SPOTSYLVANIA COUNTY
VIRGINIA

Comprehensive Plan

Adopted by the Spotsylvania County Board of Supervisors December 14, 2021
Amendment(s): July 12, 2022 (Ch.2,3,3a)

Cover Page design/layout by Meggie Roche, Spotsylvania County Economic Development

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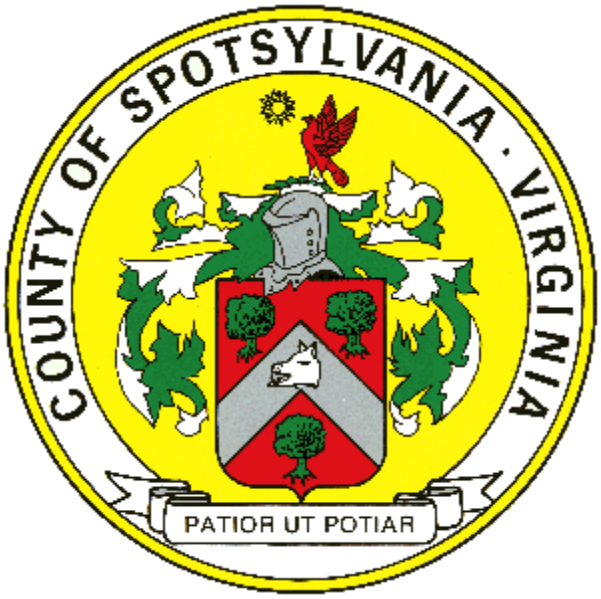

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Amended: July 12, 2022 (CPA22-0001)

ACKNOWLEDGEMENTS

Thank you to the many people who contributed to development of this Comprehensive Plan
Adopted December 14, 2021; Amended, July 12, 2022

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Spotsylvania County Comprehensive Plan

Adopted December 14, 2021; Amended July 12, 2022

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Note: The Comprehensive Plan contains numerous hyperlinks to electronic mapping resources, referenced plans, studies, other resources intended for informational resources. These links are meant as helpful resources and come from a variety of host sites maintained by others. They are intended to be updated administratively if links become broken. To report any broken links found please send an email to planning@spotsylvania.va.us.

Chapter 1

INTRODUCTION AND VISION

INTRODUCTION

The Spotsylvania County Comprehensive Plan presents a long range land use vision for the County. The Comprehensive Plan sets forth principles, goals, policies, and implementation techniques that will guide the development activity within the County and promote, preserve, and protect the health, safety, and general welfare of its citizens. Specifically, the Plan provides data and analysis on land use, transportation, housing, natural and historic resources, and public facilities and utilities. The purpose of this document is not to regulate, but rather guide land use, transportation, and infrastructure decisions. This guidance seeks to ensure continued economic and community vitality while ensuring necessary policies and infrastructure are in place to provide for the continuation of quality services to Spotsylvania's residents and businesses.

The majority of the Comprehensive Plan's policies focus on the next 20 years and provide guidance for development decisions. These policies can be amended as new information is available, or to address a change in circumstances, without straying from the basic vision and goals of the Plan. Therefore, the Comprehensive Plan is not a static document and should be changed if deemed appropriate. Changes to the document can be achieved through a Comprehensive Plan Amendment. The process entails public hearings before the Planning Commission and Board of Supervisors.

The County has established a Comprehensive Plan Vision Statement to guide the overall direction of the Comprehensive Plan, Comprehensive Plan updates, its Action Items, Goals, Objectives and Strategies. The Vision Statement is as follows:

Vision Statement

"Spotsylvania families will enjoy a community that remembers and respects its place in our nation's history and builds on the principles of our founding fathers to provide freedom and prosperity through limited government, respect for property rights, low taxes and pro-business policies for the 21st Century."

Legal Basis for the Plan

The County's Planning Commission is responsible for preparing the elements of the Comprehensive Plan under the Virginia Code, Section 15.2-2223 which states in the pertinent parts:

> "The local Planning Commission shall prepare and recommend a comprehensive plan for the physical development of the territory within its jurisdiction and every governing body shall adopt a comprehensive plan for the territory under its jurisdiction." The Code states that the purpose of the comprehensive plan is to achieve "a coordinated, adjusted and harmonious development of the territory which will, in accordance with present and probable future needs and resources, best promote the health, safety, morals, order, convenience, prosperity and general welfare of the inhabitants, including the elderly and persons with disabilities."

The Comprehensive Plan establishes goals, objectives, policies and implementation techniques that will provide the tools to help the decision makers guide the County's future development.

Section 15.2-2223 further states:

> "The Comprehensive Plan shall be general in nature, in that it shall designate the general or approximate location, character and extent of each feature, including any road improvement and any transportation improvements and shall indicate where existing lands or facilities are proposed to be extended, widened, removed, relocated, vacated, narrowed, abandoned or changed in use as the case may be. As part of the Comprehensive Plan, each locality shall develop a transportation plan that designates a system of transportation infrastructure needs and recommendations that may include the designation of new and expanded transportation facilities that support the planned development of the territory covered by the plan and shall include, as appropriate, but not limited to roadways, bicycle accommodations, pedestrian accommodations, railways, bridges, waterways, airports, ports, and public transportation facilities."

Section 15.2-2224 states in part that, "The Comprehensive Plan shall recommend methods of implementation and shall include a current map of the area covered by the Comprehensive Plan."

Amendment Process

Under Section 15.2-2229 the County Board of Supervisors may consider amendments to the Comprehensive Plan. The Comprehensive Plan is the document by which the County will evaluate rezoning and special use applications, public facility locations, and capital improvements for consistency with its development policies. If an application is determined to be inconsistent with the Comprehensive Plan, an amendment to the Comprehensive Plan may be considered. The application will be reviewed by the Planning Commission for consistency with the elements contained within the Plan.

The applicant should demonstrate that any change in land use designation or density/intensity:

- would benefit the public health, safety and welfare;
- is consistent with the Goals, Objectives, and Policies of the Comprehensive Plan and appropriate Development Districts (i.e., Primary Settlement);
- will not be detrimental to uses of property in the immediate vicinity of the subject property;
- has merit and value for the community as a whole; and
- will result in benefits (fiscal, aesthetic, employment, etc.) that will outweigh any significant impact of the change.

Growth Rates and Projections

In 1990, the U. S. Census Bureau indicated that the County population totaled 57,403. By 2000, the population had increased to 90,395. This represented a 57.5 percent increase since 1990 or an average annual growth rate of 4.6 percent. The Census Bureau reported the County population to be 122,397 in 2010, a 35.4 percent increase since 2000, making Spotsylvania County one of the fastest growing counties in the nation. Per the 2020 US Census, recently released population data shows a County population of 140,032. This population figure represents a population increase of approximately 14.4% since 2010. This growth is principally due to the County's location along Interstate 95 midway between Washington, D.C. and Richmond as well as the high quality of life available. Continued growth is

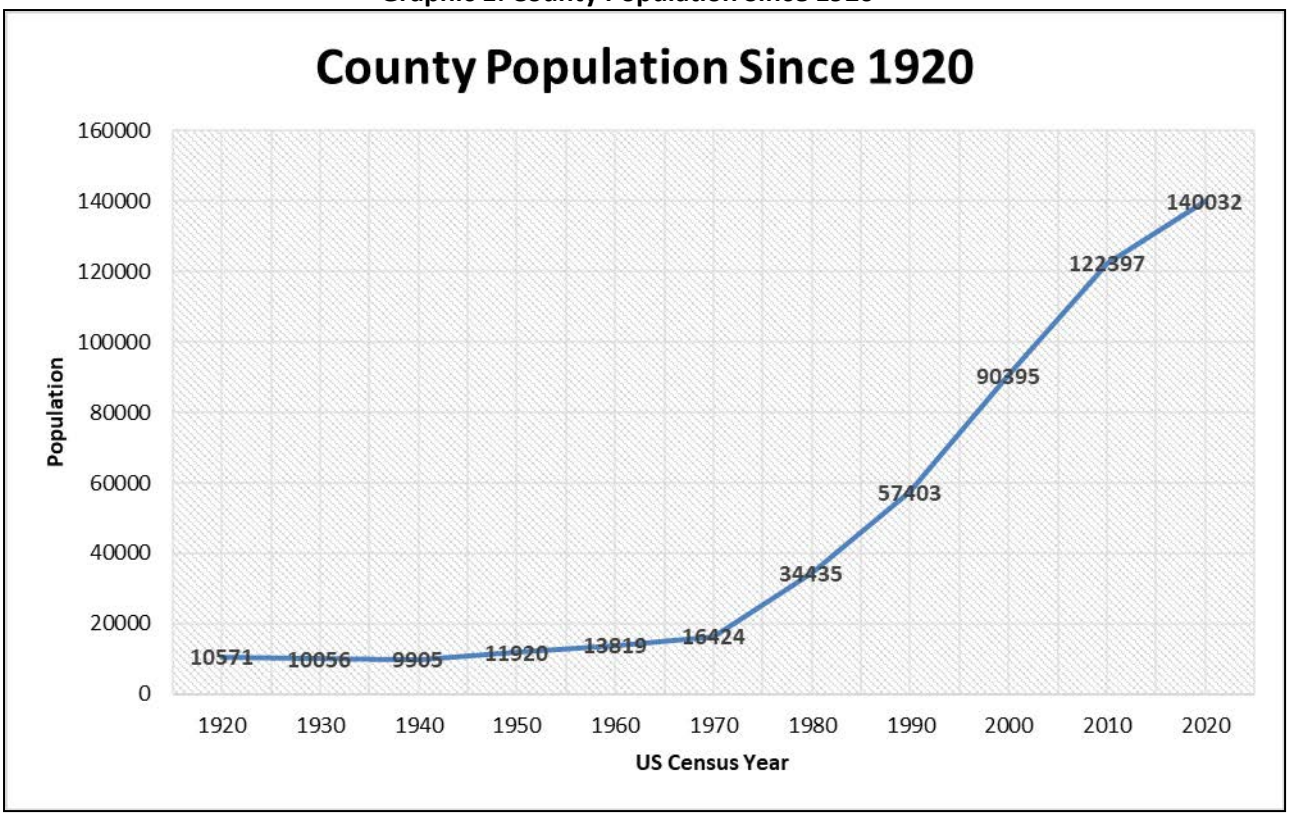
expected within Spotsylvania County and surrounding localities in the region. For Spotsylvania County, based on Weldon Cooper estimates, the population is expected to be 158,025 in 2030, and 177,369 by 2040 (the end of the Planning period).

The County growth rate has generally remained low over the last decade. Staff has included as reference the County's growth rate between 2011 and 2020 (most recent available). The County growth rate has stayed below 2% during this period based on Census estimates between 2011 and 2019. The recently released 2020 decennial census based on total count suggests a growth rate exceeding 2% over the past year. This may be suggestive of a recent increase in growth or prior years estimates being more conservative than actual growth over a longer period of time. Between the 2010 and 2020 decennial census, the County population grew approximately 14.4% or an average of 1.44% annually.

Population and Growth Rate

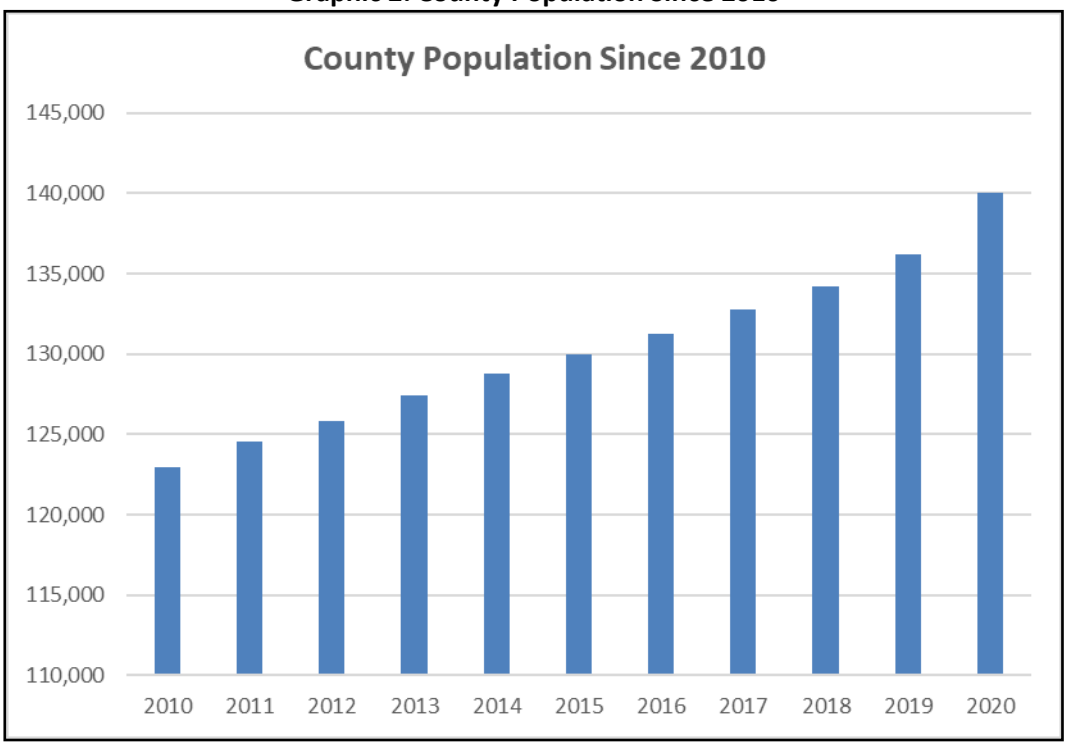
Below you will find historic and recent population tables for Spotsylvania County. Annual growth rate tracking since 2011 will also be found below:

Graphic 1: County Population Since 1920



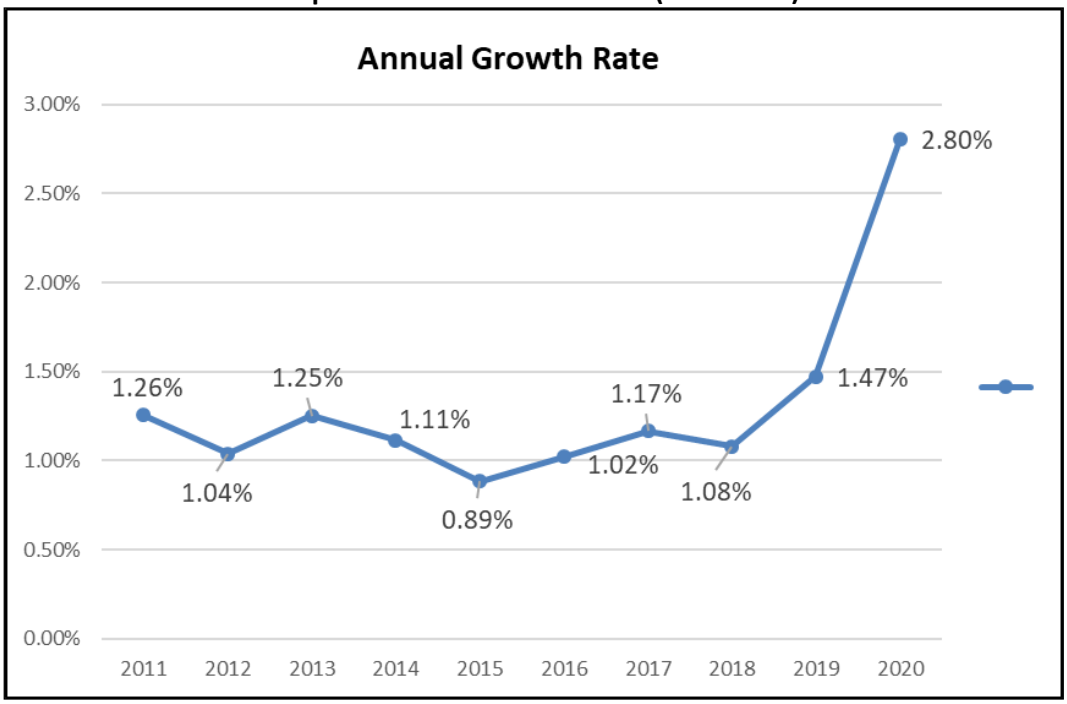
Source: Historic Decennial US Census.

Graphic 2: County Population Since 2010



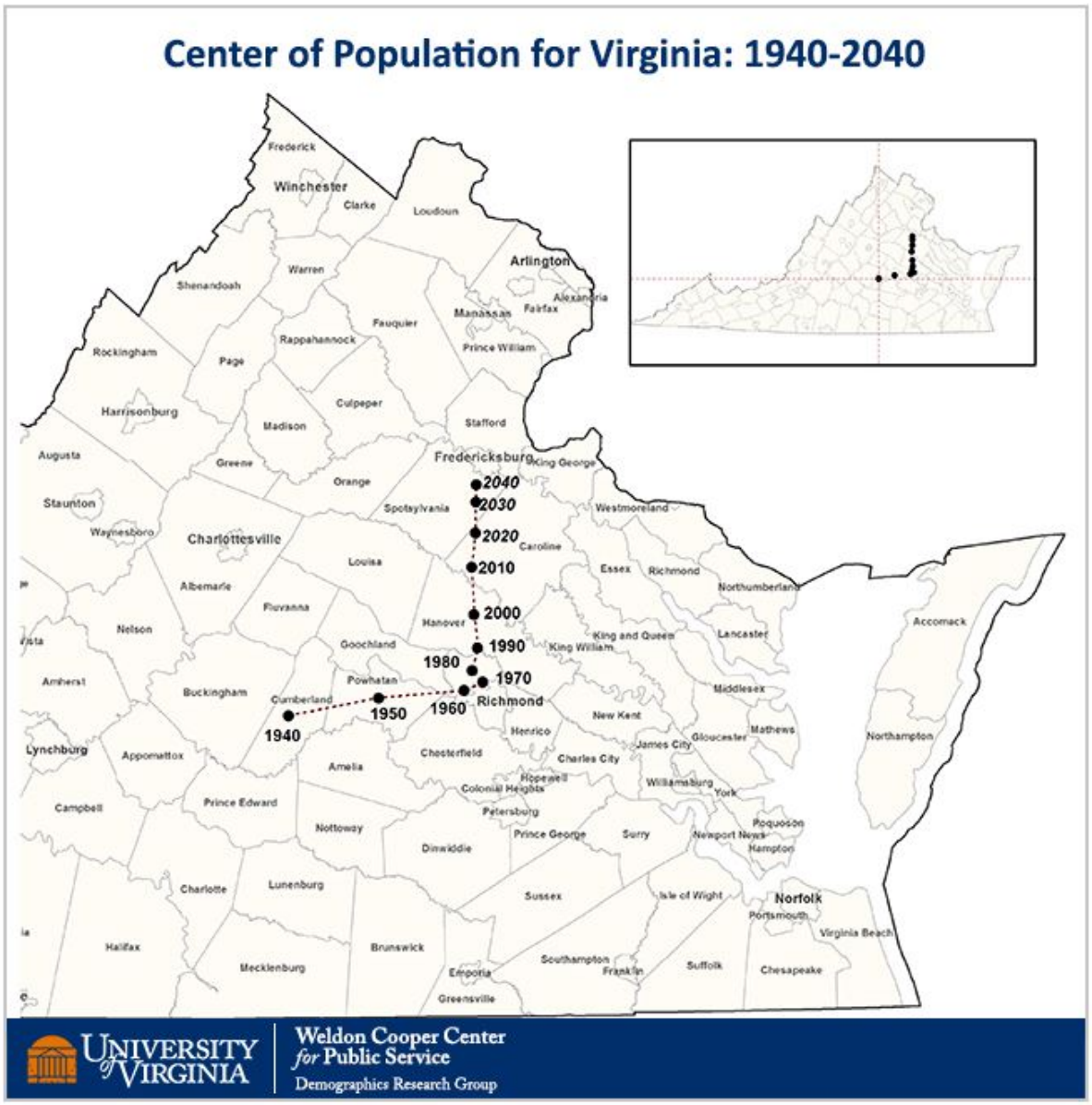
Source: 2011-'19 US Census Population Estimates (all figures as of July 1). 2010, 2020 US Decennial Census

Graphic 3: Annual Growth Rate (2011-2020)



Source: 2011-'19 US Census Population Estimates (all figures as of July 1). 2020 US Decennial Census

Exhibit 1: Center of Population for Virginia: 1940-2040



Source: University of Virginia Weldon Cooper Center for Public Service, Demographics Research Group.

The center of population for Virginia is based on the distribution of population throughout the Commonwealth. It is not based on the geographical center of Virginia. Large population centers such as those in Northern Virginia and Hampton Roads act to "pull" the population center away from areas where population is more dispersed and more rural. Higher growth areas with large populations have geographically shifted Virginia's Center of population since 1940 to the north and east. A study by the Weldon Cooper Center for Public Service has mapped the Center of Population for Virginia since 1940. Throughout the Planning period of 2020-2040 (above map), Virginia's population center will be located near the Spotsylvania and Caroline County lines in 2020, and within Spotsylvania County's Primary Development Boundary in 2030 and 2040.

Fiscal Climate

Ensuring fiscal sustainability is key to assuring successful, sustainable implementation and maintenance of portions of this Plan, particularly related to administration of programs and provision of level of service and capital facilities investments now and in the future.

The Code of Virginia requires that all general-purpose local governments publish a complete set of financial statements presented in conformity with accounting principles generally accepted in the United States of America (GAAP) and audited in accordance with governmental auditing standards generally accepted in the United States of America. Annual updates of the Comprehensive Annual Financial Report (CAFR) of the County of Spotsylvania, Virginia is made available for review online **HERE**.

Considering development within the County, the County has aspired to achieve a 70/30 mix of residential to commercial/industrial development (based on assessed value). There is interest in assuring fiscal stability and ability to fund public services for citizens of the community. Additionally, ensuring a mix of land uses helps diversify the local economy and may help "buffer" slowdowns that may impact one industry type or land use more than others. For instance, the retail sales climate has seen significant shifts over the last decade as online sales trends and home deliveries increase. Such trends have led and may continue to lead to commercial floor area vacancies and challenges to identify other potential users. The County aspires to avoid simply being a "bedroom community" for the Washington, DC and Northern Virginia areas where employment opportunities have been plentiful for local citizens. Current commuter trends have strained local roadways, especially during peak times (morning and afternoon rush). In order to achieve level of service goals for things like transportation, parks and recreation, schools, it is critical that revenue sources that can offset costs be identified. Having a vibrant commercial/industrial base helps offset some of these challenges.

The 70/30 mix is aspirational and is not expected to be wholly static due to economic development slowdowns and surges that can and do happen over time. Based on historical data (See Table 1 below) the County should seek gradual improvement overtime to help better realize the policy objective. Since 1995, Spotsylvania County's residential to commercial/industrial mix (based on assessed value) has generally remained around 80/20.

Table 1: Land Use Diversification Mix (Based on Assessed Value)

Year	Percentage Residential Contribution (Based on Assessed Value)	Percentage Commercial/Industrial (Based on Assessed Value)
1995	83.32%	16.68%
2000	81.93%	18.07%
2005	84.75%	15.25%
2010	77.30%	22.70%
2015	80.36%	19.64%
2020	82.28%	17.72%
Source: Commissioner of Revenue, Assessment		

Guiding Principles and Policies:

A. Spotsylvania County is a "business friendly" community and local job creation is a priority.

1. Encourage business investment in the County and promote the relocation of federal and state agencies to the County, providing more opportunities for Spotsylvania County residents to work in the County.
2. Support the installation of broadband internet, telecommunications infrastructure, microwave towers, fiber optics, and similar communications systems that meet an identified need for communications support for businesses throughout the County.
3. Encourage the rezoning of land to industrial/office uses in areas designated for Employment Center uses and the revitalization of older, underperforming commercial, office, and industrial developments.
4. Encourage innovative land uses such as renewable energy generation, data processing centers, and other industries leveraging technology in fields such as information technology, medicine, logistics, etc.
5. Promote gateway signage and landscaping to encourage visitation, business, and tourism and consider establishing an I-95 overlay that sets a development standard that promotes Spotsylvania County as an attractive, orderly, and business friendly location.
6. Review and modify the Subdivision Ordinance, Zoning Ordinance, and Design Standards Manual to ensure they implement the Comprehensive Plan and to streamline development review and approval procedures.

B. Spotsylvania County is fiscally sustainable.

1. Achieve a 70/30 mix of residential to commercial/industrial development (based on assessed value), and the annual growth of the industrial and commercial tax base at a rate greater than 2%.
   a. The County should identify priorities to achieve this goal through incentives, infrastructure improvements and extensions, etc.
   b. Consider proactively rezoning certain areas to promote business development.
   c. Diversify the non-residential tax base by encouraging a wide variety of businesses to locate in the County.
2. Development projects seeking increased residential density and/or non-residential intensity should address impacts that are specifically attributable to the proposed development (i.e. natural resources, historic resources, fiscal impacts, land use transitions, etc.).
   a. Each development proposal should include sufficient information to fully evaluate its impacts.
3. Any development project seeking increased residential density compared to existing zoning and by-right potential or non-residential intensity should address the project's impacts on the County's public infrastructure consistent with the levels of service standards in this Plan and as allowed in the Code of Virginia.

a. A rezoning proposal that is expected to result in demands in excess of current capacity or that would diminish level of service standards below the County's standard for any public facility should mitigate its impacts to the extent allowed in the Code of Virginia.

   Mitigation for projects may take the form of voluntary reasonable proffers that seek to address an impact that is specifically attributable to the proposed new development. Such proffers may include, but not be limited to:

   1. Cash contributions toward capital improvements,
   2. Land dedication for public facility needs,
   3. Public facility improvements constructed by the applicant, or
   4. Other onsite or offsite proffers that the applicant deems reasonable and appropriate.
   5. Phasing of proffered improvements or other proffered mitigations.

b. Development should be phased with the provision of public facilities to maintain acceptable levels of service as identified in the Public Facilities Chapter of the Spotsylvania County Comprehensive Plan. This can be achieved by proffering: 1. Cash or in kind improvements to advance the provision of the public facility 2. Proffer phasing.
c. The County should support onsite transportation alternatives such as pedestrian and bicycle facilities that connect to neighboring properties.
d. Support the expansion of transit systems to link employment centers with residential areas and transportation nodes.
e. "Access management" in the form of systematic control of the location, spacing, design, and operation of entrances, median openings, traffic signals and interchanges should be utilized for arterial and major collector roads in order to minimize the vehicular traffic impacts of new development.
f. Active adult communities, with their diminished impact on County services, should be supported.

4. Preserve significant natural, historic, and cultural resources of the County to ensure the continued allure of the County as a tourism destination.
   a. Seek cultural resource surveys, documentation of cemeteries, surveys of potential threatened or endangered species as part of the development review process where appropriate.
5. Diversify and enhance the tourism opportunities in the County.

C. Spotsylvania County is a family friendly community.

1. The County should support a diverse housing inventory, providing a mix of units that can accommodate housing needs for all stages of life. This would involve a range of housing from affordable units for young families just entering the housing market such as condominiums, townhouses, and small single family homes to larger homes, manufactured homes, and active adult and assisted care facilities.

a. Considering manufactured homes as a possible source of affordable housing, consistent with the Code of Virginia Sect. 15.2-2223.5, strategies support:
    i. preservation of existing manufactured housing communities;
    ii. creation of new manufactured home communities;
    iii. creation of new manufactured home subdivisions.
2. The County should support mixed use communities with varied housing types, civic buildings, shops, and active and passive recreation opportunities.
3. Plan for and provide public facilities that meet the needs of the community as it grows.
4. Ensure that Spotsylvania County continues to provide excellent educational and recreational, and cultural opportunities.

D. Agriculture and silviculture are valued components of Spotsylvania County's economy.

1. Promote the expansion of Farmers Market(s).
2. Continue the Land Use Taxation Program.
3. Make greater utilization of Agricultural/Forestal Districts by way of: nutrient management planning; Total Maximum Daily Load (TMDL); urban Best Management Practices (BMP) programs; and other practices coordinated through the local Soil and Water Conservation District.
4. Identify and protect productive agricultural and silvicultural lands.
5. Do not extend public infrastructure (such as water and sewer) into productive agricultural and silvicultural lands beyond the limits of the Primary Development Boundary.
6. Review and amend the Zoning Ordinance to allow landowners to preserve farm and forested areas while providing by-right lot yields.
7. Encourage complementary land uses such as agritourism, agribusiness, and renewable energy generation in agricultural and rural areas.

E. Spotsylvania County values its environmental resources.

1. Protect environmental quality by promoting a comprehensive approach to air and water quality management. Examples of approaches to accomplish this could include but are not limited to: green space and tree preservation, stream restoration, and low impact development (LID).
2. The County should support integration of required onsite drainage and stormwater features as an amenity or landscape feature that is incorporated into the overall design of the site.

MAJOR INITIATIVES ACTION PLAN

The Comprehensive Plan contains many strategies. The Action Plan is not intended to repeat strategies identified in the Plan, but rather to identify those major projects that are required to ensure implementation of the Plan.

Task	Lead Department	Assisting Departments
Continue to monitor economic (industry and construction activity), demographic, socio-economic, and housing trends locally to assess service and facility needs	Planning/Economic Development	Those with LOS
Continue to review the Zoning Ordinance and Design Standards Manual and recommend amendments to the Planning Commission that implement the Comprehensive Plan, including amendments that will streamline processes and improves outcomes	Planning	County Attorney, Zoning, and Economic Development
Continue to review the Subdivision Ordinance and recommend amendments to the Planning Commission that implement the Comprehensive Plan, including amendments that will streamline processes and improves outcomes	Planning	County Attorney
Update the Water and Sewer Master Plan	Utilities	Planning
Ensure annual update to the Capital Improvements Plan is consistent with the Comprehensive Plan	Planning	
Continue to update the annual financial report to monitors the 70/30 residential to non-residential tax rate goal, population estimates, approved projects, and demographic shifts	Planning	Commissioner of Revenue
Develop and implement a financial plan for multi-modal transportation that identifies all existing and new funding mechanisms, including private funding initiatives and public/private partnerships	Planning/Transportation	Finance
Provide an annual report to the Board of Supervisors on current Level of Service	Planning	Those with LOS
Develop periodic reports comparing built projects to the assumptions used during the application process (i.e. traffic impacts, school age children, assessment values, etc.)	Planning	
Develop Special Area Plans for areas where unique development opportunities exist in the County	Planning	Economic Development
Continue to work with partners on regional planning issues such as hazard mitigation, transportation, environmental, land use.	Planning	Based on subject matter

Chapter 2

LAND USE

INTRODUCTION

The purpose of the Land Use Chapter (Chapter) is to encourage the appropriate use of land, water, and other resources within the County, consistent with the interests of the citizens of Spotsylvania County. This Chapter is a guide for future land use decisions within the County following these general objectives:

- Plan for the orderly development of the County
- Promote a diverse and vibrant economic base
- Maximize the use of existing infrastructure and public facilities to ensure the most efficient operation of facilities and the provision of services
- Accommodate projected residential growth in a manner that is fiscally responsible
- Strive for safe and affordable housing for people of all ages
- Ensure land use policies recognize and accommodate anticipated population increases
- Encourage a community service sector and a commercial base that meets the needs of the citizens and businesses in Spotsylvania County
- Preserve and protect significant historic and environmental resources, rural farm, forest, and agricultural uses and character
- Reduce proximity conflicts between differing land uses related to height, physical massing, scale and density
- Enhance proximity and accessibility between places where people live, work, recreate, and shop

The Chapter describes land use categories and policies that provide a framework to guide physical development and land use changes in the County. The Future Land Use Map (FLUM) (SEE MAP) depicts development patterns that are intended to promote, preserve, and protect the health, safety, and general welfare of the citizens. The FLUM is not intended to be parcel specific, but rather provides a flexible guide for the County's desired future development patterns.

Land use categories as mapped are not intended to be parcel specific but they do give guidance into the envisioned land use focus intended for geographic areas. Adjacent land uses need to be considered when multiple land uses exist or are adjacent to one another. As a general "rule of thumb" concerning parcels from an interpretation standpoint land use flexibility is most pronounced when a project area has multiple land use categories (multiple options for land use support) or is adjacent to a different land use designation (complementary or transitional support along a land use edge). Adjacency of differing land uses suggests transitional uses and often involves site design considerations considering size, scale, height, screening, buffering. Significant land use separators such as major roads, environmental features (extensive wetlands, steep slopes, etc.) do generally establish clear lines of separation.

Land use categories on the FLUM are considered when rezoning and special use permit applications are being considered and to give context to appropriate design of by right development. Land use categories do not change a parcel's zoning classification, nor do they impact continuation of existing legal land uses or other uses permitted by existing zoning (by-right). New development that is in accordance with the Future Land Use Map should ensure appropriate siting and transitions to existing development (impacts of land use differences such

as height, physical massing, scale and density) that may differ from the identified land use on the FLUM in order to minimize negative impacts on existing development. Additionally, it should be noted that different densities and intensities of development may be appropriate within each of the land use categories depending on the location of the property. Each application should be evaluated within the context of its surrounding existing and proposed development, as well as the timing of the infrastructure necessary to support the development.

Land use decisions should be consistent with the FLUM. The FLUM may be amended pursuant to the Code of Virginia §15.2-2.2229.

ECONOMIC DEVELOPMENT AND TOURISM

Economic Development and Tourism are integrally linked to development and lend valuable land use insights to the County. The following summary of economic conditions in Spotsylvania have been prepared by the Spotsylvania County Economic Development, and Tourism Departments:

After the longest expansion in U.S. history, the global pandemic caused by COVID-19 is causing many businesses to close and furlough or reduce payrolls. Retail, travel, and hospitality sectors are being hit the hardest. The predicted outlook is the economic impact will be sharp and short—not sustained according to a leading economist, Chmura Economics.

As restrictions associated with COVID-19 ease and the economic recovery starts, Spotsylvania County will continue to remain strong and attractive to new and existing businesses, as Economic Development anticipates needs of businesses during the recovery. As economic development shifts focus from crisis response to economic recovery, competition between locations will resume and quickly ramp up.

One measurement used to rank the County's future success is through the Vulnerability Index, modeled by Chmura Economics. The Vulnerability Index is a measurement of the negative impact that the coronavirus crisis can have on employment based upon a region's mix of industries. As of April 2020, the County has a vulnerability Index of 119.81. The average Vulnerability Index score is 100, representing the average job loss expected in the United States. Higher scores indicate the degree to which job losses may be greater—an index of 200, for example the rate of job loss can be twice as large as the national average. Conversely, an index of 50 would mean a possible job loss of half the national average. The County remains in a better than average position to regain its previous economy based on the diversity of our industry. The market's demand will continue to promote the County's targeted industry sectors especially warehouse/distribution, manufacturing facilities and data centers. Source: Chmura Economics

The County continues to be a prime location to do business because, of its geographical location along Interstate 95, close to military installations and academic institutions, and within an easy reach of Northern Virginia, D.C., and Richmond, but with a much lower cost-of-living. Due to the County's lower taxes, quality education and strategic location, the County has become a leader in job creation in the Commonwealth. The County's pro-business, low regulatory environment has succeeded in the attraction of commercial and industrial industries that

have enhanced job creation, investment and quality of life for our citizens.

Business Retention, Attraction and Expansion

On a continuing basis, the Spotsylvania Economic Development serves as a liaison between the federal and state government and local businesses, providing information and technical assistance in a variety of areas including funding, government contracting and specialized workforce training. The Department maintains an active membership and/or dialogue with numerous regional organizations including the Virginia Economic Development Partnership, the Virginia Employment Commission, the Virginia Tourism Corporation, Virginia Career Works, the Fredericksburg Regional Alliance, the Chamber of Commerce, the Greater Fredericksburg Regional Tourism Partnerships, the International Economic Development Council and others. The Spotsylvania Economic Development Department also maintains relationships with local military bases and numerous institutions of higher learning that are in regional proximity to the County.

Many local businesses in the County continue to support the Commonwealth's significant commitment to hiring veterans and creating employment opportunities making Virginia the most veteran-friendly state in the nation in which to work.

Balanced economic growth is necessary to offset the costly service demands of low-density residential growth. As the County's commercial and industrial base expands, market opportunities will improve for business service firms and related office development. The County can help stimulate office construction by reserving or allocating well-sited parcels of land near the area's major arterials and established centers of employment. These sites will enhance a well-balanced economic development program. The County's Target Industry Sector Employers are outlined below in Table 1:

Table 1: Target Industry Sector Employers

Manufacturing	Distribution/Warehouse	Defense Contractors	Healthcare
idX Corporation	LIDL Distribution	HDT Global	Veterans Administration Outpatient Clinics
UnaDyn	CVS Distribution	PAE	Spotsylvania Regional Medical Center
Fortress Doors	Print Mail Communications	EOIR Technologies	Mary Washington Healthcare
TEX-AMM	Trivetts Furniture Distribution	Patriot3	
Kaeser Compressors	Bingham & Taylor	RPI	
Simmons			
Trussway			
Mid-Atlantic Vinyl Products			
Next Day Cabinets			

Source: Spotsylvania County Economic Development

Economic Development Programs Established to Assist Businesses

Targeted Industries Program - designed to expedite the review and approval of site and building plans involving targeted businesses.

Economic Development Incentives Program - Program used to attract new business, support in the expansion of existing businesses and retain industry. Continued collaboration with State officials ensures the County is using all available resources to maintain and grow the business community.

Economic Development Zones – The County has geography based economic development zones intended to benefit specific industries within their geographic confines, they include: Technology Zone, Tourism Zone, HUBZones, and Opportunity Zones. Because of their ties to geography and land use these zones have been considered in the update of the Future Land Use Chapter within the Comprehensive Plan and as such have been further described in that Chapter.

Virginia Business Ready Sites Program – VBRSP is a discretionary program to promote development and characterization of sites (containing a minimum of 100 contiguous, developable acres) to enhance the Commonwealth's infrastructure and promote the Commonwealth's competitive business environment. The program's goal is to identify, assess, and improve the readiness of potential industrial sites. The Business Ready Sites are also a consideration of the Future Land Use Chapter in the Comprehensive Plan and they are further detailed in that Chapter as they have been identified by location/geography and envisioned use.

Data Center Tax Rate - Data Centers are a targeted industry in the County. The County along with neighboring localities use the same valuation method and depreciation schedule to enhance the ease of doing business. The business-friendly tax rate is $1.25 / $100 of assessed value on computer equipment and peripherals. The uniform rate accompanies readied sites with adequate water, affordable and reliable power, and a fast-track development review process, along with a high-tech, well-educated workforce.

Employment and Job Creation

The County's target market sectors consisting of distribution/manufacturing, professional services, information technology/defense contractors, data centers and destination tourism venues continue to remain strong and out-perform other areas of the state due to our strategic location and versatile workforce. High-tech service, distribution centers and data center clusters have been identified as the top industry clusters to target due to the changes the pandemic has presented. There will be increased need for businesses to enable workers to work from home. The pandemic will change how we do business and deliver goods and services to their customers. A historical look at the County's Industry Employment Sectors, employment and earnings is below:

Table 2: County Industry Employment Sectors 10-Year History and 5-Year Forecast							
	2009-2019				2020-2025		
	Current		10-Year History		5-Year Forecast		
Industry	Empl	Avg Ann Wages	Empl Change	Ann %	Total Demand	Empl Growth	Ann % Growth
Retail Trade	7,178	$30,164	212	0.3%	4,957	128	0.4%
Health Care and Social Assistance	4,998	$41,550	2,178	5.9%	3,109	623	2.4%
Educational Services	4,717	$44,756	594	1.4%	2,341	134	0.6%
Accommodation and Food Services	4,263	$17,108	1,201	3.4%	3,878	316	1.4%
Construction	2,992	$46,736	-40	-0.1%	1,723	209	1.4%
Professional, Scientific, and Technical Services	2,539	$73,178	803	3.9%	1,311	190	1.5%
Other Services (except Public Administration)	2,335	$29,340	518	2.5%	1,436	84	0.7%
Administrative and Support and Waste Management and Remediation Services	1,786	$32,675	651	4.6%	1,157	101	1.1%
Transportation and Warehousing	1,769	$51,355	-7	0.0%	1,068	102	1.1%
Wholesale Trade	1,267	$54,295	486	5.0%	686	17	0.3%
Public Administration	1,153	$55,498	229	2.2%	575	39	0.7%
Manufacturing	1,079	$46,738	-152	-1.3%	556	-4	-0.1%
Arts, Entertainment, and Recreation	961	$16,757	308	3.9%	763	67	1.3%
Real Estate and Rental and Leasing	694	$42,030	-3	0.0%	393	35	1.0%
Information	588	$45,287	170	3.5%	339	46	1.5%
Finance and Insurance	573	$59,729	48	0.9%	291	20	0.7%
Management of Companies and Enterprises	459	$72,332	159	4.4%	232	21	0.9%
Agriculture, Forestry, Fishing and Hunting	192	$14,718	-31	-1.5%	106	2	0.2%
Unclassified	120	$32,261	120	n/a	76	7	1.1%
Utilities	119	$55,678	33	3.2%	61	6	1.1%
Mining, Quarrying, and Oil and Gas Extraction	43	$48,847	17	5.3%	24	2	0.7%
Total - All Industries	**39,825**	**$40,218**	**7,493**	**2.1%**	**24,393**	**2,166**	**1.1%**
Source: Jobs EQ 2019, Chmura Economics, Industry Sectors for Spotsylvania County							

Industrial and Commercial Industry Sectors

Demand for industrial space, warehouse and distribution, is steady as vacancy rates continue to trend downward year-over-year. Continued positive absorption is expected. This trend is a positive indicator for the County since the industrial market is often a leading indicator. The same trend for overall office vacancy rates but with a slower absorption due to positive employment numbers in the region and leading to continued growth in the remaining sectors.

Absorption of space for new industrial construction has been led by Lidl USA Regional Distribution Center in the distribution/warehouse submarket and manufacturing sector additions include idX Corporation and UnaDyn and available existing space continues to be strengthened by healthcare companies and the government contracting industry. As of 2020, the County's total industrial inventory is 6.9 million square feet compared to 6.0 million square feet in 2009, an increase of 15%.

Manufacturing

The County's manufacturing base is well-positioned. The County still has an inventory of available industrial zoned land to meet large and small manufacturing company needs. However, historic trends bear watching going forward.

The Spotsylvania County Planning Department has noted that the County inventory of industrial acreage has been declining over time. In the long term this trend may result in an inadequate inventory of readily available, properly zoned sites for industrial/manufacturing.

An analysis of the County's industrial acreage (last updated in 2018) found total industrial acreage within the County has been in a downward trend from 6,400 acres in 2013 to 5,732 total acres in 2018. Lost industrial acreage is attributed to rezoning activity. Based on the methodology employed, of the total industrial acres staff found 1,398 total acres considered unconstrained and undeveloped (Industrial 1 and Industrial 2 combined). The remaining acreage was either already developed or constrained under permanent protection (under conservation easement), or had environmental factors such as presence of wetlands, steep slopes, resource protection areas. The remaining unconstrained, undeveloped acres were scattered into distinct industrial core areas of the County. Larger industrial sites of ten (10) or more acres are generally in short supply County-wide. Planning staff notes since November 2018 via the Albrite Rezoning, approved July 9, 2019, approximately 6 acres of Industrial Zoned property was added back into the County inventory. Looking back over the past ten years, rezoning applications where new Industrial zoned acreage was proposed is rare in comparison to the volume of acreage proposed to be rezoned away. In all, approximately 13 new industrially zoned acres have been approved during that time. Industrial acreage loss has significantly outweighed acreage gained.

Per Economic Development there is a long-standing population of manufacturing companies in the County with a skilled and talented labor pool. Manufacturers remain exempt from Business License taxes enhancing the environment to do business in addition to the proximity to major Interstates, rail and Virginia ports. The County is strategically located to world-wide transportation and logistical hubs while offering a low cost of doing business, a talented work force and sustainable operations.

Retail Sector

Retail is the largest sector in the County. The County had 6.7 million square feet of shopping center space with 6.3 million square feet occupied and the five-year net absorption rate is 94% as of 2019.

Retail Outlook

Spotsylvania County is home to several large successful retail establishments such as Wal-Mart, Lowes, Home Depot, Michael's, Ross, At Home, BJ's wholesale and many more. Spotsylvania is also home to Spotsylvania Towne Center. Spotsylvania Towne Center houses many top name retail establishments like Macy's, Belk, Dick's, JC Penny, and Costco. Through the pandemic Spotsylvania Towne Center has maintained a high tenant occupancy rate making them one of the most successful malls in the Country. Retail establishments large and small throughout Spotsylvania have made adjustments such as offering curbside pickup to continue retail operation during the coronavirus related close the Governor had in place. The retail market within Spotsylvania continues to be successful even during unprecedented times. In order to ensure a future where businesses not only survive, but thrive, it is critical to anticipate what a post-pandemic world will look like and adjust accordingly.

The Planning Department notes that the retail economy especially can and has also been influenced by macro-level factors such as large scale corporate bankruptcies or scale backs, economic downturns, and competition of "brick and mortar" traditional outlets with the emergence of online based retailing with corresponding shifts in buyer behavior. Nationally within the past few years major retailers have announced bankruptcies often times including store closures. Between 2017 and 2020 national retailers such as JC Penney, Neiman Marcus, J.Crew, Pier 1, Forever 21, Kmart, Payless Shoe Source (announced closure of all 2,100 stores nationwide following bankruptcy filing), Gymboree and Sears have announced bankruptcy and/or location closures. In Spotsylvania County the Sears store that served as an anchor tenant at Spotsylvania Towne Centre since 1980 was recently shuttered and subsequently demolished. The Kmart store located on Route 3 closed in 2017. These factors and trends warrant further watch. Going forward, promotion of a diversification of uses that complement one another, enhance ease of access, critical mass and activity, and identification of additional tenants or uses that may successfully occupy spaces traditionally occupied by brick and mortar retailers will have merit.

Regional Data

The extended labor market area has added more jobs than any other region of the Commonwealth since 2016. According to a recent study by the Virginia Economic Development Partnership, the number of new jobs in the Region grew 1.39 percent and was one of six regions that exceeded Virginia's overall job growth rate of .76 percent, including Northern Virginia and Richmond.

In 2013, approximately 37% of the extended labor market workforce commuted outside the area. This has increased to 42% in early 2019.

In 2015 the Fredericksburg Regional Alliance at the University of Mary Washington (FRA), the University of Mary Washington (UMW), and the Fredericksburg Regional Chamber of Commerce commissioned a study to provide estimates about commuters and related demographics. This study was completed in January 2016 and was based on 2011-2013 data provided by the American Community Survey (ACS) – an ongoing set of research conducted by the United States Census Bureau. In summary of the findings, the competitiveness of the extended labor market

workforce has dramatically improved since 2013. Those who live in the County and extended labor market and work outside the region have attained a higher level of education than those who live and work within the region. This shows the dramatic increase in the overall education of the regional workforce. The study concluded that the average employee who lived and worked in the region in 2017 was more educated than the average employee that commuted outside the region in 2013 closer aligning the workforce skills needed to attract industry from outside the area.

Telecommuting

According to the American Community Survey in 2018 based on a 5-year estimate there were 4.7% or 3,047 citizens in the County working from home.

The effects of the pandemic both during and post recovery could completely reshape traditional office demand and transform what types of service sectors locate around office complexes. According to Costar, less than half of workers can work from home. Telecommuting may become Virginia's biggest demographic trend in the 2020s based on current and future trends addressing the COVID 19 pandemic.

Agriculture and Forestry

Historically, agriculture and forestry have been important components of the Spotsylvania County economy. Spotsylvania was a major producer of many agricultural products, but much of its early notoriety was due to its abundance of raw materials, such as iron ore, gold, lead and zinc. The County was named after colonial Lt. Gov. Alexander Spotswood (1676-1740), who, among other things, was responsible for establishing iron furnaces and foundries in the area. The county seal, with an image of three trees, reflects the importance of forestry to the local economy. A more detailed description of the local agriculture and forestall industry and production can be found in the Natural Resources Chapter subject of Food and Fiber production.

Although the relative economic importance of agricultural and forestal activities has declined as the commercial and industrial base has grown, they are still highly valued as providers of local employment and goods, as well as for providing natural resource protection and scenic amenities in the County. The economic, environmental and aesthetic role of farm and forest resources makes them protection and promotion important to the Spotsylvania community. In addition to land use controls, one of the best ways to preserve these resources is to promote activities to enhance the economic viability of the agricultural and forestry industries.

An important part of the County's economic development strategy should be the promotion of the agricultural and forestal industries. This would include efforts to attract businesses able to utilize local products for the production of finished goods. Furthermore, the economic development department could help to promote the purchase of local agricultural and forestal products through wholesale or retail markets.

Tourism

Per Spotsylvania County Tourism, for 2019 visitors to the Battlefields (912,999) are 60% of visits to the area. The same percentage of the local tourism market visited Battlefields in 1993 as reported in the 2002 Comprehensive Plan. Battlefield tourism remains a significant attraction to area tourism. Visitors to Agritourism sites that include wineries, breweries and the distillery account for (70,839) as of 2019.

Table 3: Tourism (Visitation)

Tourism: Total County Visitation					
	2015	**2016**	**2017**	**2018**	**2019**
Grapes and Grains*	40,622	91,610	63,327	93,869	70,839
Museums **	11,656	12,894	12,125	18,757	18,877
Battlefield (NPS), State Parks ^	822,830	1,518,052	1,585,695	1,580,141	1,150,426
Total Visitation	**875,108**	**1,622,556**	**1,661,147**	**1,692,767**	**1,240,142**
*Grapes and Grains= Spotsylvania Agritourism, Wineries, Breweries, etc.					
**Museums include Shannon Airport, John J Wright, Rappahannock Railroad Museum, Spotsylvania Museum, Salem Church, Elwood, Spotsylvania Visitors Center					
^Include Fredericksburg Regional National Park Service System of Parks and Lake Anna State Park.					
Source: Spotsylvania County Tourism, 2020					

Agritourism

In Virginia, agritourism is defined as any activity carried out on a farm or ranch that allows members of the general public, for recreational, entertainment, or educational purposes, to view or enjoy rural activities, including farming, wineries, ranching, historical, cultural, harvest-your-own activities, or natural activities and attractions. For most people, agricultural tourism refers to a visit to a working farm or any agricultural, horticultural, or agribusiness operation in order to enjoy, be educated, or become actively involved in the activities of the farm or operation – getting a true farm experience. Agritourism has become a huge economic industry in the state of Virginia, 2019 reports show agritourism being a 3-billion-dollar industry in Virginia. Spotsylvania is home to several wineries, breweries, farmers markets, and other agricultural experiences. This is an industry that continues to grow, Spotsylvania economic development encourages and promotes agritourism and will continue to help these businesses grow and flourish in Spotsylvania. Agritourism uses as part of agricultural operations are supported by the Code of Virginia in Sect. 15.2-2288.6 and complementary to that agritourism as defined is included within the definition of the use Agriculture per the Spotsylvania County Zoning ordinance.

ECONOMIC DEVELOPMENT ZONES AND BUSINESS READY SITES

This Chapter highlights and promotes Economic Development Zones and sites located in various parts of the County. Economic diversification and local job creation are a priority for Spotsylvania County. Within Spotsylvania County, Economic Development Zones include: Tourism Zone, Technology Zone, Opportunity Zones, and HUB Zones. Economic Development Zones Maps have been included at the end of this Chapter for reference. The Zones have been summarized below, as follows:

Tourism Zones (See Map)

Tourism Zones are established in Chapter 24, Article II of the Spotsylvania County Code. Spotsylvania County has designated four areas as Tourism Zones. These are located at Lake Anna, Spotsylvania Courthouse, State Route 2 Corridor, and Thornburg. The Tourism Zone Program serves both new and existing qualified businesses, including lodging, dining, retail, meeting and sports facilities, outdoor recreation areas, theme parks and event venues. The Tourism Zone program provides incentives such as tax rebates on Business, Professional and Occupational License (BPOL) and Machinery and Tools Tax (M/T). The qualified business is also placed in the County's Targeted Industry Program, initiating the Fast Track Development Review Process. Tourism zones are intended to stimulate business attraction, growth, and increase employment opportunities. Uses that complement the intent of the tourism zones while meeting the intent of the corresponding land use category should be encouraged.

Technology Zones (See Map)

Technology Zones are established in Chapter 24, Article I of the Spotsylvania County Code. Spotsylvania County has designated two areas of the County as Technology Zones. These are in the Lake Anna area in proximity to the Route 208 corridor, and much of the County's Primary Development Boundary. The Technology Zone program serves both new and existing businesses whose primary purpose is the research, development, or manufacture and/or design of technology products, processes, or related services. The Technology Zone program provides incentives such as tax rebates on Business, Professional and Occupational License (BPOL) and Machinery and Tools Tax (M/T). The qualified business is also placed in the County's Targeted Industry Program, initiating the Fast Track Development Review Process. Technology Zones are intended to stimulate business attraction, growth, and increase employment opportunities. Uses that complement the intent of the technology zones while meeting the intent of the corresponding land use category should be encouraged.

Opportunity Zones (See Map)

The Opportunity Zone program is administered through the Virginia Department of Housing and Urban Development (HUD). This program was included in the Federal Tax Cuts and Jobs Act of 2017, which introduced the Investing in Opportunity Act that established Opportunity Zones and Opportunity Funds. Opportunity Zones are determined by census tracts that have been designated as "low-income" as defined by the US internal Revenue Code Section 45D (e). Opportunity Zones are intended to revitalize economically distressed communities by utilizing private investments. Investors who invest in Opportunity Zones through Opportunity Funds will

qualify for capital gains tax incentives. The Opportunity Zone is depicted in the Spotsylvania County Opportunity Zones Map. Uses that complement the intent of the opportunity zones while meeting the intent of the corresponding land use category should be encouraged.

HUBZones (See Map)

The HUBZone (Historically Underutilized Business Zones) program was created as part of the Small Business Reauthorization Act of 1997 and is administered through the United States Small Business Administration (SBA). The primary goal of the program is to create incentives for the United States federal government to do contracting with businesses by providing those businesses with preferential access to federal procurement opportunities. It is intended to benefit small companies that operate and employ people within HUBZones. In all, there are four (4) Types of HubZone Designations, including Qualified Census Tract; Qualified Nonmetropolitan County; Qualified Indian Reservation; Qualified Base Closure Area. Spotsylvania County has two distinct HUBZone areas whose geographic limits are based on Qualified Census Tracts. The County HUBZones are depicted in the Spotsylvania County HUBZones Map. Per the SBA, for Qualified Census Tracts, a census tract must either: demonstrate a poverty rate of at least 25 percent; or 50 percent or more of its householders must have incomes below 60 percent of the area median household income. Uses that complement the intent of the HUBZones while meeting the intent of the corresponding land use category should be encouraged.

Virginia Business Ready Sites (VBRSP)

The Virginia Economic Development Partnership (VEDP), VBRSP is a discretionary program to promote development and characterization of sites (containing a minimum of 100 contiguous, developable acres) to enhance the Commonwealth's infrastructure and promote the Commonwealth's competitive business environment. The program's goal is to identify, assess, and improve the readiness of potential industrial sites.

VBRSP was developed by a team of state, regional, and local stakeholders including VEDP, DEQ, railroad representatives, utility representatives, civil engineers, and other government, business, and industry representatives. Grants are considered on a competitive basis and made at the discretion of a committee of VBRSP Working Group members.

The VBRSP has two components:

- Site Characterization to assess and designate a site's current level of development
- Site Development to further develop a pool of potential sites across the Commonwealth

In an effort to develop a pool of viable sites, Site Characterization and Site Development grants are available to assist with the costs associated with the initial assessment and the development required to increase a site's currently designated Tier Level to the next Tier Level.

- **Tier 1** – Raw land with interested seller
- **Tier 2** – Site controlled and marketed for development
- **Tier 3** – Zoned industrial/commercial, due diligence complete

- **Tier 4** – Certified as "infrastructure ready"
- **Tier 5** – "Shovel Ready" – permits in place

Requirements:

- Minimum of 100 contiguous acres
- Dollar-for-dollar match by applicant/grant recipient
- Applicant - political subdivisions of the Commonwealth of Virginia, including counties, cities, towns, industrial/economic development authorities

Priorities:

- **Viability** - the development required to prepare and position the site at a higher Tier Level can be implemented practically and successfully within a reasonable period of time.
- **Alignment** – the site is aligned with the local or regional economic development strategy or strategic plan.
- **Economic Impact** – the development of the site has a public purpose and would have a significant economic impact on the community and facilitate further increased prospect traffic and economic growth.
- **Commitment** – the scope of work required to increase a site's currently designated Tier Level to the next Tier Level (Scope of Work) is complete, the necessary financing for the implementation of the Scope of Work is available and documented or will be within a reasonable period of time, the required dollar-for-dollar match of the Site Development Grant requested is identified, and an estimated timeframe for implementation of the Scope of Work has been established.
- **Leveraged Resources** – the use of existing infrastructure, workforce and other community assets, grants and funding, or other resources used to support the site.

In Spotsylvania County numerous sites have been identified for the Business Ready Sites Program. The sites are considered potential "landing" locations for economic development prospects in the future. Of the sites, four (4) have been assigned a business ready site tier. Presently the highest tier site in the County is Tier 2. Three (3) sites have the Tier 2 designation, including: Webster 140 Site along Jefferson Davis Hwy; Gilman Tract East, near Hickory Ridge Road and Jefferson Davis Hwy; Gilman Tract West, located near N. Roxbury Mills Drive and Jefferson Davis Hwy. The remaining Tier qualified site is designated as Tier 1, the Orrock Farm-Spotsylvania, located near Orrock Road at Mallard Road. The County's tier qualified sites meet the minimum acreage threshold as required (minimum 100 acres). The remaining sites are in the process of being evaluated per the Spotsylvania Department of Economic Development. Spotsylvania County's identified VEPD Business Ready sites are summarized in Table 4 that follows:

Table 4: Spotsylvania County Sites in the VEDP Business Ready Sites Program (as of June 2020)							
Name	**Address**	**Tax Map Reference**	**Business Ready Sites Program Tier**	**Park Type**	**Total Acreage**	**Distance to nearest Interstate (miles)**	**Distance to nearest Port (minutes)**
Gilman Tract East	Hickory Ridge Road & Jefferson Davis Highway	63-A-141	2	-	666	2	53
Crutchfield Tract	Hickory Ridge Road	62-A-90	-	-	372	4.9	53
Ni Village	Jefferson Davis Hwy	49B-1-1A 49-A-82 49-A-81	-	-	333	3.9	51
Gilman Tract West	N Roxbury Mills Drive and Jefferson Davis Highway	63-A-110	2	-	314	3	54
Coleman Family Farm	6222 Smith Station Road	48-A-84	-	-	250	4	59
Webster 200 Site	Route 606	63-A-36	-	-	200	2	52
South Garden/ Broaddus Farm	Mudd Tavern Road	64-A-8	-	-	180	1	52
Gutierrez Site	South Roxbury Mill Road	63-5--C	-	-	174	2	53
Orrock Farm-Spotsylvania	Orrock Road at Mallard Road	76-A-61	1	-	147	1	52
Webster 140 Site	Jefferson Davis Highway	76-A-56 76-A-58C 76-A-58	2	-	140	2	52
Fulks Farm	1601 Belvedere Drive	38-A-26D 38-A-26	-	-	140	7.9	62
Thornburg Towne Center	5122 Mudd Tavern Road	63-A-42 63-A-41 63-A-43C 63-A-40 63-A-44	-	-	100	0.5	47
9040 Jefferson Davis Hwy	9040 Jefferson Davis Hwy	49-A-115	-	-	95	3	57
Thornburg Business Center	5630 Morris Road	63-A-37 63-A-32 63-A-33 63-12—E 63-12—D 63-12—C 63-A-27	-	-	95	2	52
6976 Courthouse Road	6976 Courthouse Road	60-A-5	-	-	70	8	59
Aggregate Rail Site	10201 Benchmark Road	37-A-17B	-	-	69	5	60
515 Lansdowne Road	515 Lansdowne Road	24-12-7	-	-	60	4	62
Jim Morris Road Business Park	Jim Morris Road	38-1-5 38-1-6 38-1-8 38-1-9	-	-	43	6.5	63
Back 40 Site	11032 Tidewater Trail	25-1-2	-	-	40	6	65

Table 4: Spotsylvania County Sites in the VEDP Business Ready Sites Program (as of June 2020)							
Spotsylvania Pkwy at Whitehall Drive	Spotsylvania Pkwy at Whitehall Drive	35-13-5B 35-13-5D 35-13-10A	-	-	38	2.4	56
7020 Harrison Road	7020 Harrison Road	22-8--C	-	-	37	4	66
10813 Rollingwood Drive	10813 Rollingwood Drive	23-A-113	-	-	33	2	61
5008 Mudd Tavern Road	5008 Mudd Tavern Road	63-A-53 63-A-52 63-A-45A 63-A-45B 63-A-50 63-A-54	-	-	32	0	51
5199 Commonwealth Drive	5199 Commonwealth Drive	35-A-91	-	-	32	2.6	55
Thornburg Miller Tract	5901 Mallard Rd	76-1-5 76-1-9	-	Industrial	32	1	52
95 Commerce	Davenport Road and Cosner Drive	36-23-B 36-23-A 36-23-P 36-23-E 36-A-43W	-	-	29	3.6	58
Route 1 and Hood Drive	Route 1 and Hood Drive	24-A-40 35-A-112 23A-2-36	-	-	24	1	54
Tidewater Trail Industrial Lot 4	Haul Road	38-1-4	-	-	24	6.8	64
7501 Lake Anna Pkwy	7501 Lake Anna Pkwy	60-A-3	-	-	20.5	7.9	57
Tidewater Trail Industrial Lot 10	Billy Days Road and Tidewater Trail	38-1-10	-	-	13	7	64
Deep Run Property	Tidewater Trail and Bowman Drive	25-A-8EE	-	-	12	3.7	61
Tidewater Trail Industrial Lot 3	Haul Road	38-1-3	-	-	8	7	63
21 Joseph Mills Drive	21 Joseph Mills Drive	25-A-8X	-	-	6	4.6	63
11615 Shannon Drive	11615 Shannon Drive	24-12-8B	-	-	6	4.5	60
8601 Jefferson Davis Hwy	8601 Jefferson Davis Hwy	49-A-95	-	-	5	3.7	53
11224 New Albany Drive	11224 New Albany Drive	24-20-17	-	-	5	3.9	59
11907 Cherry Road	11907 Cherry Road	22-A-153K	-	-	4	3.3	61
Tidewater Trail Industrial Lot 1	Haul Road	38-1-1	-	-	3.5	6.7	62
46 Joseph Mills Drive	46 Joseph Mills Drive	25-A-8FF	-	-	3	4.3	61
10801, 10805 Courthouse Road	10801, 10805 Courthouse Road	23A-2-21R	-	-	2	1.4	55
5927 Plank Road	5927 Plank Road	12B-A-3	-	-	2	4.4	62

Given the competitive nature of business attraction and retention, it is important to have business ready sites available with available acreage, proper zoning, and infrastructure in place. Efforts should be made to identify and increase the number of Tier designated sites within the County. Proactive efforts to improve the Tier designation to result in Tier 4 or Tier 5 (business ready) designations will improve site attractiveness for development and marketing efforts for prospective investments. Having Tier designated sites, especially higher tier designated sites, within the County makes them more attractive to economic development prospects and site selectors. High Tier sites correspond to reduced cost, time, risk associated with developing a site and establishing business operations. The land use map considers Spotsylvania County's business ready sites and seeks to complement efforts to improve Tier designations. The land use map seeks to avoid assigning a land use category that would inhibit the ability to rezone (if necessary) to business ready friendly zoning designation.

LAND USE MAP GUIDANCE

The Primary Development Boundary (See Map)

A major aim of any comprehensive planning process is ensuring that growth happens in a manner that can be supported efficiently and cost-effectively with community facilities and public services. One of the most effective tools for directing the timing and location of new development is the establishment of a primary development boundary to define the area within which public water and sewer utilities will be provided. The Primary Development Boundary (PDB) is shown on the Primary Development Boundary Map and the Future Land Use Map. Land within the boundary is intended to develop with higher residential densities and more intensive non-residential uses than outside of the boundary. By maintaining a PDB, the County encourages the most efficient use of the land while preserving the rural character and agricultural and forestal viability of those portions of the County outside the boundary. This boundary is not permanent and may be adjusted when conditions warrant through the amendment process, in accordance with the policies outlined below.

Primary Development Boundary Policies:

1. Development proposed outside of the Primary Development Boundary seeking extension of or connection to public sewer and/or water should submit an application for a 2232 Review by the Planning Commission pursuant to the Code of Virginia, Section 15.2-2232. Exceptions to this are outlined in a and b below. Additional 2232 guidance and exceptions are outlined in the Public Facilities Chapter Introduction, specifically under Relation to the Capital Improvement Plan. Those projects not eligible for a 2232 exception or deemed not 2232 compliant should submit a Comprehensive Plan amendment application seeking a change to the Primary Development Boundary.
    a. For public sewer services, exceptions include instances pursuant to Spotsylvania County Utility Ordinance (Spotsylvania County Code Section 22-282) and upon satisfaction of the Director of Utilities that a development will not require a County maintained sewer pump station.
    b. Individual connections of public water and/or sewer outside of the designated Primary Development Boundary when existing Utility

infrastructure is in place to make said connection feasible, as determined by County Utilities.

2. The ability to extend service pursuant to the above-mentioned Utility Ordinance is not sufficient justification to support a rezoning of the property served or of any land through which the utility lines may extend.
3. Expansions may be approved where the County has determined the change is consistent with the Comprehensive Plan.

The area of land encompassed within the County's Primary Development Boundary (PDB) is approximately 73 square miles (approximately 18% of the County land area). As part of this Comprehensive Plan update, the PDB was expanded slightly, adding approximately 444 additional acres, resulting in corresponding land use designations of commercial or employment center. The areas included in the expansion in the New Post Area, Five Mile Fork, and just north of Summit Crossing Road have topographic characteristics favorable for inclusion within the PDB and have been vetted by County Utilities. Per the Planning Department's Future Development analysis spreadsheet last updated January 1, 2021, there is an inventory of 12,049 approved and yet unbuilt residential units including single family detached (3,496), attached (2,314), multi-family (5,095), age restricted (1,144). The vast majority of these future units are located within the PDB. There are significant areas intended for commercial, employment center, and mixed-use development that remain undeveloped at this time. Roughly 1/3rd of the PDB land area remains in undeveloped or underdeveloped status.

Primary Development Boundary "Difficult-to-Serve" Areas

In review of the County Primary Development Boundary (PDB), areas within the PDB have been identified and classified as "difficult to serve" as depicted in the PDB Map and Future Land Use Map. These "difficult-to-serve" areas are specific to difficulties associated with provision of public water and sewer services within the PDB. From a County Utilities standpoint, these areas pose additional challenges related to infrastructure, especially in the near term, and especially related to provision of public sewer. Per County Utilities, "difficult-to-serve" areas within the PDB may not be readily developable for higher intensity uses requiring public water and sewer services. These are areas within the PDB that would require significant infrastructure improvements or capital expenditures in order to provide service. Environmental, topographic, proximity to existing infrastructure, capacity of nearby existing infrastructure challenges all factor into the designation. Development of these areas for higher intensity projects may be inhibited or delayed by lack of readily available public utility services (water and sewer). The cost to extend infrastructure or make necessary upgrades may also not make financial sense for smaller projects. These are cost-benefit considerations for potential site developers in those areas.

Population and Density Estimates Inside and Outside of the Primary Development Boundary (PDB)

The following population and density estimates (Table 5) are based on Geographical Information Systems (GIS) data enrichment tools by ESRI. These tools provide a data apportionment methodology to provide a wide array of demographic, economic, business variables among others. The tool allows for user defined queries of certain geographic areas to provide estimates

from known datasets such as census blocks that may not perfectly fit within the parameters of the user defined search area. The Fawn Lake neighborhood has been calculated separately as a Primary Development Boundary-like development served by public water and sewer and yet outside of the designated Boundary. Fawn Lake would otherwise skew population and density figures for the remainder of areas outside of the Primary Development Boundary that are well and septic system supported.

Table 5: Population and Density Estimates

All values approximate - Sourced from ESRI's Data Enrichment Program						
	2010	2010 Density	2010 Pop %	2020	2020 Density	2020 Pop %
PDB	82,657	1,144.7/sq mi	67.5%	94,869	1,313.8/sq mi	67.9%
Non-PDB & Non-Fawn Lake	38,144	112.5/sq mi	31.1%	42,267	124.7/sq mi	30.3%
Fawn Lake	1,722	562.7/sq mi	1.4%	2,497	815.9/sq mi	1.8%
Totals	**122,523**	**295.4/sq mi**		**139,633**	**336.8/sq mi**	

Note the table above is not representative of the 2020 US Decennial Census results released after this analysis was run and report population figures close to but do not mirror the 2020 Census population figure of 140,032 (compared to 139,633). The tool utilizes unique formulas to calculate population and density estimates.

Future Land Use Map (See Map) and Land Use Categories

Land use categories are described in this section along with policies associated with each land use. The land use categories as shown on the Future Land Use Map depict the long-range recommendations for the general development of Spotsylvania County as is required by the Code of Virginia §15.2-2.2223.

Land Use Policies Applicable to All Land Uses:

1. Rezoning proposals should address public facilities impacts that are specifically attributable to the development.
2. There is an identified need, especially proximate to Fort A. P. Hill, to minimize light pollution.
3. Wherever possible, existing trees and tree buffers should be preserved rather than replacing mature vegetation with new plantings.
4. Provide Fort A.P. Hill an opportunity to comment on rezoning proposals within the Fort A.P. Hill Approach Fan (Map in Appendix A). There is an identified concern with residential development within the Approach Fan which may be impacted by noise associated with Fort A.P. Hill.
5. The County is supportive of the Fort AP Hill Joint Land Use Study recommendations. The study is incorporated by reference into the Comprehensive Plan (See Appendix A for additional information).
6. Encourage consideration of disabled and elderly citizens in the design and implementation of both new development and redevelopment.
7. There is an identified need for the provision of fiber optic cable and other technological infrastructure throughout the Primary Development Boundary, and to the extent feasible, the County as a whole.

8. Redevelopment and investment in existing developed areas should be encouraged provided that the development does not adversely impact adjoining properties, especially adjoining residential properties.
    a. Where higher density or differing land uses are proposed with the support of the future land use map, projects should consider and mitigate impacts of their physical transitions (building height, scale, project density, uses and massing along the project periphery adjacent to existing adjoining development) through means such as screening, buffering, setbacks, project design that includes complementary uses, complementary development character along the project border. Once inland from the project periphery, proposals can then gradually "step up" intensity away from the adjoining development pattern.
    b. Encourage projects to submit design details such as project visualizations/renderings or 3D modeling.
9. Public and private utility projects to establish telecommunications towers, power substations, regulator facilities, should be sited and designed to minimize detrimental impacts to neighboring properties, uses, and roadways. Examples include setbacks and vegetative buffers to reduce size and scale conflicts with nearby uses, especially residential uses; employing stealth technology; replacement of existing infrastructure with smaller, less impactful new technologies; and the use of flush mount or low-profile telecommunications antennas, if practical.
10. Solar energy facilities, as defined by the Spotsylvania County Zoning Ordinance should be sited and designed to minimize detrimental impacts to neighboring properties, uses, and roadways, considerate of the following parameters.
    a. To preserve a diversified rural and agricultural economy and maintenance of historically rural character, the total acreage outside of the Primary Development Boundary devoted to solar energy facilities should be limited to no more than 3.75% (approximately 8,200 total acres).
    b. To minimize the need for new Cross-County transmission lines, Solar energy facilities should be located within one thousand (1,000) feet of high voltage electric power transmission corridors as depicted within the Comprehensive Plan.
    c. To maintain rural character, forestry and agriculture as primary uses outside of the Primary Development Area, there is a preference for separation of solar energy facilities of at least two (2) miles from another approved or constructed facility to reduce the physical and land use impacts related to the frequency and scale of such uses in rural areas.
    d. To reduce visual impacts, solar energy facilities are best located on sites with pre-established and/or preserved vegetative and/or forested buffers of enough depth or density to effectively screen the facility as determined by viewshed analysis along public roadways, nearby or adjacent residential properties, significant cultural or historic resources.
    e. To protect the County's ecological cores, prime agricultural soils and forestry potential, solar energy facilities should avoid designated open space, agriculture and forestry areas per the future land use map.
    f. Solar energy facilities of no more than 1,800 acres (total project area) are preferred over larger facilities.

g. Explore opportunities for non-traditional installation methods such as earth screws or earth anchors that may reduce construction noise, expedite installation or removal (if need be).
h. Notwithstanding the above guidance, any solar energy facility approved prior to adoption of this Comprehensive Plan shall be considered to be consistent with the Comprehensive Plan in respect to location, character, and extent. Restrictions recommended herein shall not apply to the extent that any solar energy facility approved by Special Use Permit should ever be reconsidered.

11. Encourage the use of underground storage tanks/cisterns for new proposed development not presently nor proposed to receive future County water service.
12. Encourage the installation of back-up generators or generator-ready hookups for quick-connections at critical infrastructure locations such as all public safety facilities, schools (public and private), complementary uses critical to civic resiliency including but not limited to retail fuel stations, grocery and convenience stores, care facilities (adult and child), and transportation depots.
13. Discourage building footprints within dam break inundation areas.
14. Encourage land use proposals complementary to the Economic Development Zones provided impacts are properly mitigated. Economic Development Zone maps have been included within this Chapter for reference.
15. Protect viewsheds and the natural, historic, and scenic integrity of the County's scenic byways, scenic roads, and Civil War Trails.
16. Enhance access for transportation alternatives such as FRED. Examples include provision of bicycle and pedestrian safe accommodations to access transportation alternatives, improving pick-up and transfer sites considering all-weather conditions, project design meant to ease access and promote the ability to utilize alternatives.
17. The preservation of land via conservation easements are generally supported, especially for purposes of historic preservation, environmental protection, farm and forest preservation.
    a. When land conservation is proposed, carefully consider infrastructure needs of the community and seek to physically accommodate planned public infrastructure improvements meant for community benefit such as future public utility and road right-of-way needs.
18. Refer to the Table of Zoning Districts Complementary to Land Use Designations Inside, and Outside of the Primary Development Boundary to identify appropriate zoning districts associated with the land use category.

Agricultural and Forestal Land Use Category

Agricultural and Forestal- This land use category represents areas of active agricultural and forestal land within the County, existing agricultural and forestal character, and high to outstanding physical and locational value for agricultural, forestal suitability as exhibited in the Virginia Department of Conservation and Recreation's Natural Heritage Data Explorer Land Use Suitability models. The models are described in Appendix D, Natural Resources. This land use category is primarily intended for cultivation of crops and livestock purposes, as well as forestry operations, open space, agritourism and other agribusiness, and by-right as zoned rural residential uses. Preservation of existing rural and agricultural friendly zoning designations is

encouraged and proposals that would increase residential density above by-right potential or are inconsistent with envisioned primary and secondary uses, especially those that result in significant loss of acreage of agriculture, forestry or silviculture are discouraged.

The Comprehensive Plan recognizes the importance of complementary uses in Agricultural and Forestal areas, considerate of provision of service for populations in the area and agricultural and forestal supply chains. Subordinate or secondary uses generally supported within the Agricultural and Forestal category include: Agriculture and forestry products processing and distribution (i.e. greenhouses, sawmills, feed mills,); Provision of rural, agricultural, forestry goods, services, equipment (i.e. convenience store, garden center, child care center, medical care facility, fuel dispensing facility; farm equipment and supplies establishment); Civic, social, fraternal activities; places of worship; public facilities for provision of service to the community; provision of rural infrastructure and services such as telecommunications infrastructure, broadband, natural gas, electricity (not including power generation plants as a primary use); agritourism and historic tourism (i.e. agritourism uses, camp or recreation ground, bed and breakfast); accessory uses.

Agricultural and Forestal lands are well suited for protection from development pressures through enrollment in Agricultural/Forestal Districts or other programs with similar goals. These areas are also well suited for land protection and preservation efforts (e.g. conservation easements). The County supports a “right to farm” policy which limits the circumstances in which farming practices and operations can be considered nuisances to surrounding development. This land use designation is located outside of the limits of the Primary Development Boundary and therefore outside of the public water and sewer service area.

Agricultural and Forestal Land Use Policies:

1. Foster the preservation of agricultural and forestal land to protect the County’s finite inventory of prime agricultural soils and areas of notable agriculture and forestry conservation value.
2. Discourage rezonings or special use permits for land uses incompatible with agricultural, silvicultural, or forestal use of the land, or that would have an adverse effect on the continued viability of these uses (e.g. significant loss of prime agricultural soils).
3. When residential development is considered within the Agricultural and Forestal land use, particular care should be paid to the viewsheds along rural roads and buffering to active agricultural lands.
4. The County should encourage the development of tourism and agri-tourism related services. These uses should be compatible with the existing development and may include bed and breakfast type inns, farmers' markets, and resorts.
5. Agribusiness in any form should be encouraged so long as it preserves the rural character of this portion of the County.
6. Road improvements (including road safety and intersection improvements) should consider the movement of agricultural freight and machinery, trailered boats and other equipment, rural and tourist populations.
7. The Agricultural and Forestal land use designation is appropriate for conservation easements intended to protect agriculture, forestry, environmentally sensitive areas, and significant historic resources.

8. Applicants should demonstrate adequate well and septic capacity considerate of surrounding uses.

Residential Land Use Categories

There are three distinct residential land use categories. The categories differ by envisioned housing types and densities of residential development. The densities that are provided are recommendations considerate of existing development and envisioned development patterns and intensity going forward. The appropriate density for each proposal needs to be evaluated in the context of the surrounding community, including the availability or provision of needed infrastructure.

Rural Residential – This category is located outside of the limits of the Primary Development Boundary. In general, Rural Residential development has a recommended maximum density of one unit per two acres, including large lot residential, cluster development, farms, and forestland. These properties are served by private wells and septic systems. The preservation of land through conservation easements or preservation methods defined by the County Code may also be appropriate within this land use. Though Agricultural and Forestal land uses are still very much supported in this category, this land use category is more accommodating of Rural Residential rezoning activity than its Agricultural and Forestal counterpart. Rural Residential areas contain fewer areas of notable agricultural or forestal value as exhibited in the Virginia Department of Conservation and Recreation's Natural Heritage Data Explorer Land Use Suitability models. The models are described in Appendix D, Natural Resources. The Rural Residential category exists in areas of existing rural residential character and is concentrated primarily around the periphery of the Primary Development Boundary where employment opportunities and an abundance of goods and services can be accessed in shorter distances through transportation routes compared to more distant Agricultural and Forestal areas. The land use category also exists in proximity to Lake Anna.

Rural residents (including disadvantaged populations in rural areas as noted in the Transportation Chapter) need access to convenient goods and services. Therefore, neighborhood commercial rezonings should be considered in the rural areas provided that adequate infrastructure is in place or can be added by the applicant to accommodate the use. Transportation infrastructure, such as adequate site distance, signage, and road improvements, must be provided by the applicant to assure safe and convenient access. Site design and architectural elevations should be considered to ensure that the design and appearance of the commercial use is compatible with the architecture and character of the area.

This land use category is located outside of the limits of the Primary Development Boundary and therefore outside of the public water and sewer service area. Applicants should demonstrate adequate well and septic capacity considerate of surrounding uses.

Low Density Residential– This category is reserved for single family attached and detached residences typical in a suburban area. The overall density can be as high as four units per acre, but lower densities are also appropriate. This land use is appropriate within the Primary Development Boundary.

High Density Residential – This urban scale residential category typically includes single family attached and multifamily housing at densities of twelve to sixteen units per acre. Typical uses may include duplexes, villas, cluster housing, town homes, residential condominiums, and apartments. Public water and sewer must be available for this type of development to occur, and, therefore, this land use is appropriate within the Primary Development Boundary.

With few exceptions, as depicted in the Future Land Use Map the High-Density Residential land use category represents existing residential projects of a similar size and character to the designation. These tend to be standalone, automobile access-oriented projects in a suburban setting surrounded by other uses within existing developed areas. Such projects and are not well fit into a larger mixed-use plan of development. Undeveloped sites with the land use designation tend to be nearby or adjacent to developed high density sites, supporting potential expansion areas for similar development. Considering land use aspirations, high density residential development is otherwise supported as part of mixed-use development under the mixed-use land use category where a mix of complementary uses of varying densities; walkable live, work, play, shop areas, are promoted and enhanced accessibility and transportation alternatives are available.

Residential Land Use Policies:

1. Residential subdivisions should provide interparcel connections to adjoining undeveloped properties and connect to developments at existing interparcel access points, where possible, to help improve the connectivity of the transportation network and more efficient distribution of traffic.
2. Residential uses within the Primary Development Boundary should provide inter- and intra-development pedestrian paths to link adjoining subdivisions and form a cohesive residential area and alternative transportation and recreational opportunities.
3. Residential infill development should maintain the neighborhood character (massing, bulk, height, density) established by the existing adjacent subdivisions in relation to the adjacent subdivision edge only.
4. For residential development outside of the Primary Development Boundary particular care should be paid to preserving the character of the viewsheds along rural roads and buffering to existing agricultural properties, especially when mapped historic and scenic corridors are present.
5. The County should encourage the development of agribusiness and tourist related services within the Rural Residential areas. These uses should be compatible with the existing development and include bed and breakfast type inns, farmers' markets, campgrounds and resorts.
6. Individual driveways onto the primary rural roads should be discouraged and consolidated wherever possible.
7. Promote the provision of a diverse housing mix by encouraging a range of housing sizes and types that meet the needs of citizens at all income levels throughout all stages of life.
8. Promote the construction of market rate affordable housing units rather than units that are subsidized for the initial sale to ensure that housing remains affordable over time. Depending on the land use designation, examples may include and are not limited to condominiums, townhouses, and small single family homes to larger homes, manufactured homes, and active adult and assisted care facilities.

a. Affordable housing are those units priced at or below the affordable price range based on the County's methodology for calculating affordability as provided in the Affordability Calculation Table located in the Housing section of this Chapter. This calculation should be updated at least annually.
b. Encourage residential development projects that integrate a range of complementary residential housing designs and price points (including affordable units).
c. Considering manufactured homes as a possible source of affordable housing, consistent with the Code of Virginia Sect. 15.2-2223.5, strategies support:
    i. preservation of existing manufactured housing communities;
    ii. creation of new manufactured home communities;
    iii. creation of new manufactured home subdivisions.

9. Rural Residential land use is appropriate for conservation easements intended to protect agriculture, forestry, environmentally sensitive areas, and significant historic resources.
10. Outside of the Primary Development Boundary, applicants should demonstrate adequate well and septic capacity considerate of surrounding uses.

Mixed Land Use Categories

Mixed Land Use areas should serve as a place for Spotsylvania residents to live, work, shop, and play by providing for a variety of land uses in a compact, walkable community with a dense development pattern. The Mixed Land Use category encompasses a variety of uses, including traditional neighborhoods; higher density residential; non-traditional residential (garage apartments as well as residential units situated over commercial uses); commercial uses (retail and office); light industrial; educational facilities; "cottage" and "artisanal" industries; live-work projects; two or more uses; recreation facilities, and compatible public and other civic facilities. The intensity of the development within the mixed-use category will vary depending upon location, surrounding uses and the availability of mass transit. Larger scale mixed use developments may be proposed under this category or developers may propose smaller projects that that are or will be integrated into a larger mixed-use area. This should be accomplished by utilizing the principles described throughout this category description, with particular attention paid to physical transitions between developments in size, scale, massing, setback, screening and buffering, street layout, building location on the lot, general aesthetic of the development, parking design and location, and pedestrian accessibility.

Alternative modes of transportation are desired within mixed use areas to encourage pedestrian access and discourage automobile reliance. Tracts of land should be developed to provide continuity among the various land uses and to create a compact and walkable living environment and workplace. Transitional uses and/or project design considerations are required to protect lower intensity and density uses from more intense/dense development. Building heights, location specific densities such as along the project edge should be "stepped down" adjacent to lower intensity and density uses, if applicable. Road, street, and pedestrian corridors should be established in a grid pattern and connect wherever possible to adjoining developments. Mixed use developments will often include both on and off-street parking, sidewalks, bike lanes, benches, pedestrian scale lighting, tree lined streets that soften the

hardscape and provide shade for pedestrians, fountains and other civic embellishments that assist in fostering a sense of community, and uniqueness of place.

There are three tiers of the mixed land use category. They are described as follows:

Mixed Use Light- Mixed Use Light is the lowest intensity mixed-use category. This land use category envisions a mix of single-family detached and attached residential development at densities of 4 to 8 units/acre. Except for the development of commercial corridors as described below, most of the land within this land use designation is envisioned to be a mix of residential uses.

The land use designation also supports development of mixed-use commercial corridors of a neighborhood or regional scale along roads with a VDOT functional classification of Major Collector or higher.

In "greenfield" development (presently undeveloped or underdeveloped areas), this land use category is generally located as a transitional land use to promote a gradual, more harmonious increase in density and intensity between low-density residential areas and more intensive mixed-use, employment center, or commercial areas.

For infill development, residential development of a similar size and scale to the existing development patterns is preferred. Development of affordable dwellings and creative infill such as residential "doubles" constructed to appear as single-family homes are appropriate in this land use designation. Affordable single family attached, single family detached, manufactured homes are additional examples. This land use designation has been geographically located to generally preserve the development patterns established in infill areas and discourage land use or intensity changes that would significantly alter the existing community.

Mixed Use General- This land use category envisions a broad mix of commercial, office, residential (single-family attached, multi-family) development in a horizontal mixed use pattern (various uses located within a walkable distance of one another), or in the "traditional neighborhood development" form with various uses "stacked" upon one another in multi-story buildings. Residential densities in these areas are envisioned to exceed 8 units/acre. However, urban or semi-urban densities of 16 units/acre or more and resulting building scale are appropriate and encouraged in this land use area. The land use designation is centrally located as core areas of mixed-use nodes and away from nearby low-density development. Urban or semi-urban densities and building scale are appropriate in this land use area.

Mixed Use Commercial Heavy. This land use category envisions a commercial and office "heavy" mixed use district. This category promotes development of commercial (such as retail, office, service, lodging, food establishments, entertainment, "cottage" or "artisanal" industries) at a semi-urban or urban scale. Residential development within these areas is intended as a secondary or subordinate use (in total land area and square footage devoted) within the land use area. The land use designation encourages mixes of residential typologies for housing diversification. Residential development here is intended to help diversify the land use mix and provide the ability for residents to be located nearer to employment opportunities and commercial goods and services and inversely for businesses and employers to benefit from a

geographically close customer base or "employee pool". Like the Mixed-Use General designation, residential densities, except for the Lake Anna Mixed Use Commercial Heavy designation, are intended to exceed 8 units/acre. Urban or semi-urban densities of 16 units/acre or more and resulting building scale are appropriate and encouraged in this land use area.

At Lake Anna, the Mixed Use Commercial Heavy designation is located outside the limits of the Primary Development Boundary and lacks public water and sewer services. The Lake Anna area in proximity to the Route 208 corridor is envisioned to develop as a "village center" and mixed-use area. Economic Development Overlay Zones exist within this area that further promote commercial, technology, tourism related businesses in the area. The Lake Anna mixed use category includes the Technology Zone, Tourism Zone, and a portion of the HUB Zone. The primary focus of the Lake Anna mixed use area therefore is commercial. Residential development in this area is intended as a secondary or subordinate use (in total land area and square footage devoted). Due to its location outside of the County's Primary Development Boundary Envisioned residential densities and complementary zoning designations are not the same as those within the Primary Development Boundary (see Table of Zoning Districts Complementary to Land Use Designations Outside of the Primary Development Boundary).

Mixed Land Use Policies:

1. Special attention should be given to provision of design guidelines, architectural features and community amenities to enhance placemaking.
2. Appropriate transitions in size, scale, height, massing of building, project density and peripheral density (considering adjoining development, if applicable) and/or setbacks and buffering should be provided from mixed land use developments to adjoining existing developments that exhibit a distinctly different development character.
3. Vehicular and pedestrian connections should be made to adjoining developments at appropriate locations, including at existing interparcel access points.
4. A grid pattern of connected streets is appropriate. Cul-de-sacs are discouraged and only employed in rare instances (e.g. site limitations due to significant environmental or topographic constraints).
5. The County should support public open space and pedestrian accommodations integrated throughout the development.
6. Mixed-Use developments should be designed so that multiple vehicle trips can be combined into one stop by providing several destinations within easy walking distance. This can be encouraged by closely monitoring the provision of parking and ensuring that there is not an excess supply that encourages additional auto trips.
7. Mixed-Use development at Lake Anna should provide local shopping and professional services as well as tourist related uses such as hotels, inns and restaurants.
8. Parking should be located to the rear and sides of buildings preferably at the fringe of development or within structured parking, with the building facades clearly visible from the street.
9. The County should support a diverse housing mix with a range of housing sizes and types that meet the needs of citizens throughout all stages of life and income levels.
10. Promote the construction of market rate affordable housing units rather than units that are subsidized for the initial sale to ensure that housing remains affordable over time. Depending on the mixed-use tier, examples may include and are not limited to

condominiums, townhouses, and small single family homes to larger homes, manufactured homes, and active adult and assisted care facilities.

a. Affordable housing are those units priced at or below the affordable price range based on the County's methodology for calculating affordability as provided in the Affordability Calculation Table located in the Housing Section of this Chapter. This calculation should be updated at least annually.
b. Encourage mixed-use development projects that integrate a range of complementary residential housing designs and price points (including affordable units).
c. Considering manufactured homes as a possible source of affordable housing, consistent with the Code of Virginia Sect. 15.2-2223.5, strategies support:
    i. preservation of existing manufactured housing communities;
    ii. creation of new manufactured home communities;
    iii. creation of new manufactured home subdivisions.

11. Quality open spaces should be integrated into developments and may include passive and active areas, pavilions, walking paths, gardens, forested areas, and lakes, pocket parks, among other features.
12. Commercial and Office development within the Mixed-Use Light tier should primarily be oriented and/or along roads with a VDOT functional classification of Major Collector or higher.
13. Residential development within the Mixed Use Commercial Heavy Tier should be a secondary or subordinate use (in total land area and square footage devoted) compared to the balance of the full extent of the land use area within which the project is a part.
14. To enhance site accessibility and reduce internal road network conflict, secure an additional point of ingress/egress to/from the Bowman Center/Sylvania Plant Industrial Center/ Spotsylvania Industrial Park Mixed Use Commercial Heavy area.

Commercial Land Use Category

Commercial- The commercial land use area consists of a variety of retail and office uses, examples of which include, but are not limited to: medical facilities, shopping centers, restaurants, hotels, automobile service and sales facilities, personal service establishments, office parks, entertainment facilities, and similar uses. The majority of the existing commercial developments within the County are located along Jefferson Davis Highway (U.S. Route 1), Plank Road (U.S. Route 3), and Southpoint Parkway. Connectivity to and accessibility from nearby residential development should be encouraged.

<u>Commercial Land Use Policies:</u>

1. Street patterns for new development should follow an interconnected network to reduce congestion and provide routing alternatives for local traffic.
2. New development should provide interparcel connections to adjoining properties, where appropriate, and should connect to existing interparcel access points.
3. Sidewalks and paths between commercial and office buildings and through parking lots should be provided to ensure safe pedestrian routes and, when possible, connect to FRED bus routes.

4. The County should encourage development patterns that redirect traffic patterns to alleviate congestion. Direct access to existing roads by individual uses or lots should be discouraged.
5. Development should proceed sequentially along and back from the major thoroughfares. Development should not isolate an existing land use or undeveloped parcel.
6. Encourage the retention and expansion of existing business operations, as well as the attraction of new businesses and investment.
7. Encourage non-retail commercial operations.

Employment Center Land Use Categories

The Employment Center land use areas are envisioned to be the primary location for new office and industrial development within the County, with a focus on larger scale office complexes, computing and technology-based uses such as data centers, industrial uses industrial parks, office parks, entertainment and tourism attractions and complementary uses, where applicable. Where the Employment Center Land Use Category overlaps the County's Economic Development Zones, the land use category seeks to achieve a complementary vision. Efforts to increase residential densities in these areas are discouraged.

Industrial development within the County is desired in the interests of growing local employment, promoting investment within the community, and maintaining a balanced economic base. Depending on the Employment Center land use category, light and heavy industrial uses are suited for the land use designation. Given the nature of these uses, careful consideration of their location and transition to adjoining properties is important.

Spotsylvania County recognizes the importance of logistics and distribution-based businesses. They are integral to the economy and provision of goods. Supply chains are far reaching. Growth of online sales has vastly increased access to goods from coast to coast and internationally. Access to these resources require extensive supply chains from manufacturer to warehouse to distribution (road, rail, air, water, pipeline, fiber) to final end user. The County recognizes the importance of Interstate 95, US Route 17, and the RF&P Rail Corridor for far reaching logistics systems connections.

Truck terminals, warehousing and distribution facilities can be considered either light or heavy industrial. Such industrial uses must be considered within the context of their size, scale, transportation systems, service area impacts to determine whether they complement light industrial neighbors or heavy industrial ones.

Except for the Thornburg area where Economic Development Zones advocate for tourism related commercial attractions and complementary uses. As a general "rule of thumb" limited commercial development is considered appropriate within the designated Employment Center areas. Commercial development such as retail sales establishments or retail plazas are intended to be secondary or subordinate to the intended employment center uses. The County's targeted commercial centers with 'big box' retailers and others have been identified separately on the Future Land Use Map as the red 'Commercial' category. Provision for commercial development also exists within the County's mapped mixed-use areas.

Employment Center Light- The employment center light category is primarily envisioned for light industrial parks, data centers and office parks. Light industrial uses are usually more consumer-oriented than business-oriented and are involved in manufacturing activities that use moderate amounts of partially processed materials to produce items of relatively high value per unit. Examples include but are not limited to the manufacturing of: clothes, shoes, furniture, consumer electronics and home appliances. Processing, assembly or disassembly operations could also fall into this category. Warehousing and distribution may be appropriate in this land use category. High Technology businesses, data centers and "clean" industry are appropriate in this land use. Typically, these uses cause little pollution or risk of nuisance. Operations are typically kept internal to the building footprint with limited outdoor operation of machinery or equipment beyond freight-based delivery or distribution.

Employment Center Heavy- Employment Center Heavy uses tend to be larger in scale and may have pollution impacts (noise, odor, etc.) on the surrounding area. Such uses may have emissions or a large degree of outdoor machinery of equipment use as part of normal operations. While these impacts should be minimized, there is the recognition that not all negative effects can be completely mitigated. The location of heavy industrial uses should be encouraged to help ensure appropriate transitions that minimize impacts on neighboring properties. Examples of heavy industrial uses include, but are not limited to: mining operations; refineries, power plants with emissions; scrap recycling operations, rail yards, and the fabrication and assembly of large items where the size and scale of facilities and operations are otherwise significantly "out of character" with the surroundings.

<u>Employment Center Land Use Policies:</u>

1. Encourage development of new and existing industrial parks and mitigate conflicts with nearby residential areas.
2. Street patterns for new development should follow an interconnected network to reduce congestion and provide routing alternatives for local traffic.
3. Truck dependent businesses should be located where they have access to major thoroughfare(s) and do not have to rely on local roads.
    a. To reduce the extent of impacts on roadways, large Interstate dependent distribution facilities are best suited within three (3) travel miles on sufficiently accommodating roadways to the nearest Interchange of chief access.
4. New development should provide interparcel connections to adjoining properties where appropriate.
5. Sidewalks and paths between commercial, office, and industrial buildings and through parking lots should be provided to ensure safe pedestrian routes and, when possible, connect to bus routes.
6. Encourage development patterns that redirect traffic patterns to alleviate congestion.
    a. Direct access to existing roads by individual uses or lots should be discouraged
    b. Discourage strip commercial and 'big box' development and promote office and industrial centers in a campus like setting that are linked by pedestrian/bicycle paths, where appropriate, and access roads.
7. Commercial development should be secondary or subordinate (in total land area and square footage devoted) to the intended uses associated with the employment center land use designations.

8. Development should proceed sequentially along and back from the major thoroughfares.
9. Promote the following components of campus style office development over traditional strip commercial development:
    a. Minimal entrances and conflict points
    b. Landscaped median strip with few stoplights and crossovers allowing for free-flowing traffic
    c. Berms, landscaping and trails or sidewalks along major transportation routes
    d. Pedestrian networks along internal roadways and between complexes
    e. Maximized interparcel connections
    f. Mixed uses provide on-site services
    g. Minimize the visibility of parking lots from the major transportation routes
10. Encourage job creation that provides sufficient income for employees to be able to afford housing within the County.
11. Encourage the retention and expansion of existing business operations as well as the attraction of new businesses and investment.
12. Encourage a diversification of uses within the Employment Center category to include light industry, heavy industry and office uses.
13. Continue economic development site selection and attraction efforts to identify candidate sites, seek tier designation, and improve tier designated sites for the VEDP Business Ready Sites Program.

Open Space Land Use Category

Open Space- The open space land use category is not intended for development other than for passive recreation purposes such as recreational trails, wildlife management areas, natural or historic preservation and interpretation. The land use is intended to preserve and protect historic and natural resources throughout the County and recognizes the inherent value in open space, resource protection, character and viewshed protection. The open space land use category includes park and recreation facilities owned and operated by the County for passive recreation, State and Federal Government parks, as well as those areas deemed worthy of preservation and conservation, such as buffers along major roadways to preserve the rural character in the proximity of the County's historic resources. Roadway buffers especially consider the County's two designated scenic byways and scenic roads. Common open spaces in private developments are also included as they serve to provide passive recreation, permanent screening and buffering, natural resource preservation and protection. Lands in existing conservation easement are included in the open space designation. As part of this Comprehensive Plan update, the open space land use category has been expanded to include mapped wetlands and resource protection areas. The intent of the addition is solely based on proactively considering presence of resources and avoiding introducing negative impacts to them. Acknowledgement of such resources under the open space category also "paints a clearer picture" for areas identified for potential development prospects that may be environmentally constrained and as a result developable acreage reduced or inhibited.

Open Space Land Use Policies

1. Viewsheds from County roads should be preserved.
2. Development in these areas should be generally discouraged, however, if it is to occur, it should occur in such a way to best blend into the existing landscape.
3. The open space land use areas are appropriate for conservation easements intended to protect open space, agricultural and forestal lands, environmentally sensitive areas, significant historic resources.

Institutional Land Uses

Institutional- For the purpose of the future land use element, Institutional land uses include the governmental facilities necessary for the provision of public services, and large public service uses such as airports. Such uses are common throughout the County and are intended to serve geographically dispersed populations within and outside of the Primary Development Boundary. Such uses commonly appear in the County Zoning ordinance as by-right or special uses across rural, suburban, and urban-scale zoning districts. As such, institutional land uses have application county-wide, both inside and outside of the Primary Development Boundary and across all land use categories. Such uses should mitigate their impacts on public facilities such as the local transportation system and carefully consider impacts to assure impact reduction (size, scale, massing) on the physical surroundings and existing development through site design. Institutional Land Use areas in the future land use map reflect existing institutional uses within the County. Refer to the Public Facilities Chapter for insights into areas identified for establishment of additional County managed facilities.

Historic or Scenic Corridors

The Future Land Use Map acknowledges designated historic or scenic corridors within the County. These designations are not intended to change the underlying land use designation but to emphasize the importance of sensitive site and building design. These corridors have been designated recognizing their inventory of significant historic, cultural, scenic resources, and character. Additionally, there are several important high visibility "gateway" or "first impressions" corridors of importance. Stewardship of recognized historic or scenic resources and continued vigilance to avoid diminishing the value of the corridor designations is up to citizens, landowners, developers, and the County as a whole. Historic and scenic corridor designations within Spotsylvania County include Scenic Byways and Roads, and the Civil War Trail. Outside of the Primary Development Boundary, efforts to preserve and protect the scenic value of these corridors are supported. Examples include establishment of conservation easement, enhanced buffering or setbacks, designating open space areas along corridors, architectural design sensitivity to the nearby rural and/or historic vernacular. Within the Primary Development Boundary where development is intended, enhanced site and architectural design is encouraged. Many of these corridors within the Primary Development Boundary already are subject to enhanced design standards associated with the Highway Corridor Overlay District (HCOD). Similar standards are encouraged to be applied along corridors where the HCOD does not exist. The County encourages architectural renderings, design simulations, viewshed analysis' when development is proposed along designated historic or scenic corridors as identified on the Future Land Use Map.

Spotsylvania County's Scenic Byways and Roads, and the Civil War Trail through Spotsylvania County have been described in greater detail below:

Scenic Byways and Roads- The State Scenic Highway and Virginia Byway Act (1966) created the Virginia Byway program. Per the Virginia Department of Conservation and Recreation (DCR), the state scenic byway program is managed by Virginia Department of Transportation (VDOT) in partnership with the DCR. Natural, cultural, historical, recreational and archeological amenities of the commonwealth's scenic roads are recognized through the program, as are unique and varied cultural and features of Virginia's geographic regions.

VDOT's designation process involves municipalities, citizens and the state who cooperatively determine if a road section of at least ten (10) miles warrants designation for its aesthetic, cultural, historical, natural or recreational significance.

Spotsylvania County has two Virginia scenic byways, they include River Road and Guinea Station Road. In order to maintain the integrity of the County's scenic roads, its incumbent upon the County to establish goals aimed at their protection. Fortunately, both corridors are located outside of the Primary Development Boundary and are not expected to or envisioned to experience transformative character changes via development pressures. However, such corridors have been subject to occasional business, utility or telecommunications infrastructure, and residential rezoning proposals that warrant establishing some basic scenic byway protective guidelines. Consideration of the scenic byway designation is often raised as a concern during the public hearing process by citizens interested in maintaining corridor integrity.

VDOT also identifies two transportation corridors within Spotsylvania County as Scenic Roads. Both Scenic Byways and Scenic Roads can be found on VDOT's 2017 Scenic Roads Map. Per VDOT, the scenic roads designation is a historic one, based in Virginia's 1965 Statewide Comprehensive Outdoor Recreation Plan. Scenic Roads in Spotsylvania County include Plank Road (Route 3), extending from the City of Fredericksburg line to Orange County, and Courthouse Road (Route 208), from Interstate 95 to Brock Road. Staff notes that portions of these roads within urbanized areas within the Primary Development Boundary are located within the County Highway Corridor Overlay District, intended to provide enhanced design standards for new development. Otherwise, cognizant of historic resources and interest in maintaining rural character and viewsheds along those corridors, the County has applied open space land use designations. For instance, Courthouse Rd between Smith Station Road and the Spotsylvania Courthouse Battlefield serves as historic rural "gateway" to Spotsylvania Courthouse mixed use area. Rural viewshed protection, enhanced setbacks, buffering, forest preservation, farmland protection, conservation easements, rural context sensitive design are all critical elements to maintaining corridor integrity in these areas.

Civil War Trails Lee vs. Grant Driving Route

Civil War Trails® connects visitors with the great campaigns and lesser-known sites of the Civil War. Stops along the Trail and interpretive signs complemented by map guides, guide visitors as they follow in the footsteps of the generals, soldiers, citizens, and the enslaved who found themselves in the midst of this great struggle.

The approach of Civil War Trails is to interpret—not commemorate or memorialize—the events, people, and places of the most pivotal time in our nation's history.

In Spotsylvania County, the Lee vs. Grant Civil War Trails Driving Route includes: Hill Ewell Drive; a portion of Orange Plank Road extending from Hill Ewell Drive to Brock Road; Brock Road from Orange Plank Road to Courthouse Road in the Spotsylvania Courthouse Area; Courthouse Road to Massaponax Church Road; Massaponax Church Road from Courthouse Road to Jefferson Davis Hwy (Route 1); Jefferson Davis Hwy (Route 1) from Massaponax Church Road to Guinea Station Road; Guinea Station Road extending to the Caroline County line. Significant Civil War sites associated with the 1864 campaign have been highlighted along this route. Within Spotsylvania County, sites include: Todd's Tavern; Spotsylvania Battlefield; Spotsylvania Courthouse Historic District; Harris Farm; Zion Methodist Church; Massaponax Church; and Plantations on Guinea Station Road.

As outlined in the Historic Resources Chapter the protection and interpretation of significant historic resources is valued in the community. Historic locations and events associated with them help shape the history and character of the County and are a major contributor to local and regional tourism, with associated economic benefits. Like the County's Scenic Byways referenced above, along the Civil War Trails Route efforts should be made to ensure historic resource preservation and protection, including maintaining the aesthetic quality of the corridor, rural and historic viewshed preservation and protection, enhanced setbacks and/or buffering, consideration of the historic architectural vernacular of the area when new development is proposed.

UTILITY, TELECOMMUNICATIONS, AND INTERNET INFRASTRUCTURE

As part of the Comprehensive Plan scope and purpose, the Code of Virginia §15.2-2223.C.8 suggests localities map the designation of corridors or routes for electric transmission lines of 150 kilovolts or more. A map showing the County's existing inventory of such transmission line corridors can be found at the end of this Chapter.

Utilities and telecommunications infrastructure and service reliability is critical in the modern day with application in many areas including personal use, business, public safety, and education. Provision of both publicly and privately administered utility infrastructure to serve the citizens, businesses, public servants (including first responders) of Spotsylvania County requires a geographically expansive network of utility infrastructure that includes all land use designations both inside and outside of the Primary Development Boundary. Provision of public water and sewer (within the Primary Development Area) requires infrastructure such as underground pipes, water treatment facilities, water towers, pump stations, while provision of cellular services by telecommunications providers requires a network of telecommunications towers spread across the County in both rural and developed areas to maintain consistent reliable services. Natural gas and electric providers distribute services by pipe, conduit, or overhead power lines and may require substations, gas regulator facilities. Considering the nature of utilities and telecommunications infrastructure, proposals for these types of facilities should be measured based on their merits and ability to mitigate impacts.

Broad availability of high-speed internet services throughout the County has become increasingly critical in recent years for residents and businesses as the world has become ever more linked to the web for e-commerce, communication, e-learning, news and information sharing. Spotsylvania County recognizes numerous benefits of expanding and enhancing access to high speed internet, including support of: jobs; job growth; education; real estate marketability; telework (a type of transportation demand management (TDM) strategy); economic development; entrepreneurship; tourism; health care; communication/entertainment; public safety and emergency services; other uses and other future uses. The County notes progress in provision of high-speed internet with an additional 12,000 homes provided with cabled broadband service since 2011. However, large rural areas of the County remain unserved by high speed broadband. The County continues to look for creative means (including opportunity for emerging technologies) to help expand broadband services.

Specific to provision of high-speed internet for unserved or underserved populations, especially in rural areas, the County Information Services Department in conjunction with the County Cable and Telecommunications Commission has identified several action items, as follows:

- Continued efforts of the Cable Commission and staff to expand broadband capabilities throughout entire County

- Establish a working timeline for short- and long-term goals
  - Establish broadband subcommittee (immediate)
  - Wireless Services on certain rural County towers (short term –4-8 months)
  - Franchise Agreement renewals (6-12 months)
  - Support for Rappahannock Electric Coop, should their grant application be awarded (long term –no ETA until more information from REC is available)

- Establish a dedicated webpage for broadband initiatives

The County will need to advocate for its citizens for broadband capability, by

- Continued work with franchise service providers
- Continued work with cell tower placement and co-location
- Continued work with grants
- Continued work on wireless and wired solutions
- Explore all available technologies
- Discussion of need for broadband consultant and fulltime broadband staff
- Formation of broadband subcommittee
- Broadband plan approval by the Board of Supervisors

HOUSING

Spotsylvania County Residential Land Use Policies set out to *promote the provision of a diverse housing mix by encouraging a range of housing sizes and types that meet the needs of citizens at all income levels throughout all stages of life*, and *promote the construction of market rate affordable housing units rather than units that are subsidized for the initial sale to ensure that housing remains affordable over time.* A summary of the County housing inventory and a calculation to determine an approximate value of affordability within the County is in Table 6 below. Housing priced below the reported amount would be considered affordable within the County based on the methodology employed.

Table 6: Housing Inventory

Spotsylvania County Total Housing Inventory By Housing Type Since 2010											
Year	2020*	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Single Family - Detached	41151	40711	40142	39585	39203	38883	37615	37938	37685	37476	37141
Single Family - Attached	4604	4357	4238	4120	4064	4007	4030	2775	2743	2730	2730
Multi-Family (Apt Units)	5106	4505	4234	3748	3194	3002	2910	3396	3136	3136	3136
Total	50861	**49573**	**48614**	**47453**	**46461**	**45892**	**44555**	**44109**	**43564**	**43342**	**43007**
MH - Personal Property	1506	1495	1402	1418	1482	1496	1497	1482	1510	1537	1523
					Note from Pat Quinn: Criteria changed for 2014.						
					2020 Figures as of January, 2020						

The Commissioner of Revenue's Office of Real Estate Assessment tracks the County housing inventory by housing type over time. The County's total housing inventory by housing type since 2010 is provided in the table above as reference. Based on the Office of Real Estate Assessment's data, the County's multi-family housing inventory is 5,106 units as of January 2020. This data is updated annually. Considering the County housing stock as a whole where there are 41,151 single family detached units and, 4,604 single family attached units. Multi-family units (5,106) account for 10% of the County's total housing inventory. Single family detached units are by far the most prevalent type of housing in the County at nearly 81%.

If we consider the County's population generation rate estimates by housing type, nearly 87% of the County population resides in single family detached homes. 7% of the County population resides in single family attached units and approximately 5% reside in multi-family housing. Presently the County estimates 3.04 persons per single family detached unit, 2.41 persons per single family attached unit, and 1.49 persons per multi-family unit.

Current County student generation rates suggest the single-family detached housing inventory accounts for approximately 84% of the total student enrollment. Approximately 10% of the student enrollment lives in single family attached units. For multi-family units, nearly 2% of the student body lives in market rate units and 4% reside in tax credit units.

The housing inventory also separately counts mobile home units, noting an inventory of 1,506 such units. Based on the information provided, the County mobile home inventory has remained relatively unchanged. Since 2010 the County has seen a slight decrease in total units from 1,523 (in 2010) to 1,506 (in 2020). There are six residential manufactured home "mobile home" parks

within the County ranging from a high of 209 units down to just 4. The total number of mobile home units within the six parks is 853. Of the total, the remaining units are located outside of mobile home parks.

Residential Building Activity

Table 7: Residential Building Activity (2011-2020)

Spotsylvania County Dwelling Units										
Month	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
January	16	22	28	30	31	54	48	61	71	51
February	22	30	27	41	26	45	40	47	30	65
March	17	21	49	32	29	33	45	68	79	120
April	18	19	40	40	30	31	58	49	51	66
May	18	10	51	45	35	62	75	52	69	59
June	29	22	47	36	46	52	79	56	64	73
July	31	43	27	55	61	52	80	61	79	78
August	18	54	44	42	29	41	58	71	51	85
September	22	29	28	33	27	51	65	67	53	97
October	26	38	37	35	41	50	70	75	52	80
November	16	23	34	24	29	44	47	43	61	58
December	19	30	31	44	40	49	50	36	52	68
Total for Year	**252**	**341**	**443**	**457**	**424**	**564**	**715**	**686**	**712**	**900**
(Total includes SF, TH, APT, SW, DW)										

Source: Spotsylvania County Building Office

Residential building permit data shows an increasing rate of new units since 2011 as the housing market slowly rebounded from the 2008 Housing Crisis that negatively impacted the region. Comparing 2020 data (last full year available) to 2011 data, new residential unit activity is nearly 3.6 times higher with 900 units reported in 2020, versus 252 in 2011. Table 7 above shows the overall increase in residential building activity since 2011.

Occupancy rates for apartments:

CoStar is the largest purveyor of real estate market data and market research in the Country. A report was run in late January 2020 and notes/identifies/accounts for 4,871 multi-family units (nearly on par with the County Office of Real Estate Assessments total multi-family housing inventory described below. Of the units tracked by CoStar, the report notes an additional 527 units under construction with an anticipated 12-month absorption rate of 419 units or nearly 80% of the new units. Market vacancy was at 7.6%. When looking at rental vacancy rates it is good to consider established built out projects that have had time to "lease up" separately from newly opened projects that are still in lease up phase where the market is still absorbing or "filling" the new units. For instance, at the time the report was run, existing well established projects such as Kilburn Crossing (2005, 2017 reno.), Breezewood Apartments (1989), Brittany Commons (1998), Silver Collection at Cosners Corner (2016) had vacancy rates of 6.36%, 5%, 4.02%, and 7.66% respectively. Inversely these projects have occupancy rates of 93.64%, 95%, 95.88%, and 92.34% respectively. Abberly at Southpoint (2016) is a fairly recent addition to the multi-family market but is now established with a vacancy rate reported at 5.71% of 280 units. This results in an occupancy rate of 94.29%. Brand new projects including Keswick I Apartments

(2019), The Allure at Jefferson (2019) ran much higher vacancy rates at 24.17% and 27.33% respectively. These projects are still in “lease up”.

A 2017 Study of the Regional Multi-Family Housing Market by the Fredericksburg Area Association of Realtors found Spotsylvania’s Multi-Family (Apartment Complex Rentals) Vacancy Rate to be 6%. The study was based on information gained from a survey of property managers of apartment complexes with 40 or more units. This threshold therefore accounts for nearly all apartment complexes within Spotsylvania County. The addition of new multi-family projects in lease up periods do influence the vacancy rates over time so some variability is expected over months, years. Additional factors can also influence variability in vacancy rates over time not associated with lack of demand within the market. Variables including but not limited to socio-economic trends and population shifts, seasonal based moving trends (May to September), property management and maintenance factors, increases in rental choice (moving from one project to another), locational factors such as convenience, public safety, proximity to transit and employment, renters shifting to home buyers, out of market relocations, lifestyle and life cycle change, all lead to potential variability within project vacancy rates without suggesting the market as a whole lacks demand.

What percentage of the Multi-Family units are tax credit financed projects:

The Virginia Housing Development Authority (VHDA) publishes a list of tax credit properties statewide searchable by locality. Based on July 7, 2020 data, the VHDA reports County-wide there are 2,411 Tax Credit Units amongst 21 Tax Credit (TC) projects. The tax credit project inventory is in Table 8 that follows:

Table 8: Current Tax Credit Properties- Spotsylvania County (As of July 7, 2020)						
Property Name	**Street Address**	**Jurisdiction**	**Tax Credit Units**	**Total Units**	**Target Type**	**Building Type**
Courthouse Green	8132 Pool Drive	Spotsylvania County	40	40	General	Acquisition/Rehab
Enoch George Manor	10231 Brittany Commons Boulevard	Spotsylvania County	60	60	Elderly	New Construction
Greens of Salem Run	5600 Salem Run Boulevard	Spotsylvania County	200	200	General	New Construction
Heights at Jackson Village	5.3 acres at Old Telegraph Road	Spotsylvania County	187	187	Elderly	New Construction
Keswick	8800 Block of Lake Anna Parkway	Spotsylvania County	120	120	General	New Construction
Keswick II	0 Robert E Lee Dr	Spotsylvania County	116	116	General	New Construction
Keswick Senior	8900 Block of Lake Anna Parkway	Spotsylvania County	100	100	Elderly	New Construction
Kings Crest	11500 Kings Crest Court	Spotsylvania County	99	100	Elderly	New Construction
Meadows at Salem Run II	5711 Castlebridge Road	Spotsylvania County	80	80	Elderly	New Construction
Meadows I	5711 Castlebridge Road	Spotsylvania County	100	100	Elderly	New Construction
New Post	1801 Nottingham Drive	Spotsylvania County	102	102	General	New Construction
Orchard Ridge at Jackson Village	9401 Jefferson Davis Highway	Spotsylvania County	169	169	General	New Construction
Orchard Ridge at Jackson Village II	9401 Jefferson Davis Highway	Spotsylvania County	76	76	General	New Construction
Overlook Terrace	4710 Overview Drive	Spotsylvania County	72	72	General	New Construction

Table 8 Continued: Current Tax Credit Properties- Spotsylvania County (As of July 7, 2020)						
Palmers Creek	8934 Jefferson Davis Highway	Spotsylvania County	200	200	General	New Construction
Pines	8835 Crismond Lane	Spotsylvania County	46	46	General	Acquisition/Rehab
Salem Fields	7100 Alpha Court	Spotsylvania County	139	139	General	New Construction
Salem Run I	5715 Castlebridge Road	Spotsylvania County	160	160	General	New Construction
Salem Run II	5715 Castle Bridge Road	Spotsylvania County	108	108	General	New Construction
Timber Ridge	3500 Golden Field Lane	Spotsylvania County	147	147	General	New Construction
Windover Villas	8001 Cherry Tree Drive	Spotsylvania County	90	90	General	New Construction
Source: Virginia Housing (VDHA) Current Tax Credit Properties List as of 07/07/2020.						

Based on the County's current multi-family inventory count of 5,106 units, using VDHA data we have found nearly 47% (47.2%) are tax credit. Of the 2,411 total Tax Credit units, 626, or nearly 26% of all tax credit projects, are age-restricted (non-student generating). Considering school age children and student generation, a recent survey of newer Spotsylvania County tax credit projects compared to market rate ones has found that tax credit project student generation rates exceed market rate student generation. For schools, student generation rates are as follows (see Table 9):

Table 9: Multi-Family Housing Student Generation Rates (2019)		
	Market Rate	**Tax Credit**
Elementary School	0.073	0.291
Middle School	0.047	0.134
High School	0.051	0.139

Multi-family market rate projects tend to generate the fewest children of the three distinct housing types the County tracks (Single family detached, single family attached, multi-family). However, multi-family tax credit projects have student generation rates more akin to single family detached and single family attached units.

Multi-Family demographics:

In 2017, the Fredericksburg Area Association of Realtors (FAAR) commissioned two studies focused on the local housing market. Staff met with representatives of FAAR in late January 2020 to discuss the local housing market, including multi-housing market. FAAR does not believe

the three years that has gone by since release of the 2017 study is enough time to have resulted in a significant change in findings. So FAAR indicated that no update is warranted at this time. Findings of FAAR's 2017 Profile of Demographic, Economic and Housing Market Conditions specific to Spotsylvania County and FAAR's 2017 Multi-Unit Housing Study that focuses on the region and includes locality specific analysis are insightful. As of the 2017 multi-family study conclusions, staff notes the study found:

> *Most of the variables suggest a strong demand for multi-unit housing in the region. Given the robust economic outlook for the region and low vacancy rate, demand may soon overtake supply. Improving transportation options between Fredericksburg (area) and Northern Virginia, specifically I-95 Express Lanes Fredericksburg Extension and the North and South Rappahannock River Crossing Projects, may increase demand for multi-unit housing even more.*

Looking at the Spotsylvania County Housing Study Profile of Demographic, Economic and Housing Market Conditions for multi-family housing conclusions:

> *The shift towards more multifamily housing and more rental housing reflects a younger workforce and stronger growth in industry sectors that pay relatively lower wages. Younger households and households with lower incomes tend to prefer both rental housing and multifamily housing.*

And

> *On the rental side, there will be substantial need for housing affordable to renters earning below $50,000. Based on these estimates of future housing needs in Spotsylvania County, about 57.7 percent of future renters will earn below this level and will need rents at or below $1,250 to be affordable. It is expected that 29.7 percent of new renter households in the County will be able to afford rents between $1,250 and $1,749. In Spotsylvania County, it expected that demand for higher-end rental units will be relatively low, with the suggestion that 7.2 percent of new renter demand will be for units with rents between $1,750 and $2,249 per month and 5.4 percent of units with rents of $2,250 per month or higher.*

The results on housing demands referenced above tied to economic struggle and lower incomes are additionally supported by the United Way of Virginia's Asset Limited, Income Constrained, Employed (ALICE) Study of Financial Hardship, dated Spring, 2017 that found 41% of households below the ALICE threshold and 6% below the poverty threshold. The Study provides additional details into methodology and findings. From the study, primary factors contributing to affordable housing demands, demands for multi-family units include: *low wage jobs dominate the local economy; the basic cost of living outpaces wages, economic conditions worsened for ALICE households from 2007 to 2015, public and private assistance helps, but doesn't provide financial stability.*

The Approved Development Analysis

Per the Planning Department's Future Development analysis spreadsheet (as updated through January 1, 2021), there is an inventory of 12,049 approved and yet unbuilt residential units

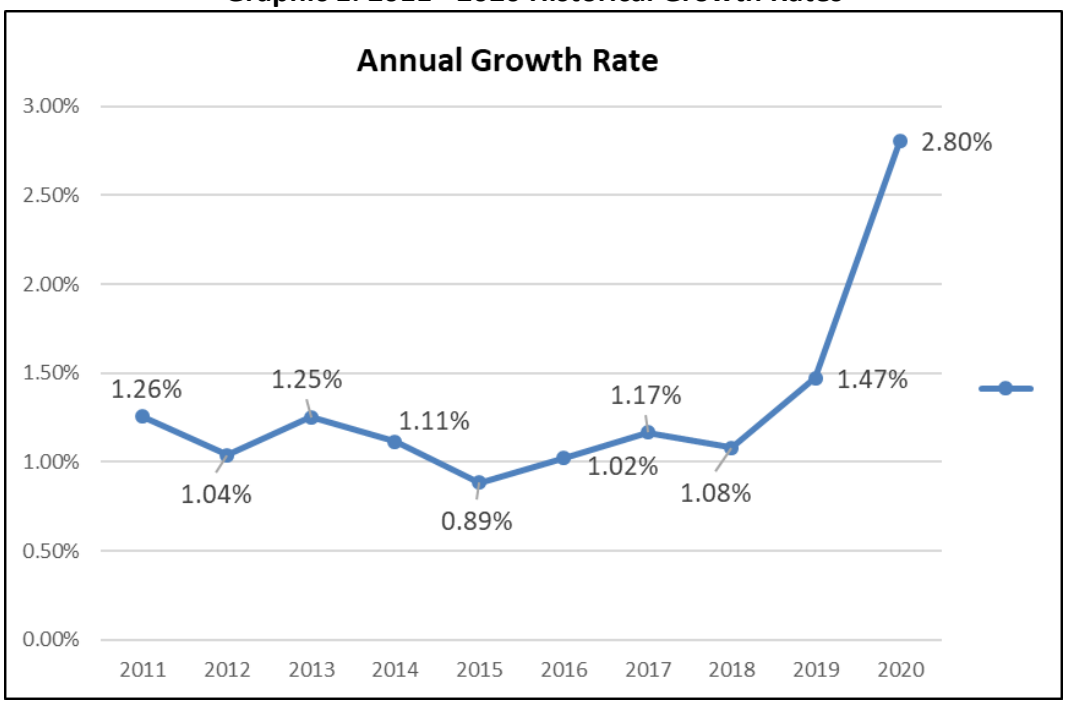
including single family detached (3,496), attached (2,314), multi-family (5,095), age restricted (1,144). The vast majority of these future units are located within the Primary Development Boundary where higher intensity development is intended. Considering multi-family units, the approved yet unbuilt multi-family inventory would nearly double the current inventory of multi-family inventory in the County. Considering the CoStar reported market absorption of 419 units over 12 months, the multi-family inventory would be absorbed over the course of 12 ½ years. Staff acknowledges it is hard to predict exactly when and how many units will come available in the market at any given time. Variables over time have influence on the rate of construction as well as market absorption. As we have seen, some projects that are approved quickly advance to site plan and construction while others sit idle for numerous years. The 12 ½ year scenario above assumes that all approved yet unbuilt multi-family units (5,095) would be constructed perfectly aligned with current market absorption rates.

Considering Spotsylvania County's known residential development "pipeline" projects inventoried above, FAAR's 2017 Profile of Demographic, Economic and Housing Market Conditions specific to Spotsylvania County between the year 2017 and 2032 found:

> *Given the expected characteristics and incomes of net new working households in Spotsylvania County over the next 15 years, it is expected that 74.8 percent (10,800) housing units) will need to be single-family detached or attached homes to meet demand. The remaining 25.2 percent (3,645 housing units) are forecasted to be multifamily. This reflects a shift from current development patterns in Spotsylvania County where 86.7 percent of homes in the County are single-family detached of attached homes and only 8.2 percent are multifamily units. (Five percent of the existing units in Spotsylvania County are mobile homes.)*

Staff notes even with an abundance of approved units of varying types, the County growth rate has generally remained low over the last decade (See Graphic 1). Staff has included as reference the County's growth rate between 2011 and 2020 (most recent available). The County growth rate has stayed below 2% during this period based on Census estimates between 2011 and 2019. The recently released 2020 decennial census based on total count suggests a growth rate exceeding 2% over the past year. This may be suggestive of a recent increase in growth or prior years estimates being more conservative than actual growth over a longer period of time. Between the 2010 and 2020 decennial census, the County population grew approximately 14.4% or an average of 1.44% annually.

Graphic 1: 2011 - 2020 Historical Growth Rates



Source: 2011-'19 US Census Population Estimates (all figures as of July 1). 2020 US Decennial Census

Housing Ratio (Housing Units and Jobs)

Per the April 2020 update of the Virginia Employment Commission's Community Profile for Spotsylvania County there were 36,079 jobs located in Spotsylvania County. This equates to a County jobs: housing ratio of 1: 1.42 (50,861 units (incl. SFD, SFA, MF)/36,079 in County jobs = 1.41), Including the County's Mobile Home inventory of 1,506 units, the jobs to housing ratio is 1.45. Typically, employment to housing ratios between 0.7 and 1.5 are considered beneficial for reducing vehicle travel according to the Environmental Protection Agency (EPA). However, the County's total labor force as a whole is 67,953 as of March 2020, reflective of an imbalance between total labor force size and employment availability within the County. As noted in the Transportation Chapter, the County has a large commuter population that works outside of the County limits, primarily within the Washington DC and Northern Virginia areas. Of the jobs located within the County, many are in historically low wage industries such as retail trade, accommodation and food service. Approximately 30% of County employment is in those fields. New hires by industry have been most significant in those sectors. Based on a 2nd Quarter, 2019 report by the US Census Bureau's Local Employment Dynamics Program, of the 6,310 new hires within the County, over approximately 42% of new hiring was in those fields. This creates a wage to housing affordability divide where low wage workers come from or seek housing opportunities outside of the County where housing costs are less expensive and commute in to work. A large percentage of the County population who can afford local housing prices tend to make their earnings outside of the County to do so where higher pay jobs exist in larger numbers (DC and Northern Virginia) while many of the prevalent lower wage jobs locally lead to a search, often times outside of the County for affordable housing. Based on 2016 data, FAAR reported the average price for a single-family detached home in the County was $287,183 and on an upward trend. FAAR's 2017 Profile of Demographic, Economic and Housing Market

Conditions forecasted that a third of new homeowners will need housing priced below $200,000 by 2032. Half will be able to afford housing priced between $200,000 and $399,999. The remaining population could afford above that price point.

In the rental market, the FAAR study forecasted that nearly 58% of units would need to be priced less than $1,250 per month between 2017 and 2032. These forecasts were based on jobs and income trends in the population forecasted through 2032.

Income and Affordability

Affordable housing is often defined as percent of income devoted to housing costs. The typical percentage used by the US Department of Housing and Urban Development (HUD), housing professionals, and the financial community is 30% of gross income. Affordability can be considered for both owner-occupied and renter-occupied dwellings.

The County has employed a methodology to determine what is affordable" for Spotsylvania County, looking at determining a specific price point based on the methodology below. The methodology was vetted by housing and mortgage professionals and provides good "ballpark" figures.

Accounting for household income, Spotsylvania County has based the calculation of local affordability, or "what is the affordable housing price point" to 30% of gross income of those households earning 75% or less of the County's Median Household Income (gross income). This gives a better "net" income number or "cash on hand" from which families pay their bills. Calculations based solely on gross earnings tend to inflate affordability expectations inconsiderate to the fact that the difference between gross and net income are committed funds (committed funds such as taxes before take home pay). Not all household and family situations are the same. Factors such as family size, number of household earners, insurance, caregiver costs, disability and/or healthcare costs can all influence affordability factors. The Housing Affordability Calculation has been established to set a "rule of thumb" based point of reference for the establishment of affordable housing within the County, or in instances where provision of affordable units has been expressed through development proposals. Its good to note that the County's median household income is based on US Census data representing the full range of households. Median Household income may include more than one earner within the household.

Monitoring the affordable price range should be done on a dynamic basis using the housing affordability methodology outlined in the 2020 Housing Affordability Calculation Tables below (Tables 10-11). The methodology accounts for household income, interest rate, down payment, interest and escrow, allowable debt loads, down payment (assuming 5%), 30-year mortgage. Using most recently updated data and the methodology outlined above, an affordable house costs less than $281,457, or rent of less than $1,237 per month for a household unit. These findings are comparable to FAAR's affordability results in their 2017 study.

Table 10: Affordability Calculation

2020 Housing Affordability Calculation		
Assumption: 2020 Spotsylvania County Median Household Income*		$81,434
A.	**Gross Annual Household Income:**	$81,434
B.	(A x 75%)	$61,076
C.	**Gross Monthly Income:**	
	(B/12 months)	$5,090
D.	**Total Debt permitted by lenders:**	
	(.36 x C)	$1,832
E.	**Monthly Allowable Housing Expense:**	
	E=$'s available for Principle and Interest (PI)= (C x 30%)	$1,527
F.	**Monthly Interest and Taxes Escrowed:**	
	(E x .19)= $'s available for Taxes and Insurance (TI)	$290
G.	**Monthly Mortgage Amount:**	
	(E - F)=$'s available for PI	$1,237
H.	**Estimated Housing Mortgage:**	
	PV((Mortage Interest Rate**/12),30-Yr. Term (mos.),G)*-1	$267,384
Affordable Price Range:		
	(H / .95) 95% consumer mortgage w/5% down	**$281,457**

* Most recently available figure from 2013-2017 American Community Survey 5-Year Estimates

** HSH Associates provides historical interest rate data for 30-year mortagages utilized here. 3.74% based on December, 2019 data.

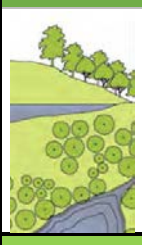
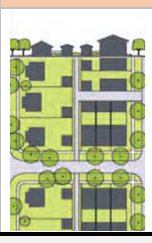
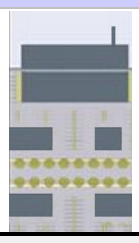
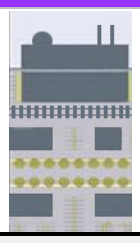
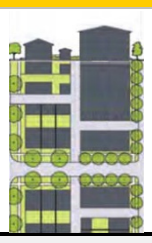
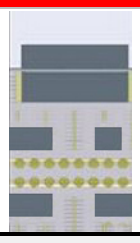
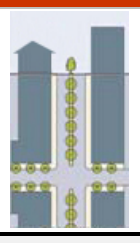
The County analysis went further to determine housing affordability based on a single income earner within the County. Based on US Census 2017 estimates, the median household income for a 1-person household within the County was $46,231. US Census acknowledges a margin of error of +/- $10,521. If we inflate the estimate to the top of the margin of error (adding $10,521), to $56,752, housing affordability is still markedly reduced compared to the County median household income of $81,434. Using the same methodology as used for county-wide median household income, an affordable house for a single income earner making $56,752 would be priced at or below $196,056 (assuming 5% down). Affordability decreases further to home prices at or below $159,786 if we explore the $46,231 average for a 1-person household reported by the US Census estimates.

Table 11: Affordability Calculation for 1-Person household

2020 Housing Affordability Calculation		
Assumption: 2020 Spotsylvania County Median Household Income (1-Person Household)*		$56,725
A.	**Gross Annual Household Income:**	$56,725
B.	(A x 75%)	$42,544
C.	**Gross Monthly Income:**	
	(B/12 months)	$3,545
D.	**Total Debt permitted by lenders:**	
	(.36 x C)	$1,276
E.	**Monthly Allowable Housing Expense:**	
	E=$'s available for Principle and Interest (PI)= (C x 30%)	$1,064
F.	**Monthly Interest and Taxes Escrowed:**	
	(E x .19)= $'s available for Taxes and Insurance (TI)	$202
G.	**Monthly Mortgage Amount:**	
	(E - F)=$'s available for PI	$862
H.	**Estimated Housing Mortgage:**	
	PV((Mortage Interest Rate**/12),30-Yr. Term (mos.),G)*-1	$186,253
Affordable Price Range:		
	(H / .95) 95% consumer mortgage w/5% down	**$196,056**
* Most recently available figure from 2013-2017 American Community Survey 5-Year Estimates		
December, 2019 data.		

Housing Affordability calculations as reported for 2020 above should be updated at least annually. This is a dynamic calculation subject to market related changes over time.

ZONING DISTRICTS COMPLEMENTARY TO LAND USE DESIGNATIONS WITHIN THE PRIMARY DEVELOPMENT BOUNDARY

ZONING DISTRICTS	LAND USE DESIGNATIONS (INCREASING DEVELOPMENT INTENSITY)								
	OPEN SPACE	LOW DENSITY RESIDENTIAL	MIXED USE LIGHT	EMPLOYMENT CENTER LIGHT	EMPLOYMENT CENTER HEAVY	HIGH DENSITY RESIDENTIAL	COMMERCIAL	MIXED USE GENERAL	MIXED USE COMMERCIAL HEAVY
									
RESIDENTIAL (R)	OPEN SPACE (SEE DESCRIPTION BELOW)								
R-1		C	-	-	-	-	-	-	-
R-2		C	-	-	-	-	-	-	-
R-3		C	-	-	-	-	-	-	-
R-8		-	C	-	-	-	-	-	-
R-12		-	-	-	-	C	-	C	S
R-MHP		C	C	-	-	-	-	-	-
PLANNED DEVELOPMENT HOUSING (PDH)									
PDH-1		C	-	-	-	-	-	-	-
PDH-2		C	-	-	-	-	-	-	-
PDH-3		C	-	-	-	-	-	-	-
PDH-4		C	C	-	-	-	-	-	-
PDH-5		-	C	-	-	-	-	-	-
PDH-8		-	C	-	-	-	-	-	-
PDH-12		-	-	-	-	C	-	C	S
PDH-16		-	-	-	-	C	-	C	S
OFFICES (O)									
O-1		-	C	C	C	-	C	C	C
O-2		-	-	C	C	-	C	C	C
COMMERCIAL (C)									
C-1		-	C	C	C	-	C	C	C
C-2		-	C	C	C	-	C	C	C
C-3		-	-	-	C	-	C	C	C
INDUSTRIAL (I)									
I-1		-	-	C	C	-	S	-	-
I-2		-	-	-	C	-	-	-	-
PLANNED DEVELOPMENT COMMERCIAL (PDC)		-	-	C	-	-	C	C	C
VILLAGE (V)		-	-	-	-	-	-	C	-
MIXED USE (MU)									
MU-1		-	C	-	-	-	-	-	-
MU-2		-	C	-	-	-	-	-	-
MU-3		-	-	-	-	-	-	C	-
MU-4		-	-	-	-	-	-	C	C
MU-5		-	-	-	-	-	-	C	C

C=Complementary Zoning District

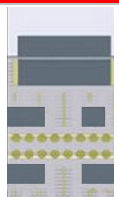
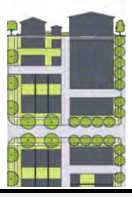
S= Secondary/ Subordinate Zoning District(s) meant to complement the intended Primary Users of the Land Use Designation. Secondary/ Subordinate Zoning Districts are NOT intended to become the primary users of the land use area.

OPEN SPACE= Intended for open space preservation and protection, conservation easements, historic and natural resource preservation and protection, parks, wildlife management areas, common areas, passive recreation. The Open Space land use has application across zoning districts.

INSTITUTIONAL LAND USE

Institutional land uses include the governmental facilities necessary for the provision of public services, and large public service uses such as airports or hospitals. Such uses are common throughout the County and are intended to serve geographically dispersed populations within and outside of the Primary Development Boundary. Such uses commonly appear in the County Zoning ordinance as by-right or special uses across rural, suburban, and urban-scale zoning districts. As such, institutional land uses have application county-wide, both inside and outside of the Primary Development District across all land use categories. Such uses should mitigate their impacts on public facilities such as the local transportation system and carefully consider impacts to assure impact reduction (size, scale, massing) on the physical surroundings and existing development through site design. Institutional Land Uses that appear within the future land use map reflect existing institutional uses within the County.

ZONING DISTRICTS COMPLEMENTARY TO LAND USE DESIGNATIONS OUTSIDE OF THE PRIMARY DEVELOPMENT BOUNDARY

ZONING DISTRICTS	LAND USE DESIGNATIONS (INCREASING DEVELOPMENT INTENSITY →)				
	OPEN SPACE	AGRICULTURAL AND FORESTAL	RURAL	COMMERCIAL	MIXED USE COMMERCIAL HEAVY
					
AGRICULTURAL (A)	OPEN SPACE (SEE DESCRIPTION BELOW)				
A-2		C	-	-	-
A-3		C	-	-	-
RESORT (R)					
R-A		C*	C*	-	-
R-R		-	C*	-	C*
R-C		S*	S*	C*	C*
RURAL (RU)		C	C	-	-
COMMERCIAL (C)					
C-1		S	S	C	C
C-2		S	S	C	C
PLANNED RURAL RESIDENTIAL (PRR)					
PRR-1		C	C	-	C
PRR-2		-	C	-	C
PRR-3		-	C	-	C
PRR-4		-	C	-	C

C=Complementary Zoning District

S= Secondary/ Subordinate Zoning District for uses meant to serve rural populations or complement agricultural or forestal uses.

*=Zoning Districts intended to be employed in the Lake Anna area only.

OPEN SPACE= Intended for open space preservation and protection, conservation easements, historic and natural resource preservation and protection, parks, wildlife management areas, common areas, passive recreation. The Open Space land use has application across zoning districts.

INSTITUTIONAL LAND USE

Institutional land uses include the governmental facilities necessary for the provision of public services, and large public service uses such as airports or hospitals. Such uses are common throughout the County and are intended to serve geographically dispersed populations within and outside of the Primary Development Boundary. Such uses commonly appear in the County Zoning ordinance as by-right or special uses across rural, suburban, and urban-scale zoning districts. As such, institutional land uses have application county-wide, both inside and outside of the Primary Development District across all land use categories. Such uses should mitigate their impacts on public facilities such as the local transportation system and carefully consider impacts to assure impact reduction (size, scale, massing) on the physical surroundings and existing development through site design. Institutional Land Uses that appear within the future land use map reflect existing institutional uses within the County.

Spotsylvania County Tourism Zones

December 14, 2021

NORTH

Legend

- Tourism Zone
- Primary Development Boundary

CULPEPER COUNTY

ORANGE COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

CAROLINE COUNTY

LOUISA COUNTY

HANOVER COUNTY

RAPIDAN DR
SPOTSWOOD FURNACE RD
ELYS FORD RD
U S FORD RD
RIVER RD
MILL RD
SINGLE OAK RD
BRAGG RD
BLACK MEADOW RD
COOKTOWN RD
HERNDON RD
PEPPER RD
HEBRON RD
WINDY ACRES LN
ORANGE PLANK RD
PARKER LN
CHANCELLOR RD
OLD PLANK RD
CATHARPIN RD
STEWART RD
GORDON RD
SMITH STATION RD
PIEDMONT DR
HARRISON RD
BUS 1
RHOADS DR
SOUTHPOINT PKWY
LANSDOWNE RD
MINE RD
CHATHAM RD
MORRIS RD
17
LEE HILL SCHOOL DR
NEW ROLLING RD
THORNTON RD
1
SUMMIT CROSSING RD
MASSAPONAX CHURCH RD
GUINEA STATION RD
PHILIPPO DR
HICKORY RIDGE RD
N ROXBURY MILL RD
MUDD TAVERN RD
95
MORRIS RD
SUNSET RD
HAMS FORD RD
STANFIELD RD
MARYE RD
ARCADIA RD
208 BYP
BUS 208
208
OLD COURTHOUSE RD
TOWLES MILL RD
BLOCK HOUSE RD
MARGO RD
MASSEY RD
LAKES CORNER RD
OLD BLOCK HOUSE LN
JUDICIAL CENTER LN
SUNNYBROOKE FARM RD
SEAYS RD
OLD PLANK RD
RED HILL RD
W CATHARPIN RD
ROBERT E LEE DR
POST OAK RD
LAWYERS RD
PAMUNKEY RD
SHIRLEY RD
JONES POWELL RD
BELMONT RD
WOOLFOLK RD
DALY BRIDGE RD
STUBBS BRIDGE RD
GRAND BROOKS RD
WILLIAMS LN
STATE PARK LN
COMFORT LN
MONROVIA RD
522
ROBINSON RD
FENTON RD
RYLAND RD
PAYNE RD
RIDGE RD
CORENTH RD
BELFONTE RD
DICKERSON RD
EDENTON RD
LEWISTON RD
PARTLOW RD
HOLLY DR
BLAYDES CORNER RD
TWILIGHT LN
FRENCH ACORS RD
SHEPHERDS RD
WALLERS RD
FAIRVIEW RD
BLANTON RD
SHIRLEYS HILL RD
SWIFT RD
ARRAT RD
TRIBBLE RD
MT OLIVE RD
FOG CABIN RD
BUTLER RD
COUNTRY RD

Spotsylvania County Technology Zones

December 14, 2021

NORTH

Legend

- Technology Zone
- Primary Development Boundary

CULPEPER COUNTY

ORANGE COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

LOUISA COUNTY

HANOVER COUNTY

CAROLINE COUNTY

RAPIDAN DR
ELYS FORD RD
SPOTSWOOD FURNACE RD
RIVER RD
BLACK MEADOW RD
COOKTOWN RD
PEPPERTREE RD
OLD PLANK RD
SINGLE OAK RD
MILL RD
ANDORA DR
HARRISON RD
SALEM CHURCH RD
BRAGG RD
WINDY ACRES LN
ORANGE PLANK RD
BROCK RD
ASHBY DR
CATHARPIN RD
GORDON RD
PIEDMONT DR
SMITH STATION RD
HEAVENLY RD
SOUTHPOINT PKWY
LORRAINE AVE
LANSDOWNE RD
LAMINE RD
BENCHMARK RD
LEE HILL SCHOOL DR
ROLLING RD
THORNTON
SUMMIT CROSSING RD
FLIPPO DR
GUINEA STATION RD
MASSAPONAX CHURCH RD
NEW ROXBURY MILL RD
MORRIS MUDD TAVERN RD
SUNSET RD
HAMS FORD RD
STANFIELD RD
MARYE RD
ARCADIA RD
BLANTON RD
TWILIGHT LN
BLAYDES CORNER RD
HOLLY RD
SHEPHERDS RD
PARTLOW RD
DUERSON LN
DICKERSON RD
EDENTON RD
BELFONTE RD
LEWISTON RD
FAIRVIEW RD
ARRITT RD
MT OLIVE RD
SHIRLEYS HILL RD
BUTLER RD
COUNTRY RD
CORENE RD
PAYNE RD
RYLAND RD
ROBINSON RD
FENTON RD
MARGO LANE
MASSEY RD
TOWLES MILL RD
BLOCK HOUSE RD
WILLIAMS LN
GRANDBROOKS RD
STUBBS BRIDGE RD
WOOLFOLK RD
STATE PARK LN
COMFORT LN
MONROVIA RD
522
S DAYS BRIDGE RD
ORANGE SPRINGS RD
BELMONT RD
LAWYERS RD
SULLIVAN RD
POST OAK RD
PAMUNKEY RD
ROBERT E LEE DR
OLD BLOCK HOUSE LN
STAYS RD
TATUM RD
CRAIGS CHURCH LN
W CATHARPIN RD
CATHARPIN RD
OLD POND RD
RED HILL RD
208
208 BYP
BUS 208
BUS 1
1
2
3
17
95

Text

DISCLAIMER: The geographic data you are about to access are electronic public records as defined in the Code of Virginia, 1950, Section 2.2-3704. The information is made available as a public service. Spotsylvania County assumes no responsibility for any action or actions taken by users of this information. Spotsylvania County shall not be liable in the event of an error made by the use or misuse of the data. The information is for general information only, and shall not be used for the design, modification, or construction of improvements to real property or for flood plain determination. If you believe any data provided is inaccurate, please inform the GIS Division by email at gis@spotsylvania.va.us

5 Miles

Spotsylvania County Economic Development Department- Technology Zones

Spotsylvania County Opportunity Zones*

0 0.25 0.5 1 Miles

NORTH

CITY OF FREDERICKSBURG

HARRISON RD

C-1

O-1

HUDGINS RD

VILLAGE DR

PDH-8

I-2

LANSDOWNE RD

WALLACE LN

BUS 1

95

1

LEAVELLS RD

51177020304

I-1

LORRAINE AVE

51177020202

O-2

EWELL RD

R-1

RHOADS DR

HOOD DR

C-2

MINE RD

SOUTHPOINT PKWY

208

R-12

MU-5

51177020305

C-3

RU

R-2

*Limits of Opportunity Zones are established by Census Tracts.

2019 Aerials by Eagleview/Pictometry

Legend

Opportunity Zones*

County Boundary

Zoning

C-1, C-2, C-3, I-1, I-2, MU-5, O-1, O-2, PDH-8, R-1, R-2, R-12, RU

December 14, 2021

Spotsylvania County Historically Underutilized Business Zones (HUBZones)

December 14, 2021

NORTH

HUBZones data from the US Small Business Administration

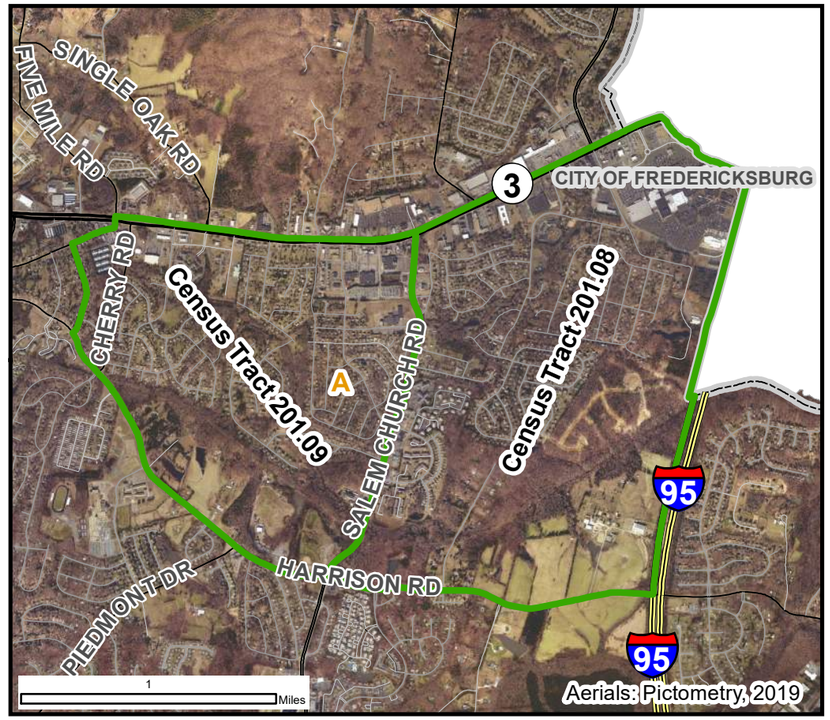
Legend

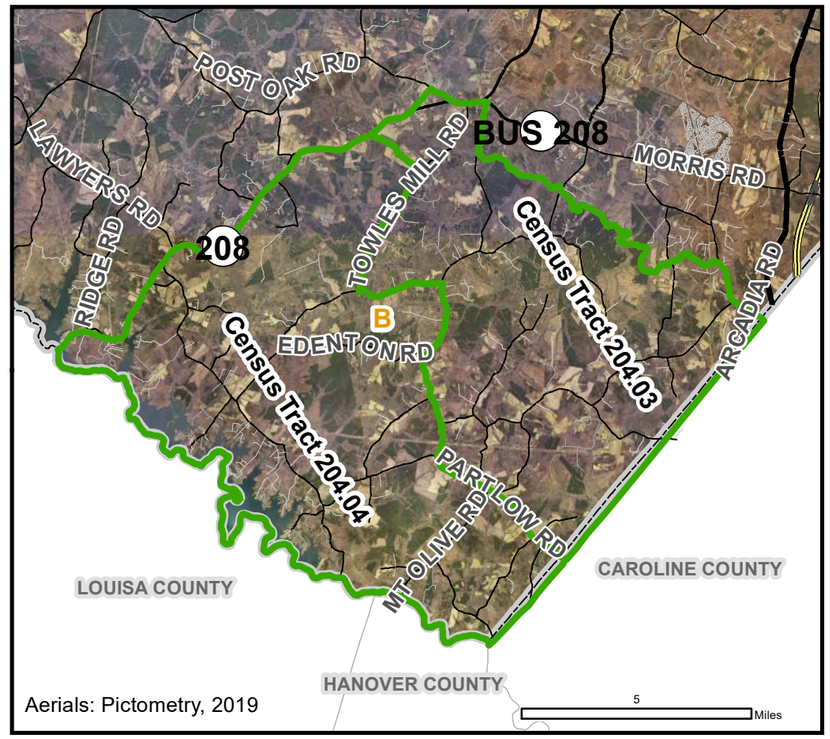
- Historically Underutilized Business Zone
- Primary Development Boundary

CULPEPER COUNTY
ORANGE COUNTY
STAFFORD COUNTY
CAROLINE COUNTY
LOUISA COUNTY
HANOVER COUNTY
CITY OF FREDERICKSBURG

A
B

5 Miles





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Spotsylvania County Department of Economic Development & Tourism- HUBZones

Primary Development Boundary

Map Approved: December 14, 2021

Primary Development Boundary Total Area:

Approximately 72.9 sq. miles.

Difficult to Serve Areas within Primary Development Boundary:

Approximately 8.5 sq. miles.

CITY OF FREDERICKSBURG

CAROLINE COUNTY

Legend

VRE Station (Rail)

Primary Development Boundary

Comprehensive Plan

Primary Development Boundary (PDB)

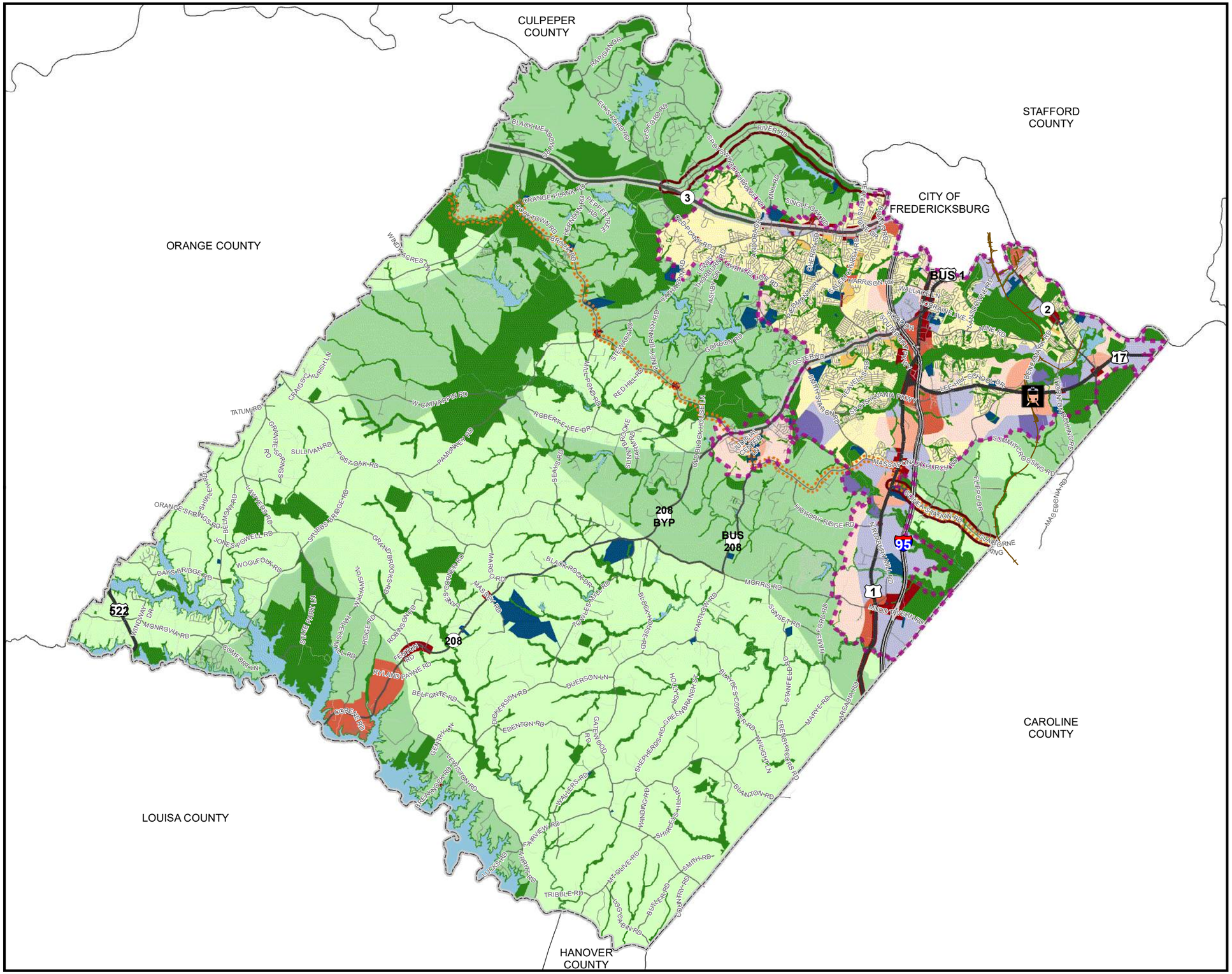
Difficult to Serve (within PDB)

County Boundary

5 Miles

SPOTSYLVANIA COUNTY FUTURE LAND USE MAP

NORTH



Legend

- VRE Station (Rail)
- Rail Corridor
- Primary Development Boundary

Land Use Description

- Scenic Byway
- Scenic Road
- Civil War Trail
- Agricultural and Forestral
- Commercial
- Employment Center Heavy
- Employment Center Light
- High Density Residential
- Institutional
- Low Density Residential
- Mixed Use Commercial Heavy
- Mixed Use General
- Mixed Use Light
- Open Space
- Rural
- Water

Map Approved: December 14, 2021

SPOTSYLVANIA COUNTY FUTURE LAND USE MAP- PRIMARY DEVELOPMENT AREA

NORTH

CITY OF FREDERICKSBURG

STAFFORD COUNTY

CAROLINE COUNTY

Legend

- VRE Station (Rail)
- Rail Corridor
- Primary Development Boundary

Land Use Description

- Scenic Byway
- Scenic Road
- Civil War Trail
- Agricultural and Forestral
- Commercial
- Employment Center Heavy
- Employment Center Light
- High Density Residential
- Institutional
- Low Density Residential
- Mixed Use Commercial Heavy
- Mixed Use General
- Mixed Use Light
- Open Space
- Rural
- Water

0 1.25 2.5 5 Miles

Map Approved: December 14, 2021

Spotsylvania County Electric Transmission Corridors (150 kV and higher)

Legend

- Transmission Line
- County Boundary

0 1.25 2.5 5 Miles

Map Approved: December 14, 2021

Chapter 3

TRANSPORTATION & THOROUGHFARE PLAN

INTRODUCTION

The Transportation Plan

The purposes of this Transportation Plan (Plan) are to identify Spotsylvania County's future transportation needs, serve as a resource for the County's citizens and the development community, and provide a base for the development and implementation of local, regional and statewide transportation plans. It is the intent of this Plan to provide a comprehensive examination of the existing transportation network and appurtenant facilities. This Plan seeks to maintain an efficient transportation system utilizing available and expected resources. The overarching goal of this Plan is to maintain functional and effective transportation systems that keep pace with growth in the future. This Plan provides guidance for shaping the future of transportation in Spotsylvania County.

The Thoroughfare Plan

The recommendations for improvements to the road network in Spotsylvania County as set forth in this Plan consist of several new facilities and the need for improvements to existing facilities. The Plan has a horizon year of 2040. With traffic volumes consistently on the increase locally, the improvement and maintenance of the existing network is of utmost importance, while new facilities will be needed in order to provide capacity for future traffic volumes and increase connectivity. New roads can have a positive impact on existing roads stressed by traffic volumes without adequate capacity by providing a "pressure relief" to better distribute traffic and provide alternative routes for traffic movement. For identified new "concept roads" it is important to note that depicted alignments are conceptual in nature and that no engineering to determine the optimal location has taken place.

Improvements to existing roads are meant to address level of service deficiencies resulting from increasing traffic volumes conflicting with existing road capacity. These tend to result in necessity for addition of new lanes through road widening and intersection improvement projects. Additionally, where capacity isn't being addressed in the form of road widening projects, safety improvements have been targeted along a number of roads, especially outside of the Primary Development Boundary (intended for rural, agricultural and forestal uses and character) in instances where roads would benefit from realignment, more generous travel lane widths and shoulder improvements. As populations grow county-wide it is important to recognize the importance of improved roadways even if capacity isn't necessarily being expanded. Many of these rural roads are also traversed with truck traffic from local timbering operations, agricultural machinery, and towed boat traffic in the area of Lake Anna.

Road corridor based transportation alternatives are addressed as part of the Thoroughfare Plan planned widening and improvement projects as a means to reduce road based demands by including provision of bicycle and pedestrian friendly transportation routes. The Trailways Master

Plan located in Chapter 3A serves as a master plan for bicycle and pedestrian based transportation alternatives. The Trailways Master Plan also directly corresponds to provision of recreational trails considering parks and recreation level of service standards as established in Chapter 4.

The recommended improvements including new concept roads, roadway, interchange and intersection improvements are shown on The Thoroughfare Plan Map with a description of each improvement listed in The Thoroughfare Plan - Project List. Both appear within this Chapter.

Thoroughfare Plan Project Prioritization

Complementary to this Comprehensive Plan update, within the last two years the County Thoroughfare Plan projects have been input into a prioritization scoring list that consider multiple factors as described below.

The prioritization method was developed by Kimley-Horn and Associates for FAMPO initially in 2008 to score projects in the FAMPO Long Range Transportation Plan, the methodology is based the collective experience of other Metropolitan Planning Organizations and localities.

Projects are ranked based on six (6) categories. The categories are;

- Congestion
- Safety
- Environmental Impacts
- Public Support
- Implementation
- Smart Growth

Points are assigned to each of the categories to obtain a total score. The score is weighted with the primary emphasis on two categories; Congestion and Safety. These two categories make up 60% of the total number of points a project can achieve. A perfect score is 100 points.

Congestion scoring is based on the Spotsylvania County Travel Forecasting Model which determines Level of Service based on the following Volume/Capacity Relationship (See Table 1 below). The lower the volume/capacity that is achieved with the improvement, the greater the number of points assigned.

Table 1: Level of Service Volume/Capacity Relationship

Facility Type	A	B	C	D	E	F
Freeway Ramp	< 0.26	0.27-0.42	0.43-0.63	0.64-0.79	0.80-1.00	> 1.00
Multi-lane Arterials	< 0.28	0.29-0.47	0.48-0.66	0.67-0.79	0.80-1.00	> 1.00
2-lane Arterials	< 0.05	0.06-0.17	0.18-0.32	0.33-0.48	0.49-0.91	> 0.92
Collectors, Local Roads						

Safety is scored and based on a projects ability to mitigate geometric deficiencies such as horizontal and vertical alignment, inadequate width or shoulders, or sharp curves and on its crash rate.

The remaining points are assigned to the project based on environmental impacts; whether it impacts wetlands, historical or archaeological sites or the neighborhood community in general, Public/community support; whether the project has local, regional or national support, funding; whether dollars have been assigned to the project or some plans are available; and Smart Growth; whether the project provides intermodal access and promotes sustainable growth. These four factors make up the other 40% of the projects score.

A complete summary of FAMPO's Highway Project Prioritization Methodology can be found **HERE**.

In Spotsylvania County, the prioritization schedule has been broken into two unique project lists identifying top tier prioritization for road projects within the Primary Development Boundary, and identification of top tier projects outside of the Primary Development Boundary. Considerate of the County's large rural areas and rural populations the two tier prioritization system is aimed at drawing a distinction between rural needs and more urbanized area needs. Considered together, often times rural road needs appear subordinate to road needs within more urbanized areas within the Primary Development Boundary resulting in identified rural roads projects appearing continuously throughout numerous Thoroughfare Plan update cycles without any implementation. The prioritization methodology intends to better highlight top tier rural roads needs instead of "burying" them amongst the high priority needs within urbanized areas where traffic volumes, levels of service and population density drive warrant for such improvements. As opposed to the Primary Development Boundary where road improvements tend to have multiple focuses including safety and maintaining level of service standards due to capacity issues, the rural roads projects in many cases are not aimed at capacity enhancements but tend to be more focused on safety related improvements such as wider travel lanes (more leeway for large vehicles), added shoulders, straightening curves, better sight distances. For instance, identified road improvements and intersection improvements along Lawyers Road near Lake Anna have been chiefly aimed at addressing safety issues in that area.

Transportation project scoring and prioritization helps focus implementation and fundraising efforts to address projects of most need and then moving on to next need projects. For reference only, a copy of the prioritization tables as of September 2019 have been included in the Appendices, specifically Appendix B. It is good to note that these tables are not intended to remain static within the planning period and are subject to potential change. The tables are working documents to be used outside of the Comprehensive Plan. Amendments to the prioritization tables such as acknowledgement of acquired funding that results in scoring amendments are not intended to require a Comprehensive Plan amendment. As noted above, they have been placed as a reference resource only within this Plan. The prioritization tables include details concerning funding status as well (through September 2019).

CODE OF VIRGINIA REQUIREMENTS

The Code of Virginia requires the study of transportation needs and their incorporation in comprehensive plans. Section 15.2.2223 requires coordination of plan amendments that will substantially affect transportation on state controlled highways with the Virginia Department of Transportation. Following staff review and update and work sessions held with the County Transportation Committee and Planning Commission, the draft Transportation Plan was routed to the VDOT Fredericksburg District Office for review in September, 2019. Following the initial VDOT review and County submittal of revisions on December 20, 2019, the VDOT-Fredericksburg District finalized their review with no additional comments, on March 25, 2020. On January 4, 2021 no issues were identified regarding proposed additional revisions to the Thoroughfare Plan map and table and Trailways Plan maps.

Section 15.2-2223 stipulates that the Plan shall designate the "general or approximate location, character, and extent of each feature, including any road improvement and any transportation improvement". It requires that each locality develop a transportation plan that "designates a system of transportation infrastructure needs and recommendations that include the destination of new and expanded transportation facilities and that support the planned development of the territory covered by the plan." The transportation resources may include roadways, pedestrian and bicycle facilities, railways, bridges, waterways, airports, and public transportation. The code requires that maps of improvements and costs accompany the plan, and that the plan be consistent with the Commonwealth's Statewide Transportation Plan and the Six-Year Improvement Program. Section 15.2-2224 requires the study and documentation of road and other transportation improvements and their cost. Section 15.2-2232 requires that corridors of statewide significance are shown in the plan. The section also states that the plan shall control the general or approximate location of transportation facilities and that no street or connection to an existing street shall be constructed, established, or authorized unless it is shown on the plan or has been approved by the Planning Commission as being substantially in accord with the adopted Comprehensive Plan.

RELATIONSHIP TO STATE AND REGIONAL PLANS

The results of the 1990 Census of Population led to the designation of the greater Fredericksburg area as an Urbanized Area by the Census Bureau. With this status came the federal requirements for a 3-C (continuing, comprehensive, and cooperative) transportation planning process and the establishment of the Fredericksburg Area Metropolitan Planning Organization (FAMPO). In order to receive federal funding for eligible projects the local governments of Spotsylvania, Stafford and the City of Fredericksburg must work together as the MPO to carry out transportation planning activities. The MPO is part of the George Washington Region (GW Region), including Spotsylvania, Stafford, King George, and Caroline County and the City of Fredericksburg. The Commonwealth of Virginia and the Federal Government play significant roles in determining whether or not the

region's transportation network is adequate to meet current or future conditions and funding of identified needs based on those conditions.

There are a number of transportation plans for Spotsylvania County, the FAMPO region, and the Commonwealth of Virginia. The various plans are: VTrans2040: An Update to Virginia's Multimodal Long-Range Transportation Policy Plan, 2035 Virginia Surface Transportation Plan, Virginia Statewide Rail Plan, the FAMPO 2045 Long Range Transportation Plan (LRTP), FAMPO Transportation Improvement Program (TIP), the Six-Year Improvement Program (SYIP) for Interstates and Primaries (SYIP), and the Secondary Six-Year Plan. Each of these plans is a subset of this Transportation Plan. As each of these plans are revised, the Spotsylvania County Thoroughfare Plan (located within the Transportation Element of the Comprehensive Plan) will serve as the Plan from which projects are prioritized, selected and moved to the funding stage of development.

The VTrans2040 plan and Six-Year plans are available for review **HERE**. While not all of the transportation projects identified within the Six-Year Improvement Program are individually noted in this Comprehensive Plan, the Plan is consistent with those projects on the SYIP, available **HERE**. The FAMPO plans referenced above are available for review **HERE**.

Specific transportation improvement plans and studies are identified below. These plans have been incorporated by reference as an integral part of the Transportation Plan.

Corridor Studies and Project Implementation

VDOT and FAMPO maintain active online resources for tracking local and regional transportation projects and studies, and their details. Fredericksburg regional projects, searchable by status and locality through the VDOT website can be found **HERE.** The FAMPO link to major projects summaries can be found **HERE.** FAMPO Transportation Study information is **HERE.** The Spotsylvania County Transportation webpage includes links to various Transportation Programs, Studies and Documents as well as a link to the VDOT Statewide Road Projects Map, **HERE.** These resources show efforts underway to improve the local transportation system.

Lafayette Boulevard Corridor Study

An initial study was completed in October, 2009 by FAMPO, the corridor study focused on major highway improvements to the Lafayette Boulevard (U.S. Route 1 Business) corridor between U.S. Route 1 in Spotsylvania and Sophia Street in Fredericksburg. It documents existing conditions, provides recommendations, and identifies a plan for implementing corridor improvements consistent with the Thoroughfare Plan and Pedestrian accommodations. In early 2019, FAMPO initiated the Lafayette Boulevard Multimodal Study to look at lower cost highway and transit improvements and bicycle/pedestrian improvements for the same Lafayette Boulevard corridor area covered in the initial. Results for the transit and bicycle/pedestrian component of this study effort are expected by January, 2020 and the highway component for the study is expected by Spring, 2020.

I-95 Jackson Gateway Access Study

In December, 2008 the Fredericksburg Area Metropolitan Planning Organization (FAMPO) established a technical study work group composed of representatives from the Federal Highway Administration (FHWA), VDOT, Spotsylvania County, FAMPO, and Kimley-Horn with the goal to improve traffic safety and operations on the Interstate 95 mainline, interstate ramps, and intersecting arterial roadways such as US 1 and US 17. The group evaluated fourteen possible alternatives that were separated into three categories: a single interchange, a new interchange, and a split interchange. From these, a preferred alternative was selected and an Interchange Modification Report (IMR) was developed. The preferred alternative was selected because it was compatible with the Spotsylvania County Comprehensive Plan, demonstrated the highest capacity and lowest amount of congestion, had less impact on existing and future businesses, and was estimated at the lowest construction cost.

I-95 Exit 126 Interchange Modification Report (IMR) and Planning Study

In 2014, Kimley-Horn prepared an Interchange Modification Report (IMR) for the I-95 Exit 126 interchange in partnership with FAMPO, Spotsylvania County, VDOT, and the Federal Highway Administration (FHWA). The study included key information concerning traffic growth assumptions and future trip generation from four new large developments; Southpoint Landing, Heritage Woods, Jackson Village, and Alexander's Crossing. Three alternatives were developed.

These included; alternative 1 (deceleration lanes and new off-ramp lanes on I-95 and dual left-turn lanes at the off-ramp and US 1), alternative 2 (a new one-lane I-95 southbound off ramp referred to as the J-Ramp) and alternative 3 (which include all of alternative 1 and dual free-flow right turn lanes at the off-ramp and US 1, and an additional southbound through lane on US 1).

US 1 Corridor Study

As of September, 2019, VDOT has been working with consultants to develop a framework for the US 1 Corridor Study within Spotsylvania County. With a 2030 design year assumption, the goals of the Study include: access management improvements (consolidation of access points, traffic movement restrictions); safety; traffic operations (intersection operational improvements); incident management (I-95 relief valve). Study deliverables are expected in 2020 and are intended to outline improvements that may eventually be incorporated into the Spotsylvania County Comprehensive Plan's Transportation Element. The geographic focus of the study is the US 1 Corridor extending from Commonwealth Drive to the Caroline County line. This is an area of the County that has been chiefly been identified for mixed use and employment center development. Part of the study area extending along Route 1 from Massaponax to Thornburg is known as the "Jackson Gateway". "Jackson Gateway", this area of the Route 1 Corridor has been envisioned as an "economic driver" for the County in the future. This Study is well timed in that the full potential of the Jackson Gateway area has not yet been realized. Many areas remain undeveloped or underdeveloped along the corridor presently. This study proactively plans for the necessary improvements along the corridor that will ultimately complement business attraction and retention to the area going forward. County Planning staff expects that any recommended projects resulting from the Study would be incorporated into the Comprehensive Plan as a Transportation Element Specific Comprehensive Plan amendment within the coming years, or as part of the next five-year update cycle.

Route 3 Arterial Management Plan

The Route 3 Arterial Management Plan dated April 11, 2016 consists of an approximate 9.6 mile corridor section of Route 3 from Gordon Road (626) to Route 20. The study details access management standards for development along Route 3, signalization, cross-over closings, and cross-over improvements to enhance safety and traffic flow. The improvements would be triggered by development along the corridor. This Plan is used as a reference document when reviewing applications for development along the corridor.

Route 606 Corridor Study

The Route 606 Corridor Study dated March 27, 2015 consists of an approximate 0.75 mile corridor section of Route 606 from the I-95 interchange to approximately 800' west of Route 1. Key areas of concern include the southbound I-95 ramp, intersections with Route 1 and Dan Bell Lane, and commercial entrances. The study includes access management standards to ensure traffic flows

safely and efficiently between I-95 and Route 1 and includes a roundabout and divided roadway plan.

Massaponax Corridor Study

In August, 2006 the Board of Supervisors authorized the hiring of the firm of Michael Baker, Inc. to perform a Corridor Study which included the area of Jefferson Davis Highway (Route 1) and Interstate 95 with the Harrison Road intersection as the northern limit of the study and the Morris/Mudd Tavern Road intersection as the southern limit. The study area also included Mills Drive (Route 17).

The study evaluated existing and future conditions at intersections within the study area and developed alternatives to address needed improvements within the corridor. These included details on traffic signal spacing, locations of limited access routes, limits, and typical road sections for four, six, and eight lane sections of Route 1 to accommodate build out of the proposed land use plan.

In addition to these tasks, the study also evaluated improvements to both the 126 Interchange in Massaponax and the 118 interchange in Thornburg. The study investigated the feasibility of a new interchange (Jackson Gateway Interchange) between the two existing interchanges taking into consideration the planned hospital (at the time) and at the same time minimizing impacts to wetlands and existing development. Many of the recommendations resulting from the Massaponax Corridor Study have progressed over time to result in substantive projects pursued for implementation. The Study envisioned a number of improvements that were included in the County Thoroughfare Plan and have since progressed, including:

- Spotsylvania Exit 126 Interchange reconstruction concept design
- A new connector road linking Route 1 to Route 17
- Thornburg Exit 118 Interchange replacement
- New connector road linking Spotsylvania Avenue to Germanna Point Drive

It is good to acknowledge that some of the design and alignment details have changed over time as land use and development changes have occurred since the Study's release. Factors such as engineering, cost, land use and development change, design alternatives, project support all impact the ultimate "real world" project that results. The Study still merits mention as a fundamental guiding source of recommended transportation improvements for the Interstate 95 and Route 1 corridor from which planned, implemented, and for future implementation projects have their roots.

The Massaponax Corridor Study is dated September, 2007.

Route 1 & 208 Corridor Study

The corridor study dated December, 2018 was a comprehensive evaluation of Route 1 & 208 to account for the growth in the area and improve the mobility and safety of all road users. The study focused on Routes 1 and 208 within the context of the broader land corridor bounded by two limited access roadways, I-95 (to the east), and Route 17 (to the south). A total of nine (9) intersections were evaluated: Route. 17 and Germanna Point Drive; Spotsylvania Avenue and Market Street; Route 1 and Market Street; Spotsylvania Avenue and Mine Road; Route 1 and Mine Rd/Hood Drive; Route 208 and Hood Drive; Route 208 and Southpoint Parkway/Rollingwood Drive; Route 1 and Courthouse Road/Lafayette Boulevard; and Lafayette Boulevard and Falcon Drive/Mall Drive. The study included the evaluation of a possible roadway connection between Germanna Point Drive and Spotsylvania Avenue. It assessed the potential for reducing congestion on Route 1, and provided conceptual plans, cost estimates, and environmental assessments. The study was funded in part through the Virginia Department of Transportation (VDOT) Revenue Sharing Program.

Route 2 & 17 Corridor Study

The corridor study dated December, 2018 was a comprehensive evaluation of Business Route 2 & 17 from the Caroline County Line to the City of Fredericksburg. It examined opportunities for accommodating future growth, addressing current traffic congestion and mobility, and potential opportunities to improve safety. It provided opportunities to maximize alternate modes of transportation and provide more efficient routes for local circulation. The study also addressed the feasibility of connecting two Industrial Parks within the City of Fredericksburg and the County. The focus of the study was on the Route 2 & 17 roadway within the context of the broader land corridor bounded by the Rappahannock River (to the east) and the CSX railroad (to the west). The study included an evaluation of the six (6) signalized intersection on Route 2/17, Benchmark Road and the intersection of Lansdowne Road and Shannon Park. The study was funded in part through the Virginia Department of Transportation (VDOT) Revenue Sharing Program.

VDOT STARS Study: I-95 Northbound at Exit 126

The purpose of this study is to identify improvements at the Route 1 and Interstate 95 interchange that will mitigate existing congestion and safety issues. The study was prepared by Kimley-Horn and delivered in final form in July, 2018.

The goals of the STARS (Strategically Targeted and Affordable Roadway Solutions) Program are to develop comprehensive, innovative transportation improvements to relieve congestion bottlenecks and create projects that improve critical traffic and safety challenges to be programmed in the VDOT Six-Year Improvement Program.

The report documents the existing and future conditions, the alternatives analyzed, and the preferred alternative, the planning level cost estimate, and preliminary conceptual design.

This project was conducted in two phases: 1) design concept development to specifically determine if a second northbound Route 1 left-turn lane could be constructed under the I-95

bridge at the northbound I-95 signalized intersection, and 2) traffic analysis to document the future year no-build and build results within the study area, primarily focusing on the Rt. 1 at I-95 ramp signalized intersection.

VDOT STARS Study: Route 1 Corridor Study from Mine Road to Market Street

This section of roadway is heavily congested and contains the greatest number of crashes along Jefferson Davis Highway (US Route 1). It experiences an annual average growth rate of 2%. The approximately 0.9- mile study corridor is comprised of two (2) signalized intersections and one non-signalized intersection. As a Corridor of Statewide Significance (CoSS) and part of the National Highway System (NHS) this corridor plays an important role in incident management along the 1-95 corridor. The purpose of the study is to identify operational and safety improvements along the corridor.

Under the supported Alternative 2 scenario, results of the study would result in intersection improvements at the intersection of Route 1 and Mine Road, "Connector Road" (Part of Market Street Extended) and Hood Drive intersection, and a new intersection of a proposed "Connector Road" extending from Hood Drive to the Route 1 intersection.

VDOT Interstate 95 Corridor Improvement Plan Study

In 2019, VDOT conducted a study of potential I-95 improvements for the approximately 180 miles stretch of I-95 in Virginia. This study primarily focused on mainline improvements and interchange safety improvements that benefit I-95 mainline traffic operations and multimodal improvements, e.g., transit, vanpools, commuter parking, and TDM. The study did not consider new interchanges or modifications to existing interchanges which do not benefit I-95 mainline traffic operations. The study results will be used to prioritize I-81 Bill interstate funding that will become available for the I-95 corridor by late 2020. Spotsylvania's stretch of I-95 is included in the State's I-81 Bill I-95 segment from the Prince William County line to the North Carolina line. Starting in FY-21, it is estimated that at least $40 million/annually will be available. In Spotsylvania, widening I-95 from 6 to 8 lanes between Exit 130 to Exit 126 has been identified by the study as a recommended improvement. New Commuter bus service from Massaponax to Northern Virginia/DC and new commuter parking at Exit 118 were also listed as recommended improvements.

AIR QUALITY ASSESSMENT

Transportation conformity is a way to ensure that Federal funding and approval goes to those transportation activities that are consistent with air quality goals.

Conformity applies to transportation plans, transportation improvement programs (TIPs), and projects funded or approved by the Federal Highway Administration (FHWA) or the Federal Transit Administration (FTA) in areas that do not meet or previously have not met air quality standards for ozone, carbon monoxide, particulate matter, or nitrogen dioxide.

These areas are known as “nonattainment areas” or “maintenance areas,” respectively. Regulations governing transportation conformity are found in Title 40 of the Code of Federal Regulations (40 CFR Parts 51 and 93).

In August, 2018, VDOT released a final air quality conformity analysis for the Fredericksburg Area Metropolitan Planning Organization financially constrained fiscal year 2018-2021 Transportation improvement Program and 2045 Long Range Transportation Plan. The conformity analysis was conducted for compliance with the federal transportation conformity rule (40 CFR Parts 51 and 93) and the corresponding state conformity regulation (9 VAC 5-151). The conformity assessment includes Spotsylvania County as part of the Fredericksburg region. Results of the analysis found a recommendation for a finding of conformity with all applicable requirements of the conformity rule.

Per the Virginia Department of Environmental Quality (DEQ) Section 174 of the Clean Air Act requires that areas of the Commonwealth that do not comply with ozone or fine particulate matter ($PM_{2.5}$) national ambient air quality standards (NAAQS) form lead planning organizations (LPOs). LPO members are elected officials from the localities in the nonattainment area and representatives of the Virginia Department of Transportation (VDOT), the Virginia Department of Rail and Public Transport (VDRPT), and the metropolitan planning organizations within the nonattainment area. Other people, such as private citizens and representatives of industry, military installations, and environmental groups, may also participate in the LPOs in an advisory capacity.

The purpose of the LPO in a nonattainment area is to assist in carrying out planning requirements for that area. Planning activities can include examining baseline emissions levels to determine necessary control strategies, examining transportation needs for future growth, and if necessary, creating plans for EPA review and approval to bring the area into attainment with the air quality standards. The extent of the planning requirements depends on the classification of the nonattainment area and the severity of the air pollution problem. The George Washington Air Quality Committee (GWAQC) has been established within the GW Region, including Spotsylvania County. For air quality, emissions modeling is required to be vetted in consultation with the LPO. Per FAMPO, Involvement of the VDEQ staff representative for that Committee in the local inter-agency consultation process for conformity is considered to fulfill that requirement.

The final report for the area can be found through the FAMPO website **HERE**.

Improving traffic flows and reducing traffic delays (less time on the road) through improvements to the transportation system and expanded mobility options via transportation alternatives all contribute to efforts to reduce vehicle emissions and improve air quality. Technological advancements through alternative energy sources to reduce emissions or expanded fuel efficiency also play an integral role.

TRANSPORTATION ALTERNATIVES

The principal modes of transportation within Spotsylvania County include vehicular, rail, transit, bicycle, and pedestrian. The vehicle-oriented roadway system is the most extensive transportation facility in the County by a wide margin and is directly affected by local land use decisions. The Thoroughfare Plan lists roadway improvements needed to maintain the system at acceptable levels of service. The focus of this section is on multi-modal transportation alternatives and concepts that lessen demand or increase capacity/safety of the roadway system at a relatively low cost. Provision of transportation alternatives are also critical to social equity and consideration of disadvantaged populations. Accessibility for Disadvantaged populations follows this Transportation Alternatives portion of the Transportation Plan.

In addition to addressing capacity improvements and transportation alternatives to achieve improved levels of service on County roads, AM and PM Peak hour traffic impacts are amplified locally due to significant out-commuting in the AM of County residents to employment located outside of the County, and return trips home during the PM. The US Census Bureau, 2016 American Community Survey found that nearly 62% (61.9%) of Spotsylvania County residents have employment outside their County of residence. Reduction in the prevalence of out-commuting in the County with increased employment availability within the County across a number of industries is beneficial. Reduced commute times and road miles travelled during AM and PM Peak hours would be beneficial to County residents, promote spending within the community as opposed to out of County during working hours (gasoline sales, lunches, etc.) and result in reduced burdens on local transportation infrastructure.

In 2019, the Fredericksburg Regional Alliance released an updated the Fredericksburg Region Commuter Workforce Study. The study was prepared by the University of Mary Washington Center for Business Research for the Fredericksburg Regional Alliance, George Washington Regional Commission and GO Virginia. 2019 Estimates found an estimated 83,117 people commuted outside the region in the first quarter of 2019. Of that regional total, 40,808 persons originated in Spotsylvania County. Far fewer persons commuted to Spotsylvania County from outside of the region (18,273), or commuted within the region to Spotsylvania County (22,145). The study estimates Spotsylvania County has a net loss of population who commute outside of the region on a daily working day basis of -22,535 persons. The top commuting destinations for Spotsylvania residents commuting outside of the Fredericksburg Region are most heavily directed toward northern Virginia and Washington DC. Smaller populations commute to the west and south (toward Richmond). As a whole, regionally approximately 216,848 people regularly commuted to (17.5%), outside of the region (38.3%), or within the Fredericksburg Region (44.2%). These commuting patterns put a strain on local roadways especially noticeable during peak commute times. Simply, regionally there are many vehicles on the roads all focused on commuting at similar times.

2018 estimates of commuter travel modes found overwhelmingly that commuters tend to use their own vehicles and drive alone (car, truck, or van). In Spotsylvania County, 52,379 persons drove alone to their place of employment. This was followed secondly by carpooling (8,605), public transportation (1,676), walking (426), other means (777), and lastly home based workers (2,967). As a means to reduce traffic loads on local roads, efforts to promote and expand transportation alternatives such as carpools, public transportation, walking or bicycling, and expanded locally based employment opportunities, will all help reduce local traffic burdens. Transportation efficiencies improvements including expanded use of Transportation Alternatives also reduce collective vehicle emissions with resulting improvements to air quality (smog reduction) with corresponding environmental and health benefits.

Transportation Demand Management

Transportation Demand Management (TDM) is a congestion relief strategy. The idea of TDM is to move as many people as possible through the use of techniques that minimize peak demands on the transportation system. These include alternative modes of transportation, flexible work schedules, and mixed-used development where proximity to live, work, play opportunities reduce necessity for lengthy on road travel. Those modes consist of high-occupancy-vehicle (HOV) lanes on the interstate system, ridesharing, park and ride lots, van pools, public and private transit, telecommuting, and provisions for walking and bicycling.

Investments in TDM are particularly stressed as regional needs within VTRANS 2040 where additional mode choice options and capacity and operational enhancements are necessary to reduce local traffic burdens. These TDM needs have been identified for improvements to roadways for vehicular travel, passenger rail, freight rail, bicycle and pedestrian connectivity and other transportation alternatives. Improving local transportation will not be achieved solely via continuous capacity enhancements on local roadways.

Transportation System Management

Transportation System Management (TSM) is the terminology given to represent minor improvements to the transportation system that enhance performance. TSM improvements typically consists of minor intersection and road improvements that afford a safer and more efficient road network. TSM improvements include, but are not limited to, implementation of turn lanes, acceleration/deceleration lanes, traffic signals, signal timing, intersection lighting, pavement marking, signage, horizontal/vertical grade improvements, drainage improvements, median installations, intersection realignments, roundabouts, intelligent transportation systems (ITS), and access management.

As the County continues to grow and develop, emphasis needs to be placed on identifying and implementing TSM projects that can be addressed through federal, state, and local funding. As developments occur within the County they too should address not only major transportation

improvements necessary to mitigate their impact, but also address any TSM improvements that will enhance the safety and operation of the road network directly impacted by the development.

Rail

Virginia's rail network is a valuable asset for the Commonwealth of Virginia. It provides an efficient means of moving freight and passengers both within and through the Commonwealth. By diverting freight and passenger traffic from road to rail, Virginia's rail network relieves congestion, saves lives, improves air quality, helps grow the economy, and complements the Virginia highway network while reducing capital and maintenance expenditures.

The Virginia Department of Rail and Public Transit (DRPT) compiles rail inventory, capacity, economic impacts data, and statewide rail planning as part of the Virginia Statewide Rail Plan. The Plan was last updated in 2017 and provides many additional resources considering the state of rail and rail planning in Virginia **HERE**.

Information concerning passenger and freight rail services in Spotsylvania County has been presented below. Additionally, the Spotsylvania County based Rappahannock Rail Museum has been included in this local rail profile in the interest of tourism, historic resource interpretation, and education.

Rail: Passenger Service

Commuter rail service to Northern Virginia and Washington, D.C. is provided by Virginia Rail Express (VRE), a semi-public agency. VRE is the tenth largest commuter rail agency in the U.S. and is a transportation partnership of Northern Virginia Transportation Commission and the Potomac & Rappahannock Transportation Commissions. Off Crossroads Parkway, south of U.S. Route 17 the VRE began passenger service to a new passenger rail station opened on November 16, 2015. Prior to the 2015 station opening in Spotsylvania County, the City of Fredericksburg downtown passenger rail station was the chief means of access to VRE service locally for Spotsylvania residents. The Spotsylvania station has 1,500 parking spaces for rail and commuter use, a small restroom, and a 700-foot platform with canopy. Presently the station serves VRE ridership exclusively. Since 2015, VRE boardings at the Spotsylvania Station have increased based on boarding survey data collected since station inception. Ridership has increased 17% since the Spotsylvania station opening in 2015. An October 3, 2018 survey of passenger boardings found a total of 789 passengers riding the rail from the Spotsylvania station generally between the hours of 5am and 7:30am distributed amongst eight VRE train arrivals at the station platform. The subsequent October, 2019 survey found a slight increase, up to 801 daily riders from the Spotsylvania Station.

The Spotsylvania Station is the southernmost station on the VRE system. The system serves points north, including the City of Fredericksburg, northern Virginia and Washington DC. Destinations served and the 2019 VRE schedule can be found in Table 2 below. This has been included for reference only and is subject to potentially change through the planning period.

Table 2: VRE Service Schedule

VRE Service Fredericksburg Line

← →

Train Number	Spotsylvania	Fredericksburg	Leeland Road	Brooke	Quantico	Rippon	Woodbridge	Lorton	Franconia / Springfield	Alexandria	Crystal City	L'Enfant	Union Station
300	4:54 a.m.	5:05 a.m.	5:12 a.m.	5:18 a.m.			5:40 a.m.			6:07 a.m.	6:16 a.m.	6:24 a.m.	6:32 a.m.
302 S	5:04 a.m.	5:15 a.m.	5:22 a.m.	5:28 a.m.	5:40 a.m.	5:49 a.m.	5:56 a.m.	6:03 a.m.	6:11 a.m.	6:23 a.m.	6:32 a.m.	6:40 a.m.	6:48 a.m.
304	5:20 a.m.	5:31 a.m.	5:38 a.m.	5:44 a.m.	5:56 a.m.	6:05 a.m.	6:12 a.m.	6:19 a.m.	6:27 a.m.	6:39 a.m.	6:48 a.m.	6:56 a.m.	7:04 a.m.
306 S	5:34 a.m.	5:45 a.m.	5:52 a.m.	5:58 a.m.	6:10 a.m.	6:19 a.m.	6:26 a.m.	6:33 a.m.	6:41 a.m.	6:53 a.m.	7:02 a.m.	7:10 a.m.	7:18 a.m.
308	6:00 a.m.	6:11 a.m.	6:18 a.m.	6:24 a.m.	6:36 a.m.	6:45 a.m.	6:52 a.m.	6:59 a.m.	7:07 a.m.	7:19 a.m.	7:28 a.m.	7:36 a.m.	7:44 a.m.
310 SB	6:20 a.m.	6:31 a.m.	6:38 a.m.	6:44 a.m.	6:56 a.m.	7:05 a.m.	7:12 a.m.	7:19 a.m.	7:27 a.m.	7:39 a.m.	7:48 a.m.	7:56 a.m.	8:04 a.m.
312 B	7:05 a.m.	7:16 a.m.	7:23 a.m.	7:29 a.m.	7:41 a.m.	7:50 a.m.	7:57 a.m.	8:04 a.m.	8:12 a.m.	8:24 a.m.	8:33 a.m.	8:41 a.m.	8:49 a.m.
314 SB	7:33 a.m.	7:44 a.m.	7:51 a.m.	7:57 a.m.	8:09 a.m.	8:18 a.m.	8:25 a.m.	8:32 a.m.	8:40 a.m.	8:52 a.m.	9:01 a.m.	9:09 a.m.	9:17 a.m.

S Special schedules for holidays and snow days.

Recognizing the potential draw of a new passenger rail station in Spotsylvania County along with historic trends of a large resident population commuting north for employment opportunities in northern Virginia and Washington, DC, the County identified the rail station area as well suited for higher density, higher intensity development with a mixed land use designation. This land use designation in the Crossroads area first appeared in the 2008 Comprehensive Plan and has been maintained in the spirit of creating a transit oriented development for easy access for VRE commuter trains. The area has nearby Fire/Rescue services with the recently opened Station 11 along Crossroads Parkway. Higher density residential and mixed use developments have been approved via rezoning in proximity to the Rail Station, consistent with the land use designations in the area including Crossroads Station (Rezoning R11-0004 incl. commercial and apartment development); Wheatland Townhomes (Rezoning R14-0007 incl. 105 SFA Units). Eventually, as the area grows and accessibility from the station is enhanced, the County may well benefit from a more two-way service that would bring travelers to the County for work opportunities and travel/ tourism opportunities.

Image 2: VRE Passenger Service Train at the Crossroads VRE Station

VRE also operates a maintenance and storage yard within Spotsylvania County off Crossroads Parkway just south of the VRE Station. The Spotsylvania maintenance yard for the VRE line is located just south of the Commuter rail station. The facility was recently expanded to include a new storage track and a 33,000 square foot addition to the Service and Inspection building. See Image 3 below.

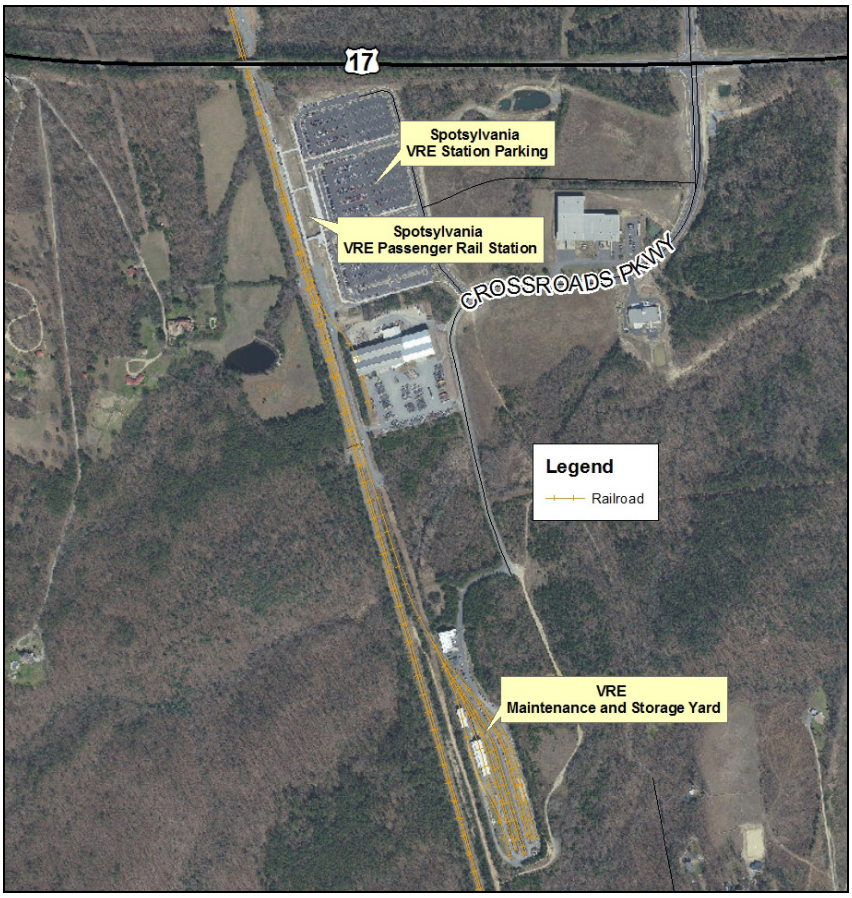


Image 3: Spotsylvania County VRE Operations

AMTRAK service traverses the County and provides additional rail passenger transportation options for passengers within the region with access up and down the east coast and through the entire national AMTRAK system. Within the region, AMTRAK service is available exclusively through Fredericksburg's downtown passenger rail station. VRE and AMTRAK share tracks owned and operated by freight rail carrier CSX Transportation, one of two Class I freight railroads in Virginia.

To address corridor congestion resulting from shared freight and passenger rail services, VRE, CSX and the Virginia Department of Rail and Public Transportation (DRPT) constructed a third track between Crossroads Parkway and Mine Road in Spotsylvania County to more efficiently accommodate passenger and freight rail traffic in the rail corridor, known as the Richmond, Fredericksburg and Potomac Rail (RF&P) Corridor within the region. VRE's long range plan includes completing triple tracking of the CSX main line between Spotsylvania and Alexandria and expanding service with additional peak and mid-day service.

RF&P Rail Corridor enhancements including addition of additional capacity via construction of a third track through the County complements efforts to further enhance passenger rail services along the east coast by adding High Speed Rail as part of the Washington, DC to Richmond

Southeast High Speed Rail project (known as DC2RVA) whose project partners include the Virginia Department of Rail and Public Transit, U.S. Department of Transportation, Federal Railroad Administration. According to the DC2RVA team, increased congestion and demands on the rail corridor are linked to population growth, freight growth, Interstate 95 congestion driving additional rail demand, air travel congestion, limited existing capacity in the corridor infrastructure, opportunity to expand and enhance TDM alternatives, and air quality benefits.

According to the project partners leading the high speed rail initiatives, across the Country, the U.S. Department of Transportation has designated 10 high speed rail corridors in addition to the Northeast Corridor. The Washington, D.C. to Richmond project is the critical link connecting two high speed rail corridors on the East Coast, which are:

- **Washington, D.C. – Richmond, VA – Charlotte, NC**: In 1992 the U.S. Department of Transportation designated the Southeast High Speed Rail Corridor connecting Charlotte, NC, Richmond, VA, and Washington, D.C. This corridor designation has been extended south to Northern FL through subsequent actions of the Department.

- **Boston – New York – Washington, DC:** The Northeast Corridor is the only high speed rail service at present in the U.S. It is also the busiest passenger rail line in the U.S. by ridership and service frequency. Amtrak operates a 150 mph train service known as "Acela" in this corridor.

The Purpose of the DC2RVA project is to increase the capacity between Washington, D.C. and Richmond to deliver higher speed passenger rail, improve conventional speed passenger rail, expand commuter rail, and accommodate growth of freight rail service in an efficient and reliable multimodal rail corridor. This Project will enable passenger rail to be a competitive transportation choice for intercity travelers between Washington, D.C. and Richmond and beyond. The Project extends 123 miles along an existing rail corridor owned by CSX Transportation from the Long Bridge in Arlington, VA, to Centralia, VA in Chesterfield County, south of Richmond. DRPT has recommended specific rail infrastructure improvements and service upgrades to deliver higher speed passenger rail, improve conventional speed passenger service, expand commuter rail, and accommodate growth of freight rail service in the corridor. These recommendations are subject to review and approval by the Federal Railroad Administration (FRA) and the Commonwealth Transportation Board (CTB).

In May, 2019, the US Department of Transportation, Federal Railroad Administration and the Virginia Department of Rail and Public Transportation issued the Tier II Final Environmental Impact Statement and Final Section 4(f) Evaluation concerning the DC2RVA project. For Spotsylvania County, recommendations result in expanded capacity along the existing RF&P Corridor. Third track rail capacity expansion improvements are already in place in Spotsylvania County between the County line with the City of Fredericksburg to the Crossroads VRE station in Spotsylvania County. Plans would extend the third rail south beyond the Spotsylvania Crossroads VRE station. Capacity improvements would result in no changes to the Spotsylvania Crossroads VRE station.

The Washington to Richmond segment will provide the critical link between the Northeast Corridor and the rest of the Southeast High Speed Rail Corridor. Spotsylvania County and its

citizens have been involved in review and comment concerning service and alternatives throughout the Environmental Impact Statement process. For more information regarding the DC to Richmond Southeast High Speed Rail project, visit the project website **HERE**.

Prospects for passenger rail service were greatly expanded in December, 2019 with the announcement of Virginia's acquisition of 350 miles of rail right-of-way, 225 miles of track and intended construction of a new Long Bridge over the Potomac River, adding capacity to the current Long Bridge that operates at 98% capacity during peak hours. The new Long Bridge will include dedicated tracks for passenger rail service. Presently passenger rail is shared and subordinate to freight rail along the corridor. Additional rail capacity will be added in northern Virginia. Announced changes to the rail corridor within the next ten (10) years include doubling Amtrak train service through Virginia, hourly Amtrak service between Richmond and Washington D.C., and expanding VRE service by 75% along the I-95 corridor with added weekend service (including the VRE's Fredericksburg Line). Service frequency along VRE's Fredericksburg Line (including the Spotsylvania VRE Station) is expected to increase from eight to thirteen round trips on weekdays by 2030. Weekend VRE service is initially projected to include a minimum of two northbound trains originating at the Spotsylvania station with two return trips in the afternoon or evening. The capacity and service enhancements have been projected to remove 5 million cars and 1 million trucks from Virginia highways annually. These improvements are expected to greatly enhance both interstate and intrastate passenger rail service and should further boost Spotsylvania's Crossroads VRE area mixed use node (per the future land use map).

Rail: Freight Service

Freight rail offers a number of benefits to the transportation system including but not limited to: fuel efficiency and emissions versus truck traffic; ability to move large quantities of goods from ports and distribution hubs to market; avoided truck trips along road corridors resulting in reduced traffic volumes and wear and tear upon roadways.

Spotsylvania County's RF&P Rail Corridor is part of a significant freight and passenger rail route along the east coast of the United States. The corridor has been experiencing increasing demands and rail traffic volumes. As noted prior, the rail corridor serves a dual use for passenger train and freight rail transportation. According to the Virginia DRPT, demand for freight movement through and within the corridor is growing as economic activity and population increase. Ongoing expansion of Virginia's deep water ports, rail-dependent industries, and intermodal facilities further increases the need for efficient shipment of freight. According to the Virginia DRPT's 2017 Virginia Statewide Rail Plan, the mining and extraction industry sector has been the leading source of freight tonnage in the Virginia freight rail system however the sector is not projected to grow through 2040. Agriculture and manufactured goods however are expected to nearly double their tonnage in all freight movements through 2040.

Table 3: 2017 DRPT Virginia Railway Plan RF&P Corridor Summary

Subdivision:	RF&P Subdivision
Owner	CSX
Operator	CSX
Line Heritage	Richmond, Fredericksburg & Potomac Railroad (RF&P)
Subdivision Route / Mileage	Washington, District of Columbia-Greendale (Richmond), Virginia; 109 miles
FRA Track Class	Class 4
Track Configuration	2-4 main tracks
Maximum Authorized Speed Freight	40-60 mph freight
Maximum Authorized Speed Passenger	70 mph passenger
Wayside Signals	Centralized Traffic Control (CTC) and Automatic Train Control (ATC)
Method of Operation	Centralized Traffic Control (CTC) and Automatic Train Control (ATC)
Maximum Allowable Gross Weight	286,000 lbs.
Clearances	Cleared for trailers (TOFC), double-stacks (COFC), and autorack railcars (20' 2" Above Top of Rail)
Current Traffic Density (2015) in Million Gross Tons	116 MGT
Average Number of Trains per Day	47.1
Train Types	• Intermodal, general manifest, and bulk freight trains • Amtrak long-distance and intercity passenger trains • Virginia Railway Express commuter trains
Industrial Leads	Dahlgren Branch: Dahlgren Junction-Sealston, Virginia; approximately 10 miles; 286,000 lbs. maximum allowable gross weight
FRA Excepted Track	N/A

The extent of freight rail service and rail side accessibility within Spotsylvania County is limited as Spotsylvania County does not have an extensive network of rail traversing the County. CSX is the only freight rail operator in the County operating along a single rail corridor in the northeastern corner of the County. The rail corridor within the County extending from the City of Fredericksburg line to the Caroline County line is approximately 9 miles in length of which approximately 5.7 miles are located within the County's designated Primary Development Boundary. Within the Primary Development Boundary staff notes large stretches of the rail corridor have already been developed, are bordered by protected Civil War Battlefield lands by the National Park Service (Fredericksburg Battlefield) and Civil War Preservation Trust (Slaughter Pen Farm), or limited by significant natural resources including wetlands, steep slopes, resource protection areas. From a land use perspective, the areas within the Primary Development Boundary are where higher intensity uses including industry and distribution centers are envisioned. Some of these industrial and distribution prospects may require or benefit from rail service as part of their site selection process as a necessary element of their manufacturing and distribution chain. The Spotsylvania

Department of Economic Development has confirmed that rail served sites are not often sought locally by economic development prospects but they do occur on occasion and represent very real opportunities for economic development and local employment benefits as well as tax revenue generation and positive spin off economic activity within the community. Considering the prospect of freight rail and economic development prospects, the mapped Exhibit 1 below was created to identify all parcels of 50 or more acres located within 1/4th and 1/2 mile of the rail corridor or rail spurs not already built out or protected via conservation easement or preservation ownership. The analysis shows the land inventory in relation to the 2013 adopted Primary Development Boundary.

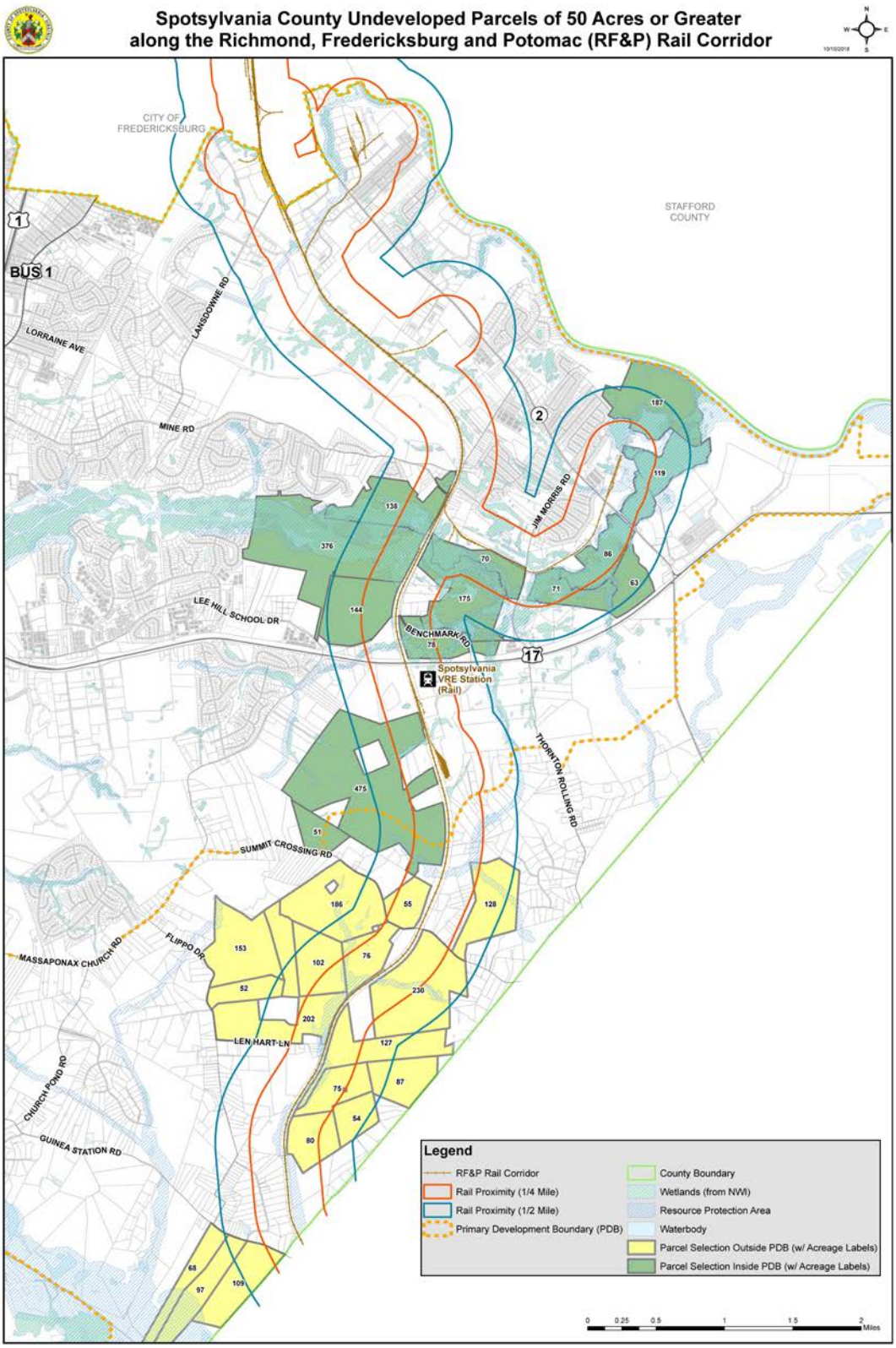


Exhibit 1: Large Parcels in Proximity to Rail Corridor

Presently four rail spurs provide feeder rail into the mainline rail corridor within the County, including: (1) Bowman Center Spur serving industrial center users and the Rappahannock Railroad Museum; (2) Shannon Drive, serving industrial property; (3) Urban Systems Development Property (former General Motors Plant), including idX Virginia plant; (4) Ruffins Pond spur serving Culpeper Wood Preservers. Within the planning period, two of the four rail spurs may to scale back in usage or cease to exist as viable rail spurs due to development impacts or land use trend changes in immediate proximity to the spurs. Tentative plans for development of the "back 40 acres" behind the idX Virginia plant would shorten the rail spur and shifts in land use around the Bowman Center appear to be reducing rail viability there. Such reductions further limit the inventory of sites available for rail ready service.

Rail: History, Education and Interpretation

The Rappahannock Rail Museum (RRM) is located at 11700 Main Street in the Bowman Center off Routes 2/17. The RRM provides railroad-related education to the public, including information about railroad lines and related events in the region, as well as the preservation of historical railroad equipment in the greater Spotsylvania and Fredericksburg areas. The Spotsylvania County Department of Economic Development and Tourism confirms this is a popular tourism destination for the County. Visitors are welcome to tour the museum Saturdays from 9 a.m. to noon. From Mid-March through October (and other Saturdays weather permitting), visitors are welcomed aboard the maintenance of way train ("little yellow train") for short rail excursions to not only learn, but experience how rail workers in the mid 1900's commuter to work sites. All train rides are subject to crew availability, weather, commercial rail activity and other factors beyond RRM's control. The RRM is supported solely through donations and volunteers.

Following a two-year effort, in September, 2018 the museum celebrated an expansion that includes model train exhibits in the HO, O. and N scale layouts as well as exhibit of additional memorabilia from local collections.

Additional information about the RRM can be found **HERE**, or contact the Spotsylvania County Economic Development & Tourism office at (540) 507-7205.

Motor Freight

VTRANS 2040 conducted an analysis of regional freight accessibility. Per VTRANS and as logic would say, in addition to railways, US Route 1/I-95 corridor is the major corridor for freight movement throughout the region. Accessibility of freight origins to these roadways is dependent primarily on the proximity of the origin to highway access ramps. Most activity centers in the region are within an eight-minute drive from a major arterial ramp. VTRANS 2040 notes that an average of 98% of the dollar value of all goods that are moved through the region move by truck. Only 1% of the total dollar value of goods are moved by rail through the region. Such a high dependence on road based freight transport further contributes to the regional traffic burden.

VTRANS acknowledges need for capacity and operational improvements of the local rail corridor to enhance rail reliability that could reduce dependence on road based, motor freight options.

The location of warehouses and distribution centers is another important factor in the level of freight accessibility for the region. As VTRANS 2040 observes, most warehouses and distribution centers in the Fredericksburg Region are clustered around the I-95/US Route 1 corridor in and around the City of Fredericksburg. Most areas adjacent to the I-95/US Route 1 corridor are within a 22-minute drive to warehouses and distribution centers. From a land use and operational efficiency standpoint, nearness to major freight corridors for complementary warehousing and distribution uses is an important land use planning consideration. The closer they are to their chief transportation routes into and out of the region helps speed their efficiency and marketability of sites while lowering the extent of freight impacts on roadways inland, away from these corridors. The Future Land Use Chapter is established to help guide land use recommendations and can play an important role defining areas "best suited" for freight based operations.

Freight Planning- Generally

The FAMPO 2045 Long Range Transportation Plan has identified a number of Regional Freight Movement Needs. Needs were identified within FAMPO's designated regional freight network. Within Spotsylvania County, the following improvements identified in Table 4 below have been identified in the 2045 LRTP for Freight:

Table 4: Regional Freight Movement Improvements Needs for Spotsylvania County

Jurisdiction	Project Name	Termini	Description
Fredericksburg/ Spotsylvania	Shannon Drive Extension	From the end of Shannon Drive to the end of Belman Rd	2-lane extension
Spotsylvania	Lansdowne Road and Shannon Drive Intersection Improvements	0.25 miles from intersection in each direction	TBD in Rte. 2/U.S. 17 Bus. Study (Spotsylvania)
Spotsylvania	U.S. 1 and Hood Drive /Mine Road Intersection Improvements	0.25 miles from intersection along Hood Drive and U.S. 1	TBD in Rte. 208/U.S. 1 Study (Spotsylvania)
Spotsylvania	U.S. 1 and I-95 NB Entrance Ramp Intersection Improvements	.25 miles south along U.S. 1 from intersection, .75 miles down NB I-95 entrance ramp	TBD in VDOT STARS Study
Fredericksburg	Route 2 and Beulah-Salisbury Drive Intersection Improvements	0.25 miles from intersection along Beulah-Salisbury	Right turn lane from Beulah-Salisbury Dr to Dixon St
Spotsylvania	Route 2 and Lansdowne Road Intersection Improvements	0.25 miles from intersection in each direction	TBD in Rte. 2/U.S. 17 Bus. Study (Spotsylvania)
Spotsylvania	Route 2 and Joseph Mills Drive Intersection Improvements	0.25 miles from intersection in each direction	TBD in Rte. 2/U.S. 17 Bus. Study (Spotsylvania)
Spotsylvania	Route 2 and Benchmark Road Intersection Improvements	0.25 miles from intersection in each direction	TBD in Rte. 2/U.S. 17 Bus. Study (Spotsylvania)
Spotsylvania	Route 2 and Jim Morris Road Intersection Improvements	0.25 miles from intersection in each direction	TBD in Rte. 2/U.S. 17 Bus. Study (Spotsylvania)
Spotsylvania	Route 2 and U.S. 17 Intersection Improvements	0.25 miles from intersection in each direction	TBD in Rte. 2/U.S. 17 Bus. Study (Spotsylvania)
Spotsylvania	Route 2 Widening	From .1 miles north of Beulah-Salisbury Drive to U.S. 17	Widen to 4 lanes divided with bike/ped accommodations

Aviation

There are two airports in the George Washington Region that provide general aviation service. First, Shannon Airport is significant to the local transportation system as it serves as a gateway for VIPs and business men and women working in the area. Shannon Airport is located in Spotsylvania County, on Tidewater Trail (Route 2). Shannon Airport is classified as a Non-Reliever General Aviation- Community airport as per the Virginia Department of Aviation. The classification is described as serving the needs of businesses and recreational users but often serve a more limited market area than the regional airports. They provide services such as aircraft rentals, flight instruction and AvGas fuel. In 2016, there were 93 aircraft based at the Shannon Airport. Statewide of the 49 non-reliever general aviation airports, the Shannon Airport had the third highest number of based aircraft (93), behind only Culpeper Regional (127) and Winchester Regional (105).

Based on the Virginia Department of Aviation's 2018 report entitled "Virginia Airport System Economic Impact Study" Spotsylvania County based Shannon Airport is responsible for the

creation of approximately 69 jobs which represent approximately 2.5 Million dollars in wages and approximately $6.8 million in total economic activity. The Shannon Airport has not been identified by the Federal Aviation Administration (FAA) as a National Plan of Integrated Airport Systems (NPIAS) airport as of their 2016 designations. As a result, the airport has not been forecasted by the FAA for future activity (total volume of operations). NPIAS designation provides eligibility for airports to receive federal funding for airport infrastructure development and improvements. More information regarding the FAA NPIAS can be found **HERE**.

The FAMPO 2045 LRTP notes there are no plans to expand the airport because the adjacent geography prevents it. There is a highway located to the north (Tidewater trail) and a railroad directly to the south (RF&P). Staff notes the airport is bounded on the east by the 200-acre Slaughter Pen Farm, under battlefield protection easement by the Civil War Trust. An existing, developing industrial park is to the west. Improvements to the airport going forward are expected to be for onsite facilities improvements and operational efficiencies. The airport does intend on improving facilities and expanding in place however by maximizing site efficiency. In order to further improve airport operations and attract more users to the site, in 2020 airport officials have identified a number of offsite transportation projects that warrant consideration within the planning period. The elevation of Tidewater Trail in relation to the nearby airport runway terminus has been identified as problematic. Recommendations include seeking to lower the elevation of the road by 4' to 5' to ensure passing vehicular and truck traffic remain below the airport runway grade. At present, truck traffic especially interferes with the runway horizon there. Additionally, accessibility to the airport via Shannon Airport Circle is not ideal. Lacking a more substantial means of access, the current configuration also inhibits wayfinding to the airport. The airport lacks right turn lane and a left turn lane from Tidewater Trail. The current access road is narrow and carries traffic not only to and from the airport but also from nearby businesses including the United Way, Wawa, Zentech. Airport officials have envisioned that a new access road may be viable, extending between Shannon Park Drive and the airport, providing the potential for a new and improved point of access for all the aforementioned businesses. The existing point of access would either be closed or limited to a right-in, right-out format only, benefitting traffic along the Tidewater Trail corridor by reducing conflict points and enhancing safety along the corridor as a result. This Plan recommends continued exploration of this alternative access route.

Secondly, the Stafford Regional Airport is located in Stafford County off of exit 136 and Centreport Parkway. The Stafford Regional Airport is classified as a General Aviation- Reliever airport. Such airports are described as general aviation airports located in metropolitan areas that serve to reduce congestion at nearby commercial service airports by providing comparable landside and airside facilities to general aviation operators. As of 2016, there were 68 aircraft based at Stafford Regional Airport.

Statewide the 2018 study notes an overall decrease in the number of certificated active airmen; down 43,000 (-7%), and aircraft; down approximately 13,000 (-6%) from 2010 to 2015 utilizing general aviation airports. However, during the same period increases have been noted for active wing turboprop (350 or 4%), active wing turbojet (1,950 or 17%) and active rotorcraft (700 or 11%).
The complete Virginia Department of Aviation's 2018 Virginia Airport System Economic Impact Study can be located online **HERE**.

There is no commercial service classified airports within the GW Region. Outside of the GW Region, there are major commercial airports that provide both air freight and passenger services to the larger area for both domestic and international passengers. Two are located in the Washington, D.C. area, including Washington Reagan National Airport- approximately 64 miles to the northeast, and Washington Dulles International Airport- approximately 80 miles to the northwest. 60 miles to the southeast is the Richmond International Airport. Per VTRANS 2040, the Fredericksburg Region is located within a one-hour drive to three freight airports, Richmond International, Reagan National, and Dulles International.

To the southwest, the Charlottesville Albemarle Commercial Service Airport- approximately 60 miles, has seen growth in popularity, with a 51% increase in passenger enplanements between 2010 and 2016 as per the Virginia Department of Aviation's 2018 study. An increase in larger aircraft landings is a contributing factor.

More distant, the Baltimore-Washington International (BWI) Airport- approximately 100 miles to the northeast, is also accessible within the greater region via Interstate 95 or Route 301 as primary routes as well as Amtrak passenger rail service from the Fredericksburg passenger rail station to the BWI station with shuttle service to the terminal.

Airport Protection Overlay District

Consistent with requirements of the Code of Virginia Sect. 15.2-2294, the Spotsylvania County Zoning ordinance has an established Airport Protection Overlay District considerate of its one County based airport, the Shannon Airport. As per County Zoning Code Sect. 23-7.7.1, the Airport Protection Overlay District is established to provide for the safe use of Shannon Airport by creating additional regulation of the use of land surrounding the airport, in addition to existing zoning districts, which will protect over flying aircraft from conflicts with land uses, objects, and natural foliage on the ground; and, to protect the safety of air navigation around the airport by limiting the height of structures and foliage under the four (4) approach paths to the airport and generally within nine thousand (9,000) feet of the runway surfaces. Anything above the established height limitations could obstruct aircraft using the airport, create a safety hazard to airport operations, and unnecessarily endanger people, property and land use activities in the vicinity of the airport. Standard zoning height limitations and land use regulations alone are insufficient to provide the required protection for air navigation, according to Federal specifications.

Aviation: History, Education and Interpretation

Like Rail discussed in the previous section, Aviation is highlighted local attraction with focus on aviation history, education and interpretation for residents and tourists at the Shannon Air Museum. The museum is located on the grounds of the Shannon Airport and was founded in the

1970s. Throughout the year the museum displays their rare collection of vintage aircraft, numerous aviation related exhibits and hosts a variety of aviation related events and festivals.

Additional information about the Shannon Air Museum can be found at their website **HERE**.

Commuter Bus Services

FREDericksburg Regional Transit (FRED) provides local linkages to area commuter lots and VRE passenger rail services at the Fredericksburg VRE and Amtrak station. Within Spotsylvania County, Route VS1/VS2, connects two park and ride lots along Plank Road (including Gordon Road commuter lot and Salem Church Crossing commuter lot) with VRE service from downtown Fredericksburg. Per the FY2018 - FY2027 Fredericksburg Regional Transit Development Plan, activity is dispersed fairly evenly between the two lots. Overall activity is higher in the afternoon and evening. This route serves six trains in the morning and seven trains in the afternoon and evening. The first run leaves Gordon Road Commuter lot at 4:35 a.m. and the last run of the day returns to Gordon Road at 8:45 p.m. The route is timed to meet VRE trains and runs Monday through Friday. Reporting 2015 figures, the Regional Transit Plan noted 37,677 total one-way passenger trips utilizing Route VS1/VS2.

Per the Regional Transit Development Plan, additional VRE feeder service has been targeted to include the Spotsylvania VRE Station. Plans would provide feeder service from the planned park and ride lot near Cosner's Corner along the Route 1 corridor with stops in close proximity to residential core areas en route to the station. Annual ridership is estimated to be 32,000 in FRED's target year of 2021 for the VRE feeder service rollout to Spotsylvania. Spotsylvania County transportation staff has also included additional VRE feeder service with the County Smart Scale round 4 projects that would provide additional VRE feeder service from the Route 208 commuter lot off Houser Dr. to the Fredericksburg Train Station that will meet all VRE trains in the morning and afternoon in the future.

Additionally, the Martz Group Virginia provides service from the various park and ride lots in Spotsylvania County to destinations in the greater Washington, D.C. Metro area, as well as Richmond.

The Martz commuter buses stop at the following locations within the FRED service area:

- Route 17 and Falls Run Drive commuter lot, located at 633 Warrenton Road (Stafford County)
- Route 3/Salem Church Road commuter lot, located at 4250 Plank Road (Spotsylvania County)
- Route 208 Park and Ride, located at 10800 Hood Drive (Spotsylvania County)
- Route 610 North Lot – North Commuter lot, located on Staffordboro Boulevard in Stafford.

I-395/95 Commuter Choice Program

In 2019, the Commonwealth of Virginia initiated the I-395/95 commuter choice program with the Northern Virginia Transportation Commission serving as the administrator. This program provides dedicated funding from the I-395 Express Lane project for Transit and TDM improvements for the I-395/95 corridor from the Washington, DC line to Exit 126 in Spotsylvania. See Exhibit 2 for eligible localities in Virginia. Projects must provide some benefit to I-395 Express lane users in order to be eligible for program funding. Eligible types of projects include:

1. New or enhanced local bus service
2. New or enhanced commuter bus service
3. Park and ride lot(s) and access
4. Roadway improvements (Corridor management & ITS)
5. Transportation System Management (TSM)/Transportation Demand Management (TDM)
6. Vanpooling/Carpooling

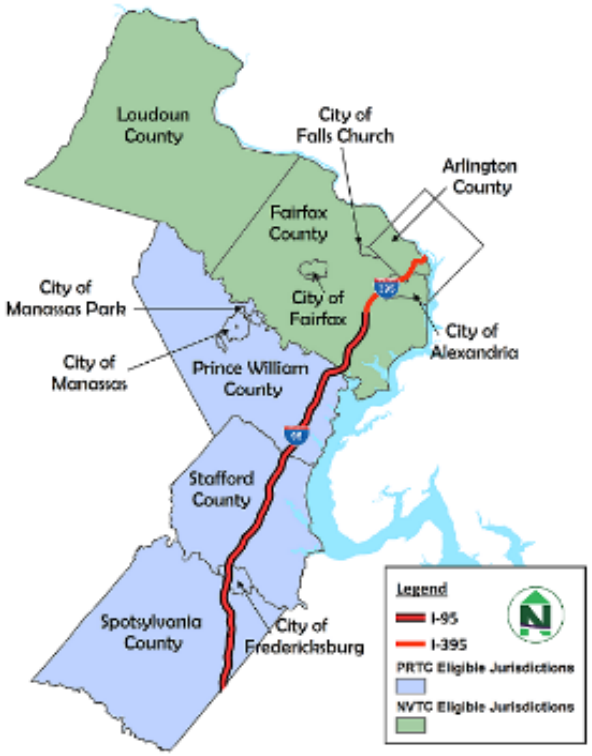


Exhibit 2: Eligible Jurisdictions

The amount of funding available was $15 million per year for the first year in FY-20 with a modest escalation of this amount expected on an annual basis in the future. The first round of projects

was approved by the Commonwealth Transportation Board in October, 2019. The application period for the second round of projects will begin in Fall, 2020. Potential eligible projects in Spotsylvania County in the future include new express bus service from the Rte 3 Corridor or Massaponax to Northern Virginia/DC, local feeder bus to AMTRAK/VRE, new or enhanced commuter lots, and I-95/Rte 1 corridor management, ITS, TSM, or TDM improvements.

Park and Ride Lots

There are four (4) Virginia Department of Transportation (VDOT) operated park and ride lots in Spotsylvania County and one (1) additional expected within the planning period. One is located on the south side of Route 3 at Salem Church Road (Route 639), which has approximately 670 parking spaces. This is a lighted park and ride lot that includes transit service, and bicycle racks. A second lot is located at the corner of Route 3 and Gordon Road (Route 627). The lot was expanded from 600 spaces to 1,061 spaces in 2015. In addition to the additional parking spaces, the $7.2 million improvement project added: A dedicated High Occupancy Vehicle (slugging) pickup and drop off area; bus lane and bus parking bay; second entrance to the lot accessible from Harrison Road; pedestrian sidewalk connecting the lot with surrounding commercial development. The third park and ride lot in Spotsylvania County is located on Houser Drive off Route 208, which has 823 spaces. This is a lighted park and ride lot that includes transit service access. The fourth is a new 1,500 space lot opened in 2015 with the opening of the new Spotsylvania VRE Passenger Rail station just south of Route 17 off Crossroads Parkway. This is a lighted park and ride lot that includes passenger rail station access, bathroom facility, transit service, and bicycle racks.

Following the results of a 2005 Commuter Lot study combined with County growth and demands upon the existing park and ride lots, the County set a transportation objective in the 2008 Comprehensive Plan seeking the development of a new lot in the Massaponax area. A 2010 screening of potential locations resulted in a favorable recommendation of a location that had been identified as a viable alternative site in the 2005 study at Route 1 and Commonwealth Drive. The project has progressed since that time to site evaluation, engineering, design, and the project has been fully funded via VDOT Smart Scale with a projected opening in 2021. The lot will have approximately 700 parking spaces. Amenities will include parking lot lighting, bus and ridesharing loading areas, bicycle racks, and Route 1 frontage shared use path for future connectivity to adjoining developments and the Spotsylvania Parkway Trail system. This site is located in the midst of residential, commercial, industrial uses, and large mixed use areas with approved projects including Jackson Village, Heritage Woods, Alexanders Crossing.

On October 3, 2018 a commuter lot utilization survey was conducted for all four of the existing commuter lots within the County. Results of that survey are below:

Table 5: Existing Commuter Lot Inventory

Commuter Lot	# Spaces	# Used	Utilization
Route 3 - Old Salem Church	672	371	55%
Route 3 - Gordon	1052	388	37%
Courthouse/Houser	805	406	50%
VRE Spotsylvania Station	1486	711	48%

Though lot utilization varies from day to day it appears there is not presently a warrant in the foreseeable future for additional capacity beyond what's expected within the next couple years with a new Commonwealth Drive lot at Route 1. Beyond the current inventory of commuter lots and looking to potential new geographic areas to serve as noted prior in reference to the VDOT Interstate 95 Corridor Improvement Plan Study, a new commuter lot is being considered at exit 118 (Thornburg). This lot would be expected to serve a future market currently well removed from the existing inventory of commuter lots in the County.

There are a variety of factors that could change commuter lot utilization over time. One influencing factor is geographical convenience and shifts in commuter behavior. The opening of the Spotsylvania VRE station and commuter lot expanded ease of access for VRE ridership within the County and added commuter parking capacity to an area of the County that had not had a nearby commuter lot previously. With expected population growth forecasted to continue there is value in continued monitoring of commuter lot usage trends to assure adequate capacity based on demand is provided.

Vanpooling

A vanpool is a group of commuters who have joined together to ride to and from work. The Potomac and Rappahannock Transportation Committee established the "Vanpool Alliance" in October of 2013 organizing 207 vans. In 2019, the Vanpool Alliance identifies numerous regional benefits associated with higher occupancy commuting options. With a focus on vanpools, regional benefits include reduced traffic congestion, lower commuting costs (allowing several users to split costs by vanpool as opposed to driving alone costs of gasoline, maintenance, insurance, tolls, etc.), improved air quality (higher occupancy vehicles equates to fewer cars on the road and less total emissions), quality of life, and business benefits.

As of Fall, 2018 the Vanpool Alliance has 665 vans and 56 vendors operating in the region. 49% of the Vanpool Alliance fleet originate from Spotsylvania County. The region receives 5307 federal funds based on transit vehicle-miles, passenger miles and other factors. Multiple agencies have established ridesharing services in the region including Department of Rail & Public Transportation (DRPT) and GWRideConnect which assists commuters who are seeking vanpools. The region's vanpool program is one of the most successful of its type in the United States. Per feedback received in October, 2018, GWRideConnect supports the largest vanpool fleet in the State (350 vanpools supported with an average 4,200 daily users). Of the 350 reported, 107 vanpools

originate from Spotsylvania County. More information regarding GWRideConnect can be found **HERE**.

Ridesharing

GWRideConnect is the Transportation Demand Management (TDM) Agency operated by the George Washington Regional Commission (GWRC) that serves the residents of the region. GWRideConnect promotes ridesharing and TDM techniques to assist citizens seeking transportation options to their workplaces and other destinations. It is the goal of the program to promote, plan and establish transportation alternatives to the single occupant vehicle, improving air quality, reducing congestion and improving the quality of life for the citizens.

GWRideConnect is the recognized source for TDM and transportation information and assistance in the George Washington Region. The program offers a free ride matching program in addition to a wide variety of transportation options and solutions connecting citizens to available carpools, vanpools, commuter buses, slug lines, Fredericksburg Regional Transit and the Virginia Railway Express.

GWRideConnect Program Services Includes 11 Work components:

- Ride matching
- GWRideConnect Website
- Follow Up and Database surveys
- Vanpool Formation
- Advantage
- Carpool Formation
- Transit Options Promotion and Support
- Advertising and Promotion
- Commuter Lots
- Employer/Realtor/New Resident Outreach
- TDM, Bike and Pedestrian Promotion

High Occupancy Toll (HOT) Lanes

High occupancy toll roads were built between exit 152 in Prince William County and exit 143 in Stafford County in 2014, with a revised and extended merge area just south of the Garrisonville Road exit opening in 2018. New toll roads are in the process of being built along the Interstate 95 corridor from the exit 143 area of north Stafford County down to Route 17 in south Stafford County to increase capacity to I-95. A new I-95 Interchange just north of the Welcome Center in Fredericksburg is in the planning stage as well. This will result in additional capacity being added to the Rappahannock River Crossing. These improvements are regionally significant and expected to benefit commuter populations within the larger area including Spotsylvania County.

In 2009, the George Washington Toll Road Authority was established which encompasses the City of Fredericksburg and the Counties of Spotsylvania and Stafford for the purposes of alleviating

highway congestion, promoting highway safety, expanding highway construction, increasing the utility and benefits and extending the services of public highways, including bridges, tunnels and other highway facilities, both free and toll, and otherwise contributing to the welfare of the Commonwealth and the George Washington Region. The Authority is governed by a ten-member board of directors. Three members are appointed from each of the original participating localities from among their elected officials, and one member is a designee of the Commissioner of the Virginia Department of Transportation.

Local Bus Service

FREDericksburg Regional Transit (FRED) provides local transit services to the County through a partnership in which the County funds a portion of the service after federal and state grant funding has been applied to funding the service planned for the County. FREDericksburg Regional Transit (FRED) operates bus routes in Spotsylvania County providing weekday services, except holidays. Routing and scheduling is coordinated by FRED and subject to change potentially as demand warrants or as new stop locations are identified. Within Spotsylvania County, FRED recently completed (January 2020) a major investment with the construction of the Lee's Hill Transfer Center (Pictured in Image 4 Below).

Image 4: New Lee's Hill Transfer Station

This new transfer center accommodates 5 buses safely in staggered bus stalls to safely load/ unload passengers, a 20'x10' shelter with a bench, trash receptacle, bike rack, and solar lighting inside to illuminate the shelter to provide additional safety. This new transfer station allows routes in the City of Fredericksburg (F2 and F3) and Spotsylvania (S1, S4, and S5) to meet every hour to allow passengers to transfer to other buses to reach destinations in other locations in the region.

Per the Fredericksburg Regional Transit Development Plan (2018-2027), the need for a transfer center at the Lee's Hill bus transfer stop was identified by FRED as new development occurred in the Market Street/ Spotsylvania Avenue area. As part of the development agreement, the developer agreed to provide a strip of land adjacent to the parking area of the Rappahannock Goodwill Industries building to be used as a bus transfer location. The Site Plan (ST18-0053) for this transfer location was approved January 9, 2019. In addition to significant improvements at the Lee's Hill transfer site, FRED has identified need for infrastructure improvements at bus stop locations throughout the system, focusing especially on high volume boarding locations. Considerate of waiting time, inclement weather, personal physical limitations, FRED has identified need for additional shelters and benches at stop sites. Such improvements help the rider experience. These are viable infrastructure improvements that enhance accessibility to local fixed route bus service for all users including disadvantaged populations.

Expansion of service to include weekend transit is also being considered. Within Spotsylvania County, Routes S1 and S5 have been identified as candidate routes for weekend services. Feeder service is also being explored from park and ride lot(s) in the Cosner's Corner area to the Spotsylvania VRE Station. This multi-modal initiative expands accessibility and is positive. For more information regarding FRED local bus service including routes, fares, schedules, and other related news within FRED's Spotsylvania County and the Fredericksburg regional network can be found at FRED's website **HERE**. FRED tracks route ridership for all its fixed routes. Ridership figures for FRED routes in Spotsylvania County (as provided by FRED) have been provided below in Table 6:

Table 6: FRED Ridership

Spotsylvania County Ridership 2014-2018						
	Route	2014	2015	2016	2017	2018
	VS1	21,687	19,449	9,812	10,003	8,405
	VS2	16,008	13,275	8,164	7,623	6,262
	S1	21,064	20,189	18,317	15,794	12,606
	S1B	15,233	14,291	12,884	11,196	9,025
	S4	15,448	14,682	13,992	12,339	10,908
	S5	25,862	23,636	20,598	18,997	17,154
	Total	115,302	105,522	83,767	75,952	64,360

Route Description	
VS1/VS2	Morning and afternoon/evening service between the Gordon Road commuter lot and downtown VRE station
S1/S1B	Spotsylvania Towne Centre to Lee's Hill Center @ Spotsylvania Avenue
S4	Lee's Hill Center to Courthouse Village
S5	Lee's Hill Center to Germanna CC via Cosner's Corner shops & Spotsylvania Hospital

As exhibited in the table above, ridership within the County has been on a downward trend since 2014. All routes within the County have seen ridership declines of varying degrees since 2014. There are a number of possible reasons for declines in ridership. FRED acknowledges national trends in ridership declines, noting the most frequent cited reasons for declines are:

- Increased automobile ownership spurred by a strong economy and low interest rates
- Moderate gas prices
- Increased tele-commuting and flex-time
- The rise of transportation network companies like Uber and Lyft
- Changes in travel patterns
- Service reliability issues
- Service reductions
- Fare increases

Addressing the last three issues (reliability, service, fares) from FRED's perspective, they would not seem to apply. Since FRED has been able to accurately track on-time performance, reliability numbers have remained steady or improved. FRED has not reduced service (except for the termination of service in Caroline County). Per FRED, "As a rule we provide hourly service; the most often registered suggestion from our customers is for more frequent service and longer hours and additional days. And we have held fares level at $1.25 per boarding for the last three years and at $1.00 per boarding the four previous years; our fares are comparable to those of other transit agencies."

Regarding changes in travel patterns, FRED ridership in the County drastically declined after the opening of the Spotsylvania VRE station. Some customers who had used FRED VRE Express service to travel to the Fredericksburg station are now driving to the Spotsylvania station where there is plenty of close-by parking.

It is hard to point to any one of the other four reasons as the primary factor affecting ridership declines within the FRED system. They all contribute to some extent.

The Fredericksburg Regional Transit Development Plan notes "the trend over the past few years is downward, even as the population has grown. There may be ways to re-deploy the current resources so that ridership improves." Per FRED, there is no magic formula and no single criterion applied to determine warrant new or expanded service. FRED uses the Transit Development Plan to identify emerging demographic and development trends that suggest where new or expanded services might be warranted and where to invest in facilities or other amenities. Additionally, FRED meets regularly with County Transportation and Planning staff to better understand where developments will be taking place and how transit can be incorporated into plans, Transportation proffers, etc. Similarly, FRED meets with developers to discuss how service might be incorporated into their plans. Information is shared with the Public Transit Advisory Board (PTAB), which includes representatives of the Planning departments of our partner jurisdictions and has a committee that focuses on how we might better serve traditionally underserved communities (we are aware of the VTRANS work in this regard). Every year FRED polls the PTAB for recommendations on where we might consider adjusting our services in the coming year.

FRED does not plan or undertake service adjustments or investments in a vacuum. Because of the way they are financed with a mix of Federal, State and local funds, the County and other partner jurisdictions must serve as the impetus for any new or expanded service. FRED cannot attract Federal and State funding (which covers roughly 60 percent of FRED's operating expenses and nearly 90 percent of capital expenses) unless local jurisdictions agree to provide matching funds. This requirement means that FRED can only implement services that the County desires and is willing to provide the local match for.

Teleworking/Telecommuting Centers

Teleworking, also known as telecommuting, means using information technology and telecommunications to replace work-related travel and therefore reduce peak hour commute time traffic volumes that ultimately impact transportation levels of service. With teleworking, employees work at home or at a local telework center one or more days per week. Communication to office staff or clients is accomplished by phone, fax, e-mail, internet, teleconferencing, and/or videoconferencing. Telework is usually implemented by business and government agencies to improve services, reduce costs, reduce vehicle travel, or to help achieve other objectives.

Telework!VA is an organization that provides information on establishing and expanding telework programs for Virginia businesses. The program goal is to provide more opportunity for participation in teleworking. This program is administered by the Commonwealth of Virginia

Department of Rail and Public Transportation (DPRT). More information about Telework!VA can be found on their website **HERE**.

Intelligent Transportation Systems (ITS)

The highway transportation system in Spotsylvania County involves three major elements: 1) vehicles, 2) roadway and 3) the driver. The major visual technique for relaying driver information are signals, static signs, changeable message signs, pavement makings, and driver information systems. Currently, there are a limited number of changeable message signs (CMS) along I-95 and which are becoming increasingly important in improving safety and operation of this corridor. In addition to the CMS signs there are a number of portable signs to relay information to motorists. Motorists are increasingly using GPS navigational software like Waze, Here We Go, Google Maps, MapQuest, Sygic, and NavIT. There are a number of stationary advance presence detection along the interstate used to collect information used by the I-95 Traffic Control Center located in Arlington, Virginia.

Trailways Master Plan- Bicycle and Pedestrian System

The Spotsylvania County Trailways Master Plan was initially adopted by the Spotsylvania County Board of Supervisors on February 22, 2011 as a standalone transportation alternatives and parks and recreation amenities plan. The Trailways Plan was developed with careful attention paid to community input and existing trailways plans at the national, state, regional, and local levels. The plan proposes an integrated system of off road greenway trails as well as roadway based improvements to serve multiple non-motorized transportation users including bicycle, pedestrian, equestrian, and others with a focus on creating safer transportation conditions while expanding recreational opportunities for citizens and tourists to enjoy Spotsylvania County's numerous historic, cultural, scenic, recreational, and commercial/ service attractions located throughout the County.

The Trailways Plan was developed acknowledging that full build-out of the trailways system with all amenities will not take place immediately. This is a flexible, living plan and will be subject to future developments and economic conditions, as the community evolves. Levels of interest, available funding, and community support factors may fluctuate over time and so may the rate at which implementation is feasible.

In the interest of assuring the Trailways Master Plan does not become outdated or inconsiderate of opportunities that may arise from changes elsewhere within other elements of the Comprehensive Plan, in 2019, the critical elements of the plan were reviewed, updated, and incorporated into the Comprehensive Plan in Chapter 3A. Abandonment of the standalone plan in favor of inclusion as a Comprehensive Plan Sub-Chapter better positions it for continued monitor, pursuit, and review and update consistent with the 5 year review and update cycle. Otherwise staff has found there tends to be little impetus to update standalone plans that may become outdated or proactively amended to reflect new opportunities or routing alternatives. The revised and updated Trailways Plan addresses sidewalks, and recreational/commuter trails intended to

create an interconnected network of trails cognizant of provision for transportation alternatives as well as established Parks and Recreation Level of Service Standards and trail deficits expected to grow to 159 miles by the year 2040 based on projected population growth.

ACCESSIBILITY FOR DISADVANTAGED POPULATIONS

For the purpose of the Comprehensive Plan, disadvantaged populations are inclusive of low income, elderly and disabled populations. These are populations that may have challenges due to income based and/or physical or health related limitations that inhibit access to critical services and conveniences within the community including but not limited to: medical care facilities, pharmacies, supermarkets, personal services, social services, financial institutions, employment opportunities, social networking events, places of worship or cultural institutions. Land use and transportation systems planning that promote enhanced accessibility and mobility for disadvantaged populations are complementary to Comprehensive Plan affordable housing goals, and the goals considerate of elderly and disabled populations within the County expressed elsewhere within the Plan. Efforts to enhance accessibility for disadvantaged populations is a critical element of social equity within the Plan.

Accessibility Challenges Today

With the assistance of the Spotsylvania County Department of Social Services, Healthy Generations Area Agency on Aging (HGAAA) (formerly known as the Rappahannock Area Agency on Aging) was contacted to provide "real world" perspective on the current state of accessibility for disadvantaged populations in Spotsylvania County and the greater region. HGAAA is one of more than 600 Area Agencies on Aging in the United States. HGAAA provides both direct and contracted services in the George Washington Planning District (PD16) including the City of Fredericksburg and Counties of Caroline, King George, Spotsylvania, and Stafford, Virginia. The mission of the staff, Board of Directors, and Advisory Council of HGAAA is to enhance the quality of life for all older citizens. HGAAA provides home and community based services to support the continued independence, safety, and health and wellness of our senior population.

It's good to note that the County's 65 and over population grew nearly 35% (34.6%) between 2010 and 2018 based on 2010 US Census figures and 2018 American Community Survey estimates. This age group represented the most significant absolute change in population within the County, adding 20,814 persons between 2010 and 2018. Population growth within the County was followed by those aged 45-64 with 11,724 additional persons, representing a 9.4% growth rate for that age bracket since 2010. These population growth trends locally represent a trend of rising demand for senior services, including accessibility. Need for accessibility is amplified when considering the United Way ALICE (Asset Limited, Income Constrained, Employed) report (released in Spring, 2017) that found 57% of seniors within the County (as of 2015 data) fell below the ALICE

threshold and where therefore financially challenged to afford basic goods and services, including transportation.

Per HGAAA, funding for their Mobility Options Program comes through a Federal Transit Administration (FTA) Section 5310 grant, Enhanced Mobility for Seniors and Persons with Disabilities. The grant is applied for through the Virginia Department of Rail and Public Transportation each year in coordination with Rappahannock Area Community Services Board. This grant funds three initiatives, including: replacement of rolling stock (vehicles), Mobility Management, and through operations funding it supports the Mobility Options Program, specifically door-to-door transportation service. Mobility services have been expanding over the last few years to accommodate, 7 part-time drivers and 1 full-time driver which equate to nearly 7,000 door-to-door trips within the Planning District in FY18. Transportation is provided to seniors over the age of 60 and persons with disabilities to a myriad of destinations including non-emergency medical appointments (non-Medicaid recipients), essential shopping trips, personal trip to the bank, post office, hair salon, Social Security Office, etc. However, services offered do not begin to meet the demand, in Spotsylvania County in particular. Additionally, funding for the Mobility Options Program from DRPT for FY2020 has been reduced almost 50%. This has resulted in a reduction of staff drivers available to provide these trips, and subsequently a reduction in the number of trips that can be provided. Reduced funding resulting in negative impacts to service inevitably results in degraded accessibility for elderly and disabled populations within the County, especially those who have little to no other options.

When assistance cannot be provided by HGAAA, the Mobility Options Program includes provision of an updated inventory of available transportation options in the area. Per the July, 2019 Transportation Resource Guide, the following Mobility options have been identified with service in the region (See Table 7):

Table 7: Transportation Resources

GW REGION TRANSPORTATION RESOURCES
NON-PROFITS/ GOVERNMENT AGENCIES
American Cancer Society Road to Recovery Program
AMTRAK
Bay Transit (Northern Neck)
Disabled American Veterans (DAV)
FREDericksburg Regional Transit (FRED)
George Washington Regional Commission GWRideConnect
Virginia Railway Express (VRE)
Virginia Department of Medical Assistance Services (DMAS)
PRIVATE FOR-PROFIT VENDORS
Advanced Life Support Transportation (ALS)
Angel Rides Inc.
ATK Transportation
Bright Day Transit Services
EL Divine Home Healthcare
JDS Transportation
LifeCare Medical Transport
MVP Transports
VIP Medical Transportation
Wisdom Ride
TAXI CABS
Aero Cab
CCS Taxi
Global Cab Inc.
Virginia Hilldrup Taxi Services
Yellow Cab of Fredericksburg
TRANSPORTATION NETWORK COMPANIES
LYFT
UBER
Source: July, 2019 Healthy Generations Transportation Resource Guide

HGAAA operates an additional transportation program that is available to Agency Senior Café Participants. This service provides rides for those participants to get to and from congregate meal sites two/three times per week and is supported through Older Americans Act funds received through the Department of Aging and Rehabilitative Services.

For accessibility, FRED usage is encouraged but often it is not a viable option for many in the community. Vehicles are often difficult to board for individuals with walkers, canes, limited mobility, and service animals. Limited service hours, routes, and limited deviations also create

barriers. In addition, a lack of supporting infrastructure in the form of sidewalks, curb-cuts, crosswalks, and bus shelters make accessing FRED even more difficult for the disabled and aging populations within the region as a whole.

There are unmet needs for access within Spotsylvania County per HGAAA. There are inadequate resources in place to effectively address demand. Within the Primary Development Boundary, many persons in need appear to be in close proximity to FRED Transit routes but cannot utilize the bus due to a multitude of reasons, not the least of which is convenience and physical limitations. Currently 344 Spotsylvania County residents are listed in the HGAAA client database. The client database continues to grow. HGAAA been able to assist approximately 29% of those residents, however Spotsylvania County residents' trips make the largest portion of ridership at 49%. From HGAAA's experience, families are unable to meet the needs of aging relatives, and family members with disabilities because they work. Transportation intensive requests, e.g. physical therapy, cardio therapy, speech therapy, dialysis, cancer treatments, employment opportunities, education opportunities are unable to be accommodated through their program. In these cases, callers are referred to the inventory (table above). The lack of a comprehensive resource to address transportation needs of elderly and disabled populations and resulting findings show the fractured nature of services, lack of adequate resources to meet demand, and struggle to secure reliable transportation for such populations. Per HGAAA, while the inventory is a great tool, it lacks cost effective options other than the Mobility Options Program. There simply aren't any to be had.

Need exists throughout the County but is focused in more suburban areas due to population density. HGAAA continues to look for funding opportunities and public/ private partnership in the hopes of expanding the program to be able to meet more needs. The next grant cycle for Section 5310 funding will begin in the fall after the release of DRPT's regional Coordinated Human Services Mobility Plan updates. DRPT is aware of the needs of small urban and rural areas across Virginia but is struggling with insufficient federal funding to meet the needs in these areas with no allowance of transferring unused funds from large urban areas. The requests have been larger than the funds available for both Section 5310 replacement vehicles and operating funds. DRPT has also been contacted by programs in some areas without Mobility Managers about the availability of funds for these new programs. Because of the lack of funding, DRPT has made changes to the guidance and reduced funding to only direct program expenses that support the funded project. They further encourage sub-recipients to look for external funding partners.

Regarding services being delivered to one's door, Meals-on-Wheels does deliver locally but only within a four-mile radius from Mary Washington Hospital. HGAAA offers a home-delivered meal program to area residents 60 and older that are completely homebound. Individuals interested in the service will go through an assessment process as funding for this program is also limited. Currently the Agency is delivering to 18 Spotsylvania residents who meet the criteria. There is emerging technology based platforms such as Amazon and DoorDash for the order and fast delivery of various goods. Instacart offers online order based same day delivery of groceries and goods partnered with a number of grocery stores and retail vendors in the region. Elderly and disabled populations have historically been found to be unable to utilize technology to access such platforms, or generally have a mistrust of 'online purchases'. This discovery is in part due to

exploring Uber and Lyft as transportation options for target populations. As the presence of these Transportation Network Companies grows in the Fredericksburg Region it would be helpful to find a way to work with these organizations to facilitate more transportation access for our aging and disabled populations. Currently HGAAA is working on a funding application for the Mary Washington and Stafford Hospital Community Benefit Fund to expand the Mobility Options Program.

Rural Access

Transportation access in rural areas especially (outside of the County Primary Development Boundary) can be a challenging and/or costly endeavor due to lack of available transportation alternatives and/or necessity of vehicle ownership, if physically and financially feasible. Rural areas typically lack an abundance of nearby employment and services whereby requiring greater travel distances to reach them. These areas may lack the critical density necessary to support certain fixed transportation services such as a public bus route. Though population density is lower in the Berkeley and Livingston Districts, as a percentage of their populations, they have higher percentages of persons aged 65 and older, disabled, and low income per regional American Community Survey data presented recently by the George Washington Regional Commission in 2019. These areas also lack proximity to fixed-route transit services such as FRED Bus. In August, 2019 as part of the development of the Virginia Transportation Plan update (VTRANS) the Office of Intermodal Planning and Investment (OIPI) presented regional analysis' results identifying disadvantaged populations beyond ¼ mile access to fixed-route transit service. Fixed route transit service to these areas was acknowledged as not viable however, not having the density thresholds to support fixed route service.

If vehicle ownership is an option, lengthier travel distances to jobs, goods and services result in greater vehicle "wear and tear" and fuel expenditures, associated vehicle upkeep costs that "cut into" a limited budget. County-wide based on 2015 data reported in the statewide 2017 ALICE Study of Financial Hardship report by the United Way show at total 47% of all households can be classified as households in poverty or within the ALICE threshold. ALICE households are households that earn more than the Federal Poverty Level, but less than the basic cost of living for the state. Per the report, "ALICE households are working households; they hold jobs, pay taxes, and provide services that are vital to the Virginia economy, in a variety of positions such as retail salespeople, laborers and movers, customer service representatives, and office workers." "ALICE households vary in size and makeup; there is no typical configuration. In fact, contrary to some stereotypes, the composition of ALICE households mirrors that of the general population. There are young and old ALICE households, those with children and those with a family member who has a disability". As such the ALICE population in many ways reflects the disadvantaged populations being considered for transportation accessibility. These represent households under financial stress who have seen costs to afford basic necessities increase without adequate income gains from low wage jobs during the study years of 2007-2015 as reported in the study. Transportation costs are considered one element of basic necessity and while those costs have remained relatively unchanged as reported, significant cost increases in housing, child care, food, health

care, tax burdens on low wage earnings, etc. have further strained resources for families. These costs often leave little to no room for basic necessities, “rainy day fund” savings or non-essential; discretionary consumer spending.

VTRANS 2040 recognizes accessibility challenges within Spotsylvania County, especially outside of the Primary Development Boundary. Accessibility to employment (number of jobs within 45 minutes) via auto, transit, and pedestrian means are not ideal. In these areas, proximity to major roads results in accessibility improvements as they provide more direct line access to major activity centers.

Outside of the Primary Development Boundary, the land use element considers provision of “neighborhood commercial” in rural and agricultural areas. Agricultural, tourism, and forestry based businesses are also complementary in such areas. The goal is not to promote proliferation of urban sprawl into the countryside but to provide goods and services (and nearby employment opportunities) in close proximity to the rural populations meant to be served. This alone helps reduce the transportation and accessibility burden on disadvantaged populations within the County. As a benefit to the transportation network, the effect is also a reduction in total vehicle miles travelled and cross-county traffic volumes. Such land use provisions within the Comprehensive Plan are complementary to provision of access for disadvantaged populations. Private sector investment has historically been the driving force behind provision of rural goods and services within the County. Such development proposals in rural areas that are aimed at providing a direct goods and services benefit to rural populations should be considered to provide a transportation and access benefit to disadvantaged populations.

Availability of affordable housing in many areas simply does not go “hand in hand” with where the jobs are located. Low income workers are often faced with commuting long distances between locations where housing may be more affordable and where employment exists. This adds traffic burdens on local roads and increases transportation related costs for disadvantaged populations. Planning for and supporting provision of affordable housing near employment rich areas, in mixed use higher density areas, near multi-modal opportunities helps proactively reduce accessibility burdens.

Urban and Suburban Access

Within the Primary Development Boundary, transportation accessibility is best achieved when multimodal transportation options are available nearby. Due to higher densities and a variety of uses, these areas tend to me much more viable for fixed route transit services such as FRED Bus. Mixed Use walkable areas with multi-model transportation options that place goods and services and employment opportunities within close proximity to affordable housing and/or housing designed for the needs of disabled or elderly populations are best suited to provision of accessibility for disadvantaged populations. Throughout the Primary Development Boundary efforts should be made to enhance the system of sidewalks and trails, close gaps within existing systems, and provide safe road crossing locations. When considering how FRED passengers access

the bus system for instance, per the Fredericksburg Regional Transit Development Plan, "walking is by far the method most used (72%), followed by driving alone (7%) and using another bus (6%)." Vehicle ownership based one-dimensional transportation systems are not favorable. Rather, multi-modal opportunities should be supported including the preservation and expansion of transportation alternatives in the community. Transportation alternatives have been identified as beneficial to reducing traffic volume burdens on roads but they are also crucial tools for enhancing access for disadvantaged populations within the County. FRED ridership survey results noted in the Fredericksburg Regional Transit Development Plan found that the majority of respondents worked full time (46%), followed by 21% with part-time employment. FRED bus service does consider enhanced accessibility for disabled and limited mobility persons through its route deviation service. Per the Fredericksburg Regional Transit Development Plan, FRED's route deviation service is designed to allow for vehicles to travel off of regular service fixed routes (up to ¾ mile, no more than three minutes, and safe to traverse) to pick up or discharge a passenger who may find it difficult to access designated bus stops. Passengers who need to use this service are instructed to register with FRED by completing a deviated stop request form. Once approved, riders who need an off-route pick-up or drop-off are instructed to call FRED 24 hours in advance. There is no requirement for users of FRED's route deviation service to provide any evidence of a disability or limited mobility. Each of FRED's revenue vehicles is equipped with wheelchair lifts to accommodate people with disabilities.

The County is currently exploring potential opportunities to extend FRED service. Areas being considered include the Rte 208 corridor to the Spotsylvania Courthouse Village Area, the Rte 1 corridor to Massaponax and Thornburg, the Rte 2/17 corridor from the City to the Bowman Center area, and the Lafayette Boulevard corridor from the City to the Rte 208 PNR lot. These areas have all seen development interest in the last few years and has been identified as core areas for mixed use and employment center type development. Both land use designations prime the area as a good location for providing service to disadvantaged populations. With transportation infrastructure upgrades such as extension of the FRED bus system and bike/ped network, mixed land use designations promoting a walkable mix of uses, and employment opportunities nearby, these areas can provide the type of environment where low income populations can seek nearby employment opportunities and look to increase earning potential.

In August, 2019 as part of the development of the Virginia Transportation Plan update (VTRANS) the OIPI presented regional analysis' results identifying disadvantaged populations beyond ¼ mile access to fixed-route transit service. Within the Primary Development Boundary, disadvantaged populations where fixed route service was identified as potentially viable included the Tidewater Trail (Route 2) corridor extending from the City of Fredericksburg to the New Post mixed use area. FRED Bus Service Route F4 extends as far as the River Club Shopping Center with connections into the City of Fredericksburg including downtown Fredericksburg, Fredericksburg Train Station, and Mary Washington Hospital. Future service extension towards Route 2 and 17 are worthy of exploration as development continues down the corridor.

TRANSPORTATION ANALYSIS TOOL

Transportation Impact Analysis

Traffic Impact Analysis is a study used to estimate impacts of growth and how the transportation network would function once a proposed land use change or development takes place. Depending upon the impacts the analysis can involve VDOT, Spotsylvania County or other government agencies. If the impact is substantial and generates 5,000 new trips per day, equals the existing traffic on a residential road or is within 3,000 feet of connection to a major VDOT highway then VDOT requires a 527 TIA and takes the lead role in scoping the parameters of the study. Spotsylvania County has established additional requirements which are as follows;

- A trip generation threshold is crossed
- A development is proposed within a critical corridor
- A rezoning or land use request is inconsistent with the comprehensive plan
- A development has regional significance
- Or the County Traffic Engineer determines that the development warrants a study

The Table below includes Land Use Size Thresholds for Spotsylvania County and the impact analysis, site issues, or other analysis that is required or appropriate for a TIA.

Table 8: Requirements for Various Types of Traffic Impact Studies

	TRIP THRESHOLD	
TASK	County Traffic Impact Study	527 Impact Traffic Study
Trip Generation	100 Peak Hour or 750 + Daily	400 Peak Hour or 5,000 + Daily
Pre-application or scoping meeting	✓	✓
Impact Analysis Requirement		
Existing conditions analysis LOS at site	✓	✓
Sight distance evaluation	✓	✓
Opposing driveway locations	✓	✓
Existing conditions at nearby intersections	✓	✓
Study area & future road summary	✓	✓
Comparison of trip generation uses	*	
Trip generation for specific uses.	✓	✓
Trip distribution analysis.	✓	✓
Background traffic growth.	✓	✓
Future conditions analysis (LOS) at nearby intersections	✓	✓
Design Year Analysis (6 years beyond Build)		✓
Mitigation identification.	✓	✓
Site Issues		
Evaluate number, location, and spacing of access points	✓	✓
Evaluate access design, queuing, etc…	✓	✓
Evaluate site circulation	*	✓
Other Analysis		
Accident history.	*	*
Gap analysis at unsignalized intersections	*	*
TDM/TSM mitigation measures.	*	✓
Evaluate impacts on travel model	*	

Key

✓ = required

* = may be appropriate on a case by case basis

Travel Demand Forecast Model

Travel demand forecasting models are the major means for the development of a long-range transportation plan. The model is designed to calculate the number of trips, connect their origins and destinations, and identify the roadways or transit routes most likely to be used in completing a trip. Models are used to determine where future transportation problems are likely to occur by identifying congested roads. Once identified the model can test the ability of the highway network or transit system to address those problems.

In 2006, Spotsylvania County developed its first travel demand forecasting model in order to update the County's Thoroughfare Plan and quantitatively evaluate Future Land Use projections. The Spotsylvania Travel Demand Forecasting Model covers the entire Fredericksburg Area Metropolitan Planning Organization (FAMPO) region: the Counties of Caroline, King George, Spotsylvania, and Stafford, and the City of Fredericksburg. The Spotsylvania model was developed based on the FAMPO Travel Demand Forecasting Model.

In 2018, the model was updated with a base year of 2015 to take advantage of the new travel surveys and other information. The update included changes to the road network, population, dwelling units, employment, and household data. The travel demand forecasting model contains a set of mathematical relationships that estimate the total number of trips made by residents and employees in the County on a typical weekday. The model estimates the patterns of origins and destinations between and within all parts of the County and the Fredericksburg metropolitan area. It estimates the proportion of trips that travel by auto and applies auto occupancy factors. The final step is to determine the roads used by each trip on its way from its origin to its destination. This is calculated assuming that each driver attempts to find the quickest path, taking into account expected congestion. The summation of those trips over all the roadway segments produces the total daily traffic volume.

The Spotsylvania County Travel Demand Forecasting Model consists of 1,659 Traffic Analysis Zones (TAZ's). The zone boundaries are based on Census geography, property lines, natural topography, roads, and other features. The TAZ's are points where traffic enters and exits the real roadway system. The number and size of these zones are extremely important in determining the model's accuracy and what roads can be modeled. The County desired a high level of accuracy and wanted the model to represent roads down to the Collector Road level, including many of the Local roads. This allows the County to also use the model to evaluate large mixed use developments as well as long range transportation plans.

The model also estimates 2040 land use at the TAZ level and the 2040 highway network reflects the current Comprehensive Plan. The model is used to evaluate land use changes proposed through the Comprehensive Plan process as well as through rezoning and special use applications. The model can also be used to evaluate future road improvement scenarios.

FUNCTIONAL CLASSIFICATIONS

The roadway functional classification system is a network of roadways grouped into classes each defined according to its purpose with respect to transportation. The system is based on guidelines by the Federal Highway Administration (FHWA). The basic purpose of a given road can be defined as a function of mobility and access. For instance, a high level facility such as an interstate or major arterial are typically characterized as having greater travel speeds as well as greater traffic volumes. On these roadways, the main travel purpose is mobility. Low level facilities such as collector or local roads on the other hand, generally tend to carry fewer vehicles traveling at lower speeds. The main function of these roadways is more related to access. The classification for roads in the County is important because in order to be eligible for Federal funding a roadway must be classified as a collector road or higher.

There are six (6) functional classifications for roads: Freeways/Interstates, Principal Arterials, Minor Arterials, Major Collectors, Minor Collectors and Local Roads. The transportation network in Spotsylvania County is organized by these classifications and matches those used by the Travel Demand Forecast Model. Spotsylvania County follows the latest adopted VDOT Functional Classifications. A map depicting VDOT's 2014 Functional Classifications can be found within this Chapter. VDOT is the official source for such classifications and any future amendments to them that may occur within the Planning Period. The latest VDOT Functional Classifications apply and can be found online **HERE**.

The definition, in part, of each roadway classification is as follows:

Freeways/Interstates are multi-lane highways with limited access at grade-separated interchanges. They are designed to carry high traffic volumes at high speeds linking one state to another for interstate travel and commerce. Typical right of way widths range from 250 feet to 400 feet.

Principal Arterials are highways designed to carry high speed/high volume traffic. Access is generally controlled through at-grade signalized crossings and grade-separated crossings at major intersections. These facilities are most often limited-access roadways intended to carry inter-county traffic and typically link cities and towns. Typical right of way widths range from 110 feet to 200 feet.

Minor Arterials are highways designed to carry high volume traffic at moderate speeds with general access through at-grade crossings and grade-separations at major/high volume intersections. These facilities are controlled-access roadways intended to carry mostly intra-county traffic while still linking cities and towns. Typical right-of-way widths range from 90 feet to 200 feet.

Major Collectors are highways designed to carry moderate speed/moderate volume traffic. These roads serve as major links between arterial roads and tend to serve more local traffic. The typical right-of-way width range is from 90 feet to 120 feet on major collectors.

Minor Collectors are highways designed to carry moderate speed, relatively low volume traffic. Minor collectors are more local serving and connect local streets with other collectors, as well as arterials. Typical right-of-way widths range from 60 feet to 90 feet.

Local Roads include those roads that provide access within residential and commercial areas. These roads are local serving in nature and connect residential and commercial areas with collector roads. In rural areas local roads convey traffic to the collector roads and are in many cases farm-to-market roads that do not meet modern design standards. Typical right-of-way widths for local roads range from 50 feet to 100 feet.

In each of the classifications described above the right-of-way widths will tend to vary to make allowances for bikeways, pedestrian facilities, bus stops, etc. as well as actual design speed.

CORRIDORS OF STATEWIDE SIGNIFICANCE

Corridors of Statewide Significance (CoSS) are multimodal connections to the Commonwealth's major activity centers. They are critical to the movement of people and goods between regions of Virginia and through the state. The CoSS were originally developed under VTrans2025 and validated during the VTrans2035 Update process. The Commonwealth Transportation Board (CTB) is charged with developing criteria for prioritizing the CoSS and conducting studies of the corridors. Corridors identified as CoSS demonstrate all of the following characteristics:

- Multiple modes and/or an extended freight corridor,
- Connection among regions, states and/or major activity centers,
- High volume of travel, and
- Unique statewide function and/or fulfillment of statewide goal

The purpose of identifying and designation CoSS is "to provide a multimodal vision for the corridors to guide localities in their land use and transportation plans. Without guidance, local decisions could degrade a corridor's ability to move people and goods, causing bottlenecks and problems that are costly to fix, and undermine economic and quality of life goals. As Virginia continues to grow, it must take steps now to ensure the right balance of development, transportation capacity, and natural resources. The real value of the CoSS is the identification of strategies within each corridor as the first step in ensuring these corridors are invested in and protected for the future benefit of the entire Commonwealth". There are three tiers of CoSS: National Corridors, Commerce and Mobility Corridors, and Statewide Corridors. These systems are defined by the dynamics of total population, travel patterns, and intermodal and economic potential of the corridor within and outside of Virginia.

Two CoSS traverse Spotsylvania County:

1. *Coastal Corridor (Route 17), Corridor A,* locally includes U. S, Route 17 as it passes through the County, is designated as a Commerce and Mobility Corridor. In whole includes Route 17, Local Transit Services, Port of Virginia (indirect access), Port of Richmond, Rappahannock River, Norfolk Southern Heartland Corridor, Norfolk Southern Coal Corridor, CSX National Gateway Corridor, CSX Coal Corridor, Amtrak, 12 airports, including 2 commercial airports (Newport News-Williamsburg Airport and Norfolk International Airport), Greyhound bus stations, Fredericksburg area VRE (Passenger Rail) accessibility.

   Spotsylvania County includes portions of the Coastal Corridor Segment A2 and A3.

Key Functions:

- Major I-95 alternative to shore destinations and through traffic
- Freight corridor
- Tourism access to Northern Neck and Middle Peninsula

Summary of VTRANS 2040 Needs- A2 Segment (Spotsylvania County):

- Safety issues at interchange of US 17/US 1/I-95
- Reliability issue at US 17 and I-95 south of Fredericksburg
- Congestion issue on US 17 between US 1 and I-95 south of Fredericksburg

Summary of VTRANS 2040 Needs- A3 Segment (Spotsylvania County):

- Congestion issue on US 17/US 1 between US 17 and I-95 south of Fredericksburg
- Slow speeds and safety concerns at interchange of I-95/US 17 and US 3
- Congestion issue on US 17/I-95 between VA Route 3 and US 17/US 17 Business west of Fredericksburg
- Reliability issue on I-95 from US 17 south of Fredericksburg to VA Route 3

Findings of the VTRANS 2040 CoSS assessment of the Coastal Corridor can be found **HERE**.

2. *Washington to North Carolina Corridor (I-95)*, Corridor K, Major corridor components include I-95. I-395, I-495, I-85, I-195, I-295, Routes 1 and 301, WMATA Blue and Yellow Lines, Local Transit Services, Virginia Railway Express, Ports of Alexandria and Richmond, James River, CSX National Gateway Corridor, Park-and-Ride, Amtrak, Dulles International Airport, Ronald Reagan Washington National Airport, Richmond International Airport, other general aviation facilities, Greyhound bus.

   Spotsylvania County is within Segment K3 of the Washington to North Carolina Corridor.

   Key Functions:

   - Commuter Corridor in Northern Virginia and Richmond Areas
   - Through Traffic (“Main Street” of East Coast)
   - Freight Corridor (trucks, CSX Rail Lines)
   - Military Access (Pentagon, Quantico, Ft. Belvoir, Ft. AP Hill, Ft. Lee, etc.)
   - Multimodal Corridor (VRE, Amtrak, Express Bus, HOV/HOT Lanes)
   - Link to Maryland, Washington, D.C., and Capital Beltway from Points South

   Summary of VTRANS 2040 Needs- A2 Segment (Spotsylvania County):

   - High-growth commercial area near VA 3 forecast to be congested by 2025
   - Limited availability/connections to transit modes at park-and-ride lots
   - I-95 at Exit 118- Planned growth in the area may exacerbate congestion issues
   - Reliability issue on I-95 between Exit 126 (US 1/US 17) and Rappahannock River
   - Reliability issue at US 1 and Harrison Road

- Congestion issue on US 1/US 17 at junction with I-95 south of Fredericksburg
- Congestion issue at US 1 and Harrison Road in Fredericksburg
- Congestion issue at US 1 and Massaponax Church Road south of Fredericksburg

Findings of the VTRANS 2040 CoSS assessment of the Washington to North Carolina Corridor can be found **HERE**.

A summary of Six Year Improvement Program projects within CoSS in Spotsylvania County are summarized in Table 9 below. The projects are also included in the Spotsylvania County Thoroughfare Plan.

Table 9: CoSS Projects

Corridors of Statewide Significance (CoSS) Projects in the Six Year Improvement Program			
State Project #	**Description**	**Route**	**VDOT UPC**
0620-088-182	Harrison Road East (Rte 620 & Rte 1 Intersection Improvements)	1/620	51845
0606-088-622	Route 606 bridge replacement over I-95 and roadway improvements	I-95/606	100829
0606-088-653	Reconstruction of Mudd Tavern Road (complements Route 606 I-95 Bridge replacement)	I-95/606	105463
0606-088-654	Reconstruction of Mudd Tavern Road (complements Route 606 I-95 Bridge replacement)	I-95/606	105464

TRAFFIC SAFETY

As noted in the FAMPO 2045 LRTP, "the dramatic rise in population has strained transportation infrastructure pushing the Region's roadway system to capacity. Traffic congestion and safety issues on the interstate, primary, and portions of the secondary road system throughout the urbanized area are plentiful and growing worse and are beginning to impact even the rural localities more and more each year…When demand for a given transportation facility outstrips available capacity for that facility, congestion occurs. It can affect all modes of travel, including highway passenger and freight vehicles, freight rail, commuter rail, metro rail, bus, air traffic and airport ground traffic, ports and waterways."

Growth over time has outpaced the ability to improve roadways to the extent necessary to significantly improve local levels of service and road safety. Based on data presented in the FAMPO 2045 LRTP sourced from the Virginia Department of Motor Vehicles (DMV), between 2012 and 2016, Spotsylvania averaged approximately 12 highway fatalities per year. During the same time, the County's average number of annual crashes based on Virginia DMV data was nearly 2,100. Identification and implementation of improvement projects and for problematic intersections and road segments experiencing elevated crash activities is critical to improving design and capacity based factors that may be associated with crash activity. Additionally, continued pursuit of alternative modes of transportation and efforts to expand their use helps

reduce roadway congestion, improves levels of service, reduces frequency of vehicle conflict, and reduces the volumes of vehicles that may otherwise be at risk of crash on local roads.

HURRICANE EVACUATION

Though infrequent, the region is susceptible to the threat of Hurricane activity and its resulting impacts on personal property, health and welfare, and the transportation system. Within Spotsylvania County the Virginia Department of Emergency Management has identified the Route 17 corridor from the Caroline County line to Interstate 95 as part of the Peninsula Evacuation Route. This evacuation route extends to the coastal Virginia areas including major population centers at Hampton Roads, Newport News, Norfolk, and Virginia Beach. Impacts of evacuation events can be far reaching and strain the transportation system. Aside from pure traffic volume based slowdowns, emergency related power outages can cause significant deficits in demands at critical facilities including but not limited to: public safety buildings; facilities or businesses providing or selling food, water, fuel, lodging; emergency medical care facilities. Lack of operational facilities due to power failure further compound the impact of emergencies and evacuation, including impacts to the transportation system. With the support of the 2017 George Washington Regional Commission Regional Hazard Mitigation Plan, this plan seeks to improve travel conditions associated with designated Hurricane Evacuation Routes and Corridors of Statewide Significance within the County.

TRANSPORTATION GOALS AND STRATEGIES

An overarching goal with specific goals and strategies has been developed to provide direction and rationale for decision making related to transportation in Spotsylvania County. *The overarching goal is to develop a sustainable transportation network that supports the County's Comprehensive Plan and achieves a level of service that promotes safe and efficient operation and movement of people and goods.* The goals and strategies form the foundation for the planning and development of Spotsylvania County's transportation system.

Goal 1: Maintain acceptable Levels of Service on public roads.

Strategies:

1. Achieve no less than a "D" Peak Hour Level of Service on 90% of County secondary roads within the Primary Development Boundary as shown in the Thoroughfare Plan. In the Primary Settlement District, levels of service are lower to encourage development and redevelopment to densities and intensities that maximize use of the existing infrastructure.
2. Achieve no less than a "D" Peak Hour Level of Service on the VDOT Primary Street System.
3. Achieve no less than a "C" Peak Hour Level of Service on 90% of County secondary roads outside of the Primary Development Boundary as shown on the Thoroughfare Plan. Levels of Service standards have been set higher in the rural area to ensure the rural character of the area is not degraded by development.
4. Continue efforts to pave those unpaved roads in the VDOT Secondary System.
5. The County should monitor secondary road links and intersection Levels of Service through a Traffic Count Program to supplement VDOT's existing Traffic Count Program.
6. Utilize the Travel Demand Forecast Model to project future Thoroughfare Plan needs.
7. Preserve and enhance capacity by improving access management, reducing signals, or signal phases, and implementing innovative intersection configurations.

Goal 2: Ensure that new development does not degrade Levels of Service and mitigates its impact on the transportation network.

Strategies:

1. Protect the transportation network from future congestion by:
    a) encouraging joint-use access points for multiple developments,
    b) ensuring connections within and between developments that offer alternative routing for traffic, but does not encourage cut-through traffic, and
    c) encouraging alternative land development and site design techniques such as mixed use and planned unit developments that provide residential, employment, and recreational opportunities connected by a network of internal streets.
2. Require the submission of Traffic Impact Analysis (TIA) in compliance with VDOT's 527 Process or for projects that meet the County TIA threshold which is 750 vehicles per day (VPD), 100 AM Peak hour trips, or 100 PM Peak hour trips. Additionally, to ensure accuracy all TIAs will employ the latest available version of the ITE Trip Generation Manual

to calculate trip generation and the peak hour of the generator rates should be used for AM and PM Peak hour trip generation calculation if data is available.

3. Development proposals, especially for non-destination convenience based uses should include estimates of pass-by trips (traffic already on the road) associated with their use as not all traffic generation can be attributed to adding additional vehicle trips to the roads.
4. Only roadway facilities that are fully funded and programmed for implementation within the first 3 years of VDOT's Six Year Program or the County's CIP should be considered built and eligible for inclusion in a traffic analysis.
5. Large scale and mixed use developments should consider incorporating Transportation Demand Management (TDM) measures that reduce single occupancy vehicle trips.
6. The County should support alternative onsite transportation alternatives and recreational options such as transit, pedestrian and bicycle facilities that are able to, or will, connect to neighboring properties.
7. Discourage road sections allowing only single lane access in any direction without adequate travelway or shoulder width to allow other vehicles to pass in case of disabled vehicle, crash, stopped or pulled over vehicle. A single lane access constrained by a divided median is one example.

Goal 3: Promote alternative modes of transportation and multi-modal facilities to more effectively address demands on the transportation network.

Strategies:

1. Promote Transportation Demand Management measures, such as the rideshare program, which relieve congestion on major transportation routes and promote more efficient use of alternative transportation systems.
2. Promote design and construction of appropriate bicycle and pedestrian facilities meant to enhance safety and avoid conflicts with motorized vehicles.
3. Promote the design and construction of transportation facilities that consider the needs of persons with disabilities as well as the needs of an aging population.
4. Coordinate with a regional transit service to provide timely and efficient bus routes that meet the needs of local transit users.
5. Promote public transit access and enhancement with supporting infrastructure improvements in the form of nearby sidewalk/trail network, curb-cuts, crosswalks, and bus shelters at stop locations.
6. Plan for and support provision of affordable housing near employment rich areas, in mixed use high density areas, near multi-modal opportunities to proactively reduce accessibility burdens.
7. Recognize the accessibility benefits of provision of rural commercial and/or employment opportunities outside of the Primary Development Boundary to rural populations, especially to rural disadvantaged populations.
8. Explore opportunities to expand regional transit services to serve the Thornburg and New Post Areas.
9. Support capacity enhancements and efficiency improvements along the RF&P Rail corridor for freight and passenger transport.

10. Support protection, enhancement, expansion of rail spurs and sidings within the County along the RF&P corridor for the potential growth of freight service and rail reliant industries and their associated employment and economic activity benefits.
11. Support protection, enhancement, expansion of rail spurs and sidings within the County along the RF&P corridor for development complementary to passenger rail service such as transit oriented developments.
12. As a County within the GW Region, Spotsylvania County recognizes the importance of freight systems impacts on the local economy and traffic. The County will support and provide assistance implementing critical improvements efforts associated with the Regional Freight Plan.
13. Road improvement designs intended for the Tidewater Trail corridor should consider Shannon Airport guidance that supports lowering the road elevation by 4' to 5' in proximity to the nearby airport runway terminus.
14. As part of the upcoming update to the George Washington Regional Bicycle and Pedestrian Plan, work with the FAMPO Bicycle and Pedestrian Advisory Committee (BPAC) to develop a regional strategy and identify local policies for e-bikes and scooters. Policy recommendations may warrant inclusion in future iterations of the Comprehensive Plan.

Goal 4: Plan transportation facilities that are environmentally and aesthetically compatible with the character of the County and minimize adverse effects upon historic and environmental resources.

Strategies

1. Minimize negative physical impacts to existing residents and businesses in the planning and design of new transportation facilities.
2. Promote Context Sensitive Design (CSD) in the development of new and expanded roadway improvements. CSD involves developing a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic, and environmental resources, while maintaining safety and mobility.

Goal 5: Plan future transportation facilities that are cost-effective and can be implemented in a timely fashion.

Strategy:

1. Develop and implement a financial plan to achieve the County's transportation system objectives. The Plan should identify all new and existing funding mechanisms, such as Revenue Sharing, to include private funding initiatives and public/private partnerships.

Goal 6: Prioritize transportation projects for consistent implementation and clear direction for development patterns.

Strategies:

1. Develop and implement a working prioritized list of future road projects to achieve the County's transportation system priorities and objectives.
2. The list should identify all proposed improvement projects, new connection points, lane improvement, turn lane/intersection improvements, traffic circles/roundabouts, interchange alternatives, etc. to be coordinated through the regional transportation network including FRED, FAMPO, VRE and surrounding localities for consistent development.
3. The list shall be a working document reviewed and approved by the Transportation Committee and the Spotsylvania County Board of Supervisors.
4. Any inclusions, exclusions and alterations in the priorities approved on the list will require Spotsylvania County Board of Supervisors approval.

Goal 7: Protect the function of Corridors of Statewide Significance and Hurricane Evacuation Routes from unnecessary gridlock created by vehicle abandonment, stranding, excessively long queues and backups, food and water shortages due to power failure at critical facilities.

1. Promote installation of onsite secondary power sources, generator ready hookups or backup generators at critical facilities including but not limited to: public safety buildings; facilities or businesses providing or selling food, water, fuel, lodging; emergency medical care facilities.

THOROUGHFARE PLAN (ROAD IMPROVEMENT PLAN)
SPOTSYLVANIA COUNTY, VA

Approved December 14, 2021; Amended July 12, 2022

NEW ROADS AND ROAD EXTENSIONS*

Project	From	To	VDOT Functional Classification (2014)	CoSS	2020 # of Lanes	2040 # of Lanes	Ultimate ROW	Description of Improvement	2020 Length	2040 Length	2020 ADT	2040 ADT	2020 LOS	2040 LOS	Source of Cost Estimate	Total Cost (2040)^
Route 606 Service Road-North	Dan Bell Lane	S Roxbury Mill Rd	N/A	N	0	2	60'/variable	New 2-lane roadway with sidewalks	0.00	0.50	0	10,800	unk.	C	UPC 105464 & 111456	$8,000,000
Route 606 Service Road-South	Thornburg Plaza II	.1 mile West of north leg of Route 606 Roundabout	N/A	N	0	2	60'/variable	New 2-lane roadway with sidewalks	0.00	0.60	0	9,300	unk.	C	VDOT PCES	$8,000,000
Guinea Station Road Extension (607)	Massaponax Church Rd (608)	Patriot Hwy (1)	N/A	N	0	2	60'/variable	New facility: two 12-foot lanes. Shared Use Path south side to complement Ni River Trail implementation. Sidewalk north side. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.00	1.15	0	6,700	unk.	C	VDOT PCES	$9,715,440
River Run Pkwy (Pvt) Extension	Guinea Station Rd Extension	Patriot Hwy (1)	N/A	N	0	2	60'/variable	New facility: two 12-foot lanes. Shared Use Path south side to complement Ni River Trail implementation. Sidewalk north side. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.00	0.44	0	6,700	unk.	C	VDOT PCES	$16,896,000
Massaponax Church Rd Extension (608)	Lake Anna Parkway (208)	Courthouse Rd (208)	N/A	N	0	2	60'/variable	New Facility: two 12-foot lanes with sidewalk and shared use path. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.00	1.52	0	2,700	unk.	B	VDOT PCES	$12,467,000
Chancellor Road Extension (674)	Old Plank Rd (610)	Plank Rd (3)	N/A	N	0	4	60'/variable	New 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.00	0.90	0	6,000	unk.	B	VDOT PCES	$10,423,000
Rollingwood Dr Extended (711)	Harrison Rd (620)	Rollingwood Dr (711)	N/A	N	0	4	90'/variable	New 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.00	1.50	0	24,000	unk.	E	VDOT PCES	$14,650,300
Germanna Point Dr Extension (1029)	Cotter Rd	Spotsylvania Ave	N/A	N	0	4	90'/variable	New facility: four 12-foot lanes with 2- foot shoulders, 2-2' barriers, 1-10' multiuse trail as part of Germanna Pt Dr Connector Trail. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.00	0.91	0	10,300	unk.	C	VDOT PCES	$42,600,000
Houser Dr. Extension (1248)	Houser Dr	Industrial Dr	N/A	N	0	2	60'/variable	Expand Industrial Park accessibility with 2-lane connector road.	0.00	0.20	0	4,000	unk.	B	VDOT PCES	$1,921,600
Market St Extension (1489)	Patriot Hwy (1)	VA Site Southern Entrance, onward to Hood Drive (636)	N/A	N	0	2	60'/variable	Construct new facility connecting VA Hospital site southern entrance and Route 1 at Market Street, continuing onward to Hood Drive. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.00	0.50	0	5,700	unk.	B	VDOT PCES	$10,847,500
Filter Lane Upgrade and Extension	Patriot Hwy (1)	Commonwealth Dr	N/A	N	0	2	60'/variable	2-lane improvement project and extension of Filter Lane to intersect with Commonwealth Drive. To result in addition to the State system.	0.10	0.30	N/A	N/A	N/A	N/A	VDOT PCES	$7,800,000
Chancellor Road Spur	Gordon Rd (627)	Chancellor Rd (674)	N/A	N	0	4	90'/variable	Construct 4-lane divided facility connecting Gordon Rd with Chancellor Rd.	0.00	0.50	0	15,000	unk.	B	VDOT PCES	$10,745,000
Lansdowne Road Extension	Tidewater Trail (2/17)	Main Street	N/A	N	0	2	60'/variable	Extension of Lansdowne Rd to Main Street with a 10ft Share Use Path. Improvement to include a connection to Russo Drive. Deep Run spur trail interest, off East Coast Greenway.	0.00	0.24	0	6,500	unk.	B	VDOT PCES	$3,000,000
Airport/Industrial Access Road	Shannon Park Dr	Shannon Airport Cir.	N/A	N	0	2	60'/variable	Improve access to Shannon Airport and nearby business to reduce volume at Tidewater Trl at Shannon Airport Circle entrance.	0.00	0.13	0	1,000	unk.	A	VDOT PCES	$2,425,000
Industrial Court Extension	Industrial Ct	Wallace Ln	N/A	N	0	2	60'/variable	Construct 2-lane industrial park connector road.	0.30	0.30	N/A	N/A	N/A	N/A	VDOT PCES	$4,900,000
Hickory Ridge Rd Extension	Patriot Hwy (1)	Approx. 1/10 mile east of Hickory Ridge Rd & Patriot Hwy intersection	N/A	N	0	2	60'/variable	Construct 2-lane extension of Hickory Ridge Road to the east of Patriot Hwy (1) to enhance accessibility, traffic distribution and flow associated with future development in the area.	0.00	0.10	N/A	N/A	N/A	N/A	VDOT PCES	$1,400,000
Spotsylvania Pkwy Extension	Smith Station Rd	Gordon Rd (627)	N/A	N	0	4	90'/variable	Extension of Spotsylvania Pkwy west to Gordon Rd with Shared Use Path to complement Ni River Trail implementation. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.00	3.50	0	10,000	unk.	C	VDOT PCES	$75,215,000
North Point Dr Ext.	North Point Dr End	"Thornburg D"	N/A	N	0	2	60'/variable	Extend North Point Dr to "Thornburg D" with new 2-lane road including bike/ped friendly improvements.	0.00	0.20	N/A	N/A	N/A	N/A	VDOT PCES	$2,700,000
Ryland Payne Rd Ext.	Courthouse Rd (208)	"Lake Anna A"	N/A	N	0	2	60'/variable	Construct 2-lane extension of Ryland Payne Rd between Courthouse Rd (208) to "Lake Anna A" with bike/ped friendly accommodations.	0.00	0.44	N/A	N/A	N/A	N/A	VDOT PCES	$4,700,000
Lewiston Rd Ext.	Courthouse Rd (208)	"Lake Anna A"	N/A	N	0	2	60'/variable	Construct 2-lane extension of Lewiston Rd between Courthouse Rd (208) to "Lake Anna A" with bike/ped friendly accommodations to serve the Lake Anna Mixed Use and Commercial Areas. Part of intersection improvement project.	0.00	0.42	N/A	N/A	N/A	N/A	VDOT PCES	$4,600,000
VRE Crossroads Connector	Crossroads Pkwy (765)	Thornton Rolling Rd (609)	N/A	N	0	3	80'/variable	Shared Use Path south side. Sidewalk north side. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped. East Coast Greenway Auxiliary Trail interest.	0.00	0.45	N/A	N/A	N/A	N/A	VDOT PCES	$4,750,000
Route 751	Pierson Dr (1504)	Approx. 3/10 mile SE Pierson Dr	N/A	N	0	2	60'/variable	Industrial park access road terminating at cul-de-sac	0.00	0.30	N/A	N/A	N/A	N/A	VDOT PCES	$3,500,000
"Lake Anna A"	Ridge Road (655)	Lawyers Rd (601)	N/A	N	0	2	60'/variable	Construct 2-lane road west of, and generally parallel to the Rt 208 corridor between Ridge Rd and Lawyers Rd with bike/ped friendly accommodations to serve the Lake Anna Mixed Use and Commercial Areas.	0.00	2.60	N/A	N/A	N/A	N/A	VDOT PCES	$12,800,000
"Lake Anna B"	Ryland Payne Rd (726)	"Lake Anna A"	N/A	N	0	2	60'/variable	Construct 2-lane road between Ryland Payne Rd (726) and "Lake Anna A" (crossing Rt 208) with bike/ped friendly improvements.	0.00	1.30	N/A	N/A	N/A	N/A	VDOT PCES	$9,400,000
"Lake Anna C"	Corene Rd (630)	"Lake Anna A"	N/A	N	0	2	60'/variable	Construct 2-lane road between Corene Rd (630) and "Lake Anna A" with bike/ped friendly improvements.	0.00	0.33	N/A	N/A	N/A	N/A	VDOT PCES	$3,600,000
"Thornburg A"	Morris Rd (606)	Hickory Ridge Rd (632)	N/A	N	0	4	100'/variable	Construct a 4-lane parkway as a parallel road west of the Route 1 corridor through the Thornburg/Jackson Gateway development area. Project includes construction of a new bridge structure over the Po River and bicycle/pedestrian accommodations. A shared use path is envisioned along the west side of the roadway associated with the Po River Trail, with sidewalks to the east.	0.00	2.30	N/A	N/A	N/A	N/A	VDOT PCES	$18,200,000
"Thornburg B"	Patriot Hwy (1)	Morris Rd (606)	N/A	N	0	4	100'/variable	Construct a 4-lane parkway aligned with "Thornburg A" at Morris Road intersection to divert traffic away from the Rt 1 & Morris Rd intersection and provide inland access to the Thornburg area targetted for mixed use and commercial development. A shared use path is envisioned along the west side of the roadway with sidewalks to the east.	0.00	1.35	N/A	N/A	N/A	N/A	VDOT PCES	$12,600,000
"Thornburg C"	Patriot Hwy (1) & N Roxbury Mill intersection improvement	Hickory Ridge Rd Ext.	N/A	N	0	2	60'/variable	Provide a parallel road on the east side of Route 1 connecting a revised intersection at Route 1 and N Roxbury Mill Rd with Hickory Ridge Rd extension to the north. This improvement is expected to enhance access and improve traffic flow in the area for future economic development opportunities.	0.00	0.75	N/A	N/A	N/A	N/A	VDOT PCES	$7,100,000
"Thornburg D"	Patriot Hwy (1)	"Thornburg A"	N/A	N	0	2	60'/variable	Construct 2-lane connector road between Patriot Hwy (1) and "Thornburg A" Parkway. Road to include intersection with extended North Point Dr. (1462). Bicycle/Pedestrian accommodation to include shared use path associated with establishment of the Po River Trail between Rt 1, East Coast Greenway reroute connection, and "Thornburg A", and sidewalks.	0.00	0.67	N/A	N/A	N/A	N/A	VDOT PCES	$6,900,000
"Thornburg E"	Patriot Hwy (1)	"Thornburg A" and onward to edge of Primary Development Boundary	N/A	N	0	2	60'/variable	Construct 2-lane connector road between Patriot Hwy (1) and "Thornburg A" Parkway between the Po River and Morris Rd. For future development potential extend road onward to the western edge of the Primary Development Boundary. Bicycle/Pedestrian accommodation to include shared use path associated with establishment of the Po River Trail between Rt 1 and "Thornburg A", and sidewalks.	0.00	1.00	N/A	N/A	N/A	N/A	VDOT PCES	$8,500,000
"Thornburg F"	Morris Rd (606)	"Thornburg B"	N/A	N	0	2	60'/variable	Construct 2-lane connector road between Morris Rd (606) and "Thornburg B" Parkway.	0.00	0.50	N/A	N/A	N/A	N/A	VDOT PCES	$5,000,000
"Thornburg G"	Patriot Hwy (1)	"Thornburg B"	N/A	N	0	2	60'/variable	Construct 2-lane connector road between Patriot Hwy (1) and "Thornburg B" Parkway.	0.00	0.66	N/A	N/A	N/A	N/A	VDOT PCES	$6,850,000
"Thornburg H"	S Roxbury Mill Rd	Route 606 Service Rd N	N/A	N	0	2	60'/variable	Construct 2-lane connector road between S Roxbury Mill Rd and Route 606 Service Rd N	0.00	0.40	N/A	N/A	N/A	N/A	VDOT PCES	$4,100,000
"Thornburg I"	Hickory Ridge Rd (632)	"Thornburg A"	N/A	N	0	2	60'/variable	Construct 2-lane connector road between Hickory Ridge Rd (632) and "Thornburg A" Parkway, including a shared use path along the south side of road as part of the Po River Trail system.	0.00	2.00	N/A	N/A	N/A	N/A	VDOT PCES	$10,900,000

** New Concept Facilities (incl. new roads and extensions) as depicted on the corresponding Thoroughfare Plan Map are presented as conceptual alignments only. Further design/engineering necessary to determine precise route.*

THOROUGHFARE PLAN (ROAD IMPROVEMENT PLAN)
SPOTSYLVANIA COUNTY, VA

Approved December 14, 2021; Amended July 12, 2022

INTERSTATE PROJECTS

Project	From	To	VDOT Functional Classification	CoSS	2020 # of Lanes	2040 # of Lanes	Ultimate ROW	Description of Improvement	2020 Length	2040 Length	2020 ADT	2040 ADT	2020 LOS	2040 LOS	Source of Cost Estimate	Total Cost (2040)^
Super Ramp Construction	I-95 SB Off-ramp	Mills Dr. (US-17)	Interstate	Y	0	2	60'	New SB ramp to provide direct connection between I-95 SB off-ramp and US 17	0	1.25	N/A	20,200	N/A	E	VDOT PCES	$90,580,000
Bridge over I-95	0.1 mile west of I-95	0.1 mile East of I-95	N/A	N	0	2	60'	Bridge between Jackson Village and Alexander's Crossing developments. 4-lanes with bike/ped accomodations.	0	0.20	N/A	32,365	N/A	E	VDOT PCES	$14,946,000
I-95 Exit 126 Off-Ramp Improvements	I-95 SB Off-Ramp	Southpoint Parkway (711)	Ramp & Principal Arterial	Y	1	2	N/A	Widen I-95 SB Off-Ramp adding an additional left turn on US 1, and lane from the ramp to Southpoint Parkway. Include a sidewalk and retaining wall.	N/A	N/A	11,200	11,500	E	B	VDOT Smart Scale	$15,295,000
I-95 Exit 126 NB On-Ramp Improvements	US Route 1	I-95 NB On-Ramp	Ramp & Principal Arterial	Y	1	2	N/A	Widen I-95 NB On-Ramp and add an additional right turn on US 1	N/A	N/A	10,530	15,200	E	C	VDOT Smart Scale	$22,000,000
I-95 Exit 126 SB On-Ramp Improvements	US Route 1	I-95 SB On-Ramp	Ramp & Principal Arterial	Y	1	2	N/A	Widen I-95 SB On-Ramp and add an additional left turn from US 1 SB	N/A	N/A	9,000	12,000	E	C	County/State	$15,000,000
I-95 Exit 130 Improvements	Exit 130	Bragg Rd	Ramp & Principal Arterial	Y	0	4	150'	Serving Rt 3 west and Spotsylvania Towne Centre	N/A	0.8	79,000	104,000	F	F	VDOT Smart Scale	$60,000,000
I-95 SB Widening	1.3 miles south of Exit 130	Exit 126	Interstate	Y	3	4	TBD	Widen I-95 SB from 3-lanes to 4-lanes	2.8	2.8	71,000	106,000	C	D	VDOT PCES	$41,000,000
Harrison Road Interchange	I-95	Harrison Road (620)	Interstate	Y	0	2	TBD	New I-95 Interchange at Harrison Rd.	0	Unk.	N/A	62,700	N/A	D	VDOT PCES	$97,000,000
I-95 Corridor ITS Improvements	1.3 miles north of Exit 130	1.3 miles south of Exit 118	Interstate	Y	0	0	TBD	Interchange and variable message signage improvements. CCTV cameras and fiber optic deployment for improved monitoring.	N/A	N/A	N/A	N/A	unk.	unk.	VDOT PCES	$10,000,000
I-95 Exit 126 NB On-ramp and CD Road	Route 17	I-95 NB	Interstate	Y	0	2	TBD	Major intersection improvements and addition on NB ramp from US-17.	0	1.12	N/A	15,000	N/A	C	Kimley-Horn	$54,270,000
I-95 NB Widening	Exit 126	Exit 130	Interstate	Y	3	4	TBD	Additional I-95 NB General Purpose Lane between Exit 126 and Exit 130.	4.30	4.30	74,000	102,400	D	C	VDOT PCES	$54,000,000

ROAD WIDENINGS AND OTHER EXISTING ROAD CORRIDOR IMPROVEMENTS

Project	From	To	VDOT Functional Classification (2014)	CoSS	2020 # of Lanes	2040 # of Lanes	Ultimate ROW	Description of Improvement	2020 Length	2040 Length	2020 ADT	2040 ADT	2020 LOS	2040 LOS	Source of Cost Estimate	Total Cost (2040)^
Patriot Hwy (1)	Spotsylvania Co/ Caroline Co. Line	Morris Rd (606)/ Mudd Tavern Rd	Principal Arterial	Y	4	6	150'/variable	Widen to a 6-lane typical section. Shared Use Path east side. Shared Use Path west side between Morris Rd and "Thornburg G". Sidewalks west side from "Thornburg G" south to Primary Development Boundary line. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.60	2.60	14,000	38,300	B	C	VDOT PCES	$55,900,000
Patriot Hwy (1)	Morris Rd/ Mudd Tavern Rd (606)	N Roxbury Mill Rd (632)	Principal Arterial	Y	4	6	130'/variable	Widen to a 6-lane typical section with sidewalks. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.00	2.00	14,000	33,000	B	D	VDOT PCES	$43,000,000
Patriot Hwy (1)	N Roxbury Mill Rd (632)	Spotsylvania Pkwy (628)	Principal Arterial	Y	4	6	150'/variable	Widen to a 6-lane divided typical section. Shared Use Path east side from N Roxbury Milld Rd (632), crossing to west side at/nr Heritage Woods Development and continuing along west side of Rt 1 to Spotsylvania Pkwy. Additional stub shared use path on east side of Rt 1 extending from Spotsylvania Pkwy to Jackson Village Pkwy. Sidewalks along east side Rt 1 between Jackson Village Pkwy and aforementioned crossing at/nr Heritage Woods Development. Sidewalks along west side of Rt 1 at/nr Heritage Woods crossing, extending to intersection location with "Thornburg D" and N Roxbury Mill Rd. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	4.30	4.30	27,000	44,500	B	D	VDOT PCES	$92,450,000
Patriot Hwy (1)	Spotsylvania Pkwy (628)	Harrison Rd (620)	Principal Arterial	Y	4	6	130'/variable	Widen to a 6-lane divided typical section. Sidewalks both sides. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.06	3.06	55,000	65,000	E	E	VDOT PCES	$65,573,760
Patriot Hwy (1)	Harrison Rd (620)	Spotsylvania Co/ Fredericksburg City Line	Principal Arterial	Y	4	6	140'/variable	Widen to 6-lane divided typical section. Shared Use Path west side. Sidewalk east side. VCR Auxiliary Trail interest. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.70	0.70	30,000	60,000	C	F	VDOT PCES	$24,831,700
Lafayette Blvd (1 Business)	Spotsylvania Co/ Fredericksburg City Line	Patriot Hwy (1)	Minor Arterial	N	2	4	90'-100'/variable	Widen to 4-lane divided typical section. Shared Use Path west side from City line to Hudgins Rd to complement VCR Auxiliary Trail implementation. Sidewalk west side from Hudgins Rd to Patriot Hwy. Sidewalk east side. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.51	1.51	22,000	28,500	F	D	VDOT PCES	$42,261,540
Tidewater Trail (2/17)	Beulah Salisbury Dr (700)	Benchmark Rd (608)	Minor Arterial	N	2	4	110'/variable	Widen to a 4-lane divided section and improve intersections. East Coast Greenway Shared Use Path east side from Beulah Salisbury Dr. to Mansfield St. East Coast Greenway Shared Use Path west side from Shannon Park Dr to Benchmark Rd. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.62	2.62	21,000	38,000	F	D	VDOT Smart Scale	$82,000,000
Tidewater Trail (2/17)	Benchmark Rd (608)	Mills Drive (17)	Minor Arterial	N	2	4	90'/variable	Widen to a 4-lane typical section and improve intersections. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.81	1.81	7,800	14,000	C	B	VDOT Smart Scale	$56,650,000
Sandy Lane Dr (2)	Mills Dr (17)	Spotsylvania Co./ Caroline Co. Line	Minor Arterial	N	2	4	90'/variable	Widen from 2 to 4-lane. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.54	0.54	24,000	36,000	F	D	VDOT PCES	$11,062,300
Plank Road (3)	Harrison Crossing Access Road/ Harrison Rd (620)	Andora Dr (626) / Corter Ave (760)	Principal Arterial	N	6	6	140' /variable	Widen to a 6-lane divided typical section with sidewalk and shared use path. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.65	0.65	32,500	57,800	C	E	ARRA	$62,800,000
Plank Road (3)	Andora Dr (626) / Corter Ave (760)	Orange Co. Line	Principal Arterial	N	4	6	130'/variable	Widen to a 6-lane divided typical section with paved shoulders. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	8.79	8.79	32,000	54,200	C	E	VDOT PCES	$14,839,300
Mills Dr (17) Overpass Replacement	Mills Dr (17) Merge	Germanna Pt./Hospital Blvd.	Principal Arterial	Y	2	4	150'/variable	Widen to a 4-lane divided typical section with bicycle/pedestrian accomodations. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.64	0.64	20,000	30,000	E	C	UPC 107140	$20,000,000
Mills Dr (17)	Germanna Pt./Hospital Blvd.	Spotsylvania Co/Caroline Co. Line	Principal Arterial	Y	2	4	150'/variable	Widen to a 4-lane divided typical section, possibly tapering to a 3-lane section east of Tidewater Trail. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	6.4	6.4	14,000	24,000	C	C	VDOT PCES	$116,417,200
Lake Anna Parkway (208)	Gentry Drive (8301 Lake Anna Pkwy.)	Post Oak/Morris Road (606)	Minor Arterial	N	2	4	125'/variable	Widen to a 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.96	1.96	11,500	19,200	C	C	VDOT PCES	$38,354,350
Courthouse Rd (208)	Patriot Hwy (1)	Smith Station (628)	Minor Arterial	N	4	6	130'-140'/variable	Widen to a 6-lane divided typical section with sidewalks to Leavells Rd. Sidewalks and shared use path between Leavells and Smith Station Rd. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.72	3.72	39,000	56,750	E	E	VDOT PCES	$86,733,000
Courthouse Rd (208)	Smith Station (628)	Brock Road (613)	Minor Arterial	N	4	6	130'-140'/variable	Widen to a 6-lane divided. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped. Shared Use Path along east side between Wild Turkey Dr and Brock Rd.	3.12	3.12	30,000	42,500	C	B	VDOT PCES	$66,262,300
Courthouse Rd (208 Business)	Lake Anna Parkway (208) at Spotsylvania Courthouse	Massaponax Church Rd (608) at Spotsylvania Courthouse	Minor, Major Collector (Segments)	N	2	2	60'/variable	Widen to two 12-foot lanes with sidewalks within the Spotsylvania Courthouse area.	1.20	1.20	4,700	12,000	C	E	VDOT PCES	$13,315,200
Courthouse Rd (208 Business)	Lake Anna Parkway (208)	Morris Rd (606) at Snell	Minor Arterial	N	2	3	75'/variable	Widen to three 12-foot lanes with paved shoulders. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.60	2.60	9,200	5,400	B	A	VDOT PCES	$28,849,600
Courthouse Rd (208)	Post Oak/Morris Rd (606)	Bradley Ln (712)	Minor Arterial	N	2	4	60'/variable	Widen from 2 to 4-lanes with paved shoulders. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	7.70	7.70	6,800	19,000	B	C	VDOT PCES	$65,000,000
Courthouse Rd (208)	Bradley Ln (712)	Lake Anna/ Louisa County Line	Minor Arterial	N	2	4	110'/variable	Widen from 2 to 4-lanes. Shared Use Path east and west side of road. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	4.20	4.20	6,800	12,600	B	C	VDOT PCES	$74,000,000
Lawyers Road (601)	Courthouse Rd (208)	Stubbs Bridge Road (612)	Major Collector	N	2	2	60'/variable	Widen to two 12-foot lanes with 6-foot shoulders.	4.30	4.30	1,970	7,700	A	C	VDOT PCES	$18,042,000
Lewiston Rd (601)	Fairview Rd (622)	Courthouse Rd (208)	Minor Collector	N	2	2	60'/variable	Widen to two 12-foot lanes with paved shoulders. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	6.88	6.88	1,800	3,200	A	A	VDOT PCES	$28,856,500
Arcadia Rd (603)	Patriot Hwy (1)	Spotsylvania/Caroline Co. Line	Major, Minor Collector (Segments)	N	2	2	60'/variable	Widen to two 12-foot lanes with paved shoulders. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.38	1.38	3,800	2,700	B	B	VDOT PCES	$7,192,000
Marye Road (605)	Partlow Rd (738)	Arcadia Rd (603)	Major Collector	N	2	2	60'/variable	Widen to two 12-foot lanes with paved shoulders. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	8.40	8.40	2,500	2,000	A	A	VDOT PCES	$43,776,700
Mudd Tavern Rd Bridge over I-95 (606)	Bridge with taper to west	Bridge with taper to east	Minor Arterial	Y	2	4	72'	New bridge with 4-12' lanes, 4' median. 2' shoulders, sidewalk & 10' trail.	0.34	0.34	7,700	14,000	C	C	UPC 100829	$7,820,000
Mudd Tavern Rd (606)	Patriot Hwy (1)	Caroline Co. Line	Minor Arterial	N	2	4	100'/variable	Widen to 4-lanes. Shared Use Path south side. Sidewalk north side. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.51	0.51	12,600	16,000	C	B	UPC 105456	$21,250,000
Morris Rd (606)	Patriot Hwy (1)	Courthouse Rd (208)	Minor Arterial	N	2	4	80'-100'/variable	Widen from 2 to 4-lanes. Shared Use Path south side from Patriot Hwy to "Thornburg A", crossing to north and extending west to Hiawatha Dr. Sidewalk north side from Patriot Hwy to "Thornburg A". Paved shoulders otherwise outside Primary Development Boundary. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.50	3.50	10,000	12,000	C	B	VDOT PCES	$45,056,000
Post Oak Rd (606)	Lake Anna Parkway (208)	West Catharpin Rd (608)	Major Collector	N	2	2	50'/variable	Reconstruct select portions to improve horizontal and vertical alignments. Improve various intersections, paved shoulders. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	11.62	11.62	1,700	2,700	A	A	VDOT PCES	$24,921,000
Benchmark Rd (608)	Tidewater Trl (2)	Mills Dr (17)	Major Collector	N	2	2	60'/variable	Sidewalk and Shared Use Path on opposite sides of street. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped. East Coast Greenway interest.	2.65	2.65	4,100	6,800	A	B	VDOT PCES	$24,100,000
Robert E. Lee Dr (608)	Catharpin Rd (612)	Lake Anna Parkway (208)	Major Collector	N	2	2	50'/variable	Widen to two 12-foot lanes with 6-foot shoulders. Reconstruct the intersection at Route 612. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	6.08	6.08	2,500	2,300	A	A	VDOT PCES	$36,475,400
Massaponax Church Rd (608)	Courthouse Rd (208)	West of Smith Station Rd (628)	Major Collector	N	2	2	50'/variable	Widen travel lanes and paved shoulders. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.60	3.60	3,350	19,000	B	D	VDOT PCES	$14,800,000
Massaponax Church Rd (608)	West of Smith Station Rd (628)	Patriot Hwy (1)	Major Collector	N	2	4	100'/variable	Widen to a 4-lane divided typical section, tapering down to 2-lane improvement between Smith Station Rd and Honor Ln. Sidewalk and shared use path. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.10	1.10	1,500	12,200	A	C	VDOT PCES	$15,292,000

THOROUGHFARE PLAN (ROAD IMPROVEMENT PLAN)
SPOTSYLVANIA COUNTY, VA

Approved December 14, 2021; Amended July 12, 2022

ROAD WIDENINGS AND OTHER EXISTING ROAD CORRIDOR IMPROVEMENTS

Project	From	To	VDOT Functional Classification (2014)	CoSS	2020 # of Lanes	2040 # of Lanes	Ultimate ROW	Description of Improvement	2020 Length	2040 Length	2020 ADT	2040 ADT	2020 LOS	2040 LOS	Source of Cost Estimate	Total Cost (2040)^
Massaponax Church Rd (608)	Patriot Hwy (1)	Mills Dr (17)	Major Collector	N	2	4	100'/variable	Widen to two 12-foot lanes. Realign portion just east of Route 632. Shared Use Path east side from Mills Dr, crossing road north of Summit Crossing Rd. Shared Use Path west side from north of Summit Crossing Road to Patriot Hwy. Sidewalk west side from Mills Dr to north of Summit Crossing Rd. East Coast Greenway interest. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	4.52	4.52	1,200	5,700	A	B	VDOT PCES	$70,529,300
W Catharpin Rd (608)	Spotsylvania Co/Orange Co Line	Robert E. Lee (608)	Minor Collector	N	2	2	50'/variable	Widen to two 12-foot lanes with paved shoulders. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	7.09	7.09	2,000	3,100	B	B	VDOT PCES	$34,212,600
Thornton Rolling Rd (609)	Mills Dr (17)	Spotsylvania/Caroline Co. Line	Minor Collector	N	2	2	50'-60'/variable	Widen to two 12-foot lanes with paved shoulders. Shared Use Path west side of road within Primary Development Boundary. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.90	1.90	3,000	4,500	B	B	VDOT PCES	$9,902,000
Old Plank Rd (610)	Gordon Rd (627)	Plank Road (3)	Major Collector	N	2	2	60'/variable	Widen to two 12-foot lanes with sidewalks. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.50	0.50	6,000	7,100	B	C	VDOT PCES	$2,605,800
Old Plank Rd (610)	Catharpin Rd (612)	Gordon Rd (627)	Major Collector	N	2	2	60'/variable	Widen to two 12-foot lanes with shared Use Path south side and sidewalk north side. VCR Trail westward expansion interest. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.06	3.06	12,700	14,700	C	B	VDOT PCES	$25,300,000
Old Plank Rd (610)	Plank Road (3)	Catharpin Rd (612)	Major Collector	N	2	2	50'-60'/variable	Widen to two 12-foot lanes. Sidewalks between Catharpin Rd and Mclaws Dr. Paved Shoulders from Mclaws Dr to Plank Rd (3). Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.80	1.80	5,400	14,000	B	C	VDOT PCES	$14,753,400
Elys Ford Rd.(610)	Plank Rd (3)	Spotsylvania Co./ Culpeper Co. Line	Major Collector	N	2	2	50'/variable	Widen to two 12-foot lanes with paved shoulders. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.84	3.84	3,500	4,600	A	B	VDOT PCES	$19,110,800
Catharpin Rd (612)	W. Catharpin Rd (608)	Piney Branch Rd (624)	Major Collector	N	2	2	50'/variable	Widen to two 12-foot lanes with paved shoulders. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	5.24	5.24	2,500	4,800	A	B	VDOT PCES	$26,078,300
Catharpin Rd (612)	Piney Branch Rd (624)	Old Plank Rd (610)	Major Collector	N	2	2	60'/variable	Widen to a two 12-foot lanes with sidewalk and shared use path between Old Plank Rd and Ni River Middle School/Wilderness Elementary entrance. Shared Use Path continues on east side to Piney Branch Rd. VCR and Ni River Trail system interest. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.28	2.28	5,500	8,000	B	C	VDOT PCES	$14,200,000
Monrovia Rd & Stubbs Bridge Rd (612)	Spotsylvania Co/Orange Co Line	Post Oak Rd (606)	Major Collector	N	2	2	50'/variable	Improve horizontal and verticle alignments, paved shoulders. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	11.38	11.38	600	4,000	A	B	VDOT PCES	$32,000,000
Pamunkey Rd (612)	Post Oak Rd (606)	West Catharpin Rd (608)	Minor Collector	N	2	2	50'/variable	Widen to two 12-foot lanes with paved shoulders. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	4.10	4.10	1,000	3,800	A	B	VDOT PCES	$2,931,800
Brock Road (613)	Courthouse Rd (208)	Gordon Rd (627)	Major Collector	N	2	2	50'/variable	Widen to two 12-foot lanes with paved shoulders. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	12.00	12.00	5,700	10,400	B	D	VDOT PCES	$64,190,860
River Road (618)	Bragg Rd (639)	Motts Run Reservoir/ Park	Minor Collector	N	2	2	50'/variable	Shoulder Improvements. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.20	2.20	4,600	8,000	B	C	VDOT PCES	$1,652,000
Harrison Rd (620)	Patriot Hwy (1)	Lafayette Blvd (1 Business)	Minor Arterial	N	2	2	60'/variable	Widen to a 2-12' Lanes with sidewalks. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.17	0.17	5,700	11,200	B	C	VDOT PCES	$8,200,000
Harrison Rd (620)	Old Plank Rd (610)	Gordon Rd (627)	Minor Arterial	N	2	4	100'/variable	Widen to a 4-lane divided typical section with sidewalk and shared use path. VCR Trail westward expansion interest. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.50	0.50	13,000	23,800	C	C	UPC 107141	$11,200,000
Harrison Rd (620)	Salem Church Rd (639)	Patriot Hwy (1)	Minor Arterial	N	2	4	100'/variable	Widen to a 4-lane divided typical section. Shared Use Path north side. Sidewalk south side. VCR and VCR Auxiliary Trail interest. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.44	2.44	16,200	48,000	D	E	VDOT PCES	$36,647,700
Orange Plank Rd. (621)	Plank Rd (3)	Spotsylvania Co./ Orange Co. Line	Major Collector	N	2	2	50'/variable	Paved shoulder Improvements. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	7.00	7.00	3,500	11,300	A	C	VDOT PCES	$5,674,800
Fairview Rd (622)	Lewiston Rd (601)	Partlow Rd (738)	Minor Collector	N	2	2	50'/variable	Widen to two 12-foot lanes and paved shoulders. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.81	2.81	3,200	4,200	A	B	VDOT PCES	$10,809,500
Gordon Rd (627)	Spotsylvania Pkwy Extended (New Road)	Harrison Rd (620)	Major Collector	N	2	4	80'-100'/variable	Widen to 4-lane divided typical section. Paved shoulders and shared use path from Spotsylvania Pkwy Ext to Smith Station Rd. Sidewalk and shared use path between Smith Station Rd and Harrison Rd. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.10	3.10	16,700	20,700	E	C	VDOT PCES	$39,759,000
Gordon Rd (627)	Brock Rd (613)	Spotsylvania Pkwy Extended (New Road)	Major Collector	N	2	2	50'-60'/variable	Widen to two 12-foot lanes with paved shoulders but for Ni River Trail shared use path. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.00	3.00	9,100	10,500	C	D	VDOT PCES	$17,617,400
Smith Station Rd (628/639)	Massaponax Church Rd (608)	Courthouse Rd (208)	Major Collector	N	2	4	100'/variable	Widen to a 4-lane divided typical section. Shared Use Path west side to complement Ni River Trail implementation. Sidewalk east side. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.40	3.40	9,200	21,800	B	C	VDOT PCES	$44,117,600
Smith Station Rd (628)	Courthouse Rd (208)	Gordon Rd (627)	Major Collector	N	2	2	60'/variable	Widen to 2-12' lanes with bike/ped friendly improvements.	2.50	2.50	9,400	12,800	B	C	VDOT PCES	$15,200,000
Corene Rd (630)	Courthouse Rd (208)	Ridge Rd (655)	Local	N	2	2	60'/variable	Widen to 2-12' lanes with bike/ped friendly improvements.	0.40	0.40	10	2,200	A	A	VDOT PCES	$2,700,000
N Roxbury Mill Rd (632)	Patriot Hwy (1)	Larkin Chew Rd (1464)	Minor Collector	N	2	4	100'/variable	Widen to a 4-lane divided typical section. 10-foot shared use path along east side of road. East Coast Greenway reroute interest. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.47	0.47	320	6,000	A	B	VDOT PCES	$7,200,000
N,S Roxbury Mill Rd (632)	Larkin Chew Rd (1464)	S. Roxbury Mill Rd (632)	Minor Collector	N	2	2	60'/variable	Widen to 2-12' lanes. Demolish existing closed bridge structure and construct a new 2-lane bridge. New 10-foot shared use path along east side of road. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.50	1.50	0	1,209	N/A	A	VDOT PCES	$2,737,000
Hickory Ridge Rd (632)	Patriot Hwy (1)	Massaponax Church Rd (608)	Local	N	2	2	50'-60'/variable	Widen to 2-12' lanes with paved shoulders outside of Primary Development Boundary. Additional bike/ped friendly improvements within the Primary Development Boundary.	3.37	3.37	1,100	3,400	A	B	VDOT PCES	$6,400,000
Church Pond Rd (633)	Massaponax Church Rd (608)	Guinea Station Rd (607)	Local	N	2	2	50'/variable	Shoulder Improvements. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.40	1.40	850	1,500	A	A	VDOT PCES	$1,135,000
Germanna Pt Dr (635/1029)	Mills Dr (17)	Cotter Rd	Minor Collector	N	2,3	4	100'/variable	Sidewalk, and Shared Use Path (Germanna Pt Drive Connector Trail). Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.45	0.45	3,000	12,000	A	B	VDOT PCES	$21,300,000
Lee Hill School Dr (635)	Germanna Point Dr	Eagle Dr (736)	Minor Collector	N	2	2	60'/variable	Widen to two 12-foot lanes with sidewalks. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.35	2.35	5,300	6,000	B	B	VDOT PCES	$11,761,600
Hood Rd (636)	Courthouse Rd (208)	Patriot Hwy (1)	Major Collector	N	2	4	90'/variable	Widen to a 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.44	0.44	12,500	18,500	D	C	VDOT PCES	$12,972,000
Mine Rd (636)	Spotsylvania Avenue	Meadow View Drive	Major Collector	N	2	4	75'/variable	Widen to a 4-lane undivided section with sidewalks. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.32	0.32	17,100	20,000	E	C	VDOT PCES	$16,000,000
Mine Rd (636)	Meadow View Drive	Lansdowne Rd (638)	Major Collector	N	2	4	75'/variable	Widen to a 4-lane undivided section with sidewalks. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.14	1.14	11,800	15,100	C	D	VDOT PCES	$18,972,000
Mine Rd (636)	Lansdowne Rd (638)	Benchmark Rd (608)	Major Collector	N	2	2	60'/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.30	2.30	6,500	9,700	B	C	VDOT PCES	$13,527,000
Lansdowne Rd (638)	Mine Rd (636)	Spotsylvania Co/ Fredericksburg City Line	Major Collector	N	2	4	90'/variable	Widen to a 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.93	1.93	9,100	10,200	C	C	VDOT PCES	$28,845,700
Leavells Rd (639)	Courthouse Rd (208)	Smith Station Rd (628)	Major Collector	N	2	4	100'/variable	Widen to a 4-lane divided typical section with shared use path on west side, sidewalk along east. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.51	2.51	10,500	12,800	C	C	VDOT PCES	$43,866,400
Jones Powell Rd (653)	Belmont Rd (652)	Lawyers Rd (601)	Local	N	2	2	50'/variable	Widen to two 11-foot lanes with paved shoulders. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.65	1.65	800	4,350	A	B	VDOT PCES	$5,125,600
Ridge Rd (655)	Courthouse Rd (208)	"Lake Anna A"	Local	N	2	2	60'/variable	Widen to 2-12-foot lanes with bike/ped friendly improvements.	0.00	0.25	N/A	N/A	N/A	N/A	VDOT PCES	$2,800,000
Hudgins Rd (661)	Patriot Hwy (1)	Lafayette Blvd (1 Business)	Local	N	2	2	60'/variable	2-Lane improvement project with shared use path and sidewalk on opposite sides of road.	0.30	0.30	3800	7,200	B	C	VDOT PCES	$11,200,000
Piedmont Dr (673)	Smith Station Rd (628)	Harrison Rd (620)	Major Collector	N	2	2	60'/variable	Improve horizontal and vertical alignment and improve side street connections with appropriate turn lanes. Sidewalks along both sides of street but for shared use path along east side between Banks Ln and Harrison Rd.	2.24	2.24	6,800	8,500	B	B	VDOT PCES	$10,543,000
Chancellor Road (674)	Old Plank Rd (610)	Gordon Rd (627)	Minor Collector	N	2	4	100'/variable	Widen to a 4-lane divided typical section with sidewalk along north side and shared use path along south. VCR Trail interest. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.00	2.00	4,100	8,800	B	B	VDOT PCES	$33,758,000
Ryland Payne Rd (726)	Lewiston Rd (601)	Courthouse Rd (208)	Local	N	2	2	60'/variable	Widen to 2-12-foot lanes with bike/ped friendly improvements.	0.60	0.60	110	2,600	A	A	VDOT PCES	$5,600,000
Partlow Rd (738)	Spotsylvania Co/Caroline Co Line	Courthouse Rd (208)	Major Collector	N	2	2	50'/variable	Widen to two 12-foot lanes with paved shoulders. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	12.56	12.56	3,800	6,100	A	C	VDOT PCES	$39,000,000
Crossroads Pkwy (765)	Mills Dr (17)	VRE Dr	Local	N	2	4	100'/variable	Shared Use Path south side. Sidewalks north side. East Coast Greenway Auxiliary Trail interest. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.40	0.40	770	8,800	A	B	VDOT PCES	$14,400,000

THOROUGHFARE PLAN (ROAD IMPROVEMENT PLAN)
SPOTSYLVANIA COUNTY, VA

Approved December 14, 2021; Amended July 12, 2022

ROAD WIDENINGS AND OTHER EXISTING ROAD CORRIDOR IMPROVEMENTS

Project	From	To	VDOT Functional Classification (2014)	CoSS	2020 # of Lanes	2040 # of Lanes	Ultimate ROW	Description of Improvement	2020 Length	2040 Length	2020 ADT	2040 ADT	2020 LOS	2040 LOS	Source of Cost Estimate	Total Cost (2040)^
Spotsylvania Ave (1234)	Germanna Pt Dr Extension (1029)	Market St (1489)	Major Collector	N	2	4	90'/variable	Widen to 4-lane section with sidewalks.	0.20	0.20	6,500	15,600	A	C	VDOT PCES	$9,800,000
Lassen Ln (1324)	Patriot Hwy (1)	Lafayette Blvd (1 Business)	Local	N	2	3	80'/variable	Widen to 3-lane section with bike/ped friendly improvements	0.20	0.20	2,300	6,700	A	B	VDOT PCES	$3,400,000
North Point Dr (1462)	Patriot Hwy (1)	End of Road	Local	N	2	2	60'/variable	Widen to 2-12' lanes with bike/ped friendly improvements.	0.50	0.50	230	3,100	A	B	VDOT PCES	$2,900,000
Larkin Chew Rd (1462)	Patriot Hwy (1)	N. Roxbury Mill Rd (632)	Local	N	2	4	90'/variable	Widen to 4-lane section with bike/ped friendly improvements	0.28	0.28	1,100	7,000	A	B	VDOT PCES	$5,900,000
Commonwealth Dr (Pvt)	Patriot Hwy (1)	Filter Ln Extension	Local	N	2	2	60'/variable	Widen to 2-12' lanes with bike/ped friendly improvements. To result in addition to the State system.	0.30	0.30	N/A	N/A	N/A	N/A	VDOT PCES	$3,100,000

INTERSECTION IMPROVEMENT PLAN

Project	Description of Improvement	2020 Length	2040 Length	2020 PM Peak	2040 PM Peak	2020 LOS	2040 LOS	Source of Cost Estimate	Total Cost (2040)^
Lafayette Blvd (1 Business) & Olde Greenwich Dr (1227)	Add a Right-turn lane for the WB Approach with pedestrian accommodations at the signal.	0.2	0.2	N/A	N/A	N/A	N/A	VDOT Smart Scale	$2,500,000
Lafayette Blvd (1 Business) & Falcon Dr (1234)	Additional Intersection Capacity and Access Management improvements	0.25	0.25	N/A	N/A	N/A	N/A	VDOT PCES	$8,000,000
Patriot Hwy. & Courthouse Road/Lafayette Blvd.	Extend northbound, southbound, eastbound & westbound left turn lanes. Add new eastbound & westbound right turn lanes. Add a second eastbound left turn lane, and convert eastbound & westbound thru/right lanes to exclusive thru lanes.	N/A	N/A	4,050	7,400	D	E	VDOT PCES	$11,200,000
Patriot Hwy. (1) & VA Health Care Center Entrance	Construct a new signal with turn lanes into and out of the VA Health Care Center with pedestrian accomodations.	N/A	N/A	unk.	unk.	unk.	unk.	County	$3,500,000
Patriot Hwy. (1) & Market Street (1489)	Create an additional WB left turn lane on Market Street and a triple left turn from WB Market Street to SB US Rte 1. The project also includes sidewalk improvements in the intersection area.	N/A	N/A	3,720	4,851	D	C	WS	TBD
Patriot Hwy. (1) & Hood Drive (636) & Mine Road (636)	Improve intersection capacity by adding additional turn lanes. Add a median down US Rte 1 from 0.2 miles north of Hood Drive to New VA Healthcare Center entrance on US Rte 1. Add pedestrian accomodations to intersection and sidewalk in vicinity of project.	N/A	N/A	N/A	N/A	N/A	N/A	VDOT Smart Scale	$30,000,000
Patriot Hwy (1) & Hood Drive (636)- NW Quadrant Road	Construct a new connector road from Hood Drive to US Rte 1.	NA	NA	NA	10,000	NA	C	WS	TBD
Patriot Hwy. (1) & Southpoint Pkwy (711)	Improve intersection capacity by adding additional turn lanes and a SW Quadrant Roadway. Add pedestrian accomodations to intersection and sidewalk in vicinity of project.	N/A	N/A	N/A	NA	N/A	N/A	VDOT Study	$25,000,000
Patriot Hwy (1) & Filter Lane/Jackson Village Pkwy	Improve intersection capacity and align with new Jackson Village signal.	N/A	N/A	N/A	NA	N/A	N/A	VDOT PCES	$3,000,000
Patriot Hwy. (1) & Guinea Station Rd (607)	Improve intersection capacity by adding a new 2-lane roundabout with bicycle/pedestrian accommodations.	N/A	N/A	N/A	NA	N/A	N/A	VDOT Smart Scale	$12,000,000
Patriot Hwy. (1) & N Roxbury Mill Rd (632)	Improve intersection to add a signal and additional turn lanes with bicycle/pedestrian accommdations.	N/A	N/A	N/A	NA	N/A	N/A	VDOT Study	$10,000,000
Patriot Hwy. (1) & Larkin Chew/ North Point Dr (1462)	Improve intersection capacity and safety by adding a signal and turn lane improvements.	N/A	N/A	N/A	NA	N/A	N/A	VDOT PCES	$3,000,000
Patriot Hwy. (1) & Morris Rd/ Mudd Tavern Rd (606)	Additional capacity improvements beyond committed VDOT projects to add additional turn lanes and bicycle/pedestrian improvements.	N/A	N/A	N/A	NA	N/A	N/A	VDOT PCES	$5,000,000
Patriot Hwy (1) & Massaponax Church Rd (608)	Additional capacity and safety improvements to add additional turn lanes and bicycle/pedestrian improvements.	N/A	N/A	N/A	NA	N/A	N/A	VDOT PCES	$8,000,000
Tidewater Trail (2) & Benchmark Road (608)	Add a Left turn lane for the WB Approach and also add a Left turn lane for the EB Approach and change right turn lane to be shared with through lane for NB approach.	N/A	N/A	2,383	3,108	B	C	VDOT PCES	$4,500,000
Plank Rd (3) & Big Ben Blvd (1942)	Improve intersection capacity by addition additional turn lanes. Add pedestrian accomodations to intersection and sidewalk in vicinity of project	N/A	N/A	N/A	NA	N/A	N/A	VDOT PCES	$5,000,000
Courthouse Road (208) & Smith Station Road (628)	The purpose of this project is to increase intersection capacity, reduce delay, and improve traffic flow at the intersection of Courthouse Road and Smith Station Road. Additional turn lanes will be added from the north and southbound directions on Smith Station Road along with through lanes from the east and wesbound direction on Courthouse Road.	N/A	400'	3,500	4,900	E	D	VDOT PCES	$4,872,600
Courthouse Road (208) & Foster Road (629)	Improve intersection capacity by addition additional turn lanes. Add pedestrian accomodations to intersection and sidewalk in vicinity of project	N/A	N/A	N/A	NA	N/A	N/A	VDOT PCES	$4,000,000
Courthouse Rd (208) & Hood (636)/Houser Drive (1248)	Project will separate the northbound through movement on Hood Drive by providing two left turn lanes, a through lane, and right turn lane.	N/A	N/A	3,700	4,300	E	C	UPC 110987	$6,301,000
Courthouse Rd (208) Turning Lane improvements: Rte 711 (Southpoint Pkwy) to Hood Drive	Construct a 475 ft right turn lane for Rte 711 to Rte 208. Lengthen WB left turn lanes at Rte 711. Restriping of turn lanes at Stoney Creek Drive/Wawa. Construct 240 ft of missing curb lane at Woodland Dr. Provide a 3ed WB lane by reconstructing the I-95 overpass median to be a travel lane with a four ft raised median and restriping turn lanes at Hood Drive/Houser Rd intersection	N/A	N/A	TBD	TBD	TBD	TBD	STATEWIDE PLANNING LEVEL COST ESTIMATES	$7,365,000
Courthouse Rd (208) & Breckenridge Drive (2325)/Brittney Commons (1612)	Extend the eastbound and westbound left turn lanes in both directions on Courthouse Road for approximately 200'.	400'	400'	2,550	3,000	B	t	FAMPO estimate	$952,322
Courthouse Rd (208) & Corsair Terrace/ Anna Pt Ln	Intersection improvement and realignment project at Courthouse Rd (208) and Corsair Terrace/Anna Pt Ln.	N/A	N/A	N/A	NA	N/A	N/A	VDOT PCES	$3,000,000
Courthouse Rd (208) Operational and Transit Improvements	Results from VDOT Study include (1) Lengthen WB Route 208 Left Turn Lane for Southpoint Pkwy by approx. 110 ft using grass median to west of I-95/Rte 208 Bridge; (2) Southpoint Pkwy Intersection Improvements; (3) Stoney Creek Drive/Wawa Intersection Imrpovements; (4) WB Rhoades Dr to Woodland Dr to replace about 240 feet of missing curblane that ends at Woodland Dr.	0.60	0.60	4,200	5,880	D	E	VDOT STUDY	$10,000,000 (VDOT Study) & $580,000 Total Transit Cost (Not included in VDOT Cost Estimate)
Courthouse Rd (208 Business) & Massaponax Church Rd (608)	Realign intersection of Massaponax Church Rd with Business 208 to a "T" intersection with a roundabout or conventional intersecton and provide bicycle/pedestrian accommodations.	N/A	100'	TBD	TBD	TBD	TBD	STATEWIDE PLANNING LEVEL COST ESTIMATES	$3,520,000
Lawyers Road (601) & Lake Anna State Park Entrance	Project will add additional right and left turn lanes into the Lake Anna State Park and entrance improvements	N/A	N/A	N/A	N/A	N/A	N/A	VDOT PCES	$985,400
Construct new intersection or roundabout at this intersection to address turning movements and crashes.	Construct new intersection or roundabout at this intersection to address turning movements and crashes.	N/A	N/A	1910	6,027	C	C	VDOT PCES	$2,600,000
Lewiston Rd (601) & Courthouse Rd (208)	Realign intersection of Lewiston Rd with Courthouse Rd (208) to a "T" intersection as an improved 2-lane road.	N/A	N/A	N/A	NA	N/A	N/A	VDOT PCES	$3,500,000
Old Plank Rd (610) & Andora Dr (626) Roundabout	Convert existing 4-way stop controlled intersection to a free flow roundabout.	N/A	N/A	1,720	2,100	D	A	VDOT PCES	$2,500,000
Old Plank Rd (610) & Chancellor Rd (674) Roundabout	Convert a 2-way stop controlled intersection to a free flow roundabout to address safety issues.	N/A	N/A	1,450	1,730	D	A	SDI	$1,971,000
Harrison Road (620) & Lafayette Boulevard (1 Business)	Extend the existing right turn lane on Lafayette Boulevard 300' from Harrison Road to Lee Street.	300'	300'	3,300	3,900	E	D	VDOT PCES	$835,000
Harrison Road (620) & Salem Church Road/Leavells Road (639)	Extend northbound & southbound left turn lanes & southbound right turn lane. Add a new eastbound & westbound right turn lane, westbound right turn lane, westbound thru lane & esatbound right turn lane.	N/A	N/A	1,400	7,500	E	D	VDOT PCES	$6,100,000
Harrison Road (620) & Salem Station Blvd. (1475)	Additional capacity and safety improvements beyond committed Smart Scale project to add additional turn lanes and bicycle/pedestrian improvements.	N/A	N/A	N/A	NA	N/A	N/A	VDOT PCES	$6,500,000
Gordon Rd (627) & Spotsylvania Pkwy Extension (Future New Concept Road)	New intersection with turn lanes and bicycle/pedestrian accommodations.	N/A	N/A	N/A	NA	N/A	N/A	VDOT PCES	$10,000,000

THOROUGHFARE PLAN (ROAD IMPROVEMENT PLAN)
SPOTSYLVANIA COUNTY, VA

Approved December 14, 2021; Amended July 12, 2022

INTERSECTION IMPROVEMENT PLAN

Project	Description of Improvement	2020 Length	2040 Length	2020 PM Peak	2040 PM Peak	2020 LOS	2040 LOS	Source of Cost Estimate	Total Cost (2040)^
Smith Station Rd (628) & Foster Rd (629)	Capacity and safety improvements with bicycle/pedestrian accommodations.	N/A	N/A	N/A	NA	N/A	N/A	VDOT PCES	$2,000,000
Smith Station Rd (628) & Spotsylvania Extension (Future New Concept Road)	New intersection with turn lanes and bicycle/pedestrian accommodations.	N/A	N/A	N/A	NA	N/A	N/A	VDOT PCES	$10,000,000
Hudgins Road (661) & Lafayette Blvd (1 Business)	Widen Hudgins Rd to 24 ft between Tignor Lane and Rte 1. The intersection improvement for Hudgins at Rte 1 would upgrade the existing signalized intersection to provide a left and right turn lane from Hudgins to Rte 1. The project would also provide bicycle/pedestrian accomodations along Hudgins Rd from Lafayette Blvd to the West side of Rte 1.	N/A	1,100	TBD	TBD	A	TBD	STATEWIDE PLANNING LEVEL COST ESTIMATES	$3,507,000
Hudgins Road (661) & Patriot Hwy (1)	Widen Hudgins Rd to 24 ft between Lafayette Blvd and Tignor Lane. Provide a new roundabout or signalized intersection for Lafayette Blvd at Hudgins Rd with bicycle/pedestrian accomodations. Shared Use Path planned to link Patriot Hwy and Lafayette Blvd via Hudgins Rd.	N/A	500'	TBD	TBD	A	TBD	STATEWIDE PLANNING LEVEL COST ESTIMATES	$6,575,000
Spotsylvania Ave (1234) & Market Street (1489)	Add a Right turn lane from SB Spotsylvania Ave to Market St and lengthen westbound turn lanes on Rte 208 to 600 feet.	N/A	100'	TBD	TBD	TBD	TBD	STATEWIDE PLANNING LEVEL COST ESTIMATES	$460,000
Market Street Extension & Hood Drive	Construct new intersection or roundabout at a new intersection resulting from the construction of Market Street Extension that would intersect Hood Drive.	N/A	2170'	N/A	1,400	N/A	C	VDOT PCES	$9,315,350
Spotsylvania Mall Drive Roundabout	Construct a new roundabout at intersection of Towne Centre Blvd and Bragg Rd	N/A	N/A	N/A	unk.	unk.	unk.	VDOT PCES	$3,300,000

THOROUGHFARE PLAN (STUDIES)

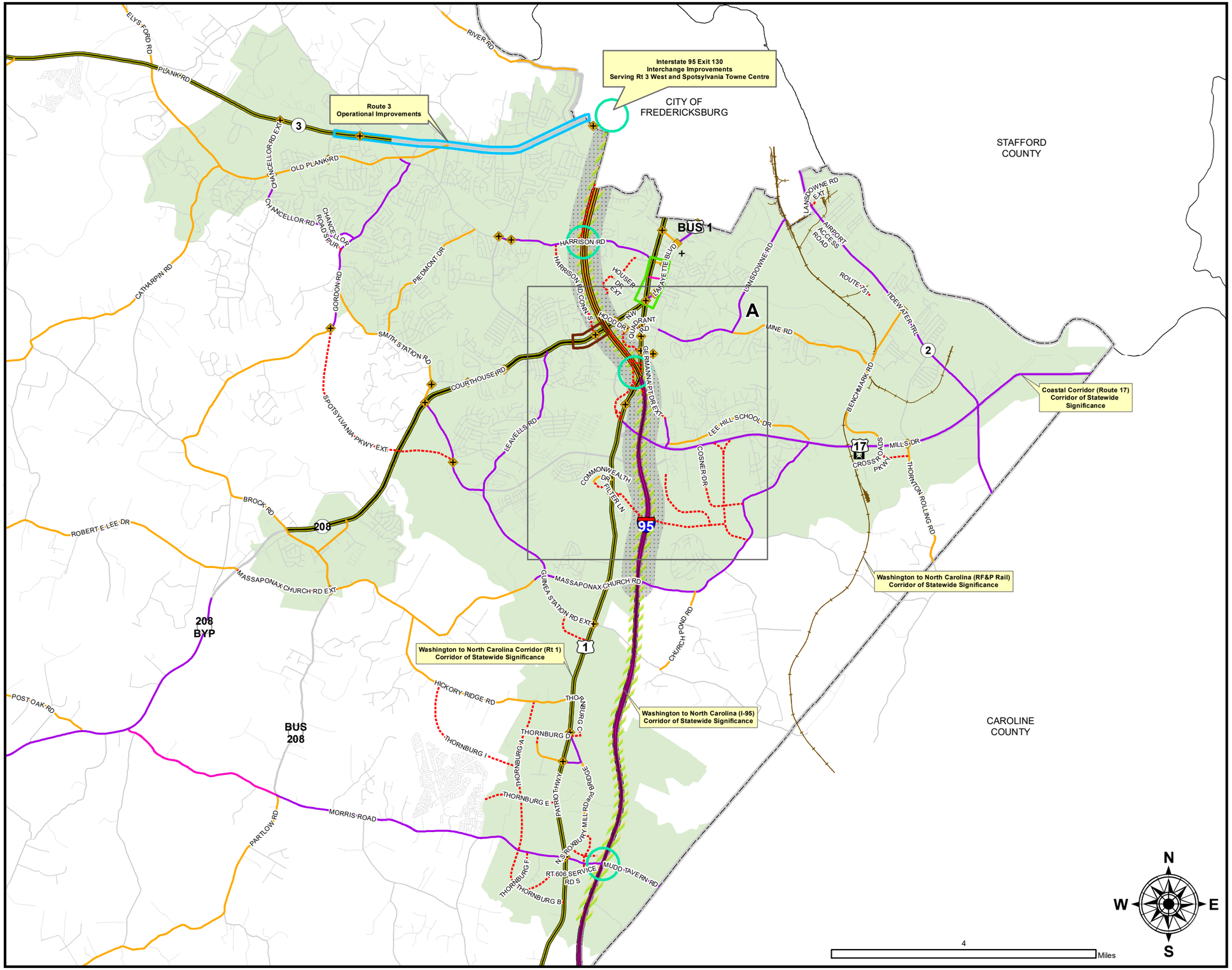
Study	Description
Intermediate I-95 Study Area Projects (from North of of Exit 130 (MP 130.7) to North of Exit 118 (MP 119.7))	Studies to include feasibility of collector-distributor (CD) lanes in both directions between Exit 130 and new access points (Harrison Road (620) & Courthouse Road (208)) and include NB CD lanes between Route 3 and US 17 (NB Rappahannock River Crossing project). Potential new interchange to be considered south of Exit 126 along with improvements to existing interchanges at Exit 118 and Exit 126. Additional Exist 126 improvements may include the "J" Ramp, Super Ramp, Alternative 3 (Improvements to US 1 and Southpoint Parkway), Exit 126 to US 1 ramp & signal improvements and/or other recommendations from the KH IMR and companion Planning Study.
Route 3 Arterial Management Plan (Michael Baker International/VDOT)	The Route 3 Arterial Management Plan consists of an approximate 9.6 mile corridor section of Route 3 from Gordon Road (626) to Route 20. The corridor includes 1/4 mile on either side of the Route 3 centerline and includes a total of fifteen intersections.
Route 3 Operational Improvements	Study to identify operational and safety improvements between I-95 and Andora Drive. Study also includes potentail grade seperation improvements between I-95 and Salem Church Rd.
Route 606 Corridor STAR's Study (VDOT)	The Route 606 Corridor Management Plan consists of an approximate 0.75 mile corridor section of Route 606 from the I-95 Exit 118 interchange to approximately 800' west of Route 1. Key areas of concern include SB I-95 Ramps and Route 606, Route 1 & Route 606, Dan Bell Lane & Route 606, and access management for commercial entrances.
Route 1 (from Interstate 95 to Commonwealth Drive) and Route 208 (from Route 1 to Leavells Road) Corridor Study.	The US 1 and Route 208 Corridor Study will evaluate needs and improvements to US 1 and Route 208 which would be needed if improvements are made to I-95 Exit 126 and assess the impacts of these traffic related improvements on the community.
Route 2/Route 17 Business (US Route 17 to VA-3 Blue and Gray Parkway) Corridor Study	The Route 2/Route 17 Business Corridor Study will evaluate needs and improvements to Route 2/Route 17 Business from the City of Fredericksburg Line to US 17 and assess what impacts these traffic related improvements would have on the community.
Massaponax Corridor Study (Michael Baker International)	The study was initiated by the County to identify projected deficiencies on US 1, US 17 and Route 606 and to provide concepts for roadway improvements and access management to address anticipated future traffic growth. The Corridor Study was designed as a tool to advance projects in VDOT's Six-Year Construction Plan.

LEGEND [^]- COST PER MILE (UNLESS OTHERWISE NOTED) - SOURCE DOCUMENT IS VDOT PLANNING COST ESTIMATES - JANUARY, 2015 (SEE TRANSPORTATION APPENDIX) - AVERAGES FOR SPOTSYLVANIA REGION, PROVIDING HIGH (WORST CASE) AS OPPOSED TO LOW ESTIMATE. 3% INFLATION PER YEAR ASSUMED

VSTP = Virginia Surface Transportation Plan
CoSS = Corridor of Statewide Significance
FAMPO = Fredericksburg Area Metropolitan Planning Organization
Kimley Horn (KH) = Exit 126 Interchange Modification Report / Planning Study
PCES = VDOT Planning Cost Estimates (January, 2015)
VDOT = Virginia Department of Transportation

SPOTSYLVANIA COUNTY THOROUGHFARE PLAN- PRIMARY DEVELOPMENT BOUNDARY

Map Approved: December 14, 2021; Amended July 12, 2022

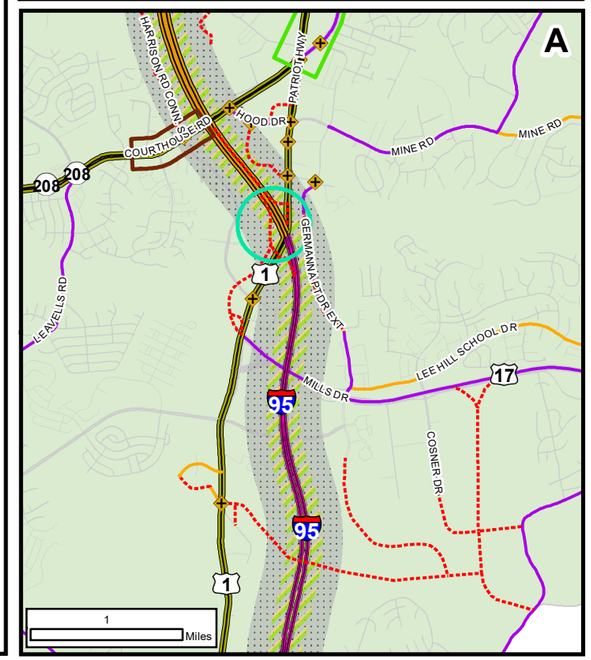


Legend

- VRE Station (Rail)
- Intersection Improvement
- Four Mile Fork Operational Improvements
- Rt 208 Operational Improvements
- Rt 3 Operational Improvements
- Interchange Project
- 2-Lane Improvement
- 3-Lane Improvement
- 4-Lane Improvement (Divided)
- 6-Lane Improvement (Divided)
- Interstate Lane Additions
- Interstate 95
- New Concept Facility*
- Rail Corridor
- I95 Corridor ITS
- I95 Interchange Study Area**
- Primary Development Boundary

* New Concept Facilities are depicted as conceptual alignments only. Futher design/engineering necessary to determine precise route.

** I95 Interchange Studies to include feasibility of Collector-distributor (CD) Lanes in both directions between Exit 130 and new access points (Harrison Road (620) & Courthouse Road (208) and include North Bound CD lanes between Route 3 and US 17 (NB) Rappahannock River Crossing project). A potential new interchange south of Exit 126 and additional Exit 126 improvements including to the Interstate Ramp. Alternative 3 (Improvements to US 1 and Southpoint Parkway), Exit 126 to US 1 ramp and signal improvements or other recommendations from the KH Interchange Modification Report and companion Planning Study.



Thornburg Area
Development Prospects Overview
Future Land Use and Thoroughfare Plan

2 Miles

N

ensity
ential

Civil War Trail

Shared Use Path

Shared Use Path (ECG REROUTE)

MASSAPONAX CHURCH RD

Ni River Trail

GUINEA STATION RD EXT.

CHURCH POND RD

95

Employment Center Heavy

Mixed Use General

Rural

Scenic Byway

HICKORY RIDGE RD

PO River Trail

THORNBURG I

THORNBURG C

THORNBURG D

Shared Use Path

NORTH POINTE DR

LARKIN CHEW RD

1

Employment Center Light

Institutional

Water

THORNBURG A

PO River Trail

THORNBURG E

Shared Use Path

Shared Use Path

MORRIS ROAD

Shared Use Path

Mixed Use Light

N.S ROXBURY MILL RD and BRIDGE

THORNBURG H

95

Open Space

Commercial

THORNBURG B

THORNBURG F

Shared Use Path

RT 606 SERVICE RD S

MUDD TAVERN RD

THORNBURG G

Shared Use Path

Caroline County

Mixed Use Commercial Heavy

Shared Use Path

PATRIOT HWY

Shared Use Path

Agricultural Forestal

ARCADIA RD

MARYE RD

Legend

- Intersection Improvement
- Interchange Projects
- I95 Corridor ITS
- I95 Interchange Study Area**

Road Improvements

- 2-Lane Improvement
- 3-Lane Improvement
- 4-Lane Improvement (Divided)
- 6-Lane Improvement (Divided)
- 8-Lane Improvement (Divided)
- Interstate Lane Additions
- Interstate 95
- New Concept Facility*
- Primary Development Boundary

Future Land Use

Land Use Description

- Scenic Byway
- Scenic Road
- Civil War Trail
- Agricultural and Forestral
- Commercial
- Employment Center Heavy
- Employment Center Light
- High Density Residential
- Institutional
- Low Density Residential
- Mixed Use Commercial Heavy
- Mixed Use General
- Mixed Use Light
- Open Space
- Rural
- Water

* New Concept Facilities are depicted as conceptual alignments only. Futher design/engineering necessary to determine precise route.

** I95 Interchange Studies to include feasibility of Collector-distributor (CD) Lanes in both directions between Exit 130 and new access points (Harrison Road (620) & Courthouse Road (208) and include North Bound CD lanes between Route 3 and US 17 (NB) Rappahannock River Crossing project). A potential new interchange south of Exit 126 and additional Exit 126 improvements including to the Interstate Ramp. Alternative 3 (Improvements to US 1 and Southpoint Parkway), Exit 126 to US 1 ramp and signal improvements or other recommendations from the KH Interchange Modification Report and companion Planning Study.

Approved with July 12, 2022 Amendment

By Spotsylvania County Planning Department (JLP- 03-03-2022)

EagleView, 2021 Aerials. Credit Pictometry International Corp

SPOTSYLVANIA COUNTY THOROUGHFARE PLAN

Map Approved: December 14, 2021;
Amended July 12, 2022

CULPEPER COUNTY

ORANGE COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

CAROLINE COUNTY

LOUISA COUNTY

HANOVER COUNTY

Route 3 Operational Improvements

Washington to North Carolina Corridor (Rt 1) Corridor of Statewide Significance

Washington to North Carolina (I-95) Corridor of Statewide Significance

Coastal Corridor (Route 17) Corridor of Statewide Significance

Washington to North Carolina (RF&P Rail) Corridor of Statewide Significance

208 BYP

BUS 208

208

522

3

1

2

17

95

A

B

N
W
E
S

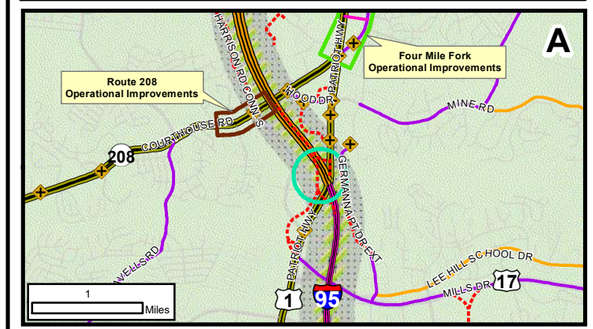
5 Miles

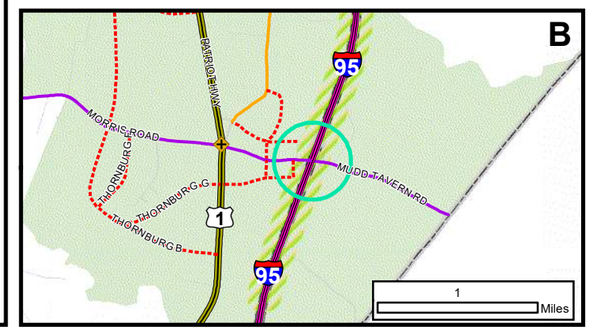
Legend

- VRE Station (Rail)
- Intersection Improvement
- Four Mile Fork Operational Improvements
- Rt 208 Operational Improvements
- Rt 3 Operational Improvements
- Interchange Project
- 2-Lane Improvement
- 3-Lane Improvement
- 4-Lane Improvement (Divided)
- 6-Lane Improvement (Divided)
- Interstate Lane Additions
- Interstate 95
- New Concept Facility*
- Rail Corridor
- I95 Corridor ITS
- I95 Interchange Study Area**
- Primary Development Boundary

* New Concept Facilities are depicted as conceptual alignments only. Futher design/engineering necessary to determine precise route.

** I95 Interchange Studies to include feasibility of Collector-distributor (CD) Lanes in both directions between Exit 130 and new access points (Harrison Road (620) & Courthouse Road (208) and include North Bound CD lanes between Route 3 and US 17 (NB) Rappahannock River Crossing project). A potential new interchange south of Exit 126 and additional Exit 126 improvements including to the Interstate Ramp. Alternative 3 (Improvements to US 1 and Southpoint Parkway), Exit 126 to US 1 ramp and signal improvements or other recommendations from the KH Interchange Modification Report and companion Planning Study.





Lake Anna Area
Development Prospects Overview
Future Land Use and Thoroughfare Plan

Open Space

Rural

Agricultural Forestal

Commercial

Mixed Use Commercial Heavy

Water

Lake Anna

Louisa County

725 Acres

734.6 Acres

LAWYERS RD

LEWISTON RD EXT

LEWISTON RD RE-ALIGN

LEWISTON RD

LAKE ANNA A

RYLAND PAYNE RD EXT

RYLAND PAYNE RD

LAKE ANNA B

LAKE ANNA C

COURTHOUSE RD

RIDGE RD

CORENE RD

208

Shared Use Path

Bike/Ped Friendly Crossing Improvements

Legend

Approved with July 12, 2022 Amendment

Intersection Improvement

Road Improvements

- 2-Lane Improvement
- 3-Lane Improvement
- 4-Lane Improvement (Divided)
- New Concept Facility*
- County Boundary
- Lake Anna Mixed Use Commercial Heavy Area

Future Land Use

Land Use Description

- Agricultural and Forestral
- Commercial
- Institutional
- Mixed Use Commercial Heavy
- Open Space
- Rural
- Water

N

* New Concept Facilities are depicted as conceptual alignments only. Futher design/engineering necessary to determine precise route.

1 Miles

By Spotsylvania County Planning Department (JLP- 03-03-2022)

EagleView, 2021 Aerials. Credit Pictometry International Corp

Spotsylvania County VDOT Functional Classifications (2014)

Legend

Functional Classifications (2014*)

- Interstate
- Other Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Rail Corridor
- Primary Development Boundary

*This map portrays county-wide functional classifications as established by VDOT in 2014. Please refer to VDOT as source for official determination and/or potential functional classifications updates that may occur in the future.

0 1.25 2.5 5 Miles

Map Approved: December 14, 2021

ORANGE COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

CAROLINE COUNTY

LOUISA COUNTY

Coastal Corridor (Route 17) Corridor of Statewide Significance

Washington to North Carolina (RF&P Rail) Corridor of Statewide Significance

Washington to North Carolina Corridor (Rt 1) Corridor of Statewide Significance

Washington to North Carolina (I-95) Corridor of Statewide Significance

ELYS FORD RD
SPOTSWOOD FURNACE RD
RIVER RD
BRAGG RD
ORANGE PLANK RD
HERNDON RD
OLD PLANK RD
HARRISON RD
CATHARPIN RD
PINEY BRANCH RD
GORDON RD
LAFAYETTE BLVD
KANSDOWNE RD
TIDEWATER TRL
MINE RD
BENCHMARK RD
BROCK RD
MILL POND RD
W CATHARPIN RD
ROBERT E LEE DR
LEE HILL SCHOOL DR
MILLS DR
LEAVELLS RD
SMITH STATION RD
SPOTSYLVANIA PKWY
MASSAPONAX CHURCH RD
FLIPPO DR
PAMUNKEY RD
SEAYS RD
208 BYP
BUS 208
HICKORY RIDGE RD
GUINEA STATION RD
JEFFERSON DAVIS HWY
LAWYERS RD
BELMONT RD
STUBBS BRIDGE RD
GRAND BROOKS RD
POST OAK RD
LAKE ANNA PKY
LANES CORNER RD
COURTHOUSE RD
MORRIS RD
DAYS BRIDGE RD
ZACHARY TAYLOR HWY
MONROVIA RD
TOWLES MILL RD
BLOCK HOUSE RD
SUNSET RD
HANSFORD RD
STANFIELD RD
BLAYDES CORNER RD
MARYE RD
LEWISTON RD
DICKERSON RD
EDENTON RD
WALLERS RD
FAIRVIEW RD
PARTLOW RD
BLANTON RD
ARRITT RD
MT OLIVE RD
LOG CABIN RD
208
522
95
17
2
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S

Chapter 3A

TRAILWAYS MASTER PLAN

TRAILWAYS MASTER PLAN

Introduction

The purpose of the Trailways Master Plan (Plan) is to provide a framework around which a comprehensive system of bicycle, pedestrian, and equestrian friendly improvements can be implemented throughout the County for user safety, provision of non-motorized transportation alternatives, and recreational value. This Plan is expected to positively contribute to transportation systems (as transportation alternatives) and provision of parks and recreation amenities considerate of levels of service as established in the Public Facilities Chapter of the Comprehensive Plan. The Plan also is intended to complement existing and future land uses, economic development and tourism related goals. For the purpose of this Plan, such improvements will be collectively referred to as "trailways".

The Plan includes transportation systems improvements paired with planned road improvement projects as outlined in the Thoroughfare Plan including provision of sidewalks, shared use or multi-use paths, paved shoulders. The Plan also includes interconnected off road corridor greenway trails (varying surface types) considerate of intended user groups, location, connectivity, existing and future land uses, and potential vehicular traffic conflicts and volumes. In a number of instances, planned greenway trails and road corridor based improvements such as planned shared use paths, complement one another and have a shared alignment.

This Plan addresses trailways on public land, public rights-of-way, and private land where the trails are open to the public. This Plan identifies a number of goals, objectives, and implementation strategies that Spotsylvania County can use in the development of an integrated system of trailways. An integrated system would link the existing trailway segments within the County into a larger common network of trailways that access residential areas, state, county, and national parks, forests and wildlife management areas, significant viewsheds, entertainment, water related resources, cultural and historic resources, schools, retail outlets, commercial services, mixed-use areas, employment centers, and transportation nodes. On a larger scale they can be incorporated into a regional system of trailways, effectively allowing for inter- and intra-jurisdictional infrastructure, regional tourism, and promoting regional alternative transportation possibilities.

The Plan has been developed acknowledging that full build-out of the trailways system with all amenities will not take place immediately. This will be a flexible, living plan and will be subject to future developments and economic conditions, as the community evolves. Levels of interest, available funding, and community support factors may fluctuate over time; so may the rate at which implementation of the plan is feasible.

Plan History

As noted in Chapter 3, the Spotsylvania County Trailways Master Plan was initially adopted by the Spotsylvania County Board of Supervisors on February 22, 2011 as a standalone document. The Plan was developed initially with direction from the 2008 Comprehensive Plan, 2009 Parks and Open Space Master Plan, numerous community meetings, community survey, and collaboration

with the Spotsylvania Greenways Initiative (SGI), work sessions and public hearing process. In 2011 the Virginia Chapter of the American Planning Association bestowed the 2011 Outstanding Plan Award- Plan Element upon the Plan.

In the interest of assuring the Plan does not become outdated or inconsiderate of opportunities that may arise from changes elsewhere within other elements of the Comprehensive Plan, the critical elements of the Plan were reviewed, updated, and incorporated into the Comprehensive Plan in Chapter 3A, here. Abandonment of the standalone Plan in favor of inclusion as a Comprehensive Plan element better positions it for continued monitor, pursuit, and review and update consistent with the 5-year review and update cycle. Otherwise staff has found there tends to be little impetus to update standalone plans that may become outdated or proactively amended to reflect new opportunities or routing alternatives.

Amendments between the 2011 Plan and this iteration result in an update that more harmoniously links planned greenway trails to road based improvements, reduces potential plan recommendations; potential routes that conflict with existing developments or past community input. Road based implementation has been found to be more favorable and feasible in many instances. Bicycle and pedestrian improvements also lend added support in the awarding of transportation dollars for road improvement projects. Bike/Ped improvements add strength to transportation project applications for funding such as Virginia's Smart Scale applications. Plans also lend support and basis for VDOT Project Scoping, Highway Safety Improvement Program (HSIP) Projects, County guidance on transportation projects managed by others, etc.

This update respects and upholds the many months of work and input that went into the development of the 2011 Trailways Master Plan and allows the planning process and implementation efforts to continue on without a radical shift or abandonment on prior plans and progress. This update is not intended to "reinvent the wheel". This update will play an integral role in administration of the County Design Standards Manual, specifically Article 5 where issues have been identified in the past related to required frontage improvements. This update will also better inform and influence bike/ped related recommendations for rezoning and special use permit applications.

The Code of Virginia requires the study of transportation needs and their incorporation in comprehensive plans. Section 15.2.2223 requires coordination of plan amendments that will substantially affect transportation on state controlled highways with the Virginia Department of Transportation. Following staff review and update and work sessions held with the County Transportation Committee and Planning Commission, the draft Transportation Plan was routed to the VDOT Fredericksburg District Office for review in September, 2019. Following the initial VDOT review and County submittal of revisions on December 20, 2019, the VDOT-Fredericksburg District finalized their review with no additional comments, on March 25, 2020.

Existing Plans

The Trailways Master Plan is Spotsylvania County specific however has been developed to "fit" within the scope of larger regional, state or national scale trail routes that involve Spotsylvania

County. This Plan was created in consideration of other existing plans to ensure that it is consistent and harmonious with those other important planning efforts. The result is a Plan that is intended to complement larger regional, state, and nationally significant trail systems. Specifically, as follows:

Nationally Significant

U.S. Bicycle Route 1

U.S. Bicycle Route 1 was designated by the American Association of State Highway and Transportation Officials (AASHTO) in 1982. The route runs the length of the United States eastern seaboard from Maine to Florida. It is one of the two original U.S. Bicycle Routes. The Bicycle Route also coincides with the Atlantic Coast Trail, an Adventure Cycling Association trail. In Spotsylvania County, the Bicycle Route is designated along Lee Drive, Benchmark Rd, Mills Dr, Massaponax Church Rd, Church pond Rd, Guinea Station Rd. VDOT road signage identifying the Bicycle Route designation was added along the corridor within the past five years.

The American Association of State Highway and Transportation Officials (AASHTO) recognize the segments in North Carolina and Virginia as being the only "official" segments of U.S. Bicycle Route 1.

U.S. Bicycle Route 76

It is important to recognize that the second of the original U.S. Bicycle Routes, U.S. Bicycle Route 76, passes just to the south of Spotsylvania County in Louisa County. The Bicycle Route is an east-west corridor accessing Virginia, Kentucky, and Illinois. With proper mapping and advertisement, proximity of the Bicycle Route to Spotsylvania County potentially could bring additional users into the County, resulting in an additional tourism benefit.

The U.S. Bicycle Route 76 coincides with the TransAmerica Trail, an Adventure Cycling Association trail.

East Coast Greenway (ECG)

Primary users: A multi-use path serving bicycle (road or mountain), pedestrian.

Approximate Distance: 13 Miles

Intended final surface: Asphalt shared use path

The East Coast Greenway (ECG) is a developing trail system, spanning nearly 3,000 miles as it winds its way between the State of Maine's northern boundary with Canada and Key West, Florida, linking all the major cities of the eastern seaboard. The ECG long term vision and plans include a 100% firm-surface road separated trail extending all 3,000 miles. At

present, thirty-two (32) percent of the planned greenway is now located on safe, vehicle traffic-free paths. This figure is up from 25% as reported in the 2011 Trailways Master Plan. A portion of the ECG alignment is planned to pass through Spotsylvania County. The East Coast Greenway Alliance (ECGA) is the non-profit organization spearheading the development of the ECG. Implementation of the greenway is largely accomplished at the local and regional level resulting from recognized community benefits expected to come with inclusion along the planned route. As per the ECG, "The ECG is being built by linking together locally owned and managed trails into a continuous route." Concerning why communities "buy-in" to implementation efforts, "Multi-use trails like the East Coast Greenway are an integral part of local transportation systems. They provide free recreational opportunities for all ages, encourage healthier lifestyles, and bolster local economic development."

The Virginia Department of Conservation and Recreation recognizes the importance of the ECG within the Commonwealth of Virginia and has specifically targeted development of the East Coast Greenway as part of the 2018 Virginia Outdoors Plan.

Within Spotsylvania County, implementation of the ECG has been limited. A commercial pad site located at the corner of Tidewater Trail and Bowman Drive was approved for development via site plan review in December, 2018. The project includes development of a standalone restaurant with a trail frontage improvement along Tidewater Trail. In August, 2018, 0.25 miles of right-of-way intended for future trail construction was secured along Thornton Rolling Road as part of project conditions associated with Board of Supervisors approval of a special use permit application there. This will complement efforts to establish an East Coast Greenway Auxilliary Trail. Otherwise, large scale enhancements associated with ECG conversion from road based to roadside trail are most likely to occur via additional new development and/or road widening projects as targeted by the Thoroughfare Plan including along Tidewater Trail, Mills Dr (Rt 17).

On March 5, 2020 the East Coast Greenway Alliance approved a planned route shift in the region impacting the City of Fredericksburg, Spotsylvania County, and Caroline County. This revision resulted from concerns raised amongst regional partners about the viability of the prior route specifically as it related to Lee Drive (NPS)- Connection pointe between the City of Fredericksburg and Spotsylvania County and Thornton Rolling Road, as connection to Caroline County. In Spotsylvania County, the route shift included realignment of the planned route away from Lee Drive (NPS) and to Tidewater Trail (a previously identified alignment alternative) and complement to the County's Planned Deep Run Trail. This approval followed a Statewide meeting of the East Coast Greenway Alliance held in the City of Fredericksburg on February 5, 2020. At the February 5, 2020 meeting of the Virginia East Coast Greenway (ECG) Committee in Fredericksburg, a group of local planners presented a set of proposed changes for the ECG route through the City of Fredericksburg, Spotsylvania County, and Caroline County. The proposed changes were discussed by the committee members present. Committee members who were not present at the meeting were given until February 21, 2020 to make comments on the proposed route changes.

These changes were proposed for a number of reasons:
• To better align with bike/pedestrian infrastructure plans in localities' Comprehensive Plans and prospects for road improvements (Caroline County connection)
• To route along roads with planned road widening projects and/or planned multi-use trails
• To increase the likelihood of funding and project prioritization for local multi-use trail construction projects
• To route the ECG outside of the Fredericksburg & Spotsylvania National Military Park, where user conflict between motor vehicles and bicyclists has been identified by the National Park Service as an issue along Lee Dr.

No opposition to the proposed route changes were voiced by committee members since the distribution of the presentation. A memorandum issued to Spotsylvania County on March 5, 2020 provided an official notice of changes to the ECG Route in the region. The East Coast Greenway Alliance's online mapping platform (map.greenway.org) will reflect the new route by March 31, 2020, and all future hardcopy maps produced by the Alliance will show the new route.

Virginia Significant

2018 Virginia Outdoors Plan (Va. Dept. of Conservation and Recreation)

The Virginia Outdoors Plan is the State's official document regarding land conservation, outdoor recreation and open space planning. It assists all levels of the public and private sectors to meet needs pertaining to those issues. The plan provides guidance for the protection of lands through actions of the Virginia Land Conservation Foundation (VLCF), and the plan is required in order for Virginia to take part in the federal Land and Water Conservation Fund (LWCF) program. Within Spotsylvania County, a VLCF award was granted to the County in 2011 that resulted in securing a recreational trail easement along a roughly 2-mile segment of the Virginia Central Railway Trail between Brock Road and Jackson Trail East. This easement greatly enhances the opportunity to eventually construct a significant historic portion of the planned VCR Trail. Within Spotsylvania County, both the East Coast Greenway (ECG) and Virginia Central Railway Trail have been identified as featured projects for continued implementation. The 2018 Virginia Outdoors Plan can be found **HERE**.

Virginia Birding and Wildlife Trail (Va. Dept. of Game and Inland Fisheries)

Within Virginia's 43,000 square miles of diverse natural habitat, there are 400 species of birds, 250 species of fish, 150 species of terrestrial and marine animals, 150 species of amphibians and reptiles, and a wide variety of aquatic and terrestrial invertebrates. The *Virginia Birding and Wildlife Trail* program is the first statewide program of its kind in the United States. In Virginia, three phases of the trail link wildlife viewing sites throughout the state. An estimated 1,041 visitors are using each VBWT site annually according to the *2008 Assessment of the Virginia Birding and Wildlife Trail* prepared for the Virginia Department of Game and Inland Fisheries. The study looked at the economic contribution

of the VBWT to a local economy, resulting in a statewide economic impact of $8,638,895 annually.

Spotsylvania County is part of the Piedmont Trail system of the Virginia Birding and Wildlife Trail. In all, the Piedmont area offers 13 loops including expansive grasslands, forested tracts, pineland savannahs, several large reservoirs, and an abundance of rich history and culture. Of the 13 loops within the Piedmont system, four (4) are located within Spotsylvania County; they include: Loriella Park, Ni Reservoir Recreation Area, Spotsylvania Courthouse Battlefield, and Chancellorsville Battlefield. Motts Reservoir Recreation Area, located within Spotsylvania County, but owned by the City of Fredericksburg, is also within the loop system.

Regionally Significant

2045 George Washington Region Bicycle and Pedestrian Plan

Through the Fredericksburg Area Metropolitan Planning Organization (FAMPO), the GWRC has completed and adopted a regional bicycle and pedestrian plan. The most recent iteration of the Plan recommends bicycle and pedestrian improvements within the region through 2045. This plan is part of the Constrained Long Range Plan (CLRP) and serves as a tool to direct resources toward defined, prioritized, cost-effective bicycle and pedestrian improvements. The project area encompasses the entire GWRC region including the City of Fredericksburg, Stafford County, Spotsylvania County, Caroline County, and King George County. Within a regional context, Spotsylvania County specific bicycle and pedestrian needs recommendations are primarily targeted to existing public roadways with recommendations for sidewalks and shared use paths in developed or developing areas, and shoulder improvements in more rural areas primarily located outside of the Primary Development Area of the County. The regional plan also includes the Virginia Central Railway Trail and recommends improvements to accommodate the East Coast Greenway. Recommendations from the regional bicycle and pedestrian plan have been synthesized with identified road improvement projects from the County Thoroughfare Plan, and planned greenway system resulting from the County's 2011 Trailways Master Plan. The result is an updated and refined Trailways Master Plan map for the County (located in Chapter 3A of the Comprehensive Plan). The 2045 George Washington Region Bicycle and Pedestrian Plan can be found **HERE**.

An update to the regional plan is expected to kick-off in 2021 with the Regional Bicycle and Pedestrian Advisory Committee.

County Significant

Spotsylvania County Comprehensive Plan

The Spotsylvania County Comprehensive Plan is a guide designed to encourage the most appropriate use of land, water and resources within the County consistent with the interests of the citizens. The Comprehensive Plan sets forth goals, objectives, policies and

implementation techniques that will guide the development activity within the County and promote, preserve and protect the health, safety, and general welfare of its citizens. Specifically, the Plan provides data and analysis on land use, transportation systems, housing, resource protection, public facilities and utilities. As of 2020, the Comprehensive Plan is the host location for the County Trailways Plan.

Recommendations and levels of service standards established within the Comprehensive Plan; those in the land use, transportation, and parks and recreation public facilities section, establish the warrant for a Trailways Master Plan.

Thoroughfare Plan

An element of the Comprehensive Plan, the Thoroughfare Plan identifies improvements to the road network in Spotsylvania County. Though the Thoroughfare Plan includes plans for new roadways, physical improvements to existing roadway facilities is the primary focus of the plan by volume. Improvements within the plan advocate for expanded lane widths or the addition of new lanes. Planned road improvement projects include include a bicycle and pedestrian-friendly element, whether it is the installation of shoulders, shared use paths, and/or construction of roadside sidewalks. Provision for bicycle and pedestrian accommodations are critical to ensuring improvements meet VDOT acceptance standards. Achievement of trailway implementation goals paired with Thoroughfare Plan road improvement projects results in dual benefits. Integration of roadway based projects with planned greenway trails greatly assist implementation efforts.

Enabling Legislation

To successfully implement this plan, the Spotsylvania County Planning Department requested that the County Attorney's Office identify statutes and ordinances that enable the County to plan for and pursue land acquisition or easements in order to construct and maintain trailway facilities for public use. Their research identified a number of sources of law which can provide guidance planning and implementing trailways within the County. The principal legislation granting authority for this plan is indicated below:

Virginia Open Space Land Act; Va. Code Ann. §§ 10.1-1700 – 10.1-1705:

The Virginia Open Space Land Act enables public landholding bodies to acquire land or easements for the preservation of open space and to obtain and utilize funds to develop and maintain facilities on land acquired. This land shall conform to the official comprehensive plan for the area in which the property is located. No land designated as open-space under the authority of this Act can be converted from that status unless the conversion or diversion is determined by the public body to be essential to development and growth of the region and in accordance with the region's official comprehensive plan and there is other substituted real property of equal or greater value.

Planning, Subdivision of Land and Zoning; Va. Code Ann. § 15.2-2200:

This section of the Virginia Code "encourages" local governments to improve the public health, safety, convenience and welfare of its citizens and to plan for the future development of communities to the end that transportation systems be carefully planned; that new community centers be developed with adequate highway utility, health, educational, and recreational facilities; that the needs of agriculture, industry and business be recognized in future growth; that residential areas be provided with healthy surrounding for family life; that agricultural and forestal land be preserved; and that the growth of the community be consonant with the efficient and economical use of public funds.

Comprehensive Plan to be Prepared and Adopted; Scope and Purpose: Va. Code Ann. § 15.2-2223:

This statute outlines the proper method by which a comprehensive plan is to be prepared and adopted. Every local Planning Commission is to prepare and recommend a comprehensive plan for the physical development of the territory within its jurisdiction and every governing body shall adopt a Comprehensive Plan. In preparation for the comprehensive plan, the commission shall make careful and comprehensive studies of the existing conditions and trends of growth within the locality. In conjunction with the comprehensive plan, "each locality shall develop a transportation plan that designates a system of transportation infrastructure needs and recommendations that may 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, and public transportation facilities" (emphasis added).

Legal Status of Plan; Va. Code Ann. § 15.2-2232

This section is critical to the development of a Capital Improvements Plan (CIP) and the identification of specific projects therein. This section establishes that capital projects such as a new park, public building, "feature" must be shown within the adopted comprehensive plan to exhibit substantial accordance with the local comprehensive plan. There are transportation goals, road improvement standards necessary to result in VDOT street acceptance, and parks and recreation related levels of service standards that may necessitate § 15.2-2232 considerations as the County seeks to implement plans or meet levels of service standards concerning trailways projects.

Parks, Recreation Facilities, Playgrounds, etc.; Va. Code Ann. § 15.2-1806(B):

This section of the Virginia Code established that a locality may establish, conduct, and regulate a system of hiking, biking, and horseback riding trails. Towards that end, a locality may set apart any land or buildings owned or leased by it for that purpose and can obtain licenses or permits for such use on land or buildings the locality does not own.

Streets, Sidewalks, and Public Rights-of-way Generally; Va. Code Ann. § 15.2-2001:

This statute sets out the authority of localities to maintain and update streets, sidewalks and public rights-of-way. This includes the authorization that "localities may make, improve and repair sidewalks upon all public rights-of-way and may convert sidewalks to bicycle paths."

Planned Facilities

Planned facilities include upgrades to existing and/or planned roadway right-of-ways and off-road greenway corridors. As noted above, the Plan reflects a synthesis of a number of national, state, and local plans concerning trailway improvements. The following outlines the planned improvements that when complete will result in a comprehensive network of non-motorized transportation system improvements throughout the County.

The trailways map included here in Chapter 3A may not represent all roads where bike/ped improvements may ultimately result. There may be instances throughout the County where existing roads not targeted for thoroughfare plan or regional bicycle and pedestrian plan road improvement or a greenway corridor will still warrant bicycle or pedestrian accommodation as part of required frontage improvements associated with development of land. Article 5 of the Spotsylvania County Design Standards Manual establishes bicycle and pedestrian requirements to be considered as part of site design and development. Additionally, there may be instances where sidewalk gaps, etc. exist along existing roads without larger scale improvements planned. The plan does not intend to dismiss the importance of these improvements to enhance connectivity, bicycle or pedestrian safety, and enhanced accessibility and walkability within the community. The attached map is intended to serve as a guide for implementation of bicycle and pedestrian infrastructure tied to major roadway right-of-way improvement projects and establishment of major greenway corridors that traverse the County.

Roadway Right-of-Way Improvements

Roadway right-of-way bicycle and pedestrian-friendly improvements that have been identified in this plan include the installation of new sidewalks, parallel to road multi-use (or shared use) paths, shoulder improvements, shared road signage improvements, or a combination. Such improvements are intended to promote bicycle and pedestrian activity and connectivity throughout the County and to make existing bicycle and pedestrian activity safer than current conditions for all users. The roadway based improvements identified in this plan include all voting districts of the County and offer residents and outside tourists the ability to travel more safely, resulting in better roadway conditions for bicycles and pedestrians and motor vehicles alike. Recommended improvements tied to roadways are primarily based in Thoroughfare Plan improvement projects as well as the George Washington Region Bicycle and Pedestrian Plan. Improvements also consider the East Coast Greenway and US 1 Bike Route. Opportunities for planned road improvement based bicycle and pedestrian improvements to help implement continuation of greenway corridors have been identified within the plan.

Greenway Improvements

Greenways serve a variety of functions including recreation, transportation, wildlife habitat, water quality protection, flood hazard mitigation, aquifer recharge, erosion prevention, property value enhancement and scenic beauty. Greenway Trails are located in areas of open space, usually linear, that connect and protect various natural, recreational, and historic or cultural resources via features such as streams, ridges, utility easements, or abandoned roads or railroads. Greenways can also serve to connect residential areas with employment, entertainment, commercial retail and services and also act as potential evacuation routes if need be. In the environment, greenways connect natural habitat areas, allowing for the movement of species and promoting healthy ecosystems. Greenway Trails can be publicly or privately owned but for the purposes of this plan would be open for public use and enjoyment. Depending on the identified classification of the trail, greenway trails may accommodate such things as hiking, biking, jogging, roller blade, or equestrian uses or a combination of them. Winter uses for the corridors might also include snowshoeing or cross-country skiing.

Depending on the intended user, environmental conditions and funding, greenway trails may be surfaced with soil, sand, clay, stone dust, woodchip or asphalt materials.

Due to existing land use and development constraints in a number of areas, planned greenway trails such as the Virginia Central Railway Trail include a combination of greenway trail sections (away from road) and sections along the road in the form of a multi-use path. Considerate of past development encroachments upon sections of the corridor and expressed citizen input and concerns, the plan recognizes instances where bypass routes are more favorable paired with planned road widening projects nearby. For the Virginia Central Trail, bypass alternatives were identified as part of the Virginia Central Railway Trail Design Guidelines (October, 2012) prepared for the Fredericksburg Area Metropolitan Organization (FAMPO) and Spotsylvania County by Kimley-Horn and Associates, Inc.

Trailways Master Plan Map (See Map(s))

Based on Geographical Information Systems calculations, in all approximately 100 miles of greenway trails have been identified. This calculated number represents the sum of approximate concept level corridor lengths only and does not consider ancillary spurs from trail heads, from subdivisions, from park facilities, cost based deviations, land acquisition or easement availability and variability, design and construction deviations as may be necessary. The calculated value also avoids assuming the inventory of trail spurs that may be developed to access overlooks and other points of access or interest. Ancillary spurs meant to access the main trail corridors or provide access to points of interest are expected to be identified and planned for during the implementation phase of this plan as particular trailway corridors are studied and engineered for construction. In total therefore it is expected that the greenway plan presented here represents over 100 miles of new trail facilities, significantly decreasing the current and future trailway level of service deficit as outlined in the Parks and Recreation Public Facilities Element found in Chapter 4.

The inventory of planned greenways was developed with extensive community input and consideration of trails deficit as outlined in the adopted Parks and Recreation Public Facilities Section of the Comprehensive Plan. See the Spotsylvania County Trailways master plan map for a complete view of the planned greenway system. Please note that this map plans for the general location of planned greenway corridors only and does not specify any one particular alignment or exact location, except where greenways run contiguous to road corridor based improvements (resulting from road widening projects, etc.). Descriptions of the county-wide greenway bicycle, pedestrian, and equestrian friendly improvements identified within this plan can be found below.

The Spotsylvania Battlefields Loop

The Virginia Central Rail Trail, along with the Ni River Corridor Trail, has been envisioned to be part of a Spotsylvania Battlefields Loop trail system accessed by the East Coast Greenway. The northern portion of the "loop" would feed off of the Virginia Central Railway Trail whose connection to the East Coast Greenway occurs within the City of Fredericksburg. The northern connection will ultimately provide access to both the Fredericksburg Battlefield and Chancellorsville Battlefield to the west prior to connecting with the proposed Ni River Corridor Trail that will run back to the southeast. The Ni River Trail would then provide opportunity for access to the Spotsylvania Courthouse Battlefield before exiting the County into Caroline County en route to the Stonewall Jackson Shrine there. This would be the south end connection to the East Coast Greenway, finishing the "Battlefield Loop". For users who choose to continue west on the Virginia Central Trail they will be able to access the Wilderness Battlefield and Orange County.

A spur off of the East Coast Greenway, the trail loop is envisioned to promote eco and historic tourism throughout the County, taking advantage of the many historic, recreational, and natural resources that it would access.

Potomac, Fredericksburg & Piedmont Railroad (Virginia Central Railway (VCR)) Trail, VCR Auxiliary Trail

Primary users: A multi-use path serving bicycle (road or mountain), pedestrian, and inline skating, with equestrian friendly facilities sharing a western portion the corridor running parallel to the bicycle/ pedestrian friendly trail.

Approximate Distance: Virginia Central Railway Trail: 17.1 Miles (w/ 2.1 miles existing and approximately 2 additional miles in recreational trail easement); VCR Auxiliary Trail: 2 miles

Intended final surface: Mix of asphalt sections and stone dust sections. As part of the Spotsylvania Battlefield Loop system, eventually upgrade to all asphalt or solid pervious from City of Fredericksburg line to intersection with the Ni River Trail. For multi-use pathway with equestrian users to the west as noted in the Trailways Master Plan Map. West of the Ni River Trail intersection, packed soil alongside a stone dust, asphalt, or solid pervious trail may be used. The VCR Auxiliary Trail is intended as an asphalt shared use path and considered the most viable short term option to cross Interstate 95 paired with the planned widening of Harrison Road.

Historical Importance

The Potomac, Fredericksburg, & Piedmont Railroad (PF&P RR) operated 38 miles of three (3) foot gauge railroad between Fredericksburg (with a connection to the Richmond, Fredericksburg, & Potomac Railroad) and Orange County (with a connection to the Orange & Alexandria Railroad). Its predecessor was the standard gauge Fredericksburg and Gordonsville Railroad that was started shortly after the Civil War and built 17 miles of line from Fredericksburg to Parker. The line failed and was sold under foreclosure to become the Fredericksburg, Orange, & Charlottesville Railroad which also failed in 1874. The line was converted to narrow gauge and completed from Parker to Orange in 1878 as the PF&P RR.

Image 1: Developed portion of the VCR Trail between Salem Church Road and Gordon Road in use.

The PF&P RR operated as narrow gauge until after World War I, was sold under foreclosure in 1925 and reorganized as the Orange & Fredericksburg Railroad. In 1926 the line was standard-gauged and the name changed to the Virginia Central Railway (VCR), the second railroad to use that name. In 1930 the Virginia Central Railway projected eastward from Fredericksburg and along the south bank of the Rappahannock River to its mouth near the Chesapeake Bay where a port was to be developed. Construction of the line was never started. In 1938 the entire line was abandoned except for a two-mile segment in Fredericksburg that lasted as late as 1983.

Today the rail lines have been removed but much of the existing rail bed exists throughout Spotsylvania County. In the years following the VCR's abandonment, pieces of the corridor were gradually "carved up" and ended up in public and private ownership. A number of linear sections of the corridor still exist, owned by local Home Owners Associations, private property owners, and some still under public control. The County recognized the benefit of utilizing the VCR corridor for the development of a linear greenway trail in the 2002 Comprehensive Plan. The County has been able to successfully develop a portion of the corridor as a greenway trail connecting Salem Church Road to Gordon Road that is in use today. A Virginia Land Conservation Fund application was made and award was granted to the County in 2011 that resulted in securing a recreational trail easement along a roughly 2-mile segment of the Virginia Central Railway Trail between Brock Road and Jackson Trail East. This easement greatly enhances the opportunity to eventually construct a significant historic portion of the planned VCR Trail. The Fredericksburg Area Metropolitan Planning Organization (FAMPO), in collaboration with Spotsylvania County secured Congestion Mitigation and Air Quality funds to study the design and alignment of the VCR Trail in 2012. Roadway crossing and frontage improvements associated with VDOT and private development projects are expected to enhance the VCR Trail within the planning period, extending it eastward from its current termination point at Salem Church Road.

Though the ultimate goal would be to continue development of the trail along the historic alignment of the VCR, in instances where existing development and/or the grant of easement for use as a trailway along segments of the historic alignment of the VCR Corridor becomes

problematic, alternate alignments, or bypasses are recognized in order to ensure continued progress in the development of this important regional trailway. For instance, at present, eastward extension of the VCR Trail paired with planned Harrison Road widening and Interstate 95 bridge replacement projects appears to be the most viable and cost effective means to cross Interstate 95 with fewest property impacts in the short term, resulting in identification of the VCR Auxiliary Trail as a viable means to bridge Interstate 95 and close the gap between the Spotsylvania County and City of Fredericksburg portions of the greenway trail. The Trailways Master Plan Map has not removed the opportunity to pursue development of the historic rail bed alignment leading up to the base of the Interstate north of Harrison Road. There remains potential to pursue easements and construction along the historic railbed in the area of Interstate 95 but this appears to be a long term option requiring prioritization and a commitment of funds specifically oriented at recreational trail development and a new bicycle/ pedestrian bridge or tunnel through the Interstate 95 right-of-way. The Spotsylvania County Board of Supervisors supported maintaining the historic rail alignment within plans on July 9, 2019 as part of a policy discussion associated with the Hazel Run Bridge Crossing and Virginia Central Trail segment east of Interstate 95.

Plans for the VCR Trail are recognized in the 2045 George Washington Region Bicycle and Pedestrian Plan and the 2018 Virginia Outdoors Plan by the Virginia Department of Conservation and Recreation.

Ni River Trail

Primary users: Bicycle (road or mountain), pedestrian, eventually inline skating. Equestrian use running parallel to the bicycle/ pedestrian friendly trail between the PONI Connector and Todd's Tavern Connector.

Approximate Distance: 11 Miles

Intended final surface: Mix of asphalt sections and stone dust sections. Eventually upgrade to all asphalt or solid pervious. Adjacent to the trail for bicycle and pedestrian users, a parallel packed soil alignment is appropriate for equestrian use between the PONI Connector and Todd's Tavern Connector.

Development of the Ni River Trail acts as the second leg; the southern leg, of the Spotsylvania Battlefields Loop extending to the southeast along the river from the Virginia Central Rail Trail to the Caroline County line where it passes the Stonewall Jackson Shrine. The Ni River Trail is the southern connector to the East Coast Greenway. The connection occurs in Caroline County.

Along the Ni River between the Virginia Central Railroad Trail and Caroline County line exist a number of attractions for users, they include but are not limited to: Chancellorsville Battlefield, Ni Reservoir Recreation Area, Spotsylvania Courthouse Battlefield, Patriot Park. The corridor is also within relatively close proximity to the Historic Courthouse District and Thornburg area.

Image 2: A "blank slate"- natural beauty along the Ni River.

Unlike the Virginia Central Railway Trail that benefits from a relatively intact railbed corridor, the Ni River corridor offers more of a “blank slate” and will require the development of a greenway trail through terrain that, in many cases has been untouched by development. The corridor offers much in terms of natural beauty. Mostly forested or agricultural with larger lot parcels along it, the development intensity along the Ni River corridor is generally less than along the VCR.

The establishment of this greenway corridor trail will be based on the successful attainment of trailway easements along the corridor and implementation of road corridor based improvements in a number of areas. The actual alignment of the trailway along the corridor is expected to occur naturally as easements are negotiated and granted. Here too, the County Utilities Department is considering the acquisition of easements for extension of public utilities along portions of the Ni River. This presents an opportunity to combine the utility and trail projects, with a cost savings, to extend the County’s Ni River Trail Project.

Since the trail initially appeared in the 2011 Trailways Master Plan, the Spotsylvania Greenways Initiative (SGI) has secured an easement and constructed a natural surface Phase 1 segment of the Ni River Trail extending from Route 1 and towards Massaponax Church Road and Patriot Park. Remaining easements and additional funds will be required to secure the complete connection to Patriot Park and upgrade the trail infrastructure.

A portion of the Ni River Trail was also secured with the approval of Fortune’s Landing residential community at the corner of Piney Branch and Catharpin Rd. Fortune’s Landing was approved through rezoning in 2013. As part of that project the applicant has constructed a multi-use path along the Piney Branch Rd frontage and granted right-of-way for future trail extension along the Catharpin Rd frontage. Development of a trail connection between the Fortune’s Landing special use park and trail, and a future park site known as the “Hilldrup Tract” is supported by the Parks and Recreation section of the Comprehensive Plan public facilities element.

Deep Run Spur

> ***"The attack on Hill's left was repulsed by the artillery on that part of the line, against which the enemy directed a hot fire from twenty-four guns. One brigade advanced up Deep Run, sheltered by its banks from our batteries, but was charged and put to flight by the Sixteenth North Carolina, of Pender's brigade, assisted by the Fifty-fourth and Fifty-seventh North Carolina, of Law's brigade, Hood's division"***
>
> -- Robert E. Lee, General
> December 1862

Primary Users: bicycle (road or mountain), pedestrian, inline skating

Approximate Distance: 0.5 to 1 Mile

Intended final surface: Asphalt or solid pervious.

Image 3: Deep Run Trailhead area viewing the Rappahannock River

The convergence of Deep Run and the Rappahannock River in Spotsylvania County just behind the Bowman Center off Route 17, Tidewater Trail played an important part in the December, 1862 Battle of Fredericksburg. Deep Run was the site of the southernmost point of the crossing of the Rappahannock River by Union Troops during the battle who constructed two pontoon bridges there. As a significant part of the battle, to local history and one also containing both State and National Significance, the historic importance of the Deep Run area has been left relatively untapped and appears forgotten. Deep Run was the Union path into the Battle at Slaughter Pen Farm.

The Deep Run Spur offers the ability to expand upon the region's civil war heritage and tourism and to expand interpretive displays associated with the local civil war battles. Development of a greenway trail within close proximity to Deep Run offers a number of exciting opportunities including the establishment of a trailhead or special use park on existing County property fronting the river. The trail would increase access opportunities to waterfront areas as advocated by the Comprehensive Plan.

Image 4: Existing crushed stone access road between the Bowman Center and Rappahannock River at Deep Run.

Intended to start at a trailhead at the Rappahannock River, the Deep Run Spur, when ultimately completed, would generally follow Deep Run before climbing terrain and coming to the recently designated National Register of Historic Places Sylvania Plant and navigating the Mixed Use area there. The trail would then run along Tidewater Trail in conjunction with the planned East Coast Greenway Route.

Massaponax Creek Trail

Primary Users: Bicycle (Mountain, Road appropriate in sections), pedestrian, inline skating (appropriate in sections).

Approximate Distance: 13.5 Miles

Intended final surface: Variable natural and stone dust trailway with asphalt segments

Image 5: Existing trailway network along Massaponax Creek off Courthouse Road.

Image 6: Installation of new sewer line along the Massaponax Corridor establishing a linear route and opportunities to pursue trailway development.

The Massaponax Creek Trail is meant to connect the East Coast Greenway and Spotsylvania Avenue Connector Trail in the Lee Hill area to the Virginia Central Rail Trail, extending existing trailway infrastructure in place alongside the Creek associated with the Estates at Breckenridge where an asphalt trailway and public parking area exist off Courthouse Road, and Loriella Park. The trail corridor has a number of points of interest, they include: Virginia Central Rail Trail and the larger Spotsylvania Battlefields Loop system; Loriella Park; Germanna Community College via Spotsylvania Avenue Connector, the East Coast Greenway.

The Spotsylvania County Utilities Department has already secured a trailway easement along with the installation of a new sewer line between Route 673, Piedmont Drive and Route 208, Courthouse Road (see Figure 13). Prior sewer line installation projects along Massaponax Creek, southeast of Route 208, Courthouse Road only have underground utility easements in place and trailway easements would need to be pursued in order to establish the trail linkage to the Spotsylvania Avenue Connector Trail in the Lee Hill area.

A number of roadway crossings will have to be considered while developing this trailway corridor to ensure safety of users. The trailway itself is expected to be of varying surface considering location and existing environmental features. Development of much of the trail is expected to occur within the RPA along Massaponax Creek though a section extending from the East Coast Greenway to the Spotsylvania Avenue Connector would be paved. Future users will find the corridor to be generally natural and forested with commercial and residential development interspersed along the route. Located within the heart of the Primary Settlement District, the corridor will have the ability to serve many nearby housing developments within a five-minute walk or approximately ¼ mile pedestrian shed or walkable catchment area.

East Coast Greenway Auxiliary Trail

Primary Users: Bicycle and Pedestrian

Approximate Distance: 0.5 to 1 Mile

Intended final surface: Asphalt or solid pervious

The East Coast Greenway Auxiliary Trail is meant to provide a direct connection between the East Coast Greenway and the Spotsylvania County VRE station and mixed-use area utilizing Crossroads Parkway and a new overland connector to Thornton Rolling Rd within the Primary Development Boundary.

Spotsylvania Avenue Connector

Primary Users: Bicycle (Road or Mountain), pedestrian, inline skating

Approximate Distance: 1 Mile

Intended final surface: Asphalt or solid pervious

Born from the Massaponax Corridor Study that is referenced in the Transportation Element; Chapter 3, and identified within the County Thoroughfare Plan, the Spotsylvania Avenue Connector Trail is will connect the commercial, lodging, employment center uses centered on Spotsylvania Avenue, and Germanna Community College and surrounding residential developments in the Lee Hill area off Germanna Drive. This connector trail would intersect one proposed to follow Massaponax Creek from the Lee Hill area, extending northward to connect with the Virginia Central Rail Trail. It is expected to be developed as part of the Spotsylvania Avenue/ Germanna Pt Drive Connector Road.

Image 7: Existing asphalt surface Lee Hill Office Complex Trail system

The area between the termination point of the existing Spotsylvania Avenue and Germanna College is undeveloped and forested with wetlands present, offering qualities consistent with a natural greenway trail. Existing trail infrastructure behind the Lee Hill Office Buildings along the edge of stormwater management ponds there should be explored to be tied into the Spotsylvania Avenue Connector Trail. The ponds are active with wildlife for nature interest with geese and a number turtle's witnessed upon visiting the site.

The trailway is in close proximity to a number of Fredericksburg Regional Transit stops and transfer points including routes F2, F3, S1, S4 and S5.

Po River Trail (incl. Norton Prong)

Primary Users: Bicycle (mountain), pedestrian. Equestrian uses running parallel to the bicycle/ pedestrian friendly trail between PONI Connector and Todd's Tavern Spur.

Approximate Distance: 20 Miles

Intended final surface: Clear cut packed/ stabilized soil pathway

The 2008 Spotsylvania Comprehensive Plan initially advocated for the development of walking/ biking trails along the Po River in the Jackson Gateway, Rural, and Agricultural/ Forestal development districts.

The Po River trail is planned to be bookended by two trail head facilities. The easternmost trail head of the Po River Trail for the purpose of this plan is identified as Jackson Gateway South, located in a mixed-use or employment center area as defined by the future land use map. To the west, the Todd's Tavern Spur trail head has been identified. The Po River Trail is intended to be developed as a multi-use greenway trail, serving bicycle, pedestrian, and equestrian users.

Image 8: Example of a side by side bike and pedestrian-friendly and equestrian greenway trail at Lake Anna State Park. This is similar to that proposed along the Po River.

The Po River Trail is planned to connect with the Lake Anna State Park Connector Trail via the Todd's Tavern Spur. The equestrian character of this and other greenways within rural portions of the County are intended to complement and enhance the rural agricultural and forestal land uses outside of the Primary Development Boundary, consistent with land use descriptions.

The Po River and Lake Anna Connector system of trails are integrated into other planned greenways within Spotsylvania County with access to the PONI Connector, the Virginia Central Rail Trail and Ni River Trail. Additional access can be gained through bicycle and pedestrian-friendly roadway improvements as outlined in this plan. In addition to potential horse friendly trail facilities along the western reaches of the Virginia Central Corridor, the PONI Connector, Lake Anna State Park Connector, and portion of the Ni River Trail, the Po River Trail is planned to greatly increase the equestrian trail miles within Spotsylvania County and make Spotsylvania County a horse enthusiast destination for trail riding, and spin-off economic benefits associated with tourism.

Currently there exists no preferred alignment along the Po River though frequent bridge crossings are discouraged due to additional costs. The actual alignment of the greenway trail along the corridor is expected to occur naturally as development occurs, public land acquisition, road improvement projects are implemented, easements are negotiated and granted.

PONI Connector Trail

Primary Users: Bicycle (mountain), pedestrian, equestrian running parallel to the bicycle/ pedestrian friendly trail

Approximate Distance: 3 Miles

Intended final surface: Stone dust with parallel packed/ stabilized soils for equestrian users

The PONI Connector Trail is envisioned to connect the Po River Trail and Ni River Trail by use of an existing overhead utility easement corridor.

The planned connector also will result in the creation of a secondary trail loop, one that is unique to and totally contained within Spotsylvania County. The secondary loop would result in a trail network that utilizes sections of the Ni River Trail, Virginia Central Rail Trail, Lake Anna State Park Connector Trail, Todd's Tavern Spur and the Po River Trail.

The PONI Connector might be thought of as the "Pony" Connector Trail as it connects identified equestrian sections along the multi-use Ni River Trail to the multi-use, equestrian-oriented Po River Trail.

Lake Anna State Park Connector Trail (LASP), Todd's Tavern Spur and Connector

Intended Users: Equestrian running parallel to the bicycle (mountain)/ pedestrian friendly trail

Approximate Distance: LASP: 9 Miles; Todd's Tavern Spur: 6.3 Miles; Todd's Tavern Connector: 1.5 Miles

Intended final surface: Natural Surface packed/ stabilized soils or stone dust.

Image 9: Example from Lake Anna State Park of an equestrian trail.

The Lake Anna State Park Connector Trail has been envisioned to create a link between existing equestrian trails already in place at Lake Anna State Park and an equestrian oriented loop through western and central Spotsylvania County outside of the Primary Development Boundary. The equestrian network would effectively make Lake Anna State Park the southern-most trail head location for equestrian users. When approached during development of the Plan, the State Park expressed interest in the development of such a trail system.

Though subject to deviation, the Connector Trail is envisioned to utilize an existing transmission line easement corridor stretching northward from a trail head, existing trailways and equestrian facilities located at Lake Anna State Park, to intersect with the Po River Trail and the Virginia Central Rail Trail further to the north. A multi-use spur trail and connector, also utilizing existing utility easements, would access the Todd's Tavern Area, creating a second

trail head location for equestrian, bicycle, and pedestrians to access the Po River Trailway and Lake Anna State Park Equestrian Connector Trail.

Significant recreational trail easements are expected to be granted resulting from conditions associated with the April, 2019 approval of a large solar energy facility in western Spotsylvania County. Once secured, the site will include easements for the convergence points of the Todd's Tavern Spur, Po River Trail, Lake Anna State Park Connector, and a small portion of the Virginia Central Railway Trail along the old rail bed. Lengthy easements for segments of the Lake Anna State Park Connector and Todd's Tavern Spur are also expected.

Trail Heads

For the purpose of this plan a trail head can be considered a centralized location along the trail network where users can meet up embarking on a trail ride, or after the ride is complete. Though access, amenities and parking areas are intended to be scattered throughout the greater system of trailways throughout the County, at trail heads you may find enhanced trail amenities above and beyond those you may find along points in between. Trail heads should include and are not limited to public access points to the trail system, parking areas, enhanced signage and availability for bicycle parking, or equestrian hitching posts where appropriate, public restroom facilities. The general location for a number of trail heads have been recommended throughout the trailway system and appear in the Trailways Master Plan map.

If future, more detailed studies recognize the need for additional or modified locations for trail heads, this plan should be considered advisory. As land is acquired and specific trailway implementation issues are addressed, this portion of the plan will need to be flexible in order to execute the goals and objectives listed previously in the document.

Major Trail Heads

A major trail head location can be thought of as a site where parking, access, and basic conveniences are provided and complemented by higher population densities and commercial/ retail activities. These are also excellent locations to establish links between bicycle and pedestrian facilities and mass transit options including FRED Bus and potential VRE services. Most major trail heads are planned to be located within designated mixed-use areas or employment center locations as identified in the Comprehensive Plan Future Land Use Element. These are areas in the County intended for higher density development with a mix of uses where people can "live, work, shop, and play". Alternative modes of transportation are also desired within the mixed-use areas to encourage pedestrian access and discourage automobile reliance. Accommodating higher density housing, mixed-use areas serving also as trailhead locations can provide the trail system large supply of trailway facility users. As a local point of activity, trail heads provide nodes of interest for residents and tourists who may also use the trailhead areas to frequent nearby entertainment, recreation, commercial retail or services, restaurants, hotels, places of employment resulting in a mutual benefit between the trailway user and private industry. They are also intended to be great locations from which to organize and implement special trailway system based events such as organized bike rides, volunteer day events, educational events or promotions.

Minor Trail Heads

Minor trail head locations are planned to provide the same level of basic services to trailway users but due to geographic location, future land use potential and existing development patterns and population densities, access to a variety of nearby commercial/ retail establishments will be far less likely. These locations will be much more rural in character.

In all, thirteen (13) locations have been identified throughout the County. A fourteenth (14^{th}) location, already existing at Lake Anna State Park, has also been identified as a complement for bicycle, pedestrian, and equestrian users. Under control by the Virginia Department of Conservation and Recreation (DCR), the trail head at Lake Anna State Park has been recognized as a contributing piece of the overall planned network and is referenced only.

General trail head locations are symbolized in the Trailways Master Plan Map. Descriptions are in Table 1 below:

Table 1: Trail Heads

Name	General Location	Voting District	Interest
Elys Ford Rd	Elys Ford Rd/ Rappahannock River/ Hunting Run Reservoir	Chancellor	public boat ramps, fishing, Rappahannock river access, Hunting Run Reservoir access, scenic/ natural/ historic
Courthouse District	Spotsylvania Courthouse Mixed Use Area, Spotsylvania Courthouse Historic District	Berkeley/ Livingston District	Spotsylvania Historic District, County government center, Spotsylvania Courthouse Battlefield, Spotsylvania Courthouse Village and mixed-use area
Lane Anna Area	Route 208, Courthouse Road at Lake Anna	Livingston District	Lake Anna, Lake Anna marina's, Lake Anna State Park and Connector Trail, mixed-use area
Jackson Gateway North	Massaponax Church Rd., Jefferson Davis Hwy., Ni River	Berkeley District	Ni River, Patriot Park, mixed-use area, employment center, Ni River Trail
Jackson Gateway South	Po River, Morris Rd., Thornburg	Berkeley District	Thornburg, mixed-use Area, employment center, Po River, Po River Trail
Bowman Center	Rappahannock River, Deep Run, Bowman Center, Tidewater Trail	Lee Hill District	Potential site for public boat ramp/ water-side park, fishing, Rappahannock River access, scenic/ natural, Civil War historic interpretation, East Coast Greenway, Deep Run Spur, industrial heritage, mixed-use area, employment center
New Post	Mills Dr., Tidewater Trail, Benchmark Rd., Jim Morris Rd., Massaponax Church Rd.	Lee Hill District	VRE station, mixed-use area, employment center, East Coast Greenway, Massaponax Creek Trail
Virginia Central East	Harrison Rd., Salem Church Rd., Virginia Central Railway Trail	Salem/ Battlefield District	Virginia Central Railway Trail, VCR Auxiliary Trail, mixed-use area, Harrison Rd Park
Virginia Central West	Orange Plank Rd.	Livingston/ Chancellor District	Virginia Central Railway Trail, Wilderness Battlefield, LASP Connector
Spotsylvania Medical Center	Jefferson Davis Hwy., Spotsylvania Pkwy., Mills Drive	Lee Hill/ Berkeley District	Spotsylvania Regional Medical Center, employment center, mixed-use area, Massaponax Creek Trail, Spotsylvania Avenue Connector
Lake Anna State Park	Lake Anna State Park	Livingston District	Lake Anna State Park, Lake Anna, LASP Connector
Ni Reservoir North End	Ni Reservoir & Park, Catharpin Rd.	Livingston/ Chancellor District	Virginia Central Railway Trail, Ni River Trail, Jackson Trail East, Chancellorsville Battlefield, Ni Reservoir & Park
Todd's Tavern	Todd's Tavern, Brock Rd., Catharpin Rd., Po River	Livingston District	Todd's Tavern Spur, Todd's Tavern Connector, Po River Trail (incl. Norton Prong), Po River, LASP Connector

Greenway System Design Guidelines

The following greenway system design standards have been provided with the assistance of a Million Mile Greenway (MMG) Community Technical Grant. The grant award provided technical services and design assistance by Photoscience Geospatial Solutions to the Spotsylvania Greenway Initiative (SGI) and Spotsylvania County, resulting in recommended system-wide trailway design standards specific to intended users. These standards should be considered when looking to construct portions of planned trailways or trail head facilities.

With consideration of the intended user(s) and type of trailway to be constructed, trail bases and surfaces should be constructed consistent with the *Design Standards Manual (Article 5- Streets, Parking, and Driveways)*.

Trail Design Guidelines & Sections

Trailhead Design

Restrooms:
Located at each trailhead, these ADA accessible restrooms will provide necessary amenities for trail users. The use of sustainable building practices will ensure a low cost of maintenance and operation.

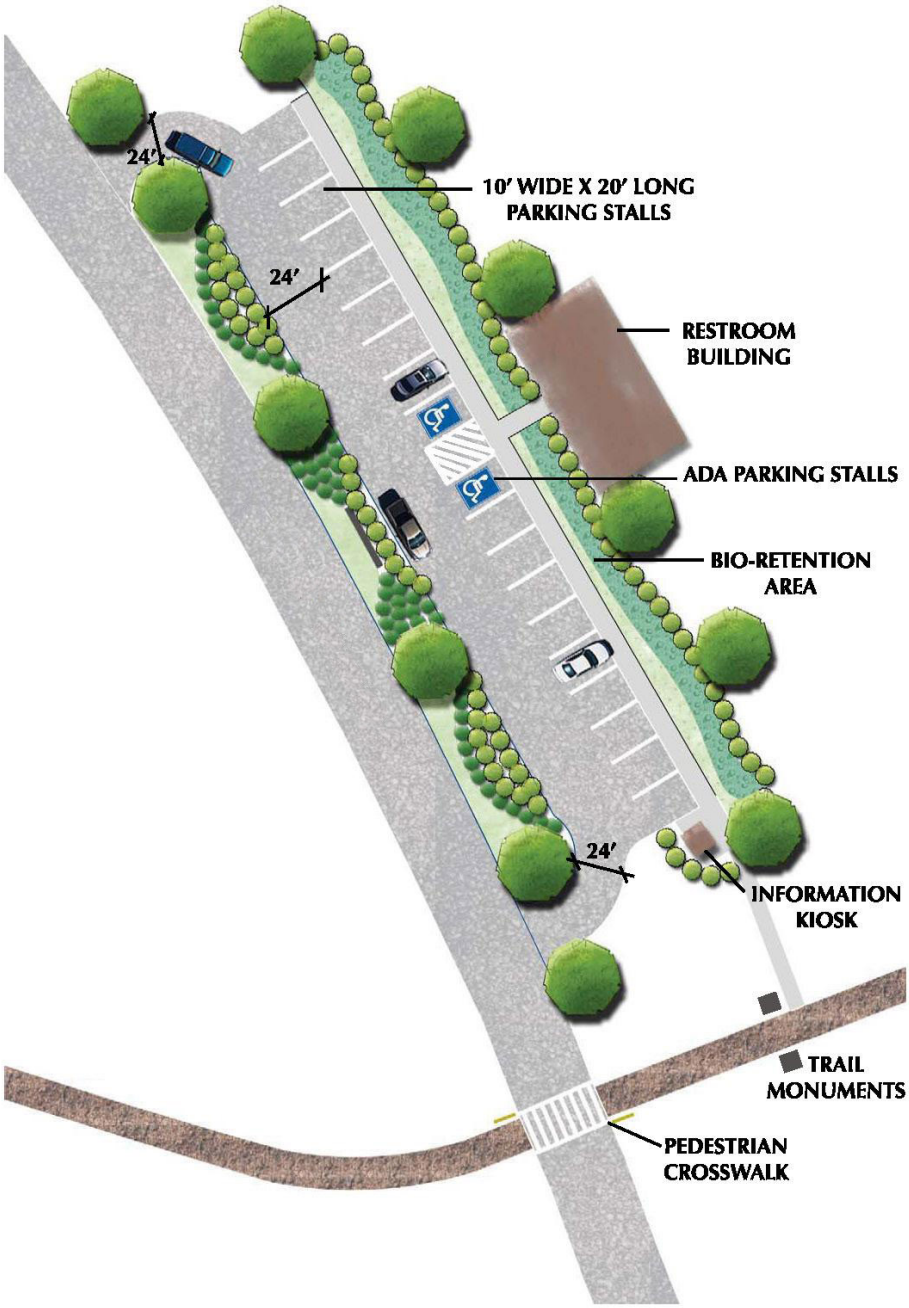
Porous Paving Parking Lot:
Proposed parking lots will be constructed using porous pavement surfaces to help preserve the water quality.

Pedestrian Crosswalks:
High visibility pedestrian crosswalks will be used at all street crossings. Flashing warning signals are proposed to maximize safety for trail users.

Bioretention Areas:
Adjacent to each parking lot and restroom building, bioretention areas will provide a first filter flush of stormwater runoff from paved impervious surfaces.In addition to the use of pervious surface parking lots, the bioretention areas will preserve the water quality of stream corridors.

Trail-Head Signage and Information Kiosks:
Appropriate user-friendly signage should be used throughout the length of the trail and especially near each trailhead. Covered wooden kiosks displaying trail information and recent news, as well as granite or wooden signs showing trail direction will help maximize the trail experience.

Trailhead Layout



Equestrian trails will complement the rural character of Spotsylvania County and add yet another layer of recreational enjoyment.

Equestrian Trails

Typical Features and Materials

Typical Features

Trail Width:	Single track, equestrian only = 4' to 5'
	Double track, equestrian only = 6' to 8'
	Shared use path, single tread = 10' to 12'
Trail Clearance:	10' minimum overhead ceiling, 12' preferred
Trail Surface:	Crushed Stone, Wood Mulch, Compacted Earth
Trail Grades:	Varies Depending on Level (see hiking trails)
Trail Signage:	Follow United States Forest Service Standards

Design Principle

Construction of equestrian trails with hiking and multiuse is encouraged wherever there is adequate width for coexistence of these facilities. Hiking trails are particularly compatible with such use and are capable of sharing the same tread with equestrian traffic, granting they have proper sight distance and ample passing room for all users. Multiuse trails, however, as designed primarily for pedestrians and bicyclists, are generally preferred to have more considerable width and a lower traffic volume to be compatible as a horseback route. Wherever width allows in the greenway corridor, it is highly recommended that these uses be separated into multiple treads, thereby keeping conflicts minimal. Trail signage should be provided to make all users aware of proper yielding to other traffic.

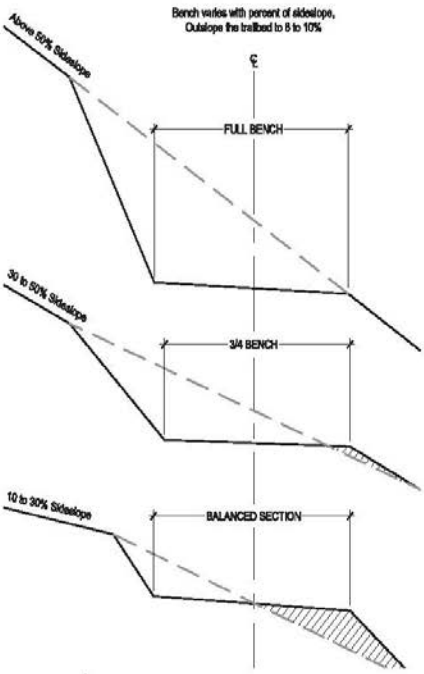
Typical Section

Scenic Hiking Trails

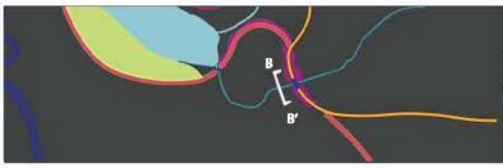
Typical Features and Materials

Typical Features

Trail Width:	Strenuous = 18" to 30"
	Moderate = 24" to 36"
	Accessible = 36" to 60"
Trail Surface:	Materials - Crushed Stone, Wood Mulch
Trail Edges:	Stacked Stone or Heavy Wood Timber
Trail Grades:	Varies Depending on Level (see hiking trails)
Trail Signage:	Follow National Park Service Standards



Typical Section



Stream corridors are desirable locations for trails and greenways; however, ecologically compatible trail standards should be utilized to ensure minimal impacts to the natural hydrologic process.

Stream Corridor Trails

Typical Features and Materials

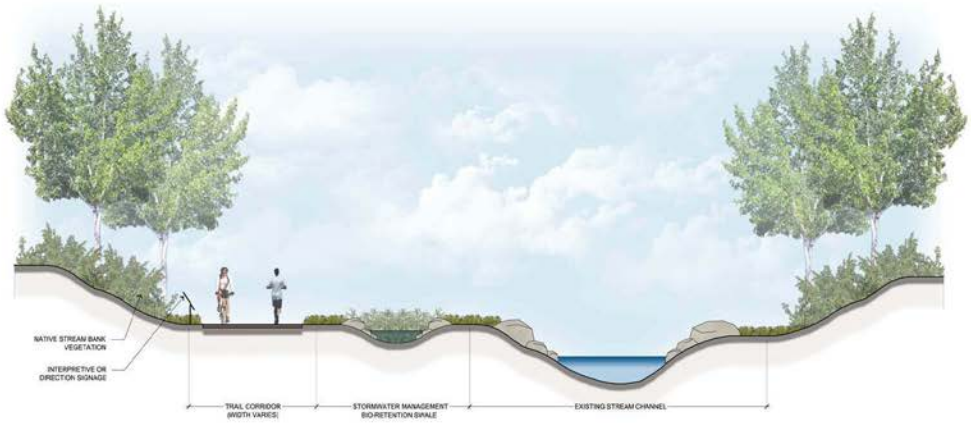
Typical Features

Trail Width:	Varies Depending on Level (see hiking trails)
Trail Surface:	Materials - Crushed Stone, Wood Mulch
Trail Edges:	Stacked Stone or Heavy Wood Timber
Trail Grades:	Varies Depending on Level (see hiking trails)
Trail Signage:	Follow National Park Service Standards

Design Principle

Trails following stream corridors shall be designed in a way that both complements and are compatible with the natural ecological environment and system. Trail and trail components including steps, bridges, rails, signs, furnishings, etc. shall be constructed of natural materials such as wood, stone, and mulch. Concrete, steel, and other more industrial materials shall be used in very limited capacity, and only when natural materials are not suitable. Special design features such as bio-retention swales and other BMP's shall be used to mitigate negative impacts to stream hydrology and water quality when appropriate. Plant materials shall also be native and appropriate for the given micro-climate and pre-existing plant communities. Trails should be respectful of stream buffers / setbacks and local variance requirements.

Typical Section



Overlook areas can be used to emphasize natural vistas, and improve the trail experience.

Overlook Areas

Typical Features and Materials

Design Principle

Overlook areas should be sited to capitalize on specific natural vistas. When no special vista is present, the design should be scaled back to a simple seating or rest area along the trail. In general, overlook areas should be constructed of local materials that blend with or complement the natural environment.

Overlook areas can be elevated observation decks above grade, or flat areas retained by stone or wood walls. Interpretive signs may also be incorporated into the vista, but should be sited away from the natural view.

All applicable building codes should be followed to determine appropriate rail design and height. An appropriate deck or landing area should be provided to match the expected level of use. Overlook areas directly adjacent to multiuse trails or within close proximity to the trailhead will have relatively more users at any given point, and should be designed accordingly with larger observation areas. In contrast, overlook areas accessible only by hiking trails and in remote areas can be designed with a smaller footprint.

Typical Section / Elev.

Multiuse Trails

Typical Features and Materials

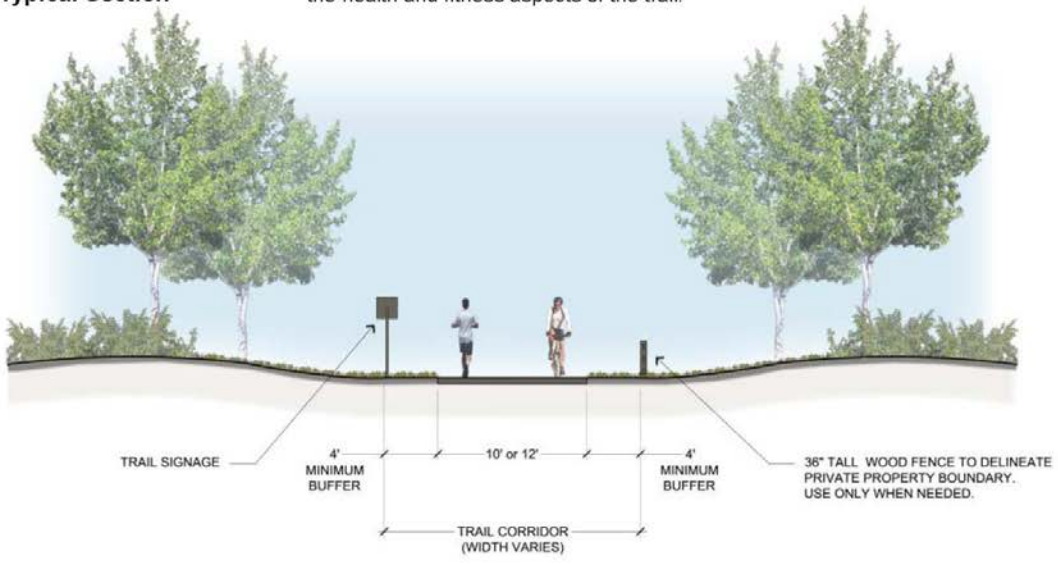
Typical Features

Trail Width: 10' to 12'
Trail Surface: Crushed Stone, Concrete, or Asphalt
Trail Location: Easements Along Private Property Lines, Transmission Line Corridors, Through Existing Parks, Through Conservation Areas.
Trail Grades: 5% Overall Maximum
Trail Signage: Follow Local or VDOT Standards

Typical Section

Design Principle

The simultaneous creation of trails and greenways allows pedestrian and bicycle corridors to be located in park like settings. Because of their popularity, multiuse greenway trails should be designed to accommodate many different user groups. Large trail widths allow for pedestrians and bicycles to interact safely while hard surface and gentle slopes provide a greater range of accessibility. In many cases, multiuse trails are striped to delineate travel lanes and/or user lanes that separate pedestrians from bicycles. Traffic control and directional signs can also increase the safety and functional aspects. Crossing signs, signals, and pavement markings shall be used when trails interact with roadways and other vehicular facilities such as parking lots. Map kiosks combined with exercise stations can also complement the health and fitness aspects of the trail.



Bicycle and Pedestrian System Goals and Objectives

The following goals and associated objectives are intended to build on the strengths of Spotsylvania County and to ensure that the planned system of trailways is developed to the maximum benefit of its users. They are designed to help achieve the County's vision for an integrated network of trailways as identified in the Spotsylvania County Comprehensive Plan.

Goal 1: Improve and expand the existing public-access non-vehicular trails network to create a comprehensive system of interconnected recreational and/ or commuter trails and sidewalks throughout the County.

a. Develop infrastructure in accordance with the Trailways Master Plan.

b. Develop bicycle and pedestrian friendly corridors that offer complementary amenities such as trash receptacles, interpretive or educational signage or displays, bike racks, lighting (where appropriate), benches and seating areas, parking areas, and water fountains.

c. Establish partnerships with State and National partners to promote access to existing state and national parks trailways by incorporating them into the County trailways network.

d. Where appropriate, utilize abandoned roadway beds to establish additional trailway linkages and implement the plan.

e. Ensure that the FRED bus system and VRE station in Spotsylvania County are integrated into the bicycle and pedestrian system, promoting bicycle and pedestrian access to mass transit.

Goal 2: Improve, expand, and construct roadway-based pedestrian and bike facilities.

a. Coordinate with adjoining jurisdictions to ensure the construction of bike and pedestrian improvements along roadways can effectively fit within a regional framework; that improvements will be consistent at the County boundary and can connect into the larger, regional system consistent with the FAMPO Bicycle/ Pedestrian plan as well as other local government plans.

b. Extend bicycle and pedestrian-friendly road improvements and/or trailways to public access points identified along the Rappahannock River and Lake Anna.

c. Develop sidewalk facilities along roadways consistent with Article 5, Streets, parking and Driveways, of the Spotsylvania County Design Standards Manual.

i. Ensure consistency between the Trailways Master Plan and Article 5, Streets, Parking and Driveways, of the Spotsylvania Design Standards Manual.

d. Avoid conflicts between automobiles, pedestrians, and bicycles by identifying and constructing appropriate pedestrian and bicycle facilities.

Goal 3: Develop and promote trail facilities for multiple user-groups, types, and recreational users.

a. For equestrian trails, provide hitching rails and trailer parking accommodations at trail heads.

b. Identify trailway corridors ideal for winter sport uses like snowshoeing or cross-country skiing.

c. Provide handicap-accessible facilities wherever possible, throughout the trails system.

d. For recreational trails, develop a classification system that considers intended users and expected level of difficulty and disclose the information with trail signage throughout the system.

e. Seek technical input and support from local, state, national walking-running, bicycling, equestrian groups during the design and construction phases of trailway implementation and post construction maintenance in order to result in more user friendly trails with feedback from avid user groups.

Goal 4: Review proposed development proposals and land-use projects for compliance with existing and planned trailways and sidewalk improvements.

a. Review all federal, state, regional, and county transportation projects to ensure they include appropriate lateral crossings in the funding, design, and construction of bridges and road projects, as well as bicycle and pedestrian signage, crossing signals and crosswalks that facilitate easy pedestrian and bike access across highways, streams, and railroads.

b. Make land-use decisions that stimulate private sector development and public transportation improvements that are consistent with the County's desired trailways network.

Goal 5: Develop a comprehensive inventory to track the location of trails, sidewalks, bicycle and pedestrian friendly road crossings, bicycle pedestrian right-of-way and easements.

a. Formally name planned public greenway and trail corridors.

b. Trailways and bike & pedestrian improvements and easements should be mapped in an appropriate trailways database or GIS based map.

c. Track plats for easements and infrastructure plans to ensure both easement acquisitions for trails and the construction of trailway segments, and the trail surface has been inventoried.

d. Prepare a current comprehensive inventory of existing trails by type. The inventory will include trails within public parks and open space, paved multi-use trails alongside highways, natural surface trails, and other paths open to the public for non- motorized travel. State and National Park trails will also be inventoried.

e. Report expanded trailway inventory information to the East Coast Greenway, Virginia Department of Conservation and Recreation and George Washington Regional Commission as part of the East Coast Greenway, Virginia Outdoors Plan and George Washington Region Bicycle and Pedestrian Plan update process to ensure consistent and up to date trails information.

Goal 6: Efficiently Implement the Plan.

a. Conduct detailed trailway corridor studies for all proposed off-road trails that address:
   - Recommended crossings of streams or other environmentally sensitive areas.
   - Recommended crossings of public roadways.
   - Recommended public points of access to the trailway, including locating ideal locations for public parking.
   - Identification of possible alternative alignments of the trailway to minimize impacts on existing developed areas.
   - Trailway amenities specific to intended user groups.

b. Seek trailway easements and/or construction along identified bike/pedestrian improvement corridors through rezoning and special use permit commitments.

c. Negotiate trailway easements with private landowners along greenway corridors identified in this plan. In general, the ultimate alignment of the greenway will result from successfully achieved grant of easements over private lands and use of existing public lands.

d. Establish and maintain volunteer Memorandum of Understanding (MOU) agreements between Spotsylvania County and volunteer organizations who seek to help construct, beautify, or maintain the trail system.

e. Ensure adequate right-of-way is dedicated and trailways are developed in conjunction with roadway improvement projects along designated trailway corridors.

f. Pursue easements for all identified bicycle & pedestrian improvements identified in this plan regardless of the implementation schedule.

g. Obtain joint utility and trailway easements when County sewer and waterline installation projects are consistent with identified trailway alignments.

h. Pursue grant opportunities to enhance pedestrian facilities for County-owned properties.

i. Pursue funding, including survey and engineering design, easement acquisition and construction, for projects that provide trail linkages to the battlefield parks and other historic sites.

j. Greenway trails intended for both bicycle and pedestrian users may be developed initially using a natural or stone dust surface to lower the initial cost to construct and complete the establishment of planned trailways. Where appropriate, as outlined in this plan, such surfaces over time can be upgraded to higher quality materials.

Goal 7: Establish safe trailways.

a. Seek to develop a public-private partnership between local law enforcement and citizenry in order to assure that trailway corridors are patrolled for the safety of users.

b. Bike and Pedestrian underpasses should be illuminated for the safety of users.

c. Where appropriate, illuminate public parking access points and trailheads.

d. Establish hours of operation along all public greenway trails for safety of users.

e. Provide trailway signage that advocates for users to walk or ride with a partner and disclose trailway hours of operation and other rules/warnings.

f. Provide trailway mileage markers for users to identify their location in case of emergency.

g. Where appropriate, consider developing a “blue light security telephone” network along isolated segments of greenway trails to notify emergency services of safety and security incidents should they occur.

h. Promote the use of the trailways in the County, therefore providing more “eyes along the trailway”.

i. Regularly inspect and maintain trailway corridors so they do not appear forgotten or abandoned. Ensure that the trails are clean, free of litter and debris.

j. Maintain long sight-lines and avoid routing trails through dense brush to minimize potential low-visibility situations.

k. Prohibit motorized vehicle use of the trailways with the exception of safety patrol, emergency or trailway maintenance vehicles, and personal assistive mobility devices for disabled persons. Disabled vehicles, emergency or maintenance vehicles, personal assistive mobility devices for disabled persons along roadway shoulders are also an exception.

l. Provide proper trail surface maintenance to ensure a safely navigable trailway and ensure no uneven trail surfaces, avoiding falls and/or equipment damage.

m. Install directional signs—spaced uniformly—so that a trailway can be navigated with ease from one end to the other.

n. Provide trailway crossing signage along public roadways where bicycle, pedestrian, or equestrian crossings exist to raise vehicle driver awareness and provide road crossing warnings along trailways at least five hundred feet prior to intersection with roadway for trailway user awareness. Changes in texture of the surface near a roadway crossing should be used where possible.

o. Review (and modify as appropriate) regulations related to trail usage and safety.

Goal 8: Provide regular maintenance of the trailways system.

a. Maintain trails so that they are passable, allowing intended trail user groups to be unimpeded by debris, fallen trees or limbs, or trail surface degradation over time or due to specific weather events.

b. As appropriate, institute limitations on use due to uncontrollable weather events.

c. Maintain the “adopt a trail” program to promote litter free trailways and promote pride in the County trailways system.

d. Reduce the potential maintenance burden by advocating for litter free trailways through outreach and education and trailside regulation signage.

e. Develop and maintain standard operating procedures, outlining the frequency of inspection and maintenance of trails and affiliated facilities throughout the County.

f. Ensure County trailway surfaces, bridge crossings, and public access parking areas are regularly monitored to ensure proper maintenance and safety for users and equipment.

g. Regularly inspect and maintain pedestrian amenities along the trail including but not limited to: trash receptacles, interpretive or educational signage or display, lighting where appropriate, benches/ seating areas, water fountains, exercise stations, trailway identification signage and mile markers.

h. Enact a leave no trace policy for equestrian trails.

Goal 9: Develop and implement an education and outreach program that promotes trail usage and educates users on the benefits of trails and the resources located along them.

a. Inform and educate the public as to the available trailways in Spotsylvania County.

b. Develop interpretive signage along the greenway corridors that portray significant historic events, sites, buildings, monuments, technology, unique natural features or natural processes for educational purposes.

c. Develop historical interpretive signage along the Virginia Central Trail to document the "Screamerville" area, and history of the Civil War in the area and the Virginia Central Railroad.

d. Develop a trail-side signage program for nearby commercial establishments to advertise their location in proximity to the trailway, offering convenience, lodging or dining opportunities to promote access to local businesses by trail users.

e. Explore the feasibility of introducing a Bike Smart Virginia program in local schools to promote bicycle ridership, basic bicycle ridership, basic bicycle safety, road rules, and basic mechanics of the bicycle.

f. Develop a trails inventory mapping feature publicly accessible via Spotsylvania County internet GIS.

g. With partners, develop a County-wide or region-wide trailways map available for public distribution.

h. Promote County trailways through grassroots citizen and organization driven volunteer efforts to maintain and beautify the trail corridors.

i. Utilize volunteer efforts from local gardening organizations and citizens to develop linear flower gardens along segments of greenway corridors.

j. Consider organizing or participating in annual National Trails Day events.

k. Promote organized events centered on use of the County Trailway system.

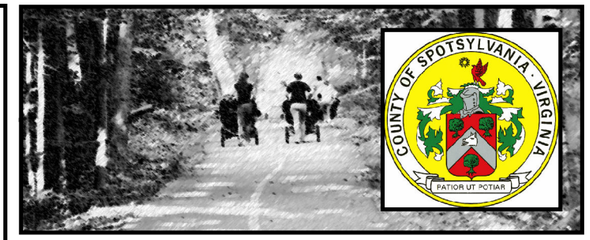
l. Develop or partner in the development of a local or regional trail system website that can advertise the local trail network, intended user groups, identify points of interest and promote special events.

m. Promote the trail system through Spotsylvania County Tourism and other tourism venues.

Goal #10: Review and update the Trailways Master Plan consistent with the Comprehensive Plan update cycle.

a. Track plan implementation successes since last update and amend plans as necessary to accommodate new or improved implementation opportunities.

SPOTSYLVANIA COUNTY TRAILWAYS MASTER PLAN



CULPEPER COUNTY
STAFFORD COUNTY
CITY OF FREDERICKSBURG
ORANGE COUNTY
LOUISA COUNTY
CAROLINE COUNTY
HANOVER COUNTY

ELY'S FORD RD
PLANK RD
ORANGE PLANK RD
RIVER RD
CHANCELLOR RD EXT
OLD PLANK RD
CHANCELLOR RD
SALEM CHURCH RD
HARRISON RD
VCR AUX. TRAIL
HUDGINS RD
LAFAYETTE BLVD
JEFFERSON DAVIS HWY
LOVEDOWNE RD
DEEP RUN SPUR
FREEWATER RUN
US Bike Route 1
VIRGINIA CENTRAL RAILWAY (VCR) TRAIL
PIEDMONT DR
CATHARPIN RD
TODDS TAVERN SPUR
NEW BRANCH RD
SMITHS TAVERN RD
MASSAPONAX CREEK TRAIL
HOOD DR
MINE RD
FREDERICKSBURG RD
SPOTSYLVANIA AVENUE CONNECTOR
GORDON RD
NI RIVER TRAIL
JEWELL HILL RD
SPOTSYLVANIA PKWY
LEE HILL DR
SCHOOLHOUSE LN
EAGLE DR
MILLS DR
ADS BLVD
CROSSROADS
VRE/ECG AUX. TRAIL
SANDY LANE DR
TOWNSEND ROLLER RD
PO RIVER TRAIL (INCL. NORTON PRONG)
W CATHARPIN RD
ROBERT E LEE DR
BROCK RD
MASSAPONAX CHURCH RD EXT
EAST COAST GREENWAY (ECG)
GUINEA STATION RD
RIVER RUN PKWY EXT
MASSAPONAX CHURCH RD
LAKE ANNA STATE PARK CONNECTOR (LASP) TRAIL
PAMUNKEY RD
208 BYP
ROUTE 208 CONNECTOR
BUS 208
POST OAK RD
COURTHOUSE RD
THORNBURG RD
THORNBURG
PO RIVER TRAIL
MORRIS ROAD
MUDD TAVERN RD
MUDD TAVERN ROAD
JONES POWELL RD
LAWYERS RD
MONROVIA RD
STUBBS BRIDGE RD
208
DUERSON LN
DICKERSON RD
LEWISTON RD
FAIRVIEW RD
PARTLOW RD
MARYE RD
US Bike Route 76
522
1
95
17
2
3

Pending East Coast Greenway Alliance Approval
East Coast Greenway Designation Re-Route Area
Spotsylvania County to Caroline County
Connection

N
W
E
S

Legend

Trail Heads w/ Proximity Buffers*

Trail Heads w/ Proximity Buffers*

- Major
- Minor
- State Park
- VRE Station (Rail)

Sidewalks_Trails_Roads

Road Corridor Improvements

- Paved Shoulders
- Paved Shoulder and Shared Use Path
- Paved Shoulder and Shared Use Path (Future Road)
- Paved Shoulders and Sidewalks
- Shared Road Signage
- Shared Use Path (1 side)
- Shared Use Paths (2 sides)
- Shared Use Path (Future Road)
- Sidewalks
- Sidewalks (Future Road)
- Sidewalk and Shared Use Path
- Sidewalk and Shared Use Path (Future Road)
- US Route 76 Bike Trail
- US Route 1 Bike Trail
- Rail Corridor

Greenways

Greenways and Primary Users

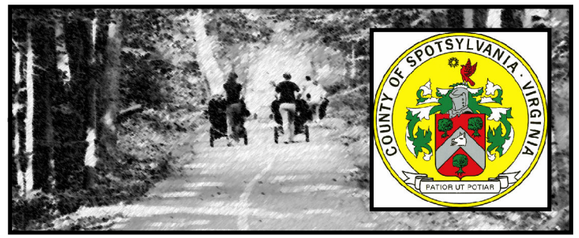
- Bicycle/ Pedestrian
- Equestrian, Bicycle/ Pedestrian
- County Boundary
- Primary Development Boundary
- Parks

* Trail head locations are depicted with proximity buffers. Proximity buffers are intended to show the general area where depicted trail heads should be located in relation to the trail system. The trail head locations identified here are not intended to be parcel specific or suggestive of any specific location at this time. Further planning will be necessary to determine where such features are best located.

0 1.25 2.5 5 Miles

Map Approved: December 14, 2021;
Amended July 12, 2022

SPOTSYLVANIA COUNTY ROAD BASED BICYCLE AND PEDESTRIAN IMPROVEMENTS PLAN



Legend

- VRE Station (Rail)

Sidewalks_Trails_Roads

Road Corridor Improvements

- Paved Shoulders
- Paved Shoulder and Shared Use Path
- Paved Shoulder and Shared Use Path (Future Road)
- Paved Shoulders and Sidewalks
- Shared Road Signage
- Shared Use Path (1 side)
- Shared Use Paths (2 sides)
- Shared Use Path (Future Road)
- Sidewalks
- Sidewalks (Future Road)
- Sidewalk and Shared Use Path
- Sidewalk and Shared Use Path (Future Road)
- US Route 76 Bike Trail
- US Route 1 Bike Trail
- Rail Corridor
- Parks
- Primary Development Boundary

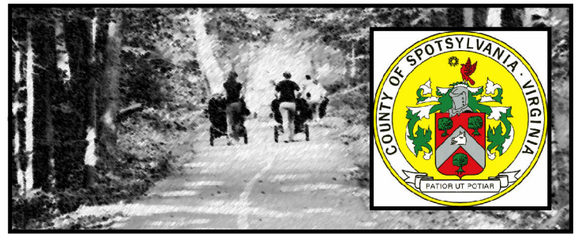
The Road Based Bicycle and Pedestrian Improvements Plan focused on implementation of sidewalks and shared use paths along major thoroughfares throughout the Primary Development Boundary and within the Lake Anna Mixed Use area along Route 208. Remaining areas outside of the Primary Development Boundary include bicycle and pedestrian friendly improvements in the form of shoulder improvements or shared road signage. In addition to enhancing ability to use the corridors for bicycle and pedestrian uses, the improvements are meant to enhance safety by reducing potential conflicts with vehicles. In rural areas, shoulder imporvements also provide greater "room for error" for vehicular traffic and are more accomodating to large vehicles and agricultural machinery.

A number of identified road based improvements are expected to be implemented via frontage improvements associated with development or planned road widening projects (See Thoroughfare Plan). A number of planned road based imporvements complement efforts to implement the County Greenways Plan. Those road based improvements have been reflected cognizant of the greenways plan.

0 1.25 2.5 5 Miles

Map Approved: December 14, 2021;
Amended July 12, 2022

SPOTSYLVANIA COUNTY GREENWAYS PLAN



CULPEPER COUNTY

STAFFORD COUNTY

ORANGE COUNTY

CITY OF FREDERICKSBURG

VIRGINIA CENTRAL RAILWAY (VCR) TRAIL

MASSAPONAX CREEK TRAIL

VCR AUX TRAIL

DEEP RUN SPUR

US Bike Route 1

TODDS TAVERN SPUR

TODDS TAVERN CONNECTOR

SPOTSYLVANIA AVENUE CONNECTOR

EAST COAST GREENWAY (ECG)

VRE/ECG AUX. TRAIL

PO RIVER TRAIL (INCL. NORTON PRONG)

NI RIVER TRAIL

LAKE ANNA STATE PARK CONNECTOR (LASP) TRAIL

PONI CONNECTOR

208 BYP

BUS 208

PO RIVER TRAIL

Pending East Coast Greenway Alliance Approval
East Coast Greenway Designation Re-Route Area
Spotsylvania County to Caroline County
Connection

CAROLINE COUNTY

LOUISA COUNTY

US Bike Route 76

HANOVER COUNTY

N W E S

Legend

Trail Heads w/ Proximity Buffers*

- Major
- Minor
- State Park
- VRE Station (Rail)
- US Route 76 Bike Trail
- US Route 1 Bike Trail

Greenways and Primary Users

- Bicycle/ Pedestrian
- Equestrian, Bicycle/ Pedestrian
- Rail Corridor
- Parks
- Primary Development Boundary

The system of planned Greenway Trails provides a network of long distance off the road shared use paths for a variety of user groups as identified. Greenway Trails are primarily intended to serve as recreational trails but do enhance opportunity for expanding accessibility to goods and services, employment opportunities, access to multi-modal hubs. The greenway system is interconnected with regional scale and national scale systems including the Virginia Central Rail Trail and East Coast Greenway.

There are a number of opportunities for implementing greenway trail development as part of planned road widening projects in the form of parallel to road shared use paths. Those imporvements have been reflected in the road based bicycle and pedestrian imporvement plan and complement greenway implementation goals.

* Trail head locations are depicted with proximity buffers. Proximity buffers are intended to show the general area where depicted trail heads should be located in relation to the trail system. The trail head locations identified here are not intended to be parcel specific or suggestive of any specific location at this time. Further planning will be necessary to determine where such features are best located.

0 1.25 2.5 5 Miles

Map Approved: December 14, 2021;
Amended July 12, 2022

Chapter 4

PUBLIC FACILITIES PLAN

INTRODUCTION

The projected population growth of Spotsylvania County will require additional public facilities. A larger population translates to more school students as well as more health services, social services, recreation facilities, utilities and solid waste, general government services and increased demands on emergency services and law enforcement. The purpose of the Public Facilities Plan is to assess the current and future public service and facility needs and provide a plan for addressing these needs in an efficient and cost-effective manner. The County's public facilities must be carefully coordinated with land use and transportation plans to integrate the provision of services with anticipated population and economic growth, revenues, and available funding.

Current and future needs should be addressed through existing facilities whenever possible. Where this is not possible, new facilities may be warranted. By identifying criteria for the development of public schools, water or sewer lines, fire and rescue stations, and other facilities, the County can encourage development in appropriate areas and discourage development in inappropriate areas. Appropriate here is meant to be consistent with adopted policies in the Comprehensive Plan. It must be recognized that areas of the County are different and levels of service within these areas will vary. Coordination of County land use, transportation and public facilities development is the key to providing equitable, efficient, and cost-effective government services for current and future County residents and to support the business community.

The Public Facilities Plan recommends the general timing and location of future County facilities based on desired service levels. It is designed to function as a needs assessment supporting the establishment of specific project priorities through the annual Capital Improvement Program (CIP). A comprehensive approach integrates facility needs, siting criteria, and design issues with adopted land use plans and other planning concerns. The Plan will guide the acquisition of public facility sites through the rezoning process and advance purchase or optioning. The Public Facilities Plan does not address funding availability, debt capacity, or other financial concerns; nor does it address facility components, equipment, building design, and numerous other factors best left to the expertise of the operating departments. In addition, the location recommendations are general and should not be interpreted as site specific.

This plan is one element of the Spotsylvania County Comprehensive Plan. As with all components of the Comprehensive Plan, it is intended to function as guide for decision-makers; flexibility is required when fundamental conditions change, or analysis based on new data reaches differing conclusions. The Comprehensive Plan and each of its components should be reviewed and, if necessary, updated periodically based on new data and analysis.

Relationship to the Comprehensive Plan and County Growth Management Strategy

The adoption of the Public Facilities Plan as part of the County's Comprehensive Plan provides an important implementation tool for the County's overall growth management strategy. Articulated through the recommendations of the Comprehensive Plan, this strategy encourages sustainable and orderly growth in designated areas of the County while supporting the overall desires and aspirations of the community.

A key aspect of the growth management strategy involves the appropriate timing and location of future land development.

Relationship to the Capital Improvements Plan

The County's annual Capital Improvement Plan (CIP) addresses short-term facility planning. The CIP proposes a specific schedule for acquisition, development, enhancement or replacement of public facilities over a five (5) year period. It shows the arrangement of selected projects in priority order and establishes cost estimates and anticipated funding sources. Capital Projects identified within the CIP must have support within the Comprehensive Plan. Considerate of the Code of Virginia *§* 15.2-2232 that links Capital projects additions to the Comprehensive Plan. From *§* 15.2-2232:

> *…unless a feature is already shown on the adopted master plan or part thereof or is deemed so under subsection D, no street or connection to an existing street, park or other public area, public building or public structure, public utility facility or public service corporation facility other than a railroad facility or an underground natural gas or underground electric distribution facility of a public utility as defined in subdivision (b) of § 56-265.1 within its certificated service territory, whether publicly or privately owned, shall be constructed, established or authorized, unless and until the general location or approximate location, character, and extent thereof has been submitted to and approved by the commission as being substantially in accord with the adopted comprehensive plan or part thereof.*

At least annually with the budget and CIP adoption process, any new public facility not shown in the Comprehensive Plan shall be reviewed by the Planning Commission to determine whether the facility is substantially in accord with the Plan. In general, a public facility, public utility facility, or public service corporation facility, use or area may be determined to be a current feature of the Comprehensive Plan when it is either specifically identified on the Comprehensive Plan map or described in and supported by the Plan text. Exceptions include:

- Railroad facilities;
- Paving, repair, reconstruction, improvement, drainage, or similar work to an existing public street or public area unless such work involves a change in location or extent of a street or public area;
- Normal service extension of public utilities or public service corporations;

- Any public area, facility, or use which is identified within, but not the entire subject of, a subdivision or site plan provided, that the governing body has by ordinance or resolution defined standards governing the construction, establishment, or authorization of such public area, facility, or use; and
- Facilities approved through acceptance of a proffer made as part of a rezoning.

The following will be considered shown in the Comprehensive Plan:

- Additions to existing public buildings that increase the floor area by less than fifty (5) percent;
- Water and sewer facilities shown in the Water and Sewer Master Plan;
- Water and sewer line extensions and pump stations within the Primary Development Boundary; and
- Water and sewer extensions and pump stations outside of the Primary Development Boundary that serve public facilities shown in the Comprehensive Plan or deemed substantially in accord with the Comprehensive Plan.
- Emergency extensions of public water and sewer to serve users with failing well or septic systems with no alternatives as determined by the County Utilities
- Water and sewer line extensions to serve public facilities otherwise identified and supported in the Comprehensive Plan or Water and Sewer Master Plan.

Facilities of public utilities and public service corporations, such as wireless telecommunications and solar energy facility uses, are also subject to the 2232 Review Process pursuant to the State Code.

OVERVIEW OF THE PUBLIC FACILITIES PLAN

The Public Facilities Plan is organized into eight (8) sections: 1) Public Schools; 2) Parks and Recreation; 3) Fire and Rescue Services; 4) Libraries; 5) Solid Waste Management; 6) Water and Sewer Facilities; 7) Sheriff's Department; 8) General Government.

In preparing the Public Facilities Plan, each of the above categories has been addressed in terms of existing conditions, evaluation criteria, future expectations and future plans. In this way the Plan will provide a baseline for future planning, evaluating existing development policies and creating new policies where appropriate.

General Evaluation Criteria

An evaluation of existing public facilities and a determination of needs for future facilities involves several related criteria. These criteria cannot be static or absolute because particular needs and existing conditions vary greatly throughout the County.

Location

Location must be considered in relation to various elements of the Comprehensive Plan, such as existing and future population distribution, zoning, major transportation arteries, topography, and utilities. A centralized location is appropriate for facilities that provide services to intermittent visitors where a time and distance factor is not critical or where the services are highly specialized. Decentralized locations are desirable for facilities that serve day-to-day needs of citizens and where a time and distance factor become more important.

Accessibility

The site should be accessible to major transportation routes providing the best possible access to the greatest number of citizens expected to use the facility.

Proximity to Related and Supporting Facilities

There are advantages to the grouping of related or complementary facilities within one complex or area. Convenience to the public is thereby enhanced, operational economics are achieved, and less land is required to provide shared facilities such as parking. Some facilities are also more effective when located adjacent to a business district or shopping center, thereby assuring the greatest convenience to the largest number of people.

Condition and Obsolescence Assessment

In order to determine how to address a facility need, the present state of repair for the particular facility needs to be determined. Existing building space arrangements and special mechanical equipment requirements to meet the function needs of the facility must be considered. The operational efficiency of the facility and its possible adaptation to change or enlargement are factors that must be reviewed to determine the relative obsolescence of the building plan. Poor condition and high levels of obsolescence may indicate a need for replacement.

Site Adequacy

The site for each building should be adequate to provide for: (a) the space needs of the building and any probable future additions, (b) parking space for vehicles of both visitors and employees, (c) convenient and safe accessibility, and (d) bicycle and pedestrian friendly improvements consistent with the County Design Standards Manual.

Supportive of Adopted Planning Policies

The proposed project should support adopted County policies and plans. Without reference to an overall framework for development of the County, projects can be inconsistent and

counterproductive. If a project appears justified, even though it is not consistent with adopted policies, then a change in policy should be proposed and reviewed through the planning process.

Public Facilities Maps

Public facilities which form an integral part of the County's land use pattern are shown on the Public Facilities Plan Maps located in this Chapter; these include public facilities specific maps for schools, parks and recreation facilities, fire and rescue, solid waste and various other buildings, structures and sites needed to provide public services. Only existing and identified future locations (general) are indicated on the map. The criteria established in this Plan shall form the basis for determining future needs and appropriate sites. The locations of existing and future water and sewer systems are identified within the Water and Sewer Master Plan.

KEY GOALS OF PUBLIC FACILITIES PLAN

The principal goals of the Comprehensive Plan regarding the provision of public facilities and utilities are:

1. Provide community facilities/services to serve existing and new development in an efficient and cost-efficient manner;
2. Provide emergency services and law enforcement to protect citizens and allow them to enjoy a safe and secure environment;
3. Provide a system of high-quality educational opportunities that meet the future educational needs of all citizens;
4. Serve the recreational needs of the community through a comprehensive system of recreational facilities and programs;
5. Provide safe and adequate facilities and educational programs for the removal, disposal, and reduction of solid waste; and
6. Provide a sufficient supply of high-quality drinking water and a distribution system to serve the domestic, recreational, industrial, commercial, and fire protection needs of the community at the most economical price possible.

KEY POLICIES OF THE PUBLIC FACILITIES PLAN

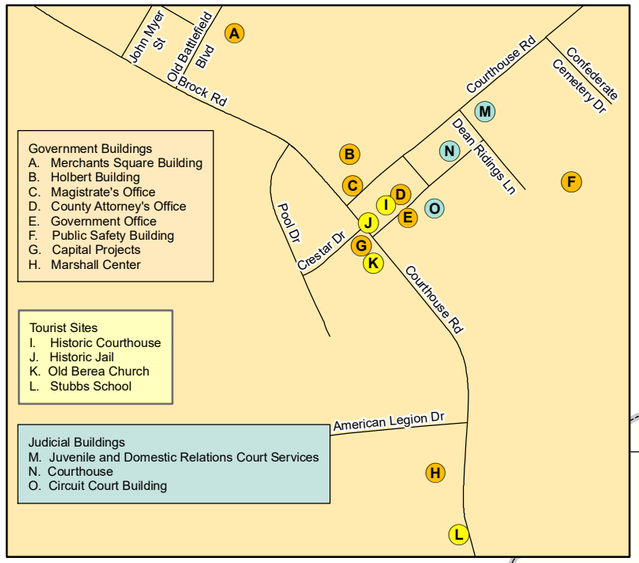
The Public Facilities Plan should serve as the foundation for future decisions concerning the location and expansion of public facilities. In making these decisions, the following policies should be considered:

1. Locate new facilities to provide convenient service to the greatest number of residents.
2. Construct or expand facilities in accord with established criteria and level of service standards.
3. Help guide future growth by coordinating the location of public facilities with recommendations in the Comprehensive Plan.

4. Use the plan as a general guide for the County's Capital Improvements Plan.
5. Ensure equitable distribution of public facilities between established and newly developing areas of Spotsylvania County. Consider existing facility maintenance or replacement needs in already developed areas of the county.
6. Mitigate the impact of public facilities on adjacent planned and existing land uses.
7. Acquire sites for future public facilities as soon as possible, ideally obtaining property for facilities many years before there is a need to build.
8. Use the recommendations of the plan, where feasible, to develop multiple use locations (i.e., joint park/school sites).
9. Use the recommendations of this plan to determine whether proposed public facilities are substantially in accord with the Comprehensive Plan, as required by state law.
10. Continue to monitor economic (industry and construction activity), demographic, socio-economic, and housing trends locally to assess service and facility needs.

Spotsylvania County Government Facilities

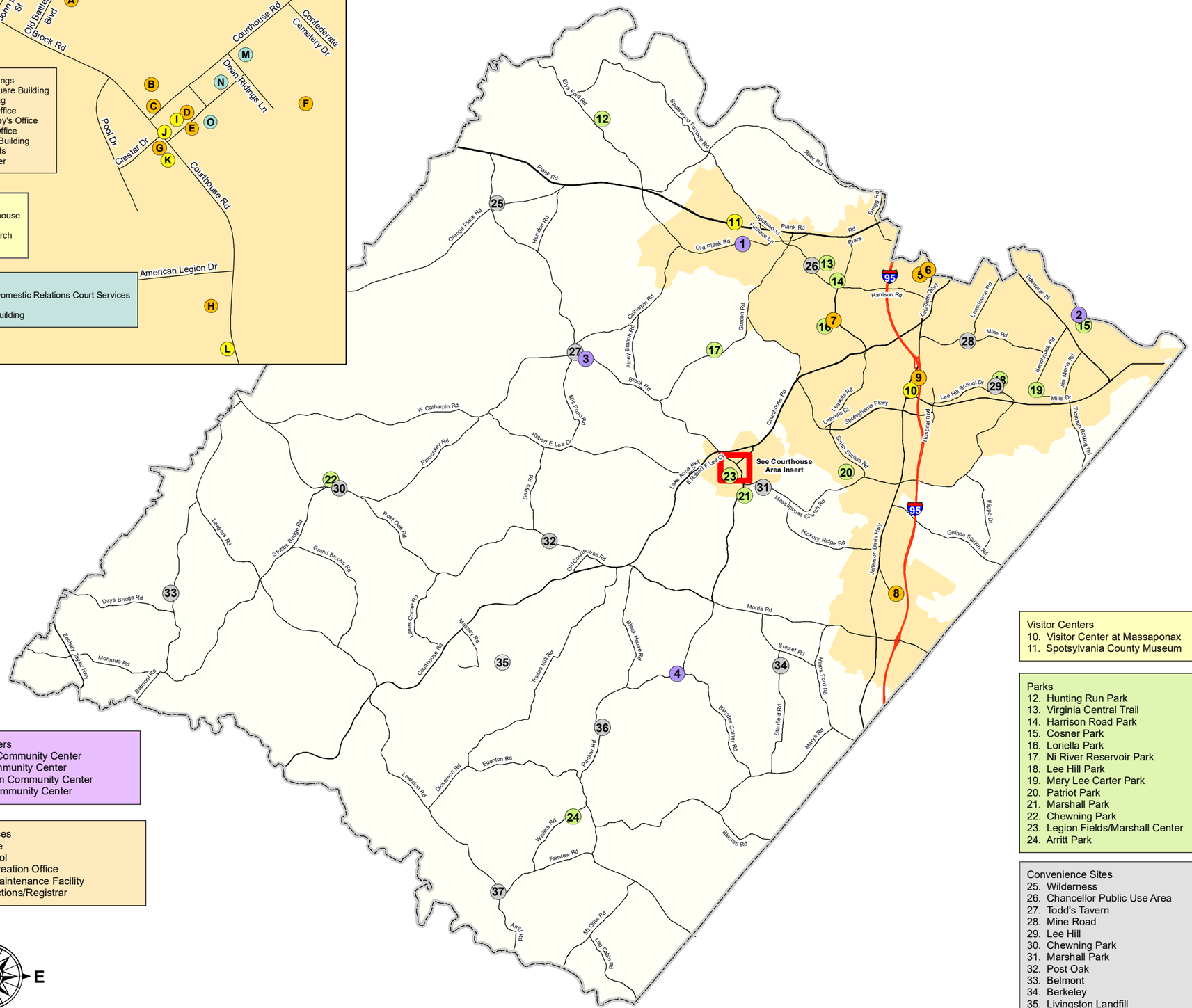
Courthouse Area Insert



Government Buildings
- A. Merchants Square Building
- B. Holbert Building
- C. Magistrate's Office
- D. County Attorney's Office
- E. Government Office
- F. Public Safety Building
- G. Capital Projects
- H. Marshall Center

Tourist Sites
- I. Historic Courthouse
- J. Historic Jail
- K. Old Berea Church
- L. Stubbs School

Judicial Buildings
- M. Juvenile and Domestic Relations Court Services
- N. Courthouse
- O. Circuit Court Building



Community Centers
1. Chancellor Community Center
2. Lee Hill Community Center
3. Todds Tavern Community Center
4. Berkeley Community Center

Government Offices
5. Utilities Office
6. Animal Control
7. Parks & Recreation Office
8. Joint Fleet Maintenance Facility
9. Office of Elections/Registrar

Visitor Centers
10. Visitor Center at Massaponax
11. Spotsylvania County Museum

Parks
12. Hunting Run Park
13. Virginia Central Trail
14. Harrison Road Park
15. Cosner Park
16. Loriella Park
17. Ni River Reservoir Park
18. Lee Hill Park
19. Mary Lee Carter Park
20. Patriot Park
21. Marshall Park
22. Chewning Park
23. Legion Fields/Marshall Center
24. Arritt Park

Convenience Sites
25. Wilderness
26. Chancellor Public Use Area
27. Todd's Tavern
28. Mine Road
29. Lee Hill
30. Chewning Park
31. Marshall Park
32. Post Oak
33. Belmont
34. Berkeley
35. Livingston Landfill
36. Cole Hill
37. The Barn

N W E S

Legend

Public Facilities

- Community Center
- Government Office
- Judicial Building
- Tourist Site/Visitor Center
- Parks
- Convenience Sites
- Primary Development Boundary

0 1.25 2.5 5 Miles

Map Approved: December 14, 2021

Chapter 4A

PUBLIC FACILITIES PLAN- SCHOOLS

PUBLIC SCHOOLS

Introduction

The vision of Spotsylvania County Public Schools is to inspire and empower each student to develop essential skills and access multiple pathways in pursuit of their dreams. Each day, every child yearns to come to school, excited about learning. This vision supports the division's mission that "Together, We Prepare our Students for their Future" and is guided by the school board adopted Strategic Plan: Engage 2025.

The Spotsylvania County Public School Division offers a comprehensive educational program for grades pre-Kindergarden-12, which includes career and technical education, programs for gifted students, special education, visual and performing arts, and alternative education. In addition to career and technical courses offered at each middle and high school, students may take career-based courses at the Spotsylvania Career and Technical Center located adjacent to Courtland High School. Spotsylvania County Public Schools also offers additional programs such as Title I, Virginia Preschool Initiative (VPI), and Head Start. The Title I and Head Start programs receive federal funds while VPI is supported through state allocations. Title I funds provide financial assistance to elementary schools with high percentages of children from low-income families to help ensure that all children meet challenging state academic standards.

The Spotsylvania County Public School (SCPS) Division consists of Twenty-Nine (29) state accredited schools: seventeen (17) elementary schools, seven (7) middle schools, and five (5) high schools. SCPS also has two learning centers: Spotsylvania County Career and Technical Center and John J. Wright Educational and Cultural Center. John J. Wright Educational and Cultural Center serves as a facility for several alternative education programs, including the Quest program (non-traditional secondary), Courthouse Academy (SWD emotional disabled), Gateway Academy (SWD autism), preschool special needs, and preschool programs.

The Center for Family and Pre-School Services facility serves as a registration site for VPI and the Head Start pre-school services. It also houses the Parent Resource Center, Child Find, and English language intake services. In addition, there is a Maintenance Warehouse Complex with a print shop that serves both the School Division and the County, and a Fleet Maintenance Facility that provides joint services with the County.

Impact of the COVID-19 Pandemic on the 2020-2021 School Year:

As of October 1, 2020 there were 9,894 elementary and pre-k students, 5,526 middle school students, and 7,667 high school students, for a total of 23,087 students enrolled in the school system. These numbers represent a decrease in enrollment of 848 students from the preceding school year on the same date. The 2019 enrollment the year prior actually represented an increase in enrollment from 2018. The elementary school enrollment accounted for 696 of the

decrease, with high school enrollments actually increasing slightly by a total of 29 students. Staff believes the overall decrease in enrollment can be directly attributed to the COVID-19 pandemic, which has been a statewide trend. This is because some parents chose to enroll students in home school programs or private schools due to perceived health concerns, even with the school division offering parents a 100 percent virtual learning option for their children. It should be noted that although overall student enrollment decreasing, several schools actually showed slight enrollment increases. The most notable of these schools was Spotsylvania Middle School, which was already overcapacity in the 2019-2020 school year.

Typically, the five-year Capital Improvement Plan (CIP) is reviewed and modified annually by school staff, providing a list by year of capital maintenance, technology and transportation needs. The CIP also provides current year enrollment data as well as enrollment forecasts for the following four years.

Because of the impact COVID-19 has had on student enrollment during the current school year and because school division staff believes that many students who opted out of public school enrollment will return once the pandemic has run its course, 2020-2021 enrollment numbers could not serve as a reliable baseline from which to forecast future student enrollment. Consequently, enrollment projections were not included in the latest 2022-2026 Capital Improvement Plan (CIP).

The third-party demographic study, conducted in 2019 providing enrollment forecasts for the following 10 years continues to help guide future school facilities planning. However, 2020-2021 school year enrollment figures should be considered aberrations, based on the effects of the COVID-19 pandemic. School staff plans to again contract with a third-party firm to update enrollment forecasts post pandemic for the upcoming 2021-2022 school year. This step was originally included in previous planning knowing that the 2021 census data would be a critical source for future growth/enrollment projections.

Another impact of the pandemic was that school staff modified its previous five year CIP (2021-2025) at the request of the County to reflect the needs of the 2021 (current school year) school year only. This was done as a precaution to address potential revenue uncertainties caused by COVID-19 when it first impacted the region. School staff has since returned to the five-year format in devising CIP 2022-2026.

Prior to the Impact of Covid-19:

At the start of the 2019-2020 school year, 10,592 elementary and pre-k students, 5,705 middle school students, and 7,638 high school students, for a total of 23,935 students, were enrolled in the school system. Overall, the total County student population had not changed significantly. Comparing the 2019-2020 school year total population to that reported in 2012-2013 (prior Comprehensive Plan update), student enrollment grew less than 1% (0.89%). Upon adoption of the County 2013 Comprehensive Plan based on the 2012-2013 school year, student enrollment was 23,725. The recent increase in students can be attributed to modest growth in the middle and high school populations where 5,402 middle school students and 7,506 high school students

were reported in the 2012-2013 school year. Elementary School enrollment was down from the 10,817 students reported in 2012-2013.

In 2019, the Spotsylvania County Schools commissioned a demographic study utilizing CropperGIS and McKibben Demographics to look at the current and future student body. Based on a trends analysis the study found total district enrollment is forecasted to increase by 500 students, or 2.1%, between 2019-20 and 2024-25. A decline in student enrollment is expected to occur by the 2026-27 school year. Total enrollment will decrease by 112 students, or-0.5%, from 2024-25 to 2029-30. The detailed analysis did take into consideration the approved and unbuilt units in the County. A January 2020 update to the County's Future Development Analysis found an approved and unbuilt housing inventory of 12,756 units representing an estimated 27,088 additional residents (based on generation rates of persons per unit type). The most recent update from January 2021 notes an approved and unbuilt supply of 12,049 units, down somewhat from the prior year. These updated figures estimate 25,295 additional residents. The report notes that even if the district continues to have a significant amount of annual new housing unit construction over the next 10 years, the rate, magnitude and price of existing home sales will become the increasingly dominant factor affecting the amount of population and enrollment change. Additional factors included in the analysis included birth and death rates, IRS migration reports, Census reports (including age/sex population counts), fertility patterns, distribution of the population by age and sex, rate, and type of existing housing unit sales, change in household size, etc. Factors such as declining fertility rates (below replacement level), increasing median age within the district from 36.3 in 2010 to 41.8 in 2030, and out-migration of the 18 to 24 age cohort contribute to downward trending enrollment findings.

The Spotsylvania Public Schools Division was able to provide analysis of historic enrollment and future enrollment projections through the 2024-2025 school year. Table 1 below shows historic school enrollment starting in the 2009-2010 school year with projections out to the 2023-2025 school year. System-wide, short term student body growth is expected to remain low.

Table 1: Spotsylvania County Enrollment

SPOTSYLVANIA COUNTY PUBLIC SCHOOLS *Historical and Projected Enrollment 2021-2025*																
Based on Actual Enrollment for October 1, 2019																
GRADE	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25
	Historical	Historical	Historical	Historical	Historical	Historical	Historical	Historical	Historical	Historical	Actual	(Projected)	(Projected)	(Projected)	(Projected)	(Projected)
PRE-SCHOOL*	301	331	324	331	327	356	360	400	401	432	462	462	462	462	462	462
K	1752	1686	1673	1705	1714	1588	1565	1586	1567	1545	1623	1615	1631	1631	1630	1626
1	1739	1750	1755	1696	1760	1774	1612	1579	1664	1599	1614	1685	1677	1679	1678	1677
2	1792	1726	1766	1772	1680	1798	1776	1602	1652	1721	1641	1654	1720	1712	1714	1713
3	1731	1781	1725	1774	1782	1713	1801	1792	1646	1698	1758	1683	1684	1751	1742	1745
4	1846	1754	1792	1745	1820	1791	1716	1771	1854	1688	1747	1799	1713	1713	1782	1773
5	1746	1824	1768	1794	1778	1842	1812	1760	1836	1866	1747	1793	1834	1746	1746	1817
Sub-Total	**10907**	**10852**	**10803**	**10817**	**10861**	**10862**	**10642**	**10490**	**10620**	**10549**	**10592**	**10691**	**10721**	**10694**	**10754**	**10813**
Increase		**-55**	**-49**	**14**	**44**	**1**	**-220**	**-152**	**130**	**-71**	**43**	**99**	**30**	**-27**	**60**	**59**
Percent		**-0.50%**	**-0.45%**	**0.13%**	**0.41%**	**0.01%**	**-2.03%**	**-1.43%**	**1.24%**	**-0.67%**	**0.41%**	**0.93%**	**0.28%**	**-0.25%**	**0.56%**	**0.55%**
6	1842	1748	1811	1777	1801	1787	1785	1850	1788	1841	1924	1789	1827	1875	1770	1779
7	1803	1844	1756	1870	1829	1813	1814	1828	1885	1806	1937	1969	1830	1870	1918	1809
8	1818	1809	1879	1755	1901	1836	1867	1858	1865	1899	1844	1977	2010	1868	1909	1958
Sub-Total	**5463**	**5401**	**5446**	**5402**	**5531**	**5436**	**5466**	**5536**	**5538**	**5546**	**5705**	**5735**	**5667**	**5613**	**5597**	**5546**
Increase		**-62**	**45**	**-44**	**129**	**-95**	**30**	**70**	**2**	**8**	**159**	**30**	**-68**	**-54**	**-16**	**-51**
Percent		**-1.13%**	**0.83%**	**-0.81%**	**2.39%**	**-1.72%**	**0.55%**	**1.28%**	**0.04%**	**0.14%**	**2.87%**	**0.53%**	**-1.19%**	**-0.95%**	**-0.29%**	**-0.91%**
9	2212	2025	2012	2070	1976	2087	2017	2014	2043	2025	2118	2031	2171	2210	2052	2096
10	1904	1990	1864	1861	1892	1835	1928	1928	1910	1874	1947	2018	1931	2064	2101	1953
11	1820	1750	1864	1721	1732	1828	1773	1824	1839	1820	1775	1861	1928	1844	1971	2005
12	1886	1820	1783	1854	1781	1769	1852	1800	1864	1860	1798	1831	1915	1982	1898	2022
Ungraded/TT/PG	24	30	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-Total	**7846**	**7615**	**7526**	**7506**	**7381**	**7519**	**7570**	**7566**	**7656**	**7579**	**7638**	**7741**	**7945**	**8100**	**8022**	**8076**
Increase		**-231**	**-89**	**-20**	**-125**	**138**	**51**	**-4**	**90**	**-77**	**59**	**103**	**204**	**155**	**-78**	**54**
Percent		**-2.94%**	**-1.17%**	**-0.27%**	**-1.67%**	**1.87%**	**0.68%**	**-0.05%**	**1.19%**	**-1.01%**	**0.78%**	**1.35%**	**2.64%**	**1.95%**	**-0.96%**	**0.67%**
TOTAL	**24216**	**23868**	**23775**	**23725**	**23773**	**23817**	**23678**	**23592**	**23814**	**23674**	**23935**	**24167**	**24333**	**24407**	**24373**	**24435**
INCREASE		**-348**	**-93**	**-50**	**48**	**44**	**-139**	**-86**	**222**	**-140**	**261**	**232**	**166**	**74**	**-34**	**62**
PERCENT		**-1.44%**	**-0.39%**	**-0.21%**	**0.20%**	**0.19%**	**-0.58%**	**-0.36%**	**0.94%**	**-0.59%**	**1.10%**	**0.97%**	**0.69%**	**0.30%**	**-0.14%**	**0.25%**
* Includes Head Start, Early Childhood Special Education & Pre-Kindergarten																

Current Student Generation Rates

In analyzing County growth trends, it is important to consider student generation rates that are expected to coincide with increased residential development and population growth. To do so, the County tracks student generation rates based on housing types including single family detached, single family attached, and multi-family units. Student generation rates differ based on housing type and can be further influenced by additional factors such as bedroom counts, lifecycle stage of resident, state of the economy, etc. Student generation directly relates to the potential capital facility's needs (new schools, school expansion, etc.) when the existing inventory of schools near their level of service based "built for" student capacity.

Table 2 below identifies the latest calculation of student generation rates. A variety of factors associated with the economy, demographics and housing may change student generation rates over time. At minimum these rates should be recalculated in conjunction with the Comprehensive Plan 5-year update cycle for accuracy sake in consideration of projecting impacts of additional students resulting from residential growth.

Table 2: Population and Student Generation Rates

Population and Student Generation Rates as of January, 2020				
Population Generation Rates	**Single Family Detached**	**Single Family Attached**	**Multi-Family (MF)**	
Persons Per Unit	3.04	2.41	1.49	
Students Per Unit			**Market Rate (MF)**	**Tax Credit (MF)**
Elementary	0.2577	0.3072	0.073	0.291
Middle	0.1307	0.1286	0.047	0.134
High	0.1832	0.1453	0.051	0.139

Level of Service Standards

For the purpose of the Public Facilities Plan, school capacity is the key Level of Service indicator. The Plan for school system expansion is based on the County School Board school design capacity as follows:

- Elementary Schools: 930-950 students
- Middle Schools: 940-1,200 students
- High Schools: 1,900-2,100 students

Not all existing schools were constructed under the current level of service standard and may have building capacity that differs from the current design capacity identified above for future schools.

School enrollments considering building capacity in existing schools have been previously reported by the Spotsylvania County Public Schools in the collection of tables below (See Table 3) based on figures provided in the pre-pandemic demographic study. The tables show that the majority of schools have remaining capacity and are expected to continue to have remaining capacity through the 2024-2025 school year. Capacity issues do exist at specific schools however, at the Middle School level, specifically Battlefield, Chancellor, Spotsylvania and High School level, specifically Massaponax High School.

School staff had previously partnered with Moseley Architects to conduct Planning the Plan Studies I and II. Planning the Plan Study I analyzed each school's current instructional capacity and provided suggestions about how to maximize existing school spaces.

Planning the Plan Study II reviewed school capacities, projected student enrollment, and analyzed feeder patterns. This information served to identify areas from which to initiate the high school redistricting effort, relieving immediate overcapacity issues at Massaponax High School and targeting the renovation and expansion of Courtland High School.

Table 3: Schools Built Capacity Considering Historic and Projected Future Enrollment

Elementary Schools- Northern Region															
School Year	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Battlefield Elementary	**678**	**648**	**639**	**644**	**658**	**645**	**618**	**649**	**655**	**675**	**696**	**705**	**700**	**705**	**710**
Building Capacity	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833
Harrison Rd. Elementary	**812**	**851**	**856**	**822**	**818**	**806**	**793**	**792**	**783**	**812**	**836**	**845**	**856**	**874**	**895**
Building Capacity	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936
Salem Elementary	**642**	**645**	**660**	**635**	**690**	**666**	**629**	**646**	**645**	**612**	**604**	**604**	**609**	**609**	**604**
Building Capacity	815	815	815	815	815	815	815	815	815	815	815	815	815	815	815
School Enrollment (Total)	**2132**	**2144**	**2155**	**2101**	**2166**	**2117**	**2040**	**2087**	**2083**	**2099**	**2136**	**2154**	**2165**	**2188**	**2209**
Building Capacity (Total)	2584	2584	2584	2584	2584	2584	2584	2584	2584	2584	2584	2584	2584	2584	2584
Seats Available	**452**	**440**	**429**	**483**	**418**	**467**	**544**	**497**	**501**	**485**	**448**	**430**	**419**	**396**	**375**

Elementary Schools- Eastern Region															
SCHOOL YEAR	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Cedar Forest	**765**	**732**	**716**	**771**	**757**	**727**	**746**	**749**	**740**	**725**	**723**	**734**	**724**	**721**	**727**
Building Capacity	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936
Lee Hill Elementary	**554**	**670**	**692**	**702**	**691**	**648**	**652**	**669**	**662**	**653**	**684**	**707**	**713**	**743**	**746**
Building Capacity	807	807	807	807	807	807	807	807	807	807	807	807	807	807	807
Parkside Elementary	**955**	**691**	**694**	**728**	**755**	**765**	**773**	**865**	**867**	**857**	**874**	**863**	**868**	**838**	**846**
Building Capacity	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936
Spotswood Elementary	**410**	**537**	**564**	**537**	**556**	**528**	**512**	**551**	**568**	**553**	**545**	**538**	**537**	**548**	**560**
Building Capacity	641	641	641	641	641	641	641	641	641	641	641	641	641	641	641
School Enrollment (Total)	**2684**	**2630**	**2666**	**2738**	**2759**	**2668**	**2683**	**2834**	**2837**	**2788**	**2826**	**2842**	**2842**	**2850**	**2879**
Building Capacity (Total)	3320	3320	3320	3320	3320	3320	3320	3320	3320	3320	3320	3320	3320	3320	3320
Seats Available	**636**	**690**	**654**	**582**	**561**	**652**	**637**	**486**	**483**	**532**	**494**	**478**	**478**	**470**	**441**

Elementary Schools- Southern Region															
SCHOOL YEAR	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Berkeley Elementary	**351**	**325**	**319**	**306**	**281**	**255**	**268**	**294**	***295***	**267**	**279**	**280**	**279**	**274**	**269**
Building Capacity	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353
Livingston Elementary	**460**	**444**	**451**	**444**	**421**	**433**	**420**	**406**	**408**	**393**	**397**	**386**	**386**	**379**	**376**
Building Capacity	504	504	504	504	504	504	504	504	504	504	504	504	504	504	504
Riverview Elementary	**614**	**623**	**653**	**712**	**717**	**696**	**685**	**619**	**624**	**664**	**682**	**707**	**717**	**735**	**747**
Building Capacity	907	907	907	907	907	907	907	907	907	907	907	907	907	907	907
School Enrollment (Total)	**1425**	**1392**	**1423**	**1462**	**1419**	**1384**	**1373**	**1319**	**1327**	**1324**	**1358**	**1373**	**1382**	**1388**	**1392**
Building Capacity (Total)	1764	1764	1764	1764	1764	1764	1764	1764	1764	1764	1764	1764	1764	1764	1764
Seats Available	**339**	**372**	**341**	**302**	**345**	**380**	**391**	**445**	**437**	**440**	**406**	**391**	**382**	**376**	**372**

Elementary Schools- Western Region

SCHOOL YEAR	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Brock Road Elementary	**764**	**769**	**729**	**753**	**720**	**693**	**656**	**658**	**665**	**681**	**677**	**668**	**654**	**655**	**668**
Building Capacity	907	907	907	907	907	907	907	907	907	907	907	907	907	907	907
Chancellor Elementary	**360**	**363**	**374**	**387**	**401**	**418**	**424**	**441**	**463**	**459**	**460**	**465**	**455**	**463**	**467**
Building Capacity	455	455	455	455	455	455	455	455	455	455	455	455	455	455	907
Wilderness Elementary	**752**	**757**	**763**	**763**	**761**	**736**	**746**	**719**	**678**	**699**	**701**	**678**	**671**	**671**	**677**
Building Capacity	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936
School Enrollment (Total)	**1876**	**1889**	**1866**	**1903**	**1882**	**1847**	**1826**	**1818**	**1806**	**1839**	**1838**	**1811**	**1780**	**1789**	**1812**
Building Capacity (Total)	2298	2298	2298	2298	2298	2298	2298	2298	2298	2298	2298	2298	2298	2298	2298
Seats Available	**422**	**409**	**432**	**395**	**416**	**451**	**472**	**480**	**492**	**459**	**460**	**487**	**518**	**509**	**486**

Elementary Schools- Central Region

School Year	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Courthouse Road Elem.	**881**	**870**	**854**	**829**	**832**	**828**	**813**	**809**	**812**	**812**	**814**	**820**	**821**	**821**	**826**
Building Capacity	907	907	907	907	907	907	907	907	907	907	907	907	907	907	907
Courtland Elementary	**608**	**577**	**586**	**564**	**539**	**563**	**527**	**535**	**535**	**556**	**555**	**560**	**563**	**589**	**576**
Building Capacity	789	789	789	789	789	789	789	789	789	789	789	789	789	789	789
Robert E. Lee Elementary	**478**	**507**	**516**	**502**	**506**	**519**	**515**	**540**	**508**	**512**	**501**	**494**	**473**	**457**	**447**
Building Capacity	585	585	585	586	586	586	586	586	586	586	586	586	586	586	586
Smith Station Elementary	**768**	**794**	**751**	**762**	**759**	**716**	**713**	**678**	**642**	**662**	**663**	**667**	**668**	**672**	**672**
Building Capacity	986	986	986	986	986	986	986	986	986	986	986	986	986	986	986
School Enrollment (Total)	**2735**	**2748**	**2707**	**2657**	**2636**	**2626**	**2568**	**2562**	**2497**	**2542**	**2533**	**2541**	**2525**	**2539**	**2521**
Building Capacity (Total)	3267	3267	3267	3268	3268	3268	3268	3268	3268	3268	3268	3268	3268	3268	3268
Seats Available	**532**	**519**	**560**	**611**	**632**	**642**	**700**	**706**	**771**	**726**	**735**	**727**	**743**	**729**	**747**

Middle Schools

School Year	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Battlefield Middle	**800**	**808**	**791**	**798**	**792**	**817**	**802**	**834**	**837**	**859**	**876**	**883**	**887**	**875**	**858**
Building Capacity	807	807	807	807	807	807	807	807	807	807	807	807	807	807	807
Chancellor Middle	**814**	**844**	**819**	**858**	**813**	**825**	**849**	**861**	**835**	**866**	**870**	**876**	**869**	**863**	**854**
Building Capacity	857	857	857	857	857	857	857	857	857	857	857	857	857	857	857
Freedom Middle	**862**	**858**	**857**	**883**	**844**	**824**	**780**	**769**	**815**	**823**	**809**	**752**	**739**	**727**	**717**
Building Capacity	948	948	948	948	948	948	948	948	948	948	948	948	948	948	948
Ni River Middle	**719**	**683**	**687**	**715**	**749**	**745**	**764**	**723**	**707**	**723**	**728**	**744**	**740**	**726**	**679**
Building Capacity	774	774	774	774	774	774	774	774	774	774	774	774	774	774	774
Post Oak Middle	**739**	**753**	**752**	**781**	**765**	**747**	**726**	**727**	**688**	**748**	**722**	**711**	**680**	**703**	**697**
Building Capacity	948	948	948	948	948	948	948	948	948	948	948	948	948	948	948
Spotsylvania Middle	**821**	**828**	**806**	**805**	**780**	**800**	**876**	**909**	**934**	**940**	**996**	**998**	**994**	**996**	**1008**
Building Capacity	907	907	907	907	907	907	907	907	907	907	907	907	907	907	907
Thornburg Middle	**646**	**672**	**690**	**691**	**693**	**708**	**739**	**715**	**730**	**746**	**734**	**703**	**704**	**707**	**733**
Building Capacity	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790
School Enrollment (Total)	**5401**	**5446**	**5402**	**5531**	**5436**	**5466**	**5536**	**5538**	**5546**	**5705**	**5735**	**5667**	**5613**	**5597**	**5546**
Building Capacity (Total)	6031	6031	6031	6031	6031	6031	6031	6031	6031	6031	6031	6031	6031	6031	6031
Seats Available	**630**	**585**	**629**	**500**	**595**	**565**	**495**	**493**	**485**	**326**	**296**	**364**	**418**	**434**	**485**

High Schools															
School Year	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
QUEST (formerly GATES)	**60**	**48**	**33**	**31**	**25**	**33**	**23**	**21**	**36**	**41**	**41**	**41**	**41**	**41**	**41**
Building Capacity	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
Chancellor High	**1355**	**1380**	**1380**	**1342**	**1330**	**1304**	**1299**	**1268**	**1288**	**1317**	**1347**	**1417**	**1433**	**1402**	**1404**
Building Capacity	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427
Courtland High	**1220**	**1192**	**1219**	**1190**	**1176**	**1173**	**1146**	**1179**	**1176**	**1413**	**1434**	**1471**	**1471**	**1427**	**1466**
Building Capacity	1265	1265	1265	1265	1265	1265	1265	1265	1265	1565	1565	1565	1565	1565	1565
Massaponax High	**1908**	**1870**	**1858**	**1829**	**1925**	**1964**	**2022**	**2027**	**2017**	**1745**	**1793**	**1858**	**1962**	**2003**	**1998**
Building Capacity	1830	1830	1830	1830	1830	1830	1830	1830	1830	1830	1830	1830	1830	1830	1830
Riverbend High	**1941**	**1923**	**1913**	**1866**	**1942**	**1933**	**1919**	**1981**	**1919**	**1918**	**1922**	**1937**	**1930**	**1923**	**1939**
Building Capacity	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995
Spotsylvania High	**1131**	**1113**	**1103**	**1123**	**1121**	**1163**	**1157**	**1180**	**1143**	**1204**	**1204**	**1221**	**1263**	**1226**	**1228**
Building Capacity	1611	1611	1611	1611	1611	1611	1611	1611	1611	1611	1611	1611	1611	1611	1611
School Enrollment (Total)	**7615**	**7526**	**7506**	**7381**	**7519**	**7570**	**7566**	**7656**	**7579**	**7638**	**7741**	**7945**	**8100**	**8022**	**8076**
Building Capacity (Total)	8218	8218	8218	8218	8218	8218	8218	8218	8218	8518	8518	8518	8518	8518	8518
Seats Available	**603**	**692**	**712**	**837**	**699**	**648**	**652**	**562**	**639**	**880**	**777**	**573**	**418**	**496**	**442**
										Courtland Reno. Increased Cap.				1565	

Facility Design and Location Criteria

The following criteria should be used in determining appropriate sites and design for additional school facilities.

- Provide new facilities to adequately and equitably serve all areas of the County.
- Schedule school construction to relieve overcrowding and plan for new growth before it occurs.
- Provide up-to-date learning facilities including advances in technology and related instructional software.
- Continue to coordinate school site planning and development with the Parks and Recreation Department in order to maximize community recreational facilities.
- Obtain optimal locations and minimize costs through advance acquisition of suitable sites.
- Provide locations for new schools that minimize travel distance for current as well as future students.
- Elementary, Middle and High Schools site design should minimize impacts of the recreational areas on adjacent residences. Sports facilities and their parking areas should be buffered from nearby homes.
- Pursue acquisition of school sites in projected growth areas of the county.
- School construction should follow the guidelines of the Virginia Department of Education, as outlined within *"Guidelines for School Facilities in Virginia's Public Schools"*.
- School sizes should be based on not only the design capacity, i.e. the number of students, but also on the program capacity as programs such as Special Education and Career and Technical Education course have mandated federal caps that may not utilize square footage or pupil/teacher ratios.

Recommendations

The following are recommendations for the provision of adequate school facilities.

- Continue to analyze existing educational environments to examine whether they can be re-purposed to support research based best instructional practices.
- Continue to examine the feasibility of renovating and/or constructing additions to existing school facilities before constructing new school facilities for cost efficiency purposes. The school division's CIP 2022-2026 includes a full renovation and expansion of Spotsylvania Middle School due to current and anticipated student growth generated by new residential developments in the school's attendance zone.

The CIP also identifies renovation of Chancellor High and Middle School's mechanical, electrical and plumbing systems, and repurposing existing spaces for new programs at Spotsylvania High School and the Career and Technical Center.

In addition, modular units have been added at Spotsylvania Elementary School (formerly known as Robert E Lee Elementary), Parkside Elementary School, and Massaponax High School to accommodate expected future student enrollment generated by approved residential developments in those schools' attendance zones. Ten modular units were added to Spotsylvania Middle School prior to the 2019-2020 school year to handle current student growth generated by new housing developments in the school's attendance zone as well as to accommodate future student growth during the school's anticipated renovation and expansion.

- Construct new schools/facilities to expand the best educational opportunities for students and prevent overcrowded classroom sizes, unsafe and long bus trips, etc.
    - Construct additional classroom capacity at Thornburg Middle School.
- Maintain levels of service by staying consistent with state standards for classroom size by education level and full utilization of school facilities based on building capacity
- Reduce bus travel distances for students going to and from school in a safe manner when possible.
- Reduce land costs for new schools through advance acquisition.
- Consider realignment of Attendance Zones to best utilize existing facilities to accommodate student population before constructing new school facilities. For example, the afore-mentioned high school redistricting effort was initiated prior to the 2019-2020 school year to successfully alleviate student capacity issues at Massaponax High School. This effort was greatly assisted by the renovation and expansion (by approximately 300 students) of Courtland High School, which was then able to take additional students from other high schools in the division to alleviate potential future overcrowding.
- Consider expanding or enhancing specialized educational programs and their necessary capital facilities considering potential student demand, market demand for skills (future employment opportunities), and costs to implement. Examples include but are not limited to newly formed or expanded Career and Technical programs.
- All applications for a rezoning and/or special use permit for residential dwelling units should contain the following information:

    - Number and type(s) of dwelling unit(s) proposed
    - Anticipated occupancy date for proposed dwelling units
    - Anticipated number of children per household type (student generation rate)

Future School Bond Referendum

The school division's remaining bond authority to complete capital projects will run only through Fiscal Year 2022. In order to fully fund the projects in CIP 2022-2026, a new school bond referendum will be necessary. This referendum is scheduled for November 2021.

Spotsylvania County Public Schools

Elementary Schools
1. Brock Road
2. Wilderness
3. Chancellor
4. Salem
5. Harrison Road
6. Battlefield
7. Smith Station
8. Spotswood
9. Courthouse Road
10. Courtland
11. Lee Hill
12. Cedar Forest
13. Parkside
14. Spotsylvania (fmr RE Lee)
15. Riverview
16. Berkeley
17. Livingston

High Schools
25. Riverbend
26. Chancellor
27. Courtland
28. Massaponax
29. Spotsylvania

Middle Schools
18. Ni River
19. Chancellor
20. Battlefield
21. Freedom
22. Spotsylvania
23. Post Oak
24. Thornburg

Career and Technical Center
30. Spotsylvania Career and Technical Center

Educational and Cultural Center
31. John J, Wright Educational and Cultural Center

N W E S

Legend

School Type

- Career & Technical Center
- Educational &Cultural Ctr
- Elementary School
- High School
- Middle School
- Primary Development Boundary

0 1.25 2.5 5 Miles

Map Approved: December 14, 2021

Chapter 4B

PUBLIC FACILITIES PLAN
FIRE, RESCUE, AND EMERGENCY MANAGEMENT

FIRE, RESCUE, AND EMERGENCY SERVICES

Introduction

Fire protection and emergency medical service are indispensable services that are essential to the safety and quality of life of every County resident. The overall goal is to ensure adequate fire protection, response, and emergency medical services for the county's residents, businesses, and tourists.

Fire and rescue services are provided to Spotsylvania County residents and visitors through the Department of Fire, Rescue and Emergency Management (FREM), a system comprised of both volunteer and career personnel. Within the Department, along with career personnel who staff County operated Fire and Rescue Stations, there are two volunteer organizations (rescue squads and fire companies) providing services to the County. They include the Spotsylvania Volunteer Fire Department, and Spotsylvania Volunteer Rescue Squad. The County provides personnel at all 11 County Fire and Rescue Stations seven days per week, 24 hours per day.

Services provided by the department are divided into five distinct categories as follows:

1 Fire - Fire suppression, first responder program, public fire education, and company inspection programs.

2 Rescue - Emergency medical treatment, transport, and public education.

3 Emergency Management/Support Services - Plans for natural or man-made disasters, processes Safety Data Sheets (SDS), responds to hazardous materials spills, investigates environmental issues (illegal dumps, spills, etc.), coordinates search and rescue efforts, provides in-house vehicle repair and maintenance for fire and EMS vehicles, and provide logistical support for the department.

Spotsylvania County is classified as a risk locality being located within the 10 Mile Emergency Protection Zone (EPZ) for the North Anna Nuclear Power Plant. Spotsylvania County has a Radiological Emergency Response Plan in accordance with the provisions of Nuclear Regulatory Commission (NRC) 10CFR 50.47, 10CFR-50 Appendix E, NUREG-0654 and FEMA REP Manual. Our staff conducts yearly training and exercise to validate the Radiological Emergency Response Plan. Spotsylvania conducts a FEMA/DHS evaluated exercises every two years where we are graded on areas such as evacuations, mass care, public notification, and radiological monitoring and decontamination. Results of the FEMA/DHS graded exercises are reported to the Nuclear Regulatory Commission and available to the public.

4 Fire and EMS Administration - Provides administrative support for the entire department, develops departmental budgets, establishes departmental policy and procedures, and administers the Revenue Recovery Program for Spotsylvania County. Administration also processes fire inspections, fire investigations, fire and EMS reports, and departmental related permits.

5 Fire Prevention – Performs plan review (site plan, building plan, and subdivision plat), conducts new construction and existing occupancy inspections to ensure compliance with applicable codes and standards, conducts investigations of fires, issues related permits (blasting, fireworks, burning, etc.)

Existing Facilities

Currently, there are 11 Fire and Rescue Stations spread throughout the County. These facilities are joint facilities providing fire and rescue services from each of them. The specific stations are listed in the table below. Plans are being developed for a replacement facility to replace the existing Fire and Rescue Station 3, and a new Fire and Rescue Station #12 in the vicinity of Jefferson Davis Hwy. and Massaponax Church Rd. The existing facilities map shows the locations of current and known future stations.

The County maintains an automatic aid agreement with the City of Fredericksburg, Orange, Louisa, Hanover, Stafford, King George, and Caroline Counties. There is an existing mutual aid agreement with Culpeper County that is in the update process presently. At this time there is no specific timeline on when the agreement will be finalized, however, Culpeper's mutual aid agreement is expected to convert to an automatic aid agreement within the planning period. Aid agreements within the region have improved over time and are expected to continue to be enhanced as noted above, within the planning period. Prior to this Comprehensive Plan update, the County had acknowledged several mutual aid agreements with adjacent localities. Mutual aid agreements assured regional cooperation and mutual FREM assistance across County or City boundaries when help was requested. Automatic aid agreements as opposed to mutual aid agreements result in more proactive, efficient and effective responses in case of emergencies, resulting in enhanced response times with a greater supply of FREM resources to stabilize the situation. With automatic aid, cooperating localities need not wait for a call for assistance from a nearby locality and therefore can dispatch vital resources more quickly.

FREM also seeks to reduce demand for fire and rescue services through a proactive fire prevention and safety education program. The program includes numerous public education activities as well as a fire safety inspection program.

The primary indicator of level of service in regard to fire protection is response time. The target response times are 6 minutes for suburban and 8 minutes for rural in 90% of responses, with an overall average of 7 minutes in 90% of responses countywide. The ability to meet this is predominately dependent on two factors, the proximity of the response location to a station,

and the availability of equipment and personnel at the station. During the next Comprehensive Plan amendment cycle these levels of service standards will be retired and replaced by a new methodology which measures "Unit Hour Utilization" and "Assembled Fire Fighting Force." The Unit Hour Utilization will measure the Utilization, or load/demand in a period of time, relative to the Unit Hour supply. The Assembled Fire Fighting Force, according to NFPA 1710/1720 measures the response time from dispatch to the point where the necessary equipment and teams (not just a first responder) are onsite to effectively resolve an incident. These more advanced measurement techniques will become available over the next few years due to capital improvements made by the County in FREM and Information Technology.

As of 2019, approximately 67% of the land area of the County is within a five-mile-driving distance of a fire station. This is a standard commonly used by the Insurance Services Organization (ISO), a group funded by the insurance industry to establish insurance rates on a national level. As of April 1, 2021, Spotsylvania's ISO Public Protection Classification Rating is a 2/10; areas within 5 road miles of a fire and rescue station are categorized with the rating of a 2, while those outside the 5 road miles are categorized with a rating of 10.

Road distance-based service areas have been mapped with the assistance of FireView Software administered by the Spotsylvania County GIS office. In past iterations of the Comprehensive Plan, response distances had been mapped based on an equal 5-mile radius buffered around fire stations (appearing as circles). Though the distances were reflective of standards they did not factor in the road-based routes necessary for fire and rescue apparatus to travel from station to the location of an emergency. With improvement of technology available, the County has enhanced its portrayal of response times, depicting "real world" distances considerate of the road network and routing.

Many variables can affect response time and the generation of fire/rescue calls by a given population. Among them are geography, road networks, age and density of population, traffic volumes, inclement weather, and age and quality of the building stock. The analysis of the department focuses on future population projections and call loading within a fire/rescue district or response zones. A threshold of 2,500 total calls per year is used as the benchmark indicator of full capacity at any single fire/rescue station, staffed with one fire apparatus and one ambulance. Under 2021 conditions, per Spotsylvania County FREM the number of units staffed in each station is still 1 Fire apparatus and 1 Ambulance. It is the intention of FREM leadership to continue to utilize volunteer agencies whenever possible to supplement career staffing, which has resulted in several instances where County FREM has been able to staff more than the minimum number of units in each station, but the regularity of this occurrence is not yet frequent enough to expand the benchmark indicators.

As of August 2019, the County has been providing 24/7 minimum staffing through career personnel, with added capacity provided through volunteer participation. However, the volunteer staffing has not been consistent. This has resulted in a continuation of maintaining the minimal staffing of 1 Fire apparatus and 1 Ambulance in each station. Therefore, service area call thresholds are based on 2,500 total calls per year for any and all fire/rescue service areas

throughout the County. County FREM staff have provided Incident Counts for fiscal year 2019 and 2020 considering call volume versus capacity (See Table 1 below). Fire and Rescue Station #4 and 6 are well over capacity based on service thresholds.

Table 1: Station Capacity vs. Volume

Fire & Rescue Station	Capacity	July 1, 2018-June 30, 2019			July 1, 2019-June 30, 2020		
		Annual Call Volume* (July 1, 2018 - June 30, 2019)	Volume vs Capacity	% Residential Calls	Annual Call Volume* (July 1, 2019 - June 30, 2020)	Volume vs Capacity	% Residential Calls
1	2500	1935	565	63%	1995	505	70%
2	2500	838	1662	65%	759	1741	68%
3	2500	558	1942	74%	587	1913	73%
4	2500	4298	-1798	46%	4246	-1746	42%
5	2500	1309	1191	66%	1322	1178	70%
6	2500	3935	-1435	60%	3857	-1357	62%
7	2500	876	1624	68%	909	1591	72%
8	2500	1118	1382	45%	1090	1410	46%
9	2500	518	1982	79%	540	1960	77%
10	2500	1360	1140	85%	1378	1122	85%
11	2500	1803	697	65%	1830	670	69%
Total	**27500**	**18548**	8952	**60%**	**18513**	**8987**	**62%**

*call volume does not include mutual aid to surrounding jurisdictions

Distance and call volume-based level of service gaps have helped drive recommended short- and long-term fire and rescue station additions recommendations as depicted in the FREM 5-Mile Response Map. In the short term, Fire and Rescue Station #12 is expected to go into service in the Massaponax area. Construction of Station #12 is expected to occur in 2023-2024. Longer term target additions for Fire and Rescue stations include the Elys Ford area in northwest Spotsylvania County, Shady Grove, and Post Oak.

Level of Service Standards

Level of Service is evaluated through multiple means. The primary measure of service is response time but response time is driven by several factors. The primary factors are station location, equipment availability, and staffing levels and availability.

There are three LOS standards for fire and rescue:

1. Respond to 90% of all fire and emergency medical service incidents within 6 minutes of being dispatched when the incident is located in the suburban districts of the County. These districts include areas covered by Stations 1, 4, 5, 6, 10, and 11. The planned Station 12's district will also be included in this list of districts.

2. Respond to 90% of all fire and emergency medical service incidents within 8 minutes of being dispatched when the incident is located rural districts of the County. These districts include areas covered by Stations 2, 3, 7, 8, and 9.
3. Achieve a 7-minute average countywide response time for 90% of the county's incidents.

Location Criteria

The following criteria should be used in determining appropriate sites for additional stations in order to provide a consistent level of service across the County.

- Locate stations at points with quick access to a major arterial road. If possible, sites should be located near two major arterials that offer both east/west and north/south travel.
- Locate new fire/rescue stations near mixed-use centers where possible, based on key site planning considerations such as access, safety, and response time.
- Response times will also be considered in evaluating and selecting appropriate sites. This will ensure that the targeted response goals are being met.

Design Criteria

The following design criteria should be considered when developing a new site for emergency response stations.

- Co-locate fire and rescue facilities for maximum efficiency. Consider co-locating with other public facilities as well.
- Acquire sites of at least 3 acres in the urban area since there is the availability of county water and sewer lines and 5 acres in the rural area in order to accommodate drainfields in order to provide for co-location of public facilities and future expansion.

Recommendations

The following are recommendations for the provision of adequate Fire and Rescue facilities.

General

- Coordinate with lead/ support agencies and Implement regional and Spotsylvania County specific mitigation action strategies associated with the current iteration of the George Washington Regional Commission Regional Hazard Mitigation Plan.
- Work with local and regional stakeholders to update the Regional Hazard Mitigation Plan consistent with the required review and update five (5) year cycle as established in the Federal Disaster Mitigation Act of 2000, administered by the Federal Emergency Management Agency (FEMA).
- Explore development of a County Wildland Fire Mitigation Plan in partnership with the Virginia Department of Forestry.

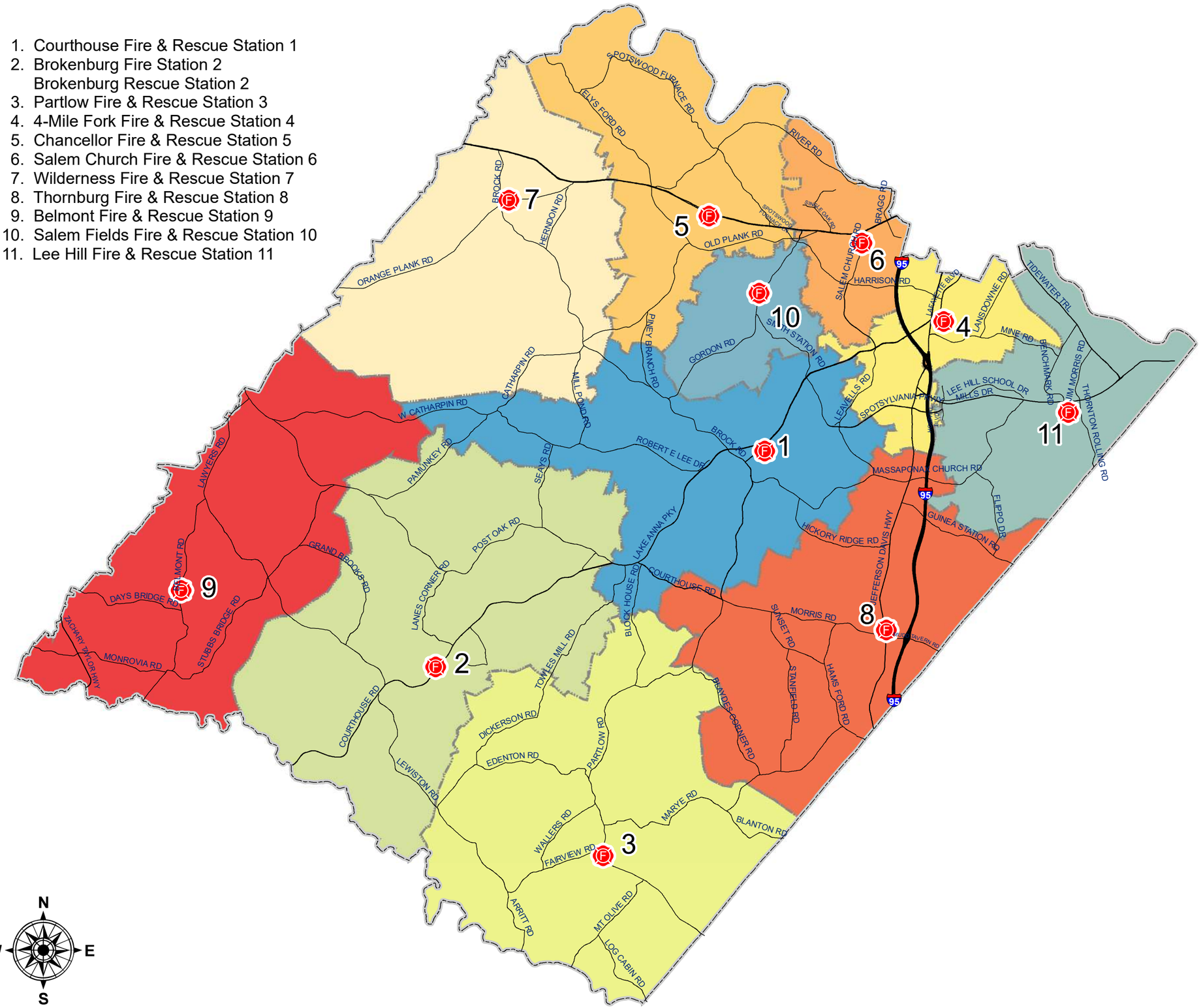
Short Term

- Integrate technologies and adopt procedures necessary to measure performance using the Unit Hour Utilization and Assembled Fire Fighting Force metrics.
- Study Fire and Rescue calls and responses, as well as Unit Hour Utilization to determine whether LOS needs dictate the construction of additional stations in some areas, and/or staffing additional fire apparatus and ambulances in existing facilities.
- Build replacement Fire and Rescue Station 3 in the Partlow area.
- Secure land for and build Fire and Rescue Station 12 in the Jefferson Davis Hwy. / Massaponax Church Rd. area.
- Build the Classroom and Logistics Facility at the Rappahannock Regional Training Center to facilitate improved system-wide training abilities and meet logistical storage needs.
- Implement traffic management strategies and technology, such as traffic signal preemption devices to facilitate improved response times.
- Continue efforts to update the aid agreement with Culpeper County, resulting in conversion from a mutual aid agreement to an automatic aid agreement.

Long Term

- Acquire land for fire/rescue joint use sites in order to relieve the burden on existing fire/rescue facilities. Considering level of service standards, new locations are in Shady Grove, Post Oak, and northwestern Spotsylvania County (north of Route 3).

1. Courthouse Fire & Rescue Station 1
2. Brokenburg Fire Station 2
   Brokenburg Rescue Station 2
3. Partlow Fire & Rescue Station 3
4. 4-Mile Fork Fire & Rescue Station 4
5. Chancellor Fire & Rescue Station 5
6. Salem Church Fire & Rescue Station 6
7. Wilderness Fire & Rescue Station 7
8. Thornburg Fire & Rescue Station 8
9. Belmont Fire & Rescue Station 9
10. Salem Fields Fire & Rescue Station 10
11. Lee Hill Fire & Rescue Station 11



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Spotsylvania County Fire/Rescue Stations First Response Zones

Legend

FREM Stations with First Response Zones

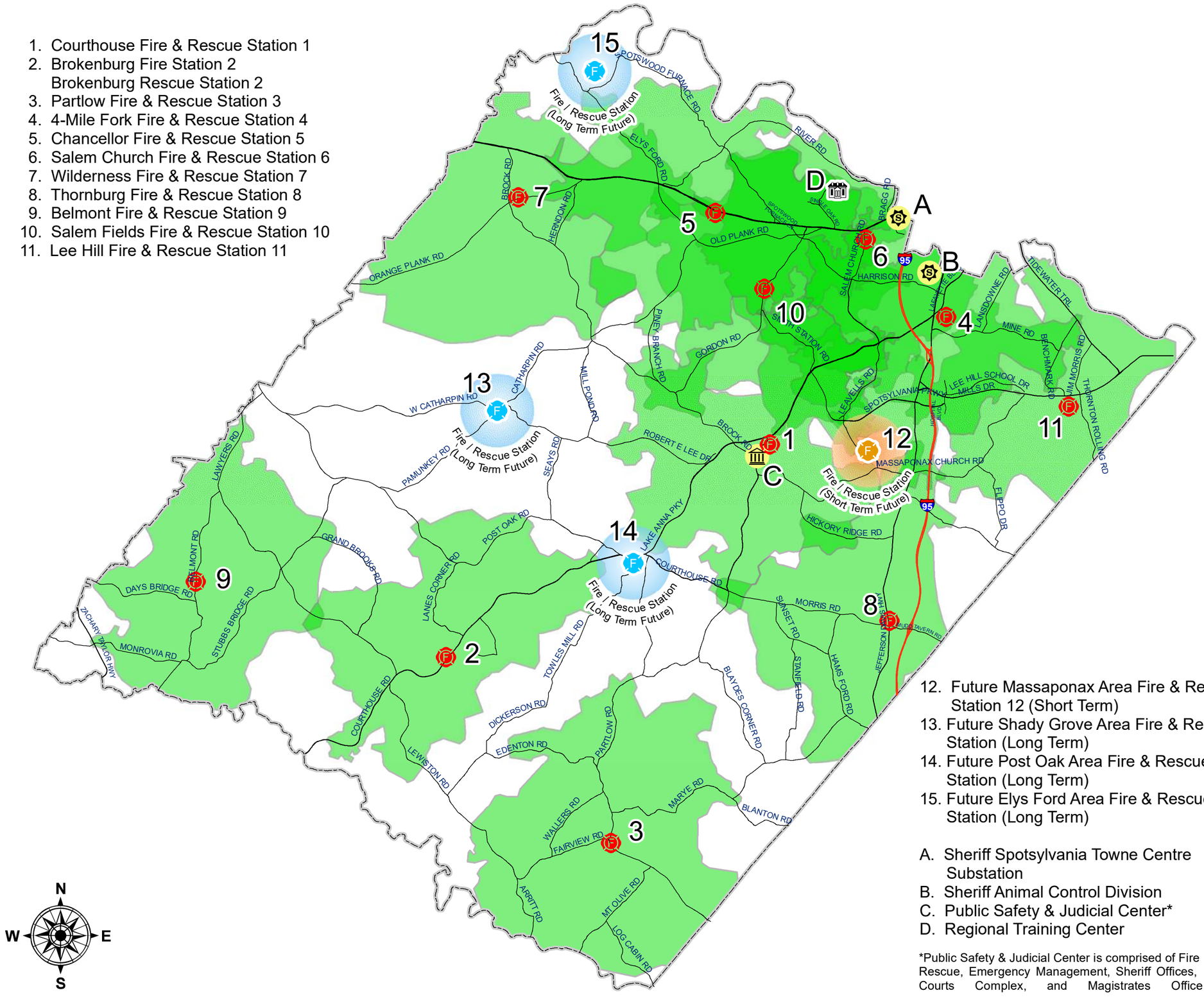
Existing Fire/Rescue Station^

^Symbology includes corresponding First Response Zones for each of the existing fire/rescue stations. The entire County has First Response Zone coverage.

0 1.25 2.5 5 Miles

Map Approved: December 14, 2021

1. Courthouse Fire & Rescue Station 1
2. Brokenburg Fire Station 2
   Brokenburg Rescue Station 2
3. Partlow Fire & Rescue Station 3
4. 4-Mile Fork Fire & Rescue Station 4
5. Chancellor Fire & Rescue Station 5
6. Salem Church Fire & Rescue Station 6
7. Wilderness Fire & Rescue Station 7
8. Thornburg Fire & Rescue Station 8
9. Belmont Fire & Rescue Station 9
10. Salem Fields Fire & Rescue Station 10
11. Lee Hill Fire & Rescue Station 11



12. Future Massaponax Area Fire & Rescue Station 12 (Short Term)
13. Future Shady Grove Area Fire & Rescue Station (Long Term)
14. Future Post Oak Area Fire & Rescue Station (Long Term)
15. Future Elys Ford Area Fire & Rescue Station (Long Term)

A. Sheriff Spotsylvania Towne Centre Substation
B. Sheriff Animal Control Division
C. Public Safety & Judicial Center*
D. Regional Training Center

*Public Safety & Judicial Center is comprised of Fire Rescue, Emergency Management, Sheriff Offices, Courts Complex, and Magistrates Office

Spotsylvania County Public Safety 5-Mile Response Map

Legend

Public Safety Buildings

- Fire / Rescue Station
- Fire / Rescue Station (Long Term Future)^
- Fire / Rescue Station (Short Term Future)^
- Sheriff Substation
- Safety & Judicial Center
- Training Center

Distance (Miles)

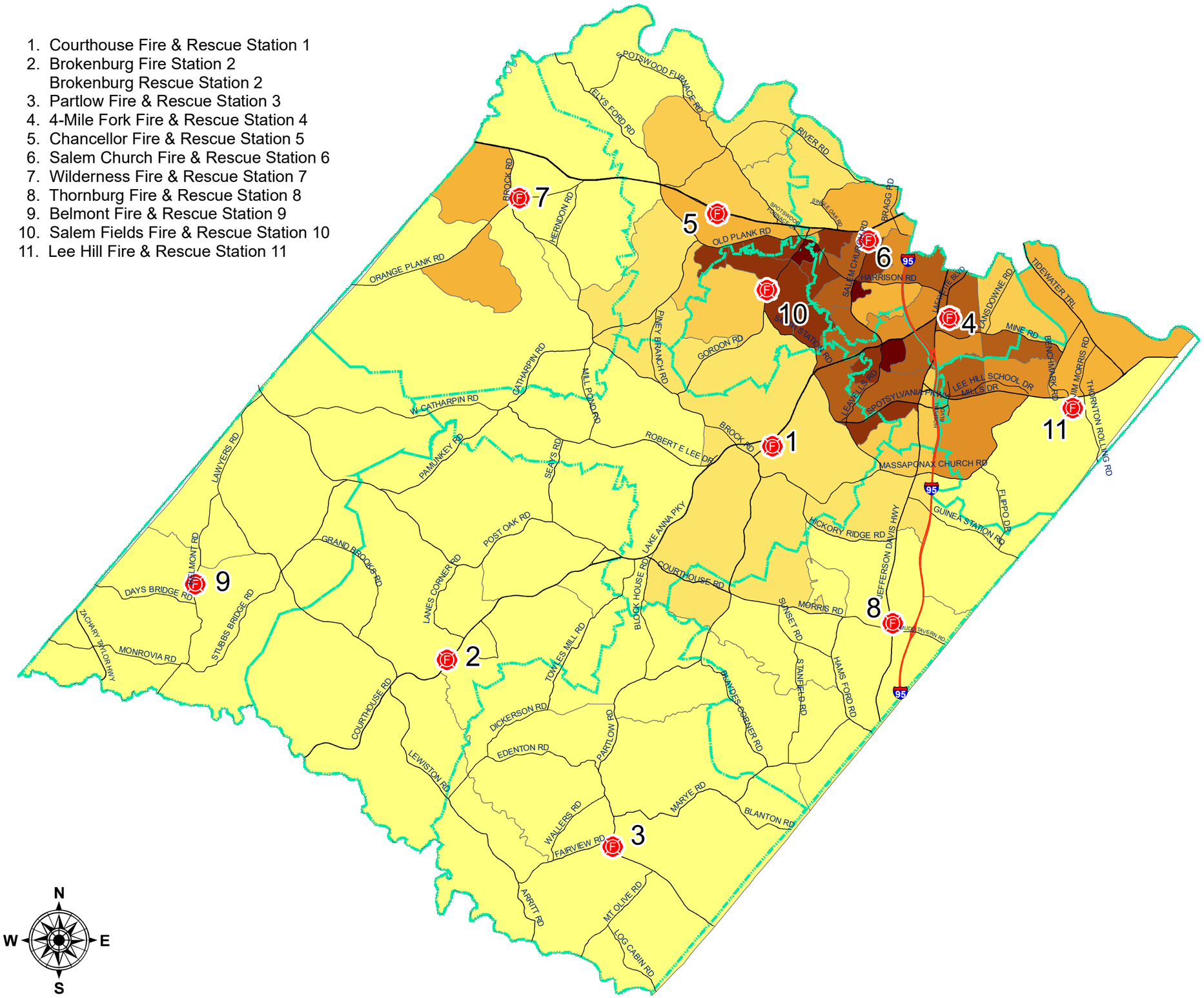
- 5-Mile Response Distance

^Symbology includes proximity/ area buffers. Locations symbolized for new stations are not intended to suggest a specific location at this time but rather represent a general area where a new station has been recommended.

0 1.25 2.5 5 Miles

Map Approved: December 14, 2021

1. Courthouse Fire & Rescue Station 1
2. Brokenburg Fire Station 2
   Brokenburg Rescue Station 2
3. Partlow Fire & Rescue Station 3
4. 4-Mile Fork Fire & Rescue Station 4
5. Chancellor Fire & Rescue Station 5
6. Salem Church Fire & Rescue Station 6
7. Wilderness Fire & Rescue Station 7
8. Thornburg Fire & Rescue Station 8
9. Belmont Fire & Rescue Station 9
10. Salem Fields Fire & Rescue Station 10
11. Lee Hill Fire & Rescue Station 11



2019 Estimated Block Group Population Density Relative To Existing Fire/Rescue First Response Zones

Legend

FREM Stations with First Response Zones

Existing Fire/Rescue Station^

2019 US Census Block Group Estimated Density (Persons per BG Acre)*

- 0.01 - 0.27
- 0.28 - 0.49
- 0.50 - 0.77
- 0.78 - 1.73
- 1.74 - 2.51
- 2.52 - 4.10
- 4.11 - 6.34
- 6.35 - 9.37

^Symbology includes corresponding First Response Zones for each of the existing fire/rescue stations.
*The Block Groups are provided by the US Census Bureau and supplemented with ESRI Total Population Estimates for 2019. Analysis conducted prior to County Boundary change with Orange County.

0 1.25 2.5 5 Miles

Map Approved: December 14, 2021

Chapter 4C

PUBLIC FACILITIES PLAN- SHERIFF

SHERIFF

Introduction

The Sheriff is a constitutional officer of the Commonwealth of Virginia and is elected by the voters of Spotsylvania County. The Sheriff provides law enforcement services to the citizens of the County, including the enforcement of all State and County criminal codes; serves civil and criminal papers; provides for the enforcement of all State and County animal codes and supervisors the operations of the County's animal shelter; and protects and maintains the security of the courts operating in the County.

There are five divisions within the Sheriff's Office that together, serve all law enforcement functions described above: Patrol Operations Division, Criminal Investigations Division, Courts Security/Civil Process Division, Administrative Services Division, and Animal Control Division. Some of the specialty functions within these divisions are the Street Crimes Unit, Crime Prevention Unit, Emergency Response Team, Bicycle Team, Canine Unit, Hostage Negotiation Team, Dive Team, Ground Search and Rescue Team, and Traffic Services Unit.

Emergency Communications is also part of the Sheriff's Office. The Emergency Communications division is a 24/7 operation that serves as the 911 answering point for calls for service and the dispatching of public safety services.

On December 3, 2011, a 58,000 square foot Public Safety Building located at 9119 Dean Ridings Lane was dedicated. The Sheriff's Office, 911 Dispatch Center, and the administrative offices of Fire, Rescue, and Emergency Management are located in the Public Safety Building. The building includes a forensics lab, bay for inspecting vehicles involved in crimes, a physical fitness facility, and an outdoor kennel for police and fire dogs.

Per FY 2022-'26 CIP project objectives, *since the building* (public safety) *was completed in 2011, public safety staffing and programs have expanded to the point of needing additional space, particularly for the Sheriff's office*. The County Finance office confirmed that the amount of added Sheriff's Office staffing since 2011 (FY 2012) is nearly 70 positions. Not all of those positions are based in the Public Safety Building. For example, nearly 20 Courts deputies have been added and those "reside" in the courts buildings. 14 School Resource Officers have been added and those "reside" in the Schools. Per communication with the County Sheriff's office the Public Safety Building has seen staffing increases since 2011 and expects there will be additional staffing needs with growth in the County. Per feedback from the Sheriff's office the Criminal Investigation Division and Administrative Services are already space constrained and additional square footage will also provide opportunity to expand the Emergency Operations Center (EOC) to benefit both the Sheriff's office and FREM. In addition to need for additional space for staffing there is a critical need for additional storage space at the facility that is now insufficient. Presently a two story addition is envisioned. As part of the project review and design process the County may like to consider a below grade addition that would add additional square footage and additional opportunity for growth and space planning. A sub-grade basement addition could add an additional 4,000 sq ft.

The public safety expansion is estimated to address current space needs as well as needs ten (10) to fifteen (15) years into the future.

The Sheriff's Office maintains one substation, located in the Spotsylvania Towne Centre, and the Animal Shelter, located at 450 TV Drive.

Level of Service Standards

1. Maintain a 1 : 1,500 ratio of Deputies per capita.

Facility Location and Design Criteria

The following criteria should be used in determining appropriate sites and design for additional or expanded Sheriff and Animal Control facilities.

- Provide new facilities to adequately and efficiently serve all areas of the county.
- Provide animal shelter facilities consistent with 2-VAC 5-110 Rules and Regulations Pertaining to a Pound or Enclosure to be Maintained by each County or City (http://www.vdacs.virginia.gov/animals/regulations.shtml)

Recommendations

The following are recommendations for the provision of adequate Sheriff and Animal Control facilities.

Short Term

- Expand Animal Shelter or partner with non-profit animal shelter(s) to provide the service.
- Expand the public safety building to meet existing space needs and those within the planning period.

Long Term

- Substation in Livingston District co-located with other public facilities.

Spotsylvania County Public Safety Existing Facilities

1. Courthouse Fire & Rescue Station 1
2. Brokenburg Fire Station 2
   Brokenburg Rescue Station 2
3. Partlow Fire & Rescue Station 3
4. 4-Mile Fork Fire & Rescue Station 4
5. Chancellor Fire & Rescue Station 5
6. Salem Church Fire & Rescue Station 6
7. Wilderness Fire & Rescue Station 7

8. Thornburg Fire & Rescue Station 8
9. Belmont Fire & Rescue Station 9
10. Salem Fields Fire & Rescue Station 10
11. Lee Hill Fire & Rescue Station 11

A. Sheriff Spotsylvania Towne Centre Substation
B. Sheriff Animal Control Division
C. Public Safety & Judicial Center*
D. Regional Training Center

*Public Safety & Judicial Center is comprised of Fire Rescue Emergency Management, Sheriff Offices, Courts Complex, and Magistrates Office

N W E S

Legend

Public Safety Buildings

- Fire / Rescue Station
- Sheriff Substation
- Public Safety & Judicial Center
- Training Center
- Primary Development Boundary

0 1.25 2.5 5 Miles

Map Approved: December 14, 2021

Chapter 4D

PUBLIC FACILITIES PLAN
SOLID WASTE COLLECTION & DISPOSAL

SOLID WASTE COLLECTION & DISPOSAL

Introduction

The Spotsylvania County Department of Public Works prepares a Solid Waste Management Plan every five years in accordance with the Virginia State Code. The Plan is an integral part of provision for solid waste services for Spotsylvania County and is incorporated as part of the Comprehensive Plan by reference. At the present time, the 2020 Solid Waste Management Plan is in effect. The next update is due in 2025. For planning purposes, the Comprehensive Plan incorporates by reference the latest version of the Solid Waste Management Plan. The Plan is based on a twenty (20) year planning period and deals with all aspects of solid waste management from operation of the landfill to the development of convenience sites to litter control efforts to the development of recycling and other educational programs. The objectives of this plan are to protect the health, safety and the welfare of the citizens of Spotsylvania by providing for and planning for the present and future solid waste disposal needs for the County. It is the intent of the County to provide these services as efficiently and economically as possible. The plan minimizes the amount of solid waste disposed of in the County's landfill by providing an integrated plan of recycling and education. This will serve to maximize the life span of the existing landfill and promote the effective and efficient use of limited natural resources. The information contained in this section is derived from that plan.

Existing Facilities

Spotsylvania County operates one landfill facility in the southern part of the County. Known as the Livingston Landfill, it is located north of State Route 602 and east of State Route 208 approximately 3 miles southeast of Brokenburg. The entire site covers approximately 538 acres, with 250 acres ultimately proposed for disposal of municipal solid waste. Future unknown variables, regulatory changes, efficiency improvements, increased recycling rates, population and waste generation changes over time all influence landfill lifecycle going forward beyond 2023. Though estimates vary, all agree additional phases will add over fifty (50) additional years to the landfill's estimated facility life beyond the Phase I closure.

Currently 85 acres are permitted for use as a landfill under the authority of the Virginia Department of Environmental Quality. This is designated as Phase 1 (cells 1 through 6). As per the 2020 Solid Waste Management Plan the estimated date of closure of Phase I is 2023. Of the 85 acres permitted as Phase 1, 55 acres will be actual disposal area with the remainder to be used for roads, drainage area, and buffers. The facility is designed with a capacity of 5.4 million cubic yards. This total includes 310,000 cubic yards of final cover (cap, cushion, and topsoil), 220,000 cubic yards of liner and drainage layers, 968,000 cubic yards of daily and intermediate cover and 3.87 million cubic yards of waste. The current waste stream five-year average (2015-2020) is 136,000 tons annually or 373 tons per day. This updated figure is up from 40,000 tons annually that had been reported as part of the 2013 Comprehensive Plan. As per the 2015 Spotsylvania County Solid Waste Management Plan in 2012/ 2013 a substantial increase was

observed due to an increase of commercial volume accepted at the Livingston Landfill. The County sourced commercial volume was previously leaving the County for private sector landfills in adjoining regions. Increased competitiveness due to more favorable tipping fees has been attributed to the shift of commercial haulers selecting the Livingston landfill over out of County sites. Commercial haulers/ users are defined as those customers delivering brush/leaves/landscape debris by means of mechanical dumping (dump trucks, box trucks, dump trailers) and vehicles clearly associated with a related commercial business (trucks with advertisements, trailers with multiple mowers, multiple site visits within 24 hours, etc). Solid Waste growth can also be attributed to an increase in economic activity and the landfill capturing the majority of any waste leaving the County. Solid Waste growth can also be attributed to an increase in economic activity and the landfill capturing the majority of any waste leaving the County.

Increased annual volumes inevitably impact the speed at which the landfill grows in relation to its ultimate capacity. However, increases in commercial tipping overall are viewed as beneficial in financial support of operations and offsetting costs associated with provision of Solid Waste Services. These increases also represent the County taking a larger share of solid waste management for solid waste generated within the County borders as opposed to its waste being exported out of the County.

The Solid Waste Division is actively looking at ways to add efficiencies and build additional capacity into existing operations including the Livingston Landfill whereby extending the viable life of such facilities while maintaining or improving upon levels of service. One example being considered during this planning period is the concept of landfill mining meant to increase the capacity and revitalize previously closed landfill cells.

Spotsylvania County maintains a comprehensive solid waste disposal program that includes the disposal of household, commercial, and industrial waste. The household component of the stream comprises approximately 90% of the waste that is placed in the landfill. The remainder consists of construction demolition and debris, and commercial and industrial waste (10%).

The Solid Waste Division, with the assistance of third-party consultants, is evaluating the landfill's existing gas extraction system and planning for potential opportunities to expand that system. The primary objective of the evaluation is to define best management practices for the future, and ensure that our existing system is operating, maintained, and monitored at an optimum level.

Currently, residents of the County are provided with 13 convenience sites located at various locations throughout the County. The sites have designated areas for household waste and recycling. Table 1 identifies the individual convenience sites.

Table 1
Spotsylvania County Convenience Sites

Convenience Site	Location
The Barn	2805 Lewiston Road
Belmont	7102 Belmont Road
Berkeley Public Use Area	6013 Stanfield Road
Chancellor Public Use Area	5917 Harrison Road
Chewning Park	13001 Post Oak Rd
Cole Hill Creek	5029 Partlow Road
Lee Hill	9904 Lee Hill Park Road
Livingston Landfill	6241 Massey Road
Marshall Park	7114 Massaponax Church Road
Mine Road	4010 Mine Road
Post Oak	10020 Post Oak Road
Todds Tavern	10653 Brock Road
Wilderness	10501 Orange Plank Road

More information regarding County convenience sites including: contact information; location; hours of operation; recycling items accepted can be found **HERE**.

Virginia mandates a recycling rate of 25%. In the most recent three years the County has achieved a recycling rate at a range of 28-36%. Single stream recycling containers are available at each convenience site. Single stream recycling includes mixed paper, plastics, cardboard, aluminum, and glass. In addition to single stream containers, the County also offers opportunities to recycle metal, used motor oil, antifreeze, batteries, appliances, latex paint, and brush and yard waste.

The County offers household hazard waste collection twice a year for residential disposal of chemicals, toxic wastes, or hazardous liquid materials. This collection effort is accomplished through third party contract services.

In accordance with the Biosolids Management Plan, Spotsylvania County adopted the composting process as the choice method to stabilize its biosolids. In 2001, the County committed to composting their biosolids, which also requires some materials from the mulching program. The composting facility is located at the Livingston Landfill and was expanded in 2010. The County composts 100% of biosolids produced and maintains 100% diversion of all wood waste out of the landfill. Tree trimmings, logs and brush are collected and periodically ground to provide the bulking agent required for the composting program. In 2003, the compost was registered with the United States Compost Seal of Testing Assurance Program. This program certifies through rigorous testing that the product not only achieves class A criteria according to the US EPA Part 503 regulations, but that it meets growing standards of quality for attributes such as particle size, stability, and soluble salt content to name a few. In that same year, the product was registered as a fertilizer with the Virginia Department of Agriculture. The compost

was later trademarked as Livingston's Blend and marketed/distributed with information regarding proper applications. The County was awarded the 2012 Gold Winner Solid Waste Association of North America Composting Division. Details of the award and Spotsylvania's composting operations can be found **HERE**.

Future Expectations

The County Code specifies that only waste that is both discarded and collected within the County limits may be disposed of at the County's Livingston landfill. This helps regulate the inflow of material and also helps plan for future landfill growth, as we can review trends of incoming material compared with population growth and development specific to Spotsylvania County. However, the County Code does not require commercial haulers doing business within the County to dispose of their collected waste at Livingston landfill, rather the Code specifies Livingston's tipping fees for commercial disposal. The dynamic of these two codes have balanced the waste steam at Livingston in years past.

Continued growth in the County whether it is commercial, industrial or residential will put additional pressure on the existing landfill and the convenience sites. The sequence of development for the Livingston Landfill currently includes five phases. The County has active permits for Phase I and has applied to the Department of Environmental Quality for permits to develop Phase II. Provided the waste stream grows at a similar rate as the population projections, phases I & II have the capacity to provide sanitary landfill services to the County until approximately 2047. Phases III, IV, and V are conceptual phases that identify potential landfill development on approximately 196 acres of County property. Estimated landfill capacity is subject to change with changes in County policy and code.

The Phase II development was initiated in 2018 with a landfill expansion conceptual evaluation. Many considerations were reviewed as part of the conceptual evaluation including: the property's wetlands and environmental setback requirements, the geographic location of existing landfill cells and opportunities to improve existing conditions while maximizing future capacity, expansion sequencing, cell development costs, cell volumes and cell life, and cost efficiency. As the design of phase II developed, project elements such as roads and disposal cells were modified to minimize direct impacts to wetlands and streams. Project elements were also designed to meet all Virginia Department of Environmental Quality siting criteria. The phase II lateral expansion of the landfill facility encompasses approximately 37 acres and consists of four waste disposal cells. The expansion provides for approximately 5,370,000 cubic yards of landfill capacity (not including liner and cap), which is equivalent to 3,423,000 tons of waste. Assuming a consistent and constant waste stream, the phase II expansion will provide approximately 24 years of life expectancy.

Environmental stewardship is a long-term strategic goal of the County. As part of the phase II development, the County intends to mine a portion of a disposal cell that stopped accepting waste in 1993. A portion of the closed cell, referred to as permit #99, does not have a geosynthetic membrane liner. The County intends to mine the unprotected buried waste area so

that a membrane liner may be installed and tied into the existing liners of adjacent cells. As a result of this solid waste management strategy, all buried waste at the Livingston property will be protected by a double geosynthetic membrane lining system which will provide long term protection of the groundwater system, minimizing environmental impacts and needs of long term corrective action planning.

Location Criteria

The existing Livingston landfill property has the acreage to provide sanitary landfill capacity throughout the 21st century and thus will not need replacement or relocation during this Comprehensive Plan horizon. Convenience sites should be located according to the following criteria.

- A 5-mile radius level of service standard should be maintained. This means that a convenience site's population should be within 5 miles of the site. Current geographical spacing of the County's convenience sites complements the 5-mile service area goals with coverage for the majority of County land and residents presently. Small service area gaps outside of the 5-mile service area exist in the northwest corner of the County near Spotswood Furnace Road; at Lake Anna near the Route 208 corridor and bridge crossing; Smith Road. Overall, these are not major population centers, and, in all instances, the additional mileage is less than 1 mile.
- Convenience sites should not be located on arterial or major collector roads.
- Preference should be given for joint use sites such as with fire/rescue station, parks, and other public facilities.
- The entrance to a convenience site should be readily accessible to the large vehicles required to service them.
- Adjoining land use (current and future) should be considered.
- Individual site use trends and traffic counts should be evaluated when determining new or expanded sites.

Design Criteria

- Convenience sites should be a minimum of two acres in area in order to accommodate parking, stacking and staging areas as well as the waste collection facilities. The sites should be of adequate size to expand if necessary.
- Sites should be located in areas that will allow for adequate screening of the facilities from adjacent land uses. Mitigation measures for the site's impact on adjacent properties should be addressed in the design of the site.
- Site should be planned to accommodate expansion, including site area, entrance design, road improvements, etc.

Recommendations

The following are recommendations for solid waste planning:

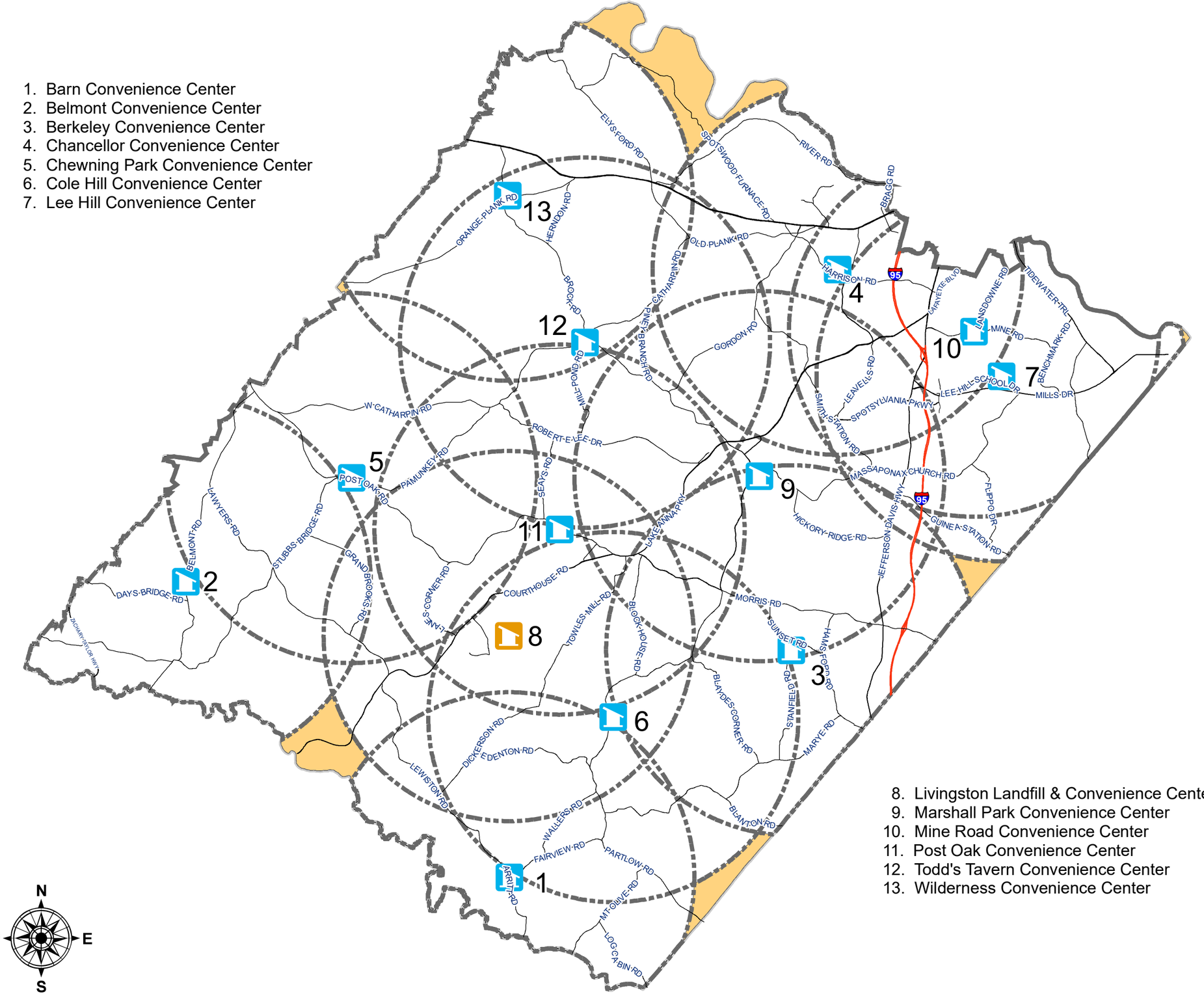
Short term

- Implement a County decal program that will enable solid waste staff to effectively identify residents of Spotsylvania County using convenience sites for residential use.
- Adopt a policy that restricts commercial disposal to a select number of disposal sites.
- Update tipping fees and disposal of select items with current market rates.
- Evaluate strategies to make brush and yard waste recycling operations sustainable, in cooperation with the County's composting facility.
- Continue to implement goals of the latest Solid Waste Management Plan that is incorporated by reference within the Comprehensive Plan.
- Consider one site to include the County's Public Works Center for collection, fleet, recycle processing, material transfer, and mulching.
- Continuously review and reference the Solid Waste Management Plan consistent with the Code of Virginia.
- Update applicable Chapters of the Comprehensive Plan upon completion of updates to the Solid Waste Management Plan update considering any future needs, opportunities, or recommendations that apply.

Long term

- Monitor recycling industry trends and markets on an international and national level.
- Update educational recycling programs as the industry grows and changes and continue to build partnerships with commercial recycling businesses.
- Continue developing sustainable solutions for bio solids, yard waste and brush recycling.
- Evaluate the benefits of managing the solid waste division as an enterprise fund.
- Evaluate the benefits of purchasing additional properties adjacent to the County's existing property. Additional property with sanitary landfill potential and value may provide long term solid waste management benefits to the County.

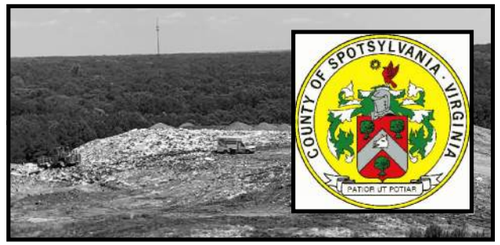
1. Barn Convenience Center
2. Belmont Convenience Center
3. Berkeley Convenience Center
4. Chancellor Convenience Center
5. Chewning Park Convenience Center
6. Cole Hill Convenience Center
7. Lee Hill Convenience Center



8. Livingston Landfill & Convenience Center
9. Marshall Park Convenience Center
10. Mine Road Convenience Center
11. Post Oak Convenience Center
12. Todd's Tavern Convenience Center
13. Wilderness Convenience Center

N
W E
S

Spotsylvania County Solid Waste 5-Mile Service Areas



Legend

Solid Waste Collection Centers

Items Accepted

- Household Trash Only
- Household, Commercial, Constr., Demo.
- 5 Mile Service Areas
- Located Beyond 5-Mile Service Area

0 1.25 2.5 5 Miles

Map Approved: December 14, 2021

Chapter 4E

PUBLIC FACILITIES PLAN- WATER AND SEWER

WATER AND SEWER FACILITIES

Introduction

The latest approved version of the County Water and Sewer Master Plan is incorporated by reference into the Comprehensive Plan. It identifies short and long range improvements required to meet development guidelines as established by the Comprehensive Plan. As the County grows additional demand will be placed on water/sewer existing infrastructure and County water resources. It is an axiom of planning that development follows water and sewer lines, as well as roads. When these facilities are upgraded in response to growth pressures, their improvement can stimulate further development. That development will increase demands on schools, recreation programs, emergency services, and other services in a continuing cycle of growth, demand, service provision, and more growth. Ensuring that the provision of community facilities and public services is phased with demand is a major aim of any Comprehensive Planning process.

One of the most effective tools for directing the timing and location of growth is the establishment of a Primary Development Boundary to define the area within which public utilities will be provided. Utility services will not be provided by the County outside of the Primary Development Boundary, where development is discouraged. Per the Future Land Use Element of the Comprehensive Plan, areas located outside of the County Primary Development Boundary are overwhelmingly designated for rural residential and agriculture and forestal land uses. With lack of public water and sewer availability in these areas, water and sewer availability comes via private well and septic systems serving individual lots. Private utility services particularly for residential uses meant to serve collections of residences outside of the Primary Development Boundary are discouraged. The threat of systems failures (such as mass drainfields), insufficient funding, management, or maintenance poses risk for service supported residents reliant on such services and the County utilities department who may have few options but to take over management and maintenance functions in areas not intended for County utility service. By establishing a Primary Development Boundary, the County will encourage more efficient use of the land while preserving the rural character of those portions of the County outside the boundary. The Primary Development Boundary is depicted in the Primary Development Boundary Map, embedded within the Public Facilities Water and Sewer Facilities, and in the Future Land Use Map, located in Chapter 2. This boundary is not permanent and can be adjusted through the Comprehensive Plan amendment process when conditions warrant.

Existing Water Service

The Spotsylvania County water system, serves more than 32,000 customers with drinking water in the County and provides bulk finished water to the City of Fredericksburg. The distribution system consists of multiple pressure zones that are supplied by seven storage tanks, two water treatment facilities and three reservoirs.

The Spotsylvania County water system consists of the following principal features:

Ni Reservoir

The Ni Reservoir, the raw water supply to the adjacent Ni Water Treatment Plant, was constructed in 1974 and the reservoir has a volume of 1.4 billion gallons with a surface area of approximately 420 acres.

Ni Water Treatment Plant

The Ni WTP was constructed in 1974 expanded to its current peak capacity of 6.0 mgd.

Motts Run Reservoir

The Motts Run Reservoir was built in 1969 and is owned by the City of Fredericksburg, but is jointly operated by the City of Fredericksburg and Spotsylvania County. The total reservoir volume, prior to modifications, is 1.3 billion gallons with a surface area of 160 acres.

Motts Run Water Treatment Plant and Intake on the Rappahannock River

The Motts Run WTP serves Spotsylvania County and the City of Fredericksburg. The Motts Run water treatment facility and Rappahannock River raw water pumping station were completed in the spring of 2000. The plant currently has a firm capacity of approximately 12.5 mdg and a limited summer peak capacity of 15 mgd. The plant is expandable to 24 mgd.

Hunting Run Side-Stream Storage Reservoir and Intake on the Rapidan River

The Hunting Run water supply dam and side-stream reservoir was completed in November of 2002. The reservoir volume is 209 billion gallons and the surface area is approximately 420 acres. Water is released into the Rapidan River to supplement the Rappahannock River during periods of low flow to allow continued river intake for the Motts Run WTP.

Existing Sewer Service

Spotsylvania County sewerage system consists of the following principal features:

Massaponax Wastewater Treatment Plant

The Massaponax WWTP was constructed in 1975 and has been expanded to 9.4-mgd (million gallons per day) capacity. The plant is a state of the art biological nutrient removal facility. The wastewater treatment plant serves the Massaponax Creek drainage basin and includes the pump-over from the American Central sewage collection system and a small part of the upper Hazel Run drainage basin which is also pumped into the Massaponax Creek basin. Facilities are in place to enable sewage from the Deep Run drainage basin to be pumped to the Massaponax Creek drainage basin. Deep Run wastewater may also be treated at the FMC WWTP. Construction has been completed for the Courthouse Area Sewage Pumping Station that conveys sewage from the Courthouse Area to the Massaponax Creek interceptor.

FMC Wastewater Treatment Plant

The original FMC industrial WWTP began operation in 1967 and purchased by the County in 1980 and upgraded to 4-mgd capacity. Sewage from the City of Fredericksburg is treated at this plant.

Thornburg Wastewater Treatment Plant

The Thornburg WWTP was constructed in 1972 and has been expanded to a 345,000-gpd capacity.

Sewers and Interceptors

The sewer system is broken into collection sewers and four major interceptors. The interceptors are defined by the drainage basins that they serve: Massaponax Creek, Hazel Run, Deep Run, and Long Branch (which is a part of the Hazel Run drainage basin).

All Spotsylvania County sewers and interceptors have been mapped on the County GIS system.

GOALS, POLICIES, AND STRATEGIES

Goal: Within the Primary Development Boundary, provide a sufficient supply of high quality drinking water and a distribution system to serve the domestic, recreational, industrial, commercial, and fire protection needs of the community at the most economical price possible.

Policy: Supplement the existing supply of potable water and fire flow for Spotsylvania County citizens.

Strategies

1. Utilize the Water and Sewer Master Plan to develop a comprehensive approach for the development of new and/or additional water sources.
2. Utilize the Water and Sewer Master Plan to develop a Capital Improvement Program so as to phase water supply and fire flow improvements for designated County growth areas in a timely and cost effective manner.
    a. A project to construct a 1 MG elevated water storage tank and all attendant facilities and structures serving the tank including, but not limited to, utilities and roads, near Massaponax High School, and, if technically possible, to be located on Massaponax High School's property as that location is ideal to provide the best water service in the most cost efficient manner and will have the least impact on surrounding properties and/or environmental and/or historic resources of significance. This tank will provide additional storage volume to the County's distribution system, increase available fire flow rates to the Route 1 corridor and Thornburg areas, and help to support the anticipated water demand from future development in the Thornburg area. The tank may also allow for the colocation of telecommunications facilities to further support

the communication and broadband needs of County citizens. Construction for this project is planned to start in calendar year 2022.

3. Continue to promote a Water Conservation Program throughout the County and protect the County's surface and groundwater supplies for the benefit of all.
4. Provide for a cost sharing program with developers to fund water improvements.

Goal: Provide for the adequacy of all new and existing sewage treatment that meets the needs of the community in an environmentally safe manner and only in targeted growth areas of the County.

Policy: Locate new or upgraded sewer facilities consistent with the Water and Sewer Master Plan to support orderly and efficient development.

Strategies

1. Update and utilize the Water and Sewer Master Plan to provide a phased, prioritized program for the extension of the County sewer system to identified development districts.
2. Utilize the Water and Sewer Master Plan to develop a Capital Improvement Program to phase sewer treatment improvements for designated County growth areas in a timely and cost effective manner.
3. Continue to provide for a cost sharing program with developers to fund sewer improvements.
4. Eliminate and consolidate individual pump stations through the provision of regional pump stations or gravity sewer extensions.

Goal: Support capacity and efficiency enhancements to continue to provide quality service within a growing community.

Policy: Invest infrastructure enhancements in areas intended for growth, and strategically locate new facilities to the betterment of operations and customer service.

Strategies

1. Focus infrastructure expansion and enhancements to the Primary Development Boundary.
2. Discourage and avoid potential cost, maintenance, and management risks associated with private utility systems intended to serve collections of residential users with mass drainfields, etc. located outside of the Primary Development Boundary.
3. Seek to co-locate the County Utilities and Public Works group to a recently acquired parcel located along Gordon Road (TM 21-A-84,) through construction of a modern new facility with adequate facilities to meet the needs to service a growing customer base.
    a. Explore opportunities to co-locate additional public facilities onsite, including a potential park site on remaining acreage.

Chapter 4F

PUBLIC FACILITIES PLAN
LIBRARY FACILITIES

LIBRARY FACILITIES

Introduction

The Central Rappahannock Regional Library (CRRL) is a regional public library system serving the City of Fredericksburg and the Counties of Spotsylvania, Stafford, and Westmoreland. It is governed by a seven-member Board of Trustees appointed by the participating jurisdictions. The regional library was established in 1969 by the Commonwealth of Virginia as a model system to demonstrate the value of regional resource sharing between cooperating jurisdictions.

The CRRL system consists of a Library Administration Center and nine (9) branches as well as an Access Services location, IdeaSpace in downtown Fredericksburg, and a joint-use facility at Germanna Community College's Barbara J. Fried Center in Stafford County, all connected by daily courier service. The library offers an extensive regional collection of physical and electronic materials as well as wide-ranging databases. The Fredericksburg branch in downtown Fredericksburg houses special collections including Virginiana (historical and family research) and a Law Library. Access Services, adjacent to the Library Administration Center on Lafayette Boulevard, offers a Talking Book Library, free reading materials, and devices for the visually impaired or has language processing issues provided through a federally supported program. IdeaSpace, located on Princess Anne Street, is a stand-alone makerspace offering state-of-the-art technologies such as a soundbooth for audio/video recording, 3D printers, and drawing tablets. Library on the Go, CRRL's outreach program, provides library services to communities and facilities with limited access to library branches. Library on the Go includes two (2) satellite centers in rural locations in Spotsylvania County with internet access and wireless printing, mobile Grow a Reader outreach to area preschools, Head Start programs, and Lobby Stop service to local assisted living and senior apartments. All administrative functions of CRRL are centralized at the Library Administration Center including collection services, accounting, human resources, graphics, and network services.

Existing Facilities

Three (3) CRRL branches are located in Spotsylvania County. The Salem Church branch, on Salem Church Road, was first opened in 1994; the facility was expanded and renovated in 2009. The C. Melvin Snow branch in the Spotsylvania County courthouse area opened in 1998, and the County's most recent library facility, the Spotsylvania Towne Centre branch, opened in August 2018. The County also has two (2) satellite locations, one (1) each in the Livingston and Berkeley districts that operate on a limited schedule.

Table 1 below lists the existing permanent library facilities directly serving Spotsylvania County and their capacities in terms of overall floor space together with the current total of materials at each branch, as well as the system holdings available to Spotsylvania residents.

Table 1
Spotsylvania County Library Resources

Branch	Gross Sq. Ft. of Floor Space	Total Books / Materials
Salem Church Branch	25,000	95,523
Snow Branch (Spotsylvania Courthouse)	5,000	31,473
Spotsylvania Towne Centre Branch	2,100	6,049
Spotsylvania Physical Collection Subtotal	**32,100**	**133,045**
Fredericksburg Branch* (Central)	12,300	30,994
Regional Physical Collection Subtotal	**44,400**	**164,039**
Digital Collection**		38,394
Regional Collection (Physical and Electronic)	**44,400 (.3 sq ft/capita)**	**202,433**

*The Fredericksburg Branch facility, used jointly by residents in the City of Fredericksburg, Stafford, and Spotsylvania Counties is 36,900 sq. ft. For purposes of space analysis, 12,300 sq. ft. is attributed to the total square footage of each jurisdiction.

**The Digital Collection, used jointly by residents in the City of Fredericksburg, Stafford, and Spotsylvania Counties consists of 115,183 materials. For purposes of collection analysis, one-third of that collection or 38,394 materials are attributed to Total Books and Materials.

Standards

Spotsylvania County residents benefit from participation in a regional library system and as such, can access the collections and databases, resources, staff expertise, and technologies of a much larger library. CRRL has been recognized nationally as a Star Library by the Library Journal Index of Public Library Service for ten (10) years based on physical materials circulation, electronic materials circulation, branch visits, program attendance, and public computer use.

Planning for Library Excellence: Standards for Virginia Public Libraries (PFLE) are the recommended standards for public libraries approved and adopted by the Library of Virginia Board. PFLE, updated in 2019, has established the following service ratings: essential, enhanced and exemplary, accompanied by a corresponding star rating for ease of use and advocacy.

> E = "Essential" services meeting the basic needs and expectations of a public library, including circulation, internet access, and basic reference assistance, as mandated in the Code of Virginia. ★
> EE = "Enhanced" services, providing a robust array of services beyond basic needs and expectations, such as community programming for all ages, a responsive digital environment, and specific research assistance. ★★
> EEE = "Exemplary" services with advanced features in service provision on all fronts. ★★★

PFLE 2019 service ratings are simultaneously cumulative, progressive and aspirational. For example, to attain an E ★ rating, a library will meet ALL criteria but may surpass some E ★ requirements. Wherever possible, the measures are progressive and aspirational, as a library system purposefully and strategically sets its sights on the next rating, as community need and funding dictates. CRRL strives and plans for a minimum EE rating in the core adopted standards listed below; CRRL currently meets the rating for Collections. The EE ★★ rating requirements are included below.

Level of Service Standards

Collections

High-quality collections are carefully built over time. A successful collection supports the services the library provides and helps the library meet its defined goals. Collection development also takes into account other library and information resources in the community, the region, and the state. Weeding outdated, unused, and inaccurate materials is part of the collection development process.

A successful collection embodies the principle of free access to ideas on all sides of an issue, including potentially controversial topics. The size and format mix of a successful collection is unique to each community, considering factors such as broadband access, population and square mileage served, facility square footage, annual budget, circulation, etc. Those responsible for collections should develop a strategy to determine their own community needs.

CRRL's Collections Level: EE ★★

★★ 1: The library complies with all standards of Level E.

★★ 2: The library provides digital resources to supplement those made available by the Library of Virginia, as meets the needs of its communities.

★★ 3: The library has a preservation policy, if it holds special collections, including local history.

★★ 4: At least every three years, the library evaluates its collection to determine strengths and weaknesses, allocating resources to address the identified weaknesses.

Facilities - Size and Location

A public library building should offer the community a compelling invitation to enter. The building design should be adaptable to changing use patterns. The building should accommodate public use, support staff efficiency, and encourage economy. It must comply with the latest regulations of the Americans with Disabilities Act and all local and state requirements for public buildings. Please note that the square footages indicated are TOTAL square footages for the population and may be spread among branches. For example, a four-branch library system might determine their square footage based on voting district populations or other municipality divisions to determine appropriate square footage for an individual branch. As a general guideline, libraries should strive to meet the below recommendation but library size should be determined by a space/needs analysis for that community.

CRRL currently offers Spotsylvania County residents .3 square feet per capita of physical facility space; the minimum threshold to meet EE★★ is .7 square feet per capita.

Service Level	Population Served (Spotsylvania County)	Total Gross Square Feet per Capita
EE★★	100,001 - 500,000	.7 SF

CRRL's Facilities Level: E ★
Goal Facilities Level: EE ★★
★★ 1: The library complies with all standards of Level E.
★★ 2: The building promotes energy efficiency, usage of natural daylight, waste reduction, and improvement of air quality.
★★ 3: When possible, newly constructed and renovated library facilities are the "green" or sustainable facilities, constructed with ecologically sound materials.
★★ 4: Library facilities are located:

- in urban areas, no more than 15 minutes' driving time from residents as an average of multiple travel time studies from a) the edges of the service area to the nearest available library and b) between available libraries.
- in rural areas, no more than 20 minutes' driving time from residents.
- where possible, on a public transportation route.

Recommendations and Future Needs

Although use of electronic materials has increased, there remains a strong need for fixed library facilities. CRRL customers continue to demand physical materials, quality age-level programming, public computers, and group meeting spaces therefore the standards adopted by the Library of Virginia Board and CRRL Board of Trustees remain applicable. Residential expansion in the Massaponax area has created a need for a fourth County branch as residents in that area must travel to the Spotsylvania Courthouse, downtown Fredericksburg, or Route 3 for library services. Those three (3) locations are all 8-10 miles from Massaponax with a drive of 15 - 20 minutes.

Presently, residents of the Livingston and Berkeley District can access library services including computers with wireless internet, wireless printing, and homework help from satellite locations in those communities one evening a week. However, small library branches similar to the Snow branch should be considered in future planning so those residents will have access to the full range of library services.

Chapter 4G

PUBLIC FACILITIES PLAN- PARKS AND RECREATION

PARKS AND RECREATION FACILITIES

Introduction

The Parks and Recreation Facilities Plan (The Plan) combines leisure and recreational objectives with the suitable locations necessary to provide a broad-based recreation and open space programs. Parks and recreation facilities provide visual relief from concrete and pavement, make surroundings more habitable, and preserve and protect natural and historical resources. These facilities provide varying recreational opportunities for people of all ages, income levels, ethnic groups and physical abilities. As Spotsylvania County continues to grow, the significance of parks and recreation planning, including land acquisition and development increases. This Chapter provides detailed standards, criteria and policies for provision of recreation facilities.

The County's Department of Parks and Recreation (The Department) is responsible for maintaining all County operated parks and community centers. The Parks and Recreation Department is responsible for youth and adult sports and facilities within the County. The Department is responsible for planning, implementing, and evaluating sports programs. This includes volunteer coach recruitment and background checks; contracting and scheduling officials; facility scheduling; maintenance, requisitioning, inventory, and distribution of equipment for each sport; supervision of sport activities; advertisement of program offering; certification of youth coaches; scheduling regular season play and tournaments; and scheduling field use for private groups. A summary of Fiscal Year 2018 Field/ Gym Rentals through the Department has been provided for reference below (See Table 1):

Table 1: Fiscal Year '18 Spotsylvania Parks and Recreation Field and Gym Reservation through the Department*

Sport	Games	Practices	TOTAL
Football	31	95	126
Basketball	65	217	282
Soccer	344	274	618
Baseball/ Softball	1,630	2,365	3,995
Total	2,070	2,951	**5,021**
*FY '18 rental activities include school fields and gyms.			

This data can be updated to track Parks and Recreation field/gym rentals activities over time. Due to the Covid outbreak there was a significant downturn in activities during months that are typically of heaviest use for sports facilities. Covid significantly impacted fiscal year 2020 resulting in a-typical results during that time. As of now the impacts of Covid are not expected

to be suggestive of a long term trend. Continued monitor of field activities going forward will help establish clearer trend lines for demand.

Due to the popularity of organized sports teams, the Department has identified a need for additional playing and practice fields. Future park development in the County will be aimed at meeting these, and other identified level of service-based needs.

The Department is responsible for training, directing, and supervising approximately 175 full-time, part-time, and seasonal employees and over 2,794 volunteers. The parks maintenance staff manages and maintains parks, recreational areas and facilities to assure safe, healthy, and attractive passive and active leisure activities. The staff also prepares school and other athletic fields for recreation and sports programs.

The Department continues to strengthen its cooperative relationship with the school system in the design, development, use, and maintenance of school recreational facilities. This relationship is critical in the overall delivery of parks and recreation facilities County-wide and includes recreational land of 92 acres at elementary schools, approximately 57 acres at middle schools and 31 acres at the high school level. Elementary and middle schools make up the majority of the school recreation space consistently available for after school community use. High school use is limited dependent upon the time of year and amenity. 8 acres are also available at John J. Wright Educational and Cultural Center.

For more information about the County Parks and Recreation Department including facilities, activities, and programs, the Department publishes an annual report that can be found **HERE**.

Existing Facilities

In order to achieve the long range goals of the Department, it is necessary to review the inventory of current parklands and facilities to determine acceptable level of service standards and to then establish a strategic plan for the identification of new facilities as the County grows.

In 2020, 535.5 acres of accessible County parkland is operated by the Department. The County also owns a future District Park size 65-acre site known as the Hilldrup Tract that is not presently developed or accessible as a usable park. Within the planning period, staff expects additional public access parks acreage to be made accessible at Keswick Park (36 Acres Community Park site and amenities) and the Fortunes Landing fifteen (15) acre Special Use Park fronting the Ni Reservoir. These new park acres, when activated, will add an additional 131 acres to the inventory for a total parkland inventory of 651.5 acres.

Additionally, it is estimated that there are approximately 188 acres of School Board shared use recreational space that is programmed by the Department for community use at elementary, middle, and high school sites. This figure also includes the John J Wright Educational and Cultural Center.

The Department also operates the County's community centers. These centers, in addition to the available spaces within the County libraries, offer a valuable resource to the County population in the provision of events and meeting space. It is important that provision of these spaces continue to serve the variety of needs of County residents.

As a complement to County Parks managed facilities, Spotsylvania County is fortunate to have the Fredericksburg and Spotsylvania National Battlefield Parks encompassing 5,800 acres within the County to serve some of the passive recreation needs. Lake Anna, a 13,000-acre man-made lake, is one of Spotsylvania's most valuable recreational resources. Water skiing, boating and swimming attracts thousands of visitors to its shores. Anglers can take advantage of the more than 33 species of fish found in its stocked waters. Lake Anna State Park with its 2,810 acres is a focal point of Lake Anna. More than 9,900 acres of the County's current land uses are public parklands. The State and Federal parks, however, are not controlled by the County and their missions and offerings are not identical to those of the County's and, therefore, cannot provide some of the recreational opportunities sought by residents.

Activation Type

Parks may have distinctly different intended uses and character. Park activation for different user groups tends to be identified as either for passive recreation (passive parks) or active recreation (active parks). Some parks may have a combination of both active and passive offerings. The character of active and passive parks is summarized below:

Passive Parks

A passive park is an outdoor area, or portion of an outdoor area that is used for passive recreational activities, such as pedestrian activities, hiking, and jogging, or serves as an historical, cultural, ecological, or archeological attraction for exploration, education, interpretation. A passive park does not include organized competitive activities, except events for uses allowable within a passive park. Generally, a passive park is maintained in a natural state, except for minimal clearing for paths, trails, sitting area, walkways or auxiliary structures. In urban settings, passive parks may have more hardscape (walking paths, sitting walls, etc.), open lawn, and landscaped areas that may be used for informal group activities. Examples of passive park features may include: trails or walkways for hiking, walking, horseback riding, bicycling; informal areas used for concerts, areas for photography, nature studies, educational studies, or fishing; ecological areas and nature interpretive programs; nature centers; ornamental gardens or landscapes; historical markers, public arts installations or civic monuments; scenic overlooks; and picnic areas that may include but are not limited to shelters, grilling areas , and restrooms.

Active Parks

An active park refers to any outdoor area that includes the following facilities or facility types: athletic fields; sports complexes, buildings or structures for recreational activities; concessions; community gardens; courses or courts; ball fields; children's play area, dog play area, swimming area, or a bike path. Active parks may allow for uses such as organized team sports; or serve as a cultural, historical or archeological attraction that is open to the public.

Classification

There are six main classifications of parks located within the County, including District Parks, Community Parks, Special Use Parks (incl. Trails/ Linear Parks), County Schools shared use recreational space, Neighborhood Parks, and Other Parks (ex. State & National Parks). These classifications have been described and inventoried below (Table 2):

Table 2: Existing Public Park & Recreation Areas

Park	Classification	Active	Passive	Total Acres
Hilldrup (Tract)* - *presently undeveloped*	District Park	-	-	65*
Loriella Park	District Park	61	147	208
Patriot Park	District Park	40	91	131
Keswick Park*	Community Park	-	-	36*
Arritt Park	Community Park	14	12.5	26.5
Chewning Park	Community Park	7.5	2.5	10
Cosner Park	Community Park	9	2	11
Harrison Road Park	Community Park	10	12	22
Lee Hill Park	Community Park	6.5	13.5	20
Legion Fields/Marshall Center	Community Park	22	2	24
Marshall Park	Community Park	14	11	25
Mary Lee Carter Park	Community Park	4.0	0.5	4.5
Hunting Run Recreation Area	Special Use Park	20	0	20
Ni River Recreation Area	Special Use Park	1	4	5
Belmont Park	Special Use Park	0	23	23
Fortunes Landing*	Special Use Park	-	-	15*
Virginia Central Trail	Trails/ Linear Parks	2	3.5	5.5
TOTAL COUNTY PARK ACREAGE		217.5	324.5	535.5*

*Keswick, Fortune's Landing and Hilldrup not included in Total Acres calculation. Keswick and Fortune's Landing Parks are expected within the planning period but have not yet been completed or open for public access as of Comprehensive Plan adoption. The Hilldrup Tract is the site of a future but not yet open public park site. When developed and accessible, Total Acres will be 651.5.

District Parks

District Parks are large parks usually greater than fifty acres in size. They contain the most extensive facilities of the County parks system. These types of parks tend to be the most popular of County Parks and Recreation managed parks due to their size, location, and ability to attract organized recreational activities such as league sports, and abundance of recreational facilities. District Parks are generally located in urbanized areas and offer a variety of facilities such as: swimming pools, amphitheaters and recreation centers. District Parks serve a larger area of the County and offer facilities that people are willing to travel further to use. The service area for a District Park is usually within a twenty-minute drive or about six to twelve miles, depending on the urbanization of the area. District Parks should be located near major collector roads in order to provide greater access to them. The park should also be accessible by pedestrians and bicycles. Spotsylvania County currently has three District Parks, they are identified in the table above. However, only two of these parks are developed (Patriot and Loriella). The Hilldrup tract is sixty-five (65) acres in size and currently undeveloped.

Community Parks

Community Parks are recreational areas containing four to fifty acres that provide a wide range of activities (varying based on size). Community Parks generally include: tennis courts, playgrounds, baseball/softball fields, multi-purpose fields, basketball and picnic areas. The service area for community parks is a ten-minute drive or approximately two to six miles, depending upon where the park is located and the degree of urbanization. There are eight Community Parks currently located within Spotsylvania County. A ninth is expected within the planning period with the future opening of the 36-acre Keswick Park. Due to location, limited size and recreational amenities offered, the smaller Community Parks may not and have tended not to attract as much interest among County residents as the larger Community and District Parks.

Special Use Parks

Special Use Parks have a county-wide service area and provide unique activities such as boating & fishing areas, dog parks, water parks, skateboard parks, golf courses, linear trail systems, community centers, and other facilities that are usually not found in other County parks. There are three Special Use Parks within the County with a fourth expected within the planning period at Fortune's Landing. Belmont is currently an undeveloped Special Use/ Community Park. Both Hunting Run Recreation Area and Ni River Recreational Area offer boat rentals, boat ramps, and fishing areas. The County is lacking in many of the more niche facilities that can be offered through Special Use Parks and these underserved needs should be taken into account when planning for development. The Motts Run Reservoir would also be considered a Special Use Park; however, operated by the City of Fredericksburg, the facility has not been included in calculations.

Image 1: Hunting Run Recreational Area

The County also manages a roughly 2-mile-long section of the Virginia Central Trail at present, classified as Trails/ Linear Park. Trails/ Linear Park areas are specialized areas within the County that are established to protect and preserve natural areas and cultural corridors, linking Spotsylvania County residents with recreational areas. By utilizing natural areas, abandoned railroad right-of-ways, along utility easements, and greenways along waterways, the Parks Department could provide low cost trails that provide both recreation and non-motorized transportation. Linear Parks can be any length, and include picnic areas, historic areas, and trails.

Image 2: Virginia Central Trail

County Schools Shared Use Recreational Space

County Schools Shared Use Recreational Space provide additional recreational areas within Spotsylvania County and are jointly operated and maintained by the School System and Parks and Recreation Department. Such Shared Use Recreational Spaces are similar to Community Parks in the activities they provide such as: tennis courts, gymnasiums, athletic fields, playgrounds, and basketball courts. The service area is two to six miles or a ten-minute driving area. While the Spotsylvania County School Board's primary mission is providing the education of children, an inherent part of the education system is physical fitness. The School Board provides gymnasiums, playgrounds, multi-purpose fields, tennis courts, and basketball courts located on school grounds. Also designating schools as Community Use Parks, allows for additional passive and active recreational area for County residents. The County Schools Shared Use Recreational Space range in size as shown in Table 3 below.

Table 3: Existing County Schools Shared Use Recreational Space

Elementary Schools	Total Acreage	Active Acreage
Battlefield Elementary School	60	3.5
Berkeley Elementary School	17	4
Brock Road Elementary School	24.3	6.3
Cedar Forest Elementary School	55	7
Chancellor Elementary School	12	4.1
Courthouse Road Elementary School	30	3
Courtland Elementary School	(*)	7.5
Harrison Road Elementary School	(*)	3
Lee Hill Elementary School	21.4	4
Livingston Elementary School	15.1	4.1
Parkside Elementary School	26.8	7.8
Riverview Elementary School	29.8	7
Robert E. Lee Elementary School	14.1	4.1
Salem Elementary School	19.5	4.5
Smith Station Elementary School	24.9	10.9
Spotswood Elementary School	19.2	4.2
Wilderness Elementary School	104	7
TOTAL:	**473.1**	**92**

Middle Schools	Total Acreage	Active Acreage
Battlefield Middle School	(*)	3.5
Chancellor Middle School	(*)	8
Freedom Middle School	76.7	10
Ni River Middle School	(*)	10
Post Oak Middle School	(*)	4
Thornburg Middle School	(*)	8.5
Spotsylvania Middle School	34	12.5
TOTAL:	**110.7**	**56.5**

High Schools	Total Acreage	Active Acreage
Chancellor High School	94.1	5
Courtland High School	100	7
Massaponax High School	105.4	8
Riverbend High School	90.3	5
Spotsylvania High School	250	6
TOTAL:	**639.8**	**31**

Other	Total Acreage	Active Acreage
John J. Wright Educational and Cultural Center	19.6	8
TOTAL:	**19.6**	**8**

Note the (*) above represents schools that share land (total acreage). Active acreage has been separated out by school within the larger “complex” when multiple schools are on a single campus.

Non-County Operated Parks

Summaries for Parks within Spotsylvania County including Neighborhood Parks and Other Public and Private Parks described below are not owned by the County and are not operated by the Department of Parks and Recreation. These areas provide varying levels of recreational opportunities and access to County citizens are considered contributing and complementary to County-wide Parks and Recreation goals.

In 2008-2009 during the development of the 2009 Parks and Open Space Element within the 2008 Comprehensive Plan (Parks and Open Space Element added via Comprehensive Plan Amendment) a concept was presented that would have reduced the satisfactory County level of service (LOS) standard for park acres and facilities to 75% of standard; a 25% reduction cognizant of non-County owned Parks and Recreation type facilities. When the subject was discussed at the Parks and Recreation Commission on October 16, 2008, the Parks and Recreation Commission had supported the reduced standard.

The 75% of standard concept was ultimately not supported by the Board of Supervisors and a 100% of standard including County schools shared use recreational spaces (open to public use) was adopted at public hearing on March 10, 2009. There were a number of reasons why the LOS discount was not supported including: (1) not all outside facilities could be considered open to all County residents (limited to paying members or residents of a specific community or HOA); (2) purpose and management of outside facilities may have focus that deviates from that of a public park; (3) standard was adopted as a County Parks and Recreation services standard and should not be discounted by outside resources. Further discount essentially diminishes the quality and quantity of County Parks and/or their facilities.

Since 2009, the 100% LOS standard including the schools shared use recreational spaces was subsequently reviewed with the Comprehensive Plan Public Facilities Advisory Groups and carried forward with the adoption of the 2013 Comprehensive Plan and it remains today in the current iteration of the Comprehensive Plan.

As a result, the Parks described below are acknowledged and valued but historically have not been included within Parks and Recreation acreage or facilities inventories used to calculate County LOS standard surpluses or deficits to determine whether additional facilities are warranted.

Neighborhood Parks

The County historically has not developed nor maintained any Neighborhood Parks as many such parks exist through neighborhood homeowner's associations in subdivisions that offer such amenities. Neighborhoods associated with Lee’s Hill, Summerfield, and Fawn Lake are some

examples. The County acknowledges that homeowner's association recreational amenities such as tennis courts, pools, gyms, tot lots, and golf courses provide valuable resources to County citizens within the developments in which they reside and can meet the recreational needs of some in the community. However, such Parks are not widely accessible for public access and such facilities can be limited in their offerings depending on the development scale and resources. Being privately managed, the County historically has not tracked and has no management role with Neighborhood Parks and their recreational facilities.

Other Public and Private Parks

National Parks:

Spotsylvania County has four significant American Civil War Battlefield Parks as well as the standalone Salem Church historic battlefield site (part of the Battle of Chancellorsville) managed by the National Park Service encompassing over 6,200 acres within the County to meet some of its passive recreational needs. With easements the total land area expands to over 7,200 acres. The four national battlefields represent not only a segment of cultural resources, but substantial passive recreational land and open space area, within the County. A current inventory of the National Park Service managed land area within Spotsylvania County and their interpretive trails has been compiled in Table 4 below:

Table 4: National Parks Inventory

National Military Parks	Total Acreage Owned	Passive Acreage Owned	Total Acreage (With Easements)	Interpretive Trails (Miles)
Chancellorsville Battlefield	1,840.3	1,840.3	2,712.4	6.8
Fredericksburg Battlefield	1,230.4	1,230.4	1,341.3	5.6
Spotsylvania Battlefield	1,327.8	1,327.8	1,394.9	5.9
Wilderness Battlefield	1,810.1	1,810.1	1,846.6	3.9
Salem Church	3.2	3.2	3.2	-
TOTAL:	6,211.8	6,211.8	7,298.4	22.2

Additional Public Access Protected Civil War Battlefield Lands:

Additional Civil War battlefield lands have been preserved by the Civil War Trust as well as the Central Virginia Battlefields Trust. The Civil War Trust manages an additional 415.91 acres of preserved, publicly accessible lands traversed by 5.52 miles of interpretive trails (3.64 miles at Chancellorsville and 1.88 miles at Slaughter Pen Farm (part of the Fredericksburg Battlefield) off Tidewater Trail in the northeast of the County.

As of 2020, the Central Virginia Battlefields Trust has 461 acres in ownership with an additional 8.63 acres in easement. Easement acreage is not readily open for public access except by organized tour or with granted permission of landowners. Harris Farm (1.74 acres) and Pelham's

Corner (4.5 acres) are always open to the public and include interpretive wayside exhibits, monument at Harris Farm, and a cannon at the Pelham's site. The Central Virginia Battlefields Trust stress that the remaining acreage is not generally open to the public except for special tours operated by the CVBT, NPS, or others with permission. CVBT manages no interpretive trails.

State Parks:

Lake Anna is a 13,000-acre manmade lake and is a valuable recreational resource. Fishing, camping, water skiing, boating, and swimming in Lake Anna and 2,810-acre Lake Anna State Park attracts thousands of visitors to the area. Anglers can take advantage of the more than 33 species of fish found in its stocked waters. An inventory of Lake Anna State Park amenities has been compiled in Table 5 below. This information is provided in the Virginia Department of Conservation and Recreation 2017 inventory of outdoor recreation facilities. Lake Anna State Park also offers Cabin and Campground rentals.

Table 5: State Parks Inventory

State Parks	Total Acreage	Active Acreage	Lake Fishing Acres	Beach Acres	Boat Accesses	Hiking Trail (Miles)	Horse Trail (Miles)
Lake Anna State Park	2,810	60	13,000	2	3	15	5

Privately Operated Recreational Facilities:

There are a number of privately operated recreational facilities within Spotsylvania County. The County acknowledges their presence and services offered to members of the community. A variety of private gyms and fitness centers are available for membership-based health and fitness offering opportunities including but not limited to: weightlifting; running/ track; weight loss and/or cardio training; yoga; indoor pools, organized instructor led exercise, etc. One such facility, the Rappahannock Area YMCA is located adjacent to the County's Patriot Park. The Virginia Youth Soccer Association and Fredericksburg Football Club (FFC) (formerly known as Fredericksburg Area Soccer Association (FASA)) operate a large outdoor soccer complex in the New Post Area of the County, hosting large tournaments. The Fredericksburg Field House offers indoor turf fields for organized sports. An 18-hole golf course, tennis, pool, fitness/ gym is offered at the Fredericksburg Country Club for members. A private disc golf course is offered at The Blockhouse Disc Golf and Country Club off Block House Road. Private camping is offered at the KOA Campground off Guinea Station Road, and the Indian Acres Club of Thornburg off Morris Road.

Meeting Spaces at Community Centers and Public Libraries

The following facilities (Table 6) are owned and operated by the County or are maintained in part by the County through mutual agreement. Information is provided for planning purposes. Utilization data is included in the Parks & Recreation annual report (Accessible Online **HERE**).

Meeting spaces are used for a variety of functions ranging from parties and celebrations to strategic planning meetings for members of the local business community. In recognizing the variety of users of the space, it is important to recognize the different needs that they may have for the space. The most important identified needs are the availability of kitchen facilities for the celebratory type uses of the facilities, and the provision of internet access for the business-related uses of the spaces.

Table 6: Existing Meeting Spaces at Community Centers and Public Libraries

Facility	Internet Access	Kitchen	Meeting Space Size (sf)	Total Acreage	Active Acreage
Berkeley Community Center	Yes	Yes	1,560	5	2
Chancellor Community Center	No	Yes	1,230	1	1
Cosner Park/Lee Hill Community Center*	Yes	Yes	2,080	-	-
Todds Tavern Community Center	No	Yes	928	2	2
Marshall Center Auditorium	No	No	5,000	N/A	N/A
Marshall Center Activity Room A**	No	No	1,080	N/A	N/A
Marshall Center Activity Room B**	No	No	1,080	N/A	N/A
Marshall Center Activity Room C**	No	No	1,080	N/A	N/A
Marshall Center Activity Room D**	No	No	936	N/A	N/A
Salem Church Library	Yes	2/6 rooms have access	1,932	N/A	N/A
Senior Center at Marshall Center- Main Lounge**	Yes	Yes	3,819	4	3
Snow Library	Yes	No	1,147	N/A	N/A
Library at Spotsylvania Towne Center	Yes	No	N/A	N/A	N/A
TOTAL COUNTY MEETING SPACE	-	-	21,872	12	8

*Cosner Park/ Lee Hill Community Center acreage reported separately as part of Cosner Park total acreage in Existing Parks and Recreation Areas Table.
** Marshall Center meeting spaces can accommodate multiple user groups simultaneously. However, kitchen space is limited to the Senior Center- Main Lounge.

County Parks Facilities Inventory

The Spotsylvania County Parks Facilities Inventory quantifies the number of facilities located County-wide. The facility inventory is a useful tool to review not only existing facilities available but those needed in the future considering LOS Standards based on population. Currently, there are no County operated public golf courses, indoor pools or recreational centers, roller skating rink, skateboard park, dog parks, racquetball courts, equestrian trails, or volleyball courts. These are more specialized or niche facilities that should be considered based on demand when opening a new park facility or adding to existing parks as funding is available. The Inventory sheets on the following pages (Exhibit 1) summarize Parks facilities available at County Parks and Community Centers.

Exhibit 1: Facilities Inventory

Parks and Recreation Facilities (9-24-18) Revised 1-8-21

Arritt Park

- 1- Small Multi-Purpose Field
- 2- Small Diamonds
- 1 Picnic Shelter (10 Tables)
- Pond
- Playground
- Restrooms
- Picnic Area (4 random tables)

Berkeley Community Center

- Meeting Room
- Kitchen
- Restrooms

Chancellor Community Center

- Meeting Room
- Kitchen
- Restrooms
- Tennis/ Pickle Ball Court

Chewning Park

- 2- Small Diamonds
- Picnic Area (1 random table)
- 1 Picnic Shelter (6 Tables)
- Playground
- Restrooms

Cosner Park

- 2- Small Diamonds
- 2-Basketball Outdoor Courts
- 1- Large Multi-Purpose Field
- Playground
- 2-Lighted Tennis/ Pickle Ball Courts
- Picnic Area (1 random table)

Harrison Road Park

- 1 Large Diamond
- 2- Small Multi-Purpose Field
- Playground
- Picnic Area (1 random table)
- Trail 2.1 Miles (see Virginia Central Trail)

Virginia Central Trail

- Trails 1.2 & .9 Miles

Hunting Run Recreation Area (March-October)

- Boat Rental/ Check –In Station
- Boat Launch Area w/ dock
- Fishing
- Fishing Pier
- Restrooms
- Picnic Area (9 random tables)

Lee Hill Community Center

- Meeting Room
- Restrooms
- Adjoining Picnic Shelter (11 Tables)

Lee Hill Park

- 2- Small Diamonds -1-Lighted

Legion Complex

- Track
- 2- Multi-Purpose Fields, 1 Lighted
- 1-Small Diamond Lighted
- 1-Large Diamond Lighted
- Restrooms

Loriella Park

- 2- Small Diamonds, 1 Lighted
- Pond
- 1 Large Diamond Lighted
- Trail 2.9 miles
- 4- Multi-Purpose Field, 1 Lighted
- Playground
- Outdoor Swimming Pool/ Bath House /Concession Stand (May- Sept.)
- 4-Lighted Tennis Courts
- Multi-Purp./ Basketball Court
- Disc Golf Course 18 Holes
- 2-Picnic Shelters (9/9 Tables)
- 3- Restrooms
- Open Play Area
- Picnic Area (5 random tables)

Marshall Center / Auditorium

- 5 Meeting Rooms
- Kitchen
- Restrooms
- Gymnasium
- Auditorium

Marshall Park

- 2- Small Diamonds, 1 Lighted
- 2- Basketball Outdoor Courts Lighted
- 1- Small Multi-Purpose Field – Lighted (Fall only)
- Playground
- Restrooms
- Picnic Area (2 random tables)
- Open Play Area

Mary Lee Carter Park

- Multi-Purpose Field
- Trail .2 Miles
- Playground
- Picnic Area (1 random table)

Ni River Recreation Area (March-October)

- Picnic Area (3 random tables)
- Picnic Shelter (12 tables)
- Restrooms
- Boat Rental/ Check –In Station
- Boat Launch Area
- Fishing

Patriot Park

- 2- Small Diamonds, Lighted
- 4- Large Diamonds, 2 Lighted
- 2-Basketball Courts
- Trail 3.1 Miles,
- 6-Multi-Purpose Fields, 2 Lighted
- Amphitheater
- 3-Restrooms
- Picnic Area (6 random tables)
- Playground

Todd's Tavern Community Center

- Meeting Room
- Kitchen
- Restrooms

Spotsylvania County School Facilities-

Elementary Schools

Battlefield Elementary -

- 2 Small Multipurpose Fields
- Playground
- Outdoor Basketball
- Gym

Berkeley Elementary-

- Playground
- Outdoor Basketball
- Gym

Brock Road Elementary -

- 1 Small Multipurpose Field
- Playground
- Outdoor Basketball
- Gym

Cedar Forest Elementary -

- 1 Large Multipurpose Field
- Playground
- Outdoor Basketball
- Gym

Chancellor Elementary

- 1 Large Multipurpose Field
- 2 Playgrounds
- Gym
- Outdoor Basketball

Courthouse Road Elementary -

- 1 Large Multipurpose Field
- Playground
- Outdoor Basketball
- Gym

Courtland Elementary -

- 1 Small Multipurpose Field
- 1 Large Multipurpose Field
- Playground
- Outdoor Basketball
- Gym

Harrison Road Elementary

- 1 Large Multipurpose Field
- Playground
- Gym

Parkside Elementary -

- 1 Large Multipurpose Field
- Playground
- Outdoor Basketball
- Gym

Robert E. Lee Elementary

- 1 Large Multipurpose Field
- Playground
- Outdoor Basketball

Riverview Elementary -

- 1 Large Multipurpose Field
- Playground
- Gym

Salem Elementary -

- 2 Small Multipurpose Fields
- Playground
- Gym

Smith Station Elementary -

- 1 Small Multipurpose Field
- Playground
- 1 Large Multipurpose Field
- Outdoor Basketball
- Gym

Spotswood Elementary-

- Playground
- Gym

Lee Hill Elementary -

- 1 Small Multipurpose Field
- Playground
- Gym

Livingston Elementary-

- Playground
- Gym

Wilderness Elementary -

- 1 Small Multipurpose Field
- Playground
- Outdoor Basketball
- Gym

Middle Schools

Battlefield Middle -

- 1 Small Diamond
- 1 Large Multipurpose Field
- 1 Track
- Gym

Chancellor Middle -

- 1 Small Diamond
- 2 Large Multipurpose Fields
- Gym

Freedom Middle -

- 1 Small Diamond
- 1 Large Diamond
- 3 Large Multipurpose Fields
- 1 Track
- Gym

Ni River Middle -

- 2 Small Diamonds
- 2 Large Multipurpose Fields
- 1 Track
- Gym

Post Oak Middle -

- 1 Small Diamond
- 1 Large Multipurpose Field
- Gym

Spotsylvania Middle -

- 2 Small Diamonds
- 1 Large Diamond
- 2 Small Multipurpose Field
- 1 Large Multipurpose Field
- Gym

Thornburg Middle -

- 1 Small Diamond
- 2 Small Multipurpose Fields
- 1 Large Multipurpose Field
- 1 Track
- Gym

John J Wright Educational & Cultural Center -

- 1 Small Diamond
- 1 Large Multipurpose Field
- Playground
- Gym

High Schools

Chancellor High -

- 1 Small Diamond
- 1 Large Diamond -Lighted
- 3 Large Multipurpose Fields -1 Lighted
- Track- Lighted
- 6 Tennis Courts

Courtland High -

- 1 Small Diamond -Lighted
- 1 Large Diamond - Lighted
- 3 Large Multipurpose Fields -1 Lighted
- Track- Lighted
- 6 Tennis Courts
- 2 Outdoor Basketball Courts

Massaponax High -

- 2 Small Diamonds – 1 Lighted
- 2 Large Diamonds – 1 Lighted
- 4 Large Multipurpose Fields -1 Lighted
- Track- Lighted
- 6 Tennis Courts

Riverbend High -

- 2 Small Diamonds – 1 Lighted
- 2 Large Diamonds– 1 Lighted
- 4 Large Multipurpose Fields -1 Lighted
- Track- Lighted
- 6 Tennis Courts

Spotsylvania High -

- 2 Small Diamonds – 1 Lighted
- 2 Large Diamonds – 1 Lighted
- 3 Large Multipurpose Fields -1 Artificial Turf Lighted, 1 Lighted
- Track- Lighted
- 6 Tennis Courts

County Parks Facilities Maintenance

Park amenities vary in age and condition. The Spotsylvania County Parks and Recreation Department recently updated a comprehensive list of parks facilities, documenting their age, condition, and estimated replacement timeline. These types of facility maintenance inventories ensure amenities are inspected and kept in good repair and/or replaced if need be. Continued tracking of Parks Facilities to monitor age and condition is warranted into the future in the interest of protecting public investments and ensuring operability.

Level of Service Standards for Parks & Recreation Acreage, Facilities, Community Centers and Public Meeting Spaces (Including Public Libraries).

New development presents demands for County-wide parks and meeting space facilities. Staff notes as of January 1, 2021 the County Approved Development Analysis noted 12,049 approved/enabled residential units that had yet to be constructed from prior rezoning approvals and subdivision activities. There are additional "pipeline" projects actively being considered or under review that could add to this number in time. Additional units are enabled in the form of by-right undeveloped lots scattered throughout the County that may or may not have additional division potential enabled by County Code as well. Considering this, it is important that the County provide both current and future residents adequate recreation services that meet current and future demand according to established LOS. The future demand for parks, open space, and recreation facilities must be measured, and means must be identified for maintaining

the established County-wide level of service for these important services after new development occurs.

Standards

Parkland Acres Per 1,000 Population: Utilizing an acres per 1,000 population standard for Parks helps to ensure that as the County maintains a consistent LOS objective for parkland growth to serve a growing population.

Table 7: Land Needs Standards

Spotsylvania County Comprehensive Land Needs, 100% Standards With Schools									
Year				2020	2020	2030	2030	2040	2040
Population				140,032	140,032	158,025	158,025	177,369	177,369
Park Type		**Standard**	Existing	Required	(-) Deficit/	Required	(-) Deficit/	Required	(-) Deficit/
		(ac/1000)	Acreage	Acreage	Surplus	Acreage	Surplus	Acreage	Surplus
Community	Total*	**3**	179	420	-241	474	-295	532	-353
Community	Active	**1.5**	87	210	-123	237	-150	266	-179
District	Total^	**7**	404	980	-576	1106	-702	1242	-838
District	Active	**3.5**	101	490	-389	553	-452	621	-520
Special Use**	Total	**1.8**	68.5	252	-184	284	-216	319	-251
Special Use	Active	**0**	23	0	23.0	0	23.0	0	23.0
School	Total	**0**	1243	0	1243	0	1243	0	1243.2
School	Active	**0**	187.5	0	188	0	188	0	187.5
Community Ctr	Total	**0**	12	0	12	0	12	0	12.0
Community Ctr	Active	**0**	8	0	8	0	8	0	8.0
Total w/o Water	**Total**	**11.8**	**1907**	**1652**	**242**	**1865**	**30**	**2093**	**-198**
	Active	**5**	**406.5**	**700**	**-302**	**790**	**-392**	**887**	**-488**
Recreational Water	Total	6.2	841	868	-27	980	-139	1100	-259
Total w/ Water	**Total**	**18**	**2748**	**2521**	**227**	**2844**	**-97**	**3193**	**-445**
Note: Population projections sourced from Weldon Cooper Center for Public Service. 2020 Population from US Decennial Census									
*Community Parks total acreage includes future Keswick Park acreage expected within planning period.									
^ District Parks total acreage includes Hilldrup tract (presently undeveloped).									
** Special Use Parks total acreage includes Fortune's Landing Park acreage expected within the planning period. Special Use acreage inventory also includes Virginia Central Trail Linear Park acreage.									

Table 7 above shows the parkland needs for all of Spotsylvania County based on 100% County parkland needs LOS standards based on park type or classification. The table acknowledges public access recreational acreage associated with schools as well. Schools related park acreage is not available for general public usage during school hours so they are not as readily available for use as other County parks. Though schools lands are not classified as a specific park classification or type, they do offer a variety of facilities beneficial especially to organized league sports. Recognizing this, the County adopted a 100% LOS standard that factors in schools acreage.

Currently there are 143 acres of Community Parks within Spotsylvania County. This total acreage is expected to increase to 179 acres with the addition of Keswick Park (36 acres) within the planning period. As of 2020, when comparing existing park land to the standard, a deficit of -241 acres existed. Without additional acreage the deficit will continually grow through 2040. District Parks currently total 404 acres. Again when compared with the standard it resulted in a deficit of -576 acres as of 2020. By 2040, without additional District Park Land, the deficit will grow to -838 acres considering population growth. The Special Use Parks comprise 68.5 total acres, resulting in a deficit of -184 acres in 2020, increasing to -251 acres by 2040.

Dismissing particular standards for the various classifications of parks and looking at park related acreage as a whole, if we add the schools and community centers acreage that are complementary to parks and recreation function, as a whole the County fares well in terms of total acres though 2030. Between 2030 and 2040 however a deficit is expected to occur. Active Park acres are where the County is actively running a deficit compared to standard. This deficit is expected to grow over time unless additional active acres are added. Additional park acres in active status are warranted during the planning period. Between 2020 and 2040 the deficit in active park acres is expected to grow from -302 acres to -488 acres if no action is taken. It is good to note that some additional park acres in active status are expected to "come online" with the development of Keswick Park and opportunities at the District Park size Hilldrup Tract in particular.

The County has also established a standard for recreational water acreage that acknowledges recreational opportunities associated with water such as fishing and paddling. Considering recreational water acreage, recreational land needs acreage deficits are removed altogether through 2020 due to acreage associated with recreational water contributing to exceeding standard. However, if no new parkland or recreational water acreage is added between 2020 and 2030, deficits are expected to appear and grow as population increases. The recreational water 841 acres reported in the table above represents County managed reservoirs at Ni Reservoir (411 Acres) and Hunting Run Reservoir (430 Acre). Additional resources exist within the community that are worthy of mention including, but not limited to: Motts Run Reservoir (City of Fredericksburg); Rappahannock and Rapidan Rivers; Lake Anna.

Community Centers standard 1 per 15,000 population: Utilizing a Community Center per 15,000 population standard ensures that adequate public meeting space will remain available as the County population continues to grow.

Table 8: Community Centers Needs

Spotsylvania County Comprehensive Community Centers Needs									
Year				**2020**	**2020**	**2030**	**2030**	**2040**	**2040**
Population				**140,032**	**140,032**	**158,025**	**158,025**	**177,369**	**177,369**
		Standard	Existing	Required	(-) Deficit/	Required	(-) Deficit/	Required	(-) Deficit/
		(1/15,000)	Comm Ctr.*	Comm Ctr.	Surplus	Sq. Ft.	Surplus	Sq. Ft.	Surplus
Community Ctr	**Total**	**15,000**	**5**	**9**	**-4**	**11**	**-6**	**12**	**-7**
Note: 2020 Population from US Decennial Census. Population projections sourced from Weldon Cooper Center for Public Service									
*Community Centers inventory includes: Marshall Center; Berkeley; Chancellor; Lee Hill; Todds Tavern.									

Presently Spotsylvania County manages 5 community centers. The inventory is expressed in Table 8 above. The County experienced a reduction of two community centers since the last Comprehensive Plan update including the Harrison Road Community Center and Lick Run Community Center. Through the year 2020 based on County standard, a deficit of 4 community centers presently exists. Without additional community centers added to the inventory this deficit is expected to grow to 7 by the year 2040 based on projected population growth. Considering County standards, the Comprehensive Plan is supportive of adding community center(s) to result in deficit reductions and maintain level of service.

The average recommended size for a community center ranges from 3,000 to 3,500 square feet (including meeting spaces, kitchen, bathrooms, etc.) The Spotsylvania Department of Parks and Recreation has identified the Lee Hill Community Center as an example of Community Center design and amenities most in demand at this time. In order to maximize their usefulness and demand, new community centers should consider the Lee Hill Center as a model. A schematic of that center is below for reference (Exhibit 2):

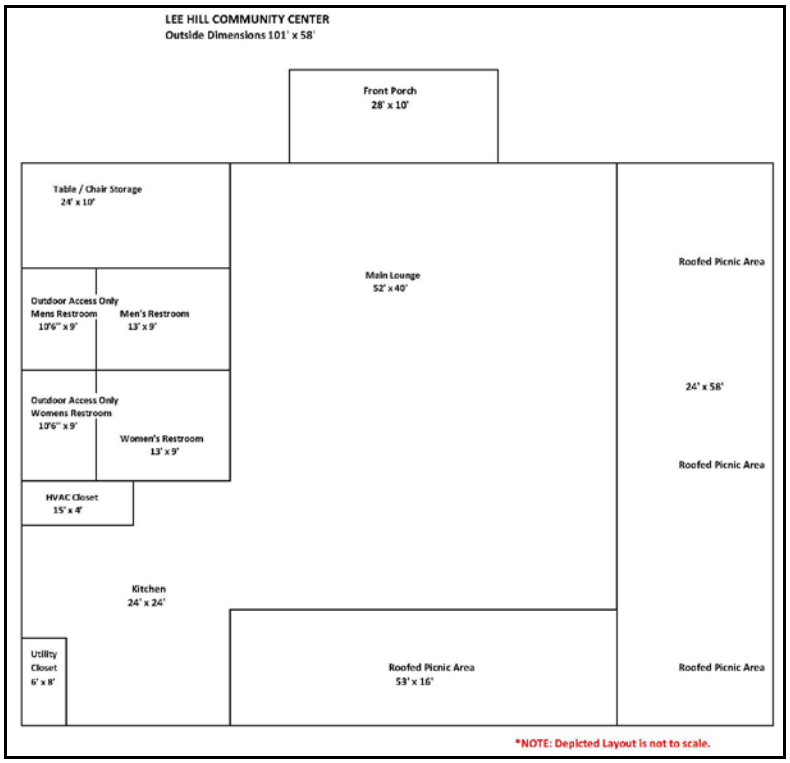


Exhibit 2: Community Center Model

Public Meeting Spaces at Community Centers and Public Libraries standard 200 Square Feet Per 1,000 Population: Utilizing a square foot per 1,000 population standard for publicly available meeting space ensures that adequate public meeting space will remain available as the County population continues to grow. This is a County standard initially adopted as part of the 2013 Comprehensive Plan.

Table 9: Community Meeting Space Needs

Spotsylvania County Comprehensive Public Meeting Space Needs at Community Centers and Public Libraries									
Year				**2020**	**2020**	**2030**	**2030**	**2040**	**2040**
Population				**140,032**	**140,032**	**158,025**	**158,025**	**177,369**	**177,369**
		Standard	Existing	Required	(-) Deficit/	Required	(-) Deficit/	Required	(-) Deficit/
		(sqft/1000)	Sq. Ft.*	Sq. Ft.	Surplus	Sq. Ft.	Surplus	Sq. Ft.	Surplus
Community	**Total**	**200**	**21,872**	**28006**	**-6134**	**31605**	**-9733**	**35474**	**-13602**
Note: 2020 Population from US Decennial Census. Population projections sourced from Weldon Cooper Center for Public Service									
*Existing Square Footage of Public Meeting Spaces include Spotsylvania County Community Centers and Libraries within County limits.									

Spotsylvania County presently has a public meeting space inventory of 21,872 sq.ft., accounting for the County's current inventory of public access meeting spaces within Community Centers as well as meeting spaces within Public Libraries in the County. The County has a set LOS standard for community meeting spaces of 200 sq ft per 1,000 residents. Considering a 2020 County population of 140,032, in order to meet County LOS the County has warrant for 28,006 sq.ft. of

public meeting space, resulting in a deficit of -6,134 sq.ft. As shown in the table above (Table 9), this deficit will grow as population grows if no additional meeting space is added to the inventory. In the short term, much of the identified deficit may be tied to the recent community center losses. The Harrison Road Community Center had offered an additional 1,748 sq. ft. of public meeting space. That Center was closed to accommodate needed Transportation systems improvements associated with a Route 1 (Jefferson Davis Hwy.) and Harrison Road intersection improvement project. The Lick Run Community Center's closure in November 2018 is the result of the displacement and subsequent relocation of the Spotsylvania County Museum. The Lick Run Community Center resulted in a loss of 1,274 square feet of meeting space. Considering the lost meeting space and Spotsylvania County standard, there is warrant for additional meeting spaces whether they be at a new or expanded community center or in the public libraries. No new meeting space inventory was added with the recent opening of the Library at Spotsylvania Towne Center.

Parks Facility Standards: Perhaps more important than the raw parkland acreage needs are standards for recreation facilities to activate the sites for recreational use that have been formulated to plan for recreation needs and serve as a basis for capital planning. Many of these recreational facilities are necessary to create Active Park acres that presently run a LOS deficit expected to grow over time. Pursuit of additional recreational amenities to meet LOS standards complements efforts to reduce active park acres deficits. The goal is to maintain a consistent LOS for the County population consistent with projected growth over time.

The following table shows the recommended County facility standards and their corresponding surpluses or deficits over time considering population estimates and projections. Many were derived from national and state standards and adopted as the County standard in 2009. Considerations for pickleball popularity has resulted in a new standard added as part of this update.

Due to the wide array of potential recreational facilities it is impractical to establish a set LOS standard for all the potential options available, especially "big ticket", specialized or niche facilities. Other more niche amenities have also been accommodated for consideration based on their uniqueness and fit within the community and their projected demand. Demand based parks and recreation planning has become more popular in recent times. For instance, the Virginia Department of Conservation and Recreation (DCR) now bases many of its recommendations within the Statewide Virginia Outdoors Plan on survey research to gauge demands for new parks facilities.

Table 10: Amenities Standards

County Parks Amenities Requirements 100% Standards with Schools								
AMENITY	SPOTSYLVANIA STANDARD		Year 2020	Year 2020	Year 2030	Year 2030	Year 2040	Year 2040
	per residents	Existing	Required	Population	Required	Population	Required	Population
		Facilties	Facilities	**140,032**	Facilities	**158,025**	Facilities	**177,369**
				(-)Deficit/		(-)Deficit/		(-)Deficit/
				Surplus		Surplus		Surplus
Baseball/ Softball Field	3,000	50	47	3	53	-3	59	-9
Baseball Lighted Regulation	15,000	9	9	0	11	-2	12	-3
Baseball Lighted Little League	30,000	10	5	5	5	5	6	4
Basketball Court	5,000	45	28	17	32	13	35	10
Basketball Indoor	5,000	25	28	-3	32	-7	35	-10
Basketball Outdoor	10,000	20	14	6	16	4	18	2
Bike/Fitness Trails (miles)	1,000	22.1	140	-118	158	-136	177	-155
Indoor Recreation Center/ with Pool	50,000	0	3	-3	3	-3	4	-4
Playgrounds	5,000	27	28	-1	32	-5	35	-8
Swimming Pool	20,000	1	7	-6	8	-7	9	-8
Tennis	2,000	46	70	-24	79	-33	89	-43
Tennis Lighted Courts	10,000	6	14	-8	16	-10	18	-12
Multipurpose Fields (Football, Field Hockey, Lacrosse & Soccer Fields)	2,000	73	70	3	79	-6	89	-16
Pickleball Courts	15,000	5	9	-4	11	-6	12	-7
Other (Specialized or niche amenities)	Case by Case considering uniqueness and demand							
Note: 2020 Population from US Decennial Census. Population projections sources from Weldon Cooper Center for Public Service.								

Over the planning period considering the County's adopted LOS standards for parks and recreation, many amenities will see growing deficits as population increases. Within the short term, recreational bike fitness trails and tennis courts comprise the most notable deficits compared to County standard. It is good to note that tennis courts can and have served dual purposes as Pickleball Courts, requiring Pickleball striping so the facility can serve dual purposes.

Bicycle and fitness trails include shared use paths such as the Virginia Central Trail that extends from Salem Church Road to Gordon Road presently. School running tracks also qualify and are included within the County's existing inventory identified in the table above. Leavells Road extending from Harrison Road to Hilltop Plaza Way has an expanded sidewalk to accommodate a wider array of users. This path serves several residential developments along the Leavells Road corridor and provides access to Loriella Park. Bicycle and fitness trails also include nature and historical interpretive trails that may be utilized by a host of users for walking, mountain biking,

cross country running, equestrian usage, etc. Staff has acknowledged the presence of other trails through the County including the Ni River Trail by the Spotsylvania Greenways Initiative (presently a nature trail envisioned to be part of the planned Ni River Trail system), historic interpretive trails associated with National Park Service, Civil War Trust, and Central Virginia Battlefields Trust lands, as well as recreational trails at Lake Anna State Park. Lake Anna State Park also includes an equestrian trail system. These trails overwhelmingly provide opportunity for passive recreation in the form of natural surface walking paths limiting potential usage to certain activities. For users that can benefit from interest in natural walking paths, these trails help buffer and/or reduce the lack of availability for such user groups.

Recognizing the need to establish a Comprehensive Trailways Master Plan to address citizen interest and formulate a plan to reduce LOS deficits, Spotsylvania County adopted a Trailways Master Plan in 2011 that included plans for both roadside and off-road greenway trails. In 2011 the Virginia Chapter of the American Planning Association bestowed the 2011 Outstanding Plan Award-Plan Element upon the Spotsylvania County Trailways Master Plan. The Plan had historically been a standalone document incorporated by reference within the Comprehensive Plan. As a Plan element in the interest of assuring such a plan does not become outdated or inconsiderate of opportunities that may arise from changes elsewhere within other elements of the Comprehensive Plan, staff shifted crucial plan elements into this Comprehensive Plan recognizing its applicability to both Transportation planning (road based) and Parks and Recreation. The Trailways Plan is now located within the Comprehensive Plan and updated accordingly on the same schedule.

Recommendations

The following general, short and long-term recommendations focus on the current and future needs for provision of public parks within Spotsylvania County.

Specific capital projects recommendations are based in the warrants established by County LOS standards and efforts to meet such standards. Decisions concerning adoption of the County Capital Improvement Plan (CIP) are guided by the Comprehensive Plan. As per the Code of Virginia, localities must be able to exhibit Comprehensive Plan support for public projects, including new Parks and Recreation facilities. CIP projects must be supported by the Comprehensive Plan by State Code. The Code of Virginia Sect. 15.2-2232 required that improvements be shown in the Comprehensive Plan, specifically identifying the "location, character and extent of each feature shown on the plan." Sect. 15.2-2232 establishes:

> … unless a feature is already shown on the adopted master plan or part thereof or is deemed so under subsection D, no street or connection to an existing street, park or other public area, public building or public structure, public utility facility or public service corporation facility other than a railroad facility or an underground natural gas or underground electric distribution facility of a public utility as defined in subdivision (b) of § 56-265.1 within its certificated service territory, whether publicly or privately owned, shall be constructed, established or authorized, unless and until the general location or approximate location, character, and extent thereof has been submitted to

and approved by the commission as being substantially in accord with the adopted comprehensive plan or part thereof.

The purpose of the Public Facilities Element in the Comprehensive Plan (including Parks and Recreation) is to establish County LOS standards and identify specific capacity building projects that help justify CIP inclusion as well as calculation of proffers concerning residential rezoning applications. In the case of Parks and Recreation related proffers they are based solely on necessary capacity expansion projects (based in LOS) identified within the County CIP. Proffer values are determined considering population increases above the by-right potential of a project area resulting from a residential rezoning, and their proportionate per unit, per person share of the cost of the new facility.

The following are general recommendations for the provision of local public park areas. The general location of proposed public park areas should be based on land acquisition needs, service area needs and the population served.

General

1. Spotsylvania County will have sufficient park facilities to meet County Park Standards as well as current and future demand. Provide community, district, and special use parks that meet a 100% level of service standard, including schools.

    a. Encourage all new schools and community centers to include provisions for public recreational acres, and amenities. Co-location of future schools, community centers, and parks will benefit Spotsylvania County by adding more recreational opportunities and avoiding duplication of recreational facilities.

        - Formally adopt a school/park and recreation policy that would include the following:
            - Provide for specific facility standards and designs for all community type use facilities at new school sites.
            - Provide for the Park & Recreation Department's operational & maintenance agreements.
            - Provide for an agreed upon short and long-range plan for the improvement and expansion of community use facilities, where feasible, at existing school sites including use of available school lands.
            - Strive for a County provision to meet the Level of Service Standards for Multi-Purpose Fields and Baseball/Softball Diamonds as these are specifically needed for programmed Parks & Recreation activities.

b. Protect, maintain, and enhance current parks and open space areas in Spotsylvania County and acquire additional parkland and facilities within the County, consistent with adopted level of service standards.

- The acquisition of park lands and development of park amenities should occur based on population estimates.

c. Provide an annual CIP submission of needed facilities based on adopted standards and replacement schedules.

d. Optimize existing parks that are not built out by improving or adding new facilities to enhance efficiencies or reduce known LOS deficits within the planning period.

- An emphasis should be placed on the current utilization of the parks with installation of artificial lighting to enhance and extend the availability of current athletic fields.

2. Preserve natural areas, parks, open space area, archaeological and architectural sites and cultural resources in Spotsylvania County.

a. Encourage protection of, access and interpretation of significant cultural or historical resources within new or existing park land.

b. Maintain and update a database and/ or mapping project that includes an inventory of all parks, open spaces, nature preserves, onsite historic and cultural sites, park amenities, trail systems.

3. Preserve and expand upon the existing recreational trails network within the County by implementing the Spotsylvania Trailways Master Plan (found in the Transportation Element of the Comprehensive Plan) consisting of off-road greenway trails and roadside based trail corridors.

a. Encourage construction of bicycle lanes and/or paths complementary to recreational trailways plan implementation efforts in conjunction with road widening projects, where appropriate.

4. Consider adding additional specialized or niche recreational amenities that do not warrant a specific level of service standard based on their uniqueness and fit within the community as well as projected demand.

5. Consider additional public/private partnerships or any other joint opportunities in the delivery of park and recreation service delivery like the YMCA/School Board/ County partnership at the Patriot Park District Park.

6. Continue to support the development of privately managed and maintained neighborhood parks and private recreational amenities that will ultimately serve County residents within their particular developments.

Short Term

1. Seek to replace the Harrison Road and Lick Run Community Centers at new locations similarly located to their former ones (approximately within a mile) considerate of nearby populations historically served by those centers respectively, and geo-spacing/facility separation to reduce service area overlap.

2. Seek to locate a new Community Center in the Partlow Area.

Long Term

1. Explore acquisition and/or development of an indoor aquatic recreation center.

2. Develop master plans for the Hilldrup and Belmont Properties.

3. Explore the acquisition of land in the Lee Hill/Massaponax area for a new district park.

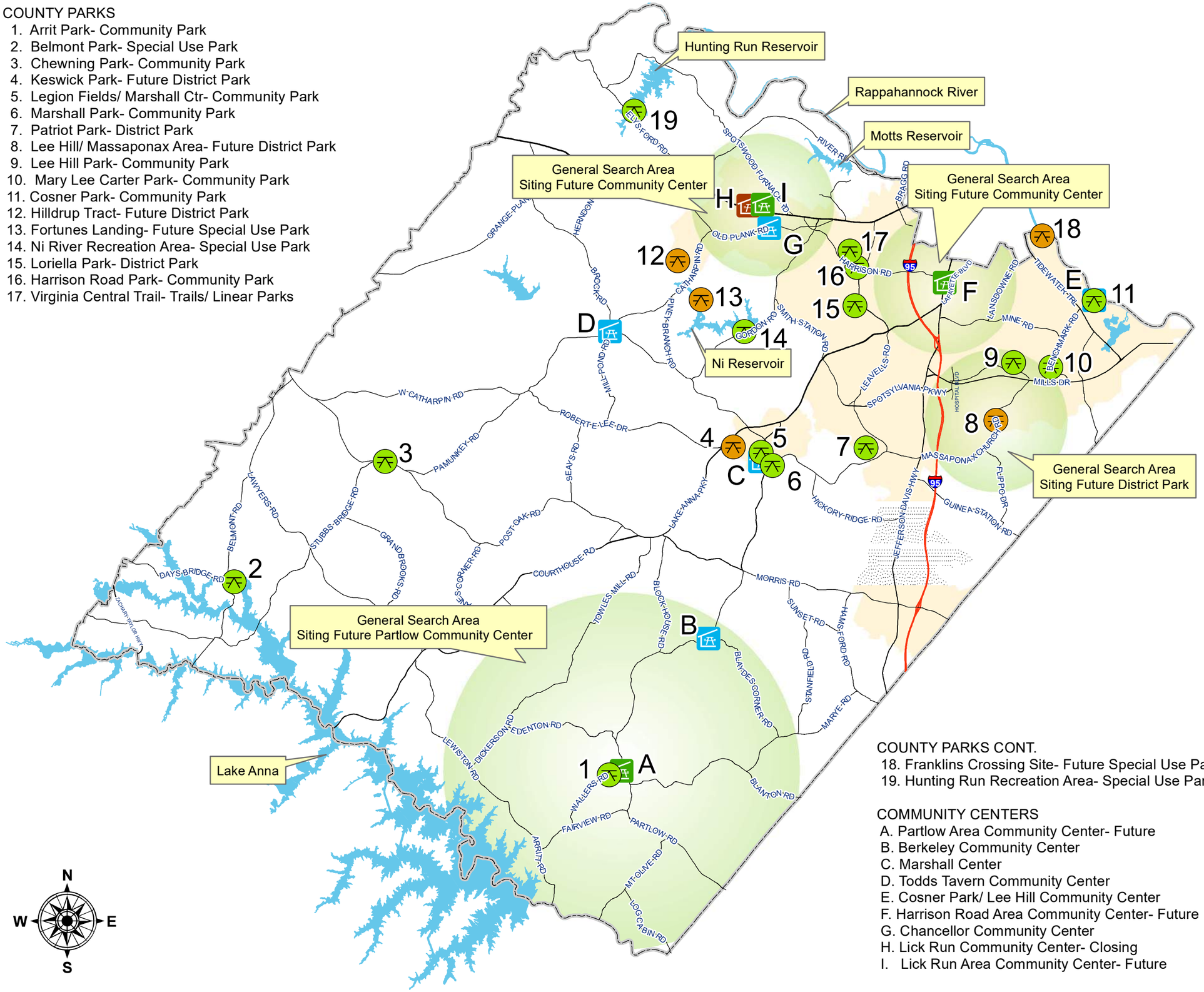
4. Continue to implement the County Trailways Plan through various means including Parks and Recreation projects, Transportation Projects, Private Development frontage and amenity improvements, etc. A number of candidate projects have been suggested to expand the trailways network and help address the sizable level of service deficits for such facilities. These candidate projects have been identified due to their location in proximity to heavily populated areas, historic and cultural resources attractions and tourism, and physical location in relation to existing trail systems with the aim of closing "gaps" or extending trails with existing usage. Candidate projects are as follows:

- Ni River Greenway Trail northward through the Hilldrup Tract District Park generally along the Ni River Corridor to include nearby County owned historic lands associated with Catherine's Meadow. (Approximately 1 Mile)
- Deep Run Trailhead (including portion of trail), riverside park, river access, and historic interpretation site at the County owned Franklin's Crossing site. (Approximately ½ Mile)
- Ni River Greenway Trail gap between its current terminus and Patriot Park (between Route 1 and Patriot Park). (Approximately ½ Mile)
- Complete implementation of the Phase I Massaponax Creek Greenway Trail, including necessary bridge crossings, between the Courthouse Road public

parking area, Loriella Park, and planned Mussel Farm site. (Approximately 1 ¼ Miles)

- Pursue construction of the Virginia Central Greenway Trail and trailhead along the Whitehall/Lakeside Virginia Land Conservation Fund easement extending between Brock Road and Jackson Trail East. (Approximately 2 Miles)
- Ni River Trail to establish a roadside based bicycle and pedestrian friendly connection between the Hilldrup Tract (Future District Park) and future public park at Fortune's Landing fronting the Ni Reservoir.
- Eastward expansion of the Virginia Central Trail by seeking roadside based bicycle and pedestrian improvements between Salem Church Road and the City of Fredericksburg via the Route 1 corridor and Harrison Road widening and Interstate 95 bridge replacement projects.
- Westward expansion of the Virginia Central Trail through Gordon Road, Harrison Road, and Old Plank Road improvement projects.
- Seek roadside bicycle and pedestrian friendly improvements along Tidewater Trail and Benchmark Road to help implement the Deep Run Trail and East Coast Greenway in Spotsylvania County from the Bowman Center to County VRE Station.

COUNTY PARKS
1. Arrit Park- Community Park
2. Belmont Park- Special Use Park
3. Chewning Park- Community Park
4. Keswick Park- Future District Park
5. Legion Fields/ Marshall Ctr- Community Park
6. Marshall Park- Community Park
7. Patriot Park- District Park
8. Lee Hill/ Massaponax Area- Future District Park
9. Lee Hill Park- Community Park
10. Mary Lee Carter Park- Community Park
11. Cosner Park- Community Park
12. Hilldrup Tract- Future District Park
13. Fortunes Landing- Future Special Use Park
14. Ni River Recreation Area- Special Use Park
15. Loriella Park- District Park
16. Harrison Road Park- Community Park
17. Virginia Central Trail- Trails/ Linear Parks



COUNTY PARKS CONT.
18. Franklins Crossing Site- Future Special Use Park
19. Hunting Run Recreation Area- Special Use Park

COMMUNITY CENTERS
A. Partlow Area Community Center- Future
B. Berkeley Community Center
C. Marshall Center
D. Todds Tavern Community Center
E. Cosner Park/ Lee Hill Community Center
F. Harrison Road Area Community Center- Future
G. Chancellor Community Center
H. Lick Run Community Center- Closing
I. Lick Run Area Community Center- Future

Spotsylvania County Parks and Recreation Facilities and Needs

Legend

County Parks
- Future Park
- Park

Community Centers
- Community Center Closing
- Community Center
- Future Community Center*

General Siting Buffer (Future Projects)

Primary Development Boundary

0 1.25 2.5 5 Miles

Map Approved: December 14, 2021

Chapter 4H

PUBLIC FACILITIES PLAN- GENERAL GOVERNMENT

GENERAL GOVERNMENT

Introduction

The General Government portion of the Public Facilities Chapter seeks to identify capital facility needs for County government operations not associated with operational needs of the Sheriffs, FREM, Solid Waste, Water and Sewer, Parks and Recreation, Schools that have each been addressed elsewhere within this Chapter. For the purpose of this Chapter, General Government includes but is not limited to governmental services including but not limited to: County Administration, Treasurer, Commissioner of Revenue, County Attorney, Voter Registrar, Cooperative Extension, Community Development, Division of Social Services, Courts, Human Resources, Finance, Information and Computer Services, Public Works and Facilities Management.

Per Spotsylvania County Public Works, the County has two separate documents that are used for general guidance for planning. It is good to note that these guiding documents have resulted in several projects, implemented and complementary to their recommendations. Not all recommendations have been pursued. Due to passage of time and population trends changes since the adoption of these two guiding documents there is an identified need to review and update space needs study and ultimate recommendations going forward. For instance, population projections based on historic growth rates leading up to the early 2000's resulted in much more robust population expectations for the year 2020, 2025. A March 2005 update concerning the Spotsylvania County Government Center Campus Master Plan projected a County population in 2020 of approximately 200,000, and between 230,000 to 250,000 or more by 2025. The latter 2000's has seen a slowing of population growth that is less than 2% annually. Since the Campus Master Plan, population growth has not kept pace with the population projections assumed in 2005. As noted elsewhere in the Comprehensive Plan, US Decennial Census 2020 reports a County population of 140,032. A brief overview of the County's existing guiding documents for general government space needs is below:

2013 General Government and Judicial Center Space Needs

Prepared by Peck, Peck, & Associates, this document looks at various services in the County and establishes an anticipated space need based on Departmental director input. The space needs study itself was constrained and not allowed to look at construction of a new building.

2001 Facility Space Needs Analysis

Prepared by Moseley, Harris, and McClintock: This document developed the Courthouse Master Plan (by Moseley Architects) and noted the need for additional buildings. Several of the projects listed in this plan have been or are being implemented including: a new public safety building (completed), new Circuit Court (completed), General District Courthouse expansion (under construction as of this update), and a New Government Building (remains unbuilt at this time). The Courthouse Master Plan addresses County government functions located in the Spotsylvania Courthouse Area, Spotsylvania County's governmental hub.

Capital Projects Recommendations

In terms of identifying the need for new spaces the County typically considers individual space needs assessments by Department as the need arises and in recent years has not performed a comprehensive space needs update. For specific metrics that guide County space needs recommendations there are two groups where space needs are driven primarily by ratio of personnel and workload. One of those is the courts which we use the judge to case load ratio to determine the number of judges needed and by extension the number of courtrooms needed. This is done by looking at current average case load per Judge in Virginia and comparing to case loading seen in Spotsylvania. This however is not a set number per code and is a discretion of the courts. The other is Social Services which has required turnaround times for case loading which impacts personnel and therefore space needs. The determination of personnel to achieve the case load requirements are subjective and not quantified and are at the discretion of the Director of Social Services.

Recommendations

The following recommendations for the provision of general government facilities going forward have been compiled with the assistance of Spotsylvania County Public Works. Capital Project recommendations for general government identified below have their basis in the aforementioned studies and continued monitor of existing conditions considering departmental feedback and personnel to workload ratios as described above. These projects remain as projects targeted for implementation to address relatively short-term needs.

Capital Projects Needs

(1) 50,000-60,000 sq.ft. new build in the Spotsylvania Courthouse area for the Department of Social Services and VA Department of Health offices.
(2) Construction of a joint use complex along Gordon Road, specifically Tax Map# 21-A-84 for Spotsylvania County Utilities and Public Works. Also see Parks and Recreation and Water and Sewer Elements of Public Facilities Chapter concerning this site.

Future Planning Needs

(1) Review and update the County's space needs assessment and recommendations for future long-term capital project needs.

Chapter 5

HISTORIC RESOURCES PLAN

INTRODUCTION

Spotsylvania County has a proud tradition of Historic Preservation. This element continues that proud tradition while ensuring that the property rights of Spotsylvania County landowners are not violated by the goals, objectives or implementation strategies of this element. The County aspires to achieve these goals and objectives, however, it is important to emphasize that they are voluntary in nature.

HISTORY

The same accidents of geography that brought war, destruction, and eternal fame to Spotsylvania County between 1861 and 1865 are now combining to alter the County's landscape in a much more permanent way than the Civil War ever could. Those changes are coming at such a rapid pace that immediate action is critical.

Early Virginia historic transportation corridors in Spotsylvania County tended to follow water courses east and west providing routes for the products of agriculture and industry to find their way to market. With the establishment of cities and towns along the Fall Line, north-south travel along roads and later rails gained greater importance. These factors, combined with Spotsylvania County's position midway between Washington, D.C. and Richmond, destined the County to be the prime battleground of the Civil War, as peacetime avenues of commerce became avenues of invasion.

Today, proximity to Washington, D.C. and Richmond and 20th century innovations in both highway and rail travel along the traditional north-south corridor have transformed much of Spotsylvania County into a sprawling bedroom community favoring the homogenized corporate and residential architecture of suburban America. In the last 20-30 years, much of that change has been so dramatic that former residents can scarcely recognize the landscape of their youth. These changes are most notable in growth areas of the County, especially within the Primary Development Boundary.

As the County enters the 300th anniversary of its founding within the Planning period (2021), the purpose of this Preservation Plan is to grapple with the difficult issue of how to accommodate growth and still preserve the character-defining nature of the County that makes it such a desirable place to live and which draws visitors from across the Country, if not from around the world. Key to the plan is to identify those resources and characteristics that make the County unique; but, more than that, the plan suggests actions that should be taken by government, the business community, and individuals to preserve a special heritage and sense of place before they are lost forever.

Within Spotsylvania County, the Spotsylvania Museum and Spotsylvania County Tourism are chiefly involved in the promotion and enhancement of historic resources throughout the County with a focus that includes and goes well beyond the Civil War history for which the County is highly known. As outlined within the Historic Resources Appendices (Appendix C), Spotsylvania County history, settlement, culture cannot be defined solely within the four-year period associated with the American Civil War. The various time periods exhibited within the Appendix

provide an abundance of opportunities to "tell the story" and preserve parts of Spotsylvania County's history. There are public, private, and non-profit opportunities to enhance historic resources preservation and interpretation within the County. A number of Historic Resources Policies and Strategies identified within this Plan are aimed at realizing such opportunities.

National Park Service

Federally, the National Park Service directly owns or has easements upon nearly 7,300 acres within Spotsylvania County. The acreage is regionally managed as part of the Fredericksburg and Spotsylvania National Military Park that includes preserved Civil War battlefields associated with the Battles of Fredericksburg, Chancellorsville, Wilderness, and Spotsylvania Courthouse. More information regarding the Fredericksburg and Spotsylvania National Military Park can be found **HERE**.

Virginia Department of Historic Resources

The Virginia Department of Historic Resources (DHR) is the State Historic Preservation Office. DHR fosters, encourages, and supports the stewardship and use of Virginia's significant architectural, archaeological, and historic resources as valuable assets for the economic, educational, social, and cultural benefit of citizens and communities. DHR offers a wide array of resources devoted to the research and documentation, preservation, and interpretation of resources throughout Virginia, including Spotsylvania County. A link to Virginia DHR can be found **HERE**.

Greater Fredericksburg Tourism Partnership

The Greater Fredericksburg Tourism Partnership is a regional tourism collaboration promoting regional tourism attractions (including historic sites) and complementary accommodations (food, lodging), within the Fredericksburg Region that includes the City of Fredericksburg, Spotsylvania County, Stafford County. Together with the Commonwealth of Virginia, the Greater Fredericksburg Tourism Partnership operate a regional tourism website that can be found **HERE**.

Spotsylvania County Museum

The County Museum's mission is to support Spotsylvania County citizens, Spotsylvania County leadership and the American public by moving toward a "world-class museum" dedicated to the collection, accountability, preservation and interpretation of Spotsylvania County's cultural and natural history, enhancing community cohesion and economic development through education and programs for the County's citizens and the American public, with a special emphasis on the Civil War. The "bricks and mortar" museum archives County historic resources, offers historical exhibits, virtual online exhibits, resources for genealogy, and a gift shop. A link to the Spotsylvania County Museum can be found **HERE**.

Spotsylvania County Tourism

Spotsylvania County Tourism promotes County tourism attractions including a variety of historic and cultural attractions, recreation, entertainment, events, and complementary

accommodations for food and lodging. Historic Tours of the County presently linked on the Tourism website include: Courthouse Historic District Web Tour, Trolley Winery Tours and a Bit of History, African American Heritage Tours, John Cummings- Battlefield Guide Service, and Scott Walker- Hallowed Ground Tours.

Additional resources within the County of historic interest include, but are not limited to: African American Heritage Trail, John J. Wright Museum and Cultural Center, Rappahannock Railroad Museum, Shannon Air Museum, Spotsylvania County Visitor Center. More information regarding Historic and Cultural Resources promoted by the Tourism office can be found **HERE**.

THE CODE OF VIRGINIA - ENABLING LEGISLATION

The Virginia Constitution and the Code of Virginia grant authority to Virginia jurisdictions to protect their historic resources. Section 15.2-2224 of the Code of Virginia requires that certain surveys and studies be made in preparation of the Comprehensive Plan. Related to historic resources, the County can either survey and study historic areas or list historic areas identified and surveyed by the Department of Historic Resources in the Comprehensive Plan. Spotsylvania County has surveyed and studied historic resources and the documentation of that study is found in Appendix C.

Enabling legislation exists in the Code of Virginia to allow jurisdictions such as Spotsylvania to adopt a historic overlay district, which the County has in Chapter 23, Zoning, Code of the County of Spotsylvania. Spotsylvania County's Historic Overlay District Ordinance and Comprehensive Plan are the foundation for the County's historic preservation program. In partnership with the Fredericksburg and Spotsylvania National Military Park, Spotsylvania County should promote and protect the four Civil War battlefield parks in the County. Voluntary measures, including protection and advocacy efforts by private and non-profit groups, are an essential part of the County's preservation program. Additionally, the County should set an example for the community in its stewardship of its historic buildings.

HISTORIC RESOURCES POLICIES AND STRATEGIES

This Plan contains goals, policies and strategies that aim to preserve the County's many resources and its successful implementation ultimately rests in the hands of the community. Historic and Cultural Preservation should be undertaken on behalf of the citizens of the County. The stakeholders in this endeavor – property owners, land developers, local government, preservation groups, and interested citizens – must have viable and creative tools to be good stewards of their historic and cultural resources. The adoption and implementation of this Plan provides the tools and focuses efforts to ensure the future of our historic and cultural resources.

GOAL: Spotsylvania County is known for the beauty of its agricultural and rural environment and for its wealth of historic and cultural resources. Spotsylvania recognizes that these assets are essential components of its identity, with an economic value worthy of protection. Spotsylvania County seeks to preserve and promote these resources through the following policies and strategies.

Policy 1: Encourage and promote the voluntary protection and preservation of scenic, historic, cultural, architectural, and archaeological resources.

Strategies:

1. Support the voluntary designation of National and State, historic register sites.
2. Support the preservation of resources with local, state, or national significance.
3. Promote the continuance and expansion of the Agricultural/Forestal District program to promote agricultural land preservation and protection of the rural farm and forest character of the county.
4. Promote and protect agriculture, forestry, and open space as the primary use of land in rural areas to promote the scenic character and economy of this area of the County.

Policy 2: The County should support projects that consider and mitigate the impact of development projects on historic and cultural resources during the rezoning, special use, and capital project planning processes.

Strategies:

1. Development applications and staff reports should identify historic and cultural resources in proximity to proposed rezoning, special use, or capital project, and evaluate the impacts of the project on the resources in question.
2. Consider appropriate architectural treatment, transitions, and/or buffering between development projects and National or State historic register sites to prevent or minimize degradation of the historic property.
3. The County should support efforts to preserve important scenic and historic lands through easements or dedicated open space.
4. The County should support efforts that propose to protect scenic viewsheds, scenic byways, and rural character outside of the Primary Development Boundary.
5. The County should support efforts that propose to preserve or rehabilitate historic structures within the design of new development projects.

Policy 3: Integrate historic and cultural preservation goals with economic development, tourism, capital facility, and public safety goals.

Strategies:

1. Develop procedures involving maintenance and care for County owned cultural and historic resources.
2. Work with the National Park Service to solve critical road and public safety issues facing the community within or in close proximity to battlefield parks to ensure that necessary improvements can occur while minimizing impact to the battlefield park.
3. Foster a strong and complementary relationship between tourism promotion and historic preservation efforts, including the promotion and awareness of the County's historic resources through the economic development efforts associated with the tourism industry.

Policy 4: Enhance public understanding and appreciation of the unique nature of Spotsylvania County's history, culture and character.

Strategies:

1. Maintain a GIS-based inventory of historic, archaeological, and cemetery resources.
2. Consider expanding scenic byway designations within the County to emphasize the importance of viewshed and character sensitive design of development proposals along such corridors.
3. Work with the National Park Service to enhance the Civil War visitor experience to both the battlefield parks and County in general.
4. Develop additional heritage tourism trails to promote new historic tourism ventures that capitalize on Spotsylvania history, including such topics as mill sites, gold mines, churches, etc.
5. Collaboration with the University of Mary Washington that will enable students to put their knowledge to use while acquiring hands-on experience and, at the same time, helping the County implement strategies of the Historic Preservation Plan.
6. Collaborate with local non-profit preservation organizations to hold historic preservation workshops and other historic awareness activities.
7. Continue to support living history related events including but not limited to the County's 300-year anniversary, Civil War reenactments.
8. Where appropriate, support projects that incorporate historic markers and/or signage documenting historic figures, groups, events, or architecture of local, state, or national significance associated with the project area.

Chapter 6

NATURAL RESOURCES PLAN

INTRODUCTION

Spotsylvania County's natural resources play a significant role in defining its character and environmental health and also play a role in its economic activities, helping support local tourism and employment. The County's rich heritage and character have been an important aspect of the high quality of life as well as a source of pride for residents.

As presented in this Chapter, the Plan contains policies and strategies that aim to promote the consideration of, and protection of the County's sensitive natural resources. The primary themes of these strategies address resource identification and protection, education and public awareness, and expanded economic opportunities as a means to build value into the preservation of County resources. Implementation of natural resource policies and strategies should be undertaken on behalf of the citizens of the County. The stakeholders in this endeavor – property owners, land developers, local government, preservation groups and special interest groups, and interested citizens – must have viable and creative tools to be good stewards of their natural resources. The adoption and implementation of this Plan helps guide efforts to ensure a future for our natural resources.

THE CODE OF VIRGINIA - ENABLING LEGISLATION

This element along with its corresponding appendices (Appendix D) have been compiled to comply with the Code of Virginia Sec. 15.2-2224, Surveys and studies to be made in preparation of plan; implementation of plan, Sec. 15.2-2223.2, Comprehensive plan to include coastal resource management guidance, and 9VAC25-830-170, Comprehensive Plans, per the Chesapeake Bay Preservation Area Designation and Management Regulations. Additionally, the information is an educational resource for the community, offering valuable insights into environmental resources. It is also a critical resource for land use planning within Spotsylvania County.

Natural Resources survey and study materials can be found within the Natural Resources Appendix D. Due to their nature providing background, inventory, or reference information as opposed to providing guidance or offering land use direction, such information has been located in Appendix D of this Comprehensive Plan. Natural Resource topics covered include, but are not limited to: (1) Soils and Groundwater, (2) Water Reservoirs and Dam Break Inundation Zones, (3) Wetlands, Watersheds, and Streams, (4) Identification of Protection Policies, (5) Vegetation and Wildlife, (6) Forestry, (7) Production of Food and Fiber, (8) Land Conservation.

NATURAL RESOURCES POLICIES AND IMPLEMENTATION STRATEGIES

Policy 1: Balance the protection of environmental resources and natural wildlife habitats with development.

Strategies:

1. The County should support the mitigation of impacts upon unique and/or endangered resources including rare species (See Natural Resources Appendix D, Table 9) and their habitats as part of the development review process.
2. Catalog open space and greenways in GIS in order to promote systematic linkages and connections where feasible to establish wildlife corridors.
3. Encourage land development practices, which minimize impervious cover to promote groundwater recharge, and/or tree preservation.
4. Encourage the use of the voluntary tree preservation credit described in the Design Standards Manual that is available as a tool to reduce clear cutting and protect existing trees on a development site.
5. Encourage recycling.
6. Enhance litter control efforts including enforcement and cleanup along County roadways.
7. Reduce long term energy costs for County buildings through energy audits and energy efficiency improvements to achieve greater savings.
8. Support the maintenance and growth of the local forestry industry, local food and fiber production (agriculture), and mining.
9. Promote multiple uses of forested land where appropriate such as outdoor recreation, wildlife habitats, watershed protection, and timber harvesting.
10. Locate land uses where their tolerance is compatible with existing or proposed noise levels and/ or reduce impacts though vegetative buffering or building design.
11. Protect designated open space, agricultural and forestal land use areas for their intended uses. Support new approaches to enable landowners to generate revenue from these land uses.
12. Promote conservation and/or planting of forests (reforestation) within three-hundred (300) feet of perennial streams, lakes and reservoirs.
13. Support efforts to manage or reduce invasive plant species in favor of native, non-invasive varieties.

Policy 2: Protect the County's potable water resources.

Strategies:

1. Review all applications for extraction of mineral resources to prevent irreversible impacts to the environment, impacts to existing development and to ensure reclamation (assuring re-use potential and/ or non-contamination) for future development.

2. Consider exhausted or closed quarry sites as possible recreational lakes and/ or water reservoirs.
3. Seek groundwater hydrology studies for development proposals increasing density or intensity of development reliant on well water.

Policy 3: Seek to create public/ private partnerships to promote and protect natural resources while integrating natural resource goals with community and economic development, tourism and, public safety goals.

Strategies:

1. Promote public and private cooperation in the preservation of environmentally sensitive areas for public open space, park, and recreation activities having minimal impact on the site.
2. Identify and make available a list of resources, including existing programs and potential funding sources that community members may like to pursue to improve environmental conditions.
3. Support development of a County Wildland Fire Mitigation Plan in partnership with the Virginia Department of Forestry.
4. Consider guidance of the latest Regional Hazard Mitigation Plan, hereby incorporated by reference.

Policy 4: Investigate the feasibility of providing additional public access points for boating (incl. canoe, kayak), fishing along the Rappahannock River and Lake Anna. The access points should be developed only after soil stability has been determined and an appropriate method has been designed to minimize erosion and its subsequent sedimentation impact.

Strategies:

1. Consider selling County land along navigable waterways or, where feasible, working with private developers and/ or regional or state agencies to speed up and promote private development with public water access.

Policy 5: Promote Natural Resource Protection through Education.

Strategies:

1. Include education areas in parks for observing and learning about the natural and physical environments, including ecology, wildlife, plants, geology, hydrology, and landforms.
2. Continue to pursue development of a fresh water mussel farm along the Massaponax Creek Corridor.

Policy 6: Consider Virginia Institute of Marine Science Guidance.

The following coastal resource guidance, provided by the Virginia Institute of Marine Science (VIMS) applies to the tidal extent of the Rappahannock River. The County is working to create its own shoreline and eco environment document to address the non-tidal tributaries, streams, creeks and rivers. County environmental staff is currently working with Caroline County on researching non-tidal tributaries, creeks, streams and river shoreline restoration and preservation that will address our common watersheds and will be easily adaptable for the entire County.

1. Refer to the guidance presented in the locality's Comprehensive Coastal Resource Management Plan (CCRMP) prepared by VIMS to guide regulation and policy decisions regarding shoreline erosion control.
2. Utilize VIMS Decision Trees for onsite review and subsequent selection of appropriate erosion control/shoreline best management practices: http://ccrm.vims.edu/decisiontree/index.html.
3. Utilize VIMS' CCRMP Shoreline Best Management Practices for management recommendation for all tidal shorelines in the jurisdiction.
4. Consider a policy where the above Shoreline Best Management Practices become the recommended adaptation strategy for erosion control, and where a departure from these recommendations by an applicant wishing to alter the shoreline must be justified at a hearing of the board(s).
5. Encourage staff training on decision making tools developed by the Center for Coastal Resources Management at VIMS.
6. Follow the development of the state-wide General Permit being developed by VMRC. Ensure that local policies are consistent with the provisions of the permit.
7. Evaluate and consider a locality-wide permit to expedite shoreline applications that request actions consistent with the VIMS recommendation.
8. Seek public outreach opportunities to educate citizens and stakeholders on new shoreline management strategies including Living Shorelines.
9. Follow the development of integrated shoreline guidance under development by VMRC.
10. Evaluate and consider a locality-wide regulatory structure that encourages a more integrated approach to shoreline management.
11. Consider preserving available open spaces adjacent to marsh lands to allow for inland retreat of the marshes under rising sea level.
12. Evaluate and consider cost share opportunities for construction of living shorelines.