

Adopted by the Frederick County Board of Supervisors – November 10, 2021

ACKNOWLEDGEMENTS

The Comprehensive Plan for Frederick County was adopted by the Frederick County Board of Supervisors on November 10, 2021, upon the recommendation of the Frederick County Planning Commission on October 20, 2021.

THE BOARD OF SUPERVISORS

CHARLES S. DEHAVEN, JR., CHAIRMAN

ROBERT W. WELLS, VICE CHAIRMAN	BLAINE P. DUNN
JUDITH MCCANN-SLAUGHTER	SHAWN L. GRABER
J. DOUGLAS MCCARTHY	DAVE STEGMAIER

THE PLANNING COMMISSION

KEVIN W. KENNEY, CHAIRMAN

ROGER THOMAS, VICE-CHAIRMAN

GARY R. OATES CHARLES E. TRIPLETT CHRISTOPHER MOHN H. PAIGE MANUEL

BETSY BRUMBACK

ROBERT MOLDEN JOHN F. JEWELL ALAN L. MORRISON KAY DAWSON WILLIAM H. CLINE ELIZABETH KOZEL

THE COMPREHENSIVE PLANS AND PROGRAMS COMMITTEE

CHRISTOPHER MOHN, CHAIRMAN

CHARLES E. TRIPLETT, VICE-CHAIRMAN	KATHRYN MCCANN-SLAUGHTER
GARY R. OATES	GREG POOLE
JAMES W. GOLLADAY, JR.	KEVIN W. KENNEY, EX-OFFICIO
H. PAIGE MANUEL	ROGER L. THOMAS, EX-OFFICIO
ROBERT MOLDEN	Frank Wright – School Board

PURPOSE OF THE PLAN	ii
CORE VALUES	iv
IMPLEMENTING THE PLAN	v

THE PLAN

I.	URBAN AREAS	1-9
11.	RURAL AREAS	10-18
111.	RESIDENTIAL DEVELOPMENT	19-22
IV.	BUSINESS DEVELOPMENT	23-37
	 i. Office and Industrial ii. Retail iii. Tourism iv. Agribusiness 	
V.	TRANSPORTATION	38-58
VI.	PUBLIC FACILITIES	59-82
VII.	NATURAL RESOURCES	83-100
VIII.	HISTORICAL RESOURCES	101-106

APPENDIX I – COMMUNITY AREA PLANS

APPENDIX II – BACKGROUND ANALYSIS AND SUPPORTING STUDIES

TABLE OF MAPS

URBAN AREAS AND RURAL AREAS	2
EASTERN FREDERICK COUNTY LONG RANGE LAND USE PLAN	8
POTENTIAL NEIGHBORHOOD VILLAGE AND URBAN CENTERS	9
AGRICULTURAL AND FORESTAL AREAS	17
TRANSFER OF DEVELOPMENT RIGHTS	18
EASTERN FREDERICK COUNTY ROAD PLAN	55
EASTERN FREDERICK COUNTY ROAD PLAN - CROSS SECTIONS	56
EASTERN FREDERICK COUNTY ROAD PLAN - CLASSIFICATIONS	57
TRANSPORTATION – CURRENT NEEDS PROJECTS	58
POTENTIAL NEW SCHOOL LOCATIONS	66
POTENTIAL NEW COUNTY PARK LOCATIONS	70
AIRPORT SUPPORT AREA	75
SEWER AND WATER SERVICE AREA, UDA, & WATER & SEWER LINES	81
MAJOR WATERSHED DRAINAGES	88
SENSITIVE NATURAL AREAS	91
TUSCARORA TRAIL	98
CIVIL WAR BATTLEFIELDS AND SITES	105
Possible Historic Districts	106

INTRODUCTION

- PURPOSE OF THE PLAN
- CORE VALUES
- THE CODE OF VIRGINIA LEGAL BASIS FOR THE PLAN
- IMPLEMENTING THE PLAN
- COMPREHENSIVE PLAN AMENDMENTS

"The Comprehensive Plan is the guide for the future growth of Frederick County."

PURPOSE OF THE PLAN

The Frederick County Comprehensive Plan (The Plan) addresses the future growth of Frederick County for its citizens, highlights its rich history, and strives to further this great community. The Plan is guided by the *Vision Statement* and *Core Values* crafted and adopted by the Frederick County Board of Supervisors.

The Plan is a vital tool that provides direction for future growth, aimed at ensuring orderly well-planned development to promote, preserve and protect the health, safety, general welfare, and quality of life for the citizens and businesses of Frederick County.

Comprehensive Plans are general in nature; their purpose is not to regulate, but rather to guide land use, transportation, public facilities, infrastructure, and resources decisions. The Comprehensive Plan is a living document that focuses on the next twenty years by providing guidance for development decisions. The Plan should be amended in response to new information or changes in circumstances, without straying from its underlying vision and goals.

2030, 2035 COMPREHENSIVE PLANS & THE 2021 UPDATE

In 2010 the County began a complete rewrite of the Plan, which was completed and adopted 2011 (2030 Comprehensive Plan). This endeavor involved public outreach meetings and collaboration with citizen volunteers who assisted with drafting new chapters. This document provided a foundation for the 2035 Comprehensive Plan (update adopted in 2017) and this 2021 update. This updated Plan was guided by the Frederick County Planning Commission, through the efforts of the Comprehensive Plans and Programs Committee (CPPC) and the Frederick County Department of Planning and Development Staff. This Plan will continue to guide the County as it seeks to implement the County's vision as expressed by the Board of Supervisors.

CORE VALUES

The Frederick County Board of Supervisors provided the framework for the Comprehensive Plan. The Plan's future focus, goals, and strategies were crafted to reflect the Vision Statement and Core Values of the Board of Supervisors, approved on December 9, 2009.

Board of Supervisors Vision Statement:

"Ensuring the quality of life of all Frederick County Citizens by preserving the past and planning for the future through sound fiscal management."

Board of Supervisors Core Values:

- A government that is accountable and dedicated to providing responsible stewardship for County funds and to ensure the citizens receive the best services possible for the funds expended.
- A government concerned with long range planning that protects our rural heritage and directs its future growth through planned infrastructure.
- A government concerned with expanding commercial and industrial tax base in order to insure a viable and thriving economy.
- A government that looks to the future and implements plans to ensure that the quality of life for future generations is preserved.
- A government that emphasizes a quality education through a cooperative effort with the School Board.
- A government that recognizes the importance of maintaining a highly trained public safety program to provide efficient services and protection to County citizens.
- A government that promotes the spirit of cooperation with its regional local government partners and, in particular, the City of Winchester.
- A government unit based on honesty, trust, integrity, and respect that understands the importance of clear communication and a willingness to listen.

THE CODE OF VIRGINIA - LEGAL BASIS FOR THE PLAN

The Code of Virginia (**Section 15.2-2223**) requires localities to adopt a comprehensive plan for the physical development of jurisdictions. The code requires that consideration be given to existing conditions and growth trends. The purpose of a plan is to guide and accomplish a coordinated development of the jurisdiction to promote the health, safety, prosperity, and general welfare of the community. The plan should be used to protect and enhance the high quality of life our citizens enjoy today, and the probable needs of future county citizens, in order to maintain that quality of life in the foreseeable future.

A comprehensive plan provides a blueprint for the future by laying out a framework for growth and development. It establishes goals, objectives, policies, and implementation techniques that will provide the tools to help the decision makers guide the County's future development. The plan coordinates transportation, utilities, schools, and other public infrastructure needs with anticipated growth and development.

As required by the Code, the plan must be reviewed at least every five years and may be amended as necessary.

IMPLEMENTING THE PLAN

The Plan contains chapters that focus on particular aspects of the County's Vision for the Future. The chapters address: Urban Areas, Rural Areas, Residential Development, Business Development, Transportation, Public Facilities, Natural Resources, and Historic Resources.

The chapters of The Plan are simple, each describes where we are today and where we see ourselves in the future. The Chapters provide goals and strategies of implementation, and they illustrate the benefits of the implementation of this focus for the future.

Each of the chapters that make up the Plan have been structured to provide goals for where we desire the Community to be and strategies that provide guidance on how to get there. The ultimate goal is to make the Plan implementable, and by extension, achieve the Community's vision for the future of Frederick County.

The Plan is supported by two Appendices:

Appendix I includes the County's Area Plans, these area plans are the key land use planning documents which implement the policies of the Plan in specific, geographic areas of the County. The Area Plans are instrumental in future planning efforts of the County. Developed over the past couple of decades, the individual Area Plans have helped to guide the growth and development of areas of the County experiencing growth pressures. In the future, the Area Plans will be used as a guide in making land use decisions that meet anticipated growth demands, assure a viable community, and maintain a high quality of life for its citizens.

Appendix II provides background analysis and studies in support of The Plan.

SUPPORTING PLANNING DOCUMENTS

In addition to the comprehensive plan, other tools utilized to manage the County's growth and development include, but are not limited to the Official Zoning Map, the Zoning and Subdivision Ordinances, Rezonings, Subdivision and Site Plan Regulations, and the Capital Improvement Plan (CIP).

Frederick County will utilize all available planning tools. To ensure that as new areas of urban uses are established, roads and public facilities of sufficient capacity are provided to serve the new areas.

Rezoning requests should be evaluated to determine their potential impacts on transportation and public facilities. Applicants will be expected to contribute a reasonable portion of the costs of new or expanded infrastructure needed to serve their proposed development. Costs to the County should be estimated in terms of what impact the development, which could result from the proposed rezoning, would have on public facilities and infrastructure. Such contributions can be in the form of cash, dedicated land, or constructed improvements or in any other manner consistent with the Code of Virginia.

Rezoning requests should not be approved unless the net impacts on public facilities are positive, or unless the negative impacts can be adequately mitigated through proffered contributions or other acceptable means. A request for rezoning may also be turned down even though all fiscal impacts appear to be addressed.

The Plan is also a key resource for developing the County's Capital Improvement Plan (CIP). The CIP is a capital facilitates planning document which consists of a schedule of major capital expenditures for the County for the ensuing five years. The CIP is updated each year as projects are completed, priorities change, or new projects are added. The CIP is based on the guidelines outlined by the Comprehensive Plan and uses those guidelines to implement a balanced approach for the planning and development of capital projects. Adopted annually, the Capital Improvements Plan becomes a component of the Comprehensive Plan.

In addition, the transportation elements of the Comprehensive Plan have been reviewed by the Virginia Department of Transportation (VDOT) in accordance with 15.2-2222.1.

COMPREHENSIVE PLAN AMENDMENT PROCESS

The Code of Virginia, Section 15.2-2229, states that the Board of Supervisors may consider amendments to its Comprehensive Plan. 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.

With requests to amend the Plan, applicants should demonstrate any change in land use designation, density, or intensity:

- Would benefit the public health, safety, and welfare.
- Is consistent with the Goals, Objectives, and Policies of the Comprehensive Plan.
- 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.
- Will result in benefits (fiscal, aesthetic, employment, etc.) that will outweigh any significant impact of the change.

I. URBAN AREAS

Frederick County's Urban & Rural Areas



eas



nountain



ARDST



3 Miles

Irban

URBAN AREAS

CURRENT CONDITIONS

The Urban Development Area (UDA) of Frederick County includes those areas anticipated for higher intensity development which are located within the limits of the Sewer and Water Service Area (SWSA). The SWSA designates the limit of where public sewer and water could be extended. Frederick County established its initial UDA boundary in 1987.

This Plan recognizes the need to direct new residential, commercial, and industrial growth into the Urban Areas and discourage growth in the Rural Areas; the UDA and SWSA provide a clear boundary between these two areas. Using the UDA and SWSA as urban growth boundaries, Frederick County seeks to focus growth in strategic areas where community facilities and public services are more readily available. It is expected that development within the UDA and SWSA will be served by public water and sewer. The UDA defines the general area in which more intensive forms of residential development will occur. Commercial, industrial, and institutional land uses are also identified within the UDA in designated areas. While the boundaries of the UDA and the SWSA are consistent in many locations, the SWSA does extend beyond the limits of the UDA to promote commercial, industrial, and institutional land uses are not desirable.

Future planned land uses are depicted in the various Area Plans which are compiled in Appendix I. These Area Plans contain both guiding text and future land use maps that provide a detailed land use guide for the designated area. The plans have been created over time, through a community planning process, and are incorporated as part of the Comprehensive Plan. The individual Area Plans make up the Eastern Frederick County Long Range Land Use Plan.

Suburban development within the Urban Areas continues to be the predominant land use pattern for residential use, with an average residential density between two to four units per acre. More recently, the densities for new residential development have been increasing. While the County will continue to see suburban-style growth, residential densities higher than those previously experienced in the UDA would be appropriate within specifically designated areas identified as neighborhood villages and urban centers (further described on page 4).

The boundary of Frederick County's UDA should be examined regularly to ensure that it is adequately sized to accommodate current and projected growth. Policies should also be regularly reviewed to ensure that the UDA encourages a mixture of housing types. It should be recognized that the size of the urban areas (both UDA and SWSA) will also be affected by the ability to provide water and sewer service to accommodate future development.

Historically, Frederick County has sought to achieve a balanced ratio between commercial, industrial and residential growth in terms of both available areas of land use and taxable value of the land uses. Residential development, although necessary to accommodate population growth, on average does not pay for itself. To offset this and mitigate any increased tax burdens on current residents, a fiscally balanced amount of commercial and residential

development is achieved through land use planning. The target ratio for the urban area shall be 25 percent commercial and industrial land uses and within the urban areas to 75 percent residential and other land uses throughout the County as a whole.

To encourage future development of commercial and industrial uses to achieve the targeted ratio, Frederick County has designated certain areas that are predominately planned for future commercial and industrial uses. These include such areas as the Route 11 North corridor, Kernstown area, Round Hill, the 277 Triangle Area, and in the vicinity of the Winchester Regional Airport.

FOCUS FOR THE FUTURE

The urban areas will continue to be designated for more compact and intense development patterns. The location of new and expanded public facilities, services and utilities will be focused in these areas. Improvements to the utility system, road networks, and public facilities may be required to support land development in these areas.

New residential suburban development should be designed with high-quality residential standards and mitigate potential impacts. Opportunities for providing pedestrian and biking connections to existing neighborhoods should be encouraged where appropriate. Section III of this Plan provides additional policies and guidance for future residential development.

The strategic growth areas, identified as neighborhood villages and urban centers shall promote higher urban densities, mixed uses, and a more compact form of development.

Neighborhood Villages

Neighborhood villages are envisioned to be compact centers that focus and complement the surrounding neighborhoods, are walkable, designed at a human scale, and supported by existing planned road networks.

Urban Centers

Urban centers are larger than the Neighborhood Village and are envisioned to be a more intensive, walkable urban area with a larger commercial core, higher densities, and designed around some form of public space or focal point. Urban centers should be located in close proximity to major transportation routes and intersections.

Development of these strategic growth areas would aid in attracting new skilled, creative, and entrepreneurial workers to the County. To attract new workers, the County needs to facilitate the creation of desirable, well-planned places in which they will want to reside. A variety of community choices, settings and prices needs to be fostered to accommodate a wide range of resident preferences. By fostering high quality communities centered around attractive social gathering spaces in mixed use environments, the County can attract new worker residents along with their employers. These areas should also provide for land uses that are connected by an attractive, efficient, transportation system designed for all users.

For any new use proposed within the urban areas, adequate roads, infrastructure, and public facilities with sufficient capacities to accommodate the new uses should be provided. Development proposals such as rezonings, are expected to identify and appropriately mitigate their impacts to ensure that they are not placing an undue burden on the community. Proposed uses should also seek to further implement the goals identified in this Plan.

COMMUNITY BENEFITS

There are numerous benefits to the community when focusing new growth in the urban areas.

When residential growth occurs outside of the designated growth boundaries, such as the rural areas, the County must extend public services such as schools and emergency services further distances. These expanded service areas increase the costs of operation while decreasing efficiency. Focused growth areas also reduce development pressures within the rural areas, thus helping to preserve agricultural land and open spaces.

Neighborhood Villages and Urban Centers

Incorporating planned neighborhood villages and urban centers, which are designated for higher densities and utilize Neighborhood Design principles will help to improve the sense of community and promote close knit, walkable areas where residents have greater opportunities to live, work, and play.

Commercial and Industrial

Dedicated areas for commercial and industrial development helps to ensure a strong tax base to provide public services and community facilities and provide for retail opportunities for the benefit of local residents.

GOALS/STRATEGIES

<u>GOAL 1</u>: As Frederick County continues to grow, it is essential that the vision of the Comprehensive Plan for the Urban Areas be implemented in order to accommodate growth in a viable manner. Growth should primarily be focused within the Urban Areas.

STRATEGIES:

• Focus new growth in the Urban Development Area (UDA) and Sewer and Water Service Area (SWSA).

- Monitor the size of UDA and the Sewer and Water Service Area (SWSA) to ensure appropriate land area is available to accommodate future residential growth and commercial and industrial opportunities.
- Ensure adequate water and sewer service capacity is available to accommodate new growth.
- Provide for various densities within the urban areas to encourage concentrated growth. Support a range of housing options in suburban areas, neighborhood villages and urban centers.

<u>GOAL 2</u>: PROMOTE THE NEIGHBORHOOD DESIGN PRINCIPLES AS IDENTIFIED IN THIS CHAPTER FOR NEIGHBORHOOD VILLAGES AND URBAN CENTERS.

STRATEGIES:

- Ensure land use applications incorporate the principles of Neighborhood Design identified in this chapter for neighborhood villages and urban centers.
- Further develop the neighborhood village and urban center concepts which promote strategic growth areas within the urban areas.
- Promote the location of community facilities as focal points within neighborhood villages and urban centers.
- Support high quality and innovative community designs within neighborhood villages and urban centers.

<u>GOAL 3</u>: Provide for Transportation Opportunities for all users Within the Urban Areas.

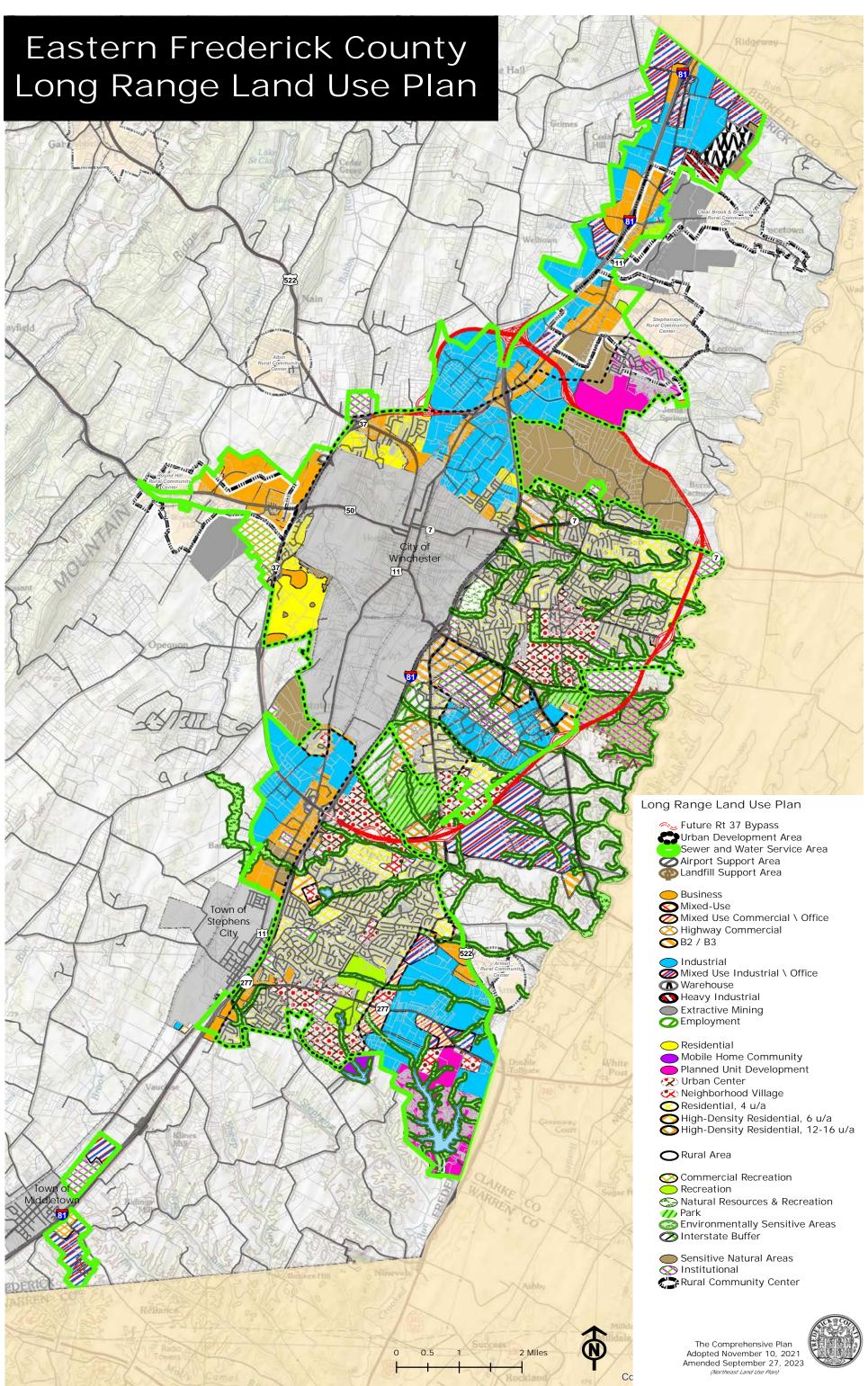
STRATEGIES:

- Ensure the bicycle plan included as part of the Comprehensive Plan provides for trail facilities in the desired locations.
- Encourage new developments to provide interconnected trail networks and on street shared travel ways.
- Connect "missing links" across existing developments to the extent possible.

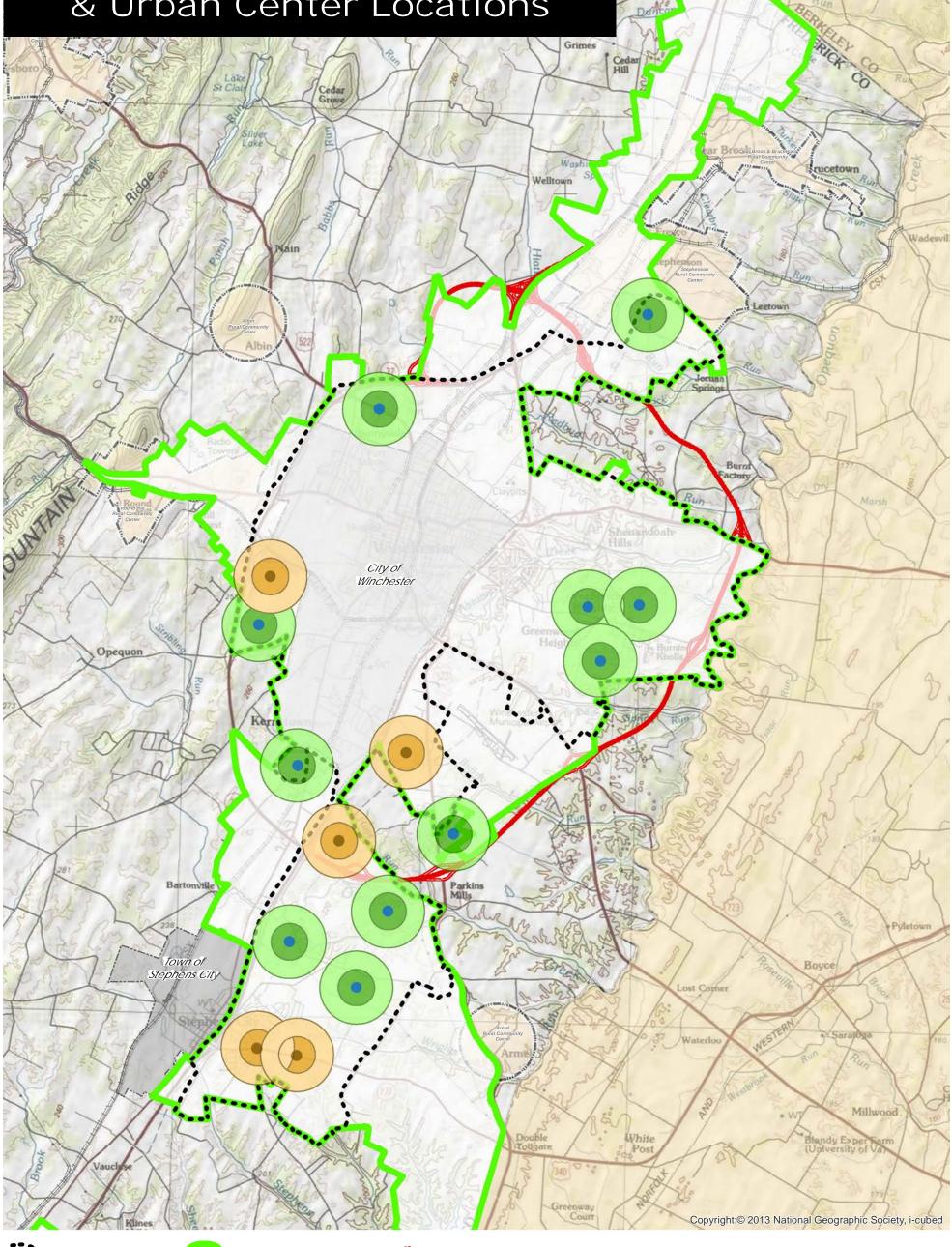
<u>GOAL 4:</u> OBTAIN 25/75 RATIO OF COMMERCIAL & INDUSTRIAL USES TO RESIDENTIAL AND OTHER LAND USES WITHIN THE URBAN AREAS OF THE COUNTY.

STRATEGIES:

- Ensure adequate services, including water and sewer infrastructure, are available to obtain target business users in a competitive market.
- Continue to work with Frederick Water to monitor the location of the SWSA and determine areas that could be modified to attract targeted users and continue to implement the Long-Range Land Use Plan.
- Continue to evaluate the availability of land for commercial and industrial land uses and incorporate sufficient acreage into Area Plans.
- Seek to attract uses that will generate the desired tax revenue and employment opportunities for the County.



Potential Neighborhood Village & Urban Center Locations



Urban Development Area 🛛 Sewer and Water Service Area 🥂 🎭 Future Rt 37 Bypass

The Comprehensive Plan Adopted November 10, 2021

Ridg

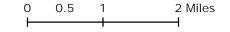


Potential Neighborhood Villages (with Ped Sheds (.25 & .5 miles))









II. RURAL AREAS



RURAL AREAS

CURRENT CONDITIONS

Frederick County's rural areas provide places for agriculture, forestry, protection and preservation of natural resources, and tourism. The rural areas best exhibit the nature, beauty, view sheds, and tranquility for which Frederick County is known. The primary land uses in the rural areas are agricultural and forestal operations. Of the County's 266,000 acres, approximately 243,000 acres are rural and located primarily west of Interstate 81. The remaining acreage comprises the Urban Development Area (UDA) Sewer and Water Service Area (SWSA) where residential, commercial, and industrial development is focused.

Agriculture

In 2017, the Federal Census of Agriculture identified 762 farms in Frederick County, with a total of 109,907 acres or approximately 41 percent of the land in the County. From 2012 to 2017, the total acreage in Frederick County farms grew by over 9,000 acres. This 9% growth in overall acreage may represent a real increase or it may be an effect of more persons reporting on their farm acreage.

Forestry is another important component of the County's agricultural economy. Managed well and logged in a sustainable manner, they provide a renewable source of income to landowners, taxes to the County, and timber products for many other users. Trees and forests provide many natural resource benefits prior to and after harvesting. The Agriculture Census showed the total percentage of land in farms comprised of woodland use as of 2017 to be 25 percent.

Residential Development

The rural areas of the County have traditionally seen about 30% of the County's new residential growth. With the exception of the County's Rural Community Centers, the predominant new residential development pattern has been five (5) acre lots or two (2) acre clustered lots with dedicated preservation tracts (discussed further below). It should also be noted that the band of prime agricultural soil which runs north-southwest of Interstate 81 is the same area where a majority of new rural residential growth has been experienced.

The handling of wastewater is a key differentiating feature for development in the rural areas. Residential uses in the rural areas are served by individual onsite sewage disposal systems and wells. The County encourages residential development in the urban areas where services and utilities are available and where such development will not conflict with agricultural and forestal uses, conservation efforts for natural resources and other objectives for the rural area. It is the County's policy that public infrastructure will be centralized in the urban areas. Minimizing the extension of public water and sewer infrastructure helps avoid more intense development within the rural areas. Within the rural areas of the County there are several established village-type developments called Rural Community Centers. There are currently twelve identified Rural Community Centers. These are:

Gore	Reynolds Store
GAINESBORO	ROUND HILL
Armel	SHAWNEELAND/NORTH MOUNTAIN
STAR TANNERY	WHITACRE/CROSS JUNCTION
ALBIN	CLEARBROOK/BRUCETOWN
STEPHENSON	WHITEHALL

These centers consist of small lot residences and commercial uses typical of a village. Four of the existing centers have been identified as potential receiving areas for the Transfer of Development Rights Program. There are currently no public water and sewer services available in these communities and therefore, the use of private utility systems would need to be investigated to facilitate future growth in these communities. Of the Rural Communities, Round Hill, has a small area plan which incorporates the community village area and commercial uses adjacent to U.S. 50, west of its interchange with the Route 37 By-Pass (see Appendix II – Area Plans).

Land Conservation Tools and Trends

Private property owners and farmers are truly the key land stewards in the County. These landowners have actively participated in voluntary preservation and land management programs through State, County, and non-profit organizations over the years. Approximately 22,800 acres of the County's land is currently in some form of conservation easement or land protection program. Also, the George Washington National Forest comprises over 8,000 acres in Frederick County. Overall, approximately 30,800 acres or 12 percent of the County's area is protected in some fashion.

Some of the management tools and incentives for the preservation of agricultural opportunities, and environmental resources are zoning and subdivision regulations, land use taxation, permanent conservation easements, purchase of development rights, transfer of development rights and Agricultural and Forestal Districts, each of which is discussed below.

Zoning and Subdivision Regulations

The Zoning and Subdivision Ordinance regulates the form of residential development seen in the rural areas today. The regulations are designed to assist in the protection and preservation of the agricultural uses and to mitigate land use conflicts between agricultural uses and appropriately limited residential development. The Zoning Ordinance takes two different approaches for subdividing land for rural development: traditional five acre lots or rural preservation (cluster) subdivisions. Both options have residential density of one house per five acres, but the preservation option allow lots as small as two acres while the remainder is conserved in a larger tract that could be utilized for agricultural purposes.

Use Value Assessment and Taxation Program

The Use Value Assessment and Taxation Program uses discounts in property tax assessments to promote and preserve agricultural, forestal, horticultural and open space lands. Use Value Assessment (also commonly known as "land use" or "land use assessment") is a state-guided program that allows localities to tax farmland and open space land at its "use" value rather than its fair market value. This program typically reduces the real estate tax on the land by a significant amount, thus making it easier to continue a farming business. The program is voluntary to the landowner and requires only five acres to qualify under open space classification or 20 acres under the forest use classification. Rollback taxes must be paid when the property is removed from the program.

Conservation Easements and Purchase of Development Rights

A conservation easement is a legal agreement between a landowner and a government and a land trust or government agency that limits the use of the land by recording deed restrictions that prohibit or severely restrict further development to protect the conservation value of the property, such as farmland, watersheds, wildlife habitat, forests and/or historical lands. Each easement is unique in terms of acreage, description, use restrictions and duration. These details are negotiated between the property owner granting the easement, and the organization that will be holding the easement.

Conservation easements are typically established in perpetuity but may be established for shorter periods. The easement allows a property owner to continue to own any underlying interest in the land that is not specifically limited by the easement, to use the land within the terms and restrictions of the easement, and to sell the land or pass it on to heirs (with the easement restrictions conveying with the land). Conservation easements do not permit public access unless specifically provided. Conservation easements may be established through purchase, lease (short term), or through donation. In these easement programs, the easement is established through the voluntary cooperation or initiative of the landowner.

When conservation easements are purchased as part of a broad government program, it is typically called "Purchase of Development Rights" or PDR. Purchasing "development rights" is the same as purchasing conservation easements or that portion of the "bundle of rights" that allows landowners to construct dwellings or non-farm commercial structures on the property. Thus, when a locality purchases a conservation easement from a landowner, it essentially "buys" the right to develop the land and "retires" that right by placing a permanent conservation easement on the property that restricts or prohibits further non-farm development. Typically, these easement restrictions run in perpetuity.

Transfer of Development Rights

In 2010, Frederick County adopted a Transfer of Development Rights (TDR) program which allows for dwelling unit rights to be transferred from qualified parcels located in the rural areas to designated properties within the Urban Development Areas. This tool provides landowners within the rural areas the ability to obtain development value from their land without having to subdivide and sell the land. The density rights from the land can be severed and utilized within the Urban Development Area where community facilities and public services can be provided more efficiently.

Agricultural and Forestal Districts

Frederick County currently has eight districts covering approximately 12,300 acres. Agricultural and Forestal Districts are voluntary rural protection zones that were established by the Commonwealth (Virginia Code § 15.2-4301), to conserve land for the production of agricultural products, timber, and the maintenance of open space as an important economic and environmental resource. By establishing a district and agreeing to continue using the property for qualifying agricultural uses, the locality and State in return agree to protect and enhance the land and not take any actions that would have a negative effect on agriculture or forestry during the term of the District.

FOCUS FOR THE FUTURE

Agriculture, forestry and conservation play an important role in the environment, heritage and economy of Frederick County. While the County's agriculture industry is likely to evolve into operations of a very different scale and intensity than currently seen, the County should continue to support and encourage new land uses in the rural areas, including supportive uses for agriculture. Policies and ordinance changes should be considered to promote the County's preferred uses for the rural areas, including supportive uses for agriculture, historic preservation, tourism, and strengthening land conservation initiatives. The Agribusiness section of the Business Development Chapter further promotes the evolution of agriculture in the County's rural areas.

The Rural Community Centers are focal points for the rural areas and should be examined to accommodate future residential growth. Small area plans for these communities should be studied and created, and approaches for water and sewer needs should be investigated.

The natural landscape should be used as the background of development with a greater emphasis placed on conservation design for growth within the rural areas. The inclusion of new recreational opportunities and the growth of existing ones within the rural areas are also encouraged.

COMMUNITY BENEFITS

The rural areas of the County provide benefits to the community in many ways. These areas not only contribute to the identity of Frederick County, they also provide jobs, recreation, and a way of life. Preserving and protecting the rural areas of Frederick County is important not only to ensure the economic viability of agricultural and forestal operations but to also guarantee that those lands are present for the use and enjoyment of future generations.

GOALS/STRATEGIES

<u>GOAL 1</u>: DIRECT NEW RESIDENTIAL GROWTH AWAY FROM THE RURAL AREAS, AND CLUSTER RESIDENTIAL DEVELOPMENT THAT DOES OCCUR TO PRESERVE AGRULTURAL LAND.

STRATEGIES:

- New residential development should continue to be directed into the urban areas.
- Preserve the desired physical characteristics of the rural areas. Avoid prime soils, minimize land disturbance and grading, and minimize drainage changes.
- Maintain transition areas between different uses, most importantly, between the rural and urban areas.
- Avoid, as applicable, Sensitive Natural Areas, Historic Districts, TDR sending areas, and Forestal Districts.
- Continue helping property owners find ways to keep properties intact rather than subdividing.

<u>GOAL 2:</u> SUPPORT THE GROWTH OF THE COUNTY'S RURAL COMMUNITIES.

STRATEGIES:

- Further define the boundaries for each Rural Community Center and small area land use plans for each center. These centers should remain the focal point of the rural community and their character and scale should be preserved.
- Plan for improved services within the neighborhood centers (wastewater treatment, package treatment, fire and rescue, and satellite County offices, library).
- Encourage appropriate mixes of residential, commercial and business uses within the Rural Community Centers.

<u>GOAL 3</u>: SUPPORT VOLUNTARY LAND PRESERVATION TOOLS AND THE LAND USE TAX DEFERRAL PROGRAM

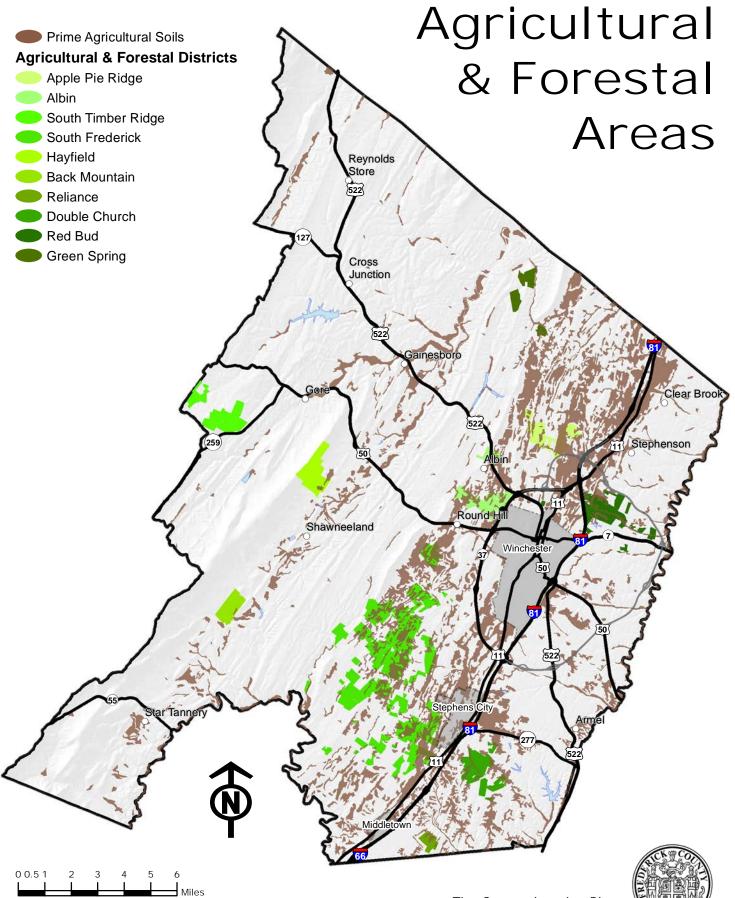
STRATEGIES:

- Support the Conservation Easement Authority (CEA) and the Purchase of Development Rights (PDR) program.
- Support the Transfer of Development Rights (TDR) Program, the Land Use Tax Deferral Program, and encourage growth of the County's Agricultural and Forestal Districts.
- Promote the use of conservation easements and support the Conservation Easement Authority through the County's Purchase of Development Rights Program.
- Participate in state grant programs to the greatest extent possible.
- Follow changes to state code that would enable new land preservation tools.
- Continue to support the work of conservation organizations in establishing and holding conservation easements and extinguishing residential development potential.

<u>GOAL 4</u>: SUPPORT AGRICULTURAL OPERATIONS AND RURAL RECREATION

STRATEGIES:

- Support the agricultural economy in Frederick County and adapt to evolving practices and new agricultural opportunities such as value added activities and uses on farms that are a logical extension of the agricultural use.
- Encourage conservation options that retain continuous land areas for agricultural uses; focus should be placed on areas with prime agricultural soils.
- Identify and support local, regional, and national rural recreation opportunities within the County's rural areas.



The Comprehensive Plan Adopted November 10, 2021



Sending Area #1

Designated Agricultural Districts Density Transfer 1 TDR Density Right = 2 Dwelling Units in the Receiving Area

Sending Area #2

Limestone/Carbonate Bedrock Areas Density Transfer 1 TDR Density Right = 1.5 Dwelling Units in the Receiving Area

Sending Area #3

Shale/Sandstone Area Density Transfer 1 TDR Density Right = 1 Dwelling Units in the Receiving Area

Receiving Areas

- Urban Development Area
- Per §165-302.02

0.0.5

Miles

- Rural Community Centers

Areas Not Qualified

for the TDR Program

Transfer of Development Rights

Round

Stepher

Citv

Winc

Urban

Development

Area

Urban Development Area

Sending Areas & Receiving Areas

Clear Brook

The Comprehensive Plan Adopted November 10, 2021



III. RESIDENTIAL DEVELOPMENT



RESIDENTIAL DEVELOPMENT

CURRENT CONDITIONS

Over the past two decades, residential development in Frederick County has continued to increase at a relatively consistent rate. According to studies performed by the Economic Development Authority (EDA), Frederick County remains primarily an in-commute location. This Plan also acknowledges Frederick County is also home to a large population of residents that commute out of the County for employment. One of the contributors to the County's population growth was the migration of people from inside of the Washington Metropolitan Statistical Area (WMSA) to Frederick County for a higher quality of life including lower housing costs and a lower tax rate. Frederick County, because of its location and excellent access to Northern Virginia and Washington, DC, has become a desirable place to live for those commuters. Frederick County has also become an attractive place to live for retirees.

Frederick County's housing stock includes a variety of homes in both suburban and rural settings. In recent years Frederick County has seen approximately two thirds of its new residential growth constructed in the Urban Development Area (UDA) and one third in the rural areas, including the Residential Recreational Communities (such as Lake Holiday, Lake Frederick, and Shawneeland).

The rural areas are home to the agricultural, forestal and open spaces of the County. Within the rural areas, the predominant types of residential units are single family dwellings with a density of one house per five acres. In addition to the traditional five acres lots seen in the past, dwellings at the same density can be clustered using a two-acre lot size with the remainder being preserved through a 60% preservation tract. The County also has a number of historic Rural Community Centers where residential uses are clustered. These rural community centers typically have smaller lot sizes, higher densities, and some commercial uses. Residential developments located in the Rural Areas, including Rural Community Centers are typically on private individual water and sewer systems.

The Urban Development Area (UDA) is the portion of the County which has been identified as the area where more intensive forms of residential development will occur accommodate the anticipated residential growth within the Community. While the UDA currently consists of primarily suburban residential types of development, with some multifamily units, particular areas have been identified to accommodate a more intensive mix of land uses and residential housing opportunities.

The UDA is designed to accommodate increased residential densities because it is adjacent to or in near proximity to necessary infrastructure and public facilities. These facilities include public water and sewer, schools, emergency services, and a transportation network more capable of handling the increased trips from higher density residential uses. To further encourage residential development in the Urban rather than Rural Areas, the County adopted a Transfer of Development Rights Program (TDR) in the spring of 2010. More information on the County's TDR Program can be found in the Rural Areas chapter of this Plan.

FOCUS FOR THE FUTURE

Residential growth in Frederick County is anticipated to continue. The County must ensure that land use policies are established to adequately direct and shape that growth. While new residential growth is expected in both the Rural and the Urban Areas, new residential growth should be focused primarily within the Urban Development Area (UDA) which is better suited to meet the needs of these new residences.

The County should continue to establish policies which result in attractive and welcoming residential neighborhoods which are able to accommodate a growing population. The County should strive to offer a variety of neighborhood and housing choices to attract younger populations that would help support a diverse and skilled workforce for the County. It is also important that housing opportunities be available to all household types and income categories.

The land use policies of the Urban Areas will further guide this residential development and community growth.

COMMUNITY BENEFITS

Proactive planning efforts are essential in both the Urban and Rural Areas to ensure that the County is able to deal with its future residential growth in a cost-effective and attractive manner.

Proper planning and land use policies enable the County to identify where future residential growth should be accommodated. It enables the County to plan for and provide infrastructure and services in defined areas where they can reach the majority of the population. By directing growth and services to the urban areas, the County can develop community facilities that become focal points to the residential areas.

GOALS/STRATEGIES

<u>GOAL1:</u> New residential development should be focused within the Urban Development Area (UDA).

STRATEGIES:

- Guide new residential development to areas that are served by public utilities, access to transportation networks able to serve higher intensities, employment areas, schools, recreation facilities and shopping facilities.
- The Urban Development Area should allow for housing that will meet the needs of first-time buyers, retiree's, move-up residences, and seniors.
- Higher density residential development is encouraged in close proximity to or mixed with commercial areas to enhance walkable access to employment,

shopping, and entertainment. The County's strategic growth areas, the Urban Centers and Neighborhood Villages, are the most desirable locations for this type of development.

• Continue to monitor the supply of land designated and zoned for residential use in the Urban Areas to ensure adequate capacity for future population growth.

<u>GOAL 2:</u> NATURAL SYSTEMS, OPEN SPACES AND FOCAL POINTS SHOULD BE INCORPORATED INTO NEW RESIDENTIAL DEVELOPMENT.

STRATEGIES:

- When new development occurs in the rural areas, the rural preservation option should be encouraged as the preferred subdivision form and design to preserve natural and environmental features.
- New residential neighborhoods should incorporate focal points, landscaping, recreational amenities, open space amenities (active, passive, and natural), located in close proximity to all dwellings, with an emphasis on the provision of usable open space that facilitate community interaction and promote a quality neighborhood development.

GOAL 3: ENCOURAGE NEW AND INNOVATIVE HOUSING CHOICES WHICH MEET THE NEEDS OF VARIOUS AGES AND INCOMES.

STRATEGIES:

- Residential housing types and design guidelines should be flexible to accommodate evolving demographic trends, and to ensure that housing choices are maximized.
- Ensure that adequate housing options are available to the development community through the Zoning Ordinance. Investigate additional opportunities such as new or expanded manufactured housing developments and accessory units to help expand the housing supply and help meet the County's affordable housing needs.
- Rural Community Centers should be enhanced as viable and desirable places to live, as they can serve an important role as a location with lower development costs, thus reducing the housing costs. Opportunities to provide water and sewer services, public or private, should be investigated.
- When water and sewer (public or private) becomes available, promote the completion of land use plans for the Rural Community Centers and provide incentives to increase the viability of these neighborhoods.

IV. BUSINESS DEVELOPMENT









INTRODUCTION

chapter focuses on four areas that are all integral to the economy of Frederick County. These areas are:

- OFFICE AND INDUSTRIAL
- RETAIL
- TOURISM
- AGRIBUSINESS

Frederick County currently has a consistent and competitive real estate tax rate in comparison to neighboring communities. Supported by a proactive Economic Development Authority (EDA), the area's workforce has a high work ethic and a low turnover rate. The County's attractiveness as a residential community will continue to expand our population and our opportunities for business growth. Each new residence only generates approximately 50% of the taxes needed to offset the service burden created by the residence; the goal of planning for new business development is to attract businesses that will balance the tax base and jobs.

The opportunity for residents to have an expanded employment base affords not only an enhanced quality of life and increased income, but also results in increased local spending and therefore increased sales tax collections.

CURRENT CONDITIONS

Our strategic geographic location, diverse business community, skilled workforce, recognized economic performance, and commitment to business Frederick County's strategic economic cornerstones. These, in combination with outstanding public education institutions and top-ranking healthcare facilities, provide additional confidence to businesses about Frederick County's economic environment.

Multiple four-lane highways (which can reach much of the U.S./Canadian population in one day), quick access to a general airport and three international airports (Washington-Dulles International Airport, Baltimore-Washington International Airport, and Ronald Reagan Washington National Airport), and daily intermodal connection via the Virginia Inland Port are just a few of the reasons businesses like operating in Frederick County, Virginia.

Geographically, Frederick County is strategically placed in the Mid-Atlantic region of the United States and along major North/South and East/West transportation routes. This is a valuable asset to companies serving the North American and European markets.

In addition to the outstanding geographic reach, Frederick County employers enjoy a labor supply from a 45-minute drive-time across 10 counties in Virginia, Maryland, Pennsylvania,

and West Virginia. The total labor supply is more than 340,000 professionals, over 90.8% of which are high school graduates (or higher); 40.1% hold an associate degree or higher.

Widely recognized employers are operating in Frederick County, including HP Hood, Kraft-Heinz Foods, M&H Plastics, Navy Federal Credit Union, Rubbermaid and Thermo Fisher Scientific. A mix of manufacturing, retail, professional service, logistics, customer service, technology and entrepreneurial enterprises keep the economy strong. Our region is among the top 10% best performing metros in Virginia for capital investment and new job creation over the last decade.

The County's business community has steadily grown over the years and has been recognized for its range of offerings, proximity to major metros and its long-term appeal to some of today's leading manufacturers, financial operations and more.

With an extensive and diverse business portfolio, \$326 million in capital expenditures between 2018-2020, and ongoing partnerships between the business community and educational institutions, Frederick County has consistently retained leading companies. Frederick County has also been recognized as one of the most prosperous economies in the state. In fact, the County falls within the top 10% of Virginia localities over the last decade for new capital investment and new job growth and is consistently rated a great place to operate a business. Winchester VA-WV MSA is No. 9 on Forbes' "Best Small Places for Business and Careers" in 2019.

Frederick County prides itself as a vibrant, pro-business community with an immense commitment to business. In fact, the County, has employed a "business support at every step" approached for over 30 years. One such resource includes call-team visits to local businesses to communicate training resources and expansion assistance opportunities. The Frederick County EDA has an established track record of facilitating financial and workforce training assistance to expanding companies. Frederick County, Virginia's, consistent economic success provides businesses with assurance that their investment will grow.

The largest employment sector in the County, is Manufacturing, (6,048 workers). The nextlargest sectors are Transportation and Warehousing (4,197), Retail Trade (3,615 workers) and Educational Services (3,071). Sectors with the highest average wage per worker are Public Administration (\$71,453), Finance and Insurance (\$68,960), and Utilities (\$64,375).

Regional sectors with the best job growth (or most moderate job losses) over the last 5 years are Transportation and Warehousing (1,980), Manufacturing (+954 jobs), Finance and Insurance (+693), and Public Administration (+427). Over the next 10 years, employment in the County, is projected to expand by 6,618 jobs. The fastest growing sector in the region is expected to be HealthCare and Social Assistance with a +3.3% year-over-year rate of growth. The strongest forecast by number of jobs over this period is expected for Transportation and Warehousing (+1,007), Manufacturing (+744), HealthCare and Social Assistance (+655), Construction (+576) and Retail Trade (+519).

Education opportunities abound in Frederick County which include a well-respected primary education system and higher education opportunities at the following establishments:

- Shenandoah University
- Laurel Ridge Community College
- Old Dominion University Satellite Office at LRCC

The Community has an excellent healthcare system which is centered around the Valley Health Systems. The rate of expansion in the County has increased significantly in the last 10 years. Facilities in the Winchester-Frederick County area now include:

- Winchester Medical Center
- Regional Referral Center
- Level II Trauma Center
- Heart and Vascular Center
- Cancer Center
- Diagnostic and Imaging Center
- Quick Care / Urgent Care Centers
- Health and Wellness Center

Frederick County provides a quality of living which is considered to be a factor in recruiting companies and maintaining a desirable workforce. The City of Winchester, with its successful downtown walking mall, is a resource for additional workforce and provides numerous retail and entertainment opportunities.

FOCUS FOR THE FUTURE

The Plan recognizes the changing nature of the social and economic environment and identifies potential adjustments to existing resource use.

In order to maintain a desirable and competitive real estate tax rate, the County strives to achieve ratio of 25/75 between commercial/industrial (C&I) land uses and residential uses in terms of their collective taxable value. The County seeks to achieve fiscal balance through land use planning.

To encourage C & I uses, Frederick County has designated certain areas solely for their potential development, such as the Route 11 North corridor, Kernstown area, Round Hill, the Route 277 Triangle area (SoFred), and in the vicinity of the Winchester Regional Airport. Future planning efforts will continue to identify opportunities to align land uses to promote business development.

COMMUNITY BENEFITS

Adequate amounts of land must be planned for and designated for both C & I uses and new residential developments. Striking a balance of these land uses and ensuring that the tax

rates remain low and that services are available to support these initiatives will help make Frederick County an economic engine within the region.

GOALS/STRATEGIES

<u>GOAL 1:</u> DEVELOP A STRATEGY THAT PROMOTES THE EXPANSION OF DESIRABLE BUSINESS AND INDUSTRIAL LAND USES.

- The Frederick County Economic Development Authority's (EDA) targeted industries: (as of February 2021) include the following:
 - Advanced Manufacturing
 - Headquarters & Back Office
 - Professional & Creative Services
 - Agribusiness & Food Processing

OFFICE AND **INDUSTRIAL**

CURRENT CONDITIONS

Geographically, Frederick County is strategically placed in the Mid-Atlantic region of the United States and along major North/South and East/West transportation routes. This is a valuable asset to companies serving the North American and European markets.

The County's location places its businesses halfway between the markets of the north and south, and therefore the ability to reach much of the U.S./Canadian population in one day. Over 60% of the goods manufactured in the United States are distributed from the 750-mile (1,207 kilometers) area.

In addition to being halfway between Boston and Atlanta, Winchester-Frederick County is well positioned equidistant between Los Angeles and London. For national and international companies, being in the Eastern Time Zone maximizes their hours of operations, which helps to improve efficiencies.

Excellent road, rail, inland ocean port and the Dulles World Cargo Center provide access to the major markets in North America, Latin America, and globally.

Interstate 81 runs directly through the County. Several major airports are within 100 miles of Frederick County, including Washington-Dulles International Airport (IAD), Baltimore-Washington International Airport (BWI), and Ronald Reagan Washington National Airport (DCA). Frederick County is home to a growing regional general aviation airport. These assets support access to Frederick County's business development opportunities.

With the formation of the Washington-Baltimore Metropolitan Statistical Area after the 1990 US Census, the sixth largest USA market begins at the County Line. This close proximity to Washington D.C. also provides access to the unique opportunities associated with the Federal Government and the County's location is supportive of those policies established for purposes of Homeland Security.

In addition to the central geographic location of Frederick County, other significant strengths of the County market, particular to attracting new office and industrial development, include size of skilled workforce, recognized economic performance, business support at every step, and a diverse current office and industrial community. Frederick County is currently the site of several government facilities, including, the Federal Emergency Management Agency (FEMA), the Army Corps of Engineers, and the Federal Bureau of Investigation (FBI) Records Storage facility.

Current office and industrial operations within the community provide for diversity in current business markets. The economic strength of the area is further enhanced by the fact that the area is not linked to one major industry or employer. There is a redundancy in resources offered at certain business parks.

FOCUS FOR THE FUTURE

Frederick County should focus on targeted office and industrial business development opportunities over the next twenty years (as outlined in the Introduction).

No business development marketing strategy will be effective if sufficient acreage has not been designated to accommodate desired business uses in suitable key locations. Area plans should continue to identify and incorporate ample areas of business and industrial land use.

Frederick County supports green initiatives in the field of economic development. Viable development initiatives should be recognized, and their implementation encouraged. Such an example is rail access and transportation which will become more valuable and expected in industrial settings due to desire to operate effectively and efficiently. The County should be proactive in ensuring the resources necessary for business development are planned for in a viable way and available to support identified office and industrial users.

With regards to infrastructure (i.e. water, wastewater treatment, communication and electricity), manufacturers will require adequate supply and availability, but will also be interested in quality and service reliability. There is a finite capacity of these resources that must be managed accordingly.

COMMUNITY BENEFITS

The value of office and industrial business development to Frederick County is immeasurable. As part of the County's economic development effort, office and industrial growth is a key component for ensuring a broad selection of employment opportunities for its citizens.

The continuation of a low residential tax rate is a direct result of the expansion of the commercial and industrial tax base. Currently commercial and industrial tax revenue accounts for approximately 20.3% of the County's tax base. The County's goal indicates this should be around 25% to ensure a balanced fiscal environment.

Tax revenue derived from the average single-family residence is approximately fifty percent of the cost of service provided for that same residence. The County's fiscal survival is dependent upon recruiting office and industrial occupants which offset those residential costs.

Overall, a sound office and industrial business development strategy will result in the conservation of a variety of finite resources and promote a high quality of life for the citizens of Frederick County.

GOALS/STRATEGIES

<u>GOAL 1:</u> IDENTIFY AND RECOGNIZE AREAS IN THE COUNTY MOST STRATEGICALLY SUITED FOR OFFICE AND INDUSTRIAL DEVELOPMENT

STRATEGIES:

- Complete review of area land use plans to ensure sufficient acreage is designated for office and industrial uses.
- All infrastructure, such as voice and data fiber, electric, water, wastewater, and natural gas, should be extended to areas identified for office and industrial uses and non-rural residential areas.
- The rezoning process should be examined and streamlined as appropriate in order to encourage landowners of properties identified in Area Plans (see Appendix I) to proceed with rezoning.

<u>GOAL 2:</u> PROACTIVELY ATTRACT DESIRED BUSINESS ENTITIES

STRATEGIES:

- Review and revise the office and manufacturing zoning districts to further encourage development of targeted industries.
- Continue to examine and fund business location marketing studies that build or modify the current business base, to help the County forward its goal of increased income for its citizens and tax value for the County.

<u>GOAL 3:</u> CONSIDER REGULATIONS ENCOURAGING AND/OR REQUIRING SERVICE REDUNDANCY IN OFFICE & INDUSTRIAL AREAS

STRATEGIES:

• Create incentives for industrial site developers to implement service redundancy.

Retail

CURRENT CONDITIONS

The retail sales potential of any geographic market is based upon a mixture of many factors, a few of which are:

- The number of households within the market.
- The average disposable income of those households.
- The sophistication and depth of surrounding competing markets.
- The presence of a marketing effort for the area (as opposed to the marketing of an individual venue).

From a land use perspective as well as general business development, retail needs to be viewed in at least 3 parts:

- National Retail
- Small Retail
- Meals Away from Home

FOCUS FOR THE FUTURE

Over the next twenty years, population growth in Frederick County and its environs will continue to fuel retail development and the opening of varied retailers throughout the area. Frederick County has already taken necessary steps to prepare. The establishment of the Frederick County Economic Development Authority (EDA) is an example. A locality has little impact on the decision of the "national" retailer to locate in an area, unless the number of households in the market and the average disposable income of those households meet their individual business model. With a "small" retailer the driving factor is affordable available space.

Frederick County must strategically identify prime areas for commercial land use in key locations to capitalize on future commercial opportunities. In addition, Frederick County must continue to effectively market itself to the network of developers, national and regional retail trade organizations, retailers, and tenant-representation real estate agents and brokers that influence site selection decisions.

While the County's ability to attract national and regional developers and retailers to the area cannot be understated, the County must not underestimate the importance of supporting locally owned and operated developments and retail establishments. The growth of such locally owned businesses within the market's retail mix will have a direct positive impact to the vitality of the market's retail profile and the quality of life of residents.

COMMUNITY BENEFITS

Successful growth of retail equates to an increase in sales tax revenue to support county services and capital improvements. A strong retail environment also plays a key role in the quality of life for the residents of any geographic area and thus plays an integral role in an individual family, a corporation, or other entity deciding to relocate to that area. Retail growth also equates to more jobs, both directly (with the retailers themselves) and indirectly (a strong retail environment plays a role in drawing employers to the area).

GOALS/STRATEGIES

<u>GOAL 1</u>: **PROMOTE FREDERICK COUNTY AS A DYNAMIC, RETAIL MARKET.**

STRATEGIES:

- Develop a unified marketing plan for the County.
- Strategically identify prime areas for commercial land use in key locations to capitalize on future commercial opportunities.

GOAL 2: FUTURE DEVELOPMENTS SHOULD BE OF A HIGH QUALITY.

- Promote enhanced architectural/design requirements for future retail development, including structure appearance, landscaping, and signage.
- Encourage mixed use developments for future residential and commercial developments.
- Identify regulations that may require modification to support the inclusion of a limited retail component within residential developments.

TOURISM

CURRENT CONDITIONS

Frederick County and the surrounding areas play host every year to nationally recognized events such as the Shenandoah Apple Blossom Festival and Belle Grove Civil War living history reenactments. The area is home to the Museum of the Shenandoah Valley, the Cedar Creek and Belle Grove National Historic Park, the North-South Skirmish, various year-round live theater and performance centers, a revitalized and vibrant Old Town Winchester, and other key assets such as orchards, farm markets, historic homes, battlefields, and natural resources that bring travelers and their tourism dollars to the area.

The County also supports a growing number of wineries and the potential for new craft breweries and distilleries, as well as outstanding outdoor recreational opportunities such as the Tuscarora hiking trail, an ATV trail, seasonal navigable waterways, and access to regional amenities such as the Appalachian Trail, Shenandoah River, and the Shenandoah National Park.

As the economy improves and travel increases, it is critical that the County be poised to capitalize on the growth in travel and tourism. The Winchester–Frederick County Convention and Visitors Bureau, a city/county tourism marketing partnership, is a key component in developing the marketing strategy to attract additional visitors, and subsequent spending, to the area.

The economic impact of travel and tourism reaches every citizen of Frederick County (each household pays less each year in local & state taxes due to the revenue generated by tourism) by providing employment and tax revenues. Tourism also helps to support a diverse portfolio of local events, attractions and activities and thereby contributes to the quality of life for residents.

Focus for the Future

First impressions often set the tone for a visitor's experience, and the great majority of travelers arrive in Frederick County through its roadways. The character of Frederick County's entrance corridors, especially in areas adjacent to the city of Winchester, is a key factor for the visitor's experience and their decision to stay longer and hopefully return. Enhancing the aesthetics and traffic flow of these corridors will improve visitor impressions and will benefit the quality of life for residents.

Frederick County should concentrate on strengthening its ability to attract an increasing number of overnight visitors through targeted, strategic, and collaborative branding and marketing efforts that focus on visitor experiences. The ultimate goal will be to enhance the visitor experience.

Agritourism

Agritourism takes place on a farm or ranch and may include the opportunity to assist with the day-to-day activities associated with running the farm or to participate in the use of these lands for outdoor related events or activities. The term *agritourism* has also been broadened now to include wineries, breweries, and distilleries, which, combined, are the hottest trend in tourism product development in the Commonwealth. Agritourism is discussed at length in the following section of this chapter.

GOALS/STRATEGIES

<u>GOAL 1</u>: RECOGNIZE DIVERSIFIED LAND USE FOR TOURISM RELATED ACTIVITIES

STRATEGIES:

- Ensure that business owners are supported in their efforts to bring tourism activities to the local consumer market
- Continue to support rural agribusiness such as breweries, wineries, and distilleries.

<u>GOAL 2</u>: LINK THE AREA'S VISITOR ATTRACTIONS WITH A TRAIL NETWORK THAT FACILITATES NON-VEHICULAR MOVEMENT

STRATEGIES:

- Work with the Northern Shenandoah Valley Regional Commission (NSVRC) and surrounding jurisdictions to update and improve the regional bicycle and pedestrian plan, "Walking and Wheeling in the Northern Shenandoah Valley".
- Support the Redbud Run Greenway project to provide a trail network that will link natural areas, battlefields, including the existing five-mile trail on the Civil War Preservation Trust property, schools, and other facilities in the Redbud Run corridor.

<u>GOAL 3</u>: PRESERVE AND ENHANCE THE HISTORIC CHARACTER OF FREDERICK COUNTY'S ROADWAYS

- Foster a compact community design that uses traditional building features to maintain Frederick County's unique historic character.
- Focus development in compact centers, using Neighborhood Design guidelines, and keeping the rural, agricultural landscape as part of the visitor experience in Frederick County.

AGRIBUSINESS

CURRENT CONDITIONS

Frederick County's rural character is a key component in its identity and one of the key aspects that draw visitors and new residents to the area. Historically, these rural areas have supported a wide array of agricultural uses, which at one time was the primary industry in the County. Today these agricultural and forestry activities generate roughly \$33 million per year and preserve close to 110,000 acres of rural land. From 2012 to 2017, the total acreage in Frederick County farms grew by over 9,000 acres.

Agritourism continues to be a growing sector within the County's rural areas. Agritourism is a term that is applied to activities that allow visitors to tour some or all of an operational farm, participate in the cultivation or harvest of farm products, purchase and consume products grown directly on the farm, or participate in festivals or activities related to significant agricultural seasons or events. Examples include farm tours, pick-your-own farm operations, roadside farm-stands, wineries, or fall harvest festivals.

The County in recent years has also seen increasing interest in the development of utilityscale photovoltaic energy generation facilities (i.e., solar farms). Due to the large land area assemblage needed to develop these facilities, the rural areas of the County have been the primary target. Utility scale solar facilities are typically passive uses with limited impacts to the environment and the rural character. Additionally, implementation of this use can facilitate the preservation of agricultural and rural land for future use once these sites are decommissioned, although the extent to which the use removes agricultural and rural land from current use should also be considered. Utility-scale solar facilities, when located in appropriate areas, can provide opportunities for landowners to recoup value from their property without subdividing. The Code of Virginia also enables localities implementing solar facilities to tax this utility infrastructure through the machinery and tools tax or revenueshare agreements with utility operators, generating additional tax revenue beyond the land use assessment. This additional revenue can help the County offset impacts from residential development.

To protect the amount of land available for agricultural use, the County provides variety of tools and programs for landowners. The County continues to offer the Land Use Tax Deferral Program which allows taxpayers to apply for reduced assessments, for qualifying agricultural, horticultural, and forestry uses. Participation in one of the County's many Agricultural and Forestal Districts is also available to County property owners. As of 2021, there were ten districts covering approximately 13,000 acres.

Frederick County has worked to implement new tools which not only help protect the agricultural lands in the County but at the same time also help rural landowners realize economic return from their property without developing or selling the land. These programs include the Purchase of Development Rights Program and the Transfer of Development Rights Program. These programs are discussed further in the Rural Areas chapter.

FOCUS FOR THE FUTURE

Agricultural operations in Frederick County will continue to evolve. As such, the County should be prepared to respond to new rural related business and agricultural models including new agricultural techniques, value-added farm products, on-site events, sales, and services. These business opportunities can allow rural landowners to diversify their sources of income and engage niche agricultural and tourism markets.

COMMUNITY BENEFITS

Once land is converted from agricultural use it is unlikely that it will ever be reclaimed. The rural economy of Frederick County plays a significant role in the life and livelihood of its inhabitants. In addition to providing food products for the region, agriculture is a revenue generator which requires very few local services. Agriculture contributes to Frederick County's extraordinary viewsheds while providing a living to its farmers, citizens, and a place of enjoyment for its visitors. Most importantly, active, profitable agricultural operations reduce the amount of land converted to more intensive uses. Diversification of land used for agricultural purposes not only generates notable income and drives more tourism dollars to the County, but it can also offer protection for the land from potential conversion to residential uses.

GOALS/STRATEGIES

<u>GOAL1</u>: THE COUNTY SHOULD CONTINUE TO SUPPORT ITS AGRICULTURAL INDUSTRIES WHILE ALSO RESPONDING TO INDUSTRY CHANGES

- Diversified uses such as farm markets, alternative fuels, animal boarding, Pick-Your-Own operations, agritourism, vineyards, wineries, distilleries and microbreweries and specialty crops, etc., should be encouraged to help preserve farming and agricultural uses in Frederick County.
- Ordinances should be reviewed to enable a wide range of agriculturally related activities. Care must be taken to ensure that such activities are compatible in scale, size and intensity with surrounding land uses and the rural character.
- Value added processes and support businesses should be examined for location within the Rural Area. These processes currently are permitted in the business districts.
- Continue to encourage use of the Land Use Tax Deferral Program, Agricultural and Forestal Programs, Purchase of Development Rights Program, and the Transfer of Development Rights Program.

- Continue to regulate solar facilities through the Conditional Use Permit process to protect adjacent properties and the agricultural/rural character of these areas.
- The County should ensure that the siting of new solar facilities do not detract from the agricultural and rural character within its rural areas and will protect agricultural and rural land for future use once decommissioned.

V. TRANSPORTATION



TRANSPORTATION

CURRENT CONDITIONS

Frederick County has grown significantly in the past two decades in both population and economic development, placing a significant demand upon the transportation system. Current County policy follows State Code guidance to ensure that new development offsets its impacts to the transportation system. A significant portion of congested roadways in the County can be linked to by-right development that does not offset its transportation impacts since it is not required by the Code of Virginia. This has had the greatest impact upon Interstate 81 and the primary highways in the County. Primary Highways include Routes 37, 522, 50, 7, 277 and 11.

Based upon the most recent Virginia Department of Transportation (VDOT) data available (2016) Frederick County has 1,853 lane miles of roadway that are part of the state system. As of 2019, VDOT estimates that vehicles traveled 3,323,511 miles per day on Frederick County roadways. This is an over 200% increase since 1990. The vast majority of this travel is focused upon the Interstate and Primary systems.

Planning Activities

Transportation planning for Frederick County takes place in many ways. In addition to local comprehensive planning, Frederick County is a member of the WinFred Metropolitan Planning Organization. As part of that organization, the County participates in regional long-range planning and has access to resources for numerous other planning studies. In addition, the County annually updates the Frederick County Interstate, Primary, and Secondary Road Plans which highlight key priorities. Finally, the County also regularly conducts small area plans such as the Northeast Land Use Plan and the 277 Triangle Land Use Plan which focus on smaller portions of the County. With the exception of a situation where the small area plan is more detailed, any discrepancy between the two plans will be resolved by the Eastern Road Plan.

Urban Areas

It is the County's policy to focus future growth in the Urban Areas, within the boundaries of the Urban Development Area (UDA) and Sewer and Water Service Area (SWSA). In addition, the County has taken additional steps for growth within the UDA by adopting a Transfer of Development Rights (TDR) ordinance which allows by-right residential development rights to be sold by landowners in the rural areas to landowners inside the UDA. Ultimately, while this results in increased traffic in the UDA, this is still a net financial benefit to the County. This allows the County and State to focus roadway improvements within the UDA as opposed to having to expand roadways throughout the entire County. The Eastern Road Plan is the guide to roadway development/improvements in and around the urban areas.

As of the year 2000 census, the urbanized portions of Frederick County, Winchester, and

Stephens City area reached the population threshold (50,000) that led to the federally required creation of a Metropolitan Planning Organization (MPO). In Frederick County the MPO boundary is concentrated around the development in the eastern section, and along Route 11 to West Virginia in the north, and to Stephens City in the South. Staffed by the Northern Shenandoah Valley Regional Commission, the MPO is responsible for creating a long-range transportation plan that meets air quality standards. The MPO is currently operating under the 2040 Metropolitan Transportation Plan; a planned update will be undertaken in 2021.

Rural Areas

Improvements to secondary roads in the more rural western portion of the County are focused on safety and maintenance as opposed to creating additional capacity. The possible exception to this would be areas where the Comprehensive Plan proposes the development of Rural Community Centers. Capacity and safety improvements to primary roadways in the rural areas will be addressed on an as needed basis.

Transportation funding for improvements in Frederick County have largely been accomplished through development proffers and the VDOT Revenue Sharing Program. Whenever possible, the County uses public-private partnerships to make improvements. Key examples of this include the Crossover Blvd. connection from Route 522 to the City of Winchester over I-81, Phase I of Renaissance Drive, and Snowden Bridge Blvd from Route 11 North to Milburn Road. The County is also active in the areas of rail access funding and economic development road access funding. In recent years new legislation has created additional revenue streams to fund transportation in the Commonwealth. The most important development for Frederick County has been the creation of the I-81 Fund, which provides additional gas tax revenue for projects along and related to the function of I-81. However, despite new state level funding for roads other than I-81, the VDOT Staunton District, in which Frederick County resides, continues to receive one of the lowest formula-based District Grant allocations in the state, which results in a significant backlog of critical needs projects. How the County, State, and Federal governments work together to create a long-term funding policy for transportation will have far reaching impacts on transportation systems in Frederick County.

The majority of construction in Virginia is funded through the Smart Scale Program (formerly HB2) and HB1887, which has significantly changed the process by which transportation projects will be funded within the Commonwealth. The stated purpose of the new system is to score transportation projects and remove politics from the decision-making process. Based on the Commonwealth Transportation Board (CTB) adopted criteria, economic development is the most influential factor in scoring criteria for Frederick County. The County will continue to coordinate with the Economic Development Authority (EDA) to highlight the economic development importance of key roadways and improvements. During the first round of the Smart Scale Program the County was successful on a number of applications, the most significant of which was Route 277 from I-81 Exit 307 to Double Church Road which includes widening, access management for safety and a realignment of the Aylor Road intersection away from the interchange. To date, that project, now under construction, remains Frederick

County's largest funded project under the SmartScale program.

FOCUS FOR THE FUTURE

In the next twenty to thirty years, it is expected that a number of key transportation milestones will be reached. The issue of long-term road construction funding must be resolved, which will allow significant transportation system improvements to move forward. Most crucial is the completion of the Route 37 Eastern bypass, which is critical for both residential and economic development traffic. Completion of this roadway has been a top priority for Frederick County for many years. The next most needed project in the County is the update of the Exit 317 Interchange, which the County has applied for through SmartScale several times at this point. The Eastern Road Plan will continue to guide road projects and will evolve to address the long-range transportation needs of the County.

The County will work to ensure that development and transportation agencies routinely design and operate the entire right-of-way to enable safe access for drivers, transit users and vehicles, pedestrians, and bicyclists, as well as for older people, children, and people with disabilities. In addition, the process of developing this plan considers how to align transportation infrastructure and facilities with affordable, accessible housing and community services that are located within the territory in order to facilitate community integration of the elderly and persons with disabilities. These goal aims to balance the diverse needs of all users of the public right-of-way and promote an integrated, multi-modal (or multiple modes of transportation) transportation system. Simply put, when roads in the secondary and primary system are being improved this means that the County will consider all potential users of the transportation system when making improvements or, working with development, or constructing new facilities. This goal will benefit Frederick County as it addresses important safety, health, and environmental considerations, and promotes growth and revitalization within the Community.

Over time, it is expected that private transit options will begin to play a larger role in Frederick County's transportation network. This would likely begin with demand type services for the special need's populations, elderly, and disabled. The County has routinely supported applications for funding to the state for providers of these services through the MPO.

As densities increase in the UDA and citizen preferences continue to shift, it is expected that bicycle and pedestrian accommodations will continue to increase in importance. The Frederick County School System has now opened more than one elementary school with incorporated walk zones and they plan to continue promoting of this type of school.

Finally, with the growth potential of the Virginia Inland Port in Warren County, Frederick County has experienced and can expect a continuing increase in freight movement via rail and roadways. The development of the County's transportation infrastructure should continue to address transportation improvements that will further the economic growth of the Community. This would also include future growth of the Winchester Regional Airport.

COMMUNITY BENEFITS

The benefits to the Community of a healthy transportation system are immeasurable. An efficient transportation system leads to communities that are less stressed, healthier, less polluted, safer, and more attractive to economic development opportunities and new residents.

A policy that creates an interconnected system of bicycle and pedestrian facilities will lead to a healthier community as well as increased home values. Removal of cars from the roadway would reduce congestion and air pollution. The mixed-use land use pattern promoted by New Urbanism and the urban center concept of this Plan further promotes these policies.

The transportation system is also a key consideration for business looking to expand or locate in a community. An efficient transportation system will make the County more attractive to new businesses and will also keep existing businesses from looking to locate elsewhere. In addition, continued focus on intermodal opportunities (the transfer of goods between different transportation modes such as truck to rail or air) in the area will make the County more attractive to businesses looking to take advantage of rail sidings or locations near the airport. The County's willingness to support both road and rail access funding has already led to increased economic development interest. The result is more jobs for County citizens as well as a more valuable and diverse tax base.

As residential and commercial development continues, increasing demands will be placed upon the County's transportation infrastructure. Challenges will continue to be placed on the County by users of Interstate 81 and commuters through the area.

The role of Frederick County is to first plan the transportation system and then work with new and existing development to preserve corridor right-of-ways and implement construction needs. The State and Federal government, as well as private development, carry the primary responsibility to fund transportation improvements necessary to ensure the future health of the County's transportation network. However, it may be necessary to consider strategic local funding contributions in order to leverage State and Federal funds, or match and incentivize private investment.

GOALS/STRATEGIES

<u>GOAL 1:</u> TO PROMOTE THE DEVELOPMENT OF NEW ROADWAYS AND THE REDEVELOPMENT OF EXISTING ROADWAYS IN A MANNER THAT MAKES THEM OPEN, AVAILABLE, AND SAFE TO ALL MODES OF TRANSPORTATION.

STRATEGIES:

• Match desired form of development to roadway classification to simplify the determination of which roadways receive which treatment. That is, different types of streets for different land uses. For example, while some roadways would require a

separate bicycle and pedestrian trail in order to be more accessible to bicyclists and pedestrians. In rural areas a wider shoulder section may be more appropriate.

- Work with new development and redevelopment to implement this policy and the overall transportation plan. This may require analysis and modification of the existing subdivision ordinance.
- Work cooperatively with the School Board to identify school locations that meet both school and County goals of public access and safe walkability.
- Seek outside funding sources to fill in gaps in order to attach separate segments and create a fully interconnected system.
- Continue to monitor the County ordinances to ensure they meet the shifting needs of facility planning and VDOT standards.

GOAL 2: IMPLEMENT THE ROADWAY PRIORITIES OF THE COUNTY AS OUTLINED ANNUALLY IN THE CAPITAL IMPROVEMENT PLAN, THE INTERSTATE, PRIMARY AND SECONDARY ROAD PLANS, AND THE EASTERN ROAD PLAN, AND PARTICULARLY ROUTE 37 EAST.

STRATEGIES:

- Work with new development and redevelopment to implement the Eastern Road Plan through construction and preservation of rights-of- way.
- Continue to work closely with VDOT, State and Federal representatives, and any other available revenue sources to increase transportation funding.
- In the absence of outside funding, continue to protect rights-of-way and move forward on planning transportation priorities.
- Coordinate with VDOT to make sure the required percentage of maintenance funds to be spent on other accommodations is used on County priorities.
- Maintain the character of the rural roadways in the County while addressing safety issues as they may arise.

<u>GOAL 3</u>: IMPROVE UPON EXISTING TRANSPORTATION SAFETY AND SERVICE LEVELS IN THE COUNTY.

STRATEGIES:

• Coordinate with VDOT in the scoping and review of Traffic Impact Analyses (TIA).

- Analyze VDOT Access Management standards and, when needed, adopt County standards that are stronger.
- Work with new development and redevelopment to ensure that trip generation and new movements do not degrade the transportation system, increase delays, or reduce service levels.
- Create an informal working group with Staff, VDOT, and law enforcement to identify and address safety concerns with coordination to be handled by Planning and Development and the Board's Transportation Committee (TC).

<u>GOAL 4</u>: KEEPING THE COST OF INDUSTRIAL PROPERTY COMPETITIVE. WORK TO ENHANCE USE OF INTERMODAL FREIGHT MOVEMENT WHEREVER POSSIBLE.

STRATEGIES:

- Coordinate with local business to maximize the use of Economic Development Road Access funding, as well as Rail Access funding.
- Actively work with rail carriers through the Economic Development Authority to maximize the amount of material that is shipped into and out of Frederick County via rail.
- Perform a study to discern where opportunities to bring air freight into the regional airport may be available.
- Work to encourage and maximize opportunities presented by expansion of the Virginia Inland Port.
- Make use of revenue sharing funds for development of industrial property when the Board of Supervisors determines that it is in the best interest of Frederick County.
- Incorporate the Airport Master Plan into the County planning efforts.

<u>GOAL 5</u>: IMPROVE THE BEAUTY OF TRANSPORTATION CORRIDORS AT THE COUNTY GATEWAYS AND ALONG COMMERCIAL ROADWAYS.

- Work with VDOT to create roadway design plans that meet standards while beautifying local gateways and commercial corridors.
- Through the Transportation Committee, develop a plan and actively promote corridor beautification. This should include working with local institutions to create more attractive County entrances into their facilities.

<u>GOAL 6</u>: ENSURE SAFE OPERATION OF FIRE AND RESCUE VEHICLES AND SCHOOL BUSSES.

STRATEGIES:

- Investigate the existence and potential removal of barriers between neighborhoods that lead to delays in response, particularly for the Greenwood and Millwood Companies.
- Promote the adoption of a uniform locking technology acceptable to the Fire and Rescue Department for use on gated and locked emergency access points.
- Analyze driving, road, and parking standards and actively seek the Fire and Rescue Department input for driveways and roads to ensure that all approved developments are accessible by fire equipment.

GOAL 7: PROVIDE COST-EFFECTIVE ALTERNATIVES TO AUTOMOBILE TRAVEL AS NEEDED, FOR THE ELDERLY, DISABLED, STUDENTS, AND WORKFORCE.

STRATEGIES:

- Coordinate with existing agencies such as the Shenandoah Area Agency on Aging (SAAA) and Access Independence to secure outside funding to enhance service to the elderly and disabled in the community.
- Make use of the Winchester-Frederick Metropolitan Planning Organization (MPO) resources to identify areas of most critical need.
- Monitor existing data source updates to determine areas of growing need.

STATE CODE COMPLIANCE

The Code of Virginia, Section 15.2-2222.1, states specific requirements for the development of a transportation plan as it relates to comprehensive plans:

B.1. As part of the comprehensive plan, each locality shall develop a transportation plan that designates a system of transportation infrastructure needs and recommendations that include the designation of new and expanded transportation facilities and that support the planned development of the territory covered by the plan and shall include, as appropriate, but not be limited to, roadways, bicycle accommodations, pedestrian accommodations, railways, bridges, waterways, airports, ports, and public transportation facilities. The plan shall recognize and differentiate among a hierarchy of roads such as expressways, arterials, and collectors. In developing the plan, the locality shall take into consideration how to align transportation infrastructure and facilities with affordable, accessible housing and community services that are located within the territory in order to facilitate community integration of the elderly and persons with disabilities. The Virginia Department of Transportation shall, upon request,

provide localities with technical assistance in preparing such transportation plan.

B.2. The transportation plan shall include a map that shall show road and transportation improvements, including the cost estimates of such road and transportation improvements from the Virginia Department of Transportation, taking into account the current and future needs of residents in the locality while considering the current and future needs of the planning district within which the locality is situated.

This chapter has been reviewed by VDOT officials and has been determined to meet the requirements outlined in state code.

PLANNING ASSUMPTIONS

While many factors impact changes in transportation needs and patterns, the most significant factors impacting the transportation system in Frederick County are population and employment growth. Desired patterns for that growth and policies and strategies to support those patterns are outline earlier in this chapter of the Comprehensive Plan. As noted in the WinFred MPO 2040 Metropolitan Transportation Plan, the population for the entire planning area (Frederick County and the City of Winchester) is expected to reach 151,408 by 2040. This is a decrease from the previously expected horizon year population of 153,945 from the 2035 MPO plan. Employment in the planning area which was 23,499 in 2010 is expected to reach 93,000 by 2040. This growth is expected to add significant stress to the Frederick County transportation system.

NEEDS ASSUMPTIONS

A number of factors aid in determining near and long term needs in the County. While the most key input in determining needs and impacts is the modeling processes undertaken through the WinFred Metropolitan Planning Organization, many factors help in determining needs such as coordination with the Virginia Department of Transportation, safety concerns, maintenance needs, citizen concerns, and economic development. Shown below are the 2040 Projected Volumes and Volume/Capacity Ratio maps from the modeling work done with the WinFred Metropolitan Planning Organization. These modeling outputs are a significant tool in determining and vetting near term as well as long range transportation needs. Some of the County's most immediate near-term needs are as follows:

<u>Route 37</u>

Route 37 has long been the County's top priority, and this continues to be true. The completion of the Route 37 loop around the eastern portion of the County will not only relieve congestion on numerous local routes that have become congested as the County has grown, but also offers relief on I-81 by helping to remove local trips from the interstate as well as offering an additional relief valve when there are incidents that lead to I-81 delays or closures. The segment of Route 37 that is of top priority is from I-81 exit 310 to Route 522. This segment offers important additional connectivity between I-81 and Route 522, which, in

addition to significantly aiding local travel, will offer improved access to the Virginia Inland Port. This roadway is also expected to ease congestion on Route 277 and at Exit 313.

<u>I-81 Exit 313 Bridge</u>

The I-81 Exit 313 Bridge replacement has been funded by VDOT, however relatively few funds on the project allow for increased capacity. The need for significant capacity improvements at this interchange remains a priority.

I-81 Exit 317 and Redbud Road

There are currently two projects that are being pursued for this area at this time.

The first project would realign the northbound exit ramp of I-81 onto Route 11 to the location where Redbud Road currently intersects Route 11. This would align the interstate ramps which are currently offset and allow the removal of a signal on Route 11 north. In addition, this project would realign Redbud Road to a new intersection with Snowden Bridge Boulevard. This project is expected to aid congestion and improve safety at this area of Route 11 North as well as reduce stacking of traffic at the exit ramps.

The second project, which is more costly, would implement a more long-term solution in the form of a diverging diamond interchange.

With good design and planning, it is possible that the first project could be done in a way to provide nearer term relief while the County continues to pursue the larger solution for the long term without creating throwaway improvements.

Route 11 North Corridor Widening

Modeling of the expected development along the Route 11 North corridor indicates a need for widening and access management to the entire corridor with the corridor to become 6 lanes to Cedar Hill Road and 4 lanes to the West Virginia State line. The most immediate need is to widen from Route 37 to Old Charlestown Road.

Route 11 South

Route 11 South, particularly in the vicinity of Apple Valley Road, Commonwealth Court, and the interchange with Route 37 is becoming increasingly congested as surrounding area economic development has taken place.

Additional near-term needs:

Back Mountain Road Safety Improvements Study

• Complete a comprehensive safety evaluation of Back Mountain Road to determine areas where targeted improvements can be made to improve safety through the corridor.

Valley Mill Road Realignment (East)

• Realign the western terminus of Valley Mill Road at Route 7 from the Exit 315 interchange ramp to a signalized intersection at Gateway Drive. Eliminate or reduce access at the current location. This will reduce conflict and improve traffic flow throughout the area.

Valley Mill Road Realignment (West)

• Realign the eastern terminus of Valley Mill Road at Route 7 from the current location to align with the future Route 37 ramp area. This will improve safety of the existing intersection as well as reduce conflicts in the future.

Route 277 from Double Church Road to Warrior Drive

• Phase II of the Route 277 widening and access management. This will create a 4-lane divided facility with fewer and consolidated access points to improve capacity and traffic flow as well as provide increased safety.

Jubal Early Drive Extension and Interchange with Route 37

• Extension of existing Jubal Early Drive as a 4 laned divided facility from the City of Winchester and interchange with Route 37 at the location of the current Merrimans Lane bridge. This would include a partial realignment of Merrimans Lane to an intersection with the new Jubal Early Drive section.

Intersection of Crestleigh Drive and Senseny Road

• Installation of a westbound left turn lane at the intersection of Senseny Road and Crestleigh Drive to improve safety.

Apple Valley Road/Route 11 Intersection Improvements

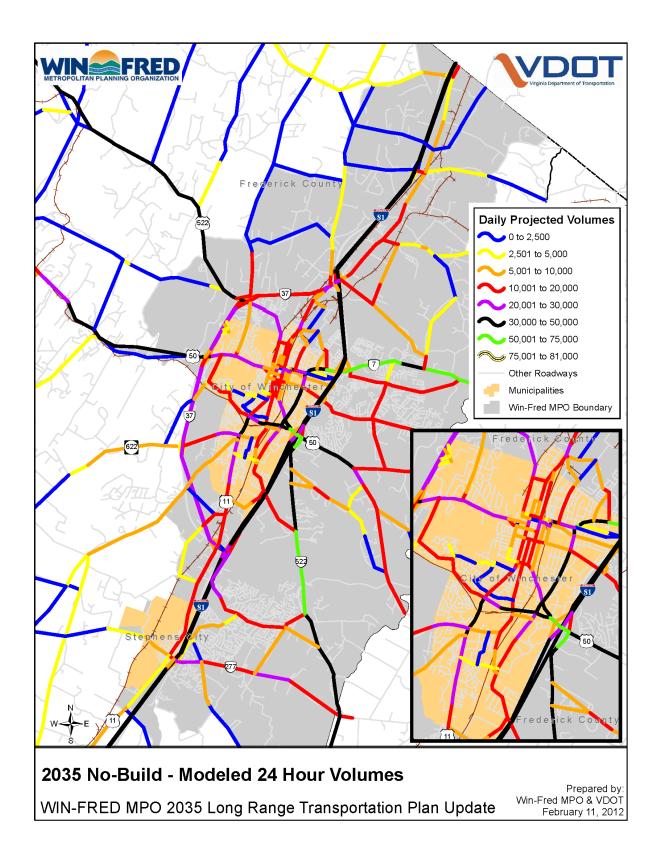
• Installation of a continuous green T design at the intersection of Apple Valley Road and Route 11 to improve Safety and traffic flow as recommended in the Route 11 STARS study.

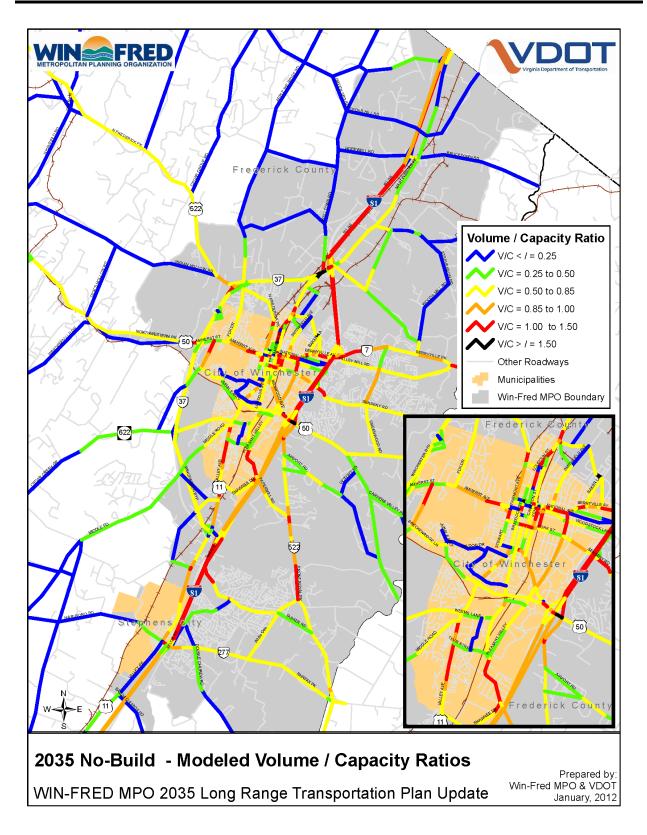
Warrior Drive extension to Brandy Lane and Brandy Lane upgrade:

• Extension of existing Warrior Drive south past Sherando High School to an intersection with Brandy Lane and upgrade of Brandy Lane from that point to Double Church Road to bring it to state standards and adoption into the state system. This would improve traffic flow into and around the school property and ease congestion at the intersection of Route 277 and Warrior Drive.

Hopewell Road/Brucetown Road Intersection Alignment

• Alignment of the Hopewell Road intersection with Route 11 to meet the Brucetown Road intersection with Route 11. This will eliminate substandard intersection spacing and reduce traffic conflicts in this area.





RECOMMENDATIONS

Project recommendations are included in the Current Needs Projects maps as well as the Eastern Road Plan which shows near and long-range transportation needs. Please note that while the map of existing inventory and functional classifications shows the entire County, the maps depicting the planned transportation improvements are zoomed in to the areas where improvements are called for to improve readability of the maps. Below please find a table of projects which are currently in the VDOT Six Year Improvement Program and that have been recently applied for through the VDOT SmartScale process.

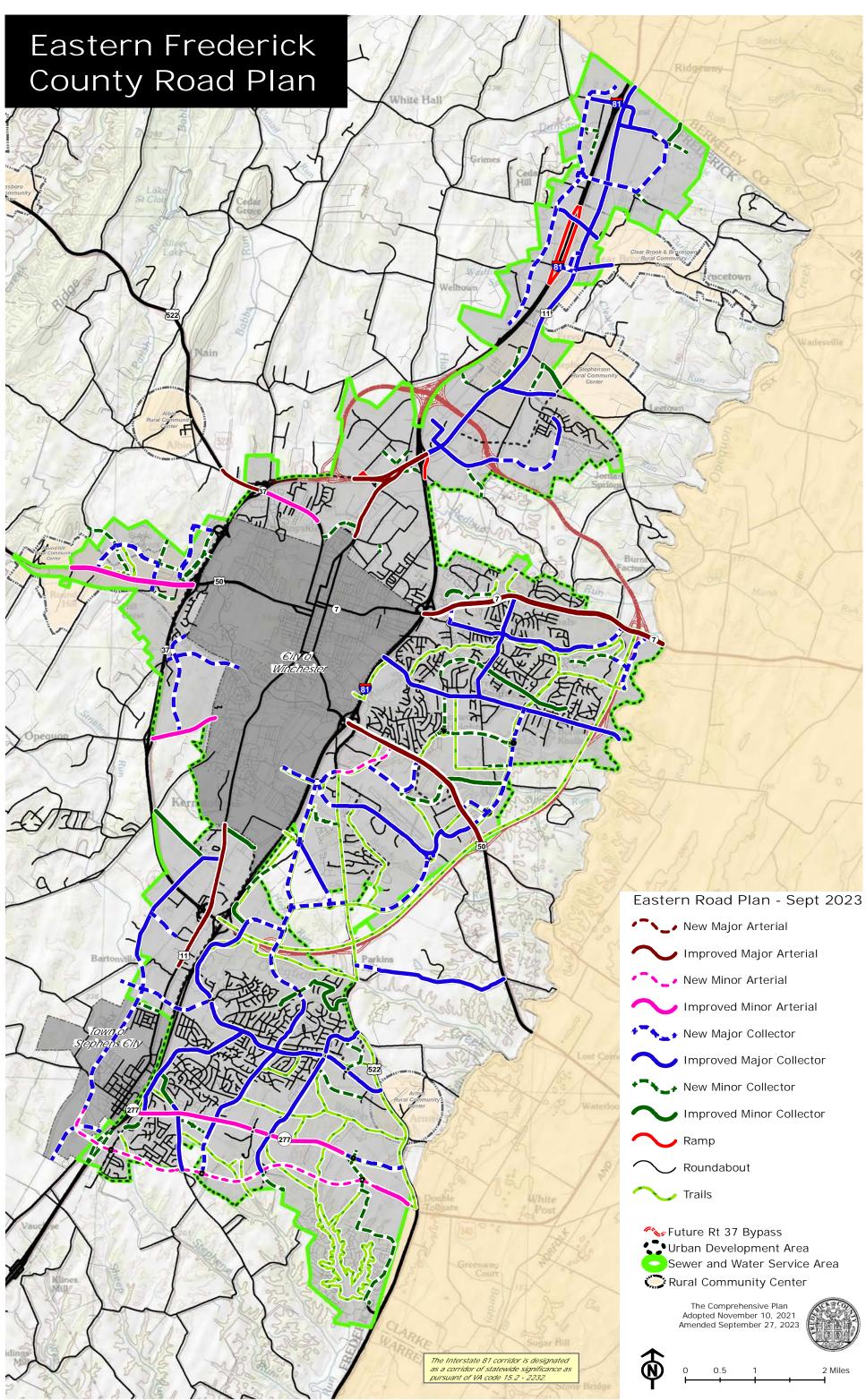
VDOT UPC	Description	Route	Estimate	Notes
			(Values in Thousands of Dollars)	
113895	ABRAMS CREEK	657	\$1,090	
	TRAIL - FREDERICK			
	COUNTY			
116040	ROUTE 11 AND I-81	11	\$412	
	RAMP			
	IMPROVEMENTS			
	EXIT 307 AND 317			
113535	#SGR19VB - RT	17	\$31,329	
	17/50/522 MILLWOOD			
	PIKE BRIDGE OVER I-			
	81			
88820	I-81 INTERCHANGE	81	\$721	
	STUDY FOR EXIT 313			
	(PE ONLY)			
109376	#HB2.FY17 I-81 EXIT	81	\$1,744	
	323 SB ACCEL AND			
	NB DECEL LANE			
	EXTENSION			
111056	#SMART18 - (ST) I-81	81	\$323	
	EXIT 315			
	NORTHBOUND			
	DECEL LANE EXT			
112900	I-81 - INSTALL HIGH	81	\$2,240	
	TENSION CABLE			
	BARRIER			
115181	#SMART20 I-81 EXIT	81	\$3,209	
	317 ACCEL/DECEL			
	LANE EXTENSIONS			
115717	#SMART20 I-81 EXIT	81	\$5,264	
	313 BRIDGE			
	CAPACITY			
	IMPROVMENT			

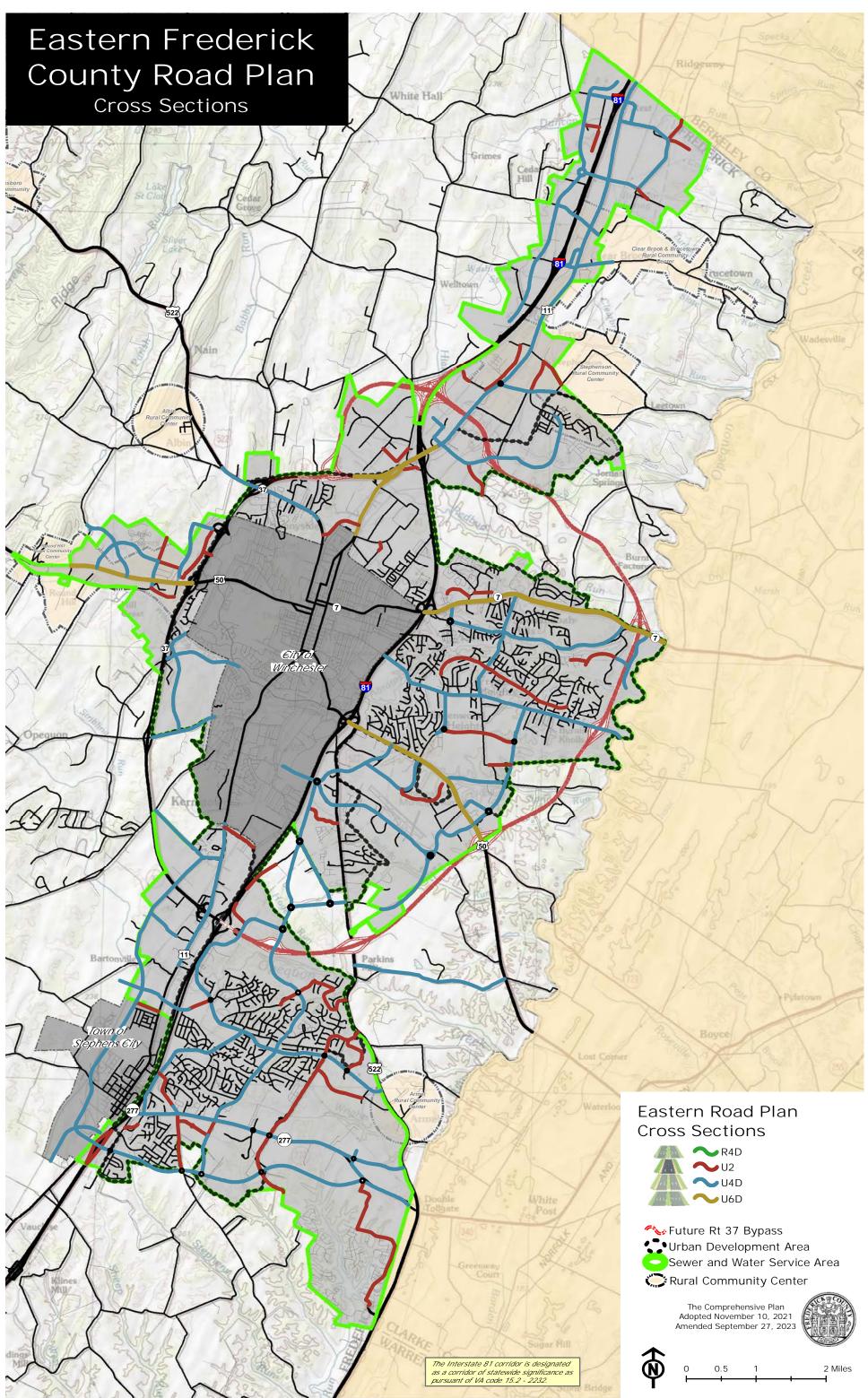
115803	#I81CIP NB EXIT 304	81	\$1,766	
	EXTEND			
	DECELERATION			
	LANE (ID #49)			
115870	#I81CIP NB EXIT 302	81	\$445	
	EXTEND			
	DECELERATION			
	LANE (ID #48)			
116236	#I81CIP NB EXIT 302	81	\$894	
	EXTEND			
	ACCELERATION			
	LANE (ID #47)			
T25555	#SMART22 - ROUTE 7	7	\$1,000	
	STARS ACCESS			
	MANAGEMENT			
	PROJECTS			
112936	RT 11 S.	11	\$1,701	
	KERNSTOWN			
	WIDENING AND			
	RAMP - FREDERICK			
	COUNTY			
117944	#81CIP DETOUR	11	\$900	
	IMPROVEMENTS -			
	EXIT 310 AND EXIT			
	317			
107020	RTE 37 - SAFETY	37	\$3,088	
	IMPROVEMENTS			
107022	RTE 50 - SAFETY	50	\$4,800	
	IMPROVEMENTS			
112615	RTE 50	50	\$1,170	
	INTERSECTION AT			
	INDEPENDENCE DR			
	(NFCU)			
18003	#HB2.FY17 RTE 277 -	277	\$42,144	
	WIDEN TO 5 LANES			
110396	#HB2.FY17 RTE 277 -	277	\$38,766	
	WIDEN TO 5 LANES			
	GARVEE DEBT			
	SERVICE			
111227	#SMART18 - (ST)	277	\$477	
	INTERSECTION OF			
	RTE 277 AND			
	WARRIOR DR			
78825	ROUTE 522, FRED.	522	\$4,329	
	CO., STR. ID 08156			

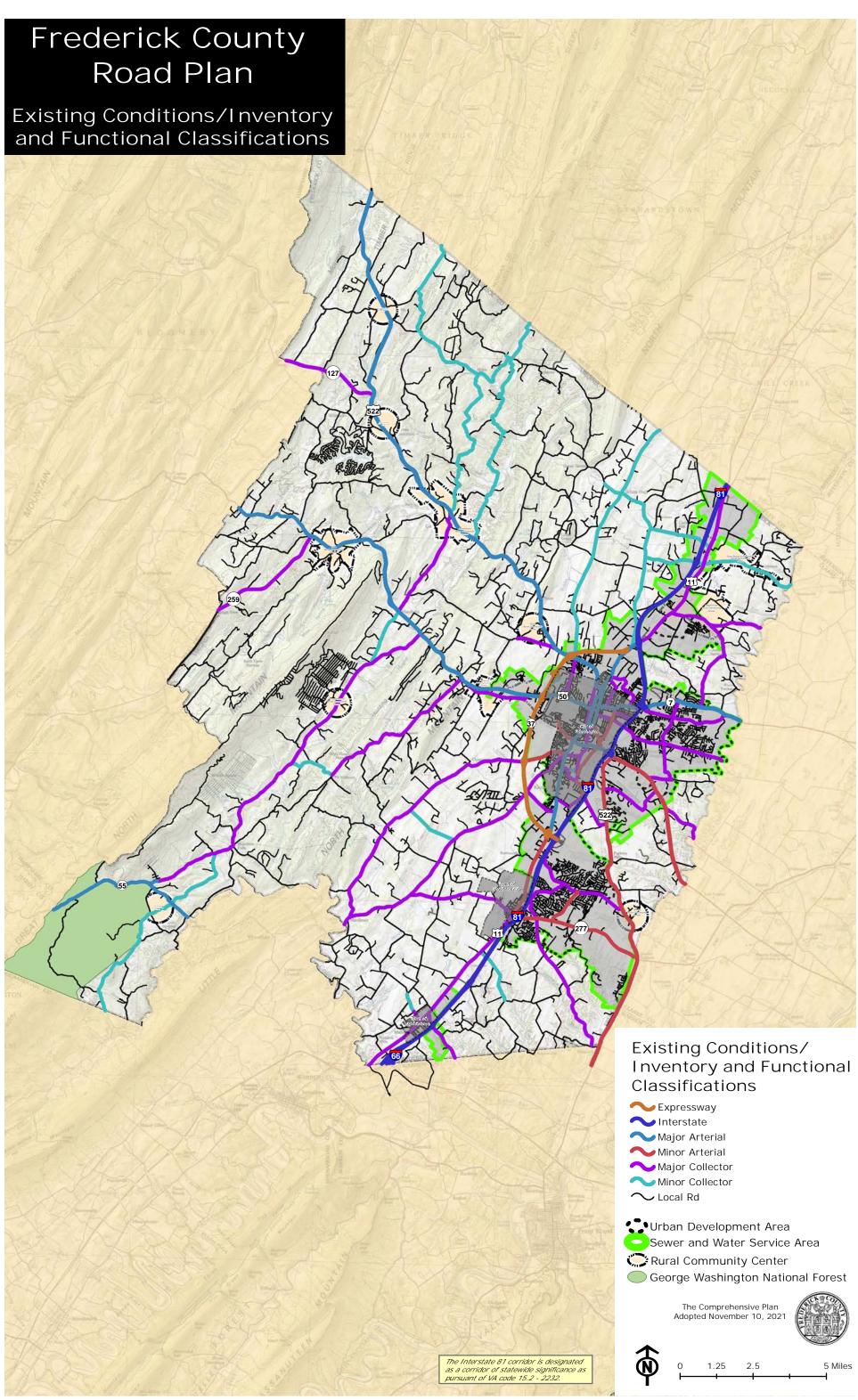
	BRG REPL. FED ID-			
	08156			
113063	RT.631-INSTALL	631	\$310	
	FLASHING LIGHTS			
	AND GATES			
113062	RT.638-UPGRADE	638	\$310	
	EXISTING FLASHING			
	LIGHTS AND GATES			
110986	RT.661-INSTALL NEW	661	\$206	
	CONTROL HOUSE			
	&TRACK			
	REDUNDANT			
	DETECTOR			
114900	RT.664- UPGRADE TO	664	\$425	
	FLASHING			
	LIGHTSAND GATES			
110985	RT.672-UPGRADE	672	\$100	
	CABINET,			
	CIRCUITRY AND			
	RAISE CANTILEVER			
110988	RT.672-REALIGN	672	\$260	
	CURVE, RAISE ROAD			
	& INSTALL			
	CONCRETE SURFACE			
90173	RTE 623 - REPLACE	623	\$3,151	
	BRIDGE OVER			
	CEDAR CREEK VA			
	STR. 6908			
111060	#SMART18 - (ST) RTE	655	\$2,540	
	655 - INTERSECTION			
	RECONSTRUCTION			
86316	#SGR17VB - BR REPL	723	\$1,964	
	RT 723 OVER			
	OPEQUON CREEK VA			
	STR 6904			
109326	#HB2.FY17 FOX	767	\$483	
	DRIVE TURN LANES			
87616	REVENUE SHARING -	788	\$13,237	Revenue
	TEVIS STREET			Sharing
	EXTENSION			
113943	RENAISSANCE	873	\$4,217	Revenue
	DRIVE PHASE II			Sharing
104262	AIRPORT ROAD AND	896	\$8,710	Revenue
	WARRIOR DRIVE			Sharing
	EXTENSION			

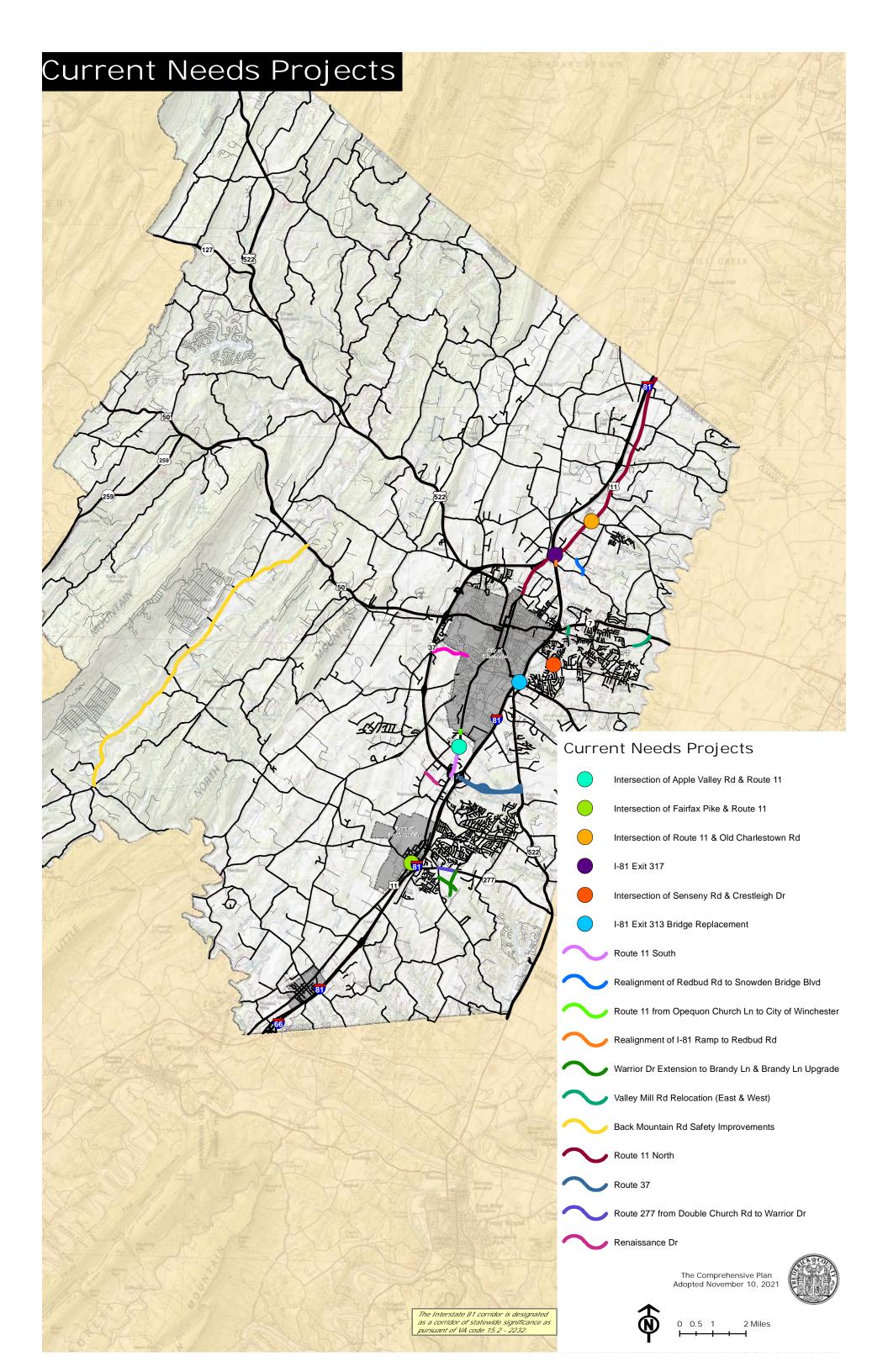
TRANSPORTATION

ROUTE 11 AT OLD	11/761	\$6,357	Smartscale
CHARLETOWN ROAD			Application
ROUNDABOUT		* 40.000	~ 1
EXIT 317 DIVERGING	I-81/11	\$40,395	Smartscale
DIAMOND			Application
INTERCHANGE			
EXIT 317 NB EXIT	81/661/11	\$6,944	Smartscale
RAMP RELOCATION			Application
TO LOCATION			
WHERE REDBUD			
ROAD CURRRENTLY			
TIES INTO ROUTE 11			
NORTH AND			
REALIGNMENT OF			
REDBUD ROAD TO			
SNOWDEN BRIDGE			
BLV			
ROUTE 7 STARS	7	\$1,000	Smartscale
IMPROVEMENTS			Application
ROUTE 11 SOUTH AT	11	\$4,598	Smartscale
THE CITY/COUNTY			Application
LINE CORRIDOR AND			
INTERSECTION			
IMPROVEMENTS IN			
THE VICINITY OF			
SHAWNEE DRIVE			
AND OPEQUON			
CHURCH LANE			









VI. PUBLIC FACILITIES



PUBLIC FACILITIES

INTRODUCTION

The purpose of the Public Facilities Chapter is to plan for future public facilities and infrastructure needed to serve existing and planned population growth through the efficient, safe, and accessible delivery of public services. The planning and siting of public facilities should be in a manner that will efficiently and economically serve the greatest number of residents. New facilities should be located within the County's Urban Development Area (UDA), where future growth is desired; such facilities shall also generally be included in the Capital Improvement Plan (CIP).

Collaboration between County agencies should continue to be a priority goal in order to ensure that the investment made in the County's community facilities will continue to provide the best possible environment for positive and vibrant community growth. Multiple use/satellite public facilities should be developed wherever such facilities would make the delivery of services more efficient.

The Public Facilities Chapter is divided into several sections based on the department responsible for providing that facility or service. The sections are:

- FREDERICK COUNTY GOVERNMENT SERVICES
- FREDERICK COUNTY PUBLIC SCHOOLS (FCPS)
- FREDERICK COUNTY PARKS AND RECREATION
- HANDLEY REGIONAL LIBRARY
- FREDERICK COUNTY EMERGENCY SERVICES
- WINCHESTER REGIONAL AIRPORT
- FREDERICK WATER
- BROADBAND AND TELECOMMUNICATIONS

FREDERICK COUNTY GOVERNMENT SERVICES

CURRENT CONDITIONS

Many of the County's departments are located in the County Administration Building at 107 North Kent Street, Winchester; public safety agencies are located at the Frederick County Public Safety Center at 1080 Coverstone Drive, Winchester. The County has also recently acquired the former Sunnyside Plaza Shopping Center. This facility is planned to help meet the need for increased office space, meeting space, and governmental services in an accessible location.

FOCUS FOR THE FUTURE

Frederick County government shall continue to provide accessible, effective, and high-quality government services to its citizens, business owners, and community partners. Community facilities providing administrative and judicial services shall be located in urban areas which may include the County's Urban Development Area, Sewer and Water Service Area, and/or areas identified as future Urban Centers.

The County should strive to improve access to government services through a variety of creative and proactive approaches. Advances in technology should be embraced to further to advance the availability of government services. Projects aimed at enhancing the County's ability to provide accessible, effective, and high-quality services, either by Frederick County or through partnerships with private entities should also be considered.

COMMUNITY BENEFITS

Proper planning and land use policies enable the County to identify where future growth should be accommodated. By planning for this growth, we are better able to identify and provide for infrastructure and services in areas where they can reach the majority of the population.

GOALS/STRATEGIES

<u>GOAL</u>: IMPROVE SERVICES TO CITIZENS THROUGH EFFICIENT PROVISIONS FOR COMMUNITY FACILITIES.

- County government facilities should be provided in a manner that ensures that all citizens, business owners, and community partners have accessible services.
- Community facilities should generally be located within urban areas such as the County's Urban Development Area, Sewer and Water Service Area, and/or areas identified as future Urban Centers.

- Community facilities should serve as community focal points.
- Collaboration between County agencies should be a priority, to ensure that the County can provide the best possible environment for positive and vibrant community growth. Multiple use/satellite public facilities should be developed wherever such facilities would make the delivery of services more efficient.
- Encourage collaboration with the private sector to provide integrated infrastructure in the most efficient way possible.

FREDERICK COUNTY PUBLIC SCHOOLS (FCPS)

CURRENT CONDITIONS

Frederick County Public Schools (FCPS) is the 20th largest of 132school systems in the Commonwealth of Virginia, serving over 13,600 students in the 2020-2021 school year. With over 2,300 full time employees, Frederick County Public Schools (FCPS) is one of the largest employers in the Winchester-Frederick County area. The school district has 12 elementary schools, 4 middle schools, 3 high schools, 1 career & technical center, and participates in Northwest Regional Educational Programs, an alternative education center. Support facilities include the administration building, the maintenance/warehouse facility, the Transportation Facility, and Support Facilities West. There are a total of 25 schools and support facilities operated by FCPS. In the past ten years, FCPS has constructed 3 new schools plus the Transportation Facility and 4 school additions/renovations.

Residential growth continues to impact the school system as additional homes are built throughout the County. During the past several decades, the total student enrollment in the school division has increased steadily. Student enrollment has grown by 490 students in the past ten years. Seventy-four percent of the class of 2020 planned to continue their education. FCPS on-time graduation rate for the 2019-2020 school year was 93%, compared to the state's 92.3%.

FOCUS FOR THE FUTURE

The establishment of new community facilities creates opportunities to improve the quality of the surrounding community. Schools in particular through the incorporation of Neighborhood Design can serve as the focal point for Neighborhood Villages and Urban Centers within the UDA and Rural Community Centers in the Rural Areas. Opportunities to co-locate schools with other community facilities should be sought. Several schools currently have Parks & Recreation Basic Rec programs within them. This program should be considered for new schools. Other Parks & Recreation programs could be co-located with schools.

Schools should be located in existing or future neighborhoods, within walking distance and be accessible to residents. They act as neighborhood anchors and community centers. Well planned school sites, by encouraging walking and bicycling, can improve student health and academic performance and reduce traffic around schools. A good example of community-centered school planning can be found around Greenwood Mill Elementary School, the County's 11th elementary school.

COMMUNITY BENEFITS

Frederick County Public Schools' (FCPS) vision is to be an innovate community where caring relationships and authentic learning inspire all students. The Frederick County Public Schools community nurtures all learners to realize their dreams and aspirations through:

• Meaningful and engaging learning experiences

- A collective responsibility for continuous growth
- Embracing a culture of diversity and inclusiveness
- Fostering and supporting innovative ideas that challenge conventional thinking
- A commitment to forward-thinking learning environments

FCPS promises each and every student learning experience grounded in high expectations, personalized to student needs and interests, tailored to inspire passion and challenge thinking, and backed by necessary learning supports today, so that each and every student is ready to pursue the dreams and opportunities of tomorrow.

FCPS is a learning organization where students and staff thrive in safe, supportive, nurturing environments, motivated by a culture of continuous growth so that each and every student becomes a contributing citizen in our global society.

FCPS will support students and staff through meaningful, authentic learning experiences and a focus on overall well-being by cultivating strategic, purposeful partnerships with community members, organizations, and families.

FCPS will be recognized as the preferred school community for individuals who are high achieving, compassionate, committed to continuous improvement, and who are inspired and inspire others.

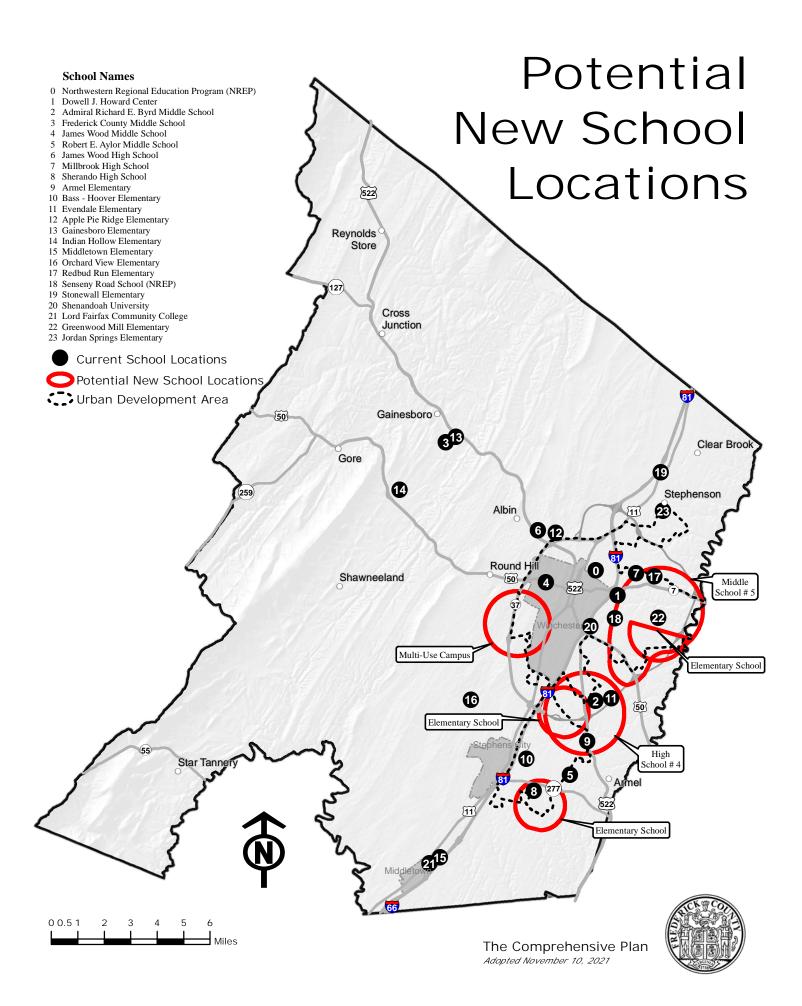
GOALS/STRATEGIES

Each local school board in Virginia is required by State Code to adopt a division wide comprehensive plan. Accordingly, the Frederick County Public Schools Division Comprehensive Plan, Inspire 2020, A Promise for Progress, is the document that governs the future direction of FCPS. Long-range school planning documents that are developed under the umbrella of the Division Comprehensive Plan include curriculum improvement plans, school improvement plans, a technology plan, enrollment projections, a capital improvement plan, and a staffing projection plan.

<u>GOALS</u>: CONSIDER THE SURROUNDING NEIGHBORHOOD VILLAGES, URBAN CENTERS, AND RURAL COMMUNITIES; SITE LOCATION, SITE SUITABILITY, PROGRAM DESIGN, AND THE NEEDS OF OTHER AGENCIES IN LOCATING NEW FACILITIES.

- In evaluating potential school facility locations, consider the role of the site in building diverse, walkable communities in the UDA.
- In evaluating potential school facility locations, consider each location relative to arterial roads, planned roadways, the SWSA, the UDA, surrounding neighborhoods, floodplains, Civil War battlefields, and Agricultural and Forestal Districts. Also consider surrounding land uses, and potential environmental hazards.

- In evaluating individual candidate sites, consider each site's zoning, planned land use, topography relative to program requirements, historical features, water features, wetlands, potential environmental hazards, geology, soil suitability, and tree cover. Also consider constraints contained in the site's deed and plat and the potential for the presence of rare, threatened, and endangered species.
- Purchase sites that are suitable for co-locating school facilities with facilities other agencies have identified in their CIP or other studies if doing so does not interfere with FCPS' educational mission and is a responsible use of public funds. Future school sites have the potential to be collocated with future fire and rescue stations, parks, community centers, libraries, convenience sites, and satellite offices for several County Departments. Additionally, future school sites could become part of the network of properties needed to execute the Eastern Road Plan.



FREDERICK COUNTY PARKS AND RECREATION

CURRENT CONDITIONS

Facilities

Frederick County has four classifications of parks including Greenways (linear parks), Neighborhood, Community, and District Parks. The classification depends on the size, service area, purpose, character, and location of the property. The County currently has two district, two community, and three neighborhood parks. Additionally, a community park is planned on 25 acres on Old Charlestown Road in the Stonewall District and the County is beginning development of a Greenway trail along Abrams Creek in the eastern part of the County.

The two district parks, Clearbrook and Sherando, currently serve the County's population with active and passive recreational programs and facilities. Clearbrook Park is located five miles north of Winchester on Route 11 and encompasses 44 acres of land surrounding a 3.5-acre lake. Sherando Park, located two miles east of Stephens City on Route 277, includes 334 acres of varied open and forested land and a diverse array of recreation facilities. Community parks include Rose Hill Park in the Back Creek District and Stonewall Park in the Stonewall District. Rose Hill Park is located 1/3 mile south of the intersection of Cedar Creek Grade and Jones Road offering visitors the opportunity to enjoy the historic and scenic features of the Museum of the Shenandoah Valley's Rose Hill Farm. Stonewall Park on Stephenson Road is developed for active recreation and has five diamond ball fields for use. The three neighborhood parks include space at the Reynolds Store Fire Company, Frederick Heights Park near Senseny Road, and County owned property behind the Bowman Library where the department has constructed a walking trail around a lake and has plans to develop an amphitheater for community use. Master development plans were adopted for both Clearbrook and Sherando Parks establishing a development vision for each park based on identified recreational needs.

Parks and Recreation Master Plan

The Parks and Recreation Master Plan was adopted in 2018 and outlines both long- and medium-term goals and strategies. Master Plan goals align with the Comprehensive Plan goals listed above and provide strategies and action steps for the department to pursue. The Parks and Recreation Master Plan is available on the Parks and Recreation website for reference.

FOCUS FOR THE FUTURE

To meet the future service demands on the County's two district parks, the Parks and Recreation Department intends to continue implementing the improvements adopted in the park Master Plans and in the Capital Improvement Plan. Additionally, new Neighborhood or Community Parks and usable open spaces should be located within the Urban Development Area (UDA), located near areas planned for future residential land uses, Neighborhood Villages and Urban Centers or within designated Rural Community Centers. The construction of additional trails throughout the community is also important. Trails are highly desired recreation facilities for county residents and provide the ability to travel safely from homes to schools, stores, work, or recreation areas without having to share roadways with vehicle traffic.

Frederick County is fortunate to have multiple entities providing publicly accessible land citizens can use for recreation and leisure purposes. Frederick County currently manages 430 acres of park land and 340 acres of other school and county owned properties. While new park land locations are identified, there is significant development potential on existing County owned park areas as almost half of these acres are yet to be developed for recreation purposes. Frederick County is fortunate to have within its jurisdictional boundary thousands of acres of publicly accessible land provided by Federal, State, school system and non-profit entities. Additionally, adjoining jurisdictions allow Frederick County residents the use of their facilities. In combination the County and other publicly accessible lands and facilities provide the array of current conditions from which remaining needs are determined.

COMMUNITY BENEFITS

The Frederick County Parks and Recreation Department is building a sense of community through people, parks, and recreational opportunities benefitting all residents. Parks and recreation activities stimulate economic activity and property values are increased by proximity to parks and through the added quality of life and sense of community. Families and organizations alike look to Frederick County Parks and Recreation to meet their leisure needs. Approximately 1.5 million recreational contact hours for youth, senior, and family programs are provided through programs offered by or facilitated through Frederick County Parks and Recreation with nearly two-thirds of Frederick County households reporting they use Parks and Recreation services and facilities. Nearly ½ million visits are counted at the two District Parks alone on an annual basis.

GOALS/STRATEGIES

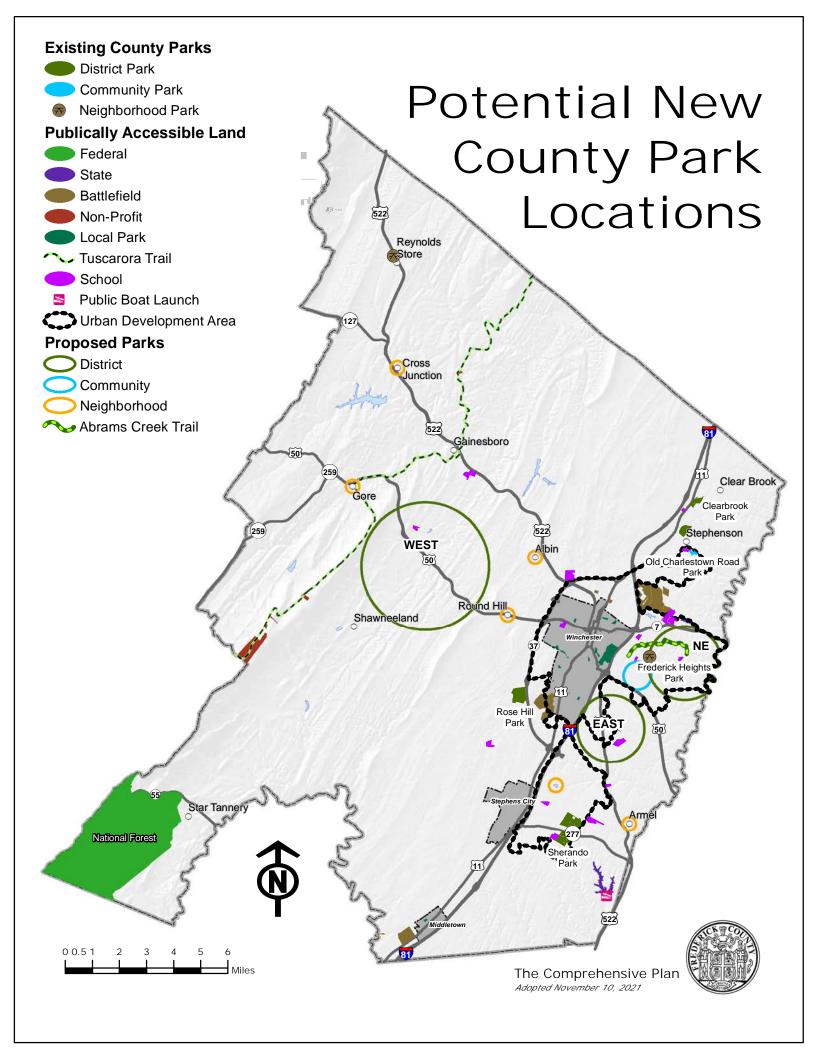
<u>GOAL</u>: CONTRIBUTE TO THE PHYSICAL, MENTAL, AND CULTURAL NEEDS OF THE COMMUNITY; ITS ECONOMIC AND SOCIAL WELL-BEING, AND ITS SENSE OF CIVIC PRIDE AND SOCIAL RESPONSIBILITY THROUGH THE IMPLEMENTATION OF AN INTEGRATED PLAN FOR RECREATION PROGRAMS AND PARK FACILITIES.

- Maintain a County-wide recreation plan which identifies recreational, park, trial, bikeway, and open space needs.
- Identify recreation needs associated with the Rural Community Centers.

- Continue to utilize State and Federal grants and as needed pursue voter-approved bond financing for capital projects approved in the Capital Improvement Plan.
- Continue to expand our cooperative relationship with the Frederick County School Board in jointly meeting identified County recreational needs.
- Review land development regulations to ensure that appropriate standards are provided for open space recreational facilities in new developments.

<u>GOAL</u>: TO HAVE EVERY RESIDENT OF FREDERICK COUNTY'S URBAN DEVELOPMENT AREA (UDA) WITHIN WALKING OR BIKING DISTANCE OF A RECREATION AREA.

- Inventory the County's natural and environmental resources to identify appropriate locations for greenways, community and neighborhood and mini parks including connectivity consistent with the 2014 Metropolitan Planning Organization (MPO) Bicycle and Pedestrian Plan.
- Strategically locate parks in or near Neighborhood Villages and Urban Centers to meet population-based needs. Parks should be carefully planned to respect and take advantage of natural and historic resources as well as to enhance the natural, scenic, and cultural value of the urban areas of the County.
- Ensure recreation and open space requirements for residential developments are adequate.
- Actively pursue parkland in areas where publicly accessible land does not or is not anticipated to meet citizen needs.



HANDLEY LIBRARY

CURRENT CONDITIONS

The goal of the Handley Regional Library System is to be a resource to the communities they serve by creating connections to information and entertainment and being the center of learning. Currently the Handley Regional Library System has one library in each jurisdiction served. As population grows in Frederick County, the demand for library services also continues to increase. Each library in the Handley Regional Library system functions as a community center, a search engine, and a place that welcomes everyone to lifelong learning. Frederick County's larger population and land area mean that there are portions of the County that are not well served by the Winchester or Stephens City branches.

FOCUS FOR THE FUTURE

As the residential population in Frederick County continues to grow the Library System has plans for opening new facilities. The Library Board plans for future libraries to open in the Gainesboro area, Senseny/Greenwood area and the Route 522/Justus Drive area. The inclusion of small library branches that can offer delivery of materials from anywhere in the system as well as providing information and training to customers about new online services should also considered.

COMMUNITY BENEFIT

With easy access to computer workstations, libraries are a primary source of technology services and resources to County residents, especially those who may lack such access in their homes. Ideal locations for new libraries would be within close proximity to residential uses, schools and commercial uses.

GOALS/STRATEGIES

GOAL:PROVIDE ADEQUATE LIBRARY SERVICES TO MEET THE NEEDS OF THE CURRENT
AND FUTURE RESIDENTS.

- The Handley Regional Library Board will review and update its long-range plan for facilities growth, using the criteria of cost, need, safety, and proximity to the greatest number of residents.
- Continue to monitor the growth throughout the County to determine where new library facilities are needed.

FREDERICK COUNTY EMERGENCY SERVICES

CURRENT CONDITIONS

As residential and commercial developments continue to locate and expand in Frederick County, there will be an increased need for emergency services to provide services to protect the citizens and transient population. Emergency services are provided by The Frederick County Fire and Rescue Department, The Sheriff's Office, and the Department of Public Safety Communications. These three departments are located at the Frederick County Public Safety Center.

The goal of the fire and rescue system is to provide the most efficient fire and rescue services Countywide. Responses include, but are not limited to, emergency medical services, fire suppression, rescue, hazardous-materials, special services and emergency management. The Department is made up of the Operations Division, Training Division, Fire and Life Safety Division, Emergency Management Division, and the Fire Marshal's Office.

The Fire and Rescue Department consists of eleven volunteer fire and rescue companies. The Department has career personnel assigned to all eleven stations, which are staffed 24 hours a day. Volunteer personnel staff their stations when available.

FOCUS FOR THE FUTURE

Future challenges for the Fire and Rescue Department include developing additional fire and rescue stations to meet future growth within the County and keeping up with the staffing needs to continue to provide quality and timely service.

Planning for future fire and rescue station locations and equipment needs must be accomplished by developing a five-year strategic plan. This plan will identify future fire and rescue station sites and equipment needs based on projected service demands and response times. The plan will encourage the dedication of sites for new fire and rescue stations within the identified areas during the rezoning process.

Non-residential areas such as retail, office, and industrial areas require increased fire protection because specialized equipment is necessary to ensure safety for these land uses. Other land uses identified as target hazards continue to grow. These include land uses such as schools, nursing homes, daycare centers, and industrial facilities. These land uses have a higher risk of injury due to the specific demographics of person utilizing these facilities.

Existing road conditions, primarily those with gravel or dirt surfaces and horizontal and vertical curvatures, located outside of the county's Urban Development Area (UDA) create longer response times. The greatest factor contributing to the need for new fire and rescue stations is the rapid population growth and increases in dwelling units within the County.

COMMUNITY BENEFITS

The development of new fire and rescue stations could provide an opportunity to extend satellite services provided by other County Departments and agencies. Allocation of space could be created within new fire and rescue stations for community services provided by the Sheriff's Office, the Treasurer's Office, the Voter Registrar's Office, and the Commission of the Revenue's Office, to provide the residents of Frederick County more accessible options for government services. Locations for future facilities are encouraged within the UDA and Rural Community Centers.

GOALS/STRATEGIES

<u>GOAL</u>: WHEN PLANNING NEW FACILITIES, CONSIDER SITE LOCATION, SITE SUITABILITY, BUILDING DESIGN, AND CONSTRUCTION TIMING.

- Co-locate fire and rescue stations with other County facilities and agencies for maximum efficiency.
- Construct fire and rescue stations at strategic locations throughout the County to help achieve desired response times to all emergency calls and increase the level of service. Locate fire and rescue stations with easy access to a major arterial or at an intersection of two major arteries to gain both east-west and north-south access.
- Locate fire and rescue stations on sites of between two and five acres to allow for future expansion. Sites may be smaller when developed as part of a Neighborhood Design in an Urban Center or Neighborhood Village.
- Select and design sites to minimize the adverse impact of sirens and other noise on residential areas.
- Investigate the need for a Regional Public Safety Training Center as the demands for public safety related training increase and existing facilities age.
- Continue working towards replacing the County's public safety communication system.

WINCHESTER REGIONAL AIRPORT

CURRENT CONDITIONS

The Winchester Regional Airport is recognized as an important component of the County's Business Development efforts. Therefore, the Plan designates an Airport Support Area for the Winchester Regional Airport. Commercial, and industrial uses should be the primary land uses in the Airport Support Area; these planned land uses are further outlined in Appendix I.

The Airport Support Area is an area in which further residential rezonings will be prohibited. Conflicts between airports and residential development can be significant in growing communities. Residents of areas in the vicinity of the airport tend to oppose airport operations and the expansion of such operations because of concern for noise increased aircraft activity. The Airport Support Area was also established to ensure the continued operational viability of the airport support future airport expansion and facilitate implementation of the Comprehensive Plan and Airport Master Plan.

FOCUS FOR THE FUTURE

There is a need to continue to implement the Airport Support Area expectations. Commercial and industrial uses should be the primary uses in the airport support area; residential rezoning's will be prohibited.

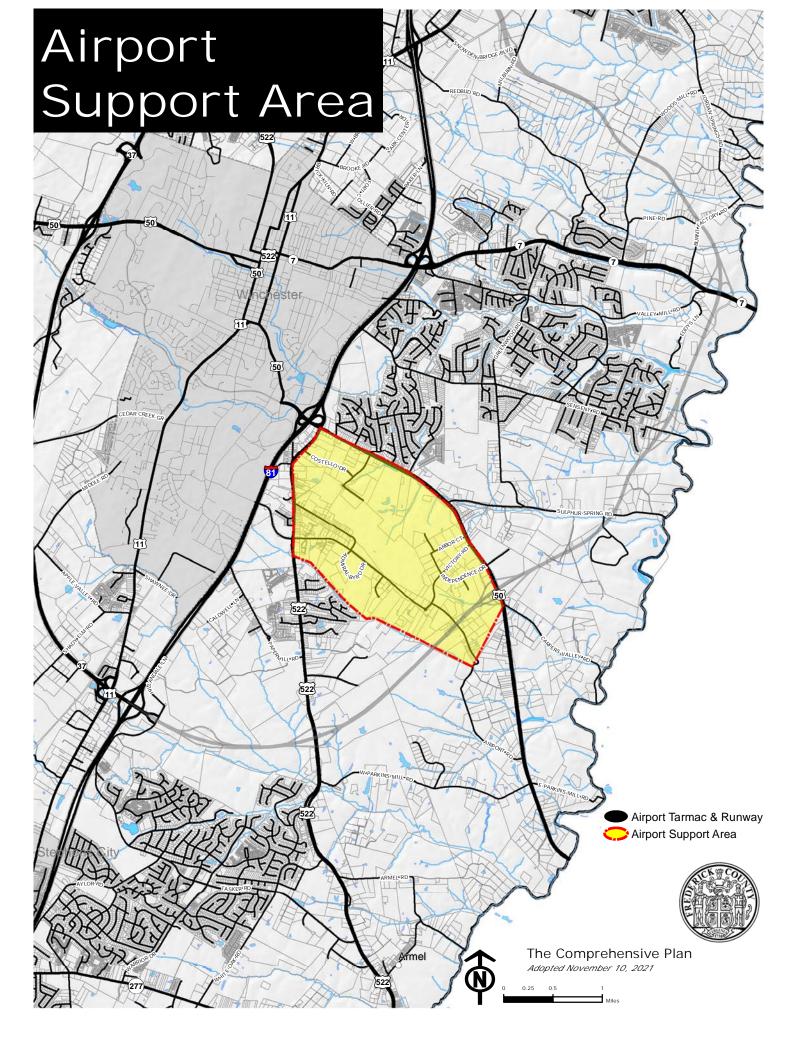
The Capital Improvement Plan will continue to be a key tool that will facilitate the growth and development of the airport. Key capital projects include the acquisition property and easements necessary to protect the approach and departure surfaces of the runway and future growth, relocation of the primary parallel taxiway, replacement of the main aircraft parking apron, development of the north side of the runway, and replacement of the terminal building.

COMMUNITY BENEFITS

Through the support of the Winchester Regional Airport Authority's member jurisdictions, the Airport will continue to be a modern, first-class air transportation facility that accommodates a multitude of aeronautical functions that serve the public good, supports local employers, and attracts new businesses to the region.

GOALS/STRATEGIES

Specific Goals and Strategies relating to the Winchester Regional Airport are contained in Chapter 4 – Business Development.



FREDERICK WATER

CURRENT CONDITIONS

The Sewer and Water Service Area (SWSA) is an important policy tool used by Frederick County to determine where public water and sewer service may be provided. The Board of Supervisors approves the location of the Urban Development Area (UDA) and SWSA boundaries through the adoption of the Comprehensive Plan and amendments thereto. As a result, properties located within the SWSA may enjoy access to public water and sewer.

Frederick Water has the primary responsibility to manage the provision of water and sewer services in Frederick County. Other public entities may serve properties within Frederick County, if approved by the Board of Supervisors; this is the case in some areas adjacent to the City of Winchester and in the vicinity of the Town of Middletown and the Town of Stephens City. The Middletown/Lord Fairfax and Middletown/Reliance Road Area Plans established the Sewer and Water Service Areas (SWSA) with the express stipulation that the Frederick Water will be the party responsible for providing water and sewer in this area. This may be done in cooperation with those adjacent public entities.

Water and Sewer Services

The location of public sewer and water lines within the Urban Development Area (UDA) and SWSA determines where urban development can occur. The UDA defines the general area in which more intensive forms of residential development can occur. Commercial, industrial, and institutional land uses are also encouraged within the UDA. The SWSA is consistent with the UDA in many locations. However, the SWSA may extend beyond the UDA to promote commercial, industrial, and institutional land uses are not desirable.

It is the clear policy of the Comprehensive Plan that extensions of sewer and water service will be within the boundaries of the UDA and SWSA. The extension service into areas outside of those boundaries will require an amendment to the Comprehensive Plan. All sewer and water mains extended shall be publicly owned.

Frederick Water has the responsibility for the treatment, transmission, and distribution of potable water and the collection and conveyance of wastewater. Most of the sewer and water mains and laterals in the County are owned, operated, and maintained by Frederick Water.

Frederick County and Frederick Water have executed a Facilities Planning Agreement which sets forth procedures for the planning of sewer and water mains in the County. The agreement includes: provisions for adopting a water and sewer facilities plan as a part of the Comprehensive Plan; specifies the location of water and sewer mains over eight inches in size; provides for review and update of the plan and for including sewer and water facilities projects in the Frederick County Capital Improvements Plan.

The City of Winchester owns and maintains sewer and water lines in portions of the County adjacent to the City corporate limits. Such lines have been extended into the County following a previous agreement between the City and the County, and often predate Frederick Water's ability to provide said services. The Frederick County Board of Supervisors prefer that all future water and sewer services in the County be provided by Frederick Water.

Wastewater Facilities

The Frederick-Winchester Service Authority (FWSA) provides wastewater treatment service for Frederick Water and the City of Winchester. The FWSA currently owns the Opequon Water Reclamation Facility, the Parkins Mill Wastewater Treatment Plant and the Crooked Run Wastewater Treatment Plant and has operational agreements with the City and Frederick Water for wastewater treatment plant operations. The City operates and maintains the Opequon Facility while Frederick Water is responsible for operation and maintenance of the Parkins Mill and Crooked Run Facilities.

Treatment of wastewater generated from within the County's Sewer and Water Service Area (SWSA) is undertaken at all plants. The Opequon Service Area is comprised of the Abrams Creek drainage area which includes the City of Winchester and adjacent drainage areas located east, west and north of the City of Winchester. The Parkins Mill Wastewater Treatment Plant serves Frederick Water customers located in the upper Opequon Creek, Wrights Run, and Stephens Run drainage areas along with the Town of Stephens City. The Crooked Run Service Area services the Lake Frederick/Shenandoah Community in southeastern Frederick County.

The Opequon Water Reclamation Facility presently has a treatment capacity of 12.6 million gallons per day. The Parkins Mill Wastewater Treatment Plant which has a treatment capacity of 5.0 million gallons per day. The Crooked Run Wastewater Treatment Facility opened in support of the Lake Frederick development and has an ultimate capacity of 0.626 million gallons per day, with a current treatment capacity of 0.25 million gallons per day.

Water Facilities

Frederick Water manages a system with a water capacity of 7.42 Million Gallons per Day (MGD), with an average daily use of 6.5 MGD. Various quarries provide the majority of the system's water supply, with an agreement with the City of Winchester supplementing the system with up to 2MGD.

Two water treatment facilities are owned and operated by Frederick Water. The James H. Diehl Water Filtration Plant, put into operation 1994, treats up to 3 million gallons of water per day. Additional pumps can increase this capacity to 5–MGD. The water sources include ground water pumped from Frederick Water owned quarries on the west side of Stephens City, and wells at Bartonsville and Orchard View Elementary School.

The James T. Anderson Treatment Plant, opened in 2002, has an initial capacity of 4 MGD expandable to 6 MGD. The water source is a quarry in Clearbrook and nearby wells.

In addition, the Authority has in operation two elevated tanks and three ground storage tanks with a total capacity of 10 million gallons of system water storage.

FOCUS FOR THE FUTURE

The Frederick County Board of Supervisors establishes the framework for where development is to occur, and Frederick Water is tasked with accommodating and serving this new development.

The Comprehensive Plan utilizes the UDA and SWSA to designate those areas that are envisioned to be developed within the next 20 years. Therefore, areas within the SWSA should be provided public water and sewer service over the next 20 years as development advances. Those areas identified with future land uses but are not presently within the SWSA are expected to develop over the next 20-40 years; public water and sewer should be planned to serve these future areas. It is the role of Frederick Water to plan for and accommodate sewer and water service to these areas of anticipated new growth and development.

Historically, the County and Frederick Water have collaborated on long range planning efforts, and this has previously been reflected in the Comprehensive Plan. Continued cooperation and collaboration between Frederick Water and the Board of Supervisors is necessary in implementing the 2035 Comprehensive Plan.

In addition, Frederick Water should update its water and sanitary sewer master plans to reflect Frederick Water's current plans to service land inside the SWSA and to include an overview of their plans to service future land uses outside of the current SWSA boundary. Such master plans should build upon the future water and sewer needs of the County and the Town of Stephens City and guide the development and acquisition of water resources and wastewater treatment options. Frederick Water should proactively identify major capital projects aimed at increasing the County's water supply or implementing the anticipated future land use plan.

As noted in the Natural Resources Chapter of the Comprehensive Plan, water supply is critical to both the natural and built environment, and viable sources are essential for future economic development in the County. The future focus of Frederick Water and County should continue to be to protect the water supply and to identify and secure viable sources of water for the future growth and development of the County.

COMMUNITY BENEFIT

Frederick Water is a non-profit organization whose mission statement is to provide affordable and reliable water and wastewater service to our customers while protecting public health and the environment. The ultimate benefit to the Community is significant and noted throughout this Plan.

GOALS/STRATEGIES

<u>GOAL</u>: PROTECT GROUNDWATER SOURCES AND THE AREAS THAT CONTRIBUTE RECHARGE TO ENSURE THAT ADEQUATE WATER SUPPLIES ARE MAINTAINED, AND WORK TOWARD DEVELOPING INCREASED WATER SUPPLIES TO MEET FUTURE NEEDS.

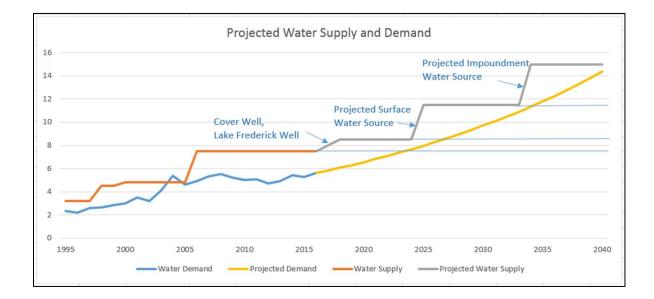
STRATEGIES:

- Frederick County and Frederick Water should continue to coordinate the planning of sewer and water facilities following the procedures described by the Facilities Planning Agreement.
- The Frederick County Board of Supervisors, with the support Frederick Water should work with adjacent communities to evaluate regional water supply issues. As a result, a regional water supply partnership could be formed that would combine water resources and address water supply issues as one regional entity to ensure common goals.
- Water and sewer service should be provided to service areas in the UDA and SWSA through an orderly process following the Facilities Planning Agreement and using the Capital Improvements Plan.

<u>GOAL</u>: FACILITIES AND SERVICES SHOULD BE CAREFULLY PLANNED TO MEET PROJECTED NEEDS. APPROPRIATE SERVICES AND FACILITIES SHALL BE PROVIDED TO SERVE PLANNED LAND USES AND DEVELOPMENT.

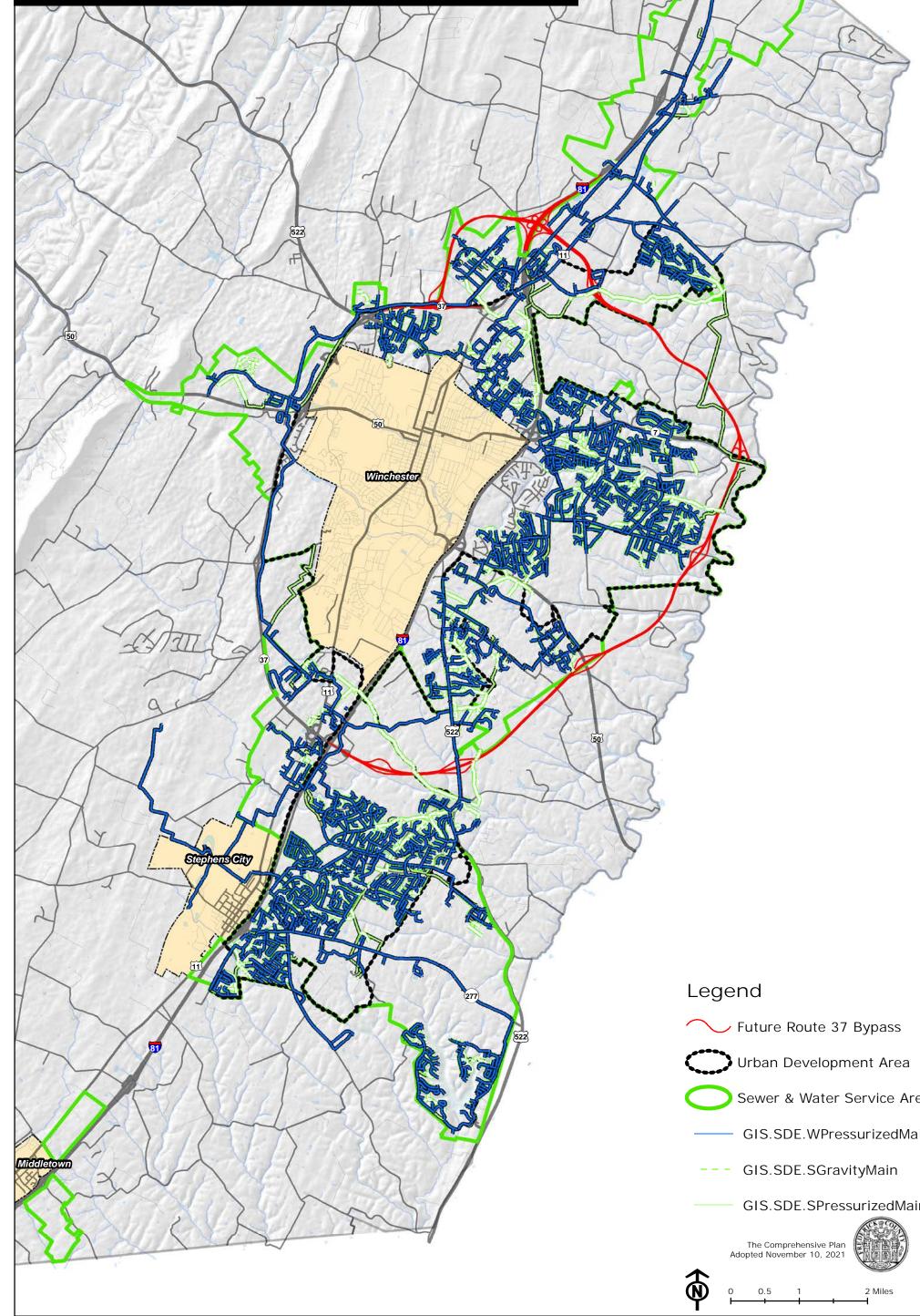
- Carefully monitor sewer and water use and develop up-to-date improvement plans for sewer and water facilities.
- Develop and maintain formal and regular relationships and procedures between the County and providers of facilities and services, including Frederick Water, the City of Winchester, the Frederick-Winchester Service Authority, and the Towns of Middletown and Stephens City.
- Identify those areas in the SWSA that are better situated to be served with water and sewer and prioritize facility and infrastructure development to more effectively serve those areas and the SWSA.
- Any sewer or water main eight inches in diameter or larger, extended or existing within an area proposed for inclusion within the SWSA or UDA, should be dedicated as a public line to be owned and maintained by Frederick Water or City of Winchester when appropriate.

- Plans for new facilities should be based on demand projections as derived from population projections in the Comprehensive Plan and from future land use plans which depict the planned future land uses that will accommodate the anticipated community growth.
- Together with the County and the City, Frederick Water and the Frederick-Winchester Service Authority should carefully plan needed sewage treatment capacity based on trends in usage.



PROJECTED WATER SUPPLY AND DEMAND CHART

Sewer and Water Service Area, Urban Development Area, & Water & Sewer Lines



Sewer & Water Service Area GIS.SDE.WPressurizedMain GIS.SDE.SPressurizedMain

BROADBAND AND TELECOMMUNICATIONS

CURRENT CONDITIONS

Telecommunications continue to play a vital role in economic development and quality of life for residents of the County. The rural areas in particular have seen a shift towards greater demand from residents for access to internet service. While some areas of the County currently have access to fiber, cable, or powerline-based services, much of the County's rural areas are not served by broadband and must rely on satellite or tower-based providers.

FOCUS FOR THE FUTURE

The lack of broadband service can be a constraint on the rural economy and puts households and students at a disadvantage. There are numerous challenges to bringing high speed broadband services to the rural areas of Frederick County. With over 416 square miles, Frederick County has topographic conditions that range from mountainous areas to the rolling and flatter rural areas, posing problems for cell tower provision of services. The County should study ways to match demand for internet service with availability of service in rural or underserved areas.

COMMUNITY BENEFITS

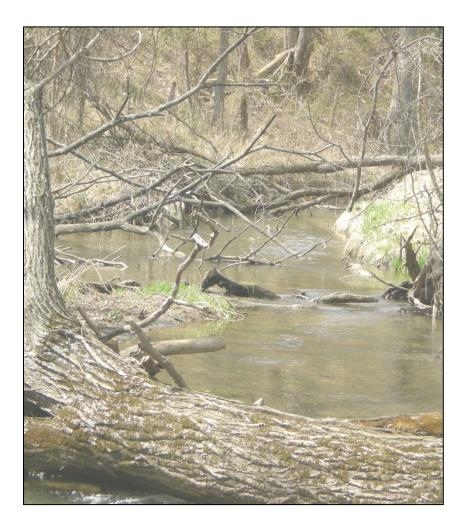
Access to high-speed internet is important for a variety of reasons, accessibility for school age children, residents that operate home based businesses, cellular phone service and access for new public safety communication facilities.

GOALS/STRATEGIES

<u>GOAL:</u> PROMOTE THE DEVELOPMENT OF A HIGH-QUALITY WIRELESS TELECOMMUNICATIONS NETWORK THROUGHOUT THE COUNTY TO SERVE ITS RESIDENTS, WHILE PROTECTING THE COUNTY'S VISUAL LANDSCAPE, HISTORIC RESOURCES AND NATURAL RESOURCES.

- Monitor broadband service coverage to ensure that as the county grows, adequate broadband services are provided to meet the needs of future residents and businesses.
- Support and facilitate the development of high-speed wired and wireless telecommunication networks, including broadband technology, to support rural businesses and residents.
- Develop a broadband policy to reflect the County's need to have internet service speeds appropriate for educational, business, and residential purposes in all parts of the County.

VII. NATURAL RESOURCES



NATURAL RESOURCES

CURRENT CONDITIONS

Frederick County's natural resources and geographic location has long influenced the County's history and settlement patterns. The last several decades has seen the community mature with a significant amount of residential and business growth. The greatest potential impact on our natural environment is the increasing population in the County which results in alteration of the land use. Conversion of land in the rural areas results in reduced open space and fragmentation of farm and forest lands. It can also disrupt natural and wildlife systems that help purify our air, recharge our groundwater and protect our local streams. Likewise, the denser growth in the UDA results in increased impervious surfaces which can impact natural resources.

This chapter focuses on the following natural resources:

- Water Supply and Water Quality
- Sensitive Natural Areas
- Agricultural and Forestal Areas
- Stormwater Management
- Erosion and Sediment Control
- Green Infrastructure
- Habitat Fragmentation and Environmental Corridors
- Light and Noise Pollution

FOCUS FOR THE FUTURE

The intent of this Chapter is to provide guidance that the future of the County's natural resources is viable and balanced, and able to meet the needs of the present community and that of future residents. As the County continues to grow and develop, we should ensure that the natural beauty is preserved, air and water qualities are protected, property values and quality of life are enhanced, and ecological diversity is maintained.

COMMUNITY BENEFITS

The preservation, maintenance, and enhancement of the natural resources within Frederick County are important to the community for many reasons; they contribute to the economic wealth, health of citizens, and the vitality of the County. The protection of natural resources helps preserve the scenic quality residents and visitors enjoy, supports native habitat and wildlife, and maintains biodiversity.

Sound regulations on the part of the public and good practices on the part of the developer make for less costly public investment. New developments that protect the environment with quality systems present less cost to the County in the long term when maintenance may

become a necessity. Recreational and aesthetic considerations are also part of our community resource management responsibilities.

One focus of this Plan is to ensure that applications for development address environmental issues at the earliest planning phase. Projects that include components of green infrastructure can help foster community cohesiveness by engaging residents in the planning process. This Chapter defines those areas of the County that are sensitive and need to be preserved.

WATER SUPPLY AND WATER QUALITY

WATER SUPPLY

Water supply is critical to both the natural and built environment, and viable sources are essential for future economic development in the County. There are no major rivers flowing through the County. The majority of the County contains small springs, seeps and headwater streams that contribute to three watersheds: the Opequon, Back Creek, and Cedar Creek. The County is within the larger Potomac River watershed, and ultimately the Chesapeake Bay watershed. The average flows from these streams within the County are marginal, and only the Opequon Creek has been perused as a supplemental source with withdrawals during peak flows. Frederick Water secured the necessary permits to utilize the Opequon Creek, and the withdrawal facilities will be constructed in the future. With the exception of water purchased from the City of Winchester, which comes from the North Fork of the Shenandoah River, the County is dependent on groundwater sources and the future Opequon Creek withdrawal.

The most productive aquifers in the County are the limestone/carbonate aquifers. Ninety percent of the recharge areas for groundwater in Frederick County are located in the limestone-carbonate topography or karst areas (see map). As development continues to occur in this region it is important to consider the impacts to both groundwater recharge and the pollution of groundwater from stormwater runoff. These are complex issues that also have a connection to surface water and will be referenced further in the water quality section. Groundwater studies in conjunction the United States Geological Survey (USGS) Virginia Water Science Center should continue, and participation in a regional water authority should be investigated to ensure adequate water supplies are available for the future.

GOALS/STRATEGIES

GOAL: PROTECT GROUNDWATER SOURCES AND THE AREAS THAT CONTRIBUTE RECHARGE (OR RESUPPLY OF WATER) TO ENSURE THAT ADEQUATE WATER SUPPLIES ARE MAINTAINED AND CONTINUE WORK TOWARD DEVELOPING INCREASED WATER SUPPLIES TO MEET FUTURE NEEDS.

STRATEGIES:

• Regional water supplies should be investigated.

- Groundwater recharge areas should be identified and protected. Protecting recharge areas can be accomplished through both technology options and reduced land disturbance practices during building and construction activities.
- Water conservation and efficiency practices should be encouraged and practiced throughout the County.
- Development within the limestone/carbonate geology should be limited and optimally these areas should be placed in conservation easements or preserved through the Transfer or Purchase of Development Rights (TDR and PDR) programs.
- Support implementation strategies identified by Frederick Water's Source Water Protection Plan.

WATER QUALITY

Land use and development activities have the potential to impact the ecological quality of streams and water bodies through the direct transport of pathogens and pollutants. Hydrologic changes can alter the character of flow in streams, resulting in alterations to stream morphology, such as increasing stream bank erosion, increased high-flow events and more critically low flows during low-flow periods.

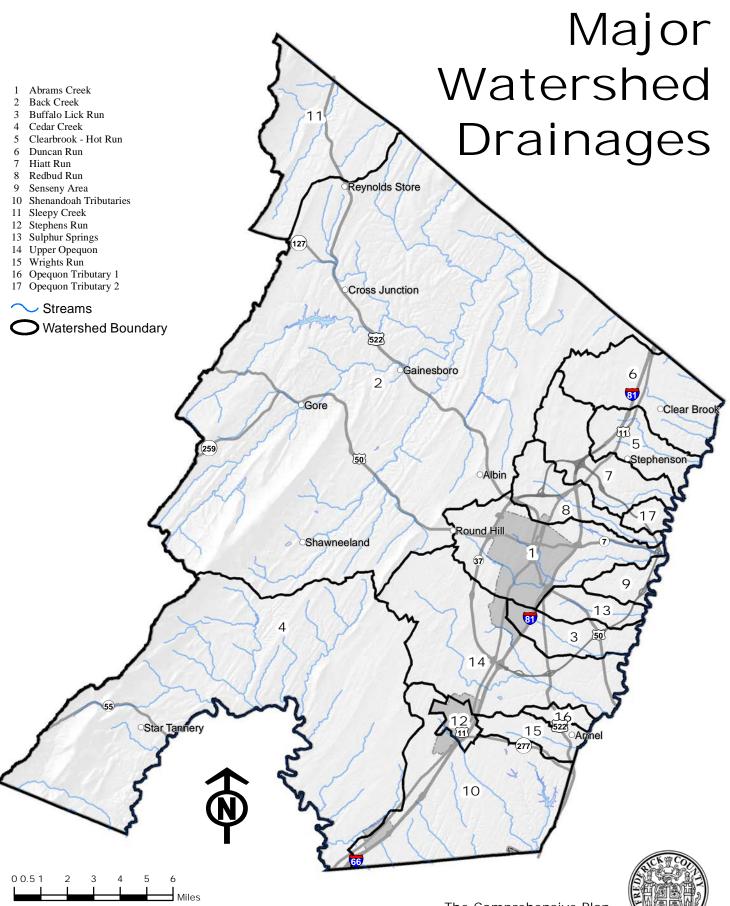
Unlike point source pollution, which comes from a defined permitted source like industrial and sewage treatment plants, nonpoint source pollution (NPS) comes from many different and diffuse sources. NPS occurs when runoff from rainfall and snowmelt cause erosion and wash various pollutants from the land into our local waterways and potentially into our local waterways. In addition, these pollutants can also enter the groundwater via karst recharge, without the benefit of any natural filtration or dilution. This is a significant issue, as most of the surface streams and rivers in the region are dependent on groundwater recharge for their base flow, rather than surface runoff. Many of the streams/creeks in Frederick County are on the State's impaired waterways list, and warrant future efforts to improve water quality. Volunteer efforts are underway to correct such situations.

Residential uses in the rural areas are typically served by individual onsite sewage disposal systems. (drainfields). When not properly maintained, these systems can become a source of water pollution. Private on-site sewage disposal systems are regulated by the Virginia Department of Health (VDH). Package treatment plant sewer systems, which are regulated by the Virginia Department of Environmental Quality (DEQ), are designed to serve more than one use. Package plants should only be allowed in areas planned for more intensive residential development, such as in the Rural Community Centers. Where such systems are allowed, they should be dedicated to a public authority or sanitary district to ensure that the facilities are properly operated.

GOALS/STRATEGIES

GOAL: PROTECT GROUND AND SURFACE WATER QUALITY.

- Watershed management throughout the County should encourage forested or vegetated streamside buffers to filter pollutants, stabilize stream banks and provide wildlife habitat.
- The types of onsite sewage disposal systems permitted in the County need to be managed to insure proper location, installation, operation, maintenance and inspection.
- Special emphasis should be placed on utilizing state and federal cost share programs specifically funded to address water quality in the Opequon Creek watershed and other environmentally sensitive areas. Work with local community and non-profit organizations to promote agricultural best management practices.



The Comprehensive Plan Adopted November 10, 2021

SENSITIVE NATURAL AREAS

Sensitive natural areas encompass various resources in the County, such as floodplains, steep slopes, karst terrain, and agricultural areas. This section describes the importance of these sensitive natural areas to Frederick County. These resources are further identified and integrated into the small area land use plans contained within the Comprehensive Plan.

FLOODPLAINS & DAM BREAK INUNDATION ZONES

Floodplains provide a necessary interface between land and water. Floodplains by definition store water and accommodate fluctuations in stream volume during heavy rains and can become flooded. Floodplains provide essential environmental benefits such as reducing peak flows and improving water quality. Encroachment of development into floodplains removes those benefits as well as increasing the impact on life, health and property.

Regulations to protect floodplains and waterways from disturbance are included in the County's Zoning Ordinance.

Floodplain areas have been generally identified in studies conducted by the Federal Emergency Management Administration (FEMA). Detailed maps produced by FEMA show floodways, as well as 100 and 500-year floodplains.

The Code of Virginia requires localities to identify and study dam break inundation zones within the community and their potential impacts. A dam break inundation zone refers to the area downstream of a dam that would be inundated or otherwise directly affected by the failure of a dam. These dams (or impounding structures) are man-made structures utilized to retain or store water. When referring to inundation zones, the term includes: (i)all dams that are 25 feet or greater in height and that create an impoundment capacity of 15 acre-feet or greater, and (ii) all dams that are six feet or greater in height and that create an impoundment capacity of 50 acre-feet or greater. Dams that meet these specifications are classified as either low hazard, significant hazard or high hazard based on the impact should the dam fail. There are 11 dams in Frederick County which are permitted by the Department of Conservation and Recreation (DCR).

STEEP SLOPES

Areas of steep slopes are located throughout the County, predominately in the mountainous areas, stream valleys and drainage areas. Steep sloped areas are often susceptible to erosion. The amount that may occur varies according to the amount and intensity of precipitation, slope steepness and length, vegetated cover and the soil type and erodibility. Clearing steeply sloped areas can exacerbate erosion of soil and increase stormwater runoff resulting in increased siltation and sedimentation.

Careful consideration should be given to avoid concentrated runoff when impervious surfaces are located close to steep slopes. Minimal disturbance of natural vegetative cover, in particular forest cover should be encouraged versus replant requirements.

KARST TERRAIN

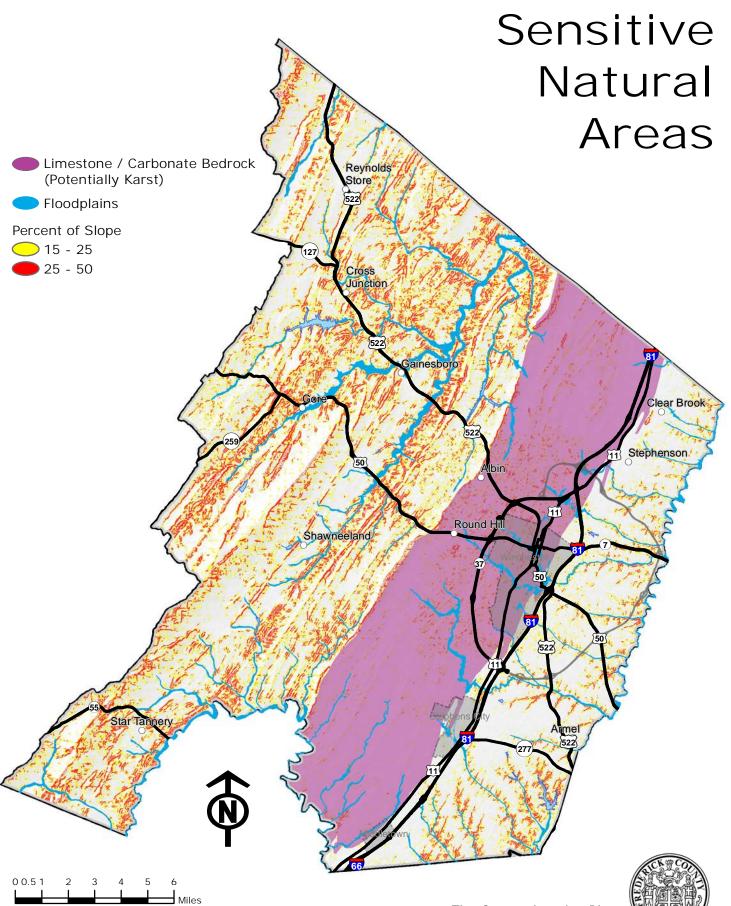
The central geophysical area of Frederick County is underlain by a band of carbonate bedrock consisting of limestone and/or dolomite and is identified as karst terrain. Karst terrain is characterized by the presence of sinkholes, surface depressions, caves, large springs, and a highly irregular, pinnacled bedrock-soil interface. Karst terrain is inherently unstable and susceptible to subsidence and surface collapse. As a result, the alteration of drainage patterns in these areas by the placement of impervious coverage, grade changes, or increased run-off from site changes can lead to sinking of land levels and sinkholes.

It is important to realize that the most of the water recharge area for the drinking water for the County is located in the karst terrain. Groundwater supplies in these areas are particularly susceptible to contamination from surface activities. Fractures, fissures and solution openings in the bedrock may connect to public or private water supplies such as wells and springs, making those sources especially susceptible to groundwater contamination.

GOALS/STRATEGIES

<u>GOAL</u>: APPROPRIATELY MANAGE IDENTIFIED SENSITIVE NATURAL AREAS AND IDENTIFY AREAS THAT COULD BE IMPACTED BY INUNDATION ZONES.

- Protect floodplains and steep slopes from unsuitable uses and continue to recognize their value for stormwater management and ecological functions.
- Development proposals should be adapted to fit the topography and natural setting of the County.
- Special consideration should be given in areas known for karst terrain prior to changes in land use. Prior to any development activities in areas known to have karst terrain, a geotechnical analysis should be performed by a certified geotechnical engineer and submitted to the Public Works Department for review.
- Update all Zoning and Subdivision Ordinance requirements to ensure that dam break inundation zones are identified to minimize potential impacts resulting from future development.



The Comprehensive Plan Adopted November 10, 2021



EROSION AND SEDIMENT CONTROL

Soils are natural resources that require proper use and conservation. Bare soil is the single greatest source of sediment which can enter waterways through erosion. In many instances, the greatest controllable source of soil erosion is through managing construction activities to reduce exposing the soil to the elements.

It is important to realize that the use of the soil be related to its suitability and limitations. Improper use may result in accelerated soil erosion, ground and surface water pollution, flooding, drainage problems, failed septic systems, construction problems and unproductive agricultural and forestal lands. The most environmentally sensible approach is to consider and adapt to soil types the planning and design of developments.

The 1987 Soil Survey of Frederick County, Virginia by the U.S. Department of Agriculture (USDA) and the Soil Conservation Service includes general and detailed soil maps, descriptions of the soils; and the suitability, limitations, and management of the soils for specified uses. The general soils map can be used to compare the suitability of large areas for general land use while the detailed soil maps along with soil unit descriptions can be used to plan and design a specific site.

The Virginia Erosion and Sediment Control Act and the Frederick County Code require that properties and waters be protected from soil erosion and sedimentation resulting from development activities. The Frederick County Public Works Department is responsible for the implementation and enforcement of these requirements.

GOALS/STRATEGIES

GOAL:INCORPORATE SOIL TYPES INTO LAND USE PLANNING FOR THE DESIGN OF
DEVELOPMENTS TO ENSURE PROPER USE OF THIS NATURAL RESOURCE AND
GUARANTEE THAT DURING DEVELOPMENT PROPER EROSION AND SEDIMENT
CONTROL MEASURES ARE MAINTAINED.

- Vegetative cover should be encouraged as the most important physical factor influencing soil erosion. The removal of topsoil and permeable soils should be discouraged and when removed, requirements to replace the soils should be enforced.
- Developments should be planned to fit the particular topography, soils, waterways, and natural vegetation on a site to ensure that structures and grading are designed to fit the site.

• Planning that requires the smallest practical area of land be exposed for the shortest period of time (through scheduling and staging project activities) is encouraged.

STORMWATER MANAGEMENT

Urban development changes the nature of streams and drainage. Areas once woodlands or pastures that are developed with roads, parking lots, and buildings, increase the impervious area or imperviousness of the watershed. This process brings changes to the runoff characteristics of surface water, both in quantity and quality.

Stormwater management is regulated by Chapter 79 of the Code of Frederick County "Erosion and Sediment Control Ordinance" as authorized by the Virginia Erosion and Sediment Control Law of Virginia. The Department of Public Works is the agency responsible for the implementation and enforcement of the Stormwater Management Ordinance as managed by the Department of Conservation and Recreation (DCR).

Stormwater management seeks to maintain post-development runoff at pre-development levels. Where necessary, stormwater storage systems, such as detention ponds, are required to accommodate a post-development storm with a twenty-five-year frequency.

Low Impact Development (LID) is an alternative to conventional stormwater management. LID is a site design strategy with the goal of maintaining or replicating the pre-development hydrologic response through the use of design techniques to create a functionally equivalent hydrologic landscape. Some of the functions include water storage, infiltration, and groundwater recharge as well as management of the volume and frequency of water discharges. Elements of LID include minimizing land disturbance, limiting impervious surfaces, and utilizing runoff reduction practices such as bioretention, permeable pavements and grass swales.

Geology is an important consideration when considering the application of LID practices. In areas of karst terrain, infiltrating LID practices must be carefully planned due to the potential for sinkhole formation. Stormwater treatment and conveyance systems should be directed away from known sinkholes to prevent expansion or possible collapse. Other geologic issues involve the presence of shale which makes infiltration difficult to impossible. While the use of LID may not replace conventional SWM controls, a combination of the two measures makes for a better overall stormwater management program.

GOALS/STRATEGIES

<u>GOAL:</u> ENSURE THAT STORMWATER IS MANAGED IN ACCORDANCE WITH THE COUNTY'S EROSION AND SEDIMENT CONTROL ORDINANCE AND VIRGINIA'S STORMWATER REQUIREMENTS, AND WORK TO IMPLEMENT LOW IMPACT DEVELOPMENT (LID) MEASURES WHERE APPROPRIATE.

- Encourage the use of semi-pervious or pervious surfaces and other low impact development techniques, where appropriate. Shared parking areas and reduced parking requirements for developments should be utilized to reduce impervious areas.
- Encourage the use of bio-retention whenever possible. Large impervious areas should take advantage of bio-retention in their parking lots.
- Participate in regional efforts to integrate LID runoff reduction and pollution prevention practices in karst areas and areas with shale-derived soils.

GREEN INFRASTRUCTURE, GREENWAYS AND TRAILS

Green infrastructure is the strategically planned and managed networks of natural lands, agricultural and forestal lands, and other open spaces. As an interconnected system, green infrastructure provides greater environmental viability, value, and function than disconnected individual resources. In both rural and urban areas, the green infrastructure concept identifies critical areas for conservation and establishes priorities for protection. It encompasses aspects like greenways, scenic areas, open spaces, biodiversity, and environmental corridors as well as naturally sensitive areas such as floodplains, karst areas and steep slopes.

URBAN AND RURAL OPEN SPACE RESOURCES

Open space resources in Urban Areas should be designed and created during development. Their value to the community is determined by their configuration, attributes and relationship to the surrounding areas. Urban open spaces will increase in importance as the County's Urban Development Area (UDA) is more densely developed. Development in the Urban Areas should consider specifically designed open spaces incorporated as amenities to offset the higher densities.

Wooded areas are an important resource and should be considered during planning and designing open spaces. The benefits of wooded include areas the maintenance of ground and surface water quality, groundwater recharge areas, habitat for biological resources, added oxygen to the air, and help protect environmentally sensitive areas. Urban wooded areas provide buffers and potential recreational opportunities. These areas help to preserve the natural scenery and can make the Urban Area a more attractive place to live. Rural open spaces of prime agricultural areas, forested areas, mountainous areas and stream valleys have particular value to the community; and they should be conserved.

Inappropriate sites like prime farm land, floodplains, habitats for threatened or endangered species, wetlands and land near wetlands, land near bodies of water and designated park land should be avoided during site selection and development to reduce environmental impacts. Development should be channeled into urban areas with existing infrastructure which would help protect natural resources and that existing natural areas should be conserved and restored to provide habitats and to promote biodiversity.

GREENWAYS

Greenways are areas of open space, usually linear in nature that form networks of trails. They are often located along streams, within utility easements, and along roadways, and can serve many different purposes. They can help link people to the area's natural, recreational and cultural resources, as well as provide a system of natural linkages for the areas wildlife to preserve biodiversity and protect habitats. When constructed along streams they can help preserve and protect buffers along the streams which can help protect biodiversity and help filter pollutants. Greenways can also provide recreational opportunities such as hiking or bicycling provide nature studies such as plant and animal behavior, as well as simply raising awareness of the environment.

The Tuscarora Trail

The Tuscarora Trail is a 249 mile hiking trail situated generally along the mountain ranges to the west of the Shenandoah and Cumberland Valley. It connects to the Appalachian Trail (AT) in Shenandoah National Park and in Pennsylvania northeast of the town of Carlisle. Approximately 26 miles of the Tuscarora Trail is in Frederick County (see map). Of this total, approximately 11.25 trail miles are protected by easements on private property, 3.75 trail miles are on unprotected private property and 11 trail miles are on public roads.

This trail is an important feature in the County for recreation and for the promotion of tourism. For safety reasons, the County supports the relocation of the trail off of the public roads wherever possible. The County also supports voluntary trail easements for sections of the trail on private property to insure the long-term viability of the Tuscarora Trail.

GOALS/STRATEGIES

GOAL:OPEN SPACES IN THE URBAN AND RURAL AREAS OF THE COUNTY AREIMPORTANT AND NEED TO BE RECOGNIZED, DELINEATED AND PROTECTED.

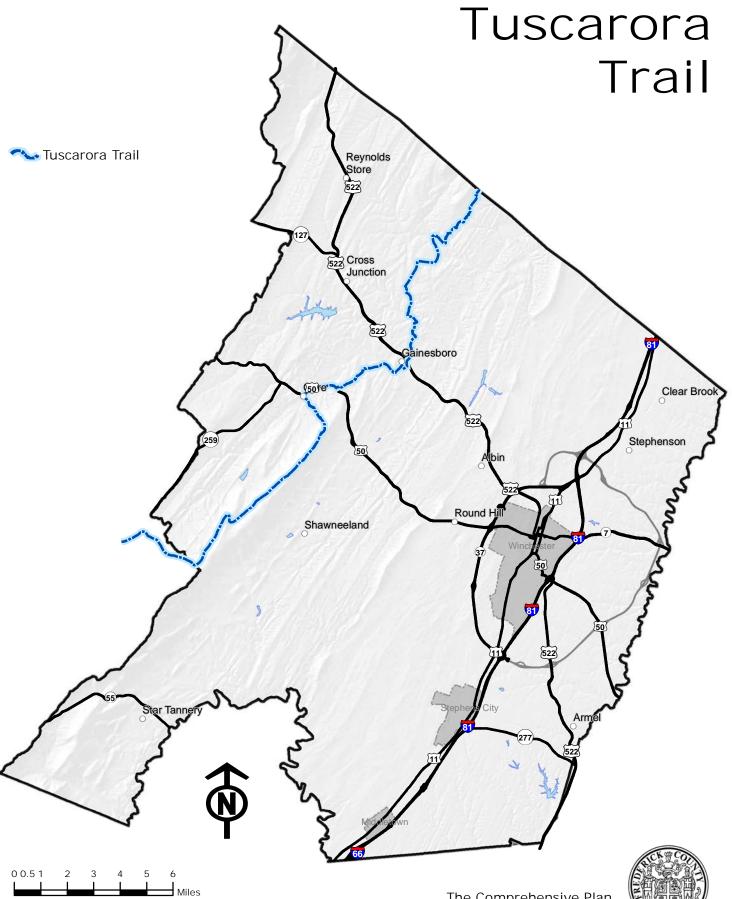
STRATEGIES:

- In urban areas, open spaces should be planned. All types of urban open spaces like greenways, squares, plazas, urban parks, playgrounds and street medians should be considered as part of urban development planning and implemented wherever reasonable.
- In rural areas, open spaces should be protected not only through conservation easements but also transfer development rights programs to ensure that agricultural, forested, and mountainous areas are protected.
- <u>GOAL:</u> ESTABLISH A NETWORK OF GREENWAY TRAILS FOR CONSERVATION, RECREATION AND TRANSPORTATION THROUGH THE URBAN AREAS OF FREDERICK COUNTY, AND LINK WITH THE TRAILS NETWORK IN THE CITY OF WINCHESTER.

STRATEGIES:

• Work with the Parks and Recreation Department, the City of Winchester and other organizations and community stakeholders to develop a greenway network plan that highlights the area's natural and historic resources.

• Ensure that when new developments are planned, connectivity of greenways is included through the project.



The Comprehensive Plan Adopted November 10, 2021



HABITAT FRAGMENTATION AND ENVIRONMENTAL CORRIDORS

Habitat fragmentation reduces available wildlife areas and changes migratory pathways through environmental corridors. Past development has created small separated pockets of open space that sometimes conflict with the needs of local wildlife and their adaptability to these changes. Fragmentation can hinder the safe movement or migration of many species because it forces them to travel over roads and through developments.

GOALS/STRATEGIES

<u>GOAL:</u> INCREASE THE CONNECTIVITY OF NATURAL AREAS AND ENVIRONMENTAL RESOURCES IN BOTH THE URBAN AND RURAL AREAS OF THE COUNTY TO AVOID FRAGMENTATION OF HABITATS AND MIGRATORY PATHWAYS.

STRATEGIES:

- Environmental corridors should be planned with all development activities to ensure safe movement and protection of species.
- The County should seek to reduce habitat fragmentation by maintaining large contiguous areas of forests, meadows, wetlands and streams.
- Large scale clearing of mature woodlands should be avoided during development activities.

LIGHT AND NOISE POLLUTION

LIGHT POLLUTION

Cycles of daylight and darkness have ecological consequences. Obtrusive lighting, often referred to as light pollution, obscures our view of the sky and primarily comes from inefficient and misdirected lighting sources. Misdirected lighting causes urban sky glow and glare, is a source of energy waste and can be a nuisance. Simply defined, light pollution is excess or obtrusive light created mainly by humans. Increasing development requires that care be taken to reduce unfocused emissions of light.

NOISE POLLUTION

Noise pollution is unwanted noise, often described as a displeasing sound that disrupts the activity or balance of human or animal life. The source of most forms of noise pollution is from transportation systems like vehicles, aircraft or railroads. The daily activities of the Winchester Regional Airport are an example, and it is important that land developing around the Airport is respectful of this operation. The Airport Support Area helps designate what types of uses are appropriate in these developing areas to ensure the continued operation of the Airport.

Other sources of noise include industrial operations, highway traffic, car alarms, factory machinery and equipment, construction work, lawn care equipment, barking pets, car stereos, and power tools. Urban planning can play an important role in managing noise pollution, and the County must ensure that acceptable levels of noise are maintained. Currently the County only has maximum noise levels for industrially zoned property.

GOALS/STRATEGIES

<u>GOAL:</u> MINIMIZE LIGHT EMISSIONS TO THOSE NECESSARY AND CONSISTENT WITH GENERAL SAFETY AND RECOGNIZE THE NUISANCE ASPECT OF UNFOCUSED LIGHT EMISSIONS.

STRATEGIES:

- Evaluate current lighting ordinances to assess effectiveness in reducing light pollution caused by up-lighting, excessive lighting, and glare.
- Light emissions need to be minimized to what is necessary and consistent with general safety. Recognition needs to be given to the nuisance aspect of unfocused light emission.

GOAL: MINIMIZE HUMAN EXPOSURE TO UNHEALTHY LEVELS OF NOISE.

STRATEGIES:

• Ensure that with new development, people are protected from unhealthy levels of noise.

Examine types of noise generators and determine if additional ordinances are appropriate.

VIII. HISTORIC RESOURCES



HISTORIC RESOURCES

CURRENT CONDITIONS

Frederick County has shifted in recent years from an agrarian community to one that has seen strong residential growth and an expanding business base. With the development and diversification experienced over the years, landscapes in Frederick County have changed dramatically. New residential communities have emerged in what were once rural areas, and architectural styles have become more uniform. However, the historic past (including sites, structures and landmarks) of Frederick County continues to play a role in the changing landscape.

The Rural Landmarks Survey of Frederick County, a survey of the majority of structures built prior to 1940 in Frederick County, was completed in 1992. It documented over 1800 properties, concluding that many are historically significant. Archaeological sites in the County have also been inventoried. Many of the historically significant properties are recognized on the local, state, and national levels.

In addition to the many structures in Frederick County, six Civil War battlefields of great national importance are located in the Frederick County and Winchester area. More than 12,000 acres of battlefield lands maintain high historic character and are enhanced by several fortifications and entrenchments. A partnership involving Winchester and Frederick County government, the Shenandoah Valley Battlefields Foundation, the Kernstown Battlefield Association, the Cedar Creek Battlefield Foundation, the North-South Skirmish, and others is underway to protect local battlefield sites and create a battlefield park network.

Currently the County has four recognized historical districts and one National Historic Park: Newtown/Stephensburg, Opequon, Middletown, and Bartonsville, Cedar Creek Battlefield and Belle Grove National Historic Park.

The County has also identified Rural Community Centers throughout the County that have a strong historical character (See Rural Areas, Chapter 2).

Focus for the Future

The next twenty years should see the remainder of unidentified historic sites and archeological resources discovered and recorded. Sites that qualify as historic will be added to an on-going inventory. Such an inventory will include archeological surveys of properties surrounding known battlefields, encampments, trenches, and cemeteries.

Heritage tourism will continue to be a strong component of Winchester-Frederick County's tourism program. Efforts to develop the battlefield park network will be underway in partnership with the Shenandoah Valley Battlefield Foundation and other community stakeholders.

The economic and cultural importance of historic resources should also be promoted. In combination with historic preservation and heritage tourism efforts, the County should partner with local agencies, organizations, and other appropriate groups to provide education sessions concerning preservation methods and programs. In addition, the Historic Resources Advisory Board (HRAB), a County appointed group, should continue to coordinate with these agencies when reviewing development applications.

COMMUNITY BENEFITS

The value of protecting our historical resources is immeasurable; once lost, historic structures and areas cannot be replaced. They provide a sense of who we are and where we have been. Our community benefits from a balance between preserved historic resources and new development.

A battlefield park network in Frederick County and Winchester will provide substantial economic and educational benefits and will create a much-desired avenue for heritage tourism. Battlefield parks act as a means of meeting the County's growing need for green space and parkland by providing the opportunity for recreational facilities within the Parks and Recreation Department. Preserving battlefields and historic sites provides open spaces and scenic vistas. Incorporating trails, such as the five miles linking Route 661 to the Regency Lakes Community and Millbrook High School at the Third Battle of Winchester, complements the pedestrian and bike component of our transportation planning.

Archeological sites are also important to the development of public education and heritage tourism programs as they provide a more detailed story of Frederick County's history.

GOALS/STRATEGIES

<u>GOAL:</u> IDENTIFY AND RECOGNIZE HISTORIC RESOURCES IN THE LONG-RANGE PLANNING EFFORTS OF THE COUNTY.

- The Historic Resources Advisory Board (HRAB) will continue to assist the Department
 of Planning and Development by reviewing development proposals to determine their
 potential impact on historic sites and surrounding areas and make recommendations
 regarding the mitigation of any impacts.
- Development should include a comprehensive approach to historic preservation that will result in a system of coordinated sites that preserves key resources, attracts tourists, and supports education.
- The Rural Landmarks Survey shall continue to serve as a primary source for identifying historic properties and districts that qualify for official recognition.

- Update and maintain the Rural Landmarks Survey regularly in order to keep current the inventory of structures older than fifty years.
- Develop, update, and maintain an inventory of archaeological sites and cemeteries in Frederick County.
- Archaeological surveys should be conducted prior to development, particularly any that involve battlefield areas, homesteads, Native American encampments, and waterways.

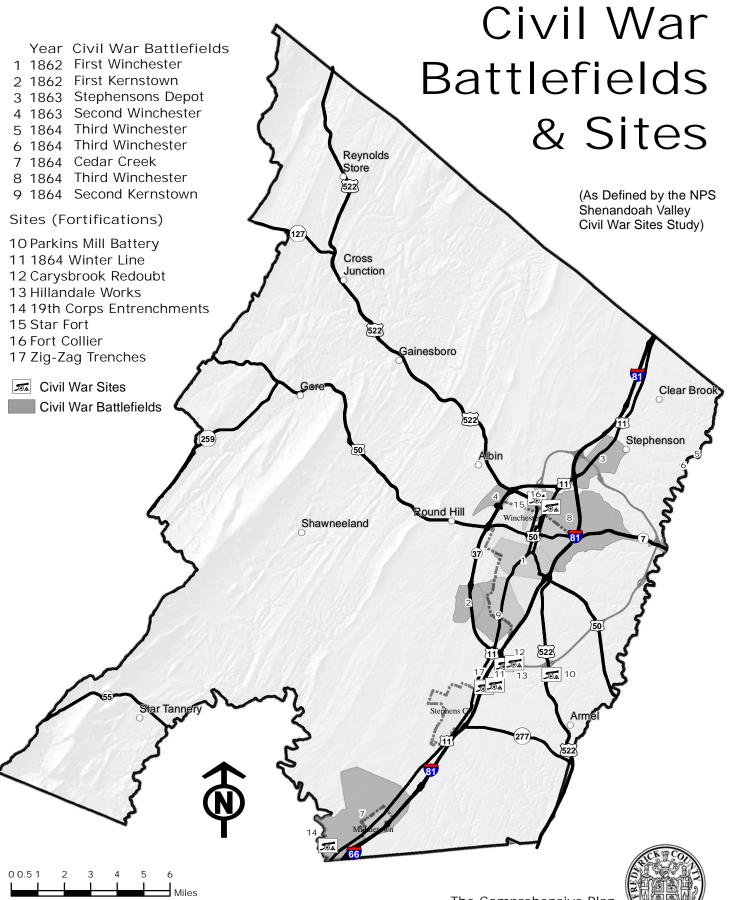
<u>GOAL:</u> INCREASE THE REHABILITATION, ADAPTIVE REUSE, OR RESTORATION OF HISTORIC STRUCTURES.

STRATEGIES:

- Study, develop, and adopt methods and criteria to identify historic resources in need of preservation.
- Support the reuse and rehabilitation of historic structures to maintain character of community, both residential and business.
- Promote incentives for private landowners to comply with Secretary of Interior's Standards for Rehabilitation.

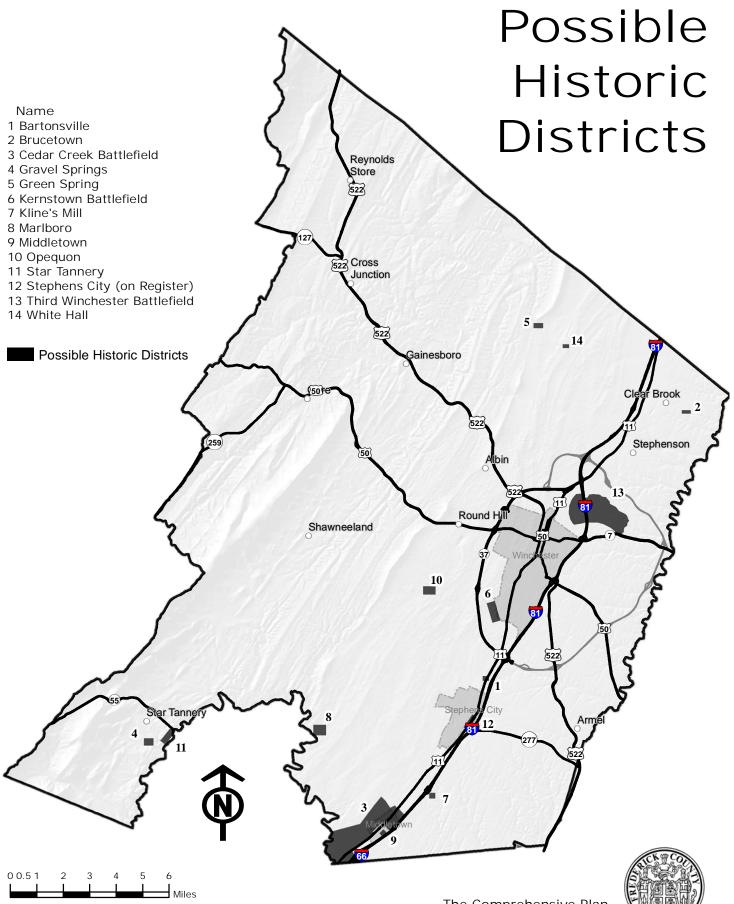
<u>GOAL</u>: INCORPORATE HISTORIC RESOURCE DEVELOPMENT IN AN EFFORT TO STRENGTHEN HERITAGE TOURISM.

- Developments should incorporate and/or convert historic properties into recreational elements, including but not limited to pedestrian trails, parks, and museums.
- Develop the Battlefield Park Network as a major heritage tourism component.
- Create dedicated pedestrian trails, sites, and routes of interest that will not adversely impact private property owners, as well as develop public scenic byways.



The Comprehensive Plan Adopted November 10, 2021





The Comprehensive Plan Adopted November 10, 2021