

# 2035 Comprehensive Plan

## Frederick County, Virginia

*Life at the Top*



*Recommended by the Frederick County Planning Commission – January 4, 2017*

*Adopted by the Frederick County Board of Supervisors – January 25, 2017*

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## ACKNOWLEDGEMENTS

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### ACKNOWLEDGEMENTS

The 2035 Comprehensive Plan was adopted by the Frederick County Board of Supervisors on January 25, 2017, upon the recommendation of the Frederick County Planning Commission on January 4, 2017.

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Special appreciation is extended to the Blue Ribbon Panel participants and other stakeholder groups for their hard work and dedication to the County in drafting the chapters of the 2035 Comprehensive Plan.

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### SPECIAL EDITORS

The County is grateful for the editing efforts provided by Charlotte Eller and Val VanMeter.

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THANK YOU.

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# FREDERICK COUNTY, VIRGINIA

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INTRODUCTION

- PURPOSE OF THE PLAN
- CORE VALUES
- IMPLEMENTING THE PLAN

*"THE 2035 COMPREHENSIVE PLAN IS THE GUIDE  
FOR THE FUTURE GROWTH OF FREDERICK  
COUNTY."*

### PURPOSE OF THE PLAN

The 2035 Frederick County Comprehensive Plan (The Plan) addresses the future 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 2035 Comprehensive Plan is the guide for the future growth of Frederick County.

The chapters of The Plan address: Urban Areas, Rural Areas, Residential Development, Business Development, Transportation, Public Facilities, Natural Resources, and Historic Resources.

The Plan is supported by two Appendices: Appendix I **includes the County's Area Plans**, key land use planning documents which implement the policies of the Comprehensive Plan in specific, geographic areas of the County, and Appendix II provides background analysis and studies in support of The Plan.

The chapters of The Plan are simple, each describes where we are today and where we want to be in 2035, they provide goals and strategies of implementation, and they illustrate the benefits of the implementation of this focus for the future.

### PUBLIC PARTNERSHIPS, INPUT, AND OUTREACH

The 2030 Comprehensive Plan was a significant and rewarding undertaking in 2010 and 2011, and provided a foundation for this 2035 Comprehensive Plan update. **The County's** 2035 Comprehensive Plan was guided by the Frederick County Planning Commission, through the efforts of the Comprehensive Plans and Programs Committee (CPPC), and with the assistance of the Blue Ribbon Panel and the Frederick County Department of Planning and Development Staff.

The public outreach for this project included: a project webpage, County social media which provided on-going updates, and traditional public input meetings and public hearings held in the June of 2016. The purpose of these meetings was to present elements of the Plan to the public for their information, and to seek additional public input and perspective. In addition to Staff, members of the Planning Commission and Board of Supervisors were in attendance to hear feedback first-hand and engage in a direct dialogue with citizens

The Comprehensive Plans and Programs Committee (CPPC) members collaborated with a large group of citizen volunteers whose goal was to update the various chapters of the Comprehensive Plan. Following an initial kick-off meeting in June 2015, the working groups met frequently throughout the winter of 2015-2016. For the 2035 Plan update, the Frederick County Sanitation Authority (FCSA) was involved to provide additional input. A series of public informational and input meetings was held in June 2016 at various locations around the Community.

The purpose of these meetings was to present draft elements of the Plan to the public for their information, and to seek additional public input and perspective through a facilitated

## INTRODUCTION

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discussion using targeted questions and open dialogue. In addition to Staff, members of the Planning Commission and Board of Supervisors were in attendance to hear feedback first-hand. Public feedback was also solicited throughout the update through the project page on the County website. Online, citizens and stakeholders were also able to review draft documents, maps and respond to targeted questions regarding the future of their Community.

Based upon the work of all of the participants, the 2035 Comprehensive Plan was updated and presented to the Planning Commission and Board of Supervisors during a joint meeting in August 2016 and subsequently through the public hearing process in January of 2017.

The updated 2035 Comprehensive 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 2035 **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 insure 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 insure 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.

### IMPLEMENTING THE PLAN

Each of the chapters that make up the Plan have been structured to provide goals for where we desire the Community to be in 2035 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.**

In determining the focus of the Plan, the stakeholder working groups evaluated the current conditions in their area of expertise, and then looked to the future; 2035. They evaluated potential community benefits of various approaches and revised goals and strategies accordingly.

Working with community partners and a variety of key stakeholders in the creation of the Plan has resulted in a well-crafted, insightful, and much improved Plan. The continued involvement of a variety of relevant community partners, key stakeholders, and the public in the future will ensure the successful implementation of the Plan.

The Area Plans, Appendix I of the 2035 Comprehensive Plan, will be a primary implementation tool and will be 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.

### 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 Ordinance, Subdivision and Site Plan Regulations, and the Capital Improvement Plan (CIP).**

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

## INTRODUCTION

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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 Capital Improvements Plan (CIP) provides a list of capital projects planned for five years and is updated each year as projects are completed and new projects are added. The scheduling of projects needs to be coordinated with the 2035 Comprehensive Plan. The CIP helps to guide development, and to maintain a stable financial program. The Comprehensive Plan may be used as a tool to aid in determining priorities among projects, for estimating required funding, and for scheduling projects. Adopted annually, the Capital Improvements Plan becomes part of the 2035 Comprehensive Plan.

### THE CODE OF VIRGINIA

The Code of Virginia requires that the Comprehensive Plan be reviewed every five years. The local Planning Commission is responsible for drafting and developing the plan, while the local governing body is required to adopt a Comprehensive Plan.

The Code calls for the comprehensive plan to be drafted for the purpose of:

*"guiding and accomplishing a coordinated, adjusted and harmonious development of the territory which will, in accordance with present and probable future needs and resources, best promote the health, safety, morals, order, convenience, prosperity and general welfare of the inhabitants."*

Frederick County meets this requirement of the Code of Virginia and, further, believes that the planning process should be a continuous and evolving effort. The Comprehensive Plan may be revisited from time to time through the Comprehensive Policy Plan Amendment process or, as directed by the Board of Supervisors, through the individual Area Plans or specific studies.

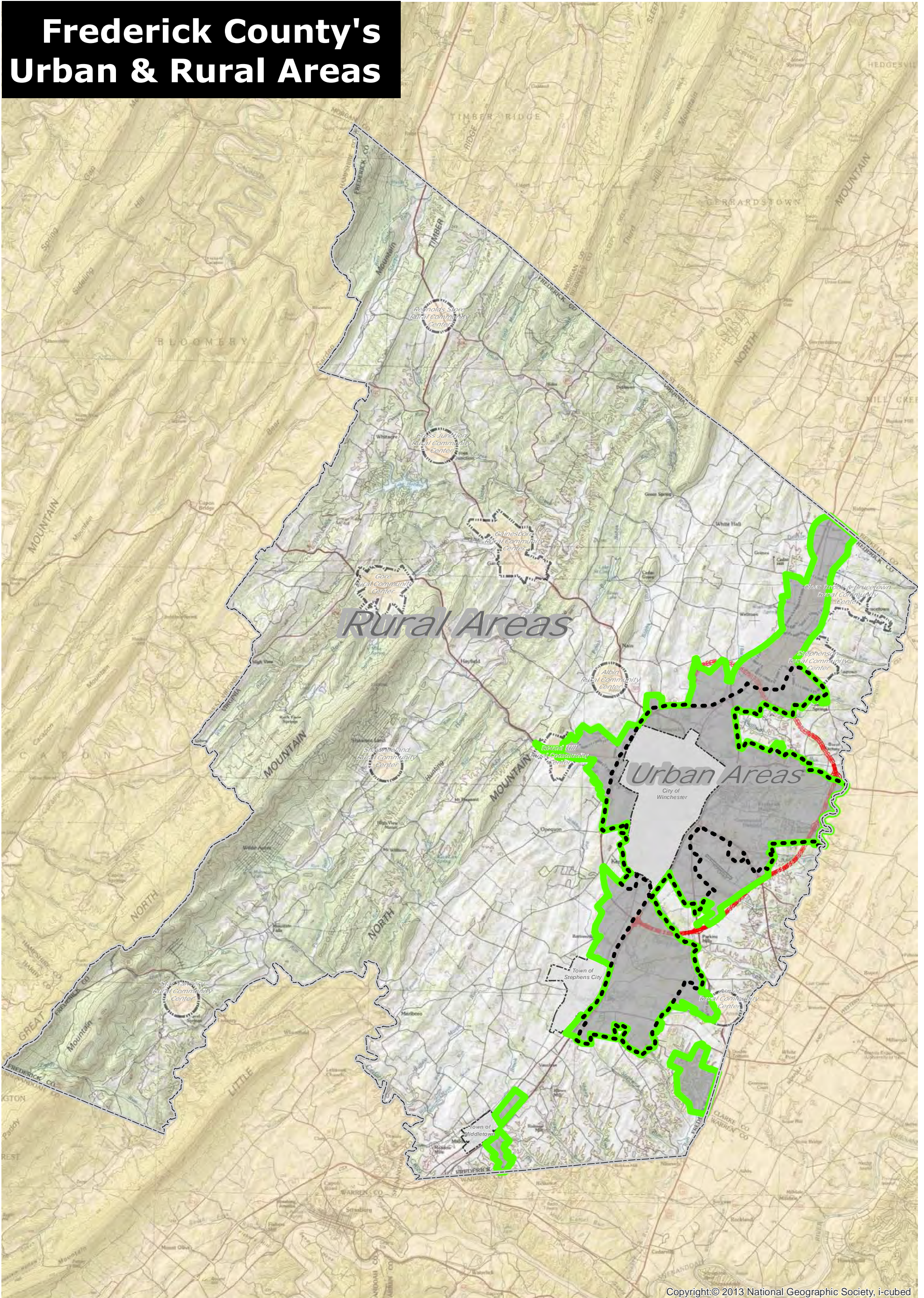
Frederick County will continue to meet, and strives to exceed, those requirements of the Code of Virginia that pertain to Urban Development Areas; 15.2-2223.1. The Frederick County Board of Supervisors has reaffirmed that the 2035 Comprehensive Plan, and its supporting documents, accommodates growth in a manner consistent with the requirements for Urban Development Areas as described in the Code of Virginia.

In addition, the transportation elements of the 2035 Comprehensive Plan have been reviewed by the Virginia Department of Transportation (VDOT) in accordance with 15.2-2222.1.







**I. URBAN AREAS**

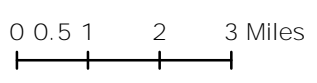


# Frederick County's Urban & Rural Areas



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-  Frederick County
-  Urban Development Area
-  Sewer and Water Service Area
-  Town and City Boundary
-  Future Rt 37 Bypass
-  Rural Community Center



## **URBAN AREAS**

### **CURRENT CONDITIONS**

The Urban Development Area (UDA) of Frederick County includes those areas anticipated for higher intensity development within and Sewer and Water Service Area (SWSA) designates the limit of where public sewer and water could be extended. The UDA and SWSA provide a clear boundary between the Urban Areas and the Rural 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 the land uses 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 encouraged within the UDA in designated areas. 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 in areas where residential land uses are not desirable.

Future land uses are depicted on the various Area Plans which are compiled in Appendix I. These Area Plans have been created over time, through a Community planning process, and have been incorporated as part of the Comprehensive Plan. The aim of the Area Plans is to provide a detailed land use guide for the designated area. As a whole, the individual Area Plans make up the Eastern Frederick County Long Range Land Use Plan.

Historically, the average gross residential density within the UDA has been between two (2) to three (3) units per acre. More recently, the densities of development in Frederick County have been increasing. The County should continually monitor the intensity and density of new development and its associated impacts. Residential densities higher than those previously experienced in the UDA would be appropriate within specifically designated areas within the UDA, known as strategic growth areas (further described on page 4).

Frederick County established the initial UDA boundary in 1987. In 2007, recognizing the importance of utilizing urban growth boundaries such as the UDA, the Virginia General Assembly adopted legislation requiring certain larger and higher growth jurisdictions to incorporate UDA's into their Comprehensive Plans. Frederick County continues to meet the requirements of the Code of Virginia that pertain to Urban Development Areas.

The boundary of Frederick County's UDA should be examined regularly to ensure that it is adequately sized to accommodate future growth, and offers a diversity of housing types. 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. The target ratio for the Urban Area shall be 25 percent commercial/industrial within the Urban Areas to 75 percent residential and other land uses throughout the County as a whole. The purpose of this target is to achieve fiscal balance through land use planning. Maintaining a healthy and balanced ratio will help the County maintain its low tax rate, while continuing to enhance the services provided to residents. To encourage commercial and

industrial uses to help achieve the targeted ratio, Frederick County has designated certain areas solely for commercial and industrial type uses such as the Route 11 North corridor, Kernstown area, Round Hill, and in the vicinity of the Winchester Regional Airport.

## **FOCUS FOR THE FUTURE**

The UDA Study of 2006 for Frederick County evaluated current land use patterns, comprehensive plan language, development trends, and contemporary planning practices. Using the UDA Study, Frederick County has identified locations which promote higher urban densities and a more compact form of development. These strategic growth areas within the Urban Areas are known as Neighborhood Villages and Urban Centers. Neighborhood Villages and Urban Centers will be the building blocks of the urban fabric of Frederick County's urban areas.

### *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*

The Urban Center is larger than the Neighborhood Village and is 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.

Future development within the Urban Areas will be based upon the following:

- Mix and integration of a variety of uses and housing opportunities
- Increased density, walkability and connectivity
- High quality architecture, community focal points, enhanced urban design and planning
- Environmental quality
- Transportation policies for all users

The application of these development principles throughout the Urban Areas, and most importantly within strategic growth areas, seeks to ensure that the UDA of the County will be made up of walkable, mixed-use neighborhoods. These areas should feature a variety of housing choices, high quality retail, community facilities as focal points, employment opportunities, and provide for land uses that are connected by an attractive, efficient, transportation system designed for all users. The mixing of uses provides a greater choice in mobility. Further, focusing development around walkable centers affords people the opportunity to work, live, shop, and play in locations that are near each other.

In order for new areas of urban uses to be established within the Urban Areas, adequate roads and public facilities with sufficient capacities to accommodate the new uses should be provided. For any proposed rezoning to be approved, applicants will be expected to contribute a reasonable portion of the costs, relative to the scale of the development, of new or expanded public facilities and infrastructure needed to serve the proposed development. It is important that anticipated impacts of proposed developments are mitigated to ensure that they are not placing an undue burden on the Community and to further implement the goals of the Comprehensive Policy Plan.

## **COMMUNITY BENEFITS**

The benefits of focusing new growth within the urban areas are numerous. When residential growth occurs outside of the designated growth boundaries and into the rural areas, the County has to extend public services such as schools and emergency services. These expanded service areas increase the costs of operation while decreasing effectiveness. Focused growth limits development pressures within the rural areas, thereby helping to preserve the environment and promote agribusiness and tourism.

Incorporating Neighborhood Design principles such as those identified in this chapter will help to improve the sense of community and promote close knit, walkable communities where residents have greater opportunities to live, work, and play in the same area. The transportation systems encouraged by this plan de-emphasizes the automobile, allowing residents to walk or bike to destinations.

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

In general, these principles are more efficient, more viable and ultimately more economical for the Community.



## **GOALS/STRATEGIES**

**GOAL: 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 residential growth within the Urban Development Area (UDA).
- Monitor size of UDA and the Sewer and Water Service Area (SWSA) to ensure appropriate land area is made available to accommodate residential growth as well as commercial and industrial opportunities.
- Ensure adequate water and sewer service capacity is available to accommodate new residential and commercial/industrial growth.
- Provide for various densities within the Urban Areas to encourage concentrated growth while also accommodating consumer choice for a variety of housing options.

**GOAL: PROMOTE THE NEIGHBORHOOD DESIGN PRINCIPLES AS IDENTIFIED IN THIS CHAPTER WITHIN THE URBAN AREAS.**

### **STRATEGIES:**

- Ensure land use applications incorporate the principles of Neighborhood Design identified in this chapter where appropriate.
- Further develop the Neighborhood Village and Urban Center concepts which promote strategic growth areas within the Urban Areas. Community Area Plans could be utilized to identify potential locations for these concepts.
- Promote the location of community facilities as focal points within identified strategic growth areas.

**GOAL: PROVIDE FOR TRANSPORTATION OPPORTUNITIES FOR ALL USERS WITHIN THE URBAN AREAS.**

### **STRATEGIES:**

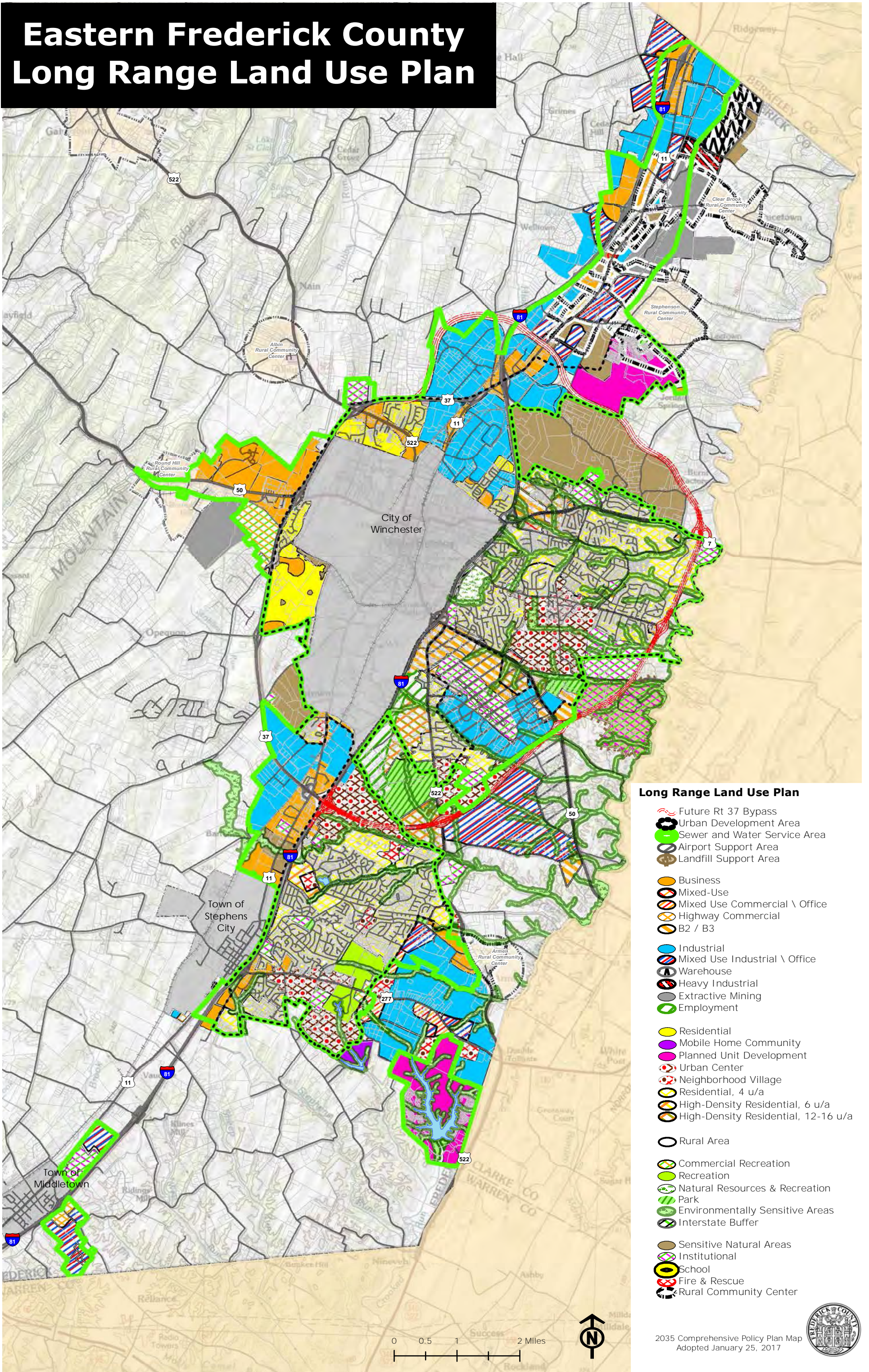
- Ensure the Bicycle Plan included as part of the Comprehensive Plan provides for trail facilities in the desired locations.
- Encourage new developments to provide interconnected trail networks and on street shared travel ways.
- Connect "missing links" across existing developments to the extent possible.

**GOALS:      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.
- Monitor location of SWSA and consider expansions when necessary to accommodate demand or a highly desirable business user, and to implement the Long Range Land Use Plan.
- Continue to evaluate the availability of land that will specifically accommodate desired amount of 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.

# Eastern Frederick County Long Range Land Use Plan

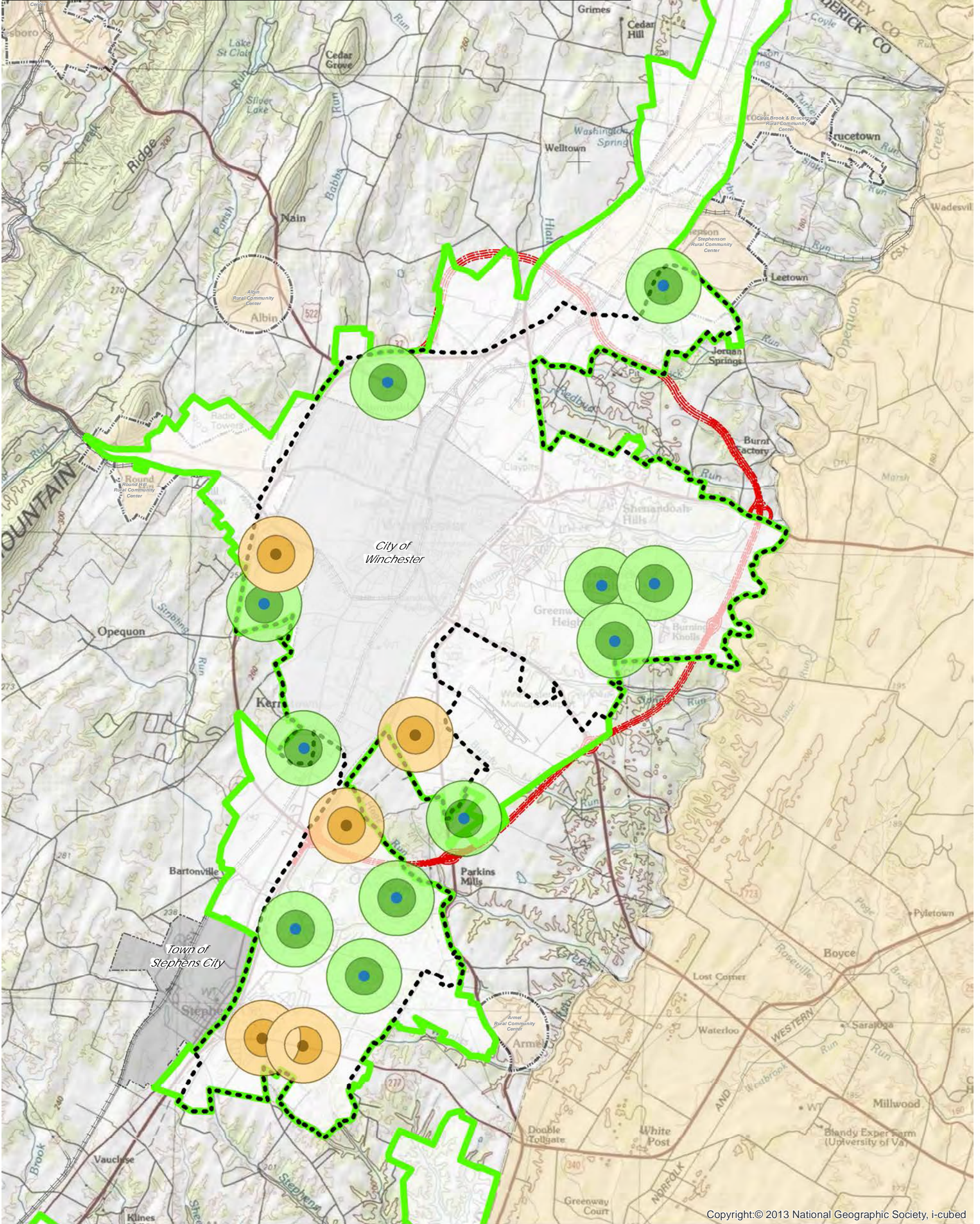


## Long Range Land Use Plan




- Future Rt 37 Bypass
- Urban Development Area
- Sewer and Water Service Area
- Airport Support Area
- Landfill Support Area
- Business
- Mixed-Use
- Mixed Use Commercial \ Office
- Highway Commercial
- B2 / B3
- Industrial
- Mixed Use Industrial \ Office
- Warehouse
- Heavy Industrial
- Extractive Mining
- Employment
- Residential
- Mobile Home Community
- Planned Unit Development
- Urban Center
- Neighborhood Village
- Residential, 4 u/a
- High-Density Residential, 6 u/a
- High-Density Residential, 12-16 u/a
- Rural Area
- Commercial Recreation
- Recreation
- Natural Resources & Recreation
- Park
- Environmentally Sensitive Areas
- Interstate Buffer
- Sensitive Natural Areas
- Institutional
- School
- Fire & Rescue
- Rural Community Center



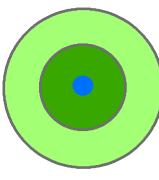
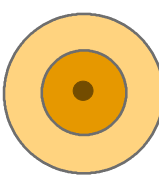
# Potential Neighborhood Village & Urban Center Locations



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 Urban Development Area
  Sewer and Water Service Area
  Future Rt 37 Bypass

2035 Comprehensive Policy Plan Map  
Adopted January 25, 2017

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



0 0.5 1 2 Miles

## II. RURAL AREAS



## **RURAL AREAS**

### **CURRENT CONDITIONS**

Most of Frederick County's land area is rural in character. 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) where the majority of the County's future growth is planned.

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. 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, further defined later in the chapter, the predominant new residential development pattern has been five (5) acre lots or two (2) acre clustered lots with dedicated preservation tracts, both of which are served by individual onsite sewage disposal systems and wells. It should also be noted that the band of prime agricultural soil which runs north-south west of Interstate 81 is the same area where a majority of new rural residential growth has been experienced.

To deal with increasing development pressures in the Rural Areas over the last decade, the Board of Supervisors established the Rural Areas Subcommittee in 2008. This Committee was tasked with identifying growth and development trends and related issues in the Rural Areas of the County, gathering ideas to address those issues and forwarding a recommendation for resolution. The Committee's final report, *The Rural Areas Report and Recommendations* was adopted by the Board of Supervisors on April 22, 2009 as a policy component of the Comprehensive Plan. One of the recommendations contained within the report was the creation of a Transfer of Development Rights (TDR) Program. In 2010, Frederick County adopted a Transfer of Development Rights (TDR) program which allows for dwelling unit rights to be transferred from parcels located in the rural areas to designated properties within the Urban Development Areas. This policy tool provides landowners within the rural areas the ability to obtain development value of their farm 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.

The TDR Program joined other existing land use tools available to rural landowners to preserve land in the Rural Areas, including:

- Land use taxation (local)
- Conservation easements (non-profit)
- Purchasable development rights (public)

Historically, the County has taken great care to allow residential land to co-exist with agriculture uses. Tools implemented by the County in recent years include buffering, clustering, and the promotion of Agricultural and Forestal Districts. All of these provide protections to both homeowners and farmers and enable equal use and enjoyment of the Rural Areas.

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## RURAL AREAS

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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:

<b>GORE</b>	<b>REYNOLDS STORE</b>
<b>GAINESBORO</b>	<b>ROUND HILL</b>
<b>ARMEL</b>	<b>SHAWNEELAND/NORTH MOUNTAIN</b>
<b>STAR TANNERY</b>	<b>WHITACRE/CROSS JUNCTION</b>
<b>ALBIN</b>	<b>CLEARBROOK/BRUCETOWN</b>
<b>STEPHENSON</b>	<b>WHITEHALL</b>

These centers consist of small lot residences and commercial uses typical of a village. There are currently no public utility services in these Communities. The Rural Areas Subcommittee recommended studying private utility systems to serve these Communities. In addition, four of the existing centers have been identified as potential receiving area for TDRs. Of the Rural Communities, Round Hill, has had a plan developed 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).

### **FOCUS FOR THE FUTURE**

Frederick County has a recognizable Rural Area where agricultural operations are promoted, natural resources are respected and its beauty and heritage are preserved. 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 these operations. The Agribusiness Business Development section further promotes the evolution of agriculture in the County's Rural Areas.

The Rural Community Centers of Frederick County will continue to play a role as focal points for the Rural Areas, and small area land use plans for the centers should be created. Additionally, other types of rural residential development should take on patterns similar to these centers. 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 a number of ways. These areas not only contribute to the identity of Frederick County, they 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**

**GOAL: CLUSTER RESIDENTIAL DEVELOPMENT TO FURTHER HELP PRESERVE AGRICULTURAL LAND.**

### **STRATEGIES:**

- 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 radically different uses, most importantly, between the Rural and Urban Areas.
- Avoid, as applicable, Sensitive Natural Areas, Historic Districts, sending TDR areas, Recreational Overlays, and Agricultural and Forestal Districts.

**GOAL: 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.

**GOAL: SUPPORT VOLUNTARY LAND PRESERVATION TOOLS AND THE LAND USE TAX DEFERRAL PROGRAM**

### **STRATEGIES:**

- Support Conservation Easement Authority (CEA), Transfer of Development Rights (TDR), Agricultural and Forestal Districts, and Purchase of Development Rights (PDR) programs, among others.



## RURAL AREAS

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- Participate in state grant programs to the greatest extent possible.
- Follow changes to state code that would enable new land preservation tools.

**GOAL:        **SUPPORT AGRICULTURAL OPERATIONS AND RURAL RECREATION****

**STRATEGIES:**

- Support the agricultural economy in Frederick County and adapt to-evolving practices and new agricultural opportunities#
- Identify and support local, regional, and national rural recreation opportunities within the County's Rural Areas.

# Transfer of Development Rights

Sending Areas & Receiving Areas



## **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

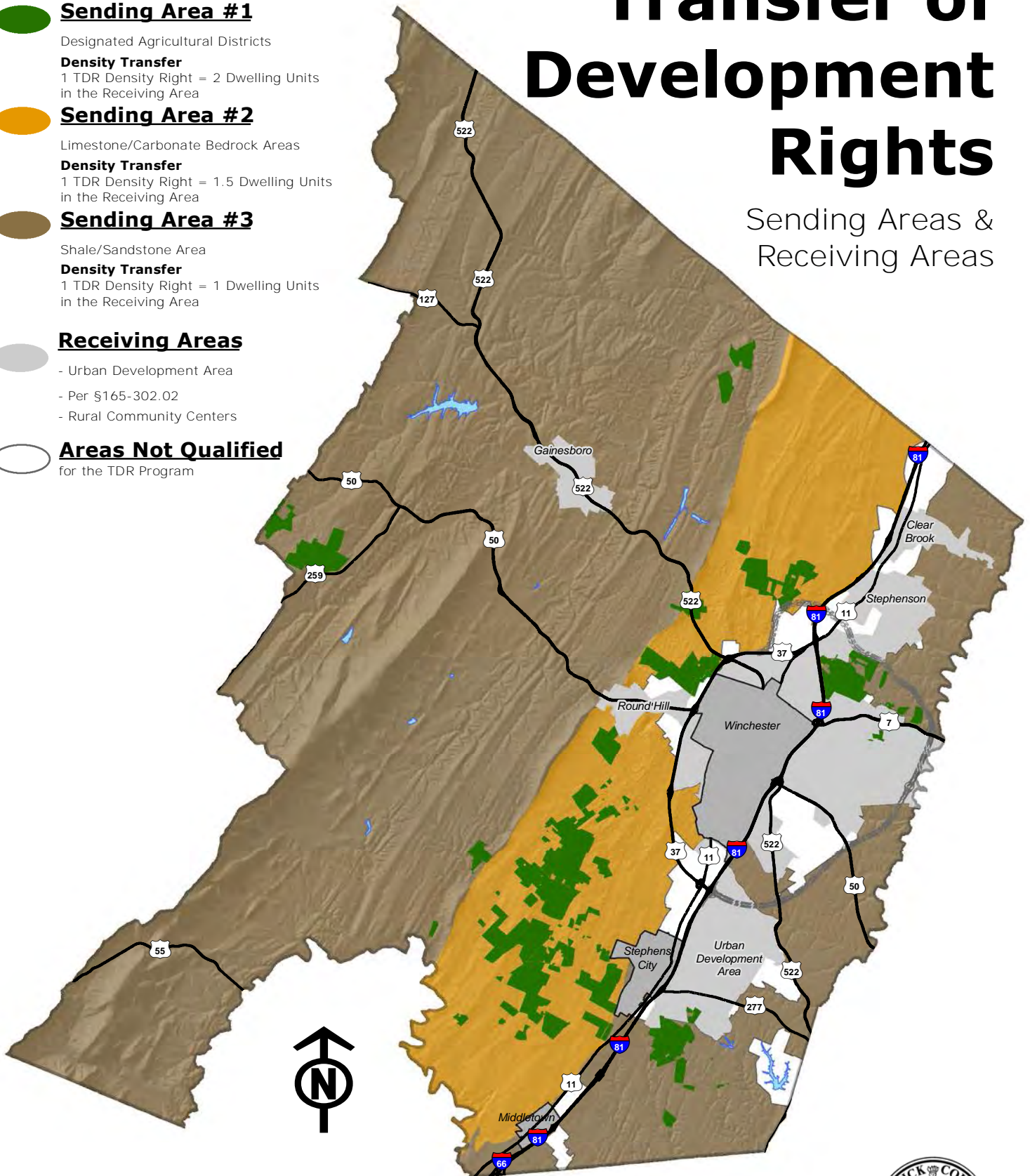
- Per §165-302.02

- Rural Community Centers



## **Areas Not Qualified**

for the TDR Program



### III. RESIDENTIAL DEVELOPMENT



## **RESIDENTIAL DEVELOPMENT**

### **CURRENT CONDITIONS**

Over the past two decades, the amount of residential development in Frederick County increased at a relatively consistent rate of approximately three (3) percent a year. Supporting this growth was a period of significant expansion in the County's commercial and industrial base. According to the 2010 Census and more recent studies performed by the Economic Development Authority (EDA), Frederick County remains primarily an in-commute location. However, this Plan acknowledges Frederick County is also home to a large population of residents that commute out of the County for employment. The main contributor to the population growth was the migration of people inside 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 place of choice to live for those commuters. Frederick County has also become an attractive place to live for retirees.

Residential opportunities exist in both the County's Urban and Rural Areas. 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 unit 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. Older rural communities exist throughout the rural areas and are typically found within one of the County's Rural Community Centers. These 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 and to accommodate the anticipated residential growth within the Community. While the UDA currently consists of primarily suburban residential types of development, with some multifamily and retirement units, it is planned 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 the near proximity to the necessary infrastructure and public facilities, such as public water and sewer, schools, emergency services and a transportation network. 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.

### **FOCUS FOR THE FUTURE**

Future residential growth in Frederick County is anticipated to continue and expand. 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).

The County should continue to establish policies which result in attractive and welcoming residential neighborhoods which are able to accommodate a growing population and expanding workforce. Such residential development should be comprised of a mixture of housing types and lot sizes to provide options for a range of lifestyles and incomes, such as retiree's, millennials and younger families. 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**

**GOAL: NEW RESIDENTIAL DEVELOPMENT SHOULD BE FOCUSED WITHIN THE URBAN DEVELOPMENT AREA (UDA).**

**STRATEGIES:**

- 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

## RESIDENTIAL DEVELOPMENT

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Centers and Neighborhood Villages, are the most desirable locations for this type of development.

- Residential housing types and design guidelines should be flexible to accommodate evolving demographic trends, and to ensure that housing choices are maximized.

**GOAL: NATURAL SYSTEMS AND OPEN SPACES SHOULD BE INCORPORATED INTO NEW RESIDENTIAL DEVELOPMENT.**

**STRATEGIES:**

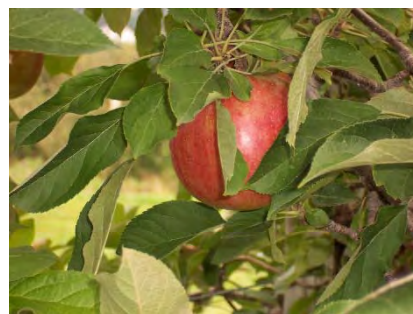
- When new development occurs in the rural areas, the rural preservation option should be encouraged as the preferred subdivision form and design to preserve natural and environmental features should be implemented.
- New residential neighborhoods will include open space amenities, active, passive, and natural, located in close proximity to all dwellings, with an emphasis on the provision of usable open space for resident use and enjoyment.

**GOAL: ENCOURAGE NEW AND INNOVATIVE HOUSING CHOICES THAT ALSO ACCOMMODATE A FULL RANGE OF AFFORDABILITY.**

**STRATEGIES:**

- Ensure that adequate housing options are available to the development community through the Zoning Ordinance.
- 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.
- 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



## **BUSINESS DEVELOPMENT**

### **INTRODUCTION**

The Comprehensive Plan Business Development 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's attractiveness as a residential community will continue to expand our population and our opportunities for business growth. Each new residence within the Winchester-Frederick County area 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 local 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**

Highway accessibility, proximity to major markets, an impressive skilled talent pool, and commitment to business are a few of 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 over 40% of the U.S. population in one day), quick access to 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 workforce pool of more than 200,000, with approximately 30,000 ready and available for business service and manufacturing operations. Funding programs exist to help with specific training.

Frederick County prides itself as a vibrant, pro-business community with an immense commitment to business. In fact, Frederick County, Virginia, has employed an award winning, proactive model for ongoing support of our businesses for more than 30 years. Onsite visits, quarterly business forums, and assistance in locating and obtaining available workforce training funds are just a few examples of our commitment. Frederick County, Virginia's, consistent economic success provides businesses with assurance that their investment will grow.

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 has a population of 82,262 and over 42,000 residents in the workforce. Of that number 89% of county residents are high school graduates and 30% hold bachelors or more advanced degrees.

The largest employment sector in Frederick County, Virginia, is Manufacturing, (5,093 workers). The next-largest sectors in the region are Retail Trade (3,725 workers) and Educational Services (3,057). Sectors in Frederick County, Virginia with the highest average wage per worker are Management of Companies and Enterprises (\$74,902), Mining, Quarrying, and Oil and Gas Extraction (\$71,244), and Public Administration (\$63,215).

Regional sectors with the best job growth (or most moderate job losses) over the last 5 years are Manufacturing (+983 jobs), Finance and Insurance (+970), and Retail Trade (+862). Over the next 10 years, employment in Frederick County, Virginia is projected to expand by 6,145 jobs. The fastest growing sector in the region is expected to be HealthCare and Social Assistance with a +3.6% year-over-year rate of growth. The strongest forecast by number of jobs over this period is expected for HealthCare and Social Assistance (+912 jobs), Retail Trade (+819), and Construction (+729).

Education opportunities abound in Frederick County which has a well-respected primary education system. In addition, higher education opportunities exist with a growing student base at the following establishments:

- Shenandoah University
- Lord Fairfax Community College (LFCC)
- Old Dominion University Satellite Office at LFCC

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 to Frederick County has designated certain areas solely for these type of uses such as the Route 11 North corridor, Kernstown area, Round Hill, the Route 277 Triangle area, 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 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**

**GOAL:     DEVELOP A STRATEGY THAT PROMOTES THE EXPANSION OF DESIRABLE BUSINESS AND INDUSTRIAL LAND USES.**

**STRATEGIES:**

- Frederick County Economic Development Authority (EDA) targeted industries: (as of February 2016):
  - Light Industrial
  - Pharmaceutical & Medicine Manufacturing, Scientific Research & Development, and Lab Services
  - Business Services
  - Retail
  
- Additional Recommended Target Areas:
  - Federal & State Facilities
  - Healthcare & Health Services

## **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, within a one-day haul of 50% of the U.S. population. Over 60% of the goods manufactured in the United States are distributed from the 750-mile (1,207 kilometers) area.

In addition to being half way 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 ideal geographic location of Frederick County, other significant strengths of the Frederick County market, particular to attracting new office and industrial development, include favorable tax rates, quality of life, numerous education options, nationally recognized healthcare provider, workforce, 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 a recently selected site for a Federal Bureau of Investigation (FBI) Records Storage facility.

Frederick County has a consistent and competitive real estate tax rate in comparison to neighboring communities. Supported by a proactive Economic Development Authority (EDA), the areas workforce has a high work ethic and a low turnover rate.

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.

Frederick 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 water, waste water treatment, 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 the citizens of Frederick County.

The continuation of a low residential tax rate is a direct result of the expansion of the commercial and industrial tax. Currently commercial and industrial tax revenue accounts for approximately 13% 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**

**GOAL: 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.

**GOAL: 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.

**GOAL: 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 items #1 and #2 (above under "Current Conditions") 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 local 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**

**GOAL:            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.

**GOALS: FU        TURE DEVELOPMENTS SHOULD BE OF A HIGH QUALITY.**

**STRATEGIES:**

- 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 spots 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 local 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**

### **GOAL:           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.

### **GOAL:           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.

### **GOAL:           PRESERVE AND ENHANCE THE HISTORIC CHARACTER OF FREDERICK COUNTY’S ROADWAYS**

#### **STRATEGIES:**

- Foster a compact community design that uses traditional building features to maintain Frederick County’s unique historic character.

## BUSINESS DEVELOPMENT

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- 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 primary items 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 those agricultural activities not only generate roughly \$30 million per year but they preserve close to 100,000 acres of rural land. While the number of farms and the amount of land dedicated to agricultural uses has declined in the last 20 years the market value of the products produced has actually increased. 'Farm to Table' trends, 'Buy Fresh, Buy Local' initiatives and the willingness for families to invest in higher quality, locally sourced and environmentally friendly produced groceries will continue to help drive additional market growth.

To protect the amount of land available for agricultural use, the County makes a variety of tools and programs available to land owners. The County continues to allow land owners to participate in the Land Use Tax Deferral Program which allows taxpayers to apply for specially reduced assessments, such as qualifying agricultural, horticultural, and forestry uses. Participation in one of County's many Agricultural and Forestal Districts is available to County property owners. As of 2016, there were eight Districts covering approximately 11,281 acres.

Over the past few years, Frederick County has worked on implementing new tools to not only help protect the agricultural lands in the County but at the same time also help the farmer capture value of the property without actually 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**

Frederick County agriculture will evolve in a way that is likely to be more intensive and by necessity more diverse. While this will require less acreage than traditional farming activities, activities it is expected that income from agricultural operations will increase. As such the County should focus on implementing policies that seek to prioritize the protection of these rural areas as well as streamline the process for approving the diversified land uses as described within this section. Reduction in permit fees and taxes generated from these new opportunities should be considered as well.

### **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, an active, profitable agriculture operation reduces the amount of land converted to more dense uses. Diversification of land use for the agricultural not only generate notable income and drive more tourism dollars to the County, it can also offer future protection the land from conversion to residential uses.

## **GOALS/STRATEGIES**

**GOAL: THE COUNTY SHOULD CONTINUE TO SUPPORT ITS AGRICULTURAL INDUSTRIES WHILE ALSO RESPONDING TO CHANGES IN THE INDUSTRY.**

### **STRATEGIES:**

- Diversified uses on the farm site such as farm markets, alternative fuels, animal boarding, Pick-Your-Own operations, agritourism vineyards, wineries, distilleries and micro-breweries and specialty crops, etc., should be encouraged to help preserve farming and agricultural uses in Frederick County.
- The ordinances of Frederick County should be reviewed to reference and enable the full 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 allow and encourage the use of the Land Use Tax Deferral Program, Agricultural and Forestal Programs, Purchase of Development Rights Program and the Transfer of Development Rights Program.



## **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 2014, VDOT estimates that vehicles traveled **3,040,103** 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 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 recently 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

## TRANSPORTATION

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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 2035 Long Range Transportation Plan (LRTP); a planned update will be undertaken in 2016.

### *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 has largely been accomplished through development proffers and the VDOT Revenue Sharing Program. Whenever possible, the County uses public-private partnerships to make improvements. The County is also active in the areas of rail access funding and economic development road access funding. The Commonwealth's role in transportation funding has been declining over the years and has now reached the point where some federal funds are being used for maintenance with very little new construction taking place. The State has been actively encouraging localities to take on maintenance of their road systems. However, roadway construction and maintenance in Frederick County primarily remains the responsibility of the State and Federal Government. 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.

Recent Transportation Legislation, the Smart Scale Program (formerly HB2) and HB1887, 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 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.



### **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 East 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 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 insure 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. This 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, this means that the County will consider all potential users of the transportation system when making improvements, 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 needs populations, elderly, and disabled.

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 opened its first elementary school (Greenwood Mill Elementary) with a walk zone, and they plan to continue promotion of this type of school.

Finally, with the growth potential of the Virginia Inland Port in Warren County, Frederick County 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.

## TRANSPORTATION

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A policy that creates an interconnected system of bicycle and pedestrian facilities will lead to a healthier and fitter 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 locations. 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 in 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. It is the role of the State and Federal government along with development to fund transportation improvements necessary to ensure the future health of the County's transportation network.

### **GOALS/STRATEGIES**

**GOAL: 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.

## TRANSPORTATION

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- 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.

**GOAL: 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 right-of- ways.
- Continue to work closely with VDOT, State and Federal representatives, and any other available revenue sources to increase transportation.
- 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.

**GOAL: 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.

## TRANSPORTATION

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- 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).

**GOAL: FIND WAYS TO IMPLEMENT TRANSPORTATION NEEDS WHILE 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 and the new multimodal facility coming to Martinsburg, WV.
- 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.

**GOAL: IMPROVE THE BEAUTY OF TRANSPORTATION CORRIDORS AT THE COUNTY GATEWAYS AND ALONG COMMERCIAL ROADWAYS.**

**STRATEGIES:**

- 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.

**GOAL: E NSURE SAFE OPERATION OF FIRE AND RESCUE VEHICLES AND SCHOOL BUSES.**

**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: P ROVIDE 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 2035 Long Range Transportation Plan, population in Frederick County which was 78,305 in 2010 is expected to reach 153,945 by 2035. Employment which was 23,499 in 2010 is expected to reach 26,960 by 2035. This growth, particularly the population is expected to add significant stress to the Frederick County transportation system.

## **NEEDS ASSESSMENT**

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 2035 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:

### **Route 37**

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.

### **I-81 Exit 313 Bridge**

The I-81 Exit 313 Bridge has been identified as in need of replacement by VDOT due to it reaching the end of the time where routine maintenance can adequately address bridge issues.

### **I-81 Exit 317 and Redbud Road**

This 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.

### **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:**

Renaissance Drive from Prosperity Drive to Shady Elm

Valley Mill Road Realignment

Russell 150 Bridge over I-81

Airport Road Extension

Tevis Street Extension

Route 277 from Double Church Road to Warrior Drive

Jubal Early Drive Extension and Interchange with Route 37

Intersection of Crestleigh and Senseny Roads

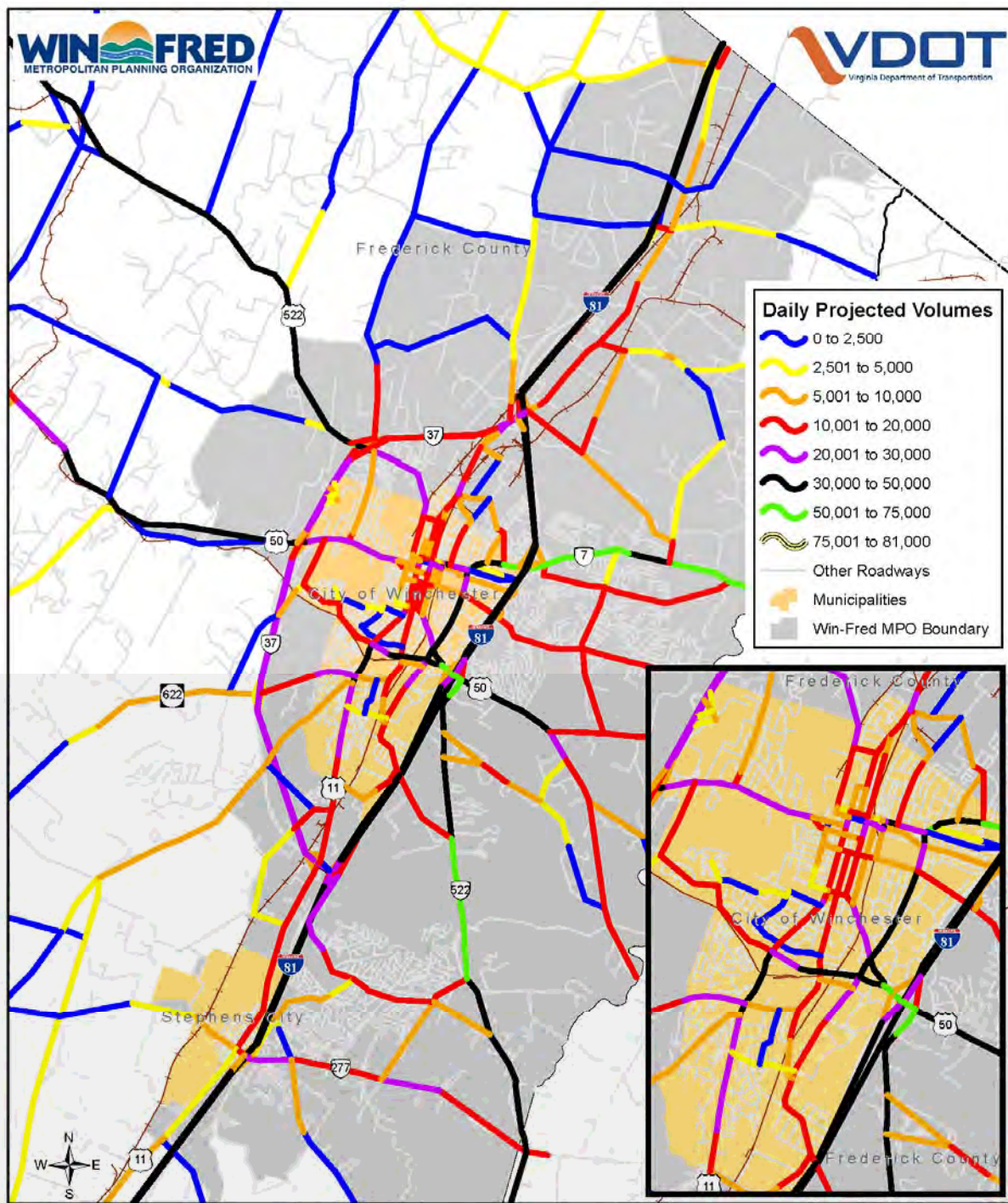
Fox Drive/Route 522 Intersection Improvements

Papermill Road/Route 522 Intersection Improvements

Apple Valley Road/Route 11 Intersection Improvements

Sulphur Springs Road Improvements



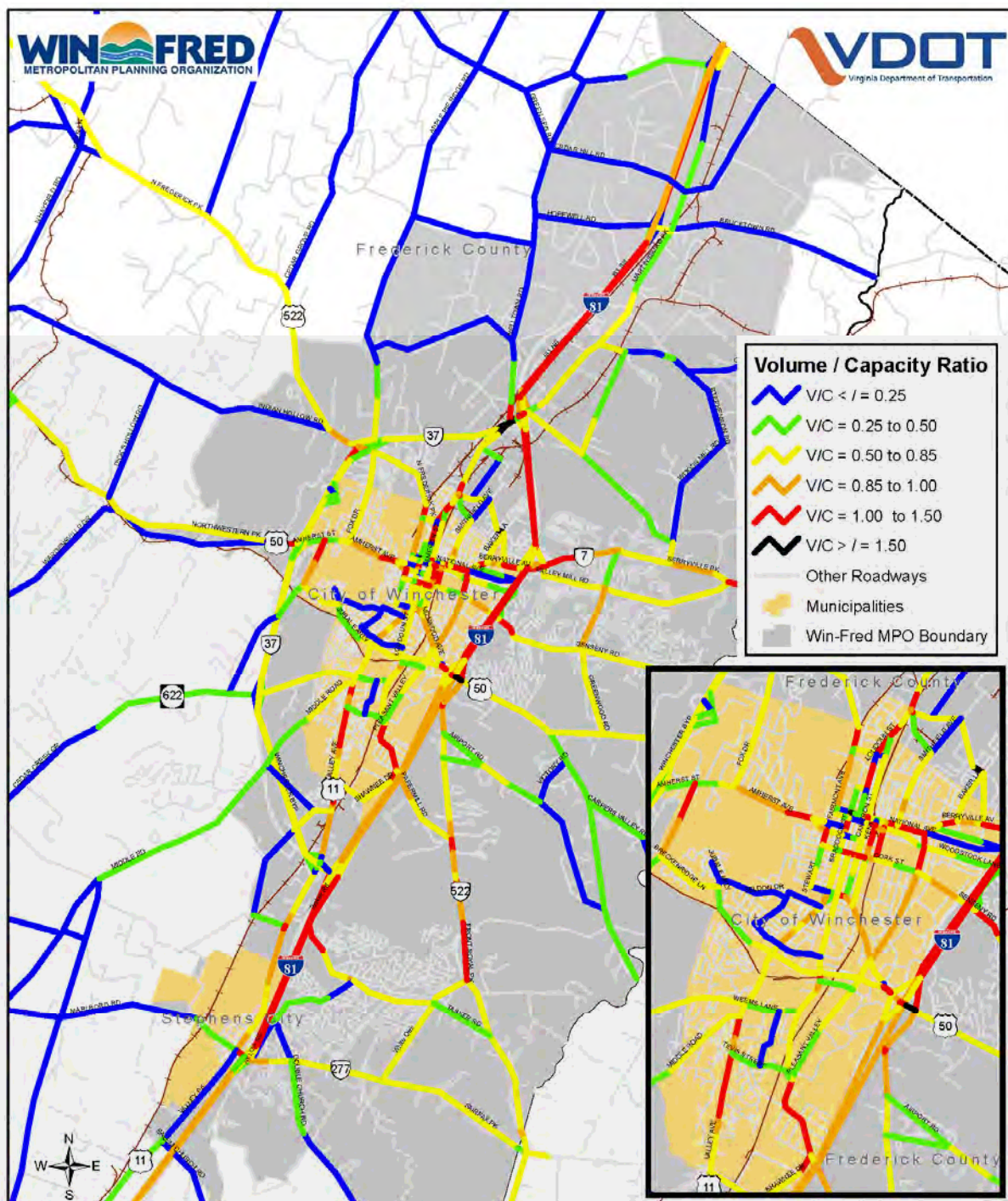


**2035 No-Build - Modeled 24 Hour Volumes**

WIN-FRED MPO 2035 Long Range Transportation Plan Update

Prepared by:  
Win-Fred MPO & VDOT  
February 11, 2012

# TRANSPORTATION



## 2035 No-Build - Modeled Volume / Capacity Ratios

WIN-FRED MPO 2035 Long Range Transportation Plan Update

Prepared by:  
Win-Fred MPO & VDOT  
January, 2012

TRANSPORTATION

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**RECOMENDATIONS**

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)	
T17535	I-81 EXIT 323 NB ACCEL AND SB DECEL LANE EXTENSION	81	\$3,451	Approved SmartScale Project FY17
75881	RTE 81 - INTERCHANGE MODIFICATION, EXIT 310	81	\$41,558	
94847	ADD THRU LANE FROM I81 TO RT37& LT TURN LANES.	11	\$2,501	Approved SmartScale Project FY17
109325	ROUTE 11 S. APPLE VALLEY RD. RIGHT TURN LANE	11	\$515	Approved SmartScale Project FY17
18003	RTE 277 - WIDEN TO 5 LANES FROM EXIT 310 TO DOUBLE CHURCH ROAD AND REALIGN AYLOR ROAD	277	\$35,935	Approved SmartScale Project FY17
104262	AIRPORT ROAD AND WARRIOR DRIVE EXTENSION	645	\$5,600	REVENUE SHARING

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108672	JUBAL EARLY DRIVE EXTENSION - FREDERICK COUNTY	0	\$18,660	REVENUE SHARING
101204	IMPROVE ALIGNMENT VALLEY MILL RD AT RT. 7	659	\$7,200	REVENUE SHARING
109326	FOX DRIVE TURN LANES	767	\$651	Approved SmartScale Project FY17
105633	SNOWDEN BRIDGE BLVD PHASE I	875	\$8,137	REVENUE SHARING
107227	COVERSTONE DRIVE EXTENSION - FREDERICK COUNTY	1538	\$4,000	REVENUE SHARING
	ROUTE 37 EXTENSION FROM TASKER ROAD TO ROUTE 522	37	\$102,187	Applied SmartScale Project FY18
	ROUTE 37 EXTENSION FROM TASKER ROAD TO WARRIOR DRIVE. WARRIOR DRIVE FROM EXISTING TERMINUS OF WARRIOR DRIVE TO ROUTE 37	37/1141	\$49,510	Applied SmartScale Project FY18
	EXIT 317 NB EXIT RAMP RELOCATION TO LOCATION WHERE REDBUD ROAD CURRENTLY TIES INTO ROUTE 11 NORTH AND REALIGNMENT OF REDBUD ROAD TO SNOWDEN BRIDGE BLV	81/661	\$11,239	Applied SmartScale Project FY18

TRANSPORTATION

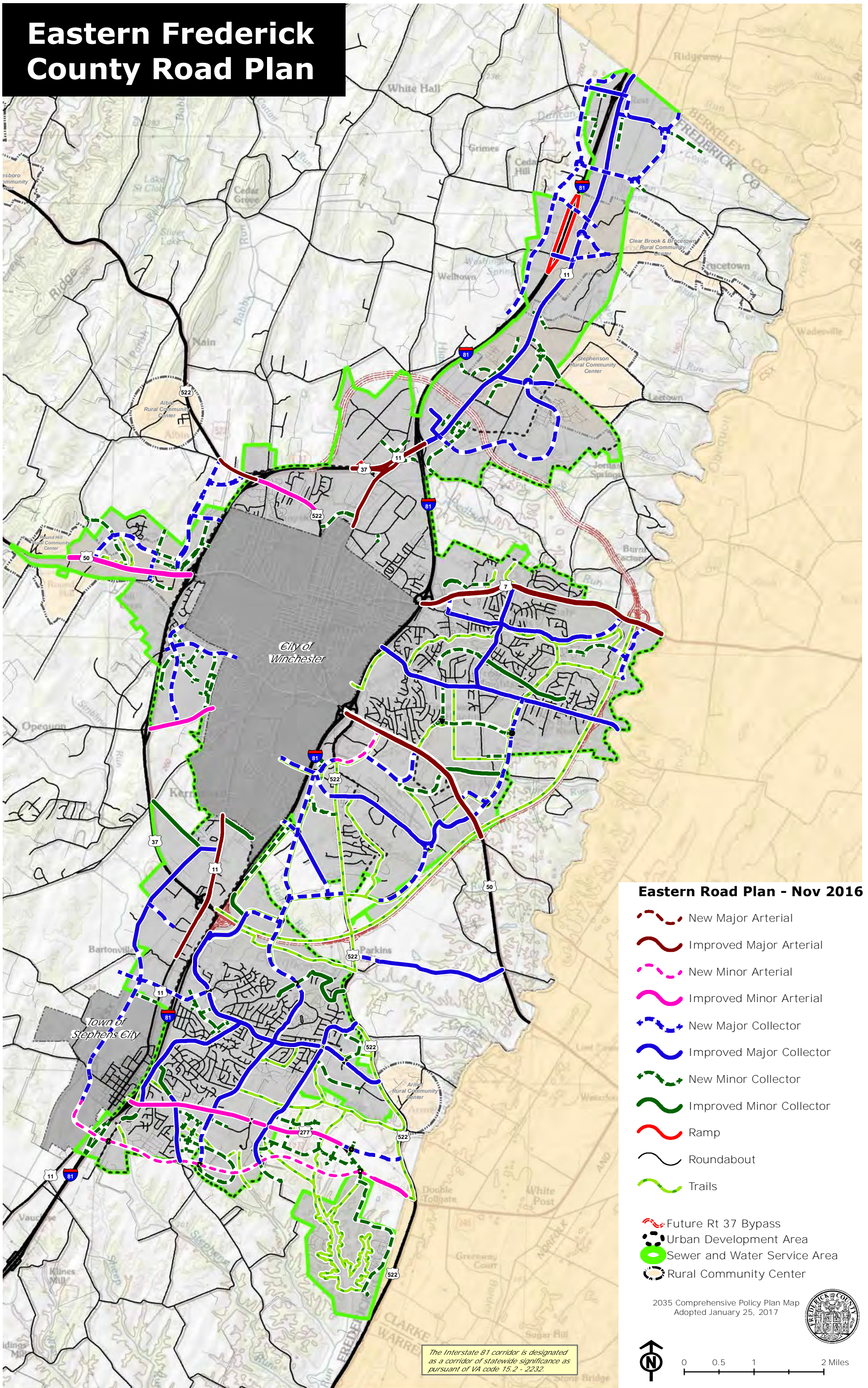
	ROUTE 277 WIDENING FROM DOUBLE CHURCH ROAD TO WARRIOR DRIVE	277	\$25,428	Applied SmartScale Project FY18
	ROUTE 11 NORTH WIDENING FROM SNOWDEN BRIDGE BLVD TO OLD CHARLESTOWN ROAD	11	\$28,346	Applied SmartScale Project FY18
	SULPHUR SPRINGS ROAD RECONSTRUCTION AND WIDENING FROM ROUTE 50 TO THE LANDFILL	655	\$2,704	Applied SmartScale Project FY18
	INTERSECTION OF SENSENY ROAD AND CRESTLEIGH DRIVE- ADD TURN LANES ON SENSENY	657	\$2,548	Applied SmartScale Project FY18
	INTERSECTION OF 277 AND WARRIOR DRIVE, EXTEND EB RIGHT TURN LANE ON ROUTE 277 AND PEDESTRIAN SAFETY IMPROVEMENTS ALONG THE SOUTHERN PART OF WARRIOR DRIVE	277/1141	\$477	Applied SmartScale Project FY18
	INTERSECTION OF PAPERMILL ROAD AND ROUTE 522, EXTEND RIGHT TURN LANE ON EB PAPERMILL ROAD	644	\$507	Applied SmartScale Project FY18
	EXIT 313 BRIDGE REDECKING AND INTERCHANGE IMPROVEMENTS	81		MPO Applied SmartScale Project FY18

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	ROUTE 11 SOUTH AT THE CITY/COUNTY LINE CORRIDOR AND INTERSECTION IMPROVEMENTS IN THE VICINITY OF SHAWNEE DRIVE AND OPEQUON CHURCH LANE	11		MPO Applied SmartScale Project FY18
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# Eastern Frederick County Road Plan



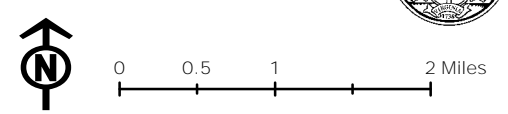
## Eastern Road Plan - Nov 2016

- New Major Arterial
- Improved Major Arterial
- New Minor Arterial
- Improved Minor Arterial
- New Major Collector
- Improved Major Collector
- New Minor Collector
- Improved Minor Collector
- Ramp
- Roundabout
- Trails
- Future Rt 37 Bypass
- Urban Development Area
- Sewer and Water Service Area
- Rural Community Center

2035 Comprehensive Policy Plan Map  
Adopted January 25, 2017

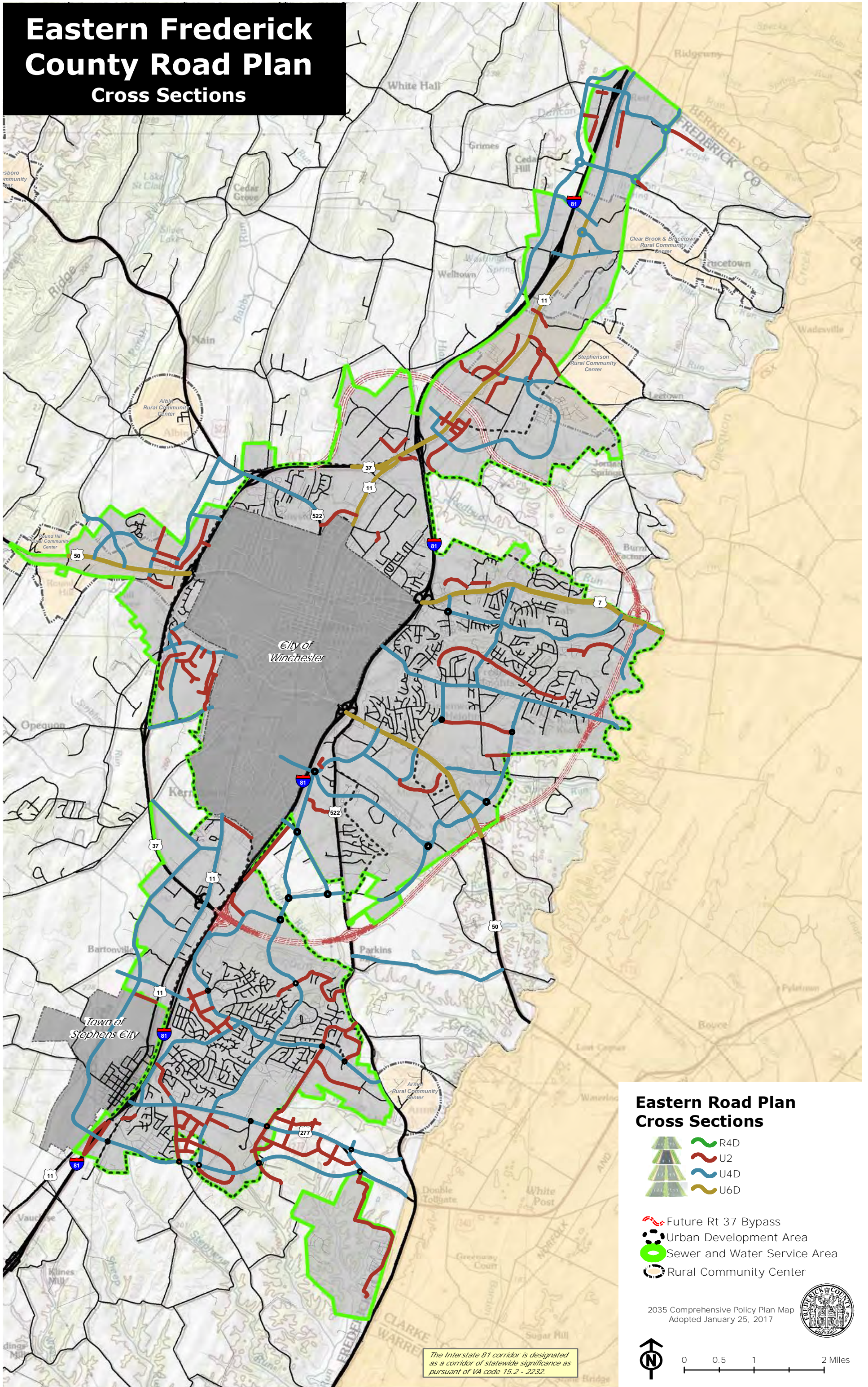


The Interstate 81 corridor is designated as a corridor of statewide significance as pursuant of VA code 15.2 - 2232.

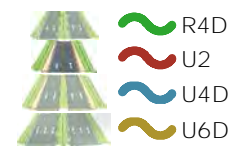






# Eastern Frederick County Road Plan

## Cross Sections

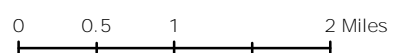


### Eastern Road Plan Cross Sections



-  Future Rt 37 Bypass
-  Urban Development Area
-  Sewer and Water Service Area
-  Rural Community Center

2035 Comprehensive Policy Plan Map  
Adopted January 25, 2017

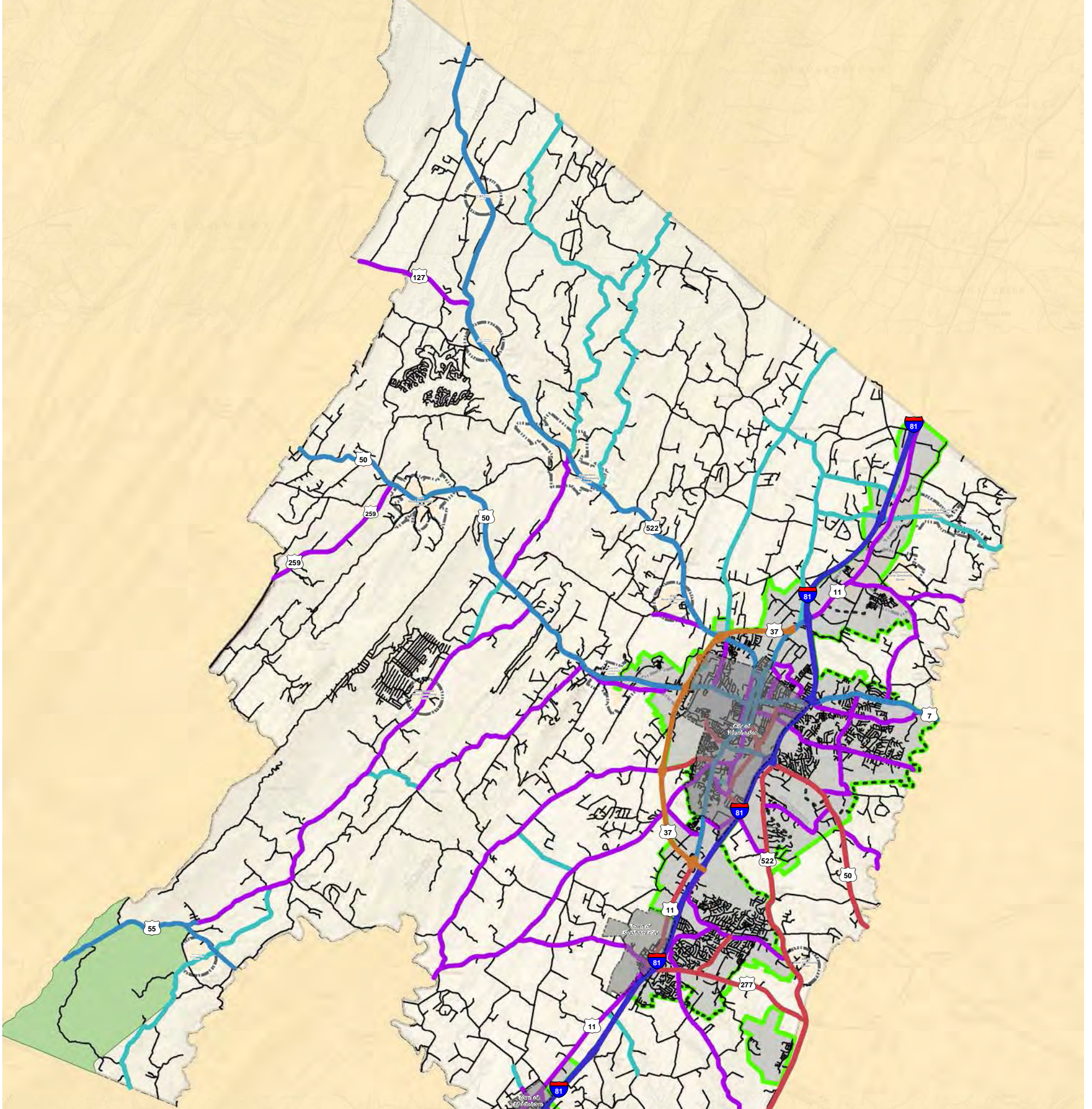


*The Interstate 81 corridor is designated as a corridor of statewide significance as pursuant of VA code 15.2 - 2232.*



# Frederick County Road Plan

## Existing Conditions/Inventory and Functional Classifications



### Existing Conditions/ Inventory and Functional Classifications

-  Expressway
-  Interstate
-  Major Arterial
-  Minor Arterial
-  Major Collector
-  Minor Collector
-  Local Rd
-  Urban Development Area
-  Sewer and Water Service Area
-  Rural Community Center
-  George Washington National Forest

2035 Comprehensive Policy Plan Map  
Adopted January 25, 2017

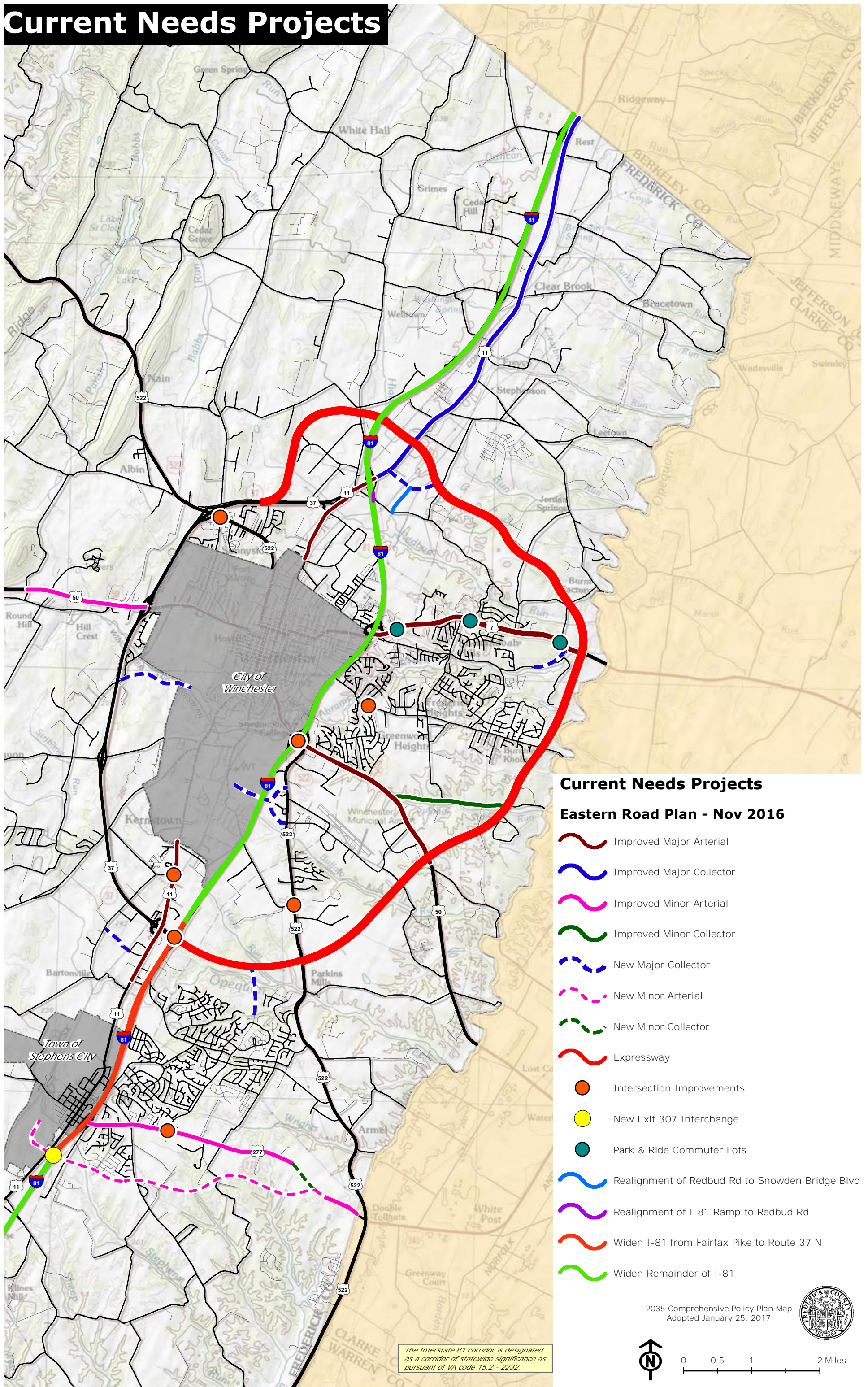


*The Interstate 81 corridor is designated as a corridor of statewide significance as pursuant of VA code 15.2 - 2232.*



0 1.25 2.5 5 Miles

# Current Needs Projects



The Interstate 81 corridor is designated as a corridor of statewide significance as pursuant of VA code 15.2 - 2232.

2035 Comprehensive Policy Plan Map  
Adopted January 25, 2017



0 0.5 1 2 Miles

## **VI. PUBLIC FACILITIES**

- **FREDERICK COUNTY GOVERNMENT SERVICES**
- **FREDERICK COUNTY PUBLIC SCHOOLS**
- **FREDERICK COUNTY PARKS AND RECREATION**
- **HANDLEY REGIONAL LIBRARY**
- **FREDERICK COUNTY EMERGENCY SERVICES**
- **WINCHESTER REGIONAL AIRPORT**
- **FREDERICK COUNTY SANITATION AUTHORITY**



## **PUBLIC FACILITIES**

### **INTRODUCTION**

This Chapter addresses the following County public facility providers and their focus and direction for the future.

- **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 COUNTY SANITATION AUTHORITY (FCSA)**

### **FOCUS FOR THE FUTURE**

Creating a sense of community through the principles of Neighborhood Design is supported through the policies contained within the Urban Area Study completed in 2006. By directing growth to the Urban Areas, through the UDA, the County can better direct services and community facilities to the citizens providing efficiency in community facilities including schools, parks, libraries and emergency services. At the same time, the County can better protect its Rural Areas and natural and cultural resources.

### **COMMUNITY BENEFITS**

Public facilities, especially schools, parks and libraries, can provide focal points for walkable, mixed-use neighborhoods, intertwined with variety of housing, retail, and employment opportunities. Focusing development around walkable centers allows people to work, go to school, live, shop, and play in locations that are near each other. The location of public facilities and infrastructure and the thoughtful provisions for public spaces, recreational areas, and open spaces are essential to the creation of more walkable, livable communities.

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.

## **FREDERICK COUNTY GOVERNMENT SERVICES**

### **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. Advances in technology shall be embraced to further advance government services. In addition, a variety of communication methods shall be used to engage the community and promote the accessibility of those government services.

The County shall strive to improve access to government services through a variety of creative and proactive approaches. This may include building new community facilities in urban areas/urban centers and through the use of technology that connects the County with the Community.

### **COMMUNITY BENEFITS**

Projects and proposals aimed at enhancing the County's ability to provide accessible, effective, and high quality government services, either by Frederick County or by private entities through allowable programs such as the Public-Private Education Facilities & Infrastructure Act (PPEA), should be considered as being consistent with the Comprehensive Plan of the County. Such community facilities shall generally be included in the Capital Improvement Plan.

### **GOALS/STRATEGIES**

**GOAL:**           **IMPROVE SERVICES TO CITIZENS THROUGH THE EFFICIENT PROVISION OF COMMUNITY FACILITIES.**

**STRATEGIES:**

- County government services should be provided as needed to provide citizens, business owners, and community partners with accessible government services.

## PUBLIC FACILITIES

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- Community facilities should generally be located within urban areas which may include the County's Urban Development Area, Sewer and Water Service Area, and/or and areas identified as future Urban Centers.
- Community facilities should serve as community focal points.
- Collaboration between County agencies should continue to be a priority goal as to provide the best possible environment for positive and vibrant community growth.

## **FREDERICK COUNTY PUBLIC SCHOOLS (FCPS)**

### **CURRENT CONDITIONS**

Frederick County Public Schools (FCPS) is the 22th largest of 134 school systems in the Commonwealth of Virginia, with just over 13,246 students in the 2016-2017 school year. With over 2,100 full time employees, Frederick County Public Schools (FCPS) is the third largest employer in the Winchester-Frederick County area. The school district has 11 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, the Smithfield 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 4 schools plus the Transportation Facility and 5 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 650 students in the past ten years. Eighty-one percent of the class of 2016 planned to continue their education. FCPS on-time graduation rate for the 2015-16 school year was 93.5%, compared to the state's 91.3%.

### **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 11<sup>th</sup> elementary school.

## **COMMUNITY BENEFITS**

It is the mission of Frederick County Public Schools' (FCPS) is to ensure all students an excellent education. The school system works hard to meet the needs of all students, from those who will go to college to those who are challenged to master the most basic of life skills. FCPS fosters a culture of success and collaboration as well as a desire to constantly improve.

Frederick County Public Schools strives to be a premier school division in the Commonwealth of Virginia. Teachers and staff maintain high expectations for students so the children of Frederick County are equipped with the necessary knowledge, skills and competencies to be successful in their chosen career and life goals. There are specific programs offered by FCPS to meet the varying needs of special groups of students. In collaboration with the City of Winchester and Clarke County, FCPS provides an education for children who are emotionally disturbed or who have multiple disabilities. FCPS offers a variety of trade and industrial programs and health occupations programs designed to meet the needs of students who wish to improve their employability skills and explore different career possibilities. FCPS provides enriched and expanded instruction for students who qualify for Gifted Education, including the Mountain Vista Governor's School. FCPS also participates in two summer programs: Performing and Visual Arts Northwest (PAVAN), a regional summer arts and culture program, and Blue Ridge Environmental Studies Regional Summer Governor's School, which offers gifted students opportunities to work on real problems in environmental management.

## **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 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. The following policies include excerpts paraphrased from the FCPS Division Comprehensive Plan 2014-20. Please refer to that plan for the official version of these policies:

**GOALS:        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.**

### **STRATEGIES:**

- In evaluating potential school facility locations, consider the role of the site in building diverse, walkable communities in the UDA.



## PUBLIC FACILITIES

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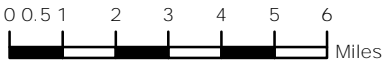
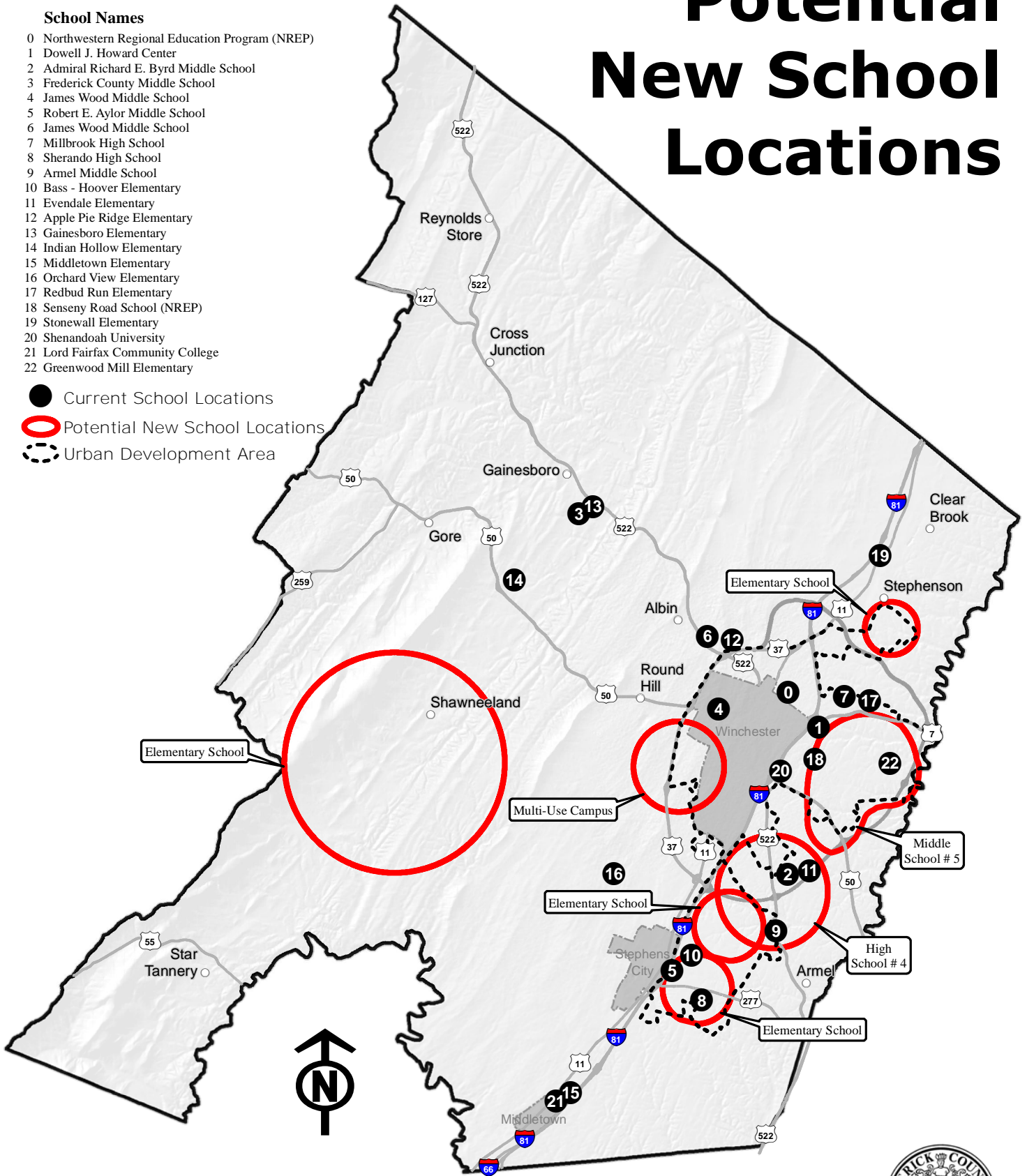
- In evaluating potential school facility locations, consider each location relative to arterial roads, planned roadways, the SWSA, the UDA, surrounding neighborhoods, floodplains, Civil War battlefields, and Agricultural and Forestal Districts. Also consider surrounding land uses, and potential environmental 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.

# Potential New School Locations

## School Names

- 0 Northwestern Regional Education Program (NREP)
- 1 Dowell J. Howard Center
- 2 Admiral Richard E. Byrd Middle School
- 3 Frederick County Middle School
- 4 James Wood Middle School
- 5 Robert E. Aylor Middle School
- 6 James Wood Middle School
- 7 Millbrook High School
- 8 Sherando High School
- 9 Armel Middle School
- 10 Bass - Hoover Elementary
- 11 Evendale Elementary
- 12 Apple Pie Ridge Elementary
- 13 Gainesboro Elementary
- 14 Indian Hollow Elementary
- 15 Middletown Elementary
- 16 Orchard View Elementary
- 17 Redbud Run Elementary
- 18 Senseny Road School (NREP)
- 19 Stonewall Elementary
- 20 Shenandoah University
- 21 Lord Fairfax Community College
- 22 Greenwood Mill Elementary

- Current School Locations
- Potential New School Locations
- ⋯ Urban Development Area



## **FREDERICK COUNTY PARKS AND RECREATION**

### **CURRENT CONDITIONS**

#### *Facilities*

There are five classifications of parks including Mini, Neighborhood, Community, District Parks and Greenways. The classification depends on the size, service area, purpose, character, and location. The County currently owns and operates two district, one community and two neighborhood parks. Additionally, one community park is planned adjacent to the Snowden Bridge development where the County has taken possession of 25 acres of land.

The two district parks currently serve the County's population with active and passive recreational programs and facilities. Clearbrook Park, located five miles north of Winchester on Route 11, consisting of approximately 55 acres (44 which are owned by the County) and Sherando Park, located two miles east of Stephens City on Route 277, consisting of approximately 334 acres. Rose Hill Park, a public park located 1/3 mile south of the intersection of Cedar Creek Grade and Jones Road, offers visitors the opportunity to enjoy the historic and scenic features of the museum of the Shenandoah Valley's Rose Hill Farm. Two neighborhood parks include space at the Reynolds Store Fire Company, and the Frederick Heights subdivision near Senseny Road. These neighborhood parks consist primarily of playground equipment for young children. Master development plans were adopted for both Clearbrook and Sherando Parks which establish goals for each park, identify unmet recreational needs, provide unified facility plans, and propose a development program for each park.

### **FOCUS FOR THE FUTURE**

In order 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 on the Master Plans and in the Department Strategic Plan. Additionally, in support of Neighborhood Design, new parks and usable open spaces should be located within the UDA, near or at the center of Neighborhood Villages and Urban Centers or in Rural Community Centers in the Rural Area to help create more walkable, livable communities. The construction of additional trails throughout the Community is also important. Additional trails would provide residents with the ability to travel safely from their homes to schools, stores, and 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 431 acres of park land with almost half of those acres yet to be developed for active and passive recreation purposes. Additionally thousands of acres of publically accessible land is provided by Federal, State, school system and non-profit entities within the borders of Frederick

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## PUBLIC FACILITIES

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County, and adjoining jurisdictions allow the use of their facilities for County residents. In combination these publically accessible lands provide an outline 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 in the past year. Nearly ½ million visits are counted at the two District Parks on an annual basis.

### **GOALS/STRATEGIES**

**GOAL: 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.**

**STRATEGIES:**

- Maintain a County-wide recreation plan which identifies recreational, park, trail, bikeway and open space needs.
- Identify recreation needs associated with the Rural Community Centers.
- Continue to utilize State and Federal grants and loans for financing and programming County recreational needs and especially for major capital projects.
- 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.

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

## PUBLIC FACILITIES




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### **STRATEGIES:**

- Inventory the County's natural and environmental resources to identify appropriate locations for greenways, Community, 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 that development recreation and open space requirements are adequate.
- Actively pursue parkland in areas where publically accessible land does not or is not anticipated to meet citizen needs.

# Potential New County Park Locations





## Existing County Parks

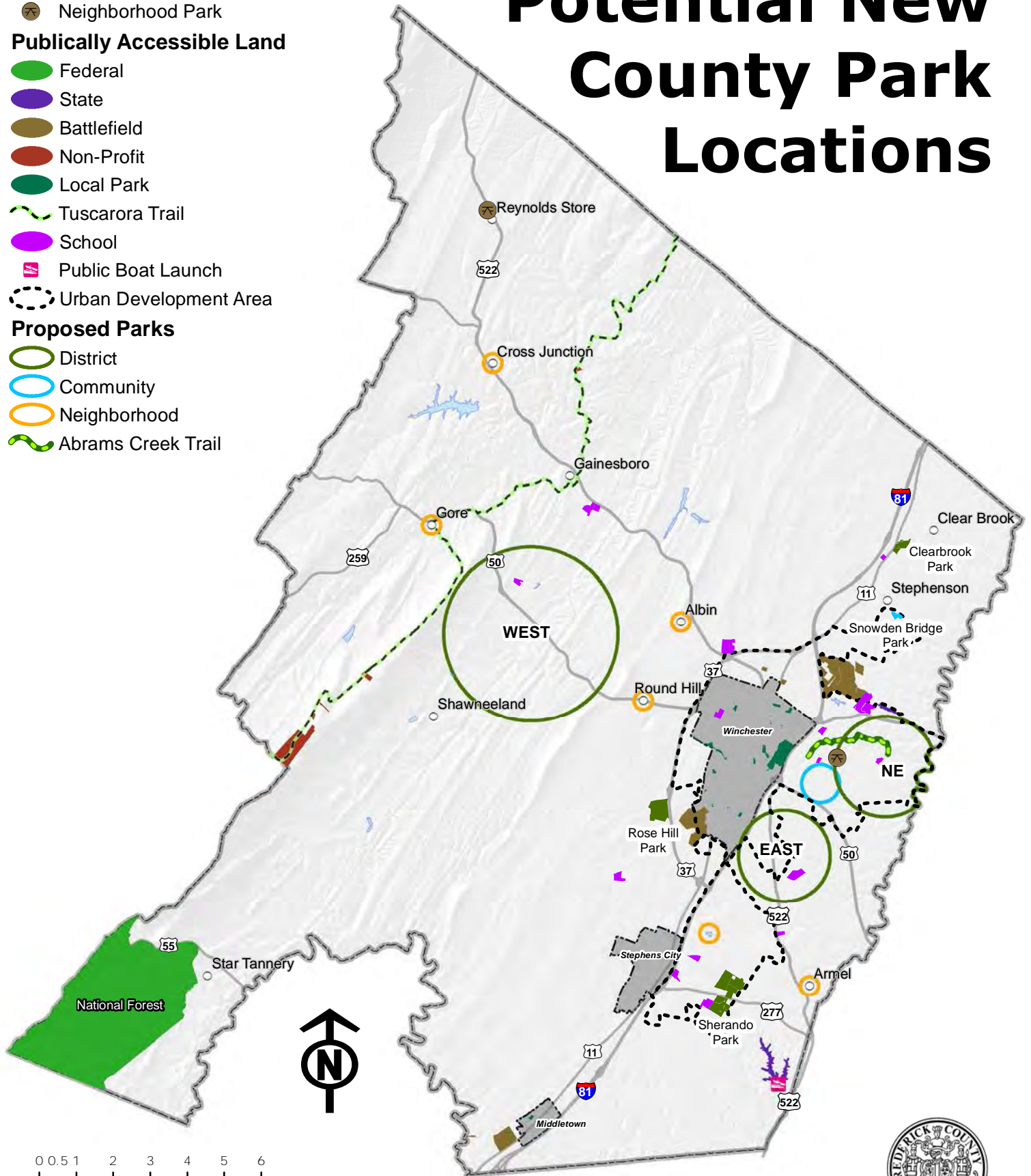
-  District Park
-  Community Park
-  Neighborhood Park

## Publicly Accessible Land

-  Federal
-  State
-  Battlefield
-  Non-Profit
-  Local Park
-  Tuscarora Trail
-  School
-  Public Boat Launch
-  Urban Development Area

## Proposed Parks

-  District
-  Community
-  Neighborhood
-  Abrams Creek Trail



## **HANDLEY LIBRARY**

### **CURRENT CONDITIONS**

Currently the Library System has one library in each jurisdiction served. As population grows in Frederick County, the demand for library services also continues to grow. 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 Frederick County locations not well served by the Winchester or Stephens City libraries.

### **FOCUS FOR THE FUTURE**

As the residential population in Frederick County continues to grow the Library System has plans for opening new facilities. Within the next five years the Library Board plans for a library to open in the Gainesboro district and new libraries at Senseny and Greenwood and at Route 522 and Justice Drive are planned for the next ten years. 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 is also being considered.

### **COMMUNITY BENEFIT**

Ideally, a new library can best serve as community centers when they are located within a walkable community, near schools, parks and retail establishments.

### **GOALS/STRATEGIES**

**GOAL: PLAN FOR GROWTH WITH THE AIM OF PROVIDING A DEQUATE LIBRARY SPACE FOR LIBRARY USERS IN THE FUTURE.**

#### **STRATEGIES:**

- 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**

As residential and commercial developments continue to locate and expand in Frederick County, there will be an increased need for fire and rescue stations to provide services to protect the citizens and transient population. The ultimate 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, hazardous materials, swift water rescue, technical rescues, and natural disasters. Timely responses by emergency services personnel and equipment enable resuscitation efforts to begin in the critical minutes immediately following a cardiac related incident and also minimize fire related deaths.

### **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 timely service to the citizens.

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. Also, in support of Neighborhood Design, it is encouraged that the location



## PUBLIC FACILITIES

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of future facilities be located within the UDA, near Neighborhood Villages and Urban Centers or in Rural Community Centers.

### **GOALS/STRATEGIES**

**GOAL:            **WHEN PLANNING NEW FACILITIES , CONSIDER SITE LOCATION, SITE SUITABILITY, BUILDING DESIGN, AND CONSTRUCTION TIMING.****

**STRATEGIES:**

- Co-locate fire and rescue stations with other County facilities and agencies for maximum efficiency.
- 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.
- Encourage sites to be large enough to accommodate equipment storage and facilitate maneuverability, allowing equipment to either pull-through or be backed into garage bays without hindering traffic flows in the public right-of-way.
- 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.
- Where appropriate, collocate Fire and Rescue communication infrastructure on existing telecommunications towers and/or tall structures to support more efficient operations throughout the County.

## **WINCHESTER REGIONAL AIRPORT**

### **CURRENT CONDITIONS**

The Winchester Regional Airport is recognized as an important component of the County's Business Development efforts. Therefore, the Winchester Regional Airport Authority has developed an Airport Support Area for inclusion in the plan. Business and industrial uses should be the primary land uses in the airport support area and will be supported. The airport support area is an area in which further residential rezoning's will be prohibited in order to protect fly-over areas and noise sensitive areas. 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 activities and the expansion of such activities because of concern for noise and fly-overs. The airport support area was also established to ensure the feasibility of continued airport use and future airport expansion and the implementation of the Comprehensive Plan.

### **FOCUS FOR THE FUTURE**

There is a need to continue to implement the airport support area expectations. Business 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. Remaining capital projects include the acquisition of land along Bufflick Road for noise abatement, development of the northern side of the runway, renovation of the 17 year old terminal building and construction of an aircraft wash rack.

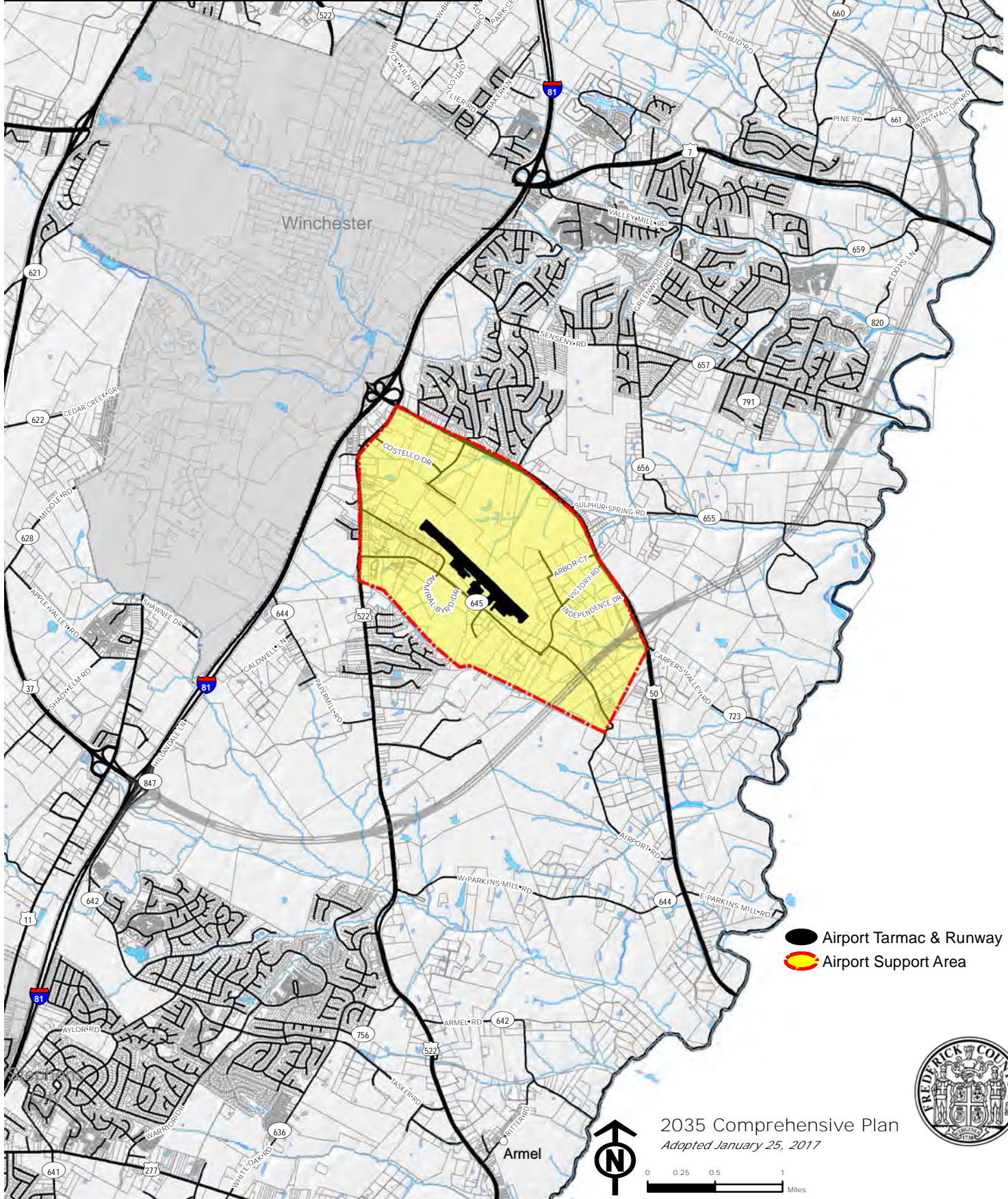
### **COMMUNITY BENEFITS**

Through the support of the member jurisdictions, the Airport will continue to evolve into a modern, first class air transportation facility which will assist business development endeavors in the attraction of new industrial and commercial businesses to the region.

### **GOALS/STRATEGIES**

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

# Airport Support Area



● Airport Tarmac & Runway  
● Airport Support Area

2035 Comprehensive Plan  
Adopted January 25, 2017



## **FREDERICK COUNTY SANITATION AUTHORITY (FCSA)**

### **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.

The Frederick County Sanitation Authority (FCSA) 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 Sewer and Water Service Areas (SWSA) with the express stipulation that the Frederick County Sanitation Authority (FCSA) 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 in areas where residential 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.

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

Frederick County and the Frederick County Sanitation Authority 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.

## PUBLIC FACILITIES

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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.

### *Wastewater Facilities*

The Frederick-Winchester Service Authority (FWSA) provides wastewater service for the FCSA 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 the FCSA for their operation. The City operates and maintains the Opequon Facility while the Sanitation Authority 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 Sanitation Authority 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 serves the upper Stephens Run, Wrights Run, and Opequon drainage areas has a treatment capacity of 5.0 million gallons per day. In addition, 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 capacity of 0.375 million gallons per day.

### *Water Facilities*

The FCSA manages a system with a water capacity of 7.42 Million Gallons per Day (MGD), with an average daily use of 5.5 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 the FCSA. 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 4 MGD. The water source is 3 million gallons of ground water pumped from quarries on the west side of Stephens City.

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 one elevated tank and three ground storage tanks with a total capacity of 9.5 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 the Frederick County Sanitation Authority (FCSA) 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 the Frederick County Sanitation Authority (FCSA) to plan for and accommodate sewer and water service to these areas of anticipated new growth and development.

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

In addition, the FCSA should update its master plan to reflect the FCSA'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 a master plan should build upon the future water and sewer needs of the County and guide the development and acquisition of water resources and waste water treatment options. The FCSA 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 the FCSA 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**

The Frederick County Sanitation Authority 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**

## PUBLIC FACILITIES

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**GOAL:        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 the Frederick County Sanitation Authority 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 of the Frederick County Sanitation Authority, 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.

**GOAL:        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.**

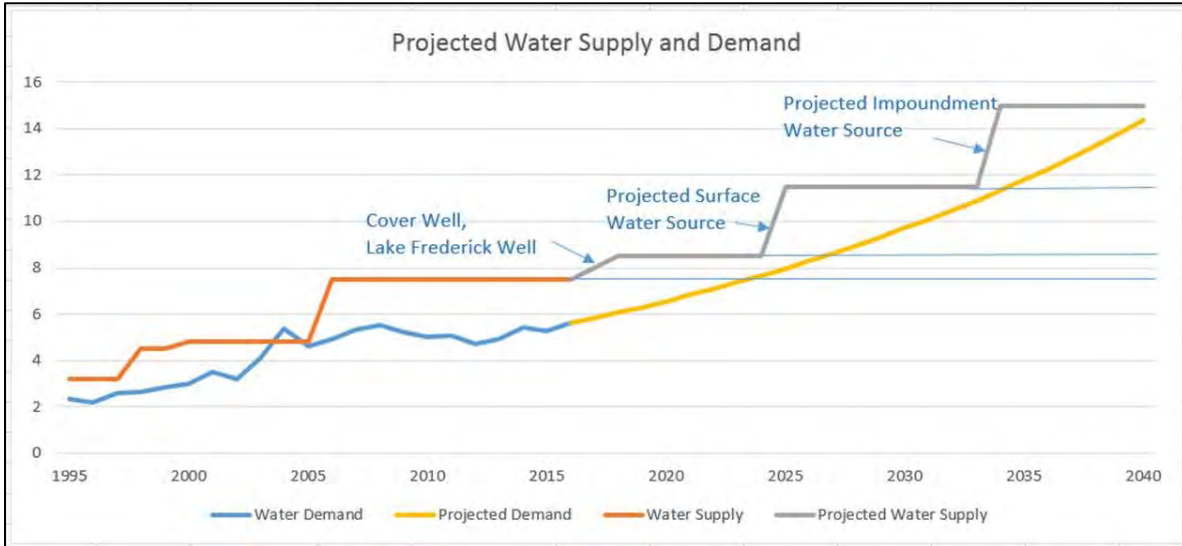
**STRATEGIES:**

- 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 the Sanitation Authority, the City of Winchester, the 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 the FCSA 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, the Frederick County Sanitation Authority and

## PUBLIC FACILITIES

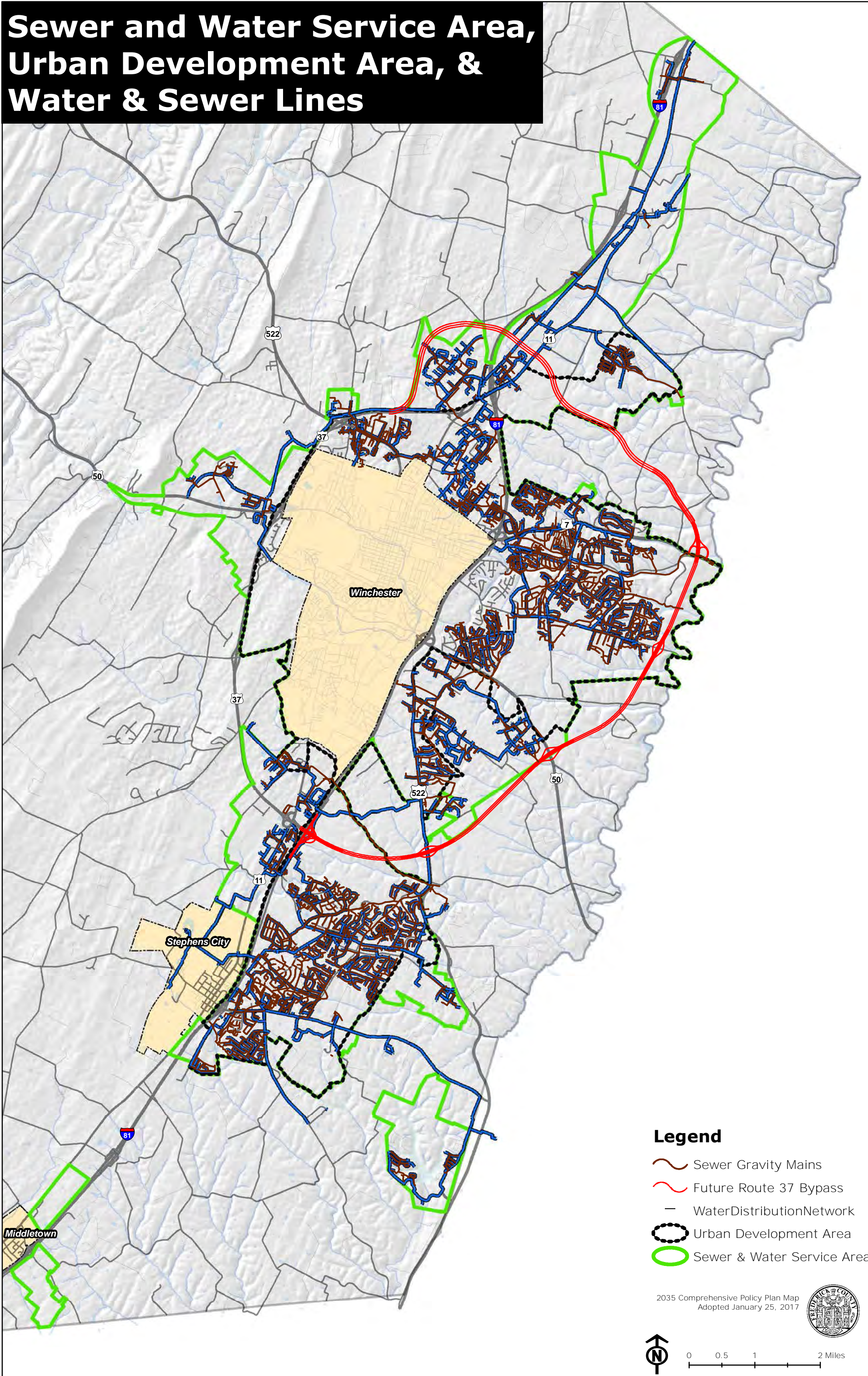
the Frederick-Winchester Service Authority should carefully plan needed sewage treatment capacity based on trends in usage.

### PROJECTED WATER SUPPLY AND DEMAND CHART










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



## Legend

-  Sewer Gravity Mains
-  Future Route 37 Bypass
-  Water Distribution Network
-  Urban Development Area
-  Sewer & Water Service Area

2035 Comprehensive Policy Plan Map  
Adopted January 25, 2017



0 0.5 1 2 Miles

**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.

The priority natural resource issues for Frederick County that are the focus of this chapter are:

- 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. Principal are those which help support the economic wealth, health of citizens, and the vitality of the County. Others include the protection of the scenic quality residents and visitors enjoy, and that 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 Cedar Creek has been considered as a supplemental source with the potential for withdrawals during peak flows. With the exception of water purchased from the City of Winchester, which comes from the North Fork of the Shenandoah River, the County is entirely dependent on groundwater sources.

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 WORK TOWARD DEVELOPING INCREASED WATER SUPPLIES TO MEET FUTURE NEEDS.**

**STRATEGIES:**

- Regional water supplies should be investigated.

## NATURAL RESOURCES

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- 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.

### *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.

On-site sewage disposal systems are a potential source of water pollution when not properly maintained. These systems are regulated by the Virginia Health Department and by the Virginia Department of Environmental Quality. Package treatment plant sewer systems designed to serve particular developments 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 insure that the facilities are properly operated.

### **GOALS/STRATEGIES**

**GOAL: P ROTECT GROUND AND SURFACE WATER QUALITY.**

**STRATEGIES:**



## NATURAL RESOURCES

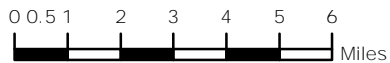
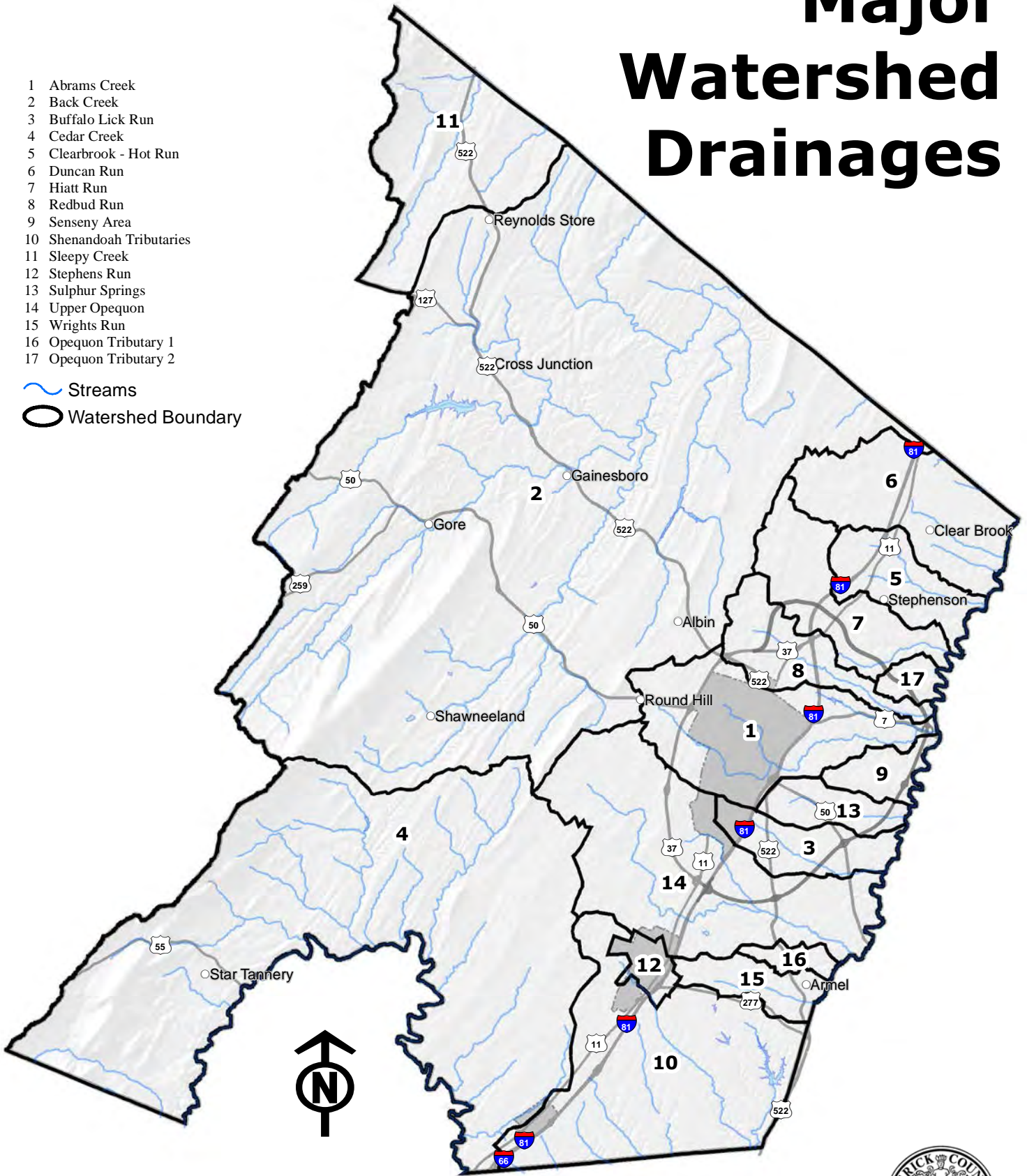
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- Watershed management throughout the County should encourage forested or vegetated streamside buffers to filter pollutants, stabilize stream banks and provide wildlife habitat.
- The types of onsite sewage disposal systems permitted in the County 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.

# Major Watershed Drainages

- 1 Abrams Creek
- 2 Back Creek
- 3 Buffalo Lick Run
- 4 Cedar Creek
- 5 Clearbrook - Hot Run
- 6 Duncan Run
- 7 Hiatt Run
- 8 Redbud Run
- 9 Senseny Area
- 10 Shenandoah Tributaries
- 11 Sleepy Creek
- 12 Stephens Run
- 13 Sulphur Springs
- 14 Upper Opequon
- 15 Wrights Run
- 16 Opequon Tributary 1
- 17 Opequon Tributary 2

 Streams  
 Watershed Boundary



### **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 Policy Plan.

#### *FLOODPLAINS*

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.

#### *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



## NATURAL RESOURCES

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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**


**GOAL: A      APPROPRIATELY MANAGE IDENTIFIED SENSITIVE NATURAL AREAS.**

**STRATEGIES:**

- 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.

# Sensitive Natural Areas

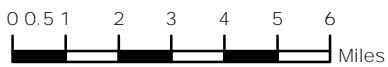
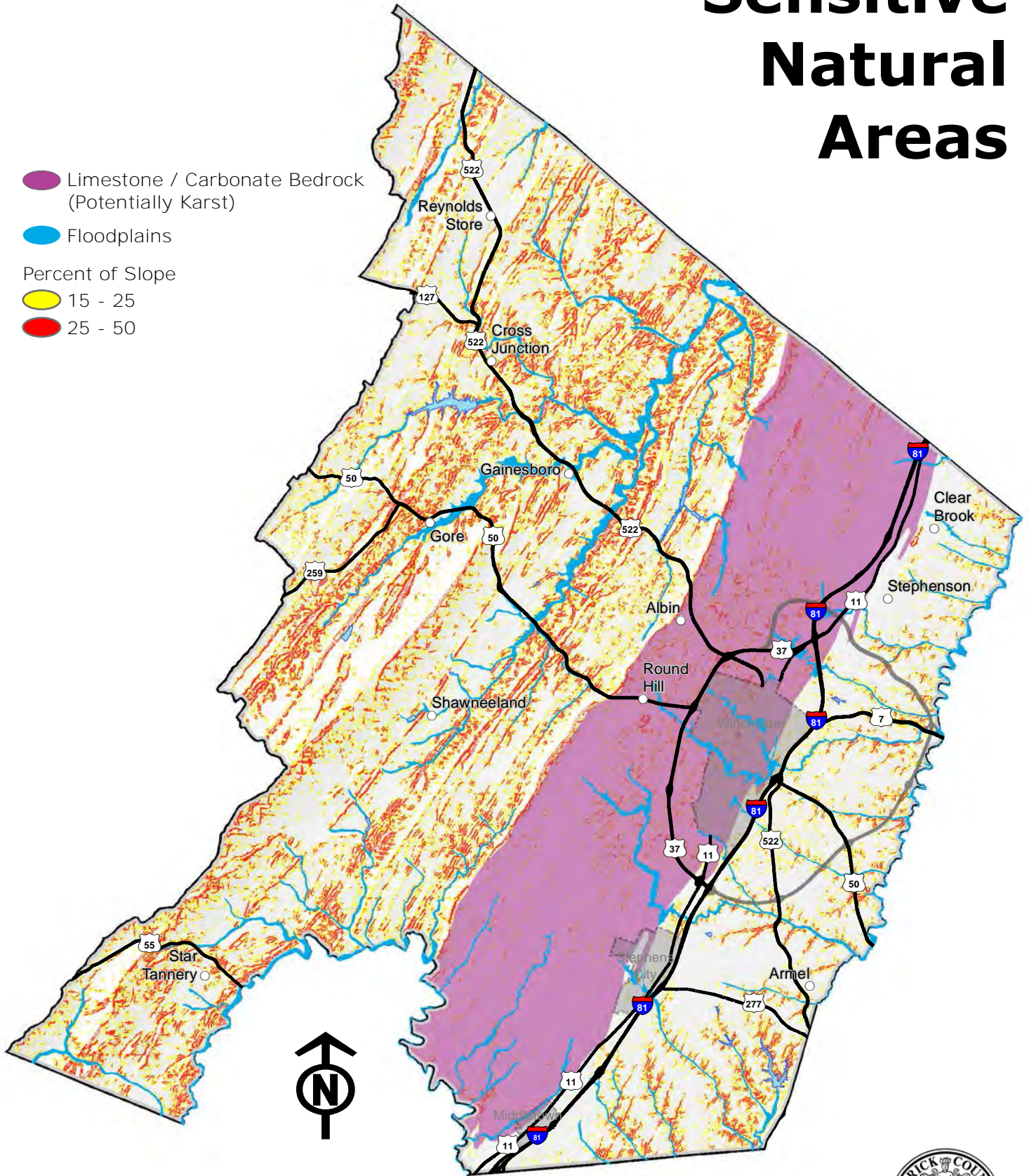
 Limestone / Carbonate Bedrock (Potentially Karst)

 Floodplains

Percent of Slope

 15 - 25

 25 - 50



## **AGRICULTURAL AND FORESTAL AREAS**

Agricultural and forestal lands in Frederick County contribute to the natural environment as well as add to the historic rural character and scenic quality associated with the community. Agricultural lands and forests provide economic benefits related to agriculture, forestry and tourism, and require minimal County services.

Frederick County has an Agricultural and Forestal District program supported by the Code of Virginia. This program allows landowners to voluntarily enroll their lands in a district which limits development. These districts are renewed every five (5) years but property owners can request that their land be removed at any time. The County has seven separate agricultural and forestal districts which contain a total of 11,281.37 acres. The use of conservation easements for the protection of agricultural and forestry lands is increasingly becoming popular and encouraged, in addition to participation in the County's Agricultural and Forestal Districts.









## **GOALS/STRATEGIES**

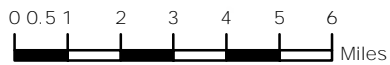
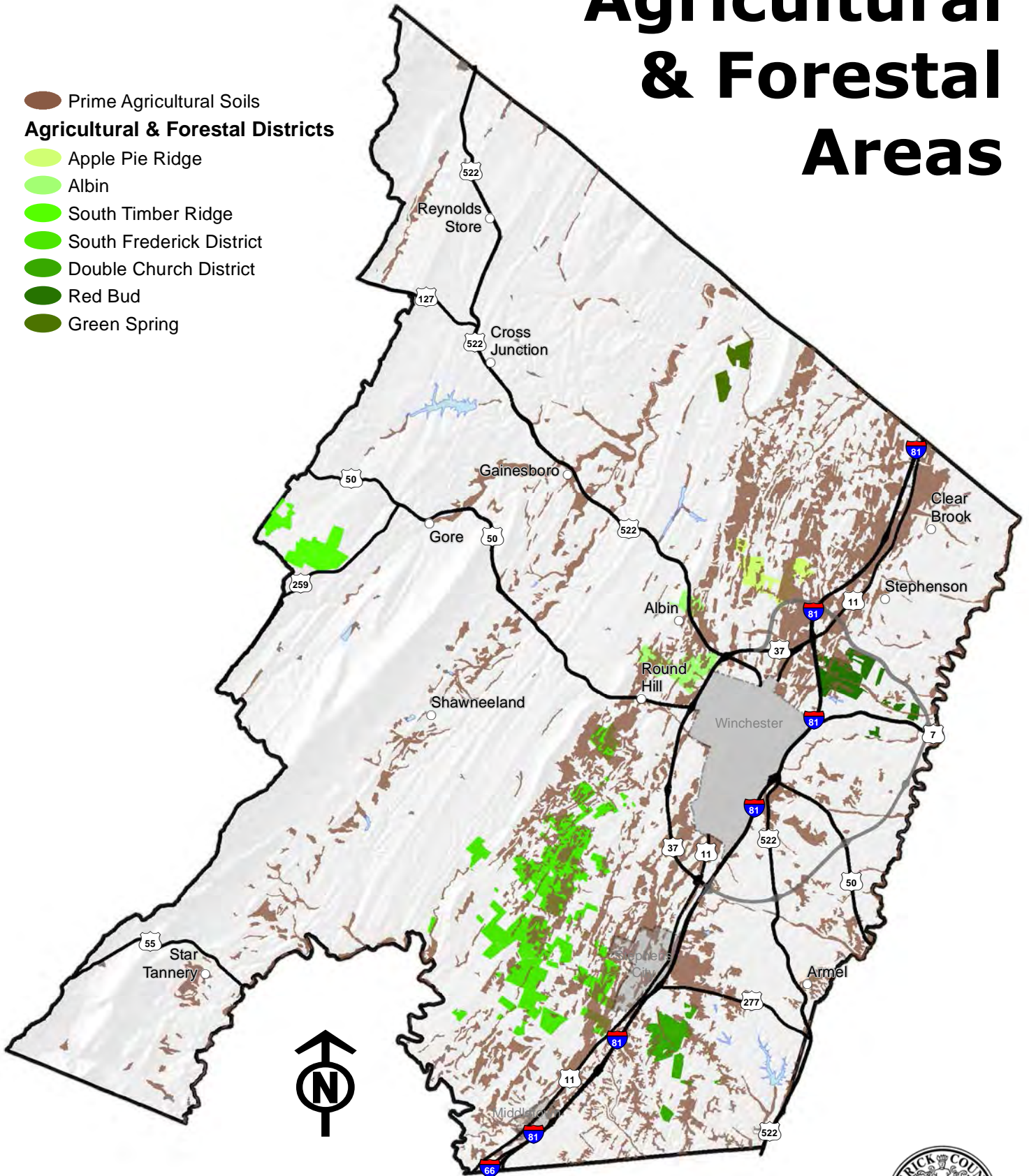
**GOAL: P            PROTECT AND PROMOTE FREDERICK COUNTY'S AGRICULTURAL AND FORESTAL AREAS**

### **STRATEGIES:**

- Evaluate the existing Agricultural and Forestal Districts program for effectiveness in helping preserve agricultural and forestry resources.
- Encourage and promote opportunities that support the continued use of farmlands and the consumption of locally grown products.
- Develop, promote and support voluntary measures to protect agricultural and forestry resources such as conservation easements, Purchase of Development Rights (PDR) or Transfer of Development Rights (TDR).
- In the Rural Areas, development should be directed away from soils which are well suited for agricultural production.

# Agricultural & Forestal Areas

-  Prime Agricultural Soils
- Agricultural & Forestal Districts**
-  Apple Pie Ridge
-  Albin
-  South Timber Ridge
-  South Frederick District
-  Double Church District
-  Red Bud
-  Green Spring



### **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.**

**STRATEGIES:**

- 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.

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## NATURAL RESOURCES

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- 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 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**

**GOAL: E            NSURE 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.**

## NATURAL RESOURCES

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### **STRATEGIES:**

- 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. (See Agricultural and Forestal Lands above)

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



## NATURAL RESOURCES

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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: O            OPEN SPACES IN THE URBAN AND RURAL AREAS OF THE COUNTY ARE IMPORTANT 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.

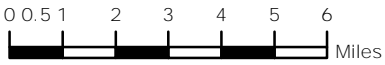
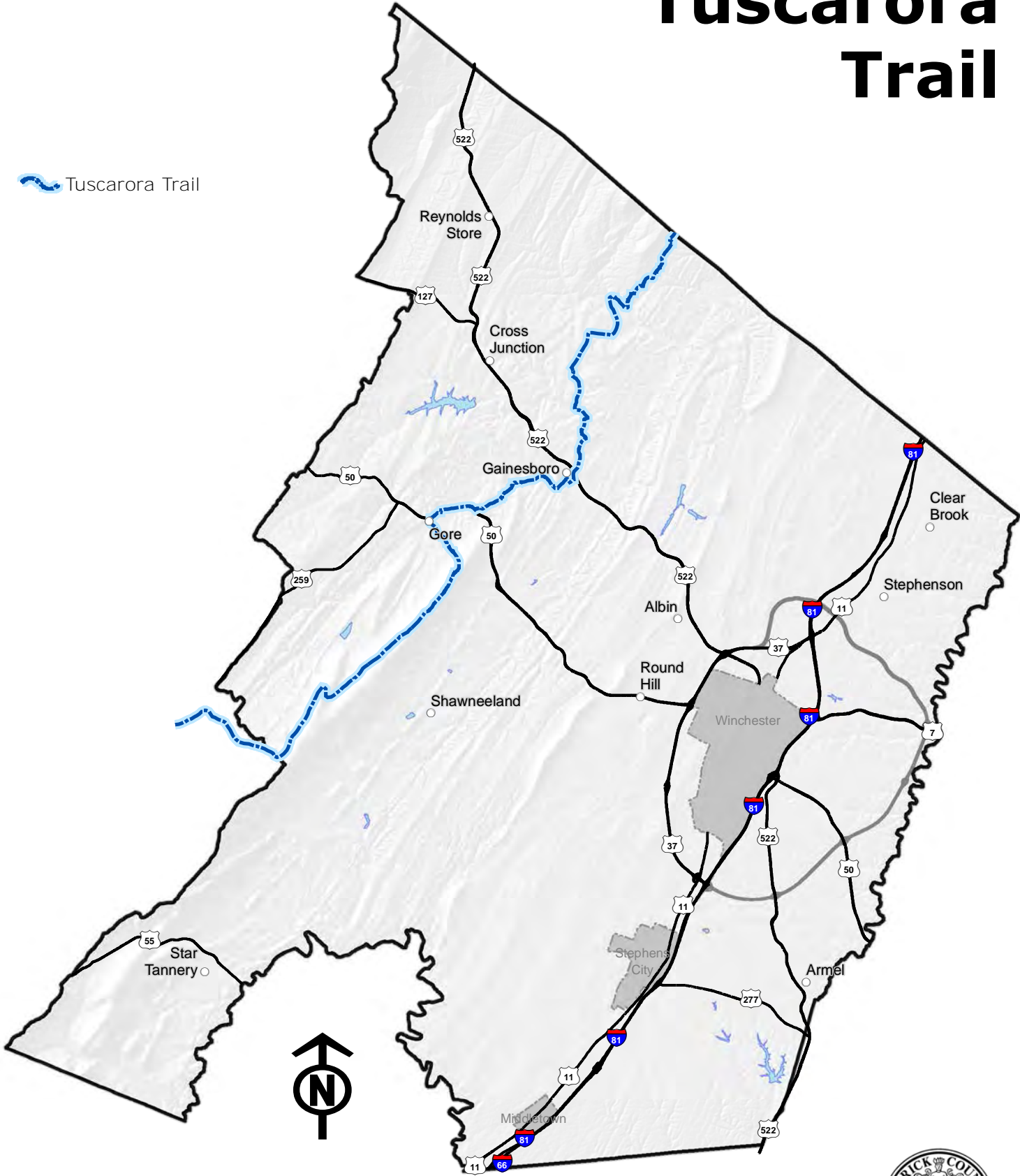
**GOAL: E            ESTABLISH A NETWORK OF GREENWAY TRAILS FOR CONSERVATION, RECREATION AND TRANSPORTATION THROUGH THE URBAN AREAS OF FREDERICK COUNTY, AND LINK WITH THE TRAILS NETWORK IN THE CITY OF WINCHESTER.**

### **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.

# Tuscarora Trail

 Tuscarora Trail



## **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**

**POLICY: I      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.**

#### **IMPLEMENTATION:**

- 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*

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*

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.

## NATURAL RESOURCES

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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**

**GOAL: M            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: M            MINIMIZE HUMAN EXPOSURE TO UNHEALTHY LEVELS OF NOISE.**

**STRATEGY:**

- 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. As a consequence of development and diversification, landscapes in Frederick County have changed more dramatically during this period than any other. New residential communities have emerged in what were once rural areas, and architectural styles have become more uniform. However, the historic past (including site, 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 documents 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.

The Historic Overlay Zoning District has been developed as an option for owners who seek to protect the historic resources on their property. This option provides a more regulated approach to the preservation of structures and may be appropriate in areas seeking to establish a historic district. 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 rural and 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.

## HISTORIC RESOURCES

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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 surviving historic resources and the new development occurring in this area.

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**

**GOAL: IDENTIFY AND RECOGNIZE HISTORIC RESOURCES IN THE LONG-RANGE PLANNING EFFORTS OF THE COUNTY.**

**STRATEGIES:**

- The Historic Resources Advisory Board (HRAB) will continue to assist the Frederick County Planning and Development Department by reviewing specific development proposals for potential impact on historic components of the site and surrounding areas and making recommendations regarding impact mitigation.
- Development should include a comprehensive approach to historic preservation that will result in a system of sites and battlefields dedicated or protected in a coordinated

## HISTORIC RESOURCES

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fashion, such as the Battlefield Park Network that preserves key sites, attracts tourists, and supports education. Use the Rural Landmarks Survey as a primary source for determining 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.

**GOAL: 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 land owners to comply voluntarily with Secretary of Interior's Standards for Rehabilitation. Incentives allowed by law for the rehabilitation, adaptive reuse, or restoration of historic structures in the Historic Overlay Zoning District should be considered.

**GOAL: INCORPORATE HISTORIC RESOURCE DEVELOPMENT IN AN EFFORT TO STRENGTHEN HERITAGE TOURISM.**

**STRATEGIES:**

- 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-sensitive trails, sites, and routes of interest that will not adversely impact private property owners, as well as develop public scenic byways.
- Permit events, reenactments, tours, and exhibits to attract visitors.



# Civil War Battlefields & Sites



(As Defined by the NPS Shenandoah Valley Civil War Sites Study)

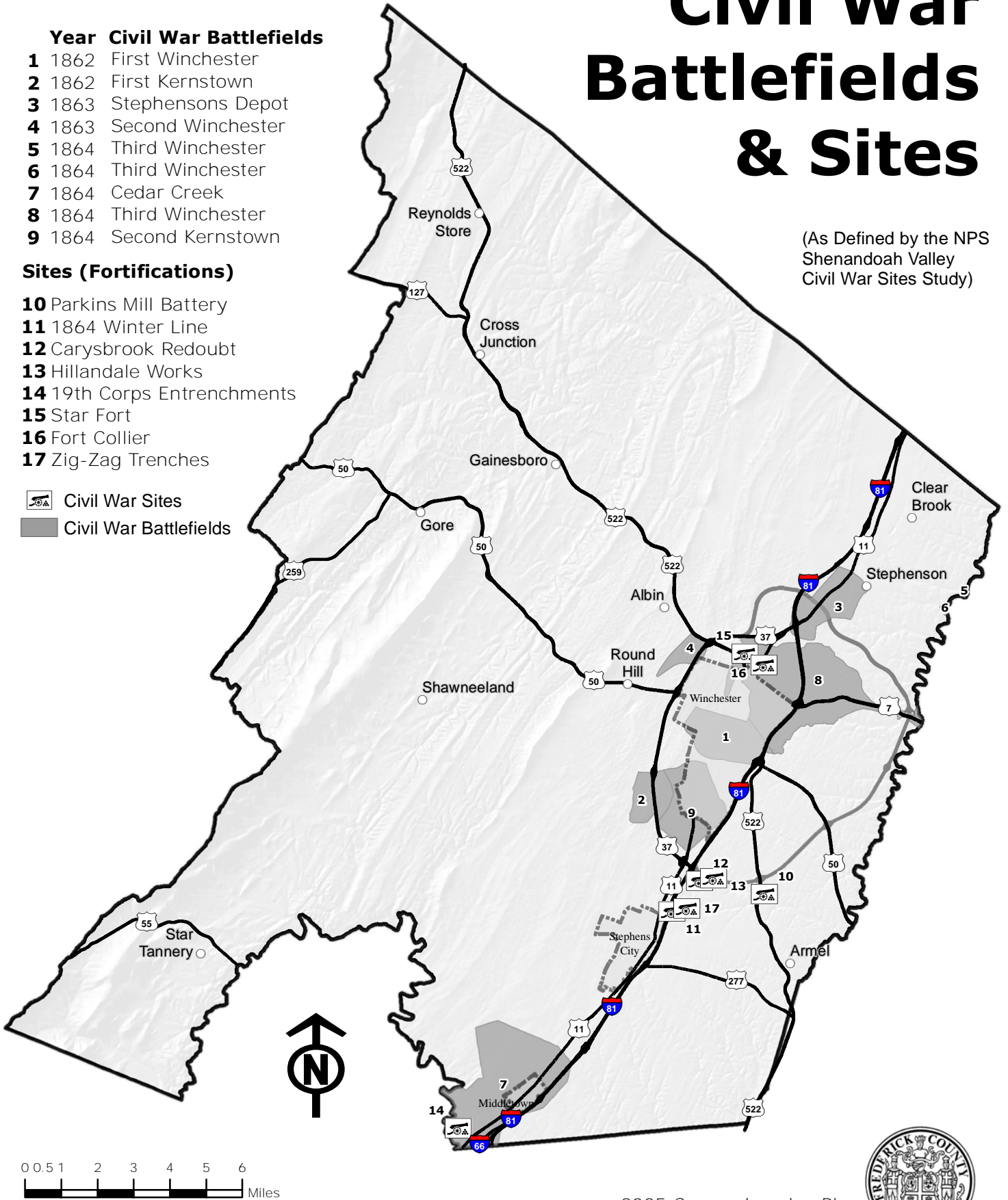
## Year Civil War Battlefields

- 1 1862 First Winchester
- 2 1862 First Kernstown
- 3 1863 Stephensons Depot
- 4 1863 Second Winchester
- 5 1864 Third Winchester
- 6 1864 Third Winchester
- 7 1864 Cedar Creek
- 8 1864 Third Winchester
- 9 1864 Second Kernstown

## Sites (Fortifications)

- 10 Parkins Mill Battery
- 11 1864 Winter Line
- 12 Carysbrook Redoubt
- 13 Hillandale Works
- 14 19th Corps Entrenchments
- 15 Star Fort
- 16 Fort Collier
- 17 Zig-Zag Trenches

-  Civil War Sites
-  Civil War Battlefields



# Possible Historic Districts

**Name**

- 1 Bartonsville
- 2 Brucetown
- 3 Cedar Creek Battlefield
- 4 Gravel Springs
- 5 Green Spring
- 6 Kernstown Battlefield
- 7 Kline's Mill
- 8 Marlboro
- 9 Middletown
- 10 Opequon
- 11 Star Tannery
- 12 Stephens City (on Register)
- 13 Third Winchester Battlefield
- 14 White Hall

■ Possible Historic Districts

