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Cedar Creek and Belle Grove National Historical Park Middletown, Virginia



Cedar Creek and Belle Grove National Historical Park Transportation Synthesis



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Report Notes

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Executive Summary

Cedar Creek and Belle Grove National Historical Park (CEBE), designated a national park unit in 2002, is in the process of developing its first General Management Plan (GMP), which will identify the overall direction for future management of the park. In addition, the GMP provides a framework for park managers to identify resource protection strategies, appropriate uses, necessary facilities, and how visitors will experience the park.

This document outlines how the current and expected future uses of the park create demands on the transportation system. This framework will allow GMP planners to understand the transportation implications of their decisions, as well as those external changes that will impact visitor experience in the park. In doing so, this document discusses the following concepts that impact the park and how visitors experience the history and landscape:

Key Sites

The park has been considered as five geographically distinct units:--the Northern Battlefield, Middletown, Harmony Hall, Keister Tract, and Bowman-Long Meadow areas--to facilitate a discussion of current and expected future use of each area. Except for the Northern Battlefield, most areas are not currently accessible to the public. Potential future plans include development of the Keister Tract as a regional recreational center, constructing interpretive trails in the Bowman-Long Meadow and Northern Battlefield areas, restoration of Harmony Hall and the Heater House, and creating recreational paths that will connect to regional trail systems.

Partners and Coordination

The park works in close partnership with community partners and non-profit organizations. These include the Cedar Creek Battlefield Foundation (CCBF), the National Trust for Historic Preservation (National Trust), Belle Grove, Inc., the Shenandoah Valley Battlefields Foundation (SVBF), Shenandoah County, and four other adjacent jurisdictions, which control and govern various portions of the park. Each of the partners has physical and human assets available, but the partners also have constraints on their activities, based on their mission and organizational structure.

By recognizing where there are similarities in goals and what areas may be conflicting, CEBE can shape its relationships with its partners to collaborate and benefit from each organization's strengths, and can find workable compromises when goals conflict. CEBE has an important role in coordinating with each of the stakeholder groups to create a cohesive visitor experience from the various capabilities that each of the partners provides.

Development Activities

Rapid growth is occurring the in jurisdictions surrounding CEBE. Development planned for the towns of Strasburg and Middletown is most likely to have a direct impact on the historic landscapes that visitors experience and increase traffic on Route II, the main access road through the park. It is expected that growth in the adjacent counties will add traffic to Interstate 81 (I-81) and Interstate 66 (I-66), but not directly impact park roads. However, the Virginia Department of Transportation (VDOT) is currently planning to increase capacity on the entire I-81 corridor, which runs directly through the park. CEBE will need to work closely with VDOT to minimize the impact of the I-81 expansion on the park's historic landscape.

Park Visitation Patterns/Park Transportation

CEBE includes a diverse set of historic, natural and recreational resources that will attract a variety of types of visitors, including Civil War enthusiasts, visitors with other historic interests, national park and National Historic Trust "baggers," recreationalists, educational tours, and other visitors who are

generally curious about the park. Understanding the likely demands on park resources by these visitors and the manner in which each group will use the park provides a basis for GMP planners to develop activity centers and supporting transportation infrastructure. It is expected that between 50,000 to 250,000 people will visit the park annually once the first phase of park development occurs over the next decade or two.

Transportation system components can be designed once a park management framework is in place. These include driving and biking tour routes, parking areas, directional signage, and traffic management plans for special events. It is believed that the current roadway network will be able to carry the expected increase in visitation. However, measures will need to be taken to minimize conflicts between park visitors and faster moving traffic, particularly along Route II. Pull-outs on the rural roads will allow faster traffic to pass and visitors to take in the scenery. Adequate parking will be needed at activity centers, as will signage that directs visitors to various sites and identifies each attraction. To support bicycle touring of CEBE, a more detailed survey of roads should be conducted to determine if additional improvements need to be made, particularly on Route II and on the unpaved roads in the Bowman-Long Meadow area. Bicycle racks and maps with recommended routes would also promote bike touring of CEBE.

Special events create their own transportation challenges. Some additional strategies may help to minimize traffic in downtown Middletown, reduce the number of vehicles parking on the historic battlefield, and improve pedestrian safety along Route II. Variable message signs on I-81 and I-66 would alert drivers of potential traffic delays and alternate routes. Alternate routing for re-enactors or others parking in the Northern Battlefield area and use of Lord Fairfax Community College for overflow parking should be considered to minimize traffic and parking congestion in downtown Middletown and the Northern Battlefield area. Controlling pedestrian crossing of Route II, expanding and encouraging use of the existing shuttle system, and providing additional lighting would limit conflicts between pedestrians and vehicles along Route II.

Next Steps

Once CEBE has developed its GMP, the following next steps are recommended to support GMP implementation:

- Visitor intercept studies and focus groups to better understand how visitors will use the park in the future.
- Engineering and design studies at each site planned for increased visitation, to ensure adequate roadway capacity, parking space, and sight-lines for vehicles entering and exiting each site.
- Route II Transportation Management Plan to develop a unified plan serving the needs of CEBE, Strasburg and Middletown.
- Local wayfinding system and coordination with regional tourist partners to create a regional traveler information network.

Working with its partners, CEBE will develop into a unified visitor experience with transportation components that help to tie the various areas of the park together.

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1 Introduction

This document summarizes the research completed by the U.S. Department of Transportation Volpe National Transportation Systems Center (Volpe Center) in its evaluation of transportation conditions within and adjacent to Cedar Creek and Belle Grove National Historical Park in preparation of the development of the park's General Management Plan (GMP).

Cedar Creek and Belle Grove (CEBE) National Historic Park (NHP) was established in 2002 to preserve, protect, and interpret a nationally significant Civil War landscape and antebellum plantation for the education, inspiration, and benefit of present and future generations. CEBE is located in the northern Shenandoah Valley, approximately 75 miles west of Washington, DC, 10 miles east of the West Virginia state line and 17 miles south of Virginia's northern border. CEBE is intersected by Interstate 81 (I-81) and adjacent to I-81's interchange with Interstate 66 (I-66).

CEBE is in the process of developing its first General Management Plan (GMP), which will identify the overall direction for future management of the park and provide a framework for park managers to identify how best to protect resources, the levels and types of uses that are appropriate for different areas of the park, the types of facilities needed, and how visitors should access the park.

This report compiles information and data needed to plan, as part of the GMP, for the transportation facilities, services, and operations both within the park and external to the park.

Park staff identified the following issues and activities related to transportation for CEBE:

- Commercial and residential development around and within the park.
- Coordination with the 2000 master plan for the Shenandoah Valley Battlefields National Historic District (SVBNHD).
- Virginia Department of Transportation's (VDOT) proposed expansion of I-81.
- Visitor circulation within the park, including vehicular and pedestrian options.
- Plans by Shenandoah County for a county park in the southern portion of CEBE.
- Potential linkages to George Washington National Forest.
- The impact of special events upon transportation, particularly the annual re-enactment of the Battle of Cedar Creek, which attracts approximately 12,000 visitors.

Further data collection highlighted other issues including roadway capacity, parking, and signage, and the potential of a new visitor center as important transportation issues.

To provide for the appropriate consideration of transportation issues as part of the GMP, this report describes:

- the park and the regional geographic and historic context,
- partners and opportunities for coordination,
- development activities by the surrounding jurisdictions and VDOT,
- park visitation patterns,
- park transportation considerations, and
- next steps.

2 The Park and Regional Context

2.1 Overview

The creation of CEBE in 2002 and its mission to preserve, protect, and interpret the landscape increase the opportunities to tell the rich story of Shenandoah Valley history from early settlement through the Civil War and beyond, including the Battle of Cedar Creek. The park also serves as a focal point to recognize and interpret important events and geographic locations within the SVBNHD, as shown in Map 3.

Unlike many parks, CEBE does not own most of the approximately 3,500 acres within its boundaries. Eight acres are owned by the National Park Service and over 1,000 additional acres are owned by park partners. The park works in partnership with community partners and non-profit organizations, including the Cedar Creek Battlefield Foundation (CCBF), the National Trust for Historic Preservation (National Trust), Belle Grove, Inc., the Shenandoah Valley Battlefields Foundation (SVBF), and Shenandoah County, Va. These partners are crucial to the preservation and interpretation of CEBE.

Over two thirds of the land within CEBE is privately owned. There are no gateways identifying entry into the park, nor is there a visitor center managed by the park. There are only two National Park Service (NPS) staff currently working at the park; their focus is currently on working with partners and developing the GMP, resulting in little direct contact with visitors. Staffs at the partner-run Belle Grove Plantation and CCBF Visitor Center serve as the primary source of visitor contact and interpretation of the park. Brochures, roadside interpretive displays and monuments provide some additional information for CEBE visitors.

It is important to understand the mission and context in which CEBE was created in order to understand the limits and opportunities for development of the park and how the existing transportation systems both support and limit access to and within the park. The following section provides an understanding of the history, geography, and key sites.

2.2 History

CEBE includes numerous historic roads, fields, structures, earthworks, and key sites associated with the antebellum period and Civil War, particularly the decisive Battle of Cedar Creek in October 1864.

The history of Belle Grove Plantation and still existing farms begins with German immigration into the Shenandoah Valley of Virginia. The Shenandoah Valley was settled by German and Swiss-German pioneers in the mid 18th century who were attracted by the fertile lands along the Shenandoah River. In 1732, Jost Hite, his partner Robert McKay, and 16 families journeyed to the northern Valley to settle on 140,000 acres obtained in two land grants. George Bowman married one of Jost's daughters and he and his kin developed Harmony Hall and the lands south of Cedar Creek. In 1783, Major Isaac Hite Jr., grandson of Jost Hite, was given 483 acres by his father upon marrying Nelly Conway Madison, sister of the future President of the United States, James Madison. The couple built Belle Grove Plantation on this property.

The Shenandoah Valley proved to be a strategically important corridor during the Civil War. Stonewall Jackson's 1862 campaign secured the Shenandoah Valley for the Confederates, who exploited its sheltered location as a transportation corridor and used it to supply food for Confederate troops. To cutoff this corridor, General Ulysses S. Grant included the Valley as part of his strategy for the spring of 1864. Failed Federal attempts in May emboldened Confederate General Jubal Early to move north through the Valley towards Washington, DC. By August, a frustrated Grant consolidated Federal forces under the direction of General Philip H. Sheridan, who was instructed to destroy the Confederate forces and the Valley as an economic asset. Sheridan and Early's initial fighting pushed the Confederates back to Fisher's Hill, south of Strasburg, and then farther back to Harrisonburg. Sheridan's troops destroyed everything in their path as they headed northward to the banks of Cedar Creek, where they established their position. With decisive wins under his belt, Sheridan traveled to Washington to discuss his next steps. Meanwhile, Early and his troops followed the Federals north in preparation for the Battle of Cedar Creek on October 19, 1864. Early's attack was rebuffed, leading to the end of Confederate control of the Shenandoah Valley. The devastated Valley slowly recovered from the battle and returned to farmland.

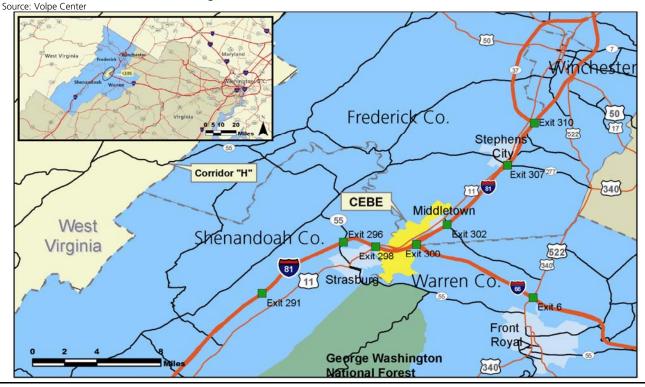
2.3 Geography

CEBE is located in the northern Shenandoah Valley approximately 75 miles west of Washington, DC, 10 miles east of the West Virginia state line and 17 miles south of Virginia's northern border. CEBE is intersected by Interstate 81 (I-81) and adjacent to I-81's interchange with Interstate 66 (I-66).

The park lies to the north of the North Fork of the Shenandoah River and includes portions of Cedar Creek. George Washington National Forest is located just south of CEBE.

Map 1





The park lies within the rapidly developing counties of Frederick, Shenandoah, and Warren adjacent to the towns of Strasburg and Middletown. Winchester, VA is 10 miles north of the park. Six miles west of Cedar Creek and Belle Grove NHP is Front Royal, the northern gateway to Shenandoah National Park. Traditionally a rural area, the adjacent communities, particularly the town of Strasburg and Frederick and Warren Counties are developing into bedroom communities for commuters into Washington, DC and its Northern Virginia suburbs. A map with local road names is provided for reference in Appendix A.

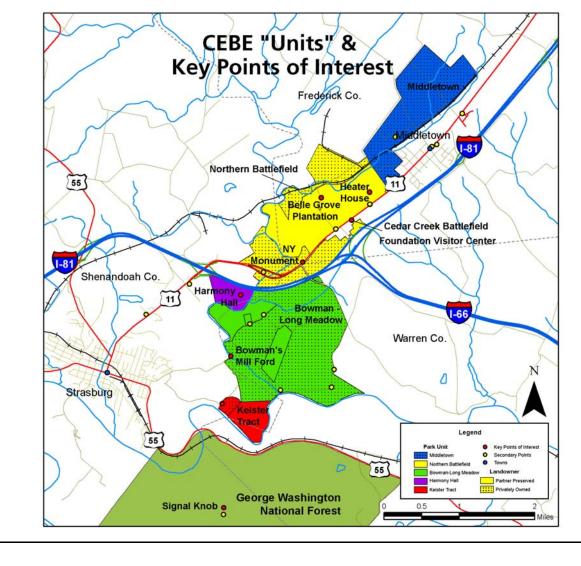
The NPS owns only a small 8-acre tract of land along Bowman Mill Road within the park; the rest is owned by private landowners or non-profit partners of the park. While the park is not officially broken into units, for the purpose of this report, the park is segmented based on ownership and transportation access as follows (See Map 2):

- **Middletown:** Areas of the park north of 5th St. / Veterans Road
- Northern Battlefield: Areas of the park south of 5th St. / Veterans Road and north of I-81 including:
 - Belle Grove Plantation
 - Reenactment Battlefield Heater House
 - Bayliss Site
 - Cedar Creek Battlefield Visitor Center
- Harmony Hall: Area south of I-81 and west of Cedar Creek.
- Bowman Long Meadow: Areas south of I-81 and east of Cedar Creek
- Keister Tract Area: Southernmost section of the park, south of Cedar Creek

Map 2

Key Sites of Interest Source: National Park Service and Park Partners

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2.4 Key Sites

Since the park is in the process of developing a GMP, specific uses of the land have not yet been determined. The following section describes existing uses and some possible future uses of key sites within the park to provide GMP planners a transportation context in which to discuss the impacts of developing sites for particular uses. *Two major transportation considerations related to GMP planning include visitor routing, or how visitors will be directed through the park, and identifying transportation improvements required to support the particular use of the site.*

Decisions made during GMP planning will impact the transportation system, such as where additional or new parking or pull-outs are needed, or if existing roads have the capacity to carry expected traffic levels safely. In addition, planners will then have to determine whether providing adequate access is physically and monetarily feasible and aesthetically desirable. For example, if parking for a visitor center required either covering historic earthworks or building a parking structure, it may be more desirable to build the visitor center at a different location. Site specific transportation analysis (operational, management strategies, and engineering) will need to be done before transportation decisions are finalized.

For each site, a summary is provided that describes current and potential visitor and interpretive facilities and their uses, and the transportation-related characteristics (access routes, parking availability and infrastructure condition). The described uses were developed through discussions with park staff and park partners. They are in no way comprehensive nor necessarily agreed upon, but provide a starting point to discuss transportation issues at CEBE.

2.4.1 Middletown

Current Conditions

While the Middletown area is part of the core of the historic battlefield, it has been split into over 100 privately owned parcels that range in size from 0.3 acres to over 100 acres (over 60 parcels are less than 1 acre). Most parcels are undeveloped or residential although some plots are used for farming. Hites Road (Rt. 625) and smaller back roads criss-cross this section of the park. Some specific sites, such as the Middletown Cemetery, Sheridan's Position, and sites at Lord Fairfax Community College' are located within this section of the park. Parking is available at the Community College but no explicit parking areas are designated at the Middletown Cemetery or Sheridan's Position.

Future Plans and Transportation Considerations

While this area was actively used during the Battle of Cedar Creek, residential development and the shear number of parcels make access to and interpretation of this area difficult. Unless intense efforts are made to purchase property or obtain easements, and active interpretation of specific sites is developed, significant visitation to these areas is unlikely. Adequate parking areas will need to be identified if park development is pursued or visitation to sites in this area encouraged.

2.4.2 Northern Battlefield

Current Conditions

Currently seen as a core of CEBE, the Northern Battlefield area is dominated by partner-owned properties including Belle Grove Plantation, the CCBF Visitor Center, and open lands adjacent to Belle Grove Plantation, which are used to host annual reenactments of the Battle of Cedar Creek. Belle Grove, Inc. and the CCBF actively use these sites and provide interpretation of their properties and the history of the area. The adjacent reenactment battlefield contains the historic Heater House, which is not currently open to the public. The land is currently used to graze cattle.

^{&#}x27;Sheridan's Position and Lord Fairfax Community College are not within the park boundaries, but are located near the Middletown area of the park. Sheridan's Position is located on Route Klines Mill Road (Rt. 633) and the College is just north of Reliance Road on Route II. The College parking area provides views of the battlefield and interpretive signage.

Route II serves as the primary access road to the CCBF Visitor Center and interpretive displays and monuments that line the road. The CCBF Visitor Center has a large undeveloped field that has been used to park over 2,000 vehicles during reenactments. Belle Grove Plantation has approximately 170 spaces in two gravel parking areas adjacent to the property. For major events, the plantation uses a meadow across the road from the plantation, which can accommodate approximately 1,000 vehicles.

Belle Grove Road, Meadow Mills Road, and Veterans Road create a loop that circles Belle Grove Plantation and the reenactment battlefield and provides access to O-N Minerals Chemstone Operation, an active limestone quarry, located just east of the park boundary. Existing mine overburden piles are obvious from the reenactment battlefield area.

The southern-most partner-owned property in the Northern Battlefield area is the 135-acre wooded Bayliss Tract, which is less developed than other sites but provides more than a mile of frontage on Cedar Creek's north bank and Panther Cave. A narrow road off Route II leads to a half-mile of walking trails with interpretive signs identifying some of the few earthworks constructed during the war that are still in good condition. Adjacent to the road leading back to the Bayliss Tract is the NY Monument, which is within the VDOT right-of-way for Route II and has space to park three or four vehicles. From Route II, there is no signage identifying the site and what lies beyond the NY Monument, which may limit current use of the area.

Land south of the Bayliss Tract (west of Rt. II) and south of the Cedar Creek Battlefield Visitor Center (east of Rt. II) is privately owned.

Future Plans and Transportation Considerations

It is expected that the Northern Battlefield will continue to be a principle focal point of CEBE. CCBF is interested in renovating the Heater House and there have been discussions about developing walking trails between various sites within the battlefield and developing additional interpretive sites or activities. Additional development at the Bayliss Site, including more parking and clear signage could significantly increase use of that site. Sightlines at the NY Monument should be increased to facilitate turning from and onto Route II.

In addition to development within CEBE, Middletown has identified the northern sections of the area for residential development and has recommended rerouting Veterans Road (Rt. 625) to run along the edge of CCBF's property. The adjacent quarry is also planning an expansion. The traffic impact analysis prepared for the quarry shows that its proposed expansion will have little impact on Route II, but will have a significant impact on Veterans Road, increasing traffic by an additional 270 to 800 trips per day from the current 360 trips per day.² Rerouting Veterans Road could improve visitor access to parts of the battlefield but will also change the historic character of the land. In particular, if quarry expansion goes forward, the additional truck traffic would likely use the new road, which would make the truck traffic visible from the Heater House.

2.4.3 Harmony Hall

Current Conditions

Harmony Hall is an example of a traditional antebellum farmhouse along the banks of Cedar Creek. Belle Grove, Inc. holds the deed to the property, but the former owner has a retained life estate, allowing the owner to retain control of the property until he passes away. The Harmony Hall tract is accessed from Route 11, just south of I-81. Fort Bowman Road, used to access Harmony Hall, is

² "A Traffic Impact Analysis (TIA) of the Global Stone," March 2005. Global Stone has proposed building a conveyor system to move lime from the quarry over Cedar Creek to their rail yard, which would eliminate the need for Global Stone Trucks to work on-site. In this scenario, traffic on Veterans Road increases by 270 trips; without the conveyor traffic will increase by 800 trips. Additional Note: The TIA uses a base traffic level of 360 ADT on Veterans Road although VDOT counts estimate 590 ADT and the TIA estimates 507 ADT currently generated by Global Stone. While using the higher current traffic estimate puts more cars on Veterans Road, it reduces the impact of Global Stone's expansion, reducing the increase in traffic from 76%-220% to 46%-136%.

unpaved and relatively steep, dropping 130 feet in ³/₄ of a mile on a gravel road. There is space available adjacent to Harmony Hall to accommodate vehicles although no particular site has been identified.

I-81 borders the property to the north. Currently, highway noise is muted by vegetation along the access road and at the home site, but is clearly audible where fields abut the highway.

Future Plans and Transportation Considerations

It is expected that Belle Grove, Inc. will restore the house and open it to the public in the future. Walking trails adjacent to Cedar Creek have also been proposed. The rural feel of this area is threatened by commercial development planned on adjacent parcels just south of the park boundary as well as the expansion of I-81. These potential impacts are described in more depth in Sections 4.1 and 4.4 respectively.

2.4.4 Bowman - Long Meadow

Current Conditions

The Bowman – Long Meadow area is made up of larger plots of farmland that are primarily under private ownership. Cedar Creek and Belle Grove NHP partners own a number of parcels in this area, including the only parcel owned by NPS.

This unit of the CEBE is isolated from the Middletown, Northern Battlefield and Harmony Hall sections of the park due to I-81, I-66 and Cedar Creek. On the north end of this unit, Water Plant Road tunnels under I-81 just south of the I-81 & I-66 interchange to connect the Bowman – Long Meadow area with the Northern Battlefield. Long Meadow Road and Bowmans Mill Road create a loop through this section of the park. Bowmans Mill Road provides access to lands owned by NPS and its partners towards the ridgeline of this area while Long Meadow Road runs adjacent to Cedar Creek. Long Meadow Road reconnects with Bowmans Mill Road at Bowmans Mill Ford, where Confederate General Kershaw's troops crossed in preparation of a backend attack.

The roads in this section of the park are rural. Most of the roads are unpaved and fairly narrow, but can still successfully carry two-way traffic due to low traffic volumes. There are no locations that currently provide enough space for park visitors to pull off the road to take in the view safely. The bridge at Bowmans Mill Ford is a single lane concrete bridge. VDOT engineers stated that records show that the bridge is in good condition and has adequate structural integrity to be able to carry a bus.³

Future Plans and Transportation Considerations

No specific plans have been identified for the partner-owned plots in the Bowman – Long Meadow area. Some possibilities include: 1) developing walking trails along the banks of Cedar Creek and a pedestrian bridge connecting to Harmony Hall⁴; 2) developing walking trails that provide views of the landscape and interpretation of the remaining earthworks within the partner-owned parcels; and 3) creating a driving tour to display the well-preserved landscape.

Development of this area of the park needs to be carefully considered to ensure that demand does not exceed capacity of the existing roadway. Increasing roadway capacity by widening the road, even for pullouts or passing areas, may be difficult due to the rolling landscape. Paving this area may also alter the historic feel of the road, and so road improvements should be considered carefully.

³ Call made to VDOT Luray Residency on Monday, March 13.

⁴ Partner-owned parcels abut the Harmony Hall parcel, but Cedar Creek prevents direct access between the two. A pedestrian bridge between these two areas would allow visitors to access both sites without driving the 4.2 mile route between them.

2.4.5 Keister Tract

Current Conditions

The southernmost unit of the park sits in a bend of the North Fork of the Shenandoah River. A few parcels within the park boundary are privately owned, but the primary focus in this area is the Keister Tract, a 150-acre plot owned by Shenandoah County. Bowmans Mill Road, which is paved to Bowmans Mill Ford, provides the most direct access to the Bowman-Long Meadow area. Pouts Hill Road, which provides access to the County-owned parcel, is paved for less than half a mile and connects back to Bowmans Mill Road before it descends towards Cedar Creek.

The County has been working with VDOT and local residents to determine whether improvements, such as full paving and the addition of a bike and pedestrian path need to be made to Pouts Hill Road to provide adequate access to the Keister Tract. While properties within the park boundary are primarily low-density residential, there are higher density residential communities adjacent to the park boundary.

Future Plans and Transportation Considerations

In 2005, Shenandoah County completed the *Keister Tract Master Plan*, which describes the County's plan to develop the site as a regional park. Plans include an interpretive center and comfort stations, walking and equestrian trails, tent camping, access to the North Fork of the Shenandoah River, an outdoor classroom and amphitheater, and an adventure course. Connections to regional trail systems include connecting the Keister Tract to Strasburg's city park with a path along the North Fork of the Shenandoah River and connecting Keister Tract to Signal Knob as described in Section 2.4.7 below.

2.4.6 Potential CEBE Visitor Center

Current Conditions

While there has been interest from many parties in developing a visitor center, currently there is no commitment from NPS or any of the partners to fund and manage such a site. It is expected that the GMP process will provide an opportunity to discuss the desirability and feasibility of a new visitor center including if and where it could be located, what it would contain, and who would pay for and manage it. This report identifies the potential new visitor center as the "CEBE Visitor Center" to differentiate it from the existing visitor center owned and managed by the CCBF.

Future Plans and Transportation Considerations

It is thought that a new visitor center could act as a welcome and orientation center for CEBE, providing visitors an opportunity to orient themselves to key sites and available activities, understand the local antebellum and civil war history, and find out about other local points of interest beyond the park. Passive exhibits, dioramas, videos, lectures, free or available for-purchase brochures, and contact with park staff are good ways to provide such services. As described later, the SVBNHD General Management Plan (GMP) recommends that a visitor center at CEBE could act as an orientation center for the SVBNHD as a whole, and provide interpretation for a cluster of local battlefields including Tom's Brook and Fisher's Hill. Part of CEBE's enabling legislation designates that the park is to "serve as a focal point to recognize and interpret important events and geographic locations within the Shenandoah Valley Battlefields National Historic District..." and it is expected to play a lead role in providing interpretation of and orientation for the battlefield cluster and the district as a whole.

2.4.7 Other areas of interest

In addition to various points of interest within the park, there are a number of key sites nearby that may be of interest to Cedar Creek and Belle Grove NHP visitors.

George Washington National Forest

Current Conditions

Signal Knob in George Washington NF is the high point at the northern end of the Massanutten Range and provides a spectacular view of the Shenandoah Valley and a broad perspective of troop movements during the Battle. Signal Knob was used by both sides of the war to send messages out of the Valley. The Confederates used Signal Knob for reconnaissance and were able to see the Union's positions before planning their initial attack.

Signal Knob is currently accessed by a strenuous nine to twelve mile round-trip hike (approximately 6 hours) from Fort Valley Road, south of Route 55. Shenandoah County's Keister Tract lies just north of Signal Knob across the North Fork of the Shenandoah River.

Also along Fort Valley Road is the Elizabeth Furnace area of George Washington National Forest. Adjacent to the current trailhead leading to Signal Knob, the Elizabeth Furnace area includes the remains of an old iron furnace and log cabin, individual and group campgrounds, and hiking and equestrian trails.

Future Plans and Transportation Considerations

To better connect CEBE with George Washington National Forest, there have been proposals to develop a hiking trail between Signal Knob and the Keister Tract. At a distance of just over one mile and an elevation gain of 1,600 feet, a route up the face of Massanutten Range would be shorter, but potentially steeper than the existing trail.

A trail of this type would provide access from CEBE to the regional trail system and connect it with the Tuscarora Trail, which travels 252 miles from West Virginia to Pennsylvania, and connects with the Appalachian Trail in Shenandoah National Park. Current barriers to building such a trail include crossing the North Fork of the Shenandoah River, the Northern-Southern Railroad Tracks, and Route 55, a 2-lane minor arterial that carries approximately 3,700 daily. Permission from private landowners along the northern boundary of the National Forest will also be required.

Shenandoah National Park

Current Conditions

While there are vantage points of the Cedar Creek Battlefield area from Skyline Drive in Shenandoah, little managerial or interpretive connections between the two parks currently exists. Signal Knob Overlook (mile marker 5.7) provides scenic views and a description of Signal Knob's use during the war. Traveling approximately 20 miles from the ridgeline of the Massanutten Range in George Washington National Forest, the Tuscarora Trail connects to the Appalachian Trail at the Elkwallow Wayside, 24 miles south of Shenandoah's northern boundary.

Future Plans and Transportation Considerations

Visitors interested in seeing all of the national parks, or through-hikers on the Appalachian Trail desiring a break may travel between the parks by car from Front Royal (a 14-mile trip), or by foot on the Tuscarora Trail. No specific plans have been developed to better connect Shenandoah to CEBE although the regional trail network and visitor information are two logical areas to initially consider.

Other Shenandoah Valley Civil War Battlefields

Current Conditions

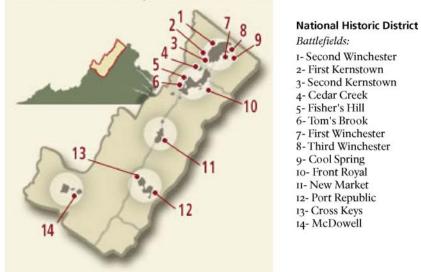
Cedar Creek was one of many Civil War battles that occurred in the Shenandoah Valley, which have collectively been preserved within the SVBNHD (See Map 3), established in part to "preserve, conserve, and interpret the legacy of the Civil War in the Shenandoah Valley."⁵ Cedar Creek has been clustered with Fisher's Hill and Tom's Brook battlefields within the SVBNHD General Management Plan. Currently, the only connectivity between the battlefields is the Virginia Civil War Trails driving route and signs.

Future Plans and Transportation Considerations

Information on planned coordination between CEBE and SVBNHD is found in Section 3 below under Shenandoah Valley Battlefields Foundation, the organization that manages SVBNHD.

Мар З

Shenandoah Valley Battlefields National Historic District Source: Shenandoah Valley Battlefields Foundation



Shenandoah Valley Battlefields National Historic District

Regional Historic and Tourist Points of Interest

There are additional local and regional attractions that may be of interest to park visitors. A list of organizations, sites or points of interest, and activities is included in Appendix D. The organizations listed may be potential partners for CEBE and may be willing to promote CEBE to their visitors.

⁵ Public Law 104-333, Omnibus Parks and Public Lands Management Act of 1996, Section 606. Shenandoah Valley Battlefields, Statement of Purpose.

3 Partners and Coordination

CEBE's enabling legislation stresses the importance of working in partnership with local government, non-profit organizations, residents, local businesses and landowners. The park's partners' landholdings and the uses they support will influence the transportation environment and will also be impacted by new visitors' travel patterns.

As required by the park's enabling legislation, CEBE organized a Park Advisory Commission to provide input to the GMP. In addition to the partners described below, two private landowners, a representative of a citizen interest group, NPS, and the Commonwealth of Virginia participate in the Advisory Commission. The following provides some background on these partners and potential areas of collaboration.

3.1 Park Partners

3.1.1 Belle Grove, Inc. and National Trust for Historic Preservation

The National Trust owns Belle Grove Plantation and the adjacent lands. Belle Grove Plantation is operated by the non-profit Belle Grove, Inc. The plantation house was built between 1794 to 1797 and expanded in 1815. The Plantation survived the Civil War and was bequeathed to the National Trust in 1964. Belle Grove Plantation is open to the public from April to November and hosts special events throughout the year. In addition to managing the Belle Grove Plantation, Belle Grove, Inc. owns Harmony Hall.

3.1.2 Cedar Creek Battlefield Foundation

The CCBF supports the preservation and interpretation of the Cedar Creek Battlefield. CCBF has been active in purchasing land and has preserved approximately 400 acres. CCBF has organized a two-day reenactment of the Battle of Cedar Creek annually since 1990. The event, which occurs the third weekend in October, draws approximately 6,000 re-enactors and 6,000 spectators. In addition, CCBF runs a visitor center that includes artifacts, illustrations of the battle, a video of the 140th anniversary reenactment, and books and other merchandise for purchase, including a brochure describing a self-guided tour of the Battle of Cedar Creek. The number of tours and school groups that stop at the CCBF visitor center is limited because the facility does not currently have education exhibits that describe the Battle.

3.1.3 Shenandoah Valley Battlefields Foundation

The SVBF is a non-profit organization created to support the development of the SVBNHD, which spans ten battlefields throughout the Shenandoah Valley. A GMP for the SVBNHD was completed in 2002 and focuses SVBF's efforts towards resource preservation, interpretation and providing visitor services. Much of the SVBF's funding is expected to be used to support battlefield preservation, an activity it will participate in directly. At Cedar Creek, SVBF has already purchased 220 acres in the Bowman-Long Meadow area.

For interpretation and provision of visitor services, the SVBNHDGMP recognizes the importance of coordination between battlefield units and reliance on existing programs and local partners such as the Virginia Civil War Trails Program and CEBE. SVBF plans to develop standards of operation and provide technical and financial assistance to local partners to implement these activities.

Additional plans for CEBE identified within the SVBNHD GMP include walking trails at current visitor facilities, parking and walking trails at river fords and the cemetery and interpretive information, and a bicycle tour route.

3.1.4 Local Governments

CEBE lies within and adjacent to many local jurisdictions including Shenandoah, Warren and Frederick Counties, and the towns of Middletown and Strasburg. CEBE works with these jurisdictions to manage the land in and around the park. A brief summary of each government's Comprehensive Plan is described in Section 4.2.

Of these organizations, Shenandoah County's Parks and Recreation Department, which owns the Keister Tract, partners most closely with CEBE. Shenandoah County completed the *Keister Tract Master Plan* in 2005, which describes the County's plan for developing this site as a regional park. The County has been working with VDOT and local residents to determine whether improvements need to be made to Pouts Hill Road, the primary access road to the site.

3.1.5 George Washington National Forest

George Washington National Forest lies directly to the south of CEBE. In addition to the shared interest in providing natural recreational experiences, George Washington National Forest includes historically significant points associated with both antebellum history and the Civil War.

In addition to specific opportunities related to Signal Knob and the regional trail network, CEBE has noted that there may be additional opportunities for the federal land agencies to work together.

3.2 Recommendations

In developing the GMP for CEBE, NPS will need to identify specific responsibilities allocated to NPS and each of the partners. It will be important to communicate regularly so that no partner feels pressured to violate their organizational mission, but each can benefit from collaborating and sharing resources.

One of the key ways to connect partners into a unified park unit is through use of consistent visual images including signage and interpretive materials. An agreement will need to be made to determine how this can be done without each organization losing its own presence.

Each of the partners has physical and human assets available but also have constraints on their activities based on their mission and organizational structure. The following identifies some of the ways that CEBE and its partners may be able to support each other through collaboration and benefiting from each others' strengths.

3.2.1 Belle Grove, Inc., National Trust for Historic Preservation and CCBF

There are many opportunities for CEBE to work with its partners who are established landowners and who are actively interpreting the park and its history. The following identifies some *potential* opportunities for collaboration with CEBE:

Cedar Creek and Belle Grove NHP:

- Renovating and staffing partner-owned buildings.
- Coordinating use of sites so that each facility serves a unique role in the interpretation of the park.
- Building and maintaining trail systems
 - within the Northern Battlefield,
 - along Cedar Creek, and
 - between various park sites.
- Providing environmental, historic and archaeological expertise and strategies for long-term preservation and management.

CCBF, Belle Grove & National Trust:

- Interpreting and maintaining properties.
- Allowing CEBE use of property.
- Fundraising to purchase additional park lands and support park operations.
- Providing discounts to Park Pass holders.

3.2.2 Shenandoah Valley Battlefield Foundation

The following identifies how SVBF and CEBE can partner to support and effectively utilize each other's strengths:

Shenandoah Valley Battlefields Foundation:

- land preservation and protection
- coordination with
 - other battlefields
 - regional partners (i.e., Virginia Civil War Trails, tourism boards)
- marketing initiatives and interpretive materials

Cedar Creek and Belle Grove NHP:

- potential regional visitor center
 - site development and management including
 - walking trails
 - wayside interpretive displays
 - interpretation and visitor services
- coordination with local partners

3.2.3 Local Governments

As will be discussed in more depth in Section 4, CEBE will need to keep in close contact with the surrounding jurisdictions with regards to development activities and their impacts on the park. CEBE may be able to organize efforts to link local trail networks into a larger regional network and direct visitors to local establishments and points of interest and work with VDOT to design roadways that support both local and park visitor travel needs.

3.2.4 George Washington National Forest

Opportunities for partnering with George Washington National Forest include efforts on developing a trail between Keister Tract and Signal Knob, coordinating interpretation of Signal Knob and Elizabeth Furnace with CEBE interpretive materials, and identifying shared funding and administrative opportunities available to Federal Lands agencies.

4 Development Activities

There is concern that increased development in and around CEBE will negatively impact the visitor experience by altering historic viewsheds, increasing traffic, and disturbing the rural character of the park. This section explores growth rates, planned development and commute patterns to identify potential impacts to the park from development of the surrounding areas.

4.1 Regional Trends

The Shenandoah Valley attracted settlers for its lush agricultural land. Much of the area is still farmed and retains this rural character. Small towns and industries have developed along the major corridors and currently more land is being developed for residential purposes, with many people commuting into Washington, DC and its suburbs.

Frederick, Warren, and Shenandoah Counties and the independent city of Winchester are considered to be part of the CEBE focus area (highlighted in blue in the inset of Map 1). As shown in Table 1 below, Strasburg and Middletown both expect high growth rates in the future, although both lagged behind their respective counties in the last decade. Frederick County has the fastest growth rate, with much of the development occurring north of CEBE around Winchester City and in Stephens City. Warren County, adjacent to I-66 is also developing rapidly, with development focused north of I-66 between Front Royal and Winchester on the 340/552 corridor. Winchester is mostly developed and is expecting the least future growth. Table 2 illustrates that most development is contained within the towns and cities, with the City of Winchester having the highest density, with Shenandoah County being the most rural. With much of Shenandoah's development occurring on the outskirts of the six incorporated towns and the resort community of Bayse/Bryce Mountain, it is expected that Shenandoah will continue to maintain its rural feel.

Table 1

Population Growth

Source: U.S. Census Bureau & Virginia Employment Commission

Population Growth

	Рори	lation	Estin	Average Annual Population Change					
Jurisidction	1990	2000	2004	2010	2030	1990 - 2000	2000- 2004	2000-2010	2000-2030
Frederick County	45,723	59,209	66,611	72,300	96,100	2.9%	3.1%	2.2%	2.1%
Middletown	1,061	1,015	1,078	1,358 - 2,892	1,835 - 3,844	-0.4%	1.6%	3.4 - 18.5%	2.7 - 9.3%
Stephens City	1,186	1,146	I,222	-	-	-0.3%	1.7%	-	-
Shenandoah County	31,636	35,075	38,032	39,100	47,100	1.1%	2.1%	1.1%	I.I%
Strasburg	3,762	4,017	4,188	4,491 - 5,865	5,021 - 7,065	0.7%	I.I%	1.2 - 4.6%	0.8 - 2.5%
Warren County	26,142	31,584	34,377	36,300	45,200	2.1%	2.2%	1.5%	1.4%
Front Royal	11,880	13,589	14,210	-	-	1.4%	I.I%	-	-
Winchester City	21,947	23,585	24,779	26,000	29,300	0.7%	1.3%	1.0%	0.8%
CEBE Focus Area	125,448	149,453	163,799	173,700	217,700	1.9%	2.4%	1.6%	1.5%
State of Virginia	6,216,884	7,078,515	7,459,827	7,892,900	9,275,101	1.4%	1.3%	1.2%	1.0%
U.S.	249,622,814	281,421,906	293,655,404	-	-	1.3%	1.1%	-	-

* Data Sources:

2004 - U.S. Census

2010 & 2030 for Counties - Virginia Employment Comission

2010 & 2030 for Middletown and Strasburg - high and low estimates from town comprehensive plans

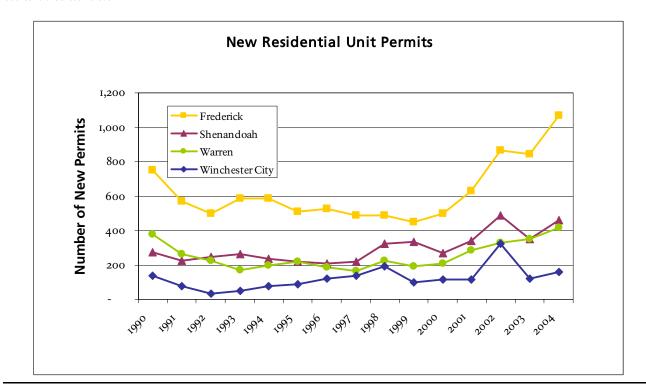
Table 2 Population Density Source: Volpe Center

Population Density

Jurisidction	Area (square miles)	Population (2000)	2000 Population Density (persons per square mile)					
Frederick County	416.2	59,209	I42					
Middletown	0.5	1,015	2,030					
Stephens City	I.4	1,146	819					
Shenandoah County	512.6	35,075	68					
Strasburg	3.0*	4,017						
Warren County	215.9	31,584	146					
Front Royal	9.3	13,589	1,461					
Winchester City	9.1	23,585	2,592					
CEBE Focus Area	1,165	149,453	128					
State of Virginia	42,769	7,078,515	166					
U.S.	3,537,441	281,421,906	80					
*0.6 square miles has been annexed since 2000.								

Figure 1 shows the rapid increase new residential building permits approved since 2000. This trend agrees with the population increases shown in Table 1.

Figure 1 Residential Permit Approvals Source: U.S Census Bureau



4.2 Local Plans

Each jurisdiction adjacent to CEBE has its own Comprehensive Plan and oversees its own planning and zoning activities. The summary of planned land use and transportation projects in this section provides the context in which the park will grow.

4.2.1 Town of Strasburg

Development within the Town of Strasburg is currently posing the greatest impact to CEBE. Strasburg promotes itself as one of the growth centers for Shenandoah County, balancing its small town character with additional development. To accommodate growth, Strasburg annexes adjacent portions of Shenandoah County and has recently grown to abut CEBE. Since 2003, over 300 acres have been annexed, increasing the size of Strasburg by 15%. Almost 200 acres was annexed in 2005, including properties east of Route 11 adjacent to Harmony Hall and another property within a historic oxbow of Cedar Creek. An 89-room hotel, fast food restaurant, townhouses, and large shopping center all recently opened along Route 11 near the park. An additional hotel, shopping and homes are planned for the recently annexed properties. Table 3 shows the distribution of land uses in Strasburg as of 2002.

Table 3

Town of Strasburg Existing Land Use (2002) Source: Strasburg Comprehensive Plan

Category	Acres	Percent
Residential	I,I77	60.0%
Commercial	130	6.6%
Industrial	157	8.0%
Public/Institutional	66	3.4%
Planned Development/ Conservation/ Recreation	205	10.4%
Undeveloped/ Transitional	227	11.6%
Total	1,962	100%

While these areas are not within the park boundary, they are directly adjacent to the park and can have a significant impact on the historic vistas from the park and further intrude on the historic setting as visitors travel from one section of CEBE to others. Many park visitors will use Route II to travel between different park units. Additional development, even outside the park, can reduce the historic feel that the park would like visitors to experience. Additionally, because Route II lies along a prominent ridge overlooking the Bowman – Long Meadow area, it is likely that additional development will impact views from within the park. Figure 2 shows the visual intrusion caused by a sign for an existing restaurant along Route II on the historic views from deep within the park.

Figure 2 Visual Impact of Development on CEBE, Taken from Bowmans Mill Road Source: Volpe Center



Strasburg has taken steps to minimize development in some critical areas and to improve access to recreational activities including access to the Shenandoah River. Strasburg has designated lands within the 100-year flood plains of Cedar Creek and the North Fork of Shenandoah River as conservation land, allowing only agriculture, park and recreational development. There are plans to connect the existing town park (consisting of a boat launch, swimming pool, picnic shelters, playground, basketball and tennis courts and soccer field) to Strasburg High School with 53-riverfront acres with a walk and bike path and potentially additional sports fields, providing full access to the North Fork within Town limits.

Formal bicycle facilities within Strasburg are limited and pedestrian facilities are limited to the downtown area. According to the comprehensive plan, as roads are upgraded to an urban cross-section, sidewalks will be added. While most visitors are able to walk to points of interest within downtown Strasburg, visits to other parts of the park require a car or bicycle due to long distances and inhospitable walking conditions.

A number of roadway improvements within Strasburg are identified in the Strasburg 2020 Transportation Plan prepared by VDOT in October 2001 (See Map 4). Many of these projects are designed to improve travel on and through the main thoroughfares in Strasburg including Routes 55 and II. Projects that directly impact CEBE include a Route II and Route 55 Bypass which would provide additional access to the Rt. II development area, and an extension of Crim Drive to connect with the bypass. Combined, these improvements will allow park visitors to travel from either I-8I Exit 296 or 298 to the Keister Tract area without traveling through downtown Strasburg. Additional improvements to Bowmans Mill Road within Shenandoah County will also speed access to the park. While these improvements may provide more direct access to the park, it may reduce the number of visitors exploring downtown Strasburg.

Map 4 Strasburg Planned Road Improvements

Source: Strasburg Comprehensive Plan (2003)

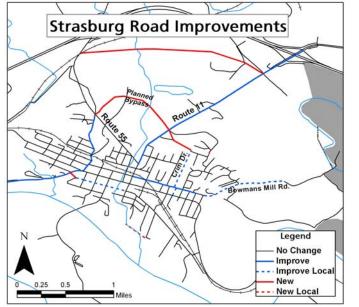
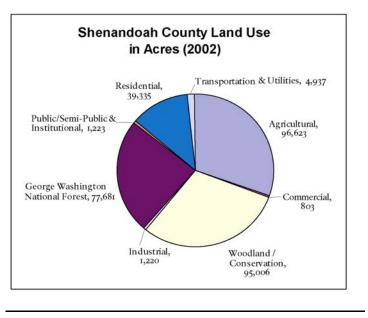


Figure 3

Shenandoah County Land Use

Source: Shenandoah County Comprehensive Plan (2002)



4.2.2 Shenandoah County

Shenandoah County is also experiencing increasing growth rates, particularly in the northern part of the county near Strasburg, due to a strong second home/retirement home market, and more recently by people commuting into Washington, DC and its suburbs. Even with continued growth, it is expected that Shenandoah County will continue to maintain its predominant rural character. As can be seen in Figure 3, 75% of the county land is preserved with 30.5% used for agriculture, 30% zoned as Woodland/Conservation Land and 24.5% preserved as part of George Washington National Forest.

While low-density development is allowed in the Woodland/Conservation areas, natural features such as steep slopes, flood plains and soil conditions, are expected to limit development throughout much of the county. Many of the areas that are developing are adjacent to towns within the county and are being annexed into town governments, such as the areas adjacent to Strasburg.

It is expected that residential and commercial development in the northern portions of the County that aren't annexed into Strasburg will have little impact on the park. County lands in the Bowman-Long Meadow and Keister Tract areas are primarily zoned for agriculture. North of I-81, zoning includes general industrial use south and west of the Bayliss Tract, where O-N Minerals Chemstone operation is located; general business is allowed along Route 11. The major development activity within the County that will have greatest impact on CEBE is development of Keister Tract as a regional park. Discussion of the impacts of the regional park can be found in Section 2.4.5.

The Shenandoah County Comprehensive Plan includes (by incorporation) the *Old Valley Pike Corridor Plan*, which identifies policies to guide development of the Route II corridor. The Comprehensive Plan recognizes that a Corridor Overlay District should be developed to support the policies set forth in the Corridor Plan including:

- Create a non-motorized multi-use trail system along the corridor.
- Ensure development pattern and design supports preservation of the rural character, safe and efficient travel, and economic development.
- Minimize the impact of traffic diverted from I-81.
- Construct distinctive gateways at town boundaries and historic resources.

- Maintain roadway capacity and pedestrian access by utilizing medians, shared entrance ways and service roads to manage access from Route II.
- Use intelligent transportation system technologies to assist in managing traffic flow.

The Comprehensive Plan expresses concern regarding I-81 proposals for an 8-lane cross section with separate truck lanes, but supports implementation of the transportation system management strategies and rail alternatives and other strategies that will minimize the impact of the project on the scenic, environmental, historic, and agricultural resources within the County. The *Virginia Transportation Six-Year Improvement Program for Fiscal Years 2006-2011* does not include any projects in Shenandoah County that would impact the park, although the County is working with VDOT to include improvements to Bowmans Mill Road.

4.2.3 Warren County

Warren County's vision statement includes maintaining its rural character and preserving its natural resources. As described in the county's Comprehensive Plan, Warren County's "development pattern is characteristic of a rural county on the fringe of an expanding metropolitan area. Generally, the majority of the county is characterized by crop land, forests, and a scattering of farms, single-family residences, or neighborhoods. Crossroads communities, various size villages and development mixes, are located throughout the County."

In order to balance their environmental preservation goals with demand for growth, Warren County has chosen to focus growth on land adjacent to Front Royal, north of I-66 along Routes 522/340 towards Winchester. Land within and adjacent to CEBE is zoned for agricultural use, and while subdivision of agricultural land is allowed, the number and size of the properties is tightly controlled, making it unlikely that the lands adjacent to CEBE will change substantially. Growth within Warren County is not expected to directly impact land use within the park or create additional traffic through the park, since it is removed from CEBE. Still, additional residential growth will create a larger local demand for recreational facilities and may attract more visitors to CEBE. No major road projects that would impact CEBE have been identified in Warren County.

4.2.4 Frederick County and Middletown

The Frederick County Comprehensive Policy Plan focuses growth in the northern portion of the county, from Stephens City northward. The primary impact of this residential development would be increased travel on I-81 and potentially Route 11 as some Washington-bound commuters travel via I-66 instead of Route 7 or Route 50. Closer to CEBE, land is predominantly zoned as rural, with the exception of the quarry. The county currently has a draft "Rural Areas Study" that identifies preserving the rural character as the primary goal in rural areas, such as those in the southern portion of the county. Protecting historic features, natural resources, and open space and encouraging agriculture uses while minimizing the amount of land used for residential development and the impact of that development are the main goals of the draft plan.

Middletown, with a population of just over 1,000, is one-half square mile and sits at the northern end of CEBE. Middletown revised the Comprehensive Plan of Middletown, Va. in 2005 to focus on accommodating and managing new growth. The plan notes that that a number of landowners have expressed interest in developing their property and identifies how the town can accommodate this growth while maintaining its small-town character. The primary recommendations are to expand the town boundaries and to develop guidelines for growth. An extensive consensus-based planning exercise, "Foresight Middletown," was conducted in 2004. The land use and infrastructure plan developed as a part of that exercise is incorporated in to the Comprehensive Plan as Section 2.

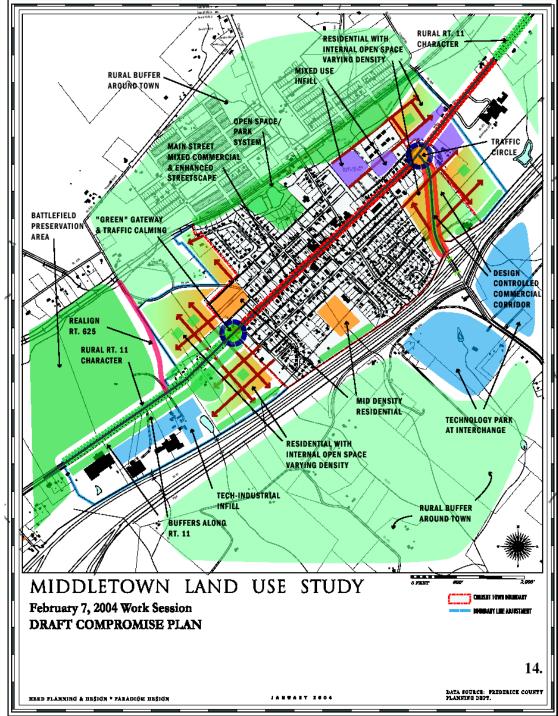
The plan includes growth projections in two places which range from 3.4% to 18.5% between 2000 and 2010: In Section 1, Chapter 2, growth rates of Middletown are tied to those of Frederick County, with the expectation that Middletown population will grow more rapidly than the county as a whole over the next few decades with growth rates of 7.1 to 18.5% between 2000 and 2010. Projections in Section 2, Foresight Middletown, estimate lower growth rates of 3.4% for the same decade. When

taking boundary adjustments identified in the plan into account, Middletown would maintain its population density growing at the rate identified in Foresight Middletown (1,835 people by 2030) while the higher rates identified in Section 1 would lead to the population density doubling to over 4,000 people per square mile.

Map 5



Source: Middletown Comprehensive Plan (2005)



Map 5 shows the plans for Middletown identified during Foresight Middletown. It is expected that Middletown will expand the town boundary to include land north of Reliance Road to Route 634, which will be developed as commercial space. Residential expansion south of town is planned to include properties abutting the Heater House property on the west side of Route II and to realign Veterans Road to extend straight towards Route II instead of turning north towards Middletown. The town boundary east of Route II is expected to move as far south as the CCBF Visitor Center; the northern sections of this area to be residential and then transitioning to more commercial and industrial use south along Route II. Outside of the town boundaries, a technology park is planned west of I-8I at Exit 302 with the rest of the surrounding area including property northwest of the railroad tracks remaining as a rural buffer. The following provides a brief summary of those policies that have a particular impact on the park and visitors to the park:

- Main Street
 - Maintain existing predominate visual character and historic architectural fabric.
 - Encourage streetscape improvements including decorative sidewalk and crosswalk treatments, street furniture, and walking and bicycle connections.
 - Create Middletown Historic District.
- Reliance Road
 - Create a gateway to town that balances motor vehicle access and pedestrian convenience.
 - Match the design of commercial developments to the historic character of town.
 - Provide limited access points to Reliance Road and encourage inter-parcel connections for both vehicles and pedestrians.
- Southern Addition
 - Have development protect the viewshed from the Cedar Creek battlefield.
 - Maintain the rural character of Route II.
- Route II Gateways
 - Consider traffic circles or other traffic calming features and improve Route II within the expanded town boundaries to include a landscaped median.
 - Include gateway design features such as community signage or interpretive markers to identify entrance to town.
- Trail System
 - Coordinate with Lord Fairfax Community College to establish pedestrian connections between the campus and new adjacent neighborhoods.
 - Create a walking/bike trail system through town.
 - Develop a "Historic trail" through town and the park.

Additional transportation components of the Comprehensive Plan include:

- working with VDOT to install a traffic signal at the intersection of Route II and Reliance Road,
- pursuing Scenic Byways for local roads,
- developing the historic rail corridor for tourism or local transportation, and
- proposing an alternative transportation corridor east of I-81 between Winchester and I-66.

Frederick County Road Improvement Plans list improvements to Cougill Road between Hite Road and Route 11 for some time before 2012 and rail road crossing improvements to Belle Grove Road and Klines Mill Road in Fiscal Year 2006-2007.

4.3 Commute to work

Commute to work information provides a sense of where people are traveling within a region. Tables 4 and 5 present commuter information on residents and employees respectively within the Winchester city and Warren, Shenandoah, and Frederick County area, identified collectively as the "CEBE Focus Area."

Table 4 Commute Patters for Local Residents Source: U.S. Census Bureau (2000) Residential Commute Patterns

		Workplace Location							
County of Residence	Number of Workers	County of Residence	CEBE Focus Area	D.C. Metro	Other Virginia	West Virginia & Other Maryland	Other United States or International		
Frederick	23,703	42.0%	78.0%	13.3%	5.1%	2.8%	0.8%		
Shenandoah	14,156	65.2%	81.1%	6.5%	11.3%	0.6%	0.4%		
Warren	8,966	44.5%	58.3%	33.4%	7.3%	0.5%	0.5%		
Winchester City	9,835	50.9%	82.5%	9.8%	4.9%	2.5%	0.3%		
CEBE Focus Area	56,660	49.3%	75.4%	15.3%	7.0%	1.8%	0.5%		

Table 5

Commute Patters for Local Employees

Source: U.S. Census Bureau (2000) Employee Commute Patterns

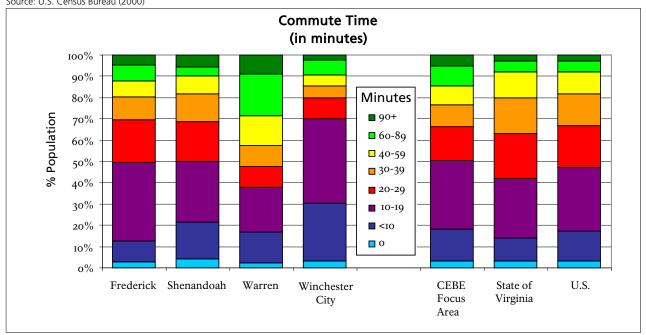
		Place of Residence							
Workplace	Number of Workers	Workplace County	CEBE Focus Area	D.C. Metro	Other Virginia	West Virginia & Other Maryland	Other United States or International		
Frederick	24,384	52.3%	74.8%	1.1%	4.0%	19.8%	0.3%		
Shenandoah	14,399	79.0%	87.7%	0.4%	9.5%	2.3%	0.2%		
Warren	10,832	63.2%	81.1%	5.8%	8.0%	3.9%	I.2%		
Winchester City	22,138	27.4%	76.8%	I.2%	4.4%	16.6%	0.0%		
CEBE Focus Area	71,753	51.6%	79.0%	1.7%	5.8%	0.0%	0.3%		

The CEBE focus area has more jobs than working residents due primarily to Winchester's large urban setting. This allows most residents of the study area to work within their county of residence or the other adjacent counties, particularly in Shenandoah and Winchester, which both employ high percentages of their own residents. Due to its relative proximity, Warren County has the highest proportion of residents who commute to the Washington, DC metropolitan area⁶ Commute times, shown in Figure 4 support these patterns with Warren residents having the longest commutes and Shenandoah and Winchester residents having the shortest.

Many local government officials believe that the majority of new residential development in all of these jurisdictions is attracting new residents who are commuting to the DC metro area. If this is the case, it average commute lengths are expected to increase from those calculated from data from the 2000 Census.

⁶ Defined by the National Capital Region Transportation Planning Board as the District of Columbia; in Maryland Frederick, Montgomery and Prince George's Counties and the cities of Bowie, College Park, Gaithersburg, Greenbelt, Rockville, and Takoma Park; in Virginia Arlington, Fairfax, Loudoun and Prince William Counties and the cities of Alexandria, Fairfax, Falls Church, and Manassas.

Figure 4 Residential Commute Lengths Source: U.S. Census Bureau (2000)



Employees commuting into the CEBE focus area generally live in areas adjacent to the jurisdiction in which they work. Matching their relative proximity, Frederick and Winchester have the highest proportion of workers from West Virginia and Maryland while Shenandoah and Warren have higher numbers of employees commuting from other parts of Virginia. These long distance commutes tend to radiate away from the park as opposed to crossing through, minimizing their need to travel through the park.

As illustrated in Tables 4 and 5, most D.C. commuters in the study area live in Warren, and local employers draw from adjacent areas, resulting in most long distance commuting avoiding traveling through the park. It is likely that long distance commuters that do commute through the park will travel primarily on Interstate routes. Local trips, which make up the majority of commuter travel, is more likely to impact local roads like Route II. Decisions associated with the expansion of I-81 may cause relative increases or decreases on traffic along Routes II & 55. The impacts of this project are described in Appendix B.

As seen in Table 6, it can be seen that the majority of commuters drive alone, although carpool rates for the region are higher than the state or national average. Use of public transportation and non-motorized modes are limited due to the rural nature of most of the study area. Not surprisingly, residents of the city of Winchester, which has the highest density and the most extensive transit system (See Section 6.5), use alternative transportation most frequently.

Table 6

Commute Mode Source: U.S. Census Bureau (2000)

Commute Mode

Private Vehicle		Publi	Public Transportation						
County of Residence	Drove Alone	Carpooled	Bus Or Trolley Bus	Taxicab	Other	Motorcycle	Bicycle	Walk	Other Means
Frederick	83.4%	11.8%	0.2%	0.0%	0.0%	0.0%	0.0%	I.3%	0.3%
Shenandoah	79.4%	13.4%	0.2%	0.0%	0.0%	0.0%	0.1%	2.1%	0.5%
Warren	72.4%	21.2%	0.4%	0.2%	0.1%	0.0%	0.1%	2.5%	0.5%
Winchester City	72.2%	17.0%	I.0%	0.8%	0.0%	0.0%	0.3%	4.8%	0.6%
	0 0/	0/	0/	0/	0 (0/	0/	0/	0.
CEBE Focus Area	78.4%	14.9%	0.4%	0.2%	0.0%	0.0%	0.1%	2.3%	0.4%
State of Virginia	77.1%	12.7%	1.6%	0.1%	1.8%	0.1%	0.2%	2.3%	0.8%
U.S.	75 · 7%	12.2%	2.5%	0.2%	2.1%	0.1%	0.4%	2.9%	0.7%

4.4 Roadway Planning

4.4.1 I-81 Corridor

Most visitors to CEBE will use the Interstate Highway System to reach the park. The park's proximity to I-81 and I-66 makes visitor access to the park fairly direct. These direct routes also attract significant amounts of non-park traffic. Use of I-81 has increased three-fold in the last 25 years. Many trucks now use I-81 to travel up and down the east coast as an alternative to I-95, which intersects most of the coast's major metropolitan areas. I-66's direct access to Washington, DC has allowed many residents to commute from the area into DC and its suburbs. The local topography and stands of trees incorporated into the agricultural landscape prevent these interstates from dominating the landscape. While the landscape provides some relief from these roads, plans to expand I-81 may have significant impacts on the park. An analysis of the various alternatives proposed in the I-81 Tier I Draft Environmental Impact Statement (DEIS) is provided in Appendix B. It should be noted that while the Cedar Creek Battlefield and Belle Grove Plantation are listed as National Historic Landmarks and Harmony Hall (Bowmans Fort) is listed on the National Register of Historic Places, the DEIS makes no recognition of the existence of CEBE as a national park unit. Cedar Creek is identified as supporting threatened or endangered species and as having the potential for inclusion in the National Wild and Scenic Rivers System. While these designations provide some protection for the CEBE, these designations will not prevent construction from taking place.

It is expected that demand for travel through the area will require an additional two I-81 travel lanes in each direction. Some of the alternatives proposed will reduce the number of lanes that need to be constructed while others will require additional lanes. In considering expansion plans for I-81 it is also important to consider that too few lanes, or poorly managed lanes may divert traffic from I-81 onto Route II, which runs parallel. Table 7 identifies which alternatives will have positive benefits to CEBE and which will have the most negative impacts.

Alternative	Details
Transportation System	Operational changes and minimal roadway construction to improve
Management	safety and increase efficiency
	Divert current Route 11 traffic onto I-81 and provide adequate capacity
Add Lanes – 2	to keep increasing demand off Route 11.
	Improving rail service will reduce truck traffic and will reduce the
Rail Concepts	amount of widening needed at a few locations.
	While segregating traffic may make travel easier for personal vehicles, i
Separated Lane	is difficult to match lanes to demand. Additional lanes may be required
Concepts	in order to implement segregated lane concepts. While only the "All vehicles – high toll" scenario increases traffic on
	While only the "All vehicles – high toll" scenario increases traffic on
	Route II compared to the "No Build" alternative, all toll scenarios
Toll Concepts	divert some traffic onto Route 11.

Table 7 Annual Average Daily Traffic Volumes: I-81 Expansion Alternatives

CEBE and its partners should track actively participate in the planning process for adjoining highway projects. The proposal for I-81 needs to be monitored for specific impacts to the park, such as

- loss of historic battlefield lands,
- increased noise and visual intrusion from the highway structure,
- loss of trees and ground cover, and
- reduced environmental quality of Cedar Creek.

The current historic designations will provide some protection and should be leveraged to encourage VDOT to include creative and enhanced mitigations to minimize the impacts of the project, including visual and noise intrusions. Three major proposals of the project that will have the most impact on CEBE include

- overall widening of the roadway,
- redesign of the I-81 & I-66 interchange, and
- design of the project adjacent to Harmony Hall and Cedar Creek.

CEBE and its partners should work with VDOT to encourage widening into the existing median rather than building at the outer edges of the right of way. The redesign of the I-81 & I-66 interchange may also impact CEBE. The current design, in which southbound traffic on I-81 exits left for I-66 east and I-66 west merges from the left onto I-81 south, does not meet current interchange standards. Redesigning this interchange to allow for right-merging lanes may require taking significant land area from the Northern Battlefield area, adjacent to the CCBF Visitor Center.

It is expected that expansion of I-81 will not directly impact the Harmony Hall structure, which is approximately 530 feet from the road right-of-way, but will cause major disturbance to the property and landscape. Careful consideration needs to be given to roadway design and material choice to prevent additional intrusion of I-81 into the historic landscape. Cedar Creek passes under I-81 at this location, requiring additional consideration of the construction impact on the watershed. Appendix A summarizes the potential impacts to CEBE of the currently proposed alternatives for expansion of I-81.

4.4.2 Corridor H

Another major transportation project that has the potential to impact CEBE is West Virginia Department of Transportation's (WVDOT) "Corridor H" project. Corridor H is the final section of the Appalachia Development Highways System (ADHS) within West Virginia and spans over 100 miles from Elkins, WV to the West Virginia – Virginia border at Route 55. Proposed by the Appalachian Regional Commission in the early 1960's, ADHS was designed to promote economic and social development throughout the Appalachian region. Efforts to build Corridor H began in 1996, although construction has moved slowly due to legal challenges.

The Federal Highway Administration (FHWA) and WVDOT agreed to defer construction of the section between Wardensville and the Virginia border for as long as 20 years in a legal agreement approved in 2000. Subject to certain conditions, final design and right-of-way acquisition for this section have also been deferred. One of conditions that would shorten the delay is if Virginia approved plans to connect Corridor H to I-81. As of 2005, Virginia had not yet approved plans to improve Route 55 or other routes connecting Corridor H from the state border to I-81. FHWA has approved the Amended Record of Decision for eastern-most section in 2003 but design has not begun.

While Virginia currently has no plans for development of Corridor H within the state, future development of the corridor could impact CEBE. If the alignment were to follow Route 55, the park would largely be bypassed as Route 55 dips south of the park. In fact, development of this corridor would improve access to CEBE from the west, connecting the park directly to I-79. On the other hand, if there were ever an attempt to connect Corridor H to I-66 at the existing I-81 / I-66 interchange, the park would be directly impacted, as the connector to Corridor H would need to pass adjacent to Belle Grove Plantation and the reenactment battlefield. Alternatively, Corridor H could connect to Route 37, which circles Winchester via Route 628, a secondary road. No current action regarding Corridor H is needed by the park, although it should keep abreast of project discussions.

4.5 Summary

CEBE's relationship with local governments is complicated by the fact that the park lies in three counties and is adjacent to two towns. Since each jurisdiction has its own Comprehensive Plan and

oversees its own planning and zoning activities, CEBE must maintain contact with all five jurisdictions, which may have differing priorities for future development patterns. In addition to working with the local jurisdictions, CEBE will need to develop a relationship with VDOT, which is responsible for both local roadway projects such as Pouts Hill Road and major construction projects such as I-81.

Development in the jurisdictions encompassing CEBE is likely to have minimal impacts on most park roads. Due to future development plans, there may be increased traffic flow on Route II in both Strasburg and Middletown and on Reliance road in Middletown. However, most commute traffic induced by residential development throughout the CEBE focus area will not directly impact park roads. Increased population in the CEBE focus area may boost park visitation as locals seek educational and recreational activities.

It is likely that proposed development along Route II in Strasburg and southern Middletown and the expansions of O-N Chemstone operations and I-81 will impact the historic, natural, military and scenic landscapes currently seen by park visitors.

CEBE will need to work with each jurisdiction in order to minimize the visual impacts of planned development. One way to work cooperatively with the jurisdictions is to assist in developing zoning regulations, design standards, and design review processes that appropriately address the overlapping interests of CEBE and the surrounding municipalities. Some examples might include

- maximum height limits,
- limits to the number of driveway access points,
- historically appropriate design of building facades,
- requiring appropriate vegetation buffers, and
- viewshed visualizations during design review.

Middletown and Shenandoah County have proposed creating overlay districts to preserve the historic character of development in key areas.

Just as CEBE overlaps many jurisdictions, VDOT is responsible for all road projects in and around the park. CEBE will need to work with VDOT to ensure projects meet the needs of both park visitors and non-park traffic. While there may not be much that CEBE can do to eliminate the need for capacity projects, the park can work with VDOT to determine how to minimize the impact of the projects on the park landscape. VDOT has worked with local communities, such as those along Virginia's Route 50 in Fauquier and Loudoun Counties to identify appropriate traffic calming techniques and safety enhancements while preserving the rural and historical character.

5 Park Visitation Patterns

5.1 Overview

Understanding park visitation patterns and levels is an important element for determining the future transportation needs, as well as the viability of existing transportation systems. As a new national park, CEBE has not yet collected visitation statistics, although park partners have some data for visitation at Belle Grove Plantation and attendance at the reenactment. Visitation patterns at CEBE are complicated, because the park is enmeshed within the local community and there is no single entrance or tour route that visitors follow. Some visitors may only stop at the Belle Grove Plantation, the CCBF Visitor Center, or current CEBE office where they can interact with park staff or staff of park partners, while others may travel the back roads of the park to see Signal Knob, Bowman's Mill Ford, and Middletown Cemetery, while never interacting with park or partner staff

Even if existing data were comprehensive, improvements to CEBE identified during GMP planning will likely attract additional visitors. While there is some belief that designation as a national park intrinsically increases visitation, park service staff⁷ believe that while there may be an initial spike in visitation short lived. The most dramatic changes in visitation occur due to improvements to the facilities and activities available. As described in Section 2, park partners have begun to envision a number of changes to the use of the park. Development of the Keister Tract, visitor access to Harmony Hall and/or the Heater House, and additional active and passive interpretation, including a new visitor center, have all been discussed as potential changes which would increase visitation.

This section estimates expected visitation by analyzing what types of visitors will use CEBE, synthesizing data from park partners, using engineering estimates based on expected land use, and comparing CEBE to other NPS units with known visitation. According to this analysis, expected visitation ranges from 50,000 to 250,000 visitors annually, primarily depending on the level of development pursued by the park and its partners. With minimal physical and operational changes, it is expected that total park visitation (including visitors who are not currently counted by park partners) would be in the lower end of this range, while extensive development of new park facilities would create visitation towards the upper bound.

5.2 Types of Visitors

CEBE expects to have a diverse group of visitor types, with varying interests and knowledge of local history. The following visitor types have been identified in order to think about how different parts of the park may be used.

- Civil War enthusiast: Visitors who are interested in Civil War history will likely have basic understanding of the Civil War and may be combining a trip to CEBE with other nearby battlefield sites. Civil war enthusiasts are most likely to visit sites that provide passive interpretation of the civil war battlefield landscape. Exhibits, reenactments and other active interpretation are likely to be of interest to these visitors. Hiking or other recreational activities are probably of less interest unless they provide a greater understanding of how and where the battle occurred.
- Other historic interests: CEBE is likely to attract visitors that have specific interests in American settlement patterns, the antebellum period or historic architecture. Belle Grove Plantation, Harmony Hall, the Bowman-Long Meadow area, as well as the Wayside Inn outside of the park may be of particular interest to these visitors. These visitors are likely to be somewhat knowledgeable about their specific interest, but may not know about other aspects of the park's history. In addition to an historical overview of the park, access to buildings and interpretation of landscapes will likely be the focus for this group of visitors.

⁷ Butch Street of the Public Use Statistics Office and Nancy Cocroft, Architect responsible for determining appropriate Visitor Center sizing

- National Park / National Historic Trust "baggers": There are groups of people who will visit CEBE primarily because of its status as a national park. As a National Trust Historic Site, Belle Grove Plantation will similarly draw an audience. These visitors may have little background knowledge, but are keenly interested in learning more and are likely receptive to a diverse set of experiences including recreational activities, walking and driving the landscape, touring buildings and other types of active interpretation. Approximately 6% of Belle Grove Plantation's visitors currently are members of the National Trust for Historic Preservation or Belle Grove Plantation. It is likely that a number of "national park baggers" may have NPS entrance passes, such as the National Park Pass.
- **Recreationalists:** CEBE encompasses a diverse landscape with numerous possibilities for recreational activities and enjoyment of its natural resources for both locals and a wider audience. The development of the Keister Tract and Bayliss Site, as well as trail systems through other portions of the park are keys to encouraging recreational activity while maintaining the park's natural resources. Possible recreational activities include:
 - canoeing, kayaking, tubing
 - bird watching,
 - walking, cross country skiing
 - on-road biking,
 - caving (Panther Cave),
 - tent camping, and
 - picnicking.

If park lands are connected with regional trail networks, off-road biking, trail riding, and long-distance hiking may be feasible activities. Shenandoah County has long term plans to develop an adventure course within the Keister Tract.

Many local recreational visitors come to the park regularly (e.g., as often as twice per week or monthly, as compared to once or twice in a lifetime for non-locals) and can make up a significant portion of overall visitation. For example, at Valley Forge National Historic Park on the outskirts of Philadelphia, three-quarters of visits to the park are from local recreationalists who walk, jog, bike, and boat in the park. While the local population is smaller at CEBE, recreationalists may still make up a larger proportion f visitation, particularly when Keister Tract is developed and even more so if park trails are connected to a regional trail system. It is expected that most local recreationalists will find and continue to use a specific area of the park without utilizing the entire park.

- Educational Tours: Belle Grove Plantation currently attracts approximately 50 school groups and adult bus tours annually. Educational tours are likely to be most interested in active interpretation and may not be able or willing to tour the entire park. Most will visit sites only if they are relatively close to parking. Both roads and parking areas need to be designed to accommodate larger tour vehicles. Open space for picnicking and space to play may be of interest to school groups. College-level groups may have interest in archaeological and geologic research at the park.
- "Curious": "Curious" visitors do not necessarily plan for their visit to CEBE. They may notice a highway sign, find material about the park in their hotel room, a visitor center, or another local site of interest; they may be staying locally or on a multi-day drive. Regardless of the reason for their visit, they are likely to know little about the park or local history and will appreciate easily accessible information. Some curious visitors will have very little time to visit the park while others can be enticed to fully explore the park if their interest is captivated by their initial experience. The visitor center or other initial park experience is very important for this group.

5.3 Park Partner Visitation Patterns

While most of the sites within the park are not currently staffed, Belle Grove Plantation and the Cedar Creek Battlefield Foundation were able to provide information on visitation patterns.⁸ With approximately 25,000 visits to the park counted by park partners, it is reasonable to estimate that approximately 35,000 to 50,000 people visit CEBE annually, providing a base level for estimating future visitation.

5.3.1 Cedar Creek Battlefield Foundation

Based on registration and ticket sales, approximately 6,000 re-enactors and an additional 6,000 spectators participate in the two-day Battle of Cedar Creek reenactment, held annually in October. This year, CCBF is expecting up to 12,000 re-enactors and thousands of spectators for a special 145th anniversary reenactment of the First Battle of Manassas.

While Keister Tract is planned for future recreational use, the Bayliss Tract, including Panther Cave and access to Cedar Creek, which is owned by the CCBF, is the only land currently available for public use. Since most groups do not check in with partner and private landowners when visiting the Bayliss Tract and other properties there are no statistics on current use, although there are reports of student groups conducting archaeological research and caving within the park.

5.3.2 Belle Grove Plantation

Belle Grove Plantation collects detailed visitation data that may provide some understanding of future visitation patterns to the park. Belle Grove Plantation is open daily from April through October and open weekends in November and December for special events. Belle Grove Plantation had a total of almost 10,000 visitors in 2005, down slightly from a high of 13,000 visitors in 2004. Of this, approximately 4,000 visitors came independently; 1,600 came as a part of adult and student tours; and over 4,000 came to participate in special events, including private rentals. Some of the special events included:

- "Of Ale and History" Microbrew and Imported Beer Tasting Festival (May, 3,000 visitors)
- Bluegrass Festival (July, 500)
- Triennial Hite Family Reunion (July, 270)
- Reenactment of Battle of Cedar Creek (October, 3,000)9
- Antiques Appraisal Station (November, unknown)

Since special events have an overwhelming impact on visitation levels, individual visitation and tour activities are analyzed independently in order to be able to extrapolate expected visitation patterns from Belle Grove Plantation to all of CEBE. As can be seen in Figure 5, individual visitation peaks slightly during the summer months June – August. Special Christmas tours and limited days of operation (weekends only) during December explain the high average daily visitation for this month.

Figure 6 illustrates that spring (April – June) is the busiest time for adult tour groups while student tours occur primarily in October and May. Figure 7, illustrates higher weekend visitation for individuals, while not surprising, school groups prefer weekdays, particularly Tuesdays and Thursdays. Adult tour groups seem to have a strong preference for Wednesdays. There does not seem to be any correlation between seasons and visitation by day of week. It does not appear that summer vacations bring additional weekday visitation.

⁸ The Cedar Creek Battlefield Foundation does not collect daily visitation data.

⁹ The only data available for Belle Grove Visitation during the reenactment is 4,500 visitors during the 140th anniversary reenactment. An estimate of 3,000 was made for non-anniversary year.

Figure 5

Individual Visitation to Belle Grove Plantation (2005)

Source: Belle Grove, Inc.

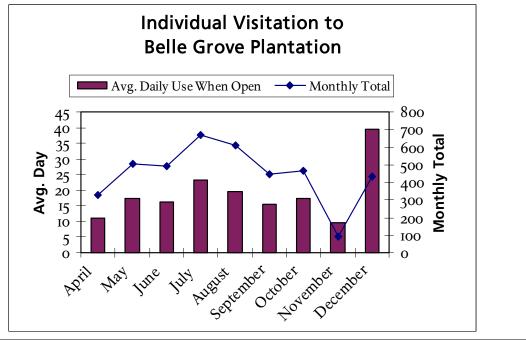


Figure 6

Tours of Belle Grove Plantation (2005) Source: Belle Grove, Inc.

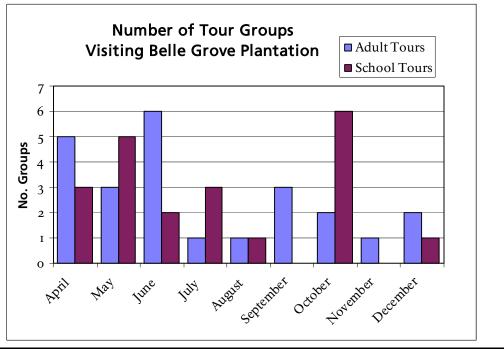
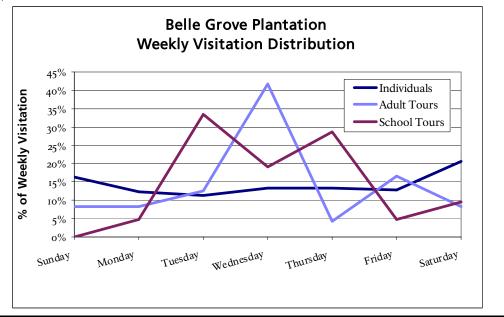


Figure 7 Visitor Distribution by Day of Week Source: Belle Grove, Inc.



5.4 Keister Tract - Traffic Engineering Projection

One area where development plans have already been determined is the Keister Tract. Owned by Shenandoah County, a master plan has been developed outlining specific uses for the 150 acre parcel. The Institute of Transportation Engineers (ITE) has compiled trip generation projections for various land uses including parks. Using ITE Trip Generation estimates for regional and county parks¹⁰ projects a demand level of 110,000 annual trips or an average of 300 trips per day for Keister Tract. It is important to note that ITE uses traffic counts conducted primarily in urban areas, total trips include both access to and egress from the park, and are per vehicle not per visitor. In general, 2 – 2.5 visitors come together in a single vehicle so 110,000 trips would account for over 220,000 visitors arriving in 55,000 vehicles. With the population of the surrounding counties at only 160,000 people, it is expected that use of Keister Tract will be far lower than 55,000 vehicle visits per year. Marcus Ordonez, Shenandoah County Director of Parks and Recreation, expected that 50,000 annual visitors (average of 140 visitors per day) was a reasonable initial estimate although visitation could potentially grow to the 100,000 range.

5.5 Comparable NPS Units

Another technique to estimate future visitation to CEBE is to look at comparable NPS units. Factors that were considered in identifying comparable parks include:

- park size (acreage),
- park mission and prestige (military history,)
- available activities, and
- distance to population center.

As each park is unique when all of these factors are considered, it is difficult to find a "perfect match" for estimating park visitation. An analysis of parks in the northeast and southeast regions designated

¹⁰ Extremely high trip generation rates for county parks on Saturdays was seen as an outlier and therefore not included in the annual estimate.

as historic parks, battlefields/battlefield parks, military parks, monuments and historic sites was conducted using the factors listed above. Based on recommendations from NPS personnel and the above factors, a number of parks were identified as potentially comparable. Visitation at these parks range from 17,400 – 1.1 million visitors annually. When physical size and population center size and relative distance were considered and potential visitation limited to 500,000 annual visits, an expected visitation of up to 200,000 to 250,000 was determined as feasible." While this is up to ten times the known current visitation, park personnel did not feel that this was impractical, especially when including the potential attractiveness of the Keister Tract.

5.6 Visitation Summary

The following provides a summary of expected visitation patterns:

- Overall visitation is expected to grow to be approximately 50,000- 250,000 visitors per year.
- Visitation will increase in parallel with development of interpretive and recreational facilities and activities.
- Visitors are likely to fall into two main categories: recreational and historical. Visitors interested in history are likely to primarily focus their trip around the Northern Battlefield area and a new visitor center. Unless extensive interpretation is provided, few historic visitors will tour the southern portions of the park (Bowman-Long Meadow area). Recreationalists will focus their trips on the Keister Tract area and any additional locations that provide walking or biking trails.

In thinking about each of the types of visitors:

- Civil War Enthusiast: Visitation will continue to be focused towards reenactments. It is expected that additional visitation by this group will increase somewhat as access and interpretation of the battlefield improves. Since current visitation is unknown, increases in this group are based on comparable national parks.
- Other historic interests: This group is expected to have limited increases in visitation although access to Harmony Hall and the Heater House may draw some additional visitors.
- National Park / National Historic Trust "baggers": Visitation by this group is included in the estimate based on comparable national parks.
- **Recreationalists**: There is expected to be a significant increase in use of CEBE by recreationalists based on the development of Keister Tract and other walking trails.
- Educational Tours: It is expected that additional tours will be attracted to interpretation of the battlefield, including development of a more comprehensive visitor center and on-site interpretation of earthworks or other features of the landscape. Recreational facilities may also attract additional school groups.
- **"Curious":** Visitation by this group is included in the estimate based on comparable national parks.

^ⁿ Analysis included as Appendix C.

6 Park Transportation

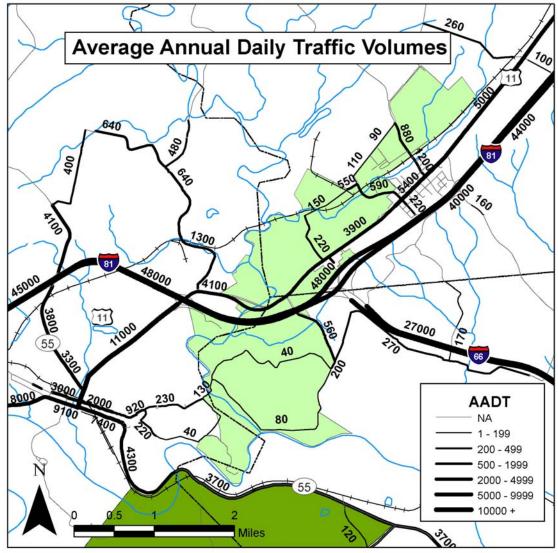
Based on the understanding of the expected number and types of visitors, this section considers how CEBE can manage and plan for visitors and their transportation needs. This section focuses on the state and use of local roadways, existing tour routes and wayfinding, parking needs, visitor center siting, opportunities for biking and trail development, and managing special events.

6.1 Roads

6.1.1 Current Conditions

CEBE is transected by I-81, a major north-south route through Virginia from Tennessee to West Virginia. The I-81 and I-66 interchange is directly adjacent to CEBE, connecting the northern Shenandoah Valley with Washington, DC.

Map 6 Annual Average Daily Traffic Volumes Source: VDOT



Map 6 provides average annual daily traffic (AADT) volumes for roadways adjacent and within the park. AADT include traffic in both directions and therefore may be double the number of trips made to a single destination as both the arrival and departure travel is counted. Route 11, paralleling I-81, acts as the primary conduit for local travel and for travel between key park sites. Route 55, is a major collector road from east of I-81 through Strasburg and on through Front Royal. Park visitors may use Route 55 from I-81 into Strasburg or to access the George Washington National Forest. The rest of the roads within the park are local roads, with the majority of Pouts Hill Road and Bowman and Long Meadow Road in Warren County unpaved. As can be seen by Map 6, other than Route 11, most of the roadways that serve the park currently have very little traffic.

6.1.2 Expected Park Visitation Impacts

Additional visitation is expected as improvements are made. Additional visitation will impact roadways in different areas of the park in different ways. It is unlikely that each visitor will travel through the park in the same manner or visit all sections of the park. Which roads see increased traffic will relate to improvements identified during the GMP process.

As discussed in Section 5.4, visitation to the Keister Tract is expected to increase to between 50,000 and 100,000 visitors annually. While the addition of just 50,000 visitors would more than double traffic on Pouts Hill Road adding 110 to 140 1-way vehicle trips daily to the exiting AADT of 40, even an increase of 100,000 visitors annually would not significantly degrade travel conditions on most days.¹² Shenandoah County is currently working with VDOT and local residents to pave Pouts Hill Road all the way to the park entrance and build four-foot paved shoulders for cyclists and pedestrians.

As noted earlier, recreational visitors, particularly regular local users, are not expected to extend their visit to other parts of the park and will therefore recreational visitors to Keister Tract will have no noticeable impact on the northern sections of the park. While some recreational traffic will travel to Keister Tract from the north, it is expected that most visitors will travel through Strasburg and use Pouts Hill Road to avoid the unpaved sections of Bowmans Mill Road and Long Meadow Road.

For the park overall, additional visitation (even up to 250,000 visitors) will have a noticeable impact on AADT, but is unlikely to negatively impact roadway capacity except during special events. During such times, some roads could be designated as one-way to reduce the number of conflicts between passing vehicles.

Roadway conflicts are more likely to be related to speed conflicts between park visitors and local through traffic than congestion from increased visitation. Particularly on Route II, where average traffic speeds are nearly 50 miles per hour (mph), visitors may feel pressure from through traffic to drive quickly, making it difficult to find specific locations or take in the views. Traffic calming methods can be used to slow all traffic, including through traffic as it travels along Route II. Middletown has successfully developed signage and street-scaping that help lower traffic speeds to 23 mph.

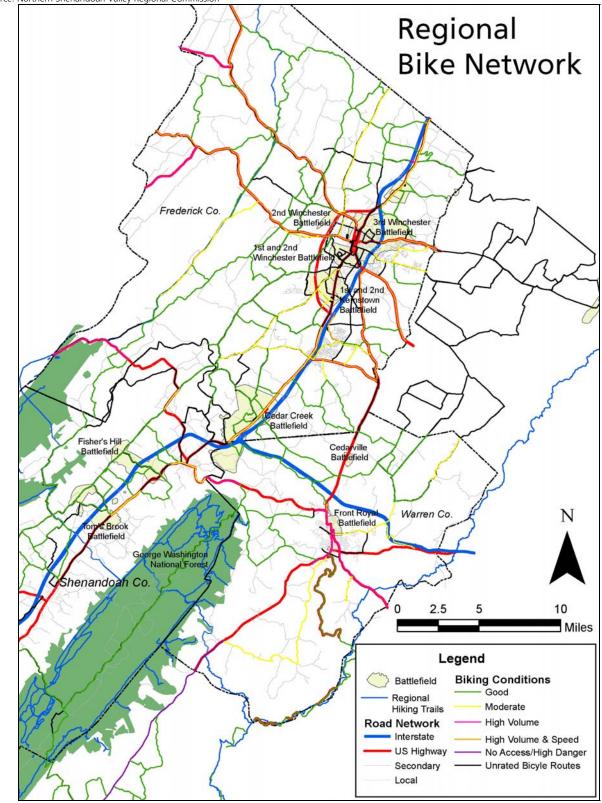
6.2 Bicycle and Pedestrian Trails

In 2004, the Northern Shenandoah Valley Regional Commission adopted "Walking and Wheeling the Northern Shenandoah," a report they commissioned with support from the SVBF. The report identifies a number of routes to and through the park as seen in Map 7. As noted earlier, the Shenandoah Valley Battlefield Foundation has identified CEBE as having potential for bike touring. A fifteen-mile route would provide access to most of the key park sites, with shorter routes around areas such as the Northern Battlefield (3.4 miles), Bowman-Long Meadow area (4.5 miles), and the Keister Tract (2.5 miles).

^a Days with special events such as fireworks displays or other regionally-significant programming are likely to cause significant back-ups.

Map7 Regional Bike Network

Source: Northern Shenandoah Valley Regional Commission



There is currently no bike-specific infrastructure in this area. Bike traffic would mix with other vehicular traffic on roadways or ride on unimproved shoulders. The Middletown and the Northern Battlefield areas are more conducive to bike touring as the landscape is flatter and all roads are paved.

Bicycle access to Harmony Hall and Bowman-Long Meadow areas is more challenging. Between the Northern Battlefield and Harmony Hall, Route II has fewer driveways and access points and opposing traffic is divided by a median, both of which cause drivers to speed. Rolling topography and higher driving speeds (55 mph) decrease biker visibility and comfort. Fort Bowman Road, used to access Harmony Hall is unpaved and relatively steep, dropping 130 feet in ³/₄ of a mile on a gravel road. The addition of paved shoulders or a separated bike lane along Route II would significantly improve biking conditions.

In contrast, the Bowman- Long Meadow and Keister Tract areas are attractive biking locations due to lower traffic volumes. The unpaved roads in this area may deter some riders, and the rolling hills may make the route challenging for less experienced cyclists. As currently planned, paved shoulders along Pouts Hill Road would provide good bike and pedestrian access to the Keister Tract from Strasburg.

Future development of paths along the North Fork of the Shenandoah as discussed by the master plans for Strasburg and Shenandoah County's Keister Tract and by CEBE staff and its partners, would provide attractive, flat, and traffic-free opportunities for biking and walking. In order to facilitate bicycle touring of CEBE, the park would need to add bicycle parking at key visitation sites. In the future, CEBE could partner with a concessionaire to rent bicycles to visitors, if demand required.

While the large size of the park makes walking tours of the entire system impractical, there are many opportunities to develop interpretive and recreational paths within CEBE. In addition to the Bayliss site and Keister Tract, walking paths may be developed on partner owned parcels within the Bowman-Long Meadow area and on the reenactment battlefield between Belle Grove Plantation, the Heater House, the Ramseur Monument, and the CCBF visitor center or other future use of this area. Walking paths that have been identified elsewhere in this report include regional trails along the North Fork of the Shenandoah River, along Cedar Creek, and connecting Keister Tract to Signal Knob.

6.3 Air

Most out-of-state visitors will either drive to the park or fly into Washington, D.C using either Washington Dulles International Airport and Ronald Reagan Washington National Airport. Dulles is 67 miles from the park and takes 1.25 hours, while National Airport is 83 miles, or 1.5 hours away. With Dulles Airport being west of downtown, it is most convenient and proximate for visitors heading directly to the park.

Locally, the Front Royal-Warren County Airport supports general aviation and has plans to expand to allow corporate air traffic. Winchester Regional Airport, south-east of downtown Winchester supports both general aviation and corporate flights. Both airports are approximately 10 miles from the park, but it is not expected that demand for air tours of CEBE will be financially viable. Since there are no major airports proximate to CEBE, the impact of noise from overflights is (and is expected to remain) minimal.

6.4 Rail

There is currently no passenger rail service to or through the Shenandoah Valley. The closest cities with passenger rail service are Martinsburg or Harpers Ferry, WV (35 miles north) and Manassas, VA (50 miles east) with trains arriving from Chicago. Trains from New Orleans and New York stop at the Manassas station only.

Although no local passenger service is available, there are a number of rail lines adjacent to CEBE. At one point, an agreement was reached for Valley Trains and Tours, Inc. to purchase the Norfolk Southern rail line between Strasburg Junction and Shenandoah Caverns to run local rail tours. A passenger rail line was also proposed to provide service from Winchester to Staunton. No action has been taken on either of these plans and it is believed that reintroduction of passenger rail service is unlikely as demand for freight service is expected to increase. Rail improvements connecting to the Inland Port in Front Royal have been proposed as a part of the I-81 Corridor Study to encourage rail transport of freight instead of relying on trucking,

Currently, the CSX lines within the Northern Battlefield area are regularly used by O-N Minerals Chemstone Operation. With the planned expansion of the quarry, this activity is expected to increase. Tracks owned by Norfolk-Southern adjacent to Route 55 also are actively used for shipping.

6.5 Public Transportation

Due to its rural location, it is difficult to reach or tour CEBE via public transportation, or transit. Local agencies provide limited transit services. Winchester Transit runs six fixed route bus services and a trolley shuttle in Winchester City, as well as two routes which serve Frederick County. One of these routes serves Lord Fairfax Community College, near to the Middletown portion of the park. Winchester Transit runs three 25 passenger "cab on chassis" buses and a 12-passenger vehicle, all of which are wheelchair accessible. Additional paratransit service is provided by Winchester Transit. Adult fares are \$0.50; transfers are not provided, although all routes connect at City Hall. Service is provided from 6 AM to 6 PM M-F, and 9 AM to 4 PM on Saturdays.

The Virginia Regional Transportation Association operates Front Royal Area Transit, which provides service between the downtown and commercial and residential areas. The 45-minute route runs from 9:45 AM to 5 PM M-F and costs \$0.50. Additional transportation is provided by human service agencies.

In 1982 a Rural Mass Transit Feasibility Study was conducted by the Lord Fairfax Planning District Commission (now the Northern Shenandoah Valley Regional Commission), which considered various fixed-route options. A route servicing Front Royal, Middletown, Winchester, and Berryville was considered, but was not financially viable based on projected demand. A route between Front Royal and Winchester was expected to attract the highest ridership.

6.6 Other Park Transportation Planning Issues

6.6.1 Parking

Since most visitors will rely on private vehicles to access different parts of the park, adequate parking needs to be made available. Belle Grove Plantation, the CCBF visitor center, and the planned Keister Tract park are the only sites that have significant parking. Limited space is available at the NY monument while at most other sites visitors must pull over onto a limited shoulder.

During the GMP process, CEBE and its partners will have to identify how various locations will be used, based on the visitor experiences envisioned. The amount of parking at a given site is based on the number of people it expects to attract and the amount of time that they spend there. A pull out to read a wayside plaque and take in the landscape is very can be much smaller than a parking area designed to accommodate visitors going on an extended hike or those watching a movie and touring an exhibit at the visitor center.

In developing parking areas, access for the disabled and capacity for school buses needs to be considered. Ease of access from the road into the parking area should also be considered. Along Route II, where traffic speeds are high, clear sightlines are needed to safely turn in and out of parking areas. Parking should be sited to have the minimum visual and environmental impact, preferably behind buildings and out of the way of major site lines.

6.6.2 Visitor Center Siting

The following transportation issues should be considered when choosing the final location of the visitor center.

- **Proximity to I-81 and I-66**: It is expected that the majority of visitors will be traveling to the park via I-81 or I-66. The visitor center should be easily accessible from one of these roadways.
- How the site relates to desired visitor circulation patterns: A visitor center should be located to capture visitors as they enter the park (proximate to I-81 and I-66) but also be located so as to provide a logical starting point for visitors to tour the park. For example, if it is decided that visitors should tour the park so as to follow the Battle of Cedar Creek from south to north, locating the visitor center in Strasburg would make sense. Alternatively, if visitors are expected to come from Winchester, a visitor center towards the northern end of the park would make most sense.
- Capacity of local road network: The local roadways must be able to handle the increased traffic that a visitor center creates. While locating the visitor center along Route II may have very little noticeable impact on the roadway, the high visitation levels expected at a visitor center will have a large impact on smaller roads such as Bowmans Mill Road.
- Adequate space for parking: In addition to having enough space for the visitor center, there needs to be adequate parking for visitors, including spaces for tour and school buses. Ideally the parking would be close to the visitor center without interrupting the landscape.

6.6.3 Routing and Wayfinding

Because CEBE's many sites of interest are dispersed throughout the park, wayfinding and routing of visitors will be necessary to guide visitors through the park. Wayfinding signage at the park is limited to signs on I-81, signs on Route 11 for Belle Grove Plantation and the CCBF visitor center. Signage related to the Winchester-Frederick County Convention and Visitors Bureau "Apple Trail" and the Virginia Civil War Trails, two regional driving tours, also run through the park. Other organizations have developed travel routes but do not currently have signs to direct people. SVBF has identified appropriate visitor routes throughout the Shenandoah Valley, relying on the existing Shenandoah Valley Civil War Trail Route, and Virginia Scenic Byways. CCBF foundation has worked with Dr. Joseph Whitehorne, history professor at Lord Fairfax Community College, to develop "Battle of Belle Grove or Cedar Creek: Self-Guided Tour," a guide that provides an in-depth tour and history of the Battle of Cedar Creek.

Once GMP planning has identified the intended uses of various sections of the park, routes can be updated to create the most direct route to capture the key sites in an order that provides the best understanding of the battle. As noted, a visitor center could be the starting point for most visitors' experience of the park and therefore its location will have a significant impact on the routing of visitors.

For areas of the park that are "loops" such as the Belle Grove Road, Meadow Mills Road, Veterans Road and Route II, or Bowmans Mill Road and Long Meadow Road or Pouts Hill Road, identifying appropriate "routes" can focus traffic in a single direction, reducing the number of vehicles that need to pass each other or cross the road to access driveways or pull-outs.

6.6.4 Special Events

The CCBF annually organizes a reenactment of the Battle of Cedar Creek that attracts approximately 6,000 re-enactors and 6,000 spectators for the two day event. In 2006, CCBF will host a reenactment of the Battle of First Manassas in commemoration of its 145 anniversary, 12,000 re-enactors are expected in addition to thousands of spectators. These events, major undertakings for any organization, are particularly impressive and challenging in a town that has a population of only 1,000. Town administrators see the reenactment as a major boon for the town, providing name recognition for Middletown. While the event is not thought to bring in significant tax dollars, town organizations such as the Middletown Volunteer Fire and Rescue Company rely on funding conducted during the reenactments. While Middletown supports the reenactment, many locals try to avoid Middletown during the reenactment due to heavy congestion. Second hand reports state that traffic can back up from the battlefield through Middletown, along Reliance Road all the way onto Exit 302 on I-81.

A typical schedule for the Battle of Cedar Creek brings thousands of re-enactors to the battlefield between noon Friday and 9:00 am Saturday. Many participants check in at a field on the corner of Route II and Reliance Road, just off I-8I at Exit 302. After unloading at the camp areas, re-enactors park their cars using the parking area behind the CCBF Visitor Center, the auxiliary lot across the Belle Grove Road from the Plantation and a field adjacent to the Monte Vista House. Spectators arrive throughout the weekend and park at Fisher Diagnostics, adjacent to the CCBF Visitor Center and at the edge of the battlefield along Route II. While many of the re-enactors park their cars when they first arrive and do not use them again until they leave, spectators may make multiple trips in and out of the battlefield area.

CCBF hires Frederick County School's buses and drivers to run a loop around the battlefield to shuttle participants and re-enactors throughout the site, stopping at all parking areas, both camps and the main gate. CCBF works closely with the town of Middletown to orchestrate the event and the Sheriff receives assistance from Frederick County to monitor and direct traffic.

Primary transportation issues associated with the reenactments include:

- increased traffic through Middletown,
- parking on historic battlefields and
- conflicts between pedestrians and vehicles along Route II.

One way to minimize the impacts to both the historic battlefields and traffic through Middletown could be to move spectator parking to a more remote location, such as the lot at the corner of Reliance Road and Route II or parking lots at Lord Fairfax Community College, 2/10ths of a mile to the north. Since these areas are adjacent to the interstate exit and outside the boundaries of CEBE, their use would reduce traffic through downtown and significantly reduce the need to have people park on the core historic battlefield. Additional shuttle service would be required to make this feasible.

Since it is likely that most re-enactors will need drive to the battlefield to unload their gear, remote parking is of less benefit, and might in fact increase the number of trips. In order to reduce the impact of travel by re-enactors on the town of Middletown, re-enactors could be directed to use I-81 Exit 298 to reach their designated parking areas. A smaller registration area could be set up adjacent to the battlefield if participants were encouraged to pre-register. Exit 298 is approximately the same distance (just over two miles) as Exit 302, but there is much less development along this section of Route II.

CCBF and Middletown officials should work with the Virginia Department of Transportation (VDOT) to have temporary variable message signs placed along I-66 and I-81 and possible at major intersections adjacent to off-ramps to alert participants and other drivers of recommended routes and potential delays. By working with VDOT, information and alerts associated with the reenactment can also be included in Virginia's 511 Traffic and Travel Information System to assist participants in planning their trip.

While remote parking will reduce traffic along Route II during the reenactment weekend, with the CCBF Visitor Center and re-enactor parking on the east side of Route II, there is still great potential for vehicle pedestrian conflicts along Route II. Running the shuttle service in a clockwise direction allows passengers to board and alight from the correct side of the road to access the Battlefield and Belle Grove Plantation without needing to cross the street. Identifying specific crossing points and using police and volunteers to monitor these points can go a long way to minimize potential conflicts.

During the evenings, such as after the Civil War Ball, is a time of particular concern for safety. For people used to the night-glow of cities, the lack of roadway lighting can make seeing pedestrians particularly difficult. Some options for minimizing the risk of an incident at night include 1) encourage use of the shuttle¹³, 2) guide participants to use one or two locations to cross, and 3) use some source of artificial lighting (i.e., temporary overhead lights, flares, or flashlights) to illuminate these crossing areas.

³ In order to accommodate the crowds, additional service may need to be organized to shuttle people in a timely manner.

7 Summary and Next Steps

The future of CEBE is currently being envisioned through the development of the park's first GMP. Decisions made during GMP planning will impact the park's transportation needs in the future. While GMP participants have some control over the future of CEBE, the park will continue to be impacted by development decisions and transportation projects managed by local jurisdictions and the state. A summary of key information and considerations needed to understand the current and future transportation and development landscape that park visitors will encounter is provided below.

7.1 Park Transportation

7.1.1 Park Roadways

While no specific improvements to park facilities have been finalized, the existing road network has adequate capacity to absorb expected future visitation levels of 50,000 to 250,000 visitors annually. This assumes that key activity centers, such as a regional visitor center, are located on primary roads. Back roads, such as those in the Bowman-Long Meadow area, can accommodate some additional traffic but may not be appropriate as means of servicing locations that all types of visitors see as a crucial place to visit.

Wayfinding signs and vehicular and/or bike tour routes would make it easier for visitors to absorb the history and key sites within the park. Different routes could be developed that focus on the numerous cultural, historical, and natural stories preserved by the park.

7.1.2 Parking

Parking needs will depend on what activities are planned. When planning parking areas for different locations, the following questions should be considered:

- How many people will visit this location? (What visitor types? What percentage of all visitors?)
- How long will they spend? (Five minutes? Two days?)
- Do school or tour buses need to be accommodated? If so, how many?
- How close to the attraction is the parking? Is the connecting path accessible?
- Are there adequate sight lines for vehicles to safely enter and exit the parking area?
- Does the parking area interfere with the landscape or cause damage to historic artifacts?
- When do people come—in the morning? In the afternoon? On weekdays? On weekends? Is seasonality a factor?
- What requirements do special events bring?

7.1.3 Paths and Trails

The following concepts have been proposed for connecting various sections of the park and connecting the park to regional trail systems:

- Riverside walking paths including
 - The Shenandoah River between Strasburg town park and Keister Tract
 - Along and across Cedar Creek, particularly south of I-81
- Connecting Keister Tract and George Washington National Forest
- Interpretive trails
 - Between Belle Grove Plantation, the Heater House, the CCBF visitor center and other key locations within the Northern Battlefield.
 - Within the Bayliss Tract (existing)
 - Through Keister Tract
 - Along entrenchments in partner-owned property in the Bowman-Long Meadow area

7.2 Partnerships & Development Activities

As a "partner park" adjacent to five local jurisdictions, the ability to work with other organizations is crucial. CEBE and its partners all play significant roles in how visitors experience the area. Each of the partners has physical and human assets available, but partners also have constraints on their activities based on their mission and organizational structure. By recognizing where there are opportunities for partners to cooperate and in what areas partner organizations may have conflicting interests, CEBE can shape its relationships with its partners to collaborate and benefit from each organization's strength while finding acceptable compromises when goals conflict.

It is not expected that regional development will have major impacts on the park transportation system, although traffic volumes along Route 11 may increase. The visual intrusion caused by the development is more likely to be an issue. CEBE will need to work with each of the five surrounding jurisdictions in order to minimize the visual impacts of planned development. One way to work cooperatively with the jurisdictions is to assist in developing zoning regulations, design standards, and design review processes that appropriately address the overlapping interests of CEBE and the surrounding municipalities.

CEBE will also need to develop a relationship with VDOT, which is responsible for all transportation projects in the area. Areas in which CEBE may be able to work with VDOT include:

- Minimizing the impact of I-81 expansion on the park
- Developing historically appropriate traffic calming along Route II
- Creating vehicle pull-outs in the Bowman-Longfellow area
- Providing assistance with traffic management during special events, by providing variable message signs on I-81 and I-66 and providing alerts through the state's 511 system

7.3 Next Steps

As noted earlier, decisions made during the GMP process will impact the future transportation needs of the park. Once the GMP has been approved, CEBE will need to conduct additional analysis in order to align the park's transportation system with its needs. This section outlines additional activities that will be needed as the park is further developed.

7.3.1 Visitation Patterns

Once concepts for various activity centers have been better defined, the park will need to conduct more detailed analyses of park visitation patterns. Focus groups—perhaps including local residents, educational groups, or Civil War enthusiasts—could be formed to provide feedback on how those types of visitors would use the park. Also, a visitor intercept survey could be used to identify the relative concentration of visitors in activity centers throughout the park, and to articulate how visitors experience and move through the park.

7.3.2 Engineering and Design Studies

Once visitation patterns are better understood, specific sites can be evaluated to determine the need for additional or upgraded parking, road improvements to increase capacity, and appropriate locations for pull-offs, and the feasibility and cost of bicycle and pedestrian trails within and connecting to the park. A roadway survey should be conducted to identify capital improvement and maintenance strategies to resolve potential problems such as drainage, rutting, visibility sight lines for all users, and other impediments that might inhibit visitors from choosing to tour the park by bicycle. The needs of reenactment participants and spectators should be considered as facilities are built or upgraded. Depending on the level of development in the Northern Battlefield, pedestrian access across Route II—between the CCBF Visitor Center, Belle Grove Plantation, Heater House, and other attractions located on the main battlefield—will need to be considered. All studies and future plans will need to balance current engineering standards with safety and the preservation of the historic landscape within the park.

7.3.3 Route 11 Transportation Management Plan

Route II serves as a key conduit for local traffic and park traffic. Both Strasburg and Middletown's Comprehensive Plans describe improvements to Route II. Working together with VDOT, CEBE, Strasburg, and Middletown can create a unified plan for Route II between downtown Strasburg and Middletown's northern boundary. A comprehensive plan could incorporate increasing vehicular travel demand and pedestrian and bicycle facilities throughout the corridor, while allowing unique visual gateways and appropriate roadway designs for each distinct segment of the roadway. For the section of the road adjacent to the Northern Battlefield, CEBE will also want to work with CCBF to incorporate the needs of visitors during special events such as reenactments.

7.3.4 Wayfinding & Traveler Information

Additional signage will be needed to direct visitors through the park. Route II serves as a natural axis for visitors. Signs identifying park resources and approximate distances at each turn-off would direct visitors and remind other traffic of the park's presence. Signage directing visitors from each activity center back to Route II and other points of interest would help orient visitors. Additional signage from the highways and other sites that attract tourists and those with an interest in history would make it easy for visitors to include CEBE as a part of a larger regional tour. CEBE can work with regional organizations that already have existing tour concepts, such as SVBF, the Winchester-Frederick County Convention and Visitors Bureau (which has developed the "Apple Trail"), and the Virginia Civil War Trails program.

Working together with its partners to develop its GMP, CEBE has the opportunity to integrate a wealth of resources into coherent experiences of the area's unique histories, and also to provide locally and regionally attractive recreational opportunities. The careful consideration of transportation needs both during and after GMP planning, and by partner organizations as they plan their future growth, is crucial for maintaining the natural and historic resources that make CEBE special, and for ensuring that these experiences are easily accessible to park visitors.

Appendix A Map of Key Local Roads

Map A.1 Key Roadways Source: Volpe Center



Appendix B I-81 DEIS Summary

B.1 Introduction

This document summarizes the traffic conditions and impacts of various build concepts on I-81 and adjacent roadways in the vicinity of Cedar Creek and Belle Grove National Historical Park. The study area consists of the I-81 corridor between Exit 291 in Shenandoah County and Exit 307 in Frederick County, with some analysis extending north to Exit 313. This segment of highway currently consists of two lanes in the northbound direction and two lanes in the southbound direction.

Information was drawn from many of the DEIS documents. Specific citations are provided in many locations. The following abbreviations are used to refer to specific sections of the DEIS. When no abbreviations are noted, the reference is to the main DEIS text.

- Executive Summary of DEIS ES
- Transportation Technical Report TTR
- Toll Impact Study TIS

B.2 Existing Conditions

B.2.1 Existing Traffic Volumes (TTR Tables 3-4 and 3-5)

Within the study area, existing peak hour northbound traffic volumes along I-81 vary between 1,300 vph and 1,550 vph. Existing peak hour southbound traffic volumes along I-81 vary between 1,500 vph and 1,750 vph. Traffic volumes on the I-81 ramps (On-Ramps and Off-Ramps) currently vary between 50 vph and 800 vph.

B.2.2 Existing LOS (TTR Tables 3-4, 3-5, and 3-7)

Throughout most of the study area, current freeway operations during the peak hour are at Level of Service (LOS) B, only the southbound segment between Exit 298 and Exit 300 is currently operating at LOS C. Throughout most of the study area, current freeway ramp operations during the peak hour are at LOS A and LOS B, only the southbound Exit 300 On-Ramp is currently operating at LOS C. Existing ramp intersection operations in the study area vary between LOS B and LOS F, LOS F conditions are found at the intersection of the Exit 298 southbound ramps at U.S. Route II. (TTR Figure 3-5 showing existing LOS is attached)

B.3 No Build Conditions

No build conditions assume that currently funded safety improvements including those planned at Exit 307 and 310 will be implemented. Based on expected travel demand, traffic volumes are expected to increase, and operations along the I-81 corridor are expected to decrease.

B.3.1 No Build Traffic Volumes (TTR Tables 4-12 and 4-13)

Within the study area, 2035 No Build peak hour northbound traffic volumes along I-81 are expected to vary between 2,900 vph and 4,000 vph. 2035 No Build peak hour southbound traffic volumes along I-81 are expected to vary between 3,250 vph and 4,000 vph. In the 2035 No Build condition in the study area, traffic volumes on the I-81 ramps (On-Ramps and Off-Ramps) are expected to vary between 150 vph and 1,300 vph.

B.3.2 No Build LOS (TTR Tables 4-12, 4-13, and 4-15)

In the 2035 No Build condition in the study area, freeway operations during the peak hour are expected to operate at LOS D and LOS E. In the 2035 No Build condition, the freeway ramp operations during the peak hour are expected to operate at LOS C through LOS F conditions; LOS F conditions are expected at the northbound Exit 300 Off-Ramp, the southbound Exit 298 Off-Ramp, and the southbound Exit 307 Off-Ramp. In the 2035 No Build condition, 7 of the 10 ramp intersections in the study area are expected to

operate at LOS F; the remaining 3 are expected to operate at LOS E. (TTR Figure 4-9 showing future LOS is attached)

B.4 Build Conditions

The Transportation System Management (TSM) project concept consists of safety improvements (e.g., lengthening acceleration lanes at interchanges), truck climbing lanes, Intelligent Transportation System (ITS) elements, law enforcement and park-and-ride projects. These TSM concepts, including improving ramp geometry and/or length at Exit 291, will be included as part of all Build concepts carried forward.

B.4.1 Add Lane Concepts

In 2035, without the application of tolls or improvements to rail facilities, all of the I-81 segments within the study area will require two additional lanes in each direction (Executive Summary (ES) Table ES-5). The following is a list of the different lane concepts and their expected sufficiency levels within the study area:

- Add 1 Additional Lane in Each Direction: Not sufficient for study area
- Add 2 Additional Lanes in Each Direction: Sufficient for study area
- Add 3 Additional Lanes in Each Direction: Excess for study area
- Uniform 6-Lane Concept for Entire Virginia I-81: Not sufficient for study area
- Uniform 8-Lane Concept for Entire Virginia I-81: Sufficient for study area

All segments within the study area need at two additional lanes to meet expected demand in 2035 while one lane NB and SB will be sufficient to meet demand just south of Winchester between Exit 310 and 313. The separate lane concepts identified below would be applied to the study area since they require more than one lane in each direction.

B.4.2 Rail Concepts (pages 3-9 to 3-14)

Four rail concepts have been investigated as described in Table B.I. Concepts 1-3 consider increasing levels of improvement to the Norfolk Southern Piedmont Line with a strong preference towards Concept 3 (Figure 3-3 attached), which builds on Concepts 1 and 2. Concept 4 makes improvements to the Norfolk Southern Shenandoah Line, which parallels I-81. Each of the rail concepts has a different effect on the diversion of freight from roadway to rail, but each only slightly reduce the need to increase capacity on I-81. Concept three has been identified as the most appropriate rail concept as it provides the best cost benefit ratio. While not discussed here, the DEIS combines Rail Concept 3 with other Build concepts to determine the total potential impacts of I-81 improvements.

Concept	Improvement	Cost (in billions of 2015 dollars)	% truck traffic diverted	Reduction in additional lane miles needed
Concept 1	Minor improvements on Piedmont Line from W. Virginia to Manassas	\$0.14	0.7%	none
Concept 2	More significant improvements to entire Piedmont Line	\$0.7	2.9%	23
Concept 3	Concept 2 plus minor improvements to Shenandoah Line including Roanoke to Lynchburg	\$0.7	3.5%	30
Concept 4	Major improvements to entire Shenandoah Line adjacent to I-81	\$5.4	5.8%	47

B.4.3 Separated Lane Concepts (pages 3-21 to 3-27)

Separated lane concepts were considered that segregated either truck or car traffic. Separate on- and offramps are provided when the separated lanes are exclusive. In the non-exclusive concepts the identified vehicle type is the only one allowed in the separated lane, but traffic from those lanes crosses the general purpose lanes to use the existing on- and off-ramps.

A summary of the impact of the separated lane concepts is provided in Table B.2. (From TTR Table 5-5). Since the separated lane concepts limit the lanes in which each vehicle type can spread through, the separated lane concepts generally do not manage traffic as efficiently as the base concepts.

The following describes the basic impacts of the concepts identified in Table B.2. In concepts B, C, & H, the two existing lanes are expected to be car exclusive. In concepts E & J trucks exclusively use existing lanes. In concept F & K, 20% of cars are expected to use the existing lanes in addition to all trucks.

Two additional lanes:

- (A) Two general purpose lanes: base concept
- (B) **One exclusive truck, one exclusive car**: provides cars with three truckless lanes; single truck lane unable to carry demand.
- (C) **Two exclusive truck**: meets truck needs, but not car needs because it doesn't provide additional car capacity although it does remove truck traffic from car lanes
- (D) **Two non-exclusive truck**: Better for trucks, worse for the cars than exclusive lanes because cars are not provided additional capacity and still have to interact with trucks
- (E) **Two exclusive car**: equivalent to (B) in that cars only have two lane but use new interchanges
- (F) **Two exclusive car**: Slightly better than (C) and (E) for cars but has significant negate impacts on truck travel.

Three additional lanes:

- (G) Three general purpose lanes: base concept
- (H) **Two exclusive truck, one exclusive car**: Not quite enough capacity, but balances truck (2 lanes) and car (three lanes) needs closest to base concept
- (I) **Two non-exclusive truck, one general purpose**: Excess capacity provided for truck; equivalent for cars as compared to base concept; slightly worse for cars than (G) in that cars have to interact with trucks
- (J) **Two exclusive car, one exclusive truck**: Way over capacity for trucks, while not providing cars additional capacity
- (K) **Two exclusive car, one general purpose**: Assumes 20% of cars would use general purpose lanes. In reality, this percentage is higher because otherwise the exclusive car lanes would be more congested than the general purpose lanes. Better than (J) in that it provides additional capacity for cars but still not as beneficial as (H).

Table B.2 Summary of Separated Lane Concepts Source: VDOTI-81 DEIS

				Fych	ICIVO	Tri	ick	General		
		Г	New Lanes	5					Purpose	
on		Exclusive Car	Exclusive Truck	Shared Lanes	Deficient	Excess	Deficient	Excess	Deficient	Excess
General Purpose	General Purpose	0	0	4					76	254
Exclusive Truck	Exclusive Car	3	Ι	0	I4	302	384	0		
Exclusive Truck	Exclusive Truck	2	2	0	348	22	65	266		
Non-exclusive Tru	ckNon-exclusive Truck	0	2	2			IO	422	495	IO
Exclusive Car	Exclusive Car	2	2	0	362	8	65	279		
Exclusive Car	Exclusive Car	2	0	4	I4I	36			171	105
tion										
General Purpose	General Purpose	0	0	5					0	574
Exclusive Truck	Exclusive Car	3	2	0	I4	302	65	266		
ckNon-exclusive Tru	0	2	3			IO	422	64	155	
Exclusive Car	Exclusive Car	2	3	0	362	8	0	585		
Exclusive Car	General Purpose	2	0	3	I4I	36			0	479
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B.4.4 Toll Concepts

VDOT is considering four tolling scenarios (Table B.3), high and low tolls for all vehicles and high and low toll rates for trucks only.

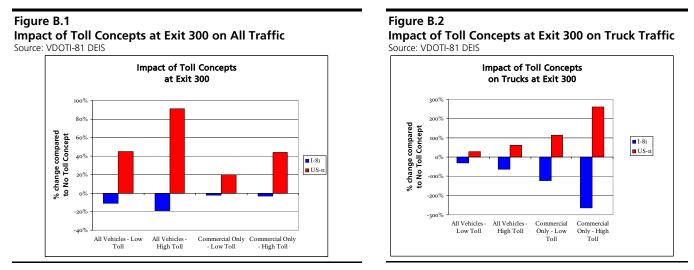
Table B.4 shows the change in traffic on I-81 and US-11 based on a generic build situation, with no tolls. (Toll Impact Study (TIS) Table 2-1).

Table B.3 Toll Scenarios Source: VDOTI-81 DE	EIS	Oli 0.14 0.07 oli N/A 0.04	
		Car	Truck
Toll Scenario			
All Vehicles	Low Toll	0.08	0.04
	High Toll	0.14	0.07
Commercial	Low Toll	N/A	0.04
Only	High Toll	N/A	0.07

Table B.4 Impact of Build, No-Toll Concept – All Vehicles Source: VDOTI-81 DEIS

Exit Number	I-81	US-11
300	13.0%	-48.0%
310	19.0%	-17.0%

Figure B.1 illustrates the impact of the various tolling scenarios on total traffic levels (TIS Table 2-3) while Figure B.2 shows the impacts of the tolling scenarios specifically on truck traffic (TIS Table 2-5). Similar, but less dramatic changes to the toll scenarios are expected South of Exit 310.



While these figures show increased truck traffic on US-II for All Toll scenarios, only the All Vehicles High Toll scenario actually increases traffic levels as compared to no-build conditions. Truck traffic, not surprisingly, is more heavily impacted by the commercial toll concepts. Since cars are not diverted by the commercial toll, heavier traffic volumes plus tolls would lead more trucks to use alternatives as compared to All Toll scenarios. Still the high commercial toll is the only scenario to create noticeably more truck traffic on US-II than currently existing levels.

Appendix C Visitation at Comparable NPS Units

Table C.1 Visitation at Comparable NPS Units Source: NPS

							ē	Nearest Metrop	olitan Area (NMA)	Activities / Amenities								1		CEBE Equivale	nts							
Expected Similarity*	Park	Region	Designation	State	annual visitation	Acreage	visitors per acı	Name	Population	Miles from park	Visitor Center	Programs / Tours	Self-Guided Tour /Trail	Guide for Hire	Picnic Area	Camp-ground	Hiking	Horestrail	Swimming	Bath-house	Boating	Boat Launch	Fishing Bicycle Trail	Matches to CEBE	MMA proximity density (pop/miles)	(A) Visitation by Area	(B) Visitation by prox. to pop. center	Avg. of A & B (if < 500,000)
	Cedar Creek	NERO			?????	3500		Washington, DC	572,059	85	x	x	x		x	х	x	x	x		-	x		1	2 6,730	112,106	14,836	
	Fort Pulaski NM	SERO		GA	308,784	5365		Savannah, GA	131,510	1	х	х	х		х		х					~	х х		9 131,510.00	201,443	375,678	288,561
	Horseshoe Bend NMP	SERO		AL	73,260	2040		Birmingham, AL	242,820	85	х	х	х		х			х	х		х	х	X		0 2,856.71	125,691	172,593	
	Chickamauga & Chattanooga NMP	SERO		GA	908,110	8292		Chattanooga, TN	155,554	1	х	х	х		х	х		х			_				7 155,554.00	383,307	934,065	383,307
	Ocmulgee NM	SERO		GA SC	134,404	701		Macon, GA	97,255	1	x		х		x		х						х		5 97,255.00	671,059	221,115	
	Kings Mountain NMP Moores Creek NB	SERO		NC	268,449 54,541	3945 88		Spartanburg, SC (County) Wilmington, NC	253,791 75,838	20	X	x	<u>×</u>			X	x	x					x		6 1,880.00 5 3,791.90	238,168 2,169,244	169,241 96,803	203,704 96,803
		SERO NERO		VA	144.640	1695			65.269	20 25	x	x	X		x						_		x		4 2.610.76	2,169,244	372.858	335,762
	Appomattox Court House NHP Andersonville NHS	SERO		GA	144,640	480		Lynchburg, VA Columbus, GA	185,269	25 66	x	×	×		x		х			-	_				4 2,610.76	1.087.898	372,858	
	Cowpens NB	SERO		SC	208,751	790		Spartanburg, SC (County)	253,791	20	x	X	X		X						_				4 2,014.00 3 12.689.55	924.844	490.506	
	Harpers Ferry NHP	NCRO		WV	206,751	2408		Washington, DC	572.059	65	x	×	x		x		x				_		x	-	6 8.800.91	365.254	490,506	278,711
	Saratoga NHP	NERO		NY	106.201	2406		Saratoga, NY	5/2,059	- 65	x	X	X		x			x			_		x		5 5.141.00	128.839	192,107	128.839
	Russell Cave NM	SERO		AI	22,923	310		Chattanooga, TN	155.554	35	x	x	×		x		x	^		_	_				5 4.444.40	258.808	34.712	
	Booker T. Washington NM	NERO		VA	17 435	239		Roanoke, VA	94,911	12	x		x		×		x				_				5 7.909.25		14.836	
	Guilford Courthouse NMP	SERO		NC	387.339	239		Greensboro, NC	223.891	1	x	x	×		^		x			-			×		5 223.891.00	5.945.986	276.805	
	Richmond NBP	NERO		VA	76.657	1430		Richmond, VA	197,790	1	x	x	×		x		L^				-		^	-	4 197.790.00	187.622	62.011	124.816
	Abraham Lincoln Birthplace NHS	SERO		KY	196,319	344	571	Louisville, KY	256.231	55	x	^	x		x		x		-	-	-				4 4,658.75	1.997.427	283,605	283.605
	Kennesaw Mountain NBP	SERO		GA	1.113.631	2879		Atlanta, GA	416.474	27	Ŷ		^		x		x	x		-	-				4 15.424.96	1.353.841	485.891	485.891
	Ninety Six NHS	SERO		SC	31.678	989		Columbia, SC	116,278	70	x	x	x		x		x			-			x		7 1.661.11	112.106	128,345	
	Stones River NB	SERO		TN	206,532	617		Murfeesboro, TN	68.816	1	×	x	x		x		x								6 68.816.00	1.171.573	20,198	20,198
	George Washington Birthplace NM	NERO		VA	66.807	550		Richmond, VA - D.C	197790-572059	50-50	x	x	x		x		x						x		6 15,396.98	425,135	29,202	
	Fredericksburg & Spotsylvania NMP	NERO		VA	488.833	7262		Richmond, VA - D.C	197790-572059	50-50	x	x	x		x		x								5 15.396.98	235,598	213.672	
	Morristown NHP	NERO		NJ	275,969	1705	162	Morristown, NJ	18.544	1	х		х				x	х							5 18.544.00	566,505	100.156	100,156
	/icksburg NMP	SERO		MS	830,783	1739		Vicksburg, MS	26,407	1	x		x	х	x		x								4 26.407.00		211.734	
3 (Gettysburg NMP	NERO	NMP	PA	1,715,011	4777	359	Gettysburg, PA	7,490	1	х	х	x	х	х	х	x								6 7,490.00	1,256,549		
3 5	Shiloh NMP	SERO		TN	313,223	4112	76	Memphis - Nashville, TN	307643-545524	110-150	х		x		х		x								4 6,433.58	266,605	327,659	297,132
3	/alley Forge NHP	NERO	NHP	PA	1,190,636	3006	396	Philadelphia, PA	1,517,550	25	х		х		х		x				х	х	x x		8 60,702.00	1,386,303	132,007	132,007
3 1	Manassas NBP	NCRO	NBP	VA	718,877	4407	163	Washington, DC	572,059	25	х	x	х		х		x	x			1		x		7 22,882.36	570,926	211,434	211,434
3 /	Andrew Johnson NHS	SERO	NHS	TN	49,374	17	2,904	Winston-Salem, NC	185,776	34	х	х	х												3 5,464.00	10,165,235	60,815	60,815
3 (Cumberland Gap NHP	SERO		KY	968,015	20498	47	Middlesboro, KY	10,384	1	х	х			х	х	х	х					х		7 10,384.00	165,287	627,392	165,287
3.	Jean Lafitte NHP & PRES	SERO	NHP &	PRILA	512,198	14475	35	New Orleans, LA	484,674	1	х	х	х		х		х				х		х		7 484,674.00	123,847	169,086	146,467
3 (Colonial NHP	NERO	NHP	VA	3,333,134	8609	387	Richmond, VA	197,790	66	х	х	х		х		х						X X		7 2,996.82	1,355,090	7,485,387	
3	owell NHP	NERO	NHP	MA	700,049	29	24,140	Boston, MA	283,588	31	х	х	х		х						х	х	х		7 9,148.00	84,488,612	515,020	
	Fort Matanzas NM	SERO		FL	960,447	299		Jacksonville - Daytona	735617-64112	45-55	х		х						х		х		х		5 17,512.72	11,242,691	369,098	369,098
3.	Jimmy Carter NHS	SERO	NHS	GA	83,120	45	1,847	Columbus, GA	185,781	70	х	x	x	х	х										4 2,654.01	6,464,850	210,776	210,776
3 (Castillo de San Marcos NM	SERO	NM	FL	621,923	20	31,096	Jacksonville - Daytona	735617-64112	45-55		х	х												2 17,512.72	108,836,525	239,004	239,004
	Chosen from NHP, NBP, NMP, NM, I	NB, NHS	in SE a	nd NE Re	gions.			1																				1
1 5	Seem like they should be good																											
21	Many similar characteristics																											
3	Expected similarities but don't seem right.																											

Appendix D Regional Historic and Tourist Sites

The following list of regional and historic tourist sites was provided by Patrick Farris, Warren County representative to the CEBE Park Advisory Commission and Executive Director of the Warren Heritage Society.

D.1 Frederick County

D.1.1 Apple Trail Driving Tour

This 45-mile driving tour takes you through scenic and historic sites throughout the community using an audio tape as your guide. Just pop the tape or CD in, watch for directional signage, and get lost in the Apple Trail. Available at the Visitor Center at 1360 S. Pleasant Valley Rd., Winchester. (540) 542-1326/(877) 871-1326. Cassettes \$5, CDs \$8.

D.1.2 Battle of Third Winchester Driving Tour

The start of Union General Philip Sheridan's devastating Shenandoah Campaign, Third Winchester was one of the largest Civil War battles in the Valley. Printed driving tour includes sites and signage throughout battlefield area. You may pick up a free copy of the tour at the Visitor Center, 1360 South Pleasant Valley Road, Winchester. (540) 542-1326/(877) 871-1326. Special tours for groups may be available with advance notice and for a fee.

D.1.3 Belle Grove Plantation

I-81 Exit 302. The 1797 home of Major Isaac Hite and his wife, Nelly Madison Hite, sister of President James Madison. Features authentic Jeffersonian architecture and breathtaking mountain views of Virginia's Shenandoah Valley. Epicenter of the 1864 Civil War Battle of Cedar Creek. Official National Trust for Historic Preservation Site. The historic 1797 Manor House is open for tours daily April 1–Nov 3, Monday–Saturday 10 am–4 pm and Sunday, 1–5 pm. 540-869-2028. www.bellegrove.org

D.1.4 Battle of Cedar Creek Visitor Center

8437 Valley Pike, Middletown, VA 22645. (540) 869-2064/(888) 628-1864. <u>http://www.cedarcreekbattlefield.org</u>. April-October: Mon thru Sat: 10 a.m. to 4 p.m. Sun: 1 p.m. to 5 p.m.

D.1.5 Cacapon State Park

Cacapon Resort Park received its name from being located in the shadows of the wide expanse of Cacapon Mountain, and includes within the park boundary the northernmost point of the State of Virginia. This mountain is the highest peak in the eastern panhandle of West Virginia reaching an elevation of 2,300 feet. The Cacapon River parallels the mountain in a meandering route beneath the mountains western slope. 818 Cacapon Lodge Drive Berkeley Springs, WV 25411. (304) 258-1022/1-800-CALL WVA.

D.1.6 Cedar Creek Battlefield Foundation

Annual anniversary reenactment of the Battle of Cedar Creek in October. Thousands of cavalry, artillery and infantry soldiers recreate the last great battle of the Shenandoah Valley on original field. Daily battles and demos. Food and merchants. 888-628-1864 or 540-869-2064. Tickets and info: www.cedarcreekbattlefield.org

D.1.7 Historic Stephensburg Museums

5408 Main Street, Stephens City (540) 869-1700 <u>stonehse@shentel.net</u> Open seasonally Admission Fee

D.1.8 Kernstown Battlefield

610 Battle Park Drive, Winchester (540) 6621824 <u>www.kernstownbattle.org</u> <u>kba@kernstownbattle.org</u> Open seasonally Free

D.1.9 Rose Hill

1850 Jones Road, Winchester (540) 662-1473 <u>www.glenburniemuseum.org</u> or <u>www.firstkernstown.org</u> Interpretive signage only Free

D.1.10 Pritchard Farm

610 Battle Park Drive, Winchester (540) 6621824 <u>www.kernstownbattle.org</u> <u>kba@kernstownbattle.org</u> Open seasonally Free

D.1.11 Stephenson's Depot

Route II at Old Charles Town & Milburn Roads north of Winchester Interpretive signage only Free

D.1.12 Redbud Run at Third Winchester

Redbud Road, east of Rt. 11N, Winchester 800-298-7878 www.civilwar.org/thirdwinchesterbrochure Interpretive signage only Free

D.1.13 North-South Skirmish Association

Gainsboro

D.1.14 The Wayside Inn

7783 Main St., Middletown. I-81 Exit 302 (crossroads I-66 and I-81). Historic country inn with antique appointed guest rooms that blend a bygone era with modern comforts. Serving lunch, dinner and a Sunday buffet brunch. The Wayside has a continuing tradition of hospitality, fine food and lodging for more than 200 years. Weddings, private and corporate events in a unique setting. 540-869-1797 or 877-869-1797. Email info@alongthewayside.com. www.alongthewayside.com

D.1.15 Virginia Landmarks Register and National Historic Register sites

- Cedar Creek Battlefield and Belle Grove National Historic Park Middletown
- Cedar Creek Battlefield and Belle Grove Middletown
- Saint Thomas Chapel (Saint Thomas Episcopal Church) Middletown

- Willa Cather Birthplace Gore
- Hopewell Friends Meetinghouse Inwood
- John Hite House (Springdale) Stephens City
- Springdale Mill Complex Stephens City
- Monte Vista Middletown
- Willow Shade Gore
- Newtown/Stephensburg Historic District Stephens City
- Frederick County Poor Farm Winchester
- Sunrise Capon Bridge, Gore
- Rose Hill Farm Winchester
- Old Stone Church White Hall
- Opequon Presbyterian Church Winchester
- Frederick County Courthouse Winchester
- Opequon Historic District Winchester, Hayfield
- Homespun Winchester
- Middletown Historic District Middletown
- Old Forge Farm Middletown
- Long Meadows Winchester
- Valley Mill Farm Stephenson

D.1.16 Virginia Historical Highway Markers

- Action at Stephenson's Depot, A-I: Rt. II at Rt. 664
- Action at Stephenson's Depot, A-I*: Rt. II, 4 miles north of Winchester
- Action at Rutherford's Farm, A-2: Rt. 11 at Rt. 664
- Action of Carter's Farm, A-2*: Rt. 11 at Rt. 664
- Capture of Star Fort, A-3: Rt. 11, 2.75 miles north of Winchester
- Fort Collier, A-4: At. II, .I miles north of Winchester
- First Battle of Winchester, A-5: Rt. 11, .1 miles north of Handley Blvd.
- First Battle of Winchester, A-6: Rt. 11 south of Winchester
- First Battle of Winchester, A-7: Rt. 11, .6 miles south of Winchester
- Second Battle of Winchester, A-8: Rt. 11, .18 miles south of Rt. 37
- Second Battle of Winchester, A-8*: Rt. II, .6 miles south of Winchester
- Battle of Kernstown, A-9: Rt. 11, 5.3 miles south of Stephens City
- Early and Crook, A-10: Rt. 11, .1 miles north of Kernstown
- First Battle of Winchester, A-II: Rt. II, 3.2 miles north of Stephens City
- House of First Settler, A-12: Rt. 11, 2.3 miles north of Stephens City
- Stephens City, A-12: Rt. 11, .16 miles south of Rt. T1017
- Stephens City, A-13: Rt. 11 center of Stephens City
- End of Sheridan's Ride, A-14: Rt. 11, 3.2 miles south of Stephens City
- Battle of Cedar Creek, A-15: Rt. 11, .2 miles north of Middletown
- Engagement of Middletown, A-16: Rt. 11 at Middletown
- Tomb of an Unknown Soldier, A-17: Rt. 11, 1 mile south of Middletown
- Old Stone Fort, A-37: Rt. 11 at Middletown
- Hackwood Park, A-38: Rt. 11, .19 miles east of Rt. 661
- Hackwood Park, A-38*: Rt. 11, 1.7 miles north of Winchester
- Chrisman's Spring, A-42: Rt. 11, 2 miles south of Stephens City
- Battle of Cedar Creek, A-56: Rt. 11, 1.3 miles south of Middletown
- Colonel John Singleton Mosby, B-16: Rt. 50 at Rt. 723
- Willow Shade, B-17: Rt. 50, .71 miles east of Gore
- Willa Cather Birthplace, B-18: Rt. 50 at Gore
- Second Battle of Winchester, B-19: Rt. 50, 2.5 miles west of Winchester
- Third Battle of Winchester, J-3: Rt. 7 at Rt. 656
- Third Battle of Winchester, J-3*: Rt. 522 at east entrance to Winchester

- Third Battle of Winchester, J-13: Rt. 7, .41 miles east of Rt. 716
- Third Battle of Winchester, J-13*: Rt. 50 at Winchester
- Defenses of Winchester, J-16: Rt. 522, 4 miles south of Winchester

D.2 Winchester City

D.2.1 African-American Heritage Driving Tour

This self-guided driving tour celebrates the African-Americans of Winchester of the past 200 years. From the homes of jazz great John Kirby to baseball star Spotsy Poles, the tour will take you on a memorable journey. Available at the Visitor Center, 1360 South Pleasant Valley Road, Winchester. (540) 542-1326/(877) 871-1326.

D.2.2 Patsy Cline Driving Tour

Celebrate the legendary Patsy Cline as you take the Patsy Cline driving tour in her hometown. Drive by her home on Kent Street, visit Gaunts Drug Store where she worked, and pay homage to her gravesite in Shenandoah Memorial Park. Pick up your copy of the driving tour at the Winchester-Frederick County Visitor Center, 1360 South Pleasant Valley Road, Winchester. (540) 542-1326/(877) 871-1326.

D.2.3 Patsy Cline Museum

D.2.4 Handley Regional Library Stewart Bell Archives

Featuring genealogical and historical research of the Lower Valley from 1732 to the present. The collection includes books, manuscripts, ephemera, maps, photographs, newspapers, periodicals, and court records. The library is also a stunning example of the exuberant Beaux Arts style and was designed by New York architects Stewart Barney and Henry Otis-Chapman. 100 West Piccadilly Street, Winchester, VA 22691. (540) 662-9041 ext. 23. <u>http://www.hrl.lib.state.va.us</u>. Tues-Wed I p.m.-8 p.m. Thurs-Sat 10 a.m.-5 p.m.

D.2.5 Winchester-Frederick County Visitor Center

1360 Pleasant Valley Avenue, Winchester 800-662-1360 <u>www.visitwinchesterva.com</u> <u>info@visitwinchesterva.com</u> Open daily 9:00am to 5:00pm

D.2.6 Civil War Orientation Center at Shenandoah University History and Tourism Center

20 S. Cameron Street, Winchester (540) 535-3543 - <u>www.theknowledgepoint.org</u> Open Monday to Friday 9:00am to 5:00pm

D.2.7 Old Frederick County Court House Civil War Museum

20 N. Loudoun St., Winchester (800) 542-1145 Open seasonally Admission fee

D.2.8 Glen Burnie Historic House and Gardens

804 Amherst Street, Winchester (540) 662-1473 www.glenburniemuseum.org Open seasonally Admission fee

D.2.9 National Historic District, Winchester

45-block National Register historic district and pedestrian walking mall filled with shops and cafes. Old Town Development Board: (540) 667-1815, <u>www.ci.winchester.va.us/otdb</u>

D.2.10 Museum of the Shenandoah Valley

901 Amherst St. US 50 West, Winchester. Opening April 3, 2005, this new museum anchors a regional history museum complex that includes the Glen Burnie Historic House and six acres of formal gardens. Following its April 2005 opening, the museum will be open year round. In 2005, the house and gardens will be open April 1-Nov 30. The house, gardens and museum are open Tuesday-Sunday, 10 am-4 pm. 888-556-5799. www.shenandoahmuseum.org

D.2.11 National Cemetery

401 National Avenue, Winchester Open daily Free

D.2.12 The Shenandoah Valley Discovery Museum

54 S Loudoun St, Winchester. Offering an interactive, hands-on, learning experience for the entire family. Open Monday-Friday 9 am-5 pm; Sunday 1-5 pm. Admission is \$5 per person. www.discoverymuseum.net. 540-722-2020

D.2.13 Shenandoah Apple Blossom Festival

I-81 Exit 313. 135 N. Cameron St. First weekend in May. Dances, lunches, parades, circus, carnival rides and games, band competitions. <u>www.sabf.org</u>. 800-230-2139 or 540-662-3863

D.2.14 Stonewall Cemetery, Mt. Hebron Cemetery Complex

East end of Boscawen Street, Winchester Open daily Free

D.2.15 Sheridan's Field Hospital

Opequon Ave near Hollingsworth Drive, Winchester (across Pleasant Valley Road from the Visitor Center) Interpretive signage only Free

D.2.16 Stonewall Jackson Headquarters Museum

415 N. Braddock St, Winchester (540) 662-6550 www.winchesterhistory.org Open seasonally Admission Fee

D.2.17 Fort Collier Civil War Center

922 Martinsburg Pike, Winchester (540) 667-5572 <u>www.fortcollier.com</u> Site open by appointment

- D.2.18 French & Indian War Foundation
- D.2.19 Winchester-Frederick County Historical Society
- D.2.20 George Washington Office Museum
- D.2.21 Abrams Delight Museum
- D.2.22 Virginia Landmarks Register and National Historic Register sites in Winchester City
 - Thomas J. Jackson Headquarters Winchester
 - Handley Library Winchester
 - Abram's Delight Winchester
 - Adam Kurtz House (Washington's Headquarters) Winchester
 - Old Stone Church Winchester
 - Glen Burnie Winchester
 - Winchester Historic District Winchester
 - Hexagon House Winchester
 - Winchester National Cemetery Winchester
 - John Handley High School Winchester
 - Douglas School Winchester
 - Fair Mount Winchester
 - Patsy Cline House Winchester

D.2.23 Virginia Historical Highway Markers

- Third Battle of Winchester, J-4: Rt. 522 at National Cemetery
- General Daniel Morgan, Q-4a: Rt. 50 at east limits
- Winchester, Q-4a: Rt. 50 at east limits
- Joist Hite and Braddock, Q-4b: Rt. 7 at east limits
- Winchester, Q-4b: Rt. 7 at east limits
- George Washington, Q-4c: Rt. 11 at north limits
- Lord Fairfax, Q-4d: Rt. 522 at north limits
- Winchester, Q-4d: Rt. 522 at north limits
- Colonel James Wood, Q-4e: Rt. 50 west of Rt. 11
- Winchester, Q-4e: Rt. 50 west of Rt. II
- Jackson's Headquarters, Q-4f: 415 North Braddock Street

D.3 Clarke County

D.3.1 Battletown Inn & Gray Ghost Tavern

I-81 Exit 315, 8 miles east of Winchester on Route 7. Nestled in the Shenandoah Valley, offering fine dining and accommodations at reasonable rates. Enjoy Gray Ghost Tavern and Garden Patio for casual fare. 800-282-4106 or 540-955-4100.

www.battletown.com

D.3.2 Berryville/Clarke County Chamber and Visitors Bureau

I-81 Exit 315. Clarke County is home to the Virginia State Arboretum, large dairy and horse farms, fox hunting, Beagling, and the annual Point-to-Point Races. Hike the Appalachian Trail or canoe the Shenandoah River. 540-955-4200. <u>www.clarkechamber.com</u>

D.3.3 Clarke County Historical Association

D.3.4 Historic Long Branch House Museum and Farm

830 Long Branch Lane, Millwood. 1811 restored Manor House on 400 acres at foot of Blue Ridge Mountains. Furnished with period pieces, antiques and arts. Beautiful gardens, horses and spectacular views. Open seasonally. Special events throughout year. Home of the Shenandoah Valley Hot Air Balloon & Wine Festival. Grounds open year round, mansion tours April–October, Saturday and Sunday only or by appointment. Groups of 10 or more year round by advance reservation. Located on Route 624 (Red Gate Road) 10 miles east of Winchester, 65 miles west of Washington DC, just off Route 50. 888-558-5567. www.historiclongbranch.com

D.3.5 Holy Cross Abbey

North of Rt. 7 on the west bank of the Shenandoah River, Clarke County (540) 955-1425 Visitor center open year-round Battlefield by appointment only Free

D.3.6 State Arboretum of Virginia

I-81 Exit 313. US 50, 9 miles east of Winchester. 170 acres of native trees and shrubs, walking trails, bridle trail, 3-mile loop drive. Workshops, lectures and special events. Open dawn to dusk, 365 days. Dogs welcome. Free admission. <u>www.virginia.edu/blandy</u>. 540-837-1758

D.3.7 Virginia Landmarks Register and National Historic Register sites in Clarke County

- Greenway Court Boyce
- Long Branch Boyce
- Annefield Stephenson
- Burwell-Morgan Mill (Millwood Mill) Boyce
- Fairfield Berryville
- Saratoga Boyce
- The Tuleyries Boyce
- Old Chapel Boyce
- Carter Hall Boyce
- Huntington Boyce
- Clarke County Courthouse Berryville
- White Post Historic District Boyce
- Berryville Historic District Berryville
- Farnley Boyce
- Bethel Church Boyce
- Scaleby Boyce
- Blandy Experimental Farm Boyce
- Guilford Boyce
- Lucky Hit Boyce
- Meadea Boyce
- Greenway Historic District Ashby Gap, Boyce
- River House Boyce
- Norwood Berryville
- Glendale Farm Stephenson
- Wickliffe Church Berryville
- Josephine City School Berryville
- Cool Spring Battlefield Ashby Gap, Berryville
- Bluemont, Round Hill
- Soldier's Rest Berryville
- Long Marsh Run Rural Historic District Berryville, Stephenson
- Smithfield Farm Berryville
- Millwood Colored School Boyce
- Boyce Historic District Boyce
- Chapel Hill Boyce
- Clermont Berryville

• Millwood Commercial Historic District Boyce

D.3.8 Virginia Historical Highway Markers

- The Briars, B-2: Rt. 50, 3 miles northwest of Boyce
- Saratoga, B-4: Rt. 50 at Boyce
- Signal Station, B-7: Rt. 50.7 miles west of Paris
- Ashby's Tavern, B-23: Rt. 50, 2 miles northwest of Paris
- A Raid of Mosby's, J-1: Rt. 340, 1 mile north of Berryville
- Buck Marsh Baptist Church, J-1a: Rt. 340 north of Berryville
- Buck Marsh, J-2: Rt. 340, 1.5 miles north of Berryville
- Gettysburg Campaign, J-14: Rt. 340, 1 mile north of Berryville
- Anderson and Crook, J-30: Rt. 7, .7 miles west of Berryville
- Berryville, Q-3a: Rt. 7 at east entrance of Berryville
- Berryville, Q-3b: Rt. 340 at north entrance of Berryville
- Berryville, Q-3c: Rt. 7 at west entrance of Berryville
- Berryville, Q-3d: Rt. 340, at south entrance of Berryville
- Carter Hall, T-1: Rt. 255, just north of Millwood
- Old Chapel, T-2: Rt. 255, 3.2 miles south of Berryville
- Greenway Court, T-3: Rt. 340, 2 miles northwest of Millwood
- Audley, T-4: Route 7, .7 miles east of Berryville
- The Burwell-Morgan Mill, T-6: Route 255 at Millwood
- White Post, T-7: Rt. 255 at White Post
- Colonial Highways, T-8: Rt. 7, 3.7 miles east of Berryville
- Castleman's Ferry Fight, T-9: Rt. 7 at Rt. 603
- Castelman's Ferry Fight, T-9*: Rt. 7, 4.5 miles east of Berryville
- Crook and Early, T-10: Rt. 7, 7.7 miles east of Berryville
- Forerunner of Wireless Telegraphy, T-II: Rt. 7, 7.7 miles east of Berryville
- Long Branch, T-12: Rt. 626, .2 miles west of Rt. 624

D.4 Warren County

D.4.1 Front Royal-Warren County Visitors Center

Front Royal is where the Skyline Drive begins. This historic and picturesque community offers a wide variety of attractions. World famous Skyline Caverns, antiquing, arts & craft shopping, golfing, hiking, backpacking, guided trail rides, self-guided driving and walking tours of the famous "Brother Against Brother" Civil War Battle, and of historic downtown Front Royal are but a few. River sports such as canoeing, kayaking, rafting, fishing have earned Front Royal the official title "Canoe Capital of Virginia." Visit us at <u>www.ci.front-royal.va.us</u>. Email us at <u>tourism@ci.front-royal.va.us</u>. 800-338-2576.

D.4.2 Raymond R. "Andy" Guest Jr. Shenandoah River State Park

Located on US 340 between Front Royal and Luray. Situated on the South Fork of the Shenandoah River with more than 1,600 acres along 5.2 miles of shoreline. Virginia's newest state park opened in May 1999. A large riverside picnic area with shelters, trails, river access, a scenic overlook and car-top boat launch make this a popular destination for families, anglers and canoeists alike. 14 miles of trails for hiking, biking, and horseback riding. The Indian Hollow Horse Livery operates at the park. 800-933-PARK. www.dcr.state.va.us

D.4.3 Skyline Caverns

I-66 Exit 6. We have the INSIDE VIEW of the Blue Ridge Mountains. Three underground streams. A 37-foot waterfall and rare crystalline formations known as "antho-dites." Picnic area, country store, rock shop and miniature train ride. Located on US 340, one mile south of Front Royal, where the

Skyline Drive begins. Handicap facilities except caverns tour. Open every day. 800-296-4545 or 540-635-4545

- D.4.4 Warren Heritage Society
- D.4.5 Warren Rifles Confederate Museum
- D.4.6 Shenandoah Center for Heritage and the Environment
- D.4.7 Shenandoah National Park
- D.4.8 Skyline Drive
- D.4.9 George Washington National Forest
- D.4.10 Tuscarora Trail
- D.4.11 Appalachian Trail
- D.4.12 Shenandoah River
- D.4.13 Virginia Landmarks Register and National Historic Register sites in Warren County
 - Cedar Creek Battlefield and Belle Grove (also in Frederick and Shenandoah Counties) Middletown
 - Mount Zion Boyce
 - Flint Run Archaeological District Bentonville, Strasburg
 - Thunderbird Archaeological Site (44WRII) Bentonville
 - Erin Stephens City
 - Compton Gap Site (44WR320) Chester Gap
 - Fairview Farm Front Royal
 - Sonner Hall, Randolph-Macon Academy Front Royal
 - Front Royal Recreational Park Historic District Front Royal
 - Killahevlin Front Royal
 - Long Meadow Strasburg
 - Riverside Front Royal
 - Rose Hill Front Royal
 - Skyline Drive Historic District (Multiple Counties) Various
 - Warren County Courthouse Front Royal
 - Riverton Historic District Front Royal
 - Front Royal Historic District Front Royal
 - Page Valley Rural Historic District Luray
 - Balthis House Front Royal
 - Milford Battlefield (Page and Warren Counties) Bentonville
- D.4.14 Virginia Historical Highway Markers
 - State Fish Hatchery, FF-2: Rt. 55, 5 miles west of Riverton
 - The McKay Home, J-7: Rt. 340 at Cedarville
 - Capture of Front Royal, J-8: Rt. 340 at Front Royal
 - Mosby's Men, J-9: Rt. 340, .5 miles north of Front Royal
 - Guard's Hill Affair, J-II: Rt. 340, .2 miles north of Riverton
 - Recreational Center of Front Royal, J-12: Rt. 340, 1.1 miles north of Riverton
 - Brother against Brother, J-17: Rt. 340 at Front Royal
 - Belle Boyd and Jackson, JD-1: Rt. 340, 3 miles southwest of Front Royal
 - William E. Carson, JD-2, Rt. 340 at Front Royal

D.5 Shenandoah County

D.5.1 American Celebration on Parade

I-81 Exit 269. See stunning huge floats from America's most prestigious parades, plus actual props from important events in America's entertainment history. Open all year. Admission includes Shenandoah Caverns and Main Street of Yesteryear. <u>www.shenandoahcaverns.com</u>. 888-4CAVERN or 540-477-4300.

D.5.2 Endless Caverns

I-81 Exit 264. Route 11 south. Follow signs to entrance. Guided tours year round. Gift and rock shop. Campground with electric, water, showers. Historic wedding/meeting hall on premises. www.endlesscaverns.com. 540-896-CAVE

D.5.3 New Market Battlefield State Historical Park & Hall of Valor Civil War Museum

I-81 Exit 264. Follow Route 305 to the end of Collins Drive. 280-acre battlefield and Bushong House Farm/Museum complex. Visit the site made famous by the participation of the VMI cadets and the original farmhouse that stood in the center of the fighting. Museum exhibits present overall picture of the entire Civil War. Open daily 9 am-5 pm. <u>www.vmi.edu/newmarket</u>. 540-740-3101.

D.5.4 Shenandoah Caverns

I-81 Exit 269. Only Virginia cavern with elevator service. No stairs to climb! Unusual formations, featured in *National Geographic*. See 17 rooms -- some 10 stories high. Open all year. Closest caverns to I-81. Admission includes American Celebration on Parade and Main Street of Yesteryear. www.shenandoahcaverns.com. 888-4Cavern.

D.5.5 Shenandoah County Historical Society

Shenandoah Valley Battlefields Foundation - Shenandoah Valley Battlefields National Historic District.

Protecting and sharing the Valley's Civil War story. Log on to <u>www.ShenandoahAtWar.org</u> or stop by any Visitor Center in the Valley. The District is managed by Shenandoah Valley Battlefields Foundation. 540-740-4545

D.5.6 Shenandoah Valley Tourist Information Center

I-81 Exit 264. Make us your first stop in the Valley! A state-certified facility open seven days a week, eight hours a day year around. Providing comprehensive color displays and brochures on Valley tourism and the entire Commonwealth. Restroom facilities. <u>www.visitshenandoah.org</u>. 800-VISITSV or 540-740-3132

D.5.7 Virginia Landmarks Register and National Historic Register sites in Shenandoah County

- Fort Bowman or Harmony Hall Middletown
- New Market Battlefield Park New Market
- New Market Historic District New Market
- Shenandoah County Courthouse Toms Brook
- Meems Bottom Covered Bridge New Market
- Orkney Springs Hotel Orkney Springs
- Snapp House Toms Brook
- Strasburg Stone and Earthenware Manufacturing Company Strasburg
- Edinburg Mill Edinburg
- Zirkle Mill New Market
- Dr. Christian Hockman House Edinburg
- Miley Archaeological Site (44SH2) Toms Brook
- Quicksburg Archaeological Site (44SH3) New Market

- Strasburg Historic District Strasburg
- Campbell Farm Middletown
- Lantz Hall, Massanutten Military Academy Woodstock
- Mount Jackson Historic District New Market
- Shenandoah County Farm Toms Brook
- Woodstock Historic District Woodstock
- Hupp House Strasburg
- Edinburg Historic District Edinburg
- Elizabeth Furnace Strasburg
- Van Buren Furnace Woodstock
- Abraham Beydler House Toms Brook
- Daniel Munch House Rileyville
- J.W.R. Moore House Conicville

D.5.8 Virginia Historical Highway Markers

- Trenches on Hupp's Hill, A-19: Rt. 11, .8 miles north of Strasburg
- Frontier Fort, A-20: Rt. 11 at Strasburg
- Battle of Cedar Creek, A-21: Rt. 11 at Strasburg
- Battle of Fisher's Hill, A-22: Rt. 11, 1.9 miles south of Strasburg
- Battle of Fisher's Hill, A-23: Rt. 11, 3.1 miles south of Strasburg
- Bank's Fort, A-24: Rt. 11 at Strasburg
- Action of Tom's Brook, A-25: Rt. 11, .1 miles south of Tom's Brook
- Cavalry Engagement, A-26: Rt. 11, .1 miles south of Mount Jackson
- Rude's Hill Action, A-27: Rt. 11, 3.7 miles north of New Market
- Battle of New Market, A-28: Rt. 11, .6 miles south of New Market
- Sevier's Birthplace, A-34: Rt. 11, .7 miles south of New Market
- Fairfax Line, A-36: Rt. 11, .7 miles south of New Market
- Last Indian Outrage, A-41: Rt. 11, 1.9 miles south of Woodstock
- Fort Bowman, A-55: Rt. 11, 1.9 miles north of Strasburg
- Meem's Bottom Covered Bridge, AB-1: Rt. 11, .2 miles south of Rt. 720

D.6 Nearby State and National Parks

D.6.1 Sky Meadows State Park

I-66 Exit 23. Travel north on Route 17. Park offers hiking trails, interpretive programs, picnic facilities, primitive camping, guided trail rides and diverse wildlife populations. The park is open year round from 8 am to dusk. Parking fee is required. <u>www.dcr.state.va.us</u>. 540-592-3556

D.6.2 Harpers Ferry National Historical Park

Exhibits, interpretive programs and trails. Explore six stories: Natural heritage, industry, John Brown's Raid, Civil War, African American history, and transportation. PO Box 65, Harpers Ferry 25425. <u>www.nps.gov/hafe</u>. 304-535-6029

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As the nation's principal conservation agency, the Department of the Interior has the responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our parks and historic places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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