

Manassas Battlefields Viewshed Plan

BACKGROUND STUDY

Prepared for

Prince William County

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With

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I. Viewsheds Analysis

Summary of the Battles

It is not the intent of this section to provide a detailed picture of the two battles, as numerous sources exist for both general and detailed information. Instead, it is meant to serve as a concise summary to give this study a general context.

First Manassas ("First Bull Run")

The chain of events eventually leading to the First Battle of Manassas began on July 16, 1861, when Union General Irvin McDowell marched his 35,000 men out of Washington, DC to begin a campaign intended to lead to the eventual capture of Richmond. Their first objective was to capture the strategic railroad junction at Manassas. They reached Centreville, five miles from Manassas, on July 18, and discovered a Confederate army of 22,000 under General P.G.T. Beauregard at Manassas. While various probing actions were conducted by McDowell, Confederate General Joseph Johnston's army of 10,000 men was being rushed by rail from the Shenandoah Valley to Manassas.

The battle started on the morning of July 21st when McDowell sent most of his forces north toward Sudley Springs Ford, while a smaller diversionary force attacked from the east at the Stone Bridge where the Warrenton Pike crosses Bull Run. The most significant early fighting occurred at Matthews Hill, south of Sudley Springs Ford,

where the Federal forces pushed back the Southern army. The retreating Confederate forces rallied at Henry Hill under the leadership of Generals Barnard Bee, Francis Bartow and Thomas J. Jackson, who earned the name "Stonewall" during this engagement.

At roughly noon, the battle stalled while both sides adjusted their lines, and it resumed at about 1:00 PM and raged until approximately 5:00 PM. It concluded when fresh Confederate troops arrived and outflanked the Union forces at Chinn Ridge, initiating a panic-stricken rout of the entire Federal army back to Washington.

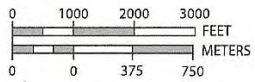


First Battle of Manassas Source: Holiday Digital Pictures - Frank Leslie's Illustrated History (pgs. 56-57) – public domain

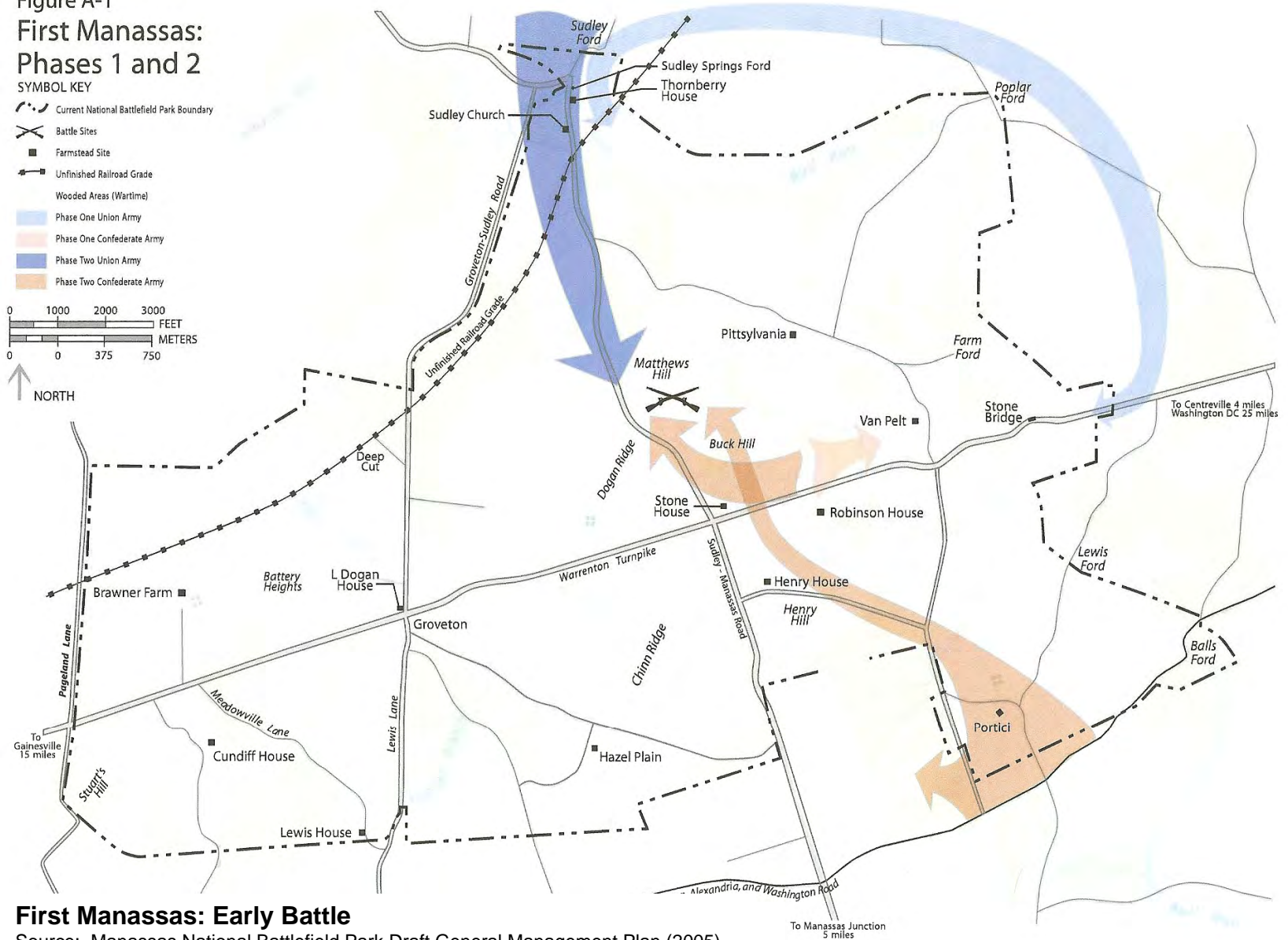
Figure A-1
First Manassas:
Phases 1 and 2

SYMBOL KEY

- Current National Battlefield Park Boundary
- Battle Sites
- Farmstead Site
- Unfinished Railroad Grade
- Wooded Areas (Wartime)
- Phase One Union Army
- Phase One Confederate Army
- Phase Two Union Army
- Phase Two Confederate Army



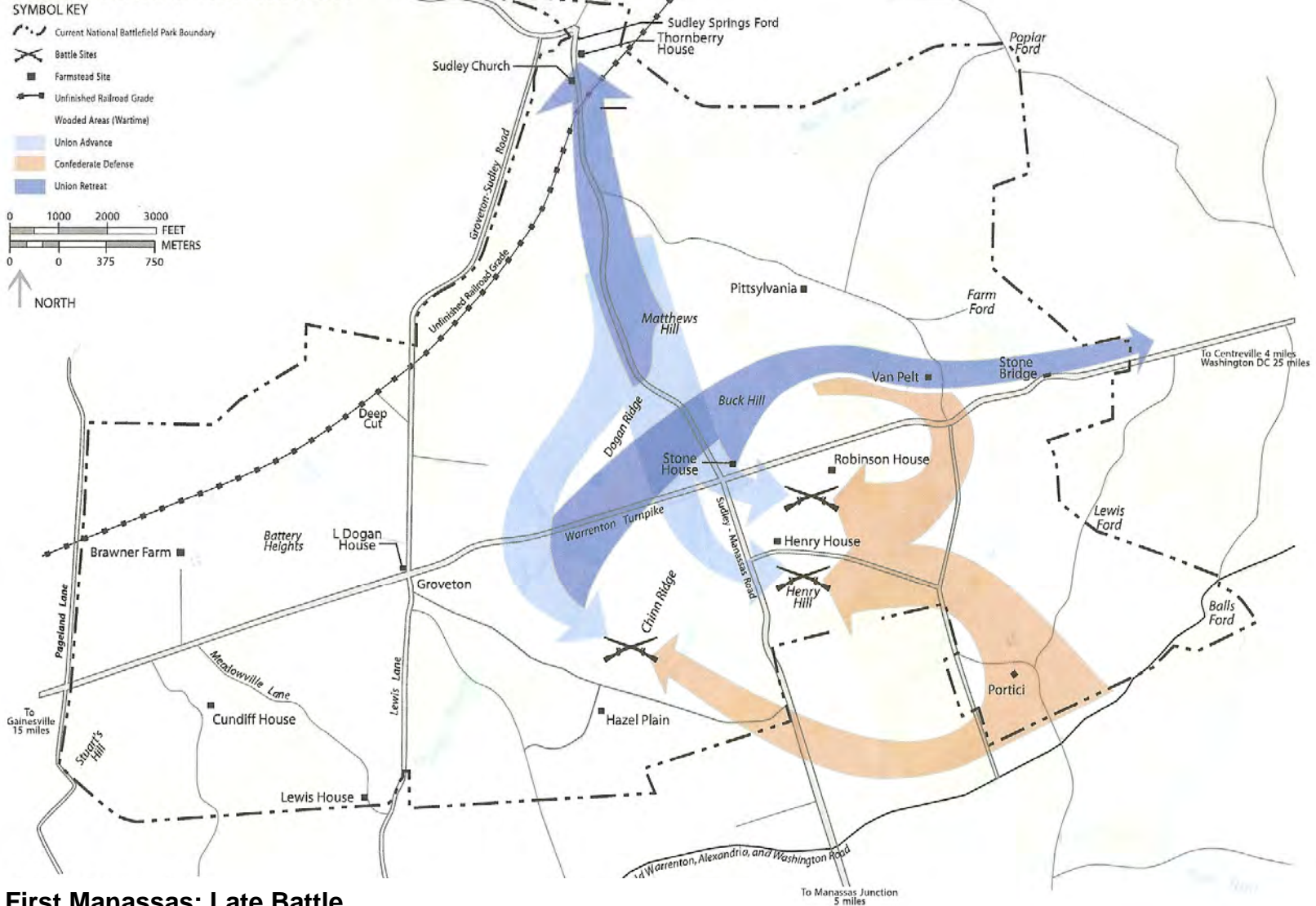
NORTH



First Manassas: Early Battle

Source: Manassas National Battlefield Park Draft General Management Plan (2005)

Figure A-2
First Manassas:
Phase 3 and Union Retreat



First Manassas: Late Battle

Source: Manassas National Battlefield Park Draft General Management Plan (2005)

Second Manassas (“Second Bull Run”)

Following the First Battle of Manassas, the leadership of both armies in the Eastern Theatre changed. McDowell’s leadership of the Army of Northeastern Virginia (later named the Army of the Potomac) was replaced by George McClellan. While he was a highly effective organizer and trainer of his army, the Peninsula Campaign that pushed toward Richmond was unsuccessful. When Joseph Johnston was wounded during that campaign at Seven Pines, Robert E. Lee was tapped to lead the newly designated Army of Northern Virginia. Meanwhile, portions of McClellan’s command were assigned to General John Pope’s Army of Virginia.

In late-August of 1862, there were numerous maneuvers in Northern Virginia between Stonewall Jackson’s Left Wing of the Army of Northern Virginia and that of Pope. Following a 50 mile flanking march by Jackson, he captured key Union supplies at Manassas Junction on August 26th and 27th. On the evening of the 27th, he withdrew from the junction and moved his forces to the old Manassas battlefield during the night and the following morning. Although Pope then moved his men toward Jackson, Lee also moved Longstreet’s corps from the south to concentrate his forces with Jackson.

On August 28th, Jackson’s forces surprised a Union column marching down the Warrenton Turnpike toward Centreville, prompting a savage fight at Brawner’s Farm that lasted until dark. The next day Pope’s forces attacked Jackson, who was entrenched in an unfinished railroad bed. Although Pope managed to break through

Jackson’s line at various points, he was ultimately repulsed. Meanwhile, Lee’s forces arrived later in the day, but did not engage.

On the 30th, Pope mistakenly thought the Confederates had withdrawn, so he ordered a pursuit. When the Federals encountered resistance, Pope’s pursuit devolved into an attack in the mid-afternoon. The Southern troops held firm, and seeing that the Union lines were in disarray, Longstreet then hit the Union left hard. Pope’s forces pulled back, first making a stand at Chinn Ridge, and then pulling back to Henry Hill. At nightfall, the Union army pulled out across Bull Run and back to Washington. For the second time, the South was victorious on this battlefield.



Second Battle of Manassas Source: Holiday Digital Pictures - Frank Leslie's Illustrated History (pgs. 56-57) – public domain

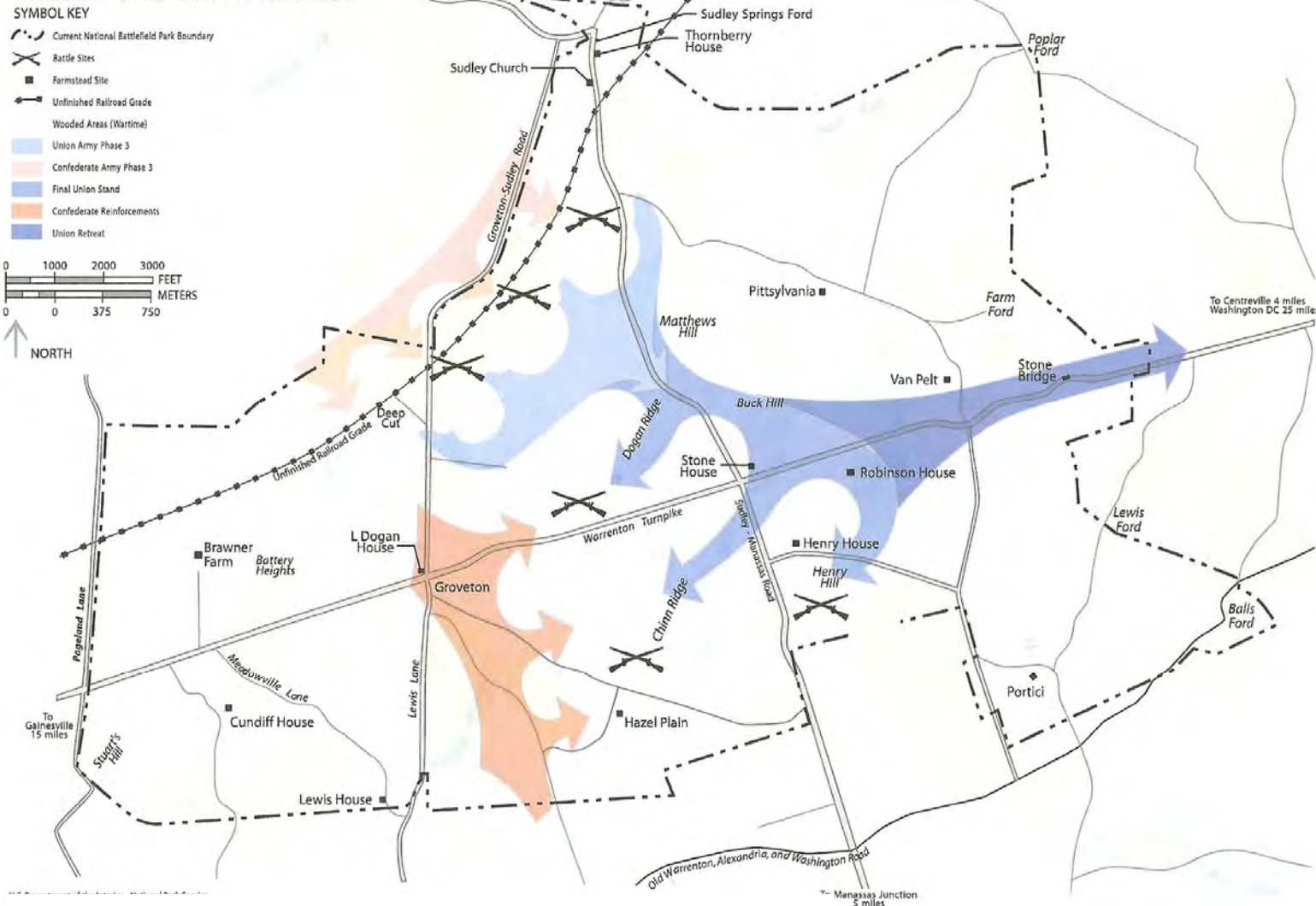
Figure A-3
Second Manassas:
Phases 1 and 2



Second Manassas: Early Battle

Source: Manassas National Battlefield Park Draft General Management Plan (2005)

Figure A-4
 Second Manassas:
 Phase 3 and Union Retreat



Second Manassas: Late Battle

Source: Manassas National Battlefield Park Draft General Management Plan (2005)

Component Areas of the Battlefields

Before various aspects of the battlefields can be analyzed, an understanding must be gained of the various components that constitute each “battlefield.” The following two pages each have one map per battle illustrating four specific areas:

National Park: Although it is only faintly visible and not included in the legends of the two following maps, the national park boundaries are depicted on both maps. Such lands are essentially protected from actions that can negatively impact their integrity, with the possible exception of potential future expansions of roads and above-ground utilities that traverse the park.

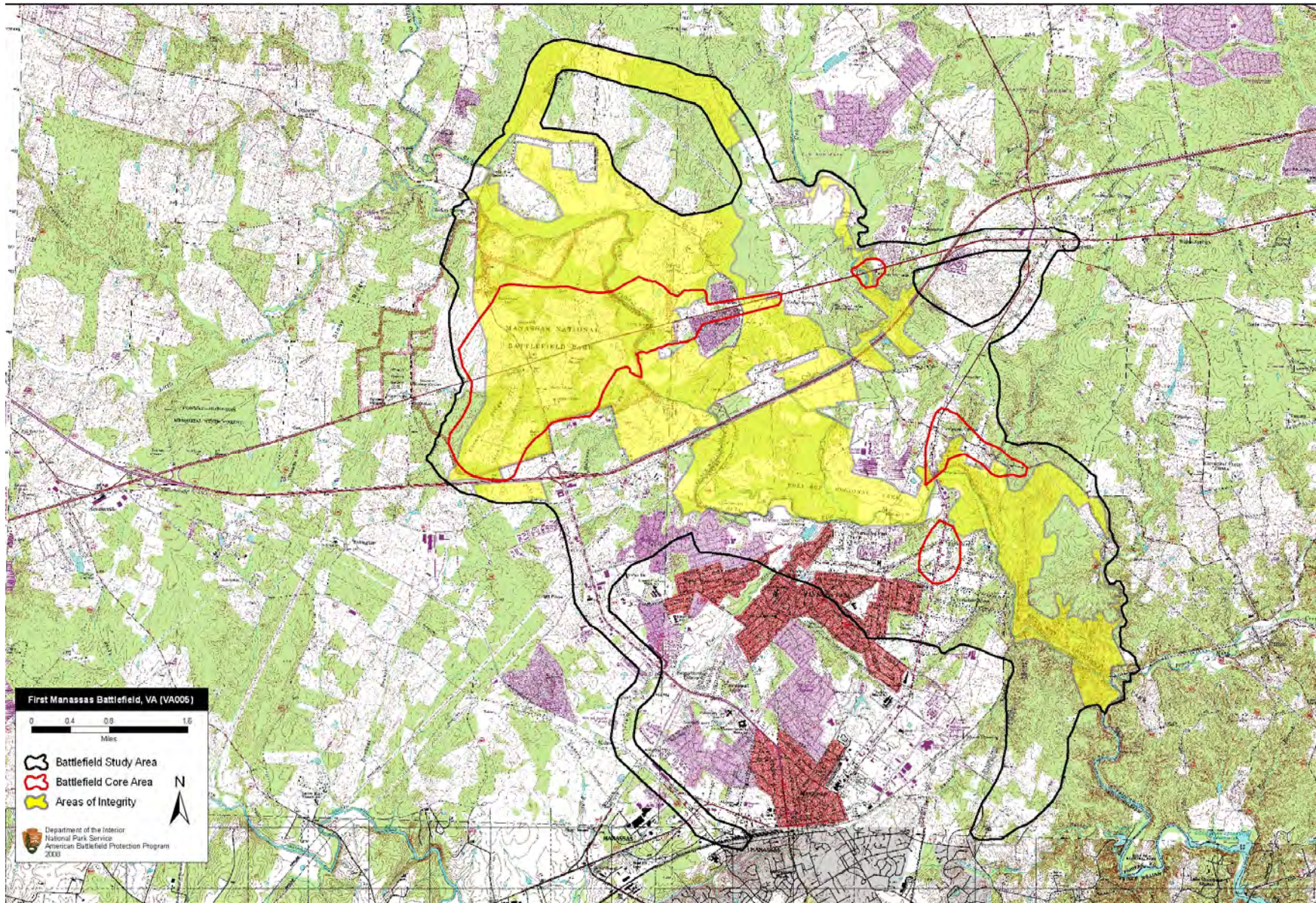
Battlefield Core Area: This area consists of locations where the primary combat occurred. These are lands from which fire was delivered or received. In other words, shots were fired and soldiers were killed or wounded.

Battlefield Study Area: In addition to the Battlefield Core Areas, this area consists of lands peripheral to the Battlefield Core Area where troop movements, encampments, staging areas, field hospitals and similar activities occurred and are directly related to, but ancillary to, combat.

Areas of Integrity: This area consists of locations where a high level of visual integrity has survived and the historic landscape

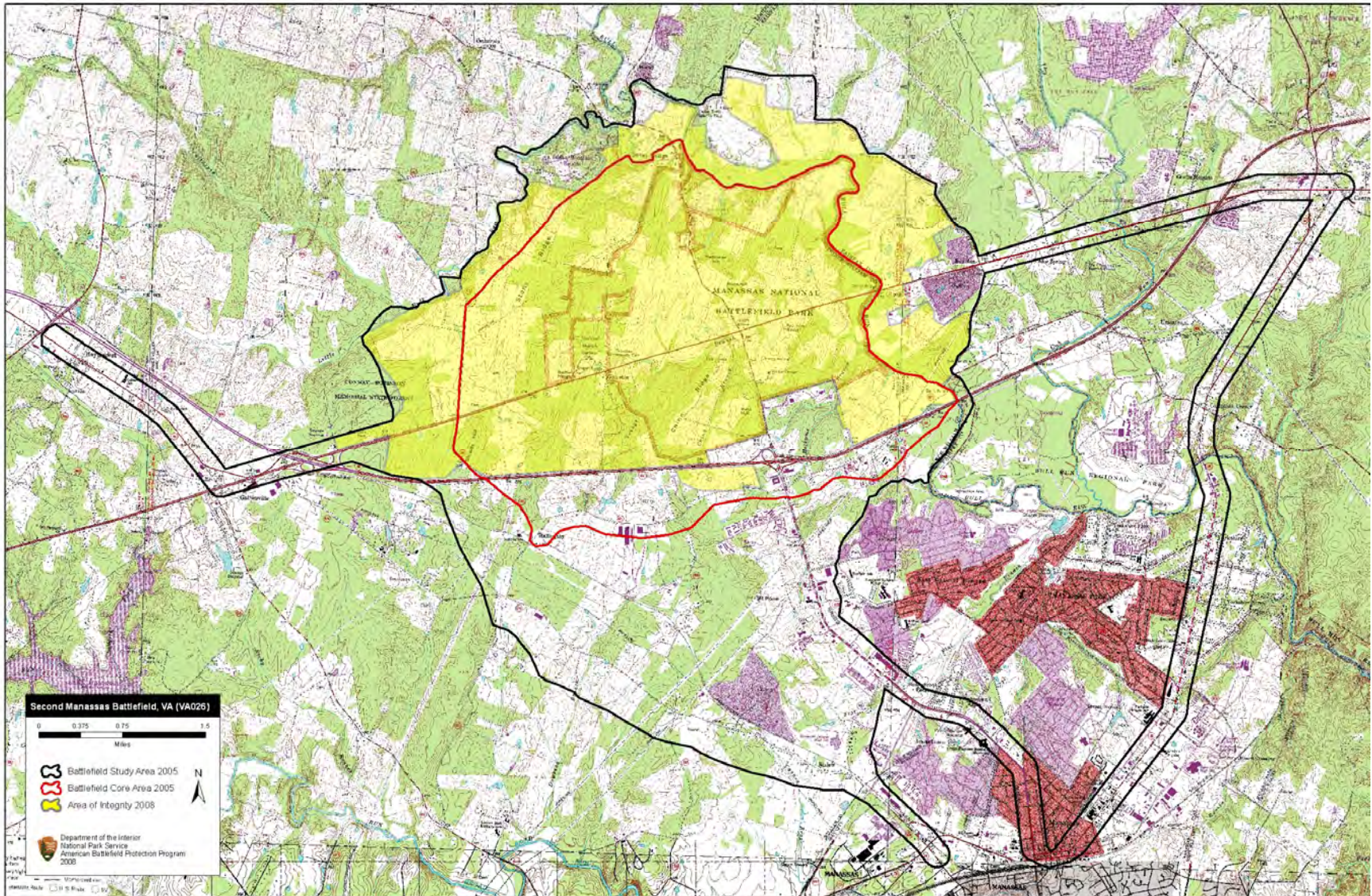
has remained substantially intact with only minor intrusions. Intrusions are changes to the landscape since the battles, such as post-war roads, buildings, parking areas, utility poles and lines, and significant landscape alterations.

First Manassas Battlefield: Various Areas of Designation



Map Source: National Park Service

Second Manassas Battlefield: Various Areas of Designation



Map Source: National Park Service

Historic Landscape: Then and Now

1860s Landscape

An important facet of today's viewshed preservation efforts is understanding the viewshed as it appeared during its time of historic significance – the 1860s. Fortunately, the National Park Service has researched the battlefield's historic vegetation patterns and produced a map to illustrate those patterns (see the following page). Approximately half of the battlefield consisted of open meadows or pastures, while the balance consisted of forests, crops, cultivated area, and other various ground covers. Of the forested areas, most were deciduous forests, with the balance being coniferous and mixed forests. Crop fields featured corn, wheat and oats, while cultivated fields included orchards and gardens. The patterns created by these various landscape types is relatively random.

NPS Landscape Rehabilitation Plan

The most recent draft of the NPS General Management Plan includes a "Proposed Forest Cuts and Reforestation Sites" map (see page 11). This plan proposes to eliminate forestation from some areas, while adding it to others based upon the documented historic landscape. A comparison of the two maps reveals that the battlefield presently has more forested area than at the time of the battles. Given the importance of agriculture to the area during the 1860s, relative to today, this fact is not surprising. Furthermore, the use of wood for construction and fuel was another contributing factor.

Interestingly, many of the areas forested today were not forested during the 1860s, and many of today's open areas were not open during the 1860s. The proposal for cutting is not so aggressive as to accurately recreate the battlefield landscape. Instead, it appears to target only the most critical areas to telling the story of the battles, such as recreating the historically open character of Chinn Ridge and segments of the unfinished railroad. Proposed reforestation areas are more limited, and a primary example is the north side of Dogan Ridge.

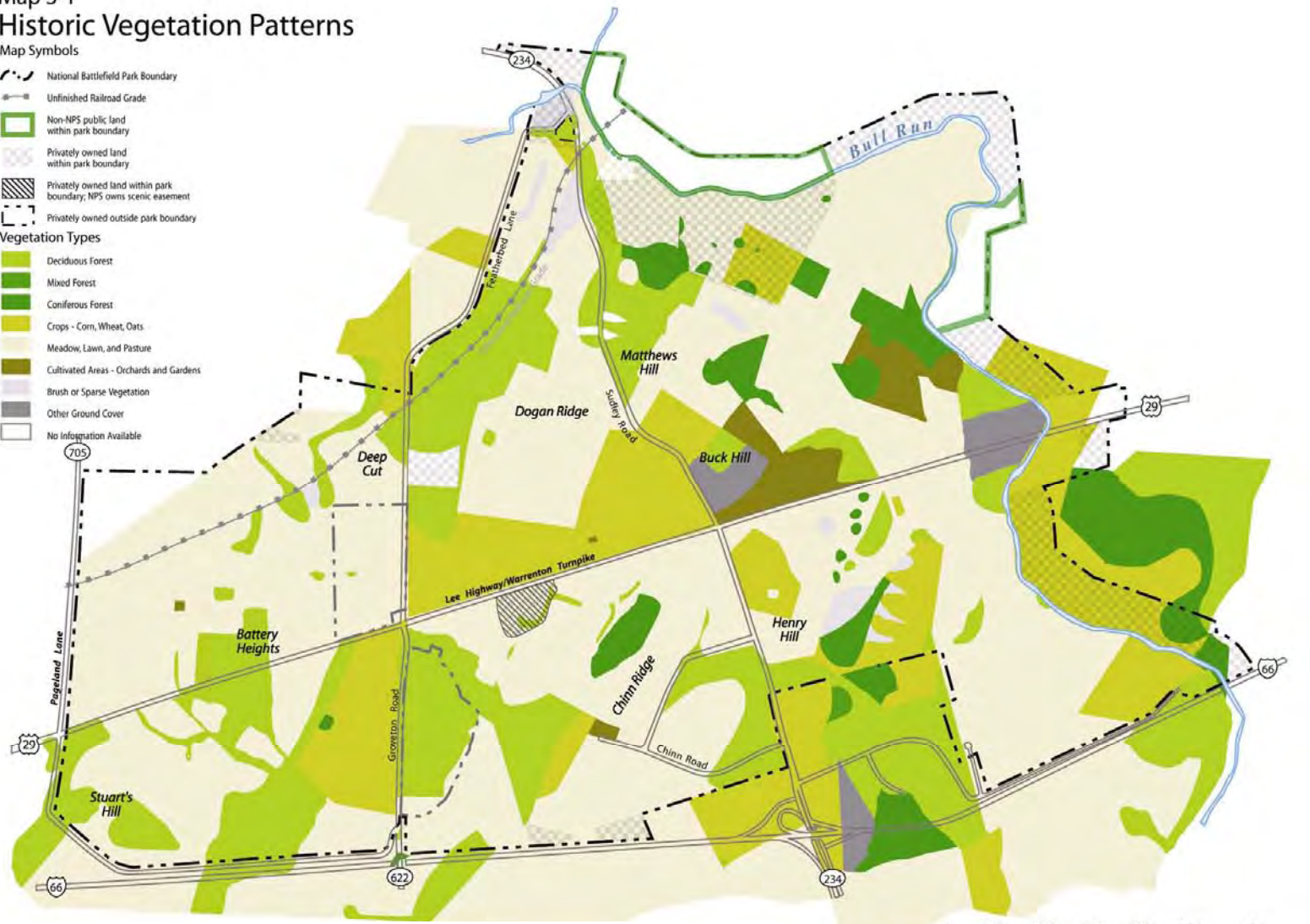
Other Factors for Consideration

In addition to landscape patterns, another consideration for viewshed preservation is the average height of a viewshed's viewer, and the average forest height – both today and historically. Based upon research done at other battlefields, including Gettysburg, the average approximate forest height of the 1860s was 40 feet, while the average approximate height today is 60 feet. The lower height in the 1860s reflects more frequent tree cutting that periodically occurred because of the use of wood for building and fuel, in addition to clearing lands for agriculture. The average male height in 1860 was 5'7", compared to 5'10" today.

Map 3-1 Historic Vegetation Patterns

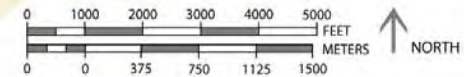
Map Symbols

-  National Battlefield Park Boundary
 -  Unfinished Railroad Grade
 -  Non-NPS public land within park boundary
 -  Privately owned land within park boundary
 -  Privately owned land within park boundary; NPS owns scenic easement
 -  Privately owned land within park boundary; NPS owns scenic easement
 -  Privately owned outside park boundary
- Vegetation Types
-  Deciduous Forest
 -  Mixed Forest
 -  Coniferous Forest
 -  Crops - Corn, Wheat, Oats
 -  Meadow, Lawn, and Pasture
 -  Cultivated Areas - Orchards and Gardens
 -  Brush or Sparse Vegetation
 -  Other Ground Cover
 -  No Information Available



Source: Manassas National Battlefield Park Draft General Management Plan (2005)

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DSC - October 2005 - 379-20117



Map 4-1 Proposed Forest Cuts and Reforestation Sites

SYMBOL KEY

-  National Battlefield Park Boundary
-  National Battlefield Park Land
-  Unfinished Railroad Grade
-  Current Forested Areas
-  Proposed Forest Cuts (Alternative B)
-  Proposed Forest Cuts (Alternative C)
-  Proposed Reforestation (Alternative B)
-  Non-NPS public land within park boundaries
-  Privately held land within park boundaries
-  Privately held land within park boundaries; NPS owns scenic easement
-  Privately owned land outside park boundary



Source: Manassas National Battlefield Park Draft General Management Plan (2005)

U.S. Department of the Interior • National Park Service
DSC - October 2005 - 379-20121



Categories & Definitions

Landscape Categories and Definition

Below is a list of landscape categories and spatial definitions for natural features that are used in the following discussion of existing conditions for each viewshed. Within the narrative descriptions, not all of the categories listed below will be used. Regardless, they are offered here to provide the reader a baseline of information to aid their understanding and evaluation of the viewsheds.

Water Resources

Watercourses

- Streams, runs, branches, creeks, drainages

Water bodies

- Natural ponds, wetlands, stormwater ponds

Vegetation

Wooded Areas

- Deciduous
- Evergreen
- Mixed species

Cultural Vegetation

- Witness trees
- Specimen trees
- Vegetation associated with dwellings or built features

Riparian Buffers

- Bottomland vegetation (trees, shrubs, grasses that tolerate hydric conditions)

Fields

- Turf (typically mown)

- Warm-season grass
- Agricultural

Topography

Natural Landforms

- Level, rolling, or steep topography
- High points and depressions

Cultural Landforms

- Railroad grade
- Abandoned road grade
- Earthworks

Spatial Definitions

Edges

- Visually define the extent to the left and right of what the viewer can see within the viewshed
- Act as the “walls” for the viewshed

Ground plane

- The portion of the viewshed that comprises the ground level
- Typically stretches between two edges

Termini

- The feature or element in the landscape that ends the view and acts as the back “wall” of the viewshed
- May be mountains, woodlands, or any element that visually ends the view

Foreground

- The section of the viewshed that is closest to the viewer
- The foreground is terminated by the middleground, which is typically signified by a change in topography, the addition of vegetation, or some other visual difference

Middleground

- The section of the viewshed that lies in between the foreground and background
- The middleground is terminated by the background, which is typically signified by a change in topography, the addition of vegetation, or some other visual difference
- May not exist in all viewsheds

Background

- The section of the viewshed that lies farthest afield in the viewshed
- The background is terminated by an overarching element that acts as the back “wall” of the viewshed (see “Termini” above)



The Manassas Battlefield consists of a gently rolling terrain and a mixture of open fields and wooded areas.