
**NATIONAL PARK SERVICE
U.S. DEPARTMENT OF THE INTERIOR**

The Civil War Defenses of Washington
National Capital Parks – East
Washington, D.C.



**ASSESSMENT OF EFFECTS
UNDER SECTION 106 OF THE
NATIONAL HISTORIC PRESERVATION ACT**

**REPAIR AND CONNECTIVITY IMPROVEMENTS
OF THE
CIVIL WAR DEFENSES OF WASHINGTON
HIKER-MOUNTAIN BIKER TRAIL**

**National Capital Parks – East
Washington, D.C.**

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INTRODUCTION

PROJECT BACKGROUND

National Capital Parks – East, an administrative unit of the National Park Service (NPS), proposes to repair and improve connectivity of the Civil War Defenses of Washington (CWDW) Hiker-Mountain Biker trail. National Capital Parks – East includes 13 park sites, parkways, and statuary covering 8,000 acres of historic, cultural, and recreational parklands from Capitol Hill to the nearby Maryland suburbs. National Capital Parks – East manages the CWDW, which includes remnants of a complex system of Civil War fortifications. The CWDW was formally called “Fort Circle Parks.”

The 7-mile-long CWDW Hiker-Mountain Biker trail currently links six of the CWDW forts in Wards 6, 7, and 8 of southeast Washington, D.C, extending from Fort Mahan to Fort Ricketts. The project would involve Fort Mahan, Fort Chaplin, Fort Dupont, Fort Davis, Fort Stanton, and Fort Ricketts. The trail system in these park areas is in various states of disrepair and destabilization because of excessive use, overgrowth, weathering, and other issues, factors that create hazards for visitors, staff, and park resources. The project would correct these deficiencies to improve public-park linkages, correct resource-damaging trail alignments and/or locations, enhance the recreational experience, and improve user safety and visitor satisfaction.

The project would include tasks that improve connectivity of the trail system by creating connecting trail segments, installing new bridges, and replacing several deteriorated bridges. Additional work items would also include the installation of standard motor vehicle prevention measures and the resurfacing of asphalt pavement. The project would include installing up to four prefabricated bridges (replacements of existing bridges) and one new boardwalk, constructing 11 sections of new trail to improve connectivity, installing 28 new vehicle prevention structures, and resurfacing five areas of existing asphalt. A map of the project area is provided in figure 1.

PROJECT LOCATION

The National Capital Parks – East section of the CWDW includes a series of protected open spaces along the hilltops southeast of the Anacostia River in southeast District of Columbia. The park holdings encompass the Civil War defense areas of Fort Mahan, Fort Chaplin, Fort Dupont, Fort Davis, Fort Stanton, Fort Ricketts, Fort Carroll, and Fort Greble. The project would involve Fort Mahan, Fort Chaplin, Fort Dupont, Fort Davis, Fort Stanton, and Fort Ricketts. Along with a link to the country’s early history, these defense sites contain green space that received some of the earliest urban planning efforts related to public recreation in the United States (in the 1902 “Improvement of the Park System of the District of Columbia”), initially planned as the Fort Drive, and later corroborated in the 1960s National Capital Planning Commission recommendations emphasizing a “fort park system” that stressed recreation with a continuous “bicycle and pedestrian way.” The importance of the historic earthworks and the greenbelt that these parks create along the ridge surrounding the city makes this a significant open space element in the nation’s capital.

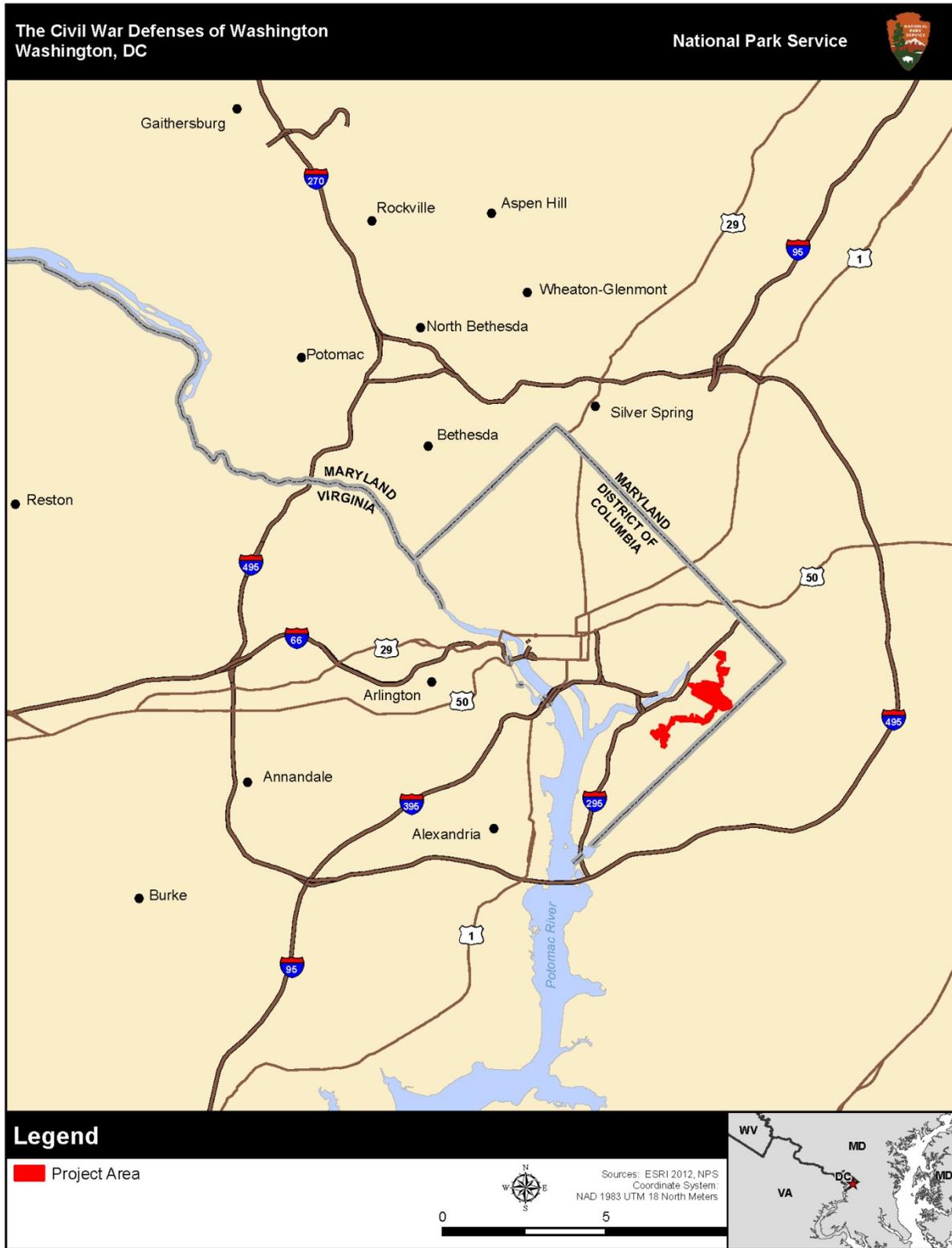


FIGURE 1. THE CIVIL WAR DEFENSES OF WASHINGTON VICINITY

PURPOSE

The purpose of the project is to repair damage and improve connectivity on several sections of the CWDW Hiker-Mountain Biker trail to enhance the recreational experiences of visitors.

Action is needed at this time because numerous sections of the trails throughout the park, although still usable, have deteriorated due to high visitor use, weathering, overgrowth, and illegal motorized vehicle use. These deteriorated conditions are impacting park resources including through soil compaction and erosion.

Additionally, in several locations along the trail, the trail is located close to the existing roadway or sidewalk, but no formal connection exists. In these locations, social trails have formed. The action is needed to formalize these social connections and create paved sections of trail connecting the CWDW Hiker-Mountain Biker trail to the existing sidewalks or roadways.

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SUMMARY OF ALTERNATIVES

Two alternatives were considered:

- Alternative 1: No Action
- Alternative 2: Repair, Reconstruct, and Improve Connectivity of the CWDW Hiker-Mountain Biker Trail (Preferred Alternative)

ALTERNATIVE 1: NO ACTION

The no action alternative provides a basis for comparison with the action alternative and the respective environmental consequences. If the no action alternative were selected, the NPS would respond to future needs and conditions without major actions or changes in the present course of management.

Under the no action alternative, no repairs or connectivity improvements would be made to the CWDW Hiker-Mountain Biker trail. Damage found throughout the trail system, including numerous areas where erosion, rutting, and ponding have occurred, would not be corrected. Asphalt surfaces in need of repair would not be resurfaced, and deteriorating bridges would not be replaced. No connectivity improvements would be made. The continuation of current conditions would contribute to further deterioration of existing environmental and safety conditions.

ALTERNATIVE 2: REPAIR, RECONSTRUCT, AND IMPROVE CONNECTIVITY OF THE CWDW HIKER-MOUNTAIN BIKER TRAIL (PREFERRED ALTERNATIVE)

The four major components of alternative 2, detailed below, include asphalt resurfacing, improving trail connectivity, installing motor vehicle prevention measures, and replacing pedestrian bridges. A new boardwalk would be installed at one location to avoid an ecologically sensitive area. Alternative 2 would include replacement of four existing footbridges.

ASPHALT RESURFACING

Asphalt resurfacing would include asphalt demolition, repairs, and resurfacing, as well as turf grading at six locations throughout Fort Mahan, Fort Davis, and Fort Dupont. Total resurfacing would include 5,225 linear feet of existing trail (6 feet wide). The approximate location of each resurfacing project is provided in figure 2 and detailed below:

- Resurface 2,400-foot-long by 6-foot-wide paved trail to Grant Street (location 24)
- Resurface 250-foot-long by 6-foot-wide section of asphalt, located south of Benning Road at Flint Place (location 38)
- Resurface 375-foot-long by 6-foot-wide section of asphalt, located south of Massachusetts Avenue to Fort Davis (location 87)
- Resurface 500-foot-long by 6-foot-wide section of asphalt, located northwest of Fort of Dupont (location 64)
- Resurface 1,400-foot-long by 6-foot-wide section of asphalt, located northwest Fort Dupont (location 54)

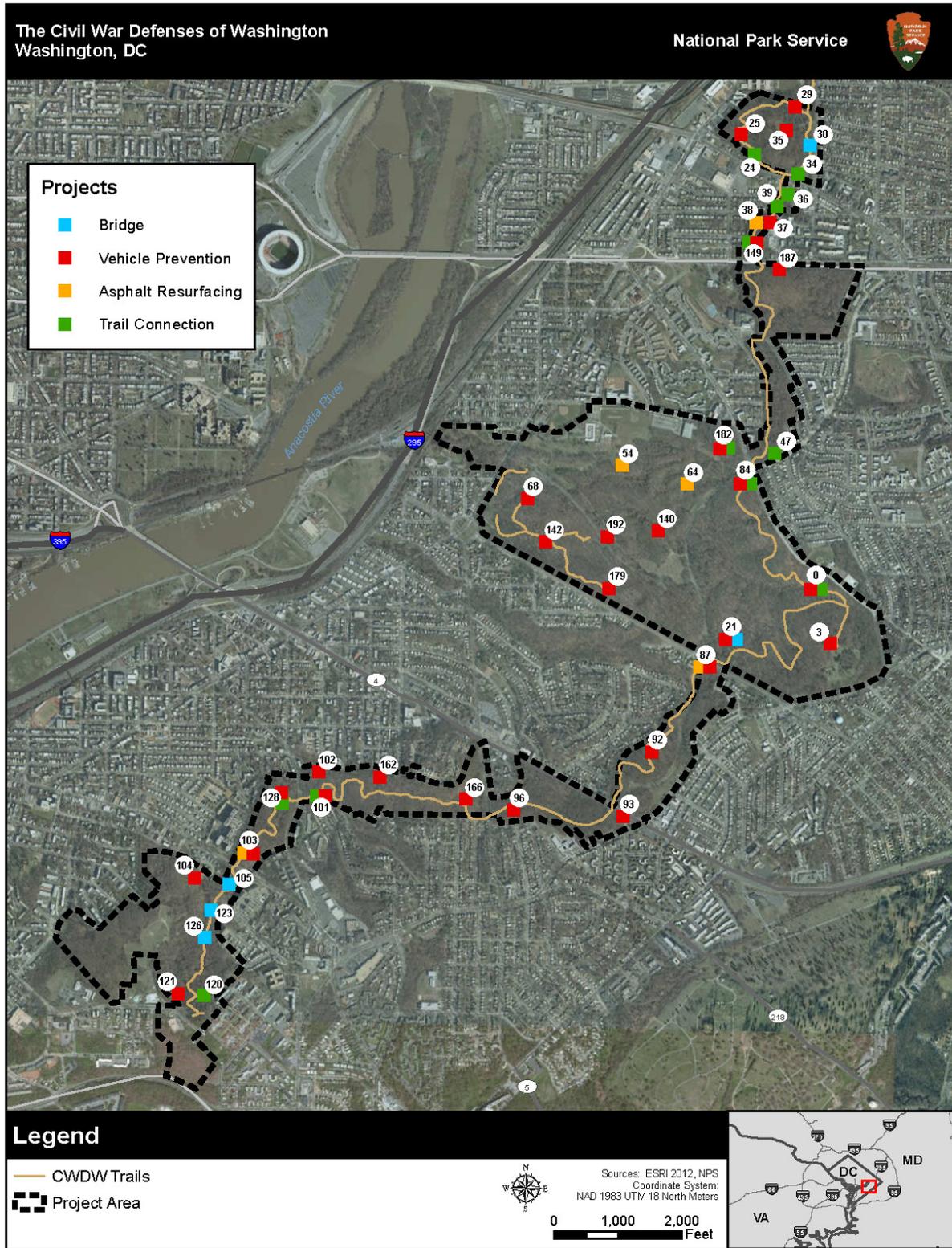


FIGURE 2. ALL PROJECT LOCATIONS

- Resurface 300-foot-long by 6-foot wide section of asphalt, located north of New Hope Road (location 103)

TRAIL CONNECTION IMPROVEMENTS

New trail connections would involve upgrading informal trails and creating connections to existing trails to improve the connectivity of the overall trail system. All new trail construction and connectivity improvements would consist of standard 6-foot-wide trails.

Ten new connecting trails would be constructed at multiple trailheads to improve wayfinding at road crossings. Generally, no trails currently exist at road crossings between the curb or sidewalk and the tree line. Figure 3 provides an example of the trail not connecting to an existing sidewalk. Six-foot-wide trails would be constructed in these areas, extending from the tree line to the curb or sidewalk. A trail base consisting of 4 inches of grade aggregate base would be covered with 2 inches of asphalt trail surface. New trail connections would be constructed at 11 locations for a total 2,385 linear feet of new trail. The locations of each trail connection are provided in figure 2 and detailed below:

- Construct 150 feet to 200 feet of connecting trail near Benning Road (locations 34, 35, and 36)
- Construct 500-foot-long section of trail to connect the trail from Fort Mahan to Flint Place (location 39)
- Construct 150 feet of connecting trail from East Capitol Street to the existing trail (location 149)
- Construct 125 feet of connecting trail at south trailhead near Ridge Road (location 47)
- Construct 125 feet of connecting trail to Fort Davis Drive (location 182)
- Construct 60 feet of connecting trail at Ridge Road and Fort Davis (location 84)
- Construct 25 feet of connecting trail, located south of Ridge Road (location 0)
- Construct 125 feet of connecting trail at the north trailhead at 28th Street (location 101)
- Construct 75 feet of connecting trail at the south trailhead at Naylor Road (location 128)
- Construct 1,000 feet of connecting trail at the south trailhead between Bruce Place and Fort Place near the Anacostia Museum (locations 120 and 121)



SOURCE: NATIONAL PARK SERVICE (2012)

**FIGURE 3. EXISTING TRAILHEAD AT EAST CAPITOL STREET NE,
SHOWING LACK OF CONNECTING TRAIL TO SIDEWALK**

MOTOR VEHICLE PREVENTION MEASURES

The use of all-terrain vehicles and motorcycles, especially on trails that are not designed to accommodate such use, can result in soil compaction and erosion, sedimentation of streams and water bodies, spread of invasive species, increased air pollution and greenhouse gas emissions, and conflicts with other user groups. Under alternative 2, in order to prevent motorcycle and all-terrain vehicle use on the CWDW Hiker-Mountain Biker trail, standard trailheads would be equipped with motor vehicle deterrent structures. A total of 27 structures would be installed at 14 road crossings, typically with two trailheads at each crossing. The vehicle prevention structures would be new with the exception of one road crossing at East Capitol Street NE where existing motor vehicle prevention structures would be replaced. The vehicle prevention measures would include placing boulders on either side of the trail to prevent vehicles from entering the trail. In the middle of the trail, a collapsible metal post would be installed so that NPS maintenance vehicles would be able to use the trail. Figure 2 shows the location of all proposed motor vehicle prevention structures. Approximate locations based on sections of trail between major roads are listed below:

- Benning Road North to Hunt Place — three new installation locations (29, 29, 35)
- Benning Road to East Capitol Street — two new installations (37 and 149) and one replacement location (187)
- Ridge Road — two new installations (84 and 0)
- Ridge Road pool to Massachusetts Avenue — two new installations (3 and 21)
- Massachusetts Avenue to Pennsylvania Avenue — two new installations (87 and 92)

- Branch Avenue to 28th Street — two new installations (166 and 162)
- 28th Street to Good Hope Road — four new installations (101, 102, 103 and 128)
- Good Hope Road to stream crossing — two new installations (104 and 121)
- Fort Dupont Trails – Stage Trail — six new installations (68, 140, 142, 179, 182, and 192)

BRIDGE REPLACEMENT/INSTALLATION

Under alternative 2, four bridges and one boardwalk would be installed. All bridges would be pre-fabricated, 6-foot-wide Enwood© laminated wood, girder-style structures. The bridges would all replace existing deteriorating structures. The boardwalk would be a new installation to prevent further damage to an environmentally sensitive area. Figures 4 and 5 show an existing 3-foot-wide bridge on the trail that would be replaced and an example of an Enwood© bridge that would be installed under alternative 2. The locations of all four bridges and the boardwalk are provided in figure 2.

The locations of the bridges and boardwalk are provided in figure 2 and details are presented below:

- Install a new 34-foot-long by 6-foot-wide, pre-fabricated boardwalk to replace paved trail in an environmentally sensitive area near Fort Mahan (location 30)
- Replace the existing 15-foot-long by 10-foot-wide, wood bridge and replace with a new 15-foot-long by 6-foot-wide, pre-fabricated wood bridge south of Fort Dupont (location 21)
- Replace the existing 25-foot-long by 3-foot-wide bridge with a new 25-foot-long by 6-foot-wide, pre-fabricated wood bridge (location 105)
- Replace the existing 25-foot-long by 3-foot-wide bridge with a new 25-foot-long by 6-foot-wide, pre-fabricated wood bridge (location 123)
- Replace the existing 40-foot-long by 3-foot-wide bridge with a new 40-foot-long by 6-foot-wide, pre-fabricated wood bridge (location 126)

Under alternative 2, a new boardwalk would be constructed at location 30 in Fort Mahan. Location 30 is located between Benning Road North to Hunt Place along the Fort Mahan Loop. At this site, frequent water exposure from a seep, located approximately 18 feet upslope from the north side of the CWDW Hiker-Mountain Biker trail, has deteriorated the asphalt. The water currently drains from the seep across the trail and into a palustrine wetland. To protect the wetland, including soils and vegetation, the NPS would remove the deteriorated asphalt and construct a pre-fabricated raised boardwalk spanning the removed portion of the trail, approximately 34-feet long by 6-feet wide. Figure 6 demonstrates the existing condition of the trail in this location.



SOURCE: NATIONAL PARK SERVICE (2012)

FIGURE 4: EXISTING BRIDGE TO BE REPLACED



SOURCE: NATIONAL PARK SERVICE (2012)

FIGURE 5. EXAMPLE OF ENWOOD© LAMINATED WOOD BRIDGE



SOURCE: LOIEDERMAN SOLTESZ ASSOCIATES, INC. (2013)

FIGURE 6. TRAIL DETERIORATION AND WETLAND AT LOCATION 17

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IDENTIFICATION OF CULTURAL RESOURCES

AREAS OF POTENTIAL EFFECT

According to the section 106 regulations (36 Code of Federal Regulation [CFR] Part 800), an Area of Potential Effects (APE) is defined as the geographic area or areas in which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.

Because of the scale and nature of the project, which includes resurfacing trails, adding new trail heads, replacing and adding bridges, and adding vehicle barriers, under analysis, APEs have been designated. The APE for cultural landscapes is based upon an approximately 400-foot buffer around the limit of disturbance and modified by considerations of visibility to and from significant above-ground historic properties.

HISTORIC CONTEXT FOR THE CIVIL WAR DEFENSES OF WASHINGTON—FORT CIRCLE PARKS

At the beginning of the Civil War, the city of Washington was relatively undefended. The only fort in the vicinity was Fort Washington, 12 miles south on the eastern side of the Potomac. It had been built several years before the War of 1812. As of May of 1861, some fortifications had begun to be built in Virginia including Forts Haggerty, Bennett, and Corcoran at the end of the Georgetown Aqueduct near what is today the Francis Scott Key Bridge, Forts Albany and Runyon at the end of Long Bridge (today the 14th Street Bridge) and Fort Ellsworth in Alexandria. After the first Battle of Bull Run, it became apparent that the city of Washington needed a series of defensive fortifications. Work on the fortifications south of the Potomac continued through the summer. In early September work on Fort Stanton in Anacostia was begun. By the end of that month, Fort Mahan near Benning's Bridge had been started as well. Forts Dupont and Davis and Battery Ricketts were started later in the fall, construction was well advanced by the beginning of 1862, and garrisons were in place as of the spring. Fort Chaplin was completed after the other forts in Anacostia.

By the end of the Civil War, Washington, D.C. was likely the most fortified city in the world. Military construction greatly altered the landscape of Washington as trees, homes, fields, orchards, and anything else that stood in the military's way were simply demolished to make way for the fortifications. Sixty-eight forts were built with 93 detached batteries and 20 miles of rifle pits. There were also covered roads and blockhouses at three key points as well as stockade bridgeheads and four picket stations. The military had also built 32 miles of roads to support the forts and military movements throughout the area. The total circumference of the forts was 37 miles. More than 1,000 landowners were impacted over the course of the war. A large part of the land was returned to landowners after the war. Some of it continued to be used as farm land, but in other cases, land and forts were returned to property owners with military buildings still in place. The government sold much of the wood from the forts for a profit. Fort Stanton was the only one of the forts in the Fort Circle Parks area that remained in government hands after the war.

The Commission on the Improvement of the Park System, known as the McMillan Commission, issued its report in 1902. Most famous for its plan for the National Mall, the McMillan Commission also suggested creating Fort Drive to connect the remaining chain of Civil War forts within the city of Washington. Of those forts in Anacostia the report stated:

In the section east of the Anacostia a similar chain of hilltop forts marks the points of the most commanding view. With the Anacostia and the Potomac below and the city of

Washington spread out beyond and the hills of Virginia in the distance, these are the most beautiful of the broad views to be had in the District. Forts Mahan, Chaplin, Sedgwick, Dupont, Davis, Baker, Stanton, Greble, and Battery Ricketts can be linked together readily by means of the permanent system of highways with a few modifications and some widening into a drive comparable in beauty with that along the Potomac Palisades, but utterly different in character (Moore 1902:111–112).

The idea of a drive or highway connecting all the Civil War forts of Washington persisted well into the 20th century. In 1924, Congress created a Park Commission to, among other things, provide for a continuous development of a park and parkway system for the National Capital. The National Capital Park and Planning Commission replaced the Parks Commission in 1926, and both entities worked toward a vision of Fort Drive as originally described by the McMillan Commission.

The Capper-Cramton Act of 1930 authorized the National Capital Park and Planning Commission to buy land in between that which it already owned to complete Fort Drive. The acreage containing the forts and all the in between spaces acquired for Fort Drive were transferred to the Department of the Interior and the NPS in 1933.

The Civilian Conservation Corps (CCC) Benning Camp was constructed in the northwest corner of the park in the opposite corner from Fort Dupont, which was on the far southeast corner. Benning housed 200 CCC workers in six temporary wooden barracks buildings. The camp also included a bath house, mess hall, headquarters, recreation building, and oil house. The NPS built an office, two garages, a blacksmith shop, and a technical service quarters near to the camp. The CCC workers also constructed several more structures for themselves, including a swimming pool, a baseball field, an outdoor beer garden, and a canteen. The CCC worked in various areas of the park including around the earthenworks and forts. By the park's opening in 1937, they had constructed picnic areas, comfort stations, play areas, park roads, and bridle paths. The CCC also built a nine-hole golf course located west of Fort Dupont by 1940 (Lester 2013A).

In March of 1942, the CCC officially turned over the use of Benning to the War Department. The Antiaircraft Artillery Command of the Military District of Washington occupied a 51-acre section of the park from 1942 until August of 1945 after the Japanese surrendered. The military set up antiaircraft batteries to protect the city of Washington in various places around the park, manned the emplacements, and housed soldiers in the CCC barracks. The CCC camp was demolished in the 1950s (Lester 2013A).

The National Capital Planning Commission re-evaluated the Fort Drive concept in 1962 and found that, because of the increased traffic, the concept was no longer viable. Three years later the report, *Fort Park System, A Re-evaluation Study of Fort Drive, Washington D.C.*, proposed the establishment of a series of interconnecting parks with recreation and bike trails instead of a drive. The 1968 Master Plan called for the Fort Drive concept to be revived but as a bike and walking trail as opposed to a road.

By the time of the 1968 Master Plan, Forts Mahan, Chaplin, Dupont, Davis, Stanton, and Battery Ricketts were in a state of disrepair. In the report, stabilization was recommended for Forts Mahan and Chaplin, Fort Stanton and Battery Ricketts were to be stabilized and rehabilitated, and Fort Dupont and Fort Davis were to be all or partially restored. According to the 1996 Cultural Landscape Inventory, none of this work was completed. As of 1951, the CCC's nine-hole golf course had been expanded to an 18-hole golf course and was located on the northwestern section of the land between Massachusetts Avenue, Minnesota Avenue, Ely Drive, and Fort Davis Drive. Instead of closing the golf course, the 1968 Master Plan recommended studying its operation for better efficiency. The golf course closed in 1971, and part of the area was later converted into a community garden. The CWDW was listed on the National Register of Historic Places (national register) in 1974.

IDENTIFICATION OF CULTURAL LANDSCAPES IN THE AREAS OF POTENTIAL EFFECTS

Cultural landscapes, as defined by The Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes, consist of “a geographic area (including both cultural and natural resources and the wildlife or domestic animals therein) associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values” (Birnbaum 1996). The CWDW park system was a major element of the 1902 McMillan Commission Plan for the improvement of the park system Washington, D.C. The system of defensive forts was singled out by the McMillan Commission for the importance its historical landscape makes to the city of Washington as much as for the “commanding view” of the Potomac and Anacostia Rivers, the city, and the hills of Virginia (Moore 1902: 111). The CWDW Hiker-Mountain Biker trail is the remnant of that plan as the McMillan Commission recommended forming Fort Drive, a highway extending all the way around Washington connecting all the Civil War-era forts. The NPS modified this plan in the 1960s when it was acknowledged that the vehicle traffic in the city of Washington had become too great for the highway to be successful as a rural byway. Instead the CWDW Hiker-Mountain Biker trail was installed to provide public access to these important historical sites and to encourage visitor use and create more opportunities for recreation within the park.

Nineteen separate properties were nominated to the national register for the CWDW Historic District. The project area, which contains Forts Mahan, Chaplin, Dupont, Davis, Stanton, and Battery Ricketts, is only a small section of the historic district. A Cultural Landscape Inventory was completed on the CWDW in 1996, and it only outlines the basic contributing features to each landscape within a fort site (Handly 1996). The report also determined that the Fort Circle Parks were a historic designed landscape. As such, it is considered a significant cultural and historic landscape.

The structures remaining at each fort site in the project area are contributing features of the significant cultural and historic landscape and have been cataloged with the NPS’ List of Classified Structures. They are shown below in table 1:

TABLE 1. LANDSCAPE FEATURES FROM THE NATIONAL PARK SERVICE LIST OF CLASSIFIED STRUCTURES

Structure Number	Name	Type	Significance Level
113-1	Fort Mahan, Earthworks	Structure	State
113-2	Fort Chaplin, Earthworks	Structure	State
113-3	Fort Mahan, Well	Structure	Contributing
113-4	Fort Mahan, Rifle Pits	Structure	Contributing
115	Fort DuPont, Earthworks	Structure	State
115-1	Fort Davis, Earthworks	Structure	State
122-1	Fort Stanton, Earthworks	Structure	State
122-3	Battery Ricketts, Earthworks	Structure	State

Two new Cultural Landscape Inventory reports were completed for Forts Mahan and Dupont in the second half of 2013. Although these reports are only in draft form, they provide a more detailed assessment of the contributing and non-contributing landscape features near these two forts (Lester 2013A and 2013B). A listing of the contributing and non-contributing character-defining landscape features identified in both draft reports appears below in tables 2 and 3:

TABLE 2. CHARACTER-DEFINING LANDSCAPE FEATURES OF FORT MAHAN

Feature Identification Number	Name	Type	Significance Level
164431	Circular Pedestrian Trail (unpaved)	Circulation	Contributing
164433	Access Road (graveled)	Circulation	Contributing
164439	Social Trails	Circulation	Non-Contributing
164441	Trail leading to CWDW Hiker-Biker Trail	Circulation	Non-Contributing
164443	Open grassy area at the crest of the fort	Vegetation	Contributing
164445	Willow oak, southeast corner of the site	Vegetation	Contributing
164447	Tulip poplars, near CCC-era road	Vegetation	Contributing
164449	Other mature trees and brush vegetation	Vegetation	Non-Contributing
164451	Southwest bastionet	Structure	Contributing
164453	Southeast bastionet	Structure	Contributing
164455	Outerworks	Structure	Contributing
164457	Advanced battery	Structure	Contributing
164459	NPS Wayside	Small Scale Features	Non-Contributing
164461	NPS Signage	Small Scale Features	Non-Contributing
164463	Metal Gate	Small Scale Features	Non-Contributing
164465	Utility Box	Small Scale Features	Non-Contributing
164467	Football uprights	Small Scale Features	Undetermined
164469	Pole (Flagpole or football upright)	Small Scale Features	Undetermined
164471	Lights (mounted on a pole)	Small Scale Features	Undetermined

TABLE 3. CHARACTER-DEFINING LANDSCAPE FEATURES OF FORT DUPONT

Feature Identification Number	Name	Type	Significance Level
164473	Trail through the sallyport	Circulation	Contributing
164477	Fort loop road	Circulation	Contributing
164489	Parking area	Circulation	Non-Contributing
164491	Social trails	Circulation	Non-Contributing
164493	Paved footpath	Circulation	Non-Contributing
164479	Grassy area W& S of earthworks	Vegetation	Contributing
164481	Cedars & Hemlock assoc. with Nursery	Vegetation	Non-Contributing
164483	Ravine vegetation	Vegetation	Non-Contributing
164485	Earthwork vegetation	Vegetation	Non-Contributing
164487	Trees near entrance	Vegetation	Undetermined
164495	Artillery platforms	Structure	Contributing
164497	Embrasures	Structure	Contributing
164499	Outerworks	Structure	Contributing
164501	Comfort station	Structure	Non-Contributing
164503	Bridge	Structure	Non-Contributing
164505	NSCD Boulder & Plaque	Small Scale Features	Non-Contributing
164507	Wayside	Small Scale Features	Non-Contributing
164509	NPS Signage	Small Scale Features	Non-Contributing
164511	Gates	Small Scale Features	Non-Contributing
164513	Trash Receptacles	Small Scale Features	Non-Contributing
164515	Picnic Tables	Small Scale Features	Non-Contributing
164517	Grill	Small Scale Features	Non-Contributing

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ASSESSMENT OF EFFECTS

METHODOLOGY

To assess the potential effects of the proposed “Repair and Connectivity Improvements of the Civil War Defenses of Washington Hiker-Mountain Biker Trail” as an undertaking with the potential to affect historic properties, this report applies the Criteria of Adverse Effect, as defined in 36 CFR Part 800.5, to each historic property within the APE. The Criteria of Adverse Effect states, “An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the national register in a manner that would diminish the property’s location, design, setting, materials, workmanship, feeling, or association.” Additionally, “adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.” Examples of adverse effects include:

- Physical destruction of or damage to all or part of the property
- Alteration of a property that is not consistent with the *Secretary of the Interior’s Standards for the Treatment of Historic Resources* (36 CFR Part 68) and applicable guidelines
- Removal of the property from its historic location
- Change of the character of the property’s use or physical features within the property’s setting that contribute to its historic significance
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property’s significant historic features
- Neglect of a property that causes its deterioration
- Transfer, lease, or sale of the property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property’s historic significance

Impacts to other cultural resources, including archeological resources, historic districts and structures, museum objects and ethnographic resources are not expected.

EFFECTS ON CULTURAL LANDSCAPES

The CWDW was first recognized as an important historic and cultural landscape by the McMillan Commission as part of its 1902 report. The property officially came under the direction of the NPS in 1933. Nineteen separate properties were nominated to national register for the CWDW Historic District in 1974. The project area, which contains Forts Mahan, Chaplin, Dupont, Davis, Stanton, and Battery Ricketts, is only a small section of the historic district. A Cultural Landscape Inventory was completed on the CWDW in 1996, but it only outlines the basic contributing features to each landscape within a fort site. Two new Cultural Landscape Inventory reports were completed for Forts Mahan and Dupont in the second half of 2013. Although these reports are only in draft form, they provide a more detailed assessment of the contributing and non-contributing landscape features near these two forts (Handly 1996; Lester 2013a and 2013b).

The existing trail network provides access to the historically important fort sites allowing visitors a different understanding of the landscape. Although the area is now covered with foliage, some of the notable broad views of the District of Columbia, Virginia, and the rivers that were singled out by the McMillan Commission do still exist within the landscape.

EFFECTS OF ALTERNATIVE 1: NO ACTION

Under the no action alternative, no repairs or connectivity improvements would be made to the CWDW Hiker-Mountain Biker trail. Damage found throughout the trail system, including numerous areas where erosion, rutting, and ponding have occurred, would not be corrected. Asphalt trail surfaces in need of repair would not be resurfaced, and deteriorating bridges would not be replaced. No connectivity improvements would be made. The continuation of current conditions would contribute to further deterioration of existing environmental and safety conditions. The trail would remain inaccessible to visitors with mobility impairments. Therefore, there would be no undertaking with regard to the Fort Circle Parks Historic District as a cultural landscape. The remains of the forts and all element of the historic landscape would continue as they are. In summary, alternative 1 with regard to cultural landscapes *does not constitute an undertaking*.

EFFECTS OF ALTERNATIVE 2: REPAIR, RECONSTRUCT, AND IMPROVE CONNECTIVITY OF THE HIKER/MOUNTAIN BIKER TRAIL

Under alternative 2, trail repair, trail construction and connectivity improvements, bridge repair and replacement, and the installation of motor vehicle prevention measures would occur within the APE. Alternative 2 would include ground-disturbing activities. Each proposed action under alternative 2 is detailed below:

1. Asphalt resurfacing would take place on 5,225 linear feet of existing trail. This process would involve asphalt demolition, repairs and resurfacing, as well as turf grading at six locations throughout the area of Fort Mahan, Fort Davis, and Fort Dupont. Trail resurfacing maintains existing access to the park by visitors. Six-foot-wide asphalt trail surfaces would be replaced in kind with minimal disturbance to the fabric of the park. No resurfacing would take place within the boundaries of the Civil War forts or any of their historic defensive features. *Consequently, there would be no adverse effect from the proposed asphalt resurfacing.*
2. Generally, no trails currently exist at road crossings between the curb or sidewalk and the line of trees. Six-foot-wide trails would be constructed in 10 locations in these areas, extending from the tree line to the curb or sidewalk. A trail base consisting of 4 inches of grade aggregate base would be covered with 2 inches of asphalt trail surface. A total 2,385 linear feet of new trail would be constructed. New trail construction would be limited to areas nearest to existing urban development, such as public streets and sidewalks. These consist of the boundary areas of the park. No new trail construction would occur within the boundaries of the Civil War forts or any of their historic defensive features. *Consequently, there would be no adverse effect from the proposed new trail construction.*
3. A total of 27 vehicle prevention structures would be installed at 14 road crossings, typically with two at each crossing. All vehicle prevention structures would be new with the exception of one road crossing at East Capital Street NE where existing motor vehicle prevention structures would be replaced. The vehicle prevention measures would include a different quantity of boulders on either side of the trail to prevent vehicles from entering the trail. In the middle of the trail would be a collapsible wood post so that NPS maintenance vehicles would be able to use the trail. The vehicle prevention measures would assist in preserving the existing trail network in that it would stop unauthorized vehicles from entering park land. Vehicle prevention structures would also stop any similar damage to the Civil War forts and any other historic defensive features related to the CWDW within the park. No new construction would occur within the boundaries of the Civil War forts or any of their historic defensive features. *Consequently, there would be no adverse effect from the proposed vehicle prevention structures.*

4. Four replacement bridges and one boardwalk would be installed at five separate locations. All bridges would be 6-foot-wide, pre-fabricated Enwood© laminated wood, girder-style structures and would replace existing deteriorating structures. One new boardwalk would be installed to protect an environmentally sensitive area. Replacing existing deteriorated bridges and adding the new boardwalk would maintain existing access to the park by visitors. The 6-foot-wide, Enwood© laminated wood, girder-style structures would replace in kind the existing wood foot bridges with minimal disturbance to the fabric of the park. No bridge would be replaced within the boundaries of the Civil War forts or any of their historic defensive features. The bridge replacements would not impact any potentially eligible CCC features. *Consequently, there would be no adverse effect from the proposed bridge replacement.*

The proposed action under alternative 2 improves the existing park infrastructure for visitors, enhances access to the existing trail network, improves environmentally sensitive areas, and prevents damage to the park resources and historic fabric by unauthorized vehicles. There would be minimal ground disturbance from the proposed action and, consequently, there would be *no adverse effect* on any part of the historic and cultural landscape of the CWDW Historic District from these actions.

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CONCLUSION

SUMMARY OF EFFECTS ON CULTURAL LANDSCAPES

Under the preferred alternative, alternative 2, trail repair, trail construction and connectivity improvements, bridge repair and replacement, and the installation of motor vehicle prevention measures would occur within the APE. Alternative 2 would improve the existing park infrastructure for visitors, enhance access to the existing trail network, improve environmentally sensitive areas, and prevent damage to the park resources and historic fabric by unauthorized vehicles. There would be *no adverse effect* on any contributing character-defining feature of the historic and cultural landscape from these actions. A listing of each of the contributing features of historic and cultural landscape is presented below in tables 4, 5, and 6.

TABLE 4. SUMMARY OF EFFECTS FOR HISTORIC AND CULTURAL LANDSCAPE FEATURES FROM THE LIST OF CLASSIFIED STRUCTURES

Structure Number	Name	Significance Level	Effect
113-1	Fort Mahan, earthworks	State	No adverse effect
113-2	Fort Chaplin, earthworks	State	No adverse effect
113-3	Fort Mahan, well	Contributing	No adverse effect
113-4	Fort Mahan, rifle pits	Contributing	No adverse effect
115	Fort DuPont, earthworks	State	No adverse effect
115-1	Fort Davis, earthworks	State	No adverse effect
122-1	Fort Stanton, earthworks	State	No adverse effect
122-3	Battery Ricketts, earthworks	State	No adverse effect

TABLE 5. SUMMARY OF EFFECTS FOR CONTRIBUTING CULTURAL LANDSCAPE FEATURES OF FORT MAHAN

Feature Identification Number	Name	Type	Significance Level	Effect
164431	Circular Pedestrian Trail (unpaved)	Circulation	Contributing	No adverse effect
164433	Access Road (graveled)	Circulation	Contributing	No adverse effect
164443	Open grassy area at the crest of the fort	Vegetation	Contributing	No adverse effect
164445	Willow oak, southeast corner of the site	Vegetation	Contributing	No adverse effect
164447	Tulip poplars, near CCC-era road	Vegetation	Contributing	No adverse effect
164451	Southwest bastionet	Structure	Contributing	No adverse effect
164453	Southeast bastionet	Structure	Contributing	No adverse effect
164455	Outerworks	Structure	Contributing	No adverse effect
164457	Advanced battery	Structure	Contributing	No adverse effect

TABLE 6. SUMMARY OF EFFECTS FOR CONTRIBUTING CULTURAL LANDSCAPE FEATURES OF FORT DUPONT

Feature Identification Number	Name	Type	Significance Level	Effect
164473	Trail through the sallyport	Circulation	Contributing	No adverse effect
164477	Fort loop road	Circulation	Contributing	No adverse effect
164479	Grassy area W& S of earthworks	Vegetation	Contributing	No adverse effect
164495	Artillery platforms	Structure	Contributing	No adverse effect
164497	Embrasures	Structure	Contributing	No adverse effect
164499	Outerworks	Structure	Contributing	No adverse effect

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ACRONYMS

Area of Potential Effects	(APE)
Civil War Defenses of Washington	(CWDW)
Civilian Conservation Corps	(CCC)
Code of Federal Regulation	(CFR)
National Park Service	(NPS)
National Register of Historic Places	(national register)

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