



Fort Donelson National Battlefield

Accessibility Assessment



FINAL REPORT

Findings and Recommendations

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U.S. DEPARTMENT OF INTERIOR
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Fort Donelson National Battlefield

Accessibility Assessment Summary of Findings and Recommendations

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Assessment Scope and FMSS Locations

The Eppley Institute for Parks and Public Land's National Center on Accessibility (NCA) entered into an agreement with the National Park Service (NPS) to conduct an accessibility assessment of high use areas at Fort Donelson National Battlefield. Within the scope, the assessment team identified accessibility barriers in the following locations, which are referenced throughout this report:

- The Fort Donelson Visitor Center
- The Dover Hotel
- Fort Donelson National Cemetery
- The River Batteries

The Picnic Area was evaluated separately under a consultation agreement. Cook and Bloomer performed that visit prior to the consultation reported on in this document. The consultation did not include specific barrier identification at the restroom. As a professional courtesy, the team noted barriers to that specific location during the follow-up assessment (this project). Observations were provided to park staff at the time of the consultation.

Purpose, History, and Themes

Fort Donelson National Battlefield is an historic site in Dover, Tennessee, focusing on one of the earliest battles of the Civil War. The site's importance draws from the campaign led by then-general and future president, Ulysses S. Grant, to retake Tennessee



from secessionist forces. The battle at Fort Donelson, which was a Union victory, was a strategic tipping point in the campaign. This campaign and battle are particularly notable as Tennessee was the only state which had seceded via popular referendum as opposed to state convention, and it was the first major campaign of the Union as well as the first of the Western campaigns. The location of Fort Donelson was important, as it was one of the three major forts on the Tennessee and Cumberland rivers and helped protect a vital rail line that ran from north to south.

Fort Donelson's mission statement, according to their 2009 long-range interpretive plan, is:

[To] protect the historic resources associated with this Civil War Battle, to convey the significance of these events in the continuum of history, to provide a setting for contemplation and reverence, and to inspire in the community

and nation a commitment to preserve these places for future generations.

The battle itself started after the fall of nearby Fort Henry to Union gunboat bombardment. Fort Henry was the first of the three forts built to maintain control of the Cumberland River. Confederate reinforcements were sent to both Fort Donelson and Nashville, while the Union moved to attack Fort Donelson, located just west of the town of Dover. The initial attempt to subdue the fort was made by using Union gunboats, as had been done at Fort Henry. These new, high-tech ironclad gunboats, which were repelled by heavy fire from the Confederate gun positions, are now a major part of the site. Following this, the Union engaged in a brief siege, which saw the retreat of two portions of the Confederate forces and then a pitched battle. The commander of the fort asked for surrender conditions, and the response from Grant was a call

for unconditional surrender, which was granted and signed in the Dover Hotel. This victory, and the later victories in taking Tennessee from the Confederate cause, would propel Grant into the national spotlight and eventually the presidency.

After the battle, the Union occupied the fort, and it became one of the first “contraband camps,” which was a camp of newly freed and escaped slaves that traded with and relied upon the Union forces for protection. It also became a recruiting point for Black Union soldiers. However, the Confederate forces made multiple attempts to reclaim the fort. In several raids and smaller battles, Dover itself was almost completely levelled, with one of the few surviving buildings being the Dover Hotel, which is included as part of the site due to both its status as the last surviving pre-war building, but also the “surrender house” for the Battle of Fort Donelson.

Since the war, the Dover Hotel was taken care of primarily by volunteers and became a national military park in 1928. Fort Donelson National Cemetery was established in 1867, and placed under the NPS in 1933. The Dover Hotel became part of the park in 1959, and in 2006, nearby Fort Heiman, in Kentucky, was added as a unit of the park. However, most interpretation and work are done at the main Fort Donelson site.

The park’s significance is tied to the maintenance of its valued resources, which include but are not limited to the following:

- The River Batteries
- The Fort Donelson Earthworks
- The Dover Hotel
- Fort Donelson National Cemetery
- The Visitor Center and interpretive exhibitions

Interpretive themes clarify the meaning, concepts, and contexts of these resources at Fort Donelson National Battlefield (FODO). Interpretive themes go beyond mere description of events or processes and foster opportunities to experience and appreciate the park and its resources. These themes help explain why a park story is relevant to people who

may otherwise be unaware of connections they have to this event, time, or place. The interpretive themes at FODO, as identified in the long-range interpretive plan, include the following:

- The importance of the site’s location in the Tennessee Campaign, as well as the importance of rivers and railroads in the Civil War at large.
- The actions of the soldiers at the actual battle, especially the ironclad troops and the Confederate gunners who repelled them.
- The importance of the battle in shaping Ulysses S. Grant’s military, and later political, career.
- The stories of soldiers and civilians who participated in the battle and lived in the area during the war, including Black people, both free and escaped slaves, who established one of the first contraband camps near the fort.
- The larger impact of the war on Tennessee and the United States, including the meaning of the war, freedom of choice, and the effect of war on people.

The resources, values and themes at any park are the foundation of the park’s programming. They drive the visitor experience, and as such ought to be accessible to everyone who visits the park. Providing equitable access to these resources and programs for people of all abilities is paramount to achieving the NPS mission.

Accessibility Assessment Approach

The NCA assessment process has been designed to identify barriers to participation for people with disabilities, make recommendations for barrier removal and access improvement, and assist facility personnel in long-term planning. The NCA used the federal standard for program access, Section 504 of the 1973 Rehabilitation Act, as a guiding principle for examining the programs, activities, and services at FODO in their entirety for consideration of barrier removal. The assessment team looked critically



at programs for effective communication and equitable opportunities for participation for people who have disabilities related to vision, hearing, mobility, and cognitive processes. This approach is intentionally designed to focus the assessment process and outcomes on the entire visitor experience, not solely in the realm of the physical environment. The NCA assessment team considers the physical environment to be a catalyst for program access and thus forms their recommendations for barrier removal with program access at the forefront of the investigative and reporting processes.

At FODO, the NCA assessment team conducted an accessibility assessment of the physical and programmatic elements of the historic site. This included three days of on-site data collection in November 2021. The team also interviewed key personnel and reviewed key park documents, in order to gain a comprehensive understanding of the park and provide an informed and broad range of recommendations for improving access for visitors with disabilities.

Referenced Standard Guidelines

The NPS is legislatively mandated to provide accessible facilities, programs, services, and activities for all visitors regardless of ability. Based on these mandates, the NCA utilizes the following accessibility legislation, standards, and guidelines in all assessments:

1968 Architectural Barriers Act Accessibility Standards as revised in 2015 (General Services Administration, effective date May 8, 2006)

These standards, originally issued under the Architectural Barriers Act (ABA) of 1968, contain scoping and technical requirements for accessibility that apply to sites and facilities designed, constructed, altered, or leased with certain federal funds. The most recent provisions for outdoor areas developed by the federal government, which address access to trails, picnic and camping areas, viewing areas, and beach access routes, are included

in the edition of the ABA Accessibility Standards employed by NCA.

Rehabilitation Act of 1973, as amended in 1978, Section 504

Section 504 of the Rehabilitation Act (1973) reads, “No otherwise qualified individual with a disability in the United States shall solely by reason of his disability, be excluded from the participation in, be denied benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance, or under any program or activity conducted by an Executive Agency.”

Rehabilitation Act of 1973, Section 508

Section 508 requires access to information and communication technology provided by the Federal Government. The law applies to all federal agencies when they develop, procure, maintain, or use electronic and information technology. Federal agencies must ensure that this technology is accessible to employees and members of the public with disabilities to the extent it does not pose an “undue burden.” Section 508 standards were updated and published in 2017.

Architectural and Transportation Barriers Compliance Board Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way; Shared Use Paths (July 26, 2011; February 12, 2013)¹

Sidewalks, street crossings, and other elements of the public right-of-way present unique challenges to accessibility, for which specific guidance is essential. These guidelines ensure that sidewalks, pedestrian street crossings, pedestrian signals, and other facilities for pedestrian circulation and use constructed or altered in the public right-of-way by state and local governments are readily accessible to and usable by pedestrians with disabilities. The guidelines were supplemented in 2013 to include provisions for shared-use paths, multi-use paths designed for transportation, and recreation that may or may not be within the public right-of-way.

¹ This guidance is not specifically referenced for the sites assessed at FODO. It is included, however, so that park staff can reference it in the future, if needed.

NPS Director’s Order #42: Accessibility for Visitors with Disabilities in National Park Service Programs and Services (November 3, 2000)

This NPS Director’s Order reiterates the NPS goal of ensuring that all people, including American citizens with disabilities, have the highest level of accessibility that is reasonable to their programs, facilities, and services, in conformance with applicable regulations and standards. Five objectives are outlined: (1) incorporation of the highest level of accessibility as a long-range goal; (2) implementation through daily operation, policies, organizational relationships, and strategies; (3) provision of guidance and direction regarding the NPS interpretation of laws and policies; (4) establishment of a framework for effective implementation; and (5) ensuring the implementation of universal design principles within the national park system.

NPS Audio-Visual Accessibility Initiative for Visitors with Disabilities D24 (2420) (October 20, 2006)²

A series of official disability rights complaints and testimony received at a congressional oversight hearing on disability access revealed that the NPS has many audiovisual programs that are not captioned or audio-described, assembly areas that are not equipped with assistive listening systems, and, in some cases, captioning systems that are broken and have not been repaired. This initiative established the fundamental goal that films and audio-visual programs presented in parks provide three basic services: open captions, audio description, and assistive listening devices.

NPS Policy Memorandum 18-02: Use of Service Animals by Visitors with Disabilities—Interim Policy (October 18, 2018)

This policy memorandum updates information about the use of service animals by visitors with disabilities in units of the NPS. It provides guidance

² This guidance is not specifically referenced for the sites assessed at FODO. It is included, however, so that park staff can reference it in the future, if needed.

on what NPS employees must do in order to comply with Section 504 of the Rehabilitation Act of 1973 and align with Department of Justice regulations implementing Titles II and III of the Americans with Disabilities Act of 1990.

Programmatic Accessibility Guidelines for National Park Service Interpretive Media (May 2017)

These NPS guidelines combine laws, policies, and best practices for interpretive media. These guidelines acknowledge that no interpretive media product works alone. Media products are interdependent and each has inherent strengths and weaknesses. Park visitors sample and benefit from an array of interpretive media. These guidelines describe design and presentation solutions that are acceptable in most interpretive media situations. It should be noted, however, that these guidelines are currently under revision.

Wayside Exhibits: A Guide to Developing Outdoor Interpretive Exhibits (October 2009)

The Wayside Guide is an overview of the NPS wayside exhibit standards and work process. Its purpose is to provide information and tools for preparation, participation, and management of a wayside project. The guide addresses accessibility issues related to Section 504 requirements, design, and installation, as well as accessible wayside features, including audio components, braille, and tactile elements.

Smithsonian Guidelines for Accessible Exhibition Design, 1996³

The Smithsonian Guidelines are some of the very first and most comprehensive resources addressing exhibit design considerations for museum patrons with disabilities. The Smithsonian Guidelines are referenced as foundational for designing for various learning styles and functional abilities in the interpretive environment, especially in situations where accessibility standards do not fully transfer to unique exhibition designs.

³ This guidance is not specifically referenced for the sites assessed at FODO. It is included, however, so that park staff can reference it in the future, if needed.

Principles of Universal Design

Universal Design is when products and environments are designed to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. The intent of universal design is to simplify life for everyone by making products, communications, and the built environment more usable by as many people as possible. Universal design benefits people of all ages and abilities.

The NCA recommends application of universal design principles to all components of projects that impact visitor use. Examples include providing recommendations for benches in the outdoor environment, using plain language in publications, installing power-assisted exterior doors, marking van-accessible parking spaces uniformly 11 feet wide, and utilizing the advisories in the Architectural Barriers Act Accessibility Standards (ABAAS) when appropriate, due to accessibility issues that contribute to safety risks.

It is the policy of the NPS (NPS Director's Order 42) that the principles of Universal Design will be applied wherever it is practical to do so. Barriers and solutions that fall into these categories and are best addressed by using principles and best practices of Universal Design are included in the recommendations and cited as such in the action tables.



CEMETERY LODGE

This 1877 house served as office and quarters for the cemetery keeper until 1905. The design of the building is based on the design of the main building of the cemetery, designed by the architect John C. White. The building was designed by the architect John C. White. The building was designed by the architect John C. White. The building was designed by the architect John C. White.

The addition of a kitchen with porch is listed in the order alteration. This addition is listed in the National Register of Historic Places and serves as park staff quarters. It is not open to the public.

Historic Structures and Landscapes

The National Register of Historic Places (NRHP) automatically includes all historic areas administered by the NPS, including FODO. The historic buildings and landscapes included in this assessment are the Dover Hotel, Fort Donelson National Cemetery, and the River Batteries.

The fact that a landscape, district, or building is listed on the NRHP does not exclude it from complying with accessibility standards. Many federal facilities around the country have been able to make changes to historic structures and landscapes to bring them into compliance with accessibility standards. Through NCA's assessment of FODO, deficiencies were noted regardless of whether they were part of a contributing factor to the park's NRHP listing. It is the park's responsibility to remedy those deficiencies to the greatest extent possible. However, the park should always strive for both improved accessibility and historical compatibility, while considering the balance of historical integrity with present-day public use. According to the ABAAS, the Advisory Council on Historic Preservation (ACHP) has established procedures for federal agencies to meet this responsibility, including consultation with the State Historic Preservation Officer and involvement, in certain cases, by the ACHP. FODO should work with its own or NPS regional historic preservation specialists to determine what possible changes can be made. If it is determined that a feature, element, or area cannot be made accessible, there is still an obligation to provide program access to the feature, element, or area. In many cases, this is achieved through a combination of approaches, including increasing accessibility to the feature, element, or area as much as is feasible, providing the experience in an alternative accessible location, and providing accessible interpretive program alternatives.

At FODO, there are many unique and historic elements and locations, such as the River Batteries, where the implementation of the ideal solution of renovating existing access routes and adding accessible options may be limited due to the historic

nature of the landscape and site constraints. In these cases, proposed solutions may focus on the creation of new interpretive materials (e.g., displays or video experiences) or creating the experience in a different, more accessible location, as a way of creating programmatic access where physical access is limited. However, as technology, construction methods, and management strategies evolve, the park should continue to reevaluate whether the ultimate goal of providing experiences in as integrated a setting as possible can be attained in these locations.

The ABAAS allow for exceptions from specific provisions in the technical requirements under certain circumstances. Documentation is required whenever a condition for exception prohibits full compliance with the standards. The documentation must include (a) the reasoning for not meeting compliance, (b) the date of the decision, and (c) information regarding who made the decision. Compliance in an alteration is not required where it is technically infeasible. "Technically infeasible" is defined as follows:

something that has little likelihood of being accomplished because existing structural conditions would require removing or altering a load-bearing member that is an essential part of the structural frame; or because other existing physical or site constraints prohibit modification or addition of elements, spaces, or features that are in full and strict compliance with the minimum requirements.

Where technical infeasibility is encountered, compliance is still required to the maximum extent technically feasible.

The FODO study takes a comprehensive view of all of the experiences and programs offered at the park as a way to evaluate accessibility-related opportunities, and to correct deficiencies at the site. Acknowledging that parks have many additional considerations when making any modifications to their infrastructure and programs, this study strives to offer attainable solutions and alternatives, while also providing long-term goals. The action tables, list of deficiencies by criticality, and list of easy improvements are the best tools with which the

park can plan projects. This narrative section of the report tells the story of access at the park, and how the corrective actions taken together will provide more equitable access to the resources, values, and themes of the park for people with disabilities.

Key Findings and Recommendations

Park-wide Considerations

Some themes in accessibility needs are consistent throughout the park. FODO staff can determine if these needs will either be addressed as each site is updated or as unique parkwide projects.

Parking Lots

Findings pertaining to accessible parking deficits were consistent across the park. According to ABAAS 502.4, slope adjustments are required in multiple sites across the park to meet accessible parking standards of 2.08% or less, or one inch rise for every 48 inches of length. While individual sites within the park generally had accessible spaces striped, the park does not have appropriate signage marking accessible spaces.

According to the ABA standards, accessible parking spaces must have identification signs that measure 60 inches minimum and include the International Symbol of Accessibility and signs that identify van parking must have signage with the designation “van accessible.” Car parking spaces must be at least 96 inches wide and van parking spaces must be at least 132 inches wide. Additionally, access aisles must be 60 inches wide and angled van parking is required to have the access aisle located on the passenger side, but as a best practice it is recommended to include a passenger side access aisle for regular accessible angled parking as well. Accessible parking spaces must be located on the shortest accessible route to an accessible entrance. Marked crossings should be implemented where access routes cross vehicular traffic lanes in order to aid pedestrian safety. FODO staff should make necessary upgrades and

adjustments to accessible parking during any future restriping projects for parking lots.

Trailhead Signage

On November 25, 2013, legal requirements for federal outdoor developed areas were mandated. As described by the United States Access Board, the “provisions address access to trails, picnic and camping areas, viewing areas, beach access routes and other components of outdoor developed areas on federal sites when newly built or altered.” These requirements were incorporated into the ABAAS. Appendix E provides greater detail and examples for how to comply with these standards.

Trailhead signage at FODO, where present, provided minimal information for visitors. It is recommended that FODO staff take a comprehensive, system-wide approach to updating trailhead signage across the park and as they do so incorporate trailhead signs that meet current ABAAS standards.

Waysides

Waysides provide information for visitors of the historic significance and context of various sites across FODO. They teach visitors the story of what happened and why it was important to the American Civil War. Due to this interpretive need, improvements and updates to waysides are needed across the entire park. As new waysides are added or current waysides are updated, FODO should work with local accessibility experts and people with disabilities to design them for the best visitor experience.

Accessible waysides should have basic elements, including large text in clear fonts with simple characteristics, avoiding italics; high contrast graphics; audio and tactile components; and dimensions that comply with accessibility standards, including height and location recommendations put forward by Harpers Ferry Center. Waysides should always be installed on an accessible route, as close to the associated route as possible. Level, clear ground space should be provided at the front of each wayside exhibit, centered on the interpretive information, and positioned for a forward approach.

The wayside should incorporate meaningful tactile elements, such as dimensional maps or scale models; maps, including floorplans, should be available in a tactile format. Tactile models are important because they are a tool for visitors with visual impairments, providing effective communication about the park's interpretive story. Tactile waysides provide the visitor with critical information, such as shape and scale of the area being interpreted. Additionally, tactile models increase the range of elements necessary for people with different learning styles to engage with the story. Tactile elements can be mounted to an interpretive panel or can be stand-alone, separate structures.

All waysides should be designed with universal access in mind so that they are as accessible as possible. Audio description of all waysides should continue to be available, however; providing audio description in and of itself does not make a wayside accessible. Wayside content can be posted on the park website, but that doesn't replace the need to incorporate it into the on-site audio description offerings.

Website

The park website is often the first point of contact for people planning a visit to an NPS site. The accessibility web page on the FODO website provides visitors with very little information about facilities, programs, and services that are available for people with disabilities. The website includes contact information for the park but doesn't provide specific contact for visitors with further questions regarding accessibility concerns.

It is important to remember not to assume what an individual would consider accessible or not, depending on their individual circumstances. As a best practice, parks should provide objective information about what visitors will encounter across all areas of the park so that they can make their own determinations regarding accessibility. It is recommended that the web page be updated to provide more detailed information about park features so that visitors can determine what features of the park are accessible to them based on their own abilities. Providing accurate and specific accessibility information on the park's website, with easy links to relevant material, can simplify the

process of planning a visit for prospective guests. Avoid listing what is accessible or not accessible, and simply provide details of current conditions (e.g., "There are nine (9) steps from the boardwalk to the front door entrance and there is a handrail on the right side of the steps"). As additional accessibility features are updated or become available, ensure revisions are made to the website.

Individuals, or their representatives, have a right to file a disability rights complaint no later than 180 days from the date of alleged discrimination if they believe they have been discriminated against or denied access to any program, service, or activity conducted by the NPS. This information must be posted on the website, as well as physically posted at visitor contact areas, such as visitor centers. The complaint must be in writing, signed and dated. Furthermore, the complaint should include contact information, the name of the alleged discriminatory official or entity, nature of the complaint, and date of alleged discrimination. All accessibility complaints should be sent to the NPS Office of Equal Opportunity Programs. It is also recommended that the park's accessibility webpage include information on how visitors can file an accessibility-related complaint.

The following NPS accessibility web pages can be referenced as good examples regarding what information to provide, how much information to provide, and formatting options to consider when revising the FODO accessibility page.

ALEUTIAN WORLD WAR II NATIONAL HISTORIC AREA

<https://www.nps.gov/aleu/planyourvisit/accessibility.htm>

All information about the accessible features of the park is on a single page of the website, which can simplify the planning process for potential visitors. A welcome statement at the top of the page provides general information including a description of the park landscape, weather conditions, safety warnings, and information about the Access Pass. Several available services for people with disabilities are listed, and the reader is encouraged to contact the park if a needed service is not listed. Links leading to more specific information are provided, taking you farther down the

same page. This eliminates the need for scrolling or switching between different pages for information. Links are then provided to information categorized by disability: physical/mobility, deaf/hearing loss, blind/low vision, and service animals. Each section is thorough in its descriptions of physical elements and services that are offered to the public.

YELLOWSTONE NATIONAL PARK

<https://www.nps.gov/yell/planyourvisit/accessibility.htm>

While Yellowstone National Park is significantly larger than FODO, their accessibility web page can offer some suggestions for format and content. General statements about access to the park and its programs welcome and orient the reader. Reference to the park cell phone app is made, with mention of its accessibility features, including audio description and alternative text for images. The Access Pass, and where to acquire one, is explained. Information is then categorized by a visitor's needs—mobility and wheelchairs, audio assistance, and visual assistance. Details are given about the physical conditions of all areas of the park, the availability of auxiliary aids and services, and where to obtain maps and park guides in alternate formats. Additional links to further information about several topics, including service animals, are provided. A link within the visual assistance section takes the reader to the mp3 tracks of the audio description for the park map and guide. The tracks can be listened to or downloaded for the visitor's convenience.

GOLDEN GATE NATIONAL RECREATION AREA

<https://www.nps.gov/goga/planyourvisit/accessibility.htm>

The Golden Gate accessibility web page, similar to Yellowstone's, covers a significant amount of property, programs, and services. They do, however, offer information that may be beneficial to visitors of any park. A link is provided to a page that explains which accessibility laws apply to the NPS, the goals of the NPS's five-year strategic plan "All In! Accessibility in the NPS, 2015–2020," and the procedure for filing a disability rights complaint. Direct links are also available to learn more about accessibility terms and

definitions, to request a sign language interpreter or beach wheelchair, and to receive assistance with any issue regarding the accessibility of the park's website or electronic documents.

Quick Fixes

There are a handful of "quick fixes" that can be implemented across the park in the short-term that will have a dramatic impact on accessibility and safety for park users of all abilities.

Restrooms

While more complex than the other quick-fix items listed, accessible restrooms are critical. There are several components detailed in the appendices regarding accessibility improvements needed in restrooms across the park. Some will be more difficult and costly than others but can also be broken into phased improvements.

Parking Signs

As noted above, ensuring the entire park has appropriate signage delineating accessible parking spaces is a relatively easy fix for FODO staff to implement. Signs should meet ABA requirements and specify which spaces can accommodate an accessible van.

Handrails

The safety of several access points throughout the park would be improved with the installation of handrails. Handrails should be installed at all locations with stairs and pedestrian walkways with a slope of 5% or greater, which is the threshold for meeting the specifications of a ramp (ABAAS 303.4; 405; 505). Some existing handrails (such as at the picnic area) have weathered and need to be replaced or reinforced. Handrail installation can be handled by FODO staff at relatively low cost.

Additionally, it is recommended that FODO staff reinforce the ramp going to the temporary Visitor Center. While this isn't a permanent space, the significant bounciness of the ramp creates instability for people with physical disabilities. The

reinforcement is a relatively simple fix and improves the safety of accessing this structure.

Website

Several suggestions are notated above for website improvements. As these updates don't require physical infrastructure changes and there are templates from other parks that can be mimicked, the website updates can be a quick fix for FODO staff to implement.

Individual Location Reports

This section, arranged by site locations, provides descriptions of identified barriers and the assessment team's recommendations for barrier removal. The corresponding action tables for these locations go into further detail, outlining the criticality and timeframe.

One intention of the format of this report is for park management and the accessibility team to use the report, specifically the location-specific sections to inform five-year work plans, influence addendums to existing projects, and inform future project work. Accessibility work is most successfully executed when it is an integral component of the project planning, writing, and scoping process.

The location-specific sections of this report include a summary of the area's experiences and benefits that are afforded to visitors in a section titled "Purpose, Experience & Use." The next section highlights the recommended long-term and interim solutions for improved accessibility and equitable use of the area based on conversations and data collected during the on-site visits. The long-term and interim solutions section are intended to inform management decisions about future work planning and managed use(s) of an area. The next section of the report includes the observations and recommendations based on common themes: parking and arrival; orientation, wayfinding, and signage; amenities and site features; interpretation and education. These portions of the report conclude with action items that can be achieved with minimal effort or resources, but that will

improve the experiences of people with disabilities and their companions. Repairs and upgrades such as adjusting the height of fixtures to fall within acceptable reach range requirements or replacing handrails on stairways and/or ramps to better meet the needs of individuals who have a variety of mobility-related needs can improve the visitor experience and perception of FODO as a welcoming place for people with disabilities and their companions.

Criticality

Each identified deficiency is rated proportionate with how much it inhibits or prohibits access for someone with a physical, sensory, or cognitive disability. A compiled list of deficiencies grouped by criticality is located in Appendix A. The NPS Facility Management Software System establishes three levels of criticality: critical, serious, and minor. A similar rating system is presented in consideration of accessibility deficiencies:

- **Critical:** A critical priority is given to those physical or programmatic deficiencies that impact a significantly high number of visitors or prohibit people with physical, sensory, or cognitive disabilities from utilizing a facility or accessing a program.
- **Serious:** A serious priority is given to those physical or programmatic deficiencies that substantially inhibit an individual with a physical, sensory, or cognitive disability from utilizing a facility or accessing a program.
- **Minor:** A minor priority is given to those deficiencies that only slightly inhibit an individual with a physical, sensory, or cognitive disability from utilizing a facility or accessing a program.

Timeframe

An implementation timeframe is provided for each solution. These timeframes are intended to help the park transition from an evaluation of deficiencies to an action plan for removing barriers. As funding, staffing, or other factors will likely change these timeframes, the park should evaluate and update these on a regular basis.

Timeframes used in the action plan are as follows:

- **Immediate**
- **Short-term**
- **Mid-term**
- **Long-term**

It is the responsibility of the park to substantiate any implementation timeline for all recommended action items. **It is the NCA's strong recommendation that FODO staff review and immediately apply for funding for all noted deficiencies in this report.** Anticipated funding horizons are sufficient substantiation for action timelines. That being the case, it remains the responsibility of the park to provide an interim solution until the accessibility barrier can be fully remedied.

Deficiency Solutions versus Best Practice Recommendations

Many of the deficiencies noted in the action tables are deficiencies because they do not meet an accessibility standard or program access standard. These deficiencies need to be addressed because they do not meet a legal requirement. Other deficiencies are identified as best practices. These indicate deficiencies where the proposed solution is recommended because it achieves good Universal Design and best contributes to providing complete program access, but the barrier is not specifically addressed by, or applicable to, an accessibility standard. All of these barriers are presented in this report for the park's consideration.

The accessibility standards and laws often specify what an element, program, or feature of a park should be doing in terms of accessibility, but not how to achieve that function. An NCA accessibility assessment has two parts:

1. identify the barriers that must be corrected, then
2. provide, in consultation with the park, a corrective action or actions that work best for the park.

A barrier, once identified, can be addressed in any way that will remove it, which provides flexibility for the park in carrying out these actions

Action Planning

The summaries in this report and the corresponding action tables represent NCA's recommendations for barrier removal. Where specific solutions are not stipulated, it is the park's responsibility to consider all possible solutions and determine the most feasible option that will provide the required access. Some solutions, such as providing vertical access to historic structures or modifying exhibit displays, may require significant time and funding. These longer-term projects should not be deferred; rather, the timeline is meant to acknowledge that the process for developing the scope and securing funding can take multiple years. The park, while offering interim solutions and building long-term solutions, is still considered deficient with respect to accessibility. A variety of factors - including a complaint brought against the park or agency - may change the recommended or planned implementation timeline.

Providing access cannot be deferred until a larger project is undertaken. In order to ensure equal access to programs, short-term solutions or programmatic alternatives must be provided. At FODO, the Dover Hotel and Visitor Center exhibit areas fall into this category. The current interpretive exhibits at the Dover Hotel are not accessible to visitors who have visual impairments. Although the ideal permanent solution requires an investigation of many alternatives, alternative program access will need to be provided until that larger project is funded and underway. The interim solution could be to continue providing the existing tactile objects and develop a prerecorded audio described version of the tour that is available on a portable device and can also be downloaded from the park website. Although the Visitor Center is currently under renovation, interpretive and informative exhibits at the temporary Visitor Center are still required to meet accessibility standards. Accommodations similar to the improvements for Dover Hotel would be appropriate for the temporary Visitor Center.

Upon receipt of the assessment data and report, it will be critical for park personnel to review recommendations and embark on a series of actions for improved access to the programs and facilities at FODO. Immediate work on PMIS requests and integration of accessibility-related recommendations into other NPS planning processes for long-term projects is strongly recommended and may also be required in order to complete work within the established timelines. For example, a multi-step, long-term project can take seven-plus years from initiation. That clock starts when the project is submitted to PMIS, and this step should not be delayed.

Park senior management are encouraged to formalize a core accessibility management team with representation from various divisions including interpretation, facility operations, maintenance, administration, and other relevant departments affecting the experience for visitors with disabilities. Representation should include individuals with decision-making authority in order to appropriately prioritize funds while assuming responsibility for compliance oversight in those key areas. The core accessibility management team should be convened to prioritize accessibility improvements, review procedures, and ensure policies are consistent with federal accessibility legislation.

The park staff member designated as the accessibility coordinator should be significantly involved in the planning process for accessibility improvements and work as a conduit for information between program services and facility operations. It is the responsibility of the park accessibility coordinator to ensure that requests are addressed and that there is appropriate follow through. The NCA recommends that the accessibility coordinator develop and implement procedural processes to identify responsible staff and available resources in the park that can be activated if and when the park receives public requests for accommodations. Based on the specific needs of the request, these procedures should provide guidelines for how the requests will be addressed and who is responsible for responding to them.

A review and prioritization process should be developed for corrective actions to improve access for visitors with disabilities. In addition,

a strategy and timeline should be outlined to conduct accessibility assessments of facilities and programs as they are changed or updated. Deficiencies should be documented and proposed corrective actions can be cost estimated for future planning and budget requests. A review process for all new construction and renovation plans or designs should be implemented, to ensure at least the minimum accessibility standards and guidelines are appropriately applied and opportunities for the application of universal design are seized. In addition, a process should be established to inspect all construction projects for compliance with the minimum accessibility standards and guidelines.

Continue to provide and invest in training for fulltime staff, seasonal staff, and volunteers on select topics including the application of the accessibility standards and guidelines for park maintenance, the principles of universal design, program access, methods for developing accessible interpretive programs, the accommodation process, techniques for interacting with people with disabilities, and the use of people-first language. Interpretive staff should receive more specific training on the provision of audio description for people with visual impairments and tailoring talks for people with cognitive impairments. Frontline customer service staff, including those working for concessioners, also should receive a seasonal update on accessibility improvements in order to field or refer questions on accessibility from the public. Staff should be trained on the use of the available auxiliary aids, such as the assistive listening system, and a routine maintenance program should be instituted for all accessibility equipment.

To ensure FODO continues to meet the needs of visitors with disabilities, a system of ongoing evaluation of the park's programs, services, and activities should be developed and instituted. The NPS is prohibited from discriminating against people with disabilities in their programs and services per Section 504 of the Rehabilitation Act. All visitors must have equal access to participate in and benefit from all programs and services, regardless of ability. Park staff is encouraged to contact the NCA to discuss possible solutions to any accessibility issue to ensure compliance is met and program access is guaranteed.



Visitor Center

The FODO Visitor Center is located at the main park entrance, at 120 Fort Donelson Park Road, in Dover, TN. The Visitor Center was built in 1962 as part of the NPS's Mission 66 modernization plan. While currently under renovation, this is the starting point for a visitor's experience at FODO: it is located at the entrance and contains important park interpretive exhibitions and information. Some exhibits at the Visitor Center were renovated in 2013, and others continue to be updated, as funding allows.

The Visitor Center is where visitors are currently able to learn the most about the history of FODO, including the larger scope of the campaign, battle, and the significance of this site to the American Civil War. The exhibits at the Visitor Center prepare the visitor for the park so that when they go through the park they will understand the context of the park. Exhibits include models of gunboats, locomotives, and uniforms, all of which help visitors understand

the history of the site. Upon completion of the renovation, the site will contain public restrooms, a gift shop, an information desk, and a small theater stage-area that plays an introductory park video.

The objectives for evaluation of the Visitor Center were:

- Discuss opportunities for expanded accessibility to the Visitor Center.
- Review the current facilities and visitor engagement for compliance with applicable accessibility standards, guidelines, and best practices.

It is the park's responsibility to remedy accessibility deficiencies to the greatest extent possible, balancing historical integrity with present-day use. Many federal facilities around the country have been able to make changes to historic structures and landscapes to bring them into compliance with accessibility standards. According to the ABAAS, the Advisory Council on Historic Preservation has

TABLE 1: Visitor Center Accessibility Goals

Goal	Implementation Detail
Install accessible exhibits	Park staff should take a holistic approach to tell the story of what's critical about the park and ensure the story is being told in a way so everyone can experience it. New exhibits should be installed with an emphasis on accessibility and equitable experience, which should include orientation, wayfinding, and supports such as tactile maps and models, as well as audio description that illustrate both specifics of the exhibit and how it fits into the larger significance of the park.
Accessibility of existing themes	All experiences need to be as equitable as possible. If something is audio it also needs to be visual. Whatever alternative is created needs to be equally interactive. Therefore, existing interpretive content must have accessible options, such as transcripts for audio and video with sufficient contrast, so that a visitor with a disability can have the same experience as a visitor without a disability.

established procedures for federal agencies to meet this responsibility, including consultation with the State Historic Preservation Officer and involvement by the advisory council in certain cases. Additionally, interpretive spaces should consult the Harper's Ferry Center Media Accessibility Guidelines for more information on accessibility within interpretive spaces.

The renovation of the Visitor Center will address some of the larger facility accessibility needs. To ensure that the site is able to provide inclusive opportunities for engagement in the valuable history of the site, interim solutions and program improvements are required. Specific interim and long-term accessibility goals for the Visitor Center are outlined in the table below.

Observations and Recommendations

Based on observations of the accessibility evaluation team from the NCA, as well as information and feedback provided by FODO personnel, the following recommendations are suggested for improved access to the Visitors Center for visitors with disabilities:

Parking & Arrival

The Visitor Center contains a one-way parking lot with angled parking and two accessible spaces.

There is a parking space aisle that is also angled and leads to an accessible path into the building. However, there are no vertical signs marking these accessible parking spaces. As the first point of contact a visitor will have with staff, it is important to have an available repository for any assistive technology that may be on site, as well as information about accessible features on site. Although currently the restroom in this building is also only accessible via a handrail-mounted chairlift, it is noted that once the renovation is complete there will be a single user restroom within the main entry and additional restroom facilities will be accessible via an elevator.

Recommendation #1: Install parking space identification signs on accessible parking spaces at the Visitor Center.

Recommendation #2: Train all staff and volunteers on how to appropriately communicate with and assist visitors with disabilities, including how to offer and operate available accommodations, such as assistive listening devices.

Amenities and Site Features

Due to the current facility renovations underway at the time of this report, this section will focus on the interpretive and informative elements of this location. The Visitor Center's main desk is currently

under renovation but is intended to serve multiple purposes. These include retail sales, general welcome and site orientation, access to staff offices, operational storage, and other considerations. This desk will need to comply with all relevant regulations in order to ensure that to visitors of all abilities have the same access to this information and features. This first critical point of contact should ensure everyone feels welcomed and able to access and interact with park information they need.

At this time, there is not an accessibility plan for the theater that would provide access to the stage. The audio-visual features in the theater are to be set up by the park after the building renovations are completed. An historic captioning board is currently present. Parks that have captioning boards are permitted to keep them as long as they are in good working order. However, the NPS is no longer supporting maintenance or replacement of these if they break. Therefore, it is recommended that FODO staff play the video in “open caption” mode with the subtitles appearing within the video screen. Currently, the park’s video is captioned but not audio described. Although devices to provide captions and audio description exist on site, it was unclear how readily accessible these devices were should a visitor require them.

The overall experience of the site in general does not have accessible means of interaction, such as artifacts and other objects being behind glass or otherwise not intended for tactile exploration. Several see-through plexiglass panels and laminated information cause poor contrast for exhibit information. Interaction with the gunboat model is beyond the required reach range for access, making it difficult to push the button and engage with the rifling of the canon. Additionally, the starting point of the museum currently does not start at the beginning of the story being told about the park, which can make it difficult for visitors who may have cognitive difficulties to engage with the content being provided.

Recommendation #3: Update all audio-visual features on site to meet compliance with appropriate standards for audio description and

assistive listening devices; deliver audio-visual content in a way that is consistent throughout the Visitor Center, so that visitors can better understand where this information is available.

Recommendation #4: Design the new desk to comply with ABAAS 904.4’s service counter reach ranges, maneuvering clearances, and other relevant design requirements, so that it can be accessed by visitors with disabilities.

Recommendation #5: Remediate issues with the reach ranges on the gunboat display, in compliance with ABAAS 308.2 and 308.3. This element is a major part of the visitor experience, and it may be difficult for both visitors in wheelchairs as well as children to interact with this particular experience. User testing on future designs is also encouraged. Including people with disabilities in the planning and design process helps make access a path to inclusion and not merely a regulatory requirement.

Recommendation #6: Present all exhibition information in an accessible manner, both in terms of requirement and ability to engage with the content. This will involve several steps and changes. First, modify and make replacements as necessary pertaining to (a) text and image contrast and (b) reflection on plexiglass and laminated information so it does not impact a visitor’s ability to engage with information. Add tactile maps and models of critical parts of the experience so that a wide variety of access needs are met. Not only will providing these experiences help visitors who are blind or visually impaired, they will help visitors who have sensory needs - such as those with autism - more fully engage with the information provided in the exhibit. Finally, the chronological and interpretive starting space of the exhibit needs to be clear and near the entrance of the exhibit so that visitors will engage with the information provided more fully and completely, and in a way that considers multiple kinds of cognitive needs.

Recommendation #7: Train staff and volunteers at the site on engaging with park visitors with disabilities, in order to help provide those who interpret the site the best chance of having successful interactions with guests with varied needs.

Recommendation #8: Provide proper ground clearance at exhibition spaces. This includes ensuring protruding objects do not interfere with maneuverability.

Action Tables

Upon receipt of the assessment data and report, it will be critical for park personnel to review and embark on a series of actions to continue planning for improved access to the programs and facilities at FODO. The corresponding action table(s) represent the NCA's recommendations for barrier removal for the Visitor Center.

Resources

[Harpers Ferry Center Resources for Interpretive Media Accessibility](#)

[U.S. Access Board Technical Guide – Parking Spaces](#)

[U.S. Access Board Technical Guide – Operable Parts](#)

[U.S. Access Board Technical Guide – Clear Floor or Ground Space and Turning Space 304-307](#)

[U.S. Access Board Technical Guide – Accessible Routes](#)

[U.S. Access Board ABA Standards 2015 – Section 904. Check-out Aisles and Sales and Service Counters](#)

Visitor Center



Location: Visitor Center Parking Lot

Corrective Action: Add accessible parking space signage

DEFICIENCY

Missing proper parking space identification signs.

SOLUTION

Purchase and install a parking space identification sign which includes the International Symbol of Accessibility and "Van Accessible" compliant to the listed standards and guidelines.

Criticality: Minor

Timeframe: Immediate

Reference Standards and Guidelines: ABAAS 502.6



Location: Visitor Center Entrance

Corrective Action: Ensure desk compliance with relevant statutes

DEFICIENCY

Current planned designs for the desk may potentially fall out of compliance with ABA statutes.

SOLUTION

Ensure that contractors who are creating the desk are familiar with the specifications of ABAAS 904.4, regarding reach heights at sales counters and desks.

Criticality: Serious

Timeframe: Short-term

Reference Standards and Guidelines: ABAAS 904.4



Location: Visitor Center Theater

Corrective Action: Add audio-visual system

DEFICIENCY

The park information video is not presented with an accessible audio-visual system.

SOLUTION

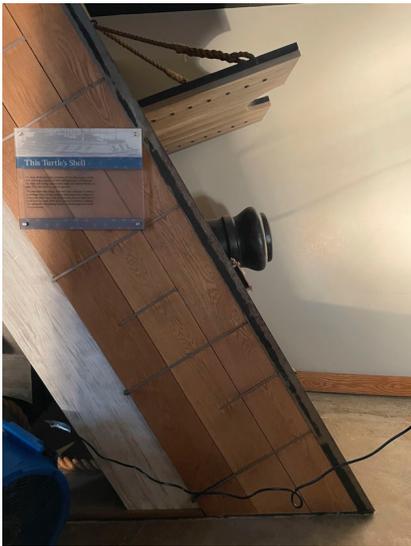
Work with the Harper's Ferry Center to ensure that new audio-visual equipment is accessible and compliant with NPS regulations, as well as federal law. All videos must have audio description and must be shown in open captions. It is the responsibility of the park to acquire appropriate equipment to deliver this.

Criticality: Critical

Timeframe: Short-term

Reference Standards and Guidelines: HFC Media Accessibility Guidelines

Exhibition Space



Location: Exhibition Space

Corrective Action: Add tactile model for the gunboat

DEFICIENCY

The gunboat model does not allow people with disabilities to experience this crucial story to the park. The gunboat is not within required reach ranges, and the slope of the interactive makes it difficult to engage with the exhibit.

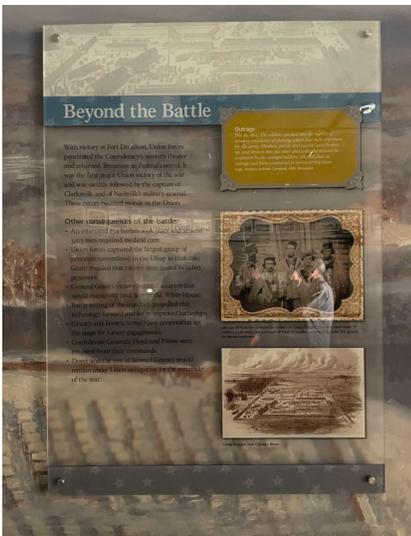
SOLUTION

Add a tactile model of the gunboat.

Criticality: Serious

Timeframe: Short-term

Reference Standards and Guidelines: ABAAS 308.2, 308.3, HFC Media Accessibility Guidelines (Operable Parts)



Location: Exhibition Space

Corrective Action: Remove plexiglass and lamination from exhibit labels

DEFICIENCY

Current plexiglass and lamination options create glare and low contrast situations, making it difficult to read content.

SOLUTION

Replace interpretative labels with ones that are accessible, including font type, size, and contrast.

Criticality: Serious

Timeframe: Short-term

Reference Standards and Guidelines: HFC Media Accessibility Guidelines (Exhibit Guidelines: Visual)



Location: Exhibition Space

Corrective Action: Add tactile models and maps

DEFICIENCY

Current space has few tactile models and maps to represent important parts of park engagement.

SOLUTION

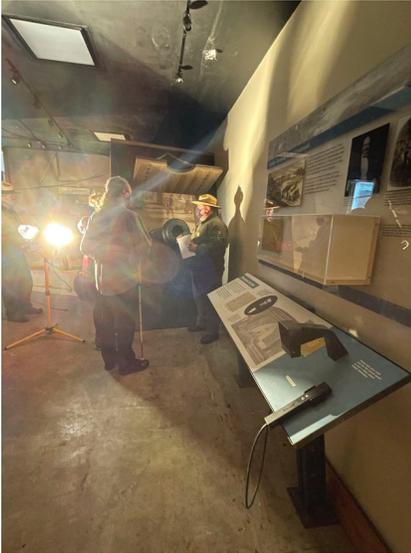
Acquire more tactile elements for museum engagement. This may include but is not limited to the following: models of major buildings on the grounds and major locations; representations of objects where interaction may not otherwise be possible; models of historically significant features, such as canons, the gunboat, the earthworks, and uniforms; and maps to provide orientation and show the locations of the rivers, forts, and the larger campaign. Potential tactile elements should also represent things that may not have been directly involved in the battle itself but were still important for the context, such as period locomotives.

Criticality: Serious

Timeframe: Short-term

Reference Standards and Guidelines: HFC Media Accessibility Guidelines

Exhibition Space Waysides



Location: Exhibition Space Waysides

Corrective Action: Waysides must meet ABA standards for protruding objects and allow visitors who use wheelchairs appropriate access to space and information

DEFICIENCY

All wayside content needs to be accessible. Visitor Center Waysides are 28" high and act as protruding objects.

SOLUTION

Raise waysides to provide proper surrounding ground clearance. Provide content in multiple, accessible formats so that everyone has an opportunity to interact with the content and gain an understanding the story.

Criticality; Critical

Timeframe; Immediate

Reference Standards and Guidelines: ABAAS 304-307



Dover Hotel

The Dover Hotel is located at 101 Petty Street in Dover, TN, adjacent to the Cumberland River. The hotel is on the National Register of Historic Places and the only remaining structure of pre-war Dover; it is a significant remaining surrender house of the American Civil War. Part of the main floor of the Dover Hotel furnished as a 19th century tavern, similar to how it may have appeared when Simon Buckner surrendered to General Ulysses S. Grant. Over the years it has served as a hotel for riverboat travelers, a headquarters for Confederate commanders, and a private museum. The grounds offer a picnic area with views of the Cumberland River. The site is sometimes used for special events, with occasional use of the reproduction bar area.

The grounds are always open to the public, and the museum is open for self-guided exploration. No

documentation exists on its condition at the time of the surrender, making historic preservation a challenge. One room on the main floor is used for interpretation of the site, and an antiquated audio wayside is present at the site. The upstairs areas are used for temporary park housing and are off limits to the public.

It should be noted that the fact that a landscape, district, or building is listed on the National Register does not exclude it from complying with accessibility standards. It is the park's responsibility to remedy those deficiencies to the greatest extent possible. According to the ABAAS, the Advisory Council on Historic Preservation has established procedures for federal agencies to meet this responsibility. FODO should collaborate with its own or NPS regional historic preservation specialists to determine what possible changes can be made. If it is determined that a feature, element, or area cannot be made accessible, there is still an obligation to provide

TABLE 2: Dover Hotel Accessibility Goals

Goal	Implementation Detail
Present site information in multiple formats.	The interpretative information at the hotel is almost exclusively presented in a visual format. This information needs to be accessible so that the critical content of the site can be engaged with in multiple ways. Audio description, captioning, and transcripts, at a minimum, need to be added.
Update exhibitions with accessible content throughout the location.	While ensuring current information is accessible should be done in the short-term, updating exhibitions with best practices with regards to cognitive and physical access to the information should be considered for this location.
Upgrade site paths and routes to an accessible standard.	Paths to the site and locations on site are generally inaccessible. Renovation of the location's routes is required in order to bring them into compliance. A major renovation of the Dover Hotel to ensure both physical and cognitive accessibility to the information should be undertaken when possible.
Regular site maintenance to address accessibility issues.	Some issues on the site are relatively minor, such as grout issues on brick, and can be fixed relatively easily by park maintenance staff. Accessibility components need to be part of maintenance checks and those reported should be a priority goal.
Provide content at accessible locations.	Given that many of the issues with the physical routes to the Dover Hotel are inaccessible, duplicating and moving the content from the hotel to other locations, such as accessible waysides onsite or at the Visitor Center, and making clear that this information is available elsewhere, should be undertaken to make sure that all visitors have the most inclusive experience possible.

program access to the feature, element, or area. In many cases, this is achieved through a combination of increasing accessibility to the feature, element, or area as much as is feasible; providing the experience in an alternative accessible location; and providing accessible interpretive program alternatives.

The objective for evaluation of the Dover Hotel was:

- Review the current facilities and visitor engagement for compliance with applicable accessibility standards, guidelines, and best practices.

Despite the significant challenges to complete access to the Dover Hotel, including the lack of knowledge of the structure's historic layout and interior, the experience of the Dover Hotel still needs to be inclusive to all visitors. Specific interim and long-term accessibility goals for the Dover Hotel are outlined in table 2.

Observations and Recommendations

Based on observations of the accessibility evaluation team from the NCA, as well as information and feedback provided by FODO personnel, the following recommendations are suggested for improved access to the Dover Hotel.

Parking and Arrival

The parking lot at the Dover Hotel has 12 standard spaces, with one accessible space. The slope of the lot is at a 7% grade. There is no curb ramp at the parking lot, nor is there a sign for the accessible space. Routes are on a combination of asphalt, concrete, and red brick. The trash can is not along the sole accessible route. The routes between the parking lot and building slope between 7% and 17%, with the average at about 7%. There are multiple issues with slope convergence and counter slope, or two slopes that intersect in opposite directions, that can make it difficult and dangerous to traverse to the Dover Hotel. Additionally, while the picnic table

has no major access issues, there is not sufficient clear ground space at the picnic area for it to be considered accessible and the grout between bricks has worn away significantly.

Recommendation #1: The entire landscape of the site truly needs to be reimagined in order to bring the entire area into compliance. In addition to the physical maintenance and reconfiguring needs of the site, the historic context and significance of the site has largely been lost. It is recommended that FODO staff take a universal design approach to renovating the site as the park better seeks to tell the story of what took place at the Dover Hotel, why it happened at that site, and why it mattered.

Recommendation #2: Add a sign for the accessible space in the parking lot and determine a location for accessible parking that complies with all accessible slope requirements, both for the lot itself and connections to the site.

Amenities and Site Features

There are three waysides for interpretation. The first is on the hotel itself, although the audio on the frame does not work properly. The second is titled “13000 prisoners,” and a third on the “1812 era” – both of which require additional context for visitors. Inside the Dover Hotel is a 15-minute video and small exhibit spaces. Other than the audio of the video, all information is communicated visually, without audio description or other ways for visitors to engage with the content. That being the case, the provided content technically meets accessibility standards for what is presented, despite only being accessible through one form of interaction.

The ramp to the building entrance is too steep. A doorknob within the hotel is currently a brass fixture and should be replaced with a lever-type knob. This replacement can be made and still visually mimic the features of this historic era. The stairs on the porch of the Dover Hotel have a vertical protruding object which can be a hazard for visitors who may not notice it, may be unable to visually identify it, or may have difficulties with controlling

their movements. There is no accessible method of accessing the upper level of the hotel, as the staircase is the only way to get to the second story.

Recommendation #3: Implement physical changes to the Dover Hotel to improve access in ways that are coherent with the historic character of the building.

Recommendation #4: Provide additional methods of engagement with interpretive elements of the site, such as audio description, audio tours, and tactile elements to ensure broader access to the information and history of the Dover Hotel.

Recommendation #5: Train volunteers and FODO staff in how to interact with and support visitors with disabilities.

Resources

[Harpers Ferry Center Resources for Interpretive Media Accessibility](#)

[U.S. Access Board Technical Guide – Parking Spaces](#)

[U.S. Access Board Technical Guide – Ramps and Curb Ramps](#)

[U.S. Access Board Technical Guide – Accessible Routes](#)

[U.S. Access Board Technical Guide – Floor and Ground Surfaces](#)

[U.S. Access Board Technical Guide – Operable Parts](#)

Action Tables

Upon receipt of the assessment data and report, it will be critical for park personnel to review and embark on a series of actions to continue planning for improved access to the programs and facilities at Fort Donelson. The corresponding action table(s) represent the NCA recommendations for barrier removal for the Dover Hotel.

Dover Hotel Parking Lot



Location: Dover Hotel Parking Lot

Corrective Action: Update parking lot to comply with ABAAS standards

DEFICIENCY

The parking lot currently is at a 7% grade and lacks a curb ramp. Current designated accessible space is unsafe and does not have accessible signage.

SOLUTION

Retrofit the parking lot in order to add a curb ramp and alter the slope to be 2% or less. Add curb ramp. Provide a newly designed and designated accessible parking area that includes compliant signage.

Criticality: Serious

Timeframe: Long-term

Reference Standards and Guidelines: ABAAS 502.4, 502.6, 406

Dover Hotel Grounds



Location: Dover Hotel Grounds

Corrective Action: Alter current routes to ensure accessible route has a grade of less than 5% and meets all other legal requirements

DEFICIENCY

Routes around the hotel grounds have slopes of about 7% and often include a significant counter-slope. This makes the routes hard to navigate for people with mobility disabilities. The brickwork in the routes requires maintenance and some areas do not have proper ground clearance for visitors with disabilities.

SOLUTION

Because of the changing elevation throughout the site, creating accessible routes may require redesigning the routes entirely. To address this, NCA recommends consultation with landscape architects, historic preservation specialists, etc. Any redesign should match a set time period and maximize both historic integrity and accessibility.

Criticality: Critical

Timeframe: Long-term

Reference Standards and Guidelines: ABAAS 302, 403.3

Dover Hotel Grounds



Location: Dover Hotel Grounds

Corrective Action: Maintain routes and surfaces to ensure access to various locations on the grounds

DEFICIENCY

Maintenance deficiencies on the grounds, such as grass overgrowth and grout loss, have created accessibility barriers.

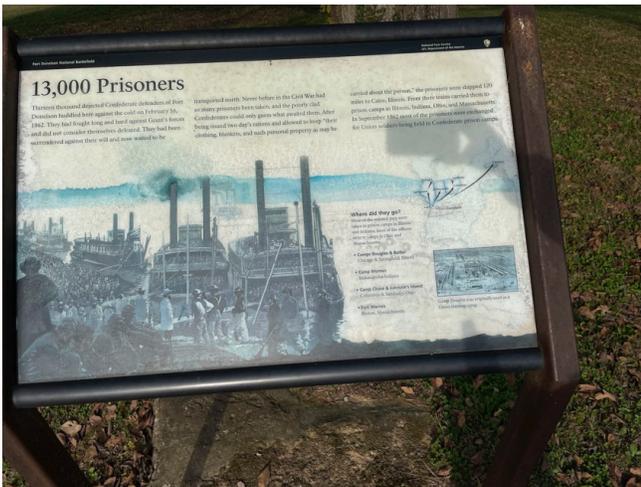
SOLUTION

Develop standard operating procedures for continual route maintenance. Procedures should include regular grout maintenance and path clearances. Other barriers (such as trash cans placement in accessible locations) can be addressed through these procedures.

Criticality: Serious

Timeframe: Immediate

Reference Standards and Guidelines: ABA 302



Location: Dover Hotel Grounds

Corrective Action: Provide audio description at waysides

DEFICIENCY

Waysides do not have audio description available.

SOLUTION

Teach staff and volunteers how to create audio description, as well as record audio version of the text on waysides for use by park visitors.

Criticality: Serious

Timeframe: Immediate

Reference Standards and Guidelines: HFC Media Accessibility Guidelines

Dover Hotel Grounds



Location: Dover Hotel Porch

Corrective Action: Add a permanent or semi-permanent object to keep visitors away from protruding object near stairs

DEFICIENCY

Physical access to Dover Hotel is limited by the presence of a protruding object (the stairs).

SOLUTION

Place a permanent or semi-permanent, period-correct object to protect visitors from walking under the staircase.

Criticality: Critical

Timeframe: Short-term

Reference Standards and Guidelines: ABAAS 309.4, 307

Dover Hotel Entrance



Location: Dover Hotel Entrance

Corrective Action: Replace non-compliant knob

DEFICIENCY

Physical access to Dover Hotel is limited by a brass knob, which is difficult to manipulate.

SOLUTION

Replace the doorknob in question with an appropriate lever-type knob.

Criticality; Serious

Timeframe; Short-term

Reference Standards and Guidelines: ABAAS 309.4, 307



Location: Dover Hotel Entrance

Corrective Action: Replace entry ramp

DEFICIENCY

The current entry ramp does not conform to standards, making the Dover Hotel inaccessible.

SOLUTION

Replace the entry ramp with a compliant version.

Criticality; Serious

Timeframe; Immediate

Reference Standards and Guidelines: ABA 405

Dover Hotel Exhibits



Location: Dover Hotel Exhibits

Corrective Action: Add audio description, captions, transcripts, and other methods of access to exhibit features

DEFICIENCY

Exhibition spaces do not have audio description, captions, or transcripts, and should have multiple means of engagement.

SOLUTION

Work with staff and other NPS stakeholders to investigate adding these features to internal exhibits.

Criticality: Critical

Timeframe: Short-term

*Reference Standards and Guidelines:
HFC Media Accessibility Guidelines*



Fort Donelson National Cemetery

Fort Donelson National Cemetery is located at 174 National Cemetery Drive in Dover, Tennessee. The cemetery is on the site of the Union's 1863 fortifications, a replacement for the Confederate works from the time of the battle for which this site is most famous, and also hosted a "contraband camp" of freedmen. It was established as a national cemetery in 1867, with the burial of 670 Union soldiers - including 512 unknown soldiers. This cemetery has since become home to veterans from all major United States wars, as well as spouses and children of these soldiers.

The cemetery functions as a place of solace and reflection, with the 15 acres of the site enclosed by a limestone wall. The site is popular for celebrating various holidays, especially Memorial Day, and was previously used for picnics, commemorations, and

speeches. Visitors can find who is buried at the cemetery using a kiosk at the information building, as well as find information about the context of the site at several waysides and older, historic War Department signs throughout the cemetery. The cemetery lodge contains park staff offices and occasionally visitors will come to the office to ask questions or obtain permits.

Cemeteries are hallowed ground, and all care possible should be taken at all points not to disturb the final resting places of other humans. However, the solace and reflection that a visit to the National Cemetery should bring should not be limited to those who are able-bodied. It is still the responsibility of the park to provide equal access to people with disabilities. Indeed, many park visitors with disabilities may be visiting loved ones – friends from their own time in the military, members of their family, and other loved ones who have since passed. All visitors deserve the same chance to engage with departed loved ones. NPS historic preservation specialists, as well as the

Table 3: Fort Donelson National Cemetery Accessibility Goals

Goal	Implementation Detail
Improve access to information across the cemetery.	Signage, waysides, and kiosks throughout the site have compliance and usability issues, including but not limited to lacking multiple methods of engagement with different options. Improving access to this information will be useful for visitors who have disabilities in accessing the site, as well as improving the experience of all visitors.
Improve maintenance of accessible routes.	Many accessibility issues in the cemetery are relatively simple to solve – cutting back grass, adjusting the location of certain objects in the restroom, etc. – and will help guide the site towards compliance, while plans can be made for more substantial changes
Update restrooms to accessible standards.	The restrooms do not meet accessible standards and will require complete retrofits to meet these standards. By carefully planning out an updated restroom, visitors who may need accessible restrooms will have a more equitable experience.
Create accessible routes throughout the cemetery.	The cemetery currently has many instances where the landscape is inaccessible, particularly for those with disabilities. A common reoccurrence is slopes that do not meet standards. A large-scale landscaping project, taken with the utmost care and respect for those who are interred at the cemetery, should be considered, to improve use of the site. The park may also consider using accessible mats on an as-needed basis for visitors with mobility disabilities.

state historic preservation officer will help ensure that the needs of the living and the needs of the dead are met, with full respect for one another.

The objective for evaluation of the National Cemetery was:

- Review the current facilities and visitor engagement for compliance with applicable accessibility standards, guidelines, and best practices.

Despite the sensitive nature of the National Cemetery, work must be done to improve access, and the most effective changes may require time. To ensure equal access to the opportunities and programs of the National Cemetery, interim solutions and/or programmatic alternatives must be provided. Specific interim and long-term accessibility goals for Fort Donelson National Cemetery are provided in the table below.

Observations and Recommendations

Based on observations of the accessibility evaluation team from the NCA, as well as information and feedback provided by FODO personnel, the following recommendations are suggested for improved access to the National Cemetery for visitors with disabilities:

Parking and Arrival

The site’s parking lot has 11 total spaces. There are two pull-in access spaces. Neither spot has a sign indicating it is an accessible spot. The maximum slope of the lot is 7.4%, which exceeds the allowed limit.

Recommendation #1: Adjust the parking lot to allow for a more even slope throughout and add accessibility signage where appropriate.

Amenities and Site Features

Outside of the Carriage House, the primary interpretation for the site comes in the form of waysides. The waysides across the site encompass a number of styles, including War Department signs - which cannot be changed. The waysides are packed

with significant information but do not have audio description. They also have poor contrast, and in some cases are on significant slopes without enough ground clearance to comply with access standards. The Carriage House has a slope to the entrance of the building. Some red brick paths, as well, have grass encroachment that reduces the paths to a point where they can be difficult to traverse. The Carriage House has several panels with font that is too small to be easily read; these panels also lack audio description. There are brochure holders on top of the Find a Grave Kiosk, which are too high for visitors who use wheelchairs or are of short stature to access. There is also significant glare at the kiosk, and it is not compliant with Section 508 of the Rehabilitation Act.

Many routes throughout the cemetery are significantly sloped, many of which are unpaved grass routes. While these may not prove an issue, there is the potential for erosion and during wet times they may become soft or unfirm. At the picnic area, which is on red brick, there are running slopes up to 13.8% with cross slopes at up to 6.3%, which are too steep for use.

The site's restrooms present major compliance issues. The gutter along the roofline of the site is a protruding object. Additionally, the only routes to the restrooms are via steep, grassy slopes and not accessible. Both restrooms have the same layout. Each has a two-inch threshold to get into the restroom. The following do not meet compliance standards: the mirror is at 48" above the ground, and the toilets sit in a 44" wide stall with 40" of depth. There are no grab bars in the stall, and the toilet seat is 22 inches high, with the flush on the closed side. The paper towel dispenser is 57" off the ground, with the trash at 52", and the sink does not allow for a forward approach.

Recommendation #2: The restrooms should be updated and brought into compliance. Ideally, a stamped concrete route should be provided between the perimeter buildings, and the stalls themselves should be designed for single, accessible use. Fixtures should have automatic sensors, and the plumbing of the sinks should be altered to meet requirements.

Recommendation #3: Update wayside and kiosk information so that it is accessible. This should include moving the brochure holder, providing audio descriptions to all waysides, updating the waysides to current standards where possible, and bringing the kiosk into compliance with Section 508 of the Rehabilitation Act. Good examples of 508 compliant kiosks at similar sites can be found at the Vietnam Memorial and Arlington National Cemetery.

Recommendation #4: Updating current access routes around the cemetery to lessen the difficulty of traversing the cemetery and landscape routes where possible to bring current paths into compliance.

Resources

[Harpers Ferry Center Resources for Interpretive Media Accessibility](#)

[U.S. Access Board Technical Guide – Parking Spaces](#)

[U.S. Access Board Technical Guide – Clear Floor or Ground Space and Turning Space](#)

[U.S. Access Board Technical Guide – Ramps and Curb Ramps](#)

[U.S. Access Board Technical Guide – Outdoor Developed Areas](#)

[U.S. Access Board Technical Guide – Operable Parts](#)

[U.S. Access Board Technical Guide – Accessible Routes](#)

[U.S. Access Board Technical Guide – Toilet Rooms](#)

[U.S. Access Board Technical Guide – Lavatories and Sinks](#)

[Section508.gov](#)

Action Tables

Upon receipt of the assessment data and report, it will be critical for park personnel to review and embark on a series of actions to continue planning for improved access to the programs and facilities at FODO. The corresponding action table(s) represent the NCA's recommendations for barrier removal for Fort Donelson National Cemetery.

National Cemetery Parking Lot



Location: National Cemetery Parking Lot

Corrective Action: Add signs indicating accessible parking spaces

DEFICIENCY

The parking lot does not have proper parking space identification signs.

SOLUTION

Purchase and install a parking space identification sign which includes the International Symbol of Accessibility and "Van Accessible" compliant to the listed standards and guidelines.

Criticality; Minor

Timeframe; Immediate

Reference Standards and Guidelines: ABAAS 502.6



Location: National Cemetery Parking Lot

Corrective Action: Adjust the slope of the lot to fall within ABA regulations

DEFICIENCY

The parking lot currently is at a 7.4% grade.

SOLUTION

Investigate the possibility of altering the parking lot in order to alter the slope to be 2% or less.

Criticality; Serious

Timeframe; Long-term

Reference Standards and Guidelines: ABAAS 502.4, 406

National Cemetery Waysides



Location: National Cemetery Waysides

Corrective Action: Develop audio descriptions for park waysides

DEFICIENCY

Park waysides do not currently have audio description.

SOLUTION

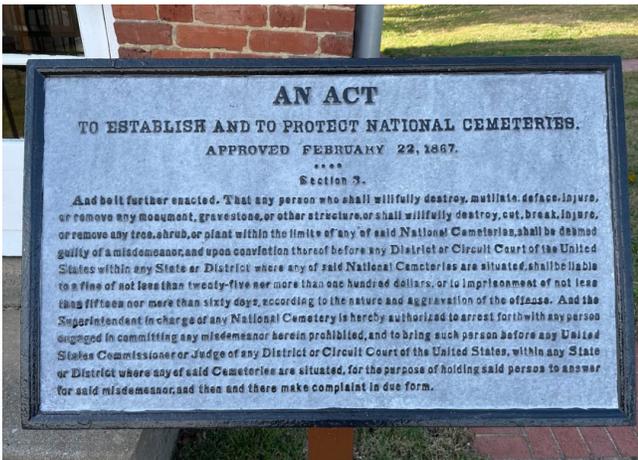
Develop audio description for waysides. This could be achieved either by developing internal capacity to create audio descriptions or hiring contractors. Investigate developing new waysides where needed.

Criticality: Serious

Timeframe: Short-term

Reference Standards and Guidelines: HFC Media Accessibility Guidelines

"Act to Establish" Waysides



Location: "Act to Establish" Wayside

Corrective Action: Alter slope leading to wayside to remove clearance hazards

DEFICIENCY

The "An Act to Establish" wayside has a slope that does not allow proper ground clearance.

SOLUTION

Correct the slope leading to the wayside to meet accessible while maintaining historic preservation standards.

Criticality: Serious

Timeframe: Short-term

Reference Standards and Guidelines: ABAAS 304

Carriage House Entrance



Location: Carriage House Entrance

Corrective Action: Provide signage indicating slope at entrance to building

DEFICIENCY

Carriage House is inaccessible to do the change in level at the entrance.

SOLUTION

Temporarily, add signage to the building that describes the conditions so that visitors can determine if the space is functional for them.

Criticality: Serious

Timeframe: Immediate

Reference Standards and Guidelines: ABAAS 304

Carriage House



Location: Carriage House

Corrective Action: Lower brochure holders to compliant reach heights

DEFICIENCY

The brochure holder on top of the "Find A Grave" kiosk is out of reach range.

SOLUTION

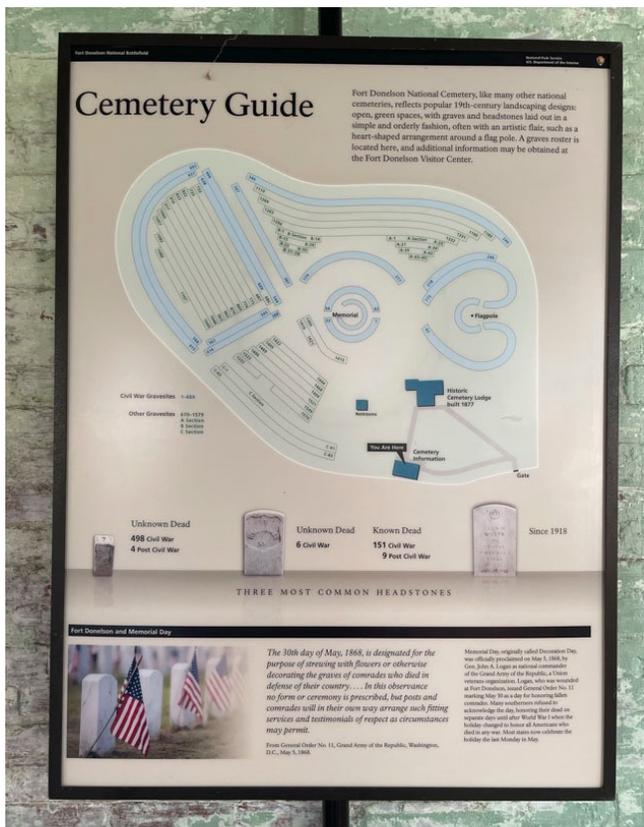
Lower the brochure holder to a location within proper reach range as defined in ABAAS 308.2 (48 inches with up to 20-inch obstruction, 44 inches for anything greater).

Criticality: Minor

Timeframe: Immediate

Reference Standards and Guidelines: ABAAS 308.2

Carriage House



Location: Carriage House

Corrective Action: Update information panels for accessible fonts, larger sizes, and audio description

DEFICIENCY

Current information panels in the Carriage House do not have adequate font sizes or audio description.

SOLUTION

Replace with accessible panels.

Criticality: Critical

Timeframe: Mid-term

Reference Standards and Guidelines: HFC Media Accessibility Guidelines



Location: Carriage House

Corrective Action: Update "Find a Grave" Kiosk to comply with Section 508 of the Rehabilitation Act

DEFICIENCY

There is significant glare at the "Find a Grave" Kiosk, as well as other instances of non-compliance with Section 508, including a lack of audio options.

SOLUTION

Investigate the possibility of upgrading or replacing the current kiosk for Section 508 compliance, using similar systems at the Vietnam War Memorial and Arlington National Cemetery as examples.

Criticality: Serious

Timeframe: Long-term

Reference Standards and Guidelines: Section 508 of the Rehabilitation Act

Park Paths, Entire Cemetery



Location: Park Paths, Entire Cemetery

Corrective Action: Update park to include more stable and accessible pathways to major areas

DEFICIENCY

Park paths are often steep, with significant cross-slopes, and often on natural grass which can be dangerous for many people.

SOLUTION

Replace major grass paths with permanent paths constructed with accessible materials. Adjusting current park paths to lower the slopes to meet accessible grades may be investigated. The use of accessible mats on an as-needed basis may also be acceptable.

Criticality: Critical

Timeframe: Long-term

Reference Standards and Guidelines: ABAAS 304, 305.3, 1016.2, 1016.7

Restrooms



Location: Restrooms

Corrective Action: Alter landscaping to remove potential hazard in protruding gutter

DEFICIENCY

A gutter on the restrooms is an overhead clearance deficiency.

SOLUTION

Investigate and implement the possibility of using a landscaping solution to eliminate the hazard.

Criticality: Serious

Timeframe: Immediate

Reference Standards and Guidelines: ABAAS 307

Restrooms



Location: Restrooms

Corrective Action: Install concrete paths and ramps to enable access to bathrooms

DEFICIENCY

Cemetery restrooms are inaccessible. There are no accessible routes that lead to the restrooms. The change in level at the threshold does not meet ABAAS standards.

SOLUTION

Add an accessible route to the restrooms that complies with ABA requirements listed below, as well as ramps that accommodate the change in level into the restrooms.

Criticality: Critical

Timeframe: Short-term

Reference Standards and Guidelines: ABAAS 1016, 405, 303



Location: Restrooms

Corrective Action: Update each restroom for single use according to ABAAS standards

DEFICIENCY

Current footprint in the restroom areas does not allow for stalled restrooms to meet accessibility standards. This contributes to the many non-compliant locations and elements present in each restroom, which include the following: mirrors at 48 inches above the ground, toilet stalls that are too small with their current measurements, a lack of grab bars in each stall, toilet flush is on the side against the wall, inaccessible sinks, as well as paper towel dispensers out of reach range.

SOLUTION

Retrofit the restrooms to create two single occupancy, gender neutral restrooms. This can be accomplished by moving the stalls in restrooms and replacing existing doors with accessible, locking doors to gain extra room, and change signage to reflect single-occupant, non-gendered restrooms to better serve all visitors. All other features, including sinks, paper towel dispensers, soap dispensers, and grab bars need to be moved and/or replaced to meet ABAAS standards. Additionally, changing tables could be added to allow for families to have greater access to this area.

Criticality: Critical

Timeframe: Short-term

Reference Standards and Guidelines: ABAAS 308, 404, 603.3, 604.3.1, 604.4, 604.5, 604.6, 606



River Batteries

The River Batteries, located at the end of the Lock D Loop, is one of the most visited parts of FODO. It was here that the Confederate defenders of Fort Donelson set their cannons to defend the river in an attempt to stop the Union's gunboats. This was significant because access of this site gave either side control of the river all the way to Nashville. Here, the gunners were able to turn back the Union tactic that had allowed the Union to capture Fort Henry further upriver. This forced the siege and battle of Fort Donelson, with eventual Union victory at the site.

Visitors are able to engage with a total of eight cannons at the site. Three are located at the upper battery and five at the lower battery. There is a modern viewing platform, and the current site sits above the historic earthworks that were critical to this defensive position. Often, special programs are held at this part of the park, such as ranger-led programs, community music events, and night sky events.

The fact that a landscape, district, or building's commitment to a larger site's historic nature or importance does not exclude it from complying with accessibility standards. It is the park's responsibility to remedy those deficiencies to the greatest extent possible. According to the ABAAS, the Advisory Council on Historic Preservation has established procedures for federal agencies to meet this responsibility. FODO should work with its own or NPS regional historic preservation specialists to determine what possible changes can be made. If it is determined that a feature, element, or area cannot be made accessible, there is still an obligation to provide program access to the feature, element, or area. In many cases, this is achieved through a combination of approaches including increasing accessibility to the feature, element, or area as much as is feasible; providing the experience in an alternative accessible location; and providing accessible interpretive program alternatives.

The objective for evaluation of the River Batteries was:

- Review the current facilities and visitor engagement for compliance with applicable accessibility standards, guidelines, and best practices.

Providing access to the site experiences cannot be deferred until a large project is undertaken. To ensure equal access to opportunities and programs, interim solutions and/or programmatic alternatives must be provided. Specific interim and long-term accessibility goals for the River Batteries are outlined in the table below.

Observations and Recommendations

Based on observations of the accessibility evaluation team from the NCA, as well as information and feedback provided by FODO personnel, the following recommendations are suggested for improved access to the river batteries for visitors with disabilities:

Parking and Arrival

The site currently has nine parking spaces, none of which are accessible spaces.

Recommendation #1: Convert at least one current parking space to accessible parking and redesign the lot so it is both safe and accessible to all visitors.

Amenities and Site Features

The experience at the River Batteries is intended to be a single experience but has been de facto split into two experiences: the upper and lower batteries. The lower batteries are much more accessible, with a concrete path connecting the parking lot and the observation platform. However, to get to these batteries from the observation platform, a set of wooden stairs without a handrail is the only option. To access the batteries via the concrete path, one must navigate a route that is highly sloped, with significant cross slope. There are three waysides, accessible with paved sidewalk, but they are not audio described. The lower batteries contain a bench, a war department tablet sign,

Table 4: River Batteries Accessibility Goals

Goal	Implementation Detail
Provide greater access to interpretive content at the site.	Part of the experience is enjoying the way this information is presented; if the park presents information visually for sighted people, it will also need to do it in a way so that a blind person may equally enjoy the information. Examine the content of existing waysides and redesign waysides in an accessible manner to include tactile elements and maps. Other necessary measures to create accessible interpretive content may include providing audio description and moving waysides where reasonable.
Provide access to the upper batteries.	The upper batteries are almost completely inaccessible for those with any sort of mobility disability. While there are opportunities for improving access, these projects will need to be investigated and developed further by staff at FODO and the larger NPS (including historic specialists and landscape architects), as it may involve altering current landscapes to provide greater trail access.
Bring site into compliance with both historic preservation and accessibility laws.	Current methods for accessing the site do not meet both accessibility and historic preservation laws. A future project will need to return the site to historic conditions; this project should also work to improve current access conditions in order to better serve all park guests. The grade of the landscape may be too significant to ever fully make it accessible; an alternative is to bring accessible, 3-dimensional waysides to visitors so that they can understand and appreciate the significance of the site and story without requiring visitors to physically traverse the hills.

and information about the types of canons used, all of which do not have audio description or other accessible ways to engage with this information.

The Donelson Trail connects the upper and lower batteries and requires the use of stone steps in order to traverse from one set of batteries to the other via the trail. The trail has a war department sign and four waysides about gunboats, none of which have audio description. The upper batteries are reached by way of an incredibly steep trail – ranging between 17.6% at minimum and up to 20% in grade. Here, visitors can engage with three canons, a War Department sign, and a wayside titled “With Admirable Precision.” The wayside is too tall for easy access of the information and contains a protruding object at the rear of the frame. A grate in the clear ground space covers a drainage pipe, with openings that are 3” wide, with the adjacent War Department sign acting as a protruding object.

Recommendation #2: Gather all information from interpretive signs and develop a plan to make this information available closer to the parking lot temporarily, while more permanent solutions for making this information available are explored.

Recommendation #3: Work to eliminate hazards caused by current signage and equipment, either through replacing the equipment and signage or using period-appropriate, semi-permanent or permanent props to help guide visitors away from hazards.

Recommendation #4: Re-design and implement new methods of access to both batteries to better link their physical access and the important story of the batteries.

Resources

[Harpers Ferry Center Resources for Interpretive Media Accessibility](#)

[U.S. Access Board Technical Guide – Parking Spaces](#)

[U.S. Access Board Technical Guide – Outdoor Developed Areas](#)

[U.S. Access Board Technical Guide – Floor and Ground Surfaces](#)

[U.S. Access Board Technical Guide – Clear Floor or Ground Space and Turning Space](#)

[U.S. Access Board Technical Guide – Accessible Routes](#)

[U.S. Access Board Technical Guide – Toilet Rooms](#)

[U.S. Access Board Technical Guide – Lavatories and Sinks](#)

[U.S. Access Board Technical Guide – Entrances, Doors, Gates](#)

Action Tables

Upon receipt of the assessment data and report, it will be critical for park personnel to review and embark on a series of actions to continue planning for improved access to the programs and facilities at FODO. The corresponding action table(s) represent the NCA’s recommendations for barrier removal for the River Batteries.

Parking Lot



Location: Parking Lot

Corrective Action: Add accessible parking to the parking lot

DEFICIENCY

No accessible parking at this location.

SOLUTION

Add accessible parking to the lot and investigate options for parking expansion at this location.

Criticality: Critical

Timeframe: Immediate

Reference Standards and Guidelines: ABAAS 502

Lower Battery



Location: Lower Battery

Corrective Action: Add a handrail to the wooden staircase

DEFICIENCY

The wooden staircase from the overlook boardwalk to the Upper Battery lacks a handrail.

SOLUTION

Add a handrail that meets ABASS standards to provide easier access to the site. Despite the general thoughts of needing to alter this location, and particularly this connection to better meet historical preservation needs, current access needs such as a handrail should be installed, even if only for temporary use. Future plans should include accessible considerations for moving between locations.

Criticality: Minor

Timeframe: Immediate

Reference Standards and Guidelines: ABAAS 1016

Lower Batteries



Location: Lower Batteries

Corrective Action: Re-pave concrete path to eliminate cross slope

DEFICIENCY

Route to the trail has significant cross slope. It is difficult to traverse this location and access the battery.

SOLUTION

Renovate the concrete path adjacent to the boardwalk overlook in order to make route to lower battery accessible. Any landscape changes should meet both historic and accessible standards.

Criticality: Serious

Timeframe: Mid-term

Reference Standards and Guidelines: ABAAS 1016

River Batteries, Donelson Trail



Location: River Batteries, Donelson Trail

Corrective Action: Duplicate interpretive content at accessible locations on-site and add audio description and tactile elements for engaging with said content

DEFICIENCY

Current waysides and other signage lack audio description and tactile elements; physical inaccessibility mean some visitors may not be able to engage with the provided information.

SOLUTION

Investigate the feasibility of duplicating interpretive content at accessible locations. This should include adding audio description and tactile elements at both the locations of interpretive content and any new areas. Given that this area is the most visited part of the park, visitors will be more affected by inaccessibility of this information than other locations.

Criticality: Critical

Timeframe: Short-term

Reference Standards and Guidelines: HFC Media Accessibility Guidelines

Donelson Trail



Location: Donelson Trail

Corrective Action: Adjust current trail to avoid use of stairs where possible

DEFICIENCY

Stairs are required to reach the upper batteries via the trail.

SOLUTION

Investigate altering the trail to avoid needing stairs.

Criticality: Minor

Timeframe: Long-term

Reference Standards and Guidelines: ABAAS 1017

Upper Battery



Location: Upper Battery

Corrective Action: Renovate and lengthen current access trail to meet accessibility requirements

DEFICIENCY

The trails to the upper battery have very steep grades, which make access difficult.

SOLUTION

Investigate the possibility of lengthening and rerouting the current trail to lower the current grade to a grade as defined in ABAAS 1016 and 1017; this will make it possible for more visitors to access the upper battery.

Criticality: Critical

Timeframe: Mid-term

Reference Standards and Guidelines: ABAAS 1016, 1017



Location: Upper Battery

Corrective Action: Replace drain cover grate with compliant grate

DEFICIENCY

A grate with 3" wide openings covers a drainage pipe.

SOLUTION

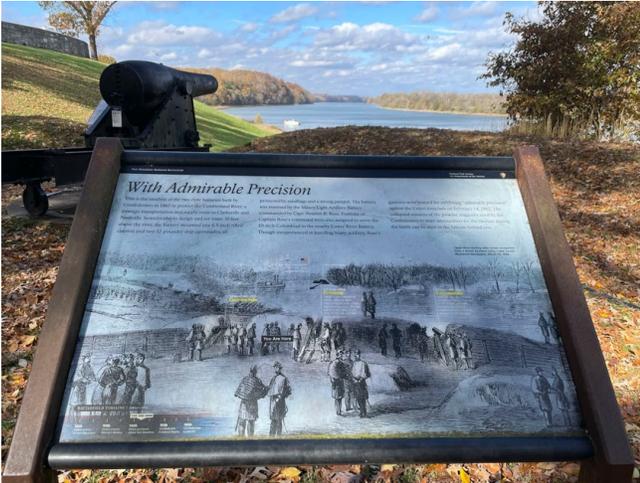
Replace this grate with a compliant and safe solution or investigate potential mitigating options if this is impossible. NPS may consider having a custom-made grate to meet ABAAS requirements while having an appearance appropriate to the historic timeframe.

Criticality: Serious

Timeframe: Short-term

Reference Standards and Guidelines: ABAAS 302.3

Upper Battery



Location: Upper Battery

Corrective Action: Replace “With Admirable Precision” wayside with accessible version

DEFICIENCY

Current wayside is too tall.

SOLUTION

Replace “With Admirable Precision” with an accessible duplicate that follows the HFC Media Accessibility Guidelines information on Wayside Exhibits and Mobility.

Criticality: Minor

Timeframe: Long-term

Reference Standards and Guidelines: HFC Media Accessibility Guidelines



Location: Upper Battery

Corrective Action: Add period-appropriate props to help guide visitors away from protruding signs

DEFICIENCY

The War Department sign and “With Admirable Precision” wayside both are protruding objects.

SOLUTION

Investigate the possibility of adding period-relevant objects to the site, either semi-permanently or permanently, to help re-direct visitors away from hazards.

Criticality: Minor

Timeframe: Short-term

Reference Standards and Guidelines: ABAAS 307



Picnic Area

Although out of scope, the NCA accessibility team assessed the restrooms at the park's picnic area while they were on site for conducting the park assessment. Below are the non-compliance findings and the recommended actions to address them.

Drinking Fountain

Location: Drinking Fountain

Corrective action: Replace drinking fountain concrete pad with a pad which meets ABASS standards

DEFICIENCY

Current drinking fountain concrete pad is too sloped.

SOLUTION

Replace the pad with a slope that meets ABAAS standards.

Criticality: Minor

Timeframe: Mid-term

Reference Standards and Guidelines: ABAAS 403

Men's and Women's Restrooms



Location: Men's and Women's Restrooms

Corrective Action: Replace or adjust fixtures to bring into compliance

DEFICIENCY

The placement of many fixtures in both the men's and women's restrooms are non-compliant: toilet flush is on the side against the wall; grab bar is too high; soap dispenser is outside of the reach range; stall latches are difficult to use; and sinks are within knee and toe clearance.

SOLUTION

Move current fixtures to appropriate heights and reach ranges as described in the sections listed below; if fixtures cannot be moved they must be replaced.

Criticality: Critical

Timeframe: Short-term

Reference Standards and Guidelines: ABAAS 603.3, 604.5/609.4, 606.1/308, 404.2.7, 606.2

Men's Restroom



Location: Men's Restroom

Corrective Action: Replace or move urinal to compliant height

DEFICIENCY

Urinal is too high.

SOLUTION

Investigate if urinal could easily be lowered to the correct height described in the section listed below; if not it would need to be replaced.

Criticality: Minor

Timeframe: Immediate

Reference Standards and Guidelines: ABAAS 605

Family Restroom



Location: Family Restroom

Corrective Action: Replace or move non-compliant fixtures (door handle, soap, side bar, rear bar, toilet paper dispenser, toilet, faucet controls)

DEFICIENCY

The following fixtures and features of this bathroom need to be altered or replaced: the handle on the door is out of reach ranges; both the rear grab bar and side grab bar for the toilet are not long enough; the toilet paper dispenser is too far; the toilet is too high; and the faucet controls require too much pressure to operate.

SOLUTION

Move certain fixtures where appropriate and replace non-compliant fixtures such as the grab bars, toilet, and faucet with complaint replacements as described in the guidelines below.

Criticality: Critical

Timeframe: Short-term

Reference Standards and guidelines: ABAAS 404.2.7, 308.2.2, 604.5.1, 604.5.2, 604.7, 604.9.3, 309.4

APPENDICES

Appendix A: Action Items by Criticality and Timeframe

Criticality

Critical

Critical-Immediate

Visitor Center Exhibition Space Waysides:

Waysides must meet ABA standards for protruding objects and allow visitors who use wheelchairs appropriate access to space and information

River Batteries Parking Lot: Add accessible parking to the parking lot

Critical-Short-term

Visitor Center Theater: Add audio-visual system

Dover Hotel Porch: Add a permanent or semi-permanent object to keep visitors away from protruding object near stairs

Dover Hotel Exhibits: Add audio description, captions, transcripts, and other methods of access to exhibit features

Cemetery Restrooms: Install concrete paths and ramps to enable access to bathrooms

Cemetery Restrooms: Update each restroom for single use according to ABAAS standards

River Batteries, Donelson Trail: Duplicate interpretive content at accessible locations on-site and add audio description and tactile elements for engaging with said content

Picnic Area Men's and Women's Restrooms: Replace or adjust fixtures to bring into compliance

Picnic Area Family Restroom: Replace or move non-compliant fixtures (door handle, soap, side bar, rear bar, toilet paper dispenser, toilet, faucet controls)

Critical-Mid-term

Cemetery Carriage House: Update information panels for accessible fonts, larger sizes, and audio description

Upper Battery: Renovate and lengthen current access trail to meet accessibility requirements

Critical-Long-term

Dover Hotel Grounds: Alter current routes to ensure accessible route has a grade of less than 5% and meets all other legal requirements

Cemetery Park Paths: Update park to include more stable and accessible pathways to major areas

Serious

Serious-Immediate

Dover Hotel Grounds: Maintain routes and surfaces to ensure access to various locations on the grounds

Dover Hotel Grounds: Provide audio description at waysides

Dover Hotel Entrance: Replace entry ramp

Cemetery Carriage House Entrance: Provide signage indicating slope at entrance to building

Cemetery Restrooms: Alter landscaping to remove potential hazard in protruding gutter

Serious-Short-term

Visitor Center Entrance: Ensure desk compliance with relevant statutes

Visitor Center Exhibition Space: Add tactile model for the gunboat

Visitor Center Exhibition Space: Remove plexiglass and lamination from exhibit labels

Visitor Center Exhibition Space: Add tactile models and maps

Dover Hotel Entrance: Replace non-compliant knob

National Cemetery Waysides: Develop audio descriptions for park waysides

Cemetery "Act to Establish" Wayside: Alter slope leading to wayside to remove clearance hazards

Upper Battery: Replace drain cover grate with compliant grate

Serious-Mid-term

Lower Batteries: Re-pave concrete path to eliminate cross slope

Serious-Long-term

Dover Hotel Parking Lot: Update parking lot to comply with ABAAS standards

National Cemetery Parking Lot: Adjust the slope of the lot to fall within ABA regulations

Cemetery Carriage House: Update “Find a Grave” Kiosk to comply with Section 508 of the Rehabilitation Act

Minor

Minor Immediate

Visitor Center Parking Lot: Add accessible parking space signage

National Cemetery Parking Lot: Add signs indicating accessible parking spaces

Cemetery Carriage House: Lower brochure holders to compliant reach heights

Lower Battery: Add a handrail to the wooden staircase

Picnic Area Men’s Restroom: Replace or move urinal to compliant height

Minor-Short-term

Upper Battery: Add period-appropriate props to help guide visitors away from protruding signs

Minor-Mid-term

Picnic Area Drinking Fountain: Replace drinking fountain concrete pad with a pad which meets ABASS standards

Minor-Long-term

River Batteries Donelson Trail: Adjust current trail to avoid use of stairs where possible

Upper Battery: Replace “With Admirable Precision” wayside with accessible version

Timeframe

Immediate

Immediate-Critical

Visitor Center Exhibition Space Waysides: Waysides must meet ABA standards for protruding objects and allow visitors who use wheelchairs appropriate access to space and information

River Batteries Parking Lot: Add accessible parking to the parking lot

Immediate-Serious

Dover Hotel Grounds: Maintain routes and surfaces to ensure access to various locations on the grounds

Dover Hotel Grounds: Provide audio description at waysides

Dover Hotel Entrance: Replace entry ramp

Cemetery Carriage House Entrance: Provide signage indicating slope at entrance to building

Cemetery Restrooms: Alter landscaping to remove potential hazard in protruding gutter

Immediate-Minor

Visitor Center Parking Lot: Add accessible parking space signage

National Cemetery Parking Lot: Add signs indicating accessible parking spaces

Cemetery Carriage House: Lower brochure holders to compliant reach heights

Lower Battery: Add a handrail to the wooden staircase

Picnic Area Men’s Restroom: Replace or move urinal to compliant height

Short-term

Short-term-Critical

Visitor Center Theater: Add audio-visual system

Dover Hotel Porch: Add a permanent or semi-

permanent object to keep visitors away from protruding object near stairs

Dover Hotel Exhibits: Add audio description, captions, transcripts, and other methods of access to exhibit features

Cemetery Restrooms: Install concrete paths and ramps to enable access to bathrooms

Cemetery Restrooms: Update each restroom for single use according to ABAAS standards

River Batteries, Donelson Trail: Duplicate interpretive content at accessible locations on-site and add audio description and tactile elements for engaging with said content

Picnic Area Men's and Women's Restrooms: Replace or adjust fixtures to bring into compliance

Picnic Area Family Restroom: Replace or move non-compliant fixtures (door handle, soap, side bar, rear bar, toilet paper dispenser, toilet, faucet controls)

Short-term-Serious

Visitor Center Entrance: Ensure desk compliance with relevant statutes

Visitor Center Exhibition Space: Add tactile model for the gunboat

Visitor Center Exhibition Space: Remove plexiglass and lamination from exhibit labels

Visitor Center Exhibition Space: Add tactile models and maps

Dover Hotel Entrance: Replace non-compliant knob

National Cemetery Waysides: Develop audio descriptions for park waysides

Cemetery "Act to Establish" Wayside: Alter slope leading to wayside to remove clearance hazards

Upper Battery: Replace drain cover grate with compliant grate

Short-term-Minor

Upper Battery: Add period-appropriate props to help guide visitors away from protruding signs

Mid-term

Mid-term-Critical

Cemetery Carriage House: Update information panels for accessible fonts, larger sizes, and audio description

Upper Battery: Renovate and lengthen current access trail to meet accessibility requirements

Mid-term-Serious

Lower Batteries: Re-pave concrete path to eliminate cross slope

Mid-term-Minor

Picnic Area Drinking Fountain: Replace drinking fountain concrete pad with a pad which meets ABASS standards

Long-term

Long-term-Critical

Dover Hotel Grounds: Alter current routes to ensure accessible route has a grade of less than 5% and meets all other legal requirements

Cemetery Park Paths: Update park to include more stable and accessible pathways to major areas

Long-term-Serious

Dover Hotel Parking Lot: Update parking lot to comply with ABAAS standards

National Cemetery Parking Lot: Adjust the slope of the lot to fall within ABA regulations

Cemetery Carriage House: Update "Find a Grave" Kiosk to comply with Section 508 of the Rehabilitation Act

Long-term-Minor

River Batteries Donelson Trail: Adjust current trail to avoid use of stairs where possible

Upper Battery: Replace "With Admirable Precision" wayside with accessible version

Appendix B: Trailhead Signage Examples

The examples in this document represent an evolution of graphic design options with one of Harpers Ferry Center’s most recently produced trailhead signs presented first. As technologies, fabrication materials, production techniques and a better understanding of effective communication evolve, so too will these examples.

Pertinent ABAAS References

F216.13 Trailhead Signs

Where new trail information signs are provided at trailheads on newly constructed or altered trails designed for use by hikers or pedestrians, the signs shall comply with 1017.10.

Advisory F216.13 Trailhead Signs

New trail information signs are required to comply with 1017.10 regardless of whether the newly constructed or altered trails comply with 1017. If trail information signs designate the name of the

trail, only the name of the trail is required to comply with 703.5. See F216.2. Tactile characters are not required on exterior signs. Trail information signs are not required to display the International Symbol of Accessibility.

1017.10 Trailhead Signs

Trail information signs at trailheads shall include: (1) Length of the trail or trail segment; (2) Surface type; (3) Typical and minimum tread width; (4) Typical and maximum running slope; and, (5) Typical and maximum cross slope.

Example: Abraham Lincoln Birthplace National Historical Park

To date, the trailhead panel example above is the most comprehensive approach to effectively communicating trailhead information. In addition to required information, information is delivered multimodally. The upright panel provides information visually. The horizontal panel provides the same information tactilely, with braille and textures to differentiate areas. Speakers on the front edge deliver audio description on demand to provide information aurally.

The tactile panel was developed for 3-D print production. At the time of the project (2016), only one-color printing was available. If multi-colored 3-D printing is possible, future designs might consider presenting all information on a single panel. Regardless, the tactile panel must be placed horizontally or at a low angle for use by people who are blind or have low vision. Maintenance of panels must also be planned as replacement every few years is anticipated.

FIGURE E.1: ABLI trailhead panel, Harpers Ferry Center



FIGURE E.2: ABLI trailhead upright panel, Harpers Ferry Center



Example ABLI Trailhead Signage: Detail of Graphic Panel

Certain color combinations and shades of color may not be discernable for people who are color blind, including red and green combinations. Make sure that you are knowledgeable about color blindness and design technique for applying different shades and saturation of colors before you create color combinations. While this map includes red and green combinations, when tested through a greyscale filter, the contrast was effective. Each trail was also

identified by a unique patterned line to further differentiate each trail.

Example ABLI Trailhead Signage: Detail of Tactile Panel

Textual information was conveyed in braille with a limited use of words produced as raised characters. Four audio buttons were added. The button on the left plays the description for the Map Key and Big Sink Trail Map. The three buttons on the right play the information under each loop of the trail.

FIGURE E.3. ABLI trailhead horizontal tactile panel, Harpers Ferry Center

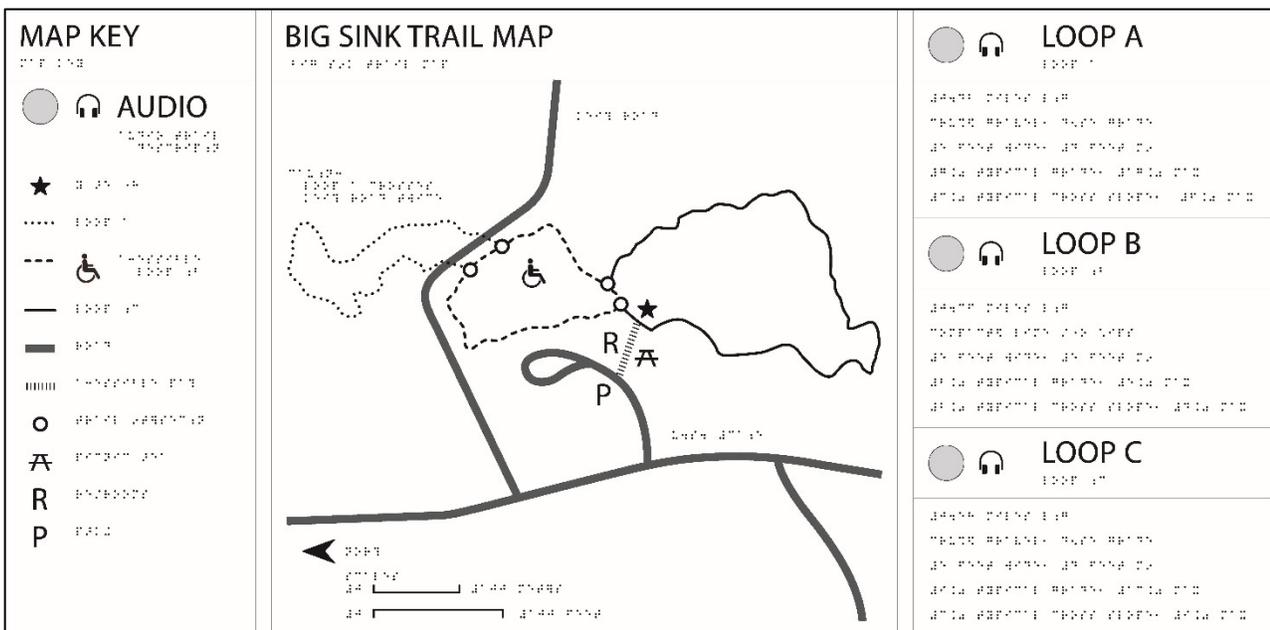


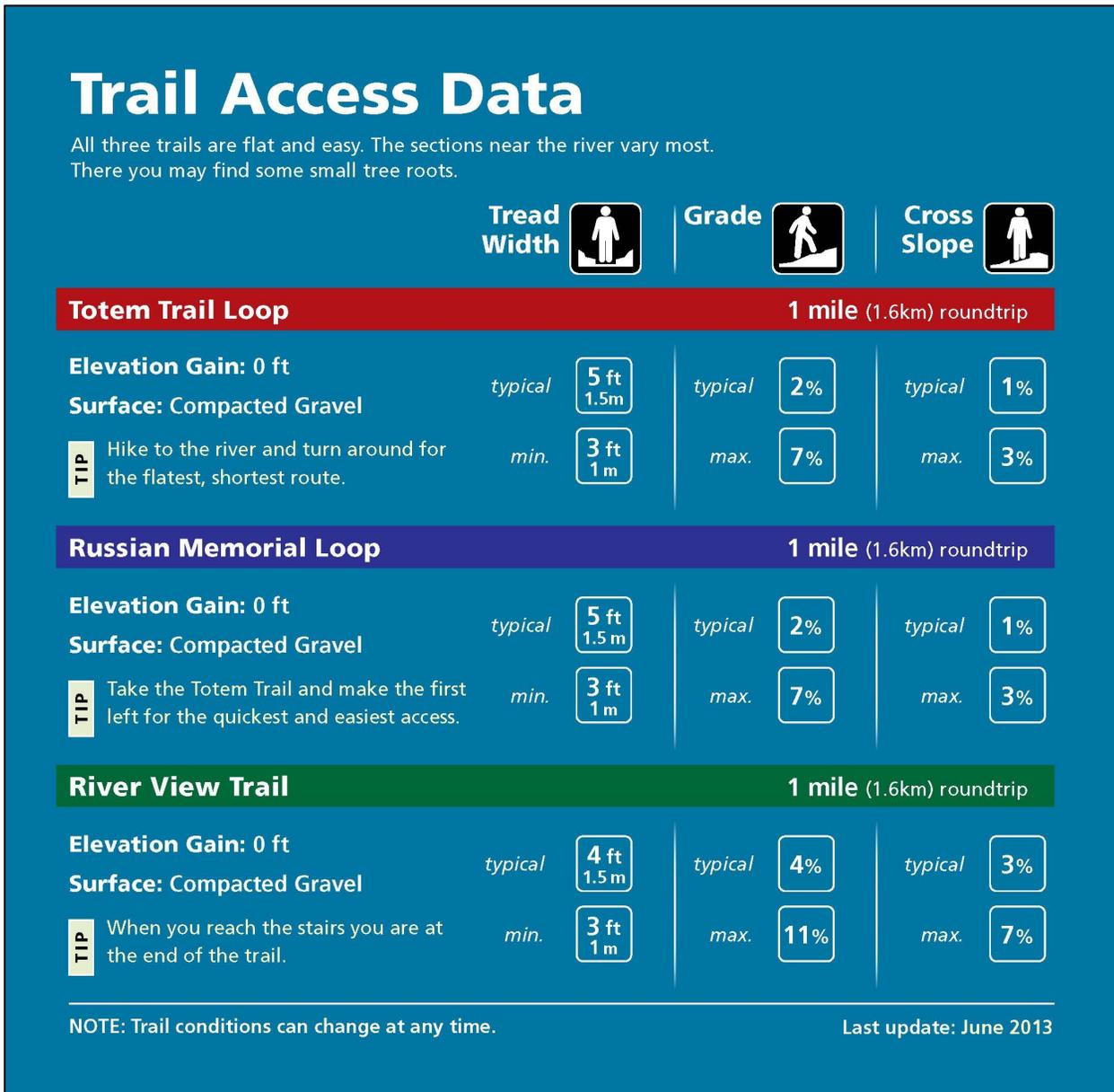
FIGURE E.4. SITK upright interpretive and trailhead panel, Harpers Ferry Center



Example: Sitka National Historical Park

Trail information is not always static. This conceptual upright panel provides interpretation and trail information. It was designed for flexibility with changeable displays. This makes updating trailhead information easier. Following are two design approaches to trail access data prototyped for Sitka.

FIGURE E.5. SITK trailhead graphic panel example one, Harpers Ferry Center



SITK Trailhead Characteristics Option One

In addition to listing requirements, a sentence or two about the trail may help individuals understand this data. This panel states when this information was last updated. This can be useful, especially if weather and other factors may change trail conditions.

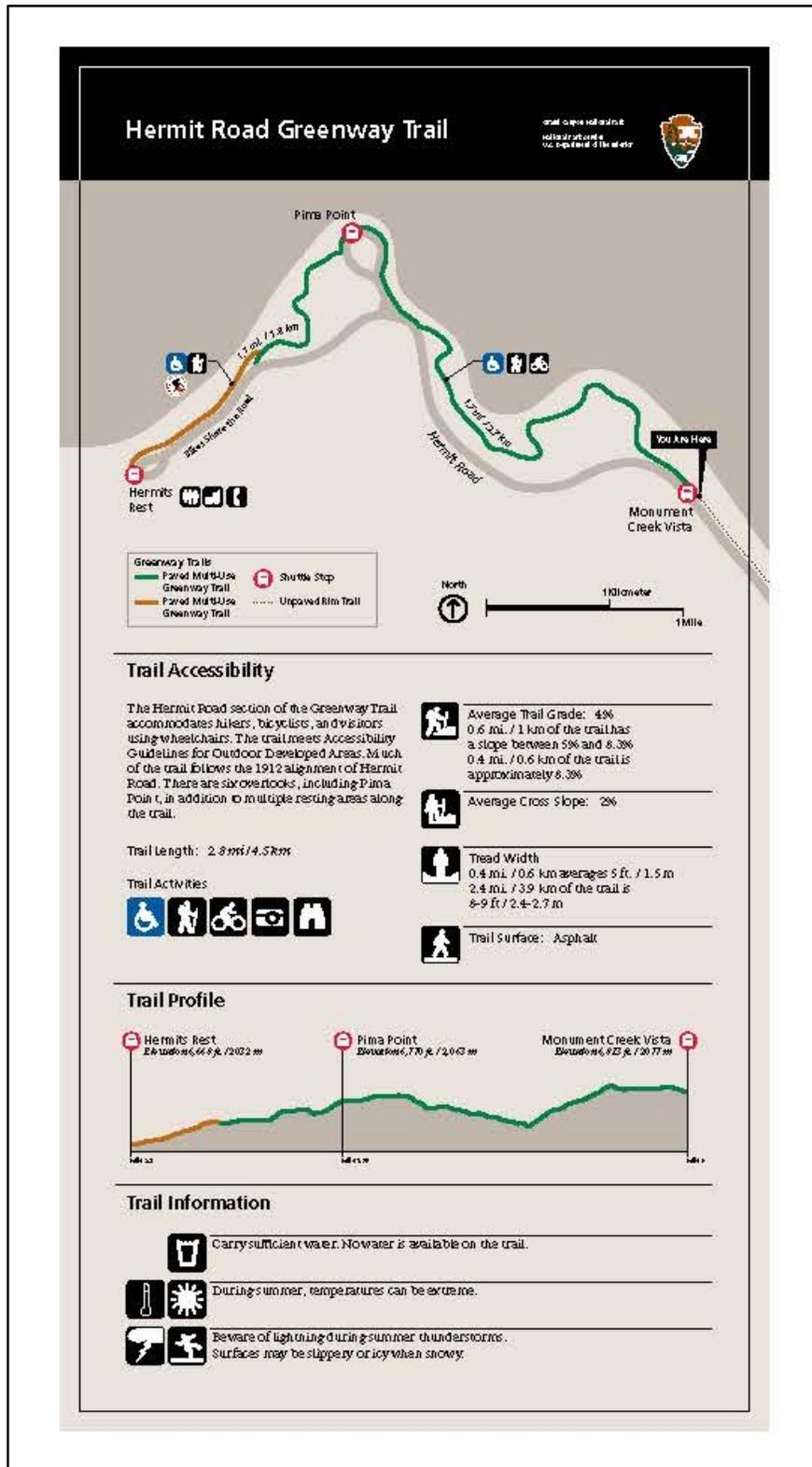
FIGURE E.6. SITK trailhead graphic panel example two, Harpers Ferry Center



SITK Trailhead Characteristics Option Two

If trails have significant changes in grade or slope, pointing this out through text and/or visually may be helpful. Obstructions, such as tree roots, may also have an impact on a person's ability to use the trail. This information is conveyed through the map and by color. Please note, the lengths of the trails are not listed because this information is provided in the interpretive wayside section of the upright panel.

FIGURE E.7. GRCA trailhead panel, Harpers Ferry Center



Grand Canyon National Park

This example presents another approach to graphically representing trail information through text, the visual shape of the trail, and by providing a trail profile.

FIGURE 8. SLBD trailhead panel prototype, Sleeping Bear Dunes National Lakeshore



Sleeping Bear Dunes Draft

This map combines both interpretation and information in a single panel and map. Because of the area and shape of the site, trail data fit nicely within the landmass outside of the park. This design was a prototype. Some revisions could include the use of upper and lower case instead of all caps and a different approach to the red/green combination used on the trail itself.

Conclusions and Additional Considerations

- There is no single way to graphically present required data. The length, complexity and uniformity of a trail or trail system should be considered within the graphic design approach.
- Consider illustrating trail conditions through photographs.
- If audio description of waysides or other features is available along the trail, the trailhead signage is a good place to note this, especially if the visitor needs to check out equipment.
- Tactile maps and audio description are not specified within ABAAS's Outdoor Developed Areas Standards. The National Park Service,

however, has a legal obligation to effectively communicate and provide opportunities for visitors with disabilities to participate in and benefit from our programs and services, which includes these products. Design, location, and materials may vary, but it is important to incorporate tactile experiences and maps within our products. Audio description should also be incorporated. Both techniques contribute to effective communication and accessibility for people who are blind, have low vision, have print disabilities or diverse ways of learning.

- Consider testing your designs to ensure that the information is understandable to people with and without disabilities.

More Information

For more information, contact:

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