



Finding of No Significant Impact for the Natchez Trace Parkway Double Arch Bridge Safety Improvements, Williamson County, Tennessee

Recommended:

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September 14, 2022

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Date

Approved:

Mark A. Foust
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Date

INTRODUCTION

In accordance with the National Environmental Policy Act (NEPA), the National Park Service (NPS) has prepared an Environmental Assessment (EA) for safety improvements to the Natchez Trace Parkway (Parkway) Double Arch Bridge (bridge) in Williamson County, Tennessee. The EA, the Non-Impairment Determination (Attachment A), and this Finding of No Significant Impact (FONSI) comprise the record of environmental impact analysis and decision-making process for the installation of a permanent physical suicide deterrent system (PSDS) on the bridge.

The purpose of this project is to develop a permanent PSDS for the bridge that reduces injuries and fatalities, maintains the bridge's structural integrity, conserves the bridge's engineering significance, and preserves the public's scenic enjoyment of the Parkway. The bridge carries two 11-foot-wide travel lanes of the Parkway across Birdsong Hollow. The original barrier on the outside edge of the bridge is 32 inches in height, and consists of a 18-inch concrete barrier with a 14-inch tall aluminum single rail mounted to the top of the concrete wall. When the bridge was designed, the barrier was intended to perform as a vehicular protection system only; however, Parkway visitors drive, bike, and walk across the bridge. The bridge railing does not sufficiently deter individuals from climbing over the bridge barrier and jumping. A temporary PSDS was installed in 2022 as an interim measure, but it does not meet long-term NPS management objectives.

NPS has approved the selection of Action Alternative 1, the preferred alternative identified in the EA. This FONSI summarizes the findings of the EA and incorporates the public input provided during the public comment period. The findings contained herein are based on the documentation and analysis presented in the EA. To the extent necessary, relevant sections of the EA are incorporated by reference below.

ALTERNATIVES CONSIDERED

The alternatives analysis considered permanent alternatives to reduce occurrences of suicide at the bridge. Fifteen potential permanent PSDS alternatives, in addition to the no action alternative, were identified by a multi-disciplinary team. The team included subject matter experts from NPS, the Federal Highway Administration (FHWA), and engineering consultants experienced in bridge PSDS design.

None of the PSDS alternatives analyzed by the team would completely eliminate the possibility of additional suicides at the bridge. The PSDS would deter an individual from attempting to breach the barrier by allowing extra time to reconsider their intentions, seek help, or receive assistance from passers-by.

A high-level screening process and evaluation resulted in three alternatives retained that were evaluated in the EA in addition to the no action alternative. A summary of the alternatives included in the EA is presented below. Conceptual design of the three PSDS alternatives was

completed in conjunction with the EA. Alternatives that were initially considered, but were dismissed from detailed analysis, are described in detail, along with the reason for their dismissal in the *Physical Suicide Deterrent System Report, Natchez Trace Parkway Double Arch Bridge* (Federal Highway Administration 2021).

VERTICAL POSTS WITH ANGLED RETURNS (ACTION ALTERNATIVE 1, SELECTED ALTERNATIVE AND PROPOSED ALTERNATIVE):

Action Alternative 1 consists of vertical posts with angled returns supporting woven stainless-steel wire mesh. The design of this alternative minimizes changes to the original bridge design by connecting the PSDS to the exterior of the existing concrete barrier. The original lane and shoulder widths will also be preserved. The location of the PSDS at the exterior face of the bridge barrier will minimize effects on the crashworthiness of the barrier and would minimize the potential for conflicts with vehicles and cyclists. It will also reduce the potential for damage and maintenance to the system. The woven stainless-steel wire mesh would flex like a fiber rope netting, which would make the barrier more difficult to climb.

The PSDS will introduce a new, discernably different, modern feature on the bridge which will adversely affect the National Register of Historic Places (NRHP) eligible structure and cultural landscape. The impacts will not be severe enough to negate the NRHP eligibility status of the bridge, landscape, or the Natchez Trace Parkway historic property. The adverse effects will be mitigated in accordance with the stipulations of the Memorandum of Agreement (MOA) between NPS, FHWA, and the Tennessee State Historic Preservation Office (SHPO). The MOA is included in the EA as Appendix B. Impacts to the structure, landscape and viewsheds will be less severe under Action Alternative 1 compared to Action Alternative 2 and Action Alternative 3 because Action Alternative 1 will require less alteration to the original bridge. Action Alternative 1 will have minor beneficial impacts by removing the temporary PSDS, repairing the anchor holes, and providing a more visually compatible PSDS.

Under Action Alternative 1, visitors will be inconvenienced during construction because a full closure of the bridge and nearby Birdsong Hollow Overlook will occur. A temporary detour will be implemented during construction. These temporary impacts will be minor and will be resolved when construction of the permanent PSDS is complete. Action Alternative 1 will be completed faster than Action Alternative 2 or Action Alternative 3, resulting in less temporary impacts to visitors.

After construction, the PSDS system will be noticeably present on the landscape. Scenic values will be slightly diminished by the upright posts and woven, stainless-steel mesh. Although Action Alternative 1 will have a minor negative impact on visitor experience by permanently diminishing scenic value, the PSDS will provide some benefits to visitor experience. The visually and physically obtrusive temporary PSDS will be replaced with a more compatible structure. The permanent PSDS will improve safety for visitors by reducing fatalities and injuries.

Permanent PSDS has not been installed or proposed at any known locations near the project area; therefore, Action Alternative 1 will not contribute to a trend that has the potential to adversely impact Parkway historic structures.

Action Alternative 1 will incrementally contribute to the trend of adverse impacts on the cultural landscape caused by past, present, and reasonably foreseeable actions including the following:

- Right-of-Way acquisition for major highways, crossings, access roads, and utilities
- Adjacent development of agricultural and forested areas within the Parkway viewshed
- Commercial activity, including strip mining and factory operations, within the Parkway viewshed
- Parkway maintenance, modernization, safety improvements, rehabilitation, and reconstruction

The alternative will not result in severe impacts that will significantly contribute to the trend or cause the Parkway landscape to be ineligible for the NRHP.

The alternative will incrementally contribute to a trend of beneficial impacts caused by past, present, and reasonably foreseeable future projects by improving safety. Examples of projects that improved visitor experience overall include:

- Parkway maintenance, rehabilitation, and reconstruction
- Construction of the Chickasaw Museum and Cultural Center
- Planning and construction of new multi-use trails

However, the Alternative will also represent an increment to the trend of adverse impacts on visitor experience by diminishing the scenic values of the project location. Other past, present, and reasonably foreseeable activities that contribute to the trend include right-of-way acquisition, adjacent development within the Parkway viewshed, and commercial activity.

Action Alternative 1 was identified in the EA as the NPS preferred alternative because the design will maximize beneficial enhancements to safety while minimizing adverse impacts to the historic structure, cultural landscape, and visitor experience. The alternative was found acceptable to FHWA engineers, resource agencies, regional officials, stakeholders, and the public.

OTHER ALTERNATIVES CONSIDERED

NO ACTION ALTERNATIVE:

Under the no action alternative, no permanent PSDS would be constructed and existing management practices would continue at the bridge. A temporary PSDS was completed in August 2022 and it would remain in place without a plan for removal. The temporary PSDS consists of galvanized steel posts and chain-link mesh fencing attached to the interior face of the existing concrete barrier. The barrier is topped with barbed wire and stands nine feet tall above the bridge deck.

The upright posts and anchoring hardware are located within the six-foot wide shoulders and clear zone on each side of the bridge. The temporary PSDS slightly reduces the bridge deck width making the area less accessible and less safe for pedestrians. Motorists would be more likely to collide with and damage the system compared to the action alternatives because the posts and fencing are located in the roadway clear zone.

The galvanized steel and stark design used in the temporary PSDS are more visible and obtrusive compared to the context sensitive approaches proposed under the Action Alternatives. The temporary PSDS is less compatible with the cultural landscape compared to the Action Alternatives. The visibly obtrusive temporary barrier would continue to diminish visitor enjoyment of the area. The temporary barrier and No Action Alternative do not meet long-term NPS management objectives because of these impacts.

ARCHED POSTS (ACTION ALTERNATIVE 2):

Action Alternative 2 consists of arched posts supporting rigid woven stainless-steel mesh. The arched posts provide a design that would be reminiscent of the curved arches of the bridge itself. The bottom of the arched posts would meet the top of the existing aluminum rail, and because of this design, Action Alternative 2 would require crash testing. The PSDS would be connected to the exterior face of the existing barrier with concrete anchors. These concrete anchors (brackets) and vertical posts would be visible along the bridge profile. The existing vehicular concrete barrier would not be altered and the existing lane and shoulder widths on the bridge would remain the same. The bottom portion of the curved members would be located on top of the existing aluminum rail, which increases the risk of vehicles colliding with and damaging the deterrent system. The existing 10-inch gap between the top of the concrete barrier and bottom of the aluminum rail would be modified by adding a mesh infill panel which would minimize access to the concrete barrier as a stepping point.

Action Alternative 2 would use rigid stainless-steel wire mesh panels and closely spaced posts that would be more visible than Action Alternatives 1 and 3. Alternative 2 would adversely affect the NRHP eligible structure and engineered landscape by introducing a new, discernably different, modern feature on the bridge, altering the original rail, and modifying the engineered landscape. The alternative would allow for clear differentiation between the original bridge structure and the new PSDS but would disrupt the profile line of the structure from nearby viewpoints. The curved form of the system pays homage to the design of the existing bridge; however, the unique system would draw attention to itself and distract from the simplicity of the original structure.

The adverse effects would be mitigated in accordance with the stipulations of the MOA. The adverse effects of Action Alternative 2 would be greater than Action Alternative 1 but would not be severe enough to negate the NRHP eligibility status of the bridge or the Natchez Trace Parkway historic property. Action Alternative 2 would have minor beneficial impacts by removing the temporary PSDS, repairing the anchor holes, and providing a more visually compatible PSDS.

Under Action Alternative 2, a full bridge closure and temporary detour would be implemented. The construction duration and temporary impacts for Action Alternative 2 would be the longest of the three action alternatives. Action Alternative 2 would result in minor permanent adverse impacts on visitor use and experience. The closely spaced posts would partially obstruct views from more vantage points and the rigid stainless-steel mesh panels would appear less transparent than Action Alternative 1 and Action Alternative 3.

Although Action Alternative 2 would have a minor negative impact on visitor experience by permanently diminishing scenic value, the PSDS would provide important benefits to visitor experience. The visually and physically obtrusive temporary PSDS would be replaced with a more compatible structure. The permanent PSDS would improve safety for visitors by reducing fatalities and injuries. Action Alternative 2 would provide less safety benefits than Action Alternative 1 because, under Action Alternative 2, the mesh infill panel attached between the existing concrete barrier and metal railing would be located within the roadside clear zone. Motor vehicles could damage the lower portion of the PSDS during a collision.

Overall, Action Alternative 2 would have a greater adverse effect on the historic structure and cultural landscape compared to the selected alternative. It would also have greater temporary and permanent detrimental impacts on visitor use and experience.

VERTICAL POSTS WITH LONGITUDINAL RAIL (ACTION ALTERNATIVE 3)

Action Alternative 3 consists of vertical posts with longitudinal rail supporting woven stainless-steel wire mesh. This alternative requires removal of the existing aluminum barrier rail and post system and replacement with a new top mounted PSDS that has a longitudinal rail integrated into the design and positioned to be flush with the front face of the existing concrete barrier. The new integrated PSDS and barrier rail system would likely require crash testing.

The existing vehicular concrete barrier would not be altered and the existing lane and shoulder widths on the bridge would remain the same. The PSDS and the proposed longitudinal rail for the bridge barrier would be supported by the same posts. This would pose an increased risk of damage to the PSDS resulting from a motor vehicle accident compared to Action Alternative 1 and Action Alternative 2 which would have vertical posts attached to the exterior of the existing barrier.

Alternative 3 would adversely affect the NRHP eligible structure and cultural landscape by introducing a new, discernably different, modern feature and removing the original rail. The adverse effects would be mitigated in accordance with the stipulations of the MOA. The adverse effects of Action Alternative 3 would be greater than Action Alternative 1 or Alternative 2 since the original rail would be removed and replaced with an integrated PSDS rail system. The adverse effects would not be severe enough to negate the NRHP eligibility status of the bridge or the Natchez Trace Parkway historic property. Action Alternative 3 would have minor beneficial impacts on the structure and landscape by removing the temporary PSDS, repairing the anchor holes, and providing a more visually compatible PSDS.

Under Action Alternative 3, the full bridge closure and temporary detour described under Action Alternative 1 would be implemented. The construction duration and adverse temporary impacts for Action Alternative 3 would be longer than Action Alternative 1. Action Alternative 3 would have a minor negative impact on visitor experience by permanently diminishing scenic value. Action Alternative 3 would benefit visitor use and experience by replacing the temporary PSDS with a more compatible structure. The permanent PSDS would provide safety benefits, but the entire PSDS would be located within the roadside clear zone. Pedestrians or cyclists would have an increased risk of coming into contact with the PSDS, potentially causing injury. The PSDS would be highly susceptible to impact damage in the event of a motor vehicle collision.

Implementation of Action Alternative 3 would have a greater adverse impact on historic resources compared to the selected alternative. It would also have greater temporary impacts on visitor use and experience. The alternative would provide less permanent safety benefits since the barrier would be located in the existing clear zone.

RATIONALE

NPS selected Action Alternative 1 for implementation because it best meets the purpose and need for the project, namely, to develop a permanent PSDS for the Natchez Trace Parkway Double Arch Bridge that reduces injuries and fatalities, maintains the bridge's structural integrity, conserves the bridge's engineering significance, and preserves the public's scenic enjoyment of the Parkway.

MITIGATION MEASURES

Under its Organic Act, the NPS has the authority to develop and direct mitigation for impacts to resources under its jurisdiction. This is in addition to the requirements that may be created through the need to comply with laws and regulations managing resource impacts that are overseen by other agencies. To meet these obligations, the NPS has developed Management Policies and Director's Orders that identify the authorities (laws, regulations, and executive orders) directing how impacts and mitigation to resources shall be managed, as well as identify the policies and procedures by which the NPS shall comply with these authorities. A full listing of the NPS policies is available from the NPS Office of Policy website at:

<https://npspolicy.nps.gov/index.cfm>.

To avoid, minimize or mitigate impacts, the following strategies will be used during or following construction. These best management practices, except where stated otherwise, are derived from Management Policies (NPS 2006).

- Staging will occur in existing paved and developed areas to minimize ground disturbance
- Debris shields will be installed below the bridge to protect land, pedestrians, and motorists from falling objects or other debris.

- Minimal soil disturbance may be required during installation of the debris shield. Silt fence or other sediment control barriers will be installed to protect adjacent areas. Any disturbed areas will be stabilized and revegetated.
- Adverse impacts to the historic bridge and Parkway landscape were resolved in consultation with the SHPO. On February 17, 2022, a MOA was signed by NPS, FHWA and the SHPO in accordance with NHPA Section 106 (see Appendix B of the EA)
- Per Stipulation I of the MOA, the bridge was documented by a professional meeting the Secretary of Interior's Professional Qualification Standards (36 CFR 61, Appendix A) prior to installation of the PSDS. Documentation was prepared in accordance with the requirements set forth in 68 FR 43159 and the Secretary of the Interior's Standards and Guidelines for Architectural and Engineering Documentation Requirements. The documentation was completed prior to installation of the temporary PSDS.

PUBLIC INVOLVEMENT AND AGENCY COORDINATION

PUBLIC INVOLVEMENT

Suicides at the bridge have been a concern for more than twenty years. The high rate of deaths has received local, regional, and national media coverage. The Natchez Trace Barrier Coalition was formed in 2018 by the friends and families of those who took their lives by jumping off the bridge. NPS has worked closely with the coalition whose goal is to have a PSDS installed on the bridge. Public awareness increased in April 2019 when the bridge was declared a public health hazard by the Tennessee State Legislature, Senate, and Governor. In August 2019, the Parkway Superintendent announced that funding had been secured for the permanent PSDS. Construction of the temporary PSDS is currently underway.

Availability of the EA for the permanent PSDS was advertised on the NPS' Planning, Environment and Public Comment (PEPC) website and was open for public review from May 16, 2022, until June 17, 2022. 280 comments were submitted to PEPC by 268 different individuals. Twelve people submitted duplicate or multiple comments. 84% of those providing comments expressed support for the installation of permanent PSDS on the bridge. 13% did not support the installation of permanent PSDS. Concerns about the aesthetics and effectiveness were the most common reasons cited by those opposed to the PSDS. The remaining 3% of comments contained miscellaneous information or did not include a statement of overall support for the project.

AGENCY COORDINATION AND PERMITS

Other agencies were contacted during the planning process. Appendix A of the EA contains copies of written correspondence with those agencies. There would be no impacts to wetlands or waterways that would require a permit from the US Army Corp of Engineers or the Tennessee Department of Environment and Conservation (TDEC). Installation of the debris shield may cause minimal ground disturbance within the maintained grassy area beneath the bridge. NPS and FHWA would implement strict erosion and sediment control practices but do not anticipate exceeding the one-acre threshold that would require a National Pollutant

Discharge Elimination System permit from TDEC. If the need for environmental permits is identified during the design process, NPS and FHWA would obtain such approvals.

Endangered Species Act of 1973 Coordination and Consultation

An official species list was obtained for the project area from the U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Conservation (IPaC) System. The list (Consultation Code: 04ET1000-2021-SLI-0366) contained the following Federally listed threatened and endangered species: gray bat, Indiana bat, northern long-eared bat, leafy prairie-clover, and Price's potato-bean. The IPaC determination key was used to evaluate the potential for impacts to the northern long-eared bat and Indiana bat. A verification letter was obtained for the project, confirming that the project is consistent with the Programmatic Biological Opinion for Transportation projects.

In a letter dated February 17, 2021, FHWA and NPS described the potential for the project alternatives to impact Federally listed species. Although bats have been documented roosting inside of the concrete girders, there is no evidence that would indicate frequent sustained use of the bridge. The project would be designed to avoid impacts to the girders and cavities within the segmental bridge superstructure. Although suitable habitat for the leafy prairie clover and Price's potato-bean exists nearby, no known occurrences have been documented in the project area. Construction and staging would avoid impacts to vegetation. Therefore, impacts to federally regulated species would not be likely.

The USFWS responded in letter dated March 18, 2021, acknowledging that the determinations of "no effect" made for the Indiana bat and northern long-eared bat are appropriate, and concurring with the determination of "not likely to adversely affect" for the gray bat, leafy prairie clover, and Price's potato bean. Copies of the USFWS consultation letters are included in Appendix A.

National Historic Preservation Act of 1966 Coordination and Consultations

Section 106 of the NHPA requires federal agencies to consider the effects on historic properties of projects they carry out, assist, fund, permit, license, or approve. The NPS initiated NHPA Section 106 consultation with the SHPO in a letter dated February 10, 2021. The NPS determined the bridge to be a contributing resource to the Parkway historic property, and also individually eligible for listing on the NRHP under National Register Criterion C in that it embodies "distinctive characteristics of a type, period, or method of construction...", and under Criteria Consideration G as "a property achieving significance within the past 50 years if it is of exceptional importance." The NPS also determined that the proposed undertaking would result in an adverse effect to the historic structure and the Parkway's cultural landscape.

In a letter dated February 11, 2021, the SHPO concurred that the project would adversely affect the Tennessee Highway 96 Double Arch Bridge as it is contributing to the Parkway. The SHPO clarified on September 13, 2021, that installation of a temporary debris shield would not result

in an adverse effect to historic properties. The SHPO agreed to participate in the development of a MOA to resolve the adverse effects.

On March 11, 2021, NPS notified the Advisory Council on Historic Preservation (ACHP) about the potential adverse effect in accordance with 36 CFR § 800.6. The notification included descriptions of the undertaking and invited ACHP to participate in the resolution of adverse effects during development of the MOA. ACHP responded to the notification on March 25, 2021, and declined to participate in the consultation to resolve adverse effects.

NPS contacted twenty-one Federally recognized tribes to initiate Section 106 consultation on February 10, 2021. The letters notified the tribes about the undertaking and potential adverse effect on the historic Parkway, and that there would be no adverse effect on archaeological resources. Responses were received in support of the project from the Kialegee Tribal Town and the Choctaw Nation. Neither tribe requested to participate in the Section 106 process as a consulting party. No response was received from the following nineteen tribes: Absentee-Shawnee Tribe; Alabama-Coushatta Tribe of Texas; Alabama-Quassarte Tribal Town; Cherokee Nation; Chickasaw Nation; Chitimacha Tribe of Louisiana; Eastern Band of Cherokee Indians; Eastern Shawnee Tribe of Oklahoma; Jena Band of Choctaw Indians; Miccosukee Tribe of Indians of Florida; Mississippi Band of Choctaw Indians; Muscogee (Creek) Nation; Poarch Band of Creek Indians; Seminole Nation of Oklahoma; Seminole Tribe of Florida; Shawnee Tribe; Thlopthlocco Tribal Town; Tunica-Biloxi Tribe of Louisiana; and the United Keetoowah Band of Cherokee.

On February 17, 2022, a MOA was signed by NPS, FHWA and the SHPO in accordance with NHPA Section 106 (see Appendix B of the EA). The MOA contains stipulations to resolve the adverse impacts to the historic bridge and Parkway landscape. Per Stipulation I of the MOA, the bridge was documented by a professional meeting the Secretary of Interior's Professional Qualification Standards (36 CFR 61, Appendix A) prior to installation of the PSDS. Documentation was prepared in accordance with the requirements set forth in 68 FR 43159 and the Secretary of the Interior's Standards and Guidelines for Architectural and Engineering Documentation Requirements. The documentation was accepted by the NPS Historic American Engineering Record (HAER) on February 22, 2022. The MOA also includes stipulations for the treatment of unanticipated discoveries during construction.

FINDING OF NO SIGNIFICANT IMPACT

As described in the EA, the selected alternative will have an adverse effect on the NRHP eligible historic bridge structure and the Natchez Trace Parkway's engineered cultural landscape. The impacts will not be severe enough to negate the NRHP eligibility status of the bridge, cultural landscape, or the Natchez Trace Parkway historic property. The adverse effects will be mitigated in accordance with the stipulations of the MOA between NPS, FHWA, and the SHPO.

The project will also impact visitor use and experience. Visitors will be inconvenienced during construction because a full closure of the bridge and nearby Birdsong Hollow Overlook will

occur. A temporary detour will be implemented during construction. These temporary impacts will be minor and will be resolved when construction of the permanent PSDS is complete. After construction, scenic values will be slightly diminished by the new PSDS. Although Action Alternative 1 will have a minor negative impact on visitor experience by permanently diminishing scenic value, the PSDS will provide some benefits to visitor experience. The visually and physically obtrusive temporary PSDS will be replaced with a more compatible structure. The permanent PSDS will improve safety for visitors by reducing fatalities and injuries.

The project will not result in any significant loss of park resources or have significant adverse impacts on visitor experience. No highly uncertain or controversial impacts, unique risks or elements of precedence were identified. Implementation of the project will not violate any federal, state, local, or environmental protection laws.

CONCLUSION

As described above, the selected alternative does not constitute an action meeting the criteria that normally requires preparation of an Environmental Impact Statement (EIS). The selected alternative will not have a significant effect on the human environment in accordance with Section 102(2)(c) of NEPA. Based on these factors, NPS has determined that an EIS is not required for this project.

Attachment A: Non-Impairment Determination

Why is a Non-Impairment Determination Required?

Section 1.4.7 of the *NPS Management Policies 2006* states that:

Before approving a proposed action that could lead to an impairment of Park resources and values, an NPS decision-maker must consider the impacts of the proposed action and determine, in writing, that the activity will not lead to an impairment of Park resources and values.

Actions that require preparation of Environmental Assessments (EAs) and Environmental Impact Statements (EISs) may have the potential to impair Park resources or values. Therefore, a non-impairment determination must be made for any action selected in a Finding of No Significant Impact (FONSI) or Record of Decision (ROD) that could affect Park resources and values and to which the NPS is a signatory. The non-impairment determination is completed only for the selected action.

What is Impairment?

Sections 1.4.5 and 1.4.6 of the *Management Policies 2006* provide an explanation of impairment.

Section 1.4.5 defines impairment as:

... an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of Park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values.

Section 1.4.5 goes on to state that:

...an impact to any Park resource or value may, but does not necessarily, constitute impairment. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the Park
- Key to the natural or cultural integrity of the Park or to opportunities for enjoyment of the Park
- Identified as a goal in the Park's general management plan or other relevant NPS planning documents as being of significance

An impact would be less likely to constitute an impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of Park resources or values and it cannot be further mitigated.

Section 1.4.6 of the *Management Policies 2006* identifies the Park resources and values that are subject to the non-impairment standard. The "Park resources and values" that are subject to the non-impairment standard include:

- the Park's scenery, natural and historic objects, and wildlife, and the processes and conditions that sustain them, including, to the extent present in the Park: the ecological, biological, and physical processes that created the Park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes and smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structure, and objects; museum collections; and native plants and animals.
- appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them
- the Park's role in contributing to the national dignity, the high public value and

integrity, and the superlative environmental quality of the national Park system, and the benefit and inspiration provided to the American people by the national Park system

- any additional attributes encompassed by the specific values and purposes for which the Park was established

How is a Non-Impairment Determination Made?

Section 1.4.7 of the *Management Policies 2006* states that

... in making a determination of whether there would be an impairment, an NPS decision maker must use his or her professional judgment. This means that the decision-maker must consider any environmental assessments or environmental impact statements required by the National Environmental Policy Act of 1969 (NEP A); consultations required under Section 106 of the National Historic Preservation Act (NHPA); relevant scientific and scholarly studies; advice or insights offered by subject matter experts and others who have relevant knowledge or experience; and the results of civic engagement and public involvement activities relating to the decision.

The *Management Policies 2006* further define "professional judgment" as:

... a decision or opinion that is shaped by study and analysis and full consideration of all the relevant facts, and that takes into account the decision-maker's education, training, and experience; advice or insights offered by subject matter experts and others who have relevant knowledge and experience; good science and scholarship; and, whenever appropriate, the results of civic engagement and public involvement activities relation to the decision.

Non-Impairment Determination for the Selected Alternative

This determination on impairment has been prepared for the Selected Alternative described in the FONSI – Action Alternative A: Vertical Posts with Angled Returns. An impairment determination is made for historic structures and cultural landscapes. An impairment determination is not made for visitor use and experience, because impairment findings relate back to Park resources and values, and these impact areas are not generally considered to be Park resources or values according to the Organic Act of 1916 and cannot be impaired in the same way that an action can impair Park resources and values.

Cultural Resources (Historic Structures and Cultural Landscapes):

The PSDS will introduce a new, discernably different, modern feature on the bridge which will adversely affect the National Register of Historic Places (NRHP) eligible structure and cultural landscape. The impacts will not be severe enough to negate the NRHP eligibility status of the bridge, landscape, or the Natchez Trace Parkway historic property. The adverse effects will be mitigated in accordance with the stipulations of the Memorandum of Agreement (MOA) between NPS, FHWA, and the Tennessee State Historic Preservation Office (SHPO). For these reasons, NPS has determined that the proposed action would not constitute an impairment to historic structures and cultural landscapes.