

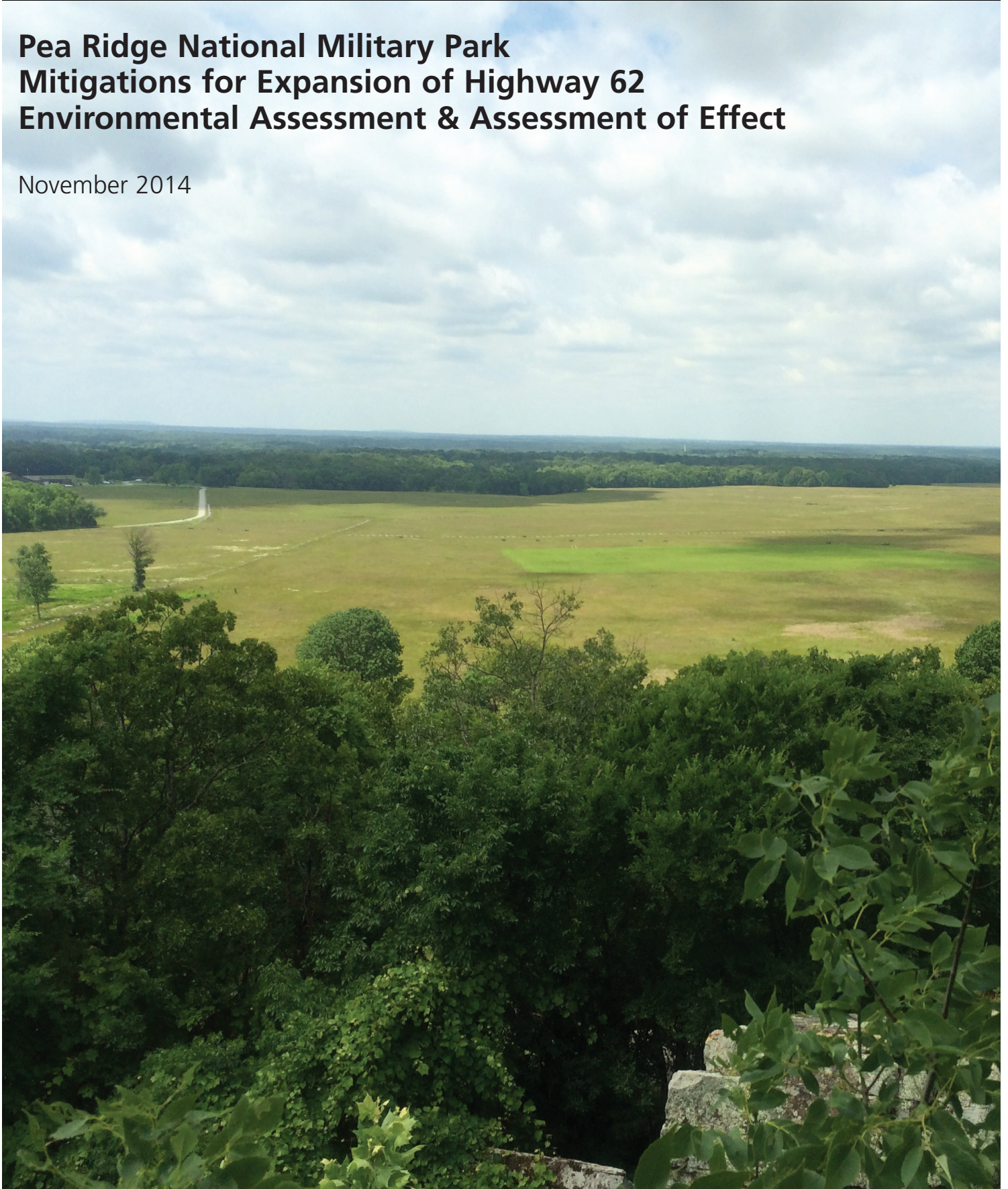
National Park Service
U.S. Department of the Interior

Pea Ridge National Military Park
Arkansas



Pea Ridge National Military Park Mitigations for Expansion of Highway 62 Environmental Assessment & Assessment of Effect

November 2014



PEA RIDGE NATIONAL MILITARY PARK

HIGHWAY 62 MITIGATIONS

ENVIRONMENTAL ASSESSMENT/ASSESSMENT OF EFFECT

EXECUTIVE SUMMARY

Pea Ridge National Military Park (park) proposes to provide new access and improved visitor circulation to the park in conjunction with the Arkansas State Highway and Transportation Department's (AHTD) and Federal Highway Administration's (FHWA) relocation of Highway 62 in northwestern Arkansas. The existing highway alignment runs along the southern boundary of the park and provides the only visitor access to the park. The purpose of the project is to identify a safe and convenient access road (and parking) to key features in the park while minimizing impacts on cultural and natural resources.

The project is needed to mitigate use of park lands for the reconstruction and widening of Highway 62 and to avoid impacts on sensitive cultural and natural resources. Under the original Highway 62 project design, the highway would be widened from two lanes to five lanes through the southern boundary of the park. Highway 62 widening, as proposed by the NPS, relocated Highway 62 along and outside the southern park boundary to minimize impacts on park resources. Section 4(f), a Federal Highway Administration regulation, governs the use of land from publicly owned parks, recreation areas, wildlife and waterfowl refuges, and public or private historic sites for federal highway projects. The proposed project would provide mitigation under Section 4(f) for the impacts on the park. The mitigation measures under the proposed action would allow new connections to the park from the relocated Highway 62.

This Environmental Assessment/Assessment of Effect (EA/AoE) evaluates five alternatives: a no action alternative and four action alternatives, one of which is the preferred action (preferred alternative). Under the no action alternative, the park would not implement mitigations and access to the park would move to the intersection of the existing Highway 62 and new Highway 62 west-southwest of the current park entrance. All of the action alternatives include a new entrance into the park, improved visitor circulation from the visitor center to the Elkhorn Tavern and improvements to the Tour Road, new parking lot locations for the Elkhorn Tavern and horse trailhead, and an expanded parking lot at the visitor center. Alternative A presents the NPS's preferred management action and defines the rationale for the action in terms of resource protection and management, visitor use, and other applicable factors. Implementing the preferred alternative would best improve parking and traffic flow within the park, protect and preserve cultural resources, and improve the visitor experience.

This EA/AoE has been prepared in compliance with the National Environmental Policy Act to provide the decision-making framework that 1) analyzes a reasonable range of alternatives to meet objectives of the proposal, 2) evaluates potential issues and impacts on the park's resources and values, and 3) identifies mitigation measures to lessen the degree or extent of these impacts. Impact topics evaluated in detail in this EA/AoE are visual resources; cultural resources, including

SUMMARY

cultural landscapes, archeological sites, and historic structures/objects; and visitor use, recreation, and education and interpretation. Some impact topics were dismissed because they are not present or the alternatives considered would result in no noticeable effects. In addition, the NPS is using this EA/AoE to satisfy the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended (16 United States Code 470, et seq.) pursuant to regulations contained in 36 Code of Federal Regulations 800.8(c) – Protection of Historic Properties. A Programmatic Agreement (PA) was developed between several entities including the park, FHWA, AHTD, Arkansas Historic Preservation Officer, and several tribes regarding the relocation of Highway 62. The PA includes, in part, stipulations for the mitigation of potential adverse effects on historic properties.

No major adverse effects were identified under any of the alternatives considered. The public, regulatory agencies, and other stakeholders will have an opportunity to comment on this EA/AoE. Comments received will be considered prior to making a decision on the proposed project.

Public Comment

If you wish to comment on this EA/AoE, you may post comments online using the National Park Service Planning, Environment and Public Comment (PEPC) website at: <http://parkplanning.nps.gov/peri>; or mail comments to: Superintendent, Pea Ridge National Military Park, P.O. Box 700, 15930 E Highway 62, Garfield, AR 72732.

This EA/AoE will be on public review for 30 days. Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made available to the public at any time. Although you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

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ACRONYMS AND ABBREVIATIONS

ACHP	Advisory Council on Historic Preservation
AHTD	Arkansas State Highway and Transportation Department
AoE	Assessment of Effect
APE	Area of Potential Effect
APSC	Arkansas Public Service Commission
BIA	Bureau of Indian Affairs
BMP	Best Management Practice
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CLR	Cultural Landscape Report
Corps	U.S. Army Corps of Engineers
DO	Director's Order
EA/AoE	Environmental Assessment/Assessment of Effect
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
EPMP	Exotic Plant Management Plan
ESA	Endangered Species Act
FHWA	Federal Highway Administration
FMP	Fire Management Plan
FONSI	Finding of No Significant Impact
GHG	Greenhouse Gas
GMP	General Management Plan
IPCC	Intergovernmental Panel on Climate Change
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPS	National Park Service
NRCS	Natural Resources Conservation Service
National Register	National Register of Historic Places
PA	Programmatic Agreement
Park	Pea Ridge National Military Park
PEPC	Planning, Environment, and Public Comment
RV	Recreational Vehicle
SHPO	Arkansas Historic Preservation Program
SWEPCO	Southwestern Electric Power Company
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

PEA RIDGE NATIONAL MILITARY PARK

HIGHWAY 62 MITIGATIONS

ENVIRONMENTAL ASSESSMENT/ASSESSMENT OF EFFECT

PURPOSE AND NEED

INTRODUCTION

This Environmental Assessment/Assessment of Effect (EA/AoE) examines alternatives for providing new access and improved visitor circulation to the Pea Ridge National Military Park (park) in conjunction with the relocation of Highway 62 in northwestern Arkansas. The park was established by Congress on July 20, 1956 to “preserve and protect the landscapes and resources associated with the Battle of Pea Ridge” and “interpret the battle as an integral part of the social, political, and military history of the Civil War” (70 Statute (Stat.) 592). The Battle of Pea Ridge (also known as the Battle of Elkhorn Tavern) in northwest Arkansas was the largest Civil War battle west of the Mississippi River and essentially secured northwest Arkansas and the state of Missouri for the Union. The name of the battle was derived from the nearby city of Pea Ridge, supposedly named for the wild “turkey peas” or “hog peanuts” that were harvested by the indigenous American Indian tribes.

PROJECT BACKGROUND

The Highway 62 relocation is a separate project with the Arkansas State Highway and Transportation Department (AHTD) and Federal Highway Administration (FHWA). Highway 62, which currently serves as the main park access road, would be removed and relocated south of the park boundary. The AHTD started the initial phase of the Highway 62 relocation this year.

The park’s General Management Plan (GMP), completed in 2006, identified issues and concerns with Highway 62 within the park. Heavy traffic on Highway 62 contributes to noise, visual impacts, resource damage, and safety issues within the park. Traffic levels are high and are expected to increase significantly in the next 20 years. Although the GMP identified the expansion of Highway 62 as a four-lane road within the park boundary as the GMP preferred alternative, other options were considered during the project development, including an avoidance alternative (which would run much farther south of the existing Highway 62) and the rerouting of Highway 62 directly south of the park boundary. The rerouting of Highway 62 directly south of the park boundary was identified as the overall preferred alternative (for the purposes of the AHTD/FHWA Highway 62 project). A map of the project location is shown in Figure 1. A map showing the overall alignment of the AHTD Highway 62 project is shown in Figure 2. A map of the project area is shown in Figure 3.

The purpose of this project is to identify a safe and convenient access road (and parking) to key features in the park while minimizing impacts on cultural and natural resources. Implementing

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mitigation measures in conjunction with the Highway 62 realignment would protect and preserve cultural and natural resources and improve the visitor experience.

This EA/AoE describes five alternatives – four action alternatives for mitigations for the relocation of Highway 62 and the no action alternative that would not implement mitigation measures. The EA/AoE was prepared in compliance with the National Environmental Policy Act (NEPA) of 1969 and implementing regulations, 40 Code of Federal Regulations (CFR) Parts 1500-1508; Department of the Interior regulations *Construction of NEPA of 1969*, 43 CFR Part 46; and NPS Director's Order (DO)-12 and Handbook, *Conservation Planning, Environmental Impact Analysis, and Decision-making*. In coordination with the Arkansas Historic Preservation Program (SHPO), the park is using this EA/AoE to satisfy the requirements of Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended (16 United States Code (USC) 470, et seq.) pursuant to regulations contained in 36 CFR 800.8(c) – Protection of Historic Properties. An NHPA Section 106 Agreement Document (Programmatic Agreement [PA]) was developed between several entities including the park; NPS; FHWA; AHTD; Arkansas Historic Preservation Officer; and tribes including the Caddo Nation, Cherokee Nation of Oklahoma, Quapaw Tribe of Oklahoma, the Osage Nation, and United Keetoowah Band of Cherokee Indians regarding the relocation of Highway 62. The PA includes, in part, stipulations for the mitigation of potential adverse effects on historic properties.

FIGURE 1. PROJECT AREA

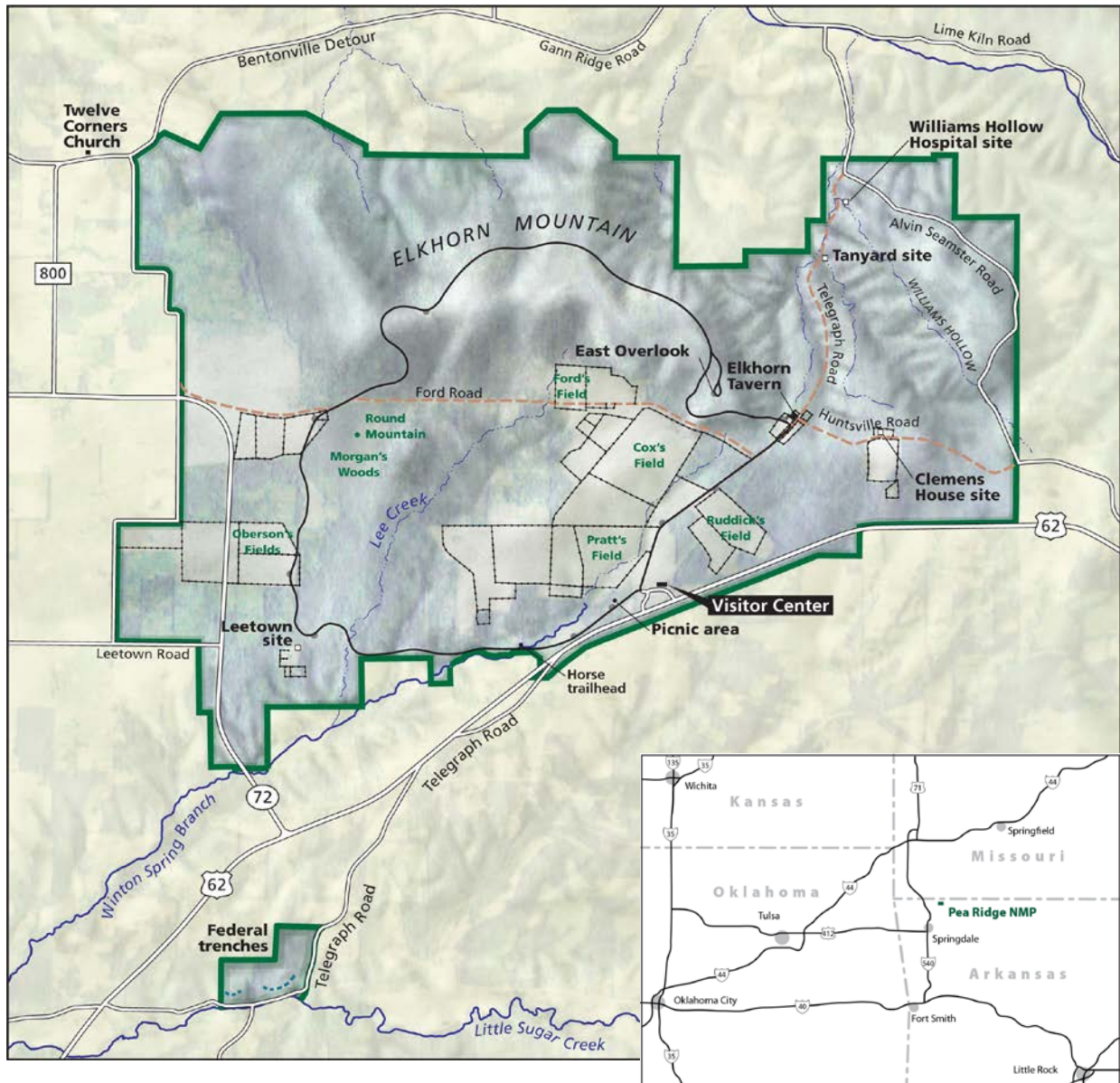
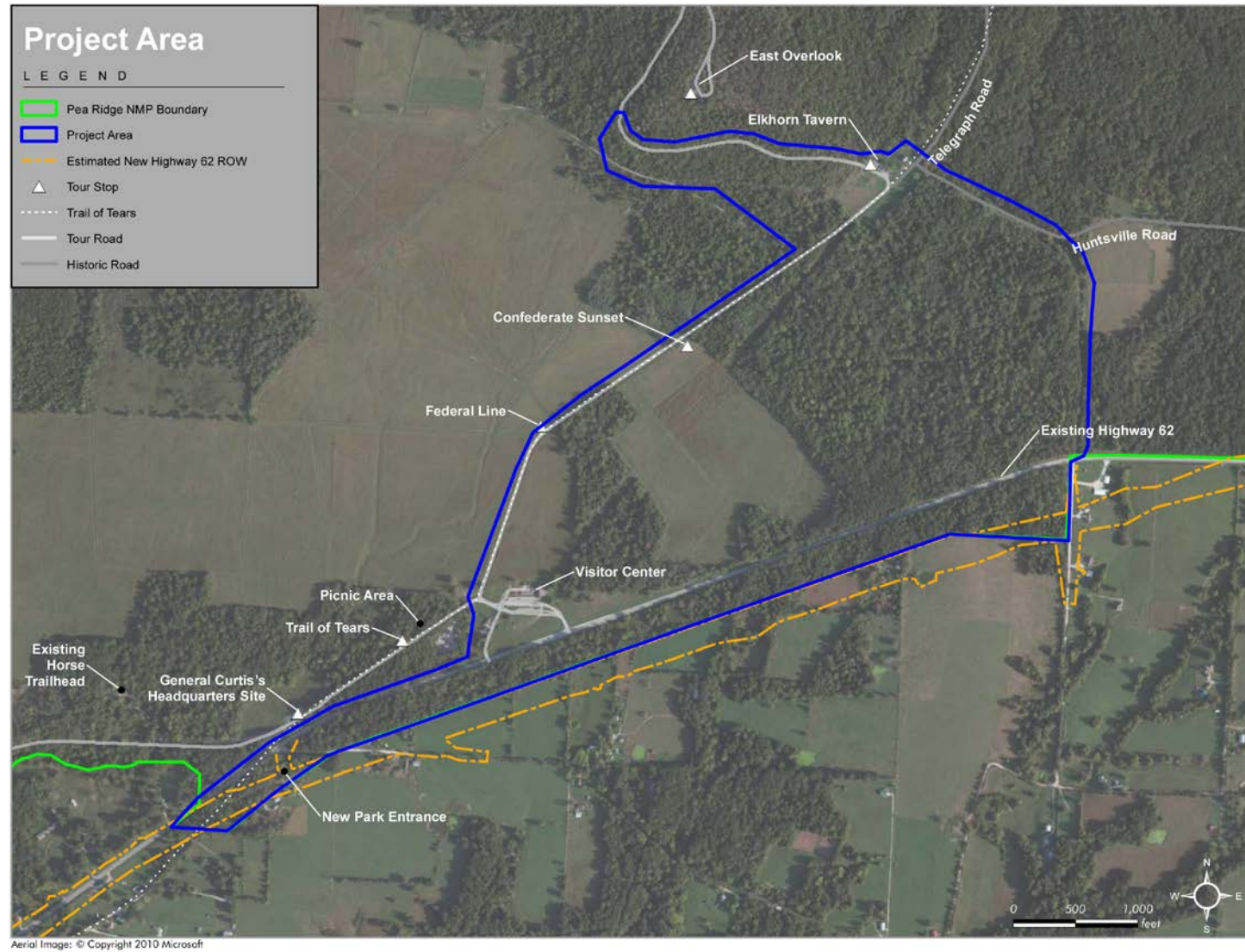


FIGURE 2. AHTD HIGHWAY 62 PREFERRED REALIGNMENT



FIGURE 3. PROJECT AREA



PURPOSE OF AND NEED FOR ACTION

Project Purpose

The purpose of taking action is to provide a safe and convenient access road and parking to key features in the park while minimizing impacts on cultural and natural resources.

Project Need

The proposed mitigation project is needed to avoid use of park lands for the reconstruction and widening of Highway 62 and to avoid impacts on sensitive cultural and natural resources. Under the original Highway 62 project design, the highway would be widened from two lanes to five lanes through the southern boundary of the park. Highway 62 widening, as originally proposed, would have resulted in the taking of NPS (federal) lands under the FHWA regulation (Section 4(f)) governing the use of land from publicly owned parks, recreation areas, wildlife and waterfowl refuges, and public or private historic sites for federal highway projects. The mitigation measures under the proposed action would allow new connections to the park from the relocated Highway 62.

Additional improvements in the park are also needed to provide better visitor circulation and parking at the visitor center and Elkhorn Tavern, and restroom facilities near Elkhorn Tavern.

Objectives in Taking Action

The objectives of the proposed project are described below.

Cultural and Natural Resources

- Minimize impacts on archeological resources and cultural landscapes
- Minimize the amount of ground disturbance in undisturbed areas
- Grade and revegetate areas where the Tour Road and existing Highway 62 is removed

Elkhorn Tavern

- Consider a comprehensive design that enhances visitor circulation, accessibility, and interpretation while incorporating the Cultural Landscape Report (CLR) (NPS 2014b) treatment recommendations
- Provide convenient access to the Elkhorn Tavern while minimizing impacts on resources
- Keep parking in proximity to the Elkhorn Tavern but still hidden or screened
- Provide restroom facilities at Elkhorn Tavern to serve the 119,000 annual visitors, volunteers, and staff

Development/Parking

- Provide a safe and convenient access road into the park, which intersects the newly constructed Highway 62
- Incorporate sustainable practices and materials during construction to the extent possible
- Include/accommodate adequate bus parking in the parking lot
- Ensure construction materials are compatible with the cultural landscape (e.g., brown aggregate)
- Ensure horse and trailhead parking are visually screened and located away from the visitor center
- Ensure any new facilities and/or infrastructure are visually screened to minimize visibility

Description of Project Area

The park is approximately 3 miles east of the city of Pea Ridge, Arkansas, and is 14 miles northeast of Bentonville, Arkansas. In March 1862, the Union Army of the Southwest (Union) led by Brigadier General Samuel R. Curtis defeated the Confederate Army of the West (Confederacy) under the command of Major General Earl Van Dorn in a bloody two-day battle at Pea Ridge in the remote northwest corner of Arkansas. This decisive victory permanently turned the tide of the Civil War west of the Mississippi River, ensured that Missouri would remain in the Union, and freed Union forces for the campaign to take control of the lower Mississippi River (NPS 2006).

The park was established on July 20, 1956 to commemorate the Battle of Pea Ridge and preserve the site of the battle, the largest Civil War engagement west of the Mississippi River. This 4,300-acre park encompasses nearly 90% of the actual battlefield. Its numerous resources include archeological sites, historic sites, structures, (site-specific) collections, and cultural landscape features associated with the battle and the agrarian community once found at the city of Pea Ridge. For the purposes of this EA/AoE, the study area encompasses the areas proposed for mitigation activities, shown in Figure 3.

The Battle of Pea Ridge

On March 7 and 8, 1862, Union and Confederacy troops met in the Pea Ridge vicinity. The east and west boundaries of the battlefield were delineated by Telegraph Road and Bentonville Detour Road, and on the south by Little Sugar Creek. Union troops were placed in trenches along Sugar Creek and the Telegraph Road, waiting for the Confederacy to approach on the Telegraph Road. Major General Earl Van Dorn set out on the night of March 6 to outflank the Union position at Little Sugar Creek, dividing his army into two columns. After gaining knowledge of Van Dorn's approach, the Union marched north to meet Van Dorn's advance on March 7. This movement, combined with the death of two generals (Brigadier General Ben McCulloch and Brigadier General James McIntosh) and the capture of their ranking colonel, brought the Confederacy attack to a halt. Van Dorn led a second column to meet the Union in the Elkhorn Tavern and Tanyard area. By that evening, the Confederacy had the Elkhorn Tavern and Telegraph Road under their control. The next day, Brigadier General Samuel R. Curtis, having reorganized and consolidated the Union, counterattacked near the tavern and gradually forced the Confederacy back. Running short of ammunition, Van Dorn retreated from the battlefield, thereby ending the Battle of Pea Ridge (also known as the Battle of Elkhorn Tavern). Missouri was in Union hands,

and most of the Union and Confederacy moved east of the Mississippi River to fight in other campaigns (NPS 2008).

PURPOSE AND SIGNIFICANCE OF PEA RIDGE NATIONAL MILITARY PARK

The purpose and significance of the park, as stated in the GMP (NPS 2006), outlines how the park is managed. The purpose tells why the park was set aside as a national park system unit. The park was established (purpose) to preserve and protect the landscapes and resources associated with the Battle of Pea Ridge; to interpret the battle as an integral part of the social, political, and military history of the Civil War; and to provide roads, trails, markers, buildings, and other improvements and facilities for the care and accommodation of visitors as necessary.

The significance of the park addresses why the area is unique—why it is important enough to our natural and/or cultural heritage to warrant national park designation, and how it differs from other parts of the country. The park is significant for the following reasons:

- The Union victory at Pea Ridge prevented the Confederacy from gaining physical and political control of Missouri. Union control of Missouri subsequently provided a secure logistical base for the Union to embark upon campaigns to control the lower Mississippi River Valley.
- Pea Ridge was the first major battle outside Indian Territory in which the largest number of organized troops from the Cherokee, Choctaw, Chickasaw, and Creek nations fought.
- Pea Ridge National Military Park is the best preserved Civil War battlefield in the United States, encompassing nearly 90% of the combat sites of the Battle of Pea Ridge.
- The Union trenches above Little Sugar Creek, the first entrenchments dug in the Civil War's Trans-Mississippi theater of operations, are the only constructed features remaining from the battle.
- Although not part of the Battle of Pea Ridge, the last distribution center along the northern route of the Trail of Tears, before reaching Indian Territory, was located in Ruddick's Field.

In addition to the park significance statements, the GMP identified three important points about the battle:

- Brigadier General Samuel R. Curtis is the only American military commander known to have successfully redeployed his entrenched army after learning of an intended assault on the Union rear.
- The Union, although outnumbered in terms of troops and artillery, launched the longest and most intense field artillery assault up to that point in the Civil War. The assault represented one of the few successful uses of massed artillery as an offensive tactic during the war.
- About one-third of the Union forces were German and eastern European immigrants from Missouri who made a significant contribution to the Union victory at Pea Ridge.

RELATED LAWS, REGULATIONS, POLICIES, ORDERS, AND PLANNING DOCUMENTS

Several guiding laws and policies, as well as previous planning project reports, provide background and management information for this EA/AoE. Relevant plans and policies are described below.

Guiding Laws and Policies

NPS Organic Act of 1916

By enacting the NPS Organic Act of 1916, Congress directed the U.S. Department of the Interior and NPS to manage units “to conserve the scenery and the natural and historic objects and wild life therein and to provide for the enjoyment of the same in such a manner and by such a means as will leave them unimpaired for the enjoyment of future generations” (16 USC section 1). Congress reiterated this mandate in the Redwood National Park Expansion Act of 1978 by stating that the NPS must conduct its actions in a manner that will ensure no “derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress” (16 USC section 1a-1). Despite these mandates, the Organic Act and its amendments afford the NPS latitude when making resource decisions that balance resource preservation and visitor recreation.

Impairment is 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 (*NPS Management Policies 2006*). Whether an impact meets this definition depends on the particular resources that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts.

An impact on 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, or
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or
- Identified 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.

National Historic Preservation Act of 1966, as Amended

The NHPA, as amended, protects buildings, sites, districts, structures, and objects that have significant scientific, historic, or cultural value. The act established affirmative responsibilities of federal agencies to preserve historic and prehistoric resources. Effects on properties that are

PURPOSE AND NEED

listed on, or that are eligible for listing on, the National Register of Historic Places (National Register) must be taken into account in planning and operations. Any property that may qualify for listing on the National Register must not be inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate.

Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties. The Advisory Council on Historic Preservation (ACHP) is then afforded a reasonable opportunity to comment. The historic preservation review process mandated by Section 106 is outlined in regulations issued by the ACHP. Revised regulations, known as “Protection of Historic Properties” (36 CFR Part 800), were updated on August 5, 2004.

National Environmental Policy Act of 1969, as Amended

NEPA was passed by Congress in 1969 and took effect on January 1, 1970. This legislation established the country’s environmental policies, including the goal of achieving a productive harmony between human beings and the physical environment for present and future generations. NEPA provides the tools to implement these goals by requiring that every federal agency prepare an in-depth study of the impacts of “major federal actions having a significant effect on the environment” and alternatives to those actions. NEPA also requires that each agency makes that information an integral part of its decision-making process. In addition, NEPA requires that agencies make a diligent effort to involve interested members of the public before agencies make decisions affecting the environment. NEPA is implemented through regulations of the Council on Environmental Quality (CEQ) (40 CFR 1500-1508).

Pea Ridge National Military Park Enabling Legislation

According to the park’s enabling legislation, the park was established on July 20, 1956 “to preserve and protect the landscapes and resources associated with the battle of Pea Ridge; to interpret the battle as an integral part of the social, political, and military history of the Civil War; and provide roads, trails, markers, buildings, and other improvements and facilities for the care and accommodation of visitors as necessary” (70 Stat. 592).

NPS Management Policies 2006

NPS Management Policies 2006 provides guidance for all management decisions, including decisions related to cultural resources. Cultural resources, including cultural landscapes and historic structures, are addressed in section 5.0, which states the NPS cultural resources management program involves “. . . stewardship to ensure that cultural resources are preserved and protected, receive appropriate treatments (including maintenance) to achieve desired conditions, and are made available for public understanding and enjoyment.” The policy further states that “Each park’s resource stewardship strategy will provide comprehensive recommendations about specific actions needed to achieve and maintain the desired resource conditions and visitor experiences for the park’s cultural resources.”

Director's Order-12 and Handbook (2011)

DO-12 and Handbook (NPS 2011a) provides the instruction or procedures by which the NPS complies with NEPA and for practicing environmental impact assessment and resource conservation. DO-12 and Handbook provide the framework for the NPS's approach in environmental analysis, public involvement, and making resource-based decisions. The order and handbook require a full and open evaluation, interdisciplinary approach, and technical and scientific analysis of management decisions.

Director's Order-28: Cultural Resource Management

DO-28 (NPS 2002) elaborates on the existing laws for cultural resources including, but not limited to, the 1916 NPS Organic Act, *NPS Management Policies 2006*, and NHPA. DO-28 offers guidance in applying the laws and regulations regarding cultural resource management to establish, maintain, and refine park cultural resource programs.

Executive Order 11593, "Protection and Enhancement of the Cultural Environment"

Executive Order (EO) 11593 mandates that all agencies 1) compile an inventory of the cultural resources for which they are the trustee, 2) nominate all eligible government properties to the National Register, 3) preserve and protect their cultural resources, and 4) ensure that agency activities contribute to the preservation and protection of nonfederally owned cultural resources.

1984 NPS Park Roads Standards

The 1984 NPS Park Roads Standards state that roads in national parks serve a distinctly different purpose from most other road and highway systems. Among all public resources, those of the national park system are distinguished by their unique natural, cultural, scenic, and recreational qualities. Park roads are to be designed with extreme care and sensitivity to provide access for the protection, use, and enjoyment of the resources that constitute the national park system.

Director's Order – 87A: Park Roads and Parkways

DO – 87A states that park roads are constructed only where necessary to provide access for the protection, use, and enjoyment of the natural, historical, cultural, and recreation resources that constitute our national park system. Park roads should enhance the visitor experience while providing safe and efficient accommodation of park visitors and to serve essential management action needs. Park roads are designed with extreme care and sensitivity with respect to the terrain and environment through which they pass—they are laid lightly onto the land.

Related Planning Documents

Pea Ridge National Military Park General Management Plan / Environmental Impact Statement

The park's GMP was completed in 2006. The purpose of the GMP is to outline the specific resource conditions and visitor experiences desirable for the park and to propose alternate management strategies for achieving these goals. The GMP provides a framework to guide park management decision-making for the next 15 to 20 years. The preferred alternative selected for the GMP is Exploration and Discovery. Under this alternative, visitors could choose from the widest range of experiences. Visitors could immerse themselves in the historic battlefield, focus on gaining an appreciation of the history of the battle, or mix elements of both experiences. Park management would retain and enhance a substantial portion of the historic character of the battlefield landscape.

Environmental Assessment, Avoca to Gateway, NEPA Study (U.S. Highway 62)

The Arkansas State Highway and Transportation Department is widening Highway 62 from two lanes to four lanes from Avoca to Gateway, including the reconfiguration of the Highway 62 intersection with Arkansas Highway 37 in Benton County, Arkansas. The purpose of the improvements is to provide increased capacity, alleviate traffic congestion, and improve safety. A portion of Highway 62 runs within the southern boundary of the park and would be rerouted as part of this project. The new section would be rerouted along the southern park boundary to avoid the park. The existing Highway 62 could be used as the entrance route for visitors to the park. The existing Highway 62 right-of-way would be converted to park lands, which would provide a greater visual and noise buffer between the highway and the park.

Long-Range Interpretive Plan

The Long-Range Interpretive Plan (NPS 2011b) outlines recommendations for future interpretive services, facilities, and media. Park staff, historians, partners, and stakeholders worked together to develop a comprehensive tool that outlines educational and recreational opportunities for visitors to develop intellectual and emotional connections to the natural and cultural resources found within the park. The goal of the plan is to promote the park's resource values through specially planned visitor experiences and excellence in interpretation.

Cultural Landscape Report/EA

The park completed a CLR and EA (CLR/EA) in September 2014. The CLR/EA follows a Cultural Landscape Inventory completed in 2008 that documented the cultural landscape features within the park. The CLR/EA documents the history, significance, and treatment of the cultural landscape at the park, including any changes to its geographical context, features, materials, and use. The CLR/EA provides managers, curators, and others with information needed to make management decisions, as well as document any new information about the landscape's historic significance and integrity.

Vegetation Management Plan/EA

The park recently completed a Vegetation Management Plan and EA (VMP/EA) (NPS 2014c) to design ways to adjust and/or establish the vegetation patterns that represent the look and feel of the 1862 Battle of Pea Ridge battlefield landscape of the park. The park's GMP set the goals for landscape management at the park. The overarching goals of the GMP are "returning the battlefield landscape to the 1862 appearance" and "providing views of the battlefield that convey the open space and woodlands present at the time of the battle." The landscape of Pea Ridge was a highly human-modified landscape in 1862. The park developed a VMP/EA to establish methods by which to create, then maintain, those patterns to maximize benefits to natural and cultural resources.

SCOPING PROCESS FOR THIS EA/AOE

Scoping is an early and open process to determine the breadth of issues and alternatives to be addressed in an environmental assessment. Park staff and resource professionals of the NPS Denver Service Center and NPS Midwest Regional Office conducted internal scoping. This interdisciplinary process defined the purpose and need, identified potential actions to address the need, determined the likely issues and impact topics, and identified the relationship of the proposed action to other planning efforts at the park.

The park initiated public scoping with a press release that was sent on June 24, 2014 to the *Arkansas Democrat Gazette*, *Barry County Advertiser*, *Cassville Democrat*, *McDonald County News*, *Morning News of Northwest Arkansas*, *Times of Northeast Benton County*, and *Weekly Advertiser*. A scoping announcement was also posted to the NPS Planning, Environment and Public Comment (PEPC) website on June 25, 2014. The scoping period was defined as June 25, 2014 through July 25, 2014. The Public Scoping Summary details the scoping process for the project (Appendix A).

No comments were received from the public.

Scoping letters were sent to the Arkansas Historic Preservation Program (SHPO), Advisory Council on Historic Preservation (ACHP), American Indian tribes and organizations, and U.S. Fish and Wildlife Service (USFWS) on June 24, 2014. See the Consultation and Coordination section for more detail on the letters sent and responses received.

ISSUES AND IMPACT TOPICS

This EA/AoE identifies the anticipated impacts of possible actions on certain resources, park visitors, and neighbors. The impacts are organized by topic, such as "cultural resources" and "visual resources." Impact topics serve to focus the environmental analysis and to ensure the relevance of impact evaluation. Impact topics were developed from the questions and comments brought forth during scoping; site conditions; staff knowledge of the park resources; and any laws, regulations, policies, or orders applicable to the project. Some topics were dismissed from detailed analysis because the resource is not present in the study area, or because the action alternatives would have either no effect on the impact topic or the effects would be typically temporary, localized, and slight but detectable.

Impact Topics Selected for Analysis

Table 1 discusses the impact topics identified during scoping that were retained for detailed analysis in the EA/AoE; the reasons for retaining the topic; and relevant laws, regulations, and policies.

TABLE 1. IMPACT TOPICS RETAINED AND RELEVANT LAWS, REGULATIONS, AND POLICIES

Impact Topic	Reasons for Retaining Impact Topic	Relevant Laws, Regulations, and Policies
Visual Resources	Modifications to the Tour Road and parking areas proposed in the EA/AoE mitigations alternatives may alter the views for park visitors; therefore, this topic was retained for further analysis.	NPS <i>Management Policies 2006</i>
Cultural Landscapes, Archeological Sites, and Historic Structures/ Objects	Changes to vegetation proposed in the EA/AoE may affect the cultural landscape of the park; and ground disturbances may affect archeological sites and historic structures/objects (i.e., disturb buried artifacts); therefore, this topic was retained for further analysis.	Sections 106 and 110 of the NHPA; ACHP implementing regulations regarding the "Protection of Historic Properties" (36 CFR 800); DO-28: <i>Cultural Resource Management Guidelines</i> ; NPS <i>Management Policies 2006</i> ; <i>Secretary of the Interior's Standards for the Treatment of Historic Properties</i> ; NEPA; <i>Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes</i> (1996); <i>Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i> ; DO-28A: <i>Archeology</i> (NPS 2004)
Visitor Experience, Recreation, and Education and Interpretation	The EA/AoE mitigations alternatives could affect overall visitor understanding of the park, including recreational, interpretive, and educational opportunities and, therefore, this topic was retained for further analysis.	NPS Organic Act; NPS <i>Management Policies 2006</i>

Impact Topics Dismissed from Further Consideration

The following impact topics or issues were eliminated from consideration because either the resources are not present in the project area or because the effects, if any, would be typically temporary, localized, and slight but detectable.

Air Quality. The Clean Air Act of 1963 (42 USC 7401 et seq.) was established to promote public health and welfare by protecting and enhancing the nation's air quality. The act establishes specific programs that provide special protection for air resources and air quality-related values associated with national park system units. Section 118 of the Clean Air Act requires a national park system unit to meet all federal, state, and local air pollution standards. The action alternatives include minor earthwork that would temporarily increase dust and vehicle emissions, which would result in localized effects on air quality. Hydrocarbons, nitrogen oxide, and sulfur dioxide vehicle emissions would rapidly dissipate; and visibility, deposition, and other air quality-related values are not expected to be appreciably impacted. These effects would be temporary, slight, and adverse. Neither overall park air quality nor regional air quality would be more than slightly affected by the temporary increase in emissions. The no action alternative would have no

effect on existing air quality. Because the alternatives would have no more than a slight short-term impact or no impact on air quality, this topic was dismissed from further analysis in this EA/AoE.

Climate Change. Climate change refers to any significant change in average climatic conditions (e.g., mean temperature, precipitation, or wind) or variability (e.g., seasonality and storm frequency) lasting for an extended period (decades or longer). Recent reports by the U.S. Climate Change Science Program, the National Academy of Sciences, and the United Nations Intergovernmental Panel on Climate Change (IPCC) provide evidence that climate change is occurring as a result of rising greenhouse gas (GHG) emissions and could accelerate in the coming decades (IPCC 2007). While climate change is a global phenomenon, it manifests differently depending on regional and local factors. General changes that are expected to occur in the future as a result of climate change include hotter, drier summers; warmer winters; warmer water; higher ocean levels; more severe wildfires; degraded air quality; heavier downpours and flooding; and increased drought. Climate change is a far-reaching long-term issue that could affect the park, its resources, visitors, and management. Although some effects of climate change are considered known or likely to occur, many potential impacts are unknown. Much depends on the rate at which the temperature would continue to rise and whether global emissions of GHGs can be reduced or mitigated. Climate change science is a rapidly advancing field and new information is being collected and released continually.

When considering climate change in an environmental analysis, the NPS must address both how the proposed project contributes to climate change, as indicated by GHG emissions associated with the project, and how climate change would impact park resources.

Although construction activities associated with the action alternatives would contribute to GHG emissions, such emissions would be temporary. For example, heavy equipment used for new road construction would result in emissions over the life of construction. Any effects of construction-related GHG emissions on climate change would not be discernible at a regional scale, however, it is not possible to meaningfully link the GHG emissions of such individual project actions to quantitative effects on regional or global climatic patterns.

Because the action alternatives would result in minimal short-term contributions of GHG emission and negligible impacts on climate change, this topic was dismissed in this EA/AoE.

Environmental Justice. EO 12898, “General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. According to the U.S. Environmental Protection Agency (EPA), environmental justice is the

...fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair Treatment means that no group of people should bear a disproportionate burden of environmental harms and risks, including those resulting from the negative environmental consequences of industrial, governmental, and commercial operations or programs and policies.

The goal of “fair treatment” is not to shift risks among populations, but to identify potentially disproportionately high and adverse effects, and identify alternatives that may mitigate these impacts. Minority populations make up approximately 24% of the population in Benton County

(Census 2013). Residents living below the poverty level are 11.8% of the population, compared with 18.4% statewide. Although minority and low-income populations are present in Benton County, no actions in the alternatives would have disproportionately high health or environmental effects on these populations or communities as defined in the EPA's "Interim Guidance on Considering Environmental Justice During the Development of an Action" (July 2010); therefore, environmental justice was dismissed as an impact topic in this EA/AoE.

Ethnographic Resources. The NPS defines ethnographic resources as any "site, subsistence, or other significance in the cultural system of a group traditionally associated with it" (NPS DO-28).

The American Indian tribes traditionally associated with the park lands were apprised of the proposed project by letter. No comments were received from the tribes regarding ethnographic resources during the scoping period. Copies of the EA/AoE will be forwarded to each associated American Indian tribe for review and comment. If subsequent issues or concerns are identified, appropriate consultations would be undertaken.

One potential ethnographic resource was identified by park staff. A portion of the Northern Route of the Trail of Tears National Historic Trail runs through the southern portion of the park. The Tour Road from the Elkhorn Tavern to the end of the Tour Road, by the visitor center, is located on the Trail of Tears roadbed (see Figure 1). However, the Tour Road was built on a county road that was wider than the current footprint and the footprint of the preferred alternative and would not extend beyond the original county road footprint. In addition, the Trail of Tears has been addressed in the CLR and would not be affected by construction activities. Consultations with Native American tribes will continue throughout the planning process to ensure that any discovered ethnographic resources are considered and protected, if applicable. During construction activities, appropriate steps would be taken to protect any human remains, funerary objects, sacred objects, or objects of cultural patrimony inadvertently discovered. For these reasons, ethnographic resources was dismissed as an impact topic in this EA/AoE.

Floodplains. EO 11988, "Floodplain Management" requires an examination of impacts on floodplains and potential risks involved in placing facilities within floodplains. NPS *Management Policies 2006* and DO-77-2: *Floodplain Management* provide guidelines for proposed actions in floodplains. The action alternatives would include modifications to the roads and parking areas within the park. Because the work would not take place in the floodplain, the action alternatives would have no impacts on existing floodplains. Because there would be no impacts on floodplains, this impact topic was dismissed from further analysis in this EA/AoE.

Geology. The NPS Organic Act and NPS *Management Policies 2006* direct the NPS to preserve and protect geologic resources and maintain natural geologic and coastal processes.

The Mississippian-age Boone Formation is the primary geologic unit in the park vicinity (NPS 2007). This unit is susceptible to karstification including cave and sinkhole development. Locally, this limestone-rich unit is capped by resistant sandstones, possibly of the Batesville Sandstone unit. This resistant unit caps the highest hills in the region. Dissected plateaus, ridges separated by valleys and ravines, and gently rolling open areas characterize the landscape at the park. These landforms had strong connections to the historical context of the area. Under the action alternatives, no rock scaling or disturbance to rock outcrops or important geologic features are proposed. As a result, the action alternatives would have little to no impact on geologic resources in the study area. Because impacts on geologic resources would be minimal, this impact topic was dismissed from further analysis in this EA/AoE.

Indian Trust Resources. Secretarial Order 3175 requires that any anticipated impacts on Indian trust resources from a proposed project or action by Department of the Interior agencies be explicitly addressed in environmental documents. The federal Indian trust responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights. The order represents a duty to carry out the mandates of federal law with respect to American Indian and Alaska Native tribes. None of the lands of the park are trust resources according to this definition. In addition, neither the Bureau of Indian Affairs (BIA) Eastern Regional office nor the various agencies of the BIA indicated the park contains Indian trust resources; therefore, Indian trust resources was dismissed as an impact topic in this EA/AoE.

Land Use. In accordance with *NPS Management Policies 2006*, the NPS must apply appropriate land protection methods to protect park resources and values from incompatible land uses. The overall land use of the park as a depiction of a specific era would not change under any of the action alternatives. The park would be maintained under NPS management as a military park and cultural and historic landscape, with the land use remaining as open space, fields, and wooded areas. The action alternatives would not result in modification of the land use; therefore, this topic was dismissed from further analysis in this EA/AoE.

Lightscape. In accordance with *NPS Management Policies 2006*, the NPS strives to preserve natural ambient lightscapes, which are natural resources and values that exist in the absence of human-caused light. Construction proposed under the action alternatives would likely take place during normal business hours, in daylight, and would have no impacts on the night sky. Under the action alternatives, sustainable LED lighting systems would be installed at the visitor center and Elkhorn Tavern. The systems would be operated with manual switches and would be used only for special events that occur in the evening. Impacts on the night sky from the lighting systems would be infrequent (approximately 10 evenings per year) and slight. For these reasons, lightscape was dismissed as an impact topic in this EA/AoE.

Museum Collections. Museum collections include historic artifacts, natural specimens, and archival and manuscript material. These collections may be threatened by fire, vandalism, natural disasters, and careless acts. The preservation of museum collections is an ongoing process of preventive conservation, supplemented by conservation treatment, when necessary. The primary goal is preservation of artifacts in the most stable condition possible to prevent damage and minimize deterioration. The action alternatives would not impact the current museum objects of the park. There would be no impacts on museum collections; therefore, museum collections was dismissed as an impact topic in this EA/AoE.

Natural Soundscapes. An important part of the NPS mission is preservation of natural soundscapes associated with national park system units as indicated in *NPS Management Policies 2006* and *DO-47: Sound Preservation and Noise Management*. Natural soundscapes exist in the absence of human-caused sound. The natural ambient soundscape is the aggregate of all natural sounds within the park, together with the physical capacity for transmitting natural sound through air, water, or solid material. Acceptable frequencies, magnitudes, and durations of human-caused sound varies among national park system units, as well as potentially throughout each park unit, but are generally greater in developed areas and less in undeveloped areas. The action alternatives would introduce additional noise from construction activities, but the additional noise would be temporary and slight. For these reasons, natural soundscapes was dismissed as an impact topic in this EA/AoE.

Paleontological Resources. NPS *Management Policies 2006* directs the NPS to protect, preserve, and manage paleontological resources. Because the park is not known to contain scientifically important paleontological resources (NPS 2008), it is unlikely there would be any effects on this resource; therefore, paleontological resources was dismissed as an impact topic in this EA/AoE.

Park Operations. Construction activities and potential road closures may result in slight impacts on park staff during construction. Park staff would likely have to answer the public's questions regarding traffic delays and/or road closures. Law enforcement personnel would be responsible for enforcing road closures and keeping park visitors out of construction areas. After construction is completed, the project is not anticipated to affect park operations. Because the impacts on park operations would be temporary and slight under all alternatives, this topic was dismissed from further evaluation in this EA/AoE.

Prime or Unique Farmland. In 1980, the Council on Environmental Quality (CEQ) directed federal agencies to assess the effects of their actions on farmland soils classified as prime or unique by the United States Department of Agriculture, NRCS. Prime or unique farmland is defined as soil that particularly produces general crops such as common foods, forage, fiber, and oil seed; and specialty crops such as fruits, vegetables, and nuts.

Seven soil map units that occur in the park are prime farmlands and two map units are prime farmland if drained (NRCS 2012). Most of the prime farmlands are in the central and southwest portion of the park. No unique farmlands are within the park. Because the action alternatives would occur in previously disturbed areas, and no prime farmland would be irreversibly converted to other uses, this topic was dismissed from further analysis in this EA/AoE.

Public Health and Safety. The rerouting of Highway 62 south of the park boundary would improve travel and safety for park visitors and staff. The existing Highway 62 that runs through the park would be converted to a two-way local park road. Speeds would be decreased from 55 mph to 30 mph. Visitors entering the park and visitor center would not have to turn into heavy oncoming traffic at high speeds. Construction activities proposed for the mitigations would be short-term and are not expected to adversely affect the safety of park visitors. Construction zones would be well-marked and the Tour Road would likely be closed during construction. The proposed mitigations would provide an overall long-term benefit to public health and safety, and because of this, public health and safety was dismissed from further analysis in this EA/AoE.

Socioeconomics. Construction of the action alternatives would result in construction-related spending. Construction expenditures would be used for labor, supplies, equipment, and other services. Labor would likely come from regional communities in Benton and other surrounding counties. Secondary economic effects from construction-related spending also would generate economic benefits to the region. Construction-related spending would have a short-term beneficial effect on the regional economy.

Construction activity and traffic delays may deter some visitors from coming to the park or traveling on the Tour Road. The park would implement a number of actions to minimize impacts on park visitors during construction. Chief among these measures would be clearly and accurately communicating to the public the status of construction work and the timing of traffic delays or road closures. Some park visitors may be inconvenienced during construction, and there may be a slight change in visitor attendance, but the park would attempt to schedule construction activities during off-peak periods to minimize impacts on visitor attendance. The action alternatives would result in regional short-term slight adverse effects on the economy if visitor numbers decrease

during construction. Because the impacts on socioeconomics would be slight under all alternatives, this topic was dismissed from further evaluation in this EA/AoE.

Soils. The Natural Resources Conservation Service (NRCS) has surveyed the soils in the park, with most soils mapped as loams (NRCS 2012). In general, Tonti soils are found on ridges, terraces, and stream terraces; Nixa soils are found on ridgetops; Noark and Clarksville soils are found on steep hill slopes; and Secaesh and Elsay soils are found on floodplains. Erosion by local streams and rivers carved the park landscape into its characteristic ridges, plateaus, valleys, and ravines. Existing erosion and channel incision currently threaten horse and foot trails in the park and have the potential to threaten the historic context of the park.

The action alternatives include activities such as clearing, grading, and other earthwork. Many of these activities would occur in previously disturbed areas, although some activities could occur within undisturbed soils. Soil disturbance could cause short-term erosion; however, mitigation measures would be in place to limit the amount of soil runoff from the proposed activities. Measures to minimize adverse effects on soils during construction activities would include implementing erosion- and sediment-control measures such as minimizing the area of disturbance, installing silt fencing, and revegetating disturbed areas. With mitigation, the alternatives would have local short-term slight adverse effects. Because impacts on soils would be marginal, this impact topic was dismissed from further analysis in this EA/AoE.

Special Status Species. Special status species include species listed as threatened or endangered under the Endangered Species Act (ESA) and other species considered sensitive by the park. Based on park resource data, staff knowledge, and consultations with the USFWS, no federally listed or special status species that are present in the park would be affected by the action alternatives. Because no special status species would be adversely impacted by the alternatives, this topic was dismissed from further analysis in this EA/AoE.

Vegetation. Since 1862, the vegetation has changed throughout many sections of the park. In order to enhance interpretation of the historic battlefield, many of the historic fields that were used for row crops have been converted to grass for ease of maintenance. Other areas of the park that were put into agricultural use after the battle have been invaded by eastern red cedar (*Juniperus virginiana*) and other trees and shrubs. The existing oak and hickory woodlands are similar in dominant species to the species found in 1862, but have increased in density and have been affected by various disturbances and fire suppression. New roads and parking would result in a loss of about 11 acres of vegetation under the preferred alternative and slightly more vegetation would be lost under the other action alternatives. Restoration of abandoned road segments would result in restoration of about 17 acres of vegetation, for an approximate net 6-acre increase in vegetation. A VMP/EA was recently completed to design ways to adjust or establish the vegetation patterns that represent the look and feel of the 1862 Battle of Pea Ridge battlefield landscape of the park. The areas of proposed disturbance would be addressed under the procedures and revegetation requirements detailed in the VMP/EA. Because the net gain in vegetation would be beneficial and disturbed areas would be restored in accordance with the VMP/EA, the effects of the action alternatives were determined to be negligible to minor and, therefore, vegetation was dismissed as an impact topic in this EA/AoE.

Water Resources. The Clean Water Act; section 10 of the Rivers and Harbors Appropriation Act; Executive Order (EO) 12088, "Federal Compliance with Pollution Control Standards"; and NPS *Management Policies 2006* direct the NPS to avoid or minimize human-caused pollution of waters and to avoid obstructing the navigable capacity of waters of the U.S. Two intermittent streams occur within the park boundaries and one of these streams lies near the study area. The

impervious surfaces (e.g., parking lots, houses, and driveways) associated with surrounding developments outside the park increases surface runoff in the park, impacting local drainages, erosion rates, peak flows, and channel morphology. Under the action alternatives, there would be areas of excavation, grading, and exposure of soil material, which would increase the potential for sediment to enter the stream until work is complete and vegetation is reestablished. The transport of sediment to the intermittent streams would be minimized using best management practices (BMPs) to contain sediment and control erosion. Increased impervious surface from new pavement and parking would slightly increase runoff. However, removal of pavement from abandoned sections of road under all of the action alternatives would restore natural vegetation and infiltration. Because the action alternatives would have no more than a minimal impact on water resources, this impact topic was dismissed from further analysis in this EA/AoE.

Wetlands. EO 11990, “Protection of Wetlands,” NPS *Management Policies 2006*, and DO-77-1: *Wetland Protection* direct that wetlands be protected and that wetlands and wetland functions and values be preserved. These orders and policies further direct that direct or indirect impacts on wetlands be avoided when practicable alternatives exist.

The *Vegetation Classification and Mapping of Pea Ridge National Military Park* report (Diamond et al. 2013) documented that wetlands occur within a marsh at the southwest portion of the park. Proposed construction activities under the action alternatives would not take place within the identified wetland areas. Because park wetlands are not found in the study area, this topic was dismissed from detailed discussion in this EA/AoE.

Wilderness. The Wilderness Act and NPS *Management Policies 2006* (section 6.2.1, NPS 2006) require that all lands administered by the NPS be evaluated for their suitability for inclusion within the National Wilderness Preservation System. Areas suitable for wilderness designation are those that generally have the qualities of being untrammeled, natural, undeveloped, and offering solitude or a primitive and unconfined type of recreation. The park is not located within existing or proposed wilderness boundaries and, therefore, is not subject to Wilderness Act requirements. Because there would be no direct impacts on wilderness resources and values, wilderness was dismissed as an impact topic in this EA/AoE.

Wildlife. A variety of wildlife species are found in the park’s forests, woodlands, and grasslands, including more than 140 bird species, reptiles, amphibians, fish, and mammals. The preferred alternative would result in the loss of about 9 acres of vegetation that provide suitable wildlife habitat; however, approximately 17.5 acres of right-of-way along the existing Highway 62 would be restored to vegetation per the park VMP/EA following construction. These restored lands would provide suitable wildlife habitat. Other action alternatives would have slightly greater impacts on existing vegetation and less restoration of existing roads. Impacts on wildlife habitat in this area would be short-term and adverse and would occur only during construction. Because impacts on wildlife habitat under the preferred alternative would be local, temporary, slight, and adverse, wildlife was dismissed as an impact topic in this EA/AoE.

ALTERNATIVES

INTRODUCTION

This chapter describes the range of reasonable alternatives considered to address the purpose, need, and objectives described in *Chapter 1: Purpose and Need* and to address the management goals of the park, as outlined in the GMP. Four action alternatives were considered to provide safe and convenient access into the park and parking areas following the relocation of Highway 62. The action alternatives would provide access to the park using the existing portion of Highway 62 and a new intersection with the rerouted Highway 62. Action alternatives also include various configurations of new internal park roads, parking and facility improvements, and other improvements designed to preserve park natural and cultural resources and improve the efficiency of park operations. In addition, a “no action” alternative was considered, as required by NEPA and implementing regulations, to establish a baseline against which the effects from the action alternatives can be compared. Under the no action alternative, access to the park would still be available where the existing section of Highway 62 intersects the new relocated Highway 62 west of the current park entrance, but other mitigation actions to improve internal park roads, visitor circulation, parking, and other facilities would not be implemented.

DEVELOPMENT OF ALTERNATIVES

Initial concepts for the project began during the evaluation of alternatives for the relocation of Highway 62 (U.S. Department of Transportation (USDOT)/FHWA and AHTD 2008). The NPS, in collaboration with the AHTD and FHWA, developed mitigation options for providing access into the park associated with the relocation of Highway 62 south of the park. The project objectives described in the *Purpose of and Need for Action* section on page 6 were used to develop alternatives. Four alternative actions were identified as part of the collaborative effort. In addition, Mitigation Guidance from the CLR team (NPS 2013) identified strategies that were incorporated into the development of the alternatives:

- Highway 62 would be rebuilt just outside the existing southern park boundary.
- Portions of the existing Highway 62 within the park boundaries that would not be used by the NPS would have pavement removed and would be restored to natural topography.
- A section of the existing Highway 62 within the park would be rebuilt as an asphalt paved two-lane park road (12-foot lanes with 2-foot shoulders). A new entrance into the park from the rerouted Highway 62 would be built at the west end of the park. Portions of the existing Highway 62 not used for park access would be removed and revegetated.
- A new horse trailhead and parking area would be built west-southwest of the visitor center. Connection of the new horse trailhead with existing horse trails would be developed as part of future trail management by the park.
- The visitor center parking lot would be expanded and a new parking area constructed near the Elkhorn Tavern tour stop.
- The existing Tour Road would be upgraded to two lanes to Elkhorn Tavern or a new park road would be built between the existing Highway 62 and a new parking lot near the Elkhorn Tavern tour stop.

ALTERNATIVES

- A new section of a single-lane Tour Road would be built between the new parking area near the Elkhorn Tavern tour stop and the East Overlook tour stop. Pavement would be removed from the abandoned section of the Tour Road and the site revegetated and restored to natural topography.
- A section of the historic Telegraph Road, which is currently part of the Tour Road near the Elkhorn Tavern tour stop would be restored as similar to its original condition (except under Alternative C).

The full range of alternatives considered in this EA/AoE are consistent with the mitigation actions identified by the NPS, AHTD, and FHWA, and would achieve the desired resource conditions and visitor experience outlined in the park's GMP (2006).

To assist in selecting the preferred alternative, the four action alternatives were evaluated as part of a Value Analysis and Choosing by Advantages workshop held at the park in June 2014. The Value Analysis is a structured process that allows decisions to be made based on the advantages between the alternatives. The selection process involved the identification of the attributes or characteristics of each of the alternatives relative to the evaluation factors. The evaluation factors included: 1) maintenance or improvement in natural resources; 2) maintenance or improvement in cultural resources; 3) maintenance or improvement in the visitor experience, education, and interpretation; 4) optimization of operations maintenance efficiency; and 5) optimization of health and safety of employees and visitors. An evaluation of the advantages for each alternative was conducted to identify the preferred alternative, which was Alternative A.

Included at the end of this chapter is a comparison of how well each of the alternatives meets project objectives, a summary comparison of the alternatives, and the environmental effects of each alternative.

ELEMENTS COMMON TO ALL ACTION ALTERNATIVES

In addition to previously described components of the action alternatives, all of the action alternatives contain several common features. The park would acquire the land that is within the ROW of the existing Highway 62 (currently owned by AHTD) within the park boundaries. Access to the park would be provided by a new intersection constructed as part of the Highway 62 relocation. The new intersection would be located about 900 feet east of where the new Highway 62 departs from the existing Highway 62, west of the current park entrance (Figure 4). A stop sign would be used to control traffic at this intersection. The existing Highway 62 used for access to the park would be reconstructed to a narrower footprint with two 12-foot travel lanes and 2-foot shoulders. Margins of the reconstructed park access road would then be revegetated, as would abandoned sections of existing Highway 62 not used for access to park facilities.

The parking area at the visitor center would be expanded to provide additional capacity for about 80 to 100 cars, and capacity for 10 recreational vehicles (RVs) and buses. The reconstructed two-way park access road along the existing Highway 62 route would provide a connection to a new horse trail parking area west of the visitor center. The horse trail parking area would accommodate up to 20 vehicles and horse trailers. A new visitor restroom would be constructed near Elkhorn Tavern. All of the alternatives include improvements to the existing Tour Road or a new Tour Road route linking Elkhorn Tavern parking to the visitor center. The existing community recycling facility located in front of the administrative buildings in the parking lot (southwest of the visitor center) would be moved to the east side of the park entrance and would

be accessible to the public even when the park is closed. The new parking area would be integrated with the topography to minimize visibility.

Common construction techniques and materials would be used under all four of the action alternatives.

- The new entrance road into the park along the existing Highway 62 would have two 12-foot lanes with 2-foot shoulders. The new entrance road and other roads would be surfaced with brown aggregate to maintain the park character.
- A detached bicycle trail would be constructed on the north side and adjacent to the new entrance road and would terminate at the visitor center.
- Sustainable LED lighting systems with manual switches would be installed at the visitor center and Elkhorn Tavern.
- Culverts and drainage features would be installed with new roads as necessary to maintain natural drainage patterns.
- Existing road pavement and fill material for abandoned sections of road would be removed, the site graded to match the natural contours, and the area revegetated with native plants and vegetation as prescribed in the VMP/EA. Removed material would be used for new road construction or recycled.
- New parking areas would be paved. Various types of pavement surface options are under consideration such as brown aggregate and/or permeable pavement. In lieu of road striping, recessed pavement markers (or similar alternative methods to traditional road striping) would be used to reduce visual impacts.
- Parking lots would provide dedicated handicap spaces. Parking areas would accommodate buses, RVs, and large delivery vehicles (e.g., semi-trailer trucks).
- The horse trailhead parking areas would allow pull-through parking and capacity for 20 parking spaces.
- Previously disturbed areas would be used to stage equipment and supplies during construction.
- Any waste soil or material generated during construction activities would be removed to a suitable facility outside the park.
- Traffic-control measures would be established during construction to maintain visitor access and safety.
- Road construction and improvements are estimated to take about 12 months depending on available funding. Work would be phased and conducted from approximately summer of 2015 to summer of 2016. Park facilities would remain open during construction.
- The estimated cost for construction of any of the four action alternatives is \$1.5 to \$2.0 million.
- Revegetation of all disturbed areas would be conducted in accordance with the VMP/EA (NPS 2014c).

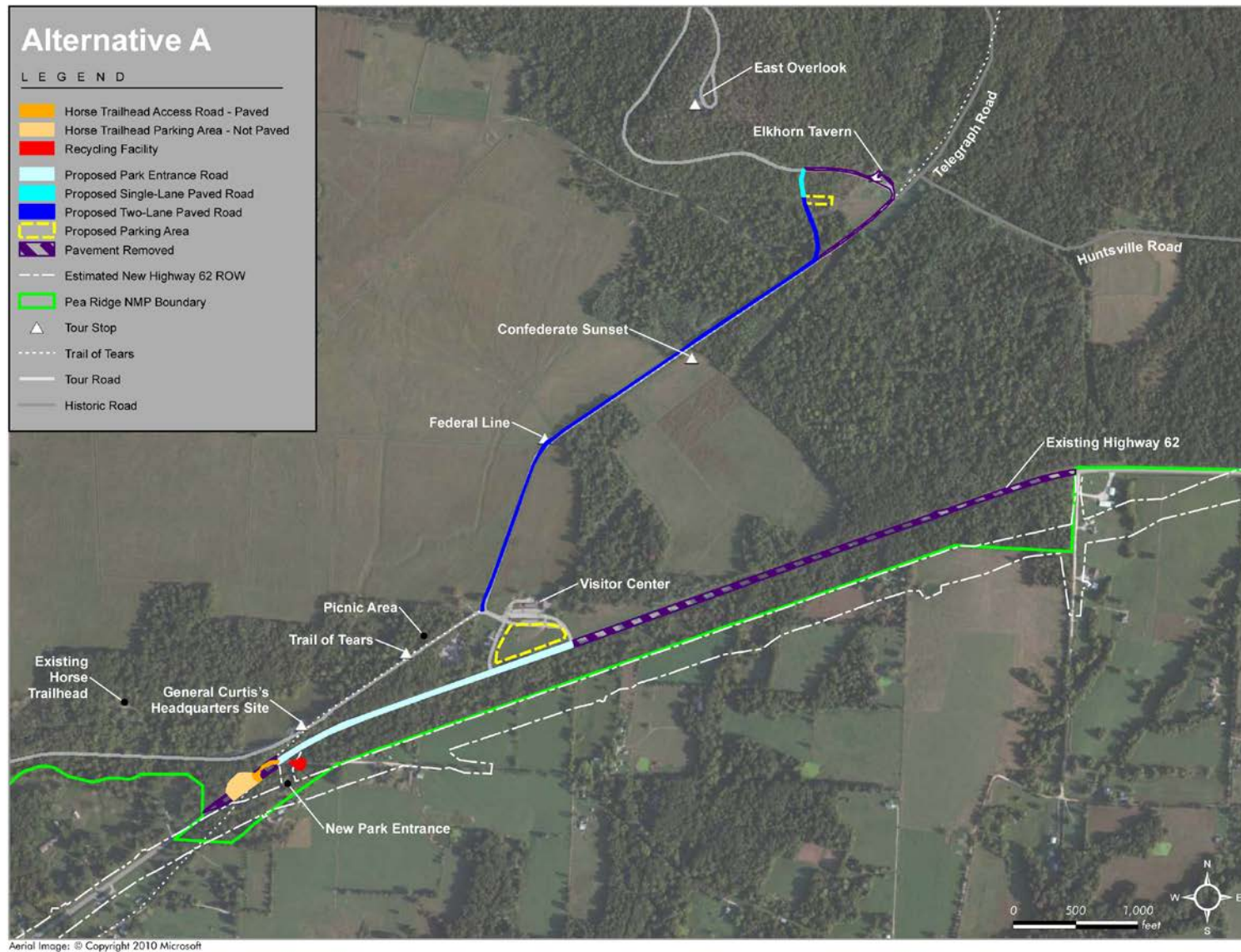
ALTERNATIVES

ALTERNATIVE A –NEW SHORT TOUR ROUTE

Under this alternative the existing one-way Tour Road would be paved within the existing roadway prism to accommodate two-way traffic from the visitor center to the new Elkhorn Tavern parking area. This would allow visitors to visit Elkhorn Tavern without driving the entire one-way Tour Road loop (Figure 4). The new Elkhorn Tavern parking lot would be located off this new road, and the existing Elkhorn Tavern parking lot would be removed and restored to historic conditions. A short new one-way Tour Road segment would be constructed from the new Elkhorn Tavern parking area to allow reclamation of the paved road through Elkhorn Tavern and Telegraph Road.

The existing Highway 62 east of the visitor center would be obliterated and revegetated to the park boundary on the east. Impacts on the cultural landscape would be minimized by confining all road modifications to the existing width and alignment, where feasible. The alignment for the new short Tour Road segment near Elkhorn Tavern would follow the natural topography of Elkhorn Mountain. The new Elkhorn Tavern parking area would be located to avoid impact to the historic battlefield and to not obstruct the sight lines from the Elkhorn Tavern (and the two monuments near the Elkhorn Tavern) toward the battlefield. Sight lines from the battlefield to the rock outcrops would be maintained.

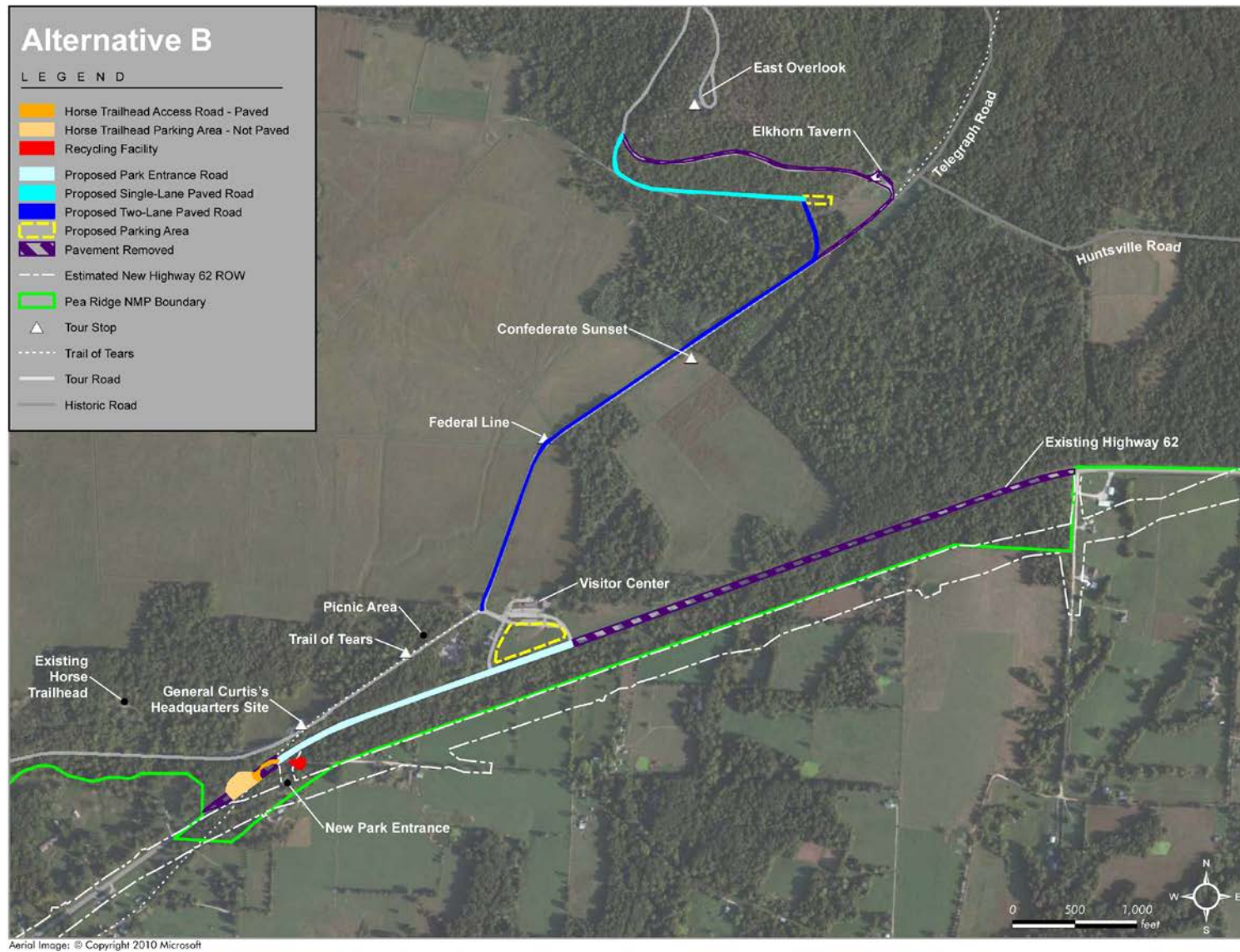
FIGURE 4. ALTERNATIVE A: NEW SHORT TOUR ROUTE



ALTERNATIVE B –NEW LONG TOUR ROUTE

The existing Highway 62 east of the visitor center would be obliterated and revegetated to the park boundary on the east, similar to Alternative A. The existing single-lane Tour Road between the visitor center and a new Elkhorn Tavern parking lot would be paved to accommodate two-way traffic similar to Alternative A. A longer new one-way route would extend down the slope of Elkhorn Mountain below the East Overlook to the new parking area near Elkhorn Tavern (Figure 5). This route would more closely follow the terrain of Elkhorn Mountain than the alignment in Alternative A. The abandoned section of the Tour Road would be removed and revegetated and the segment of Telegraph Road restored. The new Elkhorn Tavern parking area would be located to minimize impacts on the historic battlefield and to not obstruct the sight lines from the Elkhorn Tavern (and the two monuments) toward the battlefield. The existing Elkhorn Tavern parking lot would be removed and restored to historic conditions. Sight lines from the battlefield to the rock outcrops would be maintained.

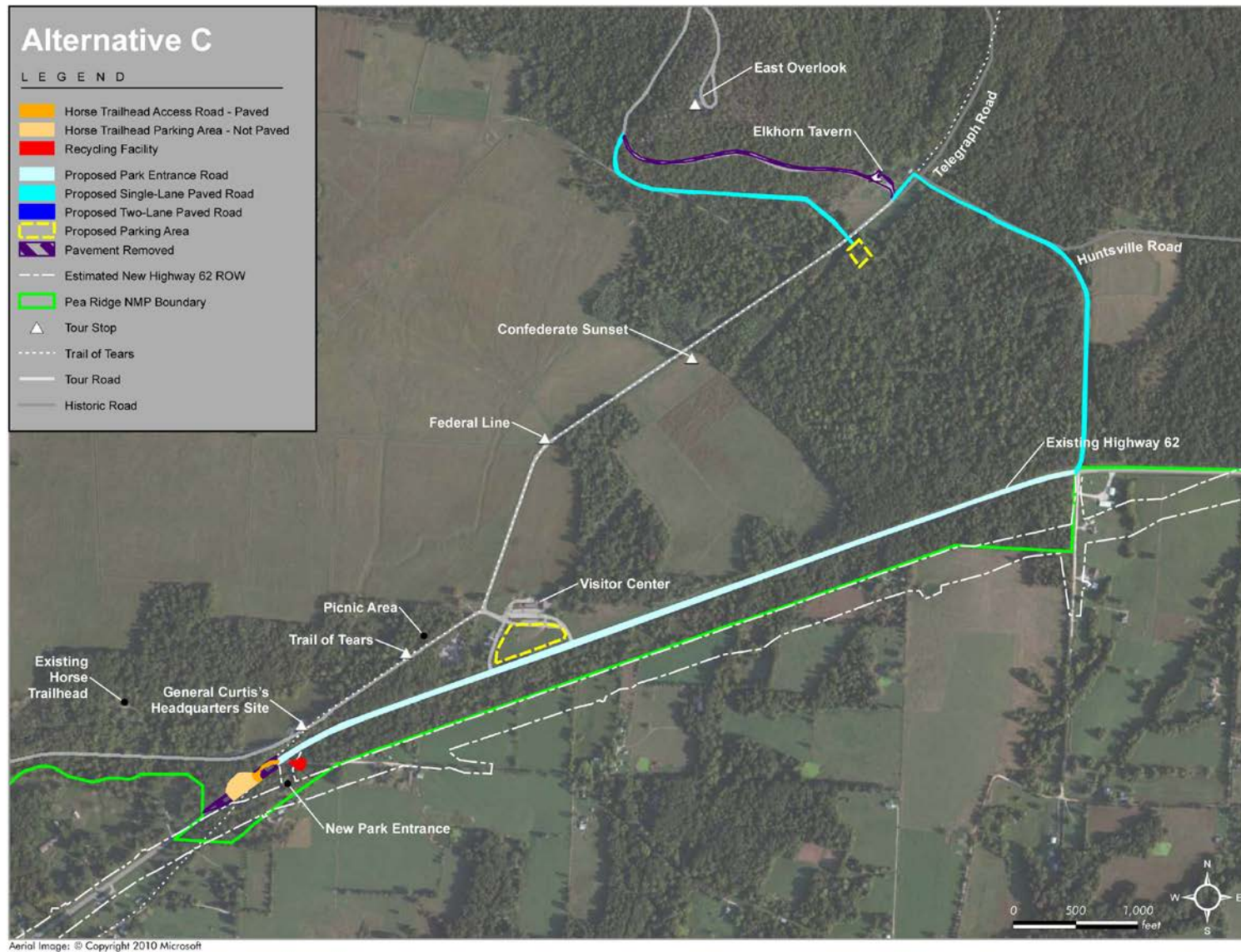
FIGURE 5. ALTERNATIVE B: NEW LONG TOUR ROUTE



ALTERNATIVE C –NEW LONG TOUR ROUTE AND NEW ONE-WAY ACCESS TO ELKHORN TAVERN

The park entrance road along the existing Highway 62 would be reconstructed as described for Alternative A, but would extend for the full length of the southeastern park boundary (Figure 6). The existing Tour Road between the visitor center and the Elkhorn Tavern would remain a one-way route. The existing historic Huntsville Road would be paved and used as one-way access to Elkhorn Tavern. A new one-way route would be constructed from Elkhorn Tavern and the new parking lot down the slope of Elkhorn Mountain, below the East Overlook along Ford Road, to the connection with the existing Tour Road. The existing Elkhorn Tavern parking lot would be removed and restored to historic conditions. Telegraph Road would not be restored since it would remain part of the Tour Road.

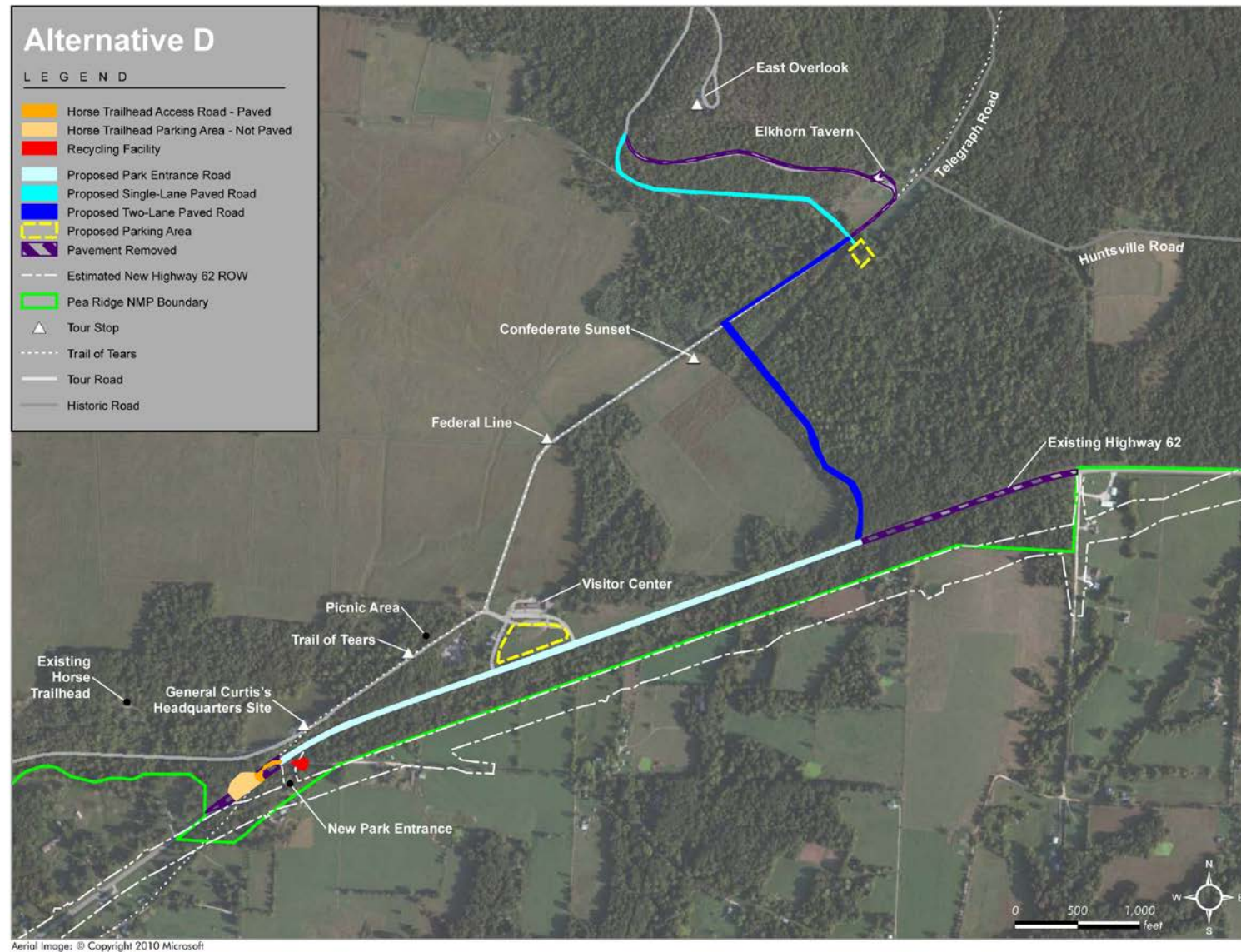
FIGURE 6. ALTERNATIVE C: NEW LONG TOUR ROUTE AND NEW ONE-WAY ACCESS TO ELKHORN TAVERN



ALTERNATIVE D –NEW LONG TOUR ROUTE AND NEW SPUR ROAD OFF TOUR ROAD

The park road along the existing Highway 62 would be reconstructed and extended to the new spur road connecting to the Tour Road. The new single-lane spur road would be constructed north from the new park road to connect with the existing Tour Road, which would extend from this point to the new parking lot at the Elkhorn Tavern (Figure 7). The segment of the Tour Road from the new intersection to the new parking area would be paved for two-way travel. A new one-way Tour Road route along the slope of Elkhorn Mountain, below the East Overlook, would extend to the new parking area on the south side of the Tour Road near the Elkhorn Tavern similar to Alternative C. The existing Elkhorn Tavern parking lot would be removed and restored to historic conditions. Abandoned portions of the Tour Road would be revegetated and Telegraph Road restored by removing pavement.

FIGURE 7. ALTERNATIVE D: NEW LONG TOUR ROUTE AND NEW SPUR ROAD OFF TOUR ROAD



ALTERNATIVE E – NO ACTION ALTERNATIVE

Under the no action alternative, access to the park would still be available from the existing Highway 62, but other mitigation actions to improve internal park roads, visitor circulation, parking, and other facilities would not be implemented. Access to the park would occur at the intersection of the existing Highway 62 and the new Highway 62 west-southwest of the current park entrance. There would be no change to the width of existing Highway 62 to the park entrance and existing Highway 62 east of the park entrance would not be reclaimed and revegetated. Additional parking at the visitor center, new parking at Elkhorn Tavern, and a new horse trailhead would not be constructed. Improvements to the Tour Road and visitor circulation in the park would not be implemented. A new restroom would not be constructed at Elkhorn Tavern.

MITIGATION AND BEST MANAGEMENT PRACTICES

The NPS places strong emphasis on avoiding, minimizing, and mitigating potentially adverse environmental impacts. To help ensure the protection of natural and cultural resources and the quality of the visitor experience, the following Best Management Practice (BMP) protective measures would be implemented as part of all of the action alternatives (Table 2). The NPS would implement an appropriate level of monitoring throughout the construction and maintenance process to help ensure that protective measures are being properly implemented and are achieving their intended results. These mitigation measures are applicable for contractors and park staff.

TABLE 2. MITIGATION MEASURES AND BEST MANAGEMENT PRACTICES

General Measures
<ul style="list-style-type: none"> • The park would ensure the project remains within the construction limits, parameters are established in the compliance documents, and mitigation measures are properly implemented. • Construction zones would be signed at approach points. No construction activities would be permitted outside the construction limits. • All protection measures would be clearly stated in the project specifications/special project requirements, and workers would be instructed to avoid conducting activities beyond the project limits as defined by construction plans or marked limits. • Garbage, trash, and other solid waste associated with project operations would be disposed of weekly, or sooner if warranted, outside the park. • All tools, equipment, barricades, signs, surplus materials, and rubbish would be removed from the project work limits upon project completion. • Contractors would be required to properly maintain equipment used on the project (e.g., mufflers) to minimize noise from equipment use. • A hazardous spill plan would be in place, stating what actions would be taken in the case of a spill, notification measures, and preventive measures to be implemented, such as the placement of refueling facilities, storage, and handling of hazardous materials. • All equipment used on the project would be maintained in a clean and well-functioning state to avoid or minimize contamination from mechanical fluids. All equipment would be checked daily. • BMPs for drainage and sediment control, per a Stormwater Erosion and Sediment Control Plan, would be implemented to prevent or reduce nonpoint source pollution and minimize soil loss and sedimentation in drainage areas, when needed. Use of BMPs in the project area for drainage area protection would include all or some of the following actions, depending on site-specific requirements:

<ul style="list-style-type: none"> o Keeping disturbed areas as small as practicable to minimize exposed soil and the potential for erosion o Locating waste and excess excavated materials outside of drainages to avoid sedimentation o Installing silt fences, temporary earthen berms, temporary water bars, sediment traps, stone check dams, or other equivalent measures (including installing erosion-control measures around the perimeter of stockpiled fill material) prior to construction o Conducting regular site inspections during the construction period to ensure erosion-control measures were properly installed and are functioning effectively o Storing, using, and disposing of chemicals, fuels, and other toxic materials in a proper manner
Soils
<ul style="list-style-type: none"> • Erosion and sediment control would be required (see the “General Measures” section above). • If applicable, topsoil or native soil would be removed from areas of construction and stored for later reclamation use. The topsoil would be redistributed as near the original location as possible and supplemented with scarification, mulching, seeding, and/or planting with native genotypes.
Vegetation
<ul style="list-style-type: none"> • Orange construction fencing would be used around large and/or historic trees and special status plant species and their habitat within construction limits to minimize the potential for inadvertent impacts from heavy equipment during construction. Large and/or historic trees and special status plant species would be avoided to the extent possible during construction. • Ground surface treatment would include grading to natural contours, conserving and replacing topsoil, and, where necessary, hand seeding or planting. In some locations, topsoil placement and mulching with litter and duff would be the primary treatment. If insufficient litter and duff is salvaged from the project area, additional litter and duff may be gathered from adjacent areas on a small scale where approved by the NPS. • Remedial actions would include installing erosion-control structures, reseeding, conserving and replacing topsoil and/or replanting the area, and controlling nonnative plant species. • Introduction of nonnative/noxious plant species would be minimized by implementing several BMPs, including: <ul style="list-style-type: none"> o Minimizing soil disturbance o Ensuring project personnel make daily checks of clothing, boots, laces, and gear to ensure no invasive plant propagates and no off-site soil is transported to the worksite o Pressure washing and/or steam cleaning all equipment to ensure all equipment and machinery are cleaned and weed free before entering the park; equipment used on the project would be inspected by park staff prior to entering the park to ensure compliance with cleanliness requirements and inadequately cleaned equipment would be rejected o Covering all haul trucks bringing fill materials from outside the park to prevent seed transport and dust deposition along the road corridor o Limiting vehicle parking turnouts to existing roads, parking lots, or access routes o Limiting project staging to existing roads, parking turnouts, and other designated areas; no machinery or equipment should access areas outside the project limits o Obtaining all fill, rock, and other earth materials from the project area, if possible o Restricting hay bales from being used during revegetation or for temporary erosion control o Initiating revegetation of disturbed sites immediately following construction activities • To maximize vegetation restoration efforts after completion of construction activities, the following measures would be applied: <ul style="list-style-type: none"> o Salvaging available topsoil or the top several inches of native soil from project areas for reuse during restoration of disturbed areas o Incorporating a native litter and duff layer in forested sites for replacement over salvaged topsoil o Ensuring the NPS surveys for, and treats, invasive plants prior to and three years after construction and in accordance with the Exotic Pest Management Plan o Until established, protecting/avoiding areas previously revegetated during park-prescribed burns (in accordance with the Fire Management Plan)
Wetlands
<ul style="list-style-type: none"> • Impacts on wetlands would be avoided and minimized to the extent practicable. No wetland fill would occur without authorization from the Corps and appropriate permitting under the Clean Water Act. • Appropriate permits (404 permit and 401 certification) would be acquired should there be any impacts on wetlands.

ALTERNATIVES

<p>Water Quality</p> <ul style="list-style-type: none"> • Sediment traps, erosion checks, and/or filters would be constructed above or below all culvert drains (if such drains are required) and in all other ditches before the water (runoff) leaves the project limits. • At all cut and fill areas, erosion and sediment control would be implemented to minimize impacts on water quality. • Surface restoration and revegetation of disturbed soils would be implemented to minimize long-term soil erosion. • Water needed for construction and dust control would come from sources outside the park.
<p>Wildlife</p> <ul style="list-style-type: none"> • To reduce noise disturbance and limit impacts on breeding avian and mammalian species, all tree removal would be conducted from October 1 to March 1, where feasible. If trees need to be removed outside of this time frame, they would be identified for removal and evaluated for nesting or roosting use. • Project personnel are prohibited from feeding or approaching wildlife. • Project personnel would report to park personnel any wildlife collisions within 24 hours of an incident. • The clearing limits (project limits) outside of the existing road prism would be clearly marked or flagged prior to construction. All construction activities, including staging areas, would be located within previously disturbed areas, if necessary. • The following measures would be taken to limit noise and disturbance from vehicles and equipment used on the project: <ul style="list-style-type: none"> ○ Ensuring all motor vehicles and equipment have mufflers conforming to original manufacturer specifications that are in good working order and are in constant operation to prevent excessive or unusual noise, fumes, or smoke ○ Limiting the use of air horns within the park to emergencies only
<p>Air Quality</p> <ul style="list-style-type: none"> • Dust control would occur, as needed, on active work areas where dirt or fine particles are exposed using water sources outside the park. • Workers would not leave vehicles idling. • Debris resulting from construction would be hauled from the park to an appropriate disposal location.
<p>Cultural Resources</p> <ul style="list-style-type: none"> • All activities would comply with the <i>Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i> (48 Federal Register 44716, revised). • Archeological resources in the vicinity of the project area would be identified and delineated for avoidance prior to project work. • Should any archeological resources be uncovered during construction, as appropriate, work would be halted in the area and a NPS archeologist, SHPO, and appropriate Native American tribes would be contacted for further consultation. Plans for treatment of unanticipated discoveries would be prepared as needed. • NPS cultural resources staff would be available during construction to advise or take appropriate actions should any archeological resources be uncovered during construction. In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (1990) would be followed. • The NPS would ensure that all contractors and subcontractors are informed of the penalties for illegally collecting artifacts or intentionally damaging archeological sites or historic properties. Contractors and subcontractors also would be instructed on procedures to follow in case previously unknown archeological resources are uncovered during construction. • Equipment and material staging areas would avoid known archeological resources. • An archeologist who meets the guidelines and standards identified by the Secretary of the Interior will be on-site during any ground-disturbance activities that occur from implementation of the preferred alternative. If battle-related artifacts, including unexploded ordnance (UXO), are found, NPS policy will be followed to ensure that the safety of visitors, contractors, and park personnel and that artifacts are handled safely and recovered within context. As a result, work may be temporarily stopped in the immediate area until the discovery is resolved. • Action alternatives are not expected to uncover, disturb, or remove Native American human remains, funerary objects, sacred objects, or objects of cultural patrimony. In the event any of these items are unintentionally exposed by some aspect of this project, procedures identified in "Guidance for National Park

Service Compliance with the Native American Graves Protection and Repatriation Act (NAGPRA), NPS Cultural Resource Management Guideline, Appendix R” will be followed. If this occurs, the project archeologist would stop work until NAGPRA guidelines and associated regulations [43 CFR 10.6] are satisfied.

- All action alternatives would result in an adverse effect on the Tour Road, a Mission 66-related property; and under Alternatives C and D, adverse effects would result to archeological resources and the cultural landscape. To resolve potential adverse effects, the PA would be amended to provide treatment measures of those affected properties using a yet to be determined level of Historic American Engineering Record for the built environment and data recovery for significant archeological deposits.

COMPARISON OF ALTERNATIVES

Table 3 shows the elements of each alternative and provides a comparison among alternatives.

HOW ALTERNATIVES MEET OBJECTIVES

The park selected Alternative A as the preferred alternative after consideration of how each alternative met the project purpose, need, and objectives and after consideration of the potential environmental consequences. All of the action alternatives would implement the needed mitigation strategies. A comparison of the alternatives and the degree to which each alternative fulfills the purpose, need, and objectives of the proposed mitigations is summarized in Table 3.

TABLE 3. COMPARISON OF ALTERNATIVES

Alternative A (Preferred Alternative) – New Short Tour Route	Alternative B – New Long Tour Route	Alternative C – New Long Tour Route and New One-way Access to Elkhorn Tavern	Alternative D – New Long Tour Route and New Spur Road off Tour Road	Alternative E – No Action
Under Alternative A, the existing one-way Tour Road would be paved within the existing road prism to accommodate two-way traffic from the visitor center to the new Elkhorn Tavern parking area to allow visitors to visit Elkhorn Tavern without driving the entire one-way Tour Road loop. The new Elkhorn Tavern parking lot would be located off this new road, and the existing Elkhorn Tavern parking lot would be removed and restored to historic conditions. A short new one-way Tour Road segment would be constructed from the new Elkhorn Tavern parking area. The alignment for the new short Tour Road segment near Elkhorn Tavern would follow the natural topography of Elkhorn Mountain. The new Elkhorn Tavern parking area would be located to avoid impacts on the historic battlefield and to not obstruct the sight lines from the Elkhorn Tavern.	Under Alternative B, the existing single-lane Tour Road between the visitor center and a new Elkhorn Tavern parking lot would be paved to accommodate two-way traffic similar to Alternative A. A longer new one-way route would extend down the slope of Elkhorn Mountain below the East Overlook to the new parking area near Elkhorn Tavern to more closely follow the terrain of Elkhorn Mountain than the alignment in Alternative A. The abandoned section of the Tour Road would be removed and revegetated and the segment of Telegraph Road restored. The new Elkhorn Tavern parking area would be located to not impact the historic battlefield and to not obstruct the sight lines from the Elkhorn Tavern toward the battlefield.	Under Alternative C, the park entrance road along the existing Highway 62 would be reconstructed as described for Alternative A, but would extend for the full length of the southeastern park boundary. The existing Tour Road between the visitor center and the Elkhorn Tavern would remain a one-way route. The existing historic Huntsville Road would be paved and used as one-way access to Elkhorn Tavern. A new one-way route would be constructed from Elkhorn Tavern and the new parking lot down the slope of Elkhorn Mountain, below the East Overlook, to the connection with the existing Tour Road. Telegraph Road would not be restored since it would remain part of the Tour Road.	Under Alternative D, the park entrance road along the existing Highway 62 would be reconstructed as described for Alternative A. A new single-lane road would be constructed north from the existing Highway 62 to connect with the existing Tour Road, which would extend from that point to the new parking lot at the Elkhorn Tavern. The segment of the Tour Road from the new intersection to the new parking area would be paved for two-way travel. A new one-way Tour Road route along the slope of Elkhorn Mountain, below the East Overlook, would extend to the new parking area on the south side of the Tour Road near the Elkhorn Tavern similar to Alternative C.	Under the no action alternative, access to the park would still be available from the existing Highway 62, but other proposed mitigation actions would not be implemented. Access to the park would occur at the intersection of the existing Highway 62 and the new Highway 62 west-southwest of the current park entrance. There would be no change to the width of the existing Highway 62 to the park entrance and the existing Highway 62 east of the park entrance would not be reclaimed and revegetated. Additional parking at the visitor center, new parking at Elkhorn Tavern, and a new horse trailhead would not be constructed. Improvements to the Tour Road and visitor circulation in the park would not be implemented. A new restroom would not be constructed at Elkhorn Tavern.
<i>Meets Project Purpose, Need, and Objectives?</i>				
Alternative A would fulfill the project objectives by providing a safe and convenient access road and parking to key features in the park. Alternative A would have the least amount of ground disturbance and subsequent impacts on natural and cultural resources and provides benefits to the cultural landscape and visitor experience. Alternative A enhances visitor circulation, accessibility, and interpretation while incorporating the CLR treatment recommendations. Construction techniques incorporate sustainable design and materials while maintaining the character of the park.	Alternative B would fulfill the project objectives in a manner similar to Alternative A, but would result in a greater disturbance area from the new portion of the Tour Road.	Alternative C would provide a safe and convenient access road and parking to key features in the park but would have a greater impact on cultural and natural resources than Alternatives A and B. Alternative C would not incorporate recommendations from the CLR for historic road treatments by paving Huntsville Road. The Elkhorn Tavern parking area may disturb buried archeological deposits and would result in a much greater disturbance area than Alternatives A and B.	Alternative D would fulfill the project objectives similar to Alternative C, although the Huntsville Road would not be paved under this alternative, resulting in less impacts on the cultural landscape. The Elkhorn Tavern parking area may disturb buried archeological deposits and would result in a much greater disturbance area than Alternatives A and B.	The no action alternative would not fulfill project objectives. Road maintenance requirements and costs would not be improved because deteriorating road conditions would not be addressed. Visitor enjoyment and safety objectives would not be achieved. Park natural and cultural resources and the scenic quality of the road would be compromised by deteriorating road conditions.

SUMMARY OF ENVIRONMENTAL CONSEQUENCES

A summary of potential environmental effects for the alternatives is presented in Table 4.

ALTERNATIVES OR ALTERNATIVE ELEMENTS CONSIDERED BUT NOT CARRIED FORWARD FOR ANALYSIS

Avoidance Alternative

During development of the EA for the overall AHTD Highway 62 realignment project, a park avoidance alternative located south of the existing Highway 62 was evaluated, which would run further south of the park boundary. The avoidance alternative was also outside of the SHPO-defined battlefield boundary and avoided Dunagins Farm, a property eligible for listing to the National Register because of its association with the Battle of Pea Ridge.

Estimated impacts for the avoidance alternative were substantially greater than for the preferred alternative (that is, the AHTD preferred alternative for the overall Highway 62 realignment project) for impact categories that include agricultural land (100 acres versus 46 acres), forested land (115 acres versus 38 acres), prime farmland (22 acres versus 9 acres), noise receptors (57 versus 13), and project cost (\$88 million versus \$37 million). The avoidance alternative was determined to be technically feasible but not prudent, and the preferred alternative was determined to be in the best interest of the park and the AHTD (FHWA and AHTD 2012). Because of this, the avoidance alternative was dismissed from further consideration.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The environmentally preferable alternative is the alternative required by 40 CFR 1505.2(b), to be identified in a record of decision, that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historic, cultural, and natural resources. The “Environmentally Preferable Alternative” is identified upon consideration and weighing by the Responsible Official of long-term environmental impacts against short-term impacts in evaluating what is the best protection of these resources (43 CFR 46.30).

Although an environmentally preferable alternative is identified, it may not be the NPS preferred alternative. The preferred alternative is the alternative the NPS believes would best fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical, and other factors.

Alternative A is the environmentally preferable alternative for several reasons. Compared with the other action alternatives, Alternative A would result in the least amount of new pavement and overall construction disturbance on the Tour Road, the least amount of wildlife habitat fragmentation, and the least impact on cultural resources (including archeological resources and cultural landscapes). Alternative A would also best protect important viewsheds, including battlefield views from the Elkhorn Tavern, and would best minimize conflicts between vehicles and visitors. Overall, Alternative A would provide the best balance between the preservation of historic and cultural resources and the protection of the natural resources within the park.

ALTERNATIVES

NPS PREFERRED ALTERNATIVE

Following the Value Analysis and Choosing by Advantages workshop in June 2014, the park selected Alternative A as the preferred alternative after consideration of the advantages of each alternative and consideration of the potential environmental consequences. The preferred alternative, Alternative A, presents NPS's preferred management action and defines the rationale for the action in terms of natural and cultural resource protection and management; visitor use, operations, and cost; and other applicable factors. While all of the alternatives considered would meet the project goals to a certain degree, the preferred alternative has the best overall combination of features to meet the project objectives.

TABLE 4. IMPACT SUMMARY

Impact Topic	Alternative A (Preferred Alternative) – New Short Tour Route	Alternative B – New Long Tour Route	Alternative C – New Long Tour Route and New One-way Access to Elkhorn Tavern	Alternative D – New Long Tour Route and New Spur Road off Tour Road	Alternative E – No Action
Visual Resources	Overall, Alternative A would result in local direct long-term slight beneficial impacts on visual resources. Obliteration and revegetation of portions of Highway 62 and a section of the Tour Road would improve visual quality and reduce visual intrusions. Use of natural materials for surfacing roads and parking areas would blend these features into the landscape. Alternative A would also result in local direct short-term slightly adverse impacts during construction. Overall, when combined with past, present, and reasonably foreseeable future actions, Alternative A would have a local long-term direct beneficial impact on visual resources. Cumulative effects would be long-term, direct, adverse, and beneficial on visual resources. Alternative A would have a beneficial contribution to cumulative visual resource impacts by improving the quality of the landscape. The impacts on visual resources from Alternative A would not likely be significant because the impacts would not appreciably alter the visual resources from the existing conditions within the park.	Impacts under Alternative B would be similar to Alternative A except direct and cumulative adverse impacts would be slightly greater under Alternative B because the footprint of the Tour Road and disturbance area would be greater. Overall, visual impacts under Alternative B would be both temporary and long-term and local, direct, slight, and adverse, but would also provide benefits to visual resources over the long term. The impacts on visual resources from Alternative B would not likely be significant because the impacts would not appreciably alter the visual resources from the existing conditions within the park.	Impacts under Alternative C would be similar to Alternative B except direct and cumulative adverse impacts would be greater under Alternative C because the footprint of the Tour Road and disturbance area would be greater. Overall, visual impacts under Alternative C would be local, temporary and long-term, moderate, and adverse. The impacts on visual resources from Alternative C would not likely be significant because the impacts would not appreciably alter the visual resources from the existing conditions within the park.	Impacts under Alternative D would be similar to Alternative C. Overall, visual impacts under Alternative D would be both temporary and long-term, and local, direct, minimal, and adverse. The impacts on visual resources from Alternative D would not likely be significant because the impacts would not appreciably alter the visual resources from the existing conditions within the park.	The no action alternative would not change the existing visual quality of the park other than the restoration and revegetation of abandoned sections of Highway 62. Adverse impacts on the scenic quality of the historic landscape at Elkhorn Tavern from vehicle access would remain. The impacts on visual resources from the no action alternative would not likely be significant because the impacts would not appreciably alter the visual resources from the existing conditions within the park.
Cultural Landscapes, Archeological Sites, and Historic Structures/ Objects	There would be no adverse impacts on known archeological sites or historic objects and structures under Alternative A. There would be no adverse impacts on a Mission 66-related resource in the park. The Elkhorn Tavern and surrounding historic roads would be treated according to CLR recommendations, which would enhance the cultural landscape. Cumulative impacts would have both long-term direct beneficial impacts and long-term direct slight adverse cumulative effects on cultural landscapes and historic properties by improving the cultural landscape through vegetation management activities and cultural landscape treatments, the relocation of Highway 62, and effects on the landscape backdrop from present and future residential and commercial development outside the park. Alternative A would have a long-term direct beneficial impact on cultural resources.	Impacts under Alternative B would be similar to Alternative A, and there would be no adverse impacts on known archeological sites. There would be adverse impacts on a Mission 66-related resource in the park.	Alternative C would result in adverse impacts on significant archeological deposits associated with the Elkhorn Tavern parking area. There would be adverse impacts on a Mission 66-related resource in the park. Paving the historic Huntsville Road would adversely affect the cultural landscape, would not conform to the CLR recommendations for historic roads in the park, and would require mitigation of an adverse effect. There would be slight direct adverse cumulative impacts from development surrounding the park but these effects would not be significant because the impacts are only potential impacts and currently are not anticipated to appreciably alter historic structures, landscape elements, or archeological resources associated with the Battle of Pea Ridge.	Impacts under Alternative D would be similar to Alternative C and would result in adverse impacts on significant archeological deposits within the proposed Elkhorn Tavern parking area and to the Tour Road and Huntsville Road.	The no action alternative would not change the cultural landscape of the park other than the restoration and revegetation of abandoned sections of Highway 62. Adverse impacts on the aesthetic quality of the historic landscape at Elkhorn Tavern from vehicle access would remain. The impacts on cultural resources from the no action alternative would not likely be significant because the impacts would not appreciably alter the cultural landscape from the existing conditions within the park.

Impact Topic	Alternative A (Preferred Alternative) – New Short Tour Route	Alternative B – New Long Tour Route	Alternative C – New Long Tour Route and New One-way Access to Elkhorn Tavern	Alternative D – New Long Tour Route and New Spur Road off Tour Road	Alternative E – No Action
Visitor Experience, Recreation, and Education and Interpretation	Alternative A would result in local long-term slight beneficial impacts on visitor use, recreation, and education and interpretation. Overall, the visitor experience would be enhanced by the actions in Alternative A because of improvements in visitor circulation, restoring the historic setting at Elkhorn Tavern, expanded parking capacity, and construction of a new designated horse trailhead. The use of brown aggregate for a road surface, screening parking from scenic viewpoints, and restoration of abandoned sections of Highway 62 and the park Tour Road would add to visitor enjoyment of the park. Alternative A would also result in local short-term slightly adverse impacts on the visitor experience and recreation during construction. Overall, when combined with past, present, and reasonably foreseeable future actions, Alternative A would have both a local long-term direct and cumulative beneficial impact on visitor use, recreation, and education and interpretation. The direct long-term slight adverse cumulative impacts would reduce the visitor experience in the park and understanding of the Battle of Pea Ridge. The impacts on visitor use, recreation, and education and interpretation from Alternative A would not likely be significant because the impacts would not appreciably alter these resources from the existing conditions in the park.	Impacts on the visitor experience under Alternative B would be similar to Alternative A except direct and cumulative adverse impacts would be slightly greater under Alternative B because the visual and audible construction disturbances from constructing a longer reroute of the Tour Road would be greater under Alternative B. Overall, impacts on visitor use, recreation, and education and interpretation under Alternative B would be local, temporary and long-term, minimal, and adverse but would also provide benefits to these resources over the long term. The impacts on visitor use, recreation, and education and interpretation from Alternative B would not likely be significant because the impacts would not appreciably alter the these resources from the existing conditions within the park.	Impacts under Alternative C would be similar to Alternative B except visitors would have the option of a longer two-way route to Elkhorn Tavern. The quality of the visitor experience at Elkhorn Tavern would improve slightly with relocation of the parking lot, but vehicle traffic would continue through this historic site. Overall, visitor use, recreation, and education and interpretation impacts under Alternative C would be local, temporary and long-term, minimal, and adverse. The impacts on visual resources from Alternative C would not likely be significant because the impacts would not appreciably alter these resources from the existing conditions in the park.	Impacts under Alternative D would be similar to Alternative C; however, Alternative D would have the advantage of removing traffic from Elkhorn Tavern. Visual impacts of a new two-way road through undisturbed lands may diminish the quality of the visitor experience. Overall, impacts on visitor use, recreation, and education and interpretation under Alternative D would be local, temporary and long-term, minimal, and adverse. The impacts on visitor use, recreation, and education and interpretation from Alternative D would not likely be significant because the impacts would not appreciably alter these resources from the existing conditions within the park.	The quality of the visitor experience would not change substantially from the existing conditions. Rerouting of Highway 62 would require moving access to the park entrance, but internal park roads and parking would continue to operate. There would be no improvements to the quality of the visitor experience by allowing two-way travel to Elkhorn Tavern and traffic and parking at the tavern would continue to diminish the quality of the visitor experience. As a result, the no action alternative would have a long-term slight adverse impact on the visitor experience. The impacts on visitor use, recreation, and education and interpretation from the no action alternative would not likely be significant because the impacts would not appreciably alter these resources from the existing conditions in the park.

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

INTRODUCTION

This chapter describes the resources or conditions potentially impacted by the alternatives and the beneficial and adverse impacts that would result from implementing any of the alternatives considered in this EA/AoE. This chapter is organized by impact topics that were derived from potential issues identified during internal park and external public scoping. This chapter also includes methods used to analyze direct, indirect, and cumulative impacts. A summary of the environmental consequences for each alternative is provided in Table 4 in *Chapter 2: Alternatives*. More detailed information on park resources may be found in the GMP (NPS 2006).

This EA/AoE assesses whether significant impacts would occur as a result of the preferred alternative or reasonable alternatives, resulting in an environmental impact statement (EIS), or whether a finding of no significant impact (FONSI) is the appropriate decision document.

GENERAL METHODS

This section describes the environmental impacts, including direct and indirect effects, and their significance for each alternative. The analysis is based on the assumption that the mitigation measures identified in the “Mitigation and Best Management Practices” section of this EA/AoE would be implemented for the action alternatives. Overall, the NPS based the impact analyses and conclusions on the review of existing literature and park studies, information provided by experts within the park and other NPS personnel, other agencies, professional judgment and park staff insights, and public input.

In accordance with CEQ regulations, direct, indirect, and cumulative impacts are described (40 CFR 1502.16), and the impacts are assessed in terms of context and intensity (40 CFR 1508.27). Where appropriate, mitigating measures for adverse impacts are also described and incorporated into the evaluation of impacts. The specific methods used to assess impacts for each resource may vary; therefore, these methodologies are described under each impact topic.

The following terms are used in the discussion of environmental consequences to assess the impact intensity threshold and the nature of impacts associated with each alternative.

Type: Impacts can be beneficial or adverse. A beneficial impact is an impact that would result in a positive change in the condition or appearance of the resource. An adverse impact is an impact that causes an unfavorable result to the resource when compared with the existing conditions.

Context: This means the significance of an action must be analyzed in several contexts such as society as a whole (human, national); the affected region; the affected interests; and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

Duration: Duration of impact is analyzed independently for each resource because impact duration is dependent on the resource being analyzed. Depending on the resource, impacts may last for the construction period, a single year or growing season, or longer. Impact duration is described as short-term or long-term for each resource. For the purposes of this analysis, short-term and long-term impacts are defined for each resource.

Direct and Indirect Impacts: Effects can be direct, indirect, or cumulative. Direct effects are caused by an action and occur at the same time and place as the action. Indirect effects are caused by the action and occur later or farther away, but are still reasonably foreseeable. Direct and indirect impacts are considered in this analysis. Cumulative effects are discussed in the next section.

Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:

1. Impacts that may be both beneficial and adverse. A significant effect may exist even if the federal agency believes that on balance the effect will be beneficial.
2. The degree to which the proposed action affects public health or safety.
3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, parklands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.
4. The degree to which the effects on the quality of the human environment are likely to be highly controversial.
5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
6. The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.
8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in, or eligible for listing in, the National Register or may cause loss or destruction of significant scientific, cultural, or historical resources.
9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.
10. Whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment.

For each impact topic analyzed, an assessment of the potential significance of the impacts according to context and intensity is provided in the “Conclusion” section that follows the discussion of the impacts under each alternative. Resource-specific context is presented in the “Methodology” section under each resource topic and applies across all alternatives. The intensity of the impacts is presented using the relevant factors from the list above. Intensity factors that do not apply to a given resource topic or alternative are not discussed.

CUMULATIVE IMPACTS

Cumulative effects (or impacts) are defined as “the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other actions” (40 CFR 1508.7). Cumulative effects can result from individually minor, but collectively significant, actions taking place over a period of time. The CEQ regulations that implement NEPA require assessment of cumulative impacts in the decision-making process for federal projects.

Methods for Assessing Cumulative Impacts

Cumulative impacts were determined by combining the impacts of each action alternative and the no action alternative with other past, present, and reasonably foreseeable future actions. Past actions include activities that influenced and affected the current conditions of the environment near the project area. Ongoing or reasonably foreseeable future projects near the park or the surrounding region might contribute to cumulative impacts. The geographic scope of the analysis includes actions in the project area as well as other actions in the park or surrounding lands, including Benton County and adjoining states, where overlapping resource impacts are possible. The temporal scope includes actions within a range of approximately 10 years.

Once identified, past, present, and reasonably foreseeable actions were then assessed in conjunction with the impacts of the alternatives to determine if they would have any added adverse or beneficial effects on a particular resource, park operation, or visitor use. The impacts of past, present, and reasonably foreseeable future actions vary for each resource. Cumulative effects are considered for each alternative and are presented in the environmental consequences discussion for each impact topic.

Past, Present, and Reasonably Foreseeable Future Actions

The following past, present, and reasonably foreseeable future actions are relevant to the analysis of the effects on resources and values that would result from the alternatives, and are based on actions described in the park’s GMP (NPS 2006) and from internal scoping. The park is undertaking other existing or proposed plans, such as the Pea Ridge National Military Park Long-Range Interpretive Plan and the CLR, but the planning team decided those planning efforts would not contribute incrementally to potential impacts on park resources when combined with this project.

U.S. Highway 62 Improvements

As discussed in *Chapter 1: Purpose and Need*, AHTD is widening Highway 62 from two lanes to four lanes from Avoca to Gateway. A portion of Highway 62 runs along the southern boundary of the park and will be rerouted outside (south) of the park boundary as part of this project. The existing Highway 62 would be reduced to a two-lane road within the park boundary and would be used for park access. The reduction in lanes would involve heavy equipment to remove the asphalt, regrade the soils, and revegetate the areas that were previously asphalt.

Vegetation Management Plan

The park recently completed a VMP to design ways to adjust and/or establish the vegetation patterns that represent the look and feel of the 1862 Battle of Pea Ridge battlefield landscape of the park, as well as to maximize benefits to natural and cultural resources. Reasonably foreseeable actions regarding management of vegetation by the park include various techniques such as thinning of forests and woodlands and removal of cedar trees, restoring the orchards and prairie, mowing and haying operations, and managing exotic species.

Shipe Road – King’s River 345-kV Transmission Project, Benton and Carroll Counties, Arkansas

Southwestern Electric Power Company (SWEPCO) has submitted an application to the Arkansas Public Service Commission (APSC) to build a new transmission line in Benton and Carroll Counties in northwest Arkansas. The facilities include a proposed 48-mile 345-kV transmission line, originating at the Shipe Road Station currently under construction west of Centerton in Benton County and terminating at the proposed King’s River Station to be constructed on SWEPCO property northwest of Berryville in Carroll County. Single-pole single-circuit structures would be used, and the average pole height would be 130 to 160 feet, with poles spaced approximately every 800 feet. The right-of-way for the transmission line would be 150 feet wide. The proposed line would most likely be constructed south of Highway 62 and could come within approximately 0.5 mile of the park boundary at the southeast end of the park. The park has determined that, based on the currently proposed alignment (Route 33), the transmission poles would be visible from the East Overlook as well as other places in the park.

Residential Development

Increased residential development around the park has been occurring and is likely to continue into the future, which may affect park resources. Included in this development is approximately 120 acres of land zoned for residential use, which are currently for sale, and are adjacent to the northern park boundary.

Closure of Alvin Seamster Road on East Side of Park

Alvin Seamster Road is accessed from Highway 62 along the eastern boundary of the park and provides an entrance point to the park (Figure 1). This road was previously a single-lane road and is now 60 to 75 feet wide. The park is working with Benton County to close the road within the park’s boundary.

VISUAL RESOURCES

Affected Environment

About 90% of the Civil War battlefield where fighting took place is protected in the park (NPS 2006). Protecting such a large portion of an original battlefield is uncommon among Civil War parks in the national park system, and this protection is essential to the unique visual character of

the park. Much of the land that is now protected in the park underwent extensive changes from the time of the battle until the park was established in 1956. Much of the land that now constitutes the park was historically used for agriculture, raising livestock, and homestead sites. These land uses, along with practices of fire suppression and logging, both before and after the battle, have combined to alter the landscape and influence the character of the park relative to its historic appearance (NPCA 2009).

Visual resources on the battlefield are important in the visitor's understanding of the battle events. Visual resources include replica artillery, fencing, and historic structures; and historic fields, roads, and trails. For more information on the visual resources within the cultural and historic context of the park, see the *Cultural Resources* section in this chapter.

The most popular activity for visitors is to travel the 7-mile Tour Road through the park (Figure 1). Guided by the park brochure, visitors can follow the Tour Road and pull over at 10 interpretive stops identifying important battle sites. Several interpretive exhibits and historic roads, trails, fields, and structures are available for viewing.

Over the past 11 years, in an effort to restore the historic landscape that soldiers witnessed during the Civil War battle, the park removed 11,000 feet of power lines that were interfering with battlefield views, planted more than 2,000 trees in areas that were forested in 1862, rebuilt 15 miles of historic fencelines that help to demarcate battle lines and the placement of artillery, and restored 5 miles of historic roads and road traces. In addition, the park is working to control eastern red cedar trees, which are encroaching on the park's open fields. Hundreds of species of birds, wildlife, and vegetation also contribute to the visual experience in the park.

Most of the park is protected from outside visual and auditory intrusions. However, there are some modern intrusions in the battlefield landscape, such as the visitor center and administrative area; residential development and associated infrastructure around the perimeter of the park such as cell towers; and Arkansas Highway 72 and Highway 62, which bisect the western and southern portions of the park, respectively. In general, visitors have several opportunities to visualize the 1862 landscape, despite the absence of the farm structures that existed at the time of the battle. The landscape is generally representative of the historic conditions, although fire prevention and suppression has resulted in an increase in tree density in some areas of the park, such as denser areas of forest around the battlefields, trenches, and fields and the invasive eastern red cedar species occurring throughout the park. The change in vegetation characteristics has altered views and interpretation of the battlefields and routes, making it somewhat difficult for visitors to visualize how the landscape affected the battle.

Environmental Consequences

Methodology

Potential impacts on scenic resources were evaluated based on changes to the visual landscape from the visitor's perspective. Visual resources include the views from the visitor center, tour stops and overlooks along the Tour Road, areas in the battlefield where visitors are able to walk around, and the hiking trails and horse trail in the forests. The geographic project area for evaluating impacts on scenic resources includes those portions of the park from which visitors observe the battlefield, historic landscape, and scenic features. Short-term impacts on visual resources were considered to be those impacts that would last less than three years, while long-term impacts would last more than three years.

The resource-specific context for assessing impacts of the alternatives on visual resources includes:

- The contribution of visual resources to the visitor experience within the park.
- The contribution of visual resources to understanding the Battle of Pea Ridge and the setting in 1862.
- The effects of changes to the transportation system from proposed mitigations on visual resources.

Alternative A – New Short Tour Route

Impacts

The visual quality of the park would be improved under Alternative A by removing and revegetating the portion of the Tour Road that goes through the Elkhorn Tavern and abandoned sections of Highway 62 east of the visitor center (Figure 4). This would have a long-term beneficial effect on the visual character of the Elkhorn Tavern and on the park perimeter. The new section of Tour Road and parking area constructed west of Elkhorn Tavern would be visually screened by vegetation, which would improve the view from the historic tavern. Expansion of the parking lot at the visitor center would be within an area of existing visual intrusion and would not adversely affect visual quality. The new horse trailhead parking area would be screened by vegetation to minimize new visual intrusions in the landscape.

The pavement used for the Tour Road and parking areas would be a brown aggregate to blend with the visual character of the park. Recessed pavement markers (or a similar alternative to traditional striping) would be used in lieu of the current road striping on the Tour Road, which would be beneficial to visual quality; particularly from the East Overlook, which looks directly over the Tour Road. Construction activities would be visible during implementation of the project, which would result in temporary slight adverse impacts on the scenic quality in the park. Compared with the other action alternatives, Alternative A would have the least amount of new pavement on the Tour Road and would involve the least amount of construction disturbance.

Cumulative Impacts

The relocation of Highway 62 would improve visual quality by moving the highway away from the park, thereby decreasing visual intrusions into the historic setting. Vegetation management techniques implemented under the VMP would improve visual resources by returning the landscape to the original look and feel of the 1862 battle. Construction of the SWEPCO transmission line would adversely affect the viewshed from the East Overlook. Present and future residential and commercial development surrounding the park would directly adversely affect the viewshed by diminishing the quality of the landscape setting and backdrop of the battle. Cumulative effects would be both beneficial and adverse and long-term on visual resources.

Conclusions

Overall, Alternative A would result in local direct long-term slight beneficial impacts on visual resources. Obliteration and revegetation of portions of Highway 62 and a section of the Tour Road would improve visual quality and reduce visual intrusions. Use of natural materials for surfacing roads and parking areas would blend these features into the landscape. Alternative A would also result in local direct short-term slightly adverse impacts during construction. Overall, when combined with past, present, and reasonably foreseeable future actions, Alternative A would have a local long-term direct beneficial impact on visual resources. Cumulative effects would be long-term, direct, adverse, and beneficial on visual resources. Alternative A would have a beneficial contribution to cumulative visual resource impacts by improving the quality of the landscape. The impacts on visual resources from Alternative A would not likely be significant because the impacts would not appreciably alter the visual resources from the existing conditions within the park.



View of battlefield and Tour Road (in the background) from East Overlook, looking southeast.

Alternative B – New Long Tour Route

Impacts

Impacts under Alternative B would be similar to impacts under Alternative A, with the following exceptions. The footprint of the rerouted Tour Road near Elkhorn Tavern and disturbance area would be greater under Alternative B, resulting in slightly greater impacts on the viewshed during construction; however the relocated road would more closely follow the terrain than the existing alignment. Overall, impacts on visual resources under Alternative B would be slightly greater than under Alternative A and would be long-term, direct, slight, and adverse.

Cumulative Impacts

Cumulative impacts on visual resources under Alternative B would be similar to Alternative A, although the adverse effects would be slightly greater because of the additional construction disturbance.

Conclusions

Impacts under Alternative B would be similar to Alternative A except direct and cumulative adverse impacts would be slightly greater under Alternative B because the footprint of the Tour

Road and disturbance area would be greater. Overall, visual impacts under Alternative B would be both temporary and long-term and local, direct, slight, and adverse, but would also provide benefits to visual resources over the long term. The impacts on visual resources from Alternative B would not likely be significant because the impacts would not appreciably alter the visual resources from the existing conditions within the park.

Alternative C – New Long Tour Route and New One-way Access to Elkhorn Tavern

Impacts

Visual resource impacts under Alternative C would be similar to Alternative B, with the following exceptions. Paving one-way access from Elkhorn Tavern along the historic Huntsville Road to the park road on the southern boundary would result in an expanded visual disturbance of the historic setting. Routing vehicle traffic through the Elkhorn Tavern area would reduce historic views and scenic quality. The new Elkhorn Tavern parking area would be screened by vegetation to improve the scenic view from the tavern. Because all of existing Highway 62 would remain in place, the benefits of obliteration and revegetation of a portion of the road under Alternatives A and B would not occur. Overall, impacts on visual resources under Alternative C would be greater than under Alternative A and slightly greater than under Alternative B and would be long-term, direct, and adverse.

Cumulative Impacts

Cumulative impacts on visual resources under Alternative C would be similar to Alternative B, although the adverse effects would be slightly greater because of the new road along the historic Huntsville Road. Overall, impacts under Alternative C would be both temporary and long-term, and local, direct, minimal, and adverse.

Conclusions

Impacts under Alternative C would be similar to Alternative B except direct and cumulative adverse impacts would be greater under Alternative C because the footprint of the Tour Road and disturbance area would be greater. Overall, visual impacts under Alternative C would be local, temporary and long-term, moderate, and adverse. The impacts on visual resources from Alternative C would not likely be significant because the impacts would not appreciably alter the visual resources from the existing conditions within the park.

Alternative D – New Long Tour Route and New Spur Road off Tour Road

Impacts

Impacts under Alternative D would be similar to impacts under Alternative C, with the following exceptions. A new one-way vehicular route (spur road) would be constructed from the existing Tour Road to the existing Highway 62. This new road would introduce a new disturbance through a currently wooded section of the park, which would negatively affect visual quality. Because less of the existing Highway 62 would be removed and revegetated, this alternative would

have fewer visual quality benefits than under Alternatives A and B. Overall, the impacts on visual resources under Alternative D would be much greater than under Alternatives A and B and slightly greater than under Alternative C and would be long-term, direct, and adverse.

Cumulative Impacts

Cumulative impacts on visual resources under Alternative D would be similar to Alternative C.

Conclusions

Impacts under Alternative D would be similar to Alternative C. Overall, visual impacts under Alternative D would be both temporary and long-term, and local, direct, minimal, and adverse. The impacts on visual resources from Alternative D would not likely be significant because the impacts would not appreciably alter the visual resources from the existing conditions within the park.

Alternative E – No Action Alternative

Impacts

Minimal changes in the visual character of the park are anticipated under the no action alternative. Access to the park would occur via a new intersection with the existing and new Highway 62. Abandoned sections of Highway 62 east of the park entrance would not be removed and revegetated. There would be no new parking areas or changes in visitor circulation. The road and parking at Elkhorn Tavern would continue to diminish the visual quality of this historic area and the views from this location. The no action alternative would have a long-term slight adverse impact on visual quality by maintaining vehicle access to Elkhorn Tavern.

Cumulative Impacts

Cumulative effects from past, present, and future actions would be similar to Alternative A, but the no action alternative would not contribute to improvements at Elkhorn Tavern. Revegetation of abandoned sections of Highway 62 would have a long-term beneficial effect.

Conclusions

The no action alternative would not change the existing visual quality of the park other than the restoration and revegetation of abandoned sections of Highway 62. Adverse impacts on the scenic quality of the historic landscape at Elkhorn Tavern from vehicle access would remain. The impacts on visual resources from the no action alternative would not likely be significant because the impacts would not appreciably alter the visual resources from the existing conditions within the park.

CULTURAL RESOURCES

Affected Environment

The park contains a variety of archeological sites, historic structures and objects, and cultural landscape features. Cultural resources are eligible for the National Register if they meet NHPA criteria. These criteria are: association with an important event in history (Criterion A); association with significant person(s) in history (Criterion B); embody characteristics of a type, period, method of construction, or work of a master (Criterion C); or has yielded or is likely to yield information important to prehistory or history (Criterion D) (36 CFR 60.4).

Archeological Sites

The park is in the archeologically rich Ozark Plateau. Numerous sites in the area date human use and occupation to at least 10,000 years ago. Native American occupation continued until the early 19th century when Euroamerican settlement resulted in the forced relocation of Native Americans to reservations.

The identification of prehistoric archeological sites within the park has been limited to small-scale surveys for specific projects (Branam 2011; Coleman 1988; Harcourt 1993). Six prehistoric archeological sites have been identified in the park (3BE12, 3BE13, 3BE305, 3BE512, 3BE513, and 3BE589). None of the prehistoric archeological sites discovered have been assigned to a time period or culture and all were evaluated as not eligible for the National Register. As part of the 5-year Systemwide Archeological Inventory Program (SAIP), the Midwest Archeological Center and the University of Arkansas Department of Anthropology conducted a sampling program to identify additional archeological sites. Of the more than 4,000 shovel tests excavated, 95% were negative for buried archeological deposits (Kay and Herrman 2005). Historical accounts mention other buildings and structures present during the battle that no longer exist, including the outbuildings (barn and corral) associated with the Elkhorn Tavern (Bearss 1965). The remains of these structures, if identified, would be considered archeological resources.

The second component of the SAIP was a battlefield archeology assessment survey (Carlson-Drexler et al. 2008). Between 2001 and 2003, an intensive metal detector inventory covered all of Oberson's and Cox's fields, most of Foster's field, Clemens's field, the area around Elkhorn Tavern, and the area along the narrow ridge north of Elkhorn Tavern along Telegraph Road including the east slope and bottom of Middle Ravine. A more limited reconnaissance-level metal detector survey was conducted in the belt of trees between Oberson's and Foster's fields, Morgan's Woods, the area between Clemens's field and the Elkhorn Tavern, and the southwestern portion of Broad Ridge. The physical remains of the battlefield are also considered an archeological site (3BE184), evidenced by the patterned deposition of small arms ammunition, larger ordnance, and discarded personal effects identified primarily by metal detectors and by geophysical detection (Kvamme 2002).

A Phase I cultural resources survey was also conducted by AHTD (Branam 2011) for the separate Highway 62 relocation project. Three new archeological sites were recorded during the survey and 16 previously recorded sites were revisited. One of the previously recorded sites falls within park boundaries (3BE646). AHTD proposed design modifications to minimize impacts on historic properties as well as mitigations in conjunction with the NPS. With the proposed

modifications and mitigations, the SHPO concurred with AHTD's assessment of no adverse effect from the Highway 62 project.

The park also conducted an archeological survey in June 2013 of the four proposed alternatives within the park (Figure 3). For all four alternatives, where the rerouting of the tour road is proposed, no significant battle-related or subsequent historic features were identified, and the possibility for significant features is considered extremely low. The proposed parking area associated with Alternatives A and B also did not yield significant information concerning the battle or historic farming activities. Only the proposed parking area associated with Alternatives C and D yielded significant information concerning the Ruddick farm site. Features included stone foundations and a large depression. The Cox farm site south of Ruddick's Field also yielded significant information concerning the battle and the historic farming period. Battle-related artifacts at the Cox farm site suggest the possible location of the federal cannon, as well as features associated with the farming activities.

Cultural Landscapes

A cultural landscape is defined as "a geographic area, including both cultural and natural resources. . . , associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values" (NPS Preservation Briefs 36). The park is significant as a historic event or site associated with the Civil War. Pea Ridge is also a "historic site," one of four types identified by the NPS that include designed, vernacular, and ethnographic cultural landscapes.

According to DO-28: *Cultural Resource Management Guidelines* (page 87), a cultural landscape is also:

...a reflection of human adaptation and use of natural resources and is often expressed in the way land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built. The character of a cultural landscape is defined both by physical materials, such as roads, buildings, walls, and vegetation, and by use reflecting cultural values and traditions.

The park's 4,300 acres encompass about 90% of the actual battlefield. At the time of the battle, the area included the agricultural community of Leetown, which included a number of farms and homes bounded by woodlands. The natural elements of the cultural landscape include agricultural fields, orchards, open prairie, and woodlands. Topography and drainages played a crucial role in the outcome of the battle and, therefore, are part of the cultural landscape. Named topographic features such as Elkhorn Mountain, Welfley's Knoll, Tanyard Hill, Broad Ridge, and Narrow Ridge, along with drainages such as Big and Little Sugar Creeks and Cross Timber Hollow are mentioned in contemporary accounts of the battle and, therefore, constitute important elements of the historic landscape that, along with an unobstructed viewshed, convey the historic setting, feeling, and association of the Civil War battlefield. Enhancing the cultural landscape are some of the built environment features, such as the reconstructed Elkhorn Tavern and the original roads, such as Telegraph Road (now paved), that convey some of the character of the 1862 landscape.

Historic Structures and Objects

Pea Ridge National Military Park was listed on the National Register in 1966 under Criterion A for its association with a Civil War battlefield significant to history. Since the existing structures present during the 1862 battle were integral to troop movements and the outcome of the battle, they have been evaluated as contributing/noncontributing elements of the National Register-listed military park. Telegraph Road, the Elkhorn Tavern, the archeological remains at Leetown, and the federal earthworks north of Little Sugar Creek are the primary historic resources in the park today, and all are directly linked to the battle of 1862. Telegraph Road, a major avenue for traffic between Missouri and Arkansas, was used by both Union and Confederacy troops for transporting men and supplies before and during the battle. The road was crucial to Van Dorn's strategy, and was the scene of actual fighting on both days of the battle (NRHP 1966).

The NPS maintains a computerized List of Classified Structures (LCS) that are eligible for the National Register or are a contributing element to a historic site or district. These structures are listed in Table 5 below. The structures include three roads (Huntsville Road, Telegraph Road, and Ford Road); the Union earthworks (trenches); the Ford cemetery; the Leetown cemetery where casualties were temporarily interred; the reconstructed Elkhorn Tavern; and the remains of a tannery used as a temporary field hospital (Bearss 1965). Three monuments commemorating the battlefield have also been erected.

TABLE 5. LIST OF CLASSIFIED STRUCTURES WITHIN THE PARK

Structure	No.	Documentation	NRHP Eligibility
Huntsville Road	HB-01	LCS	Contributing
Elkhorn Tavern	HB-05	LCS	Noncontributing
Monument to Brave Confederate Dead	HB-06	LCS	Contributing
Soldiers Reunited Memorial	HB-07	LCS	Contributing
Ford Road	HB-08	LCS	Contributing
U.S. Army Headquarters Monument	HB-10	LCS	Contributing
Union Trenches	HB-14	LCS	Contributing
Telegraph Road	HB-21	LCS	Contributing
Tannery House Foundation	HB-22-A	LCS	Contributing
Tannery Well	HB-22-B	LCS	Contributing
Ford Cemetery	HB-24	LCS	Noncontributing
Leetown Cemetery	HB-25	LCS	Contributing
Spring Box at Elkhorn Tavern	HB-5.A	LCS	Contributing

Source: LCS compiled by the NPS (accessed July 23, 2014).

The existing Elkhorn Tavern is not the original structure; it is a reproduction of the structure from 1888. Prior to the Civil War, the tavern was well known locally as a stop for the Overland Stage. Later, the tavern was an unofficial stop on the Butterfield line that passed by on Telegraph Road. The original tavern was burned by Confederacy guerillas in 1863. The structure was rebuilt by Joseph Cox on the original foundations soon after the war's end. Because of a lack of evidence of what the tavern looked like at the time of the battle, the NPS restored the structure to its approximate wartime appearance (Bond n.d.).

The Trail of Tears is not on the NPS LCS. However, it was listed on the National Register as a multiple property submission as the Cherokee Trail of Tears National Historic Trail in 1987. Between 1836 and 1839, thousands of Cherokee, as well as several other tribes, were relocated by the U.S. government from the Southeast to eastern Oklahoma. The Northern Route of the trail

passed through Kentucky, Illinois, Missouri, and northern Arkansas (NPS 2012). The Trail of Tears encompasses the Springfield to Fayetteville Road – Elkhorn Tavern Segment, also listed on the National Register (2005), which is within the park (NRHP 2013).

In addition to the cultural resources described above, Mission 66 resources have been identified in the park. Mission 66 was a federally sponsored program from 1956 to 1966 to improve deteriorated and dangerous conditions in the national parks, the result of a massive visitor boom after World War II. Some Mission 66 elements, such as visitor centers, have been recognized by the National Register as significant historic structures and as important representatives of a new building type.

In the 1960s, as part of the Mission 66 program, the NPS completed facilities for the park. The Tour Road retains integrity as it remains in the same alignment, is of similar materials and width, and is characteristic of its original construction (NPS 2014b). The shelter at the East Overlook was designed and built in 1963 as part of the NPS Mission 66 program to provide a panoramic view of the battlefield. The interior of the structure has a small room used by park staff for interpretation (NPS 2014b). The visitor center, also built as part of the Mission 66 program, included a museum, administrative areas, and maintenance facilities at the time of its opening in 1965. The 1984 NRHP nomination noted the building as historically significant, likely due to its design and construction under the Mission 66 program. Since that time, the building has undergone several modifications that have significantly altered its exterior façade, roof line, and footprint (NPS 2014b).

Environmental Consequences

Methodology

The effects analysis for cultural resources was based on three general site types found within the park – archeological sites (both historic and prehistoric); the built environment (buildings, structures, roads, and monuments); and the cultural landscape (a geographic area associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values). The following discussion of effects is generalized based on the type of ground disturbance associated with the construction approaches and the type of cultural resource. The effects on cultural resources are only considered for historic properties or those cultural resources listed or eligible for listing on the National Register (Table 5). Short-term impacts on cultural resources were considered to be those impacts that would last only during the construction period, while long-term impacts would be impacts that last beyond the construction period.

Consultation has taken place with the SHPO and 10 interested Native American tribes to identify issues or properties of concern within the area of potential effect (APE). The APE is defined as the project area in Figure 1. Prior cultural resource inventory (Branam 2011) undertaken by the AHTD has identified all potential historic properties within the APE. Each identified cultural resource was assessed for significance by applying criteria outlined under 36 CFR 60.4. Potential historic properties (those determined eligible for listing on the National Register) are then assessed for effects by applying criteria outlined under 36 CFR Part 800.5.

The Elkhorn Tavern is a cultural resource that is addressed under the CLR and, therefore, treatment recommendations in the CLR would be deferred to in this EA. All known prehistoric

archeological sites have been found to be ineligible for the National Register and no further efforts for their protection are required.

The resource-specific context for assessing impacts of the alternatives on cultural resources includes:

- Preservation and protection of historic structures associated with the Battle of Pea Ridge are key to the park's mission and enabling legislation.
- The ability of the proposed mitigations to fully represent the 1862 Battle of Pea Ridge.
- Protection of archeological resources within the park and in the surrounding area associated with the 1862 Battle of Pea Ridge.

Alternative A – New Short Tour Route

Impacts

Under Alternative A, ground disturbances would take place in areas previously disturbed except for the new segment of the Tour Road. Because no known historic resources are in the proposed areas of disturbance and the 2013 archeological surveys in undisturbed portions of the project area were negative for buried archeological deposits, there would be no adverse impacts on archeological resources. Following construction of the new portion of the Tour Road and Elkhorn Tavern parking area, treatment recommendations in the CLR to restore the Elkhorn Tavern and surrounding historic roads to historic conditions would enhance the cultural landscape. Road and parking area construction, obliteration, and restoration would be conducted in accordance with the stipulations provided for in the PA (FHWA et al. 2012). Obliteration and restoration of the paved portion of Telegraph Road (near the Elkhorn Tavern) in conformance with CLR recommendations would enhance the historic road and overall cultural landscape. Alternative A would have no adverse impacts on a Mission 66-related resource because the minimal pavement widening and a minor realignment of the Tour Road would not affect the overall integrity of the resource.

Cumulative Impacts

Reasonably foreseeable future actions include CLR treatments in the area of the Elkhorn Tavern, which would enhance the cultural landscape by reducing the natural and man-made changes that have occurred in the area of the Elkhorn Tavern. Ground disturbance from implementing vegetation management techniques under the VMP, such as tree and vegetation thinning, may uncover buried archeological sites and known and unknown historic properties, although the archeological surveys that have taken place in the project area were negative for archeological resources. The relocation of Highway 62 would indirectly improve the cultural landscape by moving the highway away from the park, thereby decreasing visual disturbances. Present and future development surrounding the park would directly adversely affect the cultural landscape by diminishing the landscape setting and backdrop of the battle. Alternative A would have a beneficial contribution to the overall slight direct adverse cumulative effects on the cultural landscape when combined with past, present, and reasonably foreseeable future actions.

Conclusions

There would be no adverse impacts on known archeological sites or historic objects and structures under Alternative A. There would be no adverse impacts on a Mission 66-related resource in the park. The Elkhorn Tavern and surrounding historic roads would be treated according to CLR recommendations, which would enhance the cultural landscape. Cumulative impacts would have both long-term direct beneficial impacts and long-term direct slight adverse cumulative effects on cultural landscapes and historic properties by improving the cultural landscape through vegetation management activities and cultural landscape treatments, the relocation of Highway 62, and effects on the landscape backdrop from present and future residential and commercial development outside the park. Alternative A would have a long-term direct beneficial impact on cultural resources.

Section 106 Summary

After applying ACHP criteria of adverse effects (36 CFR Part 800.5, Assessment of Adverse Effects), the NPS concludes that implementation of Alternative A (the Preferred Alternative) would have no adverse effect on archeological resources, cultural landscapes, historic structures and objects, and Mission 66 resources (Tour Road).

Alternative B – New Long Tour Route

Impacts

Under Alternative B, ground disturbances would take place in areas previously disturbed except for the new Elkhorn Tavern parking area and new section of the Tour Road from the East Overlook to Elkhorn Tavern. Because there are no known historic resources in the proposed areas of disturbance and the 2014 archeological surveys in undisturbed areas were negative for buried archeological deposits, there would be no adverse impacts on archeological resources. Similar to Alternative A, treatment recommendations in the CLR to restore the Elkhorn Tavern and surrounding historic roads to historic conditions would enhance the cultural landscape over the long term. Character-defining features of the Mission 66-related Tour Road would be affected from pavement widening, realignment, and revegetation.

Cumulative Impacts

Cumulative impacts under Alternative B would be similar to Alternative A. Alternative B would have a beneficial contribution to the overall direct slight adverse cumulative effects on the cultural landscape when combined with past, present, and reasonably foreseeable future actions.

Conclusions

Impacts under Alternative B would be similar to Alternative A, and there would be no adverse impacts on known archeological sites.

Section 106 Summary

After applying ACHP criteria of adverse effects (36 CFR Part 800.5, Assessment of Adverse Effects), the NPS concludes that implementation of Alternative B would have no adverse effect on archeological resources, cultural landscapes, or historic structures and objects, but would cause adverse effects on a Mission 66-related resource (Tour Road). Mitigation measures to offset the adverse effects would be undertaken prior to project implementation.

Alternative C – New Long Tour Route and New One-way Access to Elkhorn Tavern

Impacts

Under Alternative C, ground disturbances would take place in areas previously disturbed except for the new Elkhorn Tavern parking area, new section of the Tour Road from the East Overlook to Elkhorn Tavern, and improvements to the Huntsville Road from Elkhorn Tavern to the east end of existing Highway 62 in the park. The historic Huntsville Road would be paved as a one-way road traveling north from the visitor center to the Elkhorn Tavern, which would not conform to the CLR recommendations to restore all historic roads in the park to historic conditions. Archeological survey in the area of the proposed Elkhorn Tavern parking lot under this alternative resulted in the discovery of significant archeological deposits related to the battle and the Ruddick farm site. Construction of the proposed parking lot under this alternative would result in adverse effects on historic properties. Mitigation measures to offset the adverse effects from construction of a new parking lot would likely involve archeological data recovery. Construction of a new segment of the Tour Road would adversely affect the historic integrity of a Mission 66-related property. Improvement of the Huntsville Road would also constitute an adverse effect and would require treatment measures. Similar to Alternatives A and B, treatment recommendations in the CLR for the Elkhorn Tavern and surrounding historic roads (other than the Huntsville Road) would enhance the cultural landscape over the long term.

Cumulative Impacts

Cumulative impacts under Alternative C would be similar to Alternatives A and B. When combined with past, present, and reasonably foreseeable future actions, Alternative C would have the potential for slight direct adverse cumulative effects on the cultural landscape.

Conclusions

Alternative C would result in adverse impacts on significant archeological deposits associated with the Elkhorn Tavern parking area. Paving the historic Huntsville Road would adversely affect the cultural landscape, would not conform to the CLR recommendations for historic roads in the park, and would require mitigation of an adverse effect. There would be slight direct adverse cumulative impacts from development surrounding the park but these effects would not be significant because the impacts are only potential impacts and currently are not anticipated to appreciably alter historic structures, landscape elements, or archeological resources associated with the Battle of Pea Ridge.

Section 106 Summary

After applying ACHP criteria of adverse effects (36 CFR Part 800.5, Assessment of Adverse Effects), the NPS concludes that implementation of Alternative C would cause adverse effects on significant archeological deposits within the Elkhorn Tavern parking area. Alternative C may also adversely affect the cultural landscape from alterations to the historic Huntsville Road and would cause an adverse effect on a Mission 66-related property (Tour Road).

Alternative D – New Long Tour Route and New Spur Road off Tour Road

Under Alternative D, ground disturbances would take place in the same previously disturbed areas as Alternative C except for the new spur road from the Tour Road to the existing Highway 62. Because the new Elkhorn Tavern parking area is proposed for the same location as Alternative C, Alternative D would result in an adverse effect on significant archeological deposits within the proposed Elkhorn Tavern parking area. Adverse effects would also occur to the Mission 66-related Tour Road and the Huntsville Road, a contributing property to the cultural landscape. Similar to the other action alternatives, treatment recommendations in the CLR for the Elkhorn Tavern and surrounding historic roads would enhance the cultural landscape over the long term.

Cumulative Impacts

Cumulative impacts under Alternative D would be similar to the other action alternatives. When combined with past, present, and reasonably foreseeable future actions, Alternative D would have the potential for slight direct adverse cumulative effects on historic properties.

Conclusions

Impacts under Alternative D would be similar to Alternative C and would result in adverse impacts on significant archeological deposits within the proposed Elkhorn Tavern parking area and to the Tour Road and Huntsville Road.

Section 106 Summary

After applying ACHP criteria of adverse effects (36 CFR Part 800.5, Assessment of Adverse Effects), the NPS concludes that implementation of Alternative D would adversely affect archeological resources within the proposed Elkhorn Tavern parking area and would adversely impact a contributing element of the cultural landscape and a Mission 66-related property.

Alternative E – No Action Alternative

Impacts

Minimal changes to cultural resources in the park are anticipated under the no action alternative. Abandoned sections of Highway 62 east of the park entrance would be removed and revegetated, resulting in a benefit to the cultural landscape. The road and parking at Elkhorn Tavern would

continue to diminish the aesthetic quality of this historic area and the views of the cultural landscape from this location. The no action alternative would have a long-term slight adverse impact on the cultural landscape by maintaining vehicle access to Elkhorn Tavern.

Cumulative Impacts

Cumulative effects from past, present, and future actions would be similar to Alternative A, but the no action alternative would not contribute to cultural landscape improvements at Elkhorn Tavern.

Conclusions

The no action alternative would not change the cultural landscape of the park other than the restoration and revegetation of abandoned sections of Highway 62. Adverse impacts on the aesthetic quality of the historic landscape at Elkhorn Tavern from vehicle access would remain. The impacts on cultural resources from the no action alternative would not likely be significant because the impacts would not appreciably alter the cultural landscape from the existing conditions within the park.

VISITOR USE, RECREATION, AND EDUCATION AND INTERPRETATION

Affected Environment

The park provides visitors with opportunities that enhance their understanding of the Battle of Pea Ridge and its pivotal role in the Civil War west of the Mississippi River (NPS 2006). The battlefield at the park is unique due to the lack of monuments, as the park provides more of a “living landscape.” Park visitors have the opportunity to view different areas of the battlefield and the cultural resources associated with the park including historic structures, earthworks, and historic ruins. In addition, the natural resources of the park provide recreational opportunities to visitors, with many visitors coming solely for recreation such as running, hiking, biking, and horseback riding.

The primary visitor experience at the park is centered on interpreting the Civil War battle and the events surrounding the conflicts (NPS 2006). Interpretation of the events includes interpretive signs and exhibits throughout the park placed at the routes and sites of the battles, Elkhorn Tavern, and federal earthworks (NPCA 2009). The automobile tour of the park (the Tour Road) is one of the primary interpretive programs of the park (see the *Visual Resources* section).



Elkhorn Tavern.

The tour stops provide overviews of various features of the park, such as the countryside, the battle scenes, and monuments near the Elkhorn Tavern. A trail follows Telegraph Road in Cross Timber Hollow. Williams Hollow Road connects with Huntsville Road, which in turn connects back to Telegraph Road. Trails follow many of the historic roads within the park. About 10% to 20% of visitors venture beyond the tour stops. The Tour Road was designed to accommodate a one-way single lane of auto, bus, or RV traffic. Today, the Tour Road accommodates motorized touring, bicycling, and jogging.

The visitor center serves as the primary facility for preparing visitors to understand and appreciate the park (NPCA 2009). The visitor center provides park visitors with an orientation to the park, an opportunity to view a video about the battle, an opportunity to talk with an interpretive ranger, view exhibits about the battle, and purchase Civil War-related literature (NPS 2006). A museum in the visitor center contains several exhibits and displays more than 90 objects (NPCA 2009). A library of historic documents and books related to the battle is in the visitor center/administrative complex. The library is open to researchers by appointment (NPS 2006). Interpretive signs are also present along the Trail of Tears, which goes through the park. In 2007, the park provided 328 interpretive programs; however, the park has had to reduce the number of interpretive programs due to a lack of funding (NPCA 2009). In fiscal year 2010, 18,945 visitors attended interpretive programs and demonstrations (NPCA 2009).

The park has 9 miles of horse trails and 7 miles of hiking trails (NPS 2011b). Most trails are aligned with historic roads or traces. Many visitors bike through the park along the Tour Road. Equestrian staging is at the end of the two-lane Tour Road. The designated equestrian trail passes through the western part of the battlefield, then proceeds around the north side of Elkhorn Mountain to the Elkhorn Tavern, and then along Telegraph Road back to the staging area. The park would undertake a trails management planning effort in the future to address issues related to trail use and management.

In addition to the annual anniversary of the battle event (March 7 and 8), other special events are held each year (when funding allows), such as the Hispanic Heritage Festival, Elkhorn Tavern 1860 Christmas, and the June Festival (NPS 2011b). Living history demonstrations are conducted throughout the year, primarily at the Elkhorn Tavern. The cannon programs are popular with visitors, with demonstrations occurring throughout the year.

Visitation at the park in fiscal year 2013 was 95,251, a decrease of approximately 35,000 from 2012 (NPS 2014a). Visitation has fluctuated between 61,000 and 131,000 since 1976 (NPS 2014a). Visitation is highest from May through August, with another peak in October. School groups visit the park primarily in April and May. Approximately 40 to 50 military groups come to the park each year (NPCA 2009). Based on staff observations, the average stay in the park is one to three hours.

Environmental Consequences

Methodology

Potential impacts on visitor experience were assessed based on changes to the existing quality and opportunities for visitors to enjoy park resources, values, and amenities. Past interpretive and administrative planning documents provided background on changes to visitor experience over time. For this analysis, visitor experience includes visitor understanding, satisfaction, and safety, as well as availability of visitor options. Short-term impacts on the visitor experience were

considered those impacts that would last only during project construction activities, while long-term impacts would extend beyond construction activities. Resource-specific context for assessing impacts of the alternatives on visitor experience includes:

- Expectations of visitors to experience an accurate Civil War battle site.
- The contribution of the transportation system and parking availability in the park to the visitor experience.
- The ability of visitors to enjoy a safe experience in the park.
- The effects of construction activities on visitor experience.

Alternative A – New Short Tour Route

Impacts

Under Alternative A, the portion of the Tour Road that goes through the Elkhorn Tavern would be obliterated and revegetated according to the VMP. This would remove modern intrusions and result in a benefit to visitors and the interpretative value of the Elkhorn Tavern. Converting the one-way Tour Road to a two-way road directly from the visitor center to the Elkhorn Tavern would provide more convenient access for visitors who do not want to travel the entire Tour Road to access Elkhorn Tavern. The brown aggregate pavement and recessed pavement markers (or similar alternative to traditional striping) would reduce modern intrusions on the Tour Road and parking areas, which would be beneficial to the visitor experience, particularly from the East Overlook, which looks directly over the Tour Road. The new Elkhorn Tavern parking area would be moved to a location that is accessible, although not visible from the Elkhorn Tavern, which would allow visitors to experience a more historic setting.

Improvements to the visitor center parking area and moving the Elkhorn Tavern and horse trailhead parking areas would provide more convenient access and greater capacity for buses, RVs, horse trailers, and other large vehicles, resulting in a benefit to the visitor experience and recreation (e.g., equestrian users). Temporary direct slight adverse impacts on visitor use, recreation, and education and interpretation could occur during construction activities if the Tour Road is closed by reducing opportunities for visitors to experience the battlefield. Construction activities may be visible and audible from other locations in the park, resulting in temporary direct slight adverse impacts. Compared with the other action alternatives, Alternative A would have the least amount of new pavement on the Tour Road and would involve the least amount of construction disturbance.

Cumulative Impacts

The relocation of Highway 62 would improve the visitor experience by moving the highway away from the park, thereby decreasing visual and audible disturbances and increasing public safety. Vegetation management techniques implemented under the VMP would directly improve the visitor experience and education and interpretation by returning the landscape to the original look and feel of the 1862 battle. Construction of the SWEPCO transmission line would likely directly adversely affect the viewshed from the East Overlook and would decrease the visitor's ability to visualize the battle. Present and future residential and commercial development surrounding the park would adversely affect the visitor experience and education and

interpretation by diminishing the landscape setting and backdrop of the battle and by increasing demand on natural spaces in the park. When combined with past, present, and reasonably foreseeable future actions, Alternative A would have both beneficial and adverse long-term cumulative impacts on visual resources.

Conclusions

Alternative A would result in local long-term slight beneficial impacts on visitor use, recreation, and education and interpretation. Overall, the visitor experience would be enhanced by the actions in Alternative A because of improvements in visitor circulation, restoring the historic setting at Elkhorn Tavern, expanded parking capacity, and construction of a new designated horse trailhead. The use of brown aggregate for a road surface, screening parking from scenic viewpoints, and restoration of abandoned sections of Highway 62 and the park Tour Road would add to visitor enjoyment of the park. Alternative A would also result in local short-term slightly adverse impacts on the visitor experience and recreation during construction. Overall, when combined with past, present, and reasonably foreseeable future actions, Alternative A would have both a local long-term direct and cumulative beneficial impact on visitor use, recreation, and education and interpretation. The direct long-term slight adverse cumulative impacts would reduce the visitor experience in the park and understanding of the Battle of Pea Ridge. The impacts on visitor use, recreation, and education and interpretation from Alternative A would not likely be significant because the impacts would not appreciably alter these resources from the existing conditions in the park.

Alternative B – New Long Tour Route

Impacts

Impacts under Alternative B would be similar to impacts under Alternative A, with the following exceptions. More extensive rerouting of the Tour Road would result in slightly greater visual and audible impacts on the visitor experience during construction. Overall, impacts on visitor use, recreation, and education and interpretation under Alternative B would be slightly greater than under Alternative A and would be temporary, direct, slight, and adverse.

Cumulative Impacts

Cumulative impacts on visitor use, recreation, and education and interpretation under Alternative B would be similar to Alternative A, although the adverse effects would be slightly greater because of the additional construction disturbance.

Conclusions

Impacts on the visitor experience under Alternative B would be similar to Alternative A except direct and cumulative adverse impacts would be slightly greater under Alternative B because the visual and audible construction disturbances from constructing a longer reroute of the Tour Road would be greater under Alternative B. Overall, impacts on visitor use, recreation, and education and interpretation under Alternative B would be local, temporary and long-term, minimal, and

adverse but would also provide benefits to these resources over the long term. The impacts on visitor use, recreation, and education and interpretation from Alternative B would not likely be significant because the impacts would not appreciably alter these resources from the existing conditions within the park.

Alternative C – New Long Tour Route and New One-way Access to Elkhorn Tavern

Impacts

Impacts under Alternative C would be similar to impacts under Alternative B, with the following exceptions. Routing the Tour Road along existing Highway 62 and then via the historic Huntsville Road to a new parking area at Elkhorn Tavern would allow visitors to make a short loop without driving the entire loop. This new route would make the existing one-way Tour Road from Elkhorn Tavern to the visitor center a one-way road south. While Alternative C would give visitors additional travel options in the park, the quality of the visitor experience is unlikely to be enhanced because traffic would still occur through the historic Elkhorn Tavern area. There would be less ease of access (due to the higher grade and longer distance) from the Elkhorn Tavern parking lot to the Elkhorn Tavern under Alternative C compared with Alternatives A and B. Paving and improvements of the Huntsville Road may also have short-term adverse impacts on the visitor experience. Because the park road along existing Highway 62 would remain in the same footprint, the benefits of obliteration and revegetation under Alternatives A and B would not occur. Overall, impacts on visitor use, recreation, and education and interpretation under Alternative C would be greater than under Alternative A and slightly greater than under Alternative B and would be permanent, direct, and adverse.

Cumulative Impacts

Cumulative impacts on visitor use, recreation, and education and interpretation under Alternative C would be similar to Alternative B, although the adverse effects would be slightly greater for some visitors because of the new road along the historic Huntsville Road; although for some visitors there would be long-term benefits from the additional access to the Elkhorn Tavern. Overall, impacts under Alternative C would be temporary and long-term, direct, minimal, and adverse.

Conclusions

Impacts under Alternative C would be similar to Alternative B except visitors would have the option of a longer two-way route to Elkhorn Tavern. The quality of the visitor experience at Elkhorn Tavern would improve slightly with relocation of the parking lot, but vehicle traffic would continue through this historic site. Overall, visitor use, recreation, and education and interpretation impacts under Alternative C would be local, temporary and long-term, minimal, and adverse. The impacts on visual resources from Alternative C would not likely be significant because the impacts would not appreciably alter these resources from the existing conditions in the park.

Alternative D – New Long Tour Route and New Spur Road off Tour Road

Impacts

Impacts under Alternative D would be similar to impacts under Alternative C, with the following exceptions. The new vehicular route that would extend from the existing Tour Road to the new spur road would provide visitors with an alternative two-way route to Elkhorn Tavern. This, along with relocation of the Elkhorn Tavern parking lot, would remove vehicle traffic from this historic area. However, the new two-way road would require construction of a new road through currently undisturbed lands. Less of the existing Highway 62 would be obliterated and revegetated than under Alternatives A and B. Overall, impacts on visitor use, recreation, and education and interpretation under Alternative D would be much greater than under Alternative A and slightly greater than under Alternative B and would be long-term, direct, and adverse.

Cumulative Impacts

Cumulative impacts on visitor use, recreation, and education and interpretation under Alternative D would be similar to Alternative C.

Conclusions

Impacts under Alternative D would be similar to Alternative C; however, Alternative D would have the advantage of removing traffic from Elkhorn Tavern. Visual impacts of a new two-way road through undisturbed lands may diminish the quality of the visitor experience. Overall, impacts on visitor use, recreation, and education and interpretation under Alternative D would be local, temporary and long-term, minimal, and adverse. The impacts on visitor use, recreation, and education and interpretation from Alternative D would not likely be significant because the impacts would not appreciably alter these resources from the existing conditions within the park.

Alternative E – No Action Alternative

Impacts

Under the no action alternative, visitors would have access to the park via a new interchange at the existing and new Highway 62 west of the current park entrance. This would provide a safer entrance and exit from the park. There would be no improvements to internal park roads to allow two-way travel to the Elkhorn Tavern. Visitors who want to only visit the Elkhorn Tavern would have to drive the entire Tour Road. Traffic and parking at Elkhorn Tavern would continue, reducing the quality of the visitor experience at this historic site.

Cumulative Impacts

Cumulative effects from past, present, and future actions would be similar to Alternative A, but the no action alternative would not contribute to improvements of removing traffic and parking from the Elkhorn Tavern. Revegetation of abandoned sections of Highway 62 would have long-term beneficial effects on the scenic views for visitors.

Conclusions

The quality of the visitor experience would not change substantially from the existing conditions. Rerouting of Highway 62 would require moving access to the park entrance, but internal park roads and parking would continue to operate. There would be no improvements to the quality of the visitor experience by allowing two-way travel to Elkhorn Tavern and traffic and parking at the tavern would continue to diminish the quality of the visitor experience. As a result, the no action alternative would have a long-term slight adverse impact on the visitor experience. The impacts on visitor use, recreation, and education and interpretation from the no action alternative would not likely be significant because the impacts would not appreciably alter these resources from the existing conditions in the park.

CONSULTATION AND COORDINATION

NATIONAL HISTORIC PRESERVATION ACT, SECTION 106 CONSULTATION

Agencies that have direct or indirect jurisdiction over historic properties are required by Section 106 of the NHPA to take into account the effect of any undertaking on properties listed in, or eligible for listing in, the National Register. The NPS has documented compliance with the requirements of both NEPA and Section 106 of the NHPA pursuant to 36 CFR Part 800.8(c) within this EA/AoE.

The park sent an initial consultation letter to the SHPO on March 1, 2013, during the development of the separate Highway 62 relocation project. The letter informed the SHPO of the proposed EA and mitigation activities as a result of the relocation project and of the upcoming intensive-level archeological inventory (see Appendix B). The SHPO also received maps of the preliminary mitigation alternatives as well as other park background documents. A response was received from the SHPO on April 12, 2013 stating that the previous EA developed by AHTD and FHWA, as well as the PA for that process (completed in 2012), govern Section 106 review on this undertaking and that the NPS must coordinate with FHWA on any cultural resource surveys since FHWA is the lead federal agency.

Agency scoping for the EA/AoE began with a scoping letter sent on June 24, 2014 to the SHPO to solicit input on issues of concern (see Appendix B). The SHPO also received a copy of the draft EA/AoE for review and comment, and the park will coordinate with the SHPO in the development of mitigation measures for historic and archeological resources, if necessary. A letter response was received from the SHPO on July 24, 2014 stating that Alternative A appears to result in the least removal of the Tour Road, which is likely eligible for the NRHP because of its association with Mission 66. In addition, Alternative A would result in the least amount of ground disturbance and would be less likely to impact archeological resources. A similar letter was sent to the ACHP on June 24, 2014. The ACHP responded in a letter dated August 4, 2014 stating that they will not be participating in the current Section 106 consultation since they did not participate in the 2012 PA, unless controversy should develop and the NPS or another party should contact them or request their involvement. The letter also recommended steps to take if the project results in impacts unanticipated in the 2012 PA.

Consultation with American Indian Tribes

The following federally recognized American Indian tribes and tribal governments that are traditionally associated with the area now containing the park were consulted prior to and during the development of this EA/AoE and received a copy of the draft EA/AoE:

- Absentee Shawnee Tribe
- Caddo Nation
- Cherokee Nation of Oklahoma
- Jena Band of the Choctaw Indians
- The Osage Nation
- Shawnee Tribe of Oklahoma
- Quapaw Tribe of Oklahoma

- United Keetoowah Band of Cherokee Indians
- The Chickasaw Nation
- Muscogee (Creek) Nation of Oklahoma

A letter was sent to American Indian tribes and organizations on March 1, 2013, during the development of the separate Highway 62 relocation project. The letter informed the tribes of the proposed EA and mitigation activities as a result of the relocation project and of the upcoming intensive-level archeological inventory (see Appendix B). A follow-up letter was sent to the American Indian tribes and organizations on March 12, 2013 that included a copy of the Draft NAGPRA Plan of Action to address the possible discovery of human remains or funerary or ceremonial objects during all park planning activities. An e-mail response was received from the Muscogee (Creek) Nation on April 11, 2013 stating that they would defer to the Caddo Nation, Quapaw Tribe of Oklahoma, and The Osage Nation because they are most likely to have shared group identity and were culturally affiliated with earlier peoples who occupied the park in past centuries. The Muscogee (Creek) Nation also sent an updated list of tribal contacts. A meeting was held with the THPO of the United Keetoowah Band of Cherokee Indians on May 6, 2013. Several ongoing projects within the park were discussed including the Highway 62 Mitigations EA. No concerns or issues were raised at that meeting; however, the THPO identified areas of interest, and buffer zones were developed for these areas to be avoided during construction activities. The Shawnee Tribe responded in an e-mail on May 20, 2013 concurring that no known historic properties would be negatively impacted by the project.

On June 24, 2014, the park sent a scoping letter to American Indian tribes and organizations informing them of the proposed project and soliciting comments (see Appendix B). Information from the tribes also was requested to determine if any ethnographic resources are in the project area and if the tribes wanted to be involved in the environmental compliance process. American Indian tribes traditionally associated with the parklands were also given an opportunity to review and comment on this EA/AoE. The NPS will continue to consult with the tribes throughout construction of this project.

No responses from area tribes were received following the scoping notice.

U.S. FISH AND WILDLIFE SERVICE, SECTION 7 CONSULTATION

In accordance with Section 7 of the Endangered Species Act, the park initiated consultation with the USFWS on February 27, 2013, during development of the separate Highway 62 relocation project. The letter included a list of threatened and endangered species in Benton County and stated that no adverse effects on listed species are expected as a result of the proposed action as none of the species have been sighted or documented in the park. The USFWS responded on March 12, 2013 and concurred with the NPS that the project would have no effect on listed species and no further consultation is required for the project unless new information concerning listed species is presented prior to project completion.

A scoping letter was sent to the USFWS on June 24, 2014 (Appendix B). The USFWS Arkansas Field Office responded to the scoping letter in an e-mail dated August 11, 2014, stating that the alternatives proposed appear to have minor adverse effects on fish and wildlife resources, with no effects anticipated to listed species. The USFWS response is in Appendix B.

The park also forwarded this EA/AoE to the USFWS for review and comment. The USFWS, in coordination with the NPS, will determine the level of consultation needed for potential effects on threatened and endangered species for the proposed project. The USFWS will review this EA/AoE to determine if they concur with the park's findings of effect, and whether additional conservation measures are needed to protect listed species.

ENVIRONMENTAL ASSESSMENT REVIEW AND LIST OF RECIPIENTS

The EA/AoE will be released for a 30-day public comment period. To inform the public of the availability of the EA/AoE, the NPS will publish and distribute a letter to the park's general mailing list; area tribes; and federal, state, and local agencies. The park will provide a press release to the area media. In addition, the park will provide hard copies of the EA/AoE to area libraries. Interested individuals may obtain a copy of the EA/AoE upon request. The EA/AoE will also be available for review at the park's visitor center and on the Internet at <http://parkplanning.nps.gov/peri>. Comments can be submitted through this website or provided in writing to: Superintendent, Pea Ridge National Military Park, Attn: Highway 62 Mitigations EA, P.O. Box 700, 15930 Hwy 62, Garfield, AR 72732.

COMPLIANCE WITH FEDERAL AND STATE REGULATIONS

The NPS would comply with all applicable federal and state regulations when implementing the preferred alternative. Permitting and regulatory requirements for the preferred alternative are listed in Table 6.

TABLE 6. ENVIRONMENTAL COMPLIANCE REQUIREMENTS

Agency	Statute, Regulation, or Order	Purpose	Project Application
Federal			
National Park Service	National Environmental Policy Act	Applies to federal actions that may significantly affect the quality of the environment.	Environmental review of the preferred alternative and decision to prepare a FONSI or EIS.
	National Historic Preservation Act, Section 106	Protection of historic and cultural resources.	A PA was developed to address anticipated effects and mitigation for cultural resources.
	EO 11990, "Protection of Wetlands" and NPS 77-1: <i>Wetland Protection</i>	Requires avoidance of adverse wetland impacts where practicable and mitigation, if necessary.	The preferred alternative would have no effects on wetlands as these areas would be avoided and would not include the discharge of fill material into wetlands.
	EO 11988, "Floodplain Management"	Requires avoidance of adverse floodplain impacts, where practicable, and mitigation, if necessary.	The preferred alternative would have no effect on floodplains.
	NPS 77-2: <i>Floodplain Management</i>	Protection of natural resources and floodplains.	The preferred alternative would have no effect on floodplains.
U.S. Army Corps of Engineers	Clean Water Act – Section 404 Permit to discharge dredge and fill material	Authorizes placement of fill or dredge material in waters of the U.S. including wetlands.	The preferred alternative would not discharge fill material into wetlands.
U.S. Fish and Wildlife Service	Endangered Species Act	Protection of federally listed threatened or endangered species.	The park is consulting with the USFWS as part of the NEPA process.

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

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