National Park Service
U.S. Department of the Interior

Fort Pulaski National Monument
Georgia

FINDING OF NO SIGNIFICANT IMPACT for the FORT PULASKI BRIDGE PROJECT

April 2015

INTRODUCTION

The Environmental Assessment (EA) for the Fort Pulaski Bridge Project and this Finding of No Significant Impact (FONSI) constitute the record of the environmental impact analysis and decision-making process for making improvements to the Fort Pulaski Bridge in Chatham County, Georgia. The National Park Service (NPS) and Federal Highway Administration (FHWA) have approved the selection of Alternative H, as identified in the EA. This FONSI summarizes the findings of the EA and incorporates the public input provided during the 30 day public comment period from March 4, 2015 through April 2, 2015.

BACKGROUND

The Fort Pulaski Bridge provides access from McQueens Island to Cockspur Island and Fort Pulaski. The bridge was originally constructed in 1938, and was rehabilitated in 1965. Repair projects were also completed in 1996 and 2008 to extend the life of the bridge. The bridge has continued to deteriorate; therefore, improvements to the bridge were proposed in order to maintain the Park's ability to safely serve visitors by providing safe vehicular access across the South Channel of the Savannah River to Fort Pulaski.

SELECTED ALTERNATIVE

Based on the analysis presented in the EA, the NPS and FHWA have selected the NPS Preferred Alternative (Alternative H) for implementation. The existing bridge will be replaced with a new bridge that meets current American Association of State Highway and Transportation Officials (AASHTO) specifications with regards to lane width, shoulder width, live load capacity, and crash worthy railing system. A new bridge with two travel lanes will be built upstream of the existing bridge. The bridge will be approximately 29 feet wide (including the width of the railings) with two 11-foot wide travel lanes and a five-foot shoulder on the downstream side. The bridge railing will be 42 inches high, meeting the minimum requirements for use by vehicles,

bicyclists, and pedestrians; however, there will be no railing to separate the pedestrians and bicyclists using the shoulder from the vehicles in the travel lanes.

There will be a total of 114 concrete piles installed to construct the bridge. Eighteen piles will be installed in the banks of the River for the abutments and wingwalls. There will be six piles driven per bent, except for bents 3, 6, 7 and 10, which would have 12 piles per bent. The pile caps will be constructed, upon which a concrete beam would be placed. The bridge deck will be cast offsite and then set in place on top of the beams. The beams and deck will be installed using a crane positioned on a barge in the River. A cast-in-place concrete overlay will be constructed over the precast bridge deck panels. The intermediate spans of the bridge will be built to a length of 105 feet, and the length of the end spans would be 70 feet. There will be 13 spans and 12 bents. The existing bridge will remain open to traffic during construction. Riprap will be placed at each of the bridge abutments in order to protect the abutments from scour. It is estimated that 45,000 cubic feet of riprap will be placed at the north abutment and 63,000 cubic feet of riprap will be placed at the south abutment. The bridge will be constructed in one construction phase. After construction is completed and the new bridge is open, the existing bridge will be removed, and the area will be restored to natural tidal marsh conditions.

MITIGATING MEASURES

The following are mitigation measures related to construction activities to be implemented under the Selected Alternative (Alternative H).

- A Memorandum of Agreement (MOA) with the State Historic Preservation Office (SHPO) was executed on September 9, 2014 to document the resolution of adverse effects to the cultural landscape. Prior to demolition Historic American Engineering Record documentation of the bridge will be completed. The construction drawings for the new bridge will be reviewed by the SHPO.
- Temporary Best Management Practices (BMPs) will be utilized to minimize erosion and sedimentation from ground disturbing activities to exposed bare soil. The BMPs may include the use of silt-fence, sediment logs, erosion matting, or check dams. These BMPs will be used only during construction and will be removed once the disturbed area has been permanently stabilized.
- Disturbed soil will be re-vegetated using specific native seed mixes that do not include invasive or exotic species.
- Any soil excavated during construction will be stockpiled and reused as fill if needed. Should additional soil be needed, the soils will be clean, native soils.
- Should construction unearth previously undiscovered archeological resources, work will be stopped in the area of any discovery, and the Park will consult with the State Historic Preservation Officer/Tribal Historic Preservation Officer and the Advisory Council on Historic Preservation (ACHP), as necessary, according to §36 CFR 800.13, Post Review Discoveries. In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (1990) will be followed as appropriate.

- Localized turbidity curtains will be installed where the River floor may be disturbed in order to not increase the turbidity of the River.
- The Standard Manatee Conditions for Boating Facilities will be implemented.
- No in-water work will be done from April 15th through May 31st and from September 1st through November 30th in order to avoid disruption of the Atlantic sturgeon spawning migration.
- Any dewatering activities will include the filtering of the water prior to reintroducing it to the River. Pumping water directly into the channels will be prohibited.
- The pile-driving hammer will be "ramped-up" to allow animals to leave the area. The minimum energy level required to drive the piles will be utilized to minimize noise levels and micarta cushion blocks will be used to dampen noise. A vibratory hammer will be utilized to install the sheet pile cofferdams.
- Compensatory mitigation of tidal marsh wetlands will be required by the NPS and will also be required by the United States Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act. Wetland mitigation will include the restoration of a portion of the existing bridge approach areas and the installation of living shorelines, if feasible. Coordination with the Corps will continue throughout the project development process to ensure the proposed wetland mitigation meets their requirements.
- Mitigation of tidal marsh wetlands to compensate for Essential Fish Habitat (EFH) impacts will be required by the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS) under the Magnuson Stevens Act. Coordination with NMFS will continue throughout the project development process to ensure that the proposed wetland mitigation meets their requirements.

OTHER ALTERNATIVES ANALYZED IN THE EA

Additional alternatives were considered in order to meet the purpose and need, as described in the EA in Chapter 1: Purpose and Need. These alternatives include: Alternative A – No Action Alternative, Alternative B – Emergency Repairs, Alternative C – FRP Jacketing of All Piles, Alternative D – Rehabilitation of Existing Bridge, Alternative E – Install Additional Support on Existing Bridge, Alternative F – Replace on Existing Alignment, and Alternative G – Replace on a New Alignment. A detailed discussion of these alternatives can be found in Chapter 2 of the EA.

Under Alternative A, no substantial improvements other than routine maintenance operations would be performed. Implementation of Alternative A would not maintain the Fort Pulaski Bridge as safe public access, or maintain visitor access to the Fort Pulaski National Monument.

Under Alternative B, emergency repairs would be performed. The bridge would continue to be monitored every two years. Emergency repairs would be made to address all serious structural deficiencies on an as needed basis. It is anticipated that the emergency repairs would be similar to the repairs made in 2008, which included jacketing the piles with a fiber-reinforced polymer (FRP) jacket which was then filled with epoxy grout to encapsulate the timber and reduce the rate of deterioration. Alternative B would make short-term repairs because only the most seriously deteriorated elements would be repaired. Additional repairs would likely be necessary after each two-year inspection.

Under Alternative C, all of the timber piles would be jacketed with a FRP jacket that would then be filled with epoxy grout to encapsulate the timber and thus protect it from deteriorate. The

wrapping would extend approximately two feet below the mud line and approximately two feet above high water level. Additional substructure (elements of the bridge that support the deck) repairs would include replacing timber cross bracing and bent caps, installing timber corbels, and repairing concrete bent caps. Superstructure repairs would also be completed, and would likely consist of cleaning and painting all of the structural steel in the main span, cleaning exposed rebar in the bridge deck and diaphragms in the main span and coating them with protective sealant, and replacing timber deck shims.

Under Alternative D, the existing bridge would be rehabilitated. FRP jackets would be installed on the most deteriorated timber piles as identified by previous bridge inspections. The jacket would be filled with epoxy grout to encapsulate the timber and protect it from further deterioration. The wrapping would extend from the mud line (but not below) to above the high water level. Sections of severely deteriorated timber piles may be replaced, if needed. It is estimated that 40 piles would have new FRP jackets installed, 30 piles would have their existing FRP jackets replaced, and that ten piles would have sections replaced and FRP jackets installed. Additional substructure repairs would include replacing timber cross bracing and bent caps, installing timber corbels, and repairing concrete bent caps. Superstructure repairs would also be completed, and would likely consist of cleaning and painting all of the structural steel in the main span, cleaning exposed rebar in the bridge deck and diaphragms in the main span and coating them with protective sealant, and replacing timber deck shims. Riprap would also be replaced around the bridge abutments. It is estimated that 18,500 cubic feet of riprap would be placed at the north abutment and 29,000 cubic feet would be placed at the south abutment.

Under Alternative E, two new steel piles and one new floorbeam would be installed on each side of the existing pile bent. The new piles and floorbeams would support the existing superstructure. Alternative E would improve the bridge so that it could provide safe access to Fort Pulaski; however, these repairs would have a shorter lifespan because of corrosion of the steel piles from the saltwater.

Under Alternative F, the existing bridge would be replaced with a new bridge that would be built in sections on the same alignment. The most deteriorated bridge spans would be replaced first and emergency repairs would be made as they are needed to maintain the remaining sections until they can be replaced. The new bridge would have two 12-foot travel lanes and two 4.5 foot shoulders, and would be approximately 36 feet wide including the railing width. Riprap would be placed at each of the bridge abutments in order to protect the abutments from scour. It is estimated that 52,500 cubic feet of riprap would be placed at each end of the bridge. The bridge would be replaced in multiple construction phases as funding is available.

Under Alternative G, the existing bridge would be replaced with two one-lane bridges. Each one-lane bridge would be approximately 22 feet wide with a 12-foot wide travel lane and two three-foot wide shoulders. Concrete piles would be driven into the river bottom. There would be Riprap would be placed at each of the bridge abutments in order to protect the abutments from scour. It is estimated that 52,500 cubic feet of riprap would be placed at each end of the bridge. The bridge would be replaced in multiple construction phases as funding is available. Once constructed, the new one-lane bridge would carry all truck loading with a signal system. The existing bridge would then only serve cars and other light vehicles until the second one-lane bridge is built. The second one-lane bridge would also be built in phases as funding is available. The existing bridge could service as a pedestrian/fishing bridge for several years.

ALTERNATIVES DISMISSED FROM FURTHER ANALYSIS IN THE EA

The NPS and FHWA considered and dismissed from further analysis several alternatives before development of the range of reasonable alternatives for full impact analysis. Descriptions of these preliminary alternatives and reasons for their dismissal are provided in Chapter 2 of the EA.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

The Environmentally Preferred Alternative is determined by applying the criteria from Section 2.7 (D) of NPS Director's Order 12. This is also the criteria laid out by the Council on Environmental Quality regulations that state, "the environmentally preferable alternative is the alternative that will best promote the national environmental policy as expressed in Section 101(b) of NEPA." This alternative will have the least impact to the biological and physical environment while preserving historic, cultural, and natural resources. The Selected Alternative is the alternative that best provides and improves access to the Fort Pulaski National Monument while minimizing impacts to the Fort Pulaski National Monument.

THE SELECTED ALTERNATIVE AND SIGNIFICANCE CRITERIA

As defined in 40 CFR § 1508.27(b), significance is determined by examining the following 10 criteria. A discussion on why the Selected Alternative (Alternative H) will not have a significant effect on the human environment follows each criterion.

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.*

   There will be no significant impacts as a result of implementing the Selected Alternative. Effects from the Selected Alternative to the resources analyzed in the EA are described below.

   Cultural Landscape: The Selected Alternative will result in long-term, moderate, and adverse impacts to the cultural landscape from the removal of the existing bridge and introduction of a new circulation pattern. A MOA has been executed to document the resolution of the adverse effect.

   Floodplains: The Selected Alternative will result in long-term, minor to moderate, and adverse impacts to floodplains from the placement of riprap at the bridge abutments.

   Species of Special Concern: The Selected Alternative will result in short-term minor, and adverse impacts from the pile driving and placement of riprap and long-term minor, and beneficial impacts from the removal of the existing bridge and mitigation of tidal marsh to species of special concern.

   Wetlands: The Selected Alternative will result in long-term, moderate, and adverse impacts to wetlands from the realignment of the bridge approaches and placement of riprap. Approximately 0.40 acres of intertidal wetlands will be impacted. After the removal of the

existing bridge, the existing bridge approaches will be restored to tidal marsh to provide compensatory mitigation.

Wildlife and Wildlife Habitat: The Selected Alternative will have short and long-term, minor, and adverse direct impacts to wildlife and wildlife habitat from the increase noise during construction and the realignment of the bridge approaches and placement of riprap.

2. *The degree to which the action affects public health or safety.*

   Implementation of the Selected Alternative will repair the conditions of the Fort Pulaski Bridge, which will have a moderate beneficial impact to public health and 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.*

   Historic or Cultural Resources: The Fort Pulaski Bridge connecting McQueens Island and Cockspur Island was built by the Civilian Conservation Corps in 1938. The Fort Pulaski Bridge is listed on the Cultural Landscape Inventory and contributes to the Fort Pulaski National Monument cultural landscape. An MOA has been executed to resolve the adverse effects of demolishing the Fort Pulaski Bridge.

   Parklands: No other Federal, State, or local parklands occur in the vicinity of the project area.

   Prime Farmlands: No prime farmlands occur in the vicinity of the project area.

   Wetlands: Although the approaches to the Fort Pulaski Bridge were constructed on fill material, the area surrounding the roadway approaches is intertidal wetlands. The Selected Alternative will impact approximately 0.40 acres of wetlands. Wetland impacts have been minimized to the maximum extent possible and compensatory mitigation will be implemented.

   Wild and Scenic Rivers: No wild or scenic rivers occur in the vicinity of the project area.

   Ecologically Critical Areas: No ecologically critical areas occur in the vicinity of the project area.

4. *The degree to which the effects on the quality of the human environment are likely to be highly controversial.*

   There were no highly controversial effects identified during the preparation of the EA or the public review period.

5. *Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks.*

   Potential impacts from implementation of the Selected Alternative are not highly uncertain and do not 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.*

   The Selected Alternative will not establish a precedent for future actions.

7. *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.*

   The Selected Alternative, when considered with other reasonably foreseeable past, present and future projects, is anticipated to result in cumulative effects. None of the anticipated effects are significant.

8. *The degree to which the action may adversely affect items listed or eligible for listing in the National Register of Historic Places, or other significant scientific, cultural or historic resources.*

   The bridge is considered eligible for listing on the National Register of Historic Places because although it has undergone considerable rehabilitation and repair since it was built, it retains its integrity of location, feeling, association, workmanship, design, and setting. The removal of the bridge is an adverse effect to the cultural landscape. Consultation per Section 106 of the National Historic Preservation Act was completed with the SHPO. An MOA was executed to resolve the adverse effects. Measures to be carried out to mitigate the adverse effect on the Fort Pulaski Bridge include Historic American Engineering Record documentation of the existing bridge and review of the construction drawings for the new bridge by the SHPO.

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.*

   Consultation per Section 7 of the Endangered Species Act was completed with the United States Fish and Wildlife Service (USFWS) and NMFS. In a letter dated August 29, 2012 to the USFWS, the FHWA determined that Selected Alternative may affect, but is not likely to adversely affect the West Indian manatee. In a letter dated October 25, 2012 the USFWS concurred with FHWA's determination of "not likely to adversely affect" for the West Indian manatee. In a letter dated March 26, 2014, the FHWA re-initiated consultation with the USFWS. The FHWA determined that Alternative H (Replacement on New Alignment – Two-Lane Bridge) may affect, but is not likely to adversely affect the West Indian manatee. In a letter dated May 5, 2014, the USFWS concurred with the determination.

   In a letter dated August 29, 2012 to the NMFS and subsequent coordination, the FHWA determined that the Selected Alternative may affect, but is not likely to adversely affect the Atlantic Sturgeon, shortnose sturgeon, and green turtle, Kemp's ridley turtle, and loggerhead turtle. Turbidity curtains will be used in the areas where the river floor may be disturbed. In-water work will be restricted from April 15th through May 31st and September 1st through November 30th to avoid impacts to the Atlantic sturgeon during the migration season. A vibratory hammer will be used to install the sheet-pile cofferdams instead of an impact hammer in order to reduce noise impacts to the Atlantic sturgeon and sea turtles. The NMFS service stated in a letter dated November 27, 2012 that, "We believe the project may affect, but is not likely to adversely affect shortnose sturgeon, Atlantic sturgeon, and sea turtles." In a letter dated March 26, 2014, the FHWA re-initiated consultation with the NMFS. The

FHWA determined that Alternative H (Replacement on a New Alignment – Two-Lane Bridge) including mitigation measures may affect, but is not likely to adversely affect the Atlantic Sturgeon, green, Kemp's ridley, and loggerhead sea turtles. The FHWA determined that Alternative H would have no effect on the shortnose sturgeon; however, further consultation with NMFS indicated that a recent study has shown that they may be present in the project area. In a letter dated October 10, 2014, the NMFS concurred that the proposed actions are unlikely to adversely affect Atlantic sturgeon, shortnose sturgeon and green, Kemp's ridley and loggerhead sea turtles.

10. *Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.*

    Applicable Federal, State, and local laws and requirements were considered in the development of the improvements to the Fort Pulaski Bridge. The Selected Alternative does not violate any Federal, State, or local environmental protection laws.

PUBLIC INVOLVEMENT

The EA was made available for public review from March 4, 2015 through April 2, 2015. Flyers providing information about the availability of the EA were sent to the mailing list. During this 30-day period, hardcopies of the EA were available for review at the Fort Pulaski National Monument Visitor Center, and the Tybee Island Branch of the Chatham County Library located at 405 Butler Avenue, Tybee Island, Georgia 31328. An electronic version of the EA was made available on the NPS's PEPC website at http://parkplanning.nps.gov/fopu. A legal notice was run in the Savannah Morning News on February 27, 2015 announcing the public comment period. Comments received on the EA are addressed in an Errata Sheet attached to this FONSI.

SECTION 4(f)

Section 4(f) of the U.S. Department of Transportation Act of 1966, 49 U.S.C. 303(c), states that the use of land from a significant publicly-owned public park, recreation area, or wildlife and waterfowl refuge, or any significant historic site (as determined by the officials having jurisdiction over the resource) as part of a Federally-funded or approved transportation project is permissible only if there are no feasible and prudent alternatives to the use and that the proposed action includes all possible planning to minimize harm to the protected property resulting from such use. The project is for a Federal lands transportation facility identified in the NPS' inventory. Per 23 U.S.C. 138(a), the project is exempt from Section 4(f) review and approval.

CONCLUSION

As described above, the Selected Alternative does not constitute an action meeting the criteria that normally requires the preparation of an Environmental Impact Statement (EIS). The Selected Alternative will not have a significant effect on the human environment. Environmental impacts that could occur are limited in context and intensity, with generally adverse impacts that are localized, short-to long-term, and range from negligible to moderate. There are no unmitigated adverse effects on public health and safety, threatened or endangered species, sites or districts listed in or eligible for listing in the National Register of Historic Places or other

unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any Federal, State, or local environmental protection law.

Based on the foregoing, it has been determined that an EIS is not required for this project and thus will not be prepared.

Recommended: _____ 4/15/2015

Melissa Memory
Superintendent
Fort Pulaski National Monument
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Recommended: _____ 4/8/15

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APPENDIX A
IMPAIRMENT DETERMINATION

The Prohibition on Impairment of Park Resources and Values

NPS *Management Policies 2006*, Section 1.4.4, explains the prohibition on impairment of park resources and values:

> While Congress has given the Service the management discretion to allow impacts within parks, that discretion is limited by the statutory requirement (generally enforceable by the federal courts) that the Park Service must leave park resources and values unimpaired unless a particular law directly and specifically provides otherwise. This, the cornerstone of the Organic Act, establishes the primary responsibility of the National Park Service. It ensures that park resources and values will continue to exist in a condition that will allow the American people to have present and future opportunities for enjoyment of them.

What is Impairment?

NPS *Management Policies 2006*, Section 1.4.5, *What Constitutes Impairment of Park Resources and Values*, and Section 1.4.6, *What Constitutes Park Resources and Values*, provide an explanation of impairment.

> Impairment is an impact that, in the professional judgment of the responsible National Park Service manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values.

Section 1.4.5 of *Management Policies 2006* states:

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

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

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

Per Section 1.4.6 of *Management Policies 2006*, park resources and values that may be impaired include:

- the park's scenery, natural and historic objects, and wildlife, and the processes and condition that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes an smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structure, and objects; museum collections; and native plants and animals;
- appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;
- the park's role in contributing g to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and
- any additional attributes encompassed by the specific values and purposes for which the park was established.

Impairment may result from NPS activities in managing the park, visitor activities, or activities undertaken by concessionaires, contractors, and others operating in the park. Impairment may also result from sources or activities outside the park, but this would not be a violation of the Organic Act unless the NPS was in some way responsible for the action.

How is an Impairment Determination Made?

Section 1.4.7 of *Management Policies 2006* states, "[i]n making a determination of whether there would be an impairment, an NPS decision make must use his or her professional judgment. This means that the decision-maker must consider any environmental assessments or environmental impact statements required by the National Environmental Policy Act of 1969 (NEPA); consultations required under Section 106 of the National Historic Preservation Act (NHPA); relevant scientific and scholarly studies; advice or insights offered by subject matter experts and others who have relevant knowledge or experience; and the results of civic engagement and public involvement activities relating to the decision.

Management Policies 2006 further define "professional judgment" as "a decision or opinion that is shaped by study and analysis and full consideration of all the relevant facts, and that takes into account the decision maker's education, training, and experience; advice or insights offered by subject matter experts and others who have relevant knowledge and experience; good science and scholarship; and, whenever appropriate, the results of civic engagement and public involvement activities relation to the decision.

Impairment Determination for the Selected Alternative

This determination on impairment has been prepared for the Preferred Alternative as described on page 23 of the Environmental Assessment (EA). An impairment determination is made for all

resource impact topics analyzed for the Selected Alternative. An impairment determination is not made for visitor use and experience, park operations or health and safety because impairment findings relate back to park resources and values, and these impact areas are not generally considered to be park resources or values according to the Organic Act, and cannot be impaired in the same way that an action can impair park resources and values.

Cultural Landscape

The Selected Alternative will result in long-term, moderate, and adverse impacts to the cultural landscape. The new bridge would introduce an intrusion into a previously undisturbed area of the cultural landscape and the realignment of the entrance road at the bridge approaches would introduce a new circulation pattern that was never present historically. The removal of the existing bridge would remove an important Civilian Conservation Corps (CCC)-era structure that contributes to the cultural landscape. Mitigation measures will be implemented and include Historic American Engineering Record documentation of the bridge and review of the construction drawings for the new bridge by the State Historic Preservation Office; as identified in the executed Section 106 of the National Historic Preservation Act Memorandum of Agreement. Therefore, the Selected Alternative will not result in impairment of the cultural landscape.

Floodplains

The Selected Alternative will result in long-term, minor to moderate, and adverse impacts to floodplains. The construction of a new bridge in the floodplain would be somewhat offset by the removal of the existing bridge; however, the placement of riprap at the abutments of the bridge would place fill material in the floodplain. The decrease in floodwater storage capacity of the floodplain will be negligible; therefore, the Selected Alternative will not result in impairment to floodplains.

Species of Special Concern

The Selected Alternative will result in short-term and long-term, minor to moderate, and adverse impacts to species of special concern. Endangered Species Act consultation was completed with the United States Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS). USFWS and NMFS Fisheries Service concurred that the Selected Alternative "may affect, but is not likely to adversely affect" any Federally-listed species. Essential Fish Habitat consultation was also completed with the NMFS. NMFS found that the impacts to tidal marsh will adversely affect Essential Fish Habitat and provided a conservation recommendation to provide a compensatory mitigation and monitoring plan to NMFS for approval. A compensatory mitigation plan will be provided to NMFS during the permitting process for approval prior to the start of construction. Impacts to State-listed species would be minor. Therefore, the Selected Alternative will not result in impairment to species of special concern.

Wetlands

Approximately 0.40 acres of estuarine intertidal emergent wetland (tidal marsh) would be impacted by the construction of the bridge on a new alignment and the placement of riprap in order to implement the Selected Alternative, causing a long-term, moderate and adverse impact to wetlands. The Selected Alternative requires compensatory mitigation per Procedural Manual #77-1: Wetland Protection. The roadway approaches for the existing bridge would be restored

to tidal marsh in order to compensate for the loss of wetland function. It is anticipated that 0.50 acres of tidal marsh would be restored. Therefore, the Selected Alternative will not result in impairment to wetlands.

Wildlife and Wildlife Habitat

The Selected Alternative will have short- and long-term, minor, and adverse impacts to wildlife and wildlife habitat. Construction activities will increase noise, impacting wildlife. The construction of the new bridge would impact tidal marsh habitat and open water aquatic habitat; however, the removal of the existing bridge and the compensatory wetland mitigation would restore both tidal marsh and open water aquatic habitat. Therefore, the Selected Alternative will not result in impairment to wildlife and wildlife habitat.

The NPS has determined that implementation of the Preferred Alternative, as described as Alternative H on page 23 of the EA and identified as the Selected Alternative in the Finding of No Significant Impact, will not result in impairment of park resources and values at Fort Pulaski National Monument. This determination is based on a thorough analysis of the environmental impacts described in the EA, the agency comments received, and the application of the provisions of the *NPS Management Policies 2006*. The rehabilitation of the Fort Pulaski Bridge will maintain the Park's ability to safely serve visitors by providing safe vehicular access to Cockspur Island and Fort Pulaski while minimizing impacts to Park resources.

Errata Sheet on the Environmental Assessment for the Fort Pulaski Bridge Project

Comments were received during the public comment period that warrant the preparation and distribution of an errata sheet on the above referenced Environmental Assessment. This sheet will become part of the project file. The comments and responses are as follows:

1. Comment: I am glad to hear that the Fort Pulaski Bridge is under consideration for replacement and relocation as this is more cost-effective than making repairs to the aging bridge. Fuel trucks and delivery trucks use the bridge to service the Coast Guard station, Savannah Pilot's station and the park service. No doubt, these heavy vehicles are needed but surely stress the "elderly" bridge structure.

   Response: The existing bridge is currently posted with a limit of 18 tons, and the posting limit would likely decrease in weight as the bridge continues to deteriorate. The new bridge will be designed to be safe for all legal loads, including fuel and delivery trucks.

2. Comment: In commenting on the replacement of the Fort Pulaski Bridge; I would like to say that if the replacement of the bridge is truly a safety issue, then I am all for it; however, I do know that developers have wanted to develop the western end of the island for years. They were halted because the existing bridge was not able to "handle" the additional traffic and also it is a NPS bridge. The developers were told they would have to build their own bridge to access and develop that tract of land. Now my hope is that a new bridge will not allow that beautiful, natural island to fall into the hands of some zealous developer.

   Response: The purpose of the project is to maintain the Park's ability to safely serve visitors by providing safe vehicular access to the Fort Pulaski National Monument. Access to the western tip of Cockspur Island from the Park will not be provided as part of this project.

3. Comment: Thank you for the opportunity to comment on the proposed replacement of the Fort Pulaski Bridge. The bridge is an important historic resource which contributes to integrity and significance of Fort Pulaski. The proposed replacement of the bridge will have a negative impact on the cultural landscape. The proposed mitigation measures (documentation) seem insufficient given its significance. It is unfortunate that cost is the deciding factor in this decision. It is equally unfortunate that the proposed design for the replacement bridge appears to lack context sensitivity. Aesthetically, the proposed design does not relate to the rural, coastal character of a barrier island. The wider vehicle travel lanes (increasing from 10 feet to 11 feet) with broad shoulders may encourage higher traffic speeds, creating an unsafe environment for pedestrians and bicyclists. The lack of a barrier between the automobile lanes and the shoulder area intended for pedestrians and bicyclists will discourage pedestrians and bicyclists from utilizing the shoulder. Additional efforts should be made to create a safe, pedestrian and bicycle-friendly access to Fort Pulaski, especially considering the adjacency to McQueen's Trail. Additionally, the report mentions local government and agency coordination but the letters provided in Appendix A indicate that only state and federal agencies were directly contacted. I hope you will reconsider the decision to replace the bridge. Should the bridge be replaced, please consider additional mitigation measures such as research and

publication of the importance of CCC projects in Chatham County. I also hope you will consider a design that is more context sensitive and safer for pedestrians and bicyclists. Finally, please provide additional coordination with local governments and agencies on future projects.

Response: An important aspect of the project is the balancing of improving multi-modal access to Cockspur Island while respecting the coastal character and historic CCC development of the bridge. The new bridge will better accommodate bicycles and pedestrians with a five-foot shoulder; and, in order to minimize the footprint of the bridge, the shoulder is located on one side only. The speed limit is consistently posted at 20 miles per hour throughout the Park. The higher bridge railing on the new bridge will be safer for bicycle and pedestrian use; and, the rails will be an aesthetic open concrete rail to enhance the views of and from the bridge. The Memorandum of Agreement regarding the resolution of the adverse effect to the cultural landscape was developed and executed with the State Historic Preservation Officer. Local agencies were provided with direct notification of the scoping and public comment period for the project, and we will continue to reach out to local agencies for future projects.

4. Comment: Forgive me and I know that it is probably less expensive to tear down the old and replace with a new bridge but is it not part of the NPS Charter to maintain and restore as opposed to "tear down" culturally significant items such as the Fort Pulaski Bridge. I visit our National Parks to a degree to see what once was and throughout my life, have developed such respect and awe for the CCC's and all they have done for our country during a time of great sacrifice. We are not far from a centennial celebration of when the CCC's began and I for one would want to see the Fort Pulaski Bridge restored and maintained as opposed to building new. We need to celebrate these great treasures that all too often disappear through neglect. Let us celebrate what once was and in this day where we all travel at the speed of bits and bytes, give us reason to pause to slow down and try to remember a by gone era when so many contributed to the good of all as young men in the prime of their lives. What they did, what they taught us, what they gave us needs to be celebrated and not pushed aside because the "numbers" say it is cheaper to ... I pray we will make the right decision here.

   Response: Several scenarios for the rehabilitation of the existing bridge, including rehabilitation to Secretary of Interior Standards for Historic Preservation, were considered. Although rehabilitation would extend the life of the bridge, it would eventually still need to be replaced.

5. Comment: I am so glad to hear that the NPS is protecting the wonderful resource at Fort Pulaski by replacing/repairing the bridge from US Hwy 80 to the island. However, in all the reports that I scanned (did not read Every word) I cannot find where the proposed new bridge is to be located. I have noticed with great interest the survey teams that have scoured all of the causeway with concern that a new entrance to the Park would not be within the area that the palms and oleanders are. I also do not understand why the cost of replacing the bridge in the area where it is located now is not desired - the report states that it would take less supports ($$$), disturb less of the natural habitat (endangered species, respect for the natural resources) and would eliminate a well-used parking area (restored?) for people who use the walking/biking trail! Both bridges are described to be the same - except one is longer and therefore more expensive. The less

the causeway is disturbed would seem to be the better of the two options - why is the new bridge desired to be somewhere else - - and where is that???

Response: Under the Selected Alternative, the bridge will be replaced immediately adjacent to the existing bridge. The existing bridge would remain open to traffic until the new bridge is completed to maintain access to Cockspur Island during construction.

6. Comment: On behalf of Historic Savannah Foundation (HSF), I would like to comment on the proposed replacement of the Fort Pulaski Bridge (c.1938). The existing bridge is, we think, an important element within the Fort Pulaski National Monument and is worthy of rehabilitation and continued use. We agree with the original identification of Alternative D as the Preferred Alternative. We understand that cost is a factor, but we think the repair/rehab option should stay on the table for consideration. Timber piles can be replaced and safety standards can be met without eliminating the historic bridge. In essence, we question the need for "a pound of cure" when "an ounce of prevention" may be all that is necessary. The low volume of vehicular traffic across the bridge and the relatively low gross vehicle weights in use on the bridge lead us to believe that the proposed new bridge is expensive overkill. Alternative H, Replace on a New Alignment with a Two-Lane Bridge should be reexamined. This plan will cause adverse impacts to natural, cultural and aesthetic resources. These will occur both during and after construction; not to mention the adverse impacts from removal of the existing historic bridge and the resultant change to the landscape and view shed. Further, the replacement design includes excessively wide travel lanes and shoulders which will serve only to encourage vehicles to accelerate and speed rather than go slowly and carefully. As for arguments about improved visitor access, the Monument is perfectly accessible as is. Repainting lanes and adding signage for pedestrians and bikes would be adequate. Wider lanes and a higher railing (which is also a visual intrusion) are rationalizations—not good reasons—to remove an historic and contributing element to the Monument. As we observe the replacement of the US-17 bridge between Hutchinson Island and South Carolina, we note that the new bridge has higher and solid, "Iowa-barrier" walls that deny passengers the opportunity to see the landscape and riverscape of Back River. So not only is this new bridge, itself, a visual intrusion, it does not allow for adequate viewing of the sights on either side of the bridge—natural features, the port, etc. We imagine that the replacement bridge will have a similar deleterious effect crossing from US-80 to the Monument. It stands to reason that its construction will accomplish nothing other than diminishing the experience of visitors when they arrive to enjoy the natural, cultural and aesthetic resources of the Monument—looking at the bridge and from the bridge. HSF urges the NPS to reconsider its Preferred Alternative and revert to Alternative D. We would be pleased to be part of a larger, community conversation about this issue.

   Response: Rehabilitation of the existing bridge was analyzed in the Environmental Assessment. While deterioration of the timber piles is a concern, the main structural problem is the deterioration of the timber decking. Although the life of the bridge would be extended through rehabilitation, the bridge would still need to be replaced. The existing bridge has two ten foot-travel lanes, and is not wide enough to restripe to provide a shoulder area. The new bridge will have two eleven foot-wide travel lanes and one five-foot shoulder, making it approximately five and a half feet wider than the existing bridge. The speed limit is consistently posted at 20 miles per hour throughout

the Park. Higher railings are necessary in order to improve the safety of pedestrians and bicyclists. The new bridge rail will be an aesthetic open concrete railing that will enhance the view of and from the bridge.

7. Comment: NOAA National Marine Fisheries Service (NMFS) provided a letter that noted that the EA does not provide the additional detail requested regarding the proposed mitigation and monitoring, and recommends that the consultation not be described as being completed.

   Response: A mitigation plan is under development and will be provided to NMFS to review.

8. Comment: I've lived on Tybee Island several times from childhood until again in the recent past. Today, in my retirement here on Wilmington Island, I spend several days a week on Tybee Island walking the beach, the Rails-to-Trails path as well as visiting the fort... On my drive, one of the reminders of "the good old days" is the Fort Pulaski Bridge. It's been there my entire life. So, since you are seeking comment, I ask that you actively consider restoration of the bridge. I'm sure it's a reassuring reminder of our history for others, as it is for me, and it fits the fort's history and mystique much better than an up-to-date structure. We can afford to leave those modern concrete and rebard bridges for future generations to reminisce about. The existing Ft. Pulaski Bridge is an investment in memories.

   Response: Rehabilitation of the existing bridge was analyzed in the Environmental Assessment; and, although the life of the bridge would be extended, the bridge would still need to be replaced.