

**Record of Decision**  
**Tamiami Trail Modifications: Next Steps**  
**Everglades National Park**

**1. Introduction**

The Tamiami Trail Modifications: Next Steps project arose as part of the 2009 Omnibus Appropriations Act passed by Congress on March 10, 2009. In this act, Congress directed the National Park Service (NPS) “to immediately evaluate the feasibility of additional bridge length, beyond that to be constructed pursuant to the (Modified Water Deliveries) MWD Project (16 U.S.C. SS 410r-S), including a continuous bridge, or additional bridges or some combination thereof, for the Tamiami Trail (U.S. Highway 41) to restore more natural water flow to Everglades National Park and Florida Bay and for the purpose of restoring habitat within the Park and the ecological connectivity between the Park and the Water Conservation Areas.”

On May 29, 2009, the NPS issued a Notice of Intent (NOI) in accordance with the provisions of the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 et seq.), for the preparation of a Feasibility Study and Environmental Impact Statement (EIS) to comply with the requirements of the 2009 Omnibus Appropriations Act. The NPS completed a Final EIS on December 14, 2010. The Final EIS evaluated alternatives for modifications to the Tamiami Trail, including bridging and road raising, required to restore the ecological conditions in Northeast Shark River Slough and the Water Conservation Areas and establish the foundation for future restoration efforts in the Everglades. The No-Action Alternative and five Action Alternatives were considered in the Final EIS. All of the Action Alternatives included bridge construction and reconstruction of the remaining highway, with differences being in the bridge lengths and locations. Generally, where bridging of the Tamiami Trail is to occur, the bridges will be constructed adjacent to the existing roadway and the existing roadway and embankment will be removed once the bridge section is open to public traffic. The NPS signed a Record of Decision on February 11, 2011 selecting Alternative 6e for implementation.

The FHWA is hereby adopting the Tamiami Trail Modifications: Next Steps Final EIS, prepared by the NPS. This document constitutes the record of decision for implementation of Alternative 6e.

**2. Purpose and Need**

The project purpose was developed as part of the 2009 Omnibus Appropriations Act passed by Congress on March 10, 2009. The NPS proposes:

“To immediately evaluate the feasibility of additional bridge length, beyond that to be constructed pursuant to the MWD Project (16 U.S.C. SS 410r-S), including a continuous bridge, or additional bridges or some combination thereof, for the Tamiami Trail (U.S. Highway 41) to restore more natural water flow to Everglades National Park and Florida

Bay and for the purpose of restoring habitat within the Park and the ecological connectivity between the Park and the Water Conservation Areas.”

Based on the specific language in the Act, the project delivery team determined that the project was needed in order to:

- Improve flows to and ecological conditions in Everglades National Park by bridging the Tamiami Trail to provide for unconstrained flows to Northeast Shark River Slough and Florida Bay;
- Restore the natural pathways for species movements (ecological connectivity) by removing obstructions to sheet flow between Water Conservation Area 3B and Northeast Shark River Slough;
- Improve historic flow patterns between Water Conservation Area 3B and Northeast Shark River Slough by reconnecting remnant sloughs, allowing natural re-contouring of the ridge and slough landscape;
- Improve ecological habitats in Everglades National Park, including ridge and slough, the Rocky Glades, and coastal estuaries; and
- Ensure compatibility with pre-Comprehensive Everglades Restoration Plan (CERP) and CERP projects.

The proposed action is to implement environmental mitigation through modification (no increase in capacity or transportation driven improvements) of an existing transportation facility (Tamiami Trail).

### **3. Selected Alternative**

The preferred alternative identified in the Tamiami Trail Modifications: Next Steps Final EIS is Alternative 6e. Alternative 6e best satisfies the project’s purpose and need and best minimizes impacts to the natural and human environment. Based on the analysis presented in the Final EIS, the FHWA has selected Alternative 6e, (the preferred alternative) for implementation.

### **4. Other Alternatives Considered**

Six alternatives were identified for detailed engineering evaluation and comparative analysis. The 2005 Revised General Reevaluation Report/Second Supplemental Environmental Impact Statement (RGRR/SEIS) was used as the basis for developing the initial suite of alternatives. These alternatives were renamed later for ease of use. Through further discussion and refinement other project alternatives emerged and if the adjustments were small, the existing alternative was given a lower case letter designation (e.g. a, b, or c) depending on the order in which it was developed.

All alternatives include bridge construction and reconstruction of the remaining highway, with differences being in the bridge or ConSpan (prefabricated culvert) lengths and locations. The bridge typical section would satisfy current Florida Department of Transportation (FDOT) standards and be uniform throughout their entire lengths.

Because the existing Tamiami Trail is a FDOT owned and maintained public roadway and will continue to be utilized by the public in the same manner as prior to implementation of any proposed modifications, all of the proposed alternatives would be built to satisfy FDOT standards. The NPS is only responsible for the content of the information contained in the EIS. All future actions associated with the implementation of the Tamiami Trail Modifications: Next Steps project subsequent to the release of this document, including design, permitting, and construction of the project will be determined at a later date. In addition, it should be noted that before proceeding with construction, it will be necessary to obtain FDOT approval on design, plans, and specifications of the project before proceeding to construction. This approval shall include submittal of all plans, designs, and specifications, which will be signed and sealed by a Florida registered Professional Engineer.

The existing Tamiami Trail roadway embankment would be removed from the areas where the bridge would be constructed. The remaining highway embankment would be reconstructed to raise the crown elevation to 13.13 feet, the minimum required to comply with the FDOT Flexible Pavement Design Manual and FDOT Plans Preparation Manual based on a design high water elevation of 9.7 feet<sup>1</sup> in the L-29 Canal and the roadway cross section geometry. To meet current FDOT standards for roadway geometry<sup>2</sup>, the higher profile of the roadway would result in a wider roadbed than currently exists. Therefore, expansion of the highway footprint southward would be necessary to avoid impacting the L-29 Canal.

Access facilities, such as ramps to the bridge (elevated roadway), would be provided for existing facilities. The maintenance of traffic and construction sequence for the bridge and roadway would be based on the best balance of traffic safety, environmental impacts, and construction cost and duration.

Staging areas for construction equipment and materials may be located at business sites along the corridor. Staging and other functions may also require use of the existing shoulder for temporary periods. Additional staging areas may be necessary near the eastern end of the corridor. This project would generate a large quantity of material excavated from the road bed that could be disposed or recycled for use in the other areas of the Everglades restoration project. One disposal site, Rocky Glades, which is owned by South Florida Water Management District (SFWMD), is approximately 15 to 20 miles from the construction site. Selected quantities of soils and organic peat may be evaluated for placement in the nearby Broward Water Preserve Area. Asphalt material could be used in other road beds. Excavated fill could be used as backfill for the levee

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<sup>1</sup> In the 2005 RGRR/SEIS, the USACE used the NSM over a 36-year POR to establish a stage frequency curve for Tamiami Trail. Stages were extrapolated from the curve for particular frequencies to determine the DHW and the peak stage for overtopping criteria. Using the 20-year frequency, the 24-hour stages of DHW for pavement design was 9.7 feet (NGVD 1929).

<sup>2</sup> Based on the FDOT Flexible Pavement Design Manual and FDOT Plans Preparation Manual, the minimum crown elevation for the roadway was calculated to be 13.13 feet based on the following parameters: 9.7-foot design high water; 2-foot base clearance; 10 inch limerock base (OBG 9), LBR 100, SN= 1.8; 3.5 inch type SP structural course (traffic C), SN= 1.54; 0.75 inch friction course FC-5 (traffic C); and 2.88-inch for 2% cross-slope over 12 foot travel lane.

associated with the L-67 Extensions project, where up to 50,000 cubic yards of material could be needed. Storing and recycling material could reduce hauling and disposal costs, as well as provide cost savings on other projects where this type of material is needed. Additionally, FDOT may consider some of the excavated material to be “salvageable materials” that could be used by FDOT for other purposes.

#### **4.1 No Action Alternative**

The No Action Alternative is authorized by the 2008 Limited Reevaluation Report and Environmental Assessment (LRR/EA) and consists of construction of a 1 mile eastern bridge with the remaining road raised to allow an increase in the allowable stages in the L-29 canal from 7.5 feet NGVD to 8.5 feet NGVD.

All of the following action alternatives assume the 1 mile eastern bridge (2008 LRR/EA) has been constructed. The lengths of the bridges, transition areas between the bridges and the roadway, and the roadway are separated in the descriptions.

#### **4.2 Alternative 1– 2.2 Miles of Bridges**

This alternative includes 4 bridges (for a total of 2.2 miles of bridge): a 0.56 mile bridge (Bridge A1) located between the Osceola Camp and the Lincoln Financial Radio Tower; a 0.45 mile (Bridge B1) located between the Lincoln Financial Radio Tower and everglades Safari Park facility; a 0.51 mile bridge (Bridge C1) located between Frog City and Gator Park; and a 0.26 ConSpan (ConSpan H1) located just west of Coopertown, at control structure S-355B. The bridges and ConSpan would create a conveyance opening through Tamiami Trail by removing the sections of the existing highway and embankment. Bridges would be constructed approximately 50 feet south of the existing roadway ROW to maintain motor vehicle traffic during bridge construction. The remaining highway embankment would be reconstructed to raise the crown elevation of 13.13 feet.

#### **4.3 Alternative 2a- 3.3 Miles of Bridges**

The bridge configurations include: (1) a 0.56 mile bridge located between the Osceola Camp and the Lincoln Financial Radio Tower, (2) a 0.45 mile bridge located between the Lincoln Financial Radio Tower and Everglades Safari Park, (3) a 0.51 mile bridge located between Everglades Safari Park and the Airboat Association, (4) a 0.38 mile bridge located between the Airboat Association and the Tiger Tail Camp, (5) a 0.26 mile ConSpan location between the Coopertown facility and the Salem communication radio tower, (6) a 0.53 bridge located between the Salem Communications radio tower and the existing one mile bridge and, (7) a 0.66 mile bridge located between the existing one mile bridge and the S-334 structure.

Alternative 2a would involve creating conveyance openings through Tamiami Trail by removing 3.3 miles of the existing highway and embankment. Bridges would be constructed approximately 50 feet south of the existing roadway right-of-way to maintain motor vehicle traffic during

bridge construction. The remaining highway embankment would be reconstructed to raise the crown elevation to 13.13 feet.

#### 4.4 Alternative 4- 1.0 Mile Bridge

This alternative includes 2 bridges: A1 and B1 (for a total of 1.0 mile), as described for Alternative 1. The bridges would create a conveyance opening through Tamiami Trail by removing the sections of the existing highway and embankment. Bridges would be constructed approximately 50 feet south of the existing roadway right-of-way to maintain motor vehicle traffic during bridge construction. The remaining highway embankment would be reconstructed to raise the crown elevation to 13.13 feet.

#### 4.5 Alternative 5- 1.5 Miles of Bridge

Alternative 5 consists of 3 bridges; A1, B1, and C1 (for a total of 1.5 miles) as described for Alternative 1. The bridges would create a conveyance opening through Tamiami Trail by removing the sections of the existing highway and embankment. Bridges would be constructed approximately 50 feet south of the existing roadway right-of-way to maintain motor vehicle traffic during bridge construction. The remaining highway embankment would be reconstructed to raise the crown elevation to 13.13 feet.

#### 4.6 Alternative 6e- 5.5 Miles of Bridges

Alternative 6e is the maximum bridge option and consist of 5.5 miles of bridges and elevating the remaining roadway. The bridge configurations include: (1) a 2.66 mile bridge located between the Osceola Camp and the Airboat Association, (2) a 0.4 mile bridge located between the Airboat Association and the Tiger Tail Camp, (3) a 1.8 mile bridge located between the Tiger Tail Camp and the existing one mile bridge, and (4) a 0.7 mile bridge located between the existing one mile bridge and the S-334 structure. Bridges would be constructed approximately 50 feet south of the existing roadway right-of-way to maintain motor vehicle traffic during bridge construction and avoid impacts to infrastructure north of the project area. The remaining highway embankment would be reconstructed to raise the crown elevation to 13.13 feet. Subsequent modifications have been made to Alternative 6e based on recommendations from a project Value Analysis Workshop held on December 9-13, 2013. These recommendations included modification of the proposed 2.66 mile bridge into two bridge segments, with elimination of aerial access ramps, thereby providing on grade access to the Everglades Safari site. This modification resulted in a reduction in environmental impact (including less wetland encroachment) as compared to the original Alternative 6e that proposed aerial ramp (bridge) access to Everglades Safari, see also NPS Memorandum to the File dated May 8, 2014.

**Table 1. Action Alternative Comparison**

Evaluation Criteria	Alt. 1	Alt. 2a	Alt. 4	Alt. 5	Alt. 6
<b>Roadway at 12 ft offset (feet)</b>	27,820	17, 992	40,060	34,783	13,,928
<b>Alignment Transitions (feet)</b>	11,280	16,210	5,080	7,680	9,560
<b>Bridge (feet)</b>	10,016	16,262	5,354	8,031	28,354

<b>Precast Arch-Type Bridge Culverts</b>	1,378	1,378	0	0	0
<b>Total Length (feet)</b>	50,494	51,842	50,494	50,494	51,842
<b>Total Length (miles)</b>	9.56	9.82	9.56	9.56	9.82

#### 4.3 Other Alternatives Considered and Dismissed

Due to the aggressive schedule needed to complete this EIS and report to Congress in one year, DOI managers provided guidance for the selection of alternatives and directed NPS to reevaluate appropriate alternatives from the 2005 RGRR/SEIS and explore the potential to use additional alternative to meet the project objectives. Each of the alternatives from the 2005 RGRR/SEIS was modified to remove the one mile eastern bridge portion of each alternative since this plan was approved for construction per the 2008 LRP. Therefore, the one mile eastern bridge approved for construction per the 2008 LRR/EA is the “No Action” Alternative for this project. All of the alternatives in the 2005 RGRR elevated the roadway to allow for water levels in the adjacent marshes associated with the restoration objectives of CERP. The frequency of water level conditions as predicted by the Natural Systems Model (NSM) was used as the basis for the design of the roadway in a manner consistent with FDOT requirements. The water levels from the NSM were used to define a maximum hydrologic state for purposes of designing modifications to the roadway that would allow for future unconstrained flow into Everglades National Park following restoration. The bridging alternatives shorter than 1.0 mile were dismissed for further consideration due to perceived minimal improvements above the No Action Alternative (1.0 mile of bridging). The 10.7 mile causeway (bridge) alternative was dismissed due to potential impacts to Tribal areas (e.g. bridging over the two Tribal areas would result in both visual and auditory impacts to native customs and practices). This resulted in the development of six conceptual alternatives (Alternatives 1 to 6) to carry forward into the project for more detailed engineering analysis. Modified Alternatives 9, 11, 15, and 16 from the 2005 RGRR/SEIS were evaluated during the internal scoping process and were considered but dismissed for the following reasons:

- 2005 RGRR/SEIS Alternative 9- This alternative was dismissed from consideration in the EIS because the length of bridging was too minimal (once the 2008 LRR/EA Preferred Action Alternative one mile bridge was removed from the alternative) to be cost efficient for analysis and construction, and would be not adequately meet the project objectives.
- 2005 RGRR/SEIS Alternative 11- This alternative was dismissed from consideration in the EIS because currently, the greatest amount of water flow occurs through culvert sets at the eastern end of the project area due to the proximity to the L-31 Canal; the greatest benefit would be provided by constructing a bridge/span in another location that does not currently receive as great amount of water flow. Therefore, this alternative was dismissed from further analysis since it is similar to other less environmentally damaging alternatives.
- 2005 RDRR/SEIS Alternative 15- This alternative was dismissed from consideration in the EIS because the length of bridging was too minimal (once the 2008 LRR/EA Preferred Action Alternative one mile bridge was removed from the alternative) to be cost efficient for analysis and construction, and would not adequately meet the project objectives.

- 2005 RDRR/SEIS Alternative 16- This alternative was dismissed from consideration in the EIS because the length of bridging was too minimal (once the 2008 LRR/EA Preferred Action Alternative one mile bridge was removed from the alternative) to be cost efficient for analysis and construction, and would not adequately meet the project objectives.

After further discussion and refinement, Alternatives 2, 2b, 3, 6a, 6b, 6c and 6d were dismissed for the following reasons:

- Alternative 2- This alternative included approximately 3.5 miles of bridging along with elevating the remaining roadway within the limits of the project corridor. This alternative, along with Alternative 6 were the only alternatives with a 0.7 mile bridge east of the existing one mile bridge (No Action Alternative). Alternative 2 was subsequently split into two alternatives, 2a (with 0.7 mile eastern bridge) and 2b (without 0.7 mile eastern bridge).
- Alternative 2b- This alternative included the elements of Alternative 2, above, but with the removal of the approximate 0.7 mile easternmost bridge. However, it was determined that a separate seepage study should be conducted prior to roadway construction and any resulting impacts should be addressed as part of that study. Thus, it was determined that the easternmost bridge be retained in order to maximize the restoration of more natural water flow and ecological connectivity for the purpose of restoring habitat within the park. Therefore, Alternative 2b was dismissed since it was similar to Alternative 2a, and Alternative 2a was carried forward for further analysis.
- Alternative 3- This alternative included approximately 2 miles of bridging along with elevating the remaining roadway within the limits of the project corridor. This alternative was dismissed due to the locations of the proposed bridges. It was determined that bridging needs to retain a buffer of approximately 0.5 miles from existing tribal areas to avoid potential impacts from aesthetic and noise related effects. Therefore, Alternative 3 was dismissed from further analysis because it would cause too great of an environmental impact.
- Alternative 6- This alternative included approximately 5.1 miles of bridging alone with elevating the remaining roadway within the limits of the project corridor and was the alternative sought to maximize bridging. This alternative did not include access down ramps to the two radio tower facilities that exist along the project corridor because it was originally determined during the real estate assessment that the purchase of the two radio towers may be more cost effective than cost-to-keep (retain these facilities in an operational capacity). This alternative was subsequently split into 5 alternatives (Alternatives 6a-6e) to further analyze variations to this alternative.
- Alternative 6a- This alternative included the elements of Alternative 6, above, including the removal of the access down-ramps from Tamiami Trail to Everglades Safari and Coopertown airboat facilities. This alternative was dismissed from further analysis because not providing access to the airboat facilities was determined to be inconsistent with NPS commitments to provide this access with all viable design alternatives. Therefore, Alternative 6a was dismissed from further analysis.

- Alternative 6b- this alternative included the elements of Alternative 6, above, including provisions for access down-ramps from Tamiami Trail to Everglades Safari and Coopertown airboat facilities. This alternative was dismissed because it did not include access down ramps to the two radio tower facilities that exist along the project corridor, which conflicts with NPS comments.
- Alternative 6c- This alternative included the elements of Alternative 6b, above, including provisions for access down-ramps from Tamiami Trail to Everglades Safari and Coopertown airboat facilities. In addition, this alternative included the removal of the approximately 0.7 mile easternmost bridge to minimize potential freshwater seepage affects east of the L-31N canal (outside of natural system areas in ENP). However, it was determined that a separate seepage study should be constructed prior to roadway construction and any resulting impacts should be addressed as part of that study. Thus, it was determined that the easternmost bridge be retained in order to maximize the restoration of more natural water flow and ecological connectivity for the purpose of the restoring habitat within the Park. In addition, this alternative did not include access down ramps to the two radio tower facilities that exist along the project corridor. There, Alternative 6c was dismissed from further analysis due to conflicts with NPS commitments.
- Alternative 6d- This alternative included the elements of the Alternative 6c, above, including provisions for access down-ramps from Tamiami Trail to Everglades Safari and Coopertown airboat facilities as well as the removal of the approximately 0.7 mile easternmost bridge to minimize potential freshwater seepage affects east of the L-31N canal (outside of natural system areas in Everglades National Park). This alternative also included access down ramps to the two radio tower facilities that exist along the project corridor because it was determined during their real estate assessment that these facilities would remain operational. However, it was determined that a separate seepage study should be conducted prior to roadway construction and any resulting impacts should be addressed as part of that study. Thus, it was determined that the easternmost bridge be retained in order to maximize the restorations of more natural water flow and ecological connectivity for the purpose of restoring habitat within the Park. Therefore, Alternative 6d was dismissed from further analysis since it was similar to Alternative 6e.

## 5. Environmental Consequences of the Selected Alternative

Table 2 (below) provides a summary of the impacts that would result from the roadway modifications under the Selected Alternative (Alternative 6e).

**Table 2: Summary of Impacts from Implementing the Preferred Alternative**

Resource	Impacts from the Selected Alternative (Alternative 6e)
<b>Soil</b>	
<b>Soils</b>	Effects to soils would be directly related to the short-term and long-term effects caused by construction, operations, and maintenance associated with any of the bridging alternatives. It is anticipated that the soil impacts resulting from temporary construction-related activities would be adverse, local, minor, and short term. Long term impacts resulting from implementing any of the project alternatives are anticipated to be adverse, local and minor.

<b>Water Resources</b>	
<b>Hydrology</b>	There will be a short term adverse, minor, localized effects on hydrology associated with project construction. Additionally, all action alternatives will have a long term beneficial effect on hydrology based on their capacity to convey flows and relative low velocities.
<b>Water Quality</b>	Water quality would be directly related to the short term and long term effects caused by construction, operations, and maintenance associated with the Tamiami Trail bridging project alternatives. It is anticipated that the water quality impacts resulting from construction-related activities would be adverse, local, minor, and short term. No long term effect to water quality associated with the construction of the project alternatives are anticipated from construction and maintenance related activities associated with the bridging project. The proposed bridges will have debris and grit collection features installed and maintained by the FDOT (similar to those installed in the "1 Mile Bridge" project). Stormwater management, such as extended detention measures, will be installed where feasible in portions of the to-be-abandoned Tamiami Trail earth embankment.
<b>Wetlands</b>	The action alternative would result in moderate, adverse, short term, localized effects to wetlands associated with construction of temporary work areas. Additionally, implementation of the action alternatives would result in moderate, adverse, long term, localized effects to wetlands associated with permanent filling of wetlands in conjunction with raising the crown of Tamiami Trail and construction of bridges. However, long term effects to wetlands resulting from operations remain unknown, since an operational plan has not yet been developed for the project alternatives. Since there is uncertainty as to the level of wetland improvements that would be achieved with the operation of the project, mitigation would be conducted at the Hole-in-the-Donut site at ENP if anticipated project benefits do not adequately offset the project's impacts to wetland value and functions. This will be in compliance with Executive Order 11990 and USDOT Order 5660.1A
<b>Floodplains</b>	All selected alternatives would have a short term, adverse, moderate, localized effect on floodplain values and functions associated with project construction including diminished ability of the floodplain to convey storm and flood events due to temporary fill and rerouting of water flow. However, the selected alternative would have a long term beneficial effects associated with restoration of water flows. This will be in compliance with Executive Order 11988 and 23 CFR 650A and Regulated Floodway Finding
<b>Wildlife and Vegetation/ Habitat</b>	
<b>Wildlife and Vegetation/ Habitat</b>	Short term and long term, minor to moderate, adverse, effects to wildlife and vegetation/habitats would result from the construction of the selected alternative. Long term beneficial effects to wildlife and habitat would result from the increased ecological connectivity provided through the implementation of all action alternatives.
<b>Land Use</b>	Implementation of all the action alternatives would have a minor, short term, localized, adverse, effect associated with project construction and a longer term localized, adverse, minor effect on land use in association with the conversion of existing land uses to transportation corridor. The end result of moving the current roadway onto bridges and removing existing roadway embankment where it has been abandoned due to bridging, will not create additional space for other land uses besides the existing land uses of natural open space (wetlands/open water) located in the Everglades National Park or incorporated into the current right of way of the Tamiami Trail.

<b>Special Status Species</b>	<p>See Table 3 for Effects Determinations for Federally Listed Species. In Biological Opinion dated October 18, 2010, the USFWS concurred that the proposed action may affect, but is not likely to adversely affect the eastern indigo snake, Everglades snail kite and critical habitat, West Indian manatee and critical habitat, Cape Sable seaside sparrow and critical habitat; but, the USFWS did not concur that the proposed action may affect, but is not likely to adversely affect the Florida panther. The USFWS concurred that the proposed action may affect, and is likely to adversely affect the wood stork. The USFWS stated that the NPS's proposed mitigation will minimize the adverse effects from the proposed action on the wood stork, and that the proposed action is not likely to jeopardize the continued existence of the wood stork or the Florida panther. The project will have no effect upon the Bartram's scrub-hairstreak, Florida leafwing butterfly and Cape Sable thoroughwort. The project may affect, but is not likely to adversely affect the Florida bonneted bat. As agreed by the USFWS, the NPS has committed to survey and monitor for this species as this project moves forward.</p> <p>The US Fish and Wildlife Service (USFWS) as a US Department of Interior agency has supported and provided valuable and constructive input in development of the total integrated Everglades restoration project. It supports Everglades restoration efforts, including the Tamiami Trail Modifications: Next Steps project. Consultation between the USFWS and NPS has resulted in the understanding that the project's effects upon threatened and endangered species and habitat have been avoided where possible and minimized where not avoided. The completed project will provide mitigation and environmental benefits through increased ecological connectivity, restoration of more natural water flows and storm water treatment for the existing/proposed impervious pavements. The NPS has agreed to survey and monitor certain species and nesting activities. Construction and operation of this project (Tamiami Trail Modifications) as currently proposed is supported by the USFWS.</p>
<b>Wilderness/ Unique Ecosystems</b>	
<b>Wilderness/ Unique Ecosystems</b>	<p>Minor, short term, localized adverse impacts would occur from the implementation of the selected alternative as a result of noise, vibrations, and dust generated during construction activities. Minor, long term, localized, adverse effects to wilderness would also occur from the implementation of the selected alternative as a result of direct footprint impacts to wilderness. Beneficial effects would occur as a result of improved connectivity and potential for improved hydrologic flow in the project area and ENP.</p>
<b>Cultural Resources</b>	
<b>Cultural Resources</b>	<p>The selected alternative would have adverse effects on the following cultural resources:</p> <p><b>Tamiami Trail-</b> major effects; 4 bridges and removal of 5.5 miles</p> <p><b>Coopertown Restaurant and Airboat Rides-</b> major effects; take 0.4 acre of 3 acre parcel for bridge across front of property, add 0.8 acre for replacement parking, visual impacts of elevated bridge likely to be adverse.</p> <p><b>Airboat Association of Florida-</b> minor effects; take 0.3 acre of 10 acre parcel for expanded highway ROW and 0.1 acre for TCE, setting slightly altered, no adverse effect.</p> <p><b>Miccosukee Osceola Camp-</b> minor effects; use 0.4 acre of 5 acre parcel for expanded highway ROW and 0.2 acre for TCE, setting slightly altered, no adverse effect. Bridge construction will be no nearer than ½ mile to Osceola and Tiger Tail Camp.</p>

	See attached Memorandum of Agreement between the FL SHPO, NPS and FHWA dated April 24, 2014 for mitigation of adverse effects.
<b>Visitor Use and Experience</b>	
<b>Visitor Use and Experience</b>	Short term impacts caused by construction of the selected alternative would cause visitors utilizing the section of Tamiami Trail within the project corridor to experience minor to moderate inconveniences such as lane closures; reduce speed limits; reduced accessibility to visitor facilities/ activities; construction-related noise and vibrations; reduced quality of wildlife-related recreational activities caused by construction-related noise and vibrations; reduced quality of wildlife-related recreational activities caused by construction-related noise dust and fumes; and the visual presence of construction vehicles and heavy equipment in construction zones. Visitors would also experience some long term beneficial effects from the implementation of the selected alternative. However, most aspects of visitor use and experience would experience no change or a negligible change due to the implementation of any of the action alternatives proposed for the project. Therefore, minor to moderate, short term, localized, adverse impacts and long term beneficial effects to visitor use and experience would result from the implementation of the selected alternative.
<b>Park Management and Operations</b>	
<b>Park Management and Operations</b>	No short term or long term adverse or beneficial effects to park management and operations would result from the selection of the selected alternative.
<b>Noise/ Soundscapes</b>	
<b>Noise/ Soundscapes</b>	By following the NPS management practices and FDOT standards, no impairment or unacceptable impacts to noise sensitive sites in the project study area are expected to occur as a result of construction of this project. Likewise, considering the existing conditions and the long established presence of traffic along the Tamiami Trail, the increase in highway noise predicted to occur with the selected alternative is not expected to cause operation and maintenance of this project to result in impairment or unacceptable impacts to nearby noise sensitive sites or the park's soundscape. Therefore, it is concluded that the proposed project would cause short term, moderate, adverse, localized effects to the park's soundscape associated with project construction; however, there would be no long term effects associated with the project's operation.
<b>Socioeconomics</b>	
<b>Socioeconomics</b>	Implementation of any of the action alternatives would have some positive effect on employment, gross output, and the gross regional product of Miami-Dade County; and to a lesser extent, the State of Florida, and any social impacts would be minimal. Therefore, the long term impacts from the selection of the selected alternative would be beneficial. Converting some of the current roadway from fill embankment to bridges and maintaining, with minor variations in horizontal and vertical alignment, the same roadway alignment and traffic capacity will not encourage, facilitate or justify changes in private and public land use and density along or at, the termini of the subject 10.7 mile road corridor.
<b>Transportation</b>	
<b>Transportation</b>	Transportation effects associated with the Selected Alternative would be adverse, local, minor, and short term and primarily associated with traffic delays related to construction activities. Mitigation of these effects would be though implementation of MOT plans. No long term increases in traffic levels

	are associated with the Selected Alternative. See also traffic noise, air quality, environmental justice, US DOT Section 4(f), indirect effects, cumulative impacts and water quality discussions under other topics of this document. Tamiami Trail's functional classification is as a FDOT rural principal arterial. Its applicable design standards and anticipated use will continue the same after implementation of the proposed action (preferred alternative). The National Park Service (US Government) will ultimately transfer (fee simple ownership) of lands necessary for the construction and operation of the new bridges and roadway transitions to the State of Florida. As compensation for the land areas to be transferred from the US Government to the State of Florida for this action, the State of Florida will transfer to the US Government (NPS) state owned land area of similar natural value (as determined acceptable by the NPS) currently located immediately adjacent to Everglades National Park.
<b>Hazardous, Toxic and Radioactive Waste</b>	
<b>Hazardous, Toxic, and Radioactive Waste</b>	The implementation of the Selected Alternative may lead to long term, adverse, negligible to moderate, localized affects to the environment due to potential contamination by hazardous or toxic waste. A Phase II Environmental Assessment is strongly recommended for three properties adjacent to the Tamiami Trail Bridge Project Corridor. Groundwater sampling for VOAs and Volatile Organic Compounds (VOCs) should be conducted at Everglades Safari, Gator Park, and at the entrance to the Salem Communications radio tower. Any actionable contamination or materials encountered within current or future Tamiami Trail right of way/easement will be addressed and remediated in accordance with state and federal regulations.
<b>Air Quality</b>	
<b>Air Quality</b>	Everglades National Park is a designated Class I air quality area under the Clean Air Act. Lands with this designation are subject to the most stringent air quality regulations. Very limited increases in pollution are permitted in the vicinity. Impacts to air quality include short-term construction emissions and long-term operation emissions. During construction, air quality would be impacted by the generation of dust, and the emissions from construction equipment. The level of greenhouse gas emissions produced would be 2,568 metric tons of carbon equivalent (MTCE). Emissions generated from transport and construction equipment would be mitigated through the use of best management practices (BMPs) implemented during construction and would not measurably contribute negatively to air quality conditions. The Selected Alternative would not increase the capacity of the road, change the posted speed limit, or modify any traffic control measures (stop signs or stop lights) that would change the current operation. There would be no change to the emissions related to the long-term operation of the road. The Selected Alternative would have negligible effects on air quality, and the Class I air quality status of the Park would be unaffected.
<b>Prime or Unique Farmland</b>	
<b>Prime or Unique Farmland</b>	Lands within the Park are not available for farming and therefore do not meet the definitions. Therefore, there would be no impacts to prime or unique farmlands.
<b>Right-of-Way</b>	
<b>Right-of-Way</b>	No right of way is proposed to be acquired from private residential property.

**Table 3: Effect Determination for Federally Listed Species (as concurred by USFWS).**

Species	Effects Determination	Reason
<b>West Indian manatee</b>	May affect, but not likely to adversely affect	Species is not anticipated to occur in the project area. No manatees observed in the project area for 20 years.
<b>Florida panther</b>	May affect, is likely to adversely affect	Project corridor occurs within the Primary Zone of the Service's Panther Focus Area. The project will result in loss of panther habitat. Loss of habitat will be offset by the conservation/restoration of other more functionally valuable habitat, and bridging will provide wildlife underpass rather than on grade crossing of the road and ecological/habitat connectivity.
<b>Eastern Indigo snake</b>	May affect, but not likely to adversely affect	No sightings within project area. Implement the Standard Protection Measures for the East Indigo Snake (USFWS 2004).
<b>Cape Sable seaside sparrow</b>	May affect, but not likely to adversely affect	Species is not anticipated to occur in the project area. No critical habitat within project area. Nearest nesting site is approximately 10 miles south of the project area.
<b>Wood stork</b>	May affect, is likely to adversely affect	Habitat impacts to both the primary and secondary management zones of multiple Tamiami colonies. Implement monitoring and construction restrictions in the primary and secondary management zones during the active nesting season, coordinated with the USFWS.
<b>Everglade snail Kite</b>	May affect, but not likely to adversely affect	No reported nesting in project construction footprint. Implementation of active monitoring and the USFWS draft snail kite management guidelines (USFWS, 2006).
<b>Florida bonneted bat</b>	May affect, but not likely to adversely affect	Species has the potential to occur and forage in the project area but the existing habitat is not likely to provide suitable roosting conditions.
<b>Bartram's scrub-hairstreak</b>	No effect	Species and its larval host plant are not located in the project area. Project area not located within proposed critical habitat.
<b>Florida leafwing butterfly</b>	No effect	This species and its larval host plant are not located in the project area. Project area not located within proposed critical habitat.
<b>Cape Sable thoroughwort</b>	No effect	This species and its critical habitat do not occur in the project area.

## 6. Additional Information Related to the Selected Alternative

### 6.1 Project Funding and Transportation Program/Plan

Phase 1 of this project (2.66 miles of bridging generally centered about the Everglades Safari site) will be funded using a combination of currently designated State and Federal sources (see below). It is assumed additional State/Federal funds will, at the discretion of the State and US

Government, become available for construction of future Phase 2 of this 10.7 miles of Tamiami Trail Modifications: Next Steps project.

**Table 4: Estimate of Project Funding.**

Phase 1	Estimated Cost	Time Frame (FY)	Funding Source
<b>Prelim. Engineering</b>	\$18 Million	2014 - 2015	State/Federal
<b>Right of Way</b>	\$2 million	2015	State/Federal
<b>Construction</b>	\$125 million	2015 - 2019	State/Federal
<b>Total</b>	<b>\$145 Million</b>		

Phase 2	Estimated Cost	Time Frame	Funding Source
<b>Prelim. Engineering</b>	\$45 million	2019 - 2021	Federal
<b>Right of Way</b>	\$4 million	2020	Federal
<b>Construction</b>	\$250 million	2021 - 2026	Federal
<b>Total</b>	<b>\$299 million</b>		

Preparation of the NEPA document for Phases 1 and 2, design build solicitation and construction for Phase 1 (2.66 mile of bridging) is included in The Eastern Federal Lands Highway Division, 2014 – 2017 Transportation Improvement Program as well as in the Miami-Dade Metropolitan Planning Organization’s Transportation Improvement Program (October 2014). Effective October 1, 2014 this project appears on the STIP as “Item Number: 434922 1 Project Description: SR 90/Tamiami Trail from MP 13.868 to MP 24.618 (W. of Krome) \*Non-SIS\* and District: 06 County: Miami-Dade Type of work: New Bridge – No Added Capacity, Project Length: 10.750 mile, also TIP: SR 90/Tamiami Trail from milepost 13.868 to Mile post 24.618 (W. of Krome)

## 6.2 Cultural Resources

The NPS FEIS indicated no determination had been made regarding the eligibility for the National Register of Osceola Camp, however it has been treated/assumed as “eligible”. The proposed action, as defined in the selected alternative, will have no adverse effect upon the treated as eligible Osceola Camp. The project Memorandum of Agreement between the NPS, FHWA and the FL SHPO therefore details only mitigation/stipulations for adverse effect for the Coopertown and Tamiami Trail roadway historic sites/resources, (see attached MOA between FSHPO, NPS and FHWA)

## 6.3 Noise Impacts

Federal regulations state that: “noise impacts occur when predicted traffic noise levels approach or exceed the Noise Abatement Criteria (NAC) levels or when the predicted traffic noise levels substantially exceed the existing noise levels.” With the exception of one (1) first row residence at the Osceola Camp, the predicted noise levels with the action alternatives do not exceed the FDOT Noise Abatement Approach Criteria (NAAC) or the FHWA NAC. According to

23CFR772 and Chapter 17 of the FDOT Project Development and Environment Manual, the reasonableness and feasibility of noise abatement must be considered for the residence in the Osceola Camp where the FHWA's NAC was exceeded. Traffic management measures and alignment modifications were considered in order to abate highway noise but were found to be infeasible and ineffective given the function and location of Tamiami Trail. The noise abatement measures incorporating property acquisition are also not considered feasible given the proximity of the Osceola Camp to Tamiami Trail. Construction of a long continuous noise barrier located within highway ROW as close as possible to the one (1) impacted residence was considered further. The FHWA's TNM model was used to develop conceptual noise barrier designs.

A noise barrier up to 22 feet tall was evaluated along the south side of Tamiami Trail adjacent to the Osceola Camp. In order to maintain access to the camp through the main driveway entrance, two noise barrier segments extending at least 180 feet from the driveway in both directions would be required. It was found that it would not be possible to reduce noise levels by at least 5 dBA at the impacted residence due to the required driveway opening. In addition, it would not be possible to benefit enough residences in this community with a noise barrier costing less than the FDOT's noise barrier cost threshold of \$42,000 per benefited site. Thus, it was determined it was not possible to provide reasonable and feasible noise abatement for the one (1) impacted residence in the Osceola Camp and a noise barrier would not be considered further for this community.

In addition, the selected alternative proposes a slight raising of the road surface for the one mile long sections of roadway centered on Osceola and Tiger Tail Camps (the two residential areas along the subject project section of Tamiami Trail) and includes a ½ mile setback from these camps for any bridge construction. The proposed raising of the existing roadway would be accomplished through a slight horizontal realignment and 2.0 to 2.5 feet raising of the roadway. This slight raising of the roadway does not trigger the need for a FHWA/FDOT noise and attenuation evaluation. Potential noise receptors such as Coopertown and Safari Park, as single receptors, do not meet the requirements for evaluating noise impacts and possible attenuation. The National Park Service has indicated noise attenuation measures such as noise walls would be unacceptable on bridges or along the existing roadway due to the visual impact and obstruction of scenic views of the Everglades National Park from the Tamiami Trail.

## **6.4 Indirect Impacts**

Indirect effects are those caused by the proposed action but occur later in time or farther in distance than the direct impacts discussed in the FEIS. The most common indirect effects associated with roadway projects have to do with induced development, that is, development and impacts of such development that would otherwise not occur if the project were not constructed. Lands surrounding the proposed project corridor currently can be accessed by the existing roadway. As such they could be subject to development even in the absence of implementation of this project. The project will not provide new access to adjacent undeveloped property where access does not currently exist. In summary, the proposed project will accommodate current traffic as well as future increases generated from areas located beyond the project termini, but would not cause those distant, off corridor increases. Moreover the project is consistent with

local and regional planning land use goals and future transportation plans, and will not increase capacity nor add access points.

## **6.5 Cumulative Impacts**

This National Environmental Policy Act documentation (including indirect and cumulative impact documentation) is to evaluate the feasibility of constructing additional roadway bridging and corresponding removal of sections of the existing Tamiami Trail roadway embankment. The undertaking/project is proposed as an action contributing to the restoration of more natural water flow to Everglades National Park (ENP) and Florida Bay. The undertaking/project is also intended to restore habitat within the Park and ecological connectivity between the Park and designated Water Conservation Areas which is presently restricted by the existing Tamiami Trail roadway embankment. These actions, to convert existing sections of the Tamiami Trail roadway fill embankment to bridges in the ENP, has been identified as the Tamiami Trail Modifications: Next Steps project.

Cumulative effects are the incremental effects of the action when added to other past, present and reasonably foreseeable future actions, regardless of the sponsor of those actions. The assessment of cumulative effects requires an assessment of the impact that past and present actions have had on the environmental resources in the project study area that would also be impacted by the proposed project; the current affected environment is a reflection of the impacts of those past and present actions over time. Additionally, a review of cumulative effects requires an assessment of how reasonably foreseeable future actions may affect the same environmental resources that would be directly affected by the project. Cumulative effects have been analyzed for resources for which there would be a direct or indirect impact. A detailed analysis was performed in the NPS FEIS.

Other activities (in addition to the subject Tamiami Trail roadway bridging project in the ENP) related to restoring the natural water flow within Everglades National Park and restoring habitat are also proposed. These related activities or actions are considered part of either the Comprehensive Everglades Restoration Plan (CERP) or non-CERP related activities. The Tamiami Trail Modifications: Next Steps project supports and is supported by previous completed, current and future activities to substantially increase water quality treatment and water storage south of Lake Okeechobee.

The common thread connecting the past, current and future restoration efforts is the need to elevate and remove critical segments of the existing Tamiami Trail roadway embankment to allow for greater volumes of flows to Northeast Shark River Slough in ENP. The completion of the Tamiami Trail Modifications: Next Steps project will provide the infrastructure to move large volume flows to Northeast Shark River Slough associated with new water quality initiatives south of Lake Okeechobee.

## **6.6 Environmental Justice**

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, signed by the President on February 11, 1994 directs

Federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of Federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law.

Native American populations are present within the study area at Osceola Camp and Tiger Tail Camp. The residents of the two "Camp" sites are generally Native American. This project proposes modifications to the Tamiami Trail; however, construction of the Preferred Alternative has been (due to public comments and consideration for Executive Order 12898) restricted to be no nearer to Tiger Tail Camp and Osceola Camp than ½ mile. There would be no effect to the Tiger Tail Camp and there would be no adverse effect to the Osceola Camp from the implementation of the project; therefore, there are no disproportionately high and adverse effects on minority populations and/or low-income populations in the study area.

This project has been developed to be compliant with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, and related federal and state nondiscrimination authorities.

## **6.7 NEPA Re-Evaluation Discussion**

Per 23 CFR 771.129(b), a written evaluation of the final EIS will be required before further approvals may be granted if major steps to advance the action have not occurred within three years after the approval of the final EIS, final EIS supplement, or the last major Administration approval or grant. Reevaluations are used to verify that the scope of the project remains essentially the same, addresses any changes to the project and resulting impacts to natural, cultural or social resources and to determine whether the NEPA document determination remains valid.

Within the above mentioned three year period the NPS and FDOT have taken major steps to advance the action; namely the designation of funding by the State of Florida and DOI/NPS and for the FDOT to undertake the design and construction of the approximately 2.66 miles of bridging as Phase 1 of this project. An agreement for a highway easement over NPS lands for FDOT to construct and maintain the Phase 1 Tamiami Trail bridging on NPS lands has been under negotiation for the past 2 years. Most of the conditions and process to record this easement have been agreed to by NPS and FDOT. A signed agreement, concluding this lengthy negotiation, is anticipated shortly. An aerial easement over a section of Lincoln Financial property has been concluded. Design-Build RFQ and RFP documents have been prepared during the past 2 years. The RFP is expected to be released to contractors shortly. The NPS has obtained environmental permits for the anticipated Phase 1 construction.

## **7. Mitigation Measures**

Mitigation measures and BMPs will be used to prevent or minimize potential adverse impacts associated with the selected alternative, and these measures have been included in the evaluation of impacts of the selected alternative. Mitigation measures that will be undertaken during project implementation include, but are not limited to those summarized below.

The objective - purpose and need for this project is to restore a portion of the natural environmental conditions (pre-Tamiami Trail) including water movement, presence of wetlands and organism habitat connectivity to the natural areas located on the north and south side of the Tamiami Trail. The end result of this action will be a beneficial impact to water movement, wetlands, wild life habitat and a reduction in man-made roadway embankment within and immediately adjacent to the Everglades National Park. The current roadway pavement runoff is generally filtered through a narrow strip of grassy vegetation (for water quality), the proposed action will provide collection boxes for bridge runoff (debris and grit) and where feasible provide detention facilities within the existing road embankment which is to be abandoned when bridge segments are constructed.

### **7.1 General Construction Mitigation Measures**

- Environmental training would be conducted to help educate construction personnel with the intent of reducing impacts on water quality/ soils, wetland resources, and wildlife.
- All construction areas will be protected to confine potentially adverse activities to the minimum area required for construction. All protection measures will be clearly stated in the construction specifications, and workers will be instructed to avoid conducting activities beyond the construction zone. The use of previously undisturbed areas will be minimized to the extent possible by selectively choosing staging areas and clearly defining and marking construction zones and perimeters.

### **7.2 Geology, Topography and Soils**

- The use of tarps or similar cover material or equivalent BMPs will be used on stockpiled fill and other erosion prone areas during construction to minimize erosion as a result of storm events.

### **7.3 Water Resources**

- Pre- and post-construction erosion control BMPs will be implemented, including the installation and inspection of silt fences, straw bale barriers, turbidity barriers, sediment traps, or other equivalent measures, and revegetation of area (where feasible) to control erosion, preserve water quality, protect wildlife and habitat, and prevent soil contamination. Erosion and sediment control BMPs will be inspected and maintained on a regular basis and after each measurable rainfall to ensure they are functioning properly.
- Spill prevention, control, and countermeasure procedures, as well as storm water pollution prevention measures will be implemented to protect water quality/ soils from

erosion and contamination. Areas used for refueling will be limited to areas where these activities currently occur. Equipment containing fuels will be regularly inspected for leaks.

- A water quality monitoring plan will be implemented to ensure compliance with State permitting requirements.
- Impacts to wetlands resources will be avoided and minimized to the maximum extent feasible through the implementation of construction BMPs. All unavoidable impacts will be mitigated.

#### **7.4 Wetlands**

- Since there is uncertainty as to the level of wetland improvements that will be achieved with the operation of the project, mitigation will be conducted at the Hole-in-the-Donut site in ENP if anticipated project benefits do not adequately offset the project's impacts to wetland value and functions. If needed, wetland impacts will be mitigated; therefore, there will be no impairment of wetland values and functions as a result of implementation of any of the action alternatives.

#### **7.5 Wildlife and Vegetation/ Habitat**

- Steps will be taken to minimize the introduction of non-native species and will include washing equipment before entering the project area; minimizing disturbance; and initiating revegetation of disturbed areas immediately after construction (where feasible). All of the guidelines outlined in the South Florida and Caribbean Parks Exotic Plant Management Plan will be followed during construction.
- Systematic Reconnaissance Flight (SRF) surveys will be performed to monitor nesting wading birds in the Tamiami colonies throughout the nesting season.
- Per *NPS Management Policies 2006*, artificial lighting will not be used in locations where its presence will disrupt wildlife dependent on the dark; minimal-impact lighting techniques will be used (e.g., consideration of yellow versus white lights, use of timers); artificial lighting will be shielded and directed, where necessary, with regard for natural night sky conditions. The use of lighting is not anticipated in view of the fact that all construction activities are expected to take place during daylight hours. However, construction crews may carry emergency/ safety lighting and will be instructed to abide by the *NPS Management Policies 2006*.

#### **7.6 Special Status Species**

- During the environmental training, construction contractors will receive training on federally- and state-listed species and how to recognize and avoid impacts to these species.
- Pre-construction surveys will be conducted to identify any federal- state-listed species occurring in the project area. Should individuals or active breeding sites be identified, additional measures will be taken to avoid impacts (e.g., providing additional information to contractors about the species) and the Florida Fish and Wildlife Conservation

Commission (FFWCC) and the USFWS will be notified of the presence of these species in the project area.

- Mitigation for loss of primary panther habitat will be completed as required by the USFWS.
- Everglade snail kite monitoring will be conducted throughout the nesting season in Northeast Shark River Slough, ENP.
- Species surveys and contractor training will be conducted for the Florida bonneted bat.
- Wood stork and state-listed wading bird (little blue heron, snowy egret, tricolored heron, and white ibis) monitoring will be conducted throughout the nesting season as part of the SRF wading birds surveys.
- Construction will include implementation of standard protection measures for protected species to the maximum practical extent. Additional specific mitigation measures may be identified during Section 7 consultation with the USFWS. Specific planned measures include:
  - The Guidelines for Manatee Conservation during CERP Implementation (CERP Interagency Manatee Task Force, 2006) will be followed during all phases of construction.
  - Nest protection buffers will be provided for the Everglade snail kite as described in the Draft Snail Kite Management Guidelines (USFWS, 2006) during all phases of project construction.
  - The Standard Protection Measures for the East Indigo Snake (USFWS, 2004) will be followed during all phases of project construction.
  - Based on the results of the SRF survey data, the need for wood stork management zone restrictions and state-listed wading bird nest protection buffers will be evaluated throughout the nesting season. Should any redelineation of the wood stork management zones be necessary, such information will be coordinated with the USFWS and the FFWCC.
  - The following protective measures for wood storks will be implemented:
    - Primary Zone (the wood stork colony and a 1,000 ft buffer): From onset of nesting activity through the onset of the rainy season (or when the young have fledged), highway construction (e.g., heavy human/equipment activity, pile driving, blasting) should not be permitted in the reach of the highway affected by that alternative. The SRF surveys will be used to determine the nesting status of wood storks.
    - Secondary Zone (a 1,500 ft buffer surrounding the primary zone): No unauthorized human activity (on foot, airboat, or off-road vehicle) should occur at any time of the year within the reach of highway affected by the alternative on the south side of the highway and particularly during the nesting season.
    - Length of Restrictions: These restrictions shall remain in effect during the construction phase of the Tamiami Trail project.
    - Qualified Observer: Subject to the approval of the USFWS, FFWCC, and NPS, a qualified observer(s) shall be stationed onsite during the construction phase of the Tamiami Trail project. The observer shall monitor wood stork activity and shall notify USFWS, FFWCC, and the

NPS if wood stork behavior is modified such that roosting, breeding, nesting, foraging, and/or fledging of young is disrupted or otherwise interfered with.

- Modification of Restrictions: If new information becomes available concerning the wood stork colonies, the NPS, USFWS, and FFWCC should immediately contact each other to determine what modifications, if any, are warranted.
- A 100 meter nest protective buffer zone will be implemented for state-listed wading birds (little blue heron, snowy egret, tricolored heron, and white ibis) during the construction phase of the project. Coordination should be conducted with the FFWCC and the USFWS to determine the types of construction related activities that will be restricted should this mitigation measure need to be implemented.
- Should active nest of limpkins or Florida sandhill cranes be encountered in the project area, coordination should be conducted with the FFWCC and the USFWS to develop protective nest buffers for any encountered nests.

## **7.7 Wilderness/ Unique Ecosystems**

- Measures listed above under “Water Resources” and “Wildlife” will serve to protect wilderness values and quality as well.
- Construction procedures will follow the minimum tool analysis for construction and will include provisions to minimize impacts to natural resources that contribute to wilderness values.

## **7.8 Cultural Resources**

- To avoid damage to previously unknown archaeological resources, archaeological surveys and testing activities previously un-surveyed and/or undisturbed areas will be conducted prior to ground-disturbing activities. If any resources are encountered, mitigation of project impacts (in consultation with appropriate agencies) or adjustment of the project design will take place to avoid or limit the adverse effects on prehistoric and historic archaeological resources. Stop-work provisions will be included in the construction documents should archaeological or paleontological resources be uncovered. It should be noted there is a low probability that the project area contains undiscovered archeological resources.
- Monitoring will be done if any excavation exceeds the depth of existing ground disturbance. In the event that cultural resources are encountered during any necessary excavation work, project work will be halted and the discovery process will be initiated.
- If previously unknown archaeological resources are discovered, work will be stopped in the area of any discovery and consultation will be conducted with affiliated tribes, pursuant to NAGPRA and the Draft Park NAGPRA Plan of Action for Inadvertent Discoveries, Everglades National Park and Associated Tribes (May 2008).

## **7.9 Visitor Use and Experience**

- Construction information and general information about the project will be posted at the Park, distributed to visitors, and made available on the Park's web site. Signage and notices will be used to inform visitors about the purpose of the project and to protect visitor and staff safety during construction activities.
- Artificial lighting, including minimum illumination levels, light-emitting diodes (LED), limited color spectrum (e.g., yellow) lights, and timers and sensors will be used, where applicable to ensure safety.
- The use of artificial lighting will be restricted to areas where security, basic human safety, and specific cultural resource requirements must be met.

#### **7.10 Noise/ Soundscapes**

- Construction activities will involve multiple pieces of heavy equipment. Best management practices for noise, such as using mufflers on heavy equipment and noise-muffling construction material, will be implemented, resulting in short-term minor impacts to soundscapes. Assuming that heavy equipment operates at 800 to 900 decibels (dB) measured at a distance of 50 feet, and that sound levels decrease approximately 6 dB with the doubling of distance (Harmon, 2006), it will be estimated that natural attenuation will decrease the noise from these activities to no greater than 50 to 60 dB at a distance of approximately 1,500 feet from the work area; noise will continue to dissipate with increased distance from the construction activities.

#### **7.11 Transportation**

- In order to reduce traffic impacts from construction, a maintenance of traffic plan will be implemented and construction impacting travel lanes will be scheduled during off-peak traffic hours.

#### **7.12 Air Quality**

- Everglades National Park has a Class 1 clean air status. If dust were generated during construction, BMPs for dust suppression will be initiated. Emissions from construction vehicles will be kept to a minimum by restricting idling time. Motor vehicle emissions will not increase due to completion of the proposed action, this action is not anticipated to encourage or cause additional vehicle use of the Tamiami Trail. Limited, temporary, local increases will occur during construction due to use of construction equipment as well as temporary and infrequent traffic delays due to lane shifts for construction activities.

### **8. Public Involvement**

In addition to the public involvement and notification associated with NPS's preparation of their FEIS, the FHWA has also provided opportunities for the public and interested parties to comment on the proposed adoption of the FEIS. Public notices were placed in the Miami Herald on February 13, 2014 and February 20, 2014. Public notices were also placed in the South Dade News Leader on February 14, 2014 and February 21, 2014. Letters were sent to

interested parties; which included Federal, State, and local agencies, stakeholders, and the Miccosukee Tribe of Indians. A public information meeting was held on February 27, 2014 and comments were requested by March 29, 2014. FHWA received a total of five comments. All of the comments were positive and supporting of the project.

## **9. Section 4(f)**

Per the Consolidated Appropriations Act (HR 3547 EAH), Division G, Department of the Interior, Environment, and Related Agencies Appropriations Act, 2014, under the National Park Service Operation of the National Park System, "That because the Tamiami Trail project provides significant environmental benefits for the Everglades National Park, the requirements of 49 U.S.C. 303 are deemed satisfied with respect to such project and no additional documentation shall be required under such section."

## **10. Decision**

The FHWA has reviewed the Tamiami Trail Modifications: Next Steps EIS and ROD issued by the NPS. Based on this review, the FHWA concurs and adopts the Tamiami Trail Modifications: Next Steps F EIS, ROD and NPS Memoranda to the File dated 6-26-12 and 5-8-14 related to transportation improvements for the improvements to State Road 90 known as Tamiami Trail. Alternative 6e modified, has been found to be the selected alternative. Appropriate mitigation measures are included in the project, as are commitments for future coordination and implementation.

Approved: Melisa L. Ridenour 9 Feb 2015  
Melisa L. Ridenour, Division Director, EFLHD Date

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Michael J. Williams