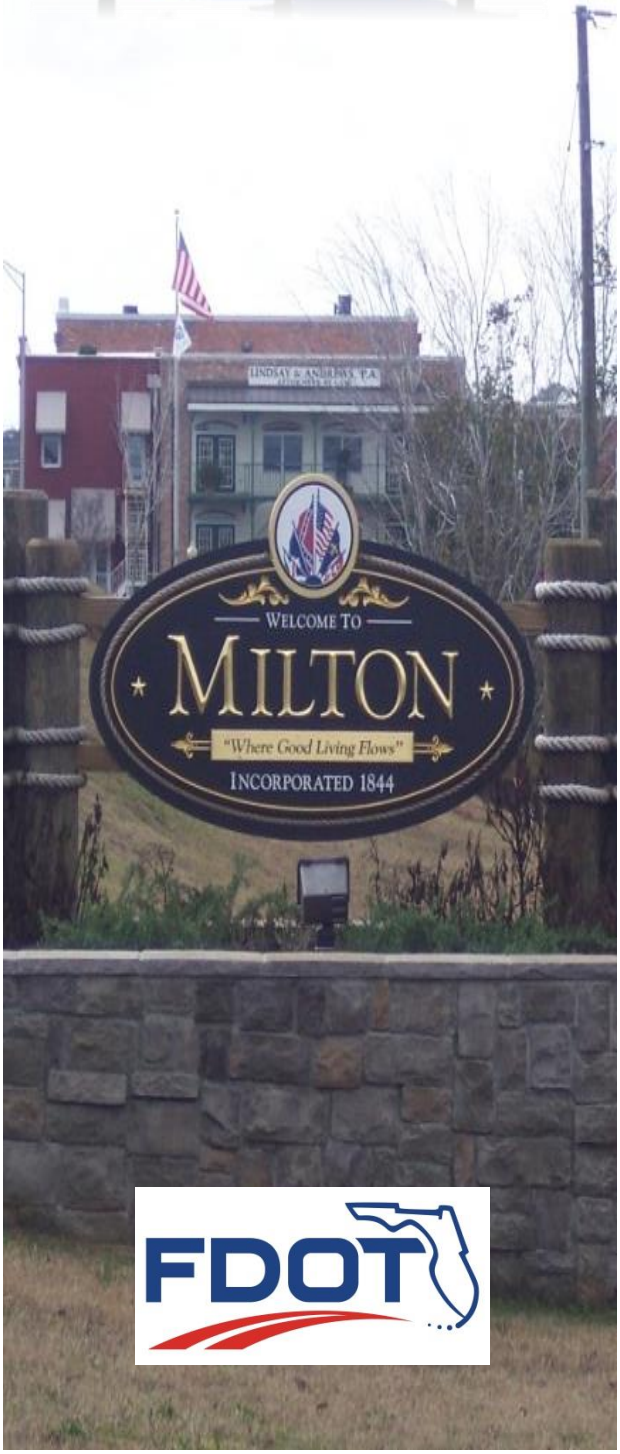

Final Environmental Impact Statement and Record of Decision

Santa Rosa County
Florida

Financial Project No.'s:
416748-3-22-01, 416748-3-22-02,
416748-4-22-01, 416748-4-22-02,
and 416748-4-22-90

ETDM No.: 12597

Federal Aid Project No.:
SF1 296 R, S129 348 R,
TCSP 033 U, T129 348 R

Date of Public Availability of DEIS:
October 17, 2014
Date of Formal Review Period
Completion of FEIS: 10/20/2016

Prepared For:
Federal Highway Administration

The FHWA will issue a single Final Environmental Impact Statement and Record of Decision document pursuant to Pub. L. 112-141, 126 Stat. 405, Section 1319(b) unless FHWA determines statutory criteria or practicability considerations preclude issuance of the combined document pursuant to section 1319.

FHWA-FLA-EIS 15-01-F
Federal Highway Administration
Florida Division

ADMINISTRATIVE ACTION

FINAL ENVIRONMENTAL IMPACT STATEMENT / RECORD OF DECISION /
FINAL SECTION 4(f) EVALUATION

U.S. Department of Transportation Federal Highway Administration
and
Florida Department of Transportation

Financial Project No.'s:
416748-3-22-01, 416748-3-22-02,
416748-4-22-01, 416748-4-22-02, and 416748-4-22-90
Federal Aid Project No.:
SF1 296 R, S129 348 R, **TCSP 033 U, T129 348 R**
Efficient Transportation Decision Making Number: **12597**

SR 87 from SR 87S to SR 87N, Santa Rosa County, Florida

The State of Florida Department of Transportation (FDOT) is conducting a study to evaluate potential options to provide a new roadway facility that will directly link SR 87S with SR 87N in the vicinity of the City of Milton in Santa Rosa County, Florida. The current connection between SR 87S and SR 87N is indirect and partly involves a shared facility of SR 87 and US 90.

For the foregoing reasons, and based upon consideration of all the social, economic, and environmental evaluations contained in the Final Environmental Impact Statement / Record of Decision, with the input received from other agencies, organizations, and the public; the Federal Highway Administration has determined that the FEIS preferred alternative, namely Adjusted Alternative 2 (the adjustment was due to comments received at the public hearing), is hereby the selected alternative. It is the decision of the FHWA to adopt this alternative as the selected alternative for this project, and grant the Florida Department of Transportation Location and Design Concept Acceptance. Additionally, FHWA finds the proposed impacts to Section 4(f) lands activities, features, and attributes to be de minimis.

Submitted pursuant to 42 U.S.C. 4332 (2)(c) and 49 U.S.C. 303.

___ / ___ / ___ _____
Date Division Administrator
Federal Highway Administration

A Federal agency may publish a notice in the Federal Register, pursuant to 23 USC §139(1), indicating that one or more Federal agencies have taken final action on permits, licenses, or approvals for a transportation project. If such notice is published, claims seeking judicial review of those Federal agency actions will be barred unless such claims are filed within 150 days after the date of publication of the notice, or within such shorter time period as is specified in the Federal laws pursuant to which judicial review of the Federal agency action is allowed. If no notice is published, then the periods of time that otherwise are provided by the Federal laws governing such claims will apply.

For additional information, contact:

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List of Acronyms Used

ADA	Americans with Disabilities Act
AHP	Analytical Hierarchical Process
AN	Advance Notification
APE	Area of Potential Effect
AST	Aboveground Storage Tank
BEBR	Bureau of Economic and Business Research
BHST	Blackwater Heritage State Trail
BLLC	Bagdad Land and Lumber Company
BMP	Best Management Practices
CEQ	Council on Environmental Quality
CFA	Core Foraging Area
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CRAS	Cultural Resource Assessment Survey
CRPA	Cultural Resources Probability Assessment
CSER	Contamination Screening Evaluation Report
CSRP	Conceptual Stage Relocation Plan
CZMA	Coastal Zone Management Act
D3	District Three
DACS	Department of Agriculture and Consumer Services
dB(A)	Decibels on the "A" scale
DHS	Florida Department of State – Division of Historical Resources
DOD	Department of Defense
DOF	Department of Forestry
DSL	Division of State Lands
DTTM	Design Traffic Technical Memorandum
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EPAC	Endangered Plant Advisory Council
ERP	Environmental Resource Permit
ESA	Endangered Species Act
ESBA	Endangered Species Biological Assessment
EST	Environmental Screening Tool
ETAT	Environmental Technical Advisory Team
ETDM	Efficient Transportation Decision Making
F&A	Florida and Alabama Railroad
FAC	Florida Administrative Code

FAST	Florida-Alabama Strategic Task Force
FCMP	Florida Coastal Management Program
FDEO	Florida Department of Economic Opportunity
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FL-AL	Florida-Alabama
FLUCCS	Florida Land Use, Cover and Forms Classification System
FMSF	Florida Master Site File
FNAI	Florida Natural Areas Inventory
FPPA	Farmland Protection Policy Act
FS	Florida Statutes
FWC	Florida Fish and Wildlife Conservation Commission
FY	Fiscal Year
GIS	Geographic Information Systems
LDC	Land Development Code
LDCA	Location Design and Concept Acceptance
LEP	Limited English Proficiency
LOS	Level of Service
LRTP	Long Range Transportation Program
MAZ	Military Airport Zones
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NAS	Naval Air Station
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOLF	Naval Outlying Fields, an auxiliary airfield associated with a Naval Air Station
NPDES	National Pollution Discharge Elimination System
NRHP	National Register of Historic Places
NSA	Noise Sensitive Area
NWFWMD	Northwest Florida Water Management District
NWI	National Wetlands Inventory
OFW	Outstanding Florida Water
OGT	Office of Greenways and Trails
OIP	Office of Intergovernmental Programs
ONRW	Outstanding National Resource Waters
PD&E	Project Development & Environment Study
PER	Preliminary Engineering Report
PIP	Public Involvement Program
RCW	Red-cockaded woodpecker
RFS	Reticulated Flatwoods Salamander
ROD	Record of Decision
ROR	Run Off Road
ROW	Right of Way

SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SCH	State Clearinghouse
SHPO	State Historic Preservation Officer
SIS	Strategic Intermodal Systems
SR	State Road
SRCO	Site Rehabilitation Completion Order
SSL	Sovereign Submerged Lands
SSURGO	Soil Survey Geographic
STIP	State Transportation Improvement Plan
SWIM	Surface Water Improvement and Management
T&E	Threatened & Endangered
TAZ	Transportation Analysis Zones
TEAM Santa Rosa	A public/private partnership economic development organization
TIP	Transportation Improvement Program
Title VI	Civil Rights Act of 1964. Prohibits discrimination based upon race, color, and national origin.
TNM	Traffic Noise Model
TPO	Transportation Planning Organization
TSM	Transportation System Management
TTCP	Temporary Traffic Control Plans
UMAM	Uniform Mitigation Assessment Method
USACE	United States Army Corps of Engineers
USCB	United States Census Bureau
USDA-NRCS	United States Department of Agriculture Natural Resources Conservation Services
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
USMC	United States Marine Corps
USN	United States Navy
UST	Underground Storage Tank
WER	Wetland Evaluation Report
WRAP	Wetland Rapid Assessment Procedure
WW	World War
WWTP	Wastewater Treatment Plant

1. RECORD OF DECISION

EXECUTIVE SUMMARY
S.R. 87 CONNECTOR

State Road No.: **S.R. 87**

Financial Project No.: **416748-3-22-01, 416748-3-22-02, 416748-4-22-01, 416748-4-22-02, and 416748-4-22-90**
Federal Aid Project No.: **SF1 296 R, S129 348 R, TCSP 033 U, T129 348 R**
Efficient Transportation Decision Making No.: **12597**

County: **Santa Rosa County, Florida**

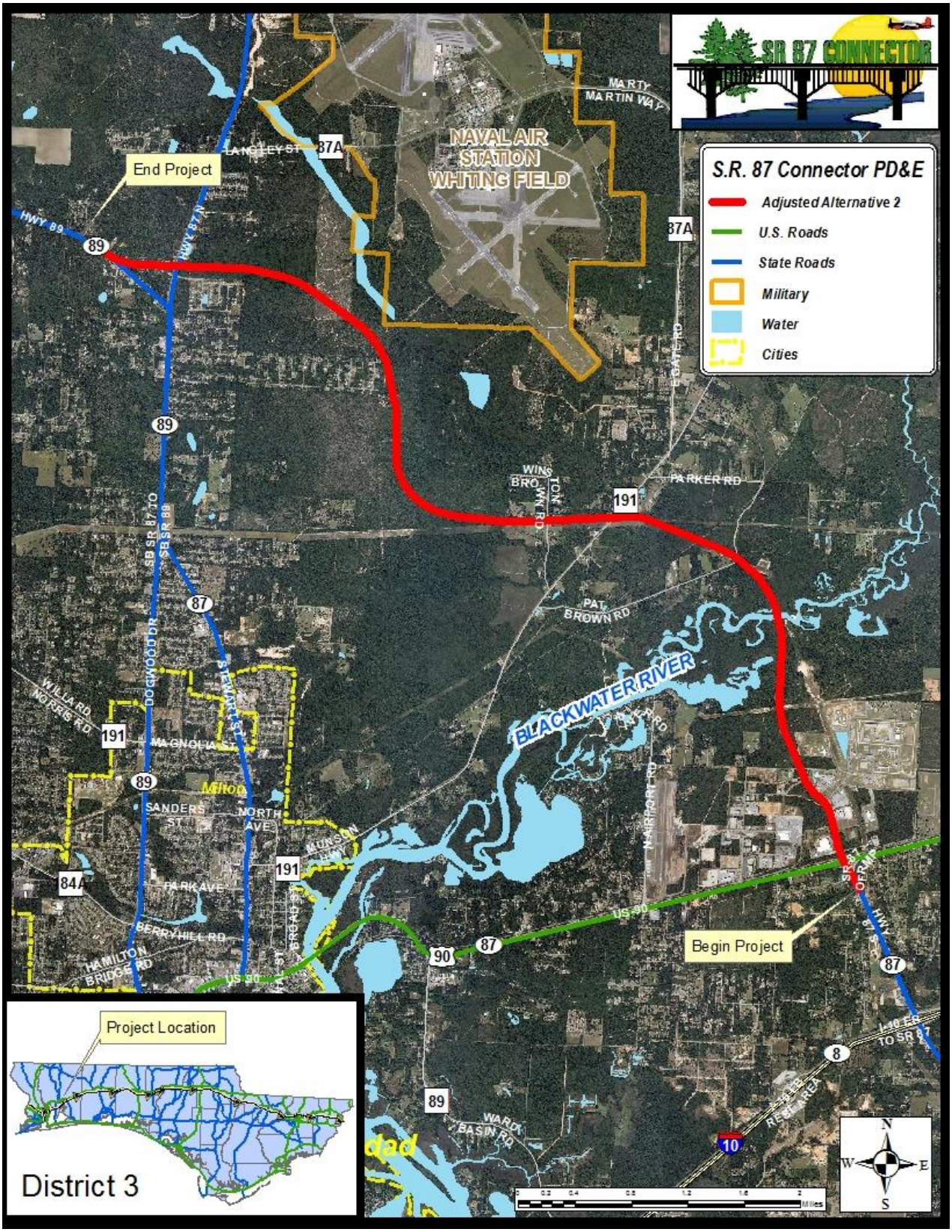
Description: **A new roadway facility that will directly link State Road (S.R.) 87 South with S.R. 87 North in the vicinity of the City of Milton in Santa Rosa County, Florida.**

This is the *Record of Decision (ROD)* for the above referenced project proposed by the Florida Department of Transportation (FDOT) and as further identified in the Florida Alabama Transportation Planning Organization Blueprint 2040 Long Range Transportation Plan (LRTP), as adopted. The purpose of the SR 87 Connector Project Development and Environment (PD&E) Study is to develop a proposed improvement strategy that is technically sound, environmentally sensitive and publicly acceptable. This project is needed to provide for a new roadway facility linking SR 87S with SR 87N, as an alternative to the existing shared facility of SR 87 and US 90, which is a constrained facility that is currently operating at a failing level of service (LOS F). Therefore, the primary need for this new corridor is to provide additional capacity, and to improve regional connectivity by providing a more direct route from areas of high growth in northern Santa Rosa County, such as the Berryhill Road area, to I-10 and to areas further to the south. Likewise, access will be improved to and from I-10 for the Whiting Field U.S. Naval Air Station, and the County's Joint Use Planning Area near Whiting Field. It is also anticipated that this new facility would provide relief to Ward Basin Road and its intersection with US 90. It is also intended to provide much needed relief to the US 90 Blackwater Bridge. This *ROD* is for the Final S.R. 87 Connector Environmental Impact Statement which is hereby included in this combined FEIS/ROD.

Decision

The Federal Highway Administration (FHWA) Florida Division, in coordination with the Florida Department of Transportation (FDOT) and in accordance with the National Environmental Policy Act (NEPA) and associated laws, regulations, and orders, proposes the construction of the S.R. 87 Connector, a new roadway facility that will directly link S.R. 87S with S.R. 87N. The selected alternative is Adjusted Alternative 2, a four lane facility with urban and rural characteristics. The 8.22 mile project will begin at the intersection of U.S. 90 and S.R. 87S and will connect with S.R. 87N just north of the northern split of S.R. 87N and S.R. 89. New bridge construction is required over the Blackwater River and over Clear Creek. The location map for the selected alternative can be viewed on page 1.2 of this *ROD*.

Figure 1.1: Selected Alternative Location Map



Background

The primary objective of this S.R. 87 Connector project is to make the S.R. 87 Corridor a contiguous facility by extending S.R. 87S to S.R. 87N. This will facilitate north-south traffic flow to more effectively serve north bound traffic, the military base operations and to provide for a more direct hurricane evacuation route from the coast to areas north in Alabama. Another objective is to reduce traffic congestion, specifically truck traffic, within the City of Milton, and to alleviate travel demand on the section of U.S. 90 currently shared with S.R. 87. In terms of the project genesis, this project has been reviewed and studied for many years under a variety of names. The Florida Alabama Strategic Task Force (FAST) previously considered it under the name "Brewton to the Beaches", while Santa Rosa County includes it in the "Better Santa Rosa Plan". Team Santa Rosa also includes it as part of their future planning. In addition, the Corridor Authority, Santa Rosa County and the Florida-Alabama Transportation Planning Organization (TPO) include the limits of this project as the eastern leg of an Outer Beltway Connector Project that is planned to span both Escambia and Santa Rosa Counties in their Long Range Plans. This Beltway corridor has been included in the last three TPO LRTP updates as a future project and was also studied by Florida's Turnpike Enterprise. The segment of the beltway from U.S. 90 to S.R. 87N in our study area was determined to be cost feasible as a new corridor during the Turnpike study. As a result of preliminary coordination, the project team understands that the TPO plans to keep design funds within the plan (FY 16-20), but construction funding continues to not be included in the CFP. It should be noted that projects associated with the western terminus of the future Beltway Project are being included in the CFP.

An Environmental Technical Advisory Team (ETAT) review was conducted in 2008 under Efficient Transportation Decision Making (ETDM) project #2861, however that effort only considered new improvements for the segment extending from S.R. 87 S/U.S. 90 to Munson Highway. It was the intent at the time that this segment be the first phase of a corridor that would be eventually extended to S.R. 87N. A "S.R. 87 Connector PD&E Study" was submitted on December 2009 for ETDM review as project #12597. The Department initiated early project coordination on December 17, 2009, by distribution of an Advance Notification (AN) package to the Florida State Clearinghouse (SCH) and ETAT representatives.

Throughout the project's history, the project team has provided numerous opportunities for the public and regulating agencies to offer input to the project. The project team has met with elected officials in March 2010 and August 2012. Several meetings with regulatory agencies were held March 24, 2010, March 25, 2010, and May 21, 2010. On July 29, 2010, a Scoping Meeting was held for the S.R. 87 Connector PD&E Study at the Santa Rosa County Commission Chambers. The meeting was open to the public and advertised in the Florida Administrative Weekly. Approximately 40 agencies were invited to attend the meeting to discuss the project. Public information meetings were held on March 23, 2010, January 27, 2011, and August 16, 2011. The Public Hearing was held on November 13, 2014. For more detailed information concerning these meetings, please see Section 6.0 of the FEIS.

Planning Consistency and Funding

At a local planning level, the proposed new facility is consistent with the Santa Rosa County Comprehensive Plan and is included in the County's Future Transportation Corridors map. Policy 4.1.E.2 of the Comprehensive Plan states, "The County shall continue to request, recommend, and support immediate roadway improvements in order to relieve the congestion on

the segment of U.S. 90 between Canal Street and S.R. 87S". Likewise, both the County planning staff and the liaison for Whiting Field Naval Air Station reviewed and commented on the alternatives to ensure their location supported the mission of the base, and did not adversely affect the lands surrounding the base. These lands are protected by the County's Comprehensive Plan and existing lease agreements with the base. The Naval Air Station sent a letter to the project team in support of this project (See Appendix A: Correspondence).

The S.R. 87 Connector is also listed in the Florida-Alabama TPO's 2040 LRTP Needs Plan as a Roadway Capacity Project, and in the TPO's 'Florida Aspirational Projects' as part of the 'Outer Beltway Connector'. The aspirational projects are those projects that are needed beyond 2040; however, they are identified due to their potential transportation impacts to the region. It should be noted that though the project is listed in the Needs Plan, the ROW and Construction phases are outside of the 2040 Cost Feasible Plan. The design funding for the S.R. Connector is in the Committed Projects List and in the Cost Feasible Plan in the TPO's 2040 LRTP. The design funds include $4,374,241 for FY 15-20; and $5,555,285 for FY 21-25 (note this amount is escalated/inflated for future year costs).

In addition, funding for the PD&E phase of the SR 87 Connector was initially included in the 2009-2013 adopted State Transportation Improvement Plan (STIP) and the Florida-Alabama TPO TIP (PD&E Study began in 2009). Funding for design is included in the current TPO TIP for fiscal years 2018/2019. Likewise, $7,874,240 for FY 2018/19 has been set aside for the Design Phase in the FDOT Work Program. It should be noted that the current and adopted STIP (Approved October 2015 by FHWA) shows $4,374,240 for design in FY 2019 instead of $7,874,240. The difference in the funding amounts is due to a portion of the funds being added during the work program gaming cycle. The TIP and STIP will be updated to include the tentative funds following the FL-AL TPO's July 2016 meeting. In the interim, the new Draft TPO TIP for FY 17-21 has been approved by the TPO and includes the entire $7,874,240. The ROW phase and Construction Phase are beyond the TPO's 2040 Cost Feasible Plan at this time. Please see below for a summary, and the Planning Consistency Appendix for documentation.

Table 1.1: Planning Consistency

Phase	Time Frame	Estimated Cost	Funding Source	TIP/STIP
PD&E	Current (2009-2016)	$2,783,075	Federal/State	FY 2009 STIP
Design	2018 - 2019	$7,874,240	Federal/State	Draft FY 2017 STIP
ROW	Beyond 2040	$5,626,000 (est. from this PD&E)	Federal/State	Beyond Current CFP
Construction	Beyond 2040	$120,410,000 (est. from this PD&E)	Federal/State	Beyond Current CFP
Totals		$136,693,315		

Alternatives Considered

All alternatives, including the No-Action were evaluated. A detailed discussion of the alternatives considered is included in the following EIS.

These alternatives include the No-Action, Transportation Systems Management, Strategic Intermodal Systems, and six Construction Alternatives.

No-Action Alternative

The No-Action alternative was evaluated as a possible alternative to the proposed project. This alternative does not meet the purpose and need of this project. The existing facility not only lacks the necessary continuity to effectively serve the evacuation and linkage needs of the area it serves, but also is inadequate in terms of existing and future capacity and meeting the needs of the abutting land uses. The No-Action, sometimes referenced as the No-Build Alternative, results in five roadway segments along U.S. 90 operating at a failing LOS by 2015, nine by 2025, and eight by 2035 (after widening U.S. 90 from Avalon Boulevard to S.R. 87N).

Transportation System Management and Operations Alternative

Transportation System Management and Operations (TSM&O) alternatives were also evaluated as a possible alternative. This alternative is comprised of minor improvement options that are usually generated to alleviate specific traffic congestion/safety problems, or to get the maximum utilization out of the existing facility by improving operational efficiency. The various TSM alternatives that were investigated included upgrading the existing facility by means of the following: 1.) provision of physical and operational improvements to high accident spots or segments, 2.) improving intersections and signalization and 3.) improving signs, markings and delineation. In summary, even though some beneficial effects can be obtained through the use of these low cost improvements, the overall capacity restriction of the existing roadway section precludes the attainment of any significant improvement in the overall project level of service.

Construction Alternatives

It was determined that various build alternatives would have to be developed within the study area. These major build options had to consider the various components of providing a new, more direct facility with emphasis on operational characteristics, roadway geometry, safety and aesthetics. A comprehensive corridor alternatives evaluation summary report (**last revised November 2013**) was prepared for this project. Six new corridors were identified and evaluated for improved mobility and safety. Three corridors were to the south of the existing U.S. 90 corridor and three were to the north. The corridor evaluation and agency coordination resulted in the elimination of four of the original six corridors generally due to fatal flaws as a result of impacts to environmental lands purchased (both just before and during the study) by funds set aside by the Florida Preservation 2000 Act, and/or the Florida Forever Act. The remaining two options (Alternatives 1 and 2) were further evaluated.

Alternative Selected

The Preferred Alternative is Adjusted Alternative 2. This option extends north from the U.S. 90/S.R. 87S intersection crossing the Blackwater River in the proximity of the existing eastern power easement crossing. Once across the river, it runs parallel or adjacent to the power easement, then veers north and runs adjacent to the Clear Creek environmental lands, where it

proceeds west to connect with S.R. 87N in the proximity of the northern split of S.R. 87N and S.R. 89.

The Selected Alternative will require right-of-way which varies from 120 feet to 264 feet in width. From south to north, the roadway will begin as an urban typical, matching S.R. 87S, which includes four 12-foot travel lanes, and a 24-foot median, four-foot bike lanes, and curb and gutter with a closed drainage system. It will also include a 12-foot wide multi-use trail on the west side of the road. The roadway will transition to a bridge typical section as the connector approaches the Blackwater River floodway. The bridging over the Blackwater River and its wetlands and floodway will consist of two parallel bridges approximately 25 feet apart. The bridges will each have two 12-foot travel lanes, 6-foot inside shoulders, and 10-foot outside shoulders. The western bridge (southbound) will also include a 12-foot multi-use trail. The bridges will extend over 5,571 feet crossing the Blackwater River, Pat Brown Road, and the Blackwater Heritage State Trail (BHST). Utilizing a series of ramps, the western bridge will connect the multi-use trail with the BHST below it. This will effectively complete the trail connection between the BHST and the Historic S.R. 1 Trail.

North of the bridge over the BHST, the roadway transitions into a rural typical section. The rural section consists of four 12-foot travel lanes and five-foot outside shoulders (bike lanes), and a 40-foot median. The section will have an open drainage system consisting of open swales adjacent to the road and within the median. There are no provisions for pedestrians, and no multi-use trail provided in this section due to the rural nature of the land use in this area. This typical section will extend from the BHST to the Clear Creek Bridge.

Much like the Blackwater River Bridge, the Clear Creek Bridge will consist of two parallel structures approximately 25 feet apart. The bridges will have four 12-foot travel lanes, six-foot inside shoulders, and 10-foot outside shoulders. The southern (southbound) bridge will have a 22-foot shoulder to allow for a potential future extension of the multi-use trail.

West of the Clear Creek Bridge, the roadway continues as a rural typical section. Adjusted Alternative 2 will travel 0.85 miles west and curve to the north. This typical section will extend from the Clear Creek Bridge to where it transitions to an urban section as the connector approaches S.R. 87N.

Adjusted Alternative 2 will intersect with S.R. 87N near Seasons Drive as an urban typical and will have a proposed access management classification 3. This will include four 12-foot travel lanes, a 24-foot median, 4-foot bike lanes, and curb and gutter with a closed drainage system. Beyond S.R. 87N, Adjusted Alternative 2 will become a rural typical section with two 12-foot travel lanes and 5-foot outside shoulders (bike lanes). The alignment will then connect to S.R. 89N approximately a half mile to the west, realigning the S.R. 87 and S.R. 89 intersection. A four-lane facility is not needed for the design year evaluated in this study. It is the intent for the project to initially build an interim two-lane facility and as demand increases, the road would be expanded to four lanes. This ROD and FEIS evaluated the impacts associated with the four lane (full build out) facility.

Both Alternative 1 and 2 meet the project's purpose and need and provide for future expansion outlined in the TPO's Beltway Project. The initial evaluation between the two alternatives

showed that Alternative 1 was the better option due to elected official preference, slightly lower cost, and potential noise issues on Alternative 2. However, comments from the Public Hearing resulted in the project team adjusting the end (northern terminus) of Alternative 2 slightly to the north. Likewise, the Florida Alabama TPO's draft 2040 Cost Feasible Plan update does not include the Beltway Project. As a result, Alternative 1 will function with regards to a transportation facility as a dead end in a growing urban area. With the adjustment to Alternative 2 and the slight realigning of S.R. 89 to meet the Alternative 2 terminus, the evaluation matrix was updated which resulted in Adjusted Alternative 2 being the more favorable option (See Table 3.2, in Section 3.2 of the FEIS). The traffic study results reflect that an interim two-lane facility will maintain a level of service C through the year 2025, when the full four-lane will be needed.

It should be noted that the local elected official preference for Alternative 1 was due to its closer proximity to downtown Milton where congestion is occurring. This option is still a viable connection as it is an existing roadway (Oakland Drive) and can be extended to the S.R. 87 Connector if the local officials so choose. In addition, as a proactive effort to address the elected officials' concerns about congestion in the downtown area, the Florida Department of Transportation initiated the U.S. 90 PD&E study through Milton. The intent of the new PD&E is to address the growing local traffic in the interim, while the S.R. 87 Connector will address the regional needs of the area.

In addition, the alternative proposed will be a restricted access alternative to ensure the corridor can function appropriately as a hurricane evacuation route, and will assist in preventing development along the corridor that does not meet the mission of Whiting Field. Much of the land surrounding the Naval Air Station is currently protected by land use designations and lease agreements with the base.

Section 4(f)

There are two Section 4(f) resources in the area of the project alternative. The Blackwater Heritage State Trail (BHST) and the Old State Road (S.R.) 1/Old Spanish Trail.

The BHST is a multi-use paved recreational trail facility and a conservation area owned by the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida. The management responsibility is conveyed to the FDEP Division of Recreation and Parks, District 1 Office, in the form of a lease. It is officially part of Florida's Statewide System of Greenways and Trails. A Section 4(f) Determination of Applicability has been prepared for the BHST and reviewed by FHWA. FHWA has made the determination that Section 4(f) does not apply based on the design proposed (see Appendix A of the FEIS, May 2012, Environmental Determination of non-applicability, dated 10-26-2012, by FHWA; and the DOA).

Old State Road 1/Old Spanish Trail is a 6-mile brick road that runs parallel to U.S. 90 from east of Ward Basin Road to east of SA Jones Road. It is significant as the first state road within the Florida Panhandle and maintains its integrity as a historic brick road. A review by both State Historic Preservation Officer (SHPO) and FHWA determined that there was no acquisition of land required nor are there any adverse effects to the property, the crossing of S.R. 1 Historic Trail and its associated improvements do not constitute a Section 4(f) involvement. The appropriate de Minimis documentation was completed and FHWA will sign it concurrent with this FEIS/ROD document. The signed document will be inserted into Appendix A of this FEIS.

There is also a commitment to coordinate with SHPO during design to ensure minimization measures are reviewed.

Major Issues Considered

The ETDM screening tool identified several areas that may have substantial effects due to Alternative 2. These are floodplains, water resources, wildlife and habitat, wetlands, recreation areas, and secondary and cumulative effects. These and other potential impacts are summarized below.

Social Impacts

The social impacts expected generally arise from the requirements for right-of-way associated with the proposed action. The majority of the study area does not include dense residential areas, or areas with extensive housing. However, the alternative intersects S.R. 87N in an area that has seen growth since the study began in 2009. With the adjustment of Alternative 2 to its original location (presented at the kick-off meeting) following the public hearing, the alternative is now located at a distance that is sufficient to not require noise abatement measures in the location of the new Harvest Point Subdivision.

Areas of impact with regards to Environmental Justice concerns were evaluated using Census data. As a result of the elimination of the southern alternatives due to the inability to traverse protected lands, the areas within the study area that had the highest minority percentages, and included some of the lowest income per household are avoided.

Economic Impacts

According to the University of Florida's Bureau of Economic and Business Research (BEBR) Report and the FL-AL TPO 2040 Long Range Transportation Plan (LRTP), the population is expected to grow another 50% to nearly 230,000 people by 2040. It should be noted that the latest census data obtained between 2010 and 2014 show a 2% growth rate per year which follows the anticipated projected growth outlined in the 2040 LRTP. This population growth will increase the vehicular demand on the U.S. 90/S.R. 87 segment, making growth and evacuation difficult due to a lack of roadway capacity. The project would provide capacity, open access to the industrial park in East Milton, as well as create a more direct overland access between the military installations in the area: Whiting Field, several Naval Outlying Fields (NOLF's), and Eglin Air Force Base.

Land Use

Changes in land use consist of the conversion to transportation land use from single family residential, industrial and agricultural land uses. Among the affected parcels, the majority are assigned land use categories of agriculture/silviculture and industrial according to the Santa Rosa County Land Use information obtained from their GIS department. There are some Single Family Residential areas in the vicinity where the alternative intersects S.R. 87N, as well as in the area near the proposed Munson Highway intersection. The future land use maps for Santa Rosa County indicate that much of the area surrounding the southern portion of the proposed roadway will remain industrial, or will convert from silviculture to industrial. It should be noted that with regards to Land Use between the southern and northern termini, the roadway is proposed to have an Access Management Classification of 3 limiting connections to the roadway. Much of the alternative follows an existing power line easement, limiting development

along its southern border. In the vicinity of Whiting Field, the County's Comprehensive Plan provides guidance on development around the military base. In addition, the County's Land Development Code (LDC) further defines, for instance, protections for military airport zones (MAZs). In the LDC, certain types of development are compatible with air operations, such as industrial development. As a result, any Land Use in the vicinity of the military base and just north of Adjusted Alternative 2 is protected by the county's comprehensive plan and by lease agreements the base has with adjoining property owners. Extensive coordination between the project team and those involved in the Joint Land Use Planning initiative and Naval Air Station (NAS) Whiting Field base operations resulted in slight alignment shifts, proper pond designs, access management classifications, etc. to ensure the best possible locations and typical sections for the alternatives.

Aesthetics

The Blackwater River is the most prominent natural feature along the alignment and is designated as an Outstanding Florida Waters (OFW). Crossing the river will offer scenic views to the east and west for those driving or utilizing the multi-use path on the proposed roadway. Views from the roadway will be impacted by transmission lines in many locations along the alternative because the alignment closely follows the transmission lines to reduce the roadway's impacts to the more undisturbed landscapes. Viewpoints from a variety of locations were chosen to represent areas affected by a new structure over the river. The location of the crossing is adjacent to a large transmission line, where the natural environmental has already been disturbed to some degree. This is in a non-navigable location of the river, but is still expected to impact the visual view for canoers, kayakers, etc. In addition, the alternative will cross the BHST. This will result in a visual quality decrease, though the crossing is proposed to be grade separated with connections that will enhance the trail's functionality and connectivity. Finally, the Clear Creek crossing also closely follows the transmission line and is in a remote area. The bridge will offer new viewing opportunities of the creek.

Relocation

The relocation of two homes, currently serving as rentals, is expected with Adjusted Alternative 2. These homes would have also been impacted with Alternative 1. Prior to the Public Hearing, a third structure, along S.R. 87N, was determined to need relocation. However, with the shifted Alternative 2 alignment, this structure is now being avoided. Each potential relocation has been notified in writing of the Department's relocation assistance program.

Mobility

At present, there is no direct connection between S.R. 87S serving the southern section of Santa Rosa County and S.R. 87N serving the northern section of the County and providing direct access to Alabama. There is also no direct connection between NAS Whiting Field to I-10 or to Eglin Air Force Base. Therefore, the benefit with regards to mobility of the proposed S.R. 87 Connector is: (1) provide a new roadway facility linking S.R. 87S with S.R. 87N, (2) provide additional capacity and improve regional connectivity from areas in northern Santa Rosa County to I-10 and to areas further to the south, (3) improve access to and from I-10 for NAS Whiting Field, and the County's Joint Use Planning Area near NAS Whiting Field, and (4) provide a direct connection between NAS Whiting Field and Eglin AFB.

Utilities

Utility adjustments will be necessary along Adjusted Alternative 2. Existing distribution power facilities are anticipated to be impacted at the beginning of the project near U.S. 90, as well as Munson Highway. The project team intentionally avoided any linear impacts to the transmission easements which are adjacent to the majority of the project length. Some impacts are anticipated however at areas where the alignment crosses those easements. There may be one additional residential relocation due to utility adjustments as the design is finalized. Additional survey is needed to determine if this may be required. The property owner was sent a relocation letter in the event the property is impacted.

Railroads

Adjusted Alternative 2 will cross the CSX Railroad near the U.S. 90 intersection. This is an existing three lane, at-grade crossing that will be widened to provide two northbound lanes and three southbound lanes. The southbound crossing provides one left turn, one thru lane and one shared thru-right turn lane. Coordination with CSX Railroad is on-going. The CSX railroad is parallel to U.S. 90 and also parallel to the S.R. 1 Historic Trail. The railroad track will be replaced during construction with a concrete pad around the track which provides a smooth crossing and allows bicycles and pedestrians a safer crossing.

Archaeological and Historic Resources

The project team conducted a Cultural Resource Assessment Survey (CRAS) in June and October 2011, as part of the S.R. 87 Connector PD&E Study. As a result of the field survey findings, no prehistoric or historic archaeological resources are affected due to the proposed alignment. In May 2015, another survey was done to include the adjustment of Alternative 2. No resources were found.

Historical background research revealed two previously recorded historic resources within the Area of Potential Effects (APE): one structure (8SR1095) and one NRHP-listed linear resource (8SR1313). The structure is located at the south terminus on the southwest corner of the U.S. 90/S.R. 87S intersection. It is not considered NRHP-eligible due to its commonality of style and lack of significant historical associations. The NRHP-listed resource, S.R. 1 (8SR1313), is a brick paved historic roadway within the APE at the intersection of US 90/S.R. 87. S.R. 1 is significant as the first state road within the Florida Panhandle and maintains integrity as a historic brick road.

The proposed undertaking may have an effect on the NRHP-listed S. R. 1 (8SR1313). However, it should be noted that S.R. 87 currently traverses S.R. 1 in this area. The proposed undertaking will allow vehicular traffic to continue crossing S.R. 1, and the undertaking will simply widen the crossing with additional lanes, and a proposed multi-use trail. Much of the brickwork along the trail has been replaced through a partnership between FHWA, FDOT, SHPO, and the U.S. Department of Interior. Since the S.R. 1 Historic Trail lies within the U.S. 90 right-of-way, no additional right-of-way will be required. Nonetheless, the proposed improvements will not alter the criteria of eligibility for the NRHP (Rucker and Mattick 1994). It was determined by SHPO and FHWA that the project will not affect this resource. This includes a commitment with regards to coordination with SHPO during the design phase of the project to analyze options which will minimize the potential effects on the SR 1 Trail.

Recreation and Parkland

After a review of the Santa Rosa County Parks and Recreation list of facility parks, as well as a review of all known State and Federal parks and recreational areas, it was determined that there are no parks adjacent to the alternative and there are no direct or indirect impacts anticipated by the proposed action to any park. However, it was determined that the alternative will have a direct impact to a recreational facility. The alternative crosses the BHST, which is part of the Florida System of Greenways and is the most western rail trail. It is discussed in the Section 4(f) of this document.

Section 4(f)

As stated earlier, there are two resources that the alternative impacts; the S.R. 1 Historic Trail and the BHST. S.R. 1 Historic Trail is located at the very southern end of the alternative at the intersection of U.S. 90 and S.R. 87S. The trail runs parallel to US 90. The S.R. 87 Connector will cross the trail at the existing East Milton Road crossing, where the East Milton Road alignment is being expanded to accommodate the S.R. 87 Connector. Enhancements will be made to the existing S.R. 1 Historic Trail crossing. Although this existing three lane crossing will be increased to five lanes, various pavement treatments, signage, and landscaping will be provided to increase awareness of the trail's crossing. A recommendation to explore options to minimize any potential effect during design was proposed by FDOT and was reviewed and approved by SHPO and FHWA in 2012. A letter of no effects determination has been signed by SHPO and can be found in **Appendix A**. FHWA will sign the De Minimis determination with this FEIS/ROD document.

The proposed project crossing over the BHST will include the construction of a grade-separated overpass that will traverse the 100-foot wide trail corridor and will meet the 20-foot clearance requested by FDEP. No bridge pilings or other bridge infrastructure will be installed within the trail corridor. There will, however, be a link provided to the BHST enabling access and connectivity with new pedestrian features (multi-use path) associated with the proposed alternative. In addition, with this new link, the BHST will be afforded additional local and regional connectivity by accessing the S.R. 1 Historic Trail's brick path located along U.S. 90. As a result, the construction of the crossing will enhance access, but will not impact usage of the trail, nor will the project impact the vital functions of the trail. The crossing will not impact existing BHST restroom or trailhead facilities and is not proposed in the vicinity of any planned facility improvements. No relocation of the trail or other facilities is proposed for this project. It is anticipated that the project as planned will not adversely affect the portion of the trail that will be crossed by the proposed alignment. A Section 4(f) Determination of Applicability was prepared for the BHST and reviewed by FHWA. FHWA has made the determination that Section 4(f) does not apply based on the design proposed (Environmental Determination of non-applicability, dated 10-26-2012, by FHWA; and the DOA.)

Pedestrian/Bicycle Features

In terms of pedestrian facilities, no existing pedestrian facilities will be adversely impacted. Where the proposed alternative occupies existing roadway facilities, such as East Milton Road, there are no existing pedestrian facilities. Adjusted Alternative 2 will provide new pedestrian facilities. Originally, the pedestrian facilities/sidewalks were to run the entire length of the project. However, as a cost savings strategy initiated by the District's Value Engineering Team, sidewalks were eliminated. Instead, a multi-use trail will be provided as part of the project's

southern urban sections, thus expanding the existing pedestrian network. Additionally, bike lanes are proposed adjacent to the roadway travel lanes. Designated bike lanes will be provided in the urban typical sections from the southern project limits to the Blackwater River bridge crossing and at the northern project limits. In the rural sections (the remaining central part of the project corridor), the paved shoulder will also be striped as a bicycle lane. In addition, a multi-use trail will be provided from U.S. 90 at the S.R. 1 Historic Trail crossing north to the BHST. By providing a vital link between the S.R. 1 Historic Trail and the BHST, the proposed roadway system provides regional connectivity for pedestrians and recreational trail users.

Air

S.R. 87 is located in Santa Rosa County, an area currently designated as being in attainment for all of the National Ambient Air Quality Standards (NAAQS) under the criteria provided in the Clean Air Act. Therefore, the Clean Air Act conformity requirements do not apply to the project. An Air Quality Screening Test was completed in November 2013 which stated that the highest project-related CO one-and eight-hour levels are not predicted to exceed the NAAQS for this project. Please see the Air Quality Technical Memorandum for further detail.

Noise

A Noise Study Report was prepared for this project which recommended that noise abatement may be reasonable and feasible adjacent to the Harvest Point Subdivision. After the adjustment to Alternative 2 to its original location in response to comments received at the Public Hearing, the proposed noise impacts were reevaluated which determined that the areas which previously warranted noise mitigation are now below the 10d(b) level required by the Environmental Protection Agency. Therefore, no areas along the preferred alignment meet the cost feasible requirement for noise mitigation.

Wetlands

Adjusted Alternative 2 will unavoidably impact a total of 55.17 acres with a Uniform Mitigation Assessment Method (UMAM) Functional Loss of 50.60 Units. These wetland impacts are less than those which would have occurred with Alternative 1. It has been determined that there are no practical alternatives to construction in wetlands if either of the build alternatives were chosen as the recommended alternative. All practicable measures will be used to reduce impacts to wetlands during subsequent project phases. Existing wetlands will have connectivity maintained via cross drains throughout the project limits. Short-term construction-related impacts will be minimized by the adherence to the FDOT's Standard Specifications for Road and Bridge Construction. Mitigation will be required for direct, as well as some indirect (as deemed necessary by FHWA, FDOT, USACOE, NWFWMD, and other appropriate resource agencies) wetland impacts. Unavoidable impacts to wetlands can be mitigated through the privately owned Pensacola Bay Mitigation Bank (PBMB) or through either of two In-Lieu Fee sites operated by Northwest Florida Water Management District (NWFWMD). The In-Lieu Fee Program is intended to provide mitigation credits when a mitigation bank is not available and is not intended to compete with existing mitigation banks. Adequate compensatory mitigation is currently available through the PBMB. Construction for this project has not been funded through 2035 and the availability of credits cannot be forecasted that far into the future.

Water Quality

It has been estimated that the degree of effect from the S.R. 87 Connector project on water quality and quantity will be substantial. This is mostly due to the undeveloped nature of the corridor. The majority of the corridor is designated timberland.

The proposed stormwater facility design will include all design criteria outlined in the Santa Rosa County Land Development Code, Section 4.03.06 (F), Chapter 62-346 of the F.A.C and NWFWMD's Environmental Resource Permit (ERP) Applicant's Handbook Volume II, Chapters 5.2 and 8.2. Adjusted Alternative 2 traverses through areas which drain to the Blackwater River, an Outstanding Florida Water (OFW). Due to the proposed impact to the OFW, the FDEP/NWFWMD requires that an additional 50% treatment volume be provided in these areas. The stormwater management facilities were preliminarily designed to include this additional 50%, even in areas that do not directly discharge to Blackwater River.

Outstanding Florida Waters

Adjusted Alternative 2 crosses the Blackwater River and its floodplain area. In order to minimize direct, indirect, and long-term impacts, the entire floodway will be bridged. The maximum amount of stormwater possible, given the land elevation at the start of the bridge south of the river, will be captured from the roadway surface and conveyed to stormwater ponds located to the north and south of the floodplain area to minimize runoff into the river or the wetlands below the bridge. The height and width of the proposed bridges are adequate to provide light penetration to the ground and allow for groundcover regrowth and survival. As mentioned above, criteria for water quality is more stringent for an OFW and will be followed during design.

Contamination

A Contamination Screening Evaluation Report (CSER) was conducted for this project. The CSER outlined a total of twelve sites as being potential sources of contamination along the proposed alignment. Sites 1-6 are found in the southeast portion of the project limits near the S.R. 87/U.S. 90 intersection and Sites 7-12 are found in the northwest portion of the project limits near the S.R. 87 and S.R. 89 intersection. The weighting system that was outlined in the CSER gave Alternative 2 a score of 14 for contamination, which is less than the 21 given to Alternative 1. However, the proposed alignment does not directly impact any of the twelve sites.

Floodplains

Mitigation is required for impacts to the floodplain. Floodplain compensation will be provided by excavating (dredging) a portion of “uplands” just upstream of the proposed Blackwater River Bridge. This area will serve as a locale for additional flooding along the river bank and will assist with rise in base flood elevations at the proposed highway facility. Flood maps shall be revised to include the floodplain compensation area as part of the base flood area. The preferred alternative generates minimal rise in base flood elevations and does not increase floodplain limits as indicated in the hydraulic evaluations provided in each Bridge Hydraulics Report (BHR). Likewise, provisions for Cooper Basin, a potential spawning ground for the Gulf sturgeon, were analyzed. The proposed floodplain mitigation may be used in conjunction with the proposed stormwater management facilities to provide additional treatment through a by-pass train away from Cooper Basin. Adjusted Alternative 2 impacts 42.13 acres of floodplains.

Coastal Zone Consistency

In accordance with Section 307 of the Coastal Zone Management Act (CZMA) and Chapter 15, CFR, Part 930, Federal Consistency with Approved Coastal Management Programs, this project was reviewed for Coastal Zone Consistency. As documented in the Advance Notification (AN) process, (the Florida State Clearinghouse), FDEP Office of Intergovernmental Affairs, commented that the State of Florida had no formal objections to the use of federal funding for the S.R. 87 Connector project, and the project was therefore consistent with the Florida Coastal Management Program (FCMP). However, the consistency determination was based on the project having addressed the concerns of the state reviewing agencies. The continued concurrence with Coastal Zone Consistency is based on the "adequate resolution of issues" as identified during the review process. Final concurrence of Coastal Zone Consistency will be determined during the Environmental Permitting Process.

Wildlife and Habitat

This project has been evaluated for potential impacts to threatened and endangered species in accordance with Section 7(c) of the Endangered Species Act of 1973 (ESA) and by Chapter 68A-27, F.A.C. An Endangered Species Biological Assessment (ESBA) Report, dated September 5, 2012 has been prepared for the project and was submitted to the USFWS for their review and concurrence of effect determination. A separate Biological Assessment, dated March 2013, was prepared as part of ESA Section 7 Formal Consultation and also submitted to USFWS. During the informal review of this project, it was determined that formal consultation should be requested for possible impacts to the Gulf sturgeon and the reticulated flatwoods salamander. During the formal consultation process, the project team and USFWS shared information about the project and the likely impacted species. USFWS followed this with the preparation of a Biological Opinion on whether this project will jeopardize the continued existence of these species. The USFWS determination stated the following:

- The project "may affect, but is not likely to jeopardize the continued existence of the Gulf sturgeon or destroy or adversely modify its designated critical habitat."
- The project "may affect, but is not likely to jeopardize the continued existence of the reticulated flatwoods salamander or destroy or adversely modify its designated critical habitat."

Essential Fish Habitat

The USFWS identified concerns over designated critical habitat and potential habitat for federally listed species located within the corridor. USFWS also identified concerns with habitat fragmentation and wetland impacts and recommended several measures to minimize potential impacts to listed species. Surveys were conducted and potential habitat was evaluated. A wildlife assessment was prepared and coordinated with USFWS. The Formal Section 7 consultation process for the reticulated flatwoods salamander and Gulf sturgeon was completed per the Services Biological Opinion issued on December 20, 2013.

Any potential downstream impacts would be minimized through the use of bridges and erosion control measures. In summary, the SR 87 project would not have an adverse effect on EFH. NMFS reviewed the proposed location for Alternatives 1 and 2 as part of the programming screen of the ETDM process and indicated that the project would not directly impact NMFS trust resources. In addition, due to the OFW requirements, the stormwater systems will be designed to prevent degraded waters from reaching estuarine and marine habitats.

Farmlands

Conducting a GIS analysis of Prime Farmland (using USDA-NRCS data) and Important (Unique) Farmland Analysis (using 2004 NWFWMD data) has resulted in the determination that there are Prime Farmland soils within the Project Area, as well as areas of Farmlands with Local Importance. Impacts to Agricultural lands are primarily restricted to improved and unimproved pasture. Since the impact to Prime Farmland is small, the NRCS assigned a minimal impact rating for both Alternative 1 and 2. After coordination with NRCS, they determined that there were no Prime Farmlands impacted by Adjusted Alternative 2.

Construction

Construction of the roadway may require limited excavation of unsuitable material and use of materials such as lime rock, asphaltic concrete, and portland cement concrete. The removal of structures and debris will be in accordance with local and state regulatory agencies permitting this operation. During construction, the contractor will utilize Best Management Practices (BMPs) which will minimize any sedimentation and erosion impacts to areas outside of the limits of construction. BMPs may include silt fence, hay bales, turbidity barriers, and ditch blocks. These are standard practices outlined in the Florida Stormwater Management Plan.

Measures to Minimize Harm

This project incorporates all practical measures to avoid or minimize environmental harm. Although some impacts will occur, every effort will be made to minimize impacts through the institution of feasible measures applicable to each situation. Specific commitments have been made as described here.

Commitments

1. The Blackwater River will be bridged and construction will be conducted during nonspawning periods to avoid direct impacts to both Gulf sturgeon critical habitat and individuals.
2. All construction methods will be consistent with the "Construction Special Provisions – Sturgeon Protection Guidelines" to minimize construction related impacts.
3. The pond areas within the Reticulated Flatwoods Salamander (RFS) critical habitat unit will be bridged to reduce direct impacts to both the critical habitat unit and individuals.
4. Indirect impacts to the RFS habitat will be minimized through the location and placement of stormwater treatment from elevated roadways so that the treatment areas do not impact the critical habitat unit.
5. The most recent or current Eastern indigo snake protective measures will be followed during construction to avoid impacts.
6. Manatee protective measures will be followed during construction to avoid impacts.
7. Prior to construction, a survey for the gopher tortoise will be conducted. If individuals are present within the project impact area, appropriate permits will be obtained and tortoise relocation will be completed per permit conditions and requirements.
8. A site-specific survey will be conducted to determine the presence or absence of bald eagle nests in or near the construction zone and appropriate permits per the Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act will be obtained as appropriate and applicable.
9. Any unused ROW purchased for future expansion will be left in its natural, generally un-impacted state until such time as it is needed for the proposed expansion to 4 lanes.

- All commitments made as terms and conditions of the Biological Opinion (Appendix I) will be fulfilled:
  10. The FDOT will provide an information package at the Pre-Construction Conference to educate the Contractor on the subject of the listed species, the laws protecting such species, and the civil and criminal penalties for harming, harassing, or killing such species.
  11. The Contractor will consider and implement where practical innovative, environmentally sensitive construction techniques to avoid/minimize impacts to listed species and sensitive areas.
  12. The Erosion Control Plan/Stormwater Pollution Prevention Plan (SPPP) will be provided to the USFWS for comment prior to the start of work. Substantive changes to the SPPP during construction will also be reported to the USFWS.
  13. The Erosion Control Plan/SPPP will be strictly adhered to, including the installation and maintenance of structures. Temporary erosion control devices will be installed prior to clearing and grubbing activities. Other measures in the plan will include:
  14. All turbidity barriers placed in the river will be consistent with the Gulf Sturgeon Protection Guidelines.
  15. Stockpiled materials will be placed in a manner to prevent rain runoff from washing materials into the river.
  16. The Erosion Control Plan will include redundant measures for the width of the ROW along the Blackwater River and along the limits of construction within the flatwoods salamander critical habitat unit to provide a second line of defense should one layer of protection be breached. An example would be a double row of silt fencing.
  17. The Erosion Control Plan will include daily monitoring of erosion control devices that protect the waters of the Blackwater River and the flatwoods salamander critical habitat unit.
  18. Soil disturbing activities (clearing, pile driving) within the potential breeding pond (Pond 2) of the flatwoods salamander critical habitat unit will be avoided to the extent practicable during periods when eggs/larvae may be present (October through April). Additional coordination will occur during the Design phase to address this issue.
  19. In the event of erosion control failure with impacts to the Blackwater River, the Contractor will notify the FDOT, FHWA, and USFWS to determine: (1) whether incidental take was exceeded, (2) if additional protection measures are needed to avoid future impacts to listed species from sedimentation, and (3) if stream restoration is needed. The USFWS will be available to assist the FDOT with development of a stream restoration plan should it become necessary.
  20. Survey the baseline stream geomorphology 400 m downstream of the extent of construction through methods including a longitudinal profile and stream channel cross sections. Coordinate the survey plan with the USFWS prior to implementation.
  21. Stream turbidity will be monitored by the Project Administrator or his designee before construction in various places on the river (upstream, downstream, etc.) to establish a baseline. During construction and demolition, the Project Administrator will be responsible for monitoring turbidity levels daily for any earthwork activities near the Blackwater River to ensure that turbidity levels do not increase above the level allowed by the FDEP permit for an OFW. Construction activities found to be associated with the increased turbidity levels will not be allowed to resume until the turbidity levels

return to that of ambient. All other construction activities having no effect on the deviant turbidity levels will be allowed to resume once the source has been identified.

22. Boats and barges used in support of construction activities will be removed from the main channel during periods of inactivity.
23. A post-construction field review will be conducted by FDOT and the USFWS to determine if the project has impacted the Blackwater River and if stream restoration is needed.
24. No herbicides or pesticides will be used within the flatwoods salamander Critical Habitat Unit RFS-2, Subunit A during construction and post-construction for FDOT maintenance activities.
25. The hydrology and native vegetation of the potential breeding pond (Pond 2) within the FDOT ROW will be maintained to the extent practicable. The pond's plant community and hydrology will be monitored for 5 years to better assess the long term adverse effects of the bridge. A monitoring plan will be developed and coordinated with the USFWS prior to construction. Annual monitoring reports will be provided to the Fish and Wildlife Service's Field Office in Panama City, Florida
26. Upon locating a dead, injured, or sick individual of an endangered or threatened species, FDOT will notify the Fish and Wildlife Service Law Enforcement Office, Groveland, Florida at (352) 429-1037 within 24 hours, and the Fish and Wildlife Service's Field Office at Panama City, Florida at (850) 769-0552 within 48 hours. Care should be taken in handling sick or injured individuals and in the preservation of specimens in the best possible state for later analysis of cause of death or injury.
27. A report describing the actions taken to implement the terms and conditions of this incidental take statement shall be submitted to the Project Leader, U.S. Fish and Wildlife Service, 1601 Balboa Avenue, Panama City, Florida, 32405, within 60 days of the completion of construction. This report shall include the dates of work, assessment and actions taken to address impacts to the Gulf sturgeon and flatwoods salamander, if they occurred.
28. Environmentally sensitive areas will be identified and flagged.
29. In the location of the bridge, clearing and grubbing will be limited to cutting vegetation to the ground surface. Root raking will only be used in areas where piling cap supports are anticipated, which will minimize impacts to the floodplain wetlands that support the Blackwater River and the RFS critical habitat unit.
30. Embankment and excavation will not be employed within the Gulf sturgeon critical habitat or the RFS critical habitat since both areas will be bridged.
31. Where embankments are constructed, only clean fill will be used that does not contain any muck, vegetation, stumps, roots, brush, rubbish, or reinforced bar. If dewatering is required, all water will be pumped to upland areas on the edge of the ROW that will be contained with silt fencing. Water will be allowed to percolate through in these upland areas to prevent sediment runoff from entering adjacent wetlands. Once the embankments are completed, they will be compacted and stabilized prior to paving and surfacing operations.
32. Excavated material will be stockpiled in designated upland areas that will be enclosed with silt fencing and hay bales. The stockpile areas will be inspected regularly and will be kept moist to reduce observed windblown particulates.
33. Construction mats will be used within wetland areas to minimize soil disturbances and rutting, and to maintain existing micro-topography and water levels.

34. FDOT will ensure that all staging areas are within uplands and are contained with erosion control measures. Construction staging areas will be located outside of the Blackwater River floodplain.
35. Best Management Practices (BMPs) specific to Outstanding Florida Waters (OFW) will be implemented during construction and stormwater design to prevent degradation of the Blackwater River.
36. Ponds with discharges into wetland areas associated with the Blackwater River will treat water to OFW standards. The remainder of the stormwater ponds will meet the state requirements under the Environmental Resource Permit (ERP).
37. In-river pile driving will be avoided during May and June to minimize potential direct harm to Gulf sturgeon during the peak period when fish may be present in the river near the project location.
38. Pile bents will be used instead of columns on piling caps to reduce direct impacts to river bottom and critical habitat.
39. No dredging or use of explosives in or adjacent to the river will be done.
40. Sturgeon migratory corridors will not be physically blocked or impeded.
41. In order to minimize impacts to Gulf sturgeon that may be using the river at the time of construction, the contractor will "ramp-up" for piling installation by conducting several (up to five) soft hammer blows before commencing the harder hammer blows. The "ramp-up" is intended to alert fish that construction is commencing and give them time to move away from the construction site.
42. During in-river pile driving, erosion control measures will be installed around the limits of the work area and will be maintained until piling installation in each area is complete. Specifically:
43. The work area will be separated from the adjacent open water using floating turbidity barriers. The barriers will be installed around the limits of the work area and downstream of the work site prior to commencing work, and removed no more than 24 hours after work is completed.
44. The barriers located downstream of the worksite will be removed at the end of each work day and replaced prior to commencing work the following day. Barriers will not be removed before turbidity returns to background levels.
45. FDOT will purchase, donate, or fund the purchase of up to four fish tag receptors for use in the Blackwater River system, in an amount not to exceed $5,000. FDOT requests copies of the processed or raw data obtained from the receptors for use in future project efforts. FDOT will follow the procedure outlined in the Construction Project Administration Manual, Section 8.2 Environmental Permit Compliance to submit proof of commitment compliance to FWS and FHWA.
46. All stormwater will be collected from the completed bridge surface and conveyed to stormwater ponds located outside of the RFS critical habitat unit.
47. The ROW will be accessed for construction and maintenance from the maintained powerline easement.
48. FDOT will provide compensation for the loss of RFS habitat through a monetary contribution up to $10,000 to a third party for activities that contribute to the conservation of the RFS. The work plan for these conservation activities will be coordinated with the USFWS and FDOT, and will be mutually agreed to as suitable for offsetting effects to RFS habitat.

49. Precautions will be taken during preventative maintenance tasks such as painting and cleaning to protect the Blackwater River and the RFS critical habitat. Preventative measures include conducting work from a maintenance traveler, platform, or over a suspended net or tarp to capture rust, paint, and paint removing agents and prevent discharge into the water or wetland below the bridge. If sanding is necessary, sanders with vacuum filter bags will be used. The water used for cleanup will be collected and disposed of to avoid impacts to the water or wetland below the bridge.
50. Mitigation for unavoidable wetland impacts will be accomplished in accordance with section 373.4137, F.S., which allows the FDOT to provide compensatory mitigation using mitigation banks and any other options that satisfy state and federal requirement. Mitigation will be finalized during Design/Permitting.
51. Proposed stormwater treatment pond(s) shall avoid direct discharge to Cooper Basin. Cooper Basin is located downstream from the proposed bridge crossing and is connected to the Blackwater River, an Outstanding Florida Water. Cooper Basin is a known breeding area for Gulf Sturgeon (Acipenser oxyrinchus desotoi).
52. Due to adjacent historical sedimentation/erosion compliance issues and adjacency of endangered species habitat, additional OFW BMPs shall be evaluated during design. FDOT shall consider designing potentially unique and project specific temporary and permanent erosion control solutions to shield highly erodible soils found within the construction limits and protect nearby OFW as well as endangered species habitat. The sedimentation and erosion controls will be submitted as part of the Stormwater Management Plan to FWS for comment prior to work start (Biological Opinion, 12-20-2013, Terms and Conditions, RPM 1.3, 1.4, 1.5, 1.7, 1.9 et al). FHWA staff shall be notified and copied upon submittal to FWS.
53. Hydrological Connections will be maintained, where reasonable and feasible, as a wetland minimization effort.
54. Final Concurrence of the project's consistency with the Florida Coastal Management Program will be determined during the environmental permitting process. Documentation can be found outlined in the approved Environmental Permit.
55. Drainage structures will be evaluated to determine if additional wildlife connections can be incorporated into their design during the projects final design phase.

Commitments to Local Government/Agencies

Local Governments

56. Commitment to Santa Rosa County and the City of Milton: To build the proposed facility into two phases, beginning with phase one as a two-lane facility with bike lanes and a multi-use path connecting the S.R. 1 Historic Trail and the BHST. Phase two would be built as traffic demand dictates, and would be a four-lane facility with bike lanes and will retain the multi-use path.
57. Commitment to Santa Rosa County and the City of Milton: In coordination with FHWA, the ROW for the final build-out (four-lane), including stormwater ponds, of the proposed facility would be purchased during the initial ROW acquisition stage.
58. To enhance alternative modes of transportation by linking existing multi-use trail facilities.
59. To gain public support by providing a landscaped enhanced corridor as part of the proposed facility.

FDEP/OGT

60. To provide grade separation between the proposed facility and the BHST to avoid the Section 4(f) impacts. No bridge pilings or other infrastructure will be installed within the trail corridor.
61. To provide a connection between the proposed facility's pedestrian features and the BHST.

State Historic Preservation Officer

62. To provide a safety enhanced at-grade trail crossing for the proposed S.R. 87 Connector's crossing of the S.R. 1 Historic Trail along U.S. 90.
63. To coordinate the design options to minimize the potential effects on the SR 1 resource.

USFWS

64. To bridge the RFS Habitat area as defined by USFWS.
65. To provide the USFWS the opportunity to review the final design plans.

FEMA

66. To bridge the entire Blackwater River Regulatory Floodway.

USCG

67. The Blackwater River and Clear Creek Bridges are exempt under the Surface Transportation Authorization Act from Coast Guard Permitting. However, per the USCG correspondence dated 5/3/2012 and 6/26/2014, USCG required lighting and other signals are not exempt. The subject Act which amended Title 23 U.S. Code, to include 23 U.S.C 144(c), did not exclude this category of bridges from the application of 14 U.S.C.85. Lighting and other signals will be addressed in the design phase. If it is determined that they are not necessary, a variance will be submitted.

National Park Service, Federal Lands to Parks

68. To provide John Barrett, Program Manager, or his equivalent at Federal Lands to Parks, the opportunity to review the final design plans of the structure over the BHST.

Monitoring or Enforcement Program

The FDOT District Three has committed to implement mitigation measures to minimize project impacts. These commitments are tracked in accordance with FDOT's ***Project Commitment Tracking Procedure, Topic No. 700-011-035***.

Through the Reevaluation process the project is kept current with laws and regulations, commitments are identified and updated, permits are identified, and project changes are addressed. Required permits may include conditions for monitoring and compliance measures.

The FDOT Reevaluation Process serves to ensure compliance with all applicable Federal and State laws and regulations prior to the advancement of the project to the next major production phase. This process also provides the mechanisms by which commitments made during the project development process are identified, updated, and their status confirmed. Any new commitments or laws which may have come into effect since the approval of the original final environmental document are addressed in the Reevaluation. As a result, the environmental documentation on a project is always current with prevailing rules and regulations, as well as, any commitments resulting from the project development process, including permit

requirements. FDOT District Three tracks these commitments through a data base in order to manage and access the large and diverse amount of data in a timely manner.

Conclusion

For the foregoing reasons, and based upon consideration of all the social, economic, and environmental evaluations contained in the *Final Environmental Impact Statement / Record of Decision*, with the input received from other agencies, organizations, and the public; the Federal Highway Administration has determined that the *FEIS* preferred alternative, namely Adjusted Alternative 2 (the adjustment was due to comments received at the public hearing), is hereby the selected alternative. It is the decision of the FHWA to adopt this alternative as the selected alternative for this project, and grant the Florida Department of Transportation Location and Design Concept Acceptance.

___ / ___ / ___
Date

_____
Division Administrator
Federal Highway Administration

2. FEIS INTRODUCTION

2.1 Project Description

The State of Florida Department of Transportation (FDOT), in coordination with FHWA as the lead agency, is conducting a study to evaluate potential alternatives that would directly link SR 87S with SR 87N in the vicinity of the City of Milton in Santa Rosa County, Florida. The current connection between SR 87S and SR 87N is indirect and partly involves a shared facility of SR 87 and US 90 (see **Figure 2.1**). The proposed project is in the Project Development and Environment (PD&E) Study phase in which preliminary engineering is accomplished.

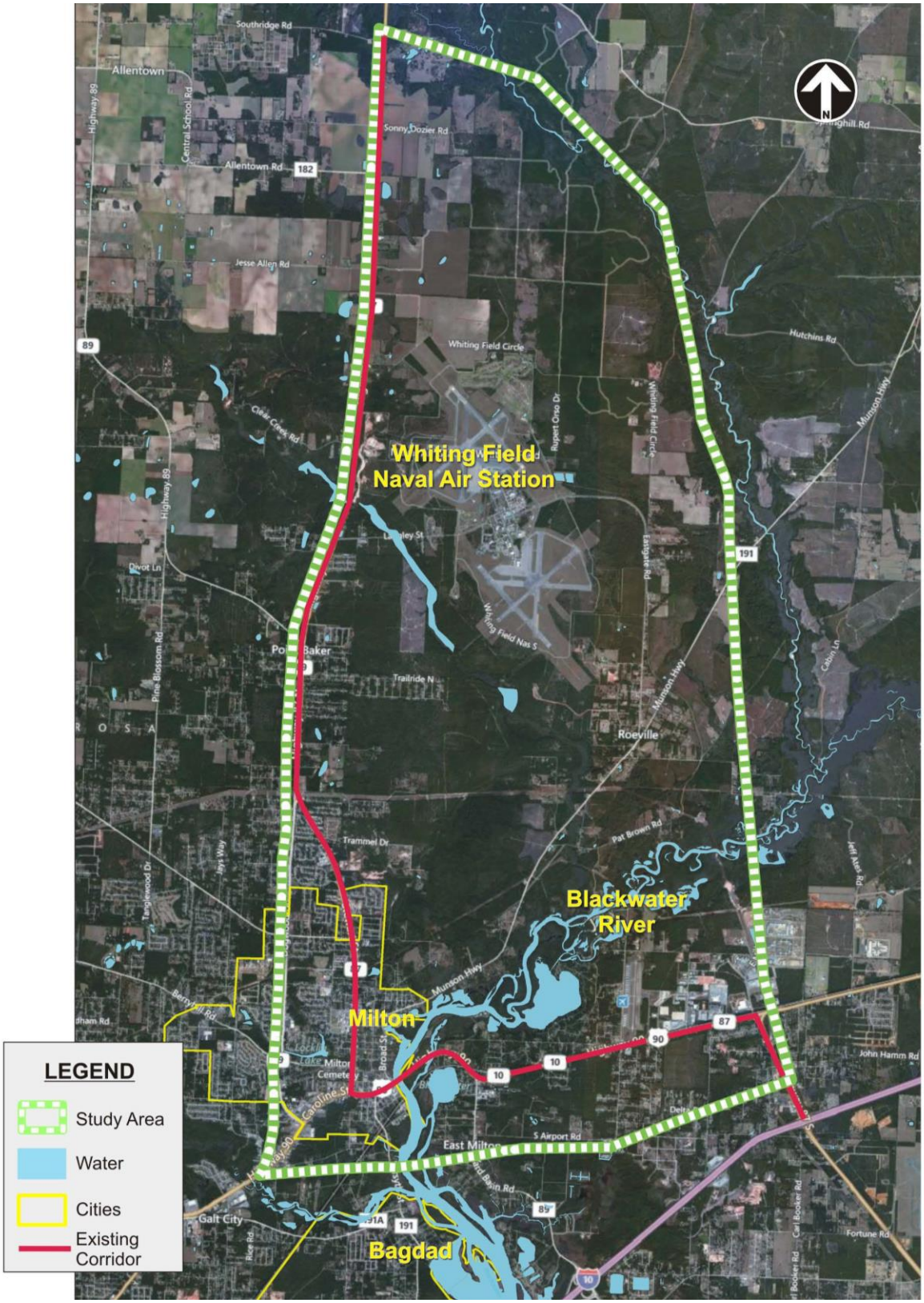
The primary objective of this SR 87 Connector project is to extend SR 87S to facilitate north-south traffic flow to more effectively serve the military base operations and to provide for a more direct hurricane evacuation route from the coast to areas north in Alabama. Another objective is to reduce traffic congestion within the City of Milton, and to alleviate travel demand on the section of US 90 currently shared with SR 87. Versions of this project have gone through ETDM screening as ETDM Project #2861 in 2008. However, that project was much more limited in scope and only evaluated a corridor from SR 87S to Munson Highway. On December 19, 2009 the SR 87 Connector project was submitted for ETDM review as Project #12597 (See **Appendix B**).

The new roadway will initially include a two-lane facility with four-lane improvements in the more urban areas at either end. In addition, the facility will include bicycle/pedestrian features with a link to the existing Blackwater Heritage State Trail. The proposed right of way and other design provisions will allow for future expansion to a four-lane facility. The alternatives are proposed to include two structures. The first structure spans Blackwater River and its associated wetlands and floodway and includes bicycle/pedestrian upgrades. The second structure spans Clear Creek.

2.2 Purpose of and Need for Action

This project is needed to provide for a new roadway facility linking SR 87S with SR 87N. This will serve as an alternative to the existing shared facility of SR 87 and US 90, which is a constrained facility that is currently operating at a failing level of service (LOS) F. Therefore, the primary need for this new corridor is to provide additional capacity, emergency evacuation, and to improve regional connectivity by providing a more direct route from areas in northern Santa Rosa County to I-10 and to areas further to the south. Likewise, access will be improved to and from I-10 for the Whiting Field U.S. NAS, and the County's Joint Use Planning Area near Whiting Field. It is also anticipated that this new roadway facility would provide relief to failing portions of US 90, as well as the physically constrained US 90 bridge over the Blackwater River.

Figure 2.1: Project Study Area



2.2.1 Emergency Evacuation

SR 87 serves as a vital evacuation route for northbound traffic destined for I-65 in Alabama. During times of hurricane force winds, both the Pensacola Bay Bridge and the Garcon Point Bridge close, leaving SR 87N to the interstate and beyond as the only access out of the beach areas of Gulf Breeze and Navarre. It is also the only access into the area for Emergency First Responders. However, since a portion of the current corridor travels along a congested portion of US 90, through historic downtown Milton, it cannot function as a contiguous roadway. The project will address future projected deficiencies on an established emergency hurricane evacuation route.

2.2.2 Multi-modalism

This project will also address the need for greater bicycle and sidewalk connectivity within the county. This new north-south link over Blackwater River will establish a county-wide network that will serve the east and northeast portions of the county connecting a trail along US 90 to areas north of Whiting Field and State Lands. Most notably will be a connection between the Blackwater Heritage State Trail (BHST) and the Historic State Road 1 Trail. The BHST is a linear park that has been embraced by the community. There is a very active bicycling, horse riding, running, etc. population in the surrounding area that utilizes the trail, and future plans call for the trail's extension to both the north and south. The Historic State Road 1 Trail has just undergone a revitalization project that repaired much of its brick path, making it a desired trail as well.

The BHST and Historic State Road 1 Trail serve as a conceptual network within a statewide system. This network is called the Florida Greenways and Trails System (FGTS). The FGTS Network is meant to establish a regionally connected system of greenways and trails through a priority network, based off of opportunity corridors. Under this system, local governments have shared their unique vision to connect trails to one another throughout the state. While the connection from the Historic State Road 1 Trail to the BHST is not on the priority network, it serves as a vital connection between the two priorities lines on the statewide network.

In addition, Whiting Field NAS is in the process of expanding its trail system to circle its perimeter. This project will connect that system to the overall network as well.

As there is no transit in the area, the multimodal improvements are based on the pedestrian and bicycle facilities provided in conjunction with the roadway, as well as connectivity to the Park-and-Ride Lot at US 90 and SR 87S, and the new Whiting Aviation Park located on the east side of NAS Whiting Field.

2.2.3 Social Demand and Economic Development

Santa Rosa County is not only a bedroom community to the greater Pensacola area, but has also been experiencing considerable population growth of its own. This growth has spurred the need for an improved roadway network. In addition, major traffic generators in the area such as new residential developments, the Santa Rosa Criminal Justice Center, the Santa Rosa Corrections Facility, the Whiting Field U.S. NAS, the Team Santa Rosa Joint Planning area near Whiting Field, and the Santa Rosa Commerce Park on the US 90 corridor, would all benefit from the additional capacity this facility will provide. The need for the project is also related to committed trips associated with future development in the northern portions of Santa Rosa County, as well as the future development on the US 90 corridor east of Milton, which is hindered by the existing lack of capacity on US 90 through Historic downtown Milton and the single bridge crossing the Blackwater River.

2.2.4 Future Growth

As reported by the US Census Bureau 2010 Report (http://www.census.gov/quickfacts), Santa Rosa County continues to be among the fastest growing counties in Florida. The county population has grown 150% (from just under 60,000 to over 150,000 people) from 1980 to 2010. According to the University of Florida's Bureau of Economic and Business Research (BEBR) Report (http://www.bebr.ufl.edu/population) and the FL-AL TPO 2040 Long Range Transportation Plan (LRTP), the population is expected to grow another 50% to nearly 230,000 people by 2040. It should be noted that the latest census data obtained between 2010 and 2014 show a 2% growth rate per year which is consistent with the anticipated projected growth outlined in the 2040 LRTP. This population growth will put further demand on the US 90/SR 87 segment, making growth and evacuation difficult due to a lack of roadway capacity.

2.2.5 Traffic Data

There are six levels of service (LOS) defined for capacity analysis on roadways. They are given letter designations A through F, with LOS A representing the best range of operating conditions and LOS F the worst. The specific terms in which each level of service is defined vary with the type of facility involved. In general, LOS A describes a free-flowing condition in which individual vehicles of the traffic stream are not influenced by the presence of other vehicles. LOS F generally describes breakdown operations (except for signalized intersections) which occur when flow arriving at a point is greater than the facility's capacity to discharge flow. Levels of service B, C, D, and E represent intermediate conditions, with the lower bound of LOS E often corresponding to at or near capacity operations.

According to the Santa Rosa County Comprehensive Plan, the current adopted LOS Standard for US 90 is D. In 2008 before this study began, US 90 from Ward Basin Road to SR 87N had a failing level of service (LOS F). Even though the subsequent

downturn in the economy improved the traffic conditions slightly, without the proposed improvement, the operating conditions are expected to deteriorate. According to the SR 87 Connector Design Traffic Technical Memorandum dated October 2012, multiple sections of US 90 are expected to have a failing LOS by 2015. This is supported by the 2014 published traffic numbers. These numbers indicate that two segments through downtown Milton are failing, with a third at 95% capacity. Without any improvements, not only will the downtown Milton area fail, the entire segment from SR 87N to SR 87S will fail by the design year of 2035.

SR 87 Connector is projected to carry approximately 20,000 daily vehicles in 2035. While this volume will provide some relief to traffic congestion along US 90, they are well within (and less than half) the daily capacity of a four-lane divided roadway with few signalized intersections. The SR 87 Connector is anticipated to provide an above standard level of service (LOS C or better) for vehicles and trucks beyond 2035. In addition, it offers a shorter truck route to serve Alabama and the northern parts of the county, saving time and fuel. It also maximizes roadway capacity during hurricane evacuation of the beach areas.

Adjusted Alternative 2, the preferred alternative, will meet regional needs such as hurricane evacuation, a more direct connection to Whiting Field, and improve connectivity of SR 87S to SR 87N. It also removes 20% of the traffic off of the congested portion of US 90 through Milton. However, the traffic models (based off of the Northwest Florida Regional Planning Model) developed during this study show that US 90 will again be exceeding its capacity by the year 2035, even if the Connector is constructed. The model suggests this traffic is local and east-west traffic. As a result, the Florida Alabama Transportation Planning Organization, along with local elected officials, approached the Florida Department of Transportation about a PD&E study that would specifically look at an east-west corridor to relieve the expected future traffic demands on US 90 through Milton. This PD&E Study, called the US 90 PD&E, began in 2013.

The four proposed alternatives from the US 90 PD&E improved the future volume to capacity ratio along the existing US 90 corridor. However, all alternatives would be at capacity by the year 2035 without the SR 87 Connector removing regional traffic from the downtown area. Without the removal of regional traffic, a six lane roadway would be required through the downtown area. Providing such a roadway through Milton would drastically change the look and feel of the downtown area, have devastating effects on archeological and historical sites, and would not be consistent with local planning efforts. With this understanding, it is evident that the improvements to US 90 and the SR 87 Connector should both be constructed to provide regional and local traffic relief for the Milton area.

2.2.6 Safety/Crash Rates

A segmental crash analysis conducted along the present study corridor from 2005-2009 is illustrated on **Table 2.1 and 2.2**. Clearly, a significant number of crashes representing an average annual economic cost of $1,291,800 have occurred. It's

interesting to note that most of the crashes have occurred at or near the US 90 intersections with SR 87S and SR 87N.

Table 2.1: Recent Crash Severity Data				
Location	**Fatal**	**Injury**	**PDO**	**Total**
US 90	$3,569,000	$365,200	$4,398,000	$8,332,200
SR 87N	$0	$291,100	$2,668,500	$2,959,600
Total	$3,569,000	$656,300	$7,066,500	$11,291,800

*Based on: (Fatality $2,600,000; Injury $36,000; PDO $2,000) Source: FHWA Tech Advisory T7570.2 (1994) updated to 2009 using GDP Price Deflator.

Likewise, the number and types of crashes were also gathered for several segments. The following is a summary of the five most predominant crash types on segments of US 90 and SR 87N, as well as bicycle and pedestrian crashes.

Table 2.2: Crash Type							
Crash Type, Years 2004-2009	**Rear End**	**Angle**	**Side-swipe**	**ROR**	**Left Turn**	**Bike (#)**	**Pedestrian (#)**
US 90 from SR 87N to Ward Basin	42.3% (41)	22.7% (22)	10.3% (10)	9.3% (9)	3.1% (3)	2	1
US 90 from Ward Basin to SR 87s	39.2% (56)	18.6% (30)	7.8% (8)	11.8 % (13)	4.9% (6)	0	0
SR 87N from US 90 to Harvest Point	19.7% (23)	28.2% (33)	2.6% (3)	13.7 % (16)	8.5% (10)	3	3

The majority of crashes on SR 87S from I-10 to US 90 occurred at the US 90/SR 87S intersection. The crashes along US 90, from SR 87S to SR 87N were distributed throughout the segment. There was, however, a slightly higher concentration of crashes at the US 90/SR 87N intersection. The single fatality in the segment occurred at milepost 13.847 just east of Ward Basin Road. The crashes along SR 87N from US 90 to Southridge Road were generally distributed throughout the segment. The six pedestrian/ bicycle crashes on SR 87N all occurred at different intersections, with no concentration in any one area. However, two out of the three pedestrian/ bicycle crashes on US 90 occurred in the historic downtown Milton area just west of the Blackwater River bridge, with the final at Ward Basin Road.

On the portion of US 90 that is shared with SR 87, the majority of crashes are Rear End collisions, followed by Angle collisions. This portion of roadway is generally a two lane typical section, with turning lane improvements at signalized intersections. This segment of US 90 had an Actual Crash Rate for years 2005, 2006, 2007, and 2009 that exceeded the statewide average for other roads of similar type in Florida with enough statistical significance to be considered outside of random variation (>99.9%). On SR 87N from US 90 to Harvest Point (location of intersection with Adjusted Alternative 2), Angle collisions are the most prominent followed by Rear End and Run off Road (ROR) collisions. This roadway is generally a four lane

divided typical section. SR 87N had higher crashes than the statewide average for 3 out of the 5 years, but only 2008 was statistically considered outside of random variation.

Rear End collisions are indicative of congested conditions where there is stop-and-go traffic, inadequate gaps between vehicles, large numbers of turning vehicles, drivers unaware of intersections, etc. Angle collisions are indicative of restricted site conditions, large intersection volumes, excessive speeds at approaches, etc. ROR crashes are generally due to inadequate shoulders, inadequate roadway design, narrow lanes and improper channelization. It should be noted that on SR 87N, the clusters of these type of accidents occurred at a median change, from a continuous bidirectional median to a restricted median, and at the intersection where SR 87 and SR 89 converge. According to the Highway Safety Improvement Program Manual, the countermeasures for Rear End collisions are to widen the roadway, add turn lanes, add warning/flashing signals, reduce speed, etc. Countermeasures for Angle collisions include removing sight obstructions, add traffic lanes, or reroute traffic. The countermeasures for ROR crashes are to improve pavement markings, upgrade roadway shoulders, widen lanes, reduce congestion, improve channelization, relocate islands, etc.

Presently, SR 87 follows along the congested US 90 corridor for five miles. This portion of the corridor is operating generally at a LOS F and is the area where the only fatality in the study area occurred. Improvements to the existing roadway in this vicinity are difficult due to the historic downtown Milton area. Currently, with only the US 90 two-lane bridge crossing the Blackwater River, all vehicle trips from the east and SR 87S to as far south as Navarre Beach, as well as trips heading north up Ward Basin Road, are forced to cross the single crossing to continue traveling westward or northward which exacerbates congestion on US 90 through this section. The SR 87 Connector will provide a new roadway to connect SR 87S and SR 87N. This will reroute through-traffic headed north from I-10, and is projected to remove 18% of the traffic off of US 90 in the study area. By developing a new corridor that does not follow the existing US 90 alignment, regional traffic would be able to avoid this congested area.

It should be noted that the preliminary traffic model developed for the US 90 PD&E study indicates that the existing US 90 corridor will again be at capacity in 2035, even with the proposed US 90 PD&E improvements, if regional traffic is not diverted. With this new and additional river crossing afforded by the SR 87 Connector Alternative 2, the traffic can be expected to re-distribute. Trips from east US 90 and SR 87S that are destined for Alabama, SR 87N, Whiting Field or Munson Highway will no longer be forced to use the US 90 Bridge and go through the congestion of downtown Milton.

This proposed roadway is projected to carry approximately 11,000 daily vehicles in 2015; 15,000 in 2025; and 20,000 in 2035. While these volumes will provide some relief to traffic congestion and therefore improve safety and crash rates along US 90, they are well within (and less than half) the daily capacity of a four-lane divided

roadway with few signalized intersections. This provides a comfortable level of service for vehicles and trucks beyond the year 2035; offers a shorter truck route to serve Alabama and the northern parts of the county saving time and fuel; and maximizes roadway capacity during hurricane evacuation of the beach areas. More information about improvements to Safety can be found in ***Section 5.1.6, Mobility***.

2.2.7 Planning Consistency

At the local planning level, the proposed new SR 87 Connector facility is consistent with the Santa Rosa County Comprehensive Plan and is included in the County's Future Transportation Corridors map. Policy 4.1.E.2 of the Comprehensive Plan states, "The County shall continue to request, recommend, and support immediate roadway improvements in order to relieve the congestion on the segment of U.S. 90 between Canal Street and S.R. 87S". Likewise, both the County planning staff and the liaison for Whiting Field Naval Air Station reviewed and commented on the alternatives to ensure their location supported the mission of the base, and did not adversely affect the lands surrounding the base. These lands are protected by the County's Comprehensive Plan and existing lease agreements with the base. The Naval Air Station sent a letter to the project team in support of this project (see Correspondence in the FEIS).

The S.R. 87 Connector is also listed in the Florida-Alabama TPO's 2040 LRTP Needs Plan as a Roadway Capacity Project, and in the TPO's 'Florida Aspirational Projects' as part of the 'Outer Beltway Connector'. The aspirational projects are those projects that are needed beyond 2040; however, they are identified due to their potential transportation impacts to the region. It should be noted that though the project is listed in the Needs Plan, the ROW and Construction phases are outside of the 2040 Cost Feasible Plan. The design funding for the S.R. Connector is in the Committed Projects List and in the Cost Feasible Plan in the TPO's 2040 LRTP. The design funds include $4,374,241 for FY 15-20; and $5,555,285 for FY 21-25 (note this amount is escalated/inflated for future year costs).

In addition, funding for the PD&E phase of the SR 87 Connector was initially included in the 2009-2013 adopted State Transportation Improvement Plan (STIP) and the Florida-Alabama TPO TIP (PD&E Study began in 2009). Funding for design is included in the current TPO TIP for fiscal years 2018/2019. Likewise, $7,874,240 for FY 2018/19 has been set aside for the Design Phase in the FDOT Work Program. It should be noted that the current and adopted STIP (Approved October 2015 by FHWA) shows $4,374,240 for design in FY 2019 instead of $7,874,240. The difference in the funding amounts is due to a portion of the funds being added during the work program gaming cycle. The TIP and STIP will be updated to include the tentative funds following the FL-AL TPO's July 2016 meeting. In the interim, the new Draft TPO TIP for FY 17-21 has been approved by the TPO and includes the entire $7,874,240. The ROW phase and Construction Phase are beyond the TPO's 2040 Cost Feasible Plan at this time. The construction estimate which has been included in the 2040 LRTP Needs Plan is significantly less than the estimate which

was obtained during the PD&E Study. This is due to the bridge over the Blackwater River requiring lengthening during the PD&E Study due to several factors:
1. Bridging the FEMA designated regulated floodway
2. Bridging the Critical Habitat of the Reticulated Flatwoods Salamander as a commitment to the United States Fish and Wildlife Service
3. Providing a grade separated crossing at the Blackwater Heritage State Trail as a commitment to FDEP

The above three factors influenced the length of the SR 87 Connector Bridge over Blackwater River. This increase resulted in approximately a $90-Million-dollar construction cost increase. The TPO has been notified of the discrepancy and will change the value in the next update. See the following **Table 2.3 Project Phase Funding** for project phase cost summary.

Table 2.3: Project Phase Funding

Phase	Time Frame	Estimated Cost	Funding Source	TIP/STIP
PD&E	Current (2009-2016)	$2,783,075	Federal/State	FY 2009 STIP
Design	2018 - 2019	$7,874,240	Federal/State	Draft FY 2017 STIP
ROW	Beyond 2040	$5,626,000 (est. from this PD&E)	Federal/State	Beyond Current CFP
Construction	Beyond 2040	$120,410,000 (est. from this PD&E)	Federal/State	Beyond Current CFP
Totals		$136,693,315		

A four-lane facility is not needed for the design year evaluated in this study. It is the intent for the project to initially build an interim two-lane facility and as demand increases, the road would be expanded to four lanes to ultimately match the four-lane section of the existing SR 87S and SR 87N (see **Figures 2.2-2.5**). Sufficient right-of-way (ROW) will be acquired in the first phase of the project for the future four-laning to be consistent with the STIP, LRTP and TIP as well as to comply with recent legislation (HB 1359-SB 7121) which stipulates that *"the adopted level of service for out-of-county hurricane evacuation is maintained for a Category 5 storm event as measured on the Saffir-Simpson Scale" and with Florida Administrative Code 9J-5.012(3)(b)(6) and 9J-5.012(3)(b)(7).*

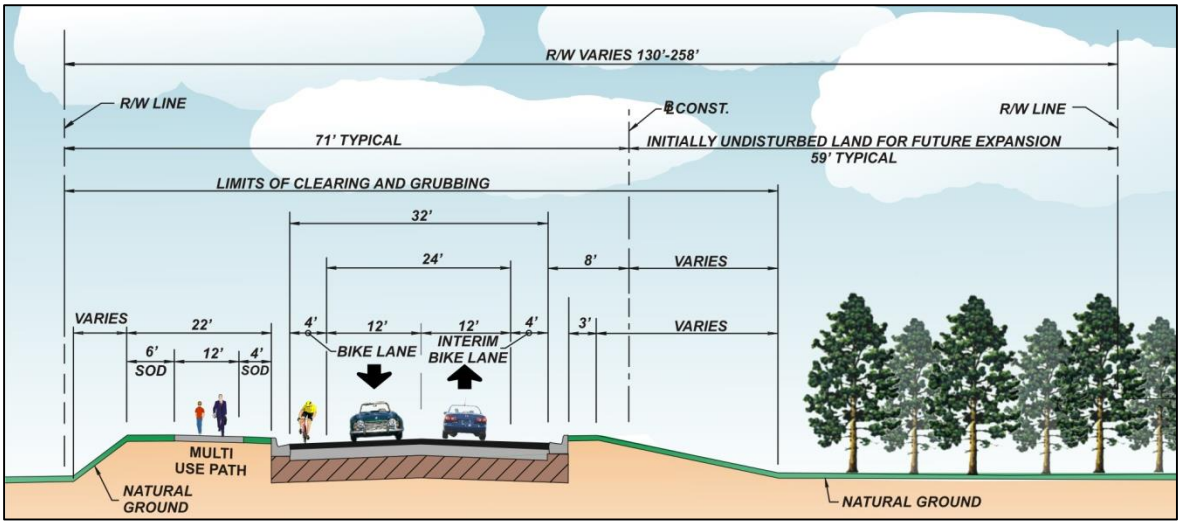


Figure 2.2: Proposed Interim Urban Typical Section

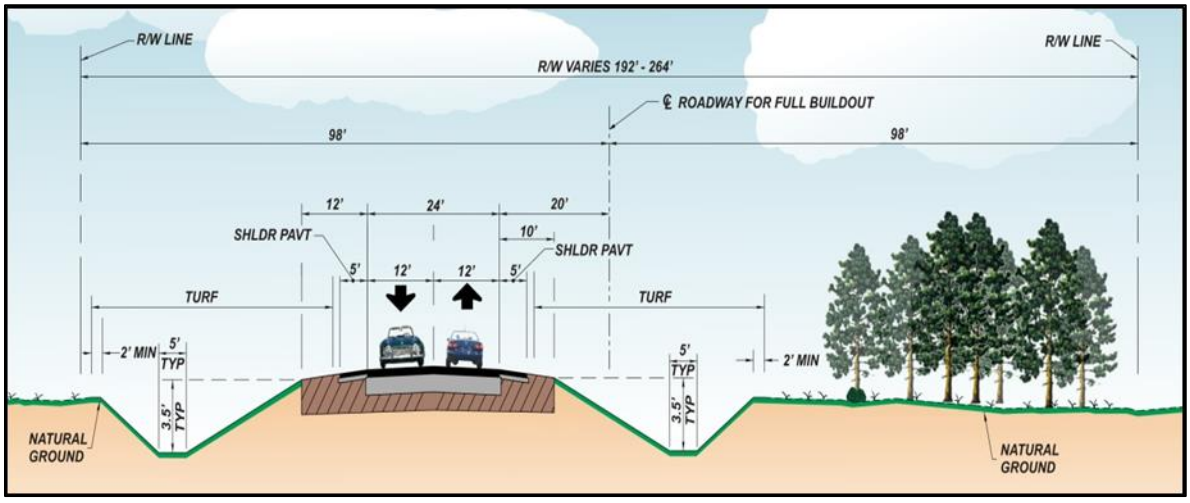


Figure 2.3: Proposed Interim Rural Typical Section

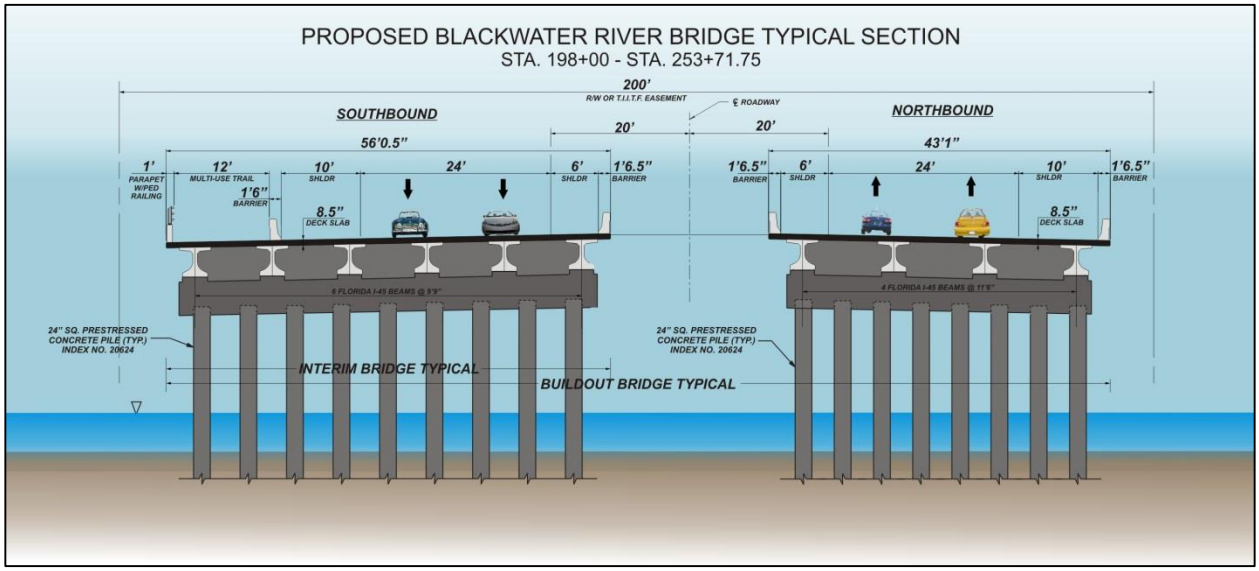


Figure 2.4: Blackwater River Bridge Typical

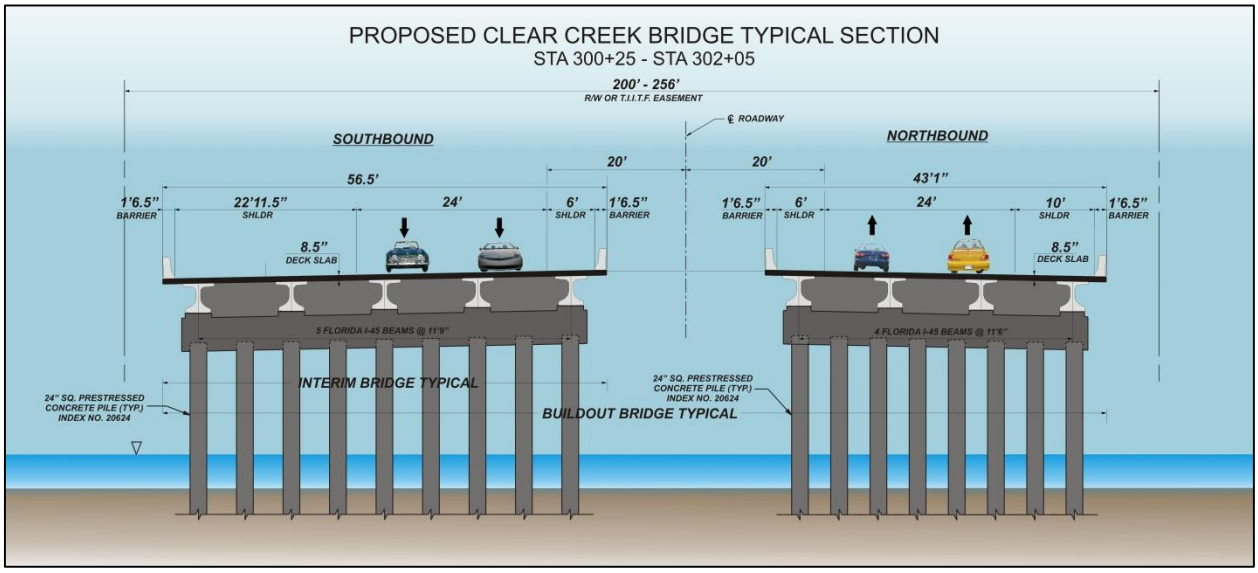


Figure 2.5: Clear Creek Bridge Typical

3. ALTERNATIVES INCLUDING THE PROPOSED ACTION

As illustrated in **Figure 3.1**, a multi-phase alternative development, evaluation and selection process was utilized to properly assess all alternatives considered for the proposed improvements of the SR 87 Connector within the project limits. Essentially, three (3) different phases comprised the alternative selection process for the proposed project as illustrated in the figure. Those alternative options found most feasible, meriting further development and evaluation, are shown in yellow (**Figure 3.3)**. A discussion of each of the three (3) different phases follows:

3.1 Phase One: Conceptual Design Analysis

3.1.1 No Action Alternative

The "No Build" alternative assumes retaining existing conditions. It is the "no-action" option and is generally used as a benchmark condition in order to compare the costs and benefits of implementing the proposed improvements to those incurred by continuing to use the existing facility. The existing problems and concerns would remain essentially unchanged, with all of the geometric, operational and connectivity deficiencies.

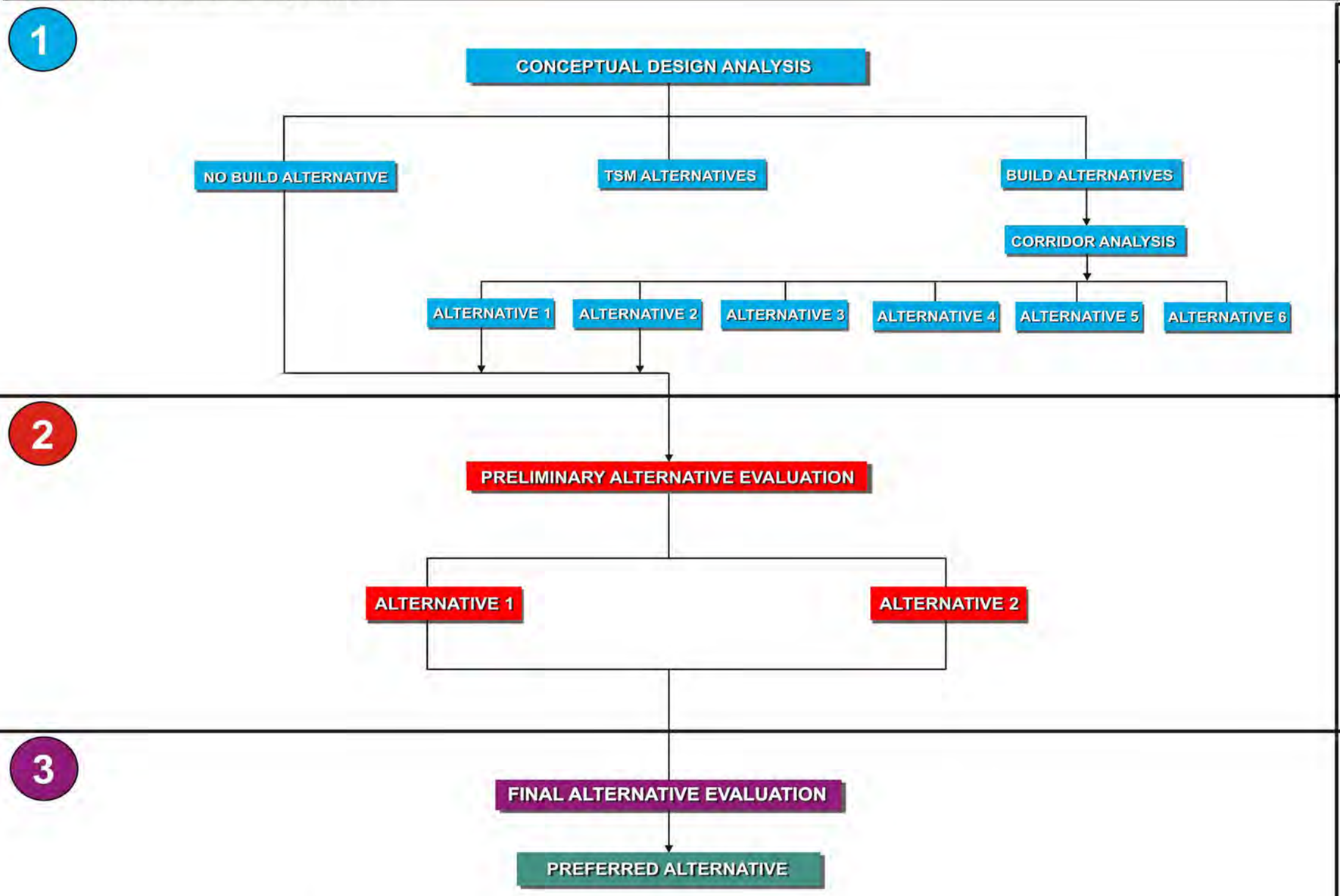
The purpose of the SR 87 Connector PD&E study is to find a solution to the regional connectivity needs of SR 87 in Santa Rosa County. In this alternative, a connection between SR 87S and SR 87N will not be implemented. The existing facility not only lacks the necessary continuity to effectively serve the evacuation and linkage needs of the area it serves, but also is inadequate in terms of existing and future capacity and meeting the needs of the abutting land uses. The existing roadway alignment of SR 87 does not meet the local or regional needs due to the existing shared section of SR 87 and US 90. As a result of the shared corridor, there continues to be a lack of north-south connectivity for evacuation and travel north to Alabama; there is no connection for the regional multi- modal facilities in the county; there continues to be capacity issues limiting economic development in East Milton; safety concerns due to crashes resulting from congestion will not improve; and access between the military bases on SR 87S to Whiting Field on SR 87N is not enhanced.

Likewise, during the development of the Design Traffic Technical Memorandum, it was found that the No Action Alternative performed poorly. Five (5) roadway segments along US 90 would operate at failing LOS in 2015, nine (9) segments in 2025, and eight (8) in 2035. Both Build Alternatives will divert traffic from US 90 and reduce the number of failing segments along US 90 to two (2) segments in 2015, five (5) segments in 2025 and three (3) segments in 2035. All other roadway segments with the build alternative will operate at acceptable LOS. For further information regarding the conditions resulting in the No Build scenario, refer to Table 3, *Future Daily Traffic Volumes* in **the SR 87 Connector Design Traffic Technical Memorandum.**

As stated in Section 2.2.5, the SR 87 Connector traffic model was the genesis of the US 90 PD&E. The US 90 PD&E purpose and need focuses on local congestion since the SR 87 Connector, per its purpose and need, is geared toward regional traffic. The outcome of both study's traffic projections indicate that neither project will provide adequate relief as standalone projects in 2035. It is evident that adoption of this "No-Build" alternative would not solve any of the existing needs associated with regional traffic, even with the improvements proposed on the US 90 PD&E Study.

3.1.2 Transportation Systems Management (TSM) Alternatives

Should the "No-Build" Alternative prevail, the Transportation Systems Management (TSM) options will be evaluated. These alternatives are comprised of minor improvements options that are usually generated to alleviate specific traffic congestion/safety problems, or to get the maximum utilization out of the existing facility by improving operational efficiency. These alternatives do not serve as a benchmark function but rather they insure that a wide range of realistic alternatives are considered by decision makers. The various TSM alternatives that were investigated included upgrading the existing facility by means of the following: 1.) provision of physical and operational improvements to high accident spots or segments, 2.) improving intersections and signalization and 3.) improving signs, markings and delineation.



PHASE DESIGNATION	PURPOSE
CONCEPTUAL DESIGN ANALYSIS	CONCEPTUAL CONSIDERATION OF MINOR AND MAJOR OPTIONS INCLUDING THE ANALYSIS OF ALTERNATIVE CORRIDOR OPTIONS
PRELIMINARY ALTERNATIVE EVALUATION	FURTHER REFINEMENT OF THE RESULTS OBTAINED IN THE PREVIOUS PHASE USING A NUMERICAL/DESCRIPTIVE MATRIX APPROACH
FINAL ALTERNATIVE EVALUATION	DETERMINATION OF OPTIMUM ALTERNATIVE BY USING THE ANALYTICAL HIERARCHICAL ANALYSIS (AHP) APPROACH

Table 3.1 provides a preliminary evaluation conducted for the various potential TSM strategies considered along the project limits. As indicated in the table, it is expected that these TSM improvements alone will not alleviate all of the existing corridor deficiencies, nor would they suffice to meet current and future travel demand.

Table 3.1: Evaluation of TSM Alternatives

TSM ALTERNATIVES	CONSEQUENCES OF IMPLEMENTATION
Physical and operational improvements to high accident spots or segments and segments operating at LOS F	▪ Most or all of the existing facility has a high number of accidents and therefore would require improvements throughout. ▪ There are three major existing segments along US 90 currently operating at LOS F. ▪ Major reconstruction would be the only way to significantly improve safety due to the severity of deficiencies and congestion along the existing facilities. A PD&E study analyzing improvements to the existing US 90 corridor is on-going. However, preliminary traffic data indicates that six lanes would be required to alleviate the future local and regional traffic needs. This significant capacity improvement would not be feasible due to archeological, historical, 4(f), and social impacts.
Improved intersections and signalization	▪ Only slight improvements to existing problem intersections such as US90/SR 87S and US90/SR 87N. ▪ Will not alleviate any of the major existing deficiencies.
Improved signing, markings and delineation	▪ Only slight improvements in guidance and possibly safety. ▪ Will not alleviate any of the major existing deficiencies.

In summary, even though some beneficial effects can be obtained through the use of low cost improvements, the overall capacity restriction of the existing roadway section precludes the attainment of any significant improvement in the overall project level of service. It is because of this fact that these alternatives were considered to have little value. Therefore, it is recommended that the TSM alternatives be rejected and only the major reconstruction options be considered for further study.

3.1.3 Strategic Intermodal System (SIS) Alternatives

The portion of SR 87S south of I-10 is part of Florida's Strategic Intermodal System (SIS) network. However, the designation does not extend any further north than I-10. Where the SR 87 Connector links with SR 87S at US 90, there is no such designation. Likewise, SR 87N from US 90 to the Alabama State Line is not part of the SIS network. In addition, the SR 87 network north of I-10 is not designated as an emerging SIS facility, nor is it part of the planned SIS network.

As such, the SIS design standards were not used in the development of the Connector design. This was also consistent with the Value Engineering efforts associated with the project.

3.1.4 Construction Alternatives

Based on the preceding analysis, it was determined that various major (build) alternatives would have to be developed within the study area. These major build options had to consider the various components of providing a new, more direct facility with emphasis on operational characteristics, roadway geometry, safety and aesthetics. A comprehensive corridor alternatives evaluation summary report was prepared for this project. Six new corridors were identified and evaluated for improved mobility and safety. **Figure 3.2** illustrates the original six corridors, and a brief description of each option follows:

The Corridor segment make up is as follows:

Corridor 1 (Segments 1a+1b+1c)	Corridor 4 (Segments 4a+4b)
Corridor 2 (Segments 1a+1b+2a)	Corridor 5 (Segments 4a+5a)
Corridor 3 (Segments 1a+3a)	Corridor 6 (segments 4a+4b+5a)

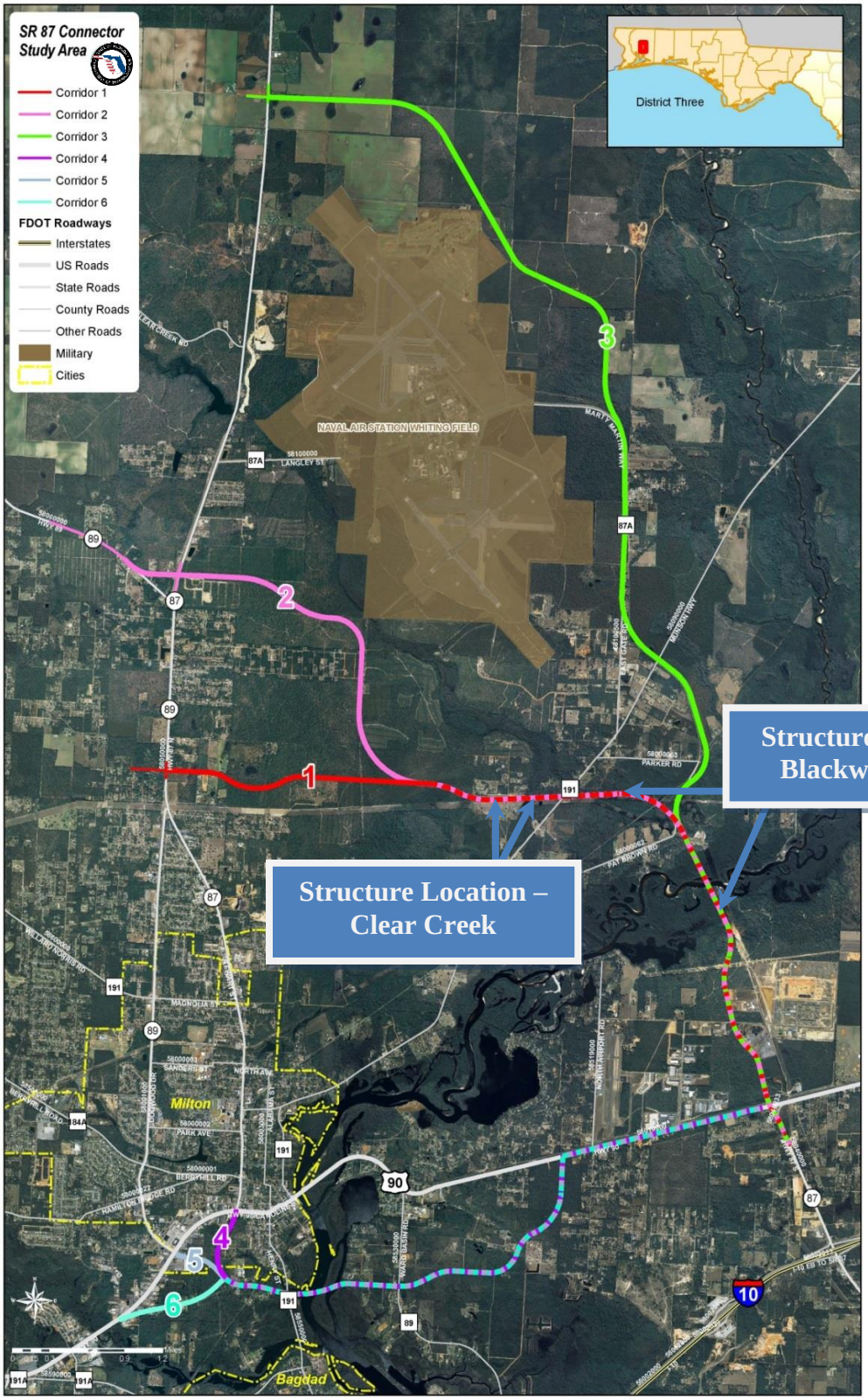
Corridor 1: As shown in Figure 3.2, this corridor extends north from the US 90/SR 87S intersection crossing the Blackwater River in the proximity of the existing eastern power easement crossings. Once across the river, it runs parallel or adjacent to the power easement, then connects with SR 87N just north of the convergence of SR 87N and SR 89, utilizing the Oakland Drive right-of-way. This corridor is approximately 6.5 miles in length.

Corridor 2: Much like Corridor 1, Corridor 2 also extends north from the US 90/SR 87S intersection crossing the Blackwater River in the proximity of the eastern most existing power easement crossing. Once across the river, it continues slightly north of Corridor 1, and runs adjacent to the Clear Creek environmental lands, where it proceeds west to connect with SR 87N in the proximity of the northern split of SR 87N and SR 89. This corridor is approximately 8.2 miles in length.

Corridor 3: Like Corridors 1 and 2, Corridor 3 also extends north from the US 90/SR 87S intersection crossing the Blackwater River in the proximity of the eastern most existing power easement crossing. Once across the Blackwater River, the corridor proceeds north on the east side of Whiting Field possibly utilizing portions of the Pat Brown Road right-of-way. Once north of Whiting Field, the corridor traverses a narrow gap between the Nature Conservancy/Florida Forever Lands and Whiting Field and south of Southridge Road. This corridor is approximately 10.5 miles in length.

Corridors 4-6: These Corridors evaluate areas to the south of US 90, and will involve a new river crossing between Bagdad and Milton. The southern corridor will generally head west from SR 87S using a portion of the US 90 right-of-way that can accommodate widening, and reconnect with SR 87N at the US 90/SR 87N intersection. The western end of this corridor near SR 87N will utilize the right-of-way of the BHST, and incorporate the trail into the roadway's cross section. This corridor may be approximately 5.6 to 6.5 miles in length depending on which option is selected. (The options for this corridor include Corridor 4, as well as the different terminus locations that make up Corridor 5 and Corridor 6.)

Figure 3.2: Alternative Corridors



The initial corridor evaluation entailed the determination of the effectiveness of each corridor in attaining the following goals:

1) The stated project's purpose and need
2) Improving the existing and projected traffic conditions within the project area
3) Avoiding or minimizing adverse environmental impacts within the project area
4) Minimizing cost expenditures

Figure 3.3 illustrates the results of each evaluation component. It should be noted that each component is based on a ranking system. The methodology used in the corridor analysis (Figure 3.3) was part of the Corridor Alternative Evaluation Summary Report which was approved by FDOT February 17, 2011 and approved by FHWA February 10, 2014. A rank of 1 reflects that the alternative is the best, while the higher numbers are reflective of less effective performances. If there is a tie, the corridors received the same rank, with the next highest score receiving the next available corridor ranking. For instance, under OFW in the Environmental Rankings, Corridors 4 - 6 included the same impact so all scored a '1'. Since three corridors scored a '1', the next score available was a '4'. Likewise, Corridors 1-3 had the same impacts, they all scored a '4' illustrating that all tied for 4th best Corridor. In terms of the evaluation summary, it is inherently clear that the least expensive alternative might provide the worst traffic service, or have a generally higher environmental impact. Therefore, how important is minimizing cost versus traffic service or environmental impacts? In order to quantify this dilemma, members of the consultant's team, reflecting a broad range of professional backgrounds, were asked to provide their perceived degree of importance (weights) for each of the four evaluation parameters (e.g. – purpose and need, compatibility, traffic service, environmental impacts and cost). The resulting relative weights shown in the final evaluation summary of Figure 3.3 serve as an additional aid in evaluation, and are thus reflective of the average of the individual weighting results submitted by the team. Compliance with the project's Purpose and Need was judged to be the most important parameter with an overall weight of 40% (0.40), while cost (construction and ROW) was the least important at 10% (.10). In order to determine the final scoring, each individual rank was multiplied by the assigned parameter weight and the resulting score added for all evaluation parameters. The corridors with the lowest resulting total scores are the more successful options. For example, as previously shown under the "Purpose and Need" comparison, Corridor 1 was the most successful, so this score was multiplied by the relative weight and a resulting score was obtained (1 x 0.4 = 0.4). This methodology of comparing corridors has been successfully used, in coordination with FDOT and FHWA, in obtaining Location Design and Concept Acceptance (LDCA) on over 15 PD&E studies throughout the state of Florida over the past 20 years. According to the results shown on the table in Figure 3.3, Corridors 1, 2, and 3 were the top three performers.

It should be noted that Corridors 4, 5, and 6 traverse protected lands owned by the Northwest Florida Water Management District (NWFWMD). Multiple State and Federal ETAT members identified that these alternatives had substantial impacts to water quality, wetlands, wildlife and habitat, historical sites, recreational areas,

floodplain and parks. Additional coordination was conducted with the NWFWMD to explore avoidance and mitigation issues concerning these lands. Several design options were explored (e.g. – bridging the area, etc.). The project team was notified by the NWFWMD that the property was purchased through a unique funding source, Preservation 2000 bonds, made available by the Florida Preservation 2000 Act, and they disputed the alternatives that passed over these properties. Their dispute justification is as follows: "The proposed use is incompatible with the purpose for which District lands were acquired under the Florida Preservation 2000 program with public funds of the Florida Preservation 2000 Trust Fund, such purpose is to protect valuable natural resources. (Florida Preservation 2000 Act: Florida Statute 259.101(7))." The Preservation 2000 Act was succeeded by the Florida Forever Act in 1999 and continues as Florida's conservation and recreation lands acquisition program. It is the largest program of its kind in the United States. The use of funding for this program to purchase lands is highly scrutinized to ensure the properties are worthy to be protected natural resource lands. Once the funds are utilized, the lands are protected into perpetuity and cannot be sold, or their use changed from the lands intent of the purchase. There are, however, limited provisions in place that enable exceptions to the laws and restrictions associated with the use of natural resource lands. They include, but are not limited to:

a) **Florida Administrative Code 18-2.015.** This code enables request to be heard for the use of uplands. It is geared for uses of the property that are compatible with the property's intent. It enables only temporary leases. As this is a lease program for compatible land uses, it would not be applicable for a land purchase by FDOT.

b) **Florida Administrative Code 18-2.021.** This code enables the State to sell surplus lands that are of no longer value to the program. The lands are highly scrutinized to justify and prove they are no longer valued for the intent they were purchased. As this deals with protected lands that no longer have value towards their intent, it would not be applicable to the lands in question.

In addition to the two exceptions noted above, there are two adopted Policies that also provide some leniency in the purchase of natural resource lands.

c) **Policy for Incompatible Use of Natural Resource Lands**, approved August 9,1988 by the Board of Trustees of the Internal Improvement Trust Fund. This policy is geared to potential use of the land if it is in the interest of the public. As stated, "The public interest determination will be based on a careful weighing of the likely adverse impacts of the use on natural resource lands against the public benefits of the proposed use. Factors to be assessed in the public interest determination include but are not limited to conservation, environmental concerns, wetlands, fish and wildlife, historic and archaeological resources, economics and aesthetics, land use, water quality and quantity, navigation, public safety, and degree of public use and enjoyment of the natural resources lands". However, article (c) of this policy dictates that the use may be authorized if "there is no practicable alternative to the proposed use that would have less adverse impact on such lands or public use of them..." In this

study, there are practicable alternatives that can be developed, and are in fact, better performing with regards to the other study factors.

d) **Policy: Use of Natural Resource Lands by Linear Facilities**, as approved by Board of Trustees of the Internal Improvement Trust Fund, on January 23, 1996. This policy may be the most applicable because it does provide for "public transportation corridors"; however, it too has an avoidance requirement. Article **(c) Avoidance** states "Owners and operators of linear facilities must avoid location on natural resource lands unless no other practical and prudent alternative is available and all steps to minimize impacts as set forth below are implemented. The test of practicality and prudence will compare the social, economic, and environmental effects of the alternatives." As stated earlier, there are practicable alternatives.
In light of this fact, Corridors 4, 5, and 6 were deemed fatally flawed and proved to be unfeasible by FHWA (See Correspondence in the **Appendix A**, multiple meeting minutes included, FHWA determination August 8, 2011). In addition, further coordination with FHWA has resulted in the removal of Corridor 3 from further consideration. This action is due to the fact that this corridor traverses lands recently purchased by the Florida Department of Environmental Protection (FDEP) using Florida Forever funds. This purchase not only blocked passage of Corridor 3 but also blocked any other nearby potential corridors that might have been explored. As a result, FHWA approved the elimination of Corridor 3 as well.

In summary, only Corridors 1 and 2 remain as viable build options and subject to further investigation.

Figures 3.4 and 3.5 illustrate typical sections, geometrics and drainage details associated with the two remaining viable alternatives. Additional information concerning these options is included in the Correspondence in the **Appendix A.**

Purpose and Need Rankings

Corridor	Crit. 1 Connection between 87S and 87N	Crit. 2 Hurricane Evacuation	Crit. 3 Improve Mobility, consistent with LRTP	Crit. 4 Connectivity to WFNAS and Park	Crit. 5 Multi-Modalism	Crit. 6 Economic Dev.	Subtotal	Resulting Rank
1	1	3	1	3	2	1	11	1
2	2	2	2	2	3	2	13	3
3	3	1	3	1	1	3	12	2
4	5	7	5	7	5	5	34	5
5	6	7	6	7	6	6	38	6
6	4	7	4	7	4	4	30	4

Traffic Evaluation Rankings

Corridor	Overall Regional Effect	Traffic Relief on US 90 and Downtown	Vehicle Miles Traveled (VMT)	Subtotal	Resulting Rank
1	1	4	3	8	1
2	2	5	2	9	2
3	3	6	1	10	4
4	5	2	4	11	5
5	6	3	4	13	6
6	4	1	4	9	2

Cost Rankings*

Corridor	Right-of-way Costs	Construction Costs			Total Estimated Costs	Resulting Rank
		Roadway Cost	Low Level Bridge Cost	High Level Bridge Cost		
1	$2.24	$45.83	$55.40	N.A.	$103.47	4
2	$2.74	$57.88	$55.40	N.A.	$116.02	5
3	$2.20	$78.57	$42.60	N.A.	$123.37	6
4	$4.09	$42.75	$41.00	$59.8**	$87.84/$106.64	1
5	$13.49	$41.47	$41.00	$59.8	$95.96/$114.76	2
6	$8.38	$50.70	$41.00	$59.8	$100.08/$118.88	3

* Costs are in millions
** Blue text represents costs associated with high level bridge. High level bridges were not reviewed for northern corridors due to the USGS ruling the waters were not commercially navigable in the crossing area

Environmental Rankings

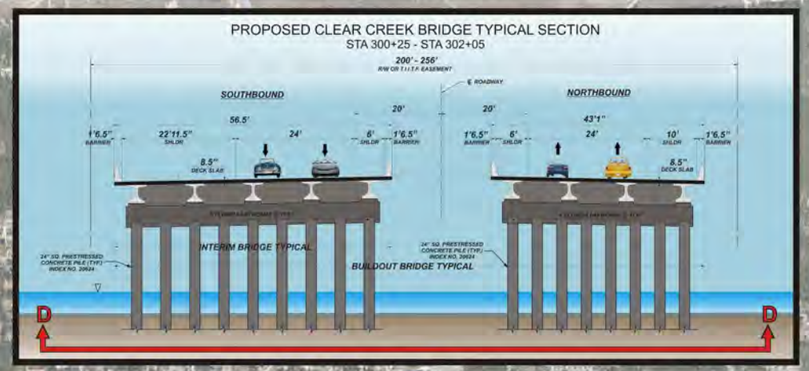
Env. Criteria \ Corridor	Corridor Scoring					
	1	2	3	4	5	6
Wetlands	3	2	1	5	4	6
FNAI	3	2	1	6	4	5
Habitat	6	4	3	2	1	5
Floodplain	2	3	1	5	4	6
T/E Species*	1	1	1	1	1	6
OFW**	4	4	4	1	1	1
Black Bear	0	0	0	0	0	0
FFWCC 1-5	1	2	6	4	3	5
FFWCC 6-10**	4	4	4	1	1	1
Pristine Lands	4	5	6	2	1	3
FEMA	4	5	3	2	1	6
Noise	4	6	5	2	1	3
CRAS	1	3	1	4	4	6
Social	1	3	2	5	4	6
Total Score	38	44	38	40	30	59
Resulting Rank	2	5	2	4	1	6

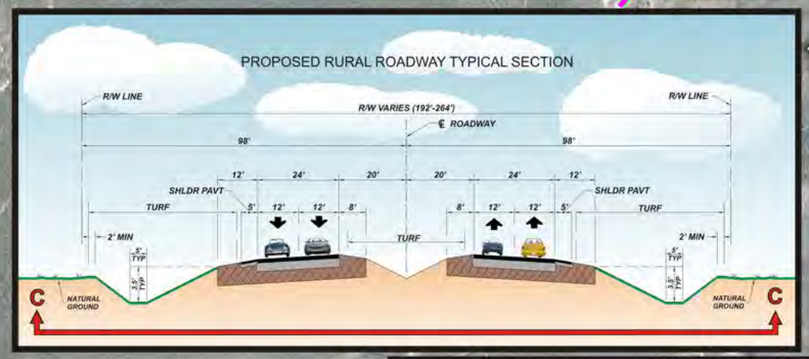
* Only Corridor 6 had impacts
** Tie between the Northern or Southern Corridors

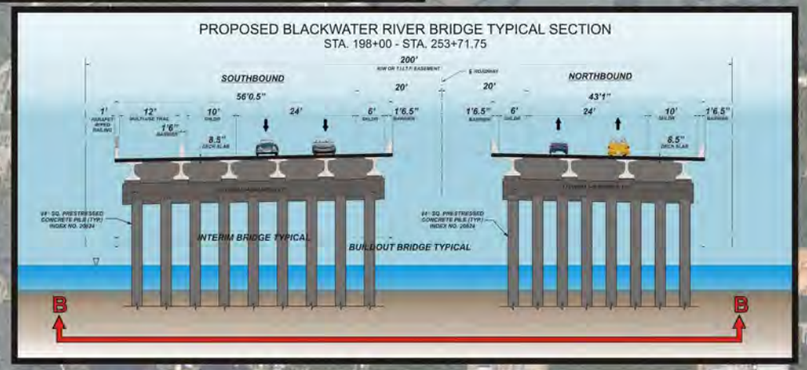
Final Corridor Evaluation Summary

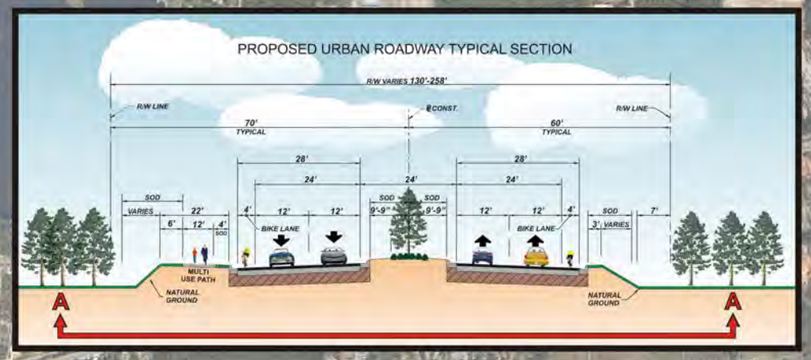
40% Relative Weight
0.40 Resulting Score

Corridor \ Evaluation Parameter	Purpose and Need 40%		Traffic 20%		Cost 10%		Environmental 30%		Final Rank (Score)
1	1	0.40	1	0.20	4	0.40	2	0.60	1 (1.60)
2	3	1.20	2	0.40	5	0.50	5	1.50	3 (3.60)
3	2	0.80	4	0.80	6	0.60	2	0.60	2 (2.80)
4	5	2.00	5	1.00	1	0.10	4	1.20	6 (4.30)
5	6	2.40	6	1.20	2	0.20	1	0.30	4 (4.10)
6	4	1.60	2	0.40	3	0.30	6	1.80	6 (4.10)





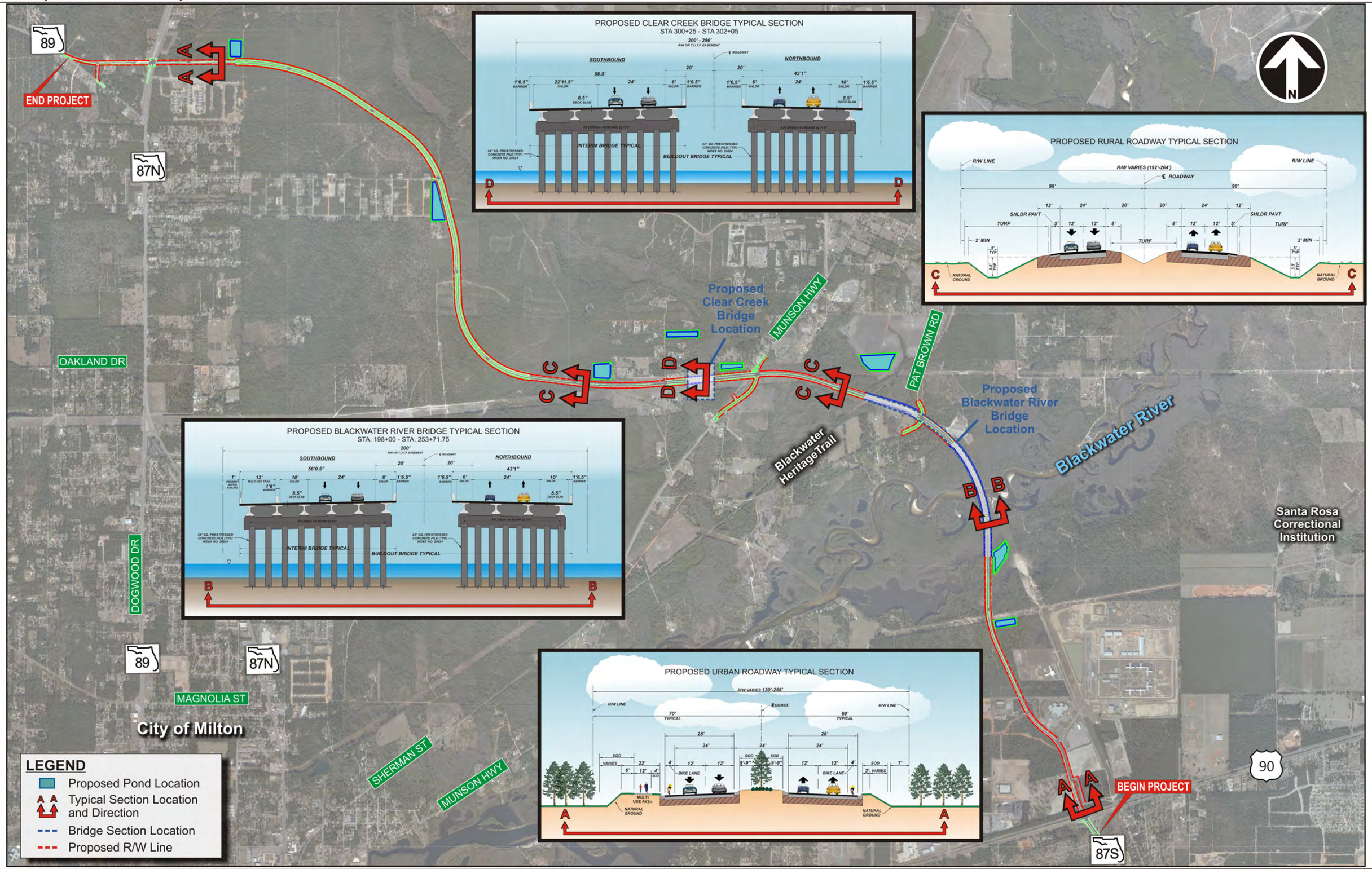




OAKLAND DR
FOREST DR
END PROJECT
87N
Proposed Clear Creek Bridge Location
MUNSON HWY
PAT BROWN RD
Blackwater Heritage Trail
Proposed Blackwater River Bridge Location
Blackwater River
89
MAGNOLIA ST
DOGWOOD DR
City of Milton
SHERMAN ST
Blackwater River Water Management Area
Santa Rosa Correctional Institution
90
BEGIN PROJECT
87S

LEGEND

- Proposed Pond Location
- Typical Section Location and Direction
- Bridge Section Location
- Proposed R/W Line


PROPOSED CLEAR CREEK BRIDGE TYPICAL SECTION
STA 300+25 - STA 302+05
SOUTHBOUND
NORTHBOUND
INTERIM BRIDGE TYPICAL
BUILDOUT BRIDGE TYPICAL
PROPOSED RURAL ROADWAY TYPICAL SECTION
R/W LINE
R/W VARIES (192'-264')
ROADWAY
SHLDR PAVT
TURF
NATURAL GROUND
PROPOSED BLACKWATER RIVER BRIDGE TYPICAL SECTION
STA. 198+00 - STA. 253+71.75
PROPOSED URBAN ROADWAY TYPICAL SECTION
R/W VARIES 130'-258'
BIKE LANE
MULTI USE PATH
Proposed Clear Creek Bridge Location
Proposed Blackwater River Bridge Location
MUNSON HWY
PAT BROWN RD
Blackwater Heritage Trail
Blackwater River
Santa Rosa Correctional Institution
OAKLAND DR
DOGWOOD DR
MAGNOLIA ST
SHERMAN ST
City of Milton
END PROJECT
BEGIN PROJECT
89
87N
87S
90
LEGEND
Proposed Pond Location
Typical Section Location and Direction
Bridge Section Location
Proposed R/W Line

3.2 Phase Two: Preliminary Alternative Evaluation

Included in this section is a numerical/descriptive matrix **(Table 3.2)**, which illustrates, describes and evaluates the features of the remaining alternatives under consideration. The evaluation used involved the generation of a weighting scheme for each of the evaluation parameters. Each criterion was separated into sub-criteria to be evaluated. Fourteen (14) different sub-criteria including engineering, socio-economic, environmental and cost factors were used. Each sub-criteria weight was assigned a weighted value depending on its degree of importance within the criterion, totaling the overall criterion number. These parameter weightings were developed from the average of individual weighting sets prepared by members of the consultant's team reflecting a broad range of professional backgrounds. In addition, the alternative performance with respect to each parameter was compared using two criteria; 1.) the overall effect on the specified parameter and/or 2.) the relative effect between the competing corridor alternatives.

The overall effect received one of the five judgmental values (++ = 1.00, + = 0.80, o = 0.60, - = 0.40, -- = 0.20). However, if any of the alternatives had an overall negative effect, then the worst alternative received a (--) and the relatively better alternative received a higher score (-). If any two values were approximately equal, then they both received the relatively lowest score. If the alternatives had an overall positive effect, then the best alternative received a (++) and the relatively worse alternative received a lower score (+). A common value, therefore, signifies an equal overall and relative effect.

This evaluation involves a combination of both qualitative and quantitative values resulting in an overall score. Each score indicated on the table is the result of multiplying the judgmental analysis rating times the relative weight for those criteria. For example, Adjusted Alternative 2 under the parameter "Wetland Impacts" was given a designation of "-" (judgmental value = "0.40") since it has substantial wetland impacts and crosses Outstanding Florida Waters (OFW) and special flood zones. This judgmental value of 0.4 was then multiplied by the relative weight of the parameter (9) resulting in an overall score of 3.6.

The results from this analysis indicated that Alternative 1 obtained the highest initial total score and, as expected, the No Build Alternative was the least attractive option. It should be noted that the objective of this phase was not necessarily to determine which option was the best, but rather to identify which alternative(s) were clearly inferior so that they can be eliminated before even more stringent evaluation criteria and procedures were used during the next evaluation phase. The Final Alternative Evaluation Phase (please see the Preliminary Engineering Report (PER) prepared for this project) used the Analytical Hierarchical Process (AHP), a multi-criteria decision method based on pair-wise comparisons, to evaluate the Alternatives with more stringent criteria. The initial results indicated that Alternative 1 scored better than Alternative 2 mainly due to the fact that it has less noise impacts, would better alleviate congestion on US 90 and would be less costly. However, updates after the Public Hearing (see **Section 7.0 Action After Public Hearing**) changed the scoring and Adjusted Alternative 2 now is the better performing alternative. A final recommendation for the preferred alternative will be made only after the public hearing transcript and comments on the PER and environmental document have been evaluated by FHWA.

PRELIMINARY ALTERNATIVE EVALUATION WITH PROPOSED ALTERNATIVE 2 ADJUSTMENTS

LEGEND

Judgemental Values

++	SUBSTANTIALLY POSITIVE EFFECT OR BEST ALTERNATIVE	=	1.0
+	GENERALLY POSITIVE EFFECT OR GOOD ALTERNATIVE	=	0.8
O	GENERALLY NO EFFECT OR MODERATE ALTERNATIVE	=	0.6
-	GENERALLY NEGATIVE EFFECT OR INFERIOR ALTERNATIVE	=	0.4
- -	GENERALLY NEGATIVE EFFECT OR WORST ALTERNATIVE	=	0.2

37 CRITERIA WEIGHT
12 SUBCRITERIA WT
2.4 RESULTING SCORE

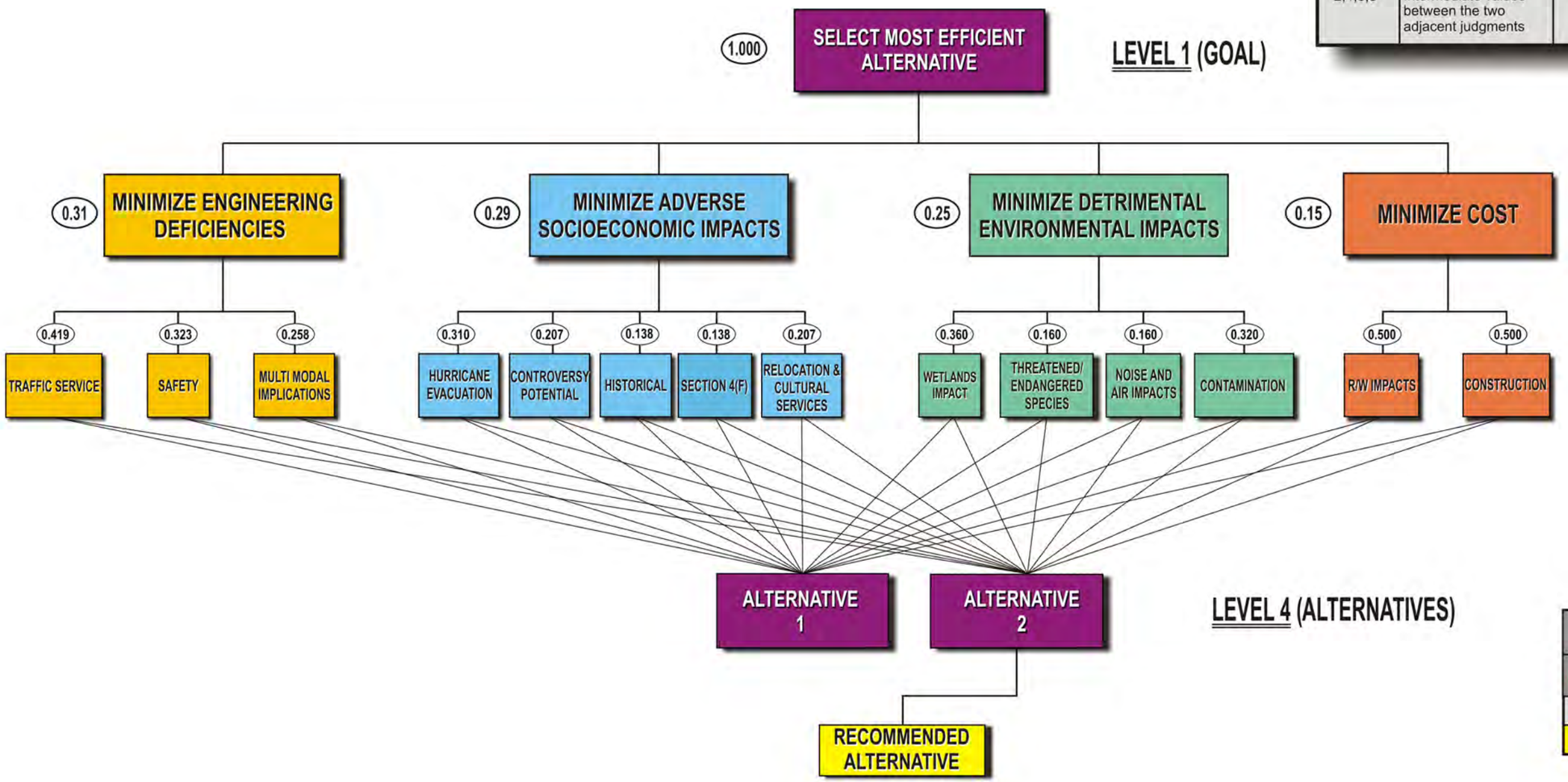
CRITERIA / ALTERNATIVES	ENGINEERING 31			ENVIRONMENTAL 25				SOCIO-ECONOMIC 29					COST 15		TOTAL SCORE
	TRAFFIC SERVICE 13	SAFETY 10	MULTIMODAL IMPLICATIONS 8	WETLANDS IMPACT 9	THREATENED/ ENDANGERED SPECIES 4	NOISE & AIR IMPACTS 4	CONTAMIN-ATION 8	HURRICANE EVACUATION 9	COMMUNITY AND CULTURAL RESOURCES 6	HISTORICAL 4	SECTION 4(F) 4	RELOCATION 6	RIGHT-OF-WAY 7.5	CONSTRUCTION 7.5	
NO BUILD	- - Does not improve the significant existing and projected delays associated with various segments of the existing corridor 2.6	- - Does not address any safety concerns associated with the subject project 2.0	- No new multimodal provisions are implemented 3.2	o No impacts to wetlands, water quality, or floodplains 5.4	o No relocation of state listed species or involvment with Critical Habitat for federal species 2.4	o No new noise or air impacts 2.4	o No involvment with contaminatio n; no testing or cleanup 4.8	- - No additional improve-ment in terms of hurricane evacuation time is provided 1.8	o No impacts 3.6	o No new impacts to NRHP-listed site 2.4	o No new impacts to 4(f) site 2.4	+ No relocation required 4.8	o No right-of-way cost 4.5	o No construction cost 4.5	**46.8**
1	+ Diversion of traffic from congestion along US 90/downtown Milton will significantly reduce delays. Proximity to Milton affords an alternate route; however, Wal-Mart, Home Depot & Lowes have expressed interest in the area. This may cause congestion due to development. 10.4	+ Additional capacity and traffic diversion features will likely reduce the likelihood of crashes within the study area 8.0	+ Provides additional pedestrian and bicycle features. Additional connectivity to the Blackwater Heritage Trail is a major positive feature 6.4	- - Substantial wetland impacts (4.3 more acres than Alternative 2), crosses OFW and special flood zone. UMAM Score is 53.25 units of functional wetland loss. 1.8	- Will likely require relocation of state-listed gopher tortoises; crosses Critical Habitat for two federal species 1.6	- 9 residences and 2 recreational trails approach or exceed 66dB(A). 5 residences and 2 trails experience an increase above 15 dB(A). 1.6	- Proximity to gas pumps at western terminus; traverses brownfield area with medium ranked sites 3.2	+ Additional connectivity reduces delays during critical emergency evauaction times 7.2	+ Benefits connectivity. Existing roadway (Oakland Dr) is being utilized. Impacts will be associated with widening of this two lane roadway. Impacts were minimized by following the county road ROW. Elected Officials preference. 4.8	- Impacts anticipated to NRHP-listed site 1.6	o Crosses 4(f) site, minimal impacts, improves trail connectivity 2.4	- Two possible rental mobile home relocations required at Winston Brown Rd & impact to two commercial sites (saw mill and salvage yard) 2.4	- Least right-of-way cost of build alternative ($5,058,000) 3.0	- Least expensive "build" alternative (approximately $116,781,000) 3.0	**57.4**
2	++ Generally similar to Alternative 1 but slightly less effective at diverting traffic away from US 90 and downtown Milton. However, Alt 2 provides regional continuity to SR 89. Until the MPO pursues the beltway project, Alternative 1 will be a dead end in a developing area. 13.0	+ Additional capacity and traffic diversion features will likely reduce the likelihood of crashes within the study area 8.0	+ Provides additional pedestrian and bicycle features. Additional connectivity to the Blackwater Heritage Trail is a major positive feature 6.4	- Substantial wetland impacts, crosses OFW and special flood zone. UMAM Score is 50.60 units of functional wetland loss. 3.6	- Will likely require relocation of state-listed gopher tortoises; crosses Critical Habitat for two federal species 1.6	- 4 residences and 2 recreational trails approach or exceed 66dB(A). 5 residences and 2 trails experience an increase above 15 B(A). 1.6	o Traverses brownfield area with medium ranked sites 4.8	++ Generally similar to Alternative 1 but provides a slightly more direct route and better continuity with SR 89. 9.0	o Benefits connectivity. Proximity to a new residential neighboorhood at the junction with SR 87 N caused an adjustment to the connector after the Hearing. This will move the roadway nearly 200 additional feet away from the subdivision. 3.6	- Impacts anticipated to NRHP-listed site 1.6	o Crosses 4(f) site, minimal impacts; improves trail connectivity 2.4	o Two possible mobile home relocations required at Winston Brown Rd. 3.6	- - Slightly higher cost than Alternative 1 ($5,626,000) 1.5	- - Slightly higher cost than Alternative 1 (approximately $120,410,000 1.5	**62.2**

LEGEND

0.31 Assigned Priority (Weight)

SCALE OF RELATIVE IMPORTANCE

Intensity of Relative Importance	Definition	Explanation
1	Equal importance	Two activities contribute equally to the objective.
3	Weak importance of one another	Experience and judgment slightly favor one activity over another.
5	Essential or strong	Experience and judgment strongly favor one activity over another.
7	Very strong importance	An activity is strongly favored and its dominance is demonstrated in practice.
9	Absolute importance	The evidence favoring one activity over another is of the highest possible order of affirmation.
2,4,6,8	Intermediate values between the two adjacent judgments	When compromise is needed.



SUMMARY

ALTERNATIVES	FINAL SCORE	RANK
1	0.459	2
2	0.541	1

3.3 Description of Alternative 1

Alternative 1 begins at the intersection of SR 87S and US 90 with a slight adjustment to the intersection alignment. Intersection improvements will also include bringing the SR 1 Historic Trail crossing up to standard and include (but not limited to) pavement and signage upgrades, pedestrian improvements and amenities, as well as landscaping and aesthetic enhancements. When Phase 2 is completed, The roadway at this location will be an urban typical matching SR 87S (Section A-A in **Figure 3.4**, **3.1.4 Construction Alternatives**) which includes four 12-foot travel lanes, and a 24-foot median, four-foot bike lanes, curb and gutter with a closed drainage system. It will also include a 12-foot wide multi-use trail on the west side of the road.

The roadway will transition to a bridge typical section as the connector approaches the Blackwater River floodway (Section B-B in **Figure 3.4**). The bridging over the Blackwater River and its wetlands and floodway will consist of two parallel bridges approximately 25 feet apart. The bridges will each have two 12-foot travel lanes, 6-foot inside shoulders, and 10-foot outside shoulders. The western bridge (southbound) will also include a 12-foot multi-use trail. The bridges will extend over 5,571 feet crossing the Blackwater River, Pat Brown Road, and the BHST. Utilizing a series of ramps, the western bridge will connect the multi-use trail with the BHST below it. This connection meets other bike users and pedestrian's needs by providing a multi-use trail that will extend from US 90 and the Historic SR 1 Trail north to the Blackwater Historic State Trail. By providing a vital link between the Historic SR 1 Trail and the BHST, the proposed roadway system provides regional connectivity for pedestrians and recreational trail users.

North of the bridge over the BHST, the roadway transitions into a rural typical section (Section C-C in **Figure 3.4**). The rural section consists of four 12-foot travel lanes and 5-foot outside shoulders (bike lanes), and a 40-foot median. The section will have an open drainage system consisting of open swales adjacent to the road and within the median. There are no provisions for pedestrians, and no multiuse trail provided in this section. This typical section will extend from the BHST to the Clear Creek Bridge.

Much like the Blackwater River bridge, the Clear Creek bridge will consist of two parallel structures approximately 25 feet apart (Section D-D in **Figure 3.4**). The bridges will have four 12-foot travel lanes, 6-foot inside shoulders, and 10-foot outside shoulders. The southern (southbound) bridge will have a 22-foot shoulder to allow for a potential future extension of the multiuse trail.

West of the Clear Creek Bridge, the roadway continues as a rural typical section (Section C-C in **Figure 3.4**). As previously mentioned, the rural section consists of four 12-foot travel lanes and 5-foot outside shoulders (bike lanes), and a 40-foot median. The section will have an open drainage system consisting of open swales adjacent to the road and within the median. There are no provisions for pedestrians, and no multiuse trail provided in the roadway section. This typical section will extend from the Clear Creek Bridge to where it transitions to an urban section as the connector approaches SR 87N.

3.4 Description of Adjusted Alternative 2

Adjusted Alternative 2 (the preferred alignment) will have the same beginning as Alternative 1. The two alignments are identical for approximately 4.7 miles.

After the Clear Creek Bridge, Adjusted Alternative 2 will travel 0.85 miles west and then separate from the Alternative 1 alignment and curve to the north. This typical section will extend from the Clear Creek Bridge to where it transitions to an urban section as the connector approaches SR 87N.

Adjusted Alternative 2 will intersect with SR 87N north of Seasons Drive as an urban typical. This will include four 12-foot travel lanes, a 24-foot median, four-foot bike lanes, curb and gutter with a closed drainage system. The medians will be landscaped with trees, bushes and ground covers. Beyond SR 87N, Adjusted Alternative 2 will become a rural typical section with two 12-foot travel lanes and 5-foot outside shoulders (bike lanes). The alignment will then connect to SR 89N approximately a half mile to the west, realigning the SR 87 and SR 89 intersection. See **Figure 3.5** in **Section 3.1.4, Construction Alternatives**.

4. AFFECTED ENVIRONMENT

4.1 Population and Community Characteristics

4.1.1 Historic Perspective – City of Milton

Juan de la Rua was the first known settler near present-day Milton. He was the son of the Pensacola Overseer of Royal Works and in 1817 received an 800 arpent (approximately 672 acres) land grant from Spanish Governor Jose Kasot. The town of Milton was well established by 1840. It was located on a bluff above the Blackwater River and available to the deep-draft ships that navigated the short watercourse. Milton was incorporated in February 1844 by an act of the territorial government and in 1845 was made a Port of Entry. By 1848, there was direct transportation service to New Orleans by a steamer packet and the town had its own newspaper, the Milton Courier, which was owned by John Dorr. Milton and Santa Rosa County prospered throughout the 1850s. Although there was some farming activity, the amount of land under cultivation was quite limited. This was primarily because the population of the entire area depended upon the booming timber industry as the base of its economy. In the 1860s, Santa Rosa County had a population of 4,048 whites, 1,371 blacks (slaves) and 61 free people of color. Milton had a total population of 1,815 and was the state's seventh largest town.

The Civil War brought a sharp decline in economic development to Milton and all of Santa Rosa County. The Union Army's occupation of Ft. Pickens literally cut the region off from the rest of the nation because of its great dependence upon water transportation. When the Confederate Army withdrew from the area in March 1862, it destroyed anything that might have been useful to the Union forces, including the brick manufactories, sawmills, and the shipyards. Immediately following the war, the South underwent a period of "Reconstruction" to prepare the Confederate States for readmission to the Union. However, the decade between 1860 and 1870 resulted in a population loss of over 13% in Milton.

The Bagdad Land and Lumber Company (BLLC) operated the Florida and Alabama Railroad (F&A), a logging railroad that connected Bagdad to Milton, Red Rock, Munson, and Whitey, Alabama. The line was begun by Stearns & Culver Lumber and was completed by the BLLC in 1914. A 19-mile branch line lead from Milton into the pine forests of Alabama where it serviced the timber and turpentine camps. After the BLLC mill closed in 1939, the F&A was abandoned. Milton's citizens were so dependent upon the paternalism of the mill owners that in 1905 the town voted against a bond issue to provide electric lights, a waterworks, and a sewage system because Stearns and Culver Lumber Company (and later the Bagdad Lumber Company) provided electrical power to Milton. However, in 1913 a labor dispute with the mill caused the power supply to be discontinued. As a result, Milton did not have these types of services until the 1920s and 1930s.

The first Courthouse in Milton, located on Berryhill Road on the site of the current Berryhill School Administration building, served as the Town Hall. Devastating fires

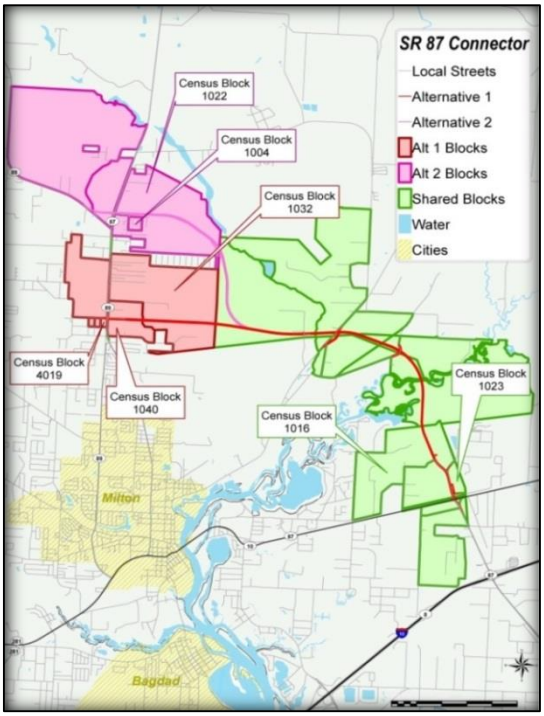
struck Milton in 1885 and 1892. Each largely destroyed the commercial sections of town. The worst fire of all, in 1909, razed almost every building within two blocks of the river, including the Town Hall. One of the few buildings remaining was the old courthouse. Downtown Milton today reflects the aggressive rebuilding effort that took place in the years following after this fire.

Whiting Field, located north of the project area, was established in 1943. Whiting Field was one of three auxiliary air fields developed by the Navy at the beginning of World War (WW) II to allow accelerated training for flyers. Federal road building, airfield construction, and the production planes and ships for the wartime defense effort brought unparalleled numbers into Florida and the project area during the postwar years. According to the USCB the state's population grew over 40% during the 1940s. The Santa Rosa County population has continued to expand, increasing almost 30% from 2000 to 2010, with an estimated population of 151,372.

Downtown Milton has been named one of the Florida Trust for Historic Preservation's Eleven Most Endangered Sites three years in a row (2010, 2011 and 2012) because of devastation from a 2009 fire in the heart of the historic district, as well as transportation expansion pressures that could destroy the remaining core of the downtown and surrounding neighborhoods.

4.1.2 Demographics

Santa Rosa County covers 2,010 square miles in the Panhandle of Florida. The population was estimated to be 158,512 in 2012 with a 4.7% increase from 2010, nearly twice the state's growth rate.



Race/Ethnicity: Census information may be obtained in a variety of formats. The Census Block (see map) analysis is the most detailed information available. Due to this fact, the block data was reviewed for race and ethnicity percentages. According to the Census Data obtained in 2013, Alternative 1 and 2 intersect 36 Census Blocks. The average race percentages for these blocks are as follows:

Table 4.1: RACE by Affected Census Blocks | **ETHNICITY**

	White	*Black*	*Asian*	*Native*	*One Race, Other*	*Two or More Races*	*Hispanic*	*Non-Hispanic*
Total #	2,600	261	35	36	15	66	122	2,891
Percentage	82.90%	8.40%	1.10%	1.10%	0.50%	2.10%	3.90%	96.10%

Based on 2010 Census Data

The average percentages for Santa Rosa County are:

Table 4.2: RACE in Santa Rosa County							ETHNICITY	
	White	*Black*	*Asian*	*Native*	*One Race, Other*	*Two or More Races*	*Hispanic*	*Non-Hispanic*
Total #	132,920	8,205	2,759	1,523	1,463	4,502	6,507	144,865
Percentage	87.81%	5.42%	1.82%	1.01%	0.97%	2.97%	4.30%	95.70%

Based on 2010 Census Data

The average percentages for Florida are:

Table 4.3: RACE in Florida							ETHNICITY	
	White	*Black*	*Asian*	*Native*	*One Race, Other*	*Two or More Races*	*Hispanic*	*Non-Hispanic*
Total #	14,109,162	2,999,862	454,821	83,744	681,144	472,577	4,223,806	14,577,504
Percentage	75.04%	15.96%	2.42%	0.45%	3.62%	2.51%	22.47%	77.53%

Based on 2010 Census Data

There are seven out of the 36 impacted census blocks (See map) that include minority percentages greater than the county average, and two that include minority percentages greater than the state average. The following are the population numbers from these census blocks:

Table 4.4: RACE by Selected Blocks							ETHNICITY	
Census Block	*White*	*Black*	*Asian*	*Native*	*One Race, Other*	*Two or More Races*	*Hispanic*	*Non-Hispanic*
1004	426	42	7	4	6	17	36	466
1016	376	79	6	0	0	0	14	447
1022	73	16	2	0	1	2	12	82
1023	35	25	0	0	0	0	0	60
1032	573	45	11	16	1	23	19	650
1040	76	9	1	2	0	8	4	92
4019	10	0	0	0	5	0	5	10

Based on 2010 Census Data

In all of the above blocks, existing road right-of-way was utilized where possible to minimize any residential impacts, though impacts associated with roadway widening will apply. More information on the impacts in these areas is found in Section **5.1, Environmental Consequences.**

Limited English: Limited English for 'Those Five Years and Older': The Limited English Proficiency (LEP) population is at the Block Group level. Out of a total population of 11,692 in the six potentially impacted blocks, 18 persons speak English "Not Well" and 0 speak English "Not at All". As a result, over 99% speak English at least "Well". Given the low percentage of LEP, language services for this project are not required. However, FDOT will provide interpretation services, free of charge, with reasonable notice.

Age: The Median Age and percentages of residents over the age of 65 in the 6 potentially impacted Census Block Groups do not reflect a large difference from the averages in Florida and in the US. Census Block 010502-4 had the highest median age and highest percentage over Age 65. It should be noted that the proposed roadway improvements in this census block geographic area are limited to intersection improvements on SR 87N only.

Table 4.5: *Age By Census Block*

Census Block Group	*Median Age (years)*	*% Age 65-74*	*% Age 75-84*	*% Over 85*
010400-2	40.6	10.09	4.03	0.58
010502-1	32.3	6.49	2.82	0.8
010502-2	41.4	10.43	3.34	0.75
010502-4	47.8	13.01	7.24	1.27
010808-1	32.6	2.55	0.7	0.22
010809-2	42.0	10.58	3.06	1.12

Based on 2010 Census Data

Table 4.6: *Age in State and US*

Loacation	*Median Age (years)*	*% Age 65-74*	*% Age 75-84*	*% Over 85*
Florida	40.7	9.19%	5.84%	2.31%
US	37.2	7.03%	4.23%	1.78%

Based on 2010 Census Data

Mobility: All Census Block Groups had vehicles available per household unit higher than both the Florida and US average. The Florida average of No Vehicles Available is 6.46% and the US average is 8.85%.

Table 4.7: *Mobility by Household*

Census Block Group	*No Vehicle Available*	*One Vehicle Available*	*Two Vehicles Available*	*Three Vehicles Available*	*Four Vehicles Available*	*Five or more Vehicles Available*
010400-2	23 (5.5%)	125	153	96	8	13
010502-1	19 (2.8%)	264	318	52	18	0
010502-2	0 (0%)	99	267	209	26	10
010502-4	32 (3.7%)	180	463	104	53	40
010808-1	0 (0%)	47	277	105	34	0
010809-2	4 (1%)	135	423	93	71	0

Mobility by Housing Unit. Based on 2010 Census Data

Other Modes: As expected, due to the rural nature of much of the location of the two alternatives, the transportation of choice for those that work outside the home is by car, truck, motorcycle, etc. As noted in several areas throughout the Environmental Impact Statement (EIS), this project will improve mobility by offering bicycle/pedestrian connectivity between existing bicycle/pedestrian corridors.

In Census Block Group 010502-4, there were 33 persons (3.2%) that utilized public transportation and 13 (1.3%) that walked to work. It should be noted that the proposed roadway improvements in this census block geographic area are limited to intersection improvements on SR 87N only. These improvements will not adversely affect the services offered by the existing public transportation service providers in the area. In Census Block Group 010400-2, 51 (7.9%) out of 643 persons said they walked to work. Block Group 0104000-2 includes the Whiting Field NAS, and the walking community is likely within the base boundaries and will not be affected by this project.

4.1.3 Existing Community Facilities

The following Community facilities are located within the Project's Study Area:

Schools and Day Care Centers – Learning Academy, King Middle School, Professional Development Center, Radar Schools of Santa Rosa, TR Jackson Elementary School, WH Rhodes Elementary School, East Milton Elementary School, Milton High School and Santa Rosa Community School.

Parks – McCallister Park, Locklin Field, Bayview Heights 1, 3, & 4, Milton Courts Park 1, 2, and Woodland Lake Heights Public Park.

Places of Worship – Greater Bethlehem AME, New Beginnings Church of Jesus Christ, Victory Life, First Baptist of Milton, Santa Rosa Baptist Association, New Life Baptist, Work Alive Christian, Shepherd's House Ministries, World of Outreach Christian Center, Trinity Church, Deliverance Tabernacle, Mount Pilgrim African, Isaiah Chapel AME Zion, St. Rose of Lima Catholic Church, Westminster Presbyterian, Bethlehem Primitive Baptist, Old Fashioned Light House Holiness, United Methodist, Faith Chapel Assembly, First Presbyterian, Ferris Hill Baptist, Pleasant Hill Missionary, East Milton Assembly of God, Evangel Christian, Mount Zion Pentecostal Peace and Love Holiness, Mount Zion Primitive Baptist, Reorganized Church of Jesus Christ of Latter Day Saints, First Assembly of God, Bible Way Baptist, Episcopal, Faith Baptist, St. John Divine Missionary, Bay Area Vineyard, Work Alive Christian, Olive Baptist, and Margaret Street Church of Christ.

Public Facilities – FIL-AM Community Center, Santa Rosa Lodge, School Board Offices, Cedar Pines camp grounds, Chamber of Commerce, James Street Playground, BHST Office, Veterans Plaza, Milton Community Center, Russell Harbor Boat Landing, Milton Museum, Marquis Boat Ramp, and the Blackwater River Water Management Area.

Hospitals – Gulf Medical, West Florida Community Health Center, Watson Alternative Health, Santa Rosa Health and Rehabilitation, Pediatric Therapy Center, and Santa Rosa Community Clinic.

Government Facilities – County Clerk's Office, County Courthouse, Department of Corrections, Department of Juvenile Justice, City of Milton Utilities, Department of Agriculture, State Representative Greg Evers Office, Milton Housing Authority, Santa Rosa County Health Department, Milton City Hall, Sheriff's Department, Santa Rosa County Department of Health – Environmental Health Office, Post Office, Probate Office, FL Child Protection, Public Defenders Office, and East Milton Water System.

Libraries – Milton Branch Library

Mass Transit – None

Communication Facilities – 12 cell towers, Gulf Power Sub Station, and AT&T.

Fire Stations – Skyline Fire Rescue 1, 2, & 4, Milton Fire Department, East Milton Volunteer Fire Department, and Whiting Field Fire Department.

Air – Peter Prince Air Field, Whiting Field NAS.

Military – Whiting Field NAS.

Cemetery – Morton Cemetery, Serenity Gardens.

4.2 Economic Conditions

Residential economics, as reported by the USCB, stated that in 2011, home ownership was at 76.3%, median household income from 2007-2011 was $55,913, and the persons living below poverty level was at 10.8%, all better than the Florida state averages.

However, development along the US 90 corridor east of Milton has suffered both from the economy downturn and from the lack of capacity on US 90 through downtown Milton where SR 87 must share its alignment. A field review of the study area in the vicinity of US 90/SR 87 showed abandoned industrial buildings, as well as abandoned subdivision areas where lots had been started and roadways and utilities were available. Conversely, the SR 87N corridor area and US 90 area west of Milton (including Pace) shows much development and growth. The project team has reviewed the Commercial and Residential permits, as well as the building inspections for Santa Rosa County and though there has been a drop in permitting in the entire county, it has been a dramatic drop in the East Milton area. This area saw much commercial growth in the early 1990s, but this growth has fallen sharply. Overall, commercial permits west of Milton from 1991-2011 totaled over 1,000 and permits South of Milton totaled nearly 2,500. Conversely, permits east of Milton totaled only 189 for that time period. Likewise, residential permitting has fallen for the East Milton area compared to the

western part of the county, with approximately 3,500 permits issued in East Milton and 9,500 permits issued west of Milton. After a review of the building inspections (all types), the northern part of the county (north of Yellow River) has been consistently higher than the southern part of the county since 2006 illustrating growth in the northern areas. According to the Census Data obtained in 2013, Alternatives 1 and 2 intersect 5 Census Block Groups. Following is the Median Household Income for these Block Groups:

Table 4.8: Median Household Income

Census Block Group	Median Household Income (12 months)
010400-2	$59,063
010502-1	$45,203
010502-2	$58,828
010502-4	$59,250
010808-1	$48,237
010809-2	$41,875

Based on 2010 Census Data

DOT and FHWA utilize the Department of Health and Human Services poverty guidelines, updated annually. The 2013 Poverty Guidelines are as follows:

Table 4.9: Poverty Levels

Persons in family/household	Poverty guideline
For families/households with more than 8 persons, add $4,020 for each additional person.	
1	$11,490
2	$15,510
3	$19,530
4	$23,550
5	$27,570
6	$31,590
7	$35,610
8	$39,630

According to the Census Block information, there is an average of less than 3 persons per household (after removing the blocks with no population). As a result, none of the Block Groups reflect a significant low income population. There are no likely disproportional impacts to citizens below the poverty line of $19,530.

Of particular note, the elimination of the southern alternatives due to the inability to traverse protected lands also resulted in the avoidance of Census areas within Santa Rosa County that had the highest minority percentages, and included some of the lowest income per household amounts as well.

4.3 Cultural Resources

The ETAT review for Cultural Resources included a rating of Moderate for Alternate 1 and 2 for Historic and Archeological Sites due to the potential impacts to SR 1, as well as potentially historic structures within 500 feet of the proposed alignments. It was noted the northern alternatives 1-3 would likely have fewer impacts to historic resources than the southern corridors 4-6, which coincides with the data analysis the project team completed. Based on the Cultural Resources Probability Assessment (CRPA) and field surveys, no archaeological resources were found within the study area.

The historical/architectural survey identified nine historic resources including one previously recorded National Register of Historic Places (NRHP) as a listed historic road (SR 1 [8SR1313]; listed 1994). Old State Road 1/Old Spanish Trail is a 6 mile brick road that runs parallel to US 90 from east of Ward Basin Road to east of SA Jones Road. It is significant as the first state road within the Florida Panhandle and maintains its integrity as a historic brick road.

Additionally, two unrecorded historic railroad alignments are located within the Area of Potential Effect (APE). The BHST was the original alignment for the Bagdad Lumber Company railroad between Bagdad and Munson, which later became the Florida Alabama Railroad. The CSX railroad, running along the north side of US 90, was initially chartered by the Louisville & Nashville Railroad in 1881 as the Pensacola and Atlantic Railroad. With the exception of State Road 1; however, none of the previously or newly recorded historic resources is considered eligible for listing in the NRHP due to the compromised integrity and the lack of significant historical association as determined by SHPO.

Downtown Milton has been named one of the Florida Trust for Historic Preservation's Eleven Most Endangered Sites three years in a row (2010, 2011 and 2012). **Figure 4.1** provides a summary of the environmental features in the area. This area is not impacted by either Alternative 1 or 2.

The ETAT reviews included ratings of Moderate for Alternative 1 and Substantial for Alternative 2 for Recreational areas; and a rating of Moderate for both alternatives for Section 4(f) impacts. This was primarily due to potential impacts to the BHST, as well as the previously mentioned historic SR 1. The BHST is an 8.02 mile recreational trail and conservation land managed by the Florida Department of Environmental Protection (FDEP) Division of Recreation and Parks, District 1. The trail is available for biking, running, walking, in-line skating, rollerblading, horseback riding, and bird watching. Recreational resources on the BHST that are listed on the trail map and included in more detail in 4.3.1 Section 4(f) include paved multi-use trail, a visitor center, and three trailheads. The trailheads feature parking, picnic tables, gazebos, restrooms and equestrians facilities.

In addition, Alternative 2 traverses lands that are planned for purchase as part of the Clear Creek/Whiting Field Florida Forever Board of Trustees Project. It should be noted that after

coordination with the county and a review of the planned purchase properties, Alternative 2 was updated to be located on the extreme western border of this property and/or within the county owned parcels.

4.3.1 Section 4(f)

There are two Section 4(f) resources in the area of the project alternatives. The BHST and the previously described (Section 4.3) Old State Road (SR) 1/Old Spanish Trail (see **Figure 4.1** on page 4.10).

The BHST is a multi-use paved recreational trail facility and a conservation area owned by the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida. The management responsibility is conveyed to the FDEP Division of Recreation and Parks, District 1 Office, in the form of a lease. It is officially part of Florida's Statewide System of Greenways and Trails.

The Statement of Significance prepared by Mr. Matthew Klein from FDEP describes the BHST as a predominantly rural trail that is available for biking, running, walking, in-line skating, rollerblading, horseback riding and bird watching. Recreational resources on the BHST that are listed on the trail map include the 8.02 mile paved multi-use trail, a visitor center, and three trailheads: the Milton Trailhead, the Munson Highway/Equestrian Trailhead, and the Whiting Field Naval Air Station Trailhead (Whiting Field Trailhead). The Visitor Center located at 5533 Alabama Street (approximately one mile north of the Milton Trailhead), offers parking, restrooms, picnic tables, barbeque grills, an amphitheater, a playground for children and a meeting room. The beginning of the Milton Trailhead is located within the town of Milton, on the northwest corner of the State Road 87N/US Highway 90 intersection. The Milton Trailhead features picnic tables and a gazebo, restrooms, a water fountain and a bicycle rack. A nearby shop sells, rents and repairs bicycles. The Munson Highway Trailhead, located at the intersection of the trail and Munson Highway, offers space for parking, including spaces for horse trailers and oversized vehicles. The equestrian trail runs parallel to the asphalt trail with shared bridges. This trailhead includes a parking area and a covered picnic table.

In addition, about 1/4 mile north from the Munson Highway Trailhead, there is a well-maintained, accessible, portable toilet that complies with the Americans with Disabilities Act (ADA). Two waterless vaulted restrooms were installed in 2010 (one near the six-mile point and the second one near the eight-mile trail point). No existing or planned facilities are located or will be installed within the portion of the trail that crosses the project corridor *(See Section 5.3.3 for Section 4(f) Impacts).*

N

1" = 5,000'

SPRINGHILL RD

Some lands have been recently purchased as part of the Clear Creek/Whiting Field Florida Forever Project

Blackwater River

Potential impacts to critical salamander habitat needs to be avoided. Formal consultation with USFWS is required

Florida Historic State Road 1

SR 1 was the first state road in the Florida panhandle and is in use today as a multi-use trail

87S

BEGIN STUDY AREA

HICKORY HAMMOCK RD

MUNSON HWY

EASTGATE RD

90

INTERSTATE 10

Clear Creek

Blackwater Heritage State Trail

Blackwater River Water Management Area

Whiting Field Naval Air Station

The Blackwater Heritage State Trail is a popular leisure trail in the area

END STUDY AREA

87N

GARCON POINT RD

N STEWART ST

87N

City of Milton

DOGWOOD DR

89

87N

89

GALT CITY RD

Clear Creek

Extensive coordination with FDEP will be required due to presence of planned Florida Forever Lands

A significant amount of gopher tortoise burrows have been spotted. Potential Impacts to upland/sandhill habitats will need to be minimized and/or mitigated

WILLARD NORRIS RD

BERRYHILL RD

HAMILTON BRIDGE RD

AVALON BLVD

90

LEGEND

- Corridor Study Area
- Historic Trail
- City Boundary
- Existing SR 87 Route

Conservation Areas

- Florida Managed Areas
- Planned Florida Forever Sites

Environmental Features

- Outstanding Florida Waters
- Locations of gopher tortoises observations
- Gulf Sturgeon Critical Habitat
- Reticulated Flatwoods Salamander Critical Habitat

4.4 Utilities and Railroads

To determine the extent of utility adjustments required by project improvements, local utility companies that may have facilities within the project limits were contacted and requested to submit the location of their existing and planned facilities. **Table 4.1** presents a list of utilities within the project vicinity and their pertinent contact information. As the Study progresses, continued coordination will take place with all pertinent utility companies. It should also be noted that East Milton and Santa Rosa County are currently planning to build the East Milton Wastewater Treatment Plant (WWTP) within the project area northwest of the Santa Rosa Correctional Institute. Proposed alternatives were designed in order to avoid impacts to the site of the proposed WWTP. The County has proposed sanitary sewer lines leading to the WWTP from the north, parallel to the east side of the power easement crossing Blackwater River.

Table 4.10: Existing Utilities

Utility Owner	Representative Contact Information	Type/Size of Utility and Location
AT&T Florida	Nancy Spence 707.918.5424	Telephone main lines
AT&T Communications	Allan Rudolph 850.436.1488	Telephone – Fiber Optic and Copper Aerial and Buried (50% / 50%) On most roadways & serves Whiting Field
City of Milton	Jesse Cornell 850.983.5428	Water: Throughout City of Milton, 4" and 6" mains along Munson Highway Sanitary Sewer: Sewer system in City and up Munson Highway to Eastgate Rd. Natural Gas: In City Limits
CSX Railroad	Hal Gibson 904.359.1048	Railroad along north side of US 90
East Milton Water System, Inc.	Uwe K. Rogers 850.623.8750	Water mains east of Bridge on US 90, and at intersection of SR 87S and US 90
Gulf Power	Chad Swails (FDOT Projects) 850.429.2446	Power poles and overhead electric throughout Milton Area Transmission Lines run north from US 90 and SR 87S intersection and east-west across Blackwater River
Level 3 Communications	Relocations Dept. 877.366.8344	Buried Telephone
MCI	Investigations 972.729.6016	Buried Telephone and Fiber Optics
Mediacom	Eddie Arnold 850.934.2560	Cable TV, buried & overhead, located throughout residential areas
Okaloosa Gas	Essa Rhebi 850.729.4870	8" and 12" Transmission Lines run east-west on Willard Norris Rd./Magnolia Street on easement under Blackwater River AND 4" Gas Transmission feeding Whiting Field from SR 87
Point Baker Water System, Inc.	Tony Mathis 850.623.4545	Water lines north of Milton – but does not serve Whiting Field
Qwest	Dwain Alverson 850.232.0072	Buried Fiber Optics in 4 orange ducts parallel US 90 on north side of Railroad
Southern Light, LLC	Andru Bramblett 251.662.1170	Fiber Optic mostly aerial (65%), Customers: Department of Defense, and other large communication needs. Not in residential areas
Sprint Nextel	Mark Caldwell 407.838.5602	Fiber Optic, serving residential and commercial properties in Milton

4.5 Comprehensive Planning

A review of the Comprehensive plan for Santa Rosa County shows concern about the congestion of the US 90/SR 87 corridor. Objective 4.1.E of the Transportation Element states the County will give the highest priority to transportation projects that will relieve existing traffic congestion. Part 2 of this Objective specifically mentions US 90 between Canal Street and SR 87 as an area the County "shall continue to request, recommend, and support immediate roadway improvements in order to relieve the congestion". Section 2.2.7 *Planning Consistency* includes more information on the regional planning goals, agenda, and budget.

In addition, the County's Economic Development Element includes the fostering of small business development by ensuring adequate commercial or industrial zone sites are available. This coincides with the Future Land Use maps for the southern portion of the study alternatives. There is a proposed increase in industrial parcels reflected in the maps near the SR 87S and US 90 intersection. Likewise, the updated 2011 Future Transportation Maps (Map 4-4) include the SR 87 Connector, and the 2014 Capital Improvements Element in the county's comprehensive plan includes this project.

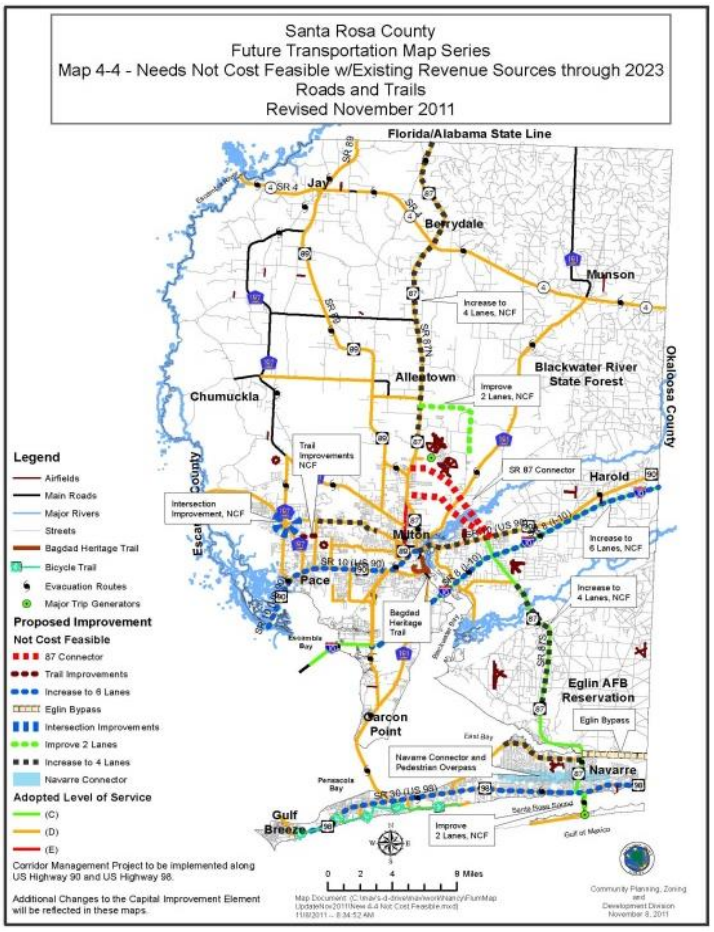


Figure 4.2: Future Transportation Map 4-4

Also, Santa Rosa County has included protection measures around Whiting Field in their Comprehensive Plan. Policy 3.1.B.5 states that the county will continue to purchase agricultural and conservation easements for the purposes of preserving and limiting development of farmland adjacent to military facilities. As a result, the northern corridors 1-3 were coordinated with the county, adjustments were made to the alignments to follow parcel lines and move west of Whiting Field. Also, the access management for the resulting alternatives was determined to include a restrictive median with full median openings spaced at ½ mile, directional openings spaced at ¼ mile and limited driveway/side street connections (Access Class 3). These restrictions will assist in the reduction of potential urban sprawl in the location of the conservation areas adjacent to Whiting Field.

4.6 Land Use

The ETAT review included ratings of Minimal for both Alternatives 1 and 2. However, an initial Moderate rating was given by the Florida Department of Community of Affairs. This was due to concerns that the City of Milton and Santa Rosa County did not have this project by name on future transportation maps or Capital Improvement Schedules. In addition, there was a concern about the coordination required for the conservation of lands around the military base, the Military Airport Zones and the opportunity for urban sprawl.

The representative from Whiting Field NAS assigned a Minimal rating, though he requested that the existing zoning regulations and the approved Joint Land Use Study information be incorporated into the study analysis. The project team coordinated extensively with the City and County on their documents, as well as met with the military to ensure the alignment locations met their needs. Additionally, the Navy liaison identified concerns over potential increases from bird strikes to aircraft and recommended mowing strategies and limited retention of stormwater ponds to reduce impacts. These items can be considered and may be implemented as part of routine maintenance strategies. As a result of these meetings and coordination efforts, adjustments to alternative location, pond type, document updates, etc. were completed.

The Study area for the SR 87 Connector consists primarily of agriculture, industrial and single family residential lands. Among the parcels impacted by the two alignments, the majority are agriculture/silviculture and industrial according to the Santa Rosa County Land Use information obtained from their GIS department. There are some Single Family Residential areas in the vicinity where the alternatives intersect SR 87N, as well as in the area near the proposed Munson Road intersection.

The County planning staff has expressed concern that if an effective alternative is not found to complement the existing roadways; sprawl will extend even further beyond the study area; congestion will worsen on US 90/SR 87 and job growth in particular in the East Milton industrial area will halt due to the limited available capacity of US 90/SR 87 through Milton.

Growth trends and projected land use from the County's Future Land Use Maps illustrate an expectation for industrial uses to increase especially at the southeastern end of the study area where both Alternatives 1 and 2 originate. **Figures 4.3** and **4.4** illustrate the county's current and future land use designations.

The County planning staff has sent written approval of the usage of a parcel which is identified on the future land use map as Conservation Land Use for the SR 87 Connector project and associated uses. Please see **Appendix A** for the letter.

There are two platted subdivisions and one condominium in the public involvement buffer area for Alternatives 1 and 2. Adjusted Alternative 2 impacts access for one platted subdivision at the intersection with SR 87N due to a median opening requiring closure. No homes/condominiums are expected to be relocated in this area.

Figure 4.3: Existing Land Use Santa Rosa County

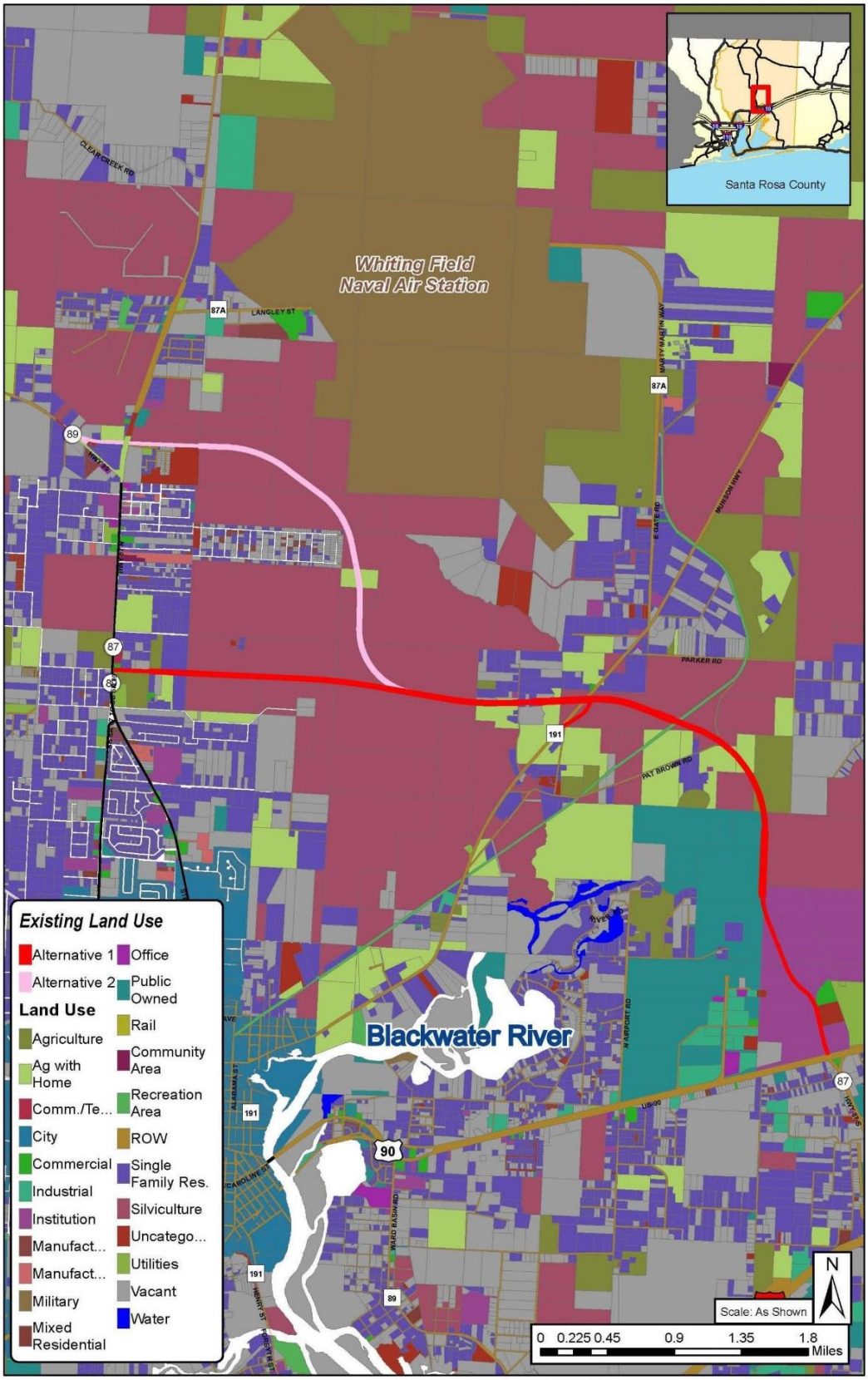
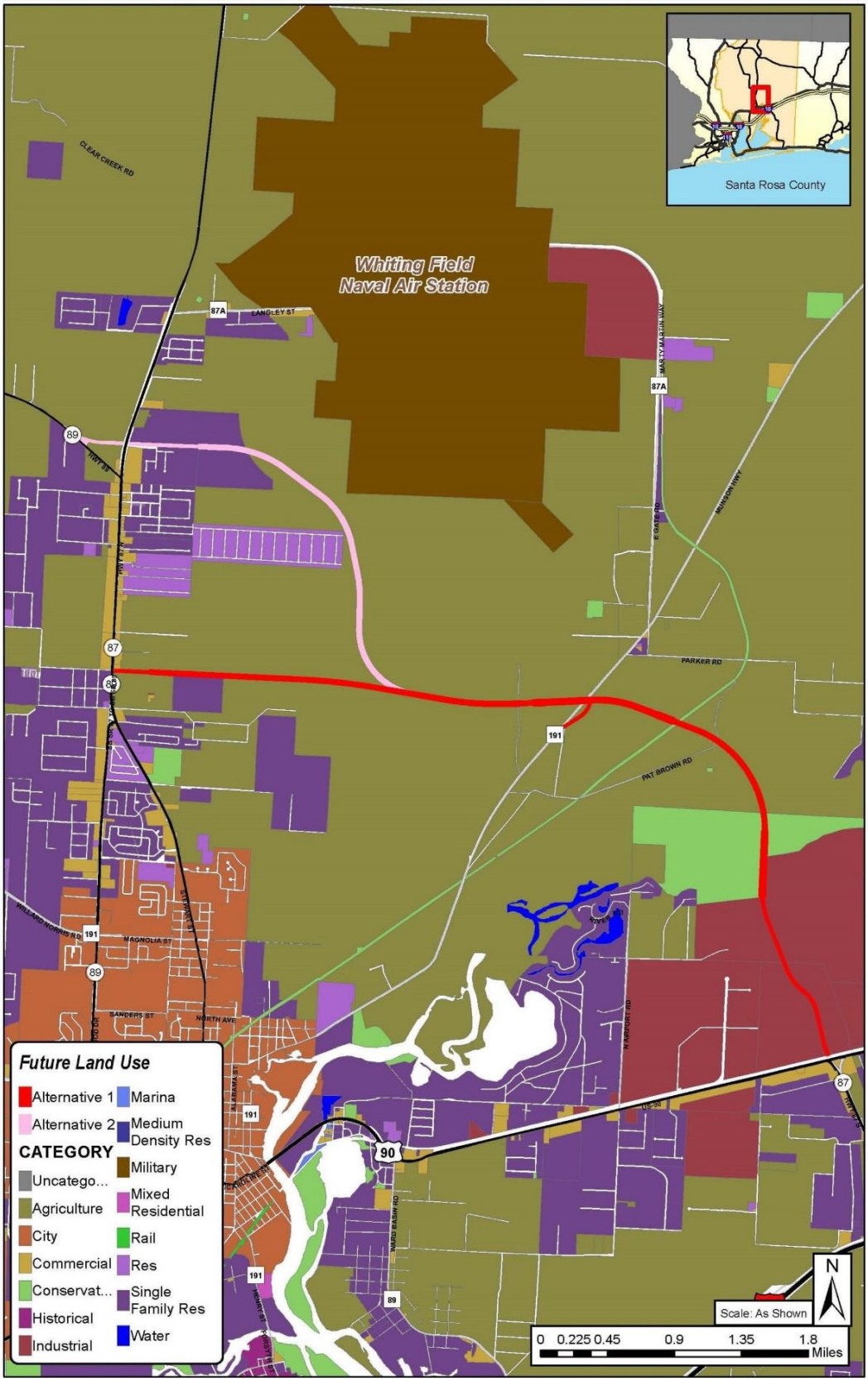


Figure 4.4: Future Land Use Santa Rosa County



4.7 Water Resources

The ETAT review included a rating of Substantial from the US EPA and NWFWMD and Moderate from the FL DEP with regard to Water Quality and Quantity for both Alternatives 1 and 2. This was primarily due to the potential for impacts to surface water quality as a result of stormwater runoff into nearby surface water bodies. The existing drainage within the project study area primarily functions by overland sheet flow which discharges into wetlands adjacent to Clear Creek and Blackwater River. No existing treatment is provided nor required prior to discharge, except at the developments near East Milton Road and Season Drive. The majority of the land within the study area is used for agricultural purposes. There are eight existing drainage basins along each alternative. In general, the existing basins are in timberland or residential subdivisions and runoff sheet flows to surrounding wetlands. The stormwater runoff from this project outfalls into the Blackwater River, the Pensacola Bay and ultimately into the Gulf of Mexico. The existing water quality is of high-quality and primarily unaffected by manmade features since most of the study area is undeveloped land or agricultural land. The north and south ends of the study area (existing state roads) provide treatment of storm water runoff for water quality in retention ponds.

The hydrology within the study area varies greatly due to land use and ground elevations. The Blackwater River is 57 miles in length and collects runoff from southern Alabama and northern Santa Rosa County. The river is attributed to a wide floodplain and regulatory floodway at the proposed roadway and bridge crossing. Clear Creek is a tributary to the Blackwater River and has a floodplain associated with the creek; however, Clear Creek is not a regulatory floodway.

The project has significant changes in elevation near the Blackwater River and “rolling hills” in the agricultural areas in the northern portion of the project. The majority of the study area has an elevation of 70 feet or greater and is outside flood zones associated with risk from the 500 year event.

GIS analysis indicates five wells within a 500 foot buffered polygon. The western end of the polygon lies in an area “vulnerable” to contamination of the Floridian Aquifer and the majority of the polygon shows as “more vulnerable” to contamination of the surficial aquifer, according to the Florida Aquifer Vulnerability Assessment. Existing water table elevations vary from 0 feet (at surface) to greater than 6 feet, which is consistent with Geotechnical investigations completed for potential pond sites.

Blackwater River drains to Blackwater Bay and is part of the Pensacola Bay watershed; these are Surface Water Improvement and Management (SWIM) priority waters of the NWFWMD. The Blackwater River is listed as an Outstanding Florida Water (OFW). OFWs are provided the highest level of protection under the 62-302.700, F.A.C (Special Protection, Outstanding Florida Waters, Outstanding National Resource Waters). Degradation of water quality in an OFW is prohibited except under certain circumstances. Pollutant discharges must not lower existing ambient water quality.

4.8 Floodplains

During the ETAT review, Floodplain potential impacts received a rating of Substantial from the NWFWMD and a rating of Moderate from the US EPA due primarily to the floodplain areas around Blackwater River and Clear Creek, and the storm surge zones within the alignment areas. Flood Insurance Rate Maps (FIRMs), prepared by the Federal Emergency Management Agency (FEMA), were utilized to determine limits of floodplains, determine base flood elevations, and investigate any special conditions required along the proposed alternatives. The majority of the project alternatives are outside of the 100 year flood zone (Zone X), except at the previously mentioned two locations; 1) surrounding the Blackwater River and 2) surrounding Clear Creek. The Blackwater River is a "Floodway Area" in Zone AE and "Special Flood Hazard Areas Subject to Inundation by the 1% Annual Change Flood" in Zone AE. Clear Creek is in "Special Flood Hazard Areas Subject to Inundation by the 1% Annual Change Flood" in Zone AE and has a base flow elevation of 18 feet. Clear Creek is a tributary to Blackwater River; connecting downstream of the proposed Blackwater River Bridge. Additional information is provided in *Section 5.4.8*. A location map of the floodplain areas is located in the **Appendix F**.

Karen Thornhill, Santa Rosa County's Floodplain Manager, stated that the Gulf Power Easement along Pat Brown Road (location of both Alternatives) repeatedly floods to the 100 year flood zone line. According to the National Oceanic and Atmospheric Administration's (NOAA) Storm Surge Interactive Risk Maps, there is risk for storm surge resulting from hurricanes within the project limits. A hurricane of any category has the potential to produce storm surge within the floodplain areas of this project.

4.9 Vegetation

In general, the existing wetland hydrology supports the natural communities and no significant alternation in hydroperiods from historic patterns exists. Many of the wetlands in the project area are associated with the Blackwater River Water Management Area or the Clear Creek floodplain area (see **Figure 4.1**).

The dominant existing land use traversed by both viable alternatives was Wetlands Forested Mix, Hardwood Coniferous-Mixed, Coniferous Plantations, and Rangeland. The wetland classifications in the area according to Florida Natural Areas Inventory (FNAI) include seepage slope/wet prairie, basin swamp, dome swamp and bottomland forest. Wetland classifications based on Florida Land Use, Cover and Forms Classification System (FLUCCS) include streams and waterways, wetland hardwood forests, wetland forested mixed, intermittent ponds and wetland shrub. Wetlands in the project area are medium/high quality wetlands. Anomalies do exist where power lines have been constructed through wetlands, where silvicultural activities are conducted or wetlands are adjacent to development.

The majority of the seepage slope/wet prairie within the project area is fire suppressed and dominated by black titi (Cliftonia monophylla), white titi (Cyrilla racemiflora), and galberry

(Ilex glabra). In areas that have been mowed, such as the power line easements, greater plant diversity was observed.
The basin swamps present within the project area are fire suppressed. The groundcover coverage is sparse and diversity is low, which is likely a result of intense competition with woody species.

The Dome Swamps contain a thick woody shrub understory of St. John's wort (Hypericum chapmanii), titi, myrtle leaf holly (Ilex myrtifolia), and fetterbush (Lyonia lucida).

The bottomland forest traversed by the alternatives surrounds both the Blackwater River and Clear Creek, which are both blackwater streams that drain into the Pensacola Bay.

4.10 Wildlife and Habitat

Both alternatives traverse developed and undeveloped areas. The southern portion of the roadway from the intersection with US 90 north to the Blackwater River floodplain follows an existing road that is surrounded by institutional and commercial development. Over the Blackwater River, the alignment follows an existing Gulf Power easement that crosses the Blackwater River. The bridge will continue west on the north side of the Blackwater River and terminate after crossing the BHST. West of the trail, the proposed alignment continues west through agricultural lands and over Munson Highway to the floodplain of Clear Creek. A bridge will span the Clear Creek wetlands and open water. As the road continues west (Alternative 1) and northwest (Adjusted Alternative 2), both alternatives cross primarily silvicutural lands until the intersection with SR 87 north.

Wildlife and Habitat received Substantial rating during the initial ETAT review. This was due to the potential for impacts to listed species and habitat areas. A designated critical habitat (unit RFS-2, Subunit A) for the Reticulated flatwoods salamander (RFS) (on federal and state endangered species list) is located within the study area (see **Figure 4.1**). Designated critical habitat is defined as a specific area within the geographic area occupied by a federally listed species at the time it is listed. Critical habitats contain physical and biological features that are considered essential to the conservation of the species and require special management considerations for protection. This critical habitat unit contains all of the primary constituent elements and supports multiple life stages of the RFS.

At the proposed bridge crossing, the Blackwater River is part of critical habitat unit 4 for the Gulf sturgeon (on federal and state threatened species list) (see **Figure 4.1**), which consists of the Yellow River system in Santa Rosa and Okaloosa Counties, Florida and Covington County, Alabama. The Blackwater River is a tributary to the Yellow River and is therefore included in the critical habitat unit. Both alternatives cross the Blackwater River.

It should also be noted that a number of federally and state listed wildlife species have a potential for involvement in this project due to the fact that the upland habitats are predominantly suitable for multiple species and the wetlands have relatively minor disturbances. Additionally, the Florida Ecological Greenways Network (EGN), established by FDEP to support connectivity between natural areas, considers the study area a level 2

link. A level 2 link indicates a medium to high growth potential for rural land uses to be converted to residential or commercial land uses.

The USFWS documents the potential occurrence of approximately 79 federal and or state listed species in Santa Rosa County. This includes approximately 34 plant species, 17 avian species, four amphibians, ten reptiles, four mammals, and four freshwater mussels. Most of these species are state listed only. There are 17 federally listed species potentially occurring in Santa Rosa County, along with one candidate species (gopher tortoise), one species proposed for listing (Red Knot), and one species with special protection status (Bald Eagle). **Table 4.11** shows the list of federal and state listed species potentially occurring in Santa Rosa County. Specifically, the alternatives traverse sandhill habitat that is appropriate for gopher tortoise (on state threatened species list). Approximately 55 potentially occupied burrows were seen within the project study area (see **Figure 4.1**).

Table 4.11: List of Federal and State T&E Plant and Animal Species Potentially Occurring in Santa Rosa County

Fish		Federal Status	State Status
Scientific Name	Common Name		
Acipenser oxyrinchus desotoi	Gulf Sturgeon	LT	FT
Crystallaria asprella	Crystal Darter	N	ST
Etheostoma histrio	Harlequin Darter	N	SSC
Fundulus jenkinsi	Saltmarsh Topminnow	SC	SSC
Notropis melanostomus	Blackmouth Shiner	N	ST
Pteronotropis welaka	Bluenose Shiner	N	SSC
Bivalves (Mussels)		**Federal Status**	**State Status**
Scientific Name	**Common Name**		
Fusconaia escambia	Narrow Pigtoe	T	N
Fusconaia rotulata	Round Ebonyshell	E	N
Pleurobema strodeanum	Fuzzy Pigtoe	T	N
Villosa choctawensis	Choctaw Bean	E	N
Amphibians		**Federal Status**	**State Status**
Scientific Name	**Common Name**		
Ambystoma bishopi	Reticulated Flatwoods Salamander	LE	FE
Hyla andersonii	Pine Barrens Treefrog	N	SSC
Rana capito	Gopher Frog	N	SSC
Rana okaloosae	Florida Bog Frog	N	SSC
Reptiles		**Federal Status**	**State Status**
Scientific Name	**Common Name**		
Alligator mississippiensis	American Alligator	SAT	FT(S/A)
Caretta caretta	Loggerhead	LT	FT
Chelonia mydas	Green Turtle	LE	FE
Dermochelys coriacea	Leatherback	LE	FE
Lepidochelys kempii	Kemp's Ridley	LE	FE
Eretmochelys imbricata imbricata	Hawksbill	LE	FE
Drymarchon couperi	Eastern Indigo Snake	LT	FT
Gopherus polyphemus	Gopher Tortoise	N	ST
Macrochelys temminckii	Alligator Snapping Turtle	N	SSC
Pituophis melanoleucus mugitus	Florida Pine Snake	N	SSC

Mammals		Federal Status	State Status
Scientific Name	**Common Name**		
Sciurus niger shermani	Sherman's Fox Squirrel	N	SSC
Tamias striatus	Eastern Chipmunk	N	SSC
Trichechus manatus	Manatee	LE	FE
Ursus americanus floridanus	Florida Black Bear	N	Delisted
Birds		**Federal Status**	**State Status**
Scientific Name	**Common Name**		
Charadrius alexandrinus	Snowy Plover	N	ST
Charadrius melodus	Piping Plover	LT	FT
Cistothorus palustris marianae	Marian's Marsh Wren	N	SSC
Egretta caerulea	Little Blue Heron	N	SSC
Egretta thula	Snowy Egret	N	SSC
Egretta tricolor	Tricolored Heron	N	SSC
Eudocimus albus	White Ibis	N	SSC
Falco sparverius paulus	Southeastern American Kestrel	N	ST
Haematopus palliatus	American Oystercatcher	N	SSC
Mycteria americana	Wood Stork	LE	FE
Falco peregrinus tundrius	Artic peregrine falcon	E	FE
Pelecanus occidentalis	Brown Pelican	N	SSC
Picoides borealis	Red-cockaded Woodpecker	LE	FE
Rynchops niger	Black Skimmer	N	SSC
Sternula antillarum	Least Tern	N	ST
Haliaeetus leucocephalus	Bald Eagle	BGEPA	
Calidris canutus	Red Knot	Proposed	
Plants and Lichens		**Federal Status**	**State Status**
Scientific Name	**Common Name**		
Andropogon arctatus	Pine-woods Bluestem	N	LT
Baptisia calycosa var. villosa	Hairy Wild Indigo	N	LT
Calamovilfa curtissii	Curtiss' Sandgrass	N	LT
Calycanthus floridus	Sweet-shrub	N	LE
Carex baltzellii	Baltzell's Sedge	N	LT
Chrysopsis gossypina ssp. cruiseana	Cruise's Goldenaster	N	LE
Cladonia perforata	Perforate reindeer lichen	E	FE
Drosera intermedia	Spoon-leaved Sundew	N	LT
Epigaea repens	Trailing Arbutus	N	LE
Hexastylis arifolia	Heartleaf	N	LT
Illicium floridanum	Florida Anise	N	LT
Kalmia latifolia	Mountain Laurel	N	LT
Lilium catesbaei	Southern red lily	N	LT
Lilium iridollae	Panhandle Lily	N	LE
Lobelia boykinii	Pond's Lobelia	N	LE
Lupinus westianus	Gulf Coast Lupine	N	LT
Macranthera flammea	Hummingbird Flower	N	LE
Magnolia ashei	Ashe's Magnolia	N	LE
Magnolia pyramidata	Pyramid Magnolia	N	LE
Medeola virginiana	Indian cucumber-root	N	LE
Pinguicula primuliflora	Primrose-flowered Butterwort	N	LE
Platanthera ciliaris	Yellow Fringe Orchid	N	LT
Platanthera integra	Yellow Fringeless Orchid	N	LE

Pogonia (Cleistes) bifaria	Fernald's Pogonia	N	LT
Polygonella macrophylla	Large-leaved Jointweed	N	LT
Potamogeton floridanus	Florida Pondweed	N	LE
Rhexia parviflora	Small-flowered Meadowbeauty	N	LE
Rhododendron austrinum	Florida Flame Azalea	N	LE
Sarracenia leucophylla	White-top Pitcherplant	N	LE
Sarracenia psittacina	Parrot Pitcherplant	N	LT
Sarracenia rosea (S. purpurea burkii)	Gulf Purple Pitcherplant	N	LT
Sarracenia rubra	Sweet Pitcherplant	N	LT
Stewartia malacodendron	Silky Camellia	N	LE
Xanthorhiza simplicissima	Yellow-root	N	LE

* BGEPA = Bald and Golden Eagle Protection Act, E = Endangered, FE = State Endangered, FT = Listed as Threated by USFWS, FT(S/A) = Federal threatened due to similarity of appearance, LT = State Threatened, LE = State Endangered, N = Not Listed, SAT = Treated as threatened due to similarity of appearance, SC = Species of Concern, SSC = Species of Special Concern, ST = State Threatened, T = Threatened

Habitat protection measures in the project area are ongoing by both state and local agencies. Santa Rosa County has included protection measures around Whiting Field in their Comprehensive Plan. Policy 3.1.B.5 states that the county will continue to purchase agricultural and conservation easements for the purposes of preserving farmland adjacent to military facilities. Also, there are Florida Forever Board of Trustees Project areas and as of June 30, 2011, the Florida Department of Environmental Protection (FDEP), using Florida Forever Funds, purchased several additional parcels east of Whiting Field Naval Air Station that are part of the Clear Creek/Whiting Field Florida Project. Likewise, multiple parcels surrounding Whiting Field Naval Air Station are Florida Forever future/planned sites (see **Figure 4.1**). The project team coordinated with the County, Whiting Field, and with the agencies extensively about these areas. The team received input on the best locations for the alternatives, as well as the access management needs of the future roadway to ensure the most appropriate locations were chosen that still met the purpose and need of this new roadway. Adjustments were made to all northern corridors (1-3) as a result of these meetings. The correspondence is located in **Appendix A**, meeting minutes.

5. ENVIRONMENTAL CONSEQUENCES

The environmental consequences section of this document describes in detail the impacts associated with the two alternatives. Included in the introduction to each of the following topics are summaries of the comments received from reviewing agencies through the Efficient Transportation Decision Making (ETDM) process.

5.1 Social and Economic Impacts

This project is being advanced in compliance with nondiscrimination authorities, including Title VI of the Civil Rights Act. FDOT will not exclude from participation in, deny the benefits of, or discriminate against anyone on the basis of race, color, national origin, sex, age, disability, religion or family status.

5.1.1 Social Impacts

The ETAT comments on social impacts included ratings of None and Moderate. The USEPA included an acknowledgement in their comments of the social benefits resulting from the proposed roadway due to congestion relief and an improvement in mobility. During the alternatives location development, the project team considered community cohesion, noise, visual aesthetics, potential relocations, archeological and/or historical areas, etc. In addition, environmental justice concerns were also addressed. Environmental justice is the fair treatment and meaningful involvement of all people impacted by this project regardless of race, color, national origin, or income.

This project will likely result in the need for one to two residential displacements, with no potential community services (i.e. churches, community centers, social services, etc.) impacted. As illustrated in **Table 5.1**, both viable alternatives generally have the same social impacts, with Adjusted Alternative 2 impacting two additional agricultural parcels.

Table 5.1: Social Impacts

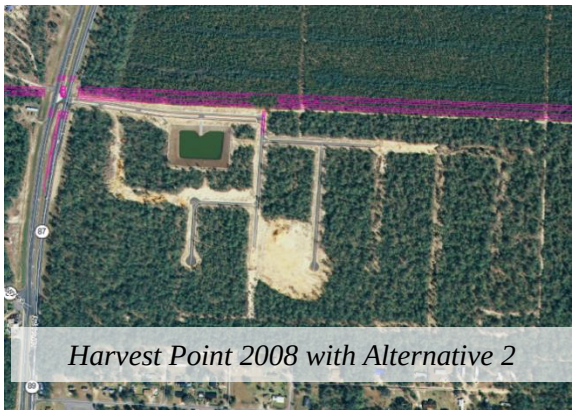
Alternatives	Residential Parcels		Manufactured Home	Business Parcels	Agriculture Parcels
	Vacant	S. Family Improved			
1	2	0	2	0	14
Adjusted 2	2	0	2	0	16

In all of the impacted residential areas, existing road right-of-way was utilized where possible to minimize displacement. Both alternatives do impact two mobile homes near the Munson Highway crossing. A 2014 review of the property owner tax files showed that both homes, though previously owned by Harrison Finance Company, Inc., a loan/finance company, have now been purchased by a Louisiana resident. One property is taxed as "vacant mobile home". The other property is being taxed as improved with only a shed. A field review showed the mobile home had completely

burned since this study began. Adjusted Alternative 2 impacts two additional residential properties west of 87N. Homes on these properties were avoided *(See Section 5.1.5 Relocation).*

Many considerations of the two viable alternatives were analyzed to reduce the impact to the social environment. For instance, the project team selected impacted parcels that were vacant or had abandoned homes; avoided community facilities like fire stations, hospitals, libraries, places of worship and schools; utilized the most current Census data to avoid the lower income/minority area just south of US 90 and north of Old Bagdad Highway and the minority areas between SR 87N and SR 89N and along the Munson Highway Corridor in the Milton City limits; and followed existing impacted properties along transmission lines. Based on the above discussion and analysis *(See section 4.1.2 Demographics)*, neither Alternative will cause disproportionately high and adverse effects on any minority or low-income populations in accordance with the provisions of E.O. 12898 and FHWA Order 6640.23.

The social impacts expected generally arise from the requirements for right of way associated with the proposed action, and apply to both of the remaining alternatives. The majority of the study area does not include dense residential areas, or areas with extensive housing. However, both alternatives do intersect SR 87N in areas that have seen growth since the study began in 2009. Alternative 1 joins SR 87N at Oakland Drive. This roadway includes scattered established homes. Property lines for the residences were followed for the roadway widening to ensure the residential parcels were not impacted. Adjusted Alternative 2 intersects SR 87 and realigns SR 89 just north of a new subdivision. When this study began, there were few homes in the area, now there are nearly 100 homes.



Harvest Point 2008 with Alternative 2

Comments from the hearing concerning the proximity of Alternative 2 to homes on the west side of S.R. 87N, as well as to homes in the newly developed Harvest Point Subdivision, prompted the study team to reevaluate the intersection location of Alternative 2 and S.R. 87N. After reviewing the public information summary of the public hearing, the study team adjusted Alternative 2 slightly north. This adjustment moved the alignment north away from the Harvest

Harvest Point 2013 with Adjusted Alternative 2

Point Subdivision, reduced noise impacts to the homes along the subdivision's northern perimeter to less than 10 dB(A), eliminated the need for a noise wall and provided a connection to S.R. 89N.

Apart from the possible displaced homes, the short term effects of the proposed action will be felt by those that reside nearby during the period of construction. The long term effects will be associated with increased noise from a new/widened roadway (See **5.4.3 Noise**). In comparison, other long term effects are improved mobility for residents as well as through traffic; savings in time and fuel provided by a new, more direct connection from I-10 to Whiting Field and the northern part of the county; multi-modal enhancements and opportunities; and enhanced motorist safety by removing nearly 20% of the traffic from constrained portions of US 90.

Also, the project team made every effort to minimize fragmentation issues for agricultural parcels by following parcel lines and/or utilizing county owned lands or lands not in an active farming use where available. These efforts resulted in limiting impacts to approximately seven (7) acres of Prime Farmlands on Alternative 1 (from the US Department of Agriculture Natural Resources Conservation Services (USDA-NRCS) GIS data; see section 5.4.12 and Appendix H). There are no Prime Farmlands impacted with Adjusted Alternative 2. Likewise, design considerations were analyzed such as insuring appropriate access points to residences and as the alternatives approach the areas of US 90 and SR 87N, where land uses become denser, a narrower urban typical section will be used to minimize impacts. In addition, concessions in the design also included the review of Whiting NAS's preference for the avoidance of their Accident Potential Zones (APZ), as well as the use of dry ponds near the base to eliminate impacts to the military facility. Also, every effort was made during the final Alternatives location selection to reduce the impacts to the Santa Rosa Criminal Justice Center and the Santa Rosa Corrections Facility by utilizing the existing improved roadways in the area, and eliminating/minimizing any need for right-of-way impacts by utilizing an urban typical section in that area.

5.1.2 Economic Impacts

The project area has seen much development over the last few decades with the growth of the industrial park, the location of the Sheriff's office and correctional facilities in East Milton, and the construction of the East Milton Recreational Park. There is much potential for further growth, however capacity and widening limitations of the US 90/SR 87 corridor will drive the growth away from East Milton, as is already evident in the abandoned subdivisions and vacant industrial buildings showing up over the course of this study. According to the University of Florida's Bureau of Economic and Business Research (BEBR) Report and the FL-AL TPO 2040 Long Range Transportation Plan (LRTP), the population is expected to grow another 50% to nearly 230,000 people by 2040. It should be noted that the latest census data obtained between 2010 and 2014 show a 2% growth rate per year which follows the anticipated projected growth outlined in the 2040 LRTP. This population growth will increase the vehicular demand on the US 90/SR 87 segment, making growth and evacuation difficult due to a lack of roadway capacity. The project, utilizing either Alternative 1

or 2, would provide capacity as well as create a more direct overland access between the military installations in the area: Whiting Field, several Naval Outlying Fields (NOLF's), and Eglin Air Force Base.

In addition, there are seven existing or planned industrial parks within or near the study area. Three industrial parks have been completed. The proposed SR 87 connector will benefit the industrial parks and the local economy by significantly improving access and regional connectivity. Specifically, the Santa Rosa County Aviation Industrial Park, located adjacent to NAS Whiting Field, will be provided improved access to the SIS facilities to the south, both Interstate 10 and SR 87S. The county continues to seek to bring more industries with higher paying jobs into their industrial park, making improved access a priority in this endeavor. In addition, the proposed improvements will likely increase property values for commercial uses within the County that benefit from the new roadway improving the County's tax base.

Access to businesses, intermodal facilities and movement of goods and freight are important considerations in the development of an effective transportation system. This is an enhancement provided by this project because it will supply a link from the northern areas of the County to areas along the interstate and on to the coast. In addition, it will establish the needed link between Whiting Field and I-10, and SR 87S SIS facility. During the data collection phase of this study, 98 businesses were located on the US 90/SR 87 corridor from SR 87S to SR 87N and SR 87N from US 90 to Whiting Field. These businesses represented a variety of types including Pawn Shops, Gas Stations, Dry Cleaners, Restaurants, Warehouses, Storage Facilities, Florists, Eye Doctors, Law Offices, Medical Offices, etc. The majority of these businesses (estimated to be 88%) serve mainly local customers and will not likely be detrimentally impacted by a potential bypass. Likewise, the businesses, churches, county/city offices and school board offices in the Historic Downtown Milton area serve mostly local residents and not pass through traffic. The business community, especially in the historic area will realize some immediate effect due to the reduction of truck and military traffic through the area and along the congested US 90 corridor. The majority of the businesses along the US 90 corridor are appointment based and do primarily serve through traffic. The DTTM describes how the SR 87 Connector will reduce the number of failing segments along US 90 from eight (8) to three (3) in the year 2035.

The proposed roadway would also provide an extension of SR 87 and would help facilitate access from the south to eco-tourism businesses (canoeing and camping), and to the Blackwater River State Park facilities, especially the parks at the Krull Recreational Area and Bear Lake. The County has invested extensively in recreational facilities north of US 90. The bicycle and pedestrian enhancements proposed along the new facility would increase safety, pedestrian mobility, connectivity between residential and nonresidential areas, and would provide access for transportation disadvantaged populations. Mobility is discussed further in *Section 5.1.6*.

5.1.3 Land Use

Existing Land Uses have been previously described in Section 4.6. Changes in land use consist of the conversion to transportation land use from single family residential, industrial and agricultural land uses. Among the affected parcels, the majority are assigned land use categories of agriculture/silviculture and industrial according to the Santa Rosa County Land Use information obtained from their GIS department. There are some Single Family Residential areas in the vicinity the alternatives intersect SR 87N, as well as in the area near the proposed Munson Highway intersection. The future land use maps for Santa Rosa County indicate that much of the area surrounding the southern portion of the proposed roadway (both alternatives) will remain industrial, or will convert from silviculture to industrial. See **Figure 4.4** Future Land Use and **Figure 5.2** Land Use Limitations.

The Project Team has also recognized the County and Team Santa Rosa's efforts on a Joint Land Use Planning initiative. This study is a joint land use study that incorporates the land use planning efforts between Santa Rosa County and the NAS Whiting Field Military Installation. The study area encompasses 8,000 acres around Whiting Field in northern Santa Rosa County and includes an Aviation park on the east side of the base as well as conservation lands (on the Florida Forever project list). With regards to Land Use in the vicinity of Whiting Field, the County's Comprehensive Plan provides guidance on development around the military base. In addition, the County's Land Development Code (LDC) further defines, for instance, protections for military airport zones (MAZs). In the LDC, some types of development are compatible with air operations, such as industrial development and conservation. The County is building the aviation industrial park adjacent to NAS Whiting Field, made possible by an agreement with the Navy. As a result, any Land Use in the vicinity of the military base and just north of Adjusted Alternative 2 is protected by the county's comprehensive plan and by lease agreements the base has with adjoining property owners. **Figure 5.1.** outlines the areas immediately adjacent to Whiting Field which are under lease agreements.

Santa Rosa County is nationally recognized for its cooperation with the Navy to achieve goals of both the county and the military. As a result, any Land Use in the vicinity of the military base and just north of both alternatives is protected. Extensive coordination between the project team and those involved in the Joint Land Use Planning initiative resulted in slight alignment shifts, proper pond designs, access management classifications, etc. to ensure the best possible alternative locations.

The continuity of the SR 87 roadway will mean growth at either end of the connector. Alternatives 1 and 2 provide a bypass around Milton and a more direct route to SR 87N and the Joint Land Use Planning Area from I-10. In addition, both alternatives intersect SR 87N in moderately developed areas, potentially serving existing residents and businesses more efficiently. Likewise, they will serve the economic development of the area as they both provide an additional North-South Corridor; and a more direct route to the Aviation Park, Whiting's East Gate and to the proposed four-lane section of SR 87N to the State Line from I-10. In addition, growth in and around the county's

industrial park near the military base should be expected. This expected growth does correspond to the Future Land Use maps. It should be noted that the project team considered the future land use maps, as well as protection of the existing Silviculture areas during the development of the corridors. For instance, the roadway adjoins a gulf power easement limiting adjacent development to the south, whereas the county comprehensive plan will limit development to the north adjoining the base. Likewise, both alternatives will include over a mile of structures that will span the entire floodways of Clear Creek and Blackwater River, as well as the known salamander habitat and the BHST. Also, the connector will be designed with access restrictions in the rural areas. Once the full build out is completed, this project will have an Access Management Classification of 3. Access Management is the careful planning of the location, type, and design of access to parcels, businesses and homes. It also includes median opening and driveway location guidelines. The Access Management standards are officially outlined in Chapter 14-97 of the Florida Administrative Code. Class 3 has restrictive median openings with openings placed every 2,640 feet for full openings and 1,320 feet for directional. One intent of these access restrictions is to ensure the corridor's effectiveness as an evacuation route. The access management restrictions along with the current comprehensive plan land use restrictions, and the extensive floodplain/wetland locations in the study area, will work in concert to deter development in the rural areas adjacent to the roadway, See **Figure 5.2**. As a result, the land use changes that may result as part of this study will occur at the southern terminus (US 90) and northern terminus (SR 87N), and at the new roadway intersection at Munson Highway. The future land use maps show the future land use to be industrial at the southern terminus, and commercial/residential at the northern terminus of both alternatives. As previously mentioned, these land uses are compatible with this project. The land use that may be reasonably expected to be altered is at the intersection with Munson Highway. The future land use is currently Agriculture in this area. With this project, residential and possibly commercial development may be likely at this intersection as the connectivity is improved to I-10. (See more Land Use information in *Section 5.4.4 Wetlands and 5.5 Indirect and Cumulative Efftects).*

Figure 5.1: Land Acquisition and Other Planning Efforts Around NAS Whiting Field

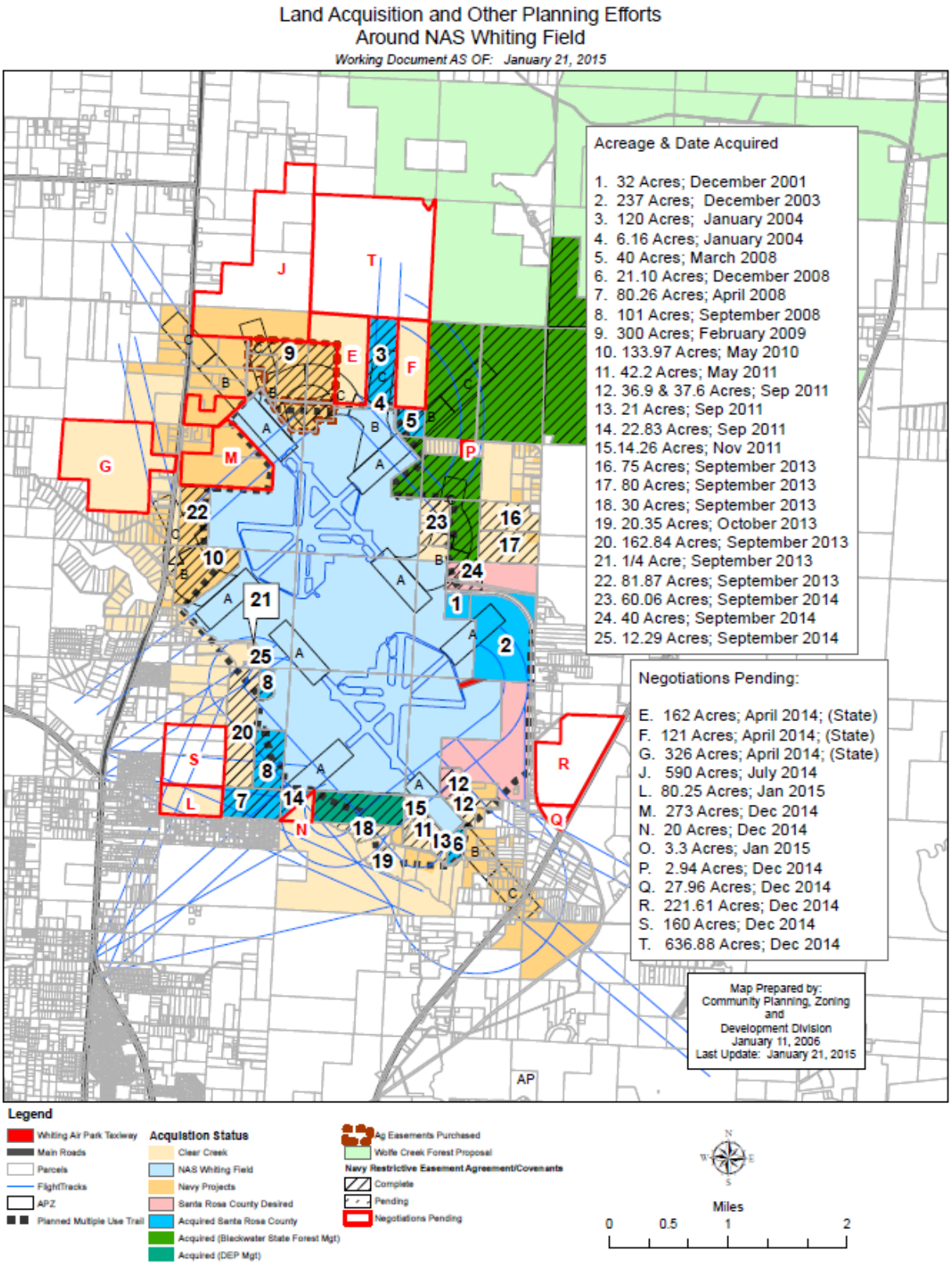
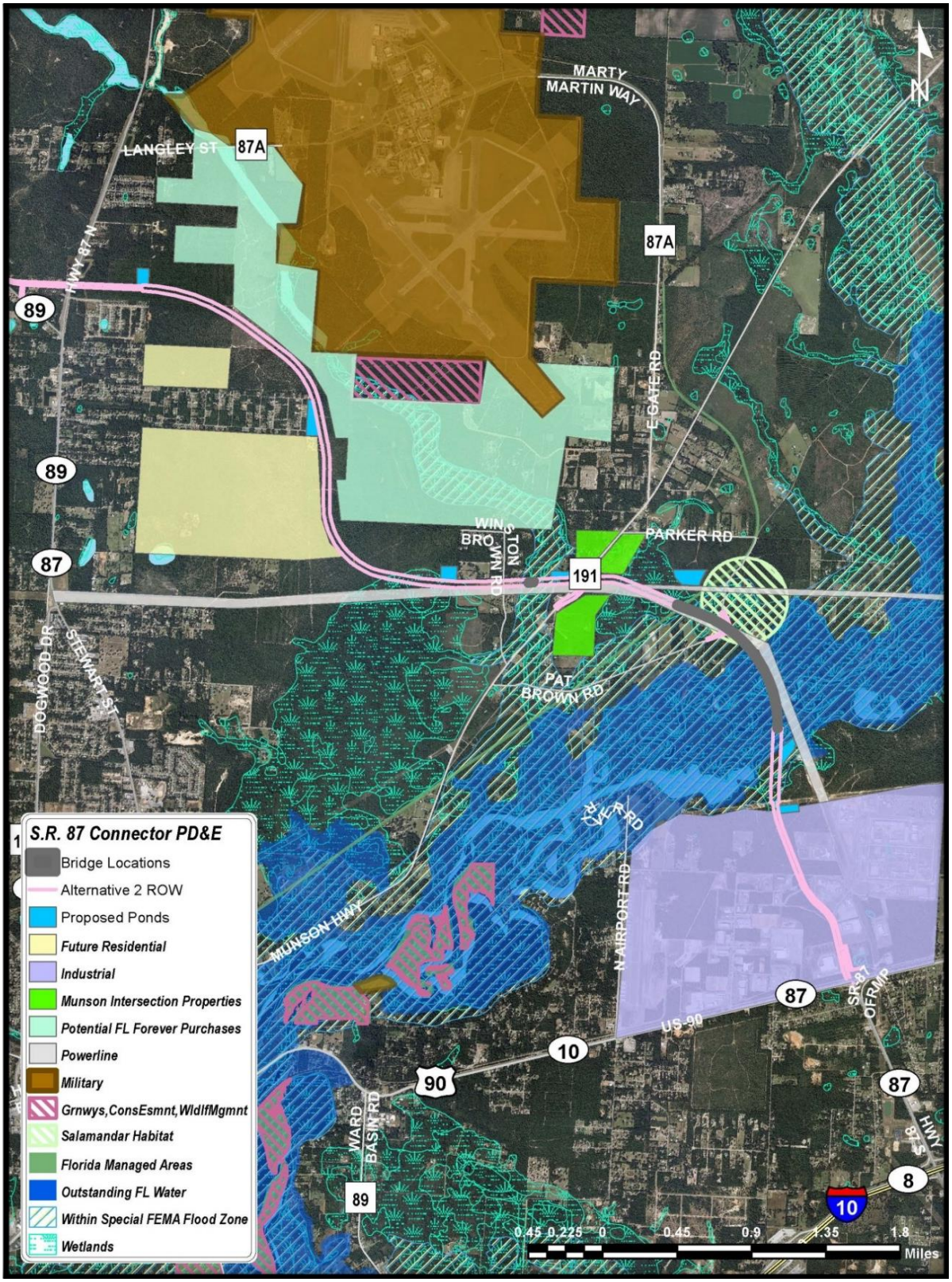


Figure 5.2: Land Use Limitations



5.1.4 Aesthetics

Given the length of the alternatives, the proposed SR 87 Connector Project crosses various natural and built communities. Natural areas include the Blackwater River, the BHST, Clear Creek, forested areas and wetlands and undeveloped areas like pastureland. Developed areas include suburban residential developments. The Blackwater River is the most prominent natural feature along both of the alternatives and is designated as an OFW. Crossing the river will offer scenic views to the east and west. However, the view to the east will be impacted by the existing transmission lines that cross the river immediately adjacent to the roadway right of way. Views from the roadway will be impacted by transmission lines in many locations along the two alternatives because the alignments closely follow the transmission lines to reduce the roadways impacts to the more undisturbed landscapes.

Viewpoint Locations

Three viewpoints were chosen to represent the areas that will be most affected by the two Build Alternatives. All three viewpoints are associated with natural areas that are somewhat undisturbed. The viewpoints are also represented by the three bridge locations for both Build Alternatives.

Blackwater River Crossing: The Blackwater River has a beautifully scenic landscape. Different locations to cross the river were evaluated, most were locations that the natural environment had already been disturbed to a degree. The location that was selected is adjacent to a large transmission facility. It was also at one of the narrowest sections of the river. As can be seen in the picture to the top right, the river has a tranquil setting. The picture to the middle right shows the transmission facility just east of the bridge crossing. The visual quality in this area is high. The visual quality for this area will decrease to average because of the intrusion of a large structure spanning the river. The area is, however, fairly remote and the river activity in this area is low, so the visual impact will be experienced by few. It should be noted that the proposed bridge will offer new viewing opportunities of the river. The proposed structure will be somewhat simple with a fairly low profile minimizing the structures visual intrusion.

Looking across the Blackwater River at the proposed bridge location

Existing BHST

Blackwater Heritage State Trail (BHST): The existing visual quality for this area is moderately high. Trail users are likely to have high sensitivity to visual change. Visual quality can be expected to slightly decrease due to the introduction of a structure. However, because the proposed crossing is to be grade separated, there will be little impact on the trails operations.

The pictures below are renderings of how the trail might look with the bridge crossing. Since the trail corridor is fairly narrow. The visual impact is somewhat limited.

Rendering of proposed bridge crossing over the BHST

Rendering of proposed bridge crossing over the BHST

Clear Creek: The Clear Creek crossing was the third viewpoint location selected. Clear Creek is a sand-bottomed stream with a relatively unaltered flood plain fed by numerous small *seepage* streams. The FNAI also lists the rare seepage slope community as present in the watershed. These shrub thickets or boggy meadows form at the base of a slope where water moving downslope or seeping creates moist soil conditions. Pitcher plants are commonly found on seepage slopes in the area. The conservation area provides habitat for many endangered and threatened plants and animals, including gopher tortoises, southeastern weasel, white-topped pitcher plant, spoon-leaved sundew, panhandle lily and the hairy-peduncled beakrush. Much like the location selected for the Blackwater River, the crossing for Clear Creek is immediately adjacent to the transmission line easement. The easement area is highly disturbed as it has been totally cleared and is regularly maintained by mowing. As seen on the picture above, the area north of the creek crossing remains in its more natural state. Though this moderately high quality view will be decreased by the roadway, the roadway will buffer the view from the very low quality views of the power easement. Again like the river crossing, this creek crossing occurs in a fairly remote location rarely seen by the public. As such, the bridge will offer new viewing opportunities of the creek.

Clear Creek Watershed north of the proposed bridge crossing

5.1.5 Relocation

A Conceptual Stage Relocation Plan (CSRP) was prepared on May 23, 2012 in compliance with Florida Statute 339.09, and the Uniform Relocation Assistance and Real Property Acquisition Act of 1987 (Public Law 91-646). Parcel impacts as a result of Alternatives 1 and 2 were analyzed. An update was made to the CSRP, following the Public Hearing, in May 2015. Comments from the hearing concerning the proximity of Alternative 2 to homes on the west side of S.R. 87N, as well as to homes in the newly developed Harvest Point Subdivision, prompted the study team to reevaluate the intersection location of Alternative 2 and S.R. 87N. After reviewing the public information summary of the public hearing, the study team adjusted Alternative 2 slightly north.

The implementation of either alternative would include impacts to residences along Eagle's Way. In 2011, the ownership of this property was transferred to a finance company, but has since been purchased along with surrounding parcels by a Louisiana resident. The property is currently being taxed as "vacant mobile homes". Due to existing damages noted during a field visit. A third mobile home at this location will not require relocation. It was fully destroyed by a fire. The property owner in Louisiana was sent a relocation packet. Adjusted Alternative 2 will intersect SR 87N and will impact two additional residential properties located along the west side of SR 87N. Homes on these properties are not impacted, though relocation packets were sent to both due to the proximity of the alternative's updated location.

Table 5.2: Residential Relocations/Impacts

Address	Alternative	Owner/ Tenant	Remarks
7524 Eagle's Way	Alternatives 1 and 2	Vacant	798 Square Feet, built 1986
7530 Eagle's Way	Alternatives 1 and 2	Rented	1,064 square feet, built 1985

Comparable replacement housing for sale and rent is available in Milton. However, there may be some last resort rent supplements and last resort replacement housing payments necessary. Last resort housing payments would be used in order to place the relocatees in decent, safe, and sanitary housing, if necessary. Should last resort housing be constructed, the housing would be available before the displacees are required to vacate their dwellings. The data collected as of February 22, 2012 shows the availability of replacement sites in order to accommodate the relocation of any displaced parties within the respective residential areas from which they will be displaced. The data collected shows that a total of 61 mobile homes are available for sale (ranging from $15,000 to $160,000), 30 mobile homes are available for rent (ranging from $140 to $1000 per month), 80 homes are available for sale (ranging from $25,000 to $199,000), and 87 homes are available for rent (ranging from $500 to $1895 per month).

To minimize the unavoidable effects of ROW acquisition and displacement of people, the FDOT will carry out a ROW and relocation program in accordance with Florida

Statute 339.09 and the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646 as amended, Public Law 100-17).

The FDOT provides advance notification of impending ROW acquisition. Before acquiring ROW, all properties are appraised on the basis of comparable sales and land use values in the area. Owners of property to be acquired will be offered and paid fair market value for their property rights. No person lawfully occupying real property will be required to move without at least 90 days written notice of the intended vacation date and no occupant of a residential property will be required to move until decent, safe and sanitary replacement housing is made available. "Made available" means that the affected person has either by himself/herself obtained and has the right of possession of replacement housing, or that the Florida Department of Transportation has offered the relocatee decent, safe and sanitary housing which is within his financial means and available for immediate occupancy.

At least one relocation specialist is assigned to each highway project to carry out the relocation assistance and payments program. A relocation specialist will contact each person to be relocated to determine individual needs and desires, and to provide information, answer questions, and give help in finding replacement property. Relocation services and payments are provided without regard to race, color, national origin, age, sex, religion, disability, or family status.

All tenants and owner-occupant displacees will receive an explanation regarding all options available to them, such as (1) varying methods of claiming reimbursement for moving expenses; (2) rental replacement housing, either private or publicly subsidized; (3) purchase of replacement housing; and (4) moving owner-occupied housing to another location.

Financial assistance is available to the eligible relocatee to:

1. Reimburse the relocatee for the actual reasonable costs of moving from homes, businesses, and farm operations acquired for a highway project;

2. Make up the difference, if any, between the amount paid for the acquired dwelling and the cost of a comparable decent, safe and sanitary dwelling available on the private market;

3. Provide reimbursement of expenses, incidental to the purchase of a replacement dwelling;

4. Make payment for eligible increased interest cost resulting from having to get another mortgage at a higher interest rate. Replacement housing payments, increased interest payments, and closing costs are limited to $22,500 combined total. A displaced tenant may be eligible to receive a payment, not to exceed $5,250, to rent a replacement dwelling or room, or to use as down payment, including closing costs, on the purchase of a replacement dwelling.

The brochures that describe in detail the Department's relocation assistance program and Right of Way acquisition program are "Your Relocation: Residential", "Your Relocation: Business, Farm and Nonprofit Organizations", "Your Relocation: Signs" and "The Real Estate Acquisition Process". All of these brochures are distributed at the public hearing and made available upon request to any interested persons.
This project has been developed in accordance with the Civil Rights Act of 1964, as amended and the Civil Rights Act of 1968 guaranteeing each person equal opportunity in housing.

5.1.6 Mobility

At present, there is no direct connection between SR 87S serving the southern section of Santa Rosa County and SR 87N serving the northern section of the County and providing direct access to Alabama. There is also no direct connection between NAS Whiting Field and Eglin Air Force Base. Therefore, the benefit of the proposed SR 87 Connector are to: (1) provide new roadway facility linking SR 87S with SR 87N, (2) provide additional capacity and improve regional connectivity from areas of high growth in northern Santa Rosa County to I-10 and to areas further to the south, (3) improve access to and from I-10 for NAS Whiting Field, and the County's Joint Use Planning Area near NAS Whiting Field, and (4) provide a direct connection between NAS Whiting Field and Eglin AFB. Furthermore, the new connector would be expected to relieve the traffic congestion along US 90, and provide much needed relief to the US 90 Blackwater Bridge.

Connectivity: The initial ETAT review resulted in a rating of Enhanced for Mobility. The study analysis found that both Alternatives 1 and 2 significantly improve mobility by providing a new bridge crossing in a more strategic location accommodating both travel from the northeast and northwest to areas south, and the reverse for northbound travel. Greater mobility is afforded by providing an alternate to what would otherwise be channeling traffic through the congested areas of the City of Milton. The remaining alternatives also provide better links north and south serving Whiting Field. Alternatives 1 and 2 are consistent with the region's Long Range Transportation Plan (LRTP) as these alternatives are in proximity of the originally intended location of the Outer Beltway project from the previous Transportation Planning Organization studies outlined in the Corridor Report prepared for this project. Hurricane evacuation would also be greatly enhanced with SR 87 finally achieving continuity as a North-South connector from US 98 and the beaches to Alabama.

Also, Santa Rosa County is currently home to eight airfields utilized by the Navy, the largest being NAS Whiting Field. Whiting is supported by 14 Naval Outlying Fields (NOLF's) spread throughout Santa Rosa County, Escambia County, Florida and the counties of Baldwin, Conecuh and Escambia in Southern Alabama. Whiting's mission is to provide services and materials to support the training of US Navy, Coast Guard, Air Force, Marine and international student aviators in fixed-winged training as well as helicopter training. Whiting Field is responsible for 10% of the USN/USMC flight hours worldwide and is a vital flight training area for the US Navy. This vital role in the nation's defense program also represents a large participation in the Santa Rosa

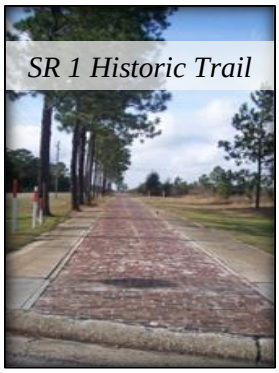
County job base and economy. Thousands of military, civilian contractor, and private industry personnel and/or students work or train at this facility and efficient methods of transporting goods and people to and from the base are essential to the success of the base's mission. In addition, Santa Rosa County's Aviation Park is located at Whiting Field under joint agreement. Currently, the major roads to Whiting include SR 87 and CR 191, neither of which offers a connection to I-10 without travelling along the congested US 90/SR 87 alignment.

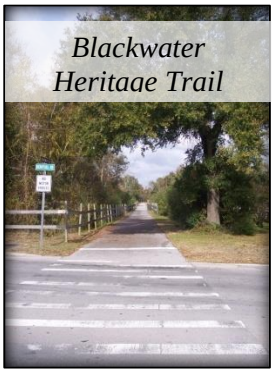
Safety: As stated in ***Safety, Section 2.2.6***, the SR 87 Connector is proposed to be a new roadway that will connect SR 87S and SR 87N. This will provide a new alignment to reroute through-traffic headed north from I-10. Presently, the SR 87 corridor follows along the congested US 90 corridor for five miles. This portion of the corridor is operating at a LOS F on most segments, and is the area where the only fatality in the corridor occurred. Improvements to the existing roadway in this vicinity are difficult due to the historic downtown Milton area. By developing a new corridor that does not follow the existing US 90 alignment, the traveler would be able to avoid this high traffic area.

The Northwest Florida Region has been identified as one of the most hurricane vulnerable areas of the United States. SR 87 is one of the most important Hurricane Evacuation Routes. The Garcon Point Bridge and the Pensacola Bay Bridge can be closed during a hurricane or tropical storm event, making SR 87 the single access out of the beach areas like Gulf Breeze and Navarre, and the only access into the area for Emergency First Responders. However, with a portion of the current alignment utilizing a congested portion of US 90 and traversing historic downtown Milton, SR 87 cannot function as a continuous roadway. Therefore, the proposed SR 87 Connector will provide a direct route from the Florida Coast north into Alabama, significantly reducing evacuation times and providing increased evacuation capacity. In addition, the proposed connector would relieve US 90 and improve traffic flow through the City of Milton.

A detailed traffic analysis was performed to document existing traffic conditions as well as to establish projected design year (2035) traffic requirements. The analysis indicates that for the **No Build Alternative**, five (5) roadway segments along US 90 will operate at a failing LOS in 2015, nine (9) segments in 2025 and eight (8) segments in 2035 (after widening US 90 from Avalon Boulevard to SR87N). **Both Build Alternatives** will divert traffic from US 90 and reduce the number of failing segments along US 90 to two (2) segments in 2015, five (5) segments in 2025 and three (3) segments in 2035. All other roadway segments will operate at acceptable LOS (SR 87 Connector DTTM, October 2012).

Both build alternatives, including the preferred Adjusted Alternative 2, reduce the travel time from the begin termini to the end termini during hurricane evacuations. The proposed alignment reduces the Vehicle Miles Traveled (VMT) by 2 miles verses the No Build option. Reducing the VMT and providing a higher travel speed, helps in reducing the travel time during evacuation events.





Multi-modalism: There are currently no transit routes serving the areas around Milton and in Santa Rosa County, though the Comprehensive Plan Policy 4.1.D.10 does state the county will actively participate in the TPO's Transit Development Plan in the goal of eventually providing transit along US 90 again. Since there is no current transit in the area, the multimodal improvements are based on the pedestrian and bicycle facilities provided that will address the need for greater bicycle and sidewalk connectivity in the County with connections to the BHST and the SR 1 Historic Trail, the two most notable existing pedestrian/bicycle facilities in the region. Both Alternatives make the connection with the trails increasing multi-modal opportunities in the area. The SR 87 Connector will greatly enhance the trail system by providing the community pedestrian/bicycle facilities linking the BHST to the Historic SR 1 Trail along US 90. Likewise, future links can be made to area parks and recreation facilities. It should be noted that though the US 90 Corridor shared between SR 87 and US 90 in the study area has five foot paved shoulders to serve as bicycle lanes, it currently has unconnected pedestrian features. There are no pedestrian features from historic downtown east to just prior to the Ward Basin intersection. There are sidewalks that begin just east of Marquis Bayou Bridge on US 90 and are continued east as part of the improvements to the Ward Basin Rd. intersection. Though the sidewalks end just east of the intersection, the rest of the US 90 corridor to the east in the study area has the SR 1 Trail that runs parallel along the roadway, serving as a multiuse path. The SR 87 Connector will provide pedestrian and bicycle features from the SR 1 Historic Trail, over Blackwater River, and will tie into the Blackwater Heritage Trail. This provides a link for the two trails that has never existed. The pedestrian features included in this project will be designed following the FDOT Design Standards that have been revised to reflect accessibility requirements required by the Americans with Disabilities Act Accessibility Standards for Transportation Facilities (ADASTF), the Public Rights of Way Accessibility Guidelines (PROWAG), and the Florida Accessibility Code (FACBC).

Finally, in addition to improved connectivity to Whiting Field and the Aviation Park, the roadway will serve the existing Park and Ride facility at the intersection of US 90 and SR 87S. Safety improvements to the ingress and egress to the facility will be included in the design of this project.

5.2 Utilities and Railroads

5.2.1 Utilities

To determine the extent of utility adjustments required by project improvements, local utility companies that may have facilities within the project limits were contacted and requested to submit the location of their existing and planned facilities. Companies

found in the vicinity (see previous **Table 4.1**) of the proposed project area were then contacted and requested to submit the location of their existing and planned facilities. A Preliminary Utility Conflict Matrix (**Table 5.3**) has been prepared identifying the utility owners in the study area and their approximate utility sizes and locations. As the study progresses, continued coordination will take place with all pertinent utility companies. It should be noted that location information was collected for planning purposes and more detailed information may be needed prior to construction.

We have identified future utility installation plans and considered the effects on the proposed improvements. One such project will be a new Waste Water Treatment Plant (WWTP) that is to be installed by East Milton and Santa Rosa County. The parcel for this project was given to East Milton by Santa Rosa County just south of the Blackwater River. This proposed site required the roadway alignment to be adjusted to the west. The County has proposed sanitary sewer lines leading to the WWTP from the north, parallel to the east side of the power easement crossing Blackwater River. These lines should not impact the proposed roadway which is parallel to the easement on the west side. It should also be noted that both alternatives will encroach onto approximately 19.8 acres of a Gulf Power easement, possibly impacting transmission and distribution lines/poles. As a result, transmission poles are expected to be relocated. Coordination with Gulf Power is on-going. The remainder of utilities will only require minor adjustments such as adjusting meter and valve boxes (gas, water and sewer), adjusting manholes and inlets (sanitary sewer and storm water), and relocating telephone pedestals, utility markers/signs, and power supply stations.

Table 5.3: Preliminary Utility Conflict Matrix

Utility Owner	Contact	Utility Information	Notes/Discussion
AT&T Communications	Steve Hamer	6 - 1.9" HDPE Ducts on north side of US 90	Runs under existing East Milton Road. May need adjustment due to new strain pole/mast arm.
AT&T Florida	Nancy Spence		***Pending additional coordination***
City of Milton	Joe Cook	4" H.P. Gas and 8" FM along East Milton Rd 10" Gravity Sewer perpendicular near shooting range 6" WM and 10" FM on Munson Hwy 6" WM on Winston Brown Rd. 2" HP Gas on SR 87N/ SR 89N	Gas and FM may be impacted due to widening along East Milton Rd. 10" gravity sewer, 6" WM, 10" FM and 6" WM all are perpendicular to alignment, may be affected. Gas on SR 87N may be affected due to widening on Oakland Drive west of SR 87N.
CSX Railroad	Hal Gibson 904.359.1048	Railroad along northside of US 90	***Pending additional coordination***
East Milton Water System, Inc.	Dink Helms 850.623.8750	12" Water along east side of East Milton Road 12" Water along west side of SR 87S 10" Water along West side of Judicial Blvd 10" Water along south side of Opportunity Drive	12" water and 10" water along East Milton Rd, Judicial Blvd and Opportunity Drive may be affected due to widening.
Gulf Power Distribution	Chad Swails 850.429.2446	East Milton Road, Judicial Drive, Munson Highway, Oakland Drive east of SR 89N, Season Drive (buried), SR 87N (to residences), SR 89N (to residences)	• East Milton Road and Judicial Drive approximately 20 poles impacted • Oakland Drive East approximately 20 poles impacted • SR 87N four poles impacted • SR 89N 6 poles impacted

Gulf Power Transmission	Tracy Judson 850.444.6085	2- 115kV lines in east/west easement north of prison 1- 115kV and 1- 230kV in easement crossing Blackwater River 1- 230 kV in easement north of Salamander Habitat	• 1 structure to be adjusted in easement N of prison • 2 structures (1- 115kV, 1-230kV) adjusted at Pat Brown Rd • 1 structure (230kV) adjusted at easement triangle • 7500' of 115kV adjusted • 3000' of 230kV adjusted • 2 structures (230kV & 46kV) adjusted at Munson Hwy
Level 3 Communications	Kelli Whitehead 720.888.4988	96 fiber, 2 - 1.5" Orange and 1-1.5" Black with Orange stripe HDPE along north side of US 90 between SR 1 and US 90	Bored under East Milton Road, widening may not affect. 10" Steel pipe for 895'.
Mediacom	Eddie Arnold 850.934.2560	Cable TV, buried & overhead, located throughout residential areas	***Pending additional coordination***
Okaloosa Gas	Essa Rhebi	8" and 12" Steel transmission pipe lines along north side of US 90	Runs under existing East Milton Road. May need adjustment
Point Baker Water System, Inc.	Tony Mathis 850.623.4545	Oakland Drive (east of SR 87N) - 2" WM and service laterals approximately 3.5' deep SR 87N - 8" WM (east side), 6" WM (west side) approximately 7' deep Harvest Point - 6" WM on south side SR 89N - 6" WM on south side	Water mains on Oakland Drive and Harvest Point may be affected. Those on SR 87N and SR 89N should not be affected.
Qwest	Jerry NeSmith 918.640.5964	Along CSX Railroad, 1 1/4" Green, 1 1/4" Blue, 1 1/4" Black, and 2" Orange HDPE	Directional bored under East Milton Road approximately 70' from west to 80' from east side
Southern Light, LLC	DJ McAuley	No facilities within project limits	***Pending additional coordination***
Sprint Nextel	Steve Thompson 678.852.2726	Fiber Optic along CSX Railroad, 40' south of C/L of railroad, 36' north of SR 1	No impacts anticipated
Verizon (MCI)	Charles Brunick 850.265.3652	12ct Fiber Optic in the median of US 90	Project will not affect fiber located in median

5.2.2 Railroads

There is one railroad crossing on each alternative. The SR 87 Connector will cross the CSX Railroad at approximately STA 112+00. This is an existing three lane, at-grade crossing that will be widened to provide two northbound lanes and three southbound lanes at the intersection of US 90 (see sheet 10 of Concept Plans, **Appendix D**). The southbound crossing provides one left turn, one thru lane and one shared thru-right turn lane. Coordination with CSX Railroad is on-going.

The CSX railroad is parallel to US 90 and also parallel to the SR 1 Historic Trail. The railroad track will be replaced during construction of the SR 87 Connector with a concrete pad around the track which provides a smooth crossing and allows bicycles and pedestrians a safer crossing. There will be pedestrian gates on both sides of the roadway to prevent pedestrians from crossing during train crossings. This existing crossing does not have a concrete crossing, nor are there bicycle or pedestrian facilities. The project team coordinated with Mr. Hal Gibson (CSX Railroad) in regards to the frequency of trains utilizing this railroad. He informed the team that there are five trains per day passing through this location, and they travel at 49 mph.

The District 3 District Rail Coordinator has been notified of this project. He has sent information to Mr. Jacob Smith, CSX Representative, regarding the proposed crossing. Please see **Appendix A** for the above referenced correspondence. Coordination regarding design aspects will begin during the design phase.

5.3 Cultural and Historical Resources

5.3.1 Archaeological and Historic Resources

The project team conducted a Cultural Resource Assessment Survey (CRAS) in June and October 2011 as part of the SR 87 Connector PD&E Study. Two proposed alternatives, which comprised the project area of potential effects (APE), were initially examined; each began at the SR 87S/US 90 intersection and continued northward then turning west and connecting with SR 87N at Oakland Drive, or Season Drive. After the public hearing and the resulting shift of Alternative 2, another assessment was done including appropriate borings and analysis in May 2015 to ensure the shift did not result in any encounters of archeological sites or occurrences. A desktop review was also completed in December 2015 to determine areas where pond locations would not be preferred. For more information, see *Desktop Analysis of Proposed Pond Alternatives for the State Road 87 Connector* document.

A phased approach to assess the Section 106 resources was done due to the scope and magnitude of the project area, and the alternatives being considered. The imposing APE's along with a large number of potential historic structures requiring evaluation, and documentation within the project's vicinity made it difficult to complete this CRAS in one phase. Background research preceded field survey (ACI 2010) and was summarized in a Cultural Resources Probability Assessment (CRPA). The CRPA identified significant cultural resources within and around the proposed alternatives in order to assist and facilitate project planning associated with the PD&E study. The CRPA, which implemented background research, data analysis and reconnaissance surveys, identified the SR 1 Historic Trail (8SR1313) (NRHP) as the only critical cultural resource that would be impacted. This was then submitted to and approved by both the FHWA and the State Historic Preservation Officer (SHPO) (Kammerer 2011; Kendall 2011). Afterwards, a full CRAS report was initiated and completed in order to evaluate the preferred alternatives. **Appendix A** (March 30, 2011) includes the approval correspondence for the phased approach.

The purpose of the CRAS was to locate, identify, and aerially delimit any archaeological sites and historic resources (structures, buildings, bridges, and cemeteries) located within the project APE, and to assess their significance in terms of the criteria of eligibility for listing in the NRHP. The APE for the archaeological resources is the land contained within each proposed alignment, and the historical APE consists of the land within and immediately adjacent to each proposed alignment.

This work was conducted in compliance with the provisions of the National Historic Preservation Act of 1966 (Public Law 89-665), as amended, and the implementing regulations 36 CFR 800, as well as with the provisions contained in Chapter 267, Florida Statutes (F.S.). All work was carried out in conformity with Part 2, Chapter 12 ("Archaeological and Historical Resources") of the FDOT PD&E Manual (1999), and the standards contained in the Cultural Resource Management Standards and Operations Manual (Florida Division of Historical Resources 2003).

The background research included in the CRPA as well as a review of updates in the Florida Master Site File (FMSF) (July 2011 update), the NRHP, and the ETDM Report (#12597) revealed two archaeological sites within a half mile of the project area, but neither is within the APE. Based on the CRPA (ACI 2010) and other regional investigations, portions of the SR 87 APE were considered to have a moderate to high potential for prehistoric archaeological site occurrence, including the better-drained soils proximate to a river, creek, or other freshwater source. Most of the project area, however, was considered to have low archaeological potential. As a result of field survey, no prehistoric or historic archaeological resources were found within the APE.

It should also be noted that an interview with Mr. Michael Brown, a property owner, disclosed the potential for a sunken vessel (boat, barge of unknown date) in the Blackwater River, west of the power line corridor and purportedly near both proposed SR 87 alignments. However, an underwater survey is not within the scope of this project. There is no history of large vessels through this area and the US Coast Guard has stated that this segment of the Blackwater River is not navigable. Therefore, survey and evaluation of this resource may best be addressed at a later date when a bridge design and location have been determined. There are remains of at least 15 known commercial vessels in the Blackwater River near Milton and Bagdad. These shipwrecks are part of Santa Rosa County's vibrant maritime heritage that made the region a center of commerce from the late 1800s through the 1930s. All of the known vessels are associated with deeper water areas, and are not in the shallow area that is being crossed by the proposed structure for this project.

Historical background research revealed two previously recorded historic resources within the historical APE: one structure (8SR1095) and one NRHP-listed linear resource (8SR1313). The structure is located at the south terminus of both proposed alternatives on the southwest corner of the US 90/SR 87S intersection. It is not considered NRHP-eligible due to its commonality of style and lack of significant historical associations. The NRHP-listed resource, State Road 1 (8SR1313), is a brick paved historic roadway within the APE at the intersection of US 90/SR 87. State Road 1 is significant as the first state road within the Florida Panhandle and maintains integrity as a historic brick road.

During the field surveys, five other historic structures and two other linear resources (railroads) were recorded within the historical APE. None of the five (8SR2130, 8SR2135, 8SR2137-2139) newly recorded historic structures is considered eligible for listing in the NRHP. They are common examples of their style, their integrity has been compromised, and they lack any significant historical associations. One of the newly

identified historic railroads, 8SR2125, is located within the APE of both Alternatives 1 and 2 at the intersection of US 90 and SR 87, and the other newly identified historic railroad, 8SR2126, is located within the APE of Alternative 2. However, due to modern alterations and limited presence of the railroad beds within the APE, neither resource, as present within the APE, is considered eligible for listing in the NRHP.

With the exception of NRHP-listed State Road 1 (8SR1313), which is within the APE of both alternatives, none of the previously or newly recorded historic resources is considered eligible for listing in the NRHP due to the compromised integrity and the lack of significant historical associations.

SR 1 Historic Trail Updates

Based on this data, the proposed undertaking may have an effect on the NRHP-listed State Road 1 (8SR1313). However, it should be noted that SR 87 currently traverses State Road 1 in this area. The proposed undertaking will allow vehicular traffic to continue crossing State Road 1, and the undertaking will simply widen the crossing with additional lanes, and a proposed multi-use trail (See **Figure 5.3**). Much of the brickwork along the trail has been replaced in a recent SHPO project. Coordination with SHPO will occur during the design phase of the project to analyze options which will minimize the potential effects on the SR 1 Trail. Since the SR 1 Trail lies within the US 90 right-of way, no additional right-of-way will be required. Nonetheless, the proposed improvements will not alter the criteria of eligibility for the NRHP (Rucker and Mattick 1994). See Illustrations in *Section 5.3.3, Section 4(f)* for more information.

In accordance with the procedures contained in 36 CFR, Part 800, as previously stated, a Cultural Resource Assessment, including background research and a field survey coordinated with the State Historic Preservation Officer (SHPO), was performed for this project. As a result of the assessment, one historic linear site (State Road 1 – 8SR1313) was identified, which was determined to be listed on the National Register of Historic Places. A recommendation to explore options to minimize any potential effect during design was proposed by FDOT and was reviewed and approved by SHPO and FHWA in 2012. A letter of no effects determination has been signed by SHPO and can be found in **Appendix A**. FHWA will sign the De Minimis determination with this FEIS/ROD document.

Based on the fact that no additional archaeological or historical sites or properties are expected to be encountered during subsequent project development; the Federal Highway Administration has determined that no other National Register properties would be impacted. (**Appendix A**, January-February 2012)

5.3.2 Recreation and Parkland

After a review of the Santa Rosa County Parks and Recreation list of facility parks, as well as a review of all known State and Federal parks and recreational areas, it was determined that there are no parks adjacent to either alternative and there are no direct or indirect impacts anticipated by the proposed action to any park. However, it was determined that both alternatives will have a direct impact to a recreational facility. Both alternatives cross the BHST, which is part of the Florida System of Greenways and is the most western rail trail. The BHST is an 8.02 mile recreational trail and conservation land managed by the FDEP Division of Recreation and Parks, District 1. To minimize any impact, the viable project alternatives over the BHST will include the construction of a grade-separated overpass that will traverse the 100-foot wide trail corridor ROW. No bridge pilings or other bridge infrastructure will be installed within the trail corridor. There will, however, be a link provided to the BHST enabling access and connectivity to new pedestrian facilities associated with the proposed corridor improvements. See **Section 5.3.3** for more information. Meeting minutes from coordination with FDEP/OGT (May 21, 2010) can be found in **Appendix A**.

In addition, Alternative 2 traverses lands that are planned for purchase as part of the Clear Creek/Whiting Field Florida Forever Board of Trustees Project. It should be noted that after coordination with the county and a review of the planned purchase properties, Alternative 2 was updated to be located on the extreme western border of this property and/or within the county owned parcels.

5.3.3 Section 4(f)

Section 4(f) of the Department of Transportation Act of 1966 (49 USC 303, 23 USC 138) provides protection for significant publicly owned parks, recreation areas, historic properties (eligible for or listed on the NRHP), and wildlife and waterfowl refuges from conversion to a transportation use. FHWA may not approve such a conversion unless a determination is made that:

- There is no feasible or prudent alternative to the use of land from the property; and
- The action includes all possible planning to minimize harm to the property resulting from each use.

A "use" of Section 4(f) property occurs when:

- Land from a Section 4(f) property is acquired for a transportation project;
- There is a temporary occupancy of land that is adverse in terms of the statute's preservationist purposes; or
- The proximity impacts of the project on the Section 4(f) property, without acquisition of land, are so great that the purposes for which the property exists are substantially impaired (normally referred to as a "constructive use"). Proximity impacts typically include visual and noise effects.

There are two resources both Alternatives impact; the Historic SR 1 and the BHST.

SR 1 Historic Trail

SR 1 Historic Trail is located at the very southern end of the Alternatives at the intersection of US 90 and SR 87S. The trail runs parallel to US 90. The SR 87 Connector will cross the trail at the existing East Milton Road crossing, where the East Milton Road alignment is being expanded to accommodate the SR 87 Connector. As illustrated in **Figure 5.3**, enhancements will be made to the existing SR 1 Historic Trail crossing. Although this existing three lane crossing will be increased to five lanes, various pavement treatments, signage, and landscaping will be provided to increase awareness of the trail's crossing. A recommendation to explore options to minimize any potential effect during design was proposed by FDOT and was reviewed and approved by SHPO and FHWA in 2012. A letter of no effects determination has been signed by SHPO and can be found in **Appendix A**. FHWA will sign the De Minimis determination with this FEIS/ROD document.

Figure 5.3: Proposed Enhancements at the SR 1 Historic Trail Crossing

Blackwater Heritage State Trail

Both alternatives cross a portion of the BHST approximately 0.6 miles east of Munson Highway in Santa Rosa County. The proposed project crossing over the BHST will include the construction of a grade-separated overpass that will traverse the 100-foot wide trail corridor and will meet the 20 foot clearance requested by FDEP. No bridge pilings or other bridge infrastructure will be installed within the trail corridor. There will, however, be a link provided to the BHST enabling access and connectivity with new pedestrian features associated with the proposed alternative improvements. In addition, with this new link, the BHST will be afforded additional local and regional connectivity by accessing the SR 1 Historic Trail's brick path located along US 90. As a result, the construction of the crossing will enhance access, but will not impact usage of the trail, nor will the project impact the vital functions of the trail.

Figure 5.4: Proposed Connection at BHST

The crossing will not impact existing BHST restroom or trailhead facilities and is not proposed in the vicinity of any planned facility improvements. No relocation of the trail or other facilities is proposed for this project. It is anticipated that the project as planned will not adversely affect the portion of the trail that will be crossed by the proposed alignment. During construction of the roadway, the contractor will be required to maintain access and/or provide a detour. A Section 4(f) Determination of Applicability has been prepared for the BHST and reviewed by FHWA. FHWA has made the determination that Section 4(f) does not apply based on the design proposed (see **Appendix A;** May 2012, Letter of Significance from Matthew Klein, Land Administration & Acquisition Coordinator, Division of Recreation and Parks, FDEP. Also Environmental Determination of non-applicability, dated October 2012 by FHWA).

5.4 Natural and Physical Impacts

5.4.1 Pedestrian / Bicycle Features

In terms of pedestrian facilities, no existing pedestrian facilities will be adversely impacted. Where the proposed alternatives occupy existing roadway facilities, such as East Milton Road and Oakland Drive, there are no existing pedestrian facilities. Both Alternatives 1 and 2 will provide new pedestrian facilities. Originally, the pedestrian facilities/sidewalks were to run the entire length of the project. However, as a cost savings strategy initiated by the District's Value Engineering Team, sidewalks were eliminated. Instead, a multi-use trail will be provided as part of the project's southern urban sections for both alternatives, thus expanding the existing pedestrian network. Additionally, bike lanes are proposed adjacent to the roadway travel lanes. Designated bike lanes will be provided in the urban typical sections from the southern project limits to the Blackwater River bridge crossing and at the northern project limits. In the rural sections (the remainder central part of the project corridor), the paved shoulder will also be striped as a bicycle lane. In addition, the multi-use trail will be provided from US 90 at the Historic SR 1 Trail crossing north to the Blackwater Historic State Trail. By providing a vital link between the Historic SR 1 Trail and the BHST, the proposed roadway system provides regional connectivity for pedestrians and recreational trail users.

The two facilities impacted are the BHST and the SR 1 Historic Trail. The impacts (crossing) to these two facilities have been mitigated as outlined previously in Section *5.3.3 Section 4(f).* For the BHST, the proposed overpass separates the roadway from the trail, and for the SR 1 Historic Trail, intersection improvements will enhance the crossing as well as bring it up to design standards.

5.4.2 Air

SR 87 is located in Santa Rosa County, an area currently designated as being in attainment for all of the National Ambient Air Quality Standards (NAAQS) under the

criteria provided in the Clean Air Act. The project alternatives were subjected to a carbon monoxide (CO) screening model that makes various conservative worst-case assumptions related to site conditions, meteorology and traffic. The roadway intersection forecasted to have the highest total approach traffic volumes was SR 87N at US 90. This intersection was evaluated as a worst-case scenario.

Estimates of CO were predicted for the default receptors which are located 10 to 150 feet from the edge of the roadway. Based on the results from the screening model, the highest project-related CO one- and eight-hour levels are not predicted to exceed the one- or eight-hour NAAQS for this pollutant with the No Build or Build Alternative. The maximum CO concentrations predicted for the entire screening model occurred at the 2035 Build Alternative 2, where the concentration at one hour was 7.9 ppm and the eight-hour concentration was 4.7 ppm. This does not exceed the NAAQS standards of 35 ppm and 9 ppm for one-hour and eight-hour levels. As such, the project "passes" the screening model.

Green House Gasses (GHG) cause a global phenomenon in which heat is trapped in the earth's atmosphere. Because atmospheric concentration of GHGs continues to climb, our planet will continue to experience climate-related phenomena. For example, warmer global temperatures can cause changes in precipitation and sea levels. The burning of fossil fuels and other human activities are adding to the concentration of GHGs in the atmosphere. Many GHGs remain in the atmosphere for time periods ranging from decades to centuries.

To date, no national standards have been established regarding GHGs, nor has United States Environmental Protection Agency (EPA) established criteria or thresholds for ambient GHG emissions pursuant to its authority to establish motor vehicle emission standards for CO2 under the Clean Air Act. GHGs are different from other air pollutants evaluated in the Federal environmental reviews because their impacts are not localized or regional due to their rapid dispersion into the global atmosphere, which is characteristic of these gases. The affected environment for CO2 and other GHG emissions is the entire planet. In addition, from a quantitative perspective, global climate change is the cumulative result of numerous and varied emissions sources (in terms of both absolute numbers and types), each of which makes a relatively small addition to global atmospheric GHG concentrations. In contrast to broad scale actions such as actions involving an entire industry sector or very large geographic areas, it is difficult to isolate and understand the GHG emissions impacts for a particular transportation project. Furthermore, presently there is no scientific methodology for attributing specific climatological changes to a particular transportation project's emissions.

Under NEPA, detailed environmental analysis should be focused on issues that are significant and meaningful to decision-making (40 CFR 1500.1(b), 1500.2(b), 1500.4(g), and 1501.7). FHWA has concluded, based on the nature of GHG emissions and the exceedingly small potential GHG impacts of the proposed action that the GHG emissions from the proposed action will not result in "reasonably foreseeable significant adverse impacts on the human environment" (40 CFR

1502.22(b)). The GHG emission from the project build alternatives will be insignificant, and will not play a meaningful role in a determination of the environmentally preferable alternative or the selection of the preferred alternative. More detailed information on GHG emissions "is not essential to a reasoned choice among reasonable alternatives" (40 CFR 1502.22(a)) or to making a decision in the best overall public interest based on a balanced consideration of transportation, economic, social, and environmental needs and impacts (23 CFR 771.105(b)).

This document does not incorporate an analysis of the GHG emissions or climate change effects of each of the alternatives because the potential change in GHG emissions is very small in the context of the affected environment. Because of the insignificance of the GHG impacts, those local impacts will not be meaningful to a decision on the environmentally preferable alternative or to a choice among alternatives. For these reasons, no alternatives-level GHG analysis has been performed for this project. It should be noted that this project is expected to reduce the Vehicle Miles Traveled (VMT) for commuters traveling from the beginning of the project to the end of the project by 2 miles per vehicle. That is a reduction of 40,000 miles per day in the year 2035. The lessened VMT results in reduced fossil fuel usage and ultimately GHG emissions due to motor vehicles.

Construction activities will cause short-term air quality impacts in the form of dust from earthwork and unpaved roads. The impacts will be minimized by adherence to all applicable State and local regulations and to the ***FDOT Standard Specifications for Road and Bridge Construction***.

5.4.3 Noise

A Noise Study Report has been prepared for this project and is available from the FDOT District Three office. This report was updated after the public hearing in April, 2015 due to a shift in Alternative 2 (See **Section 7.0 Action After Public Hearing**). The FHWA has established Noise Abatement Criteria (NAC) for seven land use activity categories. The NAC levels are presented in **Table 5.4**. These criteria determine when an impact occurs and when consideration of noise abatement analysis is required.

Table 5.4: Noise Abatement Criteria [Hourly A-Weighted Sound Level-Decibels (dB(A))]

Activity Category	Activity $L_{eq(h)}$[1]		Evaluation Location	Description of Category
	FHWA	FDOT		
A	57	56	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67	66	Exterior	Residential
C	67	66	Exterior	Active sports areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting

				rooms, public or nonprofit institutional structures, radio studios, recording studios, recreational areas, Section 4(f) sites, schools, television studios, trails, and trail crossings
D	52	51	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios
E	72	71	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F
F	-	-	-	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing
G	-	-	-	Undeveloped lands that are not permitted

For the Design Year 2035 Build Alternative, noise levels are predicted to approach or exceed the NAC for Categories B (residential) and C (public institutional structures, recreational areas, trails, trail crossings, etc.). Detailed information is in *Table 3.5* of the *Noise Study Report*.

Noise abatement measures must be considered when predicted noise levels approach or exceed the NAC levels, or when a substantial noise increase occurs. A substantial noise increase occurs when the existing noise level is predicted to be exceeded by 15 decibels on the "A" scale (dB(A)) as a result of the transportation improvement project. Because the majority of the SR 87 Connector is a new roadway, a substantial increase in traffic noise may occur. The noise sensitive sites identified along the project corridor include single family residences, a recreational trail and three institutional facilities. Activity Category F land uses such as agricultural lands, industrial facilities, maintenance facilities, and retail/commercial lands with no exterior use are also found along the SR 87 Connector. As stated in 23 CFR 772, no noise analysis is required for Activity Category F land uses. TNM was used to predict traffic noise levels at representative noise sensitive receptor sites along the project corridor. Traffic noise levels were predicted for existing conditions (2010) and the future Design Year (2035) conditions for No Build and Build Alternatives 1 and 2.

For Alternative 1, noise levels have been predicted at 57 noise sensitive receptor sites within Noise Sensitive Area (NSA) 1, NSA 2, and NSA 3 representing 59 residences and four special use areas (criminal justice facility, sheriffs training complex, juvenile residential facility, and a recreational area-BHST). For the Design Year 2035, No Build condition, noise levels are predicted to approach or exceed the NAC at two noise sensitive sites. For the Design Year 2035 Build condition, noise levels are predicted to approach or exceed the 66 dB(A) NAC at 11 noise sensitive receptor sites. In addition, a substantial noise increase (when the existing noise level is predicted to be exceeded by 15 dB(A) or more) occurred at seven receptor sites of which four also had predicted levels over the 66 dB(A) NAC. Since the Build Alternative involves noise impacts, consideration of noise abatement is warranted.

Alternative 2 is proposed to be a new roadway facility linking SR 87S with SR 87N. Therefore, there is no roadway facility along the proposed alignment in the existing year (2010) or the No Build design year (2035). In order to determine background (ambient) noise levels for the noise sensitive sites within NSA 2, NSA 4, and NSA 5, levels were monitored (measured) and used to depict existing and design year No Build noise levels. For the Design Year 2035 No Build condition, noise levels are predicted to approach or exceed the NAC at one noise sensitive site. For the Design Year 2035 Build condition, noise levels are predicted to approach or exceed the 66 dB(A) NAC at six noise sensitive receptor sites. In addition, a substantial noise increase (when the existing noise level is predicted to be exceeded by 15 dB(A) or more) occurred at seven receptor sites of which four also had predicted levels over the 66 dB(A) NAC.

Since the Build Alternatives involve noise impacts, consideration of noise abatement is warranted. **Table 5.5** provides a summary of the Noise Analysis.

Table 5.5: Summary of Noise Impacts

Alternative	Approach or Exceed 66 dB(A)		Increase of 15 dB(A) or More	
	Residences	Recreational Trail	Residences	Recreational Trail
1	9	2	5	2
2	4	2	5	2

In accordance with 23 CFR Part 772, noise abatement measures were evaluated for the noise sensitive sites that approached or exceeded NAC. For a noise barrier to be considered feasible and cost reasonable, the following minimum conditions should be met:

- A barrier must provide an insertion loss of at least a 5 dB(A) reduction in traffic noise for at least two noise sensitive receptors to be considered benefited.
- A noise barrier must provide a noise reduction of at least 7 dB(A) for at least one impacted receptor.
- The unit cost of the noise barriers is estimated at $\$30/ft^2$. The cost for the noise barriers should not exceed $42,000 per benefited noise sensitive site. This is the upper cost limit established by FDOT. A benefited noise sensitive site is defined as a site that would experience at least a 5 dB(A) reduction as a result of providing a noise barrier.

The Florida Department of Transportation is committed to the construction of feasible and reasonable noise abatement measures at the noise-impacted locations identified in Table 3.6 and on Sheet 10 of Appendix B of the Noise Report (also summarized in Table 5.6), contingent upon the following conditions:

1. Detailed noise analyses during the final design process supports the need, feasibility, and reasonableness of providing abatement;
2. Cost analysis indicates that the cost of the noise barrier(s) will not exceed the cost reasonable criterion;

3. Community input supporting types, heights, and locations of the noise barrier(s) is provided to the District Office; and
4. Safety and engineering aspects as related to the roadway user and the adjacent property owner have been reviewed and any conflicts or issues resolved.

If, during the final design phase, abatement is no longer considered feasible or reasonable for a given location, such determination will be made prior to requesting approval for construction advertisement. Commitments regarding the exact abatement measure locations, heights, and type (or approved alternatives) will be made during the final design phase and at a time before the construction advertisement is approved. The results of the evaluation of noise abatement criteria revealed that noise barriers are not warranted anywhere along Alternative 1 or 2. Barriers were determined not to be cost reasonable based on the inability of the barriers to provide the minimum required reduction in traffic noise at a cost below the FDOT's guideline of $42,000 per benefited receptor.

Construction of a noise barrier was initially reasonable and feasible for noise sensitive sites located on the western limit of Alternative 2 at its prior location near the Harvest Point Subdivision. Two out of the 11 scenarios did result in a benefit of over $42,000 per site (See **Table 5.6**). Below are the sites now avoided with the shift in Alternative 2 following the public hearing.

Table 5.6: Noise Barrier Analysis – Harvest Point Area

Barrier Height (ft.) /Width (ft.)	Number of Impacted Receptor Sites	Number of Sites w/Insertion Loss of (dB(A)):						Number of Benefited Sites	Cost Per Benefited Site
		5+	6+	7+	8+	9+	10+		
8/1601	13	11	0	0	0	0	0	11	N/A
10/1401	13	1	6	3	0	0	0	10	$42,030
10/1601	13	0	8	3	0	0	0	11	$43,664
12/1401	13	6	0	4	3	3	0	16	$31,523
12/1601	13	6	0	2	6	3	0	17	$33,904
14/1401	13	4	6	1	3	3	3	20	$29,421
14/1601	13	5	5	1	2	6	3	22	$30,565
16/1601	13	4	5	2	1	1	9	22	$34,931
18/1601	13	2	7	3	1	1	10	24	$36,023
20/1601	13	6	7	2	2	1	10	28	$34,307
22/1601	13	6	6	1	3	2	10	28	$37,738

Initially, construction of noise abatement was considered reasonable and feasible for those areas adjacent to the Harvest Point Subdivision. However, following the Public Hearing, the alignment through this area was shifted to the north. This resulted in the noise impacts being reevaluated. See **Section 7.0** for further information. From this realization, noise abatement analysis will not be required during final design.

5.4.4 Wetlands

In compliance with Presidential Executive Order 11990, and using the assessment methodology, evaluation procedures, and document preparation guidance found in the FHWA's Technical Advisory T6640.8A, Title 23, Code of Federal Regulations (CFR), Part 777, and Part Two, Chapter 18 of the FDOT's PD&E Manual (revised 11/20/09), consideration has been given to the protection of wetland resources. A separate Wetland Evaluation Report (WER), dated May 2012 and updated February 2013, has been prepared for this project. The purpose of the WER is to document any potential impacts to jurisdictional wetlands and the efforts taken to avoid, minimize, and mitigate for these impacts. The WER includes a summary of the literature searches, field reviews, and mapping conducted for this project. In addition, the WER includes the assessment of the functional values of all existing wetland habitats within the study area and the coordination conducted with the US Army Corps of Engineers (USACE), FDEP, NWFWMD, USFWS, Florida Fish and Wildlife Conservation Commission (FWC), and National Marine Fisheries Service (NMFS). Coordination with agencies can be found in Appendix A: Project Meetings and Correspondence and in Appendix M: Comments and Responses on DEIS.

Assessments of wetland and environmental resources within the project study area have been conducted. More detailed assessments appropriate for permit application submittal will be required during the design and construction phases. In order to determine the approximate locations and boundaries of existing wetland communities within the proposed alternatives, the following available site-specific data were obtained and reviewed:

- USDA-NRCS, Soil Survey Geographic (SSURGO) database for Santa Rosa County
- USFWS National Wetlands Inventory (NWI) Database
- USFWS Classification of Wetlands and Deepwater Habitats of the United States (1979)
- NWFWMD, Florida Land Use, Cover and Forms Classification System (FLUCCS) data (1995)
- FDOT FLUCCS, Level III, third ed., 1999
- Aerial photographs of the project area from 1940 and 2010
- U.S. Geological Survey (USGS) Topographic Quadrangle maps, 7.5 minute series
- Habitat and species-specific information obtained from the USFWS, the Florida Fish and Wildlife Conservation Commission (FWC), and FNAI

At the study area level, an initial desktop habitat evaluation was conducted based on photo interpretation of both historic (1940) and recent (2010) aerial photos. Data from the sources outlined above were then overlaid upon the aerial photographs and analyzed. The approximate boundaries of wetland communities were mapped on true color aerial photographs.

A more detailed review and assessment was then utilized at the corridor level, (generally 1,200 feet wide). This corridor-level analysis was further refined through field verifications and associated habitat maps (1" = 400'). Field verifications were

based on delineation methods described in the USACE Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region, dated 2008, and Section 62-340, FAC, "Delineation of the Landward Extent of Wetlands and Surface Waters." Whenever wetland boundaries and/or type observed in the field differed from those derived from publicly available wetland data and desktop analyses, notes were made on field maps and GPS points were logged as necessary in order to refine wetland boundaries.

The existing land use within the alternative alignments was classified using FLUCCS. The dominant existing land use in both alignments was Wetlands Forested Mix, Hardwood Coniferous-Mixed, Coniferous Plantations, and Rangeland. The acreage and percent of existing land use cover by FLUCCS category is summarized **Table 5.7**. A figure is available in **Appendix E**.

Table 5.7: Approximate FLUCCS Land Covers within Alternatives 1 and 2.

FLUCCS Code	FLUCCS Level 3 Descriptor	Alternative 1 (ACRES)	Alternative 2 (ACRES)
110	RESIDENTIAL, MEDIUM DENSITY <TWO-FIVE DWELLING UNITS PER ACRE>	0.0	1.4
120	RESIDENTIAL, MEDIUM DENSITY <TWO-FIVE DWELLING UNITS PER ACRE>	1.5	1.2
140	COMMERCIAL AND SERVICES	10.7	9.7
150	INDUSTRIAL	2.7	0.0
210	CROPLAND AND PASTURELAND	37.4	22.3
220	TREE CROPS	5.9	0.0
320	SHRUB AND BRUSHLAND	3.6	0.0
410	UPLAND CONIFEROUS FORESTS	217.1	251.1
420	UPLAND HARDWOOD FORESTS	3.6	3.6
434	HARDWOOD - CONIFEROUS MIXED	109.3	88.1
441	CONIFEROUS PLANTATIONS	51.0	108.6
443	FOREST REGENERATION AREAS	0.0	46.6
510	STREAMS AND WATERWAYS	6.7	6.7
610	WETLAND HARDWOOD FORESTS	14.4	12.5
630	WETLAND FORESTED MIXED	46.5	39.1
653	INTERMITTENT PONDS	4.6	4.6
631	WETLAND SHRUB	19.1	19.1
832	ELECTRICAL POWER TRANSMISSION LINES	55.8	55.8

Wetland lines were flagged in the field and FNAI classifications were assigned to each wetland polygon within each proposed alternative and were then revised in GIS (ArcMapTM 9.2/9.3) as necessary. Field reconnaissance events occurred in September 2011 and January 2012. It should be noted **Table 5.7** was updated in March 2013, with the most up to date alignment locations and field information.

Wetland classifications were based on FNAI, NWI, and FLUCCS classification schemes. Please reference the FNAI, NWI, and FLUCCS classification schemes in the WER. Natural wetland systems within the study area include wet prairie / seepage slopes, basin swamps, dome swamps, and bottomland forests. Please refer to the WER for the location of these wetland systems.

The delineated jurisdictional wetlands were classified according to the NWI/ Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, 1979) (**Appendix E**). The acreage of each wetland classified by NWI is shown in **Table 5.8**. Wetland habitats were classified using the Florida Natural Areas Inventory (FNAI, 2009) (**Table 5.9**). The wetland habitats were also classified according to FLUCCS (see **Table 5.7**). Maps depicting delineated wetlands and NWI classification are shown in **Appendix E**.

Table 5.8: Wetlands Classification Based on NWI / Cowardin

NWI / Cowardin Classification	Alternative 1 (Acres)	Alternative 2 (Acres)
PF01/2F, Freshwater Forested/ Shrub Wetland	5.8	5.8
PF01F, Freshwater Forested/ Shrub Wetland	4.8	4.8
PF03C, Freshwater Forested/ Shrub Wetland	0.8	0.8
PF04/1B, Freshwater Forested/ Shrub Wetland	7.0	7.0
PSS1C, Freshwater Forested/ Shrub Wetland	0.4	0.5
PSS1F, Freshwater Forested/ Shrub Wetland	0.7	0.0
PF02/1F, Freshwater Forested/ Shrub Wetland	2.8	0.0
PF01/4C, Freshwater Forested/ Shrub Wetland	10.9	10.9
PF01C, Freshwater Forested/ Shrub Wetland	5.5	5.5
PF03/1C, Freshwater Forested/ Shrub Wetland	5.9	5.9
PSS1/3C, Freshwater Forested/ Shrub Wetland	0.6	0.6
PUBF, Freshwater Pond	0.3	0.3
R2UBH, Riverine	0.7	0.7

Table 5.9: Wetlands Classification Based on FNAI

FNAI Classification	Alternative 1 (Acres)	Alternative 2 (Acres)
Seepage Slope	23.48	23.23
Basin Swamp	10.28	10.28
Dome Swamp	1.43	0
Bottomland Forest	21.66	21.66

The alternatives derived from corridor studies were analyzed via the same desktop and field truthing procedures outlined above and in the WER. Wetland quality associated with alternative alignments was also assessed within each unique wetland habitat polygon using the Uniform Mitigation Assessment Method (UMAM) as defined in Chapter 62- 345, F.A.C. This wetland assessment methodology has replaced the Wetland Rapid Assessment Procedure (WRAP). UMAM is the methodology of wetland quality assessment that is currently accepted by the State of Florida agencies (including FDEP and NWFWMD). This methodology was

established by the Florida Administrative Code, Chapter 62-345, and was adopted in 2004 and amended in September 2007. The methodology allows an assessment of wetland quality that is both qualitative and quantitative. The first part provides a qualitative characterization of an assessment area. The second part is a quantification of the assessment area with scoring established based on wetland functional values involving an evaluation of wetland conditions. Three criteria are scored: Location and Landscape Support, Water Environment, and Community Structure. Scoring is numeric in whole numbers on a 0 – 10 basis, with a narrative provided to support the scoring.

Scoring is based on current condition, but the methodology provides additional scores for future impacts (with the project implemented) or future enhancements (with mitigation implemented). The difference between the current and future scenario is calculated then incorporated with additional factors such as time lag and risk. Time lag ranges from 1 – 3.91 and is based on the time difference between wetland functions lost as a result of impact and the replacement through mitigation. Risk is the mitigation vulnerability of hydrology, plant community, water quality, secondary impact, and invasive exotics and is a scale of 1 – 3 with 0.25 increments. Two key concepts are functional loss, which is the measure of wetland functions that are lost by impact, and functional gain, which is the measure of wetland functions gained through mitigation after adjustments for preservation, time lag, and risk. Functional gain would be greater than functional loss to provide the "no-net-loss" of wetland function. UMAM is currently accepted as the wetland assessment methodology of the FDEP, NWFWMD, and the Jacksonville District of the USACOE via a Public Notice dated August 18, 2005. Maps indicating the specific polygon location and NWI classification are included in **Appendix E**.

Wetland Impacts

1. Seepage Slope / Wet Prairie (FLUCFCS #643 – Wet Prairie/Pine Savanna)
(NWI Classification – Palustrine, Freshwater Forested/Shrub Wetland)
Alternative 1 = 23.48 acres
Alternative 2 = 23.23 acres

Seepage slopes are on landscapes where the downward movement of ground water is redirected laterally by less permeable layers in the soil, such as increased clay content or spodic horizons, and water flows at or near the ground surface saturating the soils. Many endemic and imperiled herbaceous plant species are associated with seepage slopes since large areas of this community have been converted to pine plantations and are susceptible to alteration by fire-suppressed growth of woody species. The majority of the seepage slope / wet prairie within the alignments is fire suppressed and dominated by black titi (*Cliftonia monophylla*), white titi *(Cyrilla racemiflora),* and galberry (*Ilex* glabra). In areas that have been mowed, such as the power line easements, greater plant diversity was observed.

2. Basin Swamp (FLUCFCS *#617 – Mixed Wetland Hardwoods)*
(NWI Classification – Palustrine, Freshwater Forested/Shrub Wetland)
Alternative 1 = 10.28 acres
Alternative 2 = 10.28 acres

Basin Swamps are wetland plant communities characterized by long periods of inundation punctuated by dry periods. These areas are depressions in a relatively flat landscape and are dominated by a variety of canopy, subcanopy, and shrub species such as black titi *(Cliftonia monophylla)*, pond cypress (*Taxodium ascendens*), swamp bay (*Persea palustris*), swamp tupelo (*Nyssa biflora*), sweetbay magnolia (*Magnolia virginiana*) and slash pine (*Pinus elliottii*). The basin swamps within the alignments are fire suppressed. The groundcover coverage is sparse and diversity is low, which is likely a result of intense competition with woody species.

3. Dome Swamp (FLUCFCS #630 – Mixed Wetland Hardwoods)
(NWI Classification – Palustrine, Freshwater Forested/Shrub Wetland)
Alternative 1 = 1.43 acres
Alternative 2 = 0.0 acres
Dome Swamps are wetland plant communities characterized by long periods of inundation and occur in depressions in the landscape that may or may not be associated with other types of wetland systems (they may be isolated systems). Dome swamps typically have a partially or entirely closed canopy of cypress, black gum and sweet bay, which also characterizes the dome swamps in the alignments. The subcanopy consists of cypress, sweet bay, swamp tupelo, and red maple (*Acer rubrum*). The Dome Swamps contain a thick woody shrub understory of St. John's wort (*Hypericum chapmanii*), titi, myrtle leaf holly (*Ilex myrtifolia*), and fetterbush (*Lyonia lucida*).

4. Bottomland Forest (FLUCFCS #615 – Bottom; and Stream & Lake)
(NWI Classification – 1) Palustrine, Freshwater Forested/Shrub Wetland & 2) Riverine)
Alternative 1 = 21.66 acres
Alternative 2 = 21.66 acres
Bottomland Forests are wetland plant communities that are typically contiguous with riverine communities. Bottomland forests are seasonally flooded and influenced by precipitation. Bottomland forests have closed canopies and a mixture of evergreen and deciduous trees in the canopy. The bottomland forest in the alignments surrounds both the Blackwater River and Clear Creek, which are both blackwater streams that drain into the Pensacola Bay.

Direct and Shading Impacts
State and Federal agencies may exert jurisdiction over all wetland areas located within the alignments. Direct wetland impacts and impacts from shading will require permits from both agencies and mitigation will likely be required for the direct impacts. The State and Federal agencies use UMAM to determine the amount of mitigation required to offset impacts to wetlands and other surface waters.

The FNAI classification of wetland habitats was used for evaluating potential wetland impacts in the proposed alignment areas. The impacts were evaluated by comparing the current condition of each FNAI wetland habitat with the condition of a restored FNAI wetland habitat at a reference site. The condition of the restored habitat at the reference site indicates that the appropriate landscape treatments are being applied to

the alignments, the appropriate surrounding land uses are present, and that there is an appropriate mix of flora and fauna.

The wetlands in the alignments are medium/high quality wetlands, based on the UMAM scoring procedure, since most wetland habitats resembled the reference condition. Anomalies exist where power lines have been constructed through wetlands, where silvicultural activities are conducted, and adjacent to development. In these disturbed areas, the wetland vegetation has either been mowed or the vegetation is fire suppressed and the appropriate ground cover species are not present.

UMAM Explanation

Location and Landscape

The pre-project location and landscape scores for the alignments ranged from Moderate (7) to Optimal (9) in the current condition due to the following factors: the location of the alignments and overall landscape; connectivity to the Blackwater River and Clear Creek; the relatively un-developed surrounding land use with a variety of natural conditions and connectivity; and a lack of significant barriers to wildlife movement. In the post-project condition, the wetlands proposed for direct impact have been scored "0" while those wetlands affected by indirect impacts, or shading due to bridges such as the floodplain of the Blackwater River, have been reduced by "2" points from the pre-project scores.

Water Environment

In general, the existing wetland hydrology supports the natural communities and no significant alternation in hydroperiods from historic patterns was documented. The impacts to hydrology are directly associated with adjacent silviculture and agriculture, primarily ditching and furrowing. Most of these effects are less pronounced within the floodplains of the Blackwater River. Some minor hydrologic impacts may be associated with roadways and power lines. The current conditions scores are in the optimal range and the direct impacts have been scored "0". There were no with project score decreases for the water environment UMAM parameter as a result of proposed shading and bridge construction.

Vegetation Structure

The principal components of the structure variable in this environment are: appropriate species; appropriate diversity and distribution of these species; appropriate vertical structure (i.e., canopy and groundcover); and the ability of the vegetation to carry and withstand a fire. Most of the wetlands within the alignments have been maintained in their appropriate conditions and current condition scores are in the optimal range (from 8 to 10) based upon the degree of vegetative alteration from fire suppression and/or typical disturbance regimes such as fallen trees from storms. Highly altered areas, such as those within the power lines and adjacent to agricultural areas received moderate scores. In the post-project scoring, the areas proposed for direct impact have been scored a "0" while those areas being shaded have been reduced by "1" or "2" points based on the type of vegetation located beneath the proposed roadway.

The UMAM polygon scores are included in **Tables 5.10** and **5.11**, and the full Part 1 and Part 2 UMAM polygon evaluation sheets are provided in **Appendix E**.

UMAM Summary

Alternative 1 traverses more wetland areas than Alternative 2. The following summary **Tables 5.10** and **5.11** provide a matrix which summarizes the wetland impact analyses for both Alternatives 1 and 2. Each matrix includes the polygon name, wetland classifications (based on FNAI and FLUCFCS), acreage, polygon score, and functional loss for alignment alternatives 1 and 2, respectively. The No-Build alternative would not result in any wetland impacts. Please refer to the WER for the location of these wetland boundaries as illustrated in **Figure 5.5**. Maps indicating the specific polygon location and NWI classification are included in **Appendix E**.

It has been determined that there are no practical alternatives to construction in wetlands for the preferred alternative. All practicable measures will be used to reduce impacts to wetlands during subsequent project phases. Short-term construction-related impacts will be minimized by the adherence to the FDOT's Standard Specifications for Road and Bridge Construction.

Table 5.10: Alternative 1 UMAM Summary Table

Alignment 1 UMAM Summary Table

Polygon #	Impact Type	FNAI Wetland ID	FLUCFCS Wetland ID	Location & Landscape Support		Water Environment		Community Structure/Vegetation		Assessment Score	Area (ac)	Functional Loss Unit(s)
				Without	With Project	Without	With	Without	With			
1A	Permanent-Dredge or Fill	Bottomland Forest	615-Bottom;and Stream & Lake Swamp	9	0	10	0	9	0	0.93	2.95	2.75
1	Shading	Bottomland Forest	615-Bottom;and Stream & Lake Swamp	9	7	10	9	9	7	0.17	15.13	2.52
2	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	9	0	9	0	8	0	0.87	0.04	0.03
3	Shading	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	8	8	8	7	6	0.07	2.02	0.13
4	Shading	Basin Swamp	617-Mixed Wetland Hardwoods	9	8	9	8	9	6	0.17	4.15	0.69
5	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	0	8	0	8	0	0.83	6.35	5.29
6	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	8	0	8	0	7	0	0.77	3.34	2.56
7	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	7	0	8	0	7	0	0.73	4.55	3.34
8	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	0	8	0	7	0	0.80	2.34	1.87
9	Shading	Bottomland Forest	615-Bottom;and Stream & Lake Swamp	9	8	10	8	8	6	0.17	1.08	0.18
9A	Permanent-Dredge or Fill	Bottomland Forest	615-Bottom;and Stream & Lake Swamp	9	0	10	0	8	0	0.90	2.50	2.25
10	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	6	0	7	0	6	0	0.63	2.75	1.74
11	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	7	0	8	0	7	0	0.73	8.14	5.97
12	Permanent-Dredge or Fill	Dome Swamp	630-Mixed Forested Wetland	9	0	9	0	8	0	0.87	1.43	1.24
13	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	6	0	7	0	6	0	0.63	0.25	0.16
14	Indirect	Adjacent to Shading Impact		9	8	10	10	9	8	0.07	60.07	4.00
15	Indirect	Adjacent to Direct Impact		8	6	8	4	7	6	0.23	79.33	18.51
											Total Functional Loss Units>	**53.25**

Acreage Totals	
Direct Impacts	34.64
Shading Impacts	22.38
Indirect Impacts	139.40
Total Wetlands	196.42

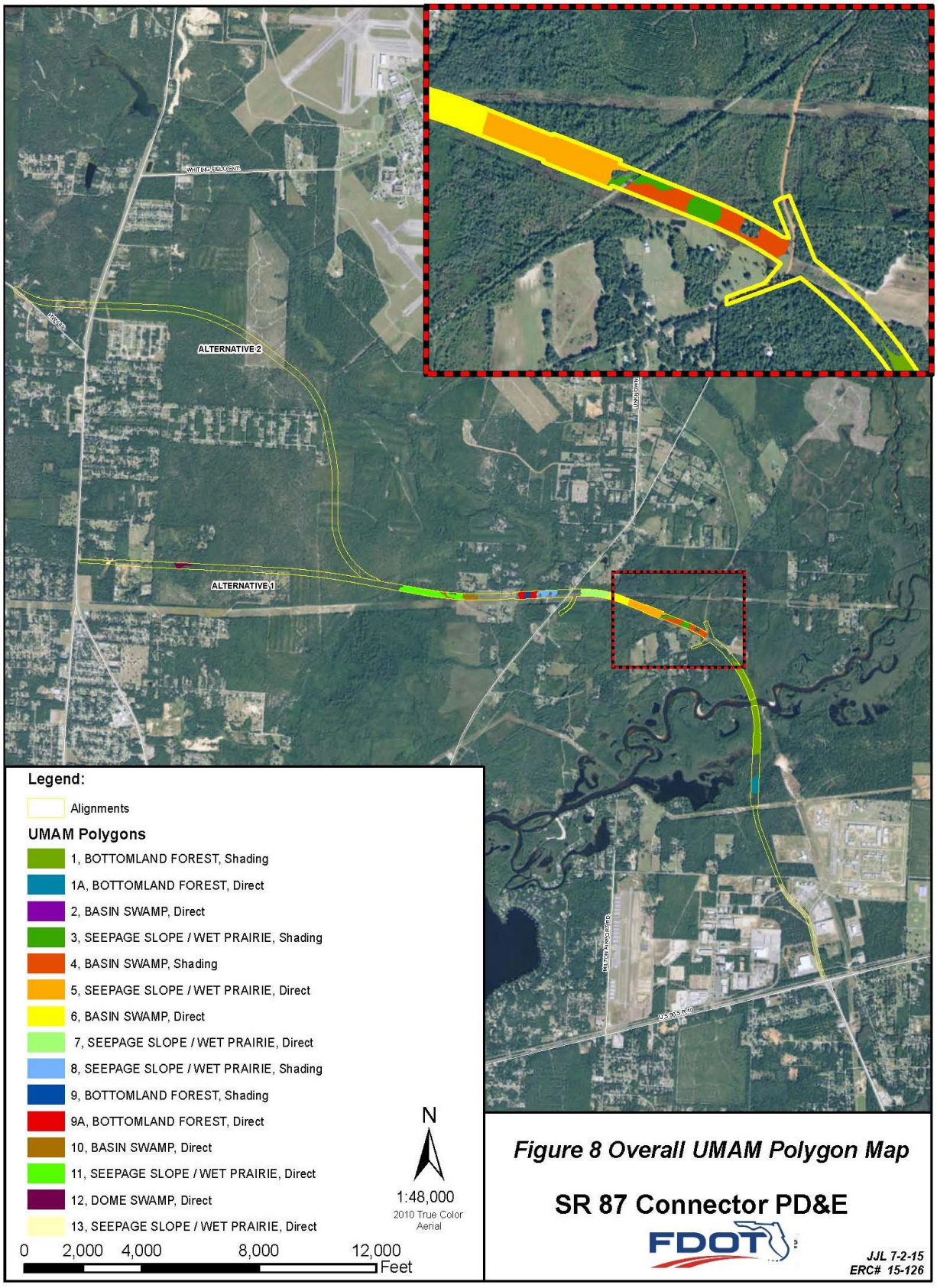
Table 5.11: Adjusted Alternative 2 UMAM Summary Table

Alignment 2 UMAM Summary Table

Polygon #	Impact Type	FNAI Wetland ID	FLUCFCS Wetland ID	Location & Landscape Support		Water Environment		Community Structure/Vegetation		Assessment Score	Area (ac)	Functional Loss Unit(s)
				Without	With Project	Without	With	Without	With			
1A	Permanent-Dredge or Fill	Bottomland Forest	615-Bottom; and Stream & Lake Swamp	9	0	10	0	9	0	0.93	2.95	2.75
1	Shading	Bottomland Forest	615-Bottom; and Stream & Lake Swamp	9	7	10	9	9	7	0.17	15.13	2.52
2	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	9	0	9	0	8	0	0.87	0.04	0.03
3	Shading	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	8	8	8	7	6	0.07	2.02	0.13
4	Shading	Basin Swamp	617-Mixed Wetland Hardwoods	9	8	9	8	9	6	0.17	4.15	0.69
5	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	0	8	0	8	0	0.83	6.35	5.29
6	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	8	0	8	0	7	0	0.77	3.34	2.56
7	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	7	0	8	0	7	0	0.73	4.55	3.34
8	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	0	8	0	7	0	0.80	2.34	1.87
9	Shading	Bottomland Forest	615-Bottom; and Stream & Lake Swamp	9	8	10	8	8	6	0.17	1.08	0.18
9A	Permanent-Dredge or Fill	Bottomland Forest	615-Bottom; and Stream & Lake Swamp	9	0	10	0	8	0	0.90	2.50	2.25
10	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	6	0	7	0	6	0	0.63	2.75	1.74
11	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	7	0	8	0	7	0	0.73	8.14	5.97
14	Indirect	Adjacent to Shading Impact		9	8	10	10	9	8	0.07	60.07	4.00
15	Indirect	Adjacent to Direct Impact		8	6	8	4	7	6	0.23	73.94	17.25
										Total Functional Loss Units>		**50.60**

Acreage Totals	
Direct Impacts	30.62
Shading Impacts	22.38
Indirect Impacts	134.01
Total Wetlands	187.01

Figure 5.5: UMAM Polygon Map



There are approximately 57 acres of wetlands within the Alternative 1 alignment and approximately 53 acres of wetlands within the Adjusted Alternative 2 alignment. Approximately 35 acres of wetlands within alignment 1 and 31 acres of wetlands within alignment 2 are proposed for direct impact. Approximately, 22 acres are potentially proposed for shading impacts in both alignments. There are approximately an additional 140 and 134 acres of indirect and cumulative impacts for Alternative 1 and Alternative 2, respectively. Wetland impacts have been avoided and minimized to the maximum extent practicable through the use of stormwater collection methods, maintenance of pre and post hydrologic flow between wetlands and streams, and by bridging the high quality, sensitive wetlands associated with the Blackwater River, Clear Creek, and reticulated flatwoods salamander critical habitat. The original wetland impact acreage was calculated after the initial wetland delineation in September 2011 and resulted in 129 acres of potential wetland impact. Based on the alignment revisions, the current potential direct wetland impact for Alternative 1 is 57 acres (+/-) and Adjusted Alternative 2 is 53 acres (+/-).

Both alignment alternatives will impact wetlands. The impacts and functional UMAM loss are summarized in the **Table 5.12**:

Table 5.12: Impacts and Functional UMAM Loss

Criteria	Alignment 1	Alignment 2
Direct Impact	34.64 Acres	30.62 Acres
Shading Impact	22.38 Acres	22.38 Acres
Indirect and Cumulative Impacts	139.40 Acres	134.01 Acres
Functional Loss (UMAM)	53.25 Units	50.60 Units

Minimization efforts include:

- *Bridges And Stormwater Treatment* - In order to minimize direct, indirect, and long-term impacts, Blackwater River's entire floodway will be bridged. The maximum amount of stormwater possible, given the land elevation at the start of the bridge south of the river, will be captured from the roadway surface and conveyed to stormwater ponds located to the north and south of the floodplain area to minimize runoff into the river or the wetlands below the bridge. The bridge over the Blackwater River will be 5,570 feet long, 99 feet wide (in two separate sections – 56 feet wide and 43 feet wide), and 28.25 feet above the ground. The height and width of the proposed bridges are adequate to provide light penetration to the ground and allow for groundcover regrowth and survival.

  In order to minimize direct, indirect, and long-term impacts, the open water portion of Clear Creek and a portion of its floodplain will be bridged (based on results of the Bridge Hydraulics Report completed in 2012). The primary goal of the bridge is to reduce upstream flooding and to allow the creek to flow unobstructed to receiving waterbodies. Bridging the entire floodplain is not feasible since the length of the bridge over the Blackwater River and the RFS critical habitat unit significantly increased in length resulting in an increase in

overall projected construction costs. The bridge over Clear Creek will be 180 feet long, 99 feet wide (in two separate sections), and 20.7 feet above the ground. The canopy and some shrubs will be impacted long term by the bridges and groundcover will be impacted during construction. The height and width of the proposed bridges are adequate to provide light penetration to the ground and allow for groundcover regrowth and survival.

- *Construction Methodology* - During construction, wetlands outside of the limits of construction will be protected from impacts using standard construction Best Management Practices (BMPs). At the start of the bridge, a retaining wall will be constructed 25 feet landward of the jurisdictional wetland line to buffer the wetlands. Bridge construction will occur from retaining wall to retaining wall to prevent sediment deposition within floodplains and stream systems.

- *Hydrological Connections* - Connections and hydrological flows between wetland systems will be maintained by using culverts to connect wetlands that may be bisected by the proposed alternatives. The use of culverts will ensure post-project flow regimes similar to the current condition and will prevent flooding, which will help to maintain wetland hydroperiod and function.

- *Threatened And Endangered Plant And Animal Species* - No Federally listed wildlife species or plant species were observed during the field survey. The only State listed animal species observed was the gopher tortoise; however, this species is not wetland dependent. FDOT will commit to pre-construction surveys and will coordinate with the FWC during design/build phase of the SR 87 Connector project. Although not observed during the field survey, both alignments are located within designated critical habitat for the reticulated flatwoods salamander. In order to minimize impacts to wetlands that serve as potential breeding habitat for the RFS, the proposed roadway alignment was shifted to roughly parallel the power line easement on the southernmost edge of the critical habitat unit, which is already a disturbed linear feature traversing this area. In an effort to minimize direct impact to the wetlands, all of the wetland area traversed by the alternatives will be bridged. The bridge through the critical habitat is a continuation of the bridge over the Blackwater River, 99 feet wide (in two separate sections), and 28.25 feet above the ground. The height and width of the proposed bridges are adequate to provide light penetration to the ground and allow for groundcover regrowth and survival.

<u>Permitting and Mitigation Efforts include:</u>
Permitting will be required for direct and indirect wetland impacts by the regulatory agencies with jurisdiction, primarily USACE and FDEP. The State and Federal agencies will exert jurisdiction over the wetlands and waters delineated within the alignment areas. Coordination with the regulatory agencies will continue through the design phase to evaluate permitting and mitigation requirements. The project is anticipated to require an Environmental Resource Permit (ERP) from NWFWMD but since Sovereign Submerged Lands are involved, the ERP will be issued by FDEP per the operating agreement between NWFWMD and FDEP, and a Section 404 dredge

and fill individual permit from the USACE. This project will also require a National Pollution Discharge Elimination System (NPDES) permit from the FDEP since one or more acres of land are proposed to be filled. The FDOT will coordinate with the FDEP, USACOE, EPA, National Marine Fisheries Service (NMFS), US Fish and Wildlife Service (USFWS), and the Florida Fish and Wildlife Conservation Commission (FFWCC) regarding potential impacts to wetlands and wildlife species.

Wetland impacts which will result from the construction of this project will be mitigated pursuant to Section 373.4137, F.S. to satisfy all mitigation requirements of Part IV, Chapter 373, F.S. and 33 U.S.C.s.1344. Compensatory mitigation for this project will be completed through the use of mitigation banks and any other mitigation options that satisfy state and federal requirements.

Mitigation will be required for direct, as well as some indirect (as deemed necessary by FHWA, FDOT, USACOE, NWFWMD, and other appropriate resource agencies) wetland impacts. Alternative 1 results in a functional loss of 53.17 units and Adjusted Alternative 2 results in a functional loss of 50.32 units, which includes indirect and cumulative impacts. At this point in the project development, FDOT is not prepared to state how impacts to wetlands will be mitigated due to the varying types of resources that could be impacted. The degree, type, and location of mitigation that will be required will not be determined until permitting requirements for the preferred alternative are evaluated. The FDOT will reserve use of statute approved mitigation (F.S. Section 373.4137), mitigation banks located near the proposed project, or property donations once the efficiency and value of the mitigation options have been calculated (See **Appendix E** for mitigation information).

In many cases involving FDOT projects, wetland impacts are mitigated by purchasing mitigation credits from the NWFWMD via the Northwest Florida Umbrella, Watershed-based, Regional Mitigation Plan or “Umbrella Plan". The Umbrella Plan was established in 2006 by an agreement between NWFWMD and the USACOE (Jacksonville District). Operated as an in-lieu fee program, the Umbrella Plan is an outgrowth of the NWFWMD’s responsibility under Florida Statutes to provide mitigation for FDOT impacts to wetlands regulated by federal and state code. The NWFWMD jurisdiction covers seven major riverine watersheds, 16 counties, and extends from east of Tallahassee to west of Pensacola. With the Umbrella Plan, watershed resources and mitigation needs are identified up front in a comprehensive manner. The Umbrella Plan establishes a process by which wetland mitigation projects are strategically identified at a watershed scale, evaluated, and approved by consensus of the USACOE-led Interagency Review Team. Using a mitigation credit ledger, credits may be used to offset future wetland impacts such as those potentially stemming from the SR 87 Connector PD&E project.

One option for mitigation is the Pensacola Bay Mitigation Bank (PBMB), a 1,200 acre site located in Santa Rosa County that offers hardwood, pine flatwoods, and herbaceous wetlands credits. The PBMB was permitted using UMAM and as “like-for-like” credits available to offset potential alignment impacts. At the time of document preparation, credits for the PBMB were priced between $25,000 and

$50,000 per credit and there were approximately 118 credits available for purchase. The restoration activities that are required to obtain credit release are continuing on the PBMB and it is anticipated that additional credits may be available as the project moves into the design and construction phases. The Interagency Review Team (IRT) will evaluate the available options to determine the most suitable mitigation during the permitting of the proposed alignment impacts. For additional information regarding mitigation, please see the conceptual mitigation plan which can be found in **Appendix E**.

5.4.5 Water Quality

It has been estimated that the degree of effect from the SR 87 Connector project on water quality and quantity will be substantial. This is mostly due to the undeveloped nature of the corridor. The majority of the corridor is designated timberland. The Water Quality Impact Evaluation can be found in **Appendix K.**

The US Environmental Protection Agency (USEPA) as part of their review of the project stated that protecting water resources such as surface water quality is a priority of federal and state environmental agencies. Primary sources of surface water quality impairment include point and non-point sources. A primary concern regarding water quality for the proposed project is the impact to surface water quality as a result of stormwater runoff into nearby surface water bodies. Stormwater runoff from the roadway would directly affect Blackwater River and other surface water bodies (such as Clear Creek); therefore runoff will be collected and treated prior to discharging to these water bodies.

The proposed stormwater facility design will include all design criteria outlined in the Santa Rosa County Land Development Code, Section 4.03.06 (F), Chapter 62-346 of the F.A.C and NWFWMD's ERP Applicant's Handbook Volume II, Chapters 5.2 and 8.2. Both alternatives traverse through areas which drain to an OFW. Due to the proposed impact to the OFW, the FDEP/NWFWMD requires that an additional 50% treatment volume be provided in these areas. The stormwater management facilities were preliminarily designed to include this additional 50%, even in areas that do not directly discharge to Blackwater River.

The proposed stormwater facility will have two conveyance systems: stormsewer pipe and roadside ditches. The urban typical section will utilize stormsewer pipe to direct the runoff from the roadway to the proposed stormwater ponds. The runoff from the rural typical section will collect in roadside ditches which will drain to the ponds. All the proposed stormwater ponds will discharge to natural low areas to preserve necessary water quantity. In addition, wetland connectivity will be preserved with cross drains under the proposed highway facility.

The recommended pond sites were chosen based on numerous factors: ground water table height, soil permeability, profile grade, pre-development outfall locations, minimizing wetland impacts, avoiding floodplains, parcel owners, minimizing

distance to pipe runoff to each pond, and avoidance of threatened and endangered species and cultural resources. The off-site pond locations were also determined based on allowable hydraulics and headloss (how far stormwater could be piped). There are areas close to the Blackwater River where some potential pond sites are within the floodplain. These ponds are wet ponds which will require berms (some embankment) and ultimately would affect the floodplain. However, the project design proposes to provide floodplain compensation upstream of these areas to help alleviate any potential staging due to the fill related to the entire project. Detailed information on these pond sites can be found in the Pond Siting Report.

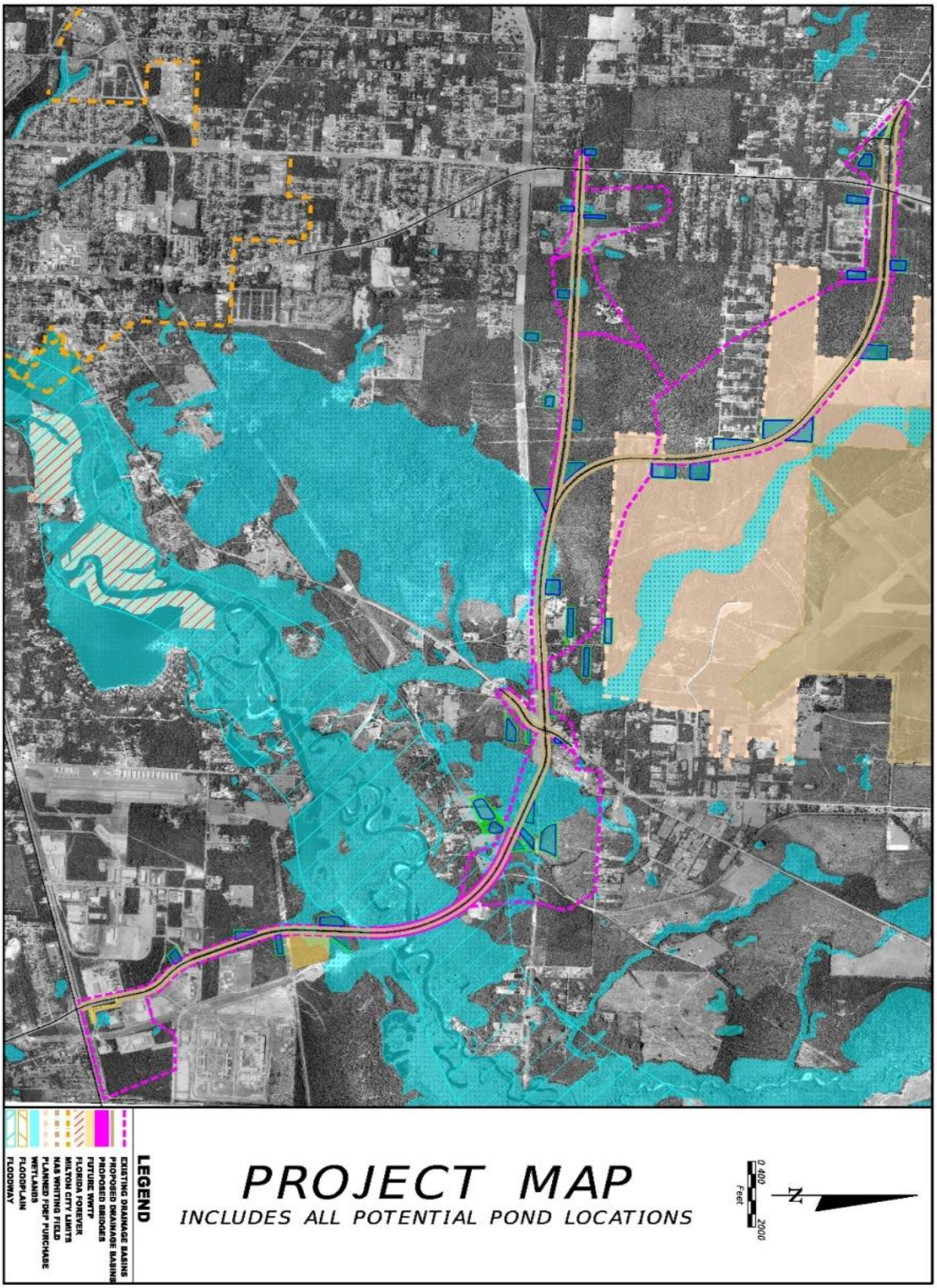


Figure 5.6: Potential Pond Sites

5.4.6 Outstanding Florida Waters

Chapter 62-302.700 F.A.C. prevents the degradation of water quality in OFWs and Outstanding National Resource Waters (ONRW). Subsections (9) and (10) of Chapter 62-302.700 F.A.C. provides a listing of all OFWs, including waters in the State Park System and waters in State Preserves. A review of Chapter 62-302.700 F.A.C. indicates that the Blackwater River is an OFW.

Both alternatives cross the Blackwater River and its floodplain area. In order to minimize direct, indirect, and long-term impacts, the entire floodway will be bridged. The maximum amount of stormwater possible, given the land elevation at the start of the bridge south of the river, will be captured from the roadway surface and conveyed to stormwater ponds located to the north and south of the floodplain area to minimize runoff into the river or the wetlands below the bridge. The height and width of the proposed bridges are adequate to provide light penetration to the ground and allow for groundcover regrowth and survival. See Section 5.1.13 for related construction measures near OFWs.

5.4.7 Contamination

In accordance with the FDOT PD&E Manual Part 2, Chapter 22, a Contamination Screening Evaluation Report (CSER) was conducted for this project. *"The State of Florida has evaluated the proposed right-of-way and has identified potentially contaminated sites for the various proposed alternatives. Results of this evaluation will be utilized in the selection of a recommended alternative. When a specific alternative is selected for implementation, a site assessment will be performed to the degree necessary to determine levels of contamination and, if necessary, evaluate the options to remediate along with the associated costs. Resolution of problems associated with contamination will be coordinated with appropriate regulatory agencies and, prior to right-of-way acquisition, appropriate action will be taken, where applicable."*

The sand-and-gravel aquifer system is the primary source of the large underground supply of fresh water in Santa Rosa County. This aquifer consists of several hundred feet of unconsolidated quartz sand and gravel that serves as a reservoir for the water that percolates into the ground. The water in the sand-and-gravel aquifer is considered to be some of the softest and least mineralized ground water in the state. The generally low mineralization of the ground water in this region results from the fact that the sand-and-gravel aquifer consists primarily of relatively insoluble quartz. Given the rather high average porosity and permeability of the sand-and-gravel aquifer, ground water recharge is accomplished through rainfall. This results in contaminated surface water being a primary concern for the sand-and-gravel aquifer. The alternatives pass through two main drainage basins: the Blackwater River basin and the Clear Creek basin.

Considering the general directional movement of surface water in the area as well as the permeability characteristics of the sand-and-gravel aquifer, it is reasonable to expect directional migration of potential contamination to generally coincide with surface water movement. Localized surface water and ground water directionality can vary over short distances, but it should be anticipated that surface water and ground water found in the sand-and-gravel aquifer will generally move from upper elevations to lower elevations, thus, possible contamination migration may also be anticipated to move down gradient towards Blackwater River or Clear Creek.

A total of twelve (12) sites (See **Figure 5.7**) were identified as being potential sources of contamination at the proposed alignment for both alternatives. Sites 1-6 are found in the southeast portion of the project limits near the SR 87/US 90 intersection and Sites 7-12 are found in the northwest portion of the project limits near the SR 87 (Stewart Street) and SR 89 (Dogwood Drive) intersection. It should be noted that Whiting Field NAS was included in the original July 2010 SR 87 Connector CSER, but was removed when Alternative #3 was dropped. It is now not a concern for the project due the location of contamination being greater than one (1) mile away from the remaining alternatives.

1. The Santa Rosa Brownfield Redevelopment Area is 655 acres and encompasses all of the Santa Rosa Industrial Park. Both Alternatives 1 and 2 are proposed to traverse through this Brownfield. It has been assigned a ranking of **MEDIUM** for potential environmental impact.

2. Santa Rosa Correctional Institute (located within the Santa Rosa Brownfield Redevelopment Area); Aboveground Storage Tank (AST), Hazardous Waste Generator (RCRIS). It has been assigned a ranking of **MEDIUM** for potential environmental impact.

3. Santa Rosa County Sheriff's Office (located within the Santa Rosa Brownfield Redevelopment Area); AST. It has been assigned a ranking of **MEDIUM** for potential environmental impact.

4. HT Hackney Panhandle Fueling Facility (located within the Santa Rosa Brownfield Redevelopment Area); Underground Storage Tank (UST). It has been assigned a ranking of **MEDIUM** for potential environmental impact.

5. (Former) G&D Tires, Inc., 8401 Highway 90, Milton, FL 32583.
   G&D Tires was a waste tire processing facility that is now closed with no ground water monitoring and has no known history of active contamination. However, due to the site's history as a tire disposal facility and its immediate proximity to the alternatives, it has been assigned a rating of **MEDIUM** for potential environmental impact.

6. (Former) C&J Tires, Inc., 8401 Highway 90, Milton, FL 32583.

A discharge of an unknown amount of leaded gas and unleaded gas was reported June of 1996. Upon closing of the station, three UST's were removed and the site was issued a Site Rehabilitation Completion Order (SRCO) in April 2002. Due to the site's known history of contamination and immediate proximity to the alternatives, it has been assigned a rating of **MEDIUM** for potential environmental impact.

7. & 8. (Former) Kembro C&D Debris Landfill / (Former) Rowley C&D Debris Landfill, West Dixie Road and Kembro Road, Milton, FL 32570.
   These sites were located near the intersection of West Dixie Road and Kembro Road approximately 0.6 miles southwest of where Alternative 1 intersects with SR 87 north of Milton, FL. Because this location is greater than 0.5 miles away from the alternatives and is "down gradient" from them, both of these sites have been assigned a rating of **LOW** for potential environmental impact.

9. (Former) Reddys Food Mart, 6500 Highway 87, Milton, FL 32570.
   A petroleum discharge report was filed in February 2006 and the site was initially assigned an SSRCO. However, in August 2011 the site was re-designated to a status of "Cleanup Not Required." Due to the site's history of petroleum discharge, and immediate proximity to the proposed Alternative 1, it has been assigned a rating of **MEDIUM** for potential environmental impact.

10. (Former) J&E Automotive, 7005 Highway 87 North, Milton, FL 32570.
    A discharge consisting of tetrachloroethene (PCE) and used oil was discovered in October 2007. Cleanup was required and the site received an SRCO in July 2010. Due to the site's history of petroleum discharge, and close proximity to the proposed Alternative 2, it has been assigned a rating of **MEDIUM** for potential environmental impact.

11. (Former) Dennis Auto Service Center, Inc., 2883 Stewart Street, Milton, FL 32570.
    The facility is now closed. A discharge of leaded and unleaded gas was reported at this location in December 1988. Cleanup was required of the discharge and an SRCO was issued in April 2000. Due to the site's known contamination and close proximity to the proposed Alternative 1, it has been assigned a rating of **MEDIUM** for potential environmental impact.

12. (Former) TNT Cleaners, 6294 Stewart Street, Milton, FL 32570.
    The drycleaner is now closed. There are no known incidents of contamination from this site. Therefore, it has been assigned a rating of **LOW** for potential environmental impact.

A weighted rating system was then developed to assess the potential for contamination impact from the alternatives. The weighted rating system utilizes a scoring system of 0 to 3, with 0 being "No Expected Impact", 1 being "Least Impact",

and 3 being "Highest Impact" for each potential source of contamination. Alternative 1 was given a score of 21 and Alternative 2 was given a score of 14. **Figure 5.7** provides a summary of the evaluation of the two project alternatives.

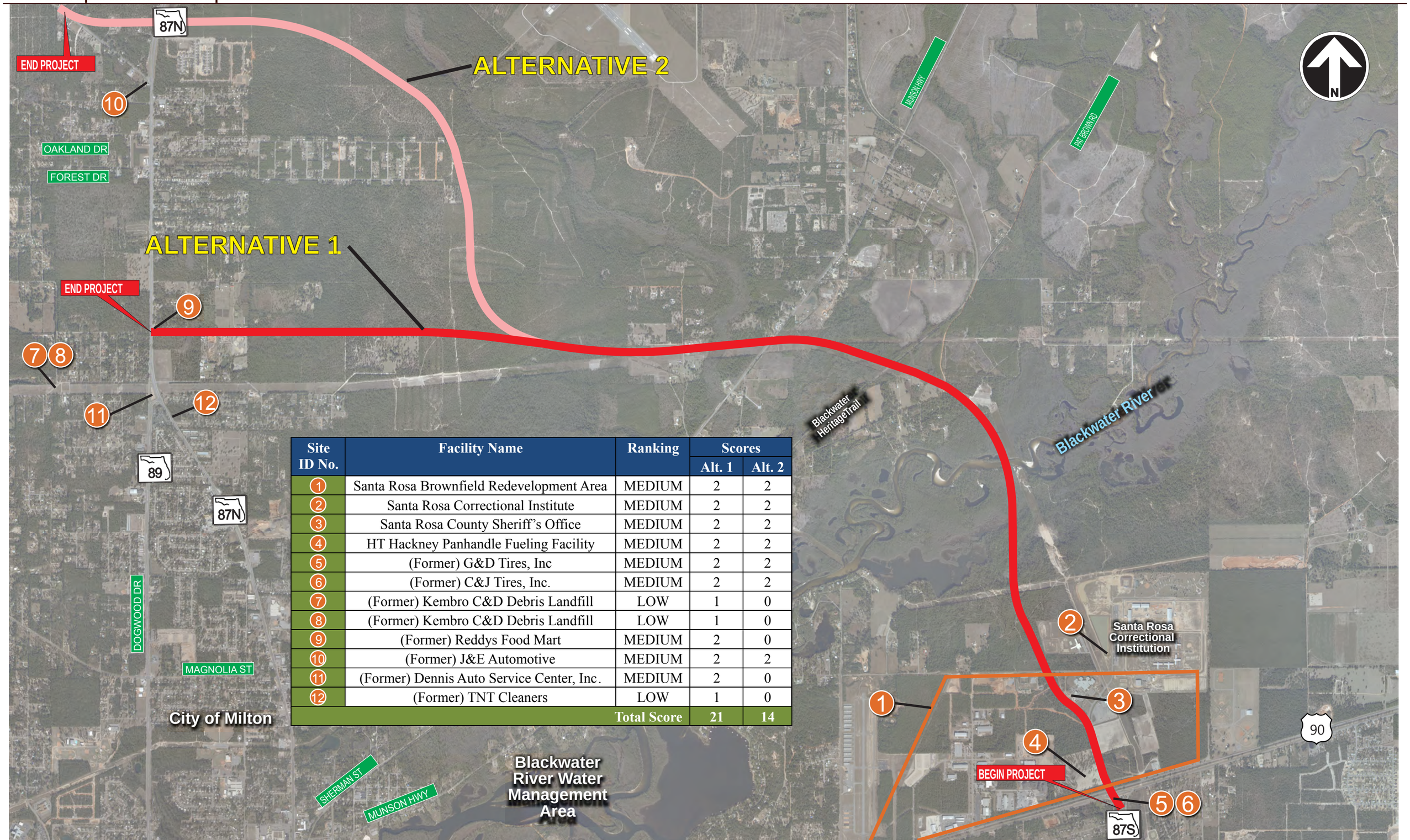
The outlined brownfield areas are similar for both alternatives. However, it is not estimated that any impacts to contaminated areas will be encountered. Therefore, remediation will not likely be necessary. With the close proximity of the existing gas station at the end of Alternative 1, Alternative 2 is a lesser risk. It is **RECOMMENDED** that additional testing be conducted if acquisition of right-of-way or construction of the roadway is located within and/or adjacent to any of the above sites that rank **HIGH**. Testing **SHOULD BE CONSIDERED** for those sites that rank **MEDIUM** and are located within and/or adjacent to the corridor alternatives. The recommendations for environmental testing for the identified sites are included in the Contamination Screening Evaluation Report. The testing procedure should be conducted as follows:

• Install three soil borings to a depth of 25-feet;

• Install three temporary monitoring wells in the surficial ground water within the proposed area of acquisition;

• Collect soils samples on 2.5-feet intervals during the installation of the soil borings and monitoring wells. The soil samples should be tested in the field using the head-space analysis technique recommended by the FDEP. The samples should be tested for the presence of petroleum hydrocarbons using a Flame Ionization Detector – Organic Vapor Analyzer (FID-OVA); and,

• Collect a representative soil sample from each soil boring and a ground water sample from each monitoring well and have it analyzed for the parameters identified in the parameters outlined in the SR 87 Connector Contamination Screening Evaluation Report.



Site ID No.	Facility Name	Ranking	Scores	
			Alt. 1	Alt. 2
1	Santa Rosa Brownfield Redevelopment Area	MEDIUM	2	2
2	Santa Rosa Correctional Institute	MEDIUM	2	2
3	Santa Rosa County Sheriff's Office	MEDIUM	2	2
4	HT Hackney Panhandle Fueling Facility	MEDIUM	2	2
5	(Former) G&D Tires, Inc	MEDIUM	2	2
6	(Former) C&J Tires, Inc.	MEDIUM	2	2
7	(Former) Kembro C&D Debris Landfill	LOW	1	0
8	(Former) Kembro C&D Debris Landfill	LOW	1	0
9	(Former) Reddys Food Mart	MEDIUM	2	0
10	(Former) J&E Automotive	MEDIUM	2	2
11	(Former) Dennis Auto Service Center, Inc.	MEDIUM	2	0
12	(Former) TNT Cleaners	LOW	1	0
		Total Score	21	14

5.4.8 Floodplains

The proposed alternatives cross over floodplains in multiple locations, including the regulatory floodplain of Blackwater River. Both alternatives transverse the 100 year floodplain at the same locations: the Blackwater River and Clear Creek. The following table outlines the impacted floodplains associated with each alternative. Specific locations of impacted floodplains in relation to each alternative can be found in **Appendix F**. See **Table 5.13, Floodplain Impacts** below:

Table 5.13: Floodplain Impacts

Alternative	Impacted Floodplains (Ac)
1	42.13
2	42.13

Flood heights associated with the bridges is minimal due to the fact that the floodplain has transverse encroachments and the Blackwater River Bridge spans the entire floodway. The proposed bridge will be designed having a length and vertical clearance to provide hydraulic conveyance of storm events affecting the Blackwater River. The bridge will also provide vertical and horizontal clearances required for small recreational vessel navigation at the Blackwater River channel as well as trail users on the Blackwater State Heritage Trail. The bridges over the Blackwater River and Clear Creek will provide no less than six feet of clearance above the mean high water elevation. This is the minimum requirement for navigational purposes outlined in FDOT's Plans Preparation Manual. Longitudinal encroachments were avoided by configuring the alignments perpendicular to the stream/river crossings. This project is not considered to have significant encroachments because the encroachments do not have a high probability of loss of human life, will not likely cause future damage that could be substantial in cost or extent, and will not cause adverse impact on natural and beneficial floodplain values. Where the proposed facilities have floodplain impacts, they are evaluated and documented in the Location Hydraulics Report in accordance with Chapter 24 of the PD&E Manual.

Within the limits of the Blackwater River floodplain, the existing ground elevations (NAVD 1988) are between -5.3 feet and 51.8 feet, and the proposed ground/bridge deck elevations are between 30.7 feet and 64.0 feet. The base flood elevation is 19 feet on the south end of the proposed Blackwater River Bridge and is 20 feet on the north end. The existing ground elevations within the Clear Creek floodplain fluctuate from 5.7 feet to 19.9 feet, and the proposed ground/bridge deck elevations vary from 23.2 feet to 34.2 feet. Throughout the remainder of the project (in Flood Zone X), existing ground elevations range from 10.0 feet to 179.0 feet, and the proposed roadway profile grade elevations from 19.2 feet to 179.0 feet.

Mitigation is required for impacts to the floodplain. Floodplain compensation will be provided by excavating (dredging) a portion of "uplands" just upstream of the proposed Blackwater River Bridge. This area will serve as a locale for additional flooding along the river bank and will assist with rise in base flood elevations at the proposed highway facility. Flood maps shall be revised to include the floodplain

compensation area as part of the base flood. It should be noted that FEMA is currently in the process of updating flood maps in the study area, and preliminary design documents may require adjustment to account for changes to the floodplain and floodway, if any.

Ultimate discharge points for offsite runoff in each existing drainage basin will not be significantly modified. Blackwater River surface elevations may have a slight increase in elevations at the proposed cross drains (for offsite runoff to by-pass under the proposed roadway). In addition, runoff from the proposed roadway basins will be collected and treated in retention ponds prior to discharging to natural low areas and/or wetlands. As a result, there will be minimal impacts on natural and beneficial floodplain values. There will also be minimal change in flood risk, and there will be an improvement for providing emergency service or emergency evacuation routes in the project vicinity.

Floodplain Statement:

This project provides a new roadway with potential significant changes in the 100 year flood elevations. The following statement, taken from the Location Hydraulics Report, summarizes the overall encroachments this project will have with regards to the floodplain:

"The construction of the drainage structure(s) proposed for this project will cause changes in flood state and flood limits. These changes will not result in any significant adverse impacts on the natural and beneficial floodplain values or any significant changes in flood risk or damage. These changes have been reviewed by the appropriate regulatory authorities who have concurred with the determination that there will be no significant impacts. (See **Appendix F** for concurrence correspondence) *There will not be significant change in the potential for interruption, or termination, of emergency service or emergency evacuation routes. Therefore, it has been determined that this encroachment is not significant."*

5.4.9 Coastal Zone Consistency

In accordance with Section 307 of the Coastal Zone Management Act (CZMA) and Chapter 15, CFR, Part 930, Federal Consistency with Approved Coastal Management Programs, this project was reviewed for Coastal Zone Consistency. As documented in the Advance Notification (AN) process, the Florida State Clearinghouse, FDEP Office of Intergovernmental Affairs, commented that the State of Florida had no formal objections to the use of federal funding for the SR 87 Connector project, and the project was therefore consistent with the Florida Coastal Management Program (FCMP). However, the consistency determination was based on the project having addressed the concerns of the state reviewing agencies. The continued concurrence with Coastal Zone Consistency is based on the "adequate resolution of issues" as identified during the review process. Final concurrence of Coastal Zone Consistency will be determined during the Environmental Permitting Process and can be found

outlined in the approved Environmental Permit. A copy of the response is available in **Appendix B, ETDM Summary Report, page 4**.

5.4.10 Wildlife and Habitat

As stated under ***Affected Environment*** in **Section 4.10, Wildlife and Habitat,** both alternatives transverse an area that is considered a type 2 link in the Florida Ecological Greenways Network. The criteria reviewed for the EGN during the prioritization process include: maintaining or restoring populations of wide ranging species; maintaining a statewide, connected reserve network from south Florida to the Panhandle; landscape linkages for connectivity, especially higher priority linkages; and importance of riparian corridors to protect water resources and connectivity.

The proposed alternatives were designed to minimize fragmentation of wildlife movement and habitat, as well effects on river hydraulics, the river floodplain, and flow patterns. A structure is proposed for both alternatives over the waterway and entire floodway of the Blackwater River continuing northwest to also include bridging over the salamander habitat. In addition, a structure is also proposed over the waterway and entire floodway of Clear Creek. The proposed bridges include over a mile of structure and will allow for habitat connectivity in an effort to minimize indirect impacts to wildlife movement. Wetlands connectivity in other areas will be preserved with cross drains located under the proposed roadway. These drainage structures will be evaluated to determine if additional wildlife connections can be included in the design. Likewise, development is protected on the north side of both alternatives by land use limitations in the county's comprehensive plan around Whiting Field. The project is also proposed to be a restricted access roadway with an Access Management Class of 3 to further restrict development around the roadway. Following is a summary of the potential impacts and mitigation efforts for this project.

This project has been evaluated for potential impacts to threatened and endangered species in accordance with Section 7(c) of the Endangered Species Act of 1973 and by Chapter 68A-27, F.A.C. An Endangered Species Biological Assessment (ESBA) Report, dated September 5, 2012 has been prepared for the project and was submitted to the USFWS for their review and concurrence of effect determination. A separate Biological Assessment, dated March 2013, was prepared as part of ESA Section 7 Formal Consultation and also submitted to USFWS. Under Section 7, federal agencies must consult with USFWS when an agency action may affect a listed or endangered species. If it is determined the action will likely adversely affect a listed species, the agency submits to USFWS a request for formal consultation. During the informal review of this project, it was determined that formal consultation should be requested for possible impacts to the Gulf sturgeon and the reticulated flatwoods salamander. During the formal consultation process, our project team and USFWS shared information about the project and the likely impacted species. USFWS followed this with the preparation of a Biological Opinion on whether this project will jeopardize the continued existence of these species. (**Appendix A**

Correspondence, Appendix I, Biological Opinion/Formal Consultation Responses).

The T&E species survey was performed by the project team using standard biological survey methods. These methods included a combination of interpreting aerial photos and soils maps, reviewing state maintained location records, and conducting exhaustive on-site field investigations. Aerial photographs and soil surveys provide useful predictive information based on the historic and current conditions of a particular landscape - this is especially helpful when the site has been altered. When this information is combined with known location records for T&E species, and a careful examination of the current botanical structure of the site, ecologists with specific knowledge of local flora and fauna can effectively predict the taxa likely to occur. Accordingly, target-specific search strategies can be designed to ensure that an effective survey is conducted.

A list of potentially occurring T&E species was prepared for the SR 87 Connector project and is included as **Table 4.11**. This list included a review of known T&E species occurrences based upon Florida Natural Areas Inventory (FNAI) and the following:

- USFWS Species List for Santa Rosa County
- USFWS Critical Habitat Mapper http://criticalhabitat.fws.gov/crithab/
- USFWS National Wetland Inventory (NWI) Database
- NMFS Essential Fish Habitat Mapper: http://www.habitat.noaa.gov/protection/efh/habitatmapper.html
- U.S. Department of Agriculture (USDA), NRCS Soil Survey Santa Rosa County
- U.S. Geological Survey (USGS) Topographic Quadrangle maps, 7.5 minute series
- FNAI Element Occurrence Data
- DOACS Species Lists
- FWC Eagle Locator https://public.myfwc.com/FWRI/EagleNests/nestlocator.aspx
- FWC Wading Bird Colony Data
- USFWS Classification of Wetlands and Deepwater Habitats of the United States (1979)
- Northwest Florida Water Management District (NWFWMD), Florida Land Use, Cover, and Forms Classification System (FLUCFCS) data (1995)
- Aerial photographs of the project area from 1940 and 2010

Historic and current aerial photographs were examined to determine potential specific ecological communities and landscape conditions associated with for the potential occurrence of T&E species in the alignments. Soil surveys and maps depicting wetlands were analyzed in order to identify potential T&E species habitat and natural areas on site. This data was also used as a component of the reticulated flatwoods salamander desktop analysis, which is an appendix of the Biological Assessment, combined soils survey data, NWI data, and FLUCCS data. These data layers were analyzed to determine if there was a potential for reticulated flatwoods salamander habitat outside of the critical habitat unit. The eight resulting potential pond areas, were evaluated in the desktop analysis for reticulated flatwoods salamander.

Based on the habitat (plant community) association of each target taxon, the likely areas of occurrence for each potential species were identified. A search list of T&E species was compiled and added to the list of known species for Santa Rosa County, described above. The Efficient Transportation Decision Making (ETDM) comments were analyzed to ensure that the target T&E taxa were inclusive of species specifically mentioned.

After the plant communities were identified in the alignments, a strategy for searching for threatened and endangered plants and animals was developed. This strategy involved a series of transects designed to exhaustively assess each plant community.

Depending on the habitat and past land use history, the survey intensity employed varied. High Intensity surveys were conducted in areas that appear unique, or that have greater potential for T&E species due to the presence of a specific plant community or habitat. In these areas, 80% or more of the habitat was traversed with transects. All surveys within the alignments were high intensity surveys. Maps with locations of observed T&E species are included in **Appendix G**. **Appendix G** also includes maps of the FNAI occurrences within and adjacent to the project corridors.

In areas with gopher tortoise habitat, a minimum of 15% of the area proposed to be impacted must be surveyed according to the FWC gopher tortoise guidelines. In order to cover the minimum area, biologists worked in teams and walked the alignments along evenly-spaced belt transects that were approximately 30 feet wide. The width of the 30 foot belt transects exceeded the 15% requirement and ensured that sufficient area was surveyed to determine the presence of potentially occupied burrows and/or abandoned burrows. Since the majority of the SR 87 alignment alternatives, excluding the existing roadway and wetlands, is suitable gopher tortoise habitat, high intensity transects were walked throughout the entire alignments.

The project team evaluated a 1,500 foot wide corridor buffer as a component of the reticulated salamander desktop analysis. The eight resulting potential pond areas were field verified and evaluated using the HDR method. The HDR method refers to the reticulated flatwoods salamander evaluation method developed by HDR, Inc., an architectural, engineering, and consulting firm based in Omaha, Nebraska, USA in conjunction with the USFWS and FWC in 2001 to assess habitat potential of wetland areas for the frosted flatwoods salamander and the reticulated flatwoods salamander. The HDR method was used to assess the quality of the potential ponds, the pond ecotones, and the uplands located around the ponds.

The majority of the habitats within the alignment areas are fire suppressed and do not have large stands of mature pine trees, which makes them inappropriate for red cockaded woodpecker habitat. The FWC Bald Eagle Nest Locator was used to determine the presence of known eagle nests, but none are in the vicinity of the project. Suitable habitat is present throughout the project area, but bald eagle nests have not been observed along the Blackwater River, Clear Creek, or any of the wetlands associated with these waterbodies.

The existing land use within the alternative alignments was classified using FLUCCS. The dominant existing land use in both alignments was Wetlands Forested Mix, Hardwood Coniferous-Mixed, Coniferous Plantations, and Rangeland. The acreage and percent of existing land use cover by FLUCCS category is summarized in the **Table 5.7**. A figure is available in **Appendix E**.

Five natural ecological communities were observed within the alternatives (Sandhill, Floodplain Swamp, Basin Swamp, Dome Swamp, and Seepage Slope/Wet Prairie). There are many abiotic and biotic factors that influence the type of plant community development. Three of the most important factors are soil, hydrology, and fire. Landscape topography in this area of north Florida contains ridges and depressions. These depressions may be primarily seepage slope or contain a wetter bog or basin swamp surrounded by a margin of seepage slope. In deeper and generally wetter basin wetlands or where there is an abrupt gradient between uplands and wetlands, the upland plant communities will transition directly to a wetland, such as a bog or basin swamp, without a broad ecotone of seepage slope. Seepage slopes sometimes grade into floodplain swamps associated with the Blackwater River and Clear Creek.

Field descriptions of each community and their suitability for T&E species follow below. In each case, the most prevalent plant species are listed, followed by the results with respect to any T&E species observed in the alignments. Subsequently each T&E species is individually discussed. There were no federally listed threatened or endangered plant species observed.

Upland Plant Communities

Sandhill (FLUCCS #410 – Upland Coniferous Forests)

Alternative 1 = 57 acres

Alternative 2 = 83 acres

The Sandhill plant community that occurs along this alignment has been altered through silviculture activities (pine plantation) but includes other areas that are unplanted. All of these areas are fire suppressed. Fire suppression has allowed the growth of opportunistic, weedy tree species such as laurel oak (*Quercus hemisphaerica*), water oak (*Quercus nigra*), and Sweetgum (*Liquidambar styraciflua*) and shrubs such as hollies (*Ilex* spp.), blueberries (*Vaccinium* spp.), and others. As a result, the typical canopy and shrub layer cover is unnaturally high and the diverse groundcover associated with the intact version of this plant community is not present. Though a diversity of species characteristic of Sandhill plant communities were identified during the survey, their coverage was sparse throughout each alignment. Portions of the alignments were planted with sand pine (*Pinus clausa*), which is not a characteristic species for Sandhill plant communities. In most cases, the canopy is dominated by sand live oak (*Quercus geminata*) and scattered longleaf pine (*Pinus palustris*) with a subcanopy/shrub strata of yaupon (*Ilex vomitoria*) and bluejack oak (*Quercus incana*) and a groundcover dominated by runner oak (*Quercus margaretta*). The characteristic dominant canopy species for this plant community is longleaf pine. Sandhill is the most widespread upland plant community in the alignments. The most prevalent plants and any T&E species observed in the sandhill are listed below.

Sandhill – Plant Species Observed:
Observed canopy and subcanopy species include longleaf pine, turkey oak *(Quercus laevis),* post oak (*Quercus stellate),* sand live oak, dwarf live oak *(Quercus minima),* running oak *(Quercus pumila),* deerberry (*Vaccinium stamineum),* sparkleberry (*Vaccinium arborea),* and yaupon. Observed groundcover species include wiregrass (*Aristida stricta),* indiangrasses (Sorghastrum spp.), false rosemary (*Conradina canescens),* bluestem (*Andropogon* spp.), Oak ridge lupine (*Lupinus diffuses),* gopher apple (*Licania michauxii),* woody goldenrod (*Chrysoma pauciflosculosa),* golden asters (*Chrysopsis* spp.), silkgrass (*Pityopsis* spp.), blazing stars (*Liatris* spp.), bracken fern (*Pteridium aquilinum),* and wild indigo (*Baptisia* spp.).

Sandhill – Threatened & Endangered Species observed:
Plants*:* Hairy Florida wild indigo (*Baptisia calycosa* var. *villosa*) – State Threatened
Animals: Gopher tortoise – State Threatened

Wetland Plant Communities
Seepage Slope / Wet Prairie (FLUCCS #643 – Wet Prairie / Pine Savanna)
(NWI Classification – Palustrine, Freshwater Forested/Shrub Wetland)
Alternative 1 = 19.41 acres
Alternative 2 = 19.16 acres

Seepage slopes occur where the downward movement of ground water is redirected laterally by less permeable layers in the soil such as increased clay content or spodic horizons and water flows at or near the ground surface, saturating the soils. Generally wet prairies are seepage slopes that have lower gradient slopes over a wider distance creating large expanses of surface flow through sandy soils and are generally open, containing the greatest diversity in the groundcover. These systems are known for a high diversity of herbaceous and graminoid plant species and require regular, natural fires to burn through the landscape and control woody shrubs species, which otherwise grow to an inappropriate lifeform and alter the habitat structure. Many endemic and imperiled herbaceous plant species are associated with this plant community because seepage slopes are typically not found in an appropriate condition that favors a diverse groundcover, which would typically include many T&E species. In north Florida, large expanses of Seepage Slope and Wet Prairie have been converted to pine plantations and are altered by fire-suppressed growth of woody species, which negatively affects the characteristic, species-rich groundcover. The majority of the seepage slope/wet prairie within the alignment areas has been fire suppressed and is dominated by black titi (*Cliftonia monophylla*), white titi (*Cyrilla racemiflora),* sweet gallberry (*Ilex coriacea*), and gallberry (*Ilex glabra*). In areas that have been mowed or sprayed with broad leaf specific herbicides, such as the power line easements, there was often greater plant diversity and a more natural condition. The most prevalent plants and any T&E species observed in the seepage slopes are listed below.

Seepage Slope / Wet Prairie – Plant species observed:
There was a scattered canopy, when one was present at all, which consisted of slash pine (*Pinus elliottii*) and pond cypress (*Taxodium ascendens*). The subcanopy and

shrub layers were dominated by black titi (*Cliftonia monophylla*), white titi (*Cyrilla racemiflora*), sweet gallberry (*Ilex coriacea*), fetterbush (*Lyonia lucida*), gallberry (*Ilex glabra*), sweet pepperbush (*Clethra alnifolia*), bayberry (*Myrica caroliniensis*), and odorless bayberry (*Myrica inodora*). The groundcover species included yellow colicroot (*Aletris lutea)*, wiregrass (*Arista stricta*), sedge (*Carex* spp.), centella (*Centella asiatica)*, woolly sunbonnets (*Chaptalia tomentosa)*, rosebud orchid (*Cleistes divaricate)*, sand swamp whitetop *(Rhynchospora latifolia)*, pink sundew (*Drosera capillaris*), water sundew *(Drosera intermedia)*, fleabane (*Erigeron vernus)*, pipewort (*Eriocaulon* spp.), yellow fringed orchid *(Platanthera ciliaris)*, bog buttons *(Lachnocaulon* spp.), umbrella grass *(Fuirena squarrosa)*, blazing star (*Liatris spicatus)*, club moss (*Lycopodium* spp.), cinnamon fern (*Osmunda cinnamomea)*, royal fern (*Osmunda regalis)*, common water dropwort (*Oxypolis filiformis)*, wild bachelor's button *(Polygala lutea)*, milkwort (*Polygala cruciata)*, meadow beauty (*Rhexia alifanus)*, meadow beauty (*Rhexia petiolata)*, yellow meadow beauty (*Rhexia lutea)*, beakrush (*Rhynchospora* spp.), parrot pitcher plant (*Sarracenia psittacina)*, nutrush *(Scleria* spp.), bamboo vine (*Smilax laurifolia)*, goldenrod (*Solidago* spp.), and yellow-eyed grass (*Xyris* spp.).

Seepage Slope– Threatened & Endangered Species observed:
Plants:
- Pine-woods Bluestem (*Andropogon arctatus*) – State Threatened
- Spoon-leaved Sundew (*Drosera intermedia*) – State Threatened
- Panhandle Lily (*Lilium iridollae*) – State Endangered
- Primrose Butterwort (*Pinguicula primuliflora*) – State Endangered
- Yellow Fringe Orchid (*Platanthera ciliaris*) – State Threatened
- Fernald's Pogonia (*Pogonia (Cleistes) bifaria*) – State Threatened
- White-top Pitcher Plant (*Sarracenia leucophylla*) – State Endangered
- Parrot Pitcher Plant (*Sarracenia psittacina*) – State Threatened
- Gulf Purple Pitcher Plant (*Sarracenia rosea (S. purpurea*)) – State Threatened

Animals: None directly observed

Basin Swamp (FLUCCS# 617 – Mixed Wetland Hardwoods)
(NWI Classification – Palustrine, Freshwater Forested/Shrub Wetland)
Alternative 1 = 8.92 acres
Alternative 2 = 8.92 acres

Basin swamps are wetland plant communities characterized by long periods of inundation punctuated by infrequent dry periods. These areas are depressions in a relatively flat landscape and are dominated by a variety of canopy, subcanopy, and shrub species such as black titi, pond cypress, swamp bay (*Persea palustris*), swamp tupelo (*Nyssa biflora*), sweetbay magnolia (*Magnolia virginiana*) and slash pine. The basin swamps within the alignment are fire suppressed. Frequently, the groundcover coverage is sparse and diversity is low, which is probably a result of intense competition from growth of woody species.

Basin Swamp – Plant species observed:
The woody species found in the alignments include the following: sweet pepperbush, black titi, white titi, sweet gallberry, odorless bayberry, fetterbush, slash pine, pond cypress, swamp black gum *(Nyssa sylvatica var. biflora,)* and sweetbay *(Magnolia virginica).* Groundcover species include: longleaf threeawn *(Aristida palustris), sedge*, centella, panic grass *(Dichanthelium scabriusculum),* fleabane, pipewort, bog buttons, club moss, royal fern, marsh fleabane *(Pluchea* spp.*),* beakrush, nutrush, bamboo vine, and yellow-eyed grass.
Basin Swamp– Threatened & Endangered Species observed:
Plants: None directly observed
Animals: None directly observed

Dome Swamp (FLUCCS# 630 – Wetland Forested Mixed)
(NWI Classification – Palustrine, Freshwater Forested/Shrub Wetland)
Alternative 1 = 1.07 acres
Alternative 2 = 0 acres

Dome swamps are wetland plant communities characterized by long periods of inundation and occur in depressions in the landscape that may or may not be associated with other types of wetland systems (they may be isolated wetlands). Dome swamps typically have a partial to entirely closed canopy of cypress, black gum, and sweet bay, which also characterizes the dome swamps in the alignments. The subcanopy consists of cypress, sweet bay, tupelo, and red maple. There is a thick woody shrub understory containing: St. John's wort (*Hypericum chapmanii*), titi, myrtle leaf holly, and fetterbush.

Dome Swamp – Plant species observed:
The canopy species and subcanopy species observed are pond cypress, swamp black gum, sweetbay, sweet gallberry, myrtle-leaf holly (*Ilex myrtifolia),* bayberry (*Myrica heterophylla),* odorless bayberry, wax myrtle, black titi, white titi, red chokeberry *(Photinia pyrifolia),* sweet pepperbush, St. John's- wort *(Hypericum chapmanii),* and fetterbush. Observed groundcover species include: Virginia chain fern (*Woodwardia virginica),* royal fern, cinnamon fern, bamboo vine, poison ivy *(Toxicodendron radicans),* sedge, panic grass, longleaf threeawn, wiregrass, broomsedge (*Andropogon* spp.), pipewort, bog buttons, beakrush, Curtiss' sandgrass *(Calamovilfa curtissii),* and yellow-eyed grass.

Dome Swamp – Threatened & Endangered Species observed:

Plants:
- Pine-woods Bluestem (*Andropogon arctatus*) – State Threatened
- Curtiss' Sandgrass (*Calamovilfa curtissii*) – State Threatened
- Spoon-leaved Sundew (*Drosera intermedia*) – State Threatened
- Small-flowered Meadowbeauty (*Rhexia parviflora*) – State Endangered
- White-top Pitcher Plant (*Sarracenia leucophylla*) – State Endangered
- Parrot Pitcher Plant (*Sarracenia psittacina*) – State Threatened
- Gulf Purple Pitcher Plant (*Sarracenia rosea*) – State Threatened

Animals: None directly observed

Bottomland Forest (FLUCCS# 615 – Streams and Lake Swamps (Bottomland)) (NWI Classification – 1) Palustrine, Freshwater Forested/Shrub Wetland & 2) Riverine)
Alternative 1 = 18.51 acres
Alternative 2 = 18.51 acres
Bottomland forests are wetland plant communities that typically connect to riverine communities. The bottomland forests in the alignments surround both the Blackwater River and Clear Creek, which are both blackwater streams that drain into the Pensacola Bay. Because of the nature of the Blackwater River system, these plant communities in the alignment differ from many other bottomland forest systems because of the low mineral content and acidic water chemistry. These systems have many similarities with seepage slope/wet prairie and dome swamp systems throughout the floodplain.

Bottomland Forest – Plant species observed:
The canopy species and subcanopy species observed are pond cypress, swamp black gum, slash pine, Atlantic white cedar (*Chamaecyparis thyoides)*, sweetbay, southern magnolia *(Magnolia grandiflora),* dahoon *(Ilex cassine),* sweet gallberry, myrtle-leaf holly, bayberry, odorless bayberry, wax myrtle, black titi, white titi, red chokeberry, sweet pepperbush, St. John's- wort, fetterbush, St. John's- wort (*Hypericum galioides)*. Observed groundcover species include: Virginia chain fern, royal fern, cinnamon fern, poison ivy, spikegrass *(Chasmanthium* spp.), sedge, panic grass, longleaf threeawn, wiregrass, broomsedge, pipewort, bog buttons, beakrush, and yellow-eyed grass.

Bottomland Forest – Threatened & Endangered Species observed:
Plants:
- Spoon-leaved Sundew (*Drosera intermedia*) – State Threatened
- Panhandle Lily (*Lilium iridollae*) – State Endangered
- Primrose Butterwort (*Pinguicula primuliflora*) – State Endangered
- Yellow Fringe Orchid (*Platanthera ciliaris*) – State Threatened
- Fernald's Pogonia (*Pogonia* (*Cleistes*) *bifaria*) – State Threatened
- White-top Pitcher Plant (*Sarracenia leucophylla*) – State Endangered
- Parrot Pitcher Plant (*Sarracenia psittacina*) – State Threatened

Animals: None directly observed

Within the two alignment alternatives, there are a variety of wetland plant communities with various hydroperiod requirements. In some areas disturbances such as silviculture, residential development, commercial development, roadways, and other human activities have altered the habitats to a point where there is no natural habitat remaining for T&E species. Throughout the alignments, there are sections where plant communities remain intact allowing for some T&E plant species to thrive. Critical habitat units for the Gulf sturgeon and reticulated flatwoods salamander were identified in the alignment area although no individuals of either

species were observed during the field surveys. There were no federally listed threatened or endangered plant species observed. The upland areas that remain undeveloped are primarily sandhill plant communities. These areas are modified (pine plantations) and are fire suppressed, which has allowed the growth of a woody understory and the shading of herbaceous groundcover species. The effects of fire suppression have lowered the habitat suitability of this plant community for gopher tortoises; however, a number of potentially occupied gopher tortoise burrows were identified within the alignment area during the survey (see **Appendix G**). A total of 12 state listed plant species were found during field surveys.
Five natural ecological communities were observed within the alternatives (Sandhill, Floodplain Swamp, Basin Swamp, Dome Swamp, and Seepage Slope/Wet Prairie).

Sandhill – Threatened & Endangered (T&E) species observed include the following plants: State Endangered (or Threatened) Hairy Florida wild indigo (*Baptisia calycosa* var. *villosa*); and the following State Threatened Animals: Gopher tortoise (State Threatened).
Seepage Slope – T&E species observed include the following state threatened plants: Pine-woods Bluestem (Andropogon arctatus), Spoon-leaved Sundew (Drosera intermedia), Yellow Fringe Orchid (Platanthera ciliaris), Fernald's Pogonia (Pogonia (Cleistes) bifaria), Parrot Pitcher Plant (Sarracenia psittacina) and Gulf Purple Pitcher Plant (Sarracenia rosea (S. purpurea)); as well as the following state endangered plants: Panhandle Lily (Lilium iridollae), Primrose Butterwort (Pinguicula primuliflor and White-top Pitcher Plant (Sarracenia leucophylla). No T&E animal species were observed.
Basin Swamp – No T&E species were observed.
Dome Swamp – T&E species observed include the following state threatened plants: Pine-woods Bluestem (Andropogon arctatus), Curtiss' Sandgrass (Calamovilfa curtissii), Spoon-leaved Sundew (Drosera intermedia), Parrot Pitcher Plant (Sarracenia psittacina), and Gulf Purple Pitcher Plant (Sarracenia rosea); as well as the following state endangered plants: Small-flowered Meadowbeauty (Rhexia parviflora) and White-top Pitcher Plant (Sarracenia leucophylla). No T&E animal species were observed.
Bottomland Forest – T&E species observed include the following state threatened plants: Spoon-leaved Sundew (Drosera intermedia), Yellow Fringe Orchid (Platanthera ciliaris), Fernald's Pogonia (Pogonia (Cleistes) bifaria) and Parrot Pitcher Plant (Sarracenia psittacina); as well as the following state endangered plants: Panhandle Lily (Lilium iridollae), Primrose Butterwort (Pinguicula primuliflora) and White-top Pitcher Plant (Sarracenia leucophylla). No T&E animal species were observed.

Impacts to the T&E plant species documented during the field survey will be avoided to the maximum extent practicable since they are located primarily in the floodplains of the Blackwater River and Clear Creek. The floodway and open water of these waterbodies will be bridged and it is anticipated that the T&E plant species will be avoided during construction. State-listed plants exist in the project area since suitable habitat areas occur based on habitat mapping and field surveys. Pedestrian searches of these habitat areas were conducted for each state listed species. The FWC, Florida

Department of Agriculture and Consumer Services (DACS) and the Endangered Plant Advisory Council (EPAC) are being notified that FDOT as owner is allowing for salvaging by others of affected protected plants on this project prior to construction in accordance with state law (Chapter 581.185, Florida Statutes), pending their receipt of the appropriate permits. It is our conclusion that protected plants potentially occurring within the project corridor will be impacted and may be salvaged in accordance with state law (Chapter 581.185, F.S.).

No coastal, marine, or estuarine habitat will be directly impacted by the proposed project, therefore, the project would have no effect to the following species: Piping Plover (*Charadrius melodus*), loggerhead (*Caretta caretta*), hawksbill (*Eretmochelys imbricata imbricata*), green sea turtle (*Chelonia mydas*), leatherback (*Dermochelys coriacea*), and Kemp's ridley (*Lepidochelys kempii*).

The following Federally listed Wildlife have a potential for involvement in this project:

Gulf sturgeon - The Gulf sturgeon is federally and state listed as a threatened species. The Gulf sturgeon is a subspecies of the Atlantic sturgeon (*A. oxyrhynchus*), which can be found along the Florida coast. The Gulf sturgeon is an anadromous species (migrates upriver from the sea to spawn in freshwater) and populates both freshwater and marine environments. The Gulf sturgeon is a slow-maturing fish, with females requiring 8 to 12 years to reach sexual maturity, while males take 7 to 10 years. Most adult feeding occurs along the Gulf of Mexico and its estuaries. Being a bottom-feeding species, they primarily eat invertebrates, including brachiopods, insect larvae, mollusks, worms, and crustaceans. As part of the sturgeon lifecycle, the species is known to acclimate to fluctuating salinity levels through osmoregulation as early as age one. The primary constituent elements for Gulf sturgeon consist of: abundant food items, riverine spawning sites, riverine aggregation areas, flow regime, water quality, sediment quality, and appropriate migratory pathways. The 5-year status review (USFWS, 2009) estimates the number of sturgeon in the Yellow River population at approximately 1,500 individuals in 2003; however, USFWS still recommends managing the Gulf sturgeon as a threatened species. The Blackwater River is designated as Gulf sturgeon critical habitat by the USFWS and is traversed by both alternatives 1 and 2. The project "may affect, but is not likely to jeopardize the continued existence of the Gulf sturgeon or destroy or adversely modify its designated critical habitat". See **Appendix I** for USFWS formal consultation coordination and determination.

Reticulated Flatwoods Salamander - The RFS is one of the smaller mole salamanders and is federally and state listed as an endangered species. The RFS is a fossorial (burrowing) species that breeds within ephemeral wetlands in the fall. After the eggs are laid, the wetlands must flood within 2-3 days otherwise the eggs will desiccate. By March or April the adult RFS leave the breeding ponds, but are hard to locate since they are fossorial. Adult salamanders are nocturnal and carnivorous, opportunistic feeders, eating primarily earthworms and

arthropods. The RFS requires fire-maintained, mesic pine uplands containing wiregrass and longleaf pine and isolated, depressional wetlands that flood in the fall. The primary constituent elements for this species include: breeding habitat, non-breeding habitat, and dispersal habitat. The RFS-2, sub-unit A critical habitat unit is traversed by both Alternatives 1 and 2. The current population status within the critical habitat unit is unknown. Due to the presence of the critical habitat, the observed appropriate habitat within the alignments, and the efforts proposed by FDOT to minimize direct impacts to the critical habitat, the proposed project "may affect, but is not likely to jeopardize the continued existence of the reticulated flatwoods salamander or destroy or adversely modify its designated critical habitat". See **Appendix I** for USFWS formal consultation coordination and determination.

Eastern Indigo Snake - The eastern indigo snake is listed by both the USFWS and the FWC as threatened. This species is known to occupy a broad range of habitats from scrub and sandhill communities, to wet prairies and mangrove swamps. The eastern indigo snake seems to be more strongly associated with high, dry, well-drained sandy soils, closely paralleling the sandhill habitat preferred by the gopher tortoise. Gopher tortoise burrows and other subterranean cavities are commonly used as dens and for egg laying. There is a moderate potential for the eastern indigo snake due to the amount of undeveloped land within the alignments. The USFWS Standard Measures for the Eastern Indigo Snake, which specify education of the construction contractor concerning avoidance of eastern indigo snakes and post construction reporting, will be implemented during the construction phase. Due to the implementation of the USFWS measures the project "may affect, but is not likely to adversely affect" the eastern indigo snake.

Wood Stork - The wood stork is listed as endangered by both the USFWS and the FWC. The wood stork is a highly colonial species usually nesting in large colonies and feeding in flocks. Nests are frequently located in trees or in man-made structures surrounded by water. They feed in freshwater marshes, narrow tidal creeks, flooded tidal pools, and roadside ditches. Particularly attractive feeding sites are depressions in marshes or swamps where fish become concentrated during periods of falling water levels. There are no wood stork rookeries documented in proximity to the alignments (FWC, 1999). The closest rookery is 12 miles away (FWC, 1999) and the closest Core Foraging Area (CFA) is 142 miles east of the alignments in Gadsden County (FWC, 2010). The project will have "no effect" on the wood stork.

Red-cockaded Woodpecker - The red-cockaded woodpecker (RCW) is federally endangered and a state species of special concern. The RCW is a small woodpecker inhabiting open, mature pine woodlands, generally longleaf pine flatwoods in north and central Florida. RCWs nest and forage in mature pine flatwoods and their distribution is tied to remaining areas of old-growth pine forests. RCWs are non-migratory and maintain territories year-round. Populations are small and highly fragmented and are found primarily on federally managed lands with some state-owned and private lands supporting smaller populations.

There are no documented red-cockaded woodpecker populations within the vicinity of the alignments (FWC, 2005). The alignments lack mature pine trees that would be suitable for red cockaded woodpecker populations. The project will have "no effect" on the red-cockaded woodpecker.

Freshwater Mussels - Several species of freshwater mussels are federally and state listed as threatened and endangered throughout north Florida and eight additional species were recently listed under the Endangered Species Act (ESA). The Blackwater River and Clear Creek are not listed as critical habitat for any currently listed or proposed mussel species and there are currently no freshwater mussel species listed as threatened or endangered in Santa Rosa County. The proposed critical habitat is within adjacent watersheds upstream of the alignments. The project will have "no effect" on freshwater mussel species.

Florida Manatee - The Florida manatee is listed as endangered by both the USFWS and the FWC. The Florida manatee is a large (182 to 400 lbs., up to nine feet long), gray, nearly hairless, walrus-like aquatic mammal. The home range for the Florida manatees is generally the southeastern United States, although some individuals have been documented to travel north to Massachusetts and west to Texas. Manatees occur within Santa Rosa County according to the USFWS and FWC; however, there is no critical habitat within the vicinity of the alternative alignments. This species was not located during the field surveys and it is unlikely that manatees would travel upstream into the Blackwater River in the vicinity of the project. The USFWS "Standard Manatee Conditions for In-Water Work" will be followed during construction and, therefore, the project "may affect, but is not likely to adversely affect" manatees.

The following State listed Wildlife have a potential for involvement in this project:

Gopher Tortoise - The gopher tortoise is a state listed threatened species, which generally lives in sandy, well-drained soils with herbaceous plants available for foraging. Gopher tortoises dig burrows in soil for shelter and for laying eggs. The burrow may also become occupied by commensal species, including the Florida pine snake, eastern indigo snake, and the gopher frog. There were approximately 55 gopher tortoise burrows observed within the alignment areas. Overall, there are 22 potentially occupied gopher tortoise burrows in the vicinity of Alternative 1 and 35 potentially occupied gopher tortoise burrows in the vicinity of Alternative 2. Although there are potentially occupied burrows present, an additional 100% survey will be required prior to obtaining a relocation permit.

Avoidance of gopher tortoise take is mandatory. In order to avoid impacts to gopher tortoise individuals, relocation permitting will be required. An additional field survey must be conducted at least 90 days prior to relocation permitting. Any gopher tortoise burrow located within 25 feet of an area proposed for development must be relocated according to FWC requirements. The FDOT will commit to perform pre-construction surveys for gopher tortoises and secure a relocation permit from the FWC for gopher tortoise burrows, as necessary. If federally listed commensals are located during the burrow surveys, separate

coordination/permits will be required from USFWS during relocation. Since tortoises and commensal species will be relocated to suitable habitat, the project "may affect, but is not likely to adversely affect" the gopher tortoise.

Florida Gopher Frog - The Florida gopher frog is commensal with the gopher tortoise and is listed by the FWC as a species of special concern. No Florida gopher frogs were previously documented within or adjacent to the alignments and none were observed during field surveys. Occurrence of this species within the alignments is possible due to the presence of both gopher tortoise burrows and suitable habitat within and near the alignments. The FWC requires coordination for commensal species. Since tortoises and commensal species (when required) will be relocated to suitable habitat, the project "may affect, but is not likely to adversely affect" the Florida gopher frog.

Southeastern American Kestrel - The southeastern American kestrel is a state threatened falcon species found in open pine habitats, sandhills, prairies and pastures. The species utilizes tall dead trees or utility poles for cavity nest sites. The species is a year-round resident; the subspecies that breeds in Florida is listed while the wintering northern migrant is not listed. There were no observed or documented kestrels within the alignments. The project will have "no effect" on the kestrel.

Wading Birds - The 1) tricolored heron (*Egretta tricolor*), 2) snowy egret (*Egretta thula*), 3) white ibis (*Eudocimus albus*), and 4) little blue heron (*Egretta caerulea*) are state listed species of special concern. These wading birds feed in permanently and seasonally flooded wetlands, marshes and swamps. They are generally year-round residents and nest in low woody vegetation including willow, cypress, and woody thickets. Because of the potential for wetland impacts, the project "may affect, but is not likely to adversely affect" wading birds.

Florida Black Bear - The black bear was recently delisted by FWC and is no longer a threatened species. While the Florida black bear was not observed during the field survey, it should be noted that portions of the alignments are within the secondary range of a Florida black bear population (Eglin). A wide variety of forested communities are needed to support the varied seasonal diet of the bears. The FWC has identified eight areas of Florida black bear populations with each one broken into primary and secondary ranges. GIS data obtained from the Florida Geographic Data Library does not indicate any bear road-kills in the vicinity of the alternatives. The project will have "no effect" on this species.

Additionally, the Bald Eagle is protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The bald eagle is a water-dependent species that is found near coastal areas, bays, rivers, lakes, or other bodies of water which provide concentrations of food sources. Suitable habitat is present throughout the project area, but bald eagle nests have not been observed along the Blackwater River, Clear Creek, or any of the wetlands associated with these waterbodies. Active eagle nests are present on the eastern shoreline of Escambia Bay approximately eight miles

west of Milton. No nests would be disturbed during construction activities. Prior to any construction, a site-specific survey would be conducted to determine the presence or absence of bald eagle nests in or near the construction area. It is understood that other than the recent guidance issued by US Fish and Wildlife Service (USFWS) relating to potential involvement with bald eagles, that compliance with the Florida Fish and Wildlife Conservation Commission's (FWC) Bald Eagle Management Plan and Bald Eagle Permitting Guidelines are also required. The proposed project would have minimal effects on river hydraulics, the river floodplain, flow patterns, or on eagle food sources. It is anticipated that the project will not affect the bald eagle.

As previously mentioned, both project alternatives traverse RFS critical habitat unit RFS-2, Subunit A and the Blackwater River which is critical habitat for the Gulf sturgeon in the same location (see **Appendix G**). The intent of critical habitat is the protection of the essential physical and biological features of the landscape in an appropriate spatial arrangement and quantity that is needed for a species to survive and reproduce. Critical habitat does not affect private landowner actions but does affect Federal agency actions, authorizations, and funded projects. Under the ESA, Federal agencies must protect the characteristics of the designated areas and avoid destruction or adverse modification. Designated critical habitat is defined as a specific area within the geographic area occupied by a federally listed species at the time it is listed. Critical habitat contains physical and biological features that are considered essential to the conservation of the species and require special management considerations for protection. Designated critical habitat can also include specific areas outside the geographic area occupied by a species at the time of federal listing if the area is determined to be essential to the conservation of the species.

In an e-mail dated May 16, 2012, USFWS responded with their comments and findings to the ESBA Report. The USFWS agreed with the determination of "may affect, not likely to adversely affect" the eastern indigo snake (*Drymarchon corais couperi*) and the Florida manatee (*Trichechus manatus latirostris*) since the standard construction guidelines for both species would be followed. A determination of no effect was made for the Red-cockaded Woodpecker (*Picoides borealis*) and the Wood Stork (*Mycteria americana*) since appropriate habitat was not present within the project area. A determination of no effect was made for freshwater mussels since the Blackwater River and Clear Creek are not listed as critical habitat for any currently listed or proposed mussel species and there are currently no freshwater mussel species listed as threatened or endangered in Santa Rosa County. However, they did not agree with the determination of effects for the Gulf sturgeon and the RFS. On August 27, 2012 the USFWS recommended that FDOT initiate formal consultation for the potential impacts to the RFS critical habitat unit 2, subunit A (RFS2A) and the Gulf sturgeon. A separate Endangered Species Biological Assessment dated March 2013 was prepared for this project and sent to FDOT for their review and concurrence of effect of determinations. A Biological Opinion dated December 2013 was prepared by the USFWS which concurred the above effects for the eastern indigo snake, Florida manatee, Red-cockaded Woodpecker, Word Stork and freshwater mussels (**Appendix I**).

In order to minimize impacts to the Gulf sturgeon critical habitat, the Blackwater River and associated floodway on both sides of the river will be bridged. Minimization of impacts to the RFS and critical habitat can be accomplished through location of the alignment to minimize intrusion into the specific habitat areas. The alignments were shifted to roughly parallel the power line easement on the southernmost edge of the critical habitat unit, which is already a disturbed linear feature traversing this area. The critical habitat area will be bridged to minimize impacts and maintain connectivity.

The proposed bridges will be composed of Florida I-45 Beams, resulting in spans of approximately 98 feet and 90 feet between pile bents for the bridges over the Blackwater River and Clear Creek, respectively. The pile bents will consist of 24" by 24" pre-stressed piles that are located approximately six feet apart. The southbound lanes will be wider (56 feet) and will need nine pilings per pile bent, while the northbound lanes (43 feet) will need eight.

Two pile bents with 17 pilings would be installed within the Blackwater River. All construction methods will be consistent with the "Construction Special Provisions – Sturgeon Protection Guidelines". The only "in water" construction work associated with the bridge is the piling installation. In-water work is defined by any work below the water line and does not include the use of boats in the river or the placement of any material above the water line. During in-water work, pilings will be installed after a "ramp-up" procedure that will alert any Gulf sturgeon within the vicinity of the construction site. These construction restrictions and construction techniques will limit the potential that Gulf sturgeons are exposed to harm, harassment or take during construction. See **Appendix I** for other recommendations. The only proposed, permanent and direct impact to the Gulf sturgeon critical habitat are associated with the bridge support pilings, which total approximately 68 square feet (0.0016 acres) of the approximately 14.7 acres of critical habitat within the action area. There are approximately 1,730 river miles of designated Gulf sturgeon critical habitat. The total length of the bridge is approximately 5,570 linear feet with approximately 180 linear feet over the Blackwater River. The footprint of the bridge over the Blackwater River is approximately 0.43 acres. Direct discharge from the bridge deck will be collected and treated in permitted stormwater ponds prior to any discharges. The Blackwater River is an OFW, which requires specific BMPs during construction and stormwater design to prevent degradation to the river. The increased BMP and stormwater requirements will minimize impacts to the Gulf sturgeon. Construction staging areas will be located outside the floodplain. The following considerations should be noted:

1. The SR 87 project is not likely to adversely affect the river aggregation area, Cooper's Basin, since the project is located approximately two miles upstream from the basin and due to the implementation of erosion control measures and OFW standards to prevent stormwater runoff.
2. Food and prey items are not likely to be impacted since the sturgeon does not feed within the Blackwater River and the implementation of OFW standards will minimize impacts to water quality.
3. The Blackwater River is not a known spawning site, however, spawning may occur upstream of the SR 87 project site.

4. The SR 87 project is not likely to result in any modification to the overall flow regime within the Blackwater River. The site will be spanned with a minimum number of pilings and columns installed within the river and the river will ultimately retain the same flow regime. The river will not be permanently or temporarily impounded.
5. Water quality within the Blackwater River is not likely to be adversely impacted as a result of the implementation of OFW standards. A minimum of in water work within the Blackwater River will occur and the floodway will be bridged. Stormwater runoff will be captured and treated prior to discharge.
6. Sediment quality within the river is not likely to be adversely impacted by the project. The site will be maintained to OFW standards, which will result in minimum runoff or discharge to the river.
7. The SR 87 project is not likely to adversely impact the migratory pathway within the Blackwater River. The site will be spanned with a minimum number of pilings and columns installed within the river and the river will ultimately retain the same flow regime. The river will not be permanently or temporarily impounded.

Approximately 38 pile bents (19 bents for each section) with a total of 646 pilings would be used to support the bridge within the RFS critical habitat unit. In the location of the bridges, clearing and grubbing will be limited to cutting vegetation to the ground surface. Root raking will only be used in areas where piling cap supports are anticipated, which will minimize impacts to the floodplain wetlands that support the Blackwater River and the RFS critical habitat unit. Replanting the areas beneath the bridge will not be necessary since it is anticipated that the existing seedbank will provide adequate cover and stabilize the soil surfaces. During any phase of construction, best management practices will be used to minimize potential impacts to water quality. See the ESBA prepared for this project for details on proposed construction activities. The potential direct impacts to the 162 acre RFS2A critical habitat unit are limited to the 646 bridge support pilings, which total approximately 2,720 square feet (0.06 acres). The total length of the bridge is approximately 5,570 linear feet with approximately 1,663 linear feet over the critical habitat unit. The footprint of the project alignment through the mapped critical habitat unit is approximately 8.3 acres (5% of the overall critical habitat unit) and is comprised of approximately 5.58 acres of upland areas (non-breeding habitat) that are disturbed by existing road, power line ROWs, and pasture and approximately 2.72 acres (breeding and dispersal habitat) of low-moderate RFS potential wetlands. Direct impact to individuals using the wetlands/ponds can be minimized by restricting work in these wetlands during RFS breeding season, which typically extends from October to February. Construction of the approximately 5,570 linear foot bridge over the RFS2A critical habitat unit will minimize any potential direct project effects.

Indirect effects may result from normal bridge operation and maintenance procedures, but will be minimized using best management practices. Effect determination for the Gulf sturgeon, the RFS and the respective critical habitats are detailed in the formal consultation documentation within this document (**Appendix I**).

Both alignments cross the Blackwater River and its floodway area. In order to minimize direct, indirect, and long-term impacts, the wetlands delineated within the floodway area and the river will be bridged. At the start of the bridge, a retaining wall will be constructed and the work on the bridge will continue from the retaining wall. The maximum amount of stormwater possible, given the land elevation at the start of the bridge south of the river, will be captured from the roadway surface and conveyed to stormwater ponds located to the north and south of the floodplain area to minimize runoff into the river or the wetlands below the bridge. The stormwater ponds will provide increased capacity to meet FDEP OFW discharge requirements. Pilings will be placed to limit direct impacts to T&E species, whenever possible.

Additionally, both alternatives cross Clear Creek and its floodplain area. In order to minimize direct, indirect, and long-term impacts, the open water portion of the creek and a portion of the floodplain will be bridged. The primary goal of the bridge is to reduce upstream flooding and to allow the creek to flow unobstructed to receiving waterbodies. The bridge over Clear Creek will help to minimize impacts to the creek bed, which provides habitat for many aquatic organisms. Stormwater will be captured from the roadway surface and conveyed to stormwater ponds located to the north and south of the floodplain area to minimize runoff into the creek or the wetlands below the bridge. The bridge over Clear Creek will be 180 feet long, 99 feet wide (in two separate sections), and 20.7 feet above the ground. The canopy and some shrubs will be impacted long term by the bridges and groundcover will be impacted during construction. The height and width of the proposed bridges are adequate to provide light penetration to the ground and allow for groundcover regrowth and survival.

5.4.11 Essential Fish Habitat

The Magnuson-Stevens Fishery Conservation and Management Act requires federal agencies to consult with the National Marine Fisheries Service (NMFS) on actions that are authorized, funded, or undertaken that may adversely affect Essential Fish Habitat (EFH). EFH evaluations are also required as a component of the PD&E process in accordance with Part 2, Chapter 11 of the PD&E Manual.

EFH is defined as waters and substrate necessary for fishery species to spawn, breed, forage, and grow to maturity. An adverse effect would be any impact that reduces the quality and/or quantity of EFH. Consultation for EFH is triggered when an action may adversely affect EFH; otherwise, no consultation is required. A review of NMFS's EFH Mapper (http://sharpfin.nmfs.noaa.gov/website/EFH_Mapper/map.aspx) indicates that EFH is not present in the project area. The nearest mapped EFH is located approximately 3.1 miles downstream from the project area and corresponds with the approximate limits of tidal influence. This project is not located within, and/or will not adversely affect areas identified as Essential Fish Habitat; therefore, an Essential Fish Habitat consultation is not required.

Any potential downstream impacts would be minimized through the use of bridges and erosion control measures. NMFS reviewed the proposed location for Alternatives

1 and 2 as part of the programming screen of the ETDM process (see ETDM comments in Appendix B) and indicated that the project would not directly impact NMFS trust resources. In addition, due to the OFW requirements, the stormwater systems will be designed to prevent degraded waters from reaching estuarine and marine habitats. In summary, the SR 87 project should not have an adverse effect on EFH.

5.4.12 Farmlands

Conducting a GIS analysis of Prime Farmland (using USDA-NRCS data) and Important (Unique) Farmland Analysis (using 2004 NWFWMD data) has resulted in the determination that there are Prime Farmland soils within the Project Area, as well as areas of Farmlands with Local Importance. Impacts to Agricultural lands are primarily restricted to improved and unimproved pasture. Since the impact to Prime Farmland is small, the NRCS assigned a minimal impact rating for both Alternative 1 and 2. However, approximately seven acres of Prime Farmland is impacted in Alternative 1 and NRCS did request the farmlands assessment process be completed. This process is a requirement of the Farmland Protection Policy Act (FPPA) of 1984. Because this is a Corridor type project, Form NRCS-CPA-106 was completed and submitted to NRCS along with the GIS files of both Alternatives 1 and 2. On July 19, 2013, Rick Robbins, Soil Scientist for USDA-NRCS, sent the project team comments on the NRCS findings. The following table is a summary of his findings. **Appendix H** includes Form NRCS-CPA-106 with the NRCS information; along with the location maps of the farmland areas. They have determined that there are delineations of Farmland of Unique Importance and Farmland of Local Importance within the scope of the project. Based on Part 2, Chapter 28 of the PD&E manual, sites receiving a total NRCS calculated score of less than 160 points on the Farmland Conversion Impact Rating shall be given minimal level of consideration for protection, and no additional sites are to be evaluated. Both alternatives scored significantly less than 160 points, at 59 and 63, respectively. It should be noted that 6.8 acres of prime and unique farmlands were identified within Alternative 1. However, Alternative 2, the chosen alternative, has no impacts to Prime and Unique Farmlands.

Table 5.14: Summary of Farmland Impacts

Land Information	Alternative 1 Impacts	Adjusted Alternative 2 Impacts
A. Total Acres Prime And Unique Farmland Impacts	6.8 Acres	0.0 Acres
B. Total Acres Statewide And Local Important Farmland	45.8 Acres	46.9 Acres
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	0.00001%	0.00001%
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	64.7%	61.6%

5.4.13 Construction

Existing Roadways/Intersections: The SR 87 Connector is primarily new construction of a new roadway facility, and disruptions will be limited to the crossings and connections with existing facilities. The connection points for Adjusted Alternative 2 are limited to:

- SR 87 South at US 90, and
- SR 87 North (north of Seasons Seasons Drive)

The crossings/intersections for the SR 87 Connector are limited to:

- Bobby Brown Road
- East Milton Road
- Opportunity Drive
- Pat Brown Road
- Munson Highway
- Winston Brown Road
- Trail Ride North (Adjusted Alternative 2)
- Seasons Drive (Adjusted Alternative 2)

Existing Roads that would merge into the new SR 87 Connector include:

- A portion of East Milton Road
- Judicial Way
- Eagles Way (dirt road)

Intersection analysis was performed at 13 intersections for each of the two Build Alternatives. The results are summarized in Table 7 in the DTTM (Design Traffic Technical Memorandum)**.** In 2035, two intersections fail under Alternative 1, and one intersection fails under Adjusted Alternative 2. The analysis indicates that for Alternative 1 the following intersections may need to be signalized if the signal warrants are met:

- SR 87N and SR89N/Oriole Street
- SR 87 Connector and Munson Highway

Adjusted Alternative 2 only requires the signalization of the intersection of SR 87 Connector and Munson Highway because Adjusted Alternative 2 continues west of SR87N and connects with SR 89N. New signals are being recommended at the new intersections for the SR 87 Connector and SR 87N for both alternatives. Please see Figures 12 and 13 in the DDTM for visualization of the recommended signals for each alternative.

The intersection analysis also indicates that SR 87 Connector intersections with US 90 and SR87N for both Alternative 1 and Adjusted Alternative 2 will operate at LOS C or better by 2025 and LOS D or better by 2035 during the AM and PM peak hours. The intersection of SR 87 Connector and Munson Highway will fail as unsignalized, but will operate at LOS B for both alignments in 2035 when signalized. Signal warrant analyses will be performed during the design phase with updated information on layout and traffic, and preferably using HCM 2010 procedures.

A sensitivity analysis was performed to evaluate the impacts of a future Wal-Mart store that may be located near the intersection formed by Alignment 1 of SR 87 Connector and SR87N. A traffic concurrency study performed in 2006 to support a land use amendment indicated that the Wal-Mart store will generate up to 315 new directional PM peak hour trips. No updated traffic study was performed since 2006, however, County staff indicated that Wal-Mart requested in January 2012 to extend the development order until November 2014. Wal-Mart proposed location places it in TAZ 519 (traffic analysis zone). Zonal data for TAZ 519 was reviewed for the 2006 validated and 2035 Cost Feasible NWFRPM models. Whereas residential units are anticipated to double between 2006 and 2035, employment will only increase by 100 workers for the entire TAZ. Therefore, the Wal-Mart store has not been accounted for in the Cost Feasible model. To examine the future traffic impacts of the proposed Wal-Mart store, the net increase in peak hour trips estimated in the 2006 concurrency study were overlaid in both directions onto 2035 future traffic projections at the two nearest intersections and then a SYNCHRO (software program utilized in traffic analysis, optimization, and simulation applications) analysis was performed. The analysis indicated that these intersections would still operate at acceptable LOS D or better in 2035 after accounting for Wal-Mart traffic that was estimated in the 2006 study. Please refer to **Appendix C** for the DTTM which contains the complete analysis.

Construction Activities: Construction of the roadway may require limited excavation of unsuitable material and use of materials such as lime rock, asphaltic concrete, and portland cement concrete. The removal of structures and debris will be in accordance with local and state regulatory agencies permitting this operation. During construction, the contractor will utilize Best Management Practices (BMPs) which will minimize any sedimentation and erosion impacts to areas outside of the limits of construction. BMPs may include silt fence, hay bales, turbidity barriers, and ditch blocks. These are standard practices outlined in the Florida Stormwater Management Plan. This project will require an NPDES permit and submission of a Stormwater Pollution Prevention Plan. The contractor is also responsible for their methods of controlling pollution on haul roads, borrow pits, other material pits, and areas used for disposal of materials from the project. Temporary erosion (water quality) control features as specified in Section 104 of the FDOT Standard Specifications for Road and Bridge Construction, latest edition, will consist of measures such as temporary grassing, sodding, mulching, sandbagging, slope drains, sediment basins, sediment checks, artificial coverings, and berms. For the residents living along the SR 87 Connector, some of the materials stored for the project may be displeasing visually; however, this is a temporary condition and should pose no substantial problem in the long term.

Construction activities may generate temporary increases in air pollutant emissions. Such emissions will be controlled in accordance with the FDOT Standard Specifications for Road and Bridge Construction, as directed by the FDOT Project Manager. Installation of the foundations for the large span bridge at the Blackwater River may result in noise and/or vibration impacts during construction. Such impacts

may also occur during general construction activities such as equipment operations and soil compaction.

Although ***Section 335.02*** of the ***Florida Statutes*** exempts FDOT from compliance with local noise and vibration ordinances, it is FDOT's policy to follow the requirements of local ordinances to the extent that it is reasonable. Noise and vibration impacts from on-site activities and from off-site activities such as traffic detours, haul routes and other off-site operations will be controlled in accordance with the FDOT Standard Specifications for Road and Bridge Construction, as directed by the FDOT Project Manager. Following is a summary of the estimated construction length in days for the full build out typical section by Noise Sensitive Area:

Table 5.15: Summary of Construction Noise

Noise Sensitive Area	Roadway Length (LF)	Construction Length (Days)
1	7,500	278
2	8,900	247
3	7,200	225
4	2,100	58
5	5,000	156

General specifications include noise screening guidelines for stationary equipment, exhaust noise, noise from loose equipment parts, and excessive tailgate banging. Also, noisy equipment should only be used when necessary and should not be operated when not being used for construction activities. Particularly noisy construction activities should be scheduled during daytime hours. If possible, several noisy operations should be scheduled concurrently to take advantage of the fact that the combined noise levels produced may not be significantly greater than the level produced if the operations were performed separately and the overall duration of the activities will be significantly reduced. Strategies that may be employed during construction to reduce noise and vibration impacts include locating staging areas and storage yards away from noise sensitive areas where possible and screening these areas from nearby noise sensitive areas when necessary. Haul road traffic can be routed away from areas with noise sensitive populations to reduce noise impacts associated with truck traffic. The FDOT will conduct coordination prior to and during construction that will address noise issues related to construction and how complaints from the public will be handled.

The contractor will be directed to specifically adhere to Section 455-1 of the Standard Specifications regarding measurement and prevention of vibration impacts to existing structures during roadway construction where applicable.

Although very few businesses will be affected by construction, any access to businesses will be maintained in a practical manner as dictated by the construction phases. Best Management Practices will be implemented in all phases in order to satisfy permit requirements and minimize indirect construction impacts. In addition, the project will include a Traffic Control Plan. The local news media will be notified in advance of road closings and other activities that could excessively inconvenience the community so that persons conducting business in the affected area can plan

travel routes in advance. Signs will be used as appropriate to provide notice of pertinent information to the public. Signs providing the name, address, and telephone of a Department contact person will be displayed on-site to assist the public in obtaining immediate answers to questions and logging complaints about project activity.

5.5 Cumulative Impacts

Under NEPA, direct, indirect and cumulative effects are evaluated. Title 40, Section 1508.7 and 1508.8, Code of Federal Regulations (CFR) define these as follows:

- ***Direct effects***: Effects caused by the action and occur at the same time and place. These are the effects documented to this point in the EIS.
- ***Indirect effects***: Effects caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. These impacts may occur outside of the area directly affected by the proposed project. Potential indirect impacts include increased noise, traffic, and development
- ***Cumulative impacts:*** Impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts include the effects of future state, local, or private actions that are reasonably certain to occur in the project area.

Projects that include a new roadway, substantial right of way impacts, increased access to undeveloped areas, and/or have direct impacts to listed species should undergo a Cumulative Effects Evaluation (CEE). Cumulative impacts may result in land use changes, increased fragmentation of wildlife habitat, social impacts, etc. In addition, the proposed roadway construction may result in increased wildlife mortality due to collisions with vehicles. Future federal actions that require ESA Section 7 consultations that are unrelated to the proposed project are not considered in the determination of cumulative effects because they require a separate consultation in accordance with Section 7 of the ESA.

As a result, the project team completed an Indirect and Cumulative Effects Evaluation. To effectively determine if there will be a significant change to a resource, the severity of the impact must be reviewed in terms of:

- ✓ Type, quality and sensitivity
- ✓ Location of the project in relation to the resource
- ✓ Duration of the effect (our study reviewed the 2035 design year as the horizon year)
- ✓ Other specific considerations

The definition of significant impact must be a function of both context of the impact to the area and the intensity of the impact, both adverse and beneficial. The FDOT has set guidelines in determining elements that should be part of the CEE. Following is the FDOT guidance:

1. Set Potential Affected Resource Area (PARA)
2. Establish Timeline
3. Summarize existing condition of each affected resource
4. Review impacts
5. Identify other current and reasonably foreseeable future actions and their impacts
6. Discuss cumulative impacts
7. Address mitigation and/or minimization measures

The following table summarizes the resources studied for indirect and cumulative impacts.

Table 5.15 CEE

Resources and Issues Evaluated		*Inclusion in the Cumulative Effects Analysis*	*Potentially Affected Resource Area Factors*
Social and Economic	***Social***	Yes	Census tract information, tax files, demographic distribution, land use
	Economic	Yes	Industrial development plans
	Land Use	Yes	County future land use maps, TPO regional plans, local government information, permits
	Aesthetics	No, Substantial Indirect and Cumulative Effects are not expected	
	Relocation	No, with the selection of Alternative 2, relocation impacts have been minimized.	
	Mobility	Yes	Projects affecting the SR 87 Connector study area
Utility and Railroads	***Utilities***	No, Direct Impacts are expected, though indirect are limited to areas of slight adjustment/relocation of power lines.	
	Railroad	No, Substantial Indirect and Cumulative Effects are not expected	
Cultural and Historical Resources	***Archeological and Historic***	No, Substantial Indirect and Cumulative Effects are not expected. FHWA determined in coordination with SHPO, that the single crossing of the historic linear site did not constitute an adverse effect.	
	Recreation and Parkland	No, Substantial Indirect and Cumulative Effects are not expected. Impacts to the BHST are expected to be beneficial as connectivity to other trails is included in this project.	
	Section 4(f)	No, Substantial Indirect and Cumulative Effects are not expected. Environmental Determination of non-applicability, dated 10-26-2012, stated Section 4(f) does not apply.	
Natural and Physical	***Pedestrian/Bicycle***	No, Impacts with regards to pedestrian/bicycle are expected to be beneficial as a connectivity is improved, and new facilities are incorporated into the new roadway. Note: The Department of Interior, Office of Environmental Policy and Compliance, did request an additional commitment be added to the EIS. This commitment was added and included a statement that John Barrett, Program Manager, Federal Lands and Parks, National Park Service would be contacted during construction to ensure limited disruption in the public's use of the BHST. A detour was also added to the commitments.	
	Air	No, the worst case scenario screening model did not exceed the NAAQS standard.	
	Noise	No, with the realignment of Alternative 2, its noise abatement measures are not needed.	
	Wetlands	Yes	Wetland delineated areas, shading areas, UMAM methodology
	Water Quality	Yes	Basin locations, watershed, floodplains
	Outstanding Florida Waters	No, discussed in Water Quality	
	Contamination	No, with the selection of Alternative 2, contamination impacts have been minimized.	
	Floodplains	Yes	Natural boundaries of floodplain areas.
	Coastal Zone Consistency	No, The project is currently consistent with the Florida Coastal Management Program and will be reevaluated at the permitting stage.	
	Wildlife and Habitat	Yes	Habitat areas, Occurrence information and migration routes, removal of areas of interest to DEP and WMD.
	Essential Fish Habitat	No, EFH areas are not within the project limits. The Natural Marine Fisheries Services reviewed this project and the proposed Alternative 2 location will not directly impact the resource. In addition, the OFW stormwater system requirements will prevent degraded waters from reaching the estuarine and marine habitats. A resource located 3.1 miles downstream will have limited impact due to the use of bridges and erosion control measures. Additional information included in Water Quality.	
	Farmland	No, NRCS assigned impacts to Prime Farmland as Minimal for Alternatives 1 and 2. With the selection of Alternative 2, Prime Farmlands occurring on Alternative 1 are avoided.	

5.5.1 Indirect Impacts

Indirect impacts are defined as those effects caused by the action of the project, but occurring in the future at a more distant location, but still reasonably foreseeable. Indirect impacts may include growth-inducing effects and other effects related to changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems (40 CFR 1508.8 and 50 CFR 402.02). These induced effects are those that would not or could not occur except for the implementation of a project. These actions are often referred to as "but for" actions. The term "indirect impact" is often used interchangeably with the term "secondary impact."

Indirect impacts for wetlands were evaluated during the UMAM evaluation as described in the WER. A number of factors were considered in the UMAM score for each alternative (e.g., introduction of weedy or invasive species, light emissions). These types of impacts would apply to both wetland and upland habitats. Many T&E species located within the proposed roadway are wetland dependent, meaning that they utilize wetlands for at least some portion of their life cycle. Avoidance, minimization, and mitigation measures for these species will reduce indirect impacts to these T&E species.

Other indirect impacts are possible due to increased noise levels, modification of wildlife movement, and impacts to air and water pollutants. Noise levels are likely to increase for areas surrounding the portion of the roadway north of the Blackwater River and east of SR 87N since these areas are primarily agricultural and do not have road related noise in the existing condition. The exact effect of increased noise levels on a particular species is difficult to determine.

Wildlife crossing patterns may be minimally affected by construction of either alternative; however, wildlife movement is currently limited in the location of the proposed alternatives by the Blackwater River, Munson Highway, Whiting Field, and SR 87N. The proposed alternatives may result in additional fragmentation of wildlife movement potential, but there is still adequate land around the proposed roadway likely to remain undeveloped or have no land use changes due to protections in the county's comprehensive plan. The proposed bridges will also allow for habitat connectivity beneath the bridge and will minimize indirect impacts to wildlife movement.

New and existing roadways have the ability to negatively impact waterways and wetlands due to increased runoff that may contain harmful pollutants. The design of both alternatives will take the runoff into consideration and will adhere to State regulatory criteria to avoid and minimize impacts to aquatic systems. The proposed design will include a drainage and stormwater management system that would provide for pretreatment of stormwater runoff prior to discharge into any wetlands, Clear Creek or its tributaries, and Blackwater Creek and its tributaries. Due to the implementation of the stormwater design, indirect impacts to water quality will be minor as a result of either alternative.

5.5.2 Cumulative Impacts

Cumulative impacts result from the total effect of the proposed project when added to other past, present, and reasonably foreseeable future projects or actions (40 Code of Federal Regulations (CFR) 1508.7 and 50 CFR 402.02). As discussed in Section 2 (Purpose of and Need for Action), in the case of the proposed project (which is defined as Alternatives 1 and 2), the purpose and need for a roadway connecting SR 87S with SR 87N is in response to growth and development projects that have already taken place or are reasonably expected to occur and have necessitated a more direct and efficient hurricane evacuation route from coastal areas. The construction projects outlined in Section 1.2 will not provide any additional capacity to the roadways within the study area and will not assist the roadway network in supporting the growth in the area. In addition, there are planned projects for widening on SR 87 just north of Whiting Field. This may put more pressure on the need for this new corridor. Those widening projects are not currently funded in the FDOT District 3 Work Program.

Most of the area around the project is rural, private property with active silvicultural stands and agricultural operations. Future changes to the land uses surrounding the road are difficult to quantify and assess; however, the future land use map shows the land areas adjacent to the proposed roadway are zoned primarily as agriculture, public, industrial and recreation/conservation. Development expansion will also be limited by the following:

- Whiting Field has buffers that cannot be encroached upon by development
- The majority of the property north of US 90 is in public ownership and is primarily developed.
- The FDEP would likely object to any development of lands within the Florida Forever desired acquisition areas located north of the two alternatives.
- Those undeveloped lands that are not protected by public ownership are located within designated floodplains, and therefore are not likely to be developed.

The SR 87 Connector is proposed to be a divided highway. The proposed access management for the resulting alternatives was determined to include a restrictive median with full median openings spaced at ½ mile, directional openings spaced at ¼ mile and limited driveway/side street connections (Access Class 3). These restrictions will assist in the reduction of potential urban sprawl in the location of the conservation areas adjacent to Whiting Field.

The savings in time and fuel provided by the direct connection, as well as the increase in motorist safety will contribute to the overall health and prosperity of the region. The connection between Eglin and Whiting Field will also improve military operations in the area. Finally, truck traffic from I-10, headed north will be able to bypass the historic downtown Milton area, eliminating the damage and noise the truck traffic contributes, as well as the safety concerns of large trucks through that area.

The following **Table 5.16: Indirect and Cumulative Effects** quantifies any indirect and cumulative impacts due to the preferred alternative.

Table 5.16 Indirect and Cumulative Effects			
Resource	**Indirect Impact**	**Cumulative Impact**	**Avoidance, Minimization, and Mitigation Effort**
Social	With an unanticipated change in land use, the population growth potential with a result of this project is expected to be low. Noise impacts are expected; see Noise, Section 5.4.3 for details. This project is intended as a truck bypass, and military connectivity roadway.	Existing development (industrial and residential) can be found at the termini of the proposed alternative. It can be assumed that growth would increase at these locations without the construction of the proposed roadway.	As stated previously, natural boundaries along with the county's comprehensive plan guidelines will limit certain land use changes which would result in additional growth potential. Because this roadway is intended for regional traffic, truck traffic and military traffic to better navigate around Milton, it is not expected that this project will cause population growth. However, as the TPO finalizes plans with the Beltway project connecting this area to Pensacola (project outside of TPO 2035 plan), this area may see commercial development at intersections. The ETAT comments on social impacts included ratings of None and Moderate. The USEPA included an acknowledgement in their comments of the social benefits resulting from the proposed roadway due to congestion relief and an improvement in mobility.
Economic	The location adjacent to Munson Highway is anticipated to see additional commercial development with the proposed signalized intersection.	At the southern termini, four new industrial areas are planned and three additional have been built. The industrial area on Marty Martin	The proposed roadway would also provide an extension of SR 87 and would help facilitate access from the south to eco-tourism businesses (canoeing and camping), and

		Way that is a partnership with Whiting and the County will also see growth with the connection to I-10. Though growth at the industrial parks is currently planned, this project is likely to accelerate the growth within the 2035 horizon.	to the Blackwater River State Park facilities, especially the parks at the Krull Recreational Area and Bear Lake.
Land Use	The proposed roadway could produce land use changes, however, they are not anticipated with the exception of the intersection with Munson Highway. Future land use maps show areas adjacent to the roadway are zoned primarily as agriculture north of the Blackwater River to the S.R. 87N intersection where it is zoned commercial/ residential. Land use change is limited by natural boundaries like Clear Creek and Blackwater River and associated wetlands and floodplains. In addition, the power line easement on the south side of the corridor near the Munson Highway intersection limits access. South of the river, is zoned industrial which is conducive to the proposed roadway.	Existing development (industrial and residential) can be found at the termini of the proposed alternative. Using the 2035 design year, it can be assumed that new development would occur at these locations without the construction of the proposed roadway. Past development patterns in the county, permit locations in the county for the last 10 years, as well as the county's future land use maps reflect a growing industrial area at the U.S. 90 terminus, as well as expected conversion of Silviculture land uses to single family residential at the northern terminus at S.R. 87N. Additional lands designated on the future land use maps as Silviculture in this area already reflect developers as	Santa Rosa County includes protection measures around Whiting Field in their Comprehensive Plan. Policy 3.1.B.5 states that the county will continue to purchase agricultural and conservation easements for the purposes of preserving and limiting development of farmland adjacent to military facilities. The proposed access management classification throughout the corridor will also reduce any land use changes. Natural boundaries like wetlands and floodplains will limit development with or without the roadway. The planned Florida Forever purchases on the north side of the roadway comprising 1,232 acres will limit development adjacent to the roadway. Likewise, this project is proposed to be limited access, with an access management class 3 rating for the rural area. This will limit connections thus

		the owners in the parcel tax information. However, since it is not currently reflected as residential on the Future LU maps, this area comprises 627 acres. Better access to I-10 may affect areas at the Munson Highway intersection designated as Ag with Homes. These areas could become single family residential or commercial. There is currently commercial property near the proposed intersection already. This area comprises approximately 104 acres. Coordination with DEP on the future Florida Forever projects resulted in the project teams understanding of their continued effort to purchase properties along Clear Creek. The Map in Section 5.1.3 Land Use, depicts those properties using the parcel data. The owners in our review were not developers associated with the current subdivisions developing in the area.	limiting development. By establishing this strict access management class, this road can effectively serve as a bypass, a hurricane evacuation route, as well as prevent long term impacts from increased residential/commercial development facilitated by a new roadway connection in a rural area. See Section 5.1.3, Land Use and related map.
Mobility	An immediate benefit would be an increase in bike/ped. safety as truck traffic and military traffic are removed from historic Milton. Connectivity will	As of July 2015, FDOT has initiated two more projects of importance within the study area, the US 90 PD&E from Glover	The initial ETAT review resulted in a rating of Enhanced for Mobility. The study analysis found that both Alternatives 1 and 2 significantly improve

	also improve access to the military base during times of emergencies, as well as easier access of other bases to the flight training facilities at NAS Whiting Field. Due to multi-modal connectivity improvements, additional users are expected on the BHST, SR 1 Historic Trail.	Lane to SR 87S, and the US 90 PD&E from Scenic Highway to Glover Lane. Both of these PD&Es are studying capacity improvements on US 90 through Santa Rosa County. The future development of this project will not conflict with the proposed action, but will further enhance traffic movements throughout the area, specifically local traffic that will likely not utilize this bypass. In addition, the county is planning to bring back transit services to the US 90 corridor. Connectivity to industrial park at Whiting as well as to residential areas along SR 87N may induce some growth. However, the future land use maps have planned for much of this development. See Land Use 5.1.3 for a map of the area.	mobility by providing a new bridge crossing in a more strategic location accommodating both travel from the northeast and northwest to areas south, and the reverse for northbound travel.
Wetlands	Indirect wetland impacts associated with the alignments are expected to be minor, but there may be impacts to wildlife utilization and hydrology. Impacts (Direct, Indirect and Cumulative) were determined using the Uniform Mitigation Assessment Method.	Wetland impacts south of the Blackwater River would occur regardless of the proposed roadway since the land is owned by Santa Rosa County and the land use is industrial. The total direct, indirect and cumulative impact	Bridges will be constructed where feasible and culverts will be placed to maintain wetland connectivity. In areas of bridging, the adjacent lands would not be accessible from the proposed roadway, therefore limiting the potential for additional impacts. Mitigation measures for wetland impacts are outlined in

	Roadway construction may increase risks to wildlife, such as traffic mortality, noise, and light. The introduction of weedy or invasive species and light emissions are also potential impacts. Utilizing the typical 300 ft. buffer adjacent to wetland boundaries, indirect impacts include an additional 134 acres for Adjusted Alternative 2.	for wetlands is 187.01 acres. The UMAM function loss score is 50.60 for Adjusted Alternative 2.	Appendix E. In addition, initial wetland impacts from the original alternative location resulted in 129 acres of potential wetland impact. Through alignment revisions and coordination with environmental professionals, the direct impact is now minimized to 53+/- acres.
Water Quality	Any additional development would incur an impact to water quality. It is expected that the previously mentioned areas near S.R. 87 N and at the Munson Highway intersection would be developed, or developed more quickly as a result of this project. The area surrounding S.R. 87N comprises a drainage basin of 437 acres that is outlined in the Pond Siting report. This area is anticipated to develop as residential, due to the future land use maps. Residential improvements do not deter water quality as much as other commercial land uses. The Munson Highway intersection properties are included in a drainage basin of 552 acres. That basin includes areas to the west of Clear Creek which are wetlands and limited by the existing power easement.	Existing development (industrial and residential) can be found at the termini of the proposed alternative. It can be assumed that development would increase at these locations without the construction of the proposed roadway. The area around Munson Highway and the adjoining subdivisions along S.R. 87 total 750 acres that have a future land use designation of Agriculture. The 627 acres near the existing subdivisions along S.R. 87N do not impact wetlands, water bodies, or impaired waters. It is reasonable to assume that this will develop similar to the adjoining land uses with the Connector's improved	The proposed bridge over the Blackwater River will reduce any potential developments adjacent to the roadway which would impact water quality. The areas which will not be bridged will be required to capture and attenuate stormwater runoff which includes an additional 50% treatment volume for areas adjacent to the Blackwater River. Santa Rosa County Land Development Code states that commercial development will limit the amount of impervious cover to 85% of the project site. These required regulations will reduce some of the adverse effects on water quality in the area.

		connectivity. The 104 acres around Munson Hwy are adjoined by Clear Creek and wetlands to the west, and Blackwater River and wetlands to the east. Due to natural features, development would be limited in this area.	
Floodplain	The majority of the floodplain areas which are adjacent to the proposed roadway will be bridged. In areas of bridging, the adjacent lands would not be accessible from the proposed roadway, therefore limiting the potential for additional impacts from development.	The estimated floodplain impacts are anticipated along approximately 1000 linear feet of the proposed roadway. This section is owned by Santa Rosa County and is designated as industrial on the future land use maps. Therefore; it is reasonable to assume that these would have occurred without this project.	Floodplain compensation will be provided by excavating (dredging) a portion of "uplands" just upstream of the proposed Blackwater River Bridge. This area will serve as a locale for additional flooding along the river bank and will assist with rise in base flood elevations at the proposed highway facility.
Wildlife and Habitat	Crossing patterns would be impacted in areas north of the Blackwater River. Adjusted Alternative 2 follows for some of its alignment a powerline easement that is already a disturbed linear feature traversing habitat in this area. The bridge construction over the Blackwater River will not affect food and prey items of the Gulf sturgeon, but may affect spawning upstream. The bridge over the 162 acre RFS2A critical habitat will impact the habitat with pilings totaling .06 acres. The	Areas of critical habitat are also in floodplains. These areas are primarily proposed to be bridged. In areas of bridging, the adjacent lands would not be accessible from the proposed roadway, therefore limiting the potential for additional impacts from development. North of Adjusted Alternative 2 is Clear Creek and areas of interest for the Florida Forever Program. The continued purchase of	T&E Species and Habitat field and desktop reviews were completed as part of this study (See **Section 5.4.10**). This review showed that species primarily occurred within the open water, floodway, and floodplain areas. The open water and entire floodways of the Blackwater River and Clear Creek, and known RFS habitat unit RFS-2 Subunit A will be bridged to minimize impacts and to provide wildlife connectivity. Cross drains will also be provided for wetland and wildlife connectivity. The data

	footprint of the structure is 5% of the overall critical habitat unit. 5.58 acres of upland non breeding habitat, and 2.72 acres of breeding and dispersal low-moderate RFS potential wetlands. Bridge operations and maintenance activities will be an impact in the future, but are infrequent and of short durations.	lands adjacent to the military base will ensure connectivity of wildlife crossings. Please see the SR 87 Connector Biological Assessment for additional information.	analyzed and mitigation measures for the RFS and Sturgeon were reviewed by USFWS as part of the Formal Consultation Process and the determination was that the project may affect, but is not likely to jeopardize the continued existence of the Gulf sturgeon or the RFS, or destroy or adversely modify designated critical habitat. Of the 14.7 acres of critical sturgeon habitat, the structure is limited to impact 68 sq. ft. with pilings, and the bridge footprint will cover 0.43 acres. Discharge will be treated in accordance to rules associated with an OFW. Coastal, Marine and Estuarine habitat was avoided. In addition, standard construction guidelines would be followed for other known species in the area, allowing USFWS to agree with our determination of 'may affect, not likely to adversely affect' those species. Clear Creek will be bridged. The proposed structure over Clear Creek is adequate to provide light penetration to the ground and allow for regrowth of impacted groundcover.

The project team has been coordinating with county staff throughout the study to ensure awareness of any potential impacts due to the project. The existing and future land use maps can be found in **Section 4.6 Land Use**. The Santa Rosa County Comprehensive plan outlines protection measures around Whiting Field in their Comprehensive Plan. Policy 3.1.B.5 states that the county will continue to purchase agricultural and conservation easements for the purposes of preserving and limiting development of farmland adjacent to military facilities. **Section 5.1.3** highlights the

expected changes in Land Use. The proposed alignment, Adjusted Alternative 2, constricts growth to the north of the alignment due to protected lands of Whiting Field and environmentally sensitive lands around Clear Creek which are outlined in the County's Comprehensive Plan. Likewise limited connection availability on the south side of much of Adjusted Alternative 2 due to the powerline easement will also serve to limit development.

6. COMMENTS AND COORDINATION

6.1 Introduction

A Public Involvement Program (PIP) has been developed and is being carried out as an integral part of the project. The purpose of this program is to establish and maintain communication with the public at-large and individuals and agencies concerned with the project and its potential impacts. To ensure open communication and agency and public input, the Department has provided, early in the project process, an AN package to 79 federal, state and local agencies and other interested parties defining the project and, in cursory terms, describing anticipated issues and impacts. In addition, in order to expedite the project development processes, eliminate unnecessary work, and provide a substantial issue identification / problem solving effort, the Department has carried out the scoping process as required by the Council on Environmental Quality (CEQ) Guidelines. Finally, in an effort to resolve all issues identified, the Department has conducted an extensive interagency coordination and consultation effort, and public participation process. This section of the document details the Department's program to fully identify, address, and resolve all project-related issues identified through the PIP.

A portion of this project was submitted for ETDM screening as Project #2861, and a Screening Report was published on February 19, 2008. A new submittal on December 14, 2009 was published as Project # 12597 to expand the boundaries to what is now the SR 87 Connector Study Area.

The Public Involvement Plan for the SR 87 Connector PD&E Study is in compliance with the PD&E Manual, F.S. Sections 286.0105 and 286.011 and 339.155, Executive Orders 11990 and 11988, CEQ Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA), the ETDM Planning and Programming Manual and U.S. Department of Transportation Order 5610.1C, and Parts 23 and 40 of the CFR. Public participation for this project is solicited without regard to race, sex, color, national origin, age, disability, religion and family status. Persons requiring special accommodation under the Americans with Disabilities Act (ADA) or language services (free of charge), should contact Peggy Kelley (project manager) at 850-330-1517 or peggy.kelley@dot.state.fl.us or Florida Relay 711.

6.2 Advance Notification

The Florida Department of Transportation utilizes the ETDM process to accomplish major transportation project planning with early and continuous coordination with agencies. ETDM is carried out through the use of the Environmental Screening Tool (EST). The EST is a web based interactive database and mapping application that integrates a database of projects with over 550 environmental GIS data layers, an automated environmental screening analysis application, and multiple tools for entry, review, and reporting. The EST includes two screens, a Planning and Programming Screen. The Planning screen is the initial step in the project development process when projects are being considered for inclusion or

prioritization within the cost feasible elements of the LRTP. For this project, it was for inclusion in the West Florida Regional Planning Council LRTP. The Programming Screen follows the Planning screen and initiates the Advance Notification (AN) process. Through this process, federal, state, autonomous regional and local agencies and other interested parties are informed of the existence of this project and its scope. The AN fulfills the project initiation notification as required by Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), the President's Executive Order 12372 (Intergovernmental Review of Federal Programs), and the Governor's Executive Order 95-359 (Florida State Clearinghouse). In addition, the AN may also provide notice of FDOT's intent to apply for federal-aid on a project. The AN is also used by FDOT to seek consistency with FCMP. The FDEP is delegated with coordinating the State of Florida's review of federal activities for consistency with the FCMP. FDEP uses the State Clearinghouse (SCH) to facilitate the coordination process. The AN is also a means by which the Florida Department of Economic Opportunity (FDEO) provides comments with regards to a project's compatibility with the Local Government Comprehensive Plans [Chapter 163, F.S.].The Department initiated early project coordination on December 17, 2009, by distribution of an AN package to the Florida SCH and ETAT representatives.

The SCH response package of state agency responses was dated January 29, 2010, and summarized responses of six state agencies, including determination of consistency with the FCMP and objectives of the Department of State's Bureau of Historic Preservation and Office of Environmental Policy. Individual AN packages were also sent directly by the District Three office to multiple federal, state, autonomous regional and local agencies and other interested parties. The following agencies / parties received AN packages. An asterisk (*) indicates those agencies that responded, either through the SCH or directly to the Department's District Three office.

1. *Bureau of Indian Affairs, * Office of Trust Responsibilities - Environmental Services Staff*
2. *Federal Aviation Administration, * Airports District Office*
3. *Federal Highway Administration, Anderson, Linda*
4. *Federal Highway Administration, Kendall, Cathy*
5. *Federal Highway Administration, Mehta, Pritesh*
6. *Federal Transit Administration, Lashore, Tajsha*
7. *FL Department of Agriculture and Consumer Services, Hardin, Dennis*
8. *FL Department of Community Affairs, Donaldson, Gary*
9. *FL Department of Environmental Protection, Milligan, Lauren P.*
10. *FL Department of Environmental Protection, Stahl, Chris*
11. *FL Department of State, Kammerer, Laura*
12. *FL Department of State, McManus, Alyssa*
13. *FL Department of State, Ross, Jennifer R.*
14. *FL Department of State, Yates, Brian*
15. *FL Department of Transportation, Bixby, Marjorie*
16. *FL Department of Transportation, Jobe, James B.*
17. *FL Fish and Wildlife Conservation Commission, Gilbert, Terry*
18. *FL Fish and Wildlife Conservation Commission, Poole, MaryAnn*
19. *FL Fish and Wildlife Conservation Commission, Sanders, Scott*

20. *Florida - Alabama TPO, Paul, Jessica*
21. *Florida Inland Navigation District, * Mr. David Roach*
22. *Miccosukee Tribe of Indians of Florida, Terry, Steve*
23. *Miccosukee Tribe of Indians of Florida, * The Honorable Mr. Billy Cypress, Chairman*
24. *Mississippi Band of Choctaw Indians, * The Honorable Mr. Beasley Denson*
25. *Muscogee (Creek) Nation, * The Honorable Mr. A.D. Ellis, Principal Chief*
26. *National Marine Fisheries Service, Rydene, David A.*
27. *National Marine Fisheries Service, Thompson, Mark*
28. *National Park Service, Barnett, Anita*
29. *Natural Resources Conservation Service, Robbins, Rick A.*
30. *Northwest Florida Water Management District, Bartel, Ron*
31. *Northwest Florida Water Management District, Brooks, Leigh*
32. *Poarch Band of Creek Indians, * The Honorable Mr. Buford Rolin, Chairman*
33. *Seminole Nation of Oklahoma, * The Honorable Mr. Enoch Kelly Haney, Principal Chief*
34. *Seminole Tribe of Florida, Steele, Willard*
35. *Seminole Tribe of Florida, * The Honorable Mr. Mitchell Cypress, Chairman*
36. *US Army Corps of Engineers, Turner, Randy*
37. *US Coast Guard, Frank, David M.*
38. *US Coast Guard, Johnson, Philip R.*
39. *US Department of Health and Human Services, * National Center for Environmental Health Centers for Disease Control and Prevention*
40. *US Department of Housing and Urban Development, * Regional Environmental Officer*
41. *US Department of Interior, * Bureau of Land Management, Eastern States Office*
42. *US Department of Interior Director, USGS-FISC*
43. *US Environmental Protection Agency Bisterfeld, Ted*
44. *US Fish and Wildlife Service, Mittiga, Mary*
45. *US Forest Service, OBryan, Katherine L.*
46. *West Florida Regional Planning Council, Gallagher, John*
47. *West Florida Regional Planning Council, Robinson, Mary*

Hard copy recipients included:

1. *Bureau of Indian Affairs, Office of Trust Responsibilities - Environmental Services Staff*
2. *Federal Aviation Administration, Airports District Office*
3. *Florida Inland Navigation District, Mr. David Roach*
4. *Miccosukee Tribe of Indians of Florida, The Honorable Mr. Billy Cypress, Chairman*
5. *Mississippi Band of Choctaw Indians, The Honorable Mr. Beasley Denson*
6. *Muscogee (Creek) Nation, The Honorable Mr. A.D. Ellis, Principal Chief*
7. *Poarch Band of Creek Indians, The Honorable Mr. Buford Rolin, Chairman*
8. *Seminole Nation of Oklahoma, The Honorable Mr. Enoch Kelly Haney, Principal Chief*
9. *Seminole Tribe of Florida, The Honorable Mr. Mitchell Cypress, Chairman*

10. *US Department of Health and Human Services, National Center for Environmental Health Centers for Disease Control and Prevention*
11. *US Department of Housing and Urban Development, Regional Environmental Officer*
12. *US Department of Interior, Bureau of Land Management, Eastern States Office*
13. *County Commissioner, District 1, The Honorable Jim Williamson*
14. *County Commissioner, District 2, The Honorable Bob Cole*
15. *County Commissioner, District 3, The Honorable Don Salter, Chairman*
16. *County Commissioner, District 4, The Honorable Gordon Goodin, Vice Chairman*
17. *County Commissioner, District 5, The Honorable Lane Lynchard*
18. *Team Santa Rosa Economic Development, Cindy Anderson, PE, Executive Director*
19. *Mayor, The Honorable Guy Thompson*
20. *Councilmember, Ward 1, The Honorable Paul Kilmartin*
21. *Councilmember, Ward 1, The Honorable Buddy Jordan*
22. *Councilmember, Ward 2, The Honorable Patsy Lunsford*
23. *Councilmember, Ward 2, The Honorable Clayton White*
24. *Councilmember, Ward 3, The Honorable Marilyn Jones*
25. *Councilmember, Ward 3, The Honorable Grady Hester*
26. *Councilmember, Ward 4, The Honorable Lloyd Hinote*
27. *Councilmember, Ward 4, The Honorable R L Lewis*
28. *Federal Aviation Administration, Rogers Alden Porter*
29. *Blackwater Heritage State Trail, Gerard Greco, Manager*
30. *NAS Air Operations Department Code N32, Randy Roy, Navy Operational Liaison Officer*
31. *NAS Air Operations Department Code N32, Capt. Enrique Sadsad, Commanding Officer*

FDOT documents the results of the Programming Screen review and the COA determination in the ***Final Programming Screen Summary Report.*** FDOT uses the report as the transition document to the PD&E phase. The ETDM summary report for this project is included in **Appendix B** and additional correspondence with the agencies above is located in **Appendix A**. The summary report includes the responses to the agencies as the 'Coordinators Summary' for each item evaluated.

6.3 Interagency Coordination

This project included a large study area with six build alternatives that were advanced through the PD&E evaluation process; only two were studied during PD&E. The FDOT project team met on multiple occasions with elected officials and concerned agencies to ensure the corridor locations were a good fit for all involved. In addition, four of the corridors received red flags as part of the initial evaluation process, and meetings were also held to discuss the options for those four corridors specifically.

6.3.1 Agency Meetings

Agency Meeting March 24th, 2010: This meeting was held with a variety of Agency representatives at the FDEP Douglas Building, OIP Conference Room #953B. The following Agency representatives attended the meeting:

FDOT (District 3) D3: Peggy Kelly
DEP/OIP: Lauren Milligan
DEP/Office of Greenways and Trails (OGT): Rick Halvorsen
DEP/OIP: Chris Stahl
DEP/OGT: Marsha Connell
Department of Agriculture and Consumer Services, Division of Forestry (DOF): John Waldron
DOF: Dennis Hardin
Department of State Lands (DSL): Gloria Barber
DSL/ Office of Environmental Services (OES): Marianne Gengenbach
DSL: Tom Butler
DSL: Kime Laudes
Metric (Metric Engineering, Inc.): John Flora

Purpose of Meeting: To address the red-flagged comments made by FDEP on Corridor Alternative 3A, and the red-flagged comments made by the NWFWMD on Corridor Alternative 4, the FDOT and Project Team arranged to meet with FDEP and the Florida Division of State Lands to discuss the environmental issues and the limitations on the State lands and the lands adjacent to the State lands.

Meeting Comments Summarized: The FDOT project team asked for clarification on the red flag on Corridor 3 when the properties were only planned purchases and were not currently Florida Forever Lands. DEP stated that the red flag was for indirect/secondary impacts due to isolation of currently owned parcels. DEP stated that though Corridor 2 also traversed planned purchases, it would not isolate any current properties and did not warrant a red flag. DEP also felt that due to the extensive planning work done by the county and by the Whiting Field Naval Air Station on the Joint Planning Area which included a proposed roadway in the vicinity of Corridor 3, another meeting should be held to include the county staff.

Discussion continued about Corridors 4-6 that were flagged by the NWFWMD. The FDOT project team asked about the funding source for the linear island properties in the Blackwater River and their allowed use. In addition, the team added the lands would be spanned by structure. A future meeting was determined to be needed so the agency could look into the funding sources. In addition, DEP stated the bridge crossing for the northern corridors was in the best possible location and they did not have a problem with that crossing.

It was decided the FDOT project team would put together a list of questions to be discussed at a future meeting.

Agency Meeting May 21st, 2010: This meeting was held with a variety of Agency representatives at the FDEP Carr Building. The following Agency representatives attended the meeting:

FDOT/D3: Peggy Kelley
DEP/OIP: Lauren Milligan
DEP/OIP: Chris Stahl
DEP: Amy Phillips
DEP/OGT: Rick Halvorsen
DEP/OGT: Jim Wood
DEP/OGT: Gerard Greco (via teleconference)
DOF: Dennis Hardin
DOF: Corinne Hermle
DSL: Deborah Poppell
DSL: Gloria Barber
DSL/OES: Marianne Gengenbach
DSL: Tom Butler
DSL: Kime Landes
NWFWMD: Paul Thorpe
Santa Rosa County: Nancy Model
Santa Rosa County: Mary Ann Vance
Metric: John Flora
Ecological Resource Consultants (ERC): Dan Van Nostrand

Purpose of Meeting: The purpose of the meeting was to continue mitigation discussions regarding the disputes that had been placed on two of the four Corridor Alternatives for the SR 87 Connector. Specifically, the two primary objectives of the meeting were to:

1. At the March 24th mitigation meeting, DEP and DSL had tasked FDOT with assimilating a list of questions associated with the disputes. The discussions at this meeting were to review the answers provided by DEP and DSL regarding both Alternative 3A, and Alternative 4.
2. It was the intent to afford both Santa Rosa County staff, and a representative from the Naval Air Station Whiting Field, the opportunity to discuss the intent of the Team Santa Rosa initiative, and the intent behind the Joint Planning Agreement that enabled the purchase of the conservation lands northeast of Whiting Field that were the cause of the dispute issued on Alternative 3A.

Meeting Comments Summarized: Both the County and NASWF representative stated that it had always been the intent to have a four-lane road north of Whiting Field. The County Planner added considerable efforts had been made to develop a connector from the Gulf to I-65, and the Joint Planning Area had been developed in conjunction with NASWF with conserving areas in the vicinity also a priority. The County representative stated the County Commissioners were concerned about the elimination of Corridor 3 without justification. In addition, OGT asked about the

colocation of the BHST in the corridor and that they would need to be involved if the trail right-of-way were to be used. In addition, if the trail were crossed, they would want a grade separated crossing. The FDOT Project Team requested documentation that allows DEP and DSL governing authority over planned purchases to assist in any possible corridor elimination.

Discussion continued about Corridors 4-6. The NWFWMD representative stated that the funds had been researched and the islands were initially purchased with Florida Forever Funds. The DSL representative stated that if there are any other viable alternatives, the governing board could not easily approve the impact. The FDOT Project Team asked for documentation to support the elimination of Corridors 4-6.

The FDOT asked the group if there were any concerns about Alternatives 1 or 2 that need to be addressed. The DEP representative asked that Corridor 2 be moved as far west as possible, but that the concerns were nothing like the concerns about Corridor 3. The County representative added that it would be the county's desire to get the connection as far north as possible to more effectively serve emergency evacuations.

6.3.2 FHWA Meeting

FDOT representatives met with FHWA personnel at the FHWA office located at 545 John Knox Rd, Suite 200, Tallahassee, on March 25th, 2010. The following representatives attended the meeting: George Hadley, FHWA; Cathy Kendall, FHWA; Brandon Bruner, FDOT; Peggy Kelley, FDOT; and John Flora, Metric.

Purpose of Meeting: For FHWA to make a determination on the project's Class of Action, and to review comments that were submitted by the ETAT members.

Meeting comments summarized: The FHWA representative stated the logical termini made sense. In addition, he stated that even if Corridors 3 and 4 (4-6) were eliminated, he would like to leave the COA as an EIS, instead of an EA to be conservative. In addition, he added the analysis should be for the full build out scenario. In addition, after questions from the FDOT Project Team, he stated crossing the BHST would not constitute a 4(f) impact. However, the US 90 trail is Historic and the issues are different. The FDOT Project Team stated that the US 90 Trail would be handled as a historic site with the State Historic Preservation Officer.

Notice of Intent: Following this meeting, FHWA approved the Notice of Intent on August 24, 2010. It was published in the Federal Registry on August 31, 2010. Please see Appendix A, Project Meetings and Correspondence, for copies of the meeting minutes and Notice documentation.

6.3.3 Scoping Meeting

On July 29, 2010 a Scoping Meeting was held for the SR 87 Connector PD&E Study at the Santa Rosa County Commission Chambers. The meeting was open to the public and advertised in the Florida Administrative Weekly. The following people / agencies were sent a formal invitation:

Florida Department of Agriculture – Division of Forestry
Florida Department of Environmental Protection – Branch office
Florida Department of Environmental Protection – District Office
Florida Department of Environmental Protection – Office of Environmental Services
Florida Department of Environmental Protection – Land Management Advisory Council
Florida Department of Environmental Protection – Office of Greenways and Trails
Florida Department of State – Division of Historical Resources
Florida Fish and Wildlife Conservation Commission – Division of Marine Fisheries
Florida Fish and Wildlife Conservation Commission – Office of Environmental Services
Florida Fish and Wildlife Conservation Commission – Regional Office
National Oceanic and Atmospheric Administration – National Marine Fisheries Service's Regional Office
State Department of Community Affairs
US Army Corps of Engineers – Branch and Permit Sections
US Coast Guard – Eighth District
US Department of the Interior – Bureau of Indian Affairs
US Department of the Interior – Bureau of Land Management
US Department of the Interior – U.S. Fish and Wildlife Service
US Environmental Protection Agency – Ecological Review Branch
US Forestry Service
Northwest Florida Water Management District
Chairman Gordon Goodin, Santa Rosa County Commission
Beckie Cato, Planning Director, Santa Rosa County
Nancy Modal, Planner 3, Santa Rosa County
Wes Meiss, President Historical Society, Santa Rosa County
Cindy Anderson, PE, Executive Director, Team Santa Rosa
Terry Joseph, West Florida Regional Planning Council
Bob Cole, Chairman, Florida Alabama TPO
Guy Thompson, Mayor, City of Milton
Randy Roy, NAS Air Operations Department
Vernon Compton, Nature Conservancy
Gerard Greco, Manager Blackwater Heritage State Trail
Martin Knopp, Federal Highway Admin
Cathy Kendall, Federal Highway Admin
Chief Amy Oliver, Public Affairs, Eglin Air Force Base

Pete Hall, Captain Whiting Field
Ryan Arvay, Mainstreet Milton

Meeting comments summarized: Commissioner Goodin commented that any planned purchases of Florida Forever Lands that are owned by the County should not be considered as obstacles for this study. In addition, he noted a landfill near Corridor 1C. He also asked about mitigation options for Corridor 3 and that he would make sure to ensure right-of-way will be allotted in the future before any future purchases are made.
The Nature Conservancy representative asked for more information from the Project Team about the impacts to the Trail.

The FDOT Project Team reviewed the Public Involvement activities to date and some of the comments received. The general consensus being the Historical Society in Milton wants the southern corridors and the County officials want the northern corridor. In addition, the spur option for Corridor 1 and 3 were brought up in an effort to assist the access to the county's industrial complex.

The Environmental impacts were reviewed as well, with discussions on possible imperiled species, habitat impacts, etc.

The discussion continued with the fact this project is trying to serve two separate purposes, dealing with daily traffic on US 90 and offering hurricane evacuation and connectivity to the military base and the County's industrial park. Commissioner Goodin added that this is two different projects.

The meeting was followed by a field review.

6.3.4 Agency Comments and FDOT Responses

The Draft Environmental Impact Statement for the SR 87 Connector had been reviewed and comments received by the State Environmental Management Office on 10/03/2013, the Federal Highway Administration on 05/08/2014, the United States Department of Interior on 12/01/2014, the United States Environmental Protection Agency on 12/02/2014, and the Florida Department of Environmental Protection on 12/19/2014. Those comments and the responses from the FDOT can be found in Appendix M.

6.4 Public Involvement

Another key aspect of the Public Involvement Program (PIP) of this project has included numerous meetings with interested parties other than the Federal and State environmental permit and review agencies. These included elected public officials, representatives of public agencies, and citizen's interest groups of many kinds. The PIP is included as **Appendix J**. The extensive record of coordination referenced throughout this document illustrating

numerous project coordination meetings with elected public officials, public agency representatives and citizen's interest groups is contained in **Appendix A**.

6.4.1 Meetings with Elected Officials

Several Elected Officials Meetings were held. The first Elected Officials meeting was held on March 9th, 2010 with the City of Milton City Council members at their regularly scheduled meeting at Milton City Hall. The next meeting was with the FL-AL TPO during their regularly scheduled commission meeting on March 10, 2010. In addition, we met with the Santa Rosa County Commissioners during their regularly scheduled commission meeting on March 18, 2010.

These were introductory type meetings and most of the comments received from these meetings were general location comments, not leaning for or against the northern or the southern corridors; however, the comments from the Santa Rosa County Commission seemed to be favorable to the northern Corridors, especially Corridor 3. Several commented at this meeting that Marty Martin Way should be utilized.

6.4.2 Public Kick-Off Meeting

A public kick-off meeting was held at the Santa Rosa Auditorium on March 23, 2010. All elected officials and property owners in the affected areas were invited. Approximately 490 invitations were sent to property owners who were within 300 feet of the centerlines of the corridors. A total of 156 people attended the meeting for a total of 32% attendance.

Nineteen comments were received associated with this meeting. Some of the comments were split between two different routes which they prioritized. The following is a breakdown of responses:

- Corridor 1 – Corridor 1 was liked by one commenter because it provided economic benefits without impacting Whiting Field. However, two disliked Corridor 1 because it would potentially divide the City and could leave US 90 as a Failing Roadway (this comment was for all northern routes).
- Corridor 2 – Two comments were received directly for Corridor 2. One comment was the same as above, that it would divide the City. In addition, one commenter stated they disliked that Corridors 2 and 3 encroach on Whiting Field. Corridor 2 was also commented on as one of the Northern Corridors that may leave US 90 Failing.
- Corridor 3 – Corridor 3 was liked by two for hurricane evacuation, less impact to homes, Whiting Field and Milton Industrial Park Access, and it may allow growth further north. Two comments were received against Corridor 3 because of the environmental concerns and terrorist threats. In

addition, another commenter stated they disliked that Corridors 2 and 3 encroach on Whiting Field.

- Corridors 4-6 (these comments did not specify a particular ending and they also generalized them into the 'Southern Corridors') - 14 positive comments were received for the Southern Corridors. The reasons generally included improved US 90 traffic conditions, serving Milton residents near downtown and supporting historic downtown. One negative comment was that a bridge in this location would hurt pleasure boaters.
- One Commenter stated that adding lanes through Milton on US 90 in its existing Location is the best alternative.

The following is a synopsis of the verbal comments that were received at the meeting by our staff.

- There were 5 negative comments on the southern corridors. Two wanted the FDOT Project Team to look at one-way pairs, one wanted us to know about a church in the west end of the alignment, one wanted us to know we were impacting family property and one wanted us to know about the historic mill location in which Milton got its name. All stated they would wait until the preferred corridor is chosen as the corridor location could be shifted to miss these items.
- There were 2 comments, one from a Greenways and Trails employee and one by a gentleman who called himself the 'Father of the Blackwater Heritage State Trail'. They wanted to ensure that there would be little to no impacts to the Trail. They also expressed dislike for an at-grade crossing of the Trail.
- We had 1 comment about Corridor 1 stating that it follows a power line. This property owner expressed that DOT will have to 'pay me' for my property adjacent to the power line. He wants to wait until the preferred corridor is selected for further comments.
- There was one comment about a historic cemetery near the convergence of alignments 1, 2, and 3. (The project team located this cemetery and collected a GPS point of its location).

6.4.3 Public Corridor Meeting

A Public Corridor meeting was held at the Santa Rosa County Auditorium on January 27, 2011. All elected officials and property owners in the affected areas were invited. A total of 686 invitations were sent to property owners who were within 300 feet of the centerlines of the corridors. 149 people attended the meeting for a total of 22% attendance.

Ten comments were received through both the website email and regular mail associated with this meeting. Some of the comments were split between two different routes which they prioritized. The following is a breakdown of responses:

1. The engineering plan must provide an extra right lane on Hwy 90 and Hwy 87 South, as we turn right from Hwy 90 (going east) to Hwy 87S. There must be a right extra lane for Punjob Road. Punjob Rd is 200' south of Hwy 90 and 87S. Please send me the name and telephone number of the Engineering firm designing the road layout. (the request for a turn lane on Punjob Rd was sent to FDOT and a traffic analysis was performed)

2. If at all possible, we would like the BHST to be undisturbed, since we bike there several times monthly and consider it Milton's greatest asset.

3. In trying to determine the best option for a hurricane evacuation route, options 1 and 2 do not move the traffic far enough north. They both will cause congestion and bottleneck traffic where they intersect with Hwy 87/89. The best option is Corridor 3. It provides the most northern route which moves traffic away from congestion as traffic moves north on Hwy 87. Also, Corridor 3 opens a route through the northern part of the county and would provide additional access for Whiting Field. It would also provide a more direct route for commercial traffic from I-65 to the Industrial Complex off Hwy 90 in East Milton.

4. I fully support Corridor #1. Thank you for holding public meeting to explain the project and have all of the information available.

5. The map on the handout should be on a separate 8 ½ x 11 sheet. It is very difficult to read. (the map was posted on the website, and a larger map was handed out at future meetings)

6. The Morton Cemetery is located on Pat Brown Road and is a historical site. Jefferson Morton one of the founders of Milton is buried there as many other citizens of Milton and Santa Rosa County. I would not like to see this site disturbed. Why not plan for 4 lanes vs. 2 lanes. By the time this project is complete, we will probably need 4 lanes.

7. I would like to request a map of the proposed road.

8. Your planned Corridor #1 makes the most sense. Less intrusive, shortest route, and probably less expensive. I hope you proceed with this corridor.

9. The City of Milton resubmitted their previous comments.

10. I would like to know exactly where the right of way boundaries will be on the north side of Oakland Dr. and how it will affect my property. I have a cemetery in my front yard. It is quiet and peaceful here and not much traffic. I would also like to have all the property ID numbers and contact information for each proposed corridor. I would like all

information mailed to me as soon as possible. (The property owner was contacted and the cemetery was a pet cemetery. The proposed ROW for this alternative follows the property lines and does not cross into her property. The ID numbers request was given to the FDOT attorney)

6.4.4 Public Alternatives Workshop

A Public Alternatives workshop was held at the Santa Rosa Auditorium on August 16, 2011. All elected officials and property owners in the affected areas were invited. A total of 686 invitations were sent to property owners who were within 300 feet of the centerlines of the corridors. There were 86 people in attendance at the meeting, for a total of 13% attendance.

Twenty five comments were received through both the website email and regular mail. We asked everyone to mark a preferred route; Alternative 1, Alternative 2 or Neither. The following is a breakdown of responses:

1. Alternative 1. The City of Milton resubmitted their previous comments.

2. Proposal 2a needs to be moved away from the entrance to Harvest Point as there will likely be 400-500 homes in this subdivision all competing for the proposed traffic light. Please go 650 feet north or about 1300 to the north line of our property. This will be far less intrusive and less expensive for DOT. We have a paved road of about 1000 ft. along your proposed path that we will lose use of. On north side of property there is a parcel left along the holding pond for a road. Thank you for your consideration.

3. Please send a copy of "boards." Mostly concerned with south section.

4. Alternative 1. Out of the alternatives, I prefer Alternative 1 as it will best serve the most urbanized area and not encourage urban sprawl. As the closest route to the City of Milton, Alternative 1 will provide a strong connection to job centers at the Santa Rosa County Industrial Park and Jail Complex. I commend the planning effort to date related to pedestrian and bicycle features, connectivity, and safety. The inclusion of a multiple use path and bike lanes will provide alternative forms of transportation corridors within the area and the job centers. Please keep these features in the future plans for the road and do so for the entirety of the road. One improvement I would recommend for the corridor and that is to have the BHST cross the new road by means of an underpass or overpass. Requiring an at-grade crossing would be an unnecessary safety flaw on the design of the road. As a major recreational trail in Santa Rosa County I highly encourage the design of a crossing for the trail either under or over the road. Thank you for the opportunity for input.

5. Alternative 1. I also like the Urban plan that provides biking and walking trails to the roadway itself. I think Alternative 1 is the best choice. This was a good public workshop. Thank you.

6. Alternative 2. This was a frustrating meeting. Ten minutes total, the first two of which was ruined by rude people talking in the back of the room. Why were no questions addressed from the floor? Many of the same questions could have been answered simultaneously. I did get my questions answered by a young man from Marianna. I see this as an asset for storm evacuation from the south of the county but as a general relief from US 90 traffic, I don't think it will be greatly utilized. Looking at the timeline, is the next public hearing in 2013? And, last but not least, I would strongly oppose the use of Federal funds to build this road. $ from Washington has got to stop.

7. Alternative 2. Seems logical to me that the farther north this can go the less impact it will have on local traffic roads, etc.

8. Alternative 2. 2a should be used for the following reasons: (1) 1c dead-ends into SR 89N. If a hurricane evacuation is needed, there will be tremendous congestion and delay in going north up 87N. (2) If 2a is used, traffic would have 2 roads directly to use going north, i.e. 87 N and 89N. Also, if traffic finally becomes too severe, an overpass could be constructed over 87N onto 89N and avoid highway congestion from a hurricane. If 1c is used, no second road way would be available to accept hurricane traffic without first going through a congested residential area where a Wal-Mart store may be constructed.

9. Alternative 2. I live in Milton. I believe that the best option for the evacuation route is 2a the northern route. The lower route (1c) will increase traffic through more populated residential areas, not only during the evacuation process, but routinely as well. I would be directly impacted by the more southern route on a daily basis with people using Oakland, Kembro, Twilight Dr. and Cherokee as a cut through to Pine Blossom and from there either north or south. This path through the residential areas is a common shortcut and would increase significantly should the connector dump into the intersection of 87/89 and Oakland Dr.

10. Alternative 1 and 2. (1) Cross walk for trail is not safe. At grade does not provide safe passage for 2 (split lane) or 4 lane crossing of state trail. Elevate or bridge over. (2) Historic SR1 crossing needs better design with safety medium or over/under. Need to plan to the future with 4 lanes and turn lanes. Just painting lines on the cement is not good enough. (3) I like the separate walkway with grass area between road and walkway – good design.

11. I am writing in regards to the SR 87 Connector Project. I am NOT in favor of either of the two remaining alternatives. Rather.... I am in favor of a southern alternate route. Even though the routes that constituted a southern alternate have been removed, it is my hope that the FDOT will look more closely at this issue and realize that a huge mistake has been made by eliminating it. The two remaining alternatives are further north of town, and would ultimately result in more negative urban sprawl. This would impact sensitive wet lands and create more commercial development near NAS Whiting Field. Such development is not only incompatible with the base's mission, but it also threatens its mission. (The base is the key economic back bone of Milton). In addition, a southern alternate was identified as the most cost effective and would offer more, far reaching transportation solutions, benefiting both Hwy. 87 and 90. A southern alternate was ranked as having the least impact on the environment. Ironically, the southern alternate was omitted from the study because it crosses Florida Forever lands. This can very easily be mitigated by Florida state policy. However, this was never pursued, despite the route being more cost effective and more beneficial to the community overall. Why was this? The southern alternate was even chosen as the preferred route in a city wide survey by a two-thirds majority. This was in large part due to connectivity but also the protection the route offers to the Milton Historic District. Plus, being closer to town it will not perpetuate as much sprawl. There are many unanswered questions as to why this route was not included in this part of the study, when it is such a positive selection. More consideration must be given to a southern alternate of some kind. Thank you!

12. Neither. (Southern Route) Each of these routes has many environmental impacts. Cost much more and will make the BHST unsafe to travel at Munson Highway. There needs to be an under or over pass for the trail if one of these routes is chosen. We need a southern route around downtown Milton. Get truck traffic off Hwy 90. Have the old Bagdad Hwy. Southern route cut south of Henry St. to Ward Basin Rd so the traffic can get to I-10. This would be less of an environmental impact than either of the alternatives. No four lanes down Hwy 90 in downtown Milton or pairs down Hwy 90 and Berryhill Rd. The City of Milton Council has voted several times to endorse the southern route. A citizens' survey was taken by the city with a two to one majority for the southern route. Please consider all alternatives before choosing just #1 or #2.

13. Neither. (Southern Route) Public input was seemingly ignored by the consultant who seemed to be against preferred southern route from beginning.

14. Neither. (Southern Route) The vast cost and environmental issues it will cause in the area of the proposed alternative 1 and alternative 2, there are bald eagles, gophers, and flatwood salamanders.

15. Neither. (Southern Route) In a city survey, citizens favored the southern route 2 to 1. It was also the most economical.

16. Neither. (Southern Route) Milton needs to keep the connection to stay in Milton so it will continue to grow and revitalize. It will also help the levels of traffic on several roads, and it makes the most sense financially.

17. Neither. Please put the southern route back on there for businesses in downtown Milton.

18. Neither. Please consider the other route because we need the traffic in front of our local businesses.

19. Neither. Please consider the southern route again. Downtown businesses need the traffic.

20. Neither. Need the road downtown to promote local businesses.

21. Neither. Not using southern route takes too much business off Hwy 90.

22. Neither. The vast wildlife in the area is nothing less than pristine. The negative impact on Blackwater River would be terrible to our local environment.

23. Neither. Southern route is preferred. With both Alternative 1 and Alternative 2, downtown businesses will be bypassed all together. Southern route allows a faster route without avoiding the area altogether. Northern routes encourage sprawl and development in an area around NAS Whiting Field we are "supposedly" trying to protect.

24. Neither. The bypass would be detrimental to the business community and a toll way would not be cost efficient.

25. Neither. With the planned paths near Whiting Field you are destroying a forest along with causing urban sprawl near the base.

6.4.5 Newsletters and Internet Website

Four newsletters were sent to interested parties and the public. Any elected or public official and/or interested party that contacted the project team by email was emailed a newsletter and any property owner within 300 feet of the viable alternatives was mailed a newsletter. In addition, the PIP included the creation of an internet website at (http://www.sr87connector.com) for the benefit of the general public.

6.4.6 Meetings with Interested Parties

On August 7th, 2012, Project Team members met with the FL-AL TPO Bicycle/Pedestrian Advisory Committee to discuss the proposed grade separated intersection of the SR 87 Connector with the BHST. The Team members brought visual aids of the proposed intersection. The Committee was very complementary and approved of the grade separation as well as the connection proposed to the trail along the new roadway.

6.4.7 Public Hearing

The Public Hearing was held on November 13, 2014 with 97 attendees. The Public Hearing documents, script, presentation and comments can be found in **Appendix L**.

6.5 Official Statements

Official statements of concurrence by municipal, county, state and/or federal agencies are anticipated following the project's Public Hearing. An official letter from the City of Milton was given to the project team stating their preference of Alternative 1, and included a unanimously passed resolution stating this preference, see **Appendix A** (September 2010). In addition, four County Commissioners from Santa Rosa County formally agreed to support Alternative 1; however, they added their desire for a spur to the Whiting Aviation Park and would like the FDOT to review a southern bypass.

7. ACTION AFTER PUBLIC HEARING

The Public Hearing for the S.R. 87 Connector PD&E was held November 13, 2014. Comments from the hearing concerning the proximity of Alternative 2 to homes on the west side of S.R. 87N, as well as to homes in the newly developed Harvest Point Subdivision, prompted the study team to reevaluate the intersection location of Alternative 2 and S.R. 87N. After reviewing the public information summary of the public hearing, the study team adjusted Alternative 2 slightly north. This adjustment moved the alignment north away from the Harvest Point Subdivision, reduced noise impacts to the homes along the subdivision's northern perimeter to less than 10 dB(A), eliminated the need for a noise wall and provided a connection to S.R. 89N.

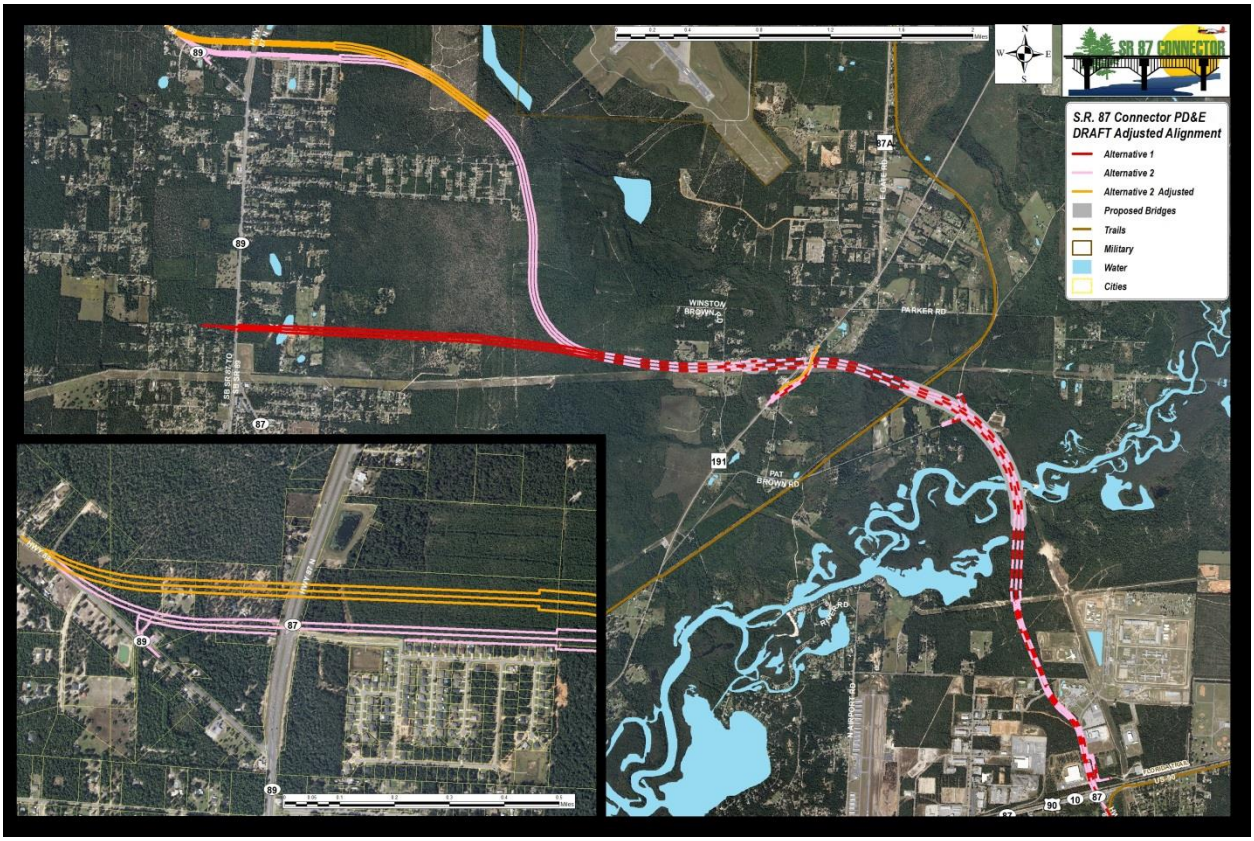


Figure 7.1: Adjusted Alignment

In addition to the Environmental Impact Statement, the following documents were updated to reflect Adjusted Alternative 2.

- Preliminary Engineering Report
- Access Management Report
- Pond Siting Report
- Wetlands Evaluation Report
- Conceptual Stage Relocation Plan
- Noise Study Report

7.1 Preliminary Alternatives Evaluation

With the adjustment of Alternative 2, the evaluation matrix found in **Section 3.2** was updated. Another update to the table was made within the traffic scoring. Due to preliminary information gathered from the Florida-Alabama Transportation Planning Organization, the update to the 2040 Cost Feasible Plan is not expected to include the Outer Beltway Project as a cost feasible project. This lack of connection altered the scoring. **Table 3.2** shows the updated matrix. Based on the new scoring, Adjusted Alternative 2 is the preferred alignment.

7.2 Impacts with Adjusted Alignment

This section outlines the impacts associated with the preferred alignment adjustment. With the adjustment to Alternative 2, some of the impacts have changed resulting in updates to the criteria scores. **Section 5.0** has been updated to reflect Adjusted Alternative 2.

7.2.1 Social and Economic

7.2.1.1 Social

During and following the Public Hearing, the study team received several comments that prompted the reevaluation of Alternative 2.

- *A property owner on the west side of S.R. 87N near Alternative 2 formally requested in writing the condemnation of their entire parcel, including the home because of the close proximity of the proposed alignment. A follow up conversation with the property owner requesting condemnation included a request that if the house was not impacted, the preference would be that the property maintain the frontage along S.R. 87 for future commercial development;*
- *Multiple comments were received with concerns about proximity location with the new homes within Harvest Point;*
- *Team members were notified that two businesses were now located along the Oakland Drive portion of Alternative 1 and may be impacted;*
- *Property owners near the terminus of Alternative 1 at S.R. 87 stated they had been contacted by a large home improvement store inquiring about property, etc.*

Alternative 2 was adjusted to be an additional +/- 200 feet north of the Harvest Point Subdivision. This is the original location of Alternative 2 that was presented at the Kick-Off meeting. It was previously adjusted prior to the Corridor Public Meeting to avoid a home on the west side of S.R. 87, and to better align the intersection of the Connector with a realigned connection to S.R. 89. With new information received at the public hearing from the impacted home owner, the alignment was moved back to its original location. The distance the alternative was adjusted was determined by reviewing noise impacts at multiple alignment distances to ensure the new location was at a sufficient distance to eliminate noise impacts/increases above 10 dB(A). The adjustment was made within the same parcel on the east side of S.R. 87; however, the adjustment will

be moving north of two homes (instead of south) on the west side of S.R. 87. One of those homes is the one which requested in writing to be condemned. By moving the alternative north away from the subdivision and eliminating the excessive noise impacts and probable noise wall, the impacts to residents within the Harvest Point Subdivision are now less with regards to noise and proximity to the roadway than those along the Oakland Drive segment of Alternative 1.

In September of 2010, the City of Milton City Council presented the FDOT project team with a resolution which preferred Alternative 1. Through coordination with the elected officials, the study team found this alternative was preferred by the elected officials due to its closer proximity to the City of Milton and projected ability to pull slightly more traffic from the congested historic downtown Milton area than Alternative 2. However, with the implementation of the new U.S. 90 PD&E from Glover Lane to S.R. 87S in Milton (estimated to be finished in 2018), the local traffic capacity demand will be addressed. Even though Alternative 1 was the direction from the local government, FDOT District 3 personnel recommended Adjusted Alternative 2 due to several reasons, which include: the current U.S. 90 PD&E study addressing immediate capacity needs in downtown Milton; the alternative's consistency with the TPO's Outer Beltway project; its ability to meet regional transportation needs by providing an S.R. 89 connection; the commercial growth expected in the immediate vicinity of Alternative 1 terminus; and Adjusted Alternative 2's environmental and business impacts in comparison to Alternative 1 (See **Table 3.2** for detailed information). It should be noted, the City of Milton and Santa Rosa County could consider an option which would extend Oakland Drive and tie into the S.R. 87 Connector if a connection is still desired in the location of the Alternative 1 intersection with S.R. 87. Further coordination with these two entities and FDOT should be done during design.

7.2.1.2 Relocation

The new location of Alternative 2 impacts two properties on the west side of S.R. 87. Both property owners were contacted and sent relocation information. Though the opportunity to utilize the entire parcel immediately adjacent to S.R. 87 allows the study team more flexibility in relocating the proposed roadway, all efforts are being made to not impact the residence, while also allowing the parcel to maintain the S.R. 87 frontage for future commercial development as requested by the property owner.

The two businesses along Oakland Drive that notified the project team of their location during the Public Hearing were found to be a sawmill and a car lot. Both have built shed type structures within the proposed right of way for Alternative 1. These businesses were contacted and the impacts are now included in the study matrix. Please refer to **Section 5.1.5**.

7.2.2 Natural and Physical Impacts

7.2.2.1 Noise

After the adjustment to Alternative 2, the proposed noise impacts were reevaluated which determined that the areas which previously warranted noise mitigation are now below the 10d(b) level required by the Environmental Protection Agency. Therefore, no areas along the preferred alignment meet the cost feasible requirement for noise mitigation. See the updated Noise Study Report for the adjusted evaluations. Likewise, **Section 5.4.3, Noise** was updated to reflect this information.

7.2.2.2 Wetlands

As outlined in **Section 5.4.4 Wetlands**, Alternative 2 impacts less wetland areas than Alternative 1. This does not change due to the adjustment of Alternative 2.

Now that the proposed alternative is being presented, the Wetlands Evaluation Report was updated to reflect this information. Additional information from that document was added to the EIS, specifically a Conceptual Mitigation Plan was added to the **Appendix E**. This expands on the mitigation efforts that can be found in **Section 5.4.4 Wetlands**.

7.2.2.3 Water Quality

The section on water quality has not changed due to the Adjusted Alternative 2 alignment. With the selection of Adjusted Alternative 2 as the preferred alignment, the minimum quantity of water quality impacts has been achieved. Adjusted Alternative 2 continues to avoid additional wetland impacts that were found in Alternative 1.

The proposed stormwater facilities will provide mitigating effects from the new roadway. The design will provide outfall locations which match existing outfall sites, and will also include the required attenuation. The stormwater facilities will be designed to provide an additional 50% treatment volume since the Blackwater River is an Outstanding Florida Waterway. More information regarding the proposed stormwater facilities can be found in the Pond Siting Report.

During construction of the S.R. 87 Connector, the contractor will utilize Best Management Practices (BMPs) which will limit any sedimentation and erosion impacts to areas outside of the limits of construction. BMPs may include silt fence, hay bales, turbidity barriers, and ditch blocks. These are standard practices outlined in the Florida Stormwater Management Plan. This project will require an NPDES permit and submission of a Stormwater Pollution Prevention Plan.

7.2.2.4 Contamination

The contamination areas that are shown in **Section 5.4.7 Contamination** have not changed with the adjustment of Alternative 2. No additional locations are within proximity of the adjusted alignment. The outlined brownfield areas are similar for

both alternatives. However, it is not estimated that any impacts to contaminated areas will be encountered. All of the contaminated areas are located in areas which will not be impacted by the proposed roadway. Therefore, remediation will not be necessary. With the close proximity of the existing gas station at the end of Alternative 1, Adjusted Alternative 2 is a lesser risk. However, Alternative 1 was designed to minimize any direct impact to the gas station.

7.2.2.5 Floodplains

The floodplain section that is described in **Section 5.4.8 Floodplains** has not changed with the adjustment of Alternative 2. No additional floodplains have been impacted due to the adjusted alignment.

Floodplain mitigation will be provided upstream of the proposed Blackwater River bridge. The proposed floodplain mitigation may be used in conjunction with the proposed stormwater management facilities to provide additional treatment through a by-pass train away from Cooper Basin.

7.2.2.6 Wildlife and Habitat

The wildlife and habitat section that is described in **Section 5.4.10 Wildlife and Habitat** has not changed with the adjustment of Alternative 2. The adjustment area encounters the same threatened and endangered species as the original Alternative 2.

Two species were evaluated through the formal consultation process: the Reticulated Flatwood Salamander and the Gulf Sturgeon. Both Alternatives avoided/mitigate direct impacts to the Reticulated Flatwood Salamander Habitat by bridging the critical habitat. The impacts to the Gulf Sturgeon have been minimized through choosing a stormwater retention facility on the east side of the proposed roadway. This stormwater pond will potentially utilize a treatment train to the flood plain mitigation area which will result in additional treatment and a discharge point farther away from Cooper Basin.

7.2.2.7 Construction

Construction noise is inevitable. As detailed in **Section 5.4.13 Construction**, the FDOT Standard Specifications for Road and Bridge Construction outlines noise screening guidelines for stationary equipment, exhaust noise, noise from loose equipment parts, and excessive tailgate banging. This does not change due to adjustment of Alternative 2.

7.2.3 Indirect and Cumulative Impacts

The Draft EIS addressed the direct impacts of both Alternative 1 and 2. The Alternative analysis following the public hearing resulted in a preferred alternative. The Indirect and Cumulative Impact Evaluation (ICE) analysis for Adjusted

Alternative 2 was added to the EIS. It should be noted the shift in the northern segment of Alternative 2 did not impact the Indirect and Cumulative Impacts.

The indirect and cumulative impacts which are described in **Section 5.5 Cumulative Impacts** are applicable to the preferred alignment. Impacts such as wetlands, floodplain, water quality, and wildlife are anticipated.

8. COMMITMENTS AND RECOMMENDATIONS

8.1 Commitments

1. The Blackwater River will be bridged and construction will be conducted during nonspawning periods to avoid direct impacts to both Gulf sturgeon critical habitat and individuals.
2. All construction methods will be consistent with the "Construction Special Provisions – Sturgeon Protection Guidelines" to minimize construction related impacts.
3. The pond areas within the Reticulated Flatwoods Salamander critical habitat unit will be bridged to reduce direct impacts to both the critical habitat unit and individuals.
4. Indirect impacts to the RFS habitat will be minimized through the location and placement of stormwater treatment from elevated roadways so that the treatment areas do not impact the critical habitat unit.
5. The most recent or current Eastern indigo snake protective measures will be followed during construction to avoid impacts.
6. Manatee protective measures will be followed during construction to avoid impacts.
7. Prior to construction, a survey for the gopher tortoise will be conducted. If individuals are present within the project impact area, appropriate permits will be obtained and tortoise relocation will be completed per permit conditions and requirements.
8. A site-specific survey will be conducted to determine the presence or absence of bald eagle nests in or near the construction zone and appropriate permits per the Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act will be obtained as appropriate and applicable.
9. Any unused ROW purchased for future expansion will be left in its natural, generally un-impacted state until such time as it is needed for the proposed expansion to 4 lanes.

- All commitments made as terms and conditions of the Biological Opinion (Appendix I) will be fulfilled:

10. The FDOT will provide an information package at the Pre-Construction Conference to educate the Contractor on the subject of the listed species, the laws protecting such species, and the civil and criminal penalties for harming, harassing, or killing such species.
11. The Contractor will consider and implement where practical innovative, environmentally sensitive construction techniques to avoid/minimize impacts to listed species and sensitive areas.
12. The Erosion Control Plan/Stormwater Pollution Prevention Plan (SPPP) will be provided to the USFWS for comment prior to the start of work. Substantive changes to the SPPP during construction will also be reported to the USFWS.
13. The Erosion Control Plan/SPPP will be strictly adhered to, including the installation and maintenance of structures. Temporary erosion control devices will be installed prior to clearing and grubbing activities. Other measures in the plan will include:
14. All turbidity barriers placed in the river will be consistent with the Gulf Sturgeon Protection Guidelines.

15. Stockpiled materials will be placed in a manner to prevent rain runoff from washing materials into the river.
16. The Erosion Control Plan will include redundant measures for the width of the ROW along the Blackwater River and along the limits of construction within the flatwoods salamander critical habitat unit to provide a second line of defense should one layer of protection be breached. An example would be a double row of silt fencing.
17. The Erosion Control Plan will include daily monitoring of erosion control devices that protect the waters of the Blackwater River and the flatwoods salamander critical habitat unit.
18. Soil disturbing activities (clearing, pile driving) within the potential breeding pond (Pond 2) of the flatwoods salamander critical habitat unit will be avoided to the extent practicable during periods when eggs/larvae may be present (October through April). Additional coordination will occur during the Design phase to address this issue.
19. In the event of erosion control failure with impacts to the Blackwater River, the Contractor will notify the FDOT, FHWA, and USFWS to determine: (1) whether incidental take was exceeded, (2) if additional protection measures are needed to avoid future impacts to listed species from sedimentation, and (3) if stream restoration is needed. The USFWS will be available to assist the FDOT with development of a stream restoration plan should it become necessary.
20. Survey the baseline stream geomorphology 400 m downstream of the extent of construction through methods including a longitudinal profile and stream channel cross sections. Coordinate the survey plan with the USFWS prior to implementation.
21. Stream turbidity will be monitored by the Project Administrator or his designee before construction in various places on the river (upstream, downstream, etc.) to establish a baseline. During construction and demolition, the Project Administrator will be responsible for monitoring turbidity levels daily for any earthwork activities near the Blackwater River to ensure that turbidity levels do not increase above the level allowed by the FDEP permit for an OFW. Construction activities found to be associated with the increased turbidity levels will not be allowed to resume until the turbidity levels return to that of ambient. All other construction activities having no effect on the deviant turbidity levels will be allowed to resume once the source has been identified.
22. Boats and barges used in support of construction activities will be removed from the main channel during periods of inactivity.
23. A post-construction field review will be conducted by FDOT and the USFWS to determine if the project has impacted the Blackwater River and if stream restoration is needed.
24. No herbicides or pesticides will be used within the flatwoods salamander Critical Habitat Unit RFS-2, Subunit A during construction and post-construction for FDOT maintenance activities.
25. The hydrology and native vegetation of the potential breeding pond (Pond 2) within the FDOT ROW will be maintained to the extent practicable. The pond's plant community and hydrology will be monitored for 5 years to better assess the long term adverse effects of the bridge. A monitoring plan will be developed and

coordinated with the USFWS prior to construction. Annual monitoring reports will be provided to the Fish and Wildlife Service's Field Office in Panama City, Florida

26. Upon locating a dead, injured, or sick individual of an endangered or threatened species, FDOT will notify the Fish and Wildlife Service Law Enforcement Office, Groveland, Florida at (352) 429-1037 within 24 hours, and the Fish and Wildlife Service's Field Office at Panama City, Florida at (850) 769-0552 within 48 hours. Care should be taken in handling sick or injured individuals and in the preservation of specimens in the best possible state for later analysis of cause of death or injury.
27. A report describing the actions taken to implement the terms and conditions of this incidental take statement shall be submitted to the Project Leader, U.S. Fish and Wildlife Service, 1601 Balboa Avenue, Panama City, Florida, 32405, within 60 days of the completion of construction. This report shall include the dates of work, assessment and actions taken to address impacts to the Gulf sturgeon and flatwoods salamander, if they occurred.
28. Environmentally sensitive areas will be identified and flagged.
29. In the location of the bridge, clearing and grubbing will be limited to cutting vegetation to the ground surface. Root raking will only be used in areas where piling cap supports are anticipated, which will minimize impacts to the floodplain wetlands that support the Blackwater River and the RFS critical habitat unit.
30. Embankment and excavation will not be employed within the Gulf sturgeon critical habitat or the RFS critical habitat since both areas will be bridged.
31. Where embankments are constructed, only clean fill will be used that does not contain any muck, vegetation, stumps, roots, brush, rubbish, or reinforced bar. If dewatering is required, all water will be pumped to upland areas on the edge of the ROW that will be contained with silt fencing. Water will be allowed to percolate through in these upland areas to prevent sediment runoff from entering adjacent wetlands. Once the embankments are completed, they will be compacted and stabilized prior to paving and surfacing operations.
32. Excavated material will be stockpiled in designated upland areas that will be enclosed with silt fencing and hay bales. The stockpile areas will be inspected regularly and will be kept moist to reduce observed windblown particulates.
33. Construction mats will be used within wetland areas to minimize soil disturbances and rutting, and to maintain existing micro-topography and water levels.
34. FDOT will ensure that all staging areas are within uplands and are contained with erosion control measures. Construction staging areas will be located outside of the Blackwater River floodplain.
35. Best Management Practices (BMPs) specific to Outstanding Florida Waters (OFW) will be implemented during construction and stormwater design to prevent degradation of the Blackwater River.
36. Ponds with discharges into wetland areas associated with the Blackwater River will treat water to OFW standards. The remainder of the stormwater ponds will meet the state requirements under the Environmental Resource Permit (ERP).
37. In-river pile driving will be avoided during May and June to minimize potential direct harm to Gulf sturgeon during the peak period when fish may be present in the river near the project location.

38. Pile bents will be used instead of columns on piling caps to reduce direct impacts to river bottom and critical habitat.
39. No dredging or use of explosives in or adjacent to the river will be done.
40. Sturgeon migratory corridors will not be physically blocked or impeded.
41. In order to minimize impacts to Gulf sturgeon that may be using the river at the time of construction, the contractor will "ramp-up" for piling installation by conducting several (up to five) soft hammer blows before commencing the harder hammer blows. The "ramp-up" is intended to alert fish that construction is commencing and give them time to move away from the construction site.
42. During in-river pile driving, erosion control measures will be installed around the limits of the work area and will be maintained until piling installation in each area is complete. Specifically:
    43. The work area will be separated from the adjacent open water using floating turbidity barriers. The barriers will be installed around the limits of the work area and downstream of the work site prior to commencing work, and removed no more than 24 hours after work is completed.
    44. The barriers located downstream of the worksite will be removed at the end of each work day and replaced prior to commencing work the following day. Barriers will not be removed before turbidity returns to background levels.
45. FDOT will purchase, donate, or fund the purchase of up to four fish tag receptors for use in the Blackwater River system, in an amount not to exceed $5,000. FDOT requests copies of the processed or raw data obtained from the receptors for use in future project efforts. FDOT will follow the procedure outlined in the Construction Project Administration Manual, Section 8.2 Environmental Permit Compliance to submit proof of commitment compliance to FWS and FHWA.
46. All stormwater will be collected from the completed bridge surface and conveyed to stormwater ponds located outside of the RFS critical habitat unit.
47. The ROW will be accessed for construction and maintenance from the maintained powerline easement.
48. FDOT will provide compensation for the loss of RFS habitat through a monetary contribution up to $10,000 to a third party for activities that contribute to the conservation of the RFS. The work plan for these conservation activities will be coordinated with the USFWS and FDOT, and will be mutually agreed to as suitable for offsetting effects to RFS habitat.
49. Precautions will be taken during preventative maintenance tasks such as painting and cleaning to protect the Blackwater River and the RFS critical habitat. Preventative measures include conducting work from a maintenance traveler, platform, or over a suspended net or tarp to capture rust, paint, and paint removing agents and prevent discharge into the water or wetland below the bridge. If sanding is necessary, sanders with vacuum filter bags will be used. The water used for cleanup will be collected and disposed of to avoid impacts to the water or wetland below the bridge.
50. Mitigation for unavoidable wetland impacts will be accomplished in accordance with section 373.4137, F.S., which allows the FDOT to provide compensatory mitigation using mitigation banks and any other options that satisfy state and federal requirement. Mitigation will be finalized during Design/Permitting.

51. Proposed stormwater treatment pond(s) shall avoid direct discharge to Cooper Basin. Cooper Basin is located downstream from the proposed bridge crossing and is connected to the Blackwater River, an Outstanding Florida Water. Cooper Basin is a known breeding area for Gulf Sturgeon *(Acipenser oxyrinchus desotoi).*
52. Due to adjacent historical sedimentation/erosion compliance issues and adjacency of endangered species habitat, additional OFW BMPs shall be evaluated during design. FDOT shall consider designing potentially unique and project specific temporary and permanent erosion control solutions to shield highly erodible soils found within the construction limits and protect nearby OFW as well as endangered species habitat. The sedimentation and erosion controls will be submitted as part of the Stormwater Management Plan to FWS for comment prior to work start (Biological Opinion, 12-20-2013, Terms and Conditions, RPM 1.3, 1.4, 1.5, 1.7, 1.9 et al). FHWA staff shall be notified and copied upon submittal to FWS.
53. Hydrological Connections will be maintained, where reasonable and feasible, as a wetland minimization effort.
54. Final Concurrence of the project's consistency with the Florida Coastal Management Program will be determined during the environmental permitting process. Documentation can be found outlined in the approved Environmental Permit.
55. Drainage structures will be evaluated to determine if additional wildlife connections can be incorporated into their design during the projects final design phase.

8.2 Commitments to Local Government/Agencies

Local Governments

56. Commitment to Santa Rosa County and the City of Milton: To build the proposed facility into two phases, beginning with phase one as a two-lane facility with bike lanes and a multi-use path connecting the Historic SR 1 Trail and the BHST. Phase two would be built as traffic demand dictates, and would be a four-lane facility with bike lanes and will retain the multi-use path.
57. Commitment to Santa Rosa County and the City of Milton: In coordination with FHWA, the ROW for the build-out (four-lanes), including stormwater ponds, of the proposed facility would be purchased during the initial ROW acquisition stage.
58. To enhance alternative modes of transportation by linking existing multi-use trail facilities.
59. To gain public support by providing a landscaped enhanced corridor as part of the proposed facility.

FDEP/OGT

60. To provide grade separation between the proposed facility and the BHST to avoid the Section 4(f) impacts. No bridge pilings or other infrastructure will be installed within the trail corridor.
61. To provide a connection between the proposed facility's pedestrian features and the BHST.

State Historic Preservation Officer

62. To provide a safety enhanced at-grade trail crossing for the proposed SR 87 Connector's crossing of the SR 1 Historic Trail along US 90.
63. To coordinate the design options to minimize the potential effects on the SR 1 resource.

USFWS

64. To bridge the RFS Habitat area as defined by USFWS.
65. To provide USFWS the opportunity to review the final design plans.

FEMA

66. To bridge the entire Blackwater River Regulatory Floodway.

USCG

67. The Blackwater River and Clear Creek Bridges are exempt under the Surface Transportation Authorization Act from Coast Guard Permitting. However, per the USCG correspondence dated 5/3/12 and 6/26/2014 (See Appendix A), USCG required lighting and other signals are not exempt. The subject Act which amended Title 23 U.S. Code, to include 23 U.S.C 144(c), did not exclude this category of bridges from the application of 14 U.S.C.85. Lighting and other signals will be addressed in the design phase. If it is determined that they are not necessary, a variance will be submitted.

National Park Service, Federal Lands to Parks

68. To provide John Barrett, Program Manager, or his equivalent at Federal Lands to Parks, the opportunity to review the final design plans of the structure over the BHST.

8.3 Recommendations

Due to the similarities in the two alignments, no preferred alternative was presented at the public hearing. The results of the alternative selection process indicate that both alternatives have similar impacts and provide similar benefits. This process reviewed engineering criteria such as safety, costs, traffic analysis, and multimodal implications. It took into account environmental impacts to wetlands, threatened and endangered species, noise, air, contamination, etc. It also included studying socio-economic factors such as hurricane evacuation, community and cultural resource impacts, historic site impacts, Section 4(f) impacts, and relocation impacts. Likewise community and agency input has also shaped the type and location of the alternatives, as well as the features, such as the connection to the BHST. FHWA will make the final determination on a preferred alternative once alternative impacts and agency comments on this EIS and public input resulting from the public hearing have been fully evaluated. Unless new information is

brought forward through the public and agency comment period, FHWA intends to select the preferred alternative and will issue a combined Final Environmental Impact Statement and Record of Decision (FEIS/ROD) in accordance with Pub. L. 112-141, 126 Stat. 405, Section 1319(b). If FHWA selects another alternative based on public or agency input, FHWA will issue a separate FEIS and ROD in accordance with 23 CFR 771.

Both Alternatives consist of constructing the SR 87 Connector from the US 90/SR 87S intersection crossing the Blackwater River in the proximity of the existing eastern power easement crossings. Once across the river, they will run parallel or adjacent to the power easement. Alternative 1 connects with SR 87N just north of the convergence of SR 87N and SR 89 for a total length of approximately 6.5 miles. Adjusted Alternative 2 connects with SR 87N north of Alternative 1 at the divergence of SR 89, realigning that intersection, for a length of approximately 8.2 miles.

Both Alternatives are proposed as four lane, restricted access, divided highways with two sets of twin two lane bridges over the Blackwater River and Clear Creek and over the BHST. Both Alternatives are south of the Whiting Field Naval Air Station. The proposed roadway typical will also provide a 12 foot multi-use path on the west side of the roadway from the Old SR 1 Trail to the Blackwater Heritage State Trail. It is the intent for the project to initially build an interim two lane facility and as demand increases, the road would be expanded to four lanes to ultimately match the urban four lane typical section at the existing SR 87S and SR 87N. As the Connector enters into less constrained areas north of the Blackwater River, a rural typical section is being recommended. The following illustrations depict the proposed typical sections.

Figure 8.1: Proposed Build Out Urban Typical Section

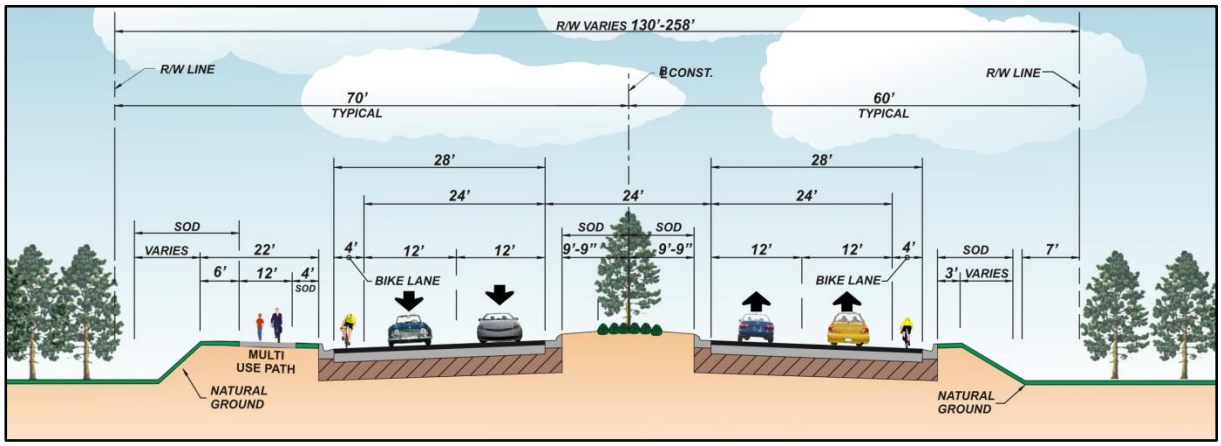
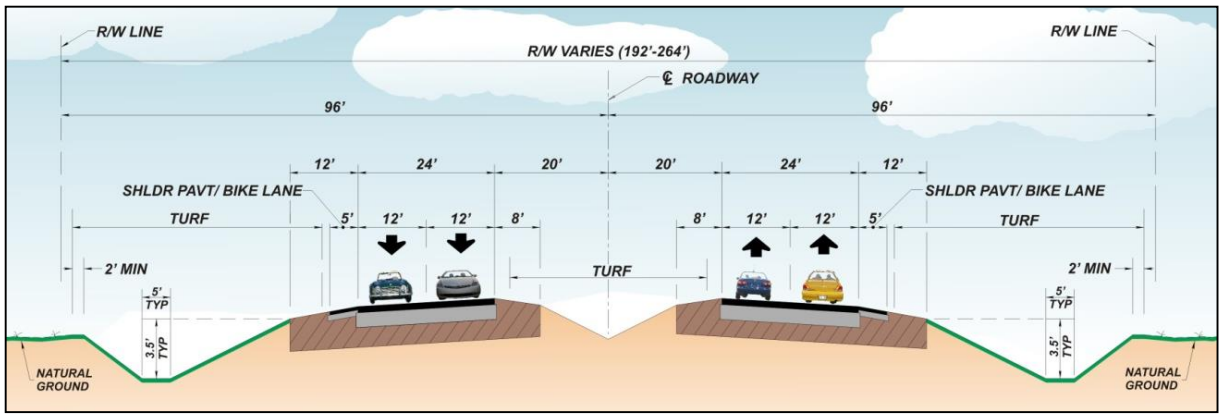


Figure **8.2**: Proposed Build Out Rural Typical Section



Project cost estimated associated with the proposed improvements are as follows:

Alternative Improvements	Construction Cost Estimate	Right-of-Way Cost Estimate
Alternative 1	$116,781,000	$5,058,000
Adjusted Alternative 2	$120,410,000	$5,626,000

The Public Hearing for the SR 87 Connector PD&E was held November 13, 2014. Comments from the hearing about the proximity of Alternative 2 to homes on the west side of SR 87N, as well as to homes in the newly developed Harvest Point Subdivision, prompted the study team to reevaluate the intersection location of Alternative 2, SR 87N and SR 89N. After reviewing the public information summary of the public hearing, the study team adjusted Alternative 2 slightly north to a previously reviewed alignment. This adjustment moved the alignment north away from the Harvest Point Subdivision, reduced noise impacts to the homes along the subdivision's northern perimeter to less than 10 dB(A) and provided a connection to SR 89N similar to what had been presented at the Public Hearing (See **Section 7** for information).

With the adjustment of Alternative 2, the evaluation matrix found in **Section 3.2** was updated. Another update to the table was made within the traffic scoring. Due to preliminary information gathered from the Florida-Alabama Transportation Planning Organization, the update to the 2040 Cost Feasible Plan is not expected to include the Outer Beltway Project as a cost feasible project. This lack of connection altered the scoring. **Table 3.2** shows the updated matrix. Based on the new scoring, Adjusted Alternative 2 is the preferred alignment.

9. LIST OF PREPARERS

FEDERAL HIGHWAY ADMINISTRATION

Buddy Cunill Environmental Programs Coordinator	M.S. Public Administration 38 years of experience
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Cathy Kendall, AICP Environmental Specialist	B.S. and M.S. degrees in Urban and Regional Planning 20 years experience in environmental analysis and documentation

FLORIDA DEPARTMENT OF TRANSPORTATION

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BALMORAL GROUP, INC.

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10. LIST OF AGENCIES, ORGANIZATIONS AND PERSONS TO WHOM COPIES OF THE STATEMENT ARE SENT

FEDERAL AGENCIES

Advisory Council on Historic Preservation - Office of Cultural Resources Preservation
Colorado State University - The Libraries, Documents Librarian
Federal Aviation Administration - Airports District Office
Federal Aviation Administration - Regional Director
Federal Emergency Management Agency - Associate General Counsel for Insurance and Mitigation
Federal Emergency Management Agency - Natural Hazards Branch, Chief
Federal Railroad Administration - Office of Economic Analysis, Director
U.S. Army Corps of Engineers - Regulatory Branch, District Engineer
U.S. Coast Guard - Commander (obr) - Eighth District
U.S. Department of Agriculture - Natural Resources Conservation Service, State Conservationist
U.S. Department of Commerce - National Marine Fisheries Service - Habitat Conservation Division
U.S. Department of Commerce - National Marine Fisheries Service - Southeast Regional Office
U.S. Department of Commerce - National Oceanic and Atmospheric Administration
U.S. Department of Health and Human Services – Centers for Disease Control and Prevention
U.S. Department of Housing and Urban Development - Regional Environmental Officer
U.S. Department of Interior - Bureau of Indian Affairs - Office of Trust Responsibilities
U.S. Department of Interior - Bureau of Land Management – Southeastern States Field Office
U.S. Department of Interior - Fish and Wildlife Service, Jacksonville Ecological Services Office, Field Supervisor
U.S. Department of Interior - Fish and Wildlife Service, Panama City Ecological Services Office, Field Supervisor
U.S. Department of Interior - Fish and Wildlife Service, South Florida Ecological Services Office, Field Supervisor
U.S. Department of Interior - National Park Service - Southeast Regional Office
U.S. Department of Interior - Office of Environmental Policy and Compliance, Director
U.S. Department of Interior - U.S. Geological Survey Chief
U.S. Department of State - Office of Environment, Health and Natural Resources
U.S. Environmental Protection Agency - Office of Federal Activities, NEPA Compliance
U.S. Environmental Protection Agency - Region IV, Regional Administrator
U.S. Environmental Protection Agency - Region IV, Ground Water Drinking Water Board

STATE AGENCIES

Florida Department of Environmental Protection – Florida State Clearinghouse
Florida Department of Economic Opportunity
Florida Department of Health
Florida Department of State - Division of Historical Resources
Florida Fish and Wildlife Conservation Commission

LOCAL AGENCIES

City of Milton
Santa Rosa County Planning Department
Florida-Alabama Transportation Planning Organization
West Florida Regional Planning Council
Northwest Florida Water Management District, Executive Director

11. INDEX