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LIST OF ACRONYMS

A

AADT	Annual Average Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
ACHP	Advisory Council on Historic Preservation
ACI	Archeological Consultants, Inc.
ACS	American Community Survey
APE	Area of Potential Effect
AST	Above Ground Storage Tank

B

BA	Biological Assessment
BDR	Bridge Development Report
BEBR	Bureau of Economic and Business Research
BMP	Best Management Practices
BOCC	Board of County Commissioners

C

CAA	Clean Air Act
CAR	Contamination Assessment Report
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CIP	Capital Improvement Program
CO	Carbon Monoxide
COO	Certificates of Occupancy
CR	County Road
CRAS	Cultural Resource Assessment Survey

CSER	Contamination Screening Evaluation Report
CSRP	Conceptual Stage Relocation Plan
CU	Cleanup or Cleanup Status
CZMA	Coastal Zone Management Act of 1972
CZMP	Coastal Zone Management Plan

D

dB	Decibels
dB(A)	Decibels (A-weighted)
DCA	Department of Community Affairs
DEIS	Draft Environmental Impact Statement
DNF	Discharge Notification Form
DNR	Discharge Notification Report
DRI	Development of Regional Impact

E

EDB	Ethylene Dibromide
EDM	Environmental Data Management, Inc.
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EMS	Emergency Medical Services
EPA	U.S. Environmental Protection Agency
ERP	Environmental Resource Permit
ESA	Endangered Species Act of 1973, as Amended
EST	Environmental Screening Tool

LIST OF ACRONYMS (CONTINUED)

F

F.A.C.	Florida Administrative Code
FCMP	Florida Coastal Management Program
FDEP	Florida Department of Environmental Protection
FDHR	Florida Division of Historical Resources
FDOT	Florida Department of Transportation
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FGDL	Florida Geographic Data Library
FID	Flame Ionization Detector
FLUCFCS	Florida Land Use Cover and Forms Classification System
FMSF	Florida Master Site Files
FNAI	Florida Natural Areas Inventory
FPPA	Farmland Protection Policy Act
FR	Federal Register
F.S.	Florida Statute
FSUTMS	Florida Standard Urban Transportation Modeling System
ft ²	Square Feet
FWC	Florida Fish and Wildlife Conservation Commission
FWS	U.S. Fish and Wildlife Service
FY	Fiscal Year

G

GIS	Geographic Information System
-----	-------------------------------

GMFMC	Gulf of Mexico Fisheries Management Council
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H

HC	Hydrocarbons
HCM	Highway Capacity Manual
HEVAL	Highway Evaluation Module
HOV	High-Occupancy Vehicle

I

I-75	Interstate 75
IL	Insertion Loss
IMPLAN	Impact Analysis for Planning
IRA	Initial Remedial Action
ITS	Intelligent Transportation System

L

LDCA	Location Design and Concept Acceptance
L _{eq(h)}	Equivalent Levels
LOS	Level of Service
L RTP	Long Range Transportation Plan
LUST	Leaking Underground Storage Tanks

M

MBTA	Migratory Bird Treaty Act of 1918
MCAT	Manatee County Area Transit
MCEMD	Manatee County Environmental Management Department
mi ²	Square Miles

LIST OF ACRONYMS (CONTINUED)

MOP	Monitoring Only Plan	O	
mpg	Miles per Gallon		
mph	Miles per Hour		
MPO	Metropolitan Planning Organization	OFW	Outstanding Florida Waters
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act, as Amended	OMB	Office of Management and Budget
		OVA	Organic Vapor Analyzer
N		P	
N/A	Not Applicable	PD&E	Project Development and Environment
NAAQS	National Ambient Air Quality Standards	PIM	Permit Information Manual
NAC	Noise Abatement Criteria	PL	Public Law
NAVD	North Atlantic Vertical Datum	R	
NEPA	National Environmental Policy Act of 1969	RA	Remedial Action
NFA	No Further Action	ROW	Right-of-Way
NFPA	National Fire Protection Association	S	
NGVD	North Geodetic Vertical Datum	SA	Site Assessment
NHPA	National Historic Preservation Act	SERT	State of Florida State Emergency Response Team
NMFS	National Marine Fisheries Service	SHCA	Strategic Habitat Conservation Area
NO	Nitrogen Oxide	SHPO	State Historic Preservation Officer
NOAA	National Oceanic and Atmospheric Administration	SMC	Sarasota/Manatee/Charlotte Transportation Model
NOI	Notice of Intent	SR	State Road
NPDES	National Pollutant Discharge Elimination System	SRCO	Site Rehabilitation Completion Order
NRHP	National Register of Historic Places	SRRI	Sacramento Regional Research Institute
NSR	Noise Study Report	SWFWMD	Southwest Florida Water Management District
		SWPPP	Stormwater Pollution Prevention Plan

LIST OF ACRONYMS (CONTINUED)

T

TANKS	Registered Tanks
TAZ	Traffic Analysis Zone
TBRPC	Tampa Bay Regional Planning Council
TDM	Travel Demand Model
THPO	Tribal Historic Preservation Officer
TMDL	Total Maximum Daily Load
TNM	Traffic Noise Model (Version 2.5)
TRB	Transportation Research Board
TSM	Transportation System Management

U

UMAM	Uniform Mitigation Assessment Method
US	U.S. Highway
U.S.	United States
USACE	U.S. Army Corps of Engineers
U.S.C.	U.S. Code
USCG	U.S. Coast Guard
UST	Underground Storage Tank

V

vpd	Vehicles per Day
VHT	Vehicle Hours Traveled
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds

W

WER	Wetlands Evaluation Report
-----	----------------------------

EXECUTIVE SUMMARY

ES.1 PROPOSED ACTION

Manatee County (the County) is proposing to add additional travel lanes across the Manatee River in eastern Manatee County. The purpose of the Proposed Action is to provide an alternative north/south transportation route between high-growth areas of Manatee County located east of Interstate 75 (I-75) and separated by the Manatee River and improve regional mobility. **Figure ES-1** depicts the project area. Studies have shown that there is a strong demand for multiple crossings over this waterway to alleviate the traffic burden on I-75. Several specific factors demonstrate the need for the Proposed Action, including:

- Accommodate existing and projected growth in eastern Manatee County (Section 1.2.2),
- Improve the Level of Service (LOS) of the local roadway network (Section 1.2.3),
- Improve emergency response times (Section 1.2.4), and
- Improve evacuation capacity across the Manatee River (Section 1.2.5).

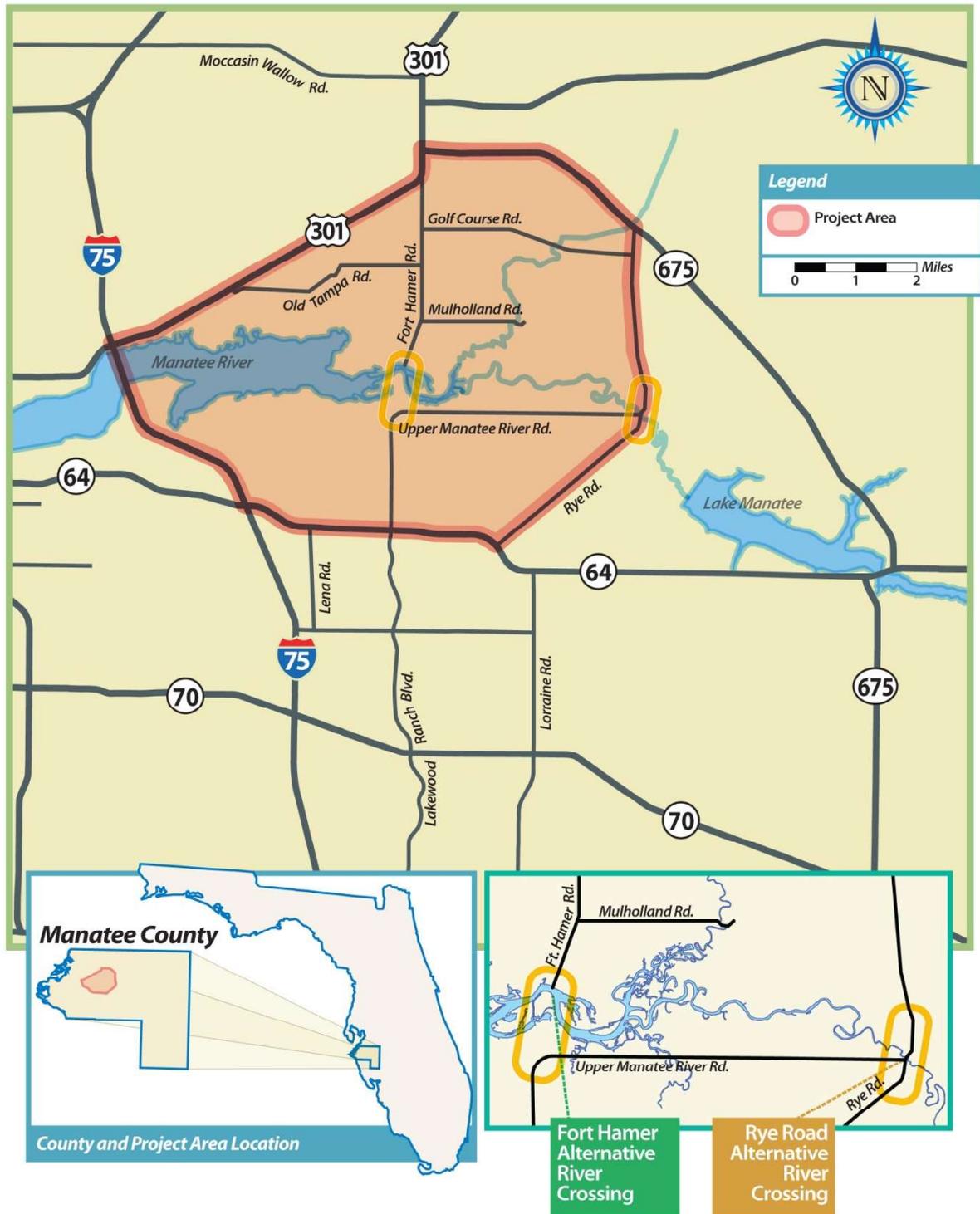
Additional details regarding the Purpose and Need for the Proposed Action are provided in Chapter 1.

The Proposed Action has been reduced from a previous study of adding four lanes of capacity across the Manatee River to two lanes. Currently, Manatee County has no plans to construct a 4-lane bridge and there is no funding for such a bridge in the foreseeable future.

ES.2 OTHER MAJOR GOVERNMENT ACTIONS

Although no other major government actions regarding transportation improvement projects are currently funded within the project area, several other major transportation improvement projects within the region (i.e., Manatee and Sarasota counties) are in various stages of planning and design. A synopsis of each project is provided in **Table ES-1**.

**FIGURE ES-1
PROJECT AREA MAP**



**TABLE ES-1
OTHER IMPROVEMENT PROJECTS WITHIN THE PROJECT AREA**

Roadway	Length (miles)	County	Description
Federal and/or State Funded Projects			
I-75 at SR 70 Interchange	1.0	Manatee	Interchange improvement. Funded for design.
I-75 at University Interchange	0.0	Manatee	Interchange improvement. Funded for design.
I-75 from I-275 to Hillsborough County line	5.8	Manatee	Intelligent Transportation System (ITS) freeway management. Funded for design.
US 301 from CR 675 to Moccasin Wallow Road	1.2	Manatee	Capacity improvements with sidewalks. Construction underway.
US 301 from Erie Road to CR 675	4.1	Manatee	Capacity improvements with turn lanes and sidewalks - COMPLETED
I-75 from SR 681 to University Parkway	13.8	Sarasota	Project Development and Environment (PD&E) Study underway.
I-75 at University Parkway	0.2	Sarasota	Capacity improvement. Funded for design.
I-75 from north of River Road to north of SR 681	9.4	Sarasota	Capacity improvement (widening). Funded for construction.
I-75 from north of Sumter Boulevard to north of River Road	9.1	Sarasota	Capacity improvement (widening). Funded for design.
Locally Funded Projects			
Upper Manatee River Road from SR 64 to Proposed Fort Hamer Bridge	1.9	Manatee	Capacity improvement (widening), turn lanes, shoulder improvements and sidewalks. Currently in design.
Fort Hamer Road from US 301 to Proposed Fort Hamer Bridge	3.6	Manatee	Capacity improvement (widening), turn lanes, shoulder improvements and sidewalks. Currently in design.
US 301 at Fort Hamer Road Intersection	0.0	Manatee	Intersection improvements including realignment, signalization upgrades and turn lanes. Currently bid, construction pending.
Fort Hamer Road Sidewalks	0.4	Manatee	Sidewalks on west side from Mulholland Road to 30 th Street East to provide continuous sidewalk from Fort Hamer County Park to Annie Lucy Williams Elementary School - COMPLETED

ES.3 ALTERNATIVES CONSIDERED

As detailed in Chapter 2, multiple build and no-build alternatives were considered throughout the life of this study. A tiered screening process was used to determine which alternatives satisfied the stated Purpose and Need, minimized impacts to the human and natural environments, and operated favorably within the regional roadway network.

Following the screening process, the No-Build Alternative and two build alternatives were advanced for further evaluation in this Final Environmental Impact Statement (FEIS). The No-Build Alternative consists of performing nothing more than currently funded and programmed maintenance and safety improvements in the project area. The two build alternatives that are evaluated in this FEIS are shown in **Figure ES-2** and summarized below.

FIGURE ES-2
ALTERNATIVES CONSIDERED



- No-Build Alternative** – This alternative consists of performing nothing more than currently funded and programmed maintenance and safety improvements included in the Manatee County Capital Improvement Program (CIP) (Manatee County BOCC, 2012). This alternative does not include any capacity improvements with the project area, including the construction of additional lanes across the Manatee River.
- Fort Hamer Alternative** – This alternative consists of construction and operation of a new two-lane, mid-level, fixed span bridge connecting the existing two-lane Upper Manatee River Road on the south to the two-lane Fort Hamer Road on the north. The length of new bridge structure, bridge approaches, and new roadway required for this alternative is approximately 1.2 miles. The Fort Hamer Alternative is being recommended as the Preferred Alternative.
- Rye Road Alternative** – This alternative consists of the widening of the existing Rye Road Bridge from two to four lanes, the widening of Rye Road from State Road (SR) 64 to Golf Course Road from two to four lanes, the widening of Golf Course Road from Rye Road to Fort Hamer Road from two to four lanes, and the widening of Fort Hamer Road from Golf Course Road to U.S. Highway (US) 301 from two to four lanes. The length of this alternative is approximately 10.2 miles. The Rye Road Alternative is not being recommended because it does not satisfy

elements of the stated Purpose and Need, as well as the Fort Hamer Alternative; it is more costly, and more impactful to the human environment.

Throughout this document reference is made to the “study areas” for each of these build alternatives. The study area of each build alternative is defined as the area contained within a 0.5-mile buffer of the alternative’s centerline. The study areas for the two build alternatives are shown on Figure 2-3 in Chapter 2. Chapter 2 describes the alternatives evaluation process and alternatives considered for further evaluation in this FEIS.

ES.4 MAJOR ENVIRONMENTAL IMPACTS

Chapter 1 of this FEIS identifies the Purpose and Need to construct additional travel lanes across the Manatee River between I-75 and Rye Road. The analyses conducted in Chapter 2 resulted in the determination that the No-Build Alternative does not meet the stated Purpose and Need and further identified two build alternatives (the Fort Hamer Alternative and the Rye Road Alternative) that met all or most of the stated Purpose and Need for the Proposed Action. The only defined need not met is the inability of the Rye Road Alternative to improve emergency response times. Both build alternatives meet all other defined needs of the Proposed Action; however, the Rye Road Alternative only minimally improves the local roadway network LOS and only minimally accommodates planned growth in the area.

Table ES-2 summarizes the social, cultural, natural environment, and physical impacts of the No-Build Alternative, Fort Hamer Alternative, and Rye Road Alternative. The No-Build Alternative results in the fewest adverse impacts compared to the build alternatives; however, the No-Build Alternative is inconsistent with the Manatee County’s 2020 Comprehensive Plan and does not satisfy the demonstrated need for the Proposed Action (Manatee County, 2010).

Social Impacts – The No-Build Alternative is not anticipated to have any social impacts or changes in growth patterns. Regional traffic congestion is anticipated to increase and the No-Build Alternative would not provide for any new sidewalks, bicycle lanes, or crossings of the Manatee River.

The Fort Hamer Alternative and Rye Road Alternative are similar except for those issues affected by traffic. The Fort Hamer Alternative would result in a large increase in traffic on Upper Manatee River Road and Fort Hamer Road compared to the existing condition. This increase in traffic would likely affect the ingress/egress to the Annie Lucie Williams Elementary School on Fort Hamer Road. However, this condition is to be mitigated by Manatee County with the installation of additional sidewalks and crosswalks at the school. Both build alternatives would have minimal to no impacts on cultural resources. The widening of the Rye Road Bridge for the Rye Road Alternative would have a minimal impact on the Rye Preserve.

Natural Impacts - The No-Build Alternative is not anticipated to have any impacts to the natural environment.

**TABLE ES-2
COMPARATIVE EVALUATION SUMMARY**

Section	Issue	No-Build Alternative	Fort Hamer Alternative	Rye Road Alternative
SOCIAL IMPACTS				
4.1.1	Socioeconomic Conditions	No anticipated adverse impacts.	No anticipated adverse impacts. Proposed Action should benefit socioeconomic conditions in the project area.	No anticipated adverse impacts. Proposed Action should benefit socioeconomic conditions in the project area.
4.1.2	Land Use Characteristics (Existing and Future)	Inconsistent with Manatee County's 2020 Comprehensive Plan.	Minimal adverse impacts to existing and future land uses. Consistent with Manatee County's 2020 Comprehensive Plan future land use.	Minimal adverse impacts to existing and future land uses. Consistent with Manatee County's 2020 Comprehensive Plan future land use.
4.1.3	Traffic	74,200 AADT increase on I-75 from SR 64 to US 301 (2035) LOS F. County-wide increase in VMT and VHT.	18,900 AADT increase on Upper Manatee River Road from SR 64 to Waterlefe Boulevard (2035). 23,600 AADT crossing the Manatee River (2035). 21,200 AADT increase on Fort Hamer Road from Manatee River to US 301. 1,400 AADT decrease on I-75 from SR 64 to US 301 (2035). LOS F. County-wide reduction in VMT and VHT.	4,200 AADT increase on Rye Road from Upper Manatee River Road to Golf Course Road (2035). 500 AADT increase on I-75 from SR 64 to US 301 (2035). LOS F. Slight increase in County-wide VMT. Slight decrease in County-wide VHT.
4.1.4	Community Cohesion	No impacts.	No anticipated adverse impacts.	No anticipated adverse impacts.
4.1.5	Relocation Potential	No impacts.	No impacts.	Four residential locations affected.
4.1.6	Religious Centers	No impacts.	Traffic increase.	No anticipated adverse impacts.
	Schools	No impacts.	Traffic increase.	No anticipated adverse impacts.
	Parks and Recreation Areas	No impacts.	Traffic increase.	Traffic increase.
	Public Facilities	No impacts.	No anticipated adverse impacts. Improved emergency vehicle response times.	No anticipated adverse impacts.
4.1.7	Pedestrian/Bicycle Facilities	No sidewalks or bicycle lanes to be added.	Proposed Action would provide continuous bicycle lanes and sidewalks.	Proposed Action would provide continuous bicycle lanes and sidewalks.
4.1.7	Environmental Justice	No impacts.	No anticipated adverse impacts.	No anticipated adverse impacts.
4.1.8	Controversy Potential	Low	High	High
4.1.9	Utilities and Railroads	No impacts.	Six utility providers No railroads	Six utility providers No railroads
CULTURAL RESOURCES IMPACTS				
4.2.1	Archaeological	No impacts.	No adverse impacts. See SHPO concurrence letter in Appendix A-4. The Seminole Tribe of Florida has concurred with the research performed as part of this FEIS. See SHPO concurrence letter in Appendix A-4.	No adverse impacts. See SHPO concurrence letter in Appendix A-4.
4.2.2	Historical	No impacts.	No adverse impacts.	No adverse impacts.
NATURAL ENVIRONMENT IMPACTS				
4.3.1	Land Use/Vegetative Cover	No additional impacts.	19.4 acres open land 6.8 acres forest converted to roadway, ROW, and ponds.	19.0 acres agriculture 3.0 acres open land 7.5 acres forest converted to roadway, ROW, and ponds.
4.3.2	Wetlands	No additional impacts.	2.05 acres fill 1.01 acres shading 1.28 acres secondary	2.51 acres fill 0.01 acres shading 0.00 acres secondary
4.3.3	Essential Fish Habitat (EFH)	No additional impacts.	0.16 acres fill 1.01 acres shading	0.00 acres
4.3.4	Wildlife	No additional impacts.	Localized general decline in mammal and bird populations due to habitat loss. Increased potential for road kill.	Localized general decline in mammal and bird populations due to habitat loss. Increased potential for road kill.
4.3.5	Threatened and Endangered Species	No effects.	"May affect, but not likely to adversely affect:" <ul style="list-style-type: none"> • Smalltooth sawfish (F) • Eastern indigo snake (F) • Wood stork (F) • West Indian manatee (F) • Critical habitat for West Indian manatee (F) • Gopher tortoise (S) • Pine snake (S) • Florida mouse (S) • Gopher frog (S) (F)=Federally-Listed (S)=State-Listed	"May affect, but not likely to adversely affect:" <ul style="list-style-type: none"> • Crested caracara (F) • Eastern indigo snake (F) • Wood stork (F) • West Indian manatee (F) • Critical habitat for West Indian manatee (F) • Florida scrub jay (F) • Gopher tortoise (S) • Pine snake (S) • Florida mouse (S) • Gopher frog (S) (F)=Federally-Listed (S)=State-Listed
4.3.6	Aquatic Preserves	N/A	N/A	N/A
4.3.7	Water Quality	No additional impacts.	No additional impacts.	No additional impacts.
4.3.8	Outstanding Florida Waters	N/A	N/A	N/A
4.3.9	Wild and Scenic Rivers	N/A	N/A	N/A
4.3.10	Groundwater	No additional impacts.	No additional impacts.	No additional impacts.
4.3.11	Floodplains and Floodways	No additional impacts.	27.9 acres floodplains 0.0 acres floodways Compatible with existing floodplain management programs.	21.8 acres floodplains 0.0 acres floodways Compatible with existing floodplain management programs.
4.3.12	Coastal Zone Consistency	Consistent	Consistent	Consistent
4.3.13	Coastal Barrier Island Resources	N/A	N/A	N/A
4.3.14	Farmlands	N/A	N/A	N/A
PHYSICAL CHARACTERISTICS IMPACTS				
4.4.1	Noise	Noise	No impacts.	39 noise-sensitive receptors 1 meets or exceeds the NAC (includes receptors with substantial increase)
4.4.2	Air Quality	Air Quality	Attainment	Attainment
4.4.3	Construction	Construction	No additional impacts.	Temporary impacts of air quality, vibration, visual, noise, and maintenance of traffic.
4.4.4	Contamination	Contamination	No additional impacts.	1 Medium Risk Site
4.4.5	Scenic Highways	Scenic Highways	N/A	N/A
4.4.6	Navigation	Navigation	No additional impacts.	2 vessels

The Fort Hamer Alternative would have larger impacts on natural resources compared to the Rye Road Alternative. A greater amount of wetlands and floodplains/floodways would be affected by the construction of the new bridge for the Fort Hamer Alternative than would be impacted by the Rye Road Alternative. These unavoidable impacts would be mitigated in accordance with federal and state permit requirements. The conceptual wetland mitigation plan for the Fort Hamer Alternative is described in the Wetlands Evaluation Report (WER) in Appendix D. Neither build alternative is likely to adversely affect any listed species or designated critical habitat; although, both build alternatives do involve crossing designated critical habitat for the West Indian manatee. The Fort Hamer Alternative would impact 2.91 acres of Essential Fish Habitat (EFH), and the Rye Road Alternative would impact 0.00 acres.

Physical Impacts – The No-Build Alternative is not anticipated to have any impacts to physical resources.

Increased traffic associated with both build alternatives would result in an increase in noise compared to the present-day condition. Although there would be less traffic with the Rye Road Alternative compared to the Fort Hamer Alternative, there are a greater number of noise-sensitive receptors along the Rye Road Alternative. Noise impacts can be mitigated by Manatee County with speed restriction and restriction on vehicle size (e.g., trucks).

Navigation on the Manatee River would be minimally affected by the Fort Hamer Alternative; only one sailboat currently exists upstream of the proposed bridge that would be unable to pass beneath the proposed structure. Another vessel (a houseboat) located upstream of the proposed bridge has a flagpole that exceeds 26 feet in height; however, it was noted that the houseboat required less than 26 feet vertical clearance if the flagpole was lowered. The shallow nature of the river upstream of the proposed bridge at Fort Hamer Road makes it unlikely that additional vessels requiring greater than 26 feet vertical clearance would be affected in the future by the presence of the bridge. An additional bridge structure at the Rye Road crossing of the Manatee River would have no affect on navigation.

ES.5 AREAS OF CONTROVERSY

From 2010 to present, coordination throughout this study with various governmental agencies, property owners, local groups, and the general public has revealed both controversy and support for the various bridge crossing alternatives among residents within the project area. Residents within the project area have expressed concerns broadly categorized as follows:

- Safety – pedestrian and bicycle safety, especially in the area of the elementary school on Fort Hamer Road (Annie Lucy Williams Elementary School);
- Trucks – perception that a new bridge would be heavily used by large trucks, thereby increasing noise and safety issues;

- Environmental/Natural Resources – potential impacts to remaining natural habitats and wildlife resources along the river;
- Visual and Aesthetics – potential loss of “natural” views in areas not already developed on both sides of the river;
- Costs – the cost of the project, especially given the current local and regional economy; and
- Need – additional lanes across the Manatee River are not needed or can be met by adding additional lanes to the Rye Road Bridge.

Residents of the Waterlefe subdivision, in particular, have expressed several concerns, including (but not limited to) the following:

- Safety – access to Winding Stream Way and the main entrance to the development,
- Visual and Aesthetics – potential impacts to the viewshed from resident homes and golf course,
- Noise – elevated noise levels from increased vehicle and truck traffic, and
- Property Devaluation – potential impacts to property values.

A written disclosure of the proposed bridge crossing at Fort Hamer Road and Upper Manatee River Road was made (and continues to be made) to all Waterlefe homeowners in their purchase documents (Appendix A-1). The original transportation easement for a proposed crossing of the Manatee River in this area was approximately 0.25 mile west with only a 300-ft crossing of the river. However, this location required the removal of three holes on the Waterlefe golf course, and subsequently the easement was moved to its present location.

These controversies have continued throughout preparation of this FEIS.

Other residents and groups in the area favor a new transportation corridor between I-75 and Rye Road, including the proposed location connecting Fort Hamer Road and Upper Manatee River Road. Their reasoning is that nearly all of what were rural undeveloped and agricultural lands in that part of the county have already been developed or have been approved for residential and mixed-use development and population and employment in the area is projected to continue to grow. Supporters have stated that additional roadway capacity is needed in order to provide relief to the I-75 corridor and to reduce congestion, improve safety on local roads, and to assist in emergency response and evacuation. A bridge crossing at Fort Hamer Road and Upper Manatee River Road is consistent with Manatee County’s 2035 Long Range Transportation Plan (LRTP) (MPO, 2012) and the County’s adopted Comprehensive Plan (Manatee County, 2010). A bridge crossing at Fort Hamer Road and Upper Manatee River Road was in the Manatee County Comprehensive Plan in 1968 as a conceptual development plan, was listed in the County Street

Plan Priority for 1968, was listed in the County's proposed land use and development requirements in 1973, was on the County's Thoroughfare Plan in 1976, and shown on the County's Right-of-Way Needs Map in 1984.

These areas of controversy and support for the bridge crossing are discussed in greater detail in Chapter 5.

ES.6 LIST OF OTHER GOVERNMENT ACTIONS REQUIRED

Before the Proposed Action can be constructed, permits would be required from several governmental agencies. Federal authorization for wetland impacts would require a Section 404 Dredge and Fill Permit from the U.S. Army Corps of Engineers (USACE). As part of their review of the Section 404 Permit application, the USACE would consult with the U.S. Fish and Wildlife Service (FWS) and National Marine Fishery Service (NMFS) for issues regarding listed species and with the NMFS for issues regarding Essential Fish Habitat (EFH). The USACE would also coordinate their review with the U.S. Environmental Protection Agency (EPA).

State authorization for wetland impacts and construction and operation of the stormwater management system for the project would require an Environmental Resource Permit (ERP) from the Southwest Florida Water Management District (SWFWMD). As part of their review of the ERP application, the SWFWMD would coordinate with the Florida Fish and Wildlife Conservation Commission (FWC) and State Historic Preservation Officer (SHPO). Issuance of the ERP by SWFWMD constitutes *Clean Water Act*, Section 401 Water Quality Certification, and *Coastal Zone Management Act* federal consistency certification concurrence.

ES.7 PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

The overall unavoidable adverse environmental effects associated with the Fort Hamer Alternative is the large increase in traffic on Upper Manatee River Road/Fort Hamer Road and wetland impacts resulting from construction of the new bridge and its approaches. The increased traffic on Upper Manatee River Road/Fort Hamer Road is an intended consequence of this alternative as it is designed to provide a more direct route for north/south traffic flow in the area, thereby reducing County-wide daily vehicle miles traveled (VMT) and vehicle hours traveled (VHT).

The No-Build Alternative would result in no adverse environmental effects. Construction of the Fort Hamer Alternative would directly impact 5.30 acres of wetlands. Wetland impacts that result from construction would be mitigated pursuant to Section 373.4137 Florida Statutes (F.S.) to satisfy all mitigation requirements of Part IV, Chapter 373, F.S. and 33 United States Code (U.S.C.) 1344.

Based upon the above considerations, it has been determined that there is no practicable alternative to the proposed construction in wetlands and that the Proposed Action includes all practicable measures to minimize harm to wetlands which may result from such use.

Probable unavoidable adverse environmental effects resulting from the Rye Road Alternative include a County-wide increase in daily VMT, the relocation of up to four residences, and direct impacts to 2.52 acres of wetlands. As with the Fort Hamer Alternative, wetland impacts resulting from the Rye Road Alternative would be mitigated pursuant to Section 373.4137 F.S. to satisfy all requirements of Part IV, Chapter 373, F.S. and 33 U.S.C. 1344.

ES.8 IRRETRIEVABLE AND IRREVERSIBLE COMMITMENT OF RESOURCES

Implementation of the Proposed Action involves a commitment of a range of natural, physical, human, and fiscal resources. Land used in the construction of the proposed facility is considered an irreversible commitment during the time period that the land is used as a highway facility. However, the land can be converted to another use. Currently, there is no reason to believe such a conversion would ever be necessary or desirable.

Considerable amounts of fossil fuels, labor, and highway construction materials such as cement, aggregate, and bituminous material are expended. Additionally, large amounts of labor and natural resources are used in the fabrication and preparation of construction materials. These materials are generally not retrievable. However, they are not in short supply and their use would not have an adverse affect upon continued availability of these resources. Any construction would also require a substantial one-time expenditure of local funds, which are not retrievable.

The commitment of these resources is based on the concept that residents in the immediate area, state, and region would benefit by the improved quality of the transportation system. These benefits would consist of improved accessibility and safety, savings in time, and greater availability of quality services which are anticipated to outweigh the commitment of these resources.

In order to maintain water quality and prevent erosion, project construction activities in the vicinity of wetlands, drainage structures, and the Manatee River would be conducted in accordance with all state and federal permit conditions.

ES.9 FEASIBLE MEASURES TO AVOID OR MINIMIZE ADVERSE EFFECTS

While every effort has been made during the project development process to minimize or avoid impacts to the human and natural environment as a result of construction and operation of the

Proposed Action, some impacts are unavoidable. To maintain water quality and to prevent erosion, project construction activities in the vicinity of wetlands and other surface waters would be conducted in accordance with the state and federal permit conditions. The Fort Hamer Alternative was developed to avoid impacts to the Fort Hamer County Park and Boat Ramp and to minimize impacts to wetlands to the extent practicable. For example, the proposed approaches to the bridge are on pile-supported structures over the wetlands on each side of the river as opposed to using earthen fill in these areas. Please see Section 3.1.6.3 (Parks and Recreation Areas) and Section 4.3.2.3 (Wetland Impacts) for further detail.

Potential impacts to listed species would be minimized through the use of standard construction conditions required by the FWS, NMFS, and FWC. Additional measures to protect listed species are being developed in coordination with these agencies as part of this FEIS process. Please see Sections 3.3.4 and 4.3.4 for further details.

As previously noted, several residents have expressed concerns about increased traffic on Fort Hamer Road and Upper Manatee River Road and the effects of this traffic on pedestrian and bicycle safety. Operational and safety improvements to Upper Manatee River Road and Fort Hamer Road are proposed by Manatee County independent of the Proposed Action. Issues related to lighting and aesthetics would be dealt with through community outreach during the design phase. Please see Sections 3.1.3 and 4.1.3 for further details.

To maintain water quality and to prevent erosion, project construction activities, related to the Rye Road Alternative, in the vicinity of wetlands and other surface water, would be conducted in accordance with the state and federal permit conditions. The Rye Road Alternative was developed to avoid impacts to the Rye Wilderness Preserve. Please see Section 3.1.6.3 (Parks and Recreation Areas) and Section 4.3.2.3 (Wetland Impacts) for further details.

Potential impacts to listed species would be minimized through the use of standard construction conditions required by FWS, NMFS, and FWC. Additional measures to protect listed species are being developed in coordination with these agencies as part of this FEIS process. Please see Sections 3.3.4 and 4.3.4 for further details.

As noted in Section ES.7, the No-Build Alternative is anticipated to have no adverse environmental impacts; therefore, the No-Build Alternative itself is a measure to avoid adverse effects.

ES.10 SHORT-TERM IMPACTS VERSUS LONG-TERM BENEFITS

No-Build Alternative – This alternative is not anticipated to improve local or regional traffic congestion or provide any new job creation within the project area and in eastern Manatee County and, therefore, is considered a short-term impact. The long-term benefits include: no loss of wetland and/or upland habitat from construction, no costs related to construction or

acquisition of right-of-way (ROW) directly related to construction and no change to existing growth patterns.

Fort Hamer Alternative – This alternative is anticipated to have short-term impacts directly related to the construction, such as loss of wetland and upland habitats, increased volumes of traffic, increased traffic related noise, and costs related to construction and acquisition of ROW. The long-term benefits include: improved localized and regional mobility, improved localized LOS, improved emergency response times, expanded emergency evacuation capacity, greater economic opportunities from improved mobility and expanded pedestrian and bicycle opportunities across the Manatee River.

Rye Road Alternative – Similar to the Fort Hamer Alternative, this alternative is anticipated to have short-term impacts directly related to the construction, such as loss of wetland and upland habitats, increased volumes of traffic, increased traffic related noise, and costs related to construction and acquisition of ROW. The long-term benefits include: expanded pedestrian and bicycle opportunities across the Manatee River.

Chapter 1

PURPOSE AND NEED FOR ACTION

Manatee County is proposing to add additional travel lanes across the Manatee River in eastern Manatee County. The purpose of the Proposed Action is to provide an alternative north/south transportation route between high-growth areas of Manatee County located east of Interstate 75 (I-75), separated by the Manatee River and to improve regional mobility. Studies have shown that there is a strong demand for multiple crossings over this waterway to alleviate the traffic burden on I-75 and improve regional mobility. Several specific factors demonstrate the need for the Proposed Action, including the need to:

- Accommodate existing and projected growth in eastern Manatee County,
- Improve the level of service (LOS) of the local roadway network,
- Improve emergency response times, and
- Improve evacuation capacity across the Manatee River.

The current Manatee River crossings located at I-75 and Rye Road create a circuitous route for travelers east of I-75 in eastern Manatee County that increases travel time/distance, reduces LOS, increases emergency response times, and are at capacity for evacuation scenarios.

1.1 PROJECT SETTING

The project area for the Proposed Action and for this Final Environmental Impact Statement (FEIS) is bound by I-75 to the west, U.S. Highway (US) 301 to the north, Rye Road to the east, and State Road (SR) 64 to the south (**Figure 1-1**). Manatee County encompasses 893 square miles (mi²) including water bodies, of which approximately 741 mi² is land area. The project area for this FEIS is approximately 38 mi².

For years the Manatee River has served as a natural and recreational resource to the citizens of Manatee County, but it also has served as a natural barrier to travel between residential areas to the north and employment, business, and commercial centers to the south. Over time, a series of crossings have been constructed over the Manatee River. **Figure 1-2** shows the location of these crossings, number of lanes, annual average daily traffic (AADT), and distances from the Fort Hamer Alternative crossing. They include:

- US 41 (9th Street West), near the county seat of Bradenton, approximately 9.0 miles west (four lanes);
- US 301, approximately 8.25 miles to the west (four lanes);

FIGURE 1-1
PROJECT AREA MAP

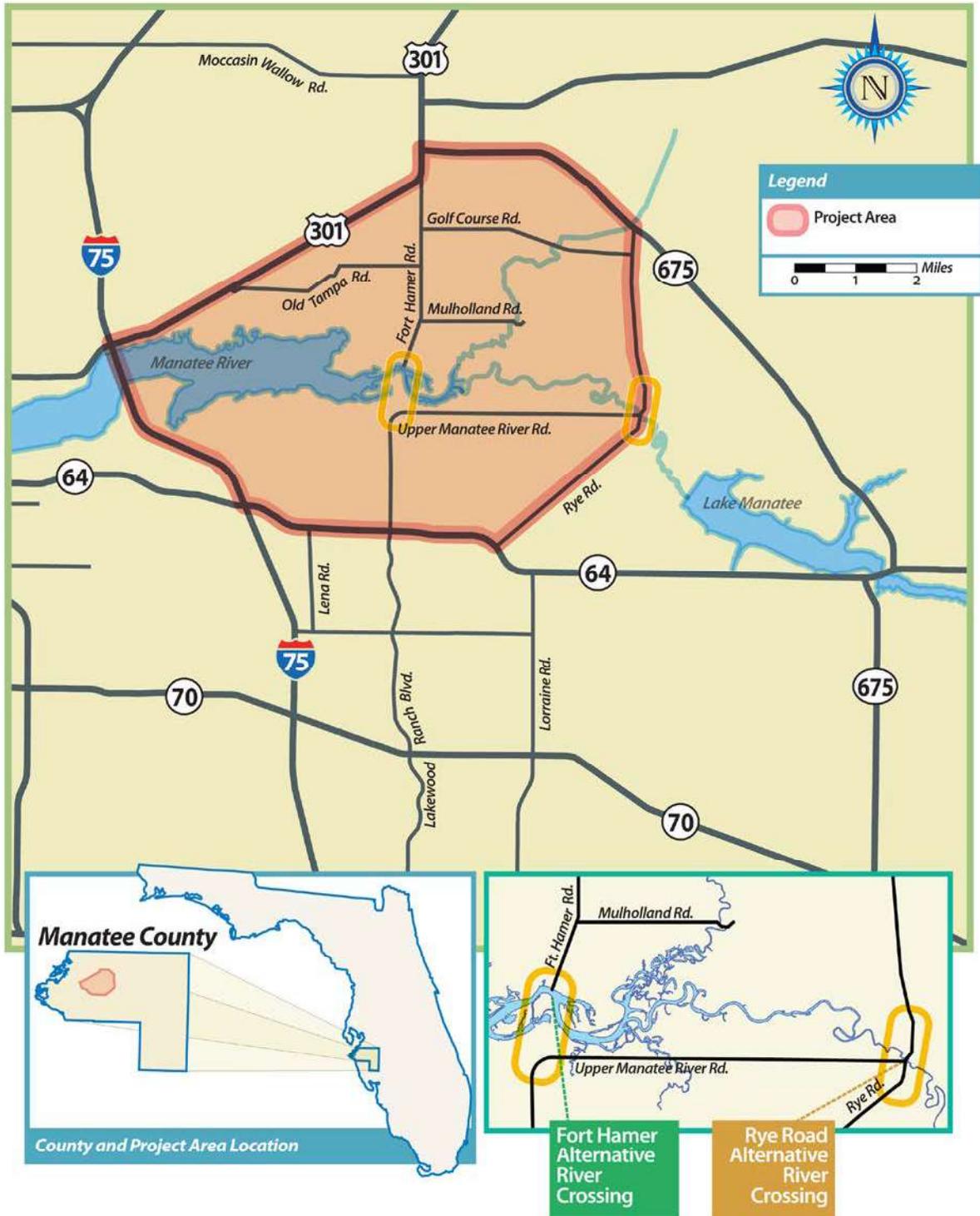
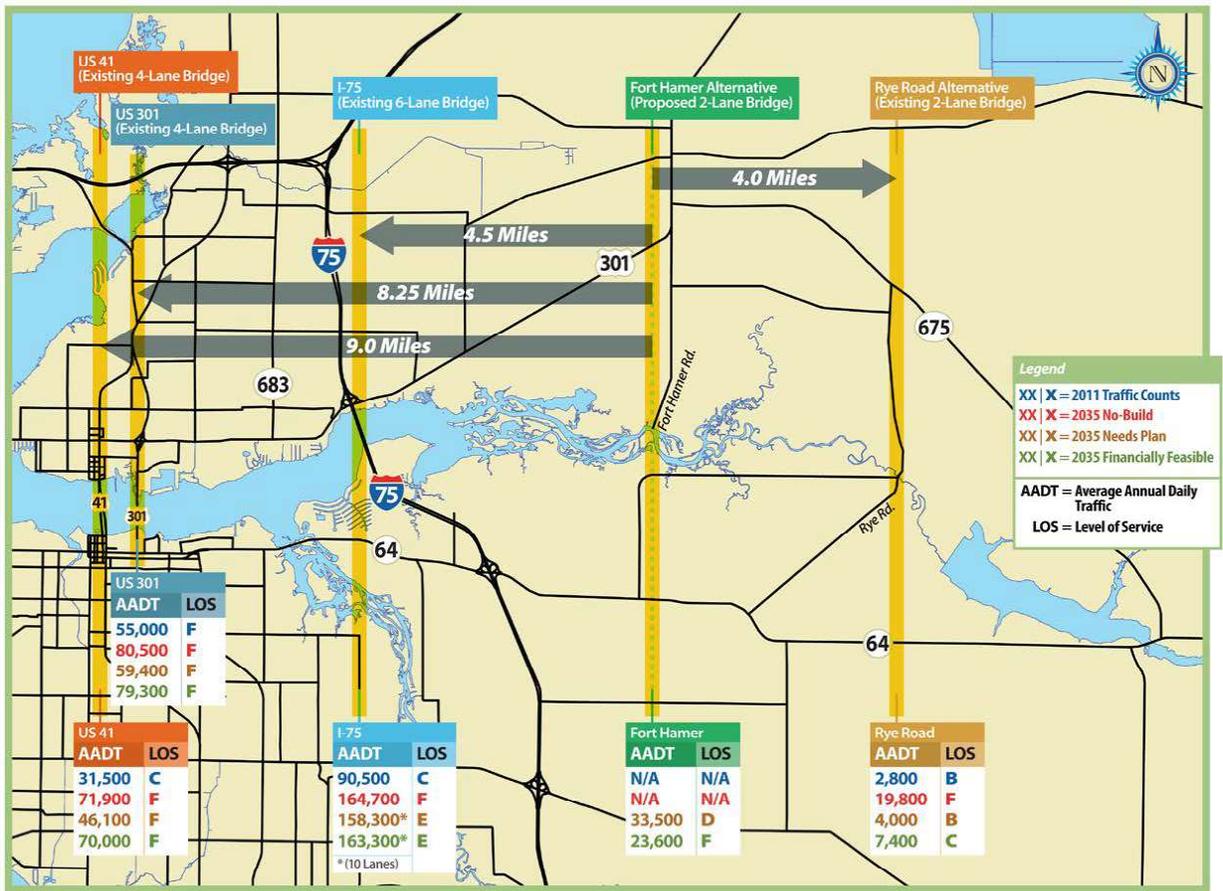


FIGURE 1-2
EXISTING CROSSINGS OF THE MANATEE RIVER



- I-75, approximately 4.5 miles west (six lanes); and
- Rye Road, approximately 4.0 miles east (two lanes).

These crossings represent a total of 16 lanes of capacity over the Manatee River.

The commercial and employment center of Manatee County is located west of the project area in the central business district of the county seat of Bradenton and farther west along the Gulf Coast beaches of Anna Maria Island, Bradenton Beach, and Longboat Key (Section 3.1.1, Socioeconomic Conditions). As detailed later in Section 3.1.2 (Land Use Characteristics) of this FEIS, much of the project area is characterized by existing Residential land uses and sparse existing Agricultural uses (Figure 3-8) that are planned for future Residential uses (Figure 3-9a).

1.2 PURPOSE AND NEED FOR ACTION

The purpose of this Proposed Action is to provide an alternative north/south route across the Manatee River and improve regional mobility. Several specific factors contribute to, and demonstrate the need for, an improvement in regional mobility across the Manatee River for residents and regional travelers. These interrelated factors, which should be addressed in any proposed solution, relate to:

- Accommodation of existing and projected growth in eastern Manatee County,
- Improvements in LOS to the local roadway network,
- Improvements to emergency response times, and
- Improvements to evacuation capacity across the Manatee River.

These factors are discussed in detail in the following sections.

The following alternatives were considered for analysis and evaluation in this document and meet the stated Purpose and Need. These alternatives are further analyzed and evaluated in the subsequent sections of this document:

- **No-Build Alternative** – no capacity improvements, only maintenance and safety projects currently funded in Manatee County’s Capital Improvement Program (CIP) (Manatee County BOCC, 2012).
- **Fort Hamer Alternative** – construction of a new two-lane bridge across the Manatee River connecting the existing local two-lane Upper Manatee River Road to the existing two-lane Fort Hamer Road.

- **Rye Road Alternative** – expansion of the current two-lane crossing of the Manatee River to four lanes and widening the existing local two-lane Rye Road from SR 64 north to Gulf Course Road to four lanes, widening the existing local two-lane Golf Course Road to four lanes, and widening the existing local two-lane Fort Hamer Road north to US 301 to four lanes.

1.2.1 REGIONAL CONTEXT

Continued growth in population and traffic volumes is anticipated to increase demand on the existing roadway network beyond its current capacity. This is most apparent in the capacity needs crossing the Manatee River. Currently, there are 16 travel lanes crossing the Manatee River downstream of the Lake Manatee Dam. Two four-lane bridges on US 41 and US 301 exist west of I-75. A six-lane bridge exists on I-75 spanning the Manatee River. East of I-75, only one two-lane bridge exists on Rye Road (Figure 1-2). As illustrated in **Figure 1-3**, the Sarasota/Manatee Metropolitan Planning Organization’s (MPO’S) 2035 Long Range Transportation Plan (LRTP)¹ projects that by the year 2035 all bridges crossing the Manatee River would be congested or severely congested.

The Transportation Research Board’s (TRB’s) *Highway Capacity Manual* (HCM) (TRB, 2010) and American Association of State Highway and Transportation Officials’ (AASHTO’s) *A Policy on Geometric Design of Highways and Streets* (“Green Book”) (AASHTO, 2011) define LOS as:

LOS A = Free flow

LOS B = Reasonably free flow

LOS C = Stable Flow

LOS D = Approaching unstable flow (congested)

LOS E = Unstable flow (severely congested)

LOS F = Forced or breakdown flow (failure)

The Needs Plan (see footnote below) indicates a need for 28 lanes crossing the Manatee River. To accommodate the future 2035 traffic demand crossing the Manatee River, 12 lanes west of I-75 [US 41, US 301, and a new bridge at County Road (CR) 683], 10 lanes on I-75, and six lanes east of I-75 (Fort Hamer Road and Rye Road) are planned. **Figure 1-4** and **Table 1-1a** shows these bridge crossings with projected traffic volumes as AADT and LOS D roadway capacity based on the Needs Plan.

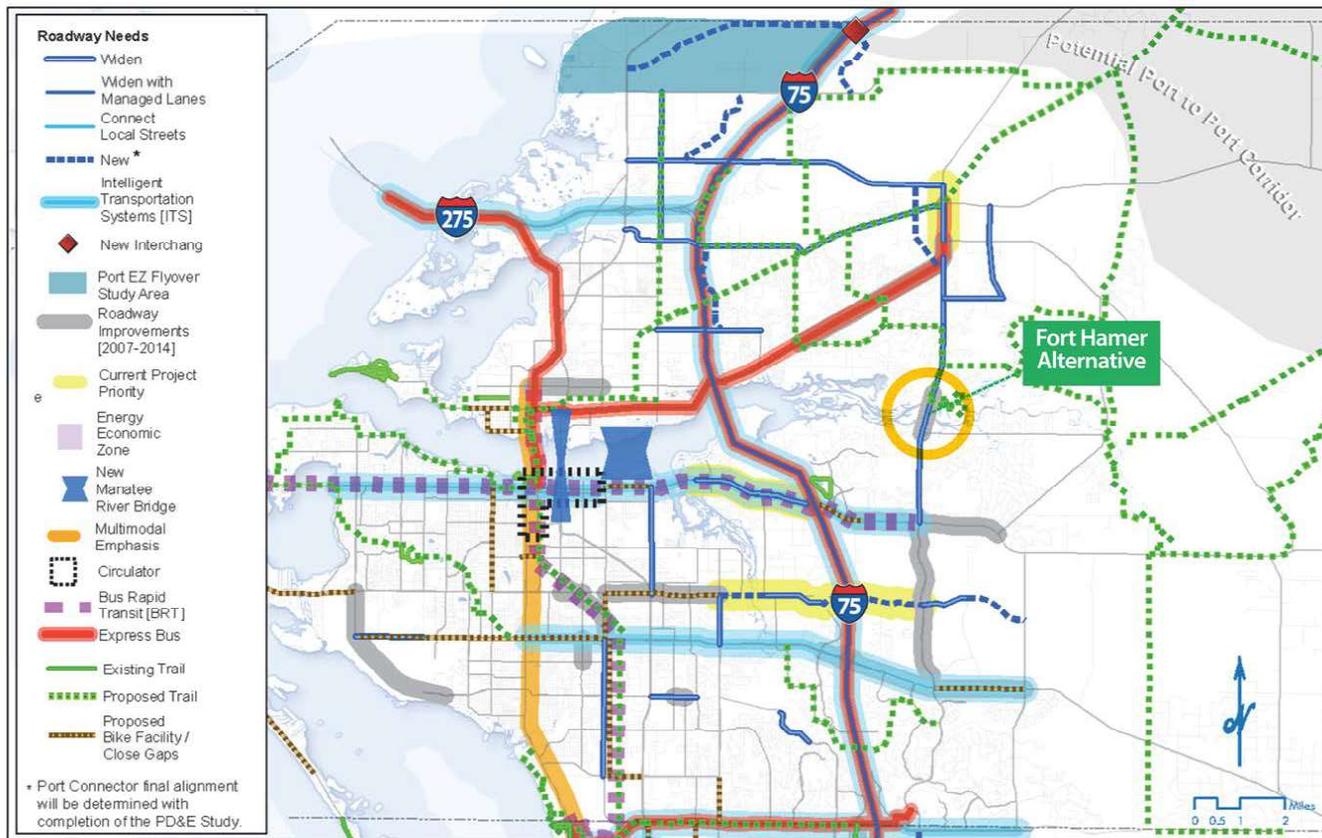
¹ The Sarasota/Manatee MPO’s 2035 LRTP (aka Mobility 2035) is a strategic document for multimodal transportation strategies and investments to support and strengthen the region’s economic vitality, livability, and environment. The plan entails two main elements: a Needs Plan and a Financially Feasible Plan. The Needs Plan charts a strategic direction for how the MPO, its member agencies, and partners will achieve important mobility and accessibility goals over the next 25 years. The Financially Feasible Plan identifies priority transportation projects, and their associated costs, that can be funded by the estimated year of expenditure using projected revenues from a variety of federal, state, and local sources over the planning horizon. The most recent version of the LRTP was completed in 2010 and updated in March 2012 (MPO, 2012).

FIGURE 1-3
PROJECTED VOLUMES ON COMMITTED
ROADWAY NETWORK (2035)



Source: MPO, 2012.

FIGURE 1-4
NEEDS PLAN



Source: Sarasota/Manatee MPO, 2012.

**TABLE 1-1a
NEEDS PLAN - PROJECTED DAILY TRAFFIC DEMAND
AND CAPACITY OF BRIDGES ACROSS THE MANATEE RIVER**

Bridge	Number of Lanes¹	Daily 2035 AADT Traffic	Capacity²
US 41 (existing)	4	46,100	39,800
US 301 (existing)	4	59,400	39,800
CR 683 (new bridge)	4	62,300	39,800
I-75 (Six general use/Four new express lanes)	10	158,300	183,900
Fort Hamer Road (new bridge)	4	33,500	39,800
Rye Road (existing)	2	4,000	14,200
Totals	28	363,600	357,300

¹ Based on the Needs Plan.

² TRB, 2010.

Source: MPO, 2012.

Based on the Needs Plan, the future 28 lanes spanning the Manatee River would provide adequate capacity for 357,300 vehicles per day (vpd), but more capacity would be needed to meet the projected daily demand crossing the river (363,600 vpd). Although the Sarasota/Manatee MPO has demonstrated the need for 28 lanes across the Manatee River by 2035, financial constraints reduce the ability to meet this need.

Figure 1-5 shows the Financially Feasible Plan. Most importantly, this Plan shows that the widening of I-75 is not financially feasible by 2035, thereby reducing capacity and increasing the demand for additional lanes east of I-75. The Financially Feasible Plan would provide only 18 lanes (10 fewer than the projected need) spanning the Manatee River with adequate capacity for 198,500 vpd. Additional capacity would be needed to meet the projected daily demand crossing the river (299,800 vpd). **Table 1-1b** lists these bridge crossings with projected traffic volumes as AADT and LOS D roadway capacity based on the Financially Feasible Plan. Manatee County has established LOS D as acceptable on local roadways.

**TABLE 1-1b
FINANCIALLY FEASIBLE PLAN - PROJECTED DAILY TRAFFIC DEMAND
AND CAPACITY OF BRIDGES ACROSS THE MANATEE RIVER**

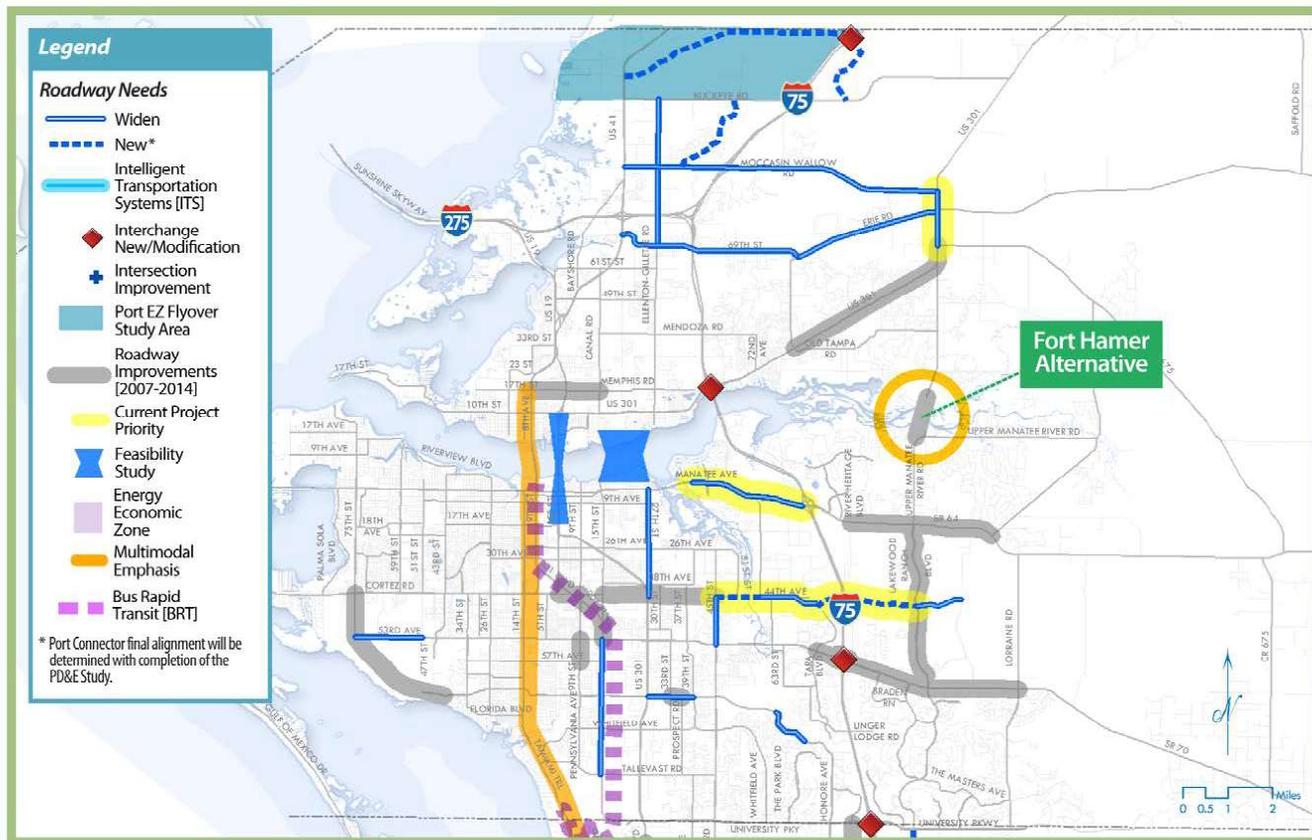
Bridge	Number of Lanes¹	Daily 2035 AADT Traffic	Capacity²
US 41 (existing)	4	46,100	39,800
US 301 (existing)	4	59,400	39,800
CR 683 (new bridge)	0	N/A	N/A
I-75 (Six general use)	6	163,300	90,500
Fort Hamer Road (new bridge)	2	23,600	14,200
Rye Road (existing)	2	7,400	14,200
Totals	18	299,800	198,500

¹ Based on the Financially Feasible Plan.

² TRB, 2010.

Source: MPO, 2012.

**FIGURE 1-5
FINANCIALLY FEASIBLE PLAN**



Source: MPO, 2012.

1.2.2 POPULATION AND EMPLOYMENT GROWTH

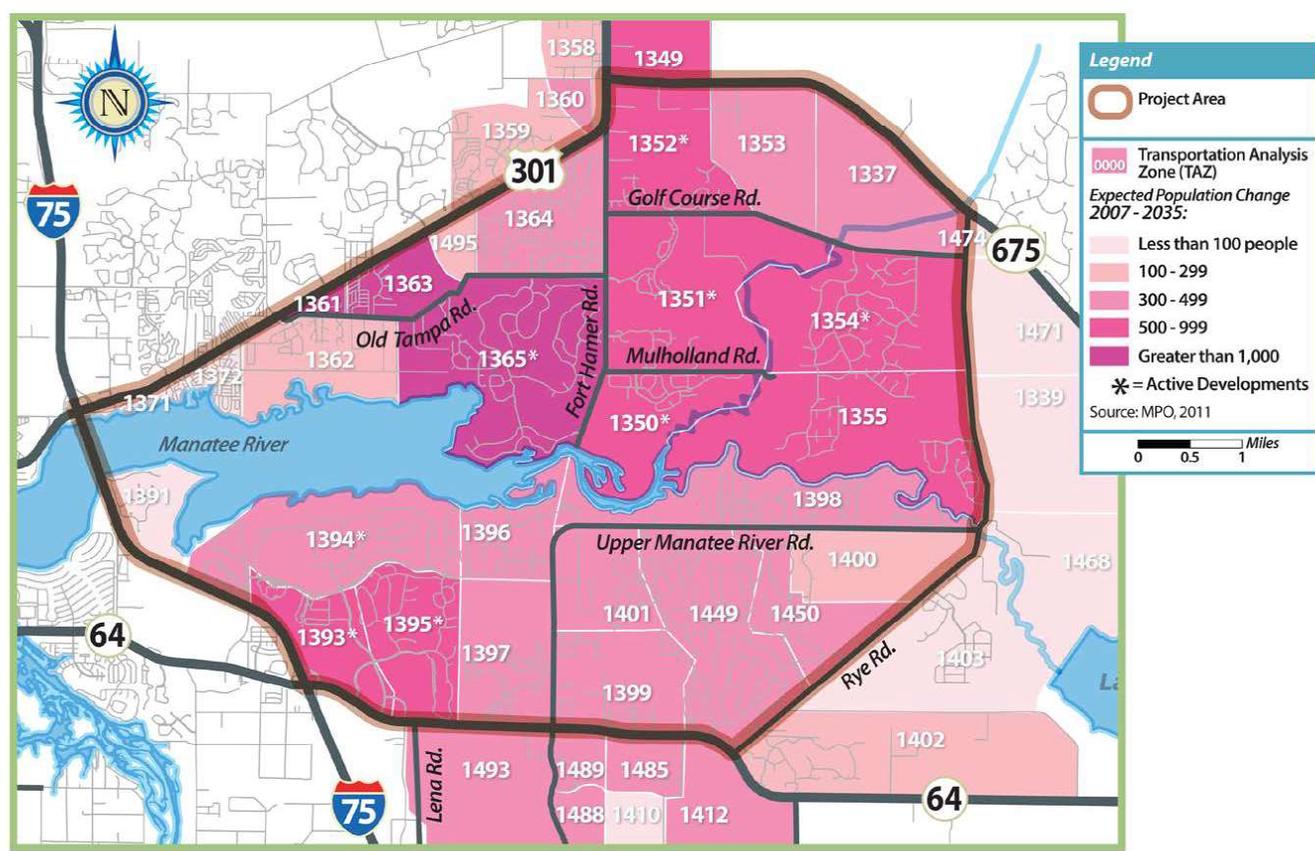
The population of Manatee County continues to expand due in part to its abundance of buildable land and proximity to major employment centers such as St. Petersburg, Tampa, Bradenton, and Sarasota. Factors such as tourism-related activities, a strong second-home market, attractiveness to retirees, and the overall historic economic growth in west central Florida contribute to the population growth in Manatee County. According to the 2010 United States (U.S.) Census, Manatee County's population was 322,833 persons, which is a 22.3 percent increase over the 2000 population of 264,002. The 2010 U.S. Census also reveals a population of 47,643 in 2010 within those census tracts that intersect the project area; this represents a 128.6 percent increase over the 2000 population of 21,002 persons within these census tracts. In 2010, 55 percent of the population within those census tracts that intersect the project area was between the ages of 20 and 65 (Census, 2010a). This indicates that a relatively high percentage of individuals in these census tracts are in the workforce and travel to and from work on a daily basis (Section 3.1.1, Socioeconomic Conditions).

As part of Manatee County's 2035 LRTP Update (MPO, 2012), the Sarasota/Manatee MPO adjusted its Travel Demand Model (TDM) and its component Traffic Analysis Zones (TAZs) to reflect the current economic environment and its impact to projected population growth and development. This update is required as part of *Florida's Growth Management Act* and concurrency policies.

According to projections from the Sarasota/Manatee MPO's TDM (MPO, 2011), the projected population for Manatee County in 2035 is 447,910 persons, which represents a 38 percent increase over the 2007 population of 323,940. The TAZs intersected by the project area are projected to grow in population from 25,189 in 2007 to 44,944 by 2035, an increase of 78 percent. **Figure 1-6** shows the growth in the TAZs that intersect the project area and depicts the location of the TAZs. This expected high growth in the project area is due to Manatee County's focus on residential development and associated business growth east of I-75.

Growth is anticipated to continue within the project area and surrounding areas with development being concentrated along Upper Manatee River Road and Fort Hamer Road. New housing starts within Manatee County reached a peak of 6,579 in 2004. Even with the following recession, the number of annual housing starts in the County has not dropped below 1,225 and housing starts began rising again in 2011. East of I-75, the County is growing and developing faster than the County as a whole due to the abundance of developable land. One Development of Regional Impact (DRI), Heritage Harbor, and five residential developments are in various stages of approval and/or construction at this time. These developments are located in TAZs 1350, 1351, 1352, 1354, 1365, 1393, 1394, and 1395 on Figure 1-6. Three thousand, four hundred fifty-one (3,451) new single-family units are approved for development and the Heritage Harbor DRI includes over 900 multi-family units, approximately 600,000 square feet (ft²) of commercial floor area, and approximately 100,000 ft² of service floor area.

FIGURE 1-6
TAZ LOCATIONS AND EXPECTED POPULATION CHANGE IN THE PROJECT AREA (2007-2035)



Source: MPO, 2011.

Figure 1-7 depicts the historic land use changes since 1974 in the vicinity of the project area and land use changes that are approved to occur by 2030. This area has evolved from a predominately agricultural area to predominantly single-family residential and is planned to continue to develop in that way in the future. **Figure 1-8** depicts the 2030 future land use map with the current Urban Services Boundary. The Urban Services Boundary defines the area in which utilities and services such as water, sewer, and solid waste disposal are provided by the County.

1.2.3 IMPROVEMENTS LOS ON THE LOCAL ROADWAY NETWORK

As a result of the population and development growth discussed previously, travel demand on the existing transportation network is anticipated to steadily increase. **Table 1-2** summarizes several segments of the Manatee County roadway network within and adjacent to the project area expected to experience a large increase in AADT volumes. These volumes were derived by running the 2015 and 2035 LRTP Financially Feasible Plan (MPO, 2012) model with the present day (2012) roadway network and lane configuration (i.e., the No-Build Alternative).

**TABLE 1-2
SUMMARY OF PROJECTED AADT VOLUMES
2015 VERSUS 2035 - NO-BUILD ALTERNATIVE¹**

Roadway	Segment	2015 AADT	2035 AADT ¹
I-75 (Assumes Six Lanes)	US 301 to I-75/I-275 Junction	102,300	138,000
	SR 64 to US 301	122,900	164,700
	SR 70 to SR 64	116,200	148,700
US 301	I-75 to Old Tampa Road	50,400	68,600
	Old Tampa Road to Fort Hamer Road	12,300	24,600
SR 64	I-75 to Grand Harbour Parkway	39,800	62,400
	Grand Harbour Parkway to Lakewood Ranch Boulevard	35,300	41,900
Upper Manatee River Road (Assumes Two Lanes)	South of Waterlefe Boulevard	5,900	9,800
Fort Hamer Road (Assumes Two Lanes)	Manatee River to Old Tampa Road	1,400	2,100
Rye Road	SR 64 to Upper Manatee River Road	7,000	15,600
	Upper Manatee River Road to Golf Course Road	2,900	19,800
Golf Course Road	Fort Hamer Road to Rye Road	1,100	11,500

¹ The No-Build Alternative assumes only those projects currently funded for construction would be in place in 2035 and no bridge would be built at Fort Hamer Road/Upper Manatee River Road.

Source: MPO, 2011

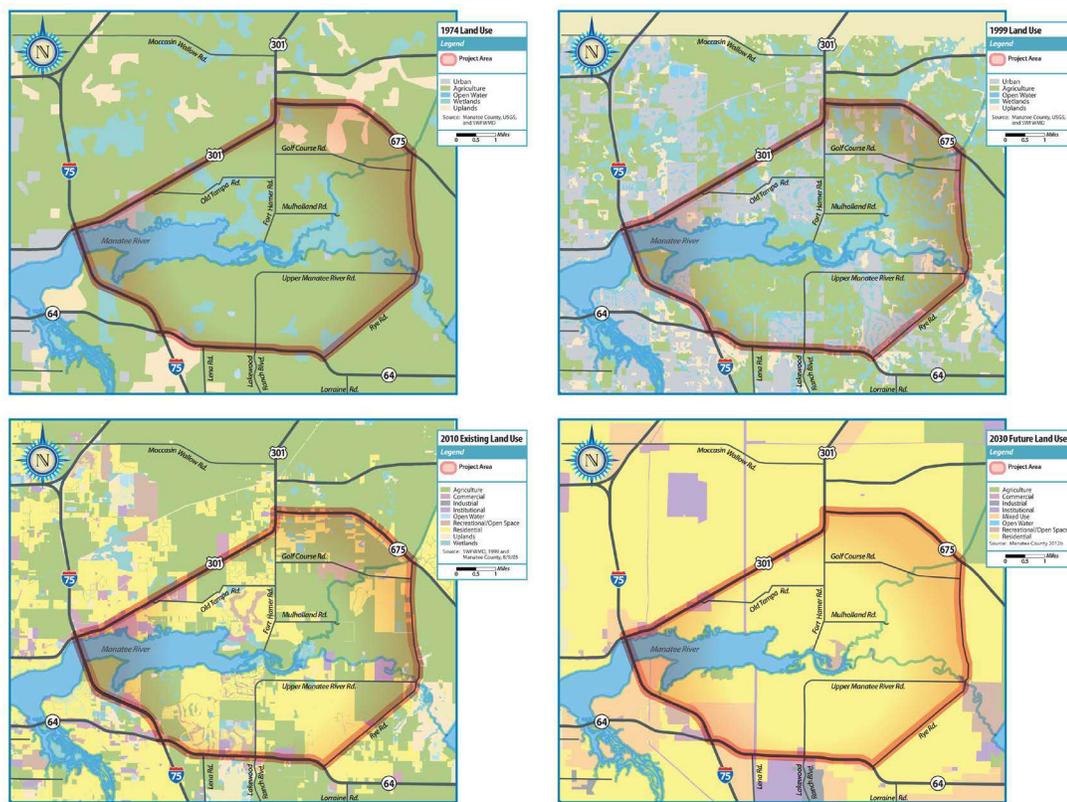
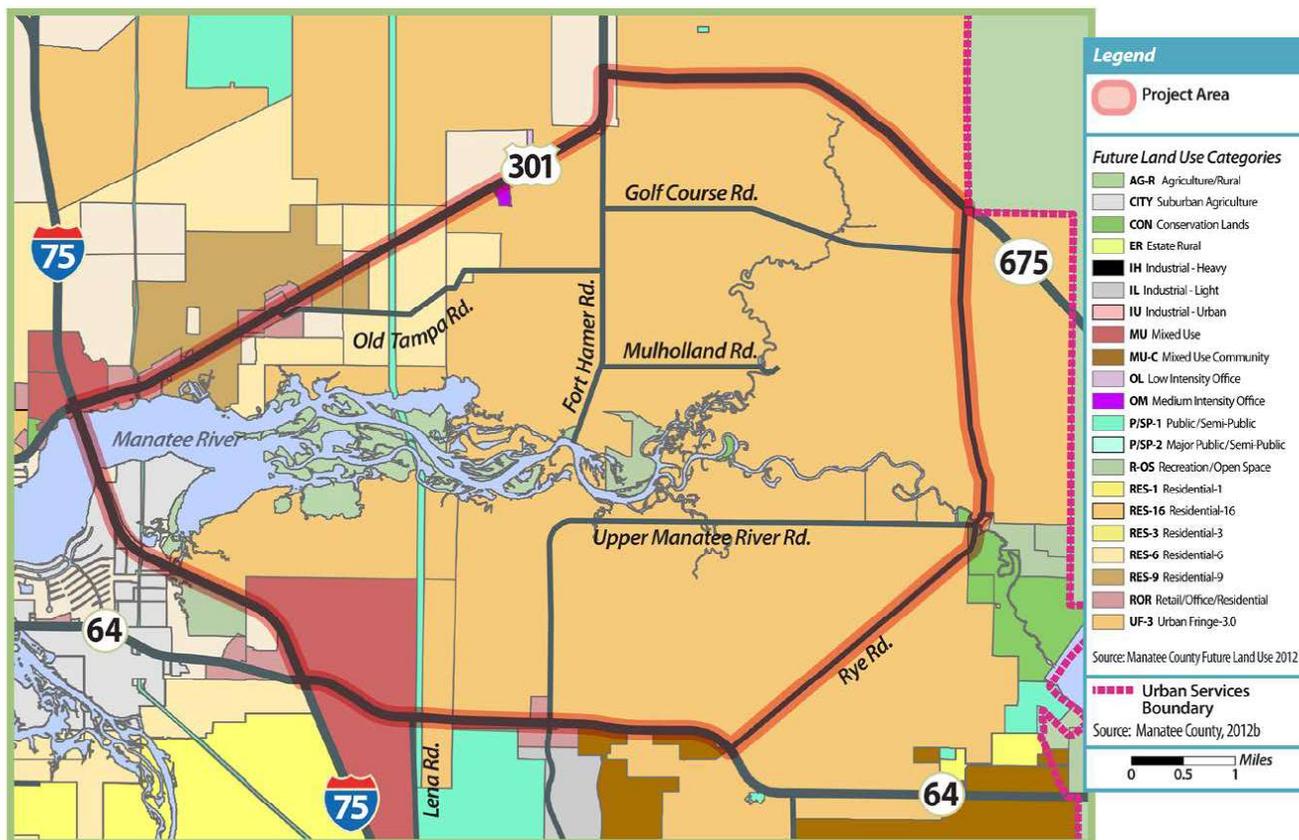


FIGURE 1-7
HISTORICAL LAND USE CHANGES
IN THE PROJECT AREA

FIGURE 1-8
2030 FUTURE LAND USE WITH URBAN SERVICES BOUNDARY



Source: MBCC, 2012.

This increase in daily volumes reflects the land use and employment patterns in Manatee County. Generalized patterns of travel flow from the northeast to the southwest across the Manatee River in the morning peak period with the reverse flow occurring in the afternoon peak.

Manatee County's LOS standard specifies to maintain LOS D for existing and 20-year design. Currently, LOS is fair (generally LOS C or better) on most of the roadway segments along the Fort Hamer Alternative and Rye Road Alternative corridors.

1.2.4 EMERGENCY RESPONSE AND EVACUATION ENHANCEMENT

The only existing crossing of the Manatee River east of I-75 is a single two-lane crossing at Rye Road located approximately 8.5 miles east of I-75 (Figure 1-2). The proposed Fort Hamer Alternative crossing is approximately 4.5 miles east of I-75 and would provide an opportunity for additional emergency response and evacuation.

Enhance Emergency Service Access to Northeast Manatee County

Neighborhoods within the project area are currently served by two fire stations (see **Figure 1-9**). These include:

- The Parrish Fire Control District at 12132 US 301 North, Parrish and
- The East Manatee Fire Rescue Station #3 at 150 Rye Road East, Bradenton.

The Parrish Fire Control District is located north of the Manatee River and the East Manatee Fire Rescue Station #3 is located south of the river. Currently, emergency responders from these stations must use either I-75 or Rye Road to service locations on the north or south side of the river, respectively. An additional river crossing at Fort Hamer Road would improve response times to allow either station to deploy assistance in the event an emergency surpasses the ability of one station to respond. It should be noted that this condition also applies to local police and sheriff responses.

According to Manatee County Emergency Medical Services (EMS) records, the current (2013) average response time for the 17 ambulances County-wide is 7.5 minutes (7 minutes 30 seconds) (**Figure 1-10**).

The National Fire Protection Association's (NFPA's) Standard 1710 states that for Fire Suppression Services Deployment (NFPA 1710 §5.2.4) and Emergency Medical Services Deployment (NFPA 1710 §5.3.3.3) of the Initial Arriving Company shall be within 4.0 minutes (240 seconds) of the incident 90 percent of the time (NFPA, 2010).

FIGURE 1-9
EMERGENCY SERVICE FACILITIES WITHIN THE PROJECT AREA

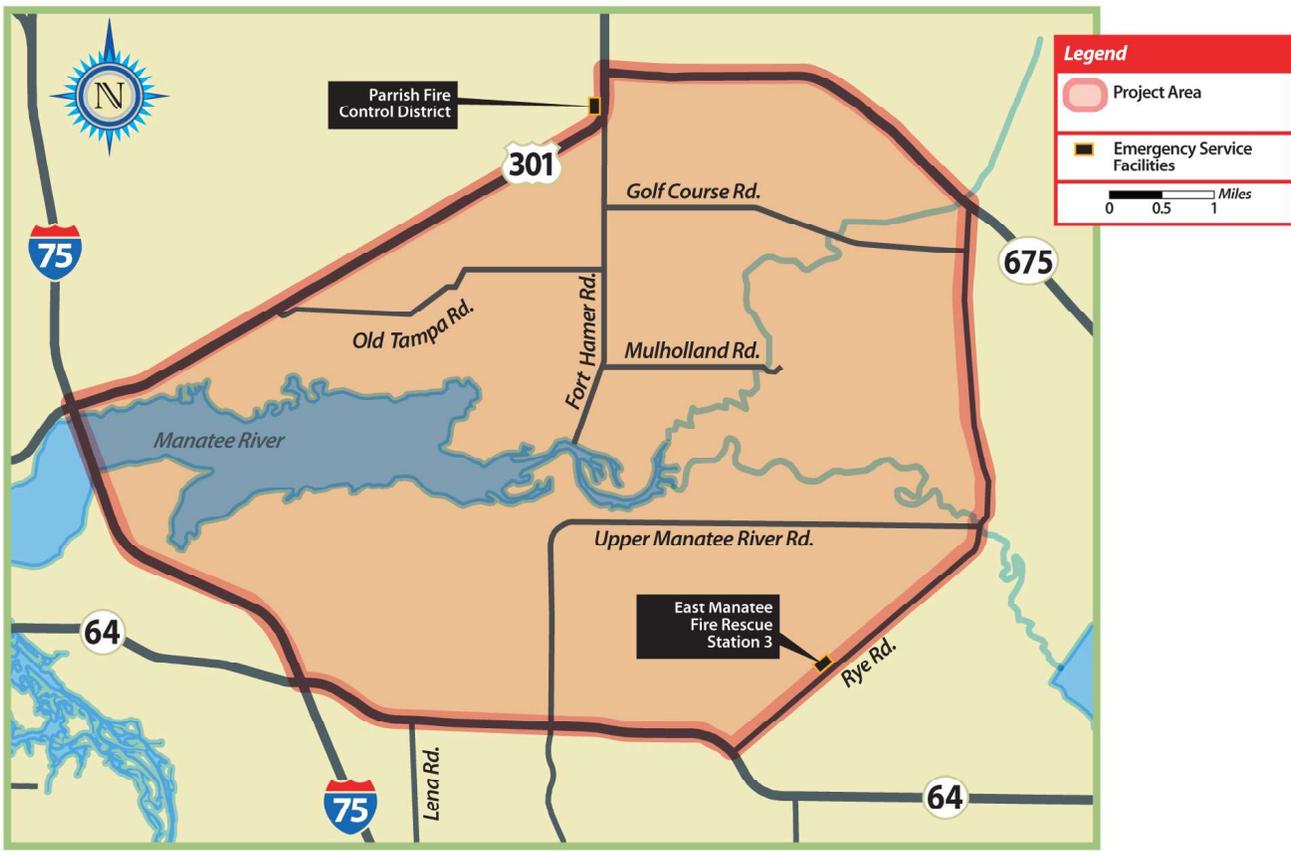
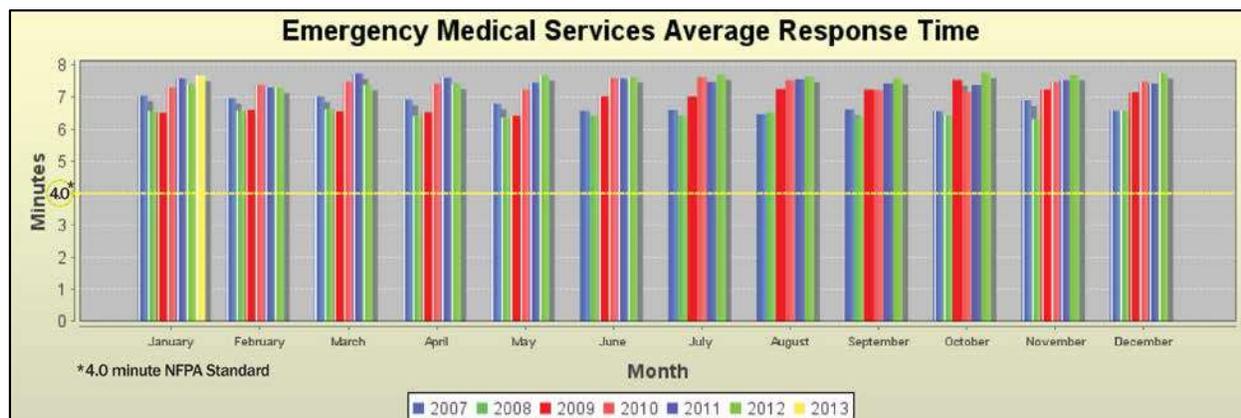


FIGURE 1-10
COUNTY-WIDE AVERAGE AMBULANCE RESPONSE TIMES (2007-2013)



Note: This chart reflects the average response time for 17 ambulances County-wide. The measurement begins when the ambulance is notified of the call and ends when they arrive on-scene.

Source: EMS, 2013.

The East Manatee Fire Rescue Fire Chief and the Manatee County EMS Chief submitted the following opinions related to the need for an additional crossing of the Manatee River east of I-75:

- In a memorandum dated March 7, 2012, Byron J. Teates, Fire Chief, East Manatee Fire Rescue (Appendix A-4), states:

“[a]s Fire Chief, I believe that a new bridge crossing in the area of Fort Hamer would substantially reduce fire service mutual-aid response times in certain areas of the East Manatee Fire Rescue District, as well as those to Parrish and North River Fire Districts.”

- In a memorandum dated January 13, 2011, Ronald J. Koper, Jr., Manatee County EMS Chief (Appendix A-4), states:

“...it is the position of the Manatee County Public Safety Department and EMS Division, that an additional crossing connecting the existing Upper Manatee River Road and Fort Hamer Road would improve public safety through decreased emergency response times and more efficient geographic coverage of areas proximate to the river.”

Currently, if the Parrish Fire Control District is needed to respond to an emergency south of the river in the approximate location of the proposed Fort Hamer Alternative (e.g., Waterlefe Golf Course), the response travel distance is 11.2 miles and would require 17 minutes at 60 miles per hour (mph) to arrive. Conversely, if the East Manatee Fire Rescue Station #3 is needed to respond to an emergency north of the river in the approximate location of the proposed Fort Hamer Alternative (e.g., Fort Hamer Boat Ramp), the response travel distance is 10.0 miles and would require 10 minutes at 60 mph to arrive. If the Fort Hamer Alternative were in place travel

distances and response times would be reduced to 4 miles in 4 minutes and 6 miles in 6 minutes, respectively.

In addition to emergency response concerns, the need for emergency detour and traveler rerouting is critical to regional travel along I-75.

There have been a series of accidents on the I-75 Bridge that have occurred in recent history requiring the complete closure of the I-75 crossing and the detour of traffic to the local roadway network including:

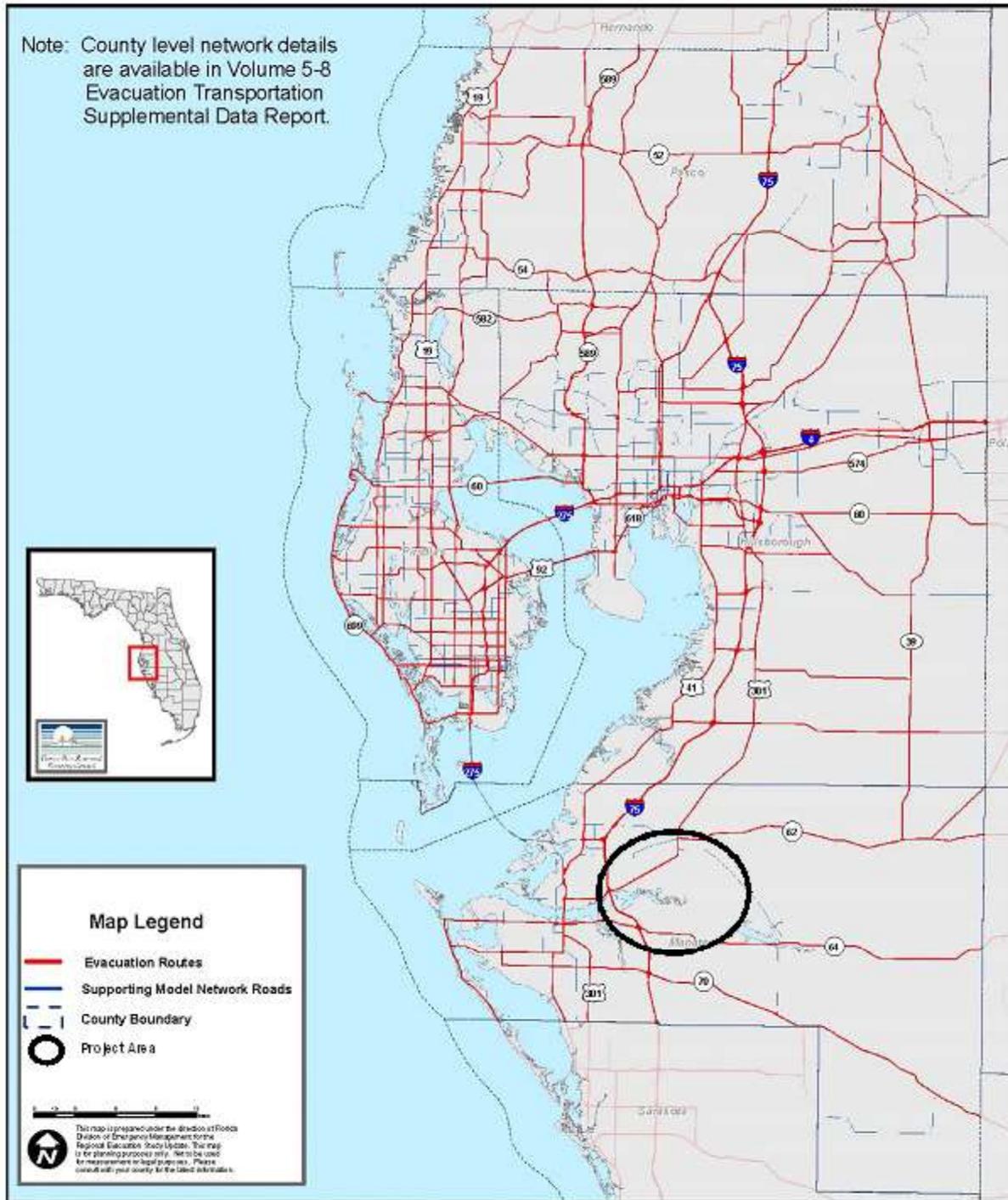
- April 4, 2013: semi-trailer went over the guardrail into the river; northbound traffic detour lasting over 4 hours.
- June 5, 2008: tanker explodes on the US 301 underpass; I-75 closed for 2 weeks.

1.2.5 HURRICANE EVACUATION

As shown in **Figures 1-11 and 1-12**, I-75 and US 41/US 301 are the only north/south designated hurricane evacuation routes over the Manatee River. Currently, there is no north/south hurricane evacuation route designated east of I-75 that crosses the Manatee River. However, US 301 and SR 64 are both designated as east/west evacuation routes paralleling the river. A new crossing within the project area would allow local inland residents the opportunity to travel north to US 301 without having to first travel west to I-75 or east to Rye Road. In addition, residents of the counties south of Manatee County would also be utilizing I-75 in the event of a hurricane evacuation. An additional crossing across the Manatee River in the project area has the potential to relieve some congestion on the adjacent segment of I-75 during an evacuation.

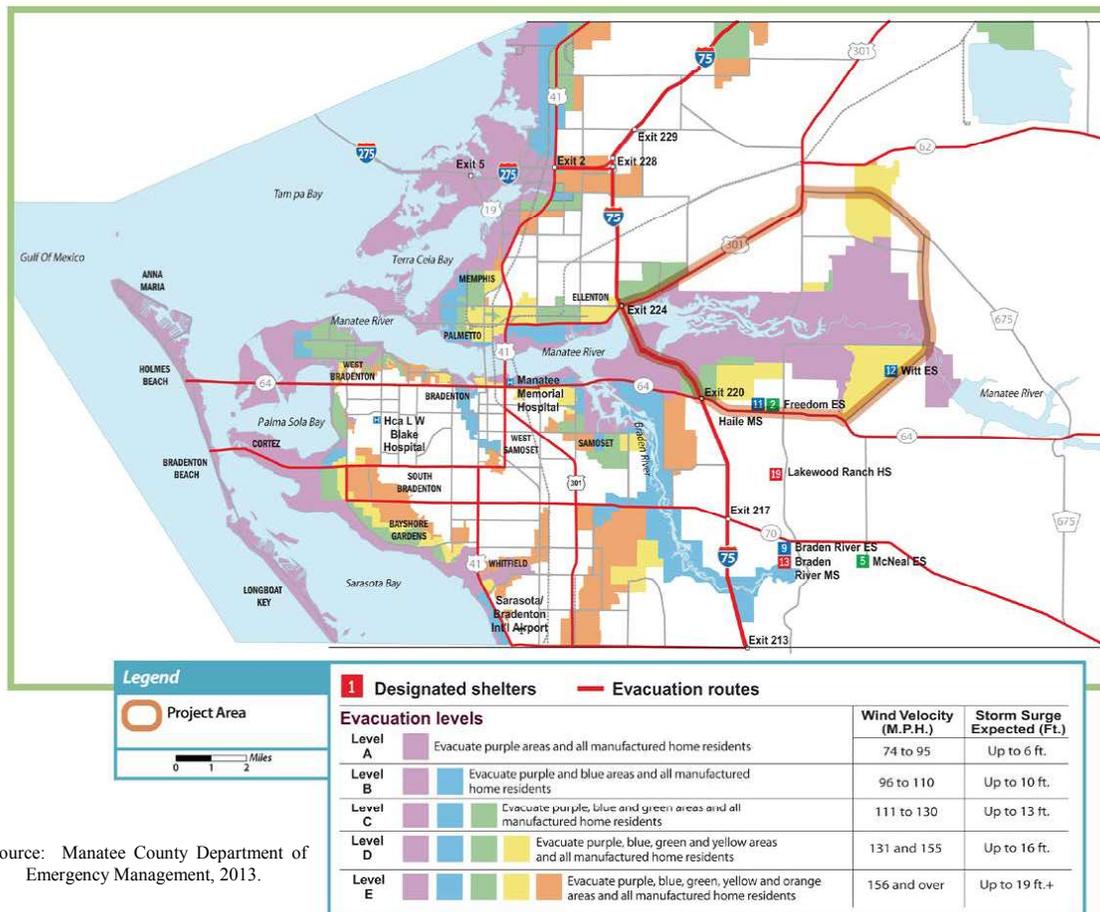
In 2010, the State of Florida State Emergency Response Team (SERT) developed the Statewide Regional Evacuation Study Program, which examined evacuation clearance times for the 11 emergency management regions within the state. Manatee County is within Tampa Bay region along with Hillsborough, Pinellas, and Pasco counties. **Table 1-3** summarizes the projected clearance times in various operational scenarios for this region in 2015. **Table 1-4** summarizes maximum evacuating population by time interval in 2015.

FIGURE 1-11
STATE OF FLORIDA DESIGNATED REGIONAL HURRICANE EVACUATION ROUTES (2013)



Source: SERT, 2010.

**FIGURE 1-12
MANATEE COUNTY HURRICANE EVACUATION PLAN**



Source: Manatee County Department of Emergency Management, 2013.

**TABLE 1-3
2015 CLEARANCE TIMES FOR OPERATIONAL SCENARIOS (HOURS)**

County	Evacuation Level A	Evacuation Level B	Evacuation Level C	Evacuation Level D	Evacuation Level E
Clearance Time to Shelter					
Hillsborough	12.0	15.5	26.0	38.0	78.0
Manatee	10.0	13.0	19.0	27.0	69.5
Pasco	12.0	13.5	23.5	40.5	78.5
Pinellas	10.0	13.0	19.5	25.5	71.0
In-County Clearance Time					
Hillsborough	12.0	15.5	26.0	38.0	78.0
Manatee	11.0	14.0	20.0	33.5	73.5
Pasco	12.0	14.5	23.5	40.5	78.5
Pinellas	11.0	14.0	20.0	31.0	72.0
Out of County Clearance Time					
Hillsborough	12.0	15.5	25.5	38.0	78.0
Manatee	11.0	14.0	20.0	33.0	75.0
Pasco	11.5	14.5	26.0	37.0	78.0
Pinellas	10.5	14.0	20.0	31.0	72.0
Regional Clearance Time					
Tampa Bay	12.0	15.5	26.0	38.0	78.0

Source: SERT, 2010 – Table VI-14.

**TABLE 1-4
MAXIMUM EVACUATING POPULATION BY TIME INTERVAL FOR 2015**

Time Interval	Evacuation Level A	Evacuation Level B	Evacuation Level C	Evacuation Level D	Evacuation Level E
Hillsborough County					
12-Hour	222,025	200,654	201,348	168,531	152,174
18-Hour	286,782	300,982	302,021	252,796	228,260
24-Hour	N/A	376,227	486,590	337,061	304,347
36-Hour	N/A	N/A	N/A	505,592	456,521
Manatee County					
12-Hour	94,284	119,100	100,436	94,896	81,446
18-Hour	113,927	148,875	150,654	142,344	122,168
24-Hour	N/A	N/A	200,872	189,791	162,891
36-Hour	N/A	N/A	N/A	284,687	244,337
Pasco County					
12-Hour	115,150	103,170	79,950	61,446	68,109
18-Hour	158,331	154,754	119,925	92,168	102,163
24-Hour	N/A	193,443	159,900	122,891	136,217
36-Hour	N/A	N/A	239,850	184,337	204,326
Pinellas County					
12-Hour	274,378	371,367	351,987	283,481	173,326
18-Hour	320,108	433,262	527,981	425,221	259,989
24-Hour	N/A	N/A	571,979	566,961	346,652
36-Hour	N/A	N/A	N/A	661,455	519,978

Source: SERT, 2010 – Table VI-16.

The results of this study show that the time to clear evacuees within Manatee County to designated shelters would require 10.0 to 69.5 hours depending on the evacuation scenario and potentially involve up to 284,000 county residents. In a more regional evacuation scenario (e.g., counties to the south or north being evacuated and residents from other counties moving through Manatee County), out of county clearance time is 11.0 to 75.0 hours and involve in excess of 660,000 out of county residents.

Providing two additional lanes of north/south capacity across Manatee County is anticipated to improve overall evacuation times by allowing intra-county local evacuation movements to occur off of I-75. The reduction of unnecessary volume on the I-75 corridor would lead to improved flow and therefore improved evacuation times.

1.3 SYSTEM LINKAGE AND LOCAL GOVERNMENT AUTHORITY

Fort Hamer Road and Upper Manatee River Road are owned and maintained by Manatee County. A bridge connecting these two roads is consistent with the adopted Sarasota/Manatee MPO's 2035 LRTP Financially Feasible Plan (MPO, 2012) (Figure 1-5) and Manatee County's Comprehensive Plan. Manatee County would be solely responsible for funding the planning, design, and construction phases of this project.

Rye Road and Golf Course Road are owned and maintained by Manatee County. Adding additional capacity to Rye Road is not part of the Financially Feasible Plan nor is it part of Manatee County's Comprehensive Plan.

I-75, through Manatee and Sarasota counties (29 miles) has received Location Design and Concept Acceptance (LDCA) from the Federal Highway Administration (FHWA) for expansion to eight lanes; however, this planned expansion is currently not funded for construction.

1.4 CONSISTENCY WITH LOCALLY ADOPTED TRANSPORTATION PLANS

The Financially Feasible Plan identifies a new crossing of the Manatee River in the location of the Fort Hamer Alternative providing two new lanes (Figure 1-5). No other capacity improvements across the Manatee River, east of I-75, are identified in the Financially Feasible Plan. Improvements to Rye Road, including widening the existing two-lane crossing to four lanes, is not consistent with current plans and would require a plan amendment and update.

1.5 PERFORMANCE MEASURES

Proposed alternatives to improve regional mobility across the Manatee River were evaluated according to several transportation performance measures that related to the stated project needs. These measures are used in this document to ascertain each proposed alternative’s satisfaction of the stated needs.

Accommodate the existing and projected growth in eastern Manatee County:

- Vehicle hours traveled (VHT) and vehicle miles traveled (VMT) – these are measures produced by the locally-adopted TDM and establish a measure of effectiveness to reduce travel time and trip distances.
- Congested Speed – this measures the average speed, in a given link, during peak a.m./p.m. volume periods.

Improvements in LOS to the local roadway network:

- VHT and VMT – these are measures produced by the locally-adopted TDM and establish a measure of effectiveness to reduce travel time and trip distances.
- Congested Speed – this measures the average speed, in a given link, during peak a.m./p.m. volume periods.

Improvements to emergency response times:

- Distance of response trip from station to furthest point in response area – this provides an approximation of “worst case” response time based on distance and average response speeds.

Improvements to evacuation capacity across the Manatee River:

- Total length of “new” route and that route’s connections to other evacuation routes – this provides an approximation of effectiveness as a parallel north/south alternative to I-75 in local or regional evacuation scenarios.

1.6 CONCLUSION

Careful evaluation of the needs of Manatee County has demonstrated the need for improvements to regional mobility across the Manatee River. Current growth in Manatee County and the project area has stressed the capacity of existing Manatee River crossing and has resulted in increased travel times and travel distances for residents and visitors. Projected growth through 2035 indicates that conditions only worsen without improvements to capacity across the Manatee River. Reduction in regional mobility also leads to increased response times for emergency services across the Manatee River, in particular, east of I-75. Likewise, additional capacity, in

some location other than I-75, would provide added capacity for a north/south alternative to I-75 in a localized or regional evacuation scenario.

Consideration of potential, reasonable solutions to the stated project needs within this document is consistent with the requirements of the *National Environmental Policy Act of 1969* (NEPA). The evaluation of various, reasonable solutions in a single document, such as this document, provides the general public and all interested parties an understanding of the full importance of the project and provides the project sponsors the ability to make a fully informed decision. The potential, reasonable solutions to the stated project needs may also have similar or cumulative environmental impacts (e.g., socioeconomic, cultural, natural, and physical) that should be analyzed together in a single document to provide comparative evaluation of all potential impacts. The results of this analysis and evaluation contained here within this FEIS, therefore, achieve the intent of NEPA. Though the No-Build Alternative does not satisfy the stated Purpose and Need, it is being retained for further evaluation to provide a comparative baseline to the two build alternatives. The following alternatives will be considered and discussed throughout the remainder of this FEIS:

- No-Build Alternative,
- Fort Hamer Alternative, and
- Rye Road Alternative.

Chapter 2

ALTERNATIVES

This section discusses those alternatives developed, analyzed, and evaluated over the life of this project. This includes those alternatives developed in previous efforts led by the Federal Highway Administration (FHWA) and the Florida Department of Transportation (FDOT), and a recommendation for these alternatives to be advanced in the current effort led by the U.S. Coast Guard (USCG). It should be noted that the FHWA-lead effort evaluated a four-lane crossing of the Manatee River. This USCG effort evaluates only a two-lane crossing due to the fact this is the only financially feasible alternative funded through 2035 as per the Sarasota/Manatee Metropolitan Planning Organization's (MPO's) 2035 Long Range Transportation Plan (LRTP) Financially Feasible Plan (MPO, 2012).

2.1 *HISTORICAL BACKGROUND*

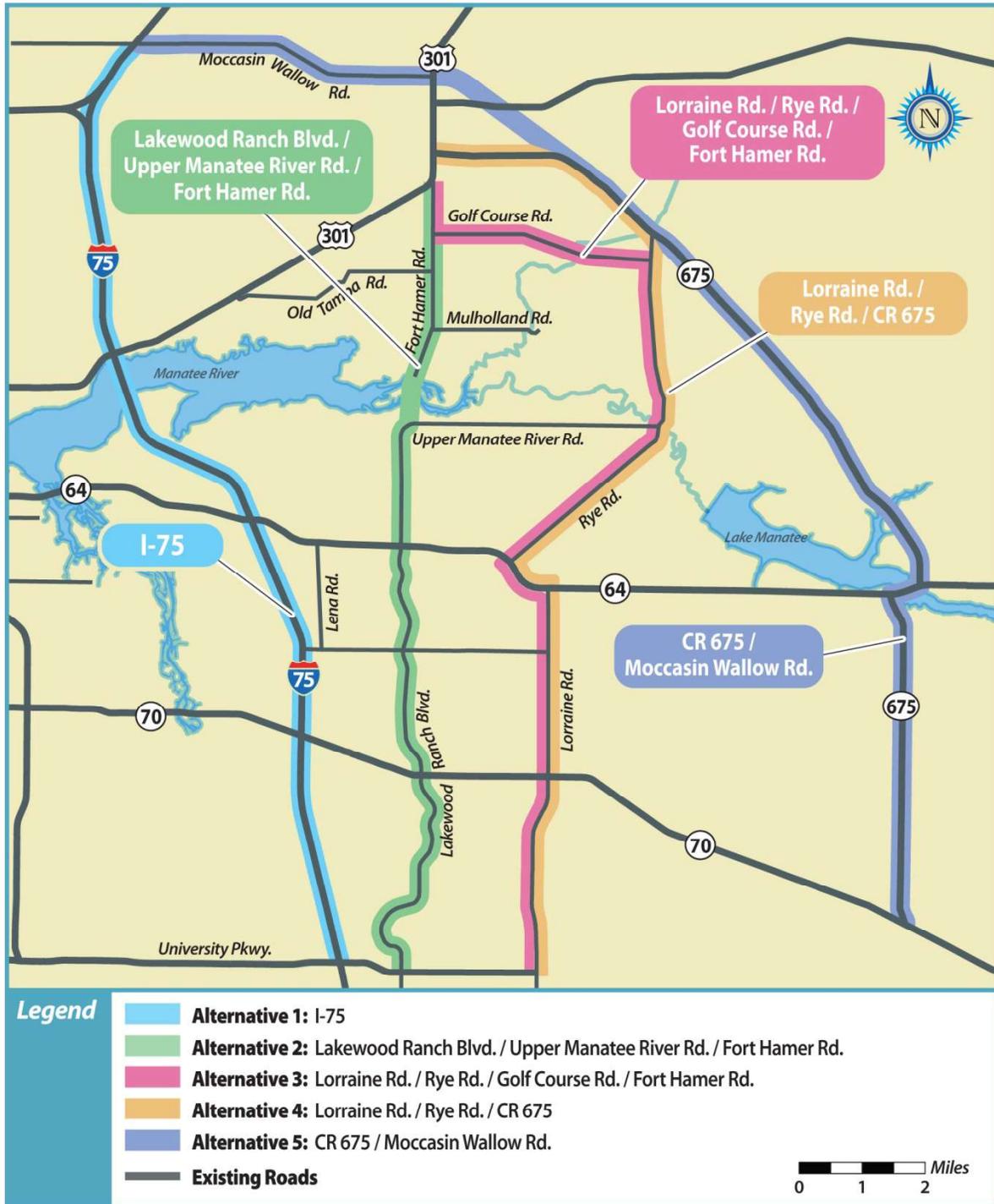
Between 1999 and 2006, Manatee County (the County) undertook detailed consideration of the need for transportation improvements east of Interstate 75 (I-75) (**Figure 2-1**). Since that time, ongoing improvements; public input; changes in transportation priorities, population and economic growth; and fiscal realities have necessitated revising parts of the earlier analysis. As a result, the alternatives analysis presented here is an amalgamation of earlier and later work. Manatee County has divided its analysis into three parts; one that identifies the alternatives considered (Section 2.2), one that describes screening that identifies reasons for excluding alternatives from further consideration (Section 2.3), and one that describes reasonable alternatives in detail (Sections 2.4 and 2.5).

2.2 *ALTERNATIVES CONSIDERED*

Manatee County has analyzed several alternatives for meeting its stated Purpose and Need for the Proposed Action:

- No-Build,
- Five build alternative corridors (**Figure 2-1**),
- Transportation system management (TSM),
- Multimodal improvements,
- Alternative bridge design concepts, and
- Alternative bridge alignments.

**FIGURE 2-1
AREA CONSIDERED FOR THE DEVELOPMENT OF ALTERNATIVE CORRIDORS**



The following paragraphs define the alternatives for the purpose of initiating screening. During and after screening, as subsequent sections indicate, some alternatives were re-defined.

The No-Build Alternative would not add road capacity improvements other than those already funded for construction under the FDOT Work Program and the County's Capital Improvement Program (CIP) (Manatee County BOCC, 2012) or by private, non-governmental entities, such as developers.

Alternative 1 is the I-75 corridor from University Parkway to Moccasin Wallow Road. For most of the alternatives analysis, Alternative 1 is the same as the No-Build Alternative, with I-75 in its current, six-lane configuration. For the analysis in Step 2, I-75 is assumed to expand to eight lanes with associated ramp modifications at the five interchanges within this segment.

Alternative 2 is a corridor extending from University Parkway to U.S. Highway 301 (US 301). This alternative would improve to four lanes Upper Manatee River Road from State Road 64 (SR 64) to the Manatee River and Fort Hamer Road from the river to US 301, and would add a four-lane bridge across the Manatee River.

Alternative 3 is a corridor extending from University Parkway to US 301. This alternative would improve to four lanes SR 64 to Rye Road, Rye Road to Golf Course Road, Golf Course Road to Fort Hamer Road, and Fort Hamer Road to US 301, and would add a second two-lane bridge across the Manatee River.

Alternative 4 is a corridor extending from University Parkway to US 301. This alternative would improve to four lanes Lorraine Road from SR 70 to SR 64, SR 64 to Rye Road, Rye Road to County Road 675 (CR 675), and CR 675 to US 301, and would add a second two-lane bridge across the Manatee River.

Alternative 5 is a corridor extending from SR 70 to I-75. This alternative would improve CR 675 and Moccasin Wallow Road to four lanes, including a short new stretch to connect CR 675 directly to Moccasin Wallow Road (new connection), and would add a second two-lane bridge across the Lake Manatee reservoir.

Alternative 6 would include TSM activities, which maximize the efficiency of the existing system without major capacity improvements. Potential TSM activities include fringe parking, ridesharing, high-occupancy vehicle (HOV) lanes, traffic signal optimization, and access control.

Alternative 7 would include Multimodal options, such as bus and/or rail service to decrease congestion.

The alternative bridge design concepts and alternative bridge alignments are limited to the preferred alternative that screening found to be reasonable, and are discussed in Section 2.5.

2.3 ALTERNATIVES SCREENING

Manatee County used a three-step process for analyzing the alternatives, with steps using increasingly detailed evaluative criteria designed to screen out alternatives that are not reasonable.

2.3.1 STEP 1 ANALYSIS



Manatee County used Step 1 to determine the overall effectiveness of each alternative in meeting the basic need for increased mobility and reduced traffic congestion within the project area.

Step 1 evaluated alternative corridors using the Sarasota/Manatee MPO's Travel Demand Model (TDM) and socioeconomic data sets found within that model, adjusted to replicate anticipated 2028 conditions, to estimate annual average daily traffic (AADT) volumes. **Table 2-1** shows the results of the AADT modeling for all road segments and **Table 2-2** excerpts AADT volumes for road segments crossing the Manatee River.

Step 1 also evaluated alternative corridors using the model's Highway Evaluation module (HEVAL) to estimate environmental impacts. **Table 2-3** shows the results of the HEVAL modeling.

Only Alternative 2 produced a substantial increase in overall north/south mobility, producing the greatest reduction in I-75 volume, network vehicle miles traveled (VMT), vehicle hours traveled (VHT), and network emissions, while using the least amount of fuel and producing the most river crossings. Alternative 5 had the least positive impact, producing the least reduction in I-75 volume, network VMT, and network emissions, while producing the fewest river crossings. Alternative 5 would also increase the number of network VHT. Due to its poor performance measures, Manatee County screened Alternative 5 out from further analysis.

The analysis showed that transportation characteristics of the project area are not conducive to Alternatives 6 and 7. Manatee County screened Alternative 6 out from further analysis because the travel characteristics of the project area do not support effective use of ridesharing or fringe parking and the project area does not support the use of HOV lanes (which are more conducive for limited-access freeways).

**TABLE 2-1
STEP 1 ALTERNATIVE CORRIDOR COMPARISONS – 2028 AADT¹ PROJECTED VOLUMES²**

Road	Section	No-Build	Alternative 1 I-75 Six-Lane	Alternative 2 Lakewood Ranch Boulevard/ Upper Manatee River Road/ Fort Hamer Road	Alternative 3 Lorraine Road/ Rye Road/ Golf Course Road/Fort Hamer Road	Alternative 4 Lorraine Road/ Rye Road/ CR 675	Alternative 5 CR 675/ Moccasin Wallow Road
I-75	University Parkway - SR 70	105,200	105,200	104,900	106,400	106,300	104,900
	SR 70 - SR 64	94,800	94,800	91,000	93,200	93,200	95,400
	SR 64 - US 301	100,400	100,400	89,500	93,900	94,600	100,100
	US 301 - I-75/I-275 Junction	96,200	96,200	88,900	93,300	93,500	96,000
	I-75/I-275 Junction - Moccasin Wallow Road	80,700	80,700	76,900	78,700	79,200	80,700
Lorraine Road	University Parkway - SR 70	11,600	11,600	12,600	27,800	27,400	12,500
	SR 70 - SR 64	12,300	12,300	11,900	27,900	27,200	11,900
Rye Road	SR 64 - Upper Manatee River Road	14,400	14,400	12,100	37,500	36,900	14,000
	Upper Manatee River Road - Golf Course Road	15,200	15,200	6,300	36,900	35,900	14,900
CR 675	SR 70 - SR 64	11,800	11,800	10,200	10,100	10,200	15,200
	SR 64 - Rye Road	11,700	11,700	5,200	5,100	5,400	15,700
	Rye Road - US 301	12,000	12,000	9,000	10,400	30,800	19,700
	CR 675 Extension to Moccasin Wallow Road	---	---	---	---	---	14,400
University Parkway	I-75 - Lakewood Ranch Boulevard	31,800	31,800	33,400	34,200	34,400	34,100
	Lakewood Ranch Boulevard - Lorraine Road	11,900	11,900	13,100	27,600	27,100	13,000
SR 70	I-75 - Lakewood Ranch Boulevard	76,100	76,100	77,000	80,900	80,300	82,200
	Lakewood Ranch Boulevard - Lorraine Road	44,700	44,700	45,500	44,900	44,900	47,200
	Lorraine Road - CR 675	16,800	16,800	16,000	17,100	17,100	18,400
SR 64	I-75 - Lakewood Ranch Boulevard	65,100	65,100	63,800	67,800	68,000	66,200
	Lakewood Ranch Boulevard - Lorraine Road	40,700	40,700	38,300	41,100	41,500	39,700
	Lorraine Road - CR 675	21,100	21,100	19,600	31,200	31,100	21,200

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TABLE 2-1 (CONTINUED)
STEP 1 ALTERNATIVE CORRIDOR COMPARISONS – 2028 AADT¹ PROJECTED VOLUMES²

Road	Section	No-Build	Alternative 1 I-75 Six-Lane	Alternative 2 Lakewood Ranch Boulevard/ Upper Manatee River Road/ Fort Hamer Road	Alternative 3 Lorraine Road/ Rye Road/ Golf Course Road/Fort Hamer Road	Alternative 4 Lorraine Road/ Rye Road/ CR 675	Alternative 5 CR 675/ Moccasin Wallow Road
Lakewood Ranch Boulevard	University Parkway - SR 70	54,600	54,600	54,800	45,300	46,400	56,300
	SR 70 - SR 64	40,100	40,100	40,100	38,200	37,600	41,100
Upper Manatee River Road	SR 64 - Manatee River	23,800	23,800	46,500	20,500	20,600	23,600
	At Manatee River	---	---	42,500	---	---	---
Fort Hamer Road	Old Tampa Road - US 301	14,200	14,200	25,400	12,200	12,300	10,300
Golf Course Road	Rye Road - Fort Hamer Road	13,600	13,600	3,200	31,500	9,400	8,200
	Fort Hamer Road - US 301 (New)	---	---	---	18,400	---	---
US 301	I-75 - 60th Avenue	43,800	43,800	41,000	43,600	43,700	42,800
	60th Avenue - Old Tampa Road	44,100	44,100	41,600	41,400	44,700	39,900
	East of Fort Hamer Road	25,400	25,400	23,100	30,300	28,700	26,500
Moccasin Wallow Road	East of I-75	28,900	28,900	23,600	28,100	28,700	29,800
	West of US 301	25,000	25,000	20,600	25,000	25,700	26,100

¹ AADT = Annual average daily traffic.

² MPO, 2011.

**TABLE 2-2
STEP 1 ALTERNATIVE CORRIDOR COMPARISONS – 2028 AADT¹ PROJECTED VOLUMES¹ OVER MANATEE RIVER**

Road	Segment	No-Build	Alternative 1 I-75 Six-Lane	Alternative 2 Lakewood Ranch Boulevard/ Upper Manatee River Road/ Fort Hamer Road	Alternative 3 Lorraine Road/ Rye Road/ Golf Course Road/Fort Hamer Road	Alternative 4 Lorraine Road/ Rye Road/ CR 675	Alternative 5 CR 675/ Moccasin Wallow Road
I-75	SR 64 - US 301	100,400	100,400	89,500	93,900	94,600	100,100
Rye Road	Upper Manatee River Road - Golf Course Road	15,200	15,200	6,300	36,900	35,900	14,900
CR 675	SR 64 - Rye Road	11,700	11,700	5,200	5,100	5,400	15,700
Upper Manatee River Road	At Manatee River	0	0	42,500	0	0	0
Total over River		127,300	127,300	143,500	135,900	135,900	130,700
Difference from No-Build			0	16,200	8,600	8,600	3,400

¹ AADT = Annual average daily traffic.

² MPO, 2011.

**TABLE 2-3
STEP 1 ALTERNATIVE CORRIDOR COMPARISONS – 2028 ENVIRONMENTAL (HEVAL) MEASURES¹**

HEVAL Statistical Measures	No-Build	Alternative 1 I-75 Six-Lane	Alternative 2 Lakewood Ranch Boulevard/ Upper Manatee River Road/ Fort Hamer Road	Alternative 3 Lorraine Road/ Rye Road/ Golf Course Road/Fort Hamer Road	Alternative 4 Lorraine Road/ Rye Road/ CR 675	Alternative 5 CR 675/ Moccasin Wallow Road
Total VMT ² Volumes	29,791,760	29,791,760	29,486,162	29,867,310	29,873,260	29,859,364
Total VMT ² Using Capacity	34,621,344	34,621,344	26,175,712	34,901,040	34,899,552	34,901,060
Total VHT ³ Volumes	1,760,464	1,760,464	1,730,924	1,701,636	1,697,786	1,756,097
Total VHT ³ Using Capacity	1,526,780	1,526,780	1,135,816	1,502,483	1,499,830	1,534,519
Total Congested Speed	20.18	20.18	20.40	20.59	20.59	20.23
Total Emissions (CO) ⁴	396,153	396,153	390,422	393,403	393,022	395,050
Total Emissions (HC) ⁵	47,084	47,084	46,390	46,889	46,867	47,004
Total Emissions (NO) ⁶	38,891	38,891	38,587	39,109	39,121	39,057
Total Fuel Used (gallons)	2,587,700	2,587,700	2,561,988	2,598,125	2,598,511	2,594,196
Total Delay Due to Congestion (Vehicles/Hours)	994,521	994,521	973,161	934,290	930,333	988,948

¹ MPO, 2011.

² VMT = vehicle miles traveled.

³ VHT = vehicle hours traveled.

⁴ CO = Carbon Monoxide

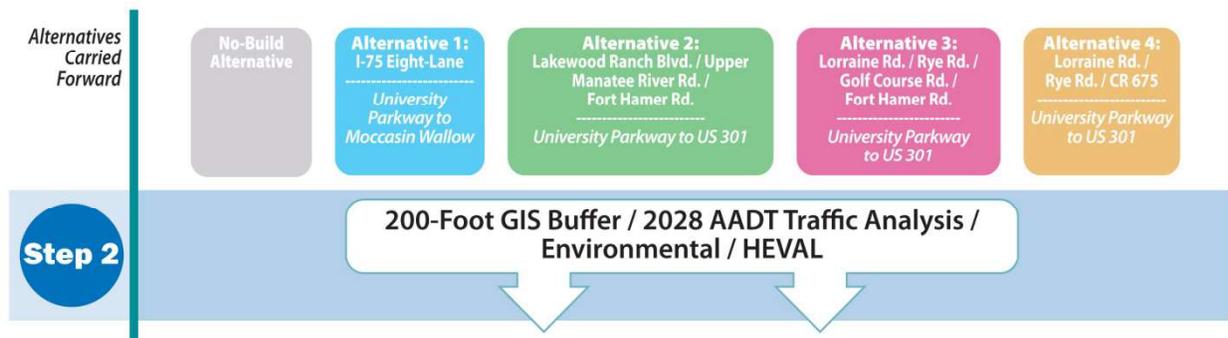
⁵ HC = Hydrocarbons

⁶ NO = Nitrogen Oxide

Manatee County screened out Alternative 7 from further analysis because the current Manatee County Area Transit (MCAT) system does not provide service east of I-75 and MCAT has no plans to fund, plan, or operate service east of I-75 in the reasonably foreseeable future.

The *National Environmental Policy Act of 1969* (NEPA) requires comparing reasonable alternatives, including a preferred alternative, to a No-Build/No-Action Alternative as a way to clearly show environmental impacts of proposed actions. For this reason, Manatee County has carried the No-Build Alternative through for a full analysis in subsequent chapters.

2.3.2 STEP 2 ANALYSIS



Manatee County used Step 2 to evaluate the remaining alternatives using additional and more refined factors.

Step 2 added environmental screening using a geographic information system (GIS). Each corridor was assessed using a FDOT Environmental Screening Tool (EST) and the University of Florida's Florida Geographic Data Library (FGDL) to identify potential impacts within 100 feet of the corridor's centerline (200-foot GIS buffer). The 200-foot buffer represents a broad area of potential impact. At this stage of the analysis there is no assumption on right-of-way (ROW) requirements for each corridor; i.e., it is unknown what each corridor's actual footprint would be. Therefore, a 200-foot buffer was selected to identify the resources potentially affected by the range of footprints for each corridor. **Table 2-4** shows the results of the 200-foot buffer analysis. With the exception of floodplain acreage, Alternatives 3 and 4 have more environmental resources that could be affected than Alternatives 1 and 2. Alternative 1 has the most floodplain acreage, which is consistent with the alternative's location furthest downstream and which means that, if I-75 were expanded, it would have the most potential for floodplain impacts. Alternative 2 would have the least potential for environmental impact of the three build alternatives, with Alternative 4 having slightly more potential than Alternative 3. The Sarasota/Manatee MPO's 2035 LRTP (MPO, 2012) demonstrates there is a need to expand I-75 from six lanes to eight lanes. Therefore, it was assumed in Alternative 1 that I-75 would be expanded to eight lanes.

**TABLE 2-4
STEP 2 ALTERNATIVE CORRIDOR COMPARISONS – 200-FOOT BUFFER ANALYSIS**

Issues	No-Build Impacts	Alternative 1 I-75 Eight-Lane Impacts	Alternative 2 Lakewood Ranch Boulevard/ Upper Manatee River Road/Fort Hamer Road Impacts	Alternative 3 Lorraine Road/ Rye Road/ Golf Course Road/ Fort Hamer Road Impacts	Alternative 4 Lorraine Road/ Rye Road/ CR 675 Impacts
Wetlands	0	81.8 acres	73.8 acres	86.5 acres	112.7 acres
Floodplains (A) ¹	0	4.2 acres	12.8 acres	2.4 acres	2.5 acres
Floodplains (AE) ²	0	145.7 acres	76.1 acres	88.2 acres	122.9 acres
Archaeological and Historic Sites	0	2 (Prehistoric Sites)	5 (Structures)	11 1 Cemetery 7 Structures 3 Prehistoric Sites	3 (Prehistoric Sites)
Historic Districts	0	0	0	0	1 (Parrish)
Section 4(f) Properties	0	1 Property	1 Property	1 Property	1 Property
Section 6(f) Properties	0	0	0	1 Property	1 Property
Residential Land Use					
Existing	0	N/A	139.5 acres	208.4 acres	222.7 acres
Future	0	N/A	319.3 acres	820.2 acres	598.2 acres
Agricultural Land Use					
Existing	0	N/A	236.3 acres	311.5 acres	509.7 acres
Future	0	N/A	7.4 acres	0.0 acres	0.2 acres

¹ Without established Base Flood Elevation.

² With established Base Flood Elevation.

Sources: Florida Geographic Data Library and Florida Department of Transportation's Efficient Transportation Decision-Making Environmental Screening Tool.

The Sarasota/Manatee MPO's 2035 LRTP (MPO, 2012) demonstrates there is a need to expand I-75 from six lanes to eight lanes. For the Step 2 corridor analyses, the Step 1 transportation model was re-coded to assume that I-75 had eight lanes and re-run. The re-run allowed evaluation of the sensitivity of modeling results for the corridors of Alternatives 2, 3, and 4 to expansion of I-75. **Tables 2-5 and 2-6** show the AADT modeling results. The I-75 bridge AADT would increase by 27,900 (28 percent) as compared to the No-Build Alternative. Comparison of Tables 2-1 and 2-5 shows that expanding I-75 from six lanes to eight lanes would attract traffic off the local system, including the corridors for Alternatives 2, 3, and 4. **Table 2-7** shows the 2028 environmental HEVAL measures with I-75 at eight lanes. Comparison of the HEVAL modeling results in Tables 2-3 and 2-7 shows that an eight-lane I-75 corridor and the local system would result in a decline in emissions and delays due to congestion within the local system. Alternative 2 still showed the best performance measures, but none of the modeling results suggests a basis for screening out any alternative.

**TABLE 2-5
STEP 2 ALTERNATIVE CORRIDOR COMPARISONS – 2028 AADT¹ PROJECTED VOLUMES² (WITH EIGHT-LANE I-75)**

Road	Section	No-Build Six-Lane I-75	Alternative 1 I-75 Eight-Lane³	Alternative 2 Lakewood Ranch Boulevard/ Upper Manatee River Road/ Fort Hamer Road	Alternative 3 Lorraine Road/ Rye Road/ Golf Course Road/Fort Hamer Road	Alternative 4 Lorraine Road/ Rye Road/ CR 675
I-75	University Parkway - SR 70	105,200	119,900	120,200	115,700	119,200
	SR 70 - SR 64	94,800	113,300	108,600	104,200	111,900
	SR 64 - US 301	100,400	128,300	114,300	102,100	122,800
	US 301 - I-75/I-275 Junction	96,200	109,600	98,100	101,700	104,800
	I-75/I-275 Junction - Moccasin Wallow Road	80,100	92,500	83,700	83,100	88,900
Lorraine Road	University Parkway - SR 70	11,600	6,700	7,600	28,000	15,100
	SR 70 - SR 64	12,300	10,700	10,600	26,900	22,000
Rye Road	SR 64 - Upper Manatee River Road	14,400	13,400	9,300	34,800	24,300
	Upper Manatee River Road - Golf Course Road	15,200	12,500	2,900	33,600	21,400
CR 675	SR 70 - SR 64	11,800	9,500	9,400	10,000	9,300
	SR 64 - Rye Road	11,700	4,300	3,600	4,800	3,900
	Rye Road - Rutland Road at US 301	12,000	8,700	6,500	10,200	16,800
	CR 675 Extension to Moccasin Wallow Road	---	---	---	---	---
University Parkway	I-75 - Lakewood Ranch Boulevard	31,800	39,700 ⁴	41,800 ⁴	34,600 ⁴	41,100 ⁴
	Lakewood Ranch Boulevard - Lorraine Road	11,900	6,600	7,700	27,800	14,900
SR 70	I-75 - Lakewood Ranch Boulevard	76,100	79,400 ⁵	77,300 ⁵	82,900 ⁵	85,000 ⁵
	Lakewood Ranch Boulevard - Lorraine Road	44,700	42,700	43,300	44,800	43,900
	Lorraine Road - CR 675	16,800	17,700	18,000	16,200	17,700
SR 64	I-75 - Lakewood Ranch Boulevard	65,100	58,000	60,100	68,000	60,600
	Lakewood Ranch Boulevard - Lorraine Road	40,700	39,400	37,500	40,900	38,400
	Lorraine Road - CR 675	21,100	18,500	17,000	31,400	23,400
Lakewood Ranch Boulevard	University Parkway - SR 70	54,600	38,600	40,800	44,900	35,900
	SR 70 - SR 64	40,100	32,000	37,000	37,600	28,500

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TABLE 2-5 (CONTINUED)
STEP 2 ALTERNATIVE CORRIDOR COMPARISONS – 2028 AADT¹ PROJECTED VOLUMES² (WITH EIGHT-LANE I-75)

Road	Section	No-Build Six-Lane I-75	Alternative 1 I-75 Eight-Lane ³	Alternative 2 Lakewood Ranch Boulevard/ Upper Manatee River Road/ Fort Hamer Road	Alternative 3 Lorraine Road/ Rye Road/ Golf Course Road/Fort Hamer Road	Alternative 4 Lorraine Road/ Rye Road/ CR 675
Upper Manatee River Road	SR 64 - Manatee River	23,800	23,700	43,200	20,600	21,600
	At Manatee River	---	---	35,300	---	---
Fort Hamer Road	Old Tampa Road - US 301	14,200	10,500	18,900	11,200	11,300
Golf Course Road	Rye Road - Fort Hamer Road	13,600	7,900	1,900	28,100	7,300
	Fort Hamer Road - US 301	---	---	---	16,400	---
US 301	I-75 - 60th Avenue	43,800	47,300 ⁶	41,000 ⁶	43,900 ⁶	45,600 ⁶
	60th Avenue - Old Tampa Road	44,100	44,800	37,800	45,100	44,400
	East of Fort Hamer Road	25,400	24,600	18,700	30,000	24,900
Moccasin Wallow Road	East of I-75	28,900	30,400	20,100	29,700	26,800
	West of US 301	25,000	26,800	16,400	26,600	23,200

¹ AADT = Annual average daily traffic.

² MPO, 2011.

³ Includes ramp and cross street improvements, for eight-lane I-75.

⁴ With six-/eight-lane University Parkway.

⁵ With six-/eight -lane SR 70.

⁶ With six-/eight -lane US 301.

**TABLE 2-6
STEP 2 ALTERNATIVE CORRIDOR COMPARISONS –
2028 AADT PROJECTED VOLUMES¹ OVER MANATEE RIVER**

Road	Segment	No-Build	Alternative 1 I-75 Eight- Lane	Alternative 2 Lakewood Ranch Boulevard/ Upper Manatee River Road/Fort Hamer Road	Alternative 3 Lorraine Road/ Rye Road/ Golf Course Road/ Fort Hamer Road	Alternative 4 Lorraine Road/ Rye Road/ CR 675
I-75	SR 64 - US 301	100,400	128,300	114,300	102,100	122,800
Rye Road	Upper Manatee River Road - Golf Course Road	15,200	12,500	2,900	33,600	21,400
CR 675	SR 64 - Rye Road	11,700	4,300	3,600	4,800	3,900
Upper Manatee River Road	At Manatee River	0	0	35,300	0	0
Total Over River		127,300	145,100	156,100	140,500	148,100
Difference from No-Build		0	17,800	28,800	13,200	20,800

¹ MPO, 2011.

**TABLE 2-7
STEP 2 ALTERNATIVE CORRIDOR COMPARISONS –
2028 ENVIRONMENTAL (HEVAL) MEASURES¹**

HEVAL Statistical Measures	No-Build	Alternative 1 I-75 Eight- Lane²	Alternative 2 Lakewood Ranch Boulevard/ Upper Manatee River Road/ Fort Hamer Road	Alternative 3 Lorraine Road/ Rye Road/ Golf Course Road/ Fort Hamer Road	Alternative 4 Lorraine Road/ Rye Road/ CR 675
Total VMT Volumes	29,791,760	29,310,950	29,146,492	29,876,522	29,354,164
Total VMT Using Capacity	34,621,344	35,299,980	26,632,266	35,481,188	35,580,004
Total VHT Volumes	1,760,464	1,569,623	1,573,277	1,665,313	1,561,512
Total VHT Using Capacity	1,526,780	1,440,665	1,086,258	1,489,561	1,440,449
Total Congested Speed	20.18	21.52	21.33	20.73	21.55
Total Emissions (CO) ³	396,153	378,608	375,972	386,851	377,696
Total Emissions (HC) ⁴	47,084	45,341	44,998	46,234	45,274
Total Emissions (NO) ⁵	38,891	38,592	38,475	39,450	38,728
Total Fuel Used	2,587,700	2,537,256	2,526,675	2,596,523	2,543,569
Total Delay Due to Congestion (Vehicles/Hours)	994,521.31	820,563.56	827,325.75	899,695.50	811,306.81

¹ MPO, 2011.

² Includes ramp and cross street improvements on eight-lane I-75.

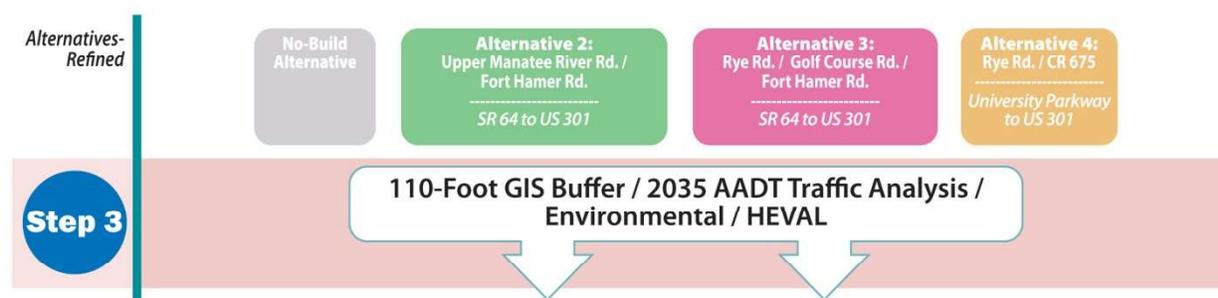
³ CO = Carbon Monoxide

⁴ HC = Hydrocarbons

⁵ NO = Nitrogen Oxide

The AADT and HEVAL modeling show that I-75 expansion from six lanes to eight lanes would reduce traffic on the local roadway network and improve mobility. However, although the MPO's 2035 LRTP (MPO, 2012) demonstrates a need for expansion, it also indicates expansion is not financially feasible. Furthermore, I-75 expansion would not provide an additional Manatee River crossing. For these reasons, Manatee County has screened out from further analysis I-75 expansion as an alternative. Section 4.6 addresses the potential contribution to cumulative impacts that I-75 expansion could have.

2.3.3 STEP 3 ANALYSIS



Manatee County used Step 3 to further refine its analysis by applying reasonable engineering and environmental constraints and taking into account changed conditions.

During the time Manatee County undertook detailed consideration of the need for transportation improvements east of I-75, the County continued making improvements determined to be needed. Roadwork on portions of Lakewood Ranch Boulevard and Lorraine Road was completed and both are now four-lane roadways. Therefore, the County has refined and re-titled the definitions of the corridors for Alternatives 2, 3, and 4. For Step 3, the corridors for all three alternatives extend from SR 64 to US 301.

For Step 3, an environmental analysis of greater detail was performed on the remaining three corridors. The first step was the determination of the most likely improvement that may occur in any of the given build corridors. It was determined that a four-lane divided typical section utilizing 110 feet of ROW (110-foot GIS buffer) would be the most likely typical section for any of the corridors. The 110-foot buffer analysis represents the area most likely to be contained within the ROW for each corridor after considering the likely engineering and environmental constraints. **Table 2-8** shows the results of the 110-foot buffer analysis. With the reduced corridor width and length, the potential for environmental impact is reduced as compared to the Table 2-4 results. With the exception of floodplains, Alternatives 3 and 4 still have the higher potential for environmental impact, with Alternative 4 generally having the greatest potential. Table 2-8 shows that Alternative 4 would have approximately 33 percent more construction costs than Alternatives 2 and 3 and would have the highest wetland mitigation costs.

No changes to the AADT or HEVAL modeling assumptions were made for Step 3. The results are the same as shown in Step 1 Tables 2-1, 2-2, and 2-3, with the sensitivity to I-75 expansion to eight lanes shown in Step 2 Tables 2-5, 2-6, and 2-7.

Based on the Step 3 analysis, Alternatives 3 and 4 were not recommended for further analysis. As compared to Alternative 2, both have higher potential for environmental impact, lower AADT crossing the river, and poorer performance measures from the HEVAL analysis. As compared to each other, Alternative 4 has higher potential for environmental impact but there is little difference otherwise. Alternative 2 has the lowest construction and wetland mitigation cost estimates and Alternative 4 the highest.

**TABLE 2-8
STEP 3 ALTERNATIVE CORRIDOR COMPARISON – 110-FOOT BUFFER ANALYSIS**

Category	Alternative 2 Upper Manatee River Road/ Fort Hamer Road	Alternative 3 Rye Road/ Golf Course Road/ Fort Hamer Road	Alternative 4 Rye Road/ CR 675
Churches (Number)	0	0	1
Schools (Number)	0	1	1
Historic/Archeological Sites (Number)	0	0	2
Wetlands (Acres)	7.50	12.28	14.45
Upland Habitat (Acres) ¹	0.96	15.46	10.76
Floodplain (Acres)	33.08	14.16	24.64
Floodplain Compensation (Acres)	33.08	14.16	24.64
Floodway (Acres)	7.33	7.86	14.50
Potentially Affected Parcels (Number)	130	163	213
Total Area of Corridor (Acres)	102.35	153.82	160.34
Total Distance of Corridor (Miles)	7.0	10.4	10.1
Wetland Mitigation Costs ²	\$483,000	\$791,000	\$930,000
Construction Costs	\$93.17 million	\$94.81 million	\$126.46 million

¹ Florida Land Use Cover and Forms Classification System (FLUCFCS) codes grouped as “Uplands” - 3100, 3200, 3300, 4100, 4120, and 4340 (FDOT, 1999).

² Based on Uniform Mitigation Assessment Method (UMAM) bank cost of \$99,000/credit (1 acre = 0.65 credit).

2.3.4 SCREENING ANALYSIS CONCLUSIONS

The Manatee County analysis screened out one alternative corridor due to poor performance alleviating the I-75 traffic burden, one due to financial infeasibility, and two due to high potential for environmental impact, least increase in Manatee River crossings, and poorest highway mobility and emissions performance measures. TSM and multimodal improvement alternatives were screened out due to infeasibility and lack of service. The screening analysis resulted in recommending improving to four lanes Upper Manatee River Road from SR 64 to the river and Fort Hamer Road from the river to US 301, and adding a four-lane bridge across the Manatee River. Alternative bridge design and alignment alternatives would be developed for this alternative.

2.4 *POST-SCREENING CHANGES*

During Manatee County discussions with the USCG regarding a permit for constructing a bridge across the Manatee River, the USCG asked the County to include in the Environmental Impact Statement (EIS) a detailed environmental impact analysis of an alternative corridor in addition to Alternative 2. The County and the USCG decided on adding Alternative 3 for detailed analysis. As shown in the screening Step 3 GIS analysis, Alternative 3 has less potential for environmental impact than Alternative 4 and would cost approximately one third less to construct.

In 2010, the Sarasota/Manatee MPO issued the 2035 LRTP (MPO, 2012). The Fort Hamer Road/Upper Manatee River Road Bridge is listed as a committed project through 2014. Due to financial constraint, Manatee County has reduced its preferred Alternative 2 to a two-lane bridge. The County has considered the effect this change might have on the prior alternatives screening.

A two-lane Alternative 2 bridge would have less carrying capacity than a four-lane bridge, which would alter the Alternative 2 performance relative to the other alternatives. The eight-lane Alternative 1 was screened out due to financial infeasibility, so the reduced Alternative 2 performance would be immaterial to Alternative 1. Alternative 5 was screened out due to performance and Alternative 4 due to potential for environmental impact, but inclusion of Alternative 3 in the detailed analysis would ensure that the two-lane alternative was subjected to a rigorous comparison to its next closest performer.

2.5 *ALTERNATIVES RECOMMENDED FOR EVALUATION IN THIS FEIS*

As a result of the preliminary evaluation of alternatives discussed above, it was determined the following two build alternatives would be considered “reasonable” for further, detailed analysis and evaluation in this Final EIS (FEIS) and the No-Build Alternative as a comparative baseline:

- No-Build Alternative,
- Fort Hamer Alternative, and
- Rye Road Alternative.

Figure 2-2 shows the location of the study area and construction limits associated with each of the two build alternatives. The study area of each build alternative is defined as the area contained within a 0.5-mile buffer of the alternative’s centerline.

FIGURE 2-2
REASONABLE BUILD ALTERNATIVES ANALYZED



2.5.1 NO-BUILD ALTERNATIVE

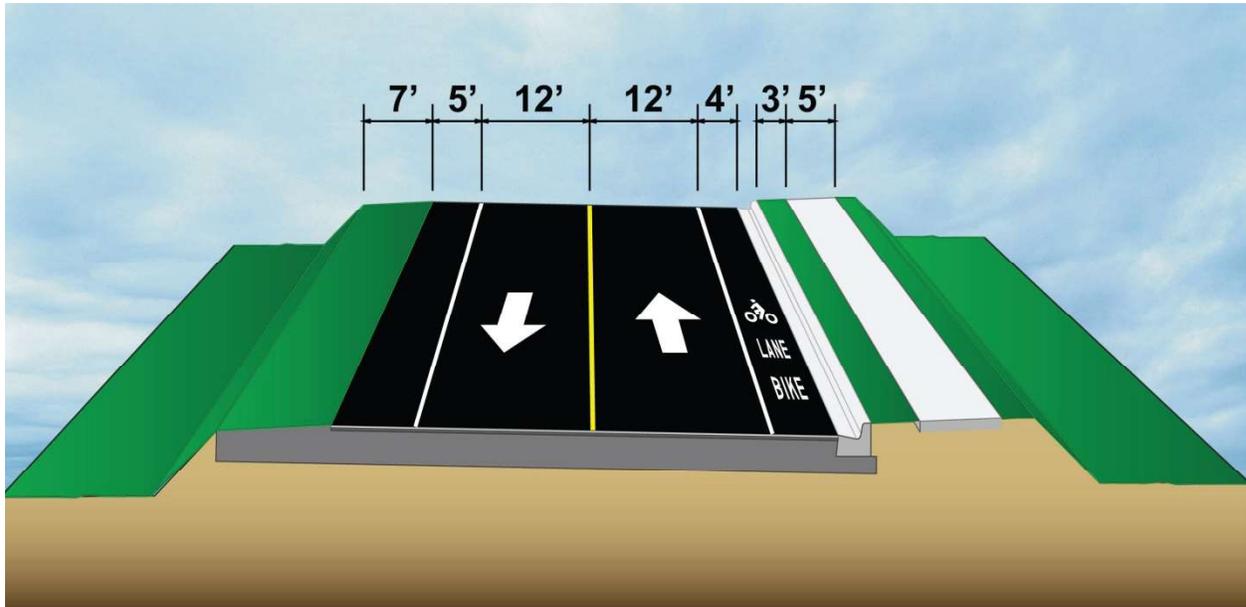
The No-Build Alternative was analyzed for the design year (2035). The No-Build Alternative does not include any additional road capacity improvements other than the road safety improvements and scheduled maintenance already funded to be constructed in Manatee County's CIP (Manatee County BOCC, 2012), or improvements provided by private non-government entities, such as developers. As previously stated, the No-Build Alternative will be considered throughout the entire EIS process as a comparative baseline for the build alternatives.

2.5.2 FORT HAMER ALTERNATIVE

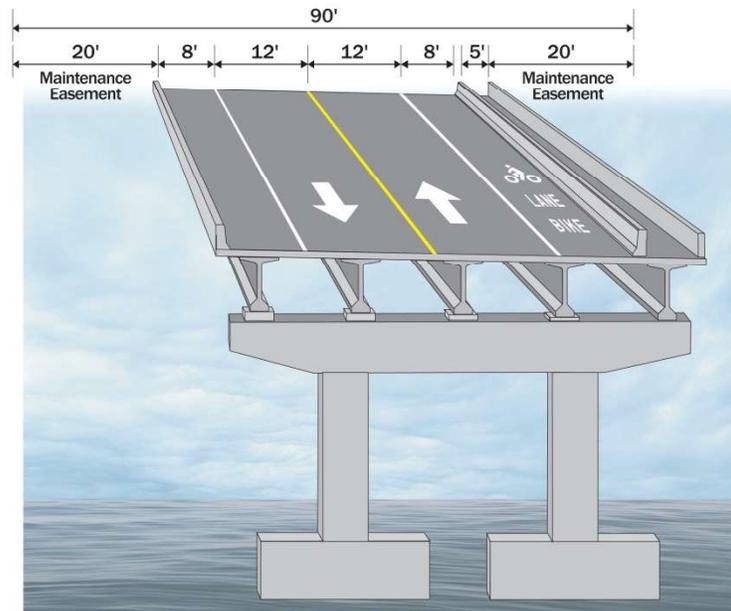
The Fort Hamer Alternative consists of a new two-lane bridge crossing the Manatee River connecting the existing two-lane Upper Manatee River Road with the existing two-lane Fort Hamer Road. The construction limits of this alternative extend from just north of the main entrance of the Waterlefe subdivision to the north side of the Manatee River, a total of approximately 1.4 miles. The length of the proposed bridge is approximately 2,570 feet. The study area for this alternative extends south to SR 64 and north to US 301 because of the increased traffic between these points that would result from this alternative. The proposed roadway and bridge typical sections for the Fort Hamer Alternative are shown in **Figure 2-3**.

FIGURE 2-3
FORT HAMER ALTERNATIVE TYPICAL SECTIONS

ROADWAY TYPICAL SECTION



BRIDGE TYPICAL SECTION



As part of the previous FHWA/FDOT study, a vessel survey was conducted during the Memorial Day weekend 1999 to assess vessel type, size, and usage along this portion of the Manatee River. At the time it was determined that a vertical clearance (air draft) of 26 feet would accommodate all vessels in this portion of the Manatee River. These results were presented to the USCG and a vertical clearance of 26 feet was found acceptable.

Due to the length of time since that survey was conducted, a second vessel survey was conducted in spring 2011. All property owners with water access between Fort Hamer Road and Rye Road were identified using the Manatee County Property Appraisers Office database and mailed a questionnaire. Based on the response of that survey, three respondents noted they had vessels that exceeded 26 feet in height. A subsequent field review in December 2011 indicated that one of these vessels (a small sailboat) was sunk in place at the owner's dock. The second vessel consisted of a houseboat with a flagpole that exceeded 26 feet in height; however, it was noted that the houseboat required less than 26 feet vertical clearance if the flagpole was lowered. The third vessel was a sailboat with a permanently mounted mast exceeding 26 feet in height. The results of both vessel surveys are provided in Appendix A-2 of this FEIS.

Within the Fort Hamer Alternative, three bridge concept alternatives were evaluated:

- Bascule Concept
 - Single leaf bascule (moveable) bridge with a 10-foot vertical clearance
- Mid-Level Fixed Concept
 - Fixed span bridge with a 26-foot vertical clearance
- High-Level Fixed Concept
 - Fixed span bridge with a 40-foot vertical clearance

Table 2-9 summarizes the estimated costs of each of these concepts based on the FDOT *Structures Manual* (FDOT, 2011a).

Based on the estimated total lifetime cost (construction, maintenance, and operations) of the Bascule Bridge Concept (\$106,142,880 - \$111,083,600) and the very low number of vessels needing unlimited vertical clearance, it was recommended the Bascule Bridge Concept for the Fort Hamer Alternative be eliminated for further consideration.

The bridge height is the basis for much of the controversy related to the Waterlefe subdivision immediately southwest of the proposed Fort Hamer Alternative crossing. The High-Level Fixed Bridge would increase the vertical clearance to 40 feet and be contradictory to the aesthetic and visual issues raised by that community. Additionally, because of the estimated total lifetime cost (construction, maintenance, and operations) of the High-Level Fixed Bridge Concept (\$14,906,580 - \$26,016,350) and the very low number of vessels needing a 40-foot vertical clearance, it was recommended the High-Level Fixed Bridge Concept for the Fort Hamer Alternative be eliminated for further consideration.

**TABLE 2-9
BRIDGE CONCEPT ALTERNATIVES
GENERALIZED COST COMPARISON**

Components	Bascule	Mid-Level Fixed	High-Level Fixed
Bridge Length (Fixed)	2,320 ft	2,570 ft	2,870 ft
Bridge Length (Bascule Span)	200 ft	0	0
Bridge Width	49 ft	49 ft	49 ft
Square Footage (Fixed Span)	113,680 sq ft	125,930 sq ft	140,630 sq ft
Square Footage (Bascule Span)	9,800 sq ft	0	0
Fixed Span Cost per square foot low range @ \$66 ¹	\$7,502,880	\$8,311,380	\$9,281,580
Fixed Span Cost per square foot high range @ \$145 ¹	\$16,483,600	\$18,259,850	\$20,391,350
Bascule Span Cost per square foot low range @ \$1,800 ¹	\$17,640,000	0	0
Bascule Span Cost per square foot high range @ \$2,000 ¹	\$19,600,000	0	0
Average annual maintenance costs ²	\$1,000,000	\$75,000	\$75,000
Estimated life of bridge	75 years	75 years	75 years
Lifetime maintenance costs	\$75,000,000	\$5,625,000	\$5,625,000
ESTIMATED TOTAL COSTS	\$106,142,880 - \$111,083,600	\$13,936,380 - \$23,884,850	\$14,906,580 - \$26,016,350

¹ FDOT, 2011a.

² Includes the cost of bridge tender for Bascule Bridge Concept.

In conjunction with the Fort Hamer Alternative, Manatee County has recently constructed or funded for design and construction several projects that compliment and facilitate a new crossing at this location. **Table 2-10** provides a summary of these projects. It is important to note that all of these projects are independent of the Fort Hamer Alternative (i.e., they are being designed and constructed regardless if the Fort Hamer is implemented).

In addition to alternative designs, Manatee County considered alternative alignments for the Fort Hamer Bridge. The alignments differed in length, the angle the bridge crossed the river channel, the amount of existing ROW used, and cost. Manatee County chose the alignment that used additional curvature to improve the skew angle across the river. A conceptual plan view of the bridge, and bridge approaches is shown on **Figure 2-4**.

2.5.3 RYE ROAD ALTERNATIVE

The Rye Road Alternative consists of a new two-lane bridge crossing the Manatee River parallel to the existing Rye Road Bridge. To accommodate the two new lanes over the river, this alternative also includes the expansion of Rye Road from two to four lanes from SR 64 north to Golf Course Road, Golf Course Road from two to four lanes from Rye Road to Fort Hamer Road, and Fort Hamer Road from two to four lanes from Golf Course Road to US 301, a total of approximately 10.2 miles. The proposed roadway and bridge typical sections for the Rye Road Alternative are shown in **Figure 2-5** and a conceptual plan view of the bridge and bridge approaches is shown on **Figure 2-6**.

**TABLE 2-10
CURRENT CIP PROJECTS**

Project Name	Description	Fiscal Year Funding Design Status	Fiscal Year Funding Construction Status
Upper Manatee River Road from SR 64 to Fort Hamer Bridge	Roadway improvements to include widening, shoulder enhancement, and sidewalk. Intersection improvements to provide right- and left-turning lane movements.	2012/2013 \$200,000 Under design	2014 \$1,575,000 Upon completion of design/permits
Fort Hamer Road from US 301 to proposed Fort Hamer Bridge	Roadway improvements to include widening, shoulder enhancement, and sidewalk. Intersection improvements to provide right- and left-turning lane movements.	2012/2013 \$125,000 Under design	2014 \$975,000 Upon completion of design/permits
US 301 @ Fort Hamer Road Intersection	Intersection improvements to include realignment, signalization upgrades, and turn lanes in all directions.	2012 \$300,000 Design Complete	2013/2014 \$2,200,000 Bidding/Construction
Fort Hamer Road - Sidewalk	Sidewalk on west side of Mulholland Road to 30 th Street East to provide immediate, continuous sidewalk from Manatee River to Annie Lucy Williams Elementary School.	2012 Funding complete Design complete	2012/2013 \$145,000 Construction Complete
US 301 roadway improvement from Erie Road/Old Tampa Road to CR 675 (Rutland Road)	Add two lanes to the existing two-lane roadway resulting in a four-lane divided facility with 28 feet median/turning lanes with bike lanes on both sides and continuous sidewalk. Upgrade both potable water and wastewater system; signalization of Chin Road/US 301 intersection.	Completed FDOT Funded	Completed 2011 Joint FDOT & Manatee County Funded
US 301 roadway improvement from CR 675 to Moccasin Wallow Road	Roadway widening from two to four lanes resulting in a four-lane facility with median for turning movement with bike lane and sidewalk.	2011 – 2013 FDOT Funded Design Underway	2015 FDOT Funded

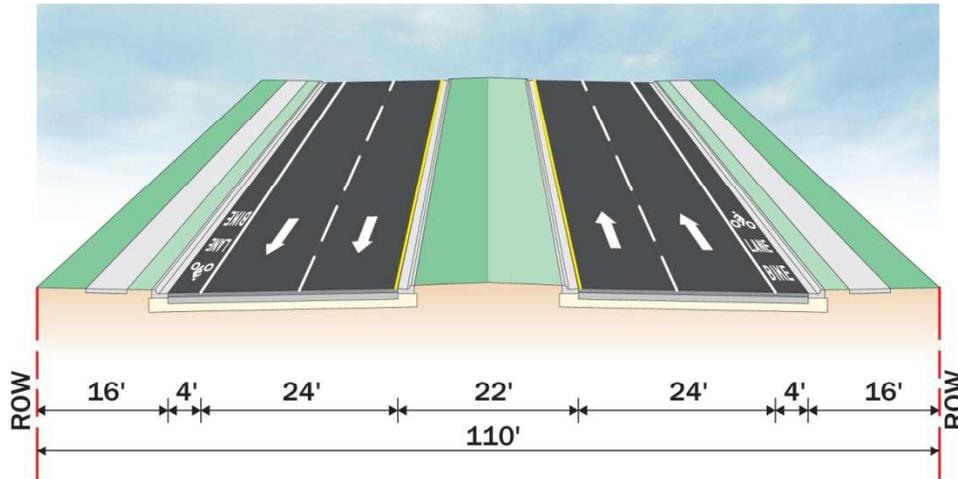
Source: Manatee County BOCC, 2012.



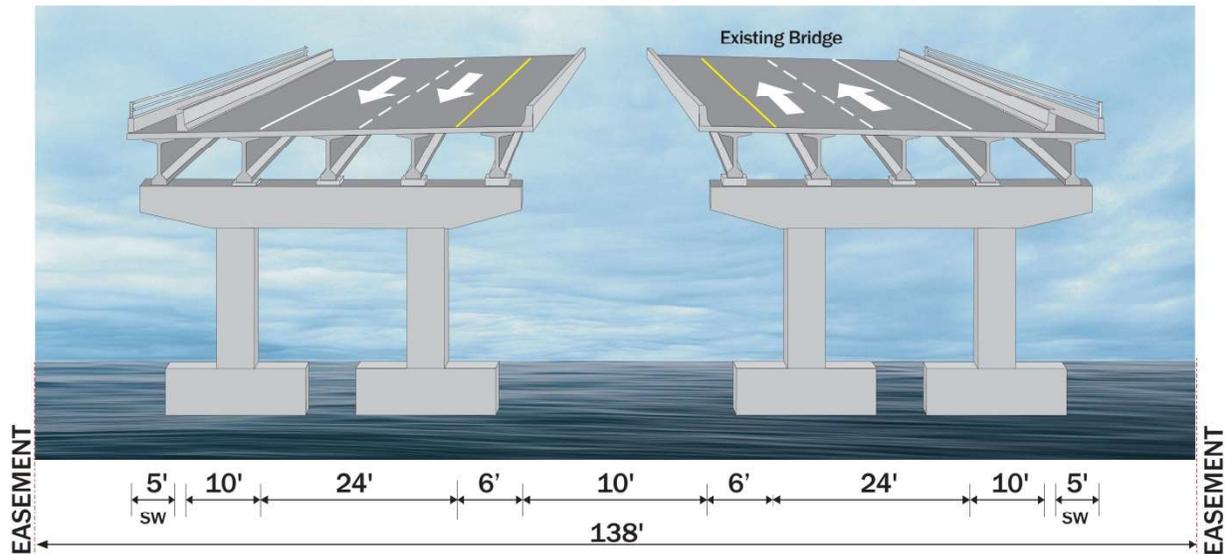
FIGURE 2-4
FORT HAMER ALTERNATIVE
CONCEPTUAL PLAN VIEW OF
BRIDGE AND APPROACHES

**FIGURE 2-5
RYE ROAD ALTERNATIVE TYPICAL SECTIONS**

ROADWAY TYPICAL SECTION



BRIDGE TYPICAL SECTION



The existing Rye Road Bridge has a vertical clearance of approximately 25 feet above the Manatee River. Since this portion of the river is navigable only by non-motorized vessels (e.g., canoes and kayaks) it is reasonable to assume that the additional two-lane bridge would be of similar structure and clearance as the existing bridge.

The estimated total lifetime cost (construction, maintenance, and operations) of the Rye Road Alternative is \$54,386,000 (FDOT, 2011a).

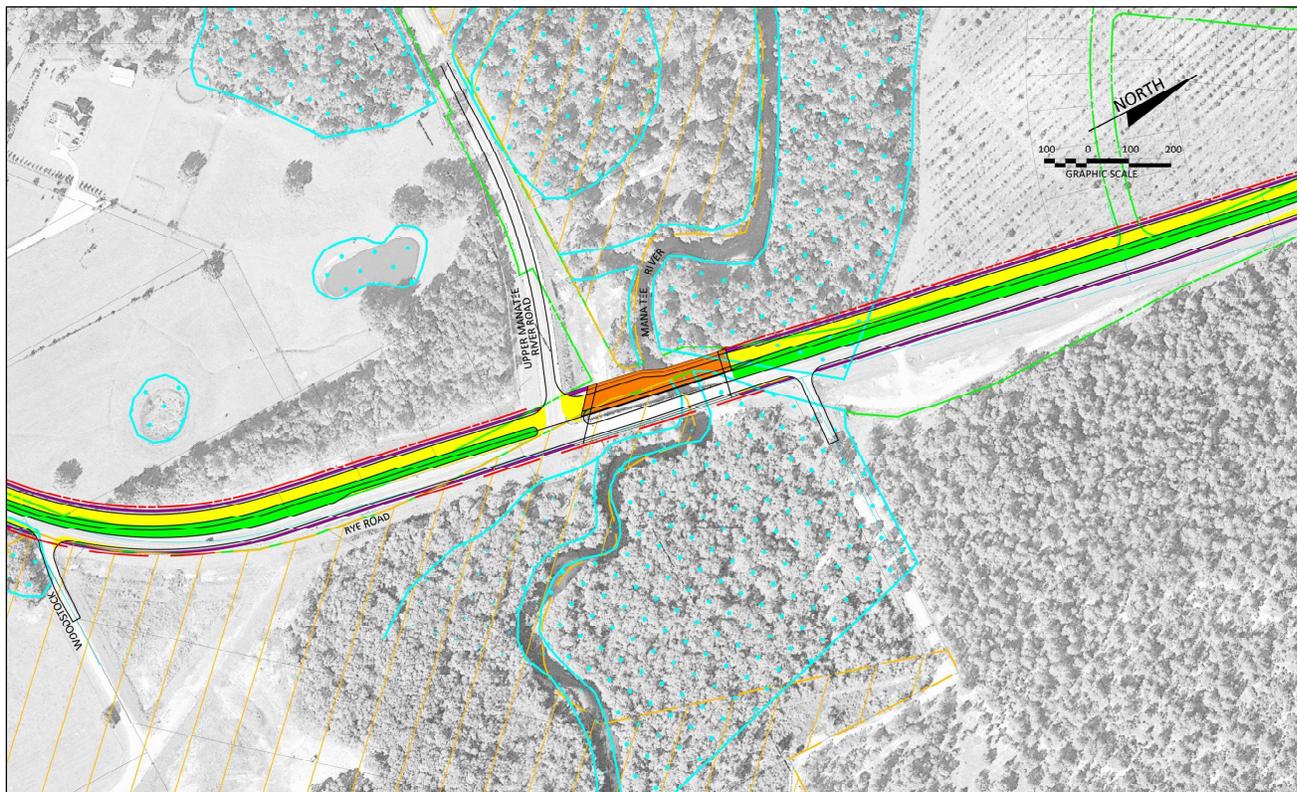


FIGURE 2-6
RYE ROAD ALTERNATIVE
CONCEPTUAL PLAN VIEW OF
BRIDGE AND APPROACHES

Chapter 3

AFFECTED ENVIRONMENT

The location of the Proposed Action is in north-central Manatee County and consists of one no-build, and two construction (build) alternatives; the Fort Hamer Alternative and Rye Road Alternative. The study areas for both build alternatives were previously shown in Figure 2-3 and described in Section 2.5. This chapter describes the existing condition present within the areas potentially affected by the two build alternatives. Specific analyses are provided for social and economic characteristics, natural environment, and physical characteristics present within the region.

The elements of the environment would be examined at the regional, county, and local levels. However, based on the limited scope of the proposed improvement, the environmental assessment would focus primarily on conditions present within the 0.5-mile project study areas.

3.1 SOCIAL CHARACTERISTICS

For the purposes of this Final Environmental Impact Statement (FEIS), social characteristics are defined as those issues related to the existing and planned human environment. These characteristics include but are not limited to population, economic activity, land use, transportation, quality of life, and community cohesion.

3.1.1 SOCIOECONOMIC CONDITIONS

3.1.1.1 Characteristics of the Population

Existing Population

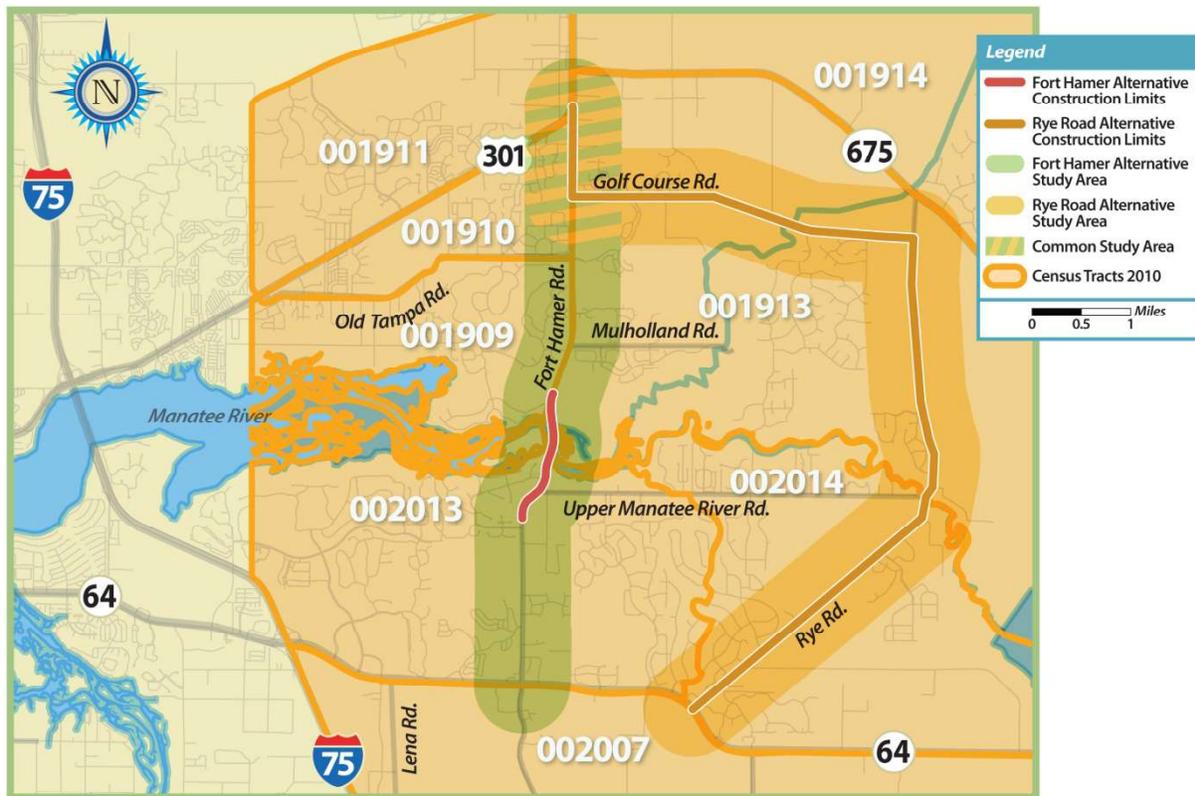
Relevant information regarding the population in Manatee County and the study area is presented in **Table 3-1**. The demographic information presented is based primarily at the U.S. Census tract level, and incorporates those tracts that are present within 0.5-mile of a project centerline. Many of the figures presented in the table are an average of values derived from the multiple Census tracts intersected by each alternative. The Fort Hamer Alternative incorporates data from Census Tracts 001909, 001010, 001011, 001013, 001914, 002007, and 002013. The Rye Road Alternative incorporates data from Census Tracts 001910, 001911, 001913, 001914, 002007, 002013, and 002014 (Census, 2010b). **Figure 3-1** depicts the location of these Census tracts in relation to the two build alternatives.

**TABLE 3-1
MANATEE COUNTY AND BUILD ALTERNATIVES SOCIOECONOMIC INFORMATION**

Statistic	Manatee County	Fort Hamer Alternative Study Area	Rye Road Alternative Study Area
Population 2000*	264,002	12,698	14,838
Population 2010	322,833	33,365	37,155
Percent Increase in Population 2000-2010	22.3	162.8	150.4
Median Age	45.7	43.3	43.1
Percent Population 65 Years Old and Older 2010	23.3	17.2	16.5
Average Household Size 2006-2010	2.40	2.61	2.65
Median Household Income 2006-2010	\$47,812	\$73,606	\$74,662
Per Capita Income 2006-2010	\$28,072	\$34,230	\$34,065
Median Value of Owner Occupied Housing 2006-2010	\$214,000	\$326,405	\$333,533

Note: Figures from the impacted Census tracts were combined and averaged to develop a total for the study area.
Source: Census, 2010a, * Census, 2000.

**FIGURE 3-1
2010 CENSUS TRACT LOCATIONS**



Source: Census, 2010b.

As shown in Table 3-1, the population of Manatee County in the year 2000 was 264,002; in 2010, the County population had grown to 322,833. This change represents a 22.3 percent population increase in the 10-year period. Additional analysis of the populations within the affected Census tracts shows growth rates well above the County average. Within the Census tracts affected by the Fort Hamer Alternative, the population increased from 12,698 in year 2000 to 33,365 in year 2010 (a 163.8 percent increase). Within the Census tracts affected by the Rye Road Alternative, the population increased from 14,838 in year 2000 to 37,155 in 2010 (a 150.4 percent increase).

Comparison of County demographic characteristics (Table 3-1) to that of the Census tracts impacted by the project alternatives shows two areas of divergence in the make-up of the populations. Data show the percentage of persons over the age of 65 within the Fort Hamer Alternative Study Area (17.2 percent) and Rye Road Alternative Study Area (16.5 percent) were lower than for Manatee County as a whole (23.3 percent). This figure may indicate that a higher percentage of individuals were still in the workforce traveling to and from work daily within the impacted area than in the County as a whole. Additionally, the median household income figures within the Fort Hamer Alternative (\$73,606) and Rye Road Alternative (\$74,662) study areas were well above the County-wide average of \$47,812.

Table 3-2 shows the racial/ethnic composition of the 2010 Census tracts intersected by the two build alternatives' study areas in comparison to Manatee County. The percent of White population within those tracts intersected by the Fort Hamer Alternative Study Area (89.9 percent) and the Rye Road Alternative Study Area (90.4 percent) is higher than the County-wide White population (81.9 percent). Except for Asian, all other race/ethnic groups occur in lower percentages in both the Fort Hamer Alternative and Rye Road Alternative study areas than in Manatee County as a whole.

**TABLE 3-2
RACIAL/ETHNIC COMPOSITION**

Race or Ethnicity	Manatee County 2010 Census		Fort Hamer Alternative Study Area 2010 Census		Rye Road Alternative Study Area 2010 Census	
	Number	Percent	Number	Percent	Number	Percent
Race						
White	264,322	81.9	29,997	89.9	33,587	90.4
Black	28,230	8.7	1,335	4.0	1,383	3.7
American Indian	1,044	0.3	58	0.2	65	0.2
Asian	5,275	1.6	819	2.5	888	2.4
Hawaiian/Pacific Islander	218	0.1	9	0.03	9	0.02
Other	17,260	5.3	550	1.7	589	1.6
Multi-Race	6,484	2.0	597	1.8	634	1.7
Ethnicity						
Hispanic	47,955	14.9	2,757	8.3	2,957	8.0
Total Population	322,833	*	33,365	*	37,155	*

* Total percentage exceeds 100 percent due to individuals occurring within multiple categories.

Source: Census, 2010a.

Future Population

Table 3-3 presents population projections for Manatee County and for the areas contained within the most proximate U.S. Census Tracts (by alternative as previously described in this section). The County growth estimates presented in Table 3-3 were developed by the Florida Bureau of Economic and Business Research (BEBR), and represent the “medium growth estimate.” This estimate was selected for use as it serves as the most likely growth scenario modeled by BEBR. The future population figures presented for each alternative’s study areas were derived from data included in the Sarasota/Manatee/Charlotte County Transportation Model (SMC Model). The projections contained in the SMC Model were developed by the Sarasota/Manatee Metropolitan Planning Organization (MPO) in 2007.

**TABLE 3-3
POPULATION PROJECTIONS**

Statistic	Manatee County	Fort Hamer Alternative Study Area*	Rye Road Alternative Study Area*
Population Projection for Year 2035	438,400	84,354	83,464
Average Annual Growth Rate, 2010-2035	1.4	6.1	5.0
Total Percent Increase in Population, 2010-2035	35.8	152.8	124.6

* TAZs from SMC Model consolidated to correspond with area of U.S. Census tracts identified in Section 3.1.1.1.
Source: MPO, 2011; Florida Statistical Abstract, 2009.

Overall, the population in Manatee County is projected to continue to increase at a moderate rate adding approximately 115,500 residents over the next 25 years. Within the study areas, the growth in population is expected to be much more dramatic. Within the Fort Hamer Alternative Study Area, the population is expected to grow by 152.8 percent by year 2035 (a rate 10.1 percent per year), and within the Rye Road Alternative Study Area by 124.6 percent (a rate of 9 percent annually). These figures help to illustrate the rapid urbanization occurring in the area of the proposed bridge.

3.1.1.2 Existing Economic Conditions

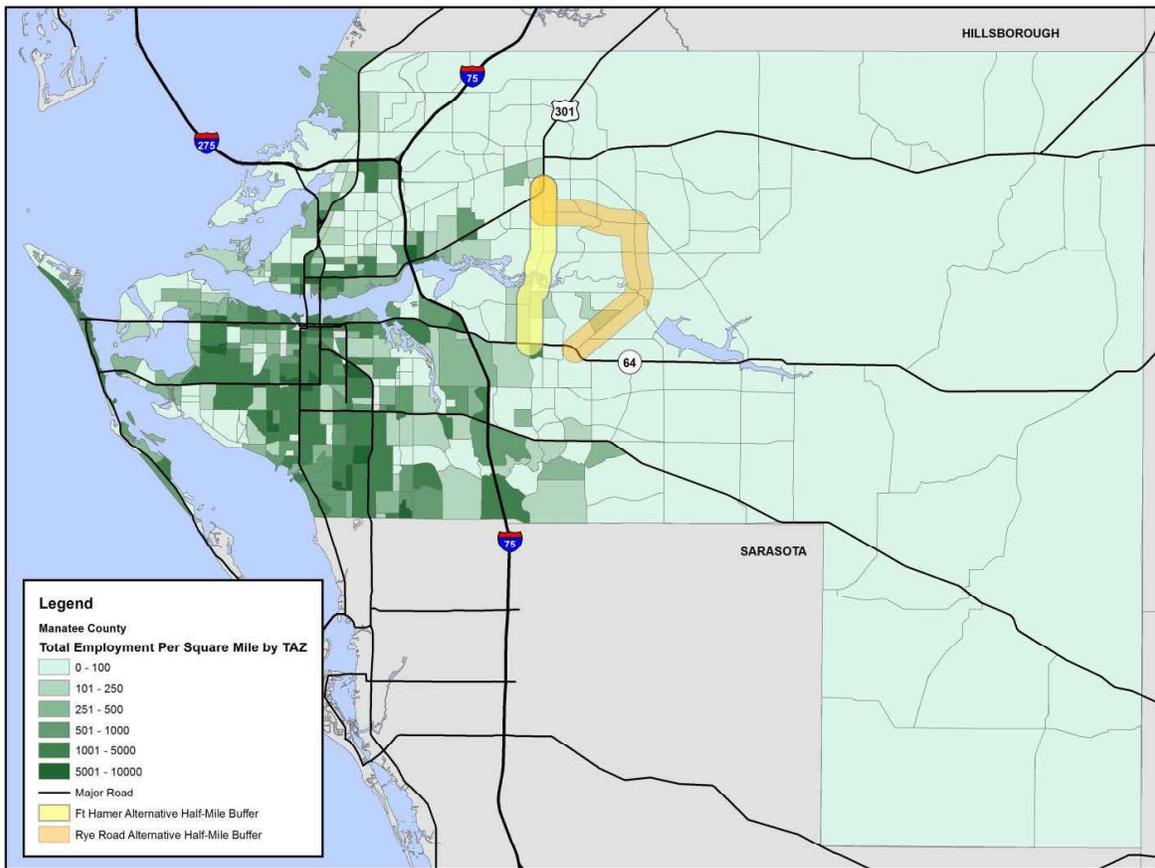
Relevant information regarding the existing economic condition in Manatee County and the alternative’s study areas is presented in **Table 3-4**. The information presented in Table 3-4 is based at the Census tract level, and incorporates those tracts that are present within 0.5-mile of an alternative’s centerline. The tracts included in the economic analysis are consistent with those presented in the discussion of population in Section 3.1.1.1 and depicted in **Figure 3-2**.

**TABLE 3-4
2011 EMPLOYMENT BY INDUSTRY**

Industry	Florida		Manatee County		Fort Hamer Alternative Study Area		Rye Road Alternative Study Area	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Agriculture, forestry, fishing and hunting, mining	95,306	1.2	2,472	1.9	255	1.9	312	2.2
Construction	638,036	7.7	10,647	8.0	720	5.3	786	5.5
Manufacturing	466,379	5.6	10,643	8.0	1,432	10.5	1,464	10.2
Wholesale trade	252,245	3.1	3,474	2.6	390	2.9	429	3.0
Retail trade	1,085,541	13.1	19,906	14.9	1,830	13.4	1,997	13.9
Transportation and warehousing, utilities	428,201	5.2	5,296	4.0	560	4.1	704	4.9
Information	181,479	2.2	2,307	1.7	273	2.0	244	1.7
Finance and insurance, real estate, rental and leasing	653,080	7.9	9,885	7.4	987	7.2	1,101	7.7
Professional, scientific, management, administrative, waste management	995,089	12.0	15,431	11.6	2,126	15.5	2,086	14.5
Educational services, health care and social assistance	1,692,745	20.5	28,190	21.1	2,744	20.1	2,992	20.8
Arts, entertainment, recreation, accommodation and food services	929,210	11.3	12,084	9.1	979	7.2	920	6.4
Other services, except public administration	437,984	5.3	7,120	5.3	420	3.1	364	2.5
Public Administration	403,216	4.9	5,881	4.4	967	7.1	966	6.7
Total Employment	8,258,511	100	133,336	100	13,683	100	14,365	100

Source: ACS, 2011a.

**FIGURE 3-2
TOTAL EMPLOYMENT PER SQUARE MILE BY TAZ**



Source: MPO, 2011.

Industry

The 2011 American Community Survey (ACS) statistics on existing industry show that economic activity within the State of Florida is focused on the service and tourism industries. Similarly, activity within the Manatee County industry is focused in several segments of the service sector, with the largest shares of employment falling in Educational Services, Health Care, and Social Assistance; Retail Trade; and Professional, Scientific, and Management, and Administrative Services.

Industry figures compiled from the 2010 U.S. Census tracts that fall within the study area of each build alternative show that the type of industry found locally generally reflects those present at the state and county levels. Additionally, the data shows that though most sectors are similar in proportion to the state and county averages, locally manufacturing represents a share of the economy that is nearly twice that reported state-wide. See Table 3-4 for total employment by industry.

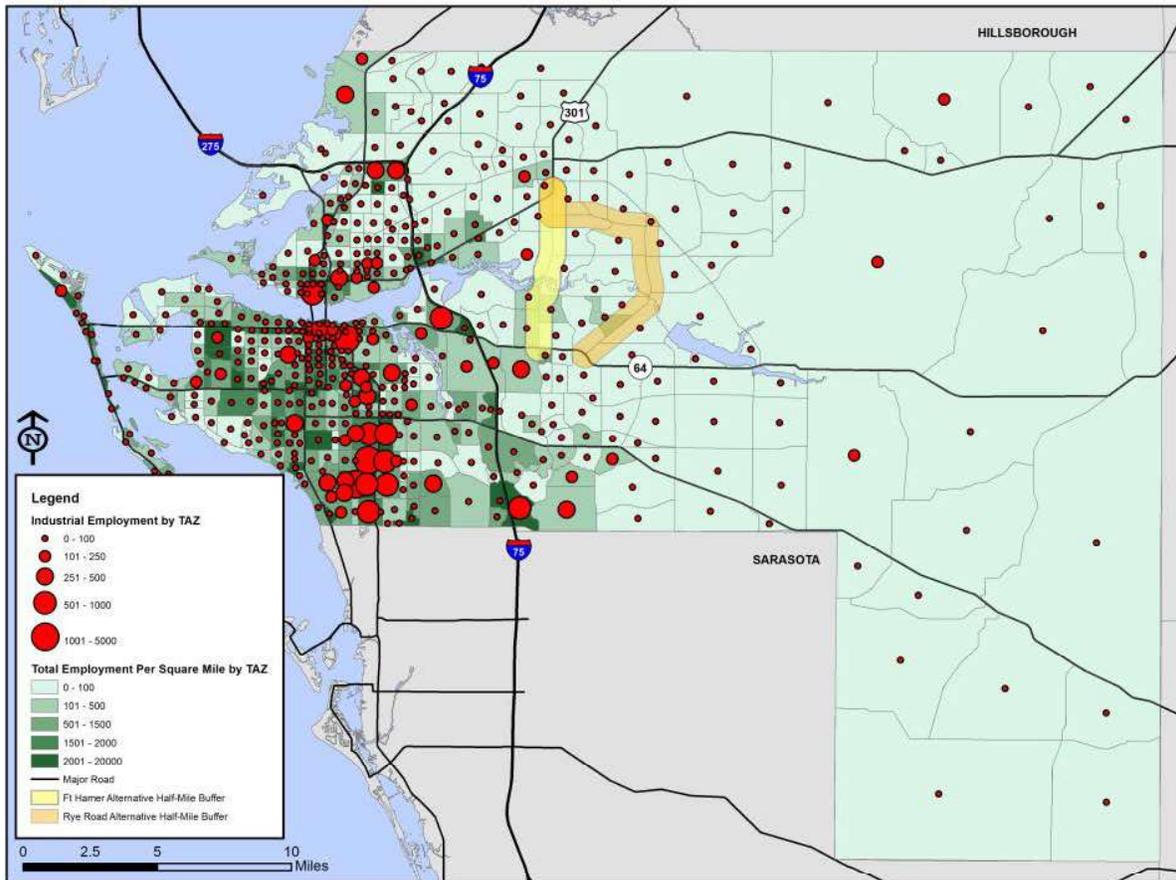
Overall, approximately 10.3 percent of employment within Manatee County falls within the vicinity of the Fort Hamer Alternative and approximately 10.8 percent of county employment falls within the 2010 U.S. Census tracts affected by the Rye Road Alternative.

Employment

Figure 3-2 provides a depiction of the distribution of employment across both alternatives' study areas. Employment data for the base year (2007) of the SMC Model was used in development of the map in place of 2011 ACS Block Group data due to high sampling errors in the ACS data. The map depicts total employment by Traffic Analysis Zone (TAZ) by square mile. Note that the vast majority of employment in Manatee County is located west of Interstate 75 (I-75).

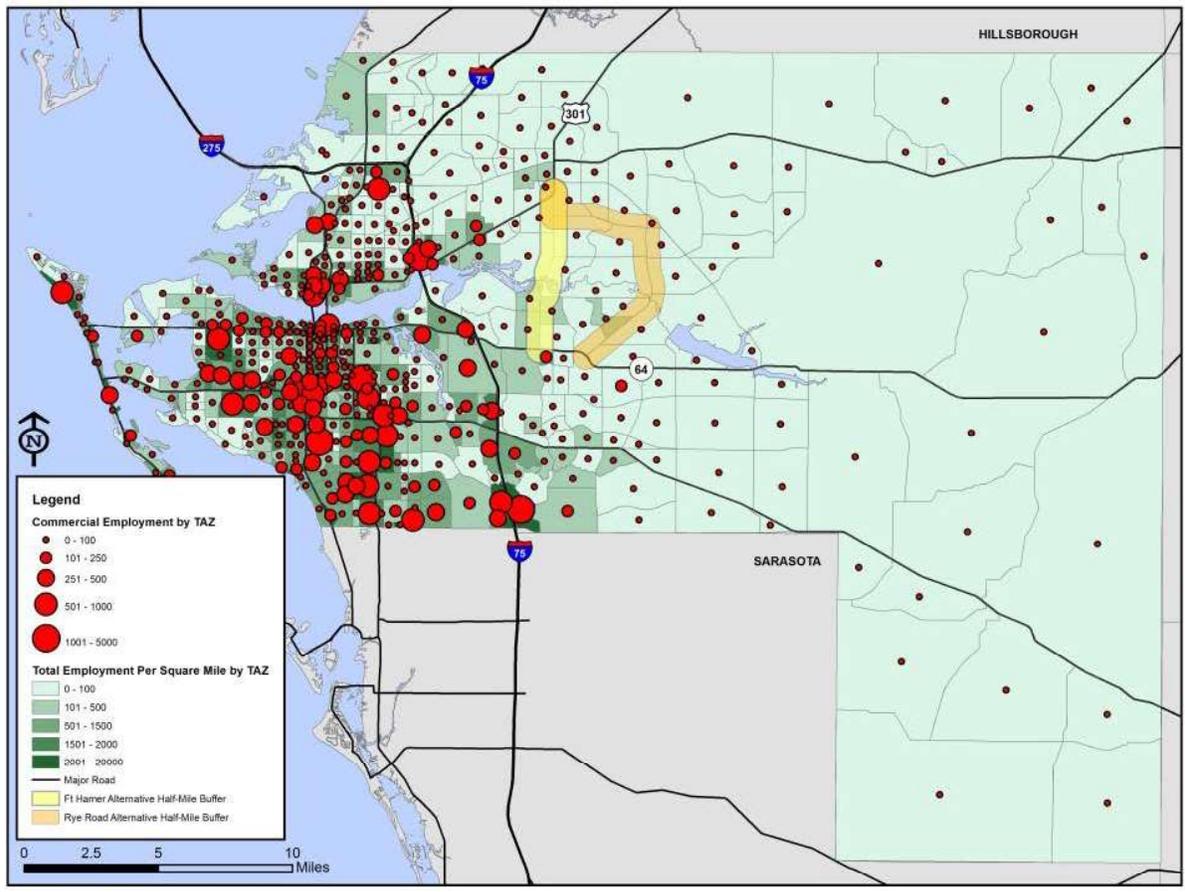
Figures 3-3 through **3-5** present the location of employment within Manatee County by employment sector. The TAZ employment data is divided into three basic groupings to include Industrial, Commercial, and Service. The maps show that the majority of the employment occurring along either alternative corridor is generally related to the service industry. The commercial and industrial activity is focused on either U.S. Highway 301 (US 301) or State Road 64 (SR 64). Many of those areas showing the highest density of employment along both corridors corresponds with the location of identified schools and golf courses. The concentration of employment north of the alignments is centered in the rural community of Parrish, and the major employment activity south of SR 64 is part of the master planned Lakewood Ranch development.

FIGURE 3-3
INDUSTRIAL EMPLOYMENT



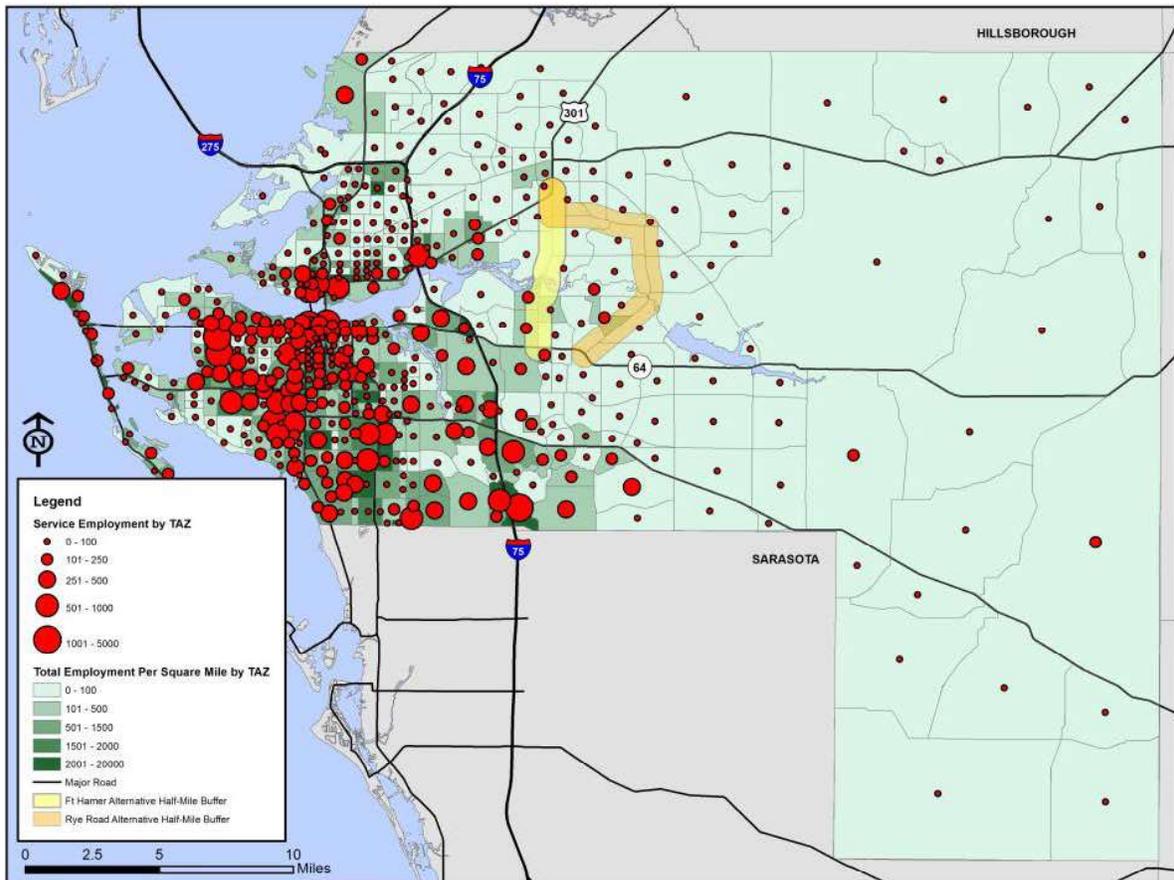
Source: MPO, 2011.

FIGURE 3-4
COMMERCIAL EMPLOYMENT



Source: MPO, 2011.

FIGURE 3-5
SERVICE EMPLOYMENT

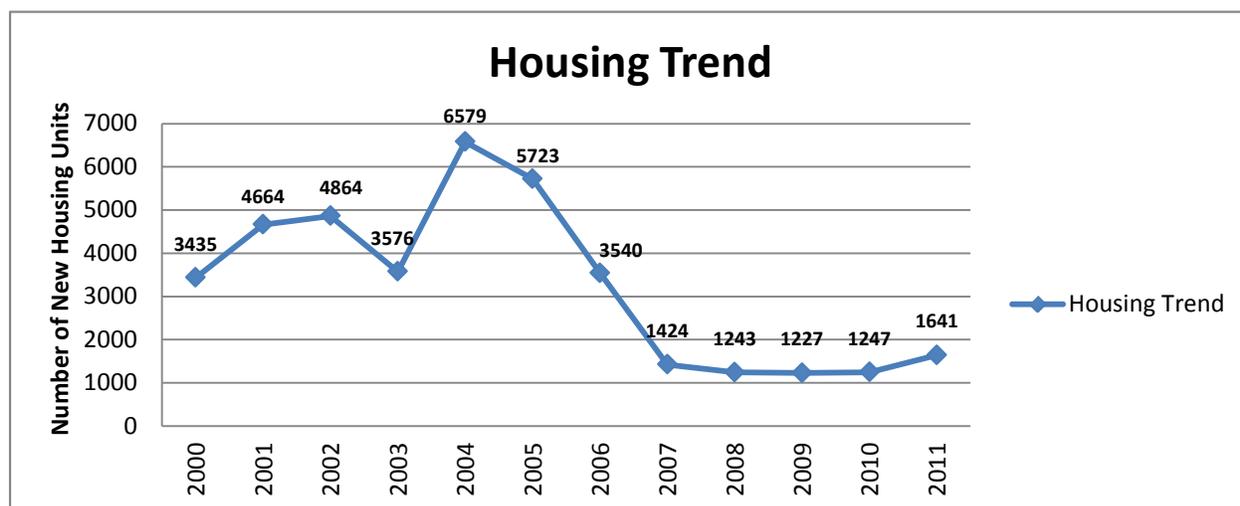


Source: MPO, 2011.

Housing Industry

Historically the housing industry has accounted for a large portion of the economy in Manatee County. Due in part to its proximity to major employment centers such as St. Petersburg, Tampa, Bradenton, and Sarasota, and despite the current sluggish Florida economy, Manatee County continues to sustain a robust housing industry. Though the recent economic downturn affected the rate of development within the county, recent U.S. Census Housing Data (Census, 2011) show that the housing market in Manatee County has started to recover from the low of 1,227 new housing units constructed in 2009. It is important to note that even as the housing market slowed, Manatee County continued adding new homes. The rate of construction of new housing units in the County never dipped below 1,225 homes in a single year, a rate the County has maintained for more than a decade. **Figure 3-6** depicts the housing starts in Manatee County over the 2000-2011 timeframe.

FIGURE 3-6
MANATEE COUNTY HOUSING STARTS (2000-2011)



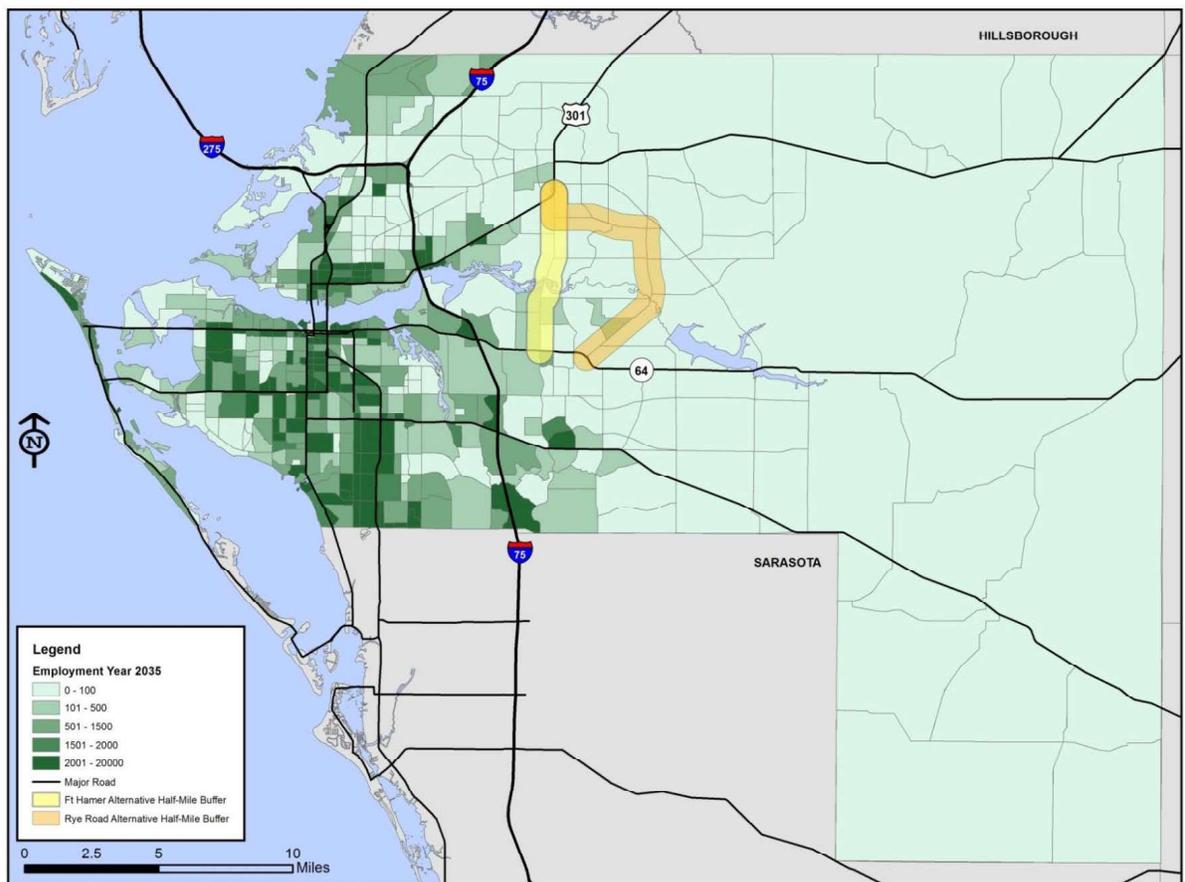
Source: Census, 2011.

Projected Employment

Figure 3-7 provides a depiction of the distribution of employment across both alternatives' study areas. Employment for year 2035 of the SMC Model was used in development of the map. The map depicts total employment by TAZ by square mile. Note that the vast majority of employment in Manatee County remains located west of I-75, and does not expand within the project area.

Socioeconomic impacts are discussed in Section 4.1.1.

FIGURE 3-7
YEAR 2035 TOTAL EMPLOYMENT PER SQUARE MILE BY TAZ



Source: MPO, 2011.

3.1.2 LAND USE CHARACTERISTICS

This section describes the character of existing and future land use within the Fort Hamer Alternative and Rye Road Alternative study areas.

Local Plan Consistency: The Fort Hamer Alternative is identified in both the Future Thoroughfare Map Series and Capital Improvement Element presented as part of Manatee County's Comprehensive Plan. Additionally, the project is listed as a Financially Feasible Project in the Sarasota/Manatee MPO's 2035 Long Range Transportation Plan (LRTP) (MPO, 2012). Finally, the project is identified in the Manatee County's 2013-2017 Capital Improvements Program (CIP) (Manatee County BOCC, 2012). Neither the Rye Road Alternative nor the No-Build Alternative is currently consistent with these plans and would require plan amendments and updates.

3.1.2.1 Existing Land Uses

Existing land use adjacent to the Fort Hamer Alternative and Rye Road Alternative is generally characterized by residential development (both existing and under construction). Many of the older single-family homes exist on larger rural parcels while other, typically newer homes, are located in higher density subdivisions. The commercial and industrial use found within both study areas is focused along SR 64 and US 301. The Fort Hamer County Park, Rye Preserve, and proposed Hidden Harbour Park occupy central areas of each corridor adjacent to the Manatee River.

As shown in **Table 3-5**, the Fort Hamer Alternative Study Area covers approximately 4,344 acres in central Manatee County. The two predominant types of land use present within the study area are residential (49.5 percent) and agricultural (29.2 percent). Land designated as mixed use and villages combines to account for 16.9 percent of the study area while commercial, industrial, public, and non-designated land combine to account for the remaining 4.4 percent. Though not made apparent through the existing zoning designations or in Table 3-5, approximately 250 acres (5.8 percent) within the Fort Hamer Alternative Study Area are dedicated to public/recreational use.

Table 3-6 shows the existing land use within the Rye Road Alternative Study Area. Agriculture (61.3 percent) represents the predominant land use within the study area followed by residential development (31.0 percent). Large segments of Rye Road near the Manatee River remain primarily rural in character. Portions of Rye Road Alternative near SR 64 and US 301 retain a more suburban character.

**TABLE 3-5
ZONING WITHIN THE FORT HAMER ALTERNATIVE STUDY AREA**

Land Use	Acreage	Percent of Area
General Agriculture (A)	285	6.6
Suburban Agriculture (A-1)	984	22.7
General Commercial (GC)	14	0.3
Planned Development Commercial (PD-C)	19	0.4
Planned Development Industrial (PD-I)	7	0.2
Planned Development Mixed Use (PD-MU)	600	13.8
Planned Development Public Interest (PD-PI)	46	1.1
Planned Development Residential (PD-R)	2,062	47.5
Residential Single Family (RSF-1)	64	1.5
Residential Single Family (RSF-3)	23	0.5
Villages (VIL)	133	3.1
Non-Designated (Manatee River)	106	2.4
Total	4,344	100.0

Source: Manatee County, 2012a.

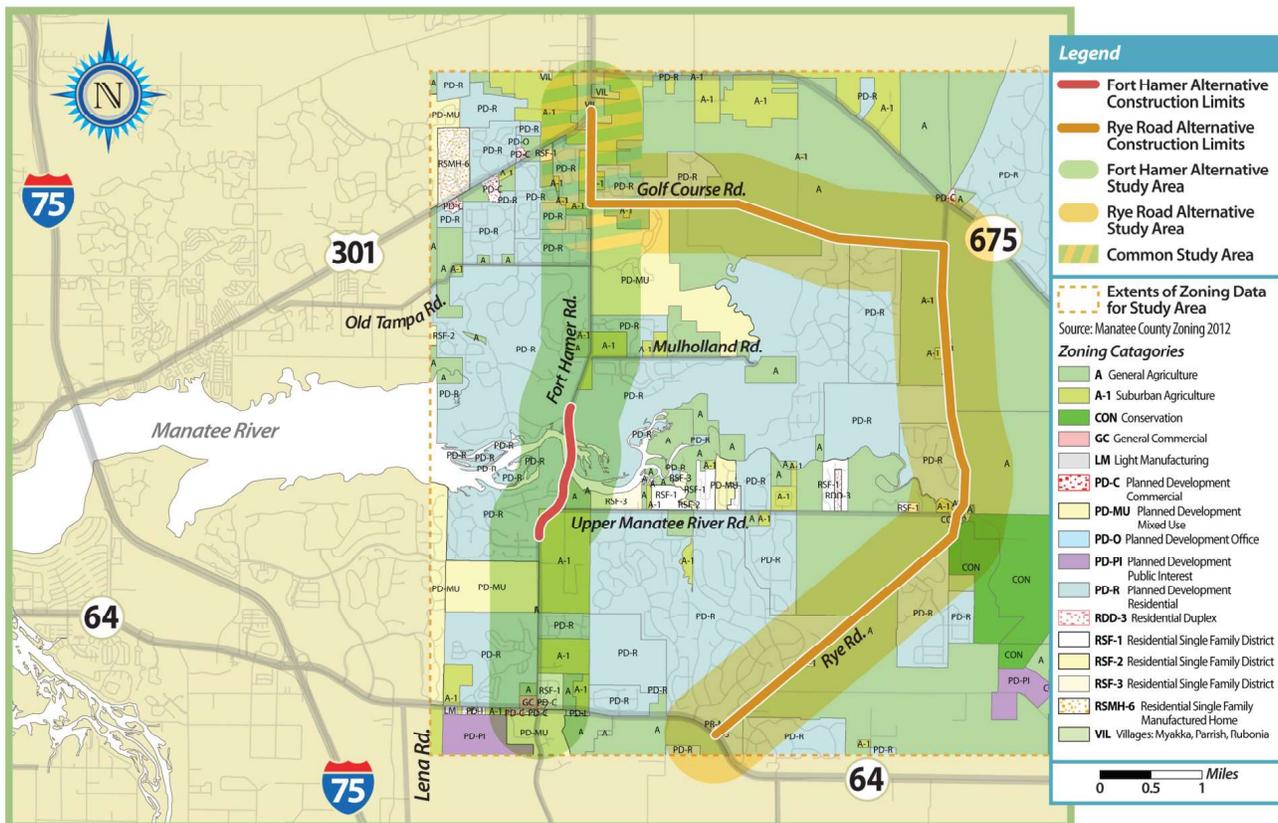
**TABLE 3-6
ZONING WITHIN THE RYE ROAD ALTERNATIVE STUDY AREA**

Land Use	Acres	Percent of Study Area
General Agriculture (A)	3,842	54.5
Suburban Agriculture (A-1)	476	6.8
Conservation (CON)	189	2.7
Neighborhood Commercial Small (NC-S)	3	0.0
Planned Development Commercial (PD-C)	5	0.1
Planned Development Mixed Use (PD-MU)	183	2.6
Planned Development Public Interest (PD-PI)	5	0.1
Planned Development Residential (PD-R)	2,185	31.0
Professional Medium (PR-M)	3	0.0
Residential Single Family (RSF-1)	24	0.3
Villages (VIL)	133	1.9
Total	7,048	100.0

Source: Manatee County, 2012a.

Figure 3-8 shows the existing zoning within the project area.

FIGURE 3-8
2010 ZONING MAP



Source: Manatee County, 2012a.

Neither study area intersects a Development of Regional Impact (DRI). A DRI is defined by Chapter 380.06(1), Florida Statutes (F.S.) as any development that would have a substantial impact on the health, safety, or welfare of citizens in more than one county. DRIs are classified based on supported activity, and within Manatee County generally must exceed 2,000 residential units or 400,000 square feet (sf²) of commercial/retail space. Both alternatives avoid direct impacts to singular large scale developments; however, both pass within close proximity of several sub-DRI projects. **Table 3-7** lists future development planned within the project area. **Figure 3-9** provides a depiction of the location of the planned future development. Both Table 3-7 and Figure 3-9 include those projects that are currently classified as “approved” or “pending” by Manatee County. Several of the “approved” developments are in phases of active development, but have not yet reached completion.

TABLE 3-7
PENDING/APPROVED RESIDENTIAL DEVELOPMENT

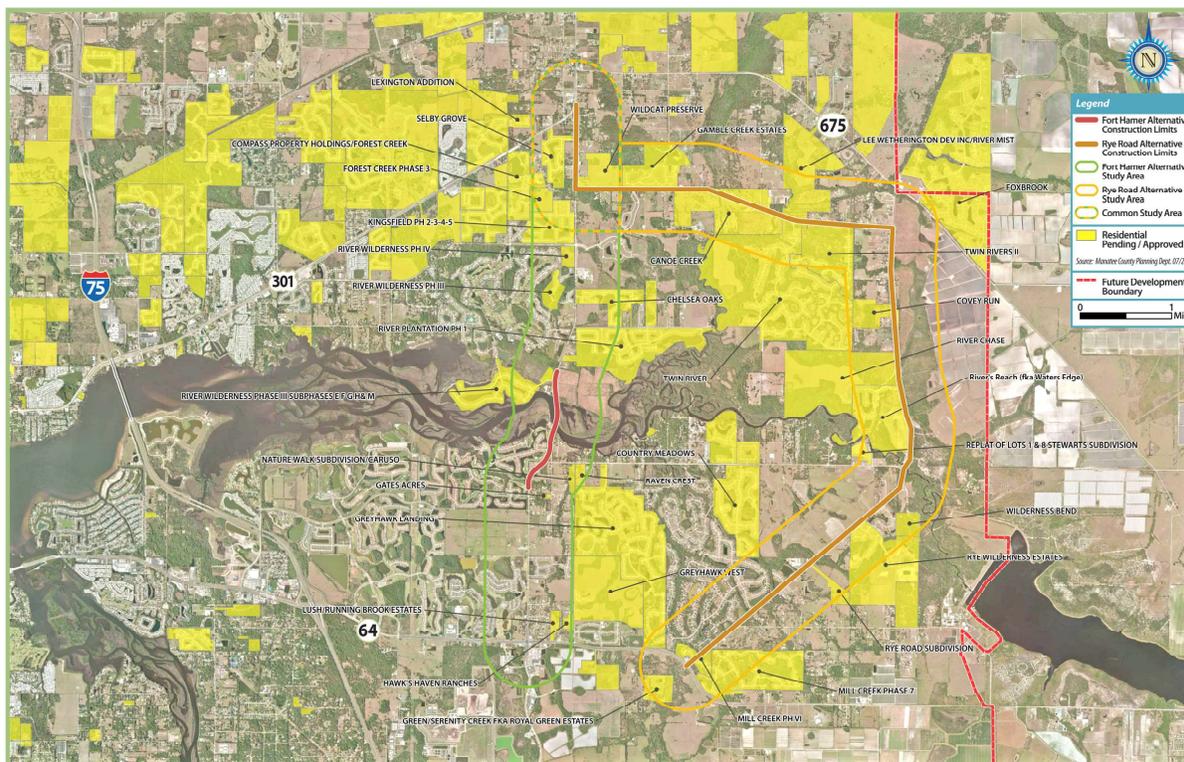
Fort Hamer Alternative Study Area Developments	Rye Road Alternative Study Area Developments	
Warner Crossing	Serenity Creek	Covey Run
Running Brook Estates	Circle C Subdivision	River Mist
Hawk's Haven Ranches	Rye Road Subdivision	Canoe Creek
Nature Walk Subdivision	Rye Wilderness Estates	Palmetto Pines
Raven Crest	Wilderness Bend	Wilderness Estates on Gamble Creek
Wildcat Preserve	Stewarts Subdivision	Wild Cat Preserve
Denali Acres Subdivision	River Chase	Denali Acres Subdivision

Source: Manatee County BOCC, 2012.

3.1.2.2 Future Land Use

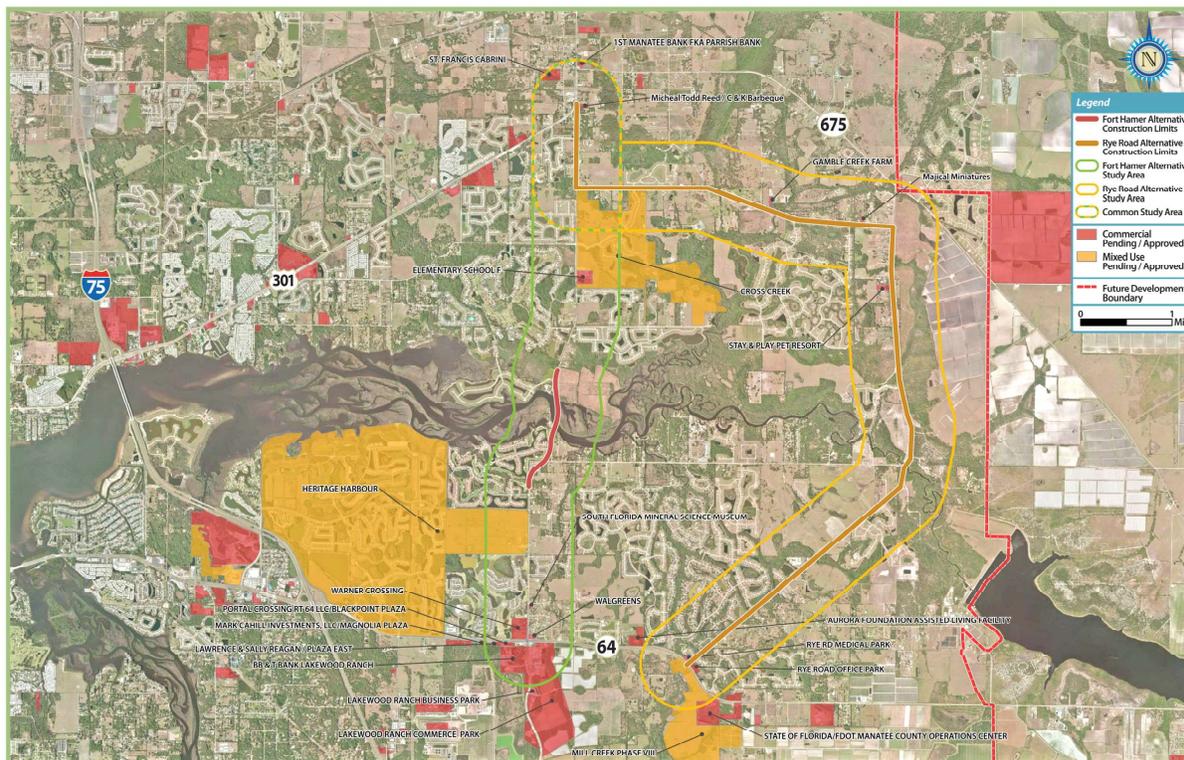
Manatee County’s Comprehensive Plan establishes the basis for land development in Manatee County over a 20-year planning horizon. The document provides a series of goals, objectives, and policies that are intended to guide the location, character, and rate of growth within the county. The Comprehensive Plan contains several elements that guide future development including intergovernmental coordination, recreation and open space, coastal management, conservation, general facilities, housing, transportation, capital improvement, and future land use elements (Manatee County, 2010).

The Future Land Use Element defines allowable use by type of activity and sets standards for the intensity of development (Manatee County, 2012b). The future land use is accompanied by Manatee County’s 2030 Future Land Use Map, which defines the areas of use geographically. The map includes an Urban Services Boundary, which defines the limit to which public services such as sewer and water would be extended by year 2030, and generally defines the future limit of urbanized development.



Source: Manatee County, 2013.

FIGURE 3-9A
PLANNED FUTURE RESIDENTIAL
DEVELOPMENT IN THE PROJECT AREA
Proposed New Bridge across the Manatee River
Final Environmental Impact Statement



Source: Manatee County, 2013.

FIGURE 3-9B
PLANNED FUTURE COMMERCIAL
AND MIXED USE DEVELOPMENT
IN THE PROJECT AREA

Proposed New Bridge across the Manatee River
Final Environmental Impact Statement

The Future Land Use Map (**Figure 3-10**) shows that both study areas occur within the Manatee County urban services area and that the majority of the land along each of the alternatives is designated to support future residential and mixed-use development. **Table 3-8** summarizes the future land use in both the Fort Hamer Alternative and Rye Road Alternative study areas.

**TABLE 3-8
FUTURE LAND USE (YEAR 2030)**

Land Use	Fort Hamer Alternative Study Area		Rye Road Alternative Study Area	
	Acres	Percent of Area	Acres	Percent of Area
Agriculture/Rural (AG-R)	126	2.9	9	0.1
Conservation Lands (CON)	0	0.0	184	2.6
Industrial-Light (IL)	73	1.7	0	0.0
Mixed Use (MU)	21	0.5	60	0.9
Mixed Use Community (MU-C)	34	0.8	0	0.0
Public/Semi-Public 1 (P/SP-1)	46	1.1	1	0.0
Residential – 6 DU/GA (RES-6)	222	5.1	222	3.2
Retail/Office/Residential (ROR)	103	2.4	0	0.0
Major Recreation/Open Space (R-OS)	82	1.9	49	0.7
Urban Fringe – 3 DU/GA (UF-3)	3,637	83.7	6,521	92.5
Total	4,344	100.0	7,046	100.0

Note: Numbers may not add due to rounding.

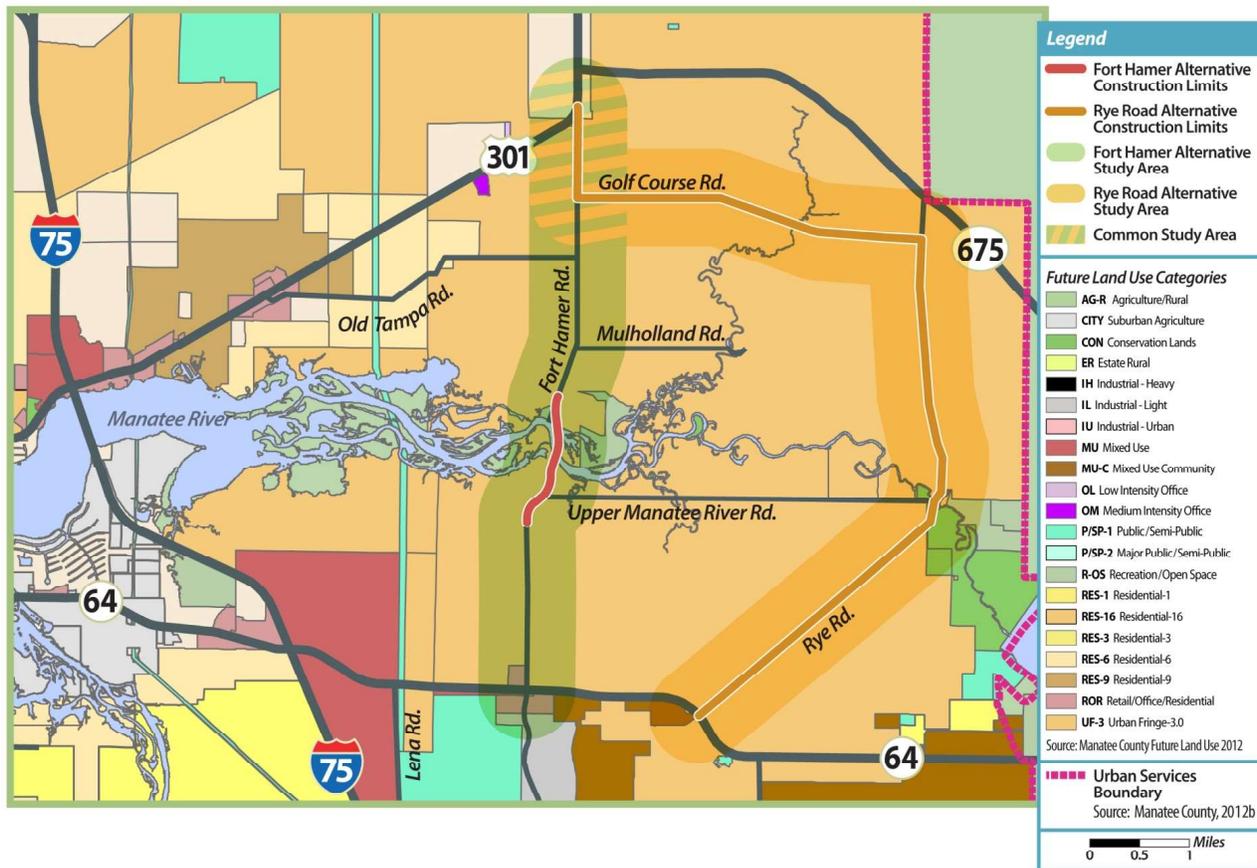
Source: Manatee County, 2012b.

Land use impacts are discussed in Section 4.1.2.

3.1.3 TRAFFIC

The Transportation Research Board's (TRB's) *Highway Capacity Manual* (HCM) defines the operational characteristics of roadways based upon traffic, roadway geometry, and presence and number of traffic signals (TRB, 2010). The level of service (LOS) is measured based upon six service flow rates – LOS A through LOS F. LOS A represents free flow traffic conditions where vehicles are unaffected by the presence of other vehicles in the traffic stream. LOS B is representative of stable traffic stream where other vehicles are noticeable. LOS C is representative of the traffic stream where the maneuverability of vehicles are noticeability affected by other vehicles. LOS D represents dense, but stable traffic flow where the speed and maneuverability are severely restricted. LOS E traffic conditions become unstable where the speeds are low along with minor interruptions and the traffic volume approaches the capacity of the road. LOS F is where the traffic volume exceeds the road capacity characterized by queues in which the traffic stream experiences stop and go conditions. For more information see Appendix B. Manatee County has adopted LOS D as their standard in its 2035 LRTP (MPO, 2012).

FIGURE 3-10
2030 FUTURE LAND USE MAP AND URBAN SERVICES AREA BOUNDARY

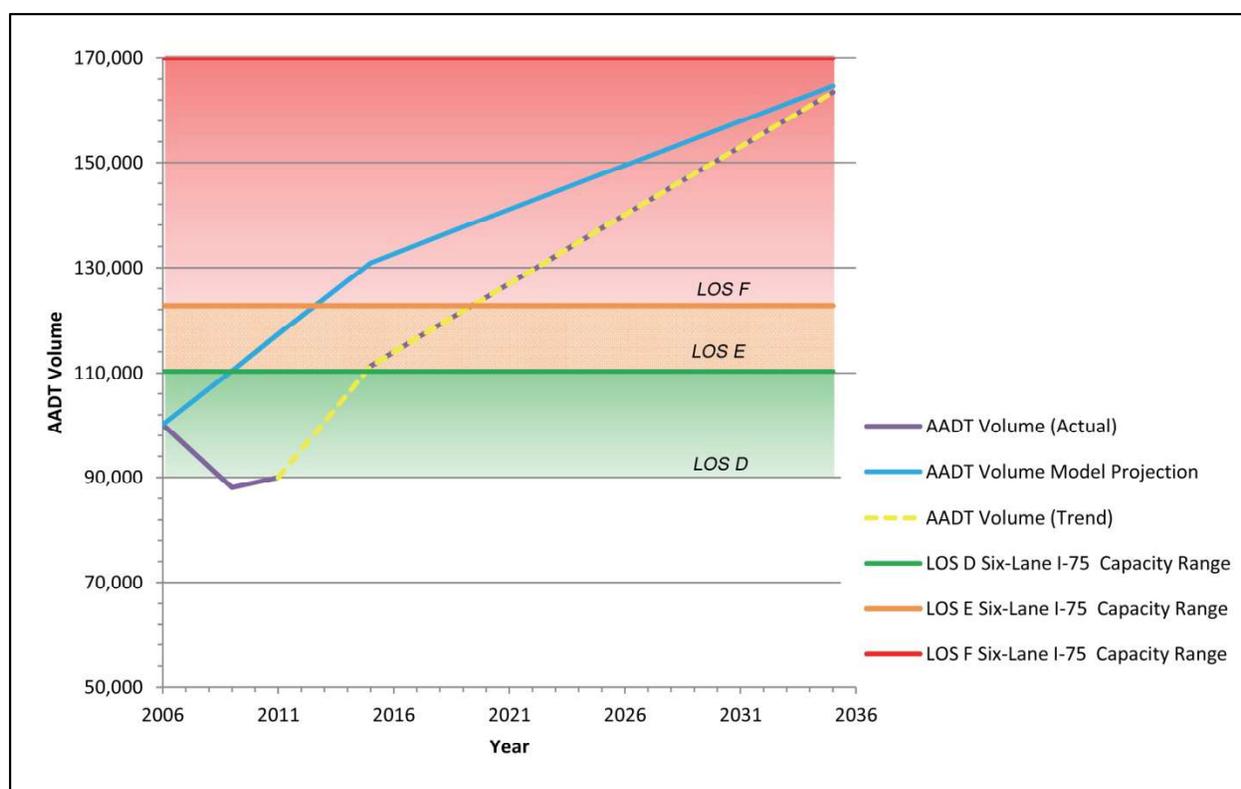


Source: Manatee County, 2012b.

Annual Average Daily Traffic (AADT) volumes were obtained from the Sarasota/Manatee MPO for the roadway segments listed in **Table 3-9** for the 2011 and future 2015 and 2035 No-Build Alternative. **Figure 3-11** shows the modeled AADT volumes on I-75 between SR 64 and US 301 during the period 2006-2035. The graph also shows the actual AADT volumes on this segment of I-75 from 2006-2011. In 2006, I-75 between SR 64 and US 301 had a volume of 100,100 vehicles per day (vpd) and operated at LOS D. By 2009, the AADT volume had decreased to 88,000 vpd (LOS C) as a result of the economic recession, but then rebounded to 90,500 vpd (LOS C) in 2011. As shown in Figure 3-11, the modeled volumes during the period 2006-2011 were noticeably higher than the actual volumes observed; this is due to the model not taking into account the effects of the recession. Although the modeled results are greater than the observed vpd on this segment of I-75 from 2006-2011, this model is the only tool currently available to estimate future traffic volume on this roadway segment. This model was last updated by the Sarasota/Manatee MPO in March 2011.

Traffic impacts are discussed in Section 4.1.3.

FIGURE 3-11
I-75 (SR 64 TO US 301) AADT VOLUMES AND LOS SIX-LANE I-75 CAPACITY



Sources: FDOT, 2010. Actual AADT Volumes – FDOT, 2011b. *Fort Hamer Road Bridge Traffic Technical Memorandum*, URS, May 2013 (Appendix B).

**TABLE 3-9
EXISTING (2011) AND FUTURE (2015 AND 2035) NO-BUILD ALTERNATIVE TRAFFIC AND LOS**

Roadway	From	To	Existing 2011 AADT	No-Build Capacity ³	Existing LOS ²	2015 No-Build AADT	No-Build Capacity ³	2015 No-Build LOS ²	2035 No-Build ¹ AADT	No-Build Capacity ³	2035 No-Build LOS ²
Upper Manatee River Rd.	SR 64	Waterlefe Blvd.	8,300	14,200	B	9,100	14,200	B	14,500	14,200	F
	Waterlefe Blvd.	Gates Creek Rd.	5,500	14,200	B	5,900	14,200	B	9,800	14,200	D
	Gates Creek Rd.	Manatee River	N/A		-	-		-	-		-
Fort Hamer Rd.	Manatee River	Mulholland Rd.	300	14,200	B	1,400	14,200	B	2,100	14,200	B
	Mulholland Rd.	Old Tampa Rd.	2,700	14,200	B	3,700	14,200	B	2,100	14,200	B
	Golf Course Rd.	US 301	1,900	14,200	B	5,200	14,200	B	10,500	14,200	C
Rye Rd.	SR 64	Upper Manatee River Rd.	5,700	14,200	B	7,000	14,200	C	15,600	14,200	F
	Upper Manatee River Rd.	Golf Course Rd.	2,800	14,200	B	2,900	14,200	B	19,800	14,200	F
Golf Course Rd.	Rye Rd.	Fort Hamer Rd.	1,800	14,200	B	1,100	14,200	B	11,500	14,200	C
I-75 ¹	SR 64	US 301	90,500	122,700	C	130,900	122,700	F	164,700	122,700	F

¹ I-75 is currently six lanes; an eight-lane design is approved but construction is unfunded.

² LOS – Level of Service (A-F) defined by the TRB's HCM (TRB, 2010).

³ Capacities – FDOT, 2010.

AADT = Annual Average Daily Traffic.

3.1.4 COMMUNITY COHESION

Historically, both the Fort Hamer Road/Upper Manatee River Road and Rye Road/Golf Course Road corridors were predominantly rural areas supporting low-density residential development and agriculture. However, the rural character of the area has changed dramatically in the past two decades as large-scale residential development replaced farms and rural homesteads. Fort Hamer Road, Upper Manatee River Road, Rye Road, and Golf Course Road now support multiple master-planned residential developments including Rye Wilderness Estates, River Wilderness, Kingsfield, River Chase, Greenfield Plantation, Waterlefe, Gates Creek, and Windsong. Large residential developments, as described previously in Section 3.1.2, are now planned and permitted for much of the remaining undeveloped lands found along both project corridors.

Typically, community connections present within this area of Manatee County occur within the distinct developments. Many of the larger residential developments are gated and include common areas and community centers that provide services only to the residents of that development. Many of these master-planned communities incorporate an internal focus including centralized roadway and pedestrian networks with limited connectivity to adjacent neighborhoods or developments. The internal focus of these neighborhoods serves to buffer them from activities that occur beyond the bounds of the development.

The development pattern and infrastructure elements present in this portion of Manatee County foster an environment where movement between neighborhoods is reliant upon the use of an automobile. Many of the community focal points and infrastructure elements that would facilitate the face to face interaction of residents from neighboring communities are sited along collector roadways which are located outside of the centrally focused neighborhoods.

Community Cohesion impacts are discussed in Section 4.1.4.

3.1.5 RELOCATION POTENTIAL

The term “relocation potential” makes reference to the potential for the displacement of occupants of areas located along the proposed alternatives as a result of right-of-way (ROW) expansion. The occupants of the affected areas may include elements such as individuals, families, households, businesses, government activities, or property only.

As previously described in Chapter 2, a major consideration in the selection of the two build alternatives was their use of existing roadways and minimization of potential conflicts with existing developments and residences.

The No-Build Alternative does not include any additional road capacity improvements and, thus would have no potential for a relocation impact.

The Fort Hamer Alternative, passes within close proximity of several master planned residential developments, single-family homes, golf courses, regional park, church, and an elementary school. As described previously in Chapter 2, the Fort Hamer Alternative would maintain two lanes of travel along the length of the project and require a 48-foot typical section. Additionally, the Fort Hamer Alternative would require the acquisition of new ROW to provide the connection between Upper Manatee River Road and Fort Hamer Road.

Much like the Fort Hamer Alternative, the Rye Road Alternative passes through an area supporting a mix of residential development, a school, golf courses, regional park, and a church. The typical section for the Rye Road Alternative would require 110 feet of ROW along Rye Road, Golf Course Road, and Fort Hamer Road; and 138 feet at the Manatee River Crossing. The Rye Road Alternative would involve the widening of Rye Road, Golf Course Road, and northern end of Fort Hamer Road from two to four lanes.

Relocation impacts are discussed in Section 4.1.5.

3.1.6 COMMUNITY SERVICES AND FACILITIES

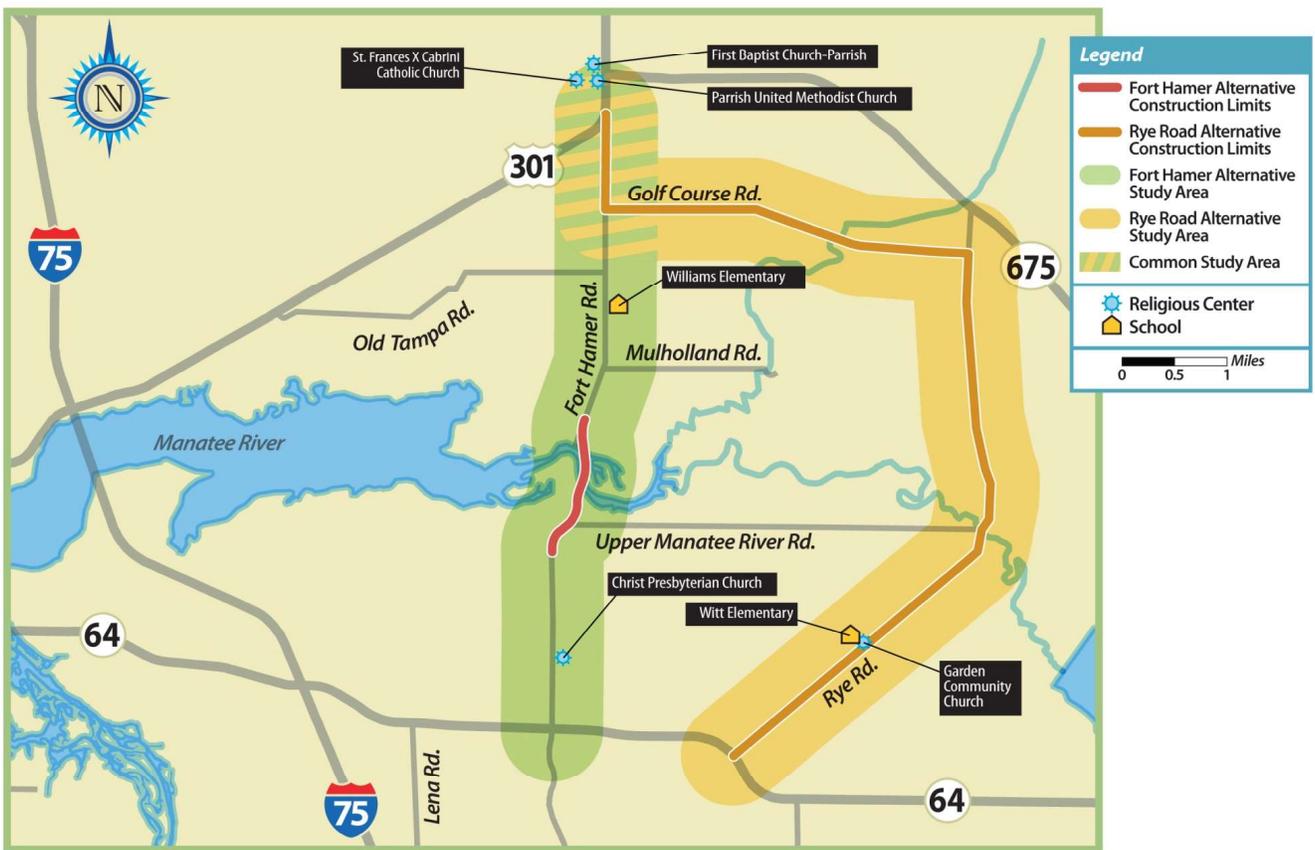
Community facilities provide a focal point for adjacent neighborhoods and communities, as well as serving the needs of the surrounding areas. For the purpose of this study, community facilities include religious centers, schools, parks and recreation areas, public facilities, and pedestrian/bicycle facilities. The presence of each of these facilities within the Fort Hamer and Rye Road Alternatives' Study Areas are described below.

3.1.6.1 Religious Centers

A total of four religious centers are located within the Fort Hamer Alternative Study Area as shown on **Figure 3-12**. Christ Presbyterian Church is located on Upper Manatee River Road approximately 0.5 mile north of SR 64. Parrish United Methodist Church, St. Frances X Cabrini Catholic Church, and First Baptist Church-Parrish are all located on the west side of US 301 just north of the Fort Hamer Road/US 301 intersection.

Four religious centers are also located within the Rye Road Alternative Study Area. These include the aforementioned Parrish United Methodist Church, St. Frances X Cabrini Catholic Church, and First Baptist Church-Parrish in addition to the Garden Community Church which meets in the Gene Witt Elementary School located on Rye Road approximately 1.5 miles north of SR 64.

FIGURE 3-12
RELIGIOUS CENTERS AND SCHOOLS WITHIN THE FORT HAMER ALTERNATIVE AND RYE ROAD ALTERNATIVE STUDY AREAS



Sources: Manatee County, 2012c. University of Florida, 2009a.

3.1.6.2 Schools

One existing educational facility is located within the Fort Hamer Alternative Study Area; the Annie Lucy Williams Elementary School, with an enrollment of 725 students, is located on the east side of Fort Hamer Road between Old Tampa Road and Mulholland Road. A second educational facility, a high school, is in the conceptual stages of development, and is planned for an area east of Fort Hamer Road just north of the Manatee River.

The Gene Witt Elementary School, with an enrollment of 561 students, is the only educational facility located within the Rye Road Alternative Study Area. This school is sited on the west side of Rye Road approximately 1.5 miles north of the Rye Road/SR 64 intersection. Figure 3-12 shows the location of these two schools.

3.1.6.3 Parks and Recreation Areas

One existing park is located within the Fort Hamer Alternative Study Area (see **Figure 3-13**). Fort Hamer Park is located at the southern terminus of Fort Hamer Road along the north bank of the Manatee River. This park is owned and managed by Manatee County and was recently improved with the addition of a collegiate rowing facility, including a boat storage building, crew training facility, public restrooms, and public boat launching amenities.

The site of the future Hidden Harbour Park is also located within the Fort Hamer Alternative Study Area on the east side of Fort Hamer Road and adjacent to the Manatee River. The site is owned by Manatee County and development of the park is scheduled to begin in 2013. The Manatee County CIP lists \$5.7 million in funding for development of the park with \$967,703 in funding allocated in Fiscal Year (FY) 2013 (Manatee County BOCC, 2012). The proposed regional park is being designed in collaboration with a future high school, which would occupy approximately 90 acres of the 210-acre site. When complete, the park would provide numerous ball fields, a playground, picnic shelters, boardwalks and trails, observation decks, and a canoe/kayak launch.

Within the Rye Road Alternative Study Area, the Rye Preserve occupies 145 acres on both sides of Rye Road where it crosses the Manatee River. Portions of this park were originally acquired in 1986 with a grant from the National Park Service Land and Water Conservation Fund. At that time, the recreation area located north of the Manatee River and east of Rye Road was named “Rye Wilderness Park.” Manatee County has since expanded the recreation area and renamed the facility “Rye Preserve.” The Preserve features hiking trails, horseback trails, picnic areas, playground, and a canoe/kayak launch, in addition to camping and fishing opportunities.

The Manatee River Blueway Trail is a County-designated paddling trail that passes through both the Fort Hamer Alternative and Rye Road Alternatives study areas. The Blueway Trail follows the Manatee River from the dam at Lake Manatee to the Gulf of Mexico and includes the canoe/kayak launch at Rye Preserve.

FIGURE 3-13
PARK AND RECREATION FACILITIES WITHIN THE FORT HAMER ALTERNATIVE AND RYE ROAD ALTERNATIVE STUDY AREAS



Source: Manatee County, 2012d.

3.1.6.4 Public Facilities

Public facilities include fire and police stations, post offices, libraries, water treatment plants, and other government facilities that provide services to the public (religious centers, schools, and parks are covered separately above). Within the Fort Hamer Alternative Study Area, a U.S. Post Office and the Parrish Fire Control District Fire Department are located on US 301 approximately 500 feet north of the Fort Hamer Road/US 301 intersection (see **Figure 3-14**). No public facilities are located along Fort Hamer Road and Upper Manatee River Road.

Four public facilities are located within the Rye Road Alternative Study Area. The Parrish Fire Department and U.S. Post Office are located north of the Fort Hamer/US 301 intersection. The East Manatee Fire Department Station 3 is located on the west side of Rye Road approximately 1.5 miles north of the Rye Road/SR 64 intersection. A Manatee County Reclaimed Water facility is located just east of Rye Road at the Waterline Road intersection.

3.1.6.5 Pedestrian/Bicycle Facilities

Intermittent sidewalks currently exist along the Fort Hamer corridor. Existing sidewalks are adjacent to Greenfield Plantation and Waterlefe subdivisions along Upper Manatee River Road and adjacent to Kingsfield subdivision on Fort Hamer Road. Based on the Needs Plan included in the Sarasota/Manatee MPO's 2035 LRTP, no bicycle facilities currently are planned within the Fort Hamer Alternative Study Area; however, the LRTP does identify a trail alignment that passes along the north side of the Manatee River connecting Rye Preserve with Fort Hamer Park (MPO, 2012). This trail is currently identified as a future need. The feasibility of construction of the project is reasonable as Manatee County is working through exactions to obtain passage through private lands. Ordinances authorizing the rezoning of two private properties (River Chase and River's Beach), both of which are located between the two parks, include a statement that requires the development of a recreation/nature trail. Conversation with Manatee County Parks and Recreation staff affirmed that although funding is currently unavailable for near-term development of the trail, the desire to construct the facility exists.

Similar to the conditions observed within the Fort Hamer Alternative Study Area, sidewalks occur as a fragmented network along the Rye Road Alternative. A continuous sidewalk is present along Rye Road from SR 64 north to 167th Boulevard NE, a distance of approximately 2.5 miles. Sidewalks occur again proximate to the River's Reach development and along portions of Fort Hamer Road. Currently, based on the Needs Plan included in the LRTP, there are no bicycle facilities planned within the Rye Road Alternative Study Area.

FIGURE 3-14
PUBLIC FACILITIES WITHIN THE FORT HAMER ALTERNATIVE AND RYE ROAD ALTERNATIVE STUDY AREAS



Sources: University of Florida, 2008 and 2009b.

3.1.7 ENVIRONMENTAL JUSTICE POPULATIONS

In February 1994, the President of the United States issued Executive Order 12898 (Environmental Justice) requiring federal agencies to analyze and address, as appropriate, disproportionately high adverse human health and environmental effects of federal actions on ethnic and cultural minority populations and low-income populations, when such analysis is required by the *National Environmental Policy Act of 1969* (NEPA). An adverse effect on minority and/or low-income populations occurs when:

1. The adverse effect occurs primarily to a minority and/or low-income population, or
2. The adverse effect suffered by the minority and/or low-income population is more severe or greater in magnitude than the adverse effect suffered by the non-minority and/or non-low-income populations.

In addition to compliance with Executive Order 12898, any proposed federal project must comply with the provisions of *Title VI of the Civil Rights Act of 1964*, as amended by *Title VIII of the Civil Rights Act of 1968*. Title VI provides that no person will, on the grounds of race, color, religion, sex, national origin, marital status, disability, or family composition be excluded from participation in, be denied the benefits of, or be otherwise subject to discrimination under any program of the federal, state, or local government. Title VIII guarantees each person equal opportunity in housing.

3.1.7.1 Assessment of the Population

To address the requirements of the policies outlined above, the presence of minority and low income populations were assessed within the area of the proposed alternatives. Criteria outlined in, *Environmental Justice, Guidance Under the National Environmental Policy Act*, published by the Council on Environmental Quality (CEQ) in December 1997, were used to guide the examination of potential environmental justice effects (CEQ, 1997). The following three points were taken from the CEQ guidance to establish the presence of a population protected by Executive Order 12898:

1. The minority or low-income population exceeds 50% in the impacted area.
2. The minority or low-income population percentage in the impacted areas is “meaningfully greater”¹ than the minority or low-income population in the general population or other appropriate geographic area.
3. There is more than one minority or low-income group present and the minority or low-income percentage, as calculated by summing all minority or low-income persons, meets one of the thresholds presented above.

¹ Note: for use in this study, the term “meaningfully greater” is defined as a population that accounts for 1.5 times the County average within a specified geographic unit. This figure is set as a threshold to help in the identification of a distinct minority and low-income community that may be present within the project area.

In addition to the identification of the presence of minority and low-income populations, an assessment of impacts related to the proposed federal action must occur. *Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analysis*, published by the Environmental Protection Agency (EPA) in April 1998, poses one additional question to be answered in the assessment of project impact.

1. Are the environmental impacts likely to fall disproportionately on minority and/or low-income members of the community?

The following subsections outline the presence of low-income, racial minority, and ethnic minority populations within central Manatee County. Section 4.1.7 of the FEIS identifies the potential for disproportionate effects, and the mitigative measures available to reduce impacts.

3.1.7.2 Poverty

To identify the presence of low-income populations in the project area, 2010 ACS 5-year estimates were reviewed at the Census tract level (Census, 2010c). The U.S. Census Bureau uses a set of income thresholds based on Office of Management and Budget's (OMB's) directives that vary by family size and composition. If total income is less than the threshold, then every individual in that family is considered to be in poverty. The official poverty thresholds do not vary geographically, however they are adjusted annually. The official poverty definition uses income before taxes and does not include capital gains or non-cash benefits (such as public housing, Medicaid, and food stamps).

Table 3-10 presents the poverty threshold established by the U.S. Census Bureau in accordance with the standard set forth in OMB Policy Directive 14.

TABLE 3-10
2010 U.S. CENSUS POVERTY THRESHOLD

Size of Family Unit	Poverty Threshold
One person (unrelated individual)	\$11,139
Under 65 years	\$11,344
65 years and over	\$10,458
Two people	\$14,218
Householder under 65 years	\$14,676
Householder 65 years and over	\$13,194
Three people	\$17,374
Four people	\$22,314
Five people	\$26,439
Six people	\$29,897
Seven people	\$34,009
Eight people	\$37,934
Nine people or more	\$45,220

Source: ACS, 2011a.

Table 3-11 presents the 2010 ACS poverty rate data for Manatee County and the eight U.S. Census tracts contained within the Fort Hamer Alternative and Rye Road Alternative study areas. The information identified shows that the percentage of Manatee County residents that fell below the poverty level during the 12 months preceding year 2010 (12.8 percent) was higher than the average for the same population within the affected U.S. Census tracts (11.4 percent). This finding shows that the area supporting the two build alternatives does not contain a low-income population that is greater than 50 percent of the overall population, nor does the population in poverty within the affected U.S. Census tracts represent a portion of the population that is “meaningfully greater” than the county average. (**Figure 3-15**).

TABLE 3-11
2010 POVERTY IN PAST 12 MONTHS

Location	Percent in Poverty in Past 12 Months
Manatee County	12.80
Tract 001909	3.90
Tract 001910	7.60
Tract 001911	11.40
Tract 001913	7.20
Tract 001914	2.20
Tract 002007	7.80
Tract 002013	3.30
Tract 002014	4.50

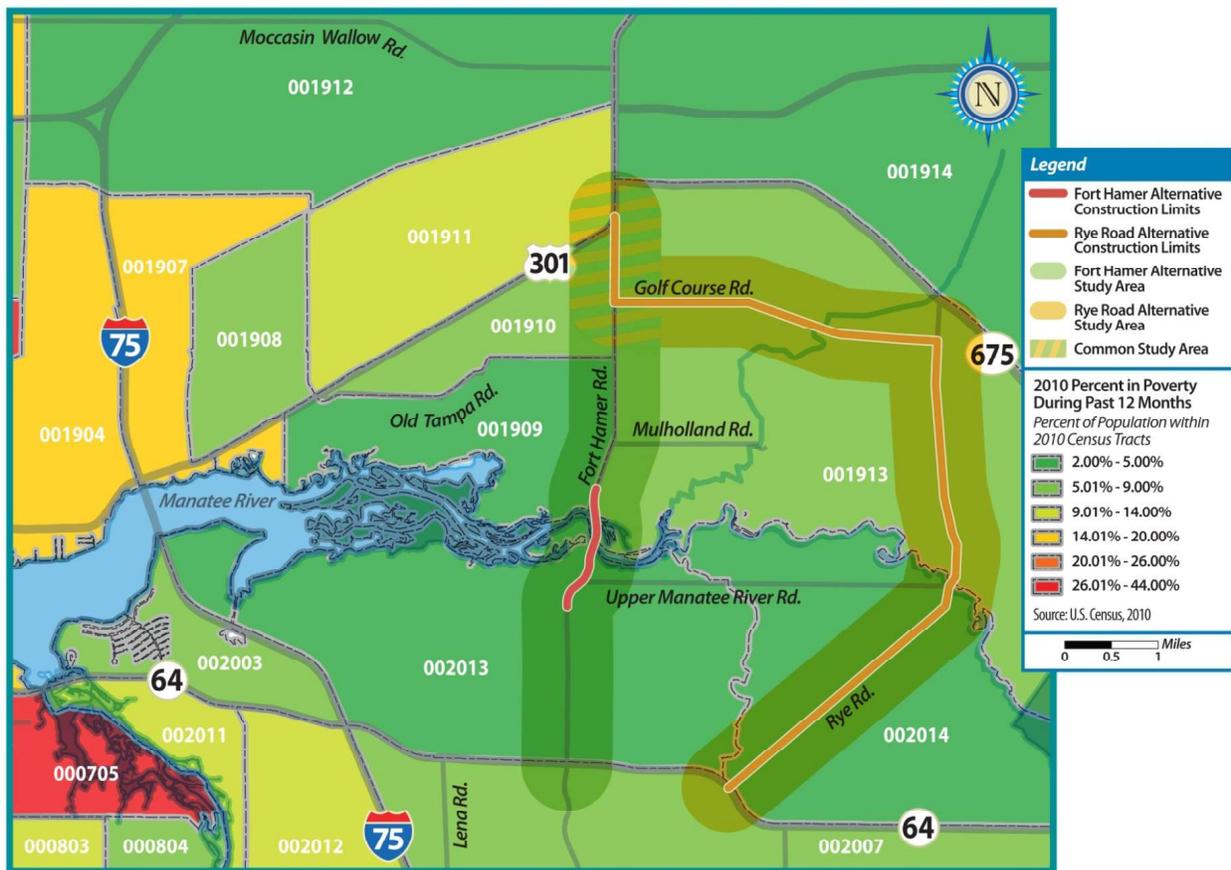
Source: ACS, 2011a.

3.1.7.3 *Minority Populations*

The figures included in **Table 3-12** show that the non-white population (including American Indian, Asian, Black, Hawaiian/Pacific Islander, Other, and Multi-Race groups) within in Manatee County represents 18.1 percent of the population overall. The highest concentration of minority residents within the affected census tracts occurs within Tract 001910, and accounts for 12.9 percent of the population, a figure well below the county average.

Review of 2010 ACS data shows that the minority population present within the Fort Hamer Alternative and Rye Road Alternative study areas does not exceed 50 percent of the overall population. Based on the identified demographic information, the non-white population does not represent a percentage of the population that is “meaningfully greater” than the overall County average (**Figures 3-16** and **3-17**).

FIGURE 3-15
PROJECT AREA, POVERTY IN PAST 12 MONTHS



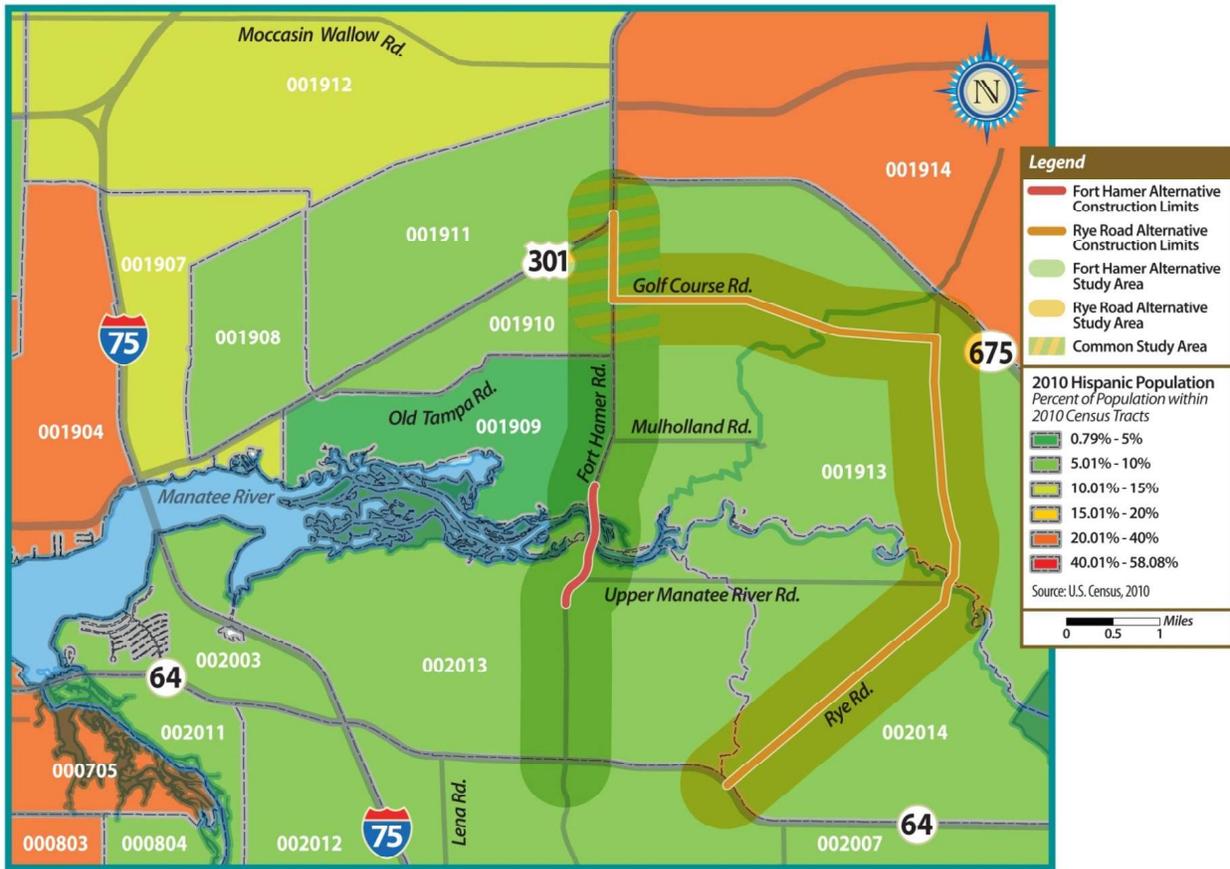
Sources: Census, 2010b. ACS, 2011a.

FIGURE 3-16
2010 NON-WHITE POPULATION



Sources: Census, 2010a and 2010b.

FIGURE 3-17
2010 HISPANIC POPULATION



Sources: Census, 2010a and 2010b.

**TABLE 3-12
2010 PERCENT OF POPULATION NON-WHITE/HISPANIC**

Location	Percent Population Non-White	Percent Population Hispanic
Manatee County	18.1	14.9
Tract 001909	5.9	4.5
Tract 001910	12.9	7.9
Tract 001911	11.3	9.0
Tract 001913	10.0	7.8
Tract 001914	11.9	24.1
Tract 002007	5.6	5.1
Tract 002013	11.0	6.4
Tract 002014	5.3	5.3

Source: Census, 2010a.

Assessment of the Hispanic population within Manatee County shows that this group accounts for 14.9 percent of the overall County population. When compared to the populations present within the affected Census Tracts, it is apparent that the Hispanic population within Census Tract 001914 (24.1 percent) exceeds the County average. Additionally, the Hispanic population identified within Tract 001914 represents a portion of the population that is greater than 1.5 times the County average, and meets the threshold for a “meaningfully greater” population. Potential effects to the Hispanic population is discussed in Section 4.1.7.

3.1.8 CONTROVERSY POTENTIAL

From 2010 to present, coordination with various governmental agencies, property owners, local groups, and the general public has revealed both opposition and support for the two build alternatives among residents within the project area. Residents within the project area have expressed concerns broadly categorized as follows:

- Safety – pedestrian and bicycle safety, especially in the area of the elementary school on Fort Hamer Road (Annie Lucy Williams Elementary School);
- Trucks – perception that a new bridge with the Fort Hamer Alternative would be heavily used by large trucks, thereby increasing noise and safety issues;
- Environmental/Natural Resources – potential impacts to remaining natural habitats and wildlife resources along the river (common to both build alternatives);
- Visual and Aesthetics – potential loss of “natural” views in areas not already developed on both sides of the river, especially with the Fort Hamer Alternative;
- Costs – the cost of the project, especially given the current local and regional economy (common to both build alternatives); and

- Need – additional lanes across the Manatee River at Fort Hamer Road are not needed or can be met by adding additional lanes to the Rye Road Bridge.

Residents of the Waterlefe subdivision, in particular, have expressed several concerns, including (but not limited to) the following:

- Safety – access to Winding Stream Way and the main entrance to the development,
- Visual and Aesthetics – potential impacts to the viewshed from resident homes and golf course,
- Noise – elevated noise levels from increased vehicle and truck traffic, and
- Property Devaluation – potential impacts to property values.

A written disclosure of the proposed bridge crossing at Fort Hamer Road and Upper Manatee River Road was made (and continues to be made) to all Waterlefe homeowners in their purchase documents (Appendix A-1).

These controversies have continued throughout preparation of this FEIS.

Other residents and groups in the area favor a new transportation corridor between I-75 and Rye Road, including the proposed location connecting Fort Hamer Road and Upper Manatee River Road. Their reasoning is that nearly all of what were rural undeveloped and agricultural lands in that part of the County has already been developed or has been approved for residential and mixed-use development and population and employment in the area is projected to continue to grow. Supporters have stated that additional roadway capacity is needed in order to provide relief to the I-75 corridor and to reduce congestion, improve safety on local roads, and to assist in emergency response and evacuation. A bridge crossing at Fort Hamer Road and Upper Manatee River Road is consistent with Manatee County's 2035 LRTP (MPO, 2012) and the County's adopted Comprehensive Plan (Manatee County, 2010). A bridge crossing at Fort Hamer Road and Upper Manatee River Road was in the Manatee County Comprehensive Plan in 1968 as a conceptual development plan, was listed in the County Street Plan Priority for 1968, was listed in the County's proposed land use and development requirements in 1973, was on the County's Thoroughfare Plan in 1976, and shown on the County's Right-of-Way Needs Map in 1984.

Impacts on controversy potential are discussed in Section 4.1.8.

3.1.9 UTILITIES AND RAILROADS

The following is a list of those utilities known to operate or that have plans to operate facilities within both of the project corridors:

- Manatee County Public Works;

- TECO-Peoples Gas;
- Florida Light & Power;
- Peace River Electric Cooperative;
- Bright House; and
- Verizon Florida, Inc.

Existing and planned utilities are summarized in **Table 3-13**. No railroads occur within the Fort Hamer Alternative or Rye Road Alternative study areas. Utility and railroad impacts are discussed in Section 4.1.9.

3.2 CULTURAL RESOURCES

For purposes of this FEIS, Cultural Resources are those concerns related to archaeological resources, historic resources, and tribal considerations.

3.2.1 INTRODUCTION

A Cultural Resource Assessment Survey (CRAS) of the Fort Hamer and Rye Road Alternatives and proposed pond sites was completed by Archaeological Consultants, Inc. (ACI) in 2011 on behalf of the U.S. Coast Guard (USCG), the lead federal agency for this undertaking, and is provided in Appendix C (ACI, 2011). The CRAS was conducted to locate and identify cultural resources within the area of potential effect (APE) and to assess their significance in terms of eligibility for listing in the National Register of Historic Places (NRHP).

Although no physical evidence of the Fort Hamer site was discovered within the APE that would require formal consultation under Section 106 of the NHPA, the USCG pursued consultation with the Tribal Historic Preservation Officer (THPO) for the Seminole Tribe of Florida and the Seminole Nation of Oklahoma in recognition of the importance of the Fort Hamer site to Native American tribes. As a result, the next step was to conduct an in-depth study of Fort Hamer and its importance as an embarkation point for Seminole emigration to the west (see Appendix A-4 for coordination letters, meeting minutes, and other dialogue pertinent to the consultation process). A report titled “Documentation Concerning Second Seminole War Fort Hamer and the Seminole Deportation, Manatee County, Florida” was completed, and the USCG submitted the report to the State Historic Preservation Officer (SHPO) and Seminole Tribe of Florida THPO in March 2013. The SHPO acknowledged receipt of the “historical documentation that was completed at the request of the Seminole Tribe of Florida during consultation” on April 17, 2013 (see Appendix A-4). Consultation with the Seminole Tribe of Florida is currently on-going.

**TABLE 3-13
EXISTING AND PROPOSED UTILITIES**

Manatee County Public Works (Existing)					
Utility	Aerial (A) Buried (B)	Approximate Location			
		Roadway	Side	From	To
42" WM	B	Lakewood Ranch Boulevard	East	South of SR 64	SR 64
42" WM	B	Upper Manatee River Road	East	SR 64	10th Avenue East
42" WM	B	Upper Manatee River Road	West	10th Avenue East	Gates Creek Road
8" WM	B	Upper Manatee River Road	West	SR 64	Lift Station
6" WM	B	Upper Manatee River Road	East	700 ft South of 10th Avenue East	8th Avenue East
8" WM	B	Upper Manatee River Road	East	150 ft South of 4th Avenue East	4th Avenue East
8" WM	B	Upper Manatee River Road	East	2nd Avenue East	400 ft North of 2nd Avenue East
8" WM	B	Upper Manatee River Road	East	3rd Avenue Northeast	1,850 ft North of 3rd Avenue NE
6" WM	B	Upper Manatee River Road	East	1,850 ft North of 3rd Avenue NE	150 ft South of Gates Creek Road
8" WM	B	Upper Manatee River Road	East	150 ft South of Gates Creek Road	Gates Creek Road
6" FM	B	Upper Manatee River Road	East	SR 64	775 ft South of 10th Avenue East
6" FM	B	Upper Manatee River Road	West	775 ft South of 10th Avenue East	Lift Station
8" FM	B	Upper Manatee River Road	West	Lift Station	Greenfield Boulevard
6" FM	B	Upper Manatee River Road	West	Greenfield Boulevard	4th Avenue East
8" FM	B	Upper Manatee River Road	West	4th Avenue East	250 ft North of 2nd Avenue East
8" FM	B	Upper Manatee River Road	East	250 ft North of 2nd Avenue East	1,500 ft North of 2nd Avenue East
6" FM	B	Upper Manatee River Road	East	1,500 ft North of 2nd Avenue East	3rd Avenue Northeast
6" FM	B	Upper Manatee River Road	West	3rd Avenue Northeast	Waterlefe Boulevard
Lift Station		Upper Manatee River Road	West	10th Avenue East	
24" WM	B	Fort Hamer Road	East	Old Tampa Road	US 301
20" WM	B	60th Street East	North	Fort Hamer Road	US 301

An archaeological and historical survey of the Rye Road Alternative was conducted in September/October 2006 and January 2007. A follow-up windshield survey was conducted in 2010-2011 to confirm whether all earlier identified resources were still extant and if there were additional historic resources (50 years in age or older) that needed to be recorded. These studies are summarized in the 2011 CRAS attached as Appendix C. In keeping with the results from the earlier reports, the 2011 CRAS concluded that there were no NRHP-listed or -eligible resources in the project APE. The SHPO concurred with these findings on February 6, 2013 (see Appendix A-4).

3.2.2 **BACKGROUND RESEARCH AND LITERATURE REVIEW**

A comprehensive review of archaeological and historical literature, records, and other documents and data pertaining to the project area was conducted. The focus of this research was to ascertain the types of cultural resources known in the project area and vicinity, their temporal/cultural affiliations, site location information, and other relevant data. This included a review of sites listed in the NRHP, the Florida Master Site File (FMSF), cultural resource survey reports, published books and articles, unpublished manuscripts, maps, and interviews. In addition to the FMSF, other data relative to the historical research were obtained from the Eaton Florida History Room of the Manatee County Public Library, the Manatee County Property Appraiser's Office, the Florida Division of Historical Resources (FDHR), the Florida Division of State Lands, and the files of ACI. It should be noted that FMSF data were obtained in December 1999, August 2000, September 2006, December 2006, and March 2011. In addition, several interviews were conducted with archaeologists Bill Burger, Rich Estabrook, and Willard Steele; librarians at the Eaton Room were contacted concerning the Rye Road area.

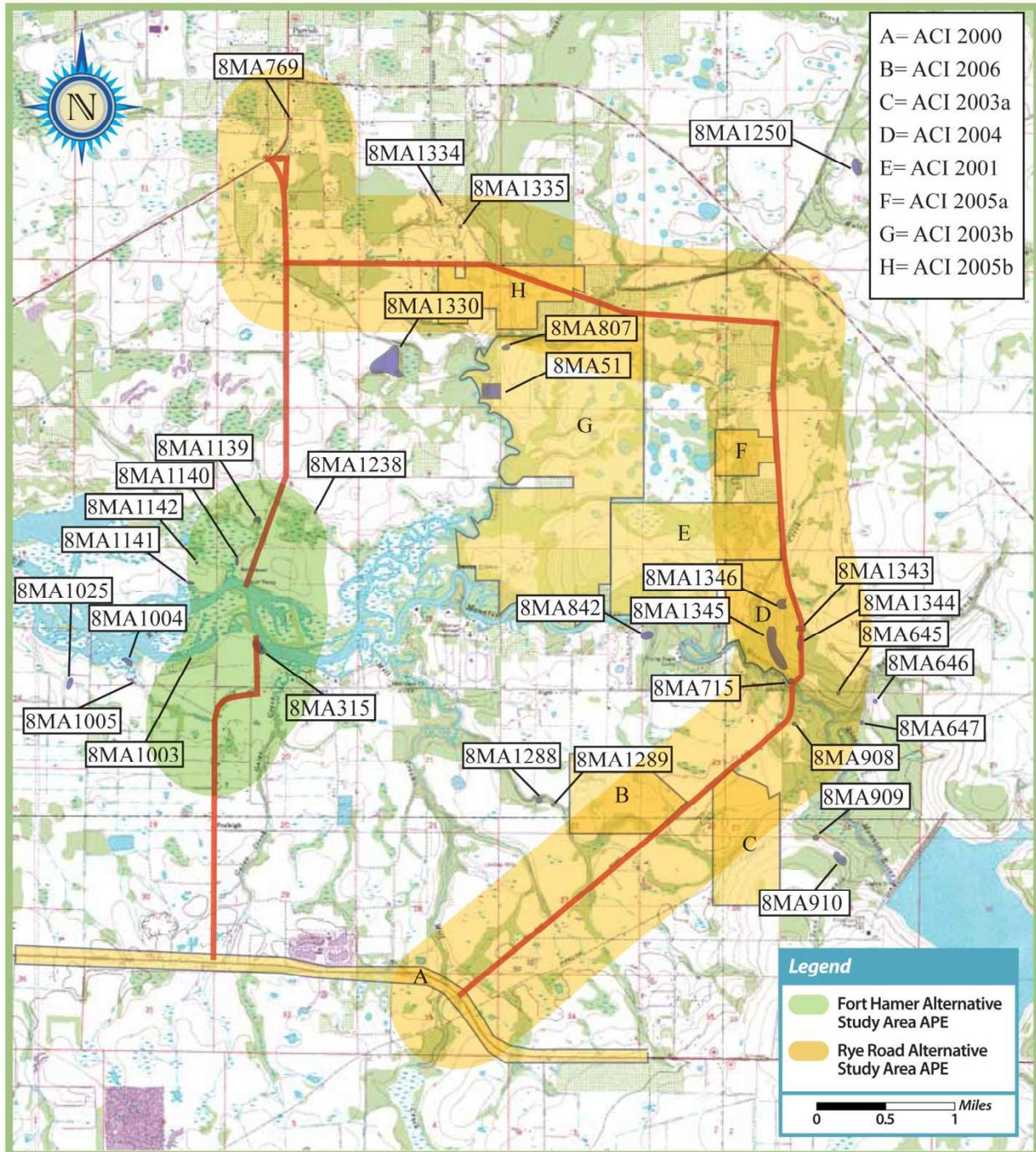
Archaeological Considerations

A review of the FMSF indicated that multiple surveys have been previously conducted in the area, and 28 archaeological sites are recorded within 1 mile of the APE and that a portion of three sites (8MA315, 8MA715, and 8MA1344) are within or adjacent to the APE (see **Figure 3-18**). In addition, 8MA1343, a historic cemetery (Mitchellville Cemetery), is within the project APE along the Rye Road Alternative. Along the Fort Hamer Alternative, these archaeological sites include several small prehistoric sites and the general location of where Fort Hamer (8MA315) was thought to have once been located. The Fort was a 19th Century Seminole War fortification which was considered eligible for listing in the NRHP. However to date, no physical evidence of the structures associated with Fort Hamer have been found. The structures associated with Fort Hamer were removed by order of the U.S. Government on November 19, 1850 (Appendix C).

In 1907/1908, "Lewis", the first steamer to travel up the Manatee River to supply the Tallevast Turpentine Camp at Mitchellville was laid up on the north side of Fort Hamer, caught fire, burned, and sank. No evidence of the Lewis has been found to date (Appendix C).

Near the Rye Road Alternative, recorded archaeological sites include prehistoric mounds, aboriginal lithic and artifact scatters, and historic sites associated with the town of Rye/Mitchellville. Sites within one mile of both alternatives are summarized in **Table 3-14**.

**FIGURE 3-18
LOCATION OF PREVIOUSLY RECORDED
ARCHAEOLOGICAL SITES WITHIN ONE MILE OF THE APE**



Note: Shovel tests are not to scale.
Source: ACI, 2011.

**TABLE 3-14
PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES WITHIN ONE MILE OF THE APE**

Site Number	Site Name	Site Type	Culture
Fort Hamer Alternative			
8MA315	Fort Hamer	Seminole War Fort/ Artifact scatter	19 th century
8MA1003	Broken Pot	Artifact scatter	Manasota/Safety Harbor
8MA1004	Ancient Oaks Hammock	Artifact scatter	Prehistoric
8MA1005	Round the Bend	Artifact scatter	Prehistoric
8MA1025	Branwen's Scatter	Artifact scatter	Prehistoric
8MA1139	Swampside	Lithic scatter	Prehistoric lacking pottery
8MA1140	Boat Ramp	Lithic scatter	Early Archaic
8MA1141	Cumba	Lithic scatter	Prehistoric lacking pottery
8MA1142	Ridge's Edge	Lithic scatter	Prehistoric lacking pottery
8MA1238	MRP 1	Campsite	Prehistoric lacking pottery
Rye Road Alternative			
8MA51	NN	Prehistoric mound	Unknown
8MA645	Pascuzzi	Lithic scatter	Middle Archaic
8MA646	Hilton	Habitation/Refuse	Safety Harbor/ Weeden Island II
8MA647	Hooley	Habitation/Lithic scatter	Prehistoric lacking pottery
8MA715	Rye Bridge Mound	Prehistoric mound	Prehistoric/Safety Harbor/Contact
8MA769	Cassick	Artifact scatter	Prehistoric
8MA807	Gamble Creek	Artifact scatter, low density	Archaic
8MA842	Archery Range	Single artifact	Archaic
8MA908	Rye Road	Artifact scatter, low density	Prehistoric lacking pottery
8MA909	Swamp Edge	Artifact scatter, low density	Prehistoric lacking pottery
8MA910	Sandy Branch	Artifact scatter, low density	Prehistoric lacking pottery
8MA1250	Foxbrook	Extractive site/Lithic scatter	Prehistoric lacking pottery
8MA1288	Country Creek	Campsite (prehistoric)/ Artifact scatter	Late Archaic
8MA1289	Country Meadows	Campsite (prehistoric)/ Lithic scatter	Middle-Late Archaic
8MA1330	Underhill 4	Campsite (prehistoric)	Prehistoric
8MA1334	Dog's Mole Site	Lithic scatter	Prehistoric lacking pottery
8MA1335	Owl Place Site	Lithic scatter	Prehistoric lacking pottery
8MA1343	Mitchellville Cemetery	Historical cemetery	ca.1879-ca.1924
8MA1344	Waters Edge Historic Scatter	Town/Artifact scatter	19 th century American
8MA1345	Waters Edge Prehistoric Scatter	Extractive site/Lithic scatter	Middle Archaic
8MA1346	Waters Edge Muticomponent	Lithic scatter; Town/ Artifact scatter	Prehistoric lacking pottery; 19 th and 20 th century American

Source: ACI, 2011.

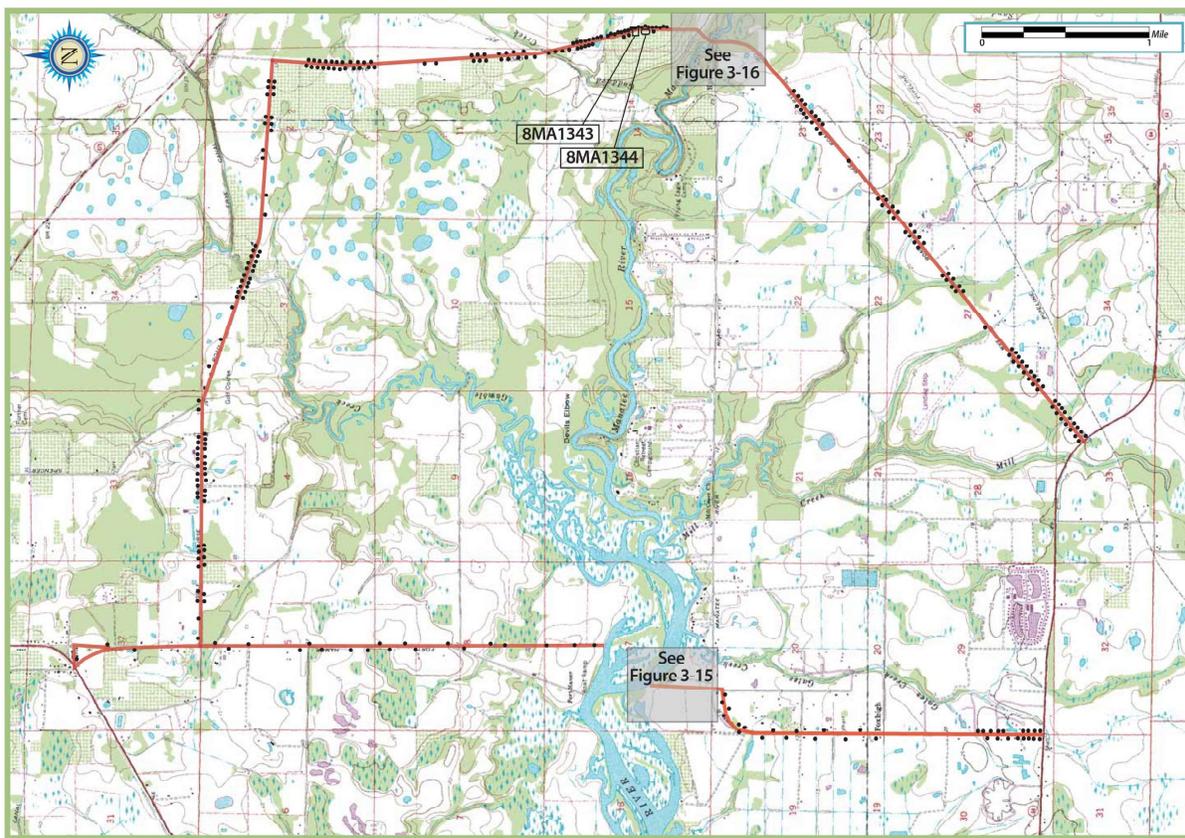
In 1998, a survey of the 700-acre Wading Bird Golf and Country Club (development since renamed Waterlefe Country Club) area was conducted north of the SR 64 corridor, on the southern bank of the Manatee River (Janus, 1998a). This survey recorded three artifact scatter type sites (8MA1003-05), two historic structures (8MA1006 and 8MA1007), and re-evaluated the Fort Hamer Site (8MA315).

When the Fort Hamer area was subjected to Phase II archaeological investigation, Janus Research concluded that "...the portion of the Fort Hamer Site (8MA315) identified within the Wading Bird Golf and Country Club project boundaries area is minimal, and does not appear to meet minimum criteria for listing on the NRHP" (Janus, 1998b). The SHPO concurred with these findings (Percy, 1998), noting that "...the portion of the Fort Hamer Site within the project area is not eligible for listing in the NRHP." A portion of the Fort Hamer Site (8MA315) within the Wading Bird project that was cleared by the SHPO as having not met criteria for listing in the NRHP is within the archaeological APE for this project.

Also, within the vicinity of the Fort Hamer Alternative, a survey of 2,600 acres was conducted for the Heritage Sound DRI/ADA project in 1998. As a result, two archaeological sites and three structures were recorded (Janus, 1999). ACI surveyed SR 64 from east of I-75 to Lorraine Road and recorded two historic buildings near the southern terminus of the alternative. Neither 8MA1177 nor 8MA1178 are eligible for listing in the NRHP (ACI, 2000).

In 2004, a survey of the 260-acre Waters Edge development (development since renamed River's Reach) project area was conducted on the north bank of the Manatee River on the west side of the Rye Road Alternative (ACI, 2004). This survey recorded a historic cemetery (8MA1343), a historic artifact scatter (8MA1344), a lithic scatter (8MA1345), and a multi-component site consisting of a lithic scatter and historic artifact scatter (8MA1346) (see **Figure 3-19**). The historic sites found during the Waters Edge survey were apparently associated with the no longer extant town of Rye/Mitchellville. None of these sites was considered eligible for listing in the NRHP. Four archaeological occurrences were also found. Of the four sites recorded, the historic cemetery (8MA1343) and the historic scatter (8MA1344) are located within the proposed Rye Road Alternative.

The platted area of the Mitchellville Cemetery (8MA1343) is bisected by the existing Rye Road. In 2004, ACI recovered the marble grave marker of Thomas Urquhart, father-in-law of Sam Mitchell, dating to 1884. The marker lies within the platted area of the Mitchellville Cemetery which, according to *Tombstone Inscriptions in Cemeteries of Manatee County, Florida 1850-1980* prepared by the Manasota Genealogical Society, is said to include 25 burials. Field surveys within the Waters Edge property (west of Rye Road) resulted in no evidence of additional burials from that portion of the cemetery (ACI, 2004). However, the remainder of the cemetery included in the existing Rye Road right-of-way and east of the existing Rye Road pavement has not been subjected to cultural resource assessment. Also, during the Waters Edge survey, an assemblage of tile, brick, and a variety of glass fragments was collected from the ground surface south of the grave marker in the vicinity of a school building depicted in the 1958 *Manatee County Soil Survey*. These sites are included within the archaeological APE for this Proposed Action. Neither site is considered potentially eligible for listing in the NRHP.



Note: Shovel tests are not to scale.
Source: ACI, 2011.

FIGURE 3-19
APPROXIMATE LOCATION OF
SHOVEL TESTS WITHIN THE PROJECT AREA
Proposed New Bridge across the Manatee River
Final Environmental Impact Statement

No evidence of the previously recorded Rye Bridge Mound (8MA715) was encountered as a result of ACI's 2004 Waters Edge survey. However, because the site may have been situated within or near the project APE, it was anticipated that associated artifacts might be found during field survey on either the south or north bank of the Manatee River.

Based on the information contained in previously conducted studies and other site locational data (Piper/Janus, 1992), examination of the USGS Lorraine and Parrish Quadrangle Maps and the Manatee Soil Survey (USDA, 1983) as well as historic documents, some locales in the archaeological APE were considered to have a high or moderate potential for the discovery of prehistoric and/or historic archaeological sites. Prehistoric sites, if found, were expected to be prehistoric or historic artifact or lithic scatter sites. Also, it was anticipated that some evidence of historic settlement might be found south of the Manatee River where Fort Hamer may have once been located, and along Fort Hamer Road north of the river where early maps indicated there had once been a trail. These areas of archaeological probability are noted in the Project Research Design prior to initiating the field survey of this segment. The area where the town of Mitchellville/Rye was once located (along Rye Road north of the river) was tested by ACI during a previous survey and as a result, evidence of the town was not anticipated within the Rye Road APE. In addition, based on background research, there was a slight potential that Seminole War activities might have occurred in the vicinity of the Rye Road segment and thus, archaeologists were aware of the potential for mid 19th century artifacts.

Historical/Architectural Considerations

A review of the FMSF revealed that although a number of resources have been recorded in the project vicinity, only four are within the historical APE. One of these, a residence along 121st Avenue (8MA763), was recorded in 1990 as part of the *Cultural Resources Survey, 8.3 Miles of US 301 in Manatee County, Florida* (ACI, 1990). As a result of this survey, the SHPO determined that the Parrish Historic District, located north of the project area, was eligible for listing in the NRHP (Percy, 1991). Site 8MA763 is not included in the district boundaries because the residence is separated from the district by non-historic construction, historic buildings lacking integrity, and open space. A preliminary visual examination revealed that the same elements continue to exclude this building from the Parrish Historic District. Two other resources (8MA1325 and 8MA1326) associated with Moore's Dairy were recorded in 2003 as part of the *Cultural Resource Assessment Survey of the Moore's Dairy Addition to the Heritage Harbor DRI/ADA in Manatee County, Florida* (Janus, 2003b). In 2006, ACI conducted a survey of the US 301/Fort Hamer Road intersection which resulted in the updating of three previously recorded resources (including 8MA763) and the recording of three new resources. None were considered eligible for listing in the NRHP (ACI, 2006b). Of these six resources, one is within the project APE, 8MA1468. The preliminary visual examination of the APE also revealed that approximately 17 buildings appear to be 50 years of age or older and have to be recorded as part of the survey as well as a bridge and a resource group. Based on the preliminary reconnaissance, none appeared to be eligible for listing in the NRHP, individually or as part of a district.

Documentary Research Considerations

Although remains of the location of Fort Hamer (8MA315) were not identified within the archaeological APE during the archaeological survey in 2000 by ACI, nor by Janus Research (Janus, 1998a and 1998b), subsequent meetings with representatives of the THPO of the Seminole Tribe of Florida and federal agencies resulted in extensive archival research to further document the historical site and identify individual Seminoles present at the location. Discussions at a meeting conducted in March 2004 outlined the scope of additional research for the project, which would focus on the emigration of Seminoles from Fort Hamer. Historical documents and a marker indicate that Fort Hamer was an embarkation point for Seminoles emigrating from Florida to the Indian Territory in the west. Extensive research was conducted to determine what groups of Seminoles were included during this period of emigration and specific individuals who traveled from Fort Hamer. This research also provides further documentation on the location of the Fort, possible structures, military personnel, and its role in Florida history.

Documentary research methodology consisted of a comprehensive review of archaeological and historical literature, records, and other documents pertaining to Fort Hamer. This included cultural resource survey reports, published books and articles, newspaper files, unpublished manuscripts, maps, government documents and correspondence, military records, local histories and interviews. Consultations with Willard Steele and later Dr. Paul Backhouse, THPO for the Seminole Tribe of Florida; Emman Spain, Historic Preservation Officer for the Seminole Nation of Oklahoma; and Dr. Joe Knetsch, Government Analyst for the Survey and Mapping Division of the Florida Division of Historical Resources provided valuable insight into Seminole War Era forts and Seminole cultural history. Data relative to the historical research were obtained from the National Archives and Records Administration in Washington, D.C., the Seminole Tribe of Florida Ah-Tah-Thi-Ki Museum archives, the Oklahoma Historical Society, the FDHR, the Florida Division of State Lands, the State Library and Archives of Florida, the Eaton Florida History Room of the Manatee County Central Library, the Manatee County Property Appraiser's Office, and the Manatee County Historical Records Library at the Manatee County Clerk of Circuit Court. Documentary research was conducted from October 2003 through November 2004.

3.2.3 *ARCHAEOLOGICAL SURVEY RESULTS*

Archaeological field survey included both ground surface reconnaissance and the excavation of 399 test pits. Survey results for both the Fort Hamer Alternative and the Rye Road Alternative are discussed in this section.

Fort Hamer Alternative

Surveys along the Fort Hamer Alternative included the excavation of 118 shovel tests and the use of a metal detector within the archaeological APE near the south bank of the Manatee River. Twenty-two of the shovel tests were placed north of the Manatee River and 33 were placed south

of the river (and south of the area of site 8MA315) at 50-meter (164-foot) and 100-meter (328-foot) intervals, as well as judgmentally.

Three of the tests were dug in a marsh and hammock area within the Manatee River where the proposed bridge would cross (see **Figure 3-20**). South of the Manatee River, 60 shovel tests (ACI, 2000; Janus 1998a) were excavated at 25-meter (82-foot) and 50-meter (164-foot) intervals, as well as judgmentally. Of these 60 shovel tests, 22 were placed in the area where at least a portion of Fort Hamer (8MA315) may have been located (see Figure 3-20).

Of the total shovel test pits excavated throughout the archaeological APE of the Fort Hamer Alternative, only one yielded cultural material. Shovel test #42, located approximately 295 feet (90 meters) south of the Manatee River on the residential property immediately east of the Waterlefe Golf and Country Club (Figure 3-20), produced a single military button. The button, found at a depth of 20 centimeters (8 inches) below the ground surface, was in a disturbed context. Modern window pane glass was recovered from above and below the button. The cast, flat, white metal button is embossed with “U.S.” and a swirl design. It is a General Service coat button issued between 1837 and 1865. The occupation of Fort Hamer (1850) occurred within these dates, and thus the button is likely associated with this military outpost.

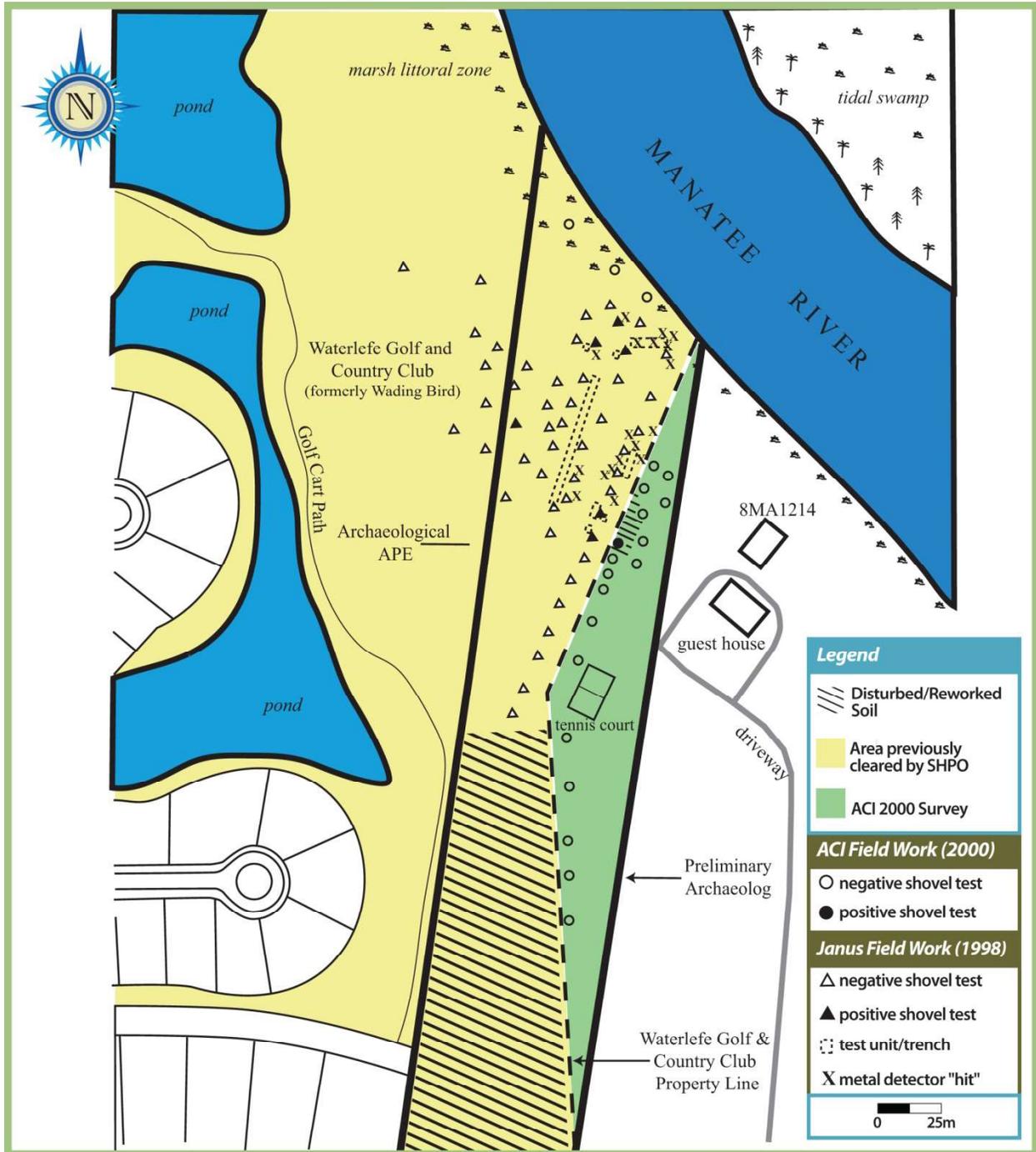
During the 1998 survey of the Wading Bird Golf and Country Club, a metal detector was used to check for the presence of historic material (buttons, nails, etc.) that might be associated with the Fort Hamer Site (Janus, 1998a). ACI also used this methodology to examine a 6,000-square meter area [100 meters (328 feet) by 60 meters (197 feet)]. Each “hit” was flagged and subsurface investigations were conducted. However, only modern materials were recovered. No evidence of historic features or artifacts was encountered.

As a result of ACI’s intensive testing and use of a metal detector in that portion of the archaeological APE where artifacts associated with Fort Hamer (8MA315) were expected, no evidence of the Fort was found. These results are in keeping with the previous cultural resource assessments conducted in the project area and resulted in three SHPO clearances of the “Fort Hamer Site” south of the Manatee River, and within a portion of the archaeological APE (Percy, 1998; Matthews, 2001; Gaske, 2005; Figure 3-20).

Rye Road Alternative

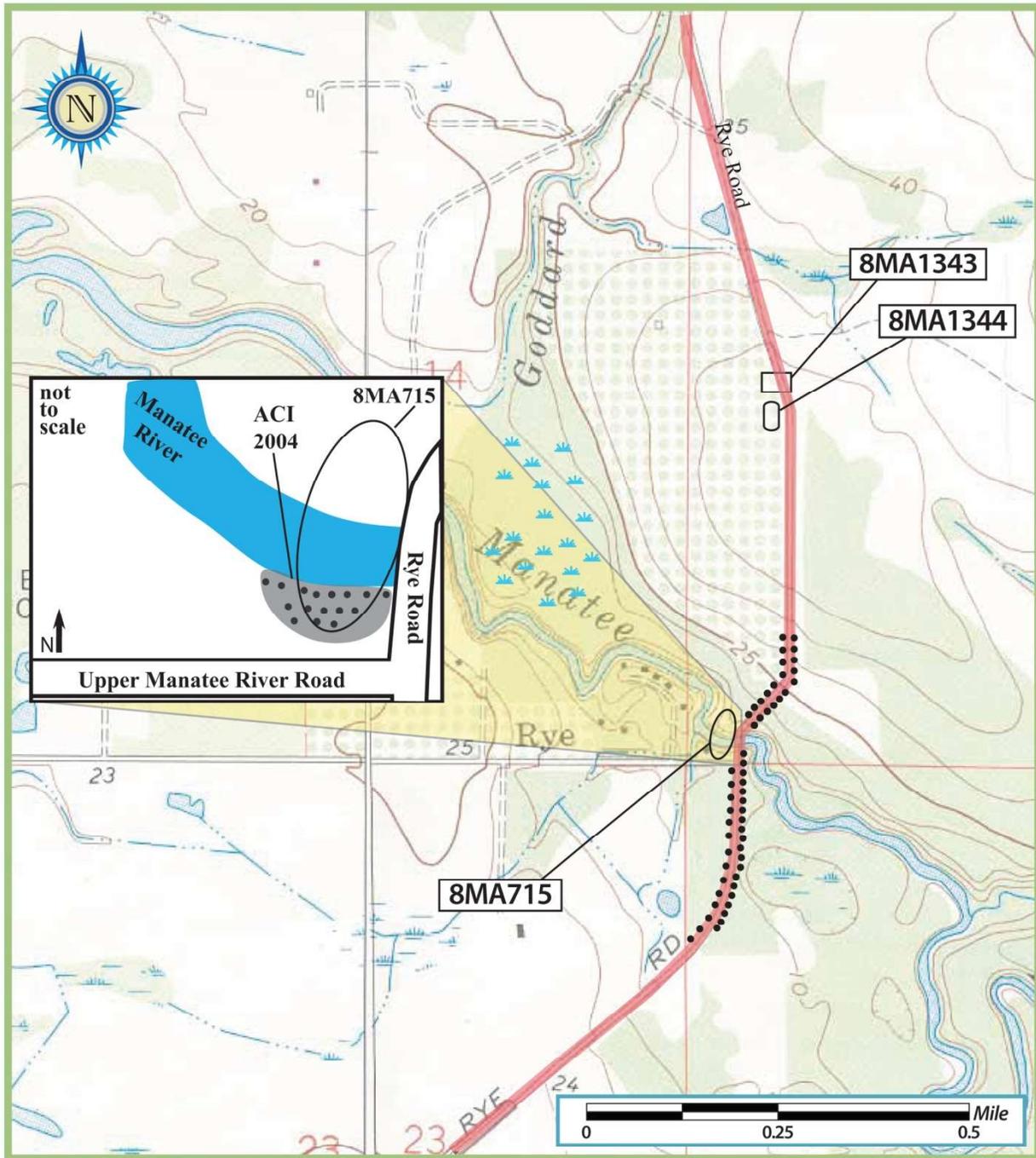
A total of 281 shovel tests were excavated along the Rye Road Alternative (**Figure 3-21**). Of these, 200 were excavated within areas of high probability at 25-meter (164-foot), 10-meter (33-foot), and 5-meter (16.5-foot) intervals. Close interval testing was performed in the vicinity of the Rye Bridge Mound Site (8MA715) in both the current survey for this Proposed Action and a previous survey of the River’s Reach property performed by ACI (ACI, 2004; Figure 3-21). Close interval testing also occurred around 8MA1343 and 8MA1344. In addition, 65 shovel tests were excavated at 50-meter (164-foot) intervals in areas considered to have moderate potential for archaeological sites, and 16 were placed judgmentally within the remainder of the alternative.

FIGURE 3-20
APPROXIMATE LOCATION OF SHOVEL TESTS WITHIN THE
FORT HAMER ALTERNATIVE



Note: Shovel tests are not to scale.
 Source: ACI, 2011.

**FIGURE 3-21
APPROXIMATE LOCATION OF SHOVEL TESTS WITHIN THE
RYE ROAD ALTERNATIVE**



Note: Shovel tests are not to scale.
Source: ACI, 2011.

As a result of ACI's intensive testing of the portion of the archaeological APE where the Rye Bridge Mound (8MA715) may have been located, no evidence of the mound was found during the Waters Edge survey (ACI, 2004) or during survey for this project. Further, the SHPO determined that the Waters Edge Historic Scatter (8MA1344) was ineligible for listing in the NRHP (ACI, 2004). Additional testing within the project APE did not reveal any further evidence of this site and the area where the site is located has been disturbed. No additional evidence of 8MA1343 was found but is discussed below. A brief description of each site follows and updated FMSF forms area in included in the CRAS (Appendix C).

8MA1343: The Mitchellville Cemetery is located in the southwest quarter of Section 13 in Township 34 South, Range 19 East, and the APE passes through the platted cemetery (Figure 3-21) (USGS, 1979). The cemetery measures approximately 300 feet by 150 feet (Wilson, 2004), and as noted above, it is bisected by the existing Rye Road. Mitchellville Cemetery was established c. 1879 and includes approximately 25 graves.

In 2004, ACI observed one grave marker dated 1884 for Thomas Urquhart, Sam Mitchell's father-in-law. Sam Mitchell colonized Mitcheville/Rey. The marble marker is in the shape of a column representing full life (see **Photo 1**). It is located near the western extremity of the APE, and a recently installed metal fence (see **Photo 2**) marks a portion of the cemetery west of Rye Road. During the survey for this project, four shovel tests were placed east of Rye Road (within the APE) and east of the cemetery in order to check for the presence of cemetery features (i.e., grave markers, soil changes). No evidence of the cemetery or associated features was found. The original and the updated FMSF form for the cemetery are located in the CRAS (Appendix C).

8MA1344: The Waters Edge Historic Scatter is located in the southwest quarter of Section 13 in Township 34 South, Range 19 East (USGS, 1972; Figure 3-21). The site is situated on the crest of a rise north of the Manatee River, immediately south of the Mitchellville Cemetery (8MA1343) (see **Photo 3**).

The site was discovered as a result of surface reconnaissance near the location of a school building depicted on the 1958 *Manatee County Soil Survey* during a survey of the Waters Edge property (ACI, 2004). All recovered materials were found on the surface and 12 shovel tests excavated in the site vicinity failed to produce subsurface artifacts or features. No structural evidence of a building was found. Based on surface reconnaissance and collection, the site as situated west of Rye Road, was estimated to extend some 100 meters north/south by 100 meters east/west. During the current survey, eight shovel tests, placed east of Rye Road (within the APE) at a 25-meter interval, failed to yield additional evidence of the site. Surface reconnaissance also did not uncover any evidence of 8MA1344.

During the original survey artifacts found at The Waters Edge Historic Scatter assemblage consisted of one fragment each of aqua glass, brown glass, "black" glass, slate, tile, and brick. In addition, two pieces of green glass, three pieces of cobalt glass, 10 pieces of solarized glass, and 10 pale green plate glass fragments were recovered.



Photo 1. Grave marker west of Rye Road.



Photo 2. Newly installed fence surrounding cemetery and grave marker west of Rye Road.



Photo 3. Area east of Rye Road and immediately east of 8MA1344, a historic surface scatter.

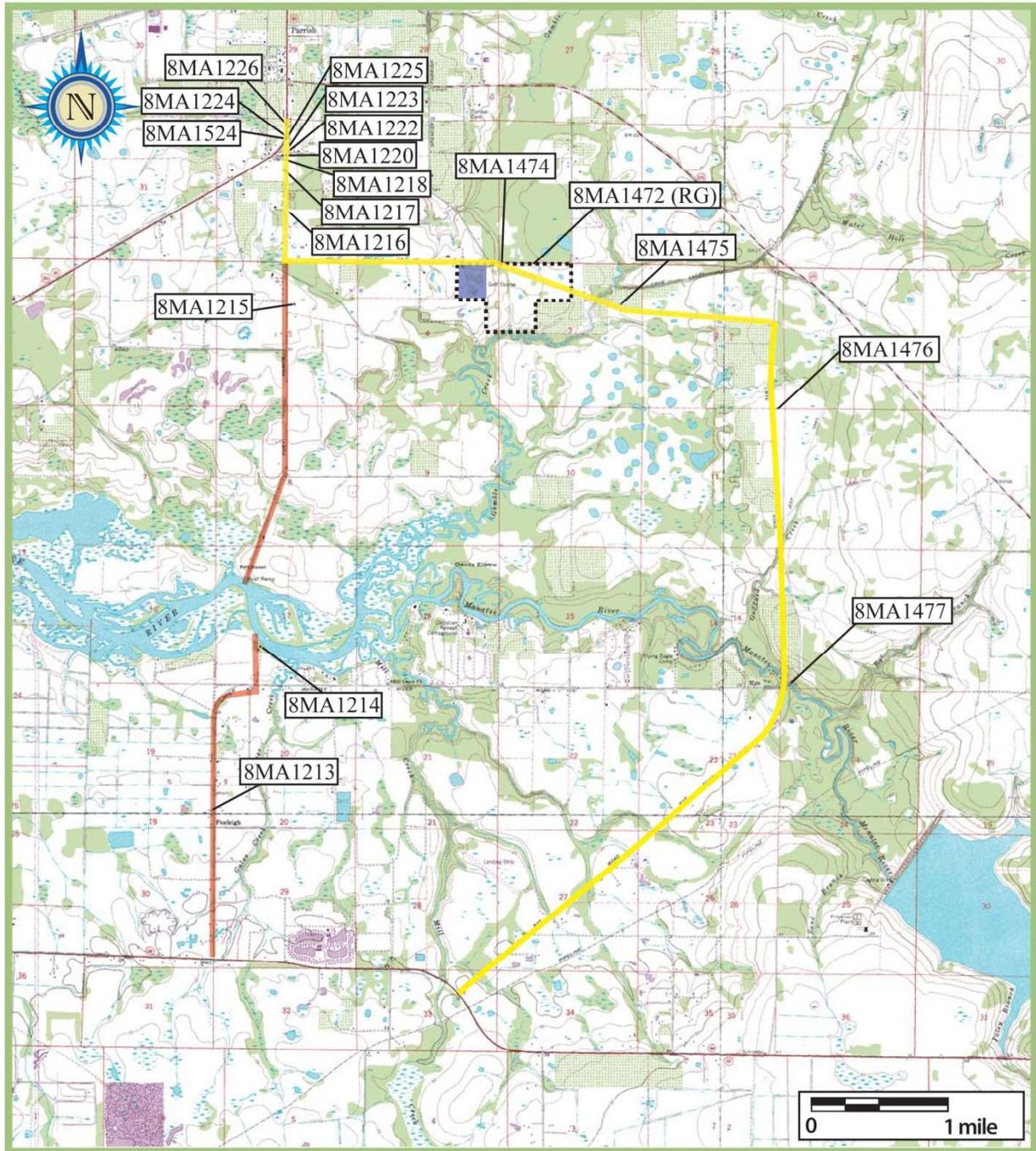
The artifact assemblage of the Waters Edge Historic Scatter was categorized into activity groups and classes similar to the system developed by Stanley South (1977). The groups represented include kitchen (vessel glass) and architecture (e.g., brick, tile, and window pane glass). Together, these represent residential activities. The date ranges of the various glass fragments converge at ca. 1870 to 1930, the occupational period of Rye/Mitchellville. Thus the Waters Edge Historic Scatter may be related to a Mitchellville household.

Although the location of 8MA1344 provides useful information in terms of historic settlement patterns and land use history, the low artifact density and diversity, and lack of diagnostic and subsurface features indicates that the site has a very low research potential. The Waters Edge Historic Scatter is not considered eligible for listing in the NRHP.

3.2.4 HISTORICAL/ARCHITECTURAL SURVEY RESULTS

Twenty-three historic resources were identified within the historical APEs along both the Fort Hamer Alternative and Rye Road Alternative (see **Figure 3-22** and **Table 3-15**). Four of these resources had been previously recorded (8MA763, 8MA1325, 8MA1326, and 8MA1468); however, none of these four are considered eligible for listing in the NRHP (Matthews 2001; Gaske, 2004 and 2006). SHPO also concurred that the 14 newly recorded resources (8MA1213-8MA1226) are not considered eligible for listing in the NRHP (Matthews, 2001). All of the recorded resources are residential buildings constructed between 1920 and 1956. These resources represent commonly occurring types of architecture for the locale and available data does not indicate any significant historical associations with these buildings. In addition, alterations to these historic buildings and/or their lack of contemporaneity precludes their eligibility for the NRHP either individually or collectively as a district.

**FIGURE 3-22
HISTORIC RESOURCES LOCATED WITHIN THE HISTORIC APE**



Note: Shovel tests are not to scale.
Source: ACI, 2011.

**TABLE 3-15
PREVIOUSLY AND NEWLY RECORDED
HISTORIC RESOURCES WITHIN THE HISTORICAL APE**

FMSF	Site Name/Address	Date	Style	NRHP Eligibility
<i>Fort Hamer Alternative</i>				
*8MA763	1609 2 nd Avenue (now 6009 121 st Avenue)	ca. 1930	Frame Vernacular	Not Eligible
8MA1213	108 Upper Manatee River Road	ca. 1950	Frame Vernacular	Not Eligible
8MA1214	11311 Upper Manatee River Road	ca. 1939	Mediterranean Revival	Not Eligible
8MA1215	4402 Fort Hamer Road	ca. 1940	Frame Vernacular	Not Eligible
8MA1216	5432 Fort Hamer Road	ca. 1940	Frame Vernacular	Not Eligible
8MA1217	5909 Fort Hamer Road	ca. 1951	Frame Vernacular	Not Eligible
8MA1218	5925 Fort Hamer Road	ca. 1924	Frame Vernacular	Not Eligible
8MA1219	12109 60 th Street East	ca. 1926	Frame Vernacular	Not Eligible
8MA1220	12116 60 th Street East	ca. 1940	Frame Vernacular	Not Eligible
8MA1221	12112 60 th Street East	ca. 1940	Frame Vernacular	Not Eligible
8MA1222	6104 Fort Hamer Road	ca. 1950	Frame Vernacular	Not Eligible
8MA1223	6108 Fort Hamer Road	ca. 1950	Frame Vernacular	Not Eligible
8MA1224	6112 Fort Hamer Road	ca. 1940	Frame Vernacular	Not Eligible
8MA1225	6204 Fort Hamer Road	ca. 1950	Frame Vernacular	Not Eligible
8MA1226	12129 US 301	ca. 1950	Ranch	Not Eligible
*8MA1325	Moore Dairy South Shed ± 110 Upper Manatee River Road	ca. 1945	Frame Vernacular	Not Eligible
*8MA1326	Moore Dairy Building #1 112 Upper Manatee River Road	ca. 1950	Masonry Vernacular	Not Eligible
*8MA1468	6111 121 st Avenue East	Ca. 1954	Frame Vernacular	Not Eligible
<i>Rye Road Alternative</i>				
8MA1472	Palmetto Pines Golf Course Resource Group	ca. 1956	Not applicable	Not Eligible
8MA1474	Clubhouse Palmetto Pines Golf Course	ca. 1956	Masonry Vernacular	Not Eligible
8MA1475	15450 Golf Course Road	ca. 1950	Masonry Vernacular	Not Eligible
8MA1476	3250 Rye Road	ca. 1945	Frame Vernacular	Not Eligible
8MA1477	Rye Road Bridge	ca. 1950	Beam/Girder	Not Eligible

* Denotes previously recorded resource.

Finally, the newly recorded resources are separated from the Parrish Historic District (located north of the project APE) by non-historic construction, historic buildings lacking integrity, and open space. In addition, the Proposed Action would end approximately 160 feet to the west of the Parrish Historic District boundary for the westbound lanes of US 301, and approximately 550 feet to the west of the district boundary for the eastbound lanes. Thus, the district is not affected.

Five historic resources were identified within the Rye Road Alternative. These include one resource group (8MA1472), one bridge (8MA1477), and three buildings (8MA1474-8MA1476). Like those resources along the Fort Hamer Alternative, these resources are commonly occurring types of architecture with no identified significant historical associations. Therefore, they are not considered eligible for listing in the NRHP. The completed FMSF forms for the historic resources recorded for this CRAS are located in Appendix C. Also in Appendix C are the FMSF forms for the four previously recorded structures. The FMSF form for 8MA763 was updated in 2006 as part of the CRAS for the *US 301 (SR 43)/Fort Hamer Road Intersection Safety Improvement Project Development and Environmental (PD&E) Study* (ACI, 2006a).

The FMSF form for 8MA1468 was also recorded as part of this survey (ACI, 2006a) and not updated. The FMSF forms for 8MA1325 and 8MA1326 were not updated as field survey indicated no changes to the structures. Individual site descriptions follow.

Previously Recorded Resources

8MA763: This Frame Vernacular residence was constructed ca. 1930 at 6009 121st Avenue East (formerly 1609 2nd Avenue). This residence is a typical example of Frame Vernacular structures found throughout Manatee County and available information did not reveal significant historical associations. As a result, 8MA763 does not appear NRHP eligible.

8MA1325: This Frame Vernacular barn at the southeast corner of the Moore Dairy Farms parcel, along Upper Manatee River Road between East 3rd Avenue and East 2nd Avenue, was constructed ca. 1945. The concrete block and wood frame residence has a continuous concrete block foundation. It has a combination hip and shed roof, clad in 5-V crimp metal sheeting. This Frame Vernacular barn is typical of post World War II construction found throughout Florida, and numerous non-historic alterations have compromised its architectural integrity. Furthermore, limited research revealed no historical significance. Therefore, 8MA1325 does not appear NRHP eligible (Janus, 2003b).

8MA1326: This Masonry Vernacular building sits within the Moore Dairy Farms parcel, along Upper Manatee River Road between East 3rd Avenue and East 2nd Avenue, was constructed ca. 1950. The concrete block structure has a continuous concrete block foundation and a gable roof, clad with 5-V crimp metal sheeting. This Masonry Vernacular building is typical of post World War II dairy construction found throughout Florida. Due to its late construction date, limited historical significance evidenced in the available data, and non-historic additions, 8MA1326 does not appear NRHP eligible (Janus, 2003b).

8MA1468: This Frame Vernacular residence at 6111 121st Avenue East was constructed ca. 1954. It has a continuous foundation of concrete block, walls faced with vertical and horizontal wood siding, and gable, with a brick chimney east of the ridge line, and flat roofs faced with composition shingle. This residence is a typical example of Frame Vernacular structures found throughout Manatee County, and available information did not reveal significant historical associations. As a result, 8MA1468 does not appear NRHP eligible (ACI, 2006b).

Newly Recorded Resources

8MA1213: This one-story Frame Vernacular residence and dairy constructed ca. 1950 is located at 108 Upper Manatee River Road. The wood frame residence has a continuous concrete block foundation, asbestos shingle siding, a hip roof, and an interior brick chimney. This Frame Vernacular residence and dairy is typical of post World War II construction found throughout Florida. Due to its late construction date, limited historical significance evidenced in the available data, and alterations, 8MA1213 does not appear NRHP eligible.

8MA1214: This residence, a two-story Mediterranean Revival style building constructed ca. 1939, is located at 11311 Upper Manatee River Road. The irregularly-shaped building is surfaced with stucco, has a concrete slab foundation, a flat roof, and six- and eight-light metal casement and one-light fixed windows. Historical research at the Eaton Florida History Room of the Manatee County Public Library indicated that this building was constructed as a ranch ca. 1939 by Wilson S. Isherwood. It appears that Isherwood retained ownership of the property through the mid- to late-1950s. No other information was available concerning Isherwood or subsequent owners and the current owner was not cooperative with ACI's efforts to research the history and possible alterations to the building.

8MA1215: This Frame Vernacular style residence located at 4402 Fort Hamer Road was constructed ca. 1940. The one-story building is characterized by weatherboard siding, a gable roof, a continuous concrete block foundation, and two porches situated on the west elevation. This residence is typical of Frame Vernacular architecture found throughout Manatee County. In addition, the limited data available does not indicate any historical significance. Therefore, it does not appear that 8MA1215 is NRHP eligible.

8MA1216: This one-story residence at 5432 Fort Hamer Road was constructed ca. 1940. The rectangular building has a continuous concrete block foundation, a hip roof, an interior masonry chimney, and a porch with a shed roof on the west elevation. This typical Frame Vernacular residence has lost its architectural integrity due to a substantial number of alterations. In addition, the limited information available did not indicate any historical significance. Thus, 8MA1216 does not appear NRHP eligible.

8MA1217: This Frame Vernacular residence located at 5909 Fort Hamer Road was constructed ca. 1951. The rectangular, one-story building has a gable roof, asbestos shingle and weatherboard siding, and a continuous concrete block foundation. This Frame Vernacular building is typical of post World War II architecture found throughout the area. Available information did not indicate any historical significance. As a result, 8MA1217 does not appear NRHP eligible.

8MA1218: This one-and-one-half-story residence was constructed ca. 1924 in the Frame Vernacular style at 5925 Fort Hamer Road. This irregularly-shaped building has a brick pier foundation, weatherboard siding, and a gable roof with a shed dormer on the north elevation. This residence, of no known historical significance, is typical of 1920s Boom era architecture

found throughout Florida. Furthermore, alterations have impacted the building's architectural integrity. Thus, 8MA1218 does not appear to meet NRHP eligibility criteria.

8MA1219: This Frame Vernacular residence was constructed ca. 1926 at 12109 60th Street East. The one-story rectangular building has a concrete block pier foundation, a combination of plywood, asbestos shingle, and drop siding, a gable roof, and two-light metal awning windows. Non-historic and non-sympathetic alterations have diminished the architectural integrity of this typical Frame Vernacular residence. Furthermore, the limited historical data available did not indicate any significance. Thus, 8MA1219 does not appear NRHP eligible.

8MA1220: This Frame Vernacular one-story residence located at 12116 60th Street East was constructed ca. 1940. This rectangular building has asbestos shingle and plywood siding, a continuous concrete block foundation, a gable roof, and a brick chimney located on the exterior west wall. Given the similarity of this residence to others in Manatee County and the lack of historical significance in the available data, 8MA1220 does not appear NRHP eligible.

8MA1221: Constructed ca. 1940, this Frame Vernacular residence was moved from Sarasota to its current location at 12112 60th Street East around 1948, according to a neighbor. The one-story rectangular residence has a continuous concrete block foundation, asbestos shingle siding, a gable roof, and 1/1 wood double-hung sash windows. Many examples of this type of Frame Vernacular residence remain throughout the immediate area and Manatee County. Additionally, limited research did not show any significant historical associations. Therefore, 8MA1221 does not appear to meet NRHP eligibility criteria.

8MA1222: This rectangular one-story residence located at 6104 Fort Hamer Road was constructed ca. 1950. The Frame Vernacular building is characterized by a continuous concrete block foundation, metal siding, a gable and shed roof, and two- and three-light metal awning and 2/2 metal single-hung sash windows. Limited research did not suggest that this residence possesses any historical significance. Furthermore, this building is typical of post World War II Frame Vernacular residences found throughout Florida. Therefore, 8MA1222 does not appear NRHP eligible.

8MA1223: This one-story rectangular building was constructed ca. 1950 at 6108 Fort Hamer Road. This residence has a concrete block pier foundation with brick infill, a gable roof, and weatherboard siding. Available data did not demonstrate that this building had any historical significance. Furthermore, this modest residence is a typical example of Frame Vernacular residential construction found throughout the surrounding area. Consequently, 8MA1223 does not appear NRHP eligible.

8MA1224: Constructed ca. 1940, this rectangular, one-story Frame Vernacular residence is located at 6112 Fort Hamer Road. Given the extent of the non-historic and non-sympathetic alterations to this residence, in combination with its lack of historical significance as evidenced in the available data, 8MA1224 does not appear eligible for listing in the NRHP.

8MA1225: This Frame Vernacular residence located at 6204 Fort Hamer Road was constructed ca. 1950. This modest residence is a typical example of Frame Vernacular residential construction found throughout Manatee County. In addition, non-historic alterations have diminished this building's architectural integrity. As available data did not demonstrate any historical significance, 8MA1225 does not appear NRHP eligible.

8MA1226: This one-story rectangular residence was constructed ca. 1950 in the Ranch style. This masonry building is surfaced with stucco, has a continuous concrete block foundation, a hip roof and two interior masonry chimneys. This residence is typical of post World War II residential architecture found throughout the region. In addition, limited research did not reveal any historical significance. Thus, 8MA1226 does not appear NRHP eligible.

8MA1475: This two-story Masonry Vernacular style structure was constructed ca. 1950 at 15450 Golf Course Road. Its concrete block walls, faced with clapboard on the second story, rest on a continuous foundation, also of concrete block. It is topped by a gable roof, clad with composition shingle, and there are brick chimneys located within the north slope of the roof. This is a typical example of the Masonry Vernacular style found throughout Manatee County, and limited research revealed no significant historical associations. Therefore, 8MA1475 does not appear eligible for listing in the NRHP.

8MA1476: This Frame Vernacular style structure was constructed ca. 1945 at 3250 Rye Road. This is a typical example of the Frame Vernacular style found throughout Manatee County, and limited research revealed no significant historical associations. Furthermore, additions and alterations have compromised its historic integrity. Therefore, 8MA1476 does not appear eligible for listing in the NRHP.

8MA1477: Florida Department of Transportation (FDOT) bridge number 134022 is an example of a typical beam/girder bridge found in Manatee County. It was constructed over the Manatee River ca. 1950 with an overall span of approximately 100 feet 6.5 inches running north to south, while its overall width is approximately 21 feet 6 inches. It consists of an approach span, at 10 feet 8 inches, and a main span of 89 feet 10.5 inches. It is supported by seven concrete bent piers, each with four piles. The superstructure of the bridge contains low concrete wall on either side, supporting a steel guardrail on steel posts (unknown date). This bridge, 8MA1477, is typical of bridge construction found in Manatee County, and limited research did not uncover any significant historical associations. Therefore, this resource does not appear to be eligible for listing in the NRHP (Jackson, 1992). Note: This bridge structure was demolished and replaced with a new bridge structure in 2008.

Resource Group

8MA1472: The Palmetto Pines Golf Course Resource Group is a 217-acre golf course complex at 14355 Golf Course Road in Manatee County. The resource group includes five individual resources, two of which are contributing, and three of which are non-contributing. The two contributing resources are the Clubhouse (8MA1474), which dates to ca. 1956, and the original

40-acre nine-hole golf course, known as the “White Course,” (purple area on Figure 3-22) which dates to ca. 1956, and was constructed by Floyd Myers. Mr. Myers was a “snow bird” from Akron, Ohio who owned a farm and a car dealership in the area. He constructed the “White Course” as a private course for use by himself and invited guests. Currently, Golf Course Road passes through the resource group. Per telephone conversation with the FMSF office on September 27, 2006, this course was not given a separate resource number. The Club House is located to the north of the road and the “White Course” is to the south of the road (Figure 3-22, purple area). However, neither are situated within the historical APE. They lie approximately 100 feet outside of the APE. The three non-contributing resources are nine-hole courses: the “Blue Course,” the “Orange Course,” and the “Red Course,” all of which date to the mid-1960s. Golf Course Road, which was once a dirt road has retained its name. In summary, the White Course, built in 1956, was not the first golf course in Manatee County (the Bradenton Country Club, for example, came at least 30 years prior to Palmetto Pines). Furthermore, non-historic golf course additions (Blue, Orange, and Red courses) have compromised its integrity. Therefore, 8MA1472 is not considered eligible for listing in the NRHP.

8MA1474: This Masonry Vernacular style structure was constructed ca. 1956 at 14355 Golf Course Road. This is a typical example of the Masonry Vernacular style found throughout Manatee County, and limited research revealed no significant historical associations. Therefore, 8MA1474 does not appear eligible for listing in the NRHP.

3.2.5 DOCUMENTARY RESEARCH RESULTS

Extensive archival and historical research of available materials resulted in a comprehensive documentation of Fort Hamer and the Seminoles who emigrated from the post (provided in Appendix C). Research was successful in consolidating data gathered from a wide variety of sources into one document. This document began with a detailed outline of the available data, resulting from archival and historical research conducted at the local, regional, and national level, which was then reviewed by Willard Steele and Dr. Joe Knetsch. Historical military and local maps assisted in providing an approximate location for Fort Hamer on the southern banks of the Manatee River, while Post Returns for Fort Hamer provided specific information regarding officers stationed at the fort and daily operations. Military correspondence and government reports outline specific structures located at Fort Hamer and its function as a supply depot and central post among several military installations. In addition, these reports outline the procedures for Seminole emigration from Fort Hamer following the Indian Scare of 1849 and indicate negotiations with the Seminoles, specific groups of Native Americans who were deported, how much they were paid, as well as names of vessels they were transported on and the route they took upon reaching New Orleans. Subsistence Rolls and Annual Annuity Reports published in Raymond C. Lantz’s *Seminole Indians of Florida 1850-1874*, were critical in providing names of individuals who emigrated from Fort Hamer to the Indian Territory in the west. Using available data, the research conducted was successful in providing a thorough history of Fort Hamer, including the emigration of 85 Seminoles from this point. Although the exact location of the fort along the southern banks of the Manatee River remains elusive, as all

fort structures were removed from the post and the coastline along the river has shifted, its historical associations continue to be an important part of Florida history.

Cultural impacts are discussed in Section 4.2.

3.3 *NATURAL ENVIRONMENT*

This section discusses the natural environment features present within the Fort Hamer Alternative and Rye Road Alternative study areas.

3.3.1 *LAND USE/VEGETATIVE COVER*

Fort Hamer Alternative

The Fort Hamer Alternative Study Area is located in east-central Manatee County along the Manatee River. I-75 and the developed urban areas of Bradenton and Palmetto lie west of the study area, while mixed rural and suburban areas occur east of the study area. The Fort Hamer Alternative Study Area and surrounding areas have experienced considerable growth and development within the past decade. During this time, residential subdivisions, a school, and golf course amenities have been constructed within and immediately adjacent to the study area; however, much of the study area remains in agriculture, forested uplands, open land, and surface waters (including wetlands).

Table 3-16 shows the land use/vegetative cover types in the Fort Hamer Alternative along with their FDOT Florida Land Use Cover and Forms Classification System (FLUCFCS) and U.S. Fish and Wildlife Service (FWS) classifications. As shown in Table 3-16, uplands account for 74.3 percent of the Fort Hamer Alternative Study Area. Of this percentage, developed lands, including residential areas, golf courses, and roadways make up the largest area (42.8 percent of the study area), followed by agriculture (25.5 percent of the study area). Undeveloped non-agricultural and forested upland areas account for only 6.0 percent of the Fort Hamer Alternative Study Area. Upland forested areas within the study area generally consist of small remnant patches of shrub and brushland, Brazilian pepper (*Schinus terebinthifolius*), live oak (*Quercus virginiana*), cabbage palm (*Sabal palmetto*), and hardwood conifer mixed. Brazilian pepper (a nuisance exotic shrub) is prevalent in many of the upland communities present in this alternative.

Wetlands and other surface waters within the Fort Hamer Alternative make up 25.7 percent of the study area and are discussed in Section 3.3.2.

Land use/vegetative cover maps of the Fort Hamer Alternative Study Area are provided in the Biological Assessment (BA) in Appendix E of this FEIS.

**TABLE 3-16
LAND USE/VEGETATIVE COVER TYPES WITHIN
THE FORT HAMER ALTERNATIVE STUDY AREA**

	FLUCFCS Classification¹	FWS Classification²	Description	Acres	Total Acres	Percent of Study Area
Uplands						
Developed Lands	110	N/A	Residential – Low Density	605.5		
	120	N/A	Residential – Medium Density	741.2		
	130	N/A	Residential – High Density	119.4		
	140	N/A	Commercial and Services	73.9		
	150	N/A	Industrial	0.1		
	170	N/A	Institutional	50.3		
	182	N/A	Golf Courses	196.8		
	185	N/A	Parks	5.2		
	740	N/A	Disturbed Land	25.0		
	814	N/A	Roads and Highways	34.4		
	830	N/A	Utilities	8.2		
Total Developed Lands					1,860.0	42.8
Agriculture	210	N/A	Cropland and Pastureland	828.8		
	214	N/A	ROW Crops	26.8		
	220	N/A	Tree Crops	6.3		
	230	N/A	Feeding Operations	43.7		
	240	N/A	Nurseries and Vineyards	65.5		
	250	N/A	Specialty Farms	5.6		
	261	N/A	Fallow Cropland	131.5		
Total Agriculture					1,108.2	25.5
Open Lands	190	N/A	Open Land	157.4		
Total Open Lands					157.4	3.6
Forested Uplands	320	N/A	Shrub and Brushland	38.6		
	410	N/A	Upland Coniferous Forest	11.8		
	411	N/A	Pine Flatwoods	15.5		
	422	N/A	Brazilian Pepper	2.9		
	427	N/A	Live Oak	6.5		
	428	N/A	Cabbage Palm	0.3		
	434	N/A	Hardwood Conifer Mixed	29.5		
Total Forested Uplands					105.1	2.4
Total Uplands					3,230.7	74.3
Surface Waters						
Freshwater Lakes and Reservoirs	530	POWHx	Ponds, Reservoirs (includes stormwater ponds)	228.8		
Total Freshwater Lakes and Reservoirs					228.8	5.3

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TABLE 3-16 (CONTINUED)
LAND USE/VEGETATIVE COVER TYPES WITHIN
THE FORT HAMER ROAD ALTERNATIVE STUDY AREA

	FLUCFCS Classification¹	FWS Classification²	Description	Acres	Total Acres	Percent of Study Area
Drainage Ditches	510	PEM2Jx	Creeks and Upland-Cut Drainage Ditches	17.5		
Total Freshwater Ditches					17.5	0.4
Freshwater Wetlands	615	PFO1P	Stream and Lake Swamps (Bottomland)	272.7		
	617	PFO1C	Mixed Wetland Hardwoods	17.0		
	619	PFO3Y	Exotic Wetland Hardwoods	1.1		
	630	PFO6/7E	Wetland Forested Mixed	176.0		
	631	PSS1C	Wetland Shrub	1.7		
	641	PEM1E	Freshwater Marshes	121.8		
	643	PEM2B	Wet Prairies	21.6		
	644	PEM1H	Emergent Aquatic Vegetation	9.6		
Total Freshwater Wetlands					621.5	14.3
Estuarine Streams	510	E1UB2L & E1UB2N	Streams and Waterways (including rivers)	123.5		
Total Estuarine Streams					123.5	2.8
Estuarine Wetlands	612	E2SS3N	Mangrove Swamps	11.7		
	631	E2SS3A	Wetland Shrub	0.6		
	642	E2EM1N & E2EM1P	Saltwater Marshes	113.2		
Total Estuarine Wetlands					125.5	2.9
Total Surface Waters					1,116.8	25.7
Total Land Use/Vegetative Cover					4,347.5	100.0

¹ FDOT, 1999.

² Cowardin, *et al.*, 1979.

Rye Road Alternative

The Rye Road Alternative Study Area is located east of the Fort Hamer Alternative and west of the Manatee River Dam. Compared to the Fort Hamer Alternative, the Rye Road Alternative Study Area is more rural (**Table 3-17**). Rural habitats within the study area consist of agriculture, forested uplands, open land, and surface waters (including wetlands). Along the Fort Hamer Road portion of the study area, low density residences are present along with some improved pasture. Along the western portion of Golf Course Road, a subdivision has been built within the study area west of Spencer Parrish Road. Between Gamble Creek Road and Jim Davis Road, a golf course and associated buildings are located on the north side of Golf Course Road.

TABLE 3-17
LAND USE/VEGETATIVE COVER TYPES WITHIN THE RYE ROAD ALTERNATIVE STUDY AREA

	FLUCFCS Classification¹	FWS Classification²	Description	Acres	Total Acres	Percent of Study Area
Uplands						
Developed Lands	110	N/A	Residential – Low Density	788.8		
	120	N/A	Residential – Medium Density	846.7		
	129	N/A	Medium Density Under Construction	72.6		
	140	N/A	Commercial and Services	52.3		
	142	N/A	Wholesale Sales and Services	0.5		
	143	N/A	Professional Services	2.3		
	148	N/A	Cemeteries	3.8		
	170	N/A	Institutional	7.0		
	171	N/A	Educational Facilities	12.5		
	175	N/A	Governmental	6.3		
	182	N/A	Golf Courses	164.0		
	740	N/A	Disturbed Land	1.5		
	814	N/A	Roads and Highways	155.0		
	833	N/A	Water Supply Plant	0.9		
	834	N/A	Sewage Treatment	0.3		
Total Developed Lands					2,114.2	28.4
Agriculture	210	N/A	Cropland and Pastureland	503.7		
	211	N/A	Improved Pasture	1065.7		
	212	N/A	Unimproved Pasture	41.5		
	220	N/A	Tree Crops	66.6		
	221	N/A	Citrus Groves	92.7		
	224	N/A	Abandoned Groves	108.0		
	240	N/A	Nurseries and Vineyards	31.1		
	241	N/A	Tree Nursery	7.8		
	242	N/A	Sod Farms	316.8		
	250	N/A	Specialty Farms	4.4		
	260	N/A	Other Open Lands (Rural)	139.9		
Total Agriculture					2,378.1	32.0
Open Lands	190	N/A	Open Land	354.5		
	193	N/A	Urban Land in Transition without positive indicators of intended activity	3.6		
Total Open Lands					358.1	4.8
Forested Uplands	320	N/A	Shrub and Brushland	307.0		
	321	N/A	Palmetto Prairies	63.3		
	410	N/A	Upland Coniferous Forests	14.9		
	411	N/A	Pine Flatwoods	83.6		

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TABLE 3-16 (CONTINUED)
LAND USE/VEGETATIVE COVER TYPES WITHIN THE RYE ROAD ALTERNATIVE STUDY AREA

	FLUCFCS Classification¹	FWS Classification²	Description	Acres	Total Acres	Percent of Study Area
Forested Uplands (continued)	412	N/A	Longleaf Pine-Xeric Oak	118.4		
	413	N/A	Sand Pine	110.6		
	422	N/A	Brazilian Pepper	0.5		
	427	N/A	Live Oak	63.0		
	434	N/A	Hardwood-Conifer Mixed	303.9		
	436	N/A	Upland Scrub, Pine and Hardwoods	15.4		
	438	N/A	Mixed Hardwoods	2.05		
Total Forested Uplands					1,082.6	14.6
Total Uplands					5,933.0	79.8
Surface Waters						
Freshwater Lakes and Reservoirs	520	POWH	Lakes	0.2		
	530	POWHx	Reservoirs (includes stormwater ponds)	172.4		
	534	POWHx	Reservoirs less than 10 acres	13.2		
Total Freshwater Lakes and Reservoirs					185.7	2.5
Drainage Ditches	510	PUB2Jx/PEM1 Jx/R2UB2	Upland-Cut Drainage Ditches/Channelized Creeks	31.0		
Total Freshwater Ditches					31.0	0.4
Freshwater Streams	510	R2UB2	Streams and Waterways (including rivers)	28.7		
Total Freshwater Streams					28.7	0.4
Freshwater Wetlands	615	PFO1P	Stream and Lake Swamps (Bottomland)	814.4		
	617	PFO1C	Mixed Wetland Hardwoods	12.9		
	618	PSS1C	Willow and Elderberry	2.8		
	621	PFO2C	Cypress	7.9		
	630	PFO1C	Wetland Forested Mixed	133.9		
	641	PEM1C	Freshwater Marshes	169.8		
	643	PEM1C	Wet Prairies	102.3		
	644	PAB3	Emergent Aquatic Vegetation	8.2		
	653	PUB2	Intermittent Ponds	0.9		
Total Freshwater Wetlands					1,252.9	16.9
Total Surface Waters					1,498.3	20.2
Total Land Use/Vegetative Cover					7,431.3	100.0

¹ FDOT, 1999.

² Cowardin, *et al.*, 1979.

Along the eastern portion of Golf Course Road, more residences are present among large areas of forested uplands and agriculture habitats. Rural areas are most prominent in the northern and central portions of Rye Road. Commercial and residential areas occur along the southern portion of Rye Road.

Uplands account for approximately 80 percent of the Rye Road Alternative Study Area. Of this percentage, developed lands (including residential areas, golf courses, parks, and roadways) make up 28.4 percent of the study area. Agriculture lands make up the largest area (32.0 percent of the study area). Undeveloped uplands, including open land (non-agricultural) and forested areas, account for 19.4 percent of the study area. Brazilian pepper is prevalent in many of the upland communities present in this alternative.

Freshwater wetlands and other surface waters make up 20.2 percent of the Rye Road Alternative Study Area and are discussed in Section 3.3.2.

Land use/vegetative cover maps of the Rye Road Alternative Study Area are provided in the BA in Appendix E of this FEIS.

Potential land use/vegetative cover impacts resulting from implementation of each alternative are discussed in Section 4.3.1.

3.3.2 WETLANDS

Pursuant to Executive Order 11990, *Protection of Wetlands*, federal actions should avoid, to the extent possible, the long- and short-term adverse impacts associated with the destruction or modification of wetlands and avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative. In accordance with this order, an assessment of wetlands and other surface waters, which may be affected by implementation of either the Fort Hamer Alternative or Rye Road Alternative, has been undertaken.

Wetlands are defined by the U.S. Army Corps of Engineers (USACE) (Federal Register, 1982) and the EPA (Federal Register, 1980) as:

“Those areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bog, and similar areas.”

This section provides a summary of the surface waters, including wetlands, found within the study areas of the two build alternatives. The study area of each build alternative is defined as the area contained within a 0.5-mile buffer of the alternative’s centerline. Maps and descriptions of the surface waters and wetlands found within each build alternative are provided in the Wetlands Evaluation Report (WER) contained in Appendix D of this FEIS.

Fort Hamer Alternative

The Fort Hamer Alternative is laterally bisected by the Manatee River, which flows east to west at this location. Within this area, the Manatee River has a relatively slow current, tidally influenced, and broad (approximately 2,100 feet). The mean high water and mean low water elevations of the river at the Fort Hamer Park boat ramp at the southern terminus of Fort Hamer Road are +0.53 feet and -1.21 feet NAVD 88 (North Atlantic Vertical Datum), respectively. Black needle rush (*Juncus roemerianus*) dominated salt marsh occurs on both sides of the main channel. These marshes are interspersed with long, narrow depositional formations supporting mangroves, stream swamp, and mixed wetland forested habitats.

Within the study area, natural wetland systems north of the river include a large freshwater marsh on the west side of Fort Hamer Road and a large stream swamp east of Fort Hamer Road. The freshwater marsh is ringed by a narrow band of mixed wetland hardwoods which, in turn, are surrounded by residential developments and stormwater ponds. These wetlands drain south through the large freshwater marsh and eventually to the Manatee River via a small creek located along the western boundary of Fort Hamer Park. The stream swamp east of Fort Hamer Road is bordered by a residential development to the north and vacant land (former agricultural fields) to the south. This swamp drains east to Gamble Creek, a large tributary to the Manatee River.

Few natural wetland systems remain on the south side of the Manatee River within the Fort Hamer Alternative Study Area. Narrow, mixed forested wetlands that drain to the Manatee River are located within the Waterlefe subdivision adjacent to the river and in a low-density residential area on both sides of Upper Manatee River Road. Several other small, isolated wetlands are scattered throughout the study area south of the river. Numerous excavated stormwater ponds and golf course ponds are located throughout the western half of the study area on both sides of the river.

Rye Road Alternative

Between SR 64 and Upper Manatee River Road, Rye Road crosses five small tributaries of Mill Creek, which flows from south to north to the Manatee River. These tributaries contain seasonal or intermittent flows and are typically bordered by red maple (*Acer rubrum*), pop ash (*Fraxinus caroliniana*), and laurel oak (*Quercus laurifolia*).

Rye Road crosses the Manatee River immediately north of its intersection with Upper Manatee River Road. At this location, the river is relatively narrow (approximately 73 feet wide) and shallow with a moderately swift current. Streams and lake swamps (bottomland) surround each side of this river crossing and consist predominately of red maple, sweetbay (*Magnolia virginiana*), laurel oak, swamp dogwood (*Cornus foemina*), water oak (*Quercus nigra*), pop ash, and cabbage palm.

Golf Course Road crosses Gamble Creek approximately 900 feet east of Jim Davis Road (Appendix J-2, Sheet No. 13). Gamble Creek flows north to south into the Manatee River. At this crossing, this channelized stream has a moderately swift current and shallow water depth. Adjacent land use types consist of abandoned citrus groves, improved pasture, and upland live oak forests.

Natural wetland systems within the Rye Road Alternative Study Area include several channelized creeks surrounded by forested wetlands/floodplains. Dominant vegetation within these forested wetlands consists of red maple, laurel oak, cabbage palm, and sweetbay. Most of these forested floodplain forests are bordered by either residential areas and/or agriculture fields. All eventually flow to the Manatee River either directly or via connected creeks.

In the southern portion of the Rye Road Alternative Study Area, isolated freshwater marshes are dominated by torpedo grass (*Panicum repens*), pickerelweed (*Pontederia cordata*), and primrose willow (*Ludwigia peruviana*).

Throughout the Rye Road Alternative Study Area, several isolated reservoirs are present that serve as either livestock ponds, stormwater management facilities for residential subdivisions/golf courses, or have been excavated by private landowners.

Potential wetland impacts resulting from implementation of each alternative are discussed in Section 4.3.2.

3.3.3 ESSENTIAL FISH HABITAT

3.3.3.1 Introduction

The *Magnuson-Stevens Fishery Conservation and Management Act*, as amended through October 11, 1996 (MSFCMA), requires the regional Fishery Management Councils and the Secretary of Commerce to describe and identify Essential Fish Habitat (EFH) for species under federal Fishery Management Plans. EFH is defined in the MSFCMA as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” The term “fish” includes finfish, crabs, shrimp, and lobsters in the Gulf of Mexico region. On April 23, 1997 (62 FR 19723), the National Marine Fishery Service (NMFS) issued proposed regulations containing guidelines for the description and identification of EFH in fishery management plans, adverse impacts on EFH, and actions to conserve and enhance EFH. These rules were revised and finalized on January 22, 2002 (67 FR 2343). The regulations also provide a process for NMFS to coordinate and consult with federal and state agencies on activities that may adversely affect EFH. The purpose of the rule is to assist in describing and identifying EFH, minimize adverse effects on EFH, and identify other actions to conserve and enhance EFH. The purpose of the coordination and consultation provisions is to specify procedures for adequate consultation with NMFS on activities that may adversely affect EFH.

3.3.3.2 *Previous EFH Consultation (Pre-USCG as Lead)*

In August 1999, as part of the NEPA documentation for the Federal Highway Administration (FHWA)/FDOT Fort Hamer Bridge project, the NMFS provided information that specific wetlands in the project area were identified as EFH. In August 2001, in their response to the draft WER for the FDOT project, the NMFS noted that the WER adequately described the fishery resources and habitats in the project area and adequately described the potential adverse impacts associated with the Proposed Action. The NMFS also noted that the WER identified indirect impacts (i.e., shading) to vegetative communities but that the FDOT anticipated providing mitigation only for the direct impacts (i.e., filling) to wetlands. In their Preliminary EFH Conservation Recommendation, the NMFS stated that compensatory mitigation should be provided for lost and reduced wetland functions resulting from direct and indirect project impacts such as filling, dredging, and shading. Copies of correspondence from the NMFS for the FHWA/FDOT Fort Hamer Bridge project are provided in the WER in Appendix D of this FEIS.

3.3.3.3 *Current EFH Coordination (USCG as Lead)*

In July 2010, the USCG provided the NMFS with a Notice of Intent (NOI) to prepare the EIS for the proposed Fort Hamer Bridge (Federal Register, 2010). In addition, NMFS was invited by a letter dated July 20, 2010, to be a cooperating agency with the USCG for the EIS preparation. The NMFS responded that they were unable to be a cooperating agency, but would participate in meetings, field investigations, and review of project documents. The Draft EIS (DEIS) for the proposed action was released for public review on July 5, 2013. A copy of the WER was provided as Appendix D of the DEIS. On July 24, 2013, the USCG initiated MSFCMA consultation with the NMFS.

On August 8, 2013 the NMFS responded with comments on the DEIS and WER and requested additional information for NMFS' review. In emails dated August 27 and 29, 2013, the NMFS requested additional information regarding project-related impacts to estuarine resources. In a letter dated September 18, 2013, the USCG provided responses to the NMFS' comments. On October 2, 2013 the NMFS requested additional information regarding project impacts and construction methodology. A response to this request was provided to NMFS on October 9, 2013. On December 16, 2013, the NMFS issued a concurrence letter to the USCG, thus concluding MSFCMA consultation. Copies of correspondence with the NMFS are included in Appendix A.

During project permitting, the NMFS will serve as a commenting agency to the USACE during their review of the Department of the Army Section 404 permit application and to the USCG during their review of the Coast Guard Bridge permit application.

3.3.3.4 *Existing EFH Resources*

The Gulf of Mexico Fisheries Management Council (GMFMC) separates EFH into marine and estuarine components. In marine waters of the Gulf of Mexico, EFH is defined as all marine waters and substrates (mud, sand, shell, rock, hardbottom, and associated biological communities) from the shoreline to the seaward limit of the Exclusive Economic Zone. For the estuarine component, EFH is defined as all estuarine waters and substrates (mud, sand, shell, rock, and associated biological communities), including the sub-tidal vegetation (seagrasses and algae) and adjacent inter-tidal vegetation (marshes and mangroves) (GMFMC, 1998). Thus, all

tidal waters and substrates within the Manatee River and adjoining wetlands, including inter-tidal zones, are considered estuarine EFH by the GMFMC.

All tidal waters and adjoining wetlands within the Fort Hamer Alternative are considered EFH. The surface waters of the Manatee River and adjoining wetlands within the Rye Road Alternative are not considered EFH. Although water elevation changes may be perceptible at the Rye Road Bridge, the Manatee River within the Rye Road Alternative is not subject to regular ebb and flood tidal fluctuations. Any perceived water elevation change is due to tailwater effects (decrease in current) caused by downstream tidal fluctuations. Although no EFH is present within the Rye Road Alternative, the Rye Road Bridge is located upstream of EFH identified by the NMFS as important nursery and foraging habitat for a number of economically important fish species.

The GMFMC has identified and described EFH for 55 representative managed species and the coral complex. Species' accounts of each of the 55 representative managed species and the coral complex were reviewed to assess the potential occurrence of these species within the Fort Hamer Alternative during any stage of their life cycle. **Table 3-18** lists the GMFMC managed species with potential to occur in the Fort Hamer Alternative Study Area. Of the 55 representative fish, shrimp, and crab species listed by the GMFMC, three are considered to have a high potential to occur within the study area. These are the pink shrimp (*Penaeus duorarum*), red drum (*Sciaenops ocellatus*), and gray snapper (*Lutjanus griseus*). The remaining 52 representative species and the coral complex are considered to have a low to no potential to occur within the Fort Hamer Alternative Study Area. The WER in Appendix D of this FEIS provides a description of the EFH in the Fort Hamer Alternative Study Area.

TABLE 3-18
GULF OF MEXICO EFH – MANAGED SPECIES¹
POTENTIAL OCCURRENCE WITHIN THE FORT HAMER ALTERNATIVE STUDY AREA

Fishery Management Plan	Species	Potential Occurrence Within Study Area ²	Comments
Shrimp	Pink shrimp (<i>F. duorarum</i>)	High	Occurs throughout Tampa Bay/Boca Ciega Bay
Red Drum	<i>Sciaenops ocellatus</i>	High	Occurs throughout Tampa Bay and the Manatee River
Coastal Migratory Pelagic Resources	Spanish mackerel (<i>S. maculatus</i>)	Low	An off-shore or near shore species; juveniles may inhabit estuarine areas but are not estuarine-dependent.
	Cobia (<i>Rachycentron canadum</i>)	Low	An off-shore/deepwater species; juveniles may inhabit estuarine areas but are not estuarine-dependent.
Stone Crab	Florida stone crab (<i>Menippe mercenaria</i>)	Low	Prefers higher salinities.
	Gulf stone crab (<i>M. adina</i>)	Low	Prefers higher salinities.
Reef Fish	Gag grouper (<i>M. microlepis</i>)	Low	Prefers higher salinities.
	Gray snapper (<i>L. griseus</i>)	High	Postlarvae and juvenile found in most estuarine habitats.

¹ GMFMC, 1998.

² Table shows only those managed species with a potential to occur within the study area. Ratings are None, Low, and High and are based on habitat suitability and species' range. See Table 14 in Appendix D for a description of each rating.

None of the 55 representative managed species and coral complex has the potential to occur within the Rye Road Alternative Study Area due to its freshwater component (i.e., lack of saltwater and estuarine habitats).

Potential EFH impacts resulting from implementation of each alternative are discussed in Section 4.3.3.

3.3.4 WILDLIFE

This section discusses the general wildlife known or expected to occur within the Fort Hamer Alternative and Rye Road Alternative study areas. Potential impacts to wildlife resulting from implementation of each alternative are discussed in Section 4.3.4.

3.3.4.1 Mammals

Both the Fort Hamer Alternative and the Rye Road Alternative study areas are expected to contain similar terrestrial mammal species. Larger mammal species expected to occur sporadically within both build alternatives are the white-tailed deer (*Odocoileus virginianus*) and feral hog (*Sus scrofa*). Smaller mammals commonly occurring within the two build alternatives include various mice, bats, rabbits (*Sylvilagus* spp.), eastern gray squirrel (*Sciurus carolinensis*), river otter (*Lutra canadensis*), Virginia opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), gray fox (*Urocyon cinereoargenteus*), and bobcat (*Lynx rufus*). These species are typical of those found in similar areas of central Florida.

One marine mammal, the bottle-nosed dolphin (*Tursiops truncatus*), was observed at the mouth of Gamble Creek during field reviews of the Fort Hamer Alternative Study Area. Another marine mammal, the West Indian manatee (*Manatus trichechus*), which is federally- and state-listed as endangered, is known to inhabit the Manatee River within the Fort Hamer Alternative Study Area. Neither dolphins nor manatees are expected to occur within the Rye Road Alternative due to prohibitively shallow water depths. The FWS has designated critical habitat for the manatee in the Manatee River from its confluence with Tampa Bay upstream to the Manatee River Dam. Because of its endangered listing by the FWS and presence of designated critical habitat within both build alternatives, consultation with the FWS is required pursuant to Section 7 of the *Endangered Species Act of 1973*, as amended (ESA). Additional information regarding threatened and endangered species and consultation with the FWS is provided in Section 3.3.5 below and in the BA contained in Appendix E of this FEIS.

3.3.4.2 Migratory Birds

A variety of habitats are available in both build alternatives for numerous migratory bird species. Common wading and shorebirds expected to occur within both build alternatives include the great blue heron (*Ardea herodias*), white egret (*Ardea alba*), and white ibis (*Eudocimus alba*). Waterfowl observed in the Fort Hamer Alternative Study Area during field reviews include the common moorhen (*Gallinula chloropus*) and various duck species. The mosaic of habitats in both build alternatives provide suitable nesting and foraging opportunities for a number of other bird species such as the wild turkey (*Meleagris gallopavo*), northern mocking-bird (*Mimus*

polyglottos), mourning dove (*Zenaida macroura*), blue jay (*Cyanocitta cristata*), red-bellied woodpecker (*Melanerpes carolinus*), pileated woodpecker (*Dryocopus pileatus*), and other various warbler and sparrow species.

Several raptor species were either observed during field reviews of the two build alternatives or are expected to use foraging and nesting habitats within forested areas available in both build alternatives. The raptor species observed and/or anticipated to occur within both build alternatives include the black vulture (*Coragyps atratus*), turkey vulture (*Cathartes aura*), red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), osprey (*Pandion haliaetus*), northern harrier (*Circus cyaneus*), southeastern American kestrel (*Falco sparverius paulus*), and swallow-tailed kite (*Elanoides forficatus*). A bald eagle (*Haliaeetus leucocephalus*) nest is documented 0.52 mile west of the proposed Fort Hamer Alternative bridge location. Various owl species may also be present within the forested areas of both build alternatives.

The Manatee County Audubon Society owns and operates the 30-acre Felts Audubon Preserve, located approximately 7 miles northwest of the Fort Hamer Alternative in Palmetto, Florida. According to the Society website, members have documented more than 160 avian species at the Preserve (Audubon Society, 2013). A copy of this checklist is provided in **Table 3-19**. Due to regional proximity and availability of habitats, almost all of the bird species documented at the Felts Audubon Preserve could also occur within the study areas of both the Fort Hamer Alternative and Rye Road Alternative.

3.3.4.3 Reptiles and Amphibians

Several species of reptiles and amphibians were observed in both build alternatives during field reviews. These include the American alligator (*Alligator mississippiensis*), black racer (*Coluber constrictor*), water moccasin (*Agkistrodon piscivorus*), softshell turtle (*Apalone ferox*), brown anole (*Anolis sagrei*), common toad (*Bufo terrestris*), and green tree frog (*Hyla cinerea*).

3.3.4.4 Fish

Some of the common fish species observed during field reviews of the Fort Hamer Alternative include mosquito fish (*Gambusia holbrooki*), tilapia (*Tilapia* spp.), bluegill (*Lepomis macrochirus*), largemouth bass (*Micropterus salmoides*), mullet (*Mugil cephalus*), sheepshead minnows (*Cyprinodon variegatus*), and sailfin mollies (*Poecilia latipinna*). Fiddler crabs (*Uca* spp.) and mollusk shells were also observed along the shoreline of the Manatee River within the Fort Hamer Alternative.

Fewer fish species are expected within the Rye Road Alternative due to its lack of estuarine components and small size of the river at the Rye Road Bridge. Mosquito fish, bluegill, and largemouth bass are common to this portion of the Manatee River.

TABLE 3-19
FELTS AUDUBON PRESERVE BIRD SPECIES

FELTS AUDUBON PRESERVE BIRD SPECIES (164 species seen as of January 2013)					DATE _____									
p = Spring = March, April, May s = Summer = June, July, August f = fall = Sept., Oct., Nov. w = winter = Dec., Jan., Feb.					c = common (usually seen) u = uncommon (sometimes seen) r = rare (seldom seen) a = abundant m = migrant					OBSERVER'S NAME _____ time of day _____				
Species	p	s	f	w	Species	p	s	f	w	Species	p	s	f	w
Loons/Grebes					Raptors continued					Swift/Nighthawk				
Common Loon				r	Red-shouldered Hawk	c	c	c	c	Chimney Swift		u	u	
Pied-billed Grebe	u			u	Broad-winged Hawk				r	Common Nighthawk		u		
Pelicans					Raptors					Hummingbirds				
American White Pelican				r	Red-tailed Hawk				r	American Kestrel	u		c	c
Brown Pelican				r	American Kestrel	u			c	Merlin				r
Cormorant/Anhinga					Ralle					Rufous/Allen's Hummingbird				
Double Crested Cormorant	c	c	c	c	Common Gallinule (Moorhen)	u	u	u	u	Peregrine Falcon				r
Anhinga	c	c	c	c	Cranes					Kingfisher				
Bitterns/Herons/Waders					Sandhill Crane					Belted Kingfisher				
American Bittern				r	Sandhill Crane	u	u	u	u	Common Gallinule (Moorhen)	u	u	u	u
Great Blue Heron	c	c	c	c	Plovers/Stilts/Sandpipers/Snipe					Woodpeckers				
Great Egret	c	c	c	c	Killdeer	r	r	r	r	Red-headed Woodpecker	r	r	r	r
Snowy Egret	u	u	u	r	Black-necked Stilt	r	r	r	r	Red-bellied Woodpecker	a	a	a	a
Little Blue Heron	c	c	c	c	Greater Yellowlegs	m			m	Yellow-bellied Sapsucker	m			m
Tricolored Heron	u	u	u	c	Lesser Yellowlegs				r	Downy Woodpecker	c	c	c	c
Cattle Egret	c	c	c	c	Solitary Sandpiper	m			m	Northern Flicker	r	r	r	r
Green Heron	r	r	r	r	Wilson's Snipe				r	Pileated Woodpecker	c	c	c	c
Black-crowned Night Heron	r	r	r	r	Gulls					Flycatchers				
White Ibis	a	a	a	c	Laughing Gull	c	c	c	c	Eastern Wood-pewee		u	u	u
Glossy Ibis	u	u	u	u	Ring-billed Gull				r	Acadian Flycatcher	r			r
Roseate Spoonbill	r	u	r	r	Herring				r	Least Flycatcher				r
Wood Stork	c	c	c	r						Eastern Phoebe	m		m	u
Vultures					Terns/Skimmer					Great Crested Flycatcher				
Black Vulture	c	c	c	c	Least Tern		r			Eastern Kingbird		r		r
Turkey Vulture	c	c	c	a	Black Skimmer		r			Scissor-tailed Flycatcher	m			m
Geese/Ducks					Pigeons/Doves					Shrike				
Black-bellied Whistling Duck	r	u	u	r	Rock Pigeon	r	r	r	r	Loggerhead Shrike	u	u	u	u
Wood Duck	u	u	u	c	Eurasian Collared Dove	u	u	u	u	Vireos				
Mottled Duck	c	c	c	c	Mourning Dove	a	a	a	a	White-eyed Vireo	m		m	r
Blue-winged Teal	c			c	Common Ground Dove	r	r	r	r	Yellow-throated Vireo		m		r
Green-winged Teal				u	Parakeets/Cuckoos					Blue-headed Vireo	m		m	r
Mallard	r	r	r	r	Nanday (Black-hooded) Parakeet	r	r	r	r	Philadelphia Vireo				m
Muscovy Duck				r	Monk Parakeet	r				Red-eyed Vireo	m			m
Hooded Merganser				r	Yellow-billed Cuckoo	m			m	Jays/Crows				
Raptors					Owls					Blue Jay				
Osprey	u	u	u	u	Eastern Screech Owl		r	r	r	Florida Scrub Jay		a	a	a
Swallow-tailed Kite	r	r		u	Great Horned Owl	u	u	u	u	American Crow	c	c	c	c
Bald Eagle	u	u	u	u	Barred Owl	r	r	r	r	Fish Crow	c	c	c	c
Northern Harrier	r			r	Martin/Swallows					Purple Martin				
Sharp-shinned Hawk				u	Purple Martin		u			Tree Swallow	c		c	u
Cooper's Hawk	u	u	u	u	Northern Rough-winged Swallow				r	Barn Swallow				r

Continued on next page

**TABLE 3-19 (CONTINUED)
FELTS AUDUBON PRESERVE BIRD SPECIES**

FELTS AUDUBON PRESERVE BIRD SPECIES				
Species	p	s	f	w
Titmouse/Nuthatch				
Tufted Titmouse	c	c	c	c
Wrens				
Carolina Wren	c	c	c	c
House Wren	m		m	r
Marsh Wren			r	
Kinglets/Gnatcatcher				
Ruby-crowned Kinglet				r
Blue-gray Gnatcatcher	c	u	c	c
Thrushes				
Veery			r	
Eastern Bluebird	c	c	u	c
Swainson's Thrush			m	
Gray-cheeked Thrush			r	
American Robin				u
Mimids/Starlings/Waxwing				
Gray Catbird	c		c	c
Northern Mockingbird	a	a	a	a
Brown Thrasher	r	r	r	r
European Starling	c	c	c	c
Cedar Waxwing	m		m	r
Warblers				
Golden-winged Warbler	r			
Tennessee Warbler			r	
Orange-crowned Warbler	m		m	r
Northern Parula	m		m	u
Yellow Warbler			r	
Chestnut-sided Warbler	m			
Magnolia Warbler	m			
Cape May Warbler	m			
Black-throated Blue Warbler	m			
Yellow-rumped Warbler	c			c
Blackburnian Warbler	m			
Yellow-throated Warbler	m			u
Pine Warbler	m		m	u
Prairie Warbler	m		m	r
Palm Warbler	a		a	a
Bay-breasted Warbler	m			
Blackpoll Warbler	m			
Black-and-white Warbler	m		m	u
American Redstart	m		m	
Prothonotary Warbler	m			
Warblers continued				
Worm-eating Warbler	m			
Ovenbird	r		r	
Louisiana Waterthrush	r			
Northern Waterthrush	r			
Kentucky Warbler	m		m	
Connecticut Warbler			r	
Common Yellowthroat	m		m	u
Hooded Warbler	m		m	r
Tanagers/Towhees				
Summer Tanager				u
Scarlet Tanager				r
Sparrows				
Swamp Sparrow	r			
Chipping Sparrow	u	c		r
Field Sparrow				r
White-throated Sparrow				r
Savannah Sparrow	r	r		
Grasshopper				r
White-crowned				r
Lincoln's				r
Cardinals/Grosbeaks/Buntings				
Northern Cardinal	a	a	a	a
Rose-breasted Grosbeak	m		m	
Blue Grosbeak	m			
Indigo Bunting	m		m	u
Painted Bunting	m		m	u
Icterids/Orioles				
Red-winged Blackbird	c	c	c	c
Common Grackle	a	a	a	a
Boat-tailed Grackle	c	c	c	c
Brown-headed Cowbird		u	u	r
Orchard Oriole	m			
Baltimore Oriole	m		m	
Finches/Siskin				
House Finch			r	u
Pine Siskin	r			
American Goldfinch	c			c

Species	p	s	f	w
Species seen not on list				

COMMENTS:

IF YOU WISH TO BE CONTACTED

Phone #

Email address:

Source: Audubon Society, 2013.

3.3.4.5 *Invasive Plants*

Pedestrian surveys revealed several invasive plant species in both build alternatives with Brazilian pepper being the most common. Brazilian pepper is present in most of the upland and wetland transitional habitats in both build alternatives. Other invasive species common in the build alternatives include cogon grass (*Imperata cylindrical*), lead tree (*Leucaena leucocephala*), caesarweed (*Urena lobata*), alligator weed (*Alternanthera philoxeroides*), para grass (*Urochloa mutica*), and hydrilla (*Hydrilla* spp.).

3.3.5 **THREATENED AND ENDANGERED SPECIES**

Each study area was evaluated for potential occurrences of federally- and state-listed plant and animal species in accordance with Section 7 of the ESA, and Chapters 5B-40 and 68A-27 Florida Administrative Code (F.A.C.). The evaluation included coordination with the FWS, the NMFS, and the Florida Fish and Wildlife Conservation Commission (FWC).

Agency coordination of the project was initiated on July 9, 2010 with the publication of the NOI to prepare an EIS in the Federal Register (Federal Register, 2010). On July 10, 2010 the USCG invited the FWS and NMFS to participate as cooperating agencies for the EIS. Both the FWS and NMFS declined to be a cooperating agency (the USACE, EPA, and FHWA were also invited to be cooperating agencies; however, only the USACE accepted the invitation). In addition, letters were sent to the FWS, FWC, and Florida Natural Areas Inventory (FNAI) requesting information on documented occurrences of listed species within 1 mile of each build alternative and wood stork rookeries located within 15 miles of each build alternative. Copies of all correspondence with federal and state agencies and FNAI are included in Appendix A-4 of this FEIS.

Development of a BA is required as part of this FEIS due to the presence of listed species and designated critical habitat within both build alternatives. A copy of the BA prepared for this FEIS is contained in Appendix E. The BA describes the habitats and listed species potentially present within each build alternative and the effects that implementation of each build alternative would have on listed species and critical habitat. Both the FWS and NMFS will review the BA as part of the ESA Section 7 process for federally-listed species, will comment on its contents and findings, and will issue a concurrence statement on the effect determinations. The FWC will review the BA regarding state-listed species and will comment on its contents and findings.

The assessment of the potential presence of listed species within each build alternative was initiated with a review of all listed species previously documented in Manatee County by the FNAI. Field reviews of the build alternatives were conducted in 2010 and 2011 to assess existing habitats and to record observations of listed species. A determination of the potential presence of listed species within each build alternative was then made based on the following:

- Geographic range of each species. Species accounts of each species were reviewed to assess whether its historic or current documented range overlapped the study area of either build alternative.

- Presence of suitable habitat. The habitat requirements of each species were reviewed and compared against the results of the habitat mapping of the study areas. Consideration was given to nesting, denning, and foraging habitat requirements for each species.
- Documented occurrences. The known presence of species within the study areas was documented based on the FNAI Element Occurrence Report, agency correspondence, and field reviews. (A copy of the FNAI Element Occurrence Report is contained in the BA in Appendix E of this FEIS.)

Table 3-20 presents a summary listing of the federally- and state-listed species potentially occurring within the Fort Hamer Alternative and Rye Road Alternative study areas. Additional information regarding habitat requirements and the presence of each species within the study areas is provided in the BA in Appendix E.

Impacts to threatened and endangered species are discussed in Section 4.3.5.

3.3.6 *AQUATIC PRESERVES*

The State of Florida has designated aquatic preserves through F.S. 258.37-39. There are no designated aquatic preserves within the Fort Hamer Alternative or Rye Road Alternative study areas.

3.3.7 *WATER QUALITY*

F.S. 403.021 declares that the public policy of the State of Florida is to conserve the waters of the state to protect, maintain, and improve the quality thereof for public water supplies, for the propagation of wildlife, fish, and other aquatic life and for domestic, agricultural, industrial, recreational, and other beneficial uses. It also prohibits the discharge of wastes into Florida waters without treatment necessary to protect those beneficial uses of the waters. In order to carry out this policy, all surface waters of the state have been classified (as listed by Rule 62-302.400 F.A.C.) according to designated uses as follows:

Class I	Potable water supplies.
Class II	Shellfish propagation or harvesting.
Class III	Fish Consumption; recreation, propagation, and maintenance of a healthy well-balanced population of fish and wildlife.
Class III-Limited	Fish Consumption; recreation or limited recreation; and/or propagation and maintenance of a healthy, well-balanced population of fish and wildlife.
Class IV	Agricultural water supplies.
Class V	Navigation, utility, and industrial use.

**TABLE 3-20
LISTED SPECIES POTENTIALLY PRESENT WITHIN BOTH BUILD ALTERNATIVES**

Scientific Name	Common Name	Federal Status ¹	State Status ²	Habitat	Potentially Present in Study Area	
					Fort Hamer	Rye Road
Plants						
<i>Acrostichum aureum</i>	Golden leather fern	NL	T	Brackish and freshwater marshes	Yes	Yes
<i>Calopogon multiflorus</i>	Many-flowered grass pink	NL	E	Wet prairies and savannahs	Yes	No
<i>Chrysopsis floridana</i>	Florida goldenaster	E	E	Scrub and sandhill	No	Yes
<i>Eragrostis pectinacea</i> var. <i>tracyi</i>	Sanibel lovegrass	NL	E	Disturbed sites such as roadsides, railroad embankments, gardens, and cultivated fields	Yes	Yes
<i>Glandularia (Verbena) tampensis</i>	Tampa vervain	NL	E	Live oak-cabbage palm hammocks and pine-palmetto flatwoods	Yes	Yes
<i>Gossypium hirsutum</i>	Wild cotton	NL	E	Disturbed sites such as roadsides, railroad embankments, gardens, and cultivated fields	Yes	Yes
<i>Matelea floridana</i>	Florida spiny-pod	NL	E	Upland hardwood forests	Yes	Yes
<i>Pteroglossaspis (Eulpohia) ecristata</i>	Giant orchid	NL	T	Sandy pinelands and fields	Yes	Yes
<i>Rhynchospora megaplumosa</i>	Large-plumed beaksedge	NL	E	Sands and sandy peats of pine flatwoods scrub and flatwoods-sand-scrub transition	No	Yes
Fish						
<i>Rivulus marmoratus</i>	Mangrove rivulus	NL	SSC	Primarily coastal brackish and saltwater areas; usually collected from mangrove or high salt marsh habitats	Yes	No
<i>Pristis pectinata</i>	Smalltooth sawfish	E	FE	Shallow coastal waters, estuaries, and river mouths over muddy or sandy bottoms.	Yes	No
Amphibians						
<i>Rana capito</i>	Gopher frog	NL	SSC	Sandhill communities, sand pine scrub, xeric oak hammocks, dry prairies, pine flatwoods	Yes	Yes
Reptiles						
<i>Alligator mississippiensis</i>	American alligator	T(S/A) ³	FT(S/A)	Rivers, swamps, lake bayous, ponds, marshes	Yes	Yes
<i>Drymarchon carais couperi</i>	Eastern indigo snake	T	FT	Mesic flatwoods, upland pine forest, sandhill scrub	Yes	Yes
<i>Gopherus polyphemus</i>	Gopher tortoise	NL	T	Sandhill, scrubby flatwoods, xeric hammock, fields and fencelines	Yes	Yes

Continued on next page

TABLE 3-20 (CONTINUED)
LISTED SPECIES POTENTIALLY PRESENT WITHIN BOTH BUILD ALTERNATIVES

Scientific Name	Common Name	Federal Status ¹	State Status ²	Habitat	Potentially Present in Study Area	
					Fort Hamer	Rye Road
<i>Pituophis melanoleucus mugitis</i>	Pine snake	NL	SSC	Sandhill, scrubby flatwoods, xeric hammock	Yes	Yes
Birds					<i>Continued on next page</i>	
<i>Aphelocoma coerulescens</i>	Florida scrub jay	T	FT	Fire-dominated, low-growing oak scrub on well-drained sandy soils	No	Yes
<i>Aramus guarauna</i>	Limpkin	NL	SSC	Mangroves, freshwater marshes, swamps, springs, ditches and swales, and pond and river margins	Yes	Yes
<i>Athene cunicularia floridana</i>	Florida burrowing owl	NL	SSC	Very open areas such as prairies, sandhills, and farm land	Yes	Yes
<i>Caracara cheriway</i>	Crested caracara	T	FT	Open grassland habitats and improved pastures with cabbage palms. Nesting generally occurs in cabbage palms	Yes	Yes
<i>Egretta caerulea</i>	Little blue heron	NL	SSC	Mangroves, freshwater marshes, swamps, springs and spring runs, swales, pond and river margins	Yes	Yes
<i>Egretta rufescens</i>	Reddish egret	NL	SSC	Mangroves, freshwater marshes, swamps, springs and spring runs, swales, pond and river margins	Yes	Yes
<i>Egretta thula</i>	Snowy egret	NL	SSC	Mangroves, freshwater marshes, swamps, springs and spring runs, swales, pond and river margins	Yes	Yes
<i>Egretta tricolor</i>	Tricolored heron	NL	SSC	Mangroves, freshwater marshes, swamps, springs and spring runs, swales, pond and river margins	Yes	Yes
<i>Eudocimus albus</i>	White ibis	NL	SSC	Mangroves, freshwater marshes, swamps, springs and spring runs, swales, pond and river margins, often feeds on residential lawns	Yes	Yes
<i>Falco sparverius paulus</i>	Southeastern American kestrel	NL	T	Open areas with long-leaf pine, small turkey and live oaks	Yes	Yes
<i>Grus Canadensis pratensis</i>	Florida sandhill crane	NL	T	Dry prairies, freshwater marshes, and wet prairies	Yes	Yes
<i>Haliaeetus leucocephalus</i>	Bald eagle	NL ⁴	NL ⁴	Nests in tall trees, forages near larger bodies of water	Yes	Yes
<i>Mycteria americana</i>	Wood stork	E	FE	Nests in inundated forested wetlands. Forages in freshwater marshes, swamps, flooded pastures, roadside ditches and stormwater ponds	Yes	Yes
<i>Pelecanus occidentalis</i>	Brown pelican	NL	SSC	Mainly coastal, feeding in shallow estuarine waters, and (less often) far offshore	Yes	No

Continued on next page

TABLE 3-20 (CONTINUED)
LISTED SPECIES POTENTIALLY PRESENT WITHIN BOTH BUILD ALTERNATIVES

Scientific Name	Common Name	Federal Status ¹	State Status ²	Habitat	Potentially Present in Study Area	
					Fort Hamer	Rye Road
<i>Platalea ajaja</i>	Roseate spoonbill	NL	SSC	Coastal mangrove islands, shallow water of variable salinity including marine tidal flats and ponds, coastal marshes, mangrove-dominated inlets and pools, and freshwater sloughs and marshes	Yes	No
Mammals						
<i>Podomys floridanus</i>	Florida mouse	NL	SSC	Sand pine scrub, pine flatwoods, sandhill communities, longleaf-xeric oak	No	Yes
<i>Sciurus niger shermani</i>	Sherman's fox squirrel	NL	SSC	Mature, fire-maintained longleaf pine-turkey oak habitats, pine flatwoods	Yes	Yes
<i>Trichechus manatus</i>	West Indian manatee	E	FE	Coastal waters, bays, rivers	Yes	No

Notes: E = endangered, F = federally, T = threatened, SSC = species of special concern, T(S/A) = threatened due to similarity of appearance to another species, NL = not listed.

¹ FWS, 2013.

² Plant species FDACS, 2007. Animal species FWC, 2013.

³ The alligator is federally-listed as "threatened due to similarity of appearance." Alligators are common in coastal Florida, and in many parts of their range the alligator is not actually endangered or threatened. Similarity of appearance to a listed species is a regulatory designation used to facilitate the enforcement of the Endangered Species Act. It is used when a species is so similar to a listed species that enforcement personnel would have substantial difficulty in attempting to differentiate between the listed and unlisted species. The American alligator has this designation due to its similarity of appearance to the endangered American Crocodile (*Crocodylus acutus*) and other rare crocodylians." The final rule (52 FR 21059) for the American alligator designation removes federal agency responsibilities for the alligator under Section 7 of the Endangered Species Act.

⁴ The bald eagle is neither federally- nor state-listed; however, this species is federally-protected by the *Bald and Golden Eagle Protection Act* and the *Migratory Bird Treaty Act* (MBTA). The bald eagle is also managed in Florida by the FWC's bald eagle rule (68A-16.002, F.A.C.).

Water quality classifications are arranged in order of the degree of protection required with Class I water generally having the most stringent water quality criteria and Class V having the least. Classes I, II, and III share water quality criteria established to protect recreation and the propagation and maintenance of a healthy, well-balanced population of fish and wildlife. Class III-Limited waters are restricted to waters with human-induced physical or habitat conditions that prevent attainment of Class III uses.

Waters of the Manatee River, downstream of the CR 675/Rye Road Bridge (both Fort Hamer Alternative and Rye Road Alternative), are designated Class II surface waters by the state. The Manatee River is not listed as impaired and has no total maximum daily limits (TMDLs).

The water quality requirements, as defined in Chapter 40D.4 F.A.C. and the Southwest Florida Water Management District (SWFWMD) Permit Information Manual (PIM) are used to quantify stormwater treatment volumes, wet detention, on-line, and off-line ponds.

Potential water quality impacts resulting from implementation of each alternative are discussed in Section 4.3.7.

3.3.8 *OUTSTANDING FLORIDA WATERS*

The State of Florida has designated specific water bodies as Outstanding Florida Waters (OFW) pursuant to Rule 62-30.700 F.A.C. No designated OFWs occur within the Fort Hamer Alternative or Rye Road Alternative study areas.

3.3.9 *WILD AND SCENIC RIVERS*

Congress has designated specific rivers in the U.S. as Wild and Scenic Rivers pursuant to the *Wild and Scenic Rivers Act* [16 United States Code (U.S.C.) 1271-1287]. No designated Wild and Scenic Rivers occur within the Fort Hamer Alternative or Rye Road Alternative study areas. Only two Wild and Scenic Rivers are designated in Florida: the Loxahatchee River in Palm Beach and Martin counties and the Wekiva River in Orange, Lake, and Seminole counties.

3.3.10 *GROUNDWATER*

The EPA defines a sole source aquifer as an underground water source that supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer (EPA, 2013). The Sole Source Aquifer Program is authorized by Section 1424(e) of the *Safe Drinking Water Act of 1974*. Designation of an aquifer as a sole source aquifer provides EPA with the authority to review federal financially assisted projects. This project does not involve federal funding and is 100 percent locally funded. The project area is not located within a designated sole source aquifer or its respective recharge or streamflow zone.

3.3.11 FLOODPLAINS AND FLOODWAYS

Both the Fort Hamer Alternative and Rye Road Alternative encroach upon Federal Emergency Management Agency (FEMA)-designated Zone AE and Zone X500 flood zones (FEMA, 1992), as described below. Potential impacts to floodplains and floodways resulting from the implementation of each alternative are discussed in Section 4.3.11.

Fort Hamer Alternative

Within the Fort Hamer Alternative, the existing Upper Manatee River Road and Fort Hamer Road encroach upon Zone X500 and Zone AE of the Manatee River (See **Figure 3-23**). The shaded portions of Zone X500 depict the area between the limits of the 100-year and 500-year floods. The unshaded portions of Zone X represent the areas above the 500-year flood level.

Zone AE is defined as areas inundated by the 100-year flood and where the base flood elevations have been determined. Within the Fort Hamer Alternative construction limits, only 0.5 acre occurs between the 100-year and 500-year flood levels, and 2.7 acres are located within the 100-year flood zone. The base floodplain elevation within the Fort Hamer Alternative for the Manatee River is elevation 10 feet NGVD 29 (North Geodetic Vertical Datum of 1929).

Along Upper Manatee River Road, the encroachment into the floodplain is located on the south side of the Manatee River. Along Fort Hamer Road, the encroachment into the floodplain is located on the north side of the Manatee River.

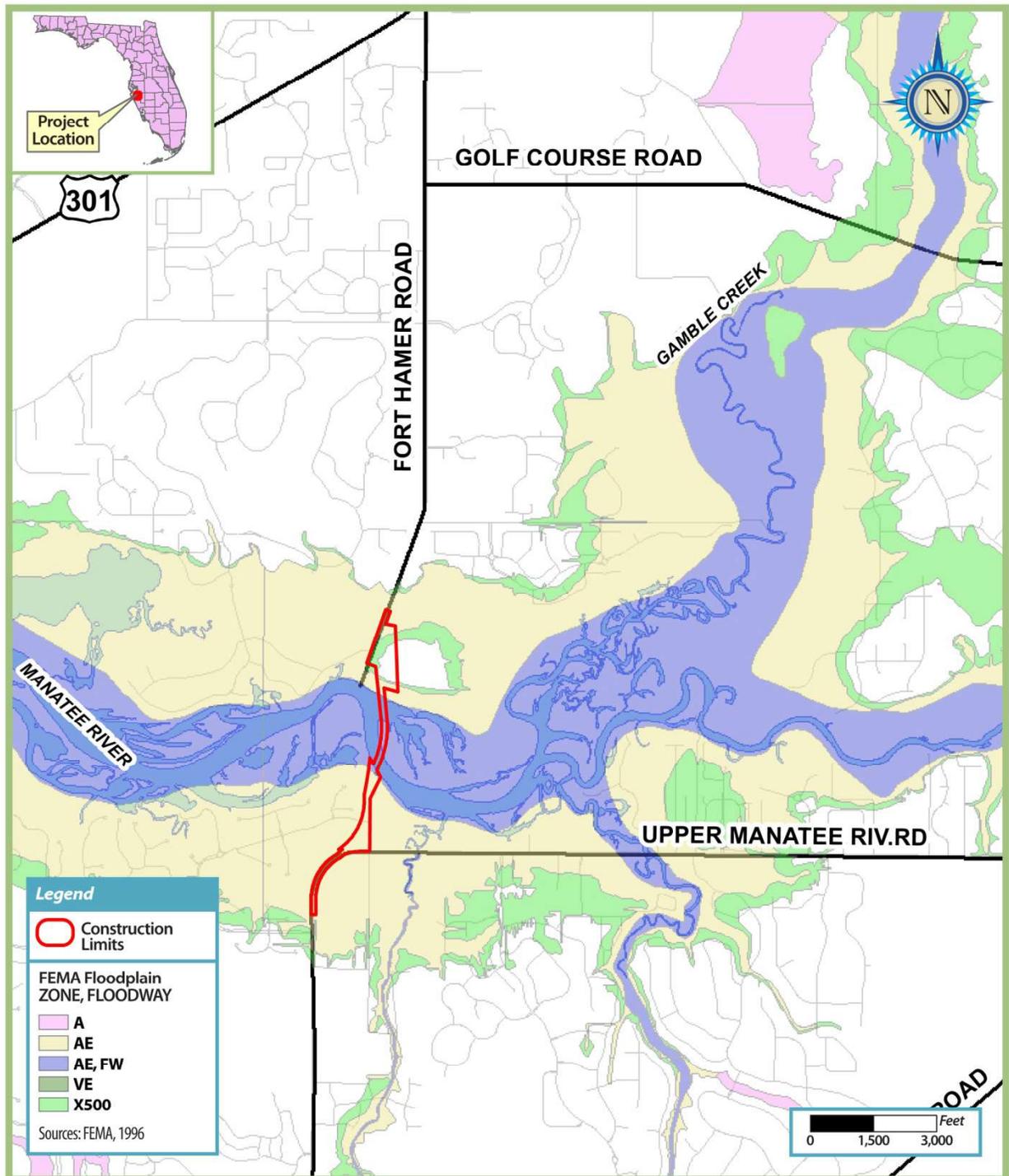
Rye Road Alternative

Within the Rye Road Alternative, existing Rye Road and Golf Course Road encroach upon Zone X500 and Zone AE of the Manatee River, Gamble Creek, and Mill Creek (**Figure 3-24**). The shaded portions of Zone X500 depict the area between the limits of the 100-year and 500-year floods. The unshaded portions of Zone X represent the areas above the 500-year flood level. Zone AE is defined as areas inundated by the 100-year flood and where the base flood elevations have been determined. Within the Rye Road Alternative, 1.4 acres are located between the 100-year and 500-year flood levels, and 5.1 acres are located within the 100-year flood zone. The base floodplain elevation within the Rye Road Alternative for the Manatee River is 22 feet NGVD, for Gamble Creek is 17 feet NGVD, and for Mill Creek is 23 feet NGVD.

3.3.12 COASTAL ZONE CONSISTENCY

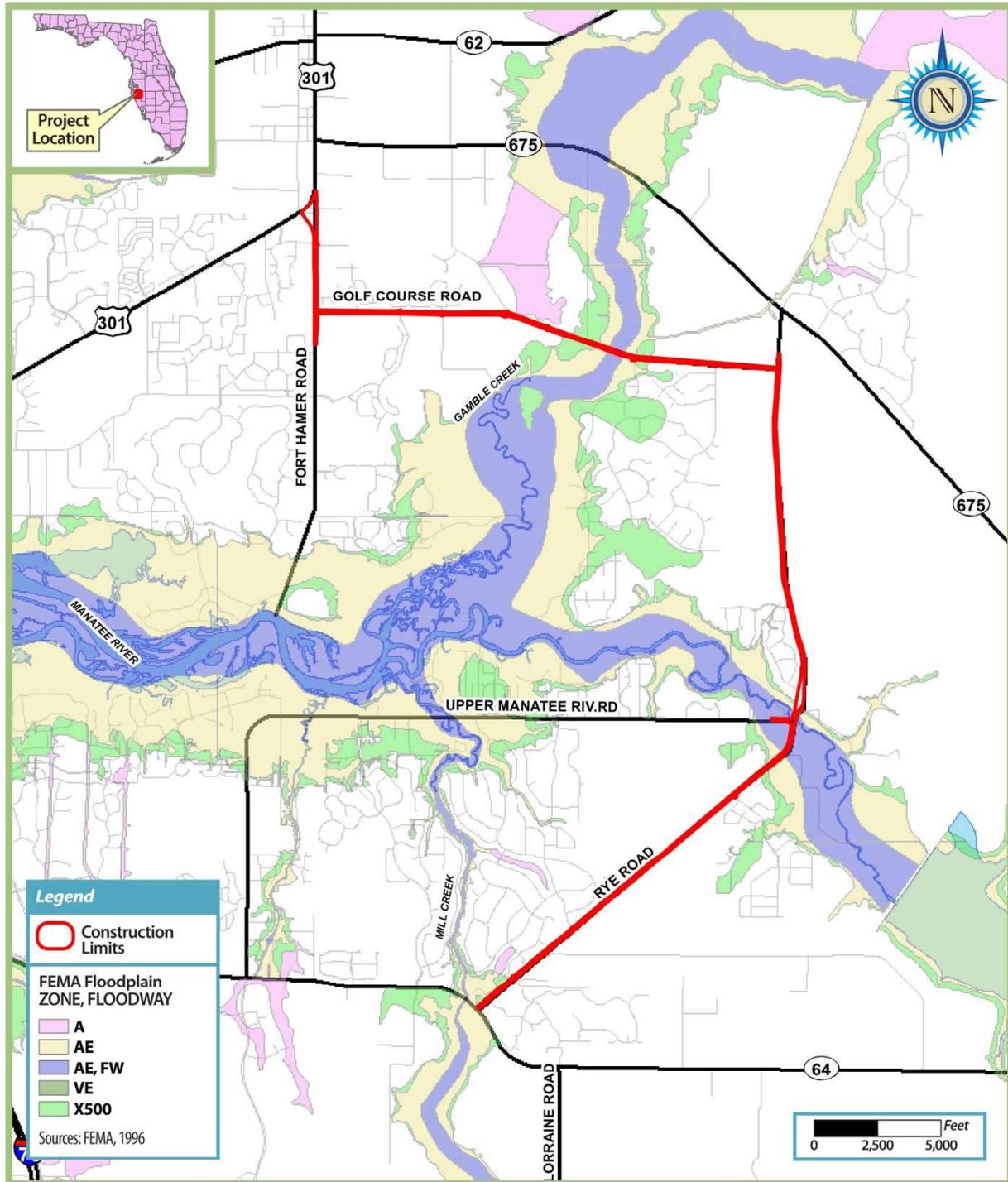
In 1978, the Florida Legislature adopted the *Florida Coastal Management Act*, codified as Chapter 380, F.S. Part II. This legislation authorized the development of the Florida Coastal Management Program (FCMP) and its submittal to the federal government. In 1981, the FCMP was approved by the Secretary of the U.S. Department of Commerce National Oceanic and Atmospheric Administration (NOAA). The Florida Department of Environmental Protection (FDEP) is designated as the lead agency for the FCMP pursuant to the *Coastal Zone Management Act of 1972* (CZMA). FDEP's Office of Intergovernmental Programs is charged with overseeing the state's coastal management program.

FIGURE 3-23
FEMA FLOODPLAIN MAP – FORT HAMER ALTERNATIVE



The definitions of the flood zones can be found at: <https://msc.fema.gov/webapp/wcs/stores/servlet/info?storeId=10001&catalogId=10001&langId=-1&content=floodZones&title=FEMA%2520Flood%2520Zone%2520Designations>.

FIGURE 3-24
FEMA FLOODPLAIN MAP – RYE ROAD ALTERNATIVE



The definitions of the flood zones can be found at: <https://msc.fema.gov/webapp/wcs/stores/servlet/info?storeId=10001&catalogId=10001&langId=-1&content=floodZones&title=FEMA%2520Flood%2520Zone%2520Designations>.

Applicants for federal permits (such as a USCG Bridge Permit) must certify that the Proposed Action is consistent with the federally-approved state coastal zone management program and give the state an opportunity to review the certification. If the state objects, the federal agency cannot issue the permit. By state regulation an application for an Environmental Resource Permit (ERP) from the SWFWMD constitutes certification and issuance of the ERP would consist of state concurrence with consistency. The SWFWMD has jurisdiction over the area of the Proposed Action.

3.3.13 COASTAL BARRIER ISLAND RESOURCES

Coastal barrier islands and resources are designated by Congress pursuant to the *Coastal Barrier Resources Act* (16 U.S.C. 3501 et. seq.) No designated coastal barrier resources occur within the Fort Hamer Alternative or Rye Road Alternative study areas.

3.3.14 FARMLANDS

In 1981, Congress passed the *Agriculture and Food Act of 1981* [Public Law (PL) 97-98], which contained the *Farmland Protection Policy Act* (FPPA) subtitle I of Title XV, Section 1539-1549. The FPPA is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. For the purpose of FPPA, farmland includes designated prime farmland, unique farmland, and land of statewide or local importance. No FPPA-designated farmland occurs with the Fort Hamer Alternative or Rye Road Alternative study areas.

3.3.15 VISUAL AND AESTHETICS

The project area, including the area traversed by the two build alternatives, supports a relatively flat topography intersected by steep-banked streams and the Manatee River. This area of the county is undergoing extensive development that is transforming the existing landscape from a primarily rural area to a landscape supporting mostly master planned, gated residential communities.

Currently, only one bridge (the Rye Road Bridge) crosses the approximate 10.5-mile segment of the Manatee River east of I-75 and west of the Lake Manatee Dam. There are no designated or planned scenic overlooks within either build alternative; however, many vantage points along the river offer boaters undisturbed views of natural habitats. Occasional home sites and associated docks are also visible along the river.

Several master planned residential developments occupy the north and south banks of the river adjacent to the Fort Hamer Alternative. The Waterlefe development located south of the river and west of the proposed structure is a 622-acre, 18-hole golf course community that contains 660 residential units with boating access to the Manatee River. A second master planned development, River Wilderness, is located north of the Manatee River and west of the proposed Fort Hamer Bridge location. Rive Isle, a community within the River Wilderness development,

is proximate to the proposed Fort Hamer Bridge site. Of the 178 Rive Isle home sites, 39 homes front the Manatee River. Although infrastructure for the development is complete, as of January 2012, only 15 homes had been constructed on the 178 available home sites within the community.

The Rye Road Alternative is bounded to the east by the Rye Preserve. The area west of the existing Rye Road Bridge is occupied by a small extension of the Rye Preserve and the River's Reach development. River's Reach is a 249-acre development planned to support 326 residential units.

Several planned developments are located within the Fort Hamer and Rye Road study areas. **Figures 3-25a and 3-25b** show the location of the residential and mixed use developments that have been approved by the Manatee County Board of County Commissioners. **Table 3-21** provides a summary of the number of housing units approved within each of the developments, and lists the number of Certificates of Occupancy (COOs) issued as of February 15, 2013. Based on the comparison of approved units to COOs issued, 9,410 approved housing units have yet to be constructed in the area of the project.

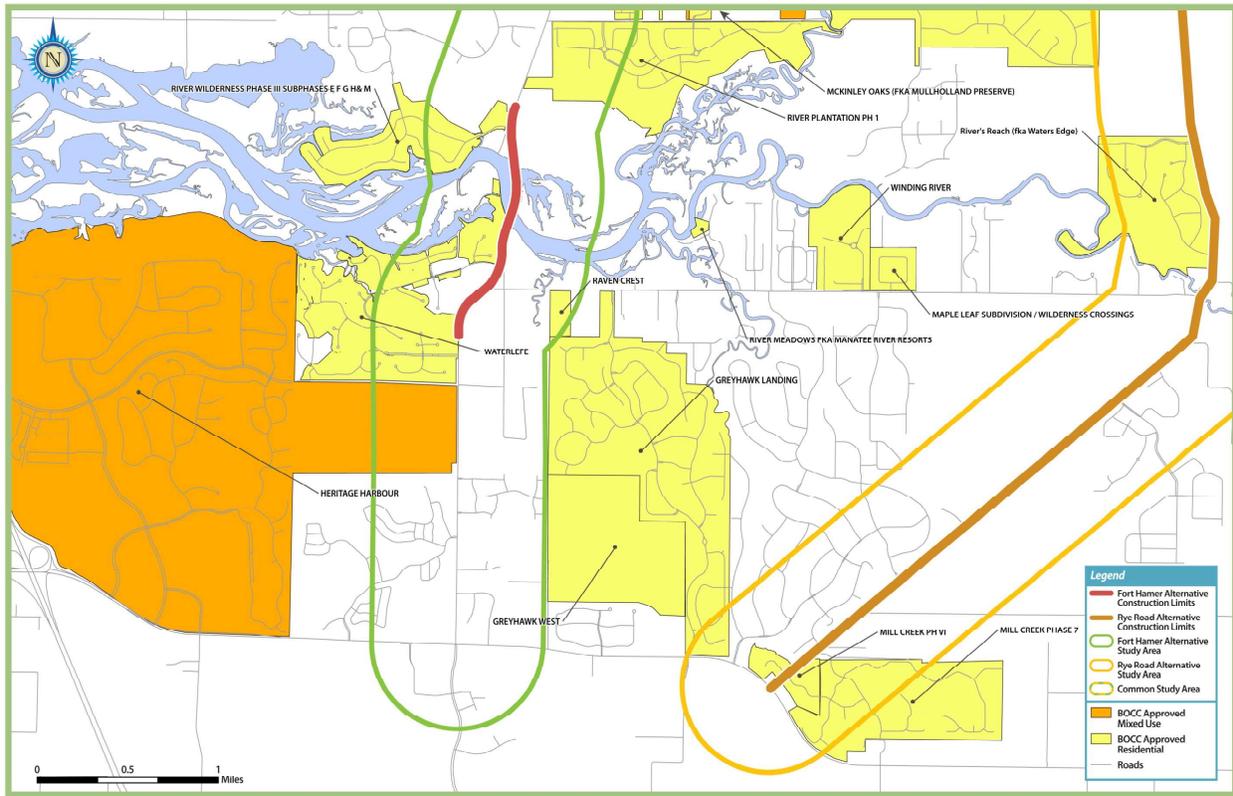
Visual and aesthetic impacts resulting from implementation of each alternative are discussed in Section 4.3.15.

3.4 *PHYSICAL CHARACTERISTICS*

For purposes of this FEIS, physical characteristics are defined as those concerns that span the human and built environment. These include noise, air quality, construction, contamination, scenic highways, and navigation.

3.4.1 *NOISE*

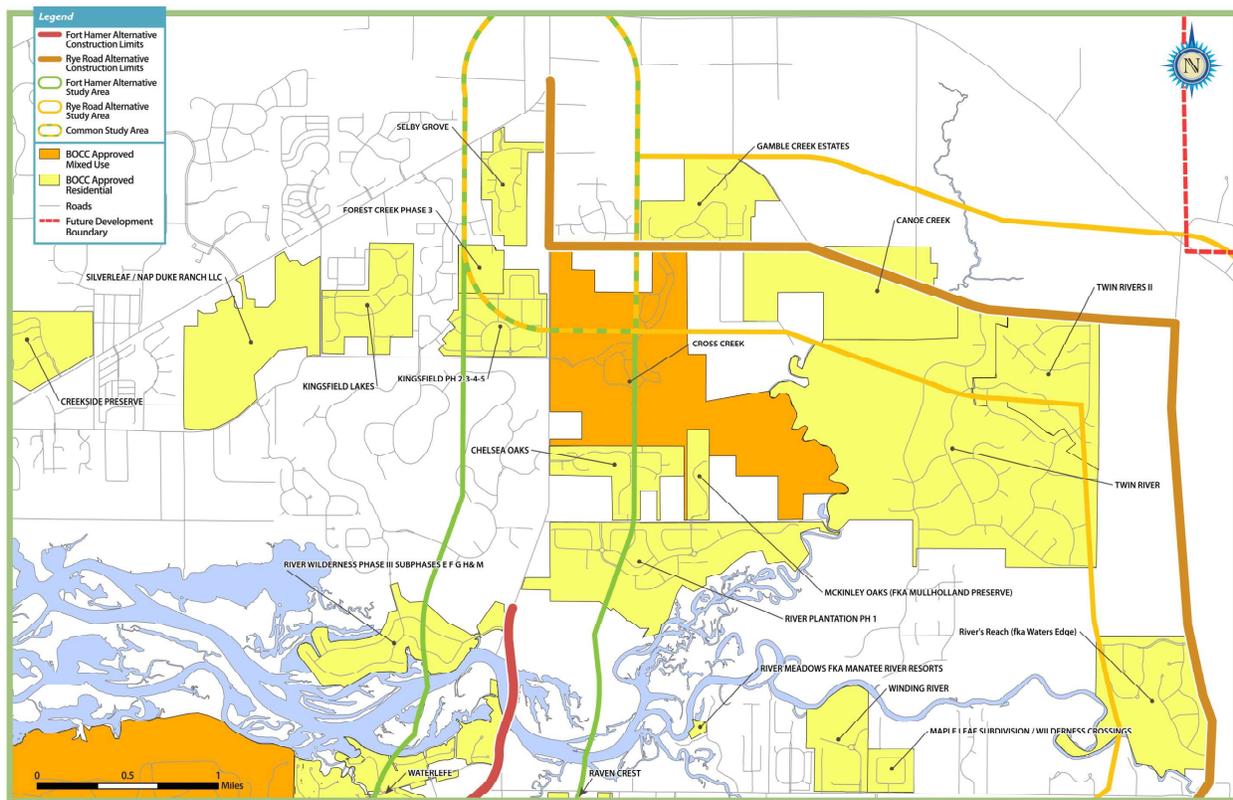
Land uses within the Fort Hamer Alternative and Rye Road Alternative study areas include residences, schools, churches, recreation areas, and parks. These types of uses are considered incompatible with highway noise levels above 66 decibels (dB) on the A-weighted scale [dB(A)]. To assess highway noise levels within each study area for the two build alternatives, a traffic noise analysis was prepared in accordance with Title 23 Code of Federal Regulations (CFR) Part 772, *Procedures for Abatement of Highway Traffic Noise and Construction Noise*. This subsection discusses existing noise levels within each study area and summarizes the methodology used to assess those noise levels. The potential noise impacts resulting from implementation of either build alternative are presented in Section 4.4.1. Details of the noise assessment are provided in the Noise Study Report (NSR) contained in Appendix F.



Source: Manatee County, 2012e.

FIGURE 3-25a
EXISTING AND PENDING
DEVELOPMENTS – SOUTH

Proposed New Bridge across the Manatee River
Final Environmental Impact Statement



Source: Manatee County, 2012e.

FIGURE 3-25b
EXISTING AND PENDING
DEVELOPMENTS – NORTH
Proposed New Bridge across the Manatee River
Final Environmental Impact Statement

**TABLE 3-21
APPROVED DEVELOPMENT WITHIN THE FORT HAMER AND RYE ROAD STUDY AREAS**

Project Name	BOCC Approved Housing Units	COOs Issued as of 2/15/2013
Canoe Creek	896	0
Chelsea Oaks	215	210
Creekside Oaks Phase II, III, IV (Aka Creekside Preserve)	244	218
Cross Creek	1282	6
Forest Creek	493	279
Gamble Creek Estates	165	74
Greyhawk Landing	789	785
Greyhawk West	501	0
Heritage Harbour	5000	1785
Kingsfield Lakes	347	339
Kingsfield Phase 2, 3, 4, 5	477	377
Mckinley Oaks (Fka Mullholland Preserve)	36	1
Mill Creek	941	677
Montecino Condominiums / Emercor Holdings LLC	46	0
Raven Crest	31	0
River Meadows Fka Manatee River Resorts	3	0
River Plantation Ph 1	493	317
River Wilderness	965	481
River's Reach	326	28
River Woods	260	246
Selby Grove	174	171
Silverleaf / Nap Duke Ranch LLC	732	0
Timberly Phases I, II	220	69
Twin River	550	186
Twin Rivers II	400	84
Waterlefe (Fka Wading Bird)	623	616
Wilderness Crossing (Fka Maple Leaf)	68	0
Winding River	97	15

NOTE: COOs issued prior to June 1991 are not reflected on this spreadsheet. Total number of COOs units may actually be higher than indicated above.

Source: Manatee County Planning Department, February 2013.

3.4.1.1 Methodology

Existing and future traffic noise levels along each build alternative were predicted using the FHWA's computer model for highway traffic noise prediction and analysis – the Traffic Noise Model (TNM-Version 2.5). The TNM propagates sound energy, in one-third octave bands, between highways and nearby receptors. The TNM takes into account the intervening ground's acoustical characteristics/topography and other natural and manmade features.

The existing and forecast future traffic data used in the TNM to predict noise levels within the Fort Hamer Alternative and Rye Road Alternative study areas were compiled for the project and are included in Appendix F. The design year for future traffic data is 2035. Because noise levels are lower when traffic volumes are low (LOS A or B) or when traffic is so congested that movement is slow (LOS D, E, or F), the maximum hourly noise level occurs between these two conditions (LOS definitions are provided in Section 3.1.3). Therefore, traffic volumes used in

the analysis reflect the demand volume or the design LOS C volumes, whichever is less. Vehicle speeds are based on posted speed limits.

In addition to the required federal regulations, this evaluation also uses methodologies established by the FDOT as documented in the FDOT's *Project Development and Environment (PD&E) Manual*, Part 2, Chapter 17 (May 24, 2011). Predicted noise levels are expressed in dB(A). This scale most closely approximates the response characteristics of the human ear to traffic noise. All noise levels are reported as equivalent levels ($L_{eq(h)}$), which is the equivalent steady-state sound level that contains the same acoustic energy as a time-varying sound level over a period of one hour.

Field measurements are taken for the purpose of ensuring the accuracy of the model in predicting existing and future noise levels. Field measurements were conducted in accordance with the FHWA's Measurement of Highway-Related Noise and were obtained using a Metrosonics dB-3100 dosimeter. The dosimeter was calibrated before and after each monitoring period with a Metrosonics cl-304 Calibrator. Validation field measurements were taken along the Fort Hamer Alternative on October 7, 2010, and along the Rye Road Alternative on April 14, 2011. Two sets of measurements were taken at each validation site for a period of 30 minutes each (three repetitions of 10 minutes each). Where possible, one set of measurements was taken in the morning and one in the afternoon. Measurement locations were as follows:

Fort Hamer Alternative

- West side of Upper Manatee River Road north of the Waterlefe subdivision entrance and
- West side of Fort Hamer Road north of the entrance to River Wilderness subdivision.

Rye Road Alternative

- West side of Rye Road north of 3rd Drive East and
- North side of Golf Course Road west of Spencer Parrish Road.

Existing noise levels at selected noise-sensitive sites within each study area were modeled using the TNM. The computer model was validated using measured noise levels at locations adjacent to the study areas. Details of this validation process are presented in the NSR contained in Appendix F.

3.4.1.2 Noise-Sensitive Sites

Noise-sensitive sites are properties where frequent human use occurs and where a lowered noise level would be of benefit. To evaluate traffic noise, the FHWA established the Noise Abatement Criteria (NAC). As shown in **Table 3-22**, the criteria vary according to a property's activity category.

**TABLE 3-22
FHWA NOISE ABATEMENT CRITERIA**

Activity Category	Description	L_{eq(h)}¹
A	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.	57 dB(A) (Exterior)
B²	Residential	67 dB(A) (Exterior)
C²	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.	67 dB(A) (Exterior)
D	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.	52 dB(A) (Interior)
E²	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F.	72 dB(A) (Exterior)
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.	N/A
G	Undeveloped lands that are not permitted.	N/A

Based on Table 1 of 23 CFR Part 772.

¹ The L_{eq(h)} Activity Criteria values are for impact determination only and are not design standards for noise abatement measures. L_{eq(h)} is expressed in dB(A).

² Includes undeveloped lands permitted for this activity category.

Note: A substantial noise increase occurs when the existing noise level is predicted to be exceeded by 15 dB(A) or more as a result of the transportation improvement project. When this occurs, the requirement for abatement consideration would be followed.

When predicted traffic noise levels “approach” or exceed the NAC, or when predicted noise levels increase substantially, the FHWA requires that noise abatement measures be considered. The term “approach” is considered to mean within 1 dB(A) of the NAC. These criteria were used to determine impacted receptors. For a substantial increase to occur, noise levels must increase 15 or more dB(A) above existing as a direct result of the transportation improvement project.

All modeled noise-sensitive sites were considered as Activity Category B or C, and as such, exterior noise levels were evaluated.

3.4.1.3 Existing Noise Levels

Within the Fort Hamer Alternative, existing exterior traffic noise levels are predicted to range from 37.5 to 54.5 dB(A). Since a portion of this alternative is on new alignment, between Receptors 13W and 35W near Winding Stream Way and at Receptor 4E, the field-measured background noise level of 44.5 dB(A) was used to represent existing and No-Build Alternative noise levels for these receptor sites. The results of this analysis indicate that existing traffic noise levels do not approach, meet, or exceed the NAC at any of the noise-sensitive receptors within the Fort Hamer Alternative Study Area.

Within the Rye Road Alternative Study Area, existing exterior traffic noise levels are predicted to range from 40.8 to 61.5 dB(A). The results of this analysis indicate that existing traffic noise levels did not approach, meet, or exceed the NAC at any of the noise-sensitive receptors within the Rye Road Alternative Study Area.

3.4.2 AIR QUALITY

An Air Quality Memorandum was prepared for this study and is provided in Appendix G. Manatee County, the EPA, and FDEP share the responsibility of protecting air quality within the project area. Manatee County is an area currently designated as attainment for all of the National Ambient Air Quality Standards (NAAQS) under the criteria provided in the *Clean Air Act* (CAA). No air quality monitoring stations are currently located within the project area. Air quality impacts are discussed in Section 4.4.2.

3.4.3 CONSTRUCTION

As previously discussed in Section 2.5.2 and listed in Table 2-10, Manatee County currently is designing and constructing roadway and safety improvements along the Fort Hamer Alternative corridor. There are currently no roadway design or construction activities planned and/or funded for the Rye Road Alternative corridor.

Construction of single-family homes in the study areas for both the Fort Hamer Alternative and Rye Road Alternative is occurring at present and is expected to continue. As discussed in Section 3.3.15, housing construction is expected to increase in the Rive Isle development in the Fort Hamer Alternative and in the River's Reach Development along the Rye Road Alternative. Construction impacts are discussed in Section 4.4.3.

3.4.4 CONTAMINATION

A Contamination Screening Evaluation Report (CSER) was prepared as part of this FEIS and is provided in Appendix H. The purpose of the evaluation was to identify properties or businesses that use, store, or distribute petroleum products, hazardous materials, or hazardous wastes that are located adjacent to the Fort Hamer and Rye Road Alternatives.

There is no single comprehensive source of information available that identifies known or potential sources of environmental contamination adjacent to either build alternative. Therefore, to identify and evaluate sites containing hazardous materials, petroleum products, or other sources of potential environmental contamination in these areas, the following tasks were conducted:

- Review of historical aerial photographs of the project area for indications of properties or businesses that might have been involved with potential environmental contamination.
- Review of readily available USGS topographic maps of the project area.
- Review of city directories and Sanborn Insurance Maps was attempted; however, none were available for the project area.

- Review of the FDEP OCULUS database and Manatee County Environmental Management (MCEMD) cleanup and inspection files for those sites adjacent to each build alternative that have reported environmental contamination or have a potential to have an impact on a proposed alternative.
- In the field surveys were conducted from accessible ROWs adjacent to the build alternatives and documented with site photographs.
- Review of Government Databases Computer Search provided by Environmental Data Management, Inc. (EDM). This screening tool maps the locations of sites with known or potential environmental liabilities based on information contained in various federal and state government databases.

Preliminary reviews of these data sources identified over 50 potentially contaminated sites adjacent to the build alternatives. The majority of these sites were removed from further consideration based on their distance from the proposed limits of construction of each of the build alternatives. The remaining identified sites (one for the Fort Hamer Alternative and 15 for the Rye Road Alternative) were then assigned a degree of risk for potential contamination impact on the environment: “No,” “Low,” “Medium,” or “High.” These risk ratings are based on the following criteria outlined in Part 2, Chapter 22 of the FDOT PD&E Guidelines (FDOT, 2013):

- “No” – After a review of all available information, there is nothing to indicate contamination would be a problem. It is possible that potential contaminants could have been handled on the parcel; however, all information (FDEP reports, monitoring wells, water and soil samples, etc.) indicates problems should not be expected.
- “Low” – The former or current operation has a hazardous waste generator ID number or deals with potential contaminants. However, based on all available information, there is no reason to believe there would be any involvement with contamination. This is the lowest possible rating a gasoline station operating within current regulation could receive.
- “Medium” – After a review of all available information (reports, Notice of Violation, consent orders, etc.), indicators were found that identified known soil and/or water contamination. It may mean that the problem does not need remediation, is being remediated (i.e., air stripping of groundwater, etc.), or that continued monitoring is required. A recommendation is made for each parcel within this category as to its acceptability for use within the Proposed Action, what action might be required if the parcel is acquired, and the possible alternative, if there is a need to avoid this parcel.
- “High” – After a review of all available information, there is a potential for contamination problems on the parcel. Further assessment would be required after alternative selection to determine the actual presence and/or levels of contamination and the need for remedial action. A recommendation must be included for what further assessment is required. Conducting the actual sites

assessment is not expected to begin until the alternative alignment is defined. However, circumstances may require screening assessment (i.e., collecting soil or water samples for laboratory analysis that may be necessary to determine the presence and/or levels of contamination) to begin earlier. Parcels that were previously used as gasoline stations and have not been evaluated or assessed would receive this rating.

Fort Hamer Alternative

One site has been identified within the construction limits of the Fort Hamer Alternative as having the potential for hazardous materials and/or petroleum contamination as defined by regulatory agencies, see **Table 3-23**. This site is the former golf cart/mower maintenance and storage area associate with the Waterlefe Golf Course on Upper Manatee River Road. The site is within the Manatee County ROW for the Fort Hamer Alternative.

**TABLE 3-23
SUMMARY OF POTENTIALLY CONTAMINATED SITES
FORT HAMER ALTERNATIVE**

Site No.	Site Name Description Address	Facility ID No.	Comments	Concern	Location	Risk Rating ¹
5	Bay Colony Gateway, Inc. Property 11225 Upper Manatee River Road Manatee County	Not Found	Former golf cart and mower maintenance and storage area	Gasoline Waste Oils Batteries Pesticides	Within ROW	Medium

¹ Risk rating based on criteria contained in Part 2, Chapter 22 of the FDOT PD&E Guidelines (FDOT, 2013).

Site No. 5 (Waterlefe Golf Course fka Bay Colony Gateway, Inc. Property - 11225 Upper Manatee River Road) - This site is a former storage and maintenance area for golf carts and lawn mowers located within the proposed roadway improvement area. This facility is not registered with FDEP but typically could have been involved with petroleum products, solvents, and batteries. Based on historical aerial review and in-the-field observations, this maintenance area was probably temporary and was in existence for no more than 2 to 3 years. No violations were found associated with this site. Based on this information, the risk rating is “Medium” for the Fort Hamer Alternative.

Rye Road Alternative

A total of 15 sites have been identified along the Rye Road Alternative with the potential to contain hazardous materials and/or petroleum contamination as defined by regulatory agencies. Of these 15 sites, one site was identified with a “Medium” risk for potential contamination impact to the Rye Road Alternative and 14 sites with “Low” risk potentials. In addition, one site was identified with “No” risk potential to impact the Rye Road Alternative. A summary of these potential contamination sites is provided in **Table 3-24**.

**TABLE 3-24
SUMMARY OF POTENTIALLY CONTAMINATED SITES
RYE ROAD ALTERNATIVE**

Site#	Site Name Description Address	Facility ID No.	Comments	Concern	Location	Risk Rating ¹
1	Taniguchi Yukinori Property 1450 Brambling Court Bradenton	9807716 LUST	Existing residential development, DNR-10/05, Score-5, CU work status- active, Emergency response spill site.	Diesel	West 1,500 feet from ROW	No
2	Coddington Backhoe Service 14109 Rye Road East Bradenton	8839641 TANKS	Former equipment maintenance facility. One 500-gallon diesel AST reported as in service on the FDEP storage tanks database but not listed on the active site database, address not found in field or property appraisers. The MCEMD indicated that the tank is not regulated and there were no files available for review. Review of historical aerial photographs suggests a likely location 120 feet to the east of the existing Rye Road ROW.	Diesel Solvents Waste Oils	East 120 feet from ROW	Low
3	L & B Hydroseeding 14119 Rye Road Bradenton	8839613 TANKS	Former agricultural supply facility and possible, one 300-gallon diesel AST reported as in service on the FDEP storage tanks database but not listed on the active site database, address not found in field or property appraisers. The MCEMD indicated that the tank is not regulated and there were no files available for review. Review of historical aerial photographs suggests a likely location 120 feet to the east of the existing Rye Road ROW.	Diesel	East 120 feet from ROW	Low
4	Manatee County Rye Road Booster Pump 14695 Waterline Road Bradenton	9807894 TANKS	Active water pump emergency generator, one 3,000-gallon diesel AST installed in 2005 currently in service, AST observed 80 ft from ROW in field.	Diesel	Adjacent to SE of ROW	Low
5	River's Reach Associates LLC a.k.a. Sunshine Ranch a.k.a. Bluebird Ranch 1501 (1531) North Rye Road Parrish	8838907 LUST TANKS	Former cattle ranch, Currently being developed as residential, one 560- gallon diesel AST removed in 1993, one 500-gallon diesel AST removed in 1991, several unregistered USTs noted in FDEP OCLUS database, two UST locations noted with soil and/or groundwater impacts during closure, one to distant to be of concern, one within 100 feet of proposed corridor, DNR-02/93, IRA-1993, CAR-1994, groundwater gradient to west and project ROW, MOP-1995, SA-2001, NFA-2001. Former tank locations could not be determined during field review.	Diesel	Within ROW UST East 100 feet from ROW	Low

Continued on next page

**TABLE 3-24 (CONTINUED)
SUMMARY OF POTENTIALLY CONTAMINATED SITES
RYE ROAD ALTERNATIVE**

Site#	Site Name Description Address	Facility ID No.	Comments	Concern	Location	Risk Rating ¹
6	Wilderness Estates on Gamble Creek 14855 Golf Course Road Parrish	8626214 TANKS	Formerly Calgene Fresh Golf Course Farm, former citrus grove with five diesel ASTs registered and reported removed between 1991 and 1999. Former AST locations could not be determined during field review.	Diesel Herbicides Pesticides Metals	Adjacent to ROW South and North	Low
7	Gamble Creek LC Property Golf Course Road west of Rye Road Parrish	9805383 TANKS	Currently Twin Rivers subdivision, former cattle ranch agricultural fields. Two 500-gallon diesel ASTs removed in 2001, AST locations over 1,700 feet south of the project corridor, tanks not regulated, no file at MCEMD.	Diesel	Adjacent to ROW South 1,700 feet	Low
8	Cross Creek Homes Formerly Fort Hamer Farms and Rawl's Custom Cutting and Wrapping 4402 Fort Hamer Road Parrish	8623998 TANKS	Currently Cross Creek Homes (under development), former cattle ranch residences and structures removed, one 500-gallon diesel AST recently removed, former AST location could not be determined in field review, tank not regulated, no file at MCEMD.	Diesel	South 2,000 feet from ROW	Low
9	Mellon Holdings Palmetto Pines Golf Course 14355 Golf Course Road Parrish	8734011 TANKS	Existing golf cart storage and golf shop adjacent to project ROW, maintenance area 1,700 feet to the south. One 500-gallon leaded gas UST removed in 1990, one 550-gallon leaded gas AST removed in 1990, one 250-gallon gas AST currently in service, one 1,000-gallon diesel AST currently in service.	Diesel Leaded Gas Batteries Herbicides Pesticides Metals	Adjacent to ROW South and North	Low
10	Rutland Ranch Rye Road & CR 675 South Myakka City	9202926 TANKS	Appears to be a nature reserve managed by SWFWMD, former cattle ranch. Four diesel pump generator ASTs registered as installed in 1991 and removed in 1999, two ASTs over 0.7 miles to the east, one 1.2 miles to the west and one AST location could not be determined.	Diesel	East and West of ROW	Low
11	Gamble Creek Estates LLC (Gamble Creek Beefmasters) Golf Course Road at Gamble Creek Road Parrish	8624403 TANKS	Currently a residential subdivision under development, former cattle ranch, one 4,000-gallon leaded gasoline UST installed 1981 and removed in 1988. Former AST location could not be determined during field review.	Leaded Gas	South 2,700 feet from ROW	Low
12	Southern Broadcast Corp WWSB 17020 SR 675 Myakka City	9601127 TANKS	Active transmission tower w/backup generator. One 800-gallon diesel AST removed in 2000, one 2,000-gallon diesel AST installed in 2000 and currently in service, AST observed in field.	Diesel	Northeast 800 feet from ROW	Low

Continued on next page

**TABLE 3-24 (CONTINUED)
SUMMARY OF POTENTIALLY CONTAMINATED SITES
RYE ROAD ALTERNATIVE**

Site#	Site Name Description Address	Facility ID No.	Comments	Concern	Location	Risk Rating ¹
FR-1	Braden River Fire Station No. 3 150 Rye Road Bradenton	Not Found	Active fire station, no fleet fueling observed. Backup emergency generator (with an integral tank within the pedestal) observed at west corner of the fire station structure 30 ft from ROW.	Diesel	Adjacent to NW of ROW	Low
FR-2	River's Reach Associates LLC 1400 block of North Rye Road Parrish	Not Found	Former citrus grove, proposed for development as residential. Possible AST and staging area within ROW noted on historical aerial photography. No access to site during field review.	Diesel Herbicides Pesticides Metals	Within Proposed ROW	Medium
FR-3	ECO Corporation 13620 Golf Course Road Parrish	Not Found	Former nursery. Appears as a nursery in historical aerials. Fleet fueling AST was observed during field review 60 ft north of the existing Golf Course Road ROW.	Gasoline Diesel Herbicides Pesticides	Adjacent to North of ROW	Low

¹ Risk rating based on criteria contained in Part 2, Chapter 22 of the FDOT PD&E Guidelines (FDOT, 2013).

AST – Aboveground Storage Tank

CU - Cleanup or Cleanup Status

IRA - Initial Remedial Action

MCEMD - Manatee County Environmental Management Department

NFA - No Further Action

TANKS - Registered Tanks

CAR - Contamination Assessment Report

DNR - Discharge Notification Report

LUST - Leaking Underground Storage Tanks

MOP - Monitoring Only Plan

SA - Site Assessment

UST - Underground Storage Tank

Site No. 2 (Coddington Backhoe Service - 14109 Rye Road) - The site address could not be found in the Manatee County Property Appraisers website or in the field. The historical address is located within a residential area. The site contact telephone number is currently in use by another party. Historical aerials suggest that the facility was located at the southeast corner of Rye Road and 15th Drive East. Structures at this location are located 120 feet to the east of the existing ROW. This facility is registered with FDEP (ID# 8839641) as having had one 500-gallon non-retail vehicular diesel above ground storage tank (AST) currently in service. The AST was not observed in the field review. The MCEMD indicates that the AST is unregulated and that no files are available for the facility. The FDEP active tanks list does not contain the site. Based on this information and the site's distance from the ROW and the likely inactive status, the risk rating is "Low" for the Rye Road Alternative.

Site No. 3 (L & B Hydroseeding - 14119 Rye Road) - The site address could not be found in the Manatee County Property Appraisers website or in the field. The historical address is located within a residential area of the project area and may be at the same location as Site No. 2. The site contact telephone number is currently inactive. Historical aerials suggest that the facility was located at the southeast corner of Rye Road and 15th Drive East. Structures at this location are located 120 feet to the east of the existing ROW. This facility is registered with FDEP (ID# 8839613) as having had one 300-gallon non-retail vehicular diesel AST currently in service. The AST was not observed in the field review. The MCEMD indicates that the AST is

unregulated and that no files are available for the facility. The FDEP active tanks list does not contain the site. Based on this information and the site's distance from the ROW and the likely inactive status, the risk rating is "Low" for the Rye Road Alternative.

Site No. 4 (Manatee County Booster Pump - 14695 Waterline Road) - This site is an existing wastewater pump facility located adjacent and east of the existing ROW. This facility is registered with FDEP (ID# 9807894) as having had one 3,000-gallon diesel AST installed in 2005 and currently in service. The AST fuels a backup emergency generator associated with the facility's waste water pumps. The double walled AST is located approximately 80 feet east of this alternative. No violations were found associated with this site. Based on the age and type of fueling system, the risk rating is "Low" for the Rye Road Alternative.

Site No. 5 (Sonshine Ranch a.k.a. Bluebird Ranch - 1501 Rye Road) - This site is a former cattle ranch currently under redevelopment as residential (River's Reach Associates, LLC at 1531 Rye Road). This facility is registered with FDEP (ID# 8838907) as having one 560-gallon diesel AST removed in 1993 and one 500-gallon diesel AST removed in 1991. The ASTs were associated with well pump generators. The actual locations of the former ASTs could not be determined and were not observed in the field.

Based on assessment reports downloaded from the FDEP OCULUS website, the ranch historically contained several diesel underground storage tanks (USTs) associated with well pump generators. During closure assessment activities, two of the locations were discovered to contain impacted soil and/or groundwater, which resulted in the submittal of a Discharge Notification Form (DNF) in 1993. One of the USTs was located approximately 0.5 mile to the west of this alternative and is not a source of potential concern to the project.

One 500-gallon UST, located approximately 50 feet west of Rye Road is also located approximately 100 feet east of this alternative. The diesel UST, reportedly used to fuel a well pump generator, was removed in 1991. The former UST location could not be determined in the September 2006 field review. During a 1993 closure assessment/initial remedial action (RA) soil and groundwater impacts were discovered. In addition, 140 tons of impacted soil were removed and thermally treated off-site. The site was approved for a one year monitoring only plan in 1994. Only one round of groundwater sampling was conducted in June 1994. The groundwater samples collected from the source well and one down gradient well were detected to contain ethyl-benzene and total volatile organic aromatics at concentrations above the guidance concentrations that were in place at the time. The surficial groundwater flow direction was shown to be to the west and toward the Rye Road Alternative.

The site was reassessed in 2001, at which time only trace levels of ethyl-benzene, total xylenes, and naphthalenes were detected in the source well. No further action (NFA) was proposed and the FDEP approved a Site Rehabilitation Completion Order (SRCO) for the facility in 2001. Based on this information, the risk rating is "Low" for the Rye Road Alternative.

Site No. 6 (Wilderness Estates on Gamble Creek - 14855 Golf Course Road) - This site is an existing inactive citrus grove. This facility is registered with FDEP (ID# 8626214) as having five diesel ASTs removed in 1991, 1994, and 1999. The ASTs were associated with well pump generators. The former AST/well locations could not be determined in the September 2006 field review. However, historical aerial photographs suggest that the pump houses were located between 250 and 850 feet from this alternative. Because Gamble Creek bisects the grove, these locations are likely cross gradient to the existing Golf Course Road ROW. No reported discharges or violations were found associated with this site. Based on this information and the fact that the assumed locations of the ASTs are at least 250 feet from the existing ROW, the risk rating is “Low” for the Rye Road Alternative.

Site No. 7 (Gamble Creek LC Property - Golf Course Road at Twin River Trail) - This site is a former agricultural facility and currently the Twin Rivers Residential subdivision. This facility is registered with FDEP (ID# 9805383) as having two 500-gallon diesel ASTs removed in 2001. Maps depict the AST locations as over 1,700 feet to the south of the existing Golf Course Road ROW. Based on this distance, the risk rating is “Low” for the Rye Road Alternative.

Site No. 8 (Fort Hamer Farms a.k.a. Rawl’s Custom Cutting and Wrapping - 4402 Fort Hamer Road) - This site is a former agricultural facility and currently being redeveloped as the Cross Creek Residential subdivision. This facility is registered with FDEP (ID# 8623998) as having one 550-gallon diesel AST removed in 2006. The former AST was located over 2,000 feet to the south of the existing Golf Course Road ROW. No reported discharges or violations were found associated with this site. Based on distance, the risk rating is “Low” for the Rye Road Alternative.

Site No. 9 (Palmetto Pines Golf Course Maintenance Facility - 14355 Golf Course Road) - This site is an existing golf course office/pro-shop and golf cart staging/recharging facility located within 100 feet north of the existing Golf Course Road ROW. This facility has one fueling UST and three ASTs registered with FDEP (ID# 8734011). Two leaded gasoline tanks (AST and UST) were removed in 1990. One gasoline and one diesel AST remain in service. The tanks are/were located 1,700 feet south of the existing Golf Course Road ROW. The golf course maintenance facility is also located in this area. No violations were found associated with this site. Based on distance the risk rating is “Low” for the Rye Road Alternative.

Site No. 10 (Rutland Ranch - Rye Road and CR 675) - This site is a former cattle ranch and agricultural facility. Former citrus groves within the ranch on the west side of Rye Road and along Golf Course Road are currently rural residential. Pastureland and fields to the west of Rye Road are generally under development with residential subdivisions or remain undeveloped. Former pastureland and fields of the ranch to the east of Rye Road are currently managed by SWFWMD. This ranch is registered with FDEP (ID# 9202926) as having four diesel ASTs installed in 1991 and removed in 1999. The ASTs were associated with well pump generators. The former AST/well locations could not be determined in the September 2006 field review. However, a review of MCEMD files identified the location of three of the ASTs, all of which are

over 0.75 miles from the existing Rye Road ROW. No reported discharges or violations were found associated with this site. Based on this information, the risk rating is “Low” for the Rye Road Alternative.

Site No. 11 (Gamble Creek Beefmasters - Golf Course Road at Gamble Creek Road) - This site includes pasturelands on the north and south sides of Golf Course Road. Land to the north, historically containing the facility’s stock yard, is currently under redevelopment as a residential subdivision (Gamble Creek Estates, LLC). Lands to the south contain rural residences and pasturelands. This ranch is registered with FDEP (ID# 8624403) as having one 4,000-gallon leaded gasoline UST installed in 1981 and removed in 1988. A review of MCEMD files suggests the location of the former UST was 2,700 feet south of the existing Golf Course Road ROW. No reported discharges or violations were found associated with this site. Based on this information, the risk rating is “Low” for the Rye Road Alternative.

Site No. 12 (Southern Broadcast Corporation WWSB - 17020 SR 675) - This site is an existing transmission tower located 800 feet northeast of the existing Rye Road ROW. This facility is registered with FDEP (ID# 9601127) as having one 800-gallon diesel AST installed in 1996 which was replaced with a 2,000-gallon AST in 2000. The AST currently in service is used to fuel an emergency backup generator. No violations were found associated with this site. Based on distance the risk rating is “Low” for the Rye Road Alternative.

Site FR-1 (Manatee County Braden River Fire Station No. 3 - 150 Rye Road) - This site is an existing fire station with an emergency backup generator located approximately 130 feet to the west of the existing Rye Road ROW. The diesel powered generator has an integral tank within the pedestal. The AST capacity is likely less than 500 gallons and not required to be registered with FDEP. Based on this information, the risk rating is “Low” for the Rye Road Alternative.

Site FR-2 (River’s Reach Associates - 1400 block of North Rye Road) - This site is a recently decommissioned citrus grove. The proposed alternative bisects the property and former citrus grove from north to south. The site has no tanks registered with FDEP. However, unregulated tanks were likely present in the past. The grove was not accessible during the field review. Historical photography (between 1940 and 1973) suggests that a former staging area may have existed near the northern end of the property within 50 feet or possibly within the proposed ROW. A 1998 aerial photograph depicts a possible surface water or well pump house and AST at the southern end of the property. The structure is within 50 feet or possibly within the proposed ROW. Based on this information, the risk rating is “Medium” for the Rye Road Alternative.

Site FR-3 (ECO Corporation - 13620 Golf Course Road) - This site is a former nursery. During the field review, a fueling AST was observed approximately 60 feet to the north of the existing Golf Course Road ROW. The AST capacity is likely less than 500 gallons and not required to be registered with FDEP. Based on this information, the risk rating is “Low” for the Rye Road Alternative.

Potential impacts of these sites resulting from the implementation of each alternative are discussed in Section 4.4.1.

3.4.5 SCENIC HIGHWAYS

As defined by F.S. 335.093, there are no designated scenic highways located within either the Fort Hamer Alternative or Rye Road Alternative study areas.

3.4.6 NAVIGATION

The USCG has jurisdiction over navigable waterways in the United States. Therefore, the ability to construct any structure over or within a navigable waterway, and that may impede the safe passage of vessels on such waterway, is regulated by the USCG. Whenever a new or replacement structure (such as a bridge) is proposed over a navigable waterway, the USCG often will use the results of a Bridge Questionnaire to define the minimum vertical and horizontal clearances for the structure.

As part of the FHWA-led study, a vessel survey was conducted over 3 days during the Memorial Day weekend in 1999. The results of that survey identified that a proposed vertical clearance of 26 feet would accommodate 100 percent of all vessels utilizing the Manatee River at this location. However, due to the length of time since that survey, and shift in lead federal agency to USCG, a second vessel survey was conducted in April 2011. Over 500 property owners with direct access to the Manatee River from the Rye Road Bridge west to approximately 0.5 mile west of the proposed Fort Hamer crossing were sent a vessel questionnaire. Three respondents noted that they had vessels in excess of 26 feet in height. Subsequently, representative from USCG, Manatee County, and the consultant toured this section of the Manatee River in December 2011. The three vessels noted were located; however, one (a small sailboat) was sunk in place at the owner's dock. The second consisted of a houseboat with a flagpole that exceeded 26 feet in height; however, it was noted that the houseboat required less than 26 feet of vertical clearance if the flagpole was lowered. The third vessel was a sailboat with a permanently mounted mast exceeding 26 feet in height. The results of both vessel surveys are provided in Appendix A-2.

The Manatee River at the location of the existing Rye Road Bridge is considered a navigable waterway; however, the shallow water depths at this location preclude all vessels except canoes, kayaks, and similar vessels.

The Manatee River is listed by the USACE as a Federal Project Channel and was authorized by House Document 117/58/2 on March 3, 1905 to be dredged up to 4 feet deep and 75 feet wide from Rocky Bluff (approximately I-75) upstream to the communities of Mitchellville/Rye. The upstream limit of the federal project was established at Mitchellville Bridge on July 27, 1916. No subsequent channel maintenance has been noted on this reach since that time (1916).

Potential impacts to navigation as a result of the implementation of each alternative are discussed in Section 4.4.6.

3.5 OTHER ACTIONS

The CEQ regulations (40 CFR Sections 1500-1508) implementing the procedural provisions of NEPA, as amended (42 U.S.C. Section 4321 et. seq.) requires that the effects of the Proposed Action be compared with the cumulative effects of other past, present, and reasonably foreseeable future actions. More specifically, the CEQ regulations define cumulative effects as:

“...the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions (40 CFR Section 1508.7).”

This section summarizes those past, present, and reasonably foreseeable future actions within the project area that, when added to the Proposed Action, may contribute to an overall cumulative effect on the environment. The cumulative effects analysis of these actions is discussed in Section 4.6 of this FEIS.

Prior to settlement, uplands within the project area likely consisted of a mosaic of hardwood hammocks, upland scrub vegetation, and pine flatwoods. With settlement, much of these areas were gradually cleared for the production of crops and pasture, chiefly for cattle. Most of these operations remained as relatively small, family farms; however, larger commercial farming ventures have occurred in the project area. For example, a commercial tomato farming operation once existed at the location of the future Hidden Harbour Park on the north side of the river. As discussed previously in Section 3.1.2.1, these farming operations have steadily given way to residential development, especially in the past 15 years. Most of the land that remains undeveloped has been zoned as residential and is expected to become developed over the coming decades. Recent improvements include development of the collegiate rowing center at Fort Hamer Park (2011), construction of the Annie Lucy Williams Elementary School on Fort Hamer Road (2007), and improvements of the Rye Road Bridge (2008). Permits for the installation of a 30-inch water main beneath the Manatee River between Upper Manatee River Road and Fort Hamer Road were recently obtained by Manatee County and construction is expected to begin within the year.

The Manatee River within the project area remains within its natural channel and has not been dredged or channelized. Wetlands along the river remain largely intact, although private residential development with associated docking structures and golf course development has encroached upon these wetlands in various places. Regardless of the implementation of either Build Alternative, there is little reason to expect future dredging or channelization of the river as there is no water-dependent industry or commercial navigation needs within this stretch of the river, nor are these needs expected to arise in the future. Periodic development of shoreline homesites and associated small docks is expected to occur along the river.

Several transportation improvement projects are reasonably foreseeable within the project area. Details of these projects were previously shown in Table 2-10 and generally include the widening of Upper Manatee River Road (from SR 64 to the proposed Fort Hamer Bridge location), Fort Hamer Road, and US 301. A new sidewalk is scheduled to be installed along Fort Hamer Road in 2012-2013 and various intersection improvements along US 301 are in various stages of planning and design.

Chapter 4

ENVIRONMENTAL CONSEQUENCES AND RECOMMENDATION

The No-Build Alternative, Fort Hamer Alternative, and Rye Road Alternative are being recommended for further consideration in this chapter. The analysis and evaluation of impacts resulting from the two build alternatives is based on a new two-lane bridge for the Fort Hamer Alternative and the widening of the Rye Road Alternative from two to four lanes. Each of these alternatives has been evaluated and compared to the others based on a series of environmental considerations. These considerations are categorized as:

Social – those issues related to the existing and planned human environment:

- Socioeconomic Conditions
- Land Use Characteristics (Existing and Future)
- Traffic
- Community Cohesion
- Relocation Potential
- Community Services and Facilities
- Environmental Justice
- Controversy Potential
- Utilities and Railroads

Cultural – those issues related to archaeological and historic resources:

- Archaeological
- Historical

Natural – those issues related to the natural environment:

- Land Use/Vegetative Cover
- Wetlands
- Essential Fish Habitat (EFH)
- Wildlife
- Threatened and Endangered Species
- Aquatic Preserves
- Water Quality
- Outstanding Florida Waters (OFWs)
- Wild and Scenic Rivers

- Groundwater
- Floodplains and Floodways
- Coastal Zone Consistency
- Coastal Barrier Island Resources
- Farmlands
- Visual and Aesthetics

Physical – those issues related to the human, built, and natural environment:

- Noise
- Air Quality
- Construction
- Contamination
- Scenic Highways
- Navigation

The following sections provide the results of this analysis and evaluation.

4.1 SOCIAL IMPACTS

4.1.1 SOCIOECONOMIC CONDITIONS

This section presents discussion of the potential social and economic effects that may result from the implementation of the No-Build Alternative, Fort Hamer Alternative, or Rye Road Alternative. Construction of the proposed alternatives has the potential to influence the environment through both direct and indirect effects, and may range from clearly observable impacts within the right-of-way (ROW) to less apparent impacts some distance from the project corridor. Though primary analysis of the socioeconomic conditions would occur within the 0.5-mile project buffer area (study area), the elements of the sociocultural environment would, where relevant, be examined at the regional and local levels to identify those effects that may be more dispersed geographically.

4.1.1.1 Impact to the Population

As described previously in Section 3.1.1.1, the population that resides in area of the Proposed Action is rapidly increasing in number, and is generally younger, wealthier, and less diverse than the population present within Manatee County as a whole. The economic and age characteristics of the existing population identified within the area of the Proposed Action suggests a reduced presence of groups less able to adjust to changes in the built environment.

No-Build Alternative

The No-Build Alternative would implement only those improvements already funded by the Florida Department of Transportation (FDOT), the County, or non-governmental agencies, and would include no additional road capacity improvement. The limited action associated with the No-Build Alternative provides little potential for impact to the demographic composition and population trends present within the project area.

Fort Hamer Alternative

As described previously in Section 2.5.2, the Fort Hamer Alternative would, through the construction of a new two-lane bridge over the Manatee River, connect two existing local collector roadways. The new connection provided by the bridge would improve north/south travel within the County. The bridge would connect two areas of the County with a similar demographic make-up. Additionally, the populations present both north and south of the Manatee River are expanding at similar rates. The provision of additional roadway capacity would likely have little effect on demographics and serve to support the trend in population growth in the area. This alternative is anticipated to have little effect at the regional level as the proposed bridge would operate as part of the local collector network and play a minor role in supporting regional traffic.

Rye Road Alternative

The Rye Road Alternative includes the widening of Rye Road, Golf Course Road, and the northern segment of Fort Hamer Road from two to four lanes. Much like the Fort Hamer Alternative, the Rye Road Alternative passes through areas of similar demographic composition that are expanding at similar rates. The widening of the existing Rye Road corridor to four lanes would likely support the current trend in population growth, but have little effect on the demographic composition of the area. This alternative is anticipated to have little effect at the regional level as the proposed capacity improvement would expand a part of the local collector network.

4.1.1.2 Impacts to the Economy

As described previously in Section 3.1.1.2, the economic activity present in Manatee County is based primarily in the service sector with the largest employment centers generally located west of Interstate 75 (I-75). In the area of the proposed alternatives, employment is focused along U.S. Highway (US) 301 and State Route (SR) 64 with relatively few jobs present along either the Fort Hamer Alternative or Rye Road Alternative. Further, comparison between the employment data presented in Figures 3-2 through 3-7 and existing use shows that no major employment centers [traffic analysis zones (TAZs) containing >500 jobs] are present along either corridor, and those areas of existing employment found to be present typically coincide with the location of either golf courses or schools.

As discussed later in Section 4.1.2.1, the existing land use present within the project area is not (based on intensity of use) supportive of large scale commercial development and would not likely be altered by the Proposed Action. The small commercial centers currently present along US 301 and SR 64 would likely support the majority of future employment growth in the area of the alternatives.

Though construction of either build alternative is anticipated to have a minimal effect on new commercial development, additional metrics may be reviewed to aid in the assessment of the overall economic impact produced by the build alternatives. **Table 4-1**, identifies several major costs and benefits that may result from the implementation of the build alternatives. In the evaluation of economic benefits, the No-Build Alternative is assumed to represent the existing condition with no action taken.

**TABLE 4-1
COST/BENEFIT BY ALTERNATIVE**

Benefit/Cost	No-Build Alternative	Fort Hamer Alternative	Rye Road Alternative
Structure Cost*	N/A	\$23,884,850	\$54,386,000
Property (ROW) Acquisition Cost	N/A	\$176,661	\$58,472,740
Reduced Annual Tax Revenue	N/A	\$714	\$235,727
Induced Wages (mean wage x number of jobs created)	N/A	\$12,074,350 to \$16,494,790	\$27,545,890 to \$37,696,530
Change in Fuel Cost**	N/A	\$16,466	\$-8,934
Change in VHT Cost**	N/A	\$ 192,096	\$219,104

* Maximum Life Time Facility Costs identified in Section 2.5.

** Annual Costs, Based on Sarasota/Manatee/Charlotte Transportation Model (SMC Model) 2035 vehicle miles traveled (VMT) and vehicle hours traveled (VHT) (MPO, 2011).

Structure Cost

The first cost figure listed in Table 4-1 represents the combined construction and life time maintenance cost associated with the bridge improvements proposed as part of the build alternatives. The life time cost figures are described in detail in Section 2.5, and combine the cost of construction with the long-term cost of facility maintenance. The figures presented identify the cost of construction and operation over a 75-year period.

Right-of-Way Cost

The second cost presented in Table 4-1 identifies the estimated cost of property acquisition. The figures shown represent the estimated value of the property that would be acquired as part of needed ROW expansion. Note the ROW costs calculated at this stage of the project are conservative approximations used to compare the acquisition costs of the build alternatives.

The methodology used in the assessment of ROW acquisition began with a geographic information system (GIS) analysis to identify the areas of adjacent parcels that would be impacted by the preliminary alternative designs. Results of this portion of the analysis showed

that the Fort Hamer Alternative would require the acquisition of approximately 0.15 acres and that the Rye Road Alternative would require approximately 47.84 acres to support the planned improvements.

The second step in the analysis estimated the value of the affected property. A generalized square-foot cost was derived from the Just Market Value assessed by the Manatee County Property Appraiser (Manatee County, 2012f). The generalized square-foot value estimate was calculated by dividing the Just Market Value for each property by the area of that property then by taking the mean of the square-foot value estimates for all properties located within the study area. An average value of \$10.98 per square-foot was identified as the generalized Just Market Value of land within the study area of each build alternative.

The square-foot value derived in step two (above) was then multiplied by the area of needed ROW. Adjustments to the total cost were then made to better approximate the total cost of associated with ROW acquisition. Multipliers, identified through similar action, were used to account for additional settlement costs. Historically, it has been shown that the actual cost of acquisition for residential property is approximately 2.5 times the just market value. Therefore, this multiplier was applied to the cost figures.

Finally, adjustments were made to the overall ROW cost to account for relocations. In four instances, the expansion of the ROW is anticipated to result in the total takings of a property. In these circumstances, the full value of the property was incorporated into the ROW cost estimate in place of the impacted area value. The property acquisition costs presented in Table 4-1 combines the partial and total takings figures.

Reduced Annual Tax Revenue

The reduced annual tax revenue figure presented in Table 4-1 represents the potential loss in property tax revenue that could result from the expansion of ROW and resultant reduction in the area of taxable private property.

As with the estimation of ROW cost, the estimation of reduced tax revenue associated with the development of the build alternatives was computed using a generalized multiplier. Housing data presented in the 2011 American Community Survey (ACS), 5 Year Estimate (ACS, 2011b) includes an estimate of the median real estate taxes paid for owner occupied housing within Manatee County. Additionally, the 2011 ACS provides the median value of housing for the same area. These figures may be combined to estimate the median real estate property taxes paid within Manatee County. See below for the calculation:

$$\text{Median Taxes } (\$1,981) / \text{Median Home Value } (\$195,300) = 1.01\%$$

To estimate the annual loss of tax revenue that may result from the development of the propose alternatives, the tax rate of 1.01 percent was applied to the value of the property that would be incorporated into the ROW. The Fort Hamer Alternative would require the acquisition of approximately 0.15 acres of land with an estimated just market value of \$70,664. This value

combined with the estimated tax rate would result in the loss of approximately \$714 in annual tax revenue. The Rye Road Alternative would require the acquisition of approximately 47.84 acres of land with an estimated just market value of \$22,880,913. This value combined with the estimated tax rate would result in the loss of approximately \$231,097 in taxes annually.

Additionally, as noted above, four relocations would likely occur as part of the development of the Rye Road Alternative. The removal of these four properties from the tax base would result in the loss (based on 2012 tax records) of approximately \$4,630 in tax revenue annually. Table 4-1 presents the combined potential loss in tax revenue.

Job Creation

One major economic benefit typically associated with a major infrastructure improvement is job creation. Several methodologies exist to estimate the number of jobs created by infrastructure spending. Two recent examples, outlined below, were used to establish a range in potential number of jobs created in the development of the Fort Hamer Alternative and Rye Road Alternative.

Developed by Sacramento Regional Research Institute (SRRI), the Stimulus Calculation Tool, is intended to provide governmental agencies with a means of assessing the economic impact of construction spending. The tool divides the calculation of benefit into a series of generalized groupings based on investment type and provides an estimated benefit for an average 1-year period. The most relevant classification provided by the SRRI tool to the work at hand is the Infrastructure and Public Works grouping. The SRRI tool assumes that for every 1 million dollars invested in infrastructure, 7.1 direct and 5.3 indirect/induced jobs are created (12.4 total jobs) through that investment.

The second analysis tool reviewed for relevance was the Impact Analysis for Planning (IMPLAN) modeling system. IMPLAN is used by over 2,000 public and private institutions to conduct regional economic impact analysis. A recent application of IMPLAN to the development of public transportation infrastructure in Milwaukie, Wisconsin showed that for every 1 million dollars invested in transportation infrastructure, 8.34 direct and 8.63 indirect/induced jobs were created (16.97 total jobs).

Based on the two examples identified above, a range for the potential number of jobs created by the construction of the Fort Hamer Alternative and Rye Road Alternative may be developed. As outlined in Section 2.5, the cost of the development of the Fort Hamer Alternative would likely cost \$23,884,850 and the Rye Road Alternative would cost \$54,386,000. These cost figures combined with the jobs estimates result in the assessment that the construction of the Fort Hamer Alternative would result in the creation of between 295 to 403 jobs and the construction of Rye Road Alternative would create between 673 to 921 jobs.

To more directly estimate the potential economic impact, the estimated number of jobs created may be multiplied by an average wage figure. The Bureau of Labor Statistics estimates that the

mean annual wage of “All Occupations” in the State of Florida in Year 2012 was \$40,930. The range of potential wage increase is listed in Table 4-1.

Estimated Fuel Cost

The estimate of the impact of the No-Build Alternative, Fort Hamer Alternative, and Rye Road Alternative on fuel costs is based on a calculation that divides total vehicle miles traveled (VMT) by average vehicle fuel efficiency, and multiplies that figure by average fuel price.

The VMT estimate was derived through use of the Sarasota/Manatee/Charlotte Travel Demand Model (SMC Model) (MPO, 2011) for the Financially Feasible Plan included in the Sarasota/Manatee Metropolitan Planning Organization’s (MPO’s) 2035 Long Range Transportation Plan (LRTP) (MPO, 2012). The figures presented by alternative in **Table 4-2** presents the total annual VMT that would occur within Manatee County in year 2035. The VMT figure is presented by alternative allows for an assessment of the total driving activity that may be induced by the proposed improvement.

TABLE 4-2
2035 VMT

Alternative	2035 VMT
No-Build	13,762,689
Fort Hamer	13,664,913
Rye Road	13,815,741

Source: SMC Model 2035 VMT (MPO, 2011).

Estimated total fuel consumption was calculated by dividing the VMT figure produced in Step 1 by the estimated average fuel efficiency of vehicles that would be traveling on road. An average of 20.7 miles per gallon (mpg) was used as the efficiency figure based on the combined mpg estimate for all light-duty vehicles which was developed by the Bureau of Transportation Statistics in 2008. **Table 4-3** presents the total number of gallons of fuel consumed.

TABLE 4-3
GALLONS OF FUEL CONSUMED

Alternative	Gallons of Fuel
No-Build	664,864
Fort Hamer	660,141
Rye Road	667,427

Sources: SMC Model 2035 VMT (MPO, 2011). FHWA, 2008.

Finally the average cost of fuel (\$3.486), taken from the 2012 AAA Cost of Driving analysis, was multiplied by the total number of gallons of fuel consumed. Table 4-1 presents the total cost of fuel associated with the alternatives.

Value of Vehicle Hours Traveled

The calculation for the value of vehicle hours traveled (VHT) considers the variations in VHT produced by development of the proposed alternatives combined with an estimate regarding the value of time. Much like the calculation of fuel cost, a total VHT figure for year 2035 was taken from the SMC Model (MPO, 2011). The VMT total was then combined with an estimate for the value of time. The value of time estimate was taken from a recent study completed by the FDOT in 2011 on I-95 in Miami, Florida. The study surveyed drivers to estimate the value of time, and set the per hour average at \$32.00 dollars. **Table 4-4** presents the total annual VMT that would occur within Manatee County in year 2035.

TABLE 4-4
2035 VHT

Alternative	2035 VHT
No-Build	736,049
Fort Hamer	730,046
Rye Road	729,202

Source: SMC Model 2035 VHT (MPO, 2011).

The VHT figures listed in Table 4-4 were then multiplied by the \$32.00 hourly rate. The results are listed in **Table 4-5**. Table 4-1 presents the difference between the No-Build Alternative and the two build alternatives.

TABLE 4-5
ANNUAL VALUE OF VHT

Alternative	2035 VHT Value
No-Build	\$23,553,568
Fort Hamer	\$23,361,472
Rye Road	\$23,334,464

Sources: MPO, 2011. CUTR, 2011.

Summary of Economic Effects

No-Build Alternative

In development of the economic analysis, the potential economic effect associated with the No-Build Alternative is considered to be the likely future condition in the absence of the proposed improvements, and serves as the base-line figure to which the economic impact of the build alternatives may be compared.

As highlighted in Table 4-1 the No-Build Alternative would result in none of the costs associated with the development of a new bridge. Similarly, the No-Build Alternative would not result in any improvement in mobility or access, resulting in some instances in higher fuel and travel time costs within the project area.

Fort Hamer Alternative

As stated previously, the implementation of the Fort Hamer Alternative would not likely affect the location or intensity of long-term employment within Manatee County. However, based on the VMT and VHT figures produced by the SMC Model (Sarasota/Manatee MPO, 2011) the Fort Hamer Alternative would reduce both fuel consumption and travel time.

The Fort Hamer Alternative would cost an estimated \$23.9 million to construct (including bridge maintenance, ROW, and roadway costs), and would result in the potential loss of less than \$1,000 in annual tax revenue.

The immediate short-term economic benefit resulting from construction expenditures would likely include the creation of 295 to 403 jobs with an associated payroll of \$12.01 – \$16.53 million dollars. Additionally, based on the results of the SMC Model (Sarasota/Manatee MPO, 2011), the travel behavior associated with the development of the Fort Hamer Alternative would reduce total VMT by 97,776 annually with a related fuel costs savings of \$16,466 annually. Finally, the Fort Hamer Alternative would reduce the total VHT by more than 6,000 hours annually with an associated annual savings of \$192,096.

Rye Road Alternative

The implementation of the Rye Road Alternative would not likely affect the location or intensity of long-term employment within Manatee County. Based on VHT figures produced by the SMC Model, the Rye Road Alternative would reduce overall travel time within the County.

The Rye Road Alternative would cost an estimated \$112.86 million to construct (including bridge maintenance, ROW, and roadway costs) and would result in the potential loss of \$235,727 in annual tax revenue. Additionally, based on the results of the SMC TDM (Sarasota/Manatee MPO, 2011), the travel behavior associated with the development of the Rye Road Alternative would increase total VMT by 53,052 miles annually with a related annual fuel costs increase of \$8,934.

The immediate short-term economic benefit resulting from construction expenditures would likely include the creation of 673 to 921 jobs with an associated payroll of \$27.56 to \$37.71 million dollars. Finally, the Rye Road Alternative would reduce the total VHT by more than 6,847 hours annually with an associated annual savings of \$219,104.

4.1.2 LAND USE CHARACTERISTICS

4.1.2.1 Existing Land Uses

This section of the document provides an examination of the potential effect of the No-Build Alternative, Fort Hamer Alternative, and Rye Road Alternative on existing land uses.

The discussion of land use impact focuses on both direct and indirect effects. Council on Environmental Quality (CEQ) Regulation 1508, describes direct effects as those that “are caused

by the action and occur at the same time and place.” Direct effects to land use resulting from transportation projects typically center on the effects of ROW expansion. CEQ Regulation 1508 goes on to define indirect effects as those that are “caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” Typically, indirect land use effects resultant from a transportation project include changes in the pattern or rate of development.

No-Build Alternative

Under the No-Build Alternative, the Proposed Action would not be consistent with the Manatee County Comprehensive Plan (Manatee County, 2010) or the Sarasota/Manatee MPO’s 2035 LRTP (Sarasota/Manatee MPO, 2012) as roadway capacity crossing the Manatee River in the project area would remain unchanged.

The No-Build Alternative is expected to result in no takings and, thus would have no direct effect on land use. Based on the relative uniformity in the type and pattern of existing development shown to be both north and south of the Manatee River, the provision of no additional capacity crossing the river would likely have no effect on existing development patterns. Finally, the trend in development in the project area has been sustained for nearly a decade in the absence of an additional water crossing. It is not likely that the No-Build Alternative would alter this trend.

Fort Hamer Alternative

Similar to the No-Build Alternative, the Fort Hamer Alternative would result in no residential or commercial relocations. Most ROW expansion associated with the Fort Hamer Alternative would occur within dedicated easements or on public land. South of the Manatee River, the project would pass just east of the Waterlefe subdivision along a transportation easement established to support the landing of a future bridge. North of the river, the new alignment would pass through an area of publicly-owned land that would soon support a regional park (Hidden Harbour). Preliminary design of the planned park incorporates the proposed bridge into the final park design. The partial takings associate with the Fort Hamer Alternative would occur near the new alignment’s tie-in with Upper Manatee River Road. The takings would occur in an area of residential use and are not anticipated to displace current use on the property. Overall, the direct impact associated with the Fort Hamer Alternative is not anticipated to significantly alter land use present in the project area.

As noted previously in Section 3.1.2, much of the open/agricultural land previously found in the area of the Fort Hamer Alternative now exists as residential development with large portions of the remaining undeveloped areas planned to support additional low-density suburban use. The project would likely, through improved river crossing access, support the continued urbanization of the area. However, based on the scope of the project (the connection of two collector roads), the new facility would not likely alter the location or character of existing use. The likely resultant effects of the project are limited to potential effects on the rate of development. Improved river crossing access and the projected increase in traffic volume (identified in Section 3.1.3) have the potential to make the commercial property located at the intersection of Fort

Hamer Road/SR 64 and on US 301 near Parrish more attractive to near-term commercial development.

The Fort Hamer Bridge project is identified in and consistent with the Manatee County's Comprehensive Plan. Additionally, the project is listed as a Financially Feasible Project in the Sarasota/Manatee MPO's 2035 LRTP (MPO, 2012).

Rye Road Alternative

The Rye Road Alternative would result in four residential and no commercial relocations. The four residential relocations would occur at the north end of Fort Hamer Road in close proximity to the US 301 intersection. The affected residential parcels would be converted to use as ROW. In total, the Rye Road Alternative would result in the takings of approximately 48 acres of land along the 10.3 mile length of the alternative. The vast majority of the takings would occur as partial takes and not result in the displacement of the current use of the parcel. Much of the area impacted by the partial takes exists as residential, agricultural, and conservation lands. The low-density and large parcel sizes associated with the existing development in the area helps to reduce the effect of the partial takings on existing use. Though the Rye Road Alternative would have a direct effect on existing use, the effects would not likely alter the general land use or character now present in the project area.

The Rye Road Alternative would serve to expand the existing two-lane sections of Rye Road, Golf Course Road, and Fort Hamer Road to four lanes. The increased capacity provided within the Rye Road corridor would likely support the suburban development that is occurring in the study area. Similar to the condition expected to result from the Fort Hamer Alternative, as noted in the traffic analysis provided in Section 3.1.3, construction of the Rye Road Alternative would result in an increase in traffic along the Rye Road corridor. This increase in traffic may make the commercial property located along SR 64 and US 301 more attractive to development, thus accelerating the timing of development of these parcels.

The Rye Road Alternative is not consistent with the County's Comprehensive Plan (Manatee County, 2010) or the 2035 LRTP (Sarasota/Manatee MPO, 2012) as the project would provide additional capacity well east of the river crossing proposed in those plans.

4.1.2.2 Future Land Uses

This section provides an examination of the potential effect of the No-Build Alternative, Fort Hamer Alternative, and Rye Road Alternative on future land uses. Unlike the discussion provided in Section 4.1.2.1, the assessment of future land use focuses on the long-term effects of the project on the location, rate, and character of development in the project area.

No-Build Alternative

The No-Build Alternative is expected to provide no additional capacity in the project area and based on the limited scope, result in no direct effects.

Trends in housing development and population growth over the past decade (described in Section 3.1) occurred in the absence of an additional water crossing in the area of Fort Hamer Road or Rye Road. Based on the projected population growth in the project area (125 to 153 percent by year 2035) and in consideration of the resultant development pressures likely to be present, the absence of the improvement is not expected to limit new development. The No-Build Alternative is not likely to significantly affect future land use.

Fort Hamer Alternative

The Fort Hamer Alternative is not anticipated to result in any residential or commercial relocations, and has been developed in coordination with the planned County park north of the Manatee River and residential development south of the river. The Fort Hamer Alternative would pass through an area of Manatee County that falls within the defined Urban Services Boundary (**Figure 4-1**). The portion of the county within the Urban Services Boundary is intended to support future urban development. The Fort Hamer Alternative would introduce an urban typical section along the length of the corridor that would be supportive of the planned urban character of the area.

As described in Section 3.1, much of the area along the Fort Hamer Alternative supports existing residential use or is planned to support a similar type of development. The rates of growth and general character of development both north and south of the Manatee River are similar. Based on existing trends, the river crossing access provided by the Fort Hamer Alternative would not likely induce additional growth or alter the character or rate of development.

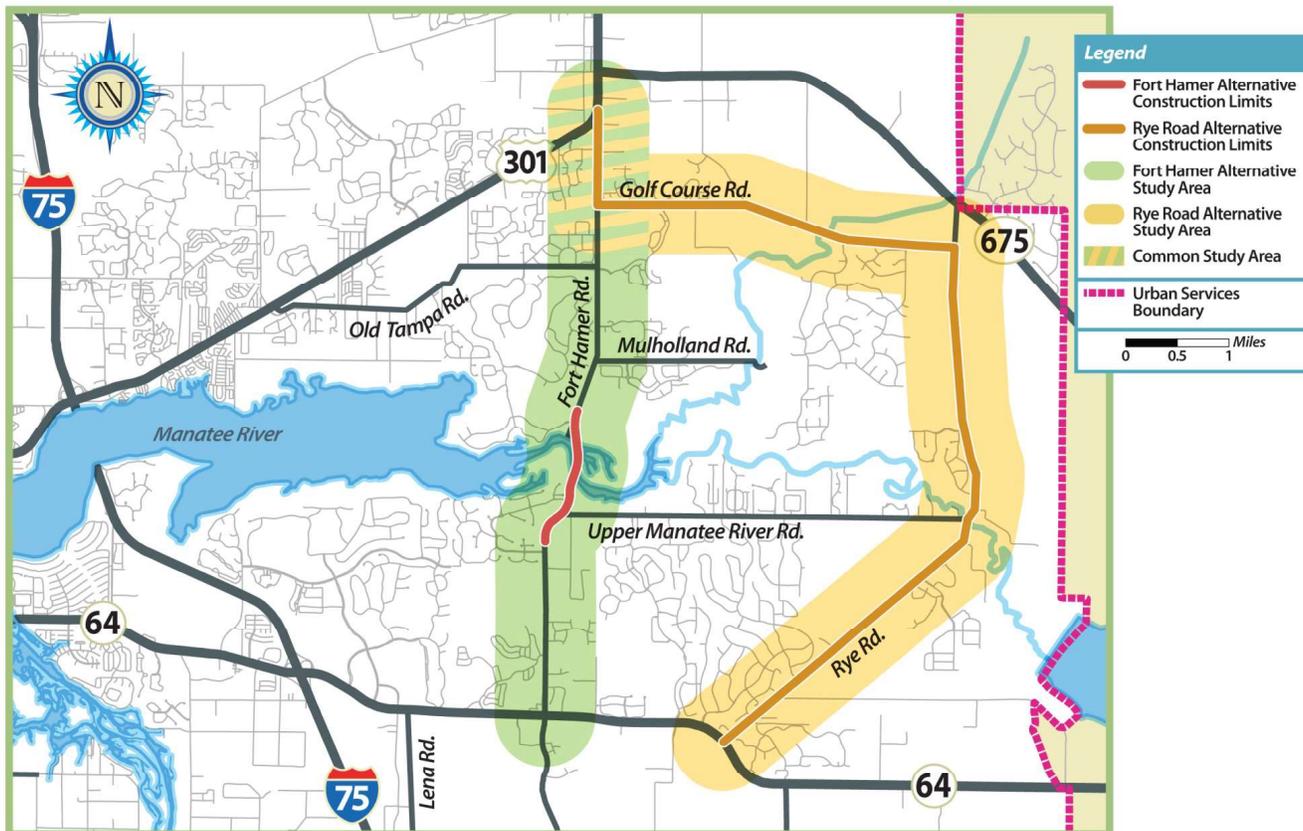
As stated in the previous section, the Fort Hamer Alternative is consistent with the Manatee County's Comprehensive Plan (Manatee County, 2010).

Rye Road Alternative

The Rye Road Alternative would result in four residential relocations and approximately 48 acres of partial takings. Though the planned future use in the area of the takings would be displaced, the large parcel size and current use would mitigate the effect on the character of the study area.

The Rye Road Alternative passes through a portion of Manatee County that falls within the Urban Services Boundary and is intended to support future urban development. The Rye Road Alternative would introduce an urban typical section to this area of the County, which would be supportive of the planned future use. The Rye Road Alternative would provide additional capacity along segments of existing roadways and serve to widen an existing crossing of the Manatee River. As shown through the presence of multiple planned developments (described in Section 3.1), pressure for development along the Rye Road Alternative currently exists. Additionally, population projections within the project area suggest development would continue at a rapid rate. The additional capacity provided along the Rye Road corridor would not likely significantly affect the demand for development.

FIGURE 4-1
LOCATION OF THE URBAN SERVICES BOUNDARY IN RELATION TO THE BUILD ALTERNATIVES



Source: Manatee County, 2012g.

As stated in the previous section, the Rye Road Alternative is not identified in the Manatee County's Comprehensive Plan (Manatee County, 2010). The development of this alternative would provide the additional river crossing approximately 4 miles east of the crossing proposed in the adopted land use plan.

4.1.3 TRAFFIC

This section summarizes traffic volumes, capacities, and levels of service (LOS) for the No-Build Alternative, Fort Hamer Alternative, and Rye Road Alternative for the years 2015 and 2035. **Table 4-6** summarizes the annual average daily traffic (AADT) volumes, roadway capacities, and LOS for the Fort Hamer Alternative and Rye Road Alternative. See Table 3-9 in Section 3.1.3 of this Final Environmental Impact Statement (FEIS) for the No-Build Alternative AADT volumes, roadway capacities, and LOS. Appendix B of this FEIS documents all the alternatives in detail.

Manatee County has adopted LOS D as its standard (Manatee County, 2010). As seen in Table 4-6, most of the roadways in the project area are anticipated to operate at acceptable LOS by 2015, with the exception of Upper Manatee River Road and I-75, which are deficient under both alternatives. By 2035, the Fort Hamer Alternative is anticipated to operate at LOS F.

The HEVAL (Highway Evaluation) module was run for Manatee County using the SMC model for each alternative (MPO, 2011). HEVAL is a component of the Florida Standard Urban Transportation Modeling System (FSUTMS)/Cube model that takes a specific study area or region and evaluates the results of the highway assignment for that particular area. The HEVAL calculates daily system performance measures such as daily VMT and daily VHT. Those alternatives with lower overall VMT and VHT are deemed superior to those with higher totals, since they result in lower fuel and operating costs with lower congestion. These measures reflect weekday conditions and provide a quantitative source for statistical comparison of the three alternatives for the year 2035 for the existing six lanes of I-75.

Figure 4-2 compares the projected 2035 daily VMT within Manatee County for the No-Build Alternative and the two build alternatives. The No-Build Alternative does not include any improvements to I-75, Fort Hamer Road, Upper Manatee River Road, Rye Road, and Golf Course Road. As Figure 4-2 illustrates, the Fort Hamer Alternative has the lowest VMT compared to the No-Build Alternative and Rye Road Alternative.

Figure 4-3 compares the projected 2035 daily VHT within Manatee County for the No-Build Alternative and the two build alternatives. As this figure illustrates, the Fort Hamer Alternative has the least amount of VHT.

As seen in these figures, the Fort Hamer Road Alternative clearly yields the lowest VMT and VHT among of the three alternatives under consideration and, as such, ranks highest in terms of eliminating congestion and reducing fuel and operating costs.

**TABLE 4-6
PROJECTED TRAFFIC CONDITIONS FOR BUILD ALTERNATIVES**

Roadway	From/To	2011		2015						2035					
		No-Build Alternative		No-Build Alternative		Fort Hamer Alternative (Two-Lane)		Rye Road Alternative (Four-Lane)		No-Build Alternative		Fort Hamer Alternative (Two-Lane)		Rye Road Alternative (Four-Lane)	
		AADT Volume/ Capacity	LOS	AADT Volume/ Capacity	LOS	AADT Volume/ Capacity	LOS	AADT Volume/ Capacity	LOS	AADT Volume/ Capacity	LOS	AADT Volume/ Capacity	LOS	AADT Volume/ Capacity	LOS
Upper Manatee River Rd.	SR 64/Waterlefe Blvd	8,300/ 14,200	B	9,100/ 14,200	B	19,500/ 17,400 ³	F	5,300/ 14,200 ²	B	14,500/ 14,200	F	27,200/ 17,400 ³	F	14,500/ 14,200 ²	F
	Waterlefe Blvd./ Gates Creek Rd	5,500/ 14,200	B	5,900/ 14,200	B	17,400/ 17,400 ³	C	5,300/ 14,200 ²	B	9,800/ 14,200	D	25,100/ 17,400 ³	F	10,900/ 14,200 ²	B
	Gates Creek Rd./ Manatee River	N/A	N/A	--	--	17,400/ 17,400 ³	C	N/A	N/A	--	--	23,600/ 17,400 ³	F	N/A	N/A
Fort Hamer Rd.	Manatee River/ Mulholland Rd.	300 14,200	B	1,400/ 14,200	B	17,400/ 17,400 ³	C	800/ 14,200 ²	B	2,100/ 14,200	B	23,600/ 17,400 ³	F	2,100/ 14,200 ²	B
	Mulholland Rd./ Old Tampa Rd.	2,700/ 14,200	B	3,700/ 14,200	B	17,300/ 17,400 ³	C	3,700/ 14,200 ²	B	2,100/ 14,200	B	23,800/ 17,400 ³	F	3,300/ 14,200 ²	B
	Golf Course Rd./US 301	1,900/ 14,200	B	5,200/ 14,200	B	14,500/ 17,400 ²	B	10,200/ 17,400 ³	B	10,500/ 14,200	C	15,400/ 17,400 ³	B	21,200/ 39,400 ⁴	B
Rye Rd.	SR 64/Upper Manatee River Rd.	5,700/ 14,200	B	7,00/ 14,200	C	7,000/ 14,200 ²	B	14,000/ 17,400 ³	B	15,600/ 14,200	F	9,400/ 14,200 ²	B	23,200/ 39,400 ⁴	B
	Upper Manatee River Rd./Golf Course Rd.	2,800/ 14,200	B	2,900/ 14,200	B	2,900/ 14,200 ²	B	14,500/ 17,400 ³	B	19,800/ 14,200	F	6,500/ 14,200 ²	B	24,000/ 39,400 ⁴	B
Golf Course Rd.	Rye Rd./Fort Hamer Rd.	1,800/ 14,200	B	1,100/ 14,200	B	3,700/ 14,200 ²	B	9,800/ 17,400 ³	B	11,500/ 14,200	C	3,000/ 14,200 ²	B	22,900/ 39,400 ⁴	B
I-75 ¹	SR 64/US 301	90,500/ 122,700	C	130,900/ 122,700	F	122,900/ 122,700 ⁵	F	126,600/ 122,700 ⁵	F	164,700/ 122,700	F	163,300/ 122,700 ⁵	F	165,200/ 122,700 ⁵	F

¹ I-75 is currently six lanes; an eight-lane design is approved but construction is unfunded.

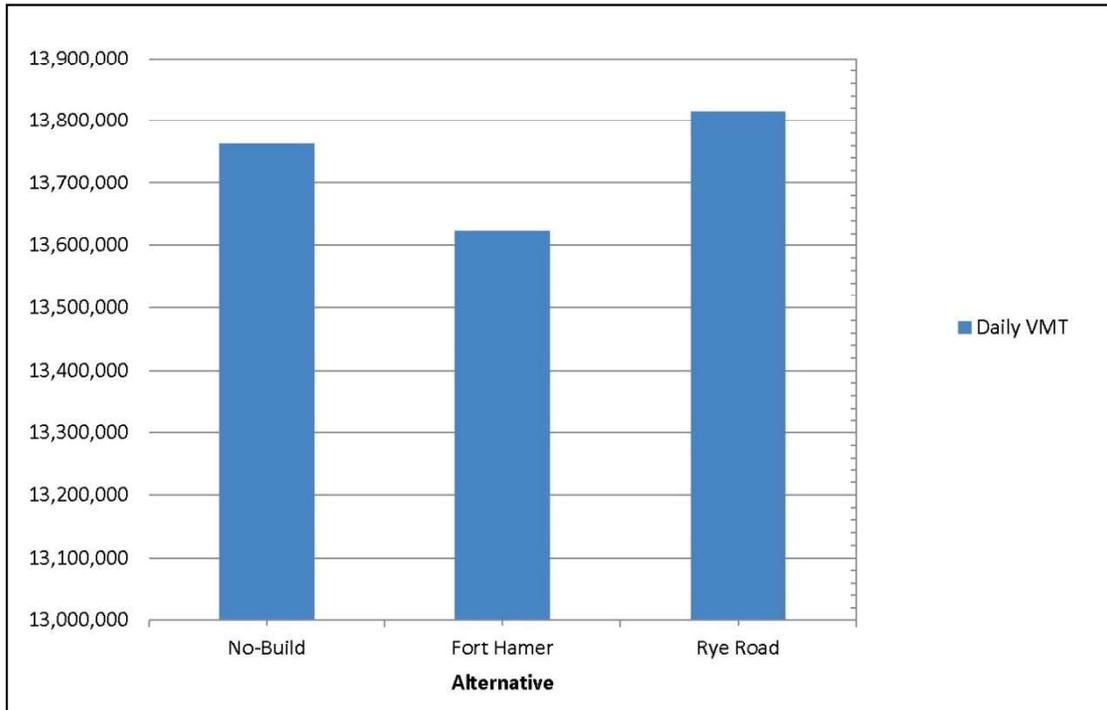
² Capacities based on FDOT's ArtPlan Analysis for No-Build Geometry.

³ Capacities based upon FDOT's ArtPlan Analysis for the Build Alternatives with interim turn lane and signal improvements.

⁴ Capacities based upon FDOT's ArtPlan Analysis for the four-lane alternatives.

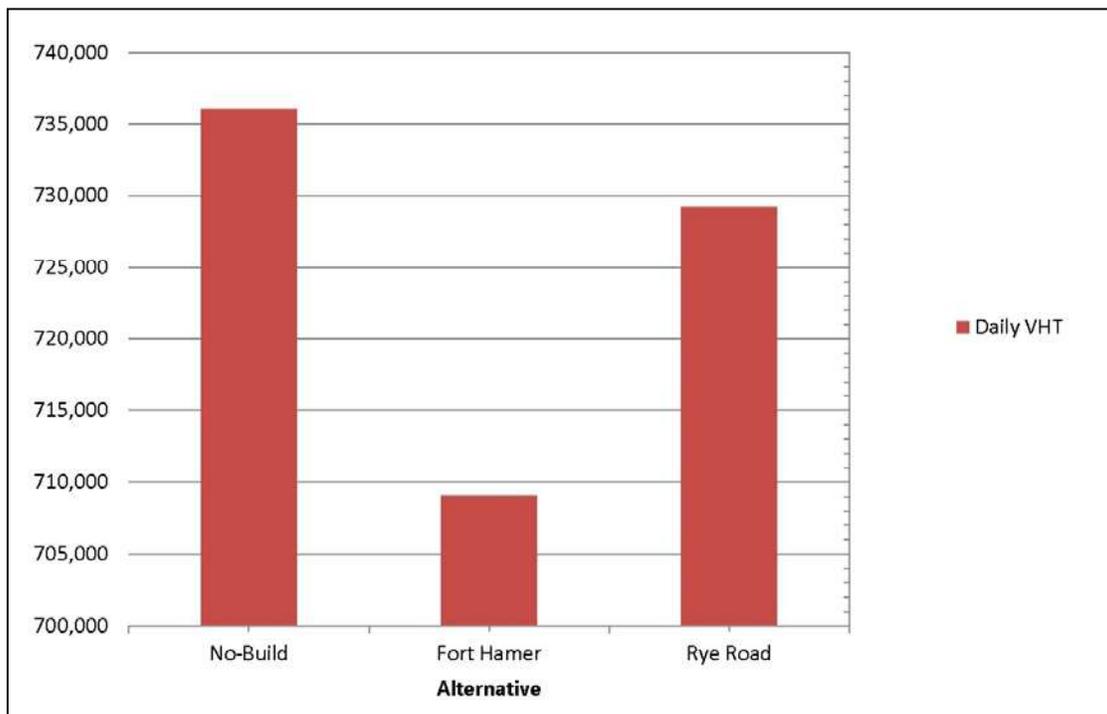
⁵ Capacities – FDOT, 2010.

**FIGURE 4-2
PROJECTED 2035 DAILY VMT WITHIN MANATEE COUNTY**



Source: MPO, 2011.

**FIGURE 4-3
PROJECTED 2035 DAILY VHT WITHIN MANATEE COUNTY**



Source: MPO, 2011.

As seen in the latest travel demand model projections from the SMC Model (MPO, 2011), the projected vehicular demand in the project area justifies the construction of a new bridge crossing for the upper Manatee River. The results of the traffic demand model demonstrate that lanes across the river are justified. The results of the travel demand model also demonstrate that the Fort Hamer Alternative location provides the best alternative for a bridge crossing in terms of: 1) attracting the most trips, 2) diverting more traffic from I-75, and 3) resulting in lowest VMT and VHT. Widening I-75 alone or providing more lanes on Rye Road would not meet the future mobility needs of the residents of the project area.

No-Build Alternative

With the No-Build Alternative, I-75 from SR 64 to US 301 is predicted to operate at LOS F by 2015. By 2035, Upper Manatee River Road and Rye Road are anticipated to operate at LOS F. The No-Build Alternative has the greatest VMT (13,762,689 VMT) and the greatest VHT (729,202 VHT). Appendix B of this FEIS documents the traffic volumes and LOS in detail.

Fort Hamer Alternative

If the Fort Hamer Alternative constructs a two-lane bridge and improves the two-lane Upper Manatee River Road and Fort Hamer Road, the LOS is anticipated to operate at LOS D or better in the year 2015. The Fort Hamer Alternative has the least amount of VMT (13,664,913 VMT) compared with the No-Build Alternative and the Rye Road Alternative. The Fort Hamer Alternative VHT is improved from the No-Build Alternative. The Fort Hamer Alternative is documented in Appendix B.

Rye Road Alternative

If the Rye Road Alternative is improved as a four-lane arterial road, the LOS is anticipated to be LOS B or better on Rye Road, Golf Course Road, and Fort Hamer Road in the year 2035. In the year 2035, Upper Manatee River Road between SR 64 and Waterlefe Boulevard is anticipated to operate at LOS F without any road improvements. The Rye Road Alternative is anticipated to have the greatest VMT, when compared with the No-Build Alternative and the Fort Hamer Alternative. The VHT is 729,202 performing better than the No-Build Alternative. In the year 2035, the Rye Road Alternative has less VHT due to providing four through lanes anticipating to operate at LOS D or better. The Rye Road Alternative is documented in Appendix B.

4.1.4 COMMUNITY COHESION

As noted in Section 3.1.4, the topic of community cohesion centers on a discussion of the maintenance of existing communal bonds and social networks in the sustainment of a cohesive community. The differing potential effect of the proposed alternatives on community cohesion is described below.

No Build Alternative

Based on the absence of new barriers to interaction or the provision any additional capacity created by the No-Build Alternative, community cohesion would likely remain unaffected by this action.

Fort Hamer Alternative

The Fort Hamer Alternative has the greatest potential to improve community cohesion in the project area. The new river crossing provided by the Fort Hamer Alternative would serve to bridge a barrier to movement that limits the interaction of populations north and south of the Manatee River. The proposed bridge would, in some instances, greatly reduce the length of the trip required (a distance of up to 12 miles) to access the area at the southern end of Fort Hamer Road that is planned to support a new regional park and high school. In the future, the regional park would likely serve as an important community focal point attracting residents from the otherwise isolated residential developments. Finally, the bicycle and pedestrian facilities included as part of the alternative support an element of the public realm important in providing opportunity for face-to-face social interaction. This type of interpersonal interaction forms the basis of a cohesive community.

Potential detrimental effects associated with the development of the Fort Hamer Alternative are limited as the project would not serve to divide or isolate any existing neighborhoods or populations.

Rye Road Alternative

The Rye Road Alternative would serve to increase the roadway capacity from two to four lanes along three existing roadway segments. Additionally, the roadway would include bike lanes and sidewalks in areas now underserved by these types of facilities. Much like the Fort Hamer Alternative, provision of bicycle and pedestrian facilities along the length of the Rye Road Alternative would provide infrastructure elements supportive of face-to-face interaction, which would serve to benefit cohesion of the community. However, unlike the Fort Hamer Alternative, the Rye Road Alternative would result in the widening of the existing roadway. The resultant increased pedestrian crossing distance and increased speed of vehicles traveling along the corridor could potentially reduce safety and limit the attractiveness of the corridor to pedestrians and bicyclists (Tan, 2011). The expanded roadway may serve as a deterrent to travel and could create a barrier between developments.

Though the Rye Road Alternative has the potential to limit crossings by bicyclists and pedestrians, the proposed alignment would not breach the boundaries of any existing developments and would not serve to fragment existing populations. No specific population or neighborhood would become socially or culturally isolated as a result of construction and operation of the Rye Road Alternative.

4.1.5 RELOCATION POTENTIAL

Appendix I and Appendix J of this FEIS contain the Conceptual State Relocation Plan (CSRP) and Conceptual Plan Sheets for the build alternatives, respectively. These documents record the areas of planned ROW expansion, and make an assessment of the potential for the displacement of existing use.

No-Build Alternative

In the absence of any capacity or ROW expansion, the No-Build Alternative would have no potential for relocation.

Fort Hamer Alternative

The Fort Hamer Alternative would maintain a two-lane typical section along the length of the project. In the area of the bridge, the additional ROW needed would be supported within an area of publically-owned land north of the river and within a transportation easement south of the river. A partial take would occur near the Fort Hamer Alternative's tie-in with Upper Manatee River Road, but would not displace the use currently occupying the property. No total takings are anticipated to result from the Fort Hamer Alternative.

Construction of the Fort Hamer Alternative is not anticipated to result in the relocation of any use. See Appendix I for a detailed discussion of the relocation potential.

Rye Road Alternative

The Rye Road Alternative would require the widening of segments of Rye Road, Golf Course Road, and Fort Hamer Road. Approximately 48 acres of additional ROW would be needed to support the construction of the Rye Road Alternative. The majority of the expansion of the ROW would occur as partial takes and would not result in the displacement the use currently occupying the property. Four residential relocations would occur near the alternative's connection with US 301.

Construction of the Rye Road Alternative would result in four residential relocations. See Appendix I for a detailed discussion of the relocations. See Appendix J for a depiction of the affected properties.

4.1.6 COMMUNITY SERVICES AND FACILITIES

As part of this FEIS, an inventory of existing community facilities such as religious centers, schools, hospitals, fire stations, and police stations were identified. Features such as those listed serve a special importance within a community by functioning as a focal point for community activity and support. Potential impacts to community service facilities are described in the following sections.

4.1.6.1 Religious Centers

No-Build Alternative

The No-Build Alternative would implement only those improvements already funded by FDOT, the County, or non-governmental agencies, and would include no additional road capacity improvement. The limited action associated with the No-Build Alternative provides little potential for impact to the existing religious centers located in the project area.

Fort Hamer Alternative

The Christ Presbyterian Church is located on the east side of Upper Manatee River Road approximately 0.5 mile north of the Upper Manatee River Road and SR 64 intersection (see **Figure 4-4**). The church structure is located at the rear of the property approximately 500 feet from the existing edge-of-pavement. A short segment of a right-turn lane providing access to the Gates Creek development exists near the entrance to the church. No left-turn lane is present on Upper Manatee River Road at the church entrance. The church hosts four services weekly, with two occurring Sunday mornings and two Wednesday evenings. Access to the Christ Presbyterian Church may be affected by the increase in traffic along Upper Manatee River Road. However, the schedule of church events does not coincide with peak traffic periods.

As identified in Figure 4-4, three additional churches (First Baptist Church-Parrish, St. Frances X Cabrini Catholic Church, and Parrish United Methodist Church) are located north of the Fort Hamer Road/US 301 intersection just west of US 301. Access to these facilities is not anticipated to be negatively affected by the Proposed Action.

Rye Road Alternative

The services associated with the Garden Community Church are hosted at Gene Witt Elementary School located west of Rye Road approximately 1.5 miles north of the Rye Road/SR 64 intersection. The expansion of Rye Road at that site would occur to the east of the roadway, thus having no physical impact on the school or church. Based on coordination of use of the school facilities by the church, most scheduled church activity times fall outside of peak traffic periods. Access to the Gene Witt Elementary School may be affected by the increase in traffic along Rye Road. However, the schedule of church events does not typically coincide with peak traffic periods, thus reducing the impact to church operations.

4.1.6.2 Schools

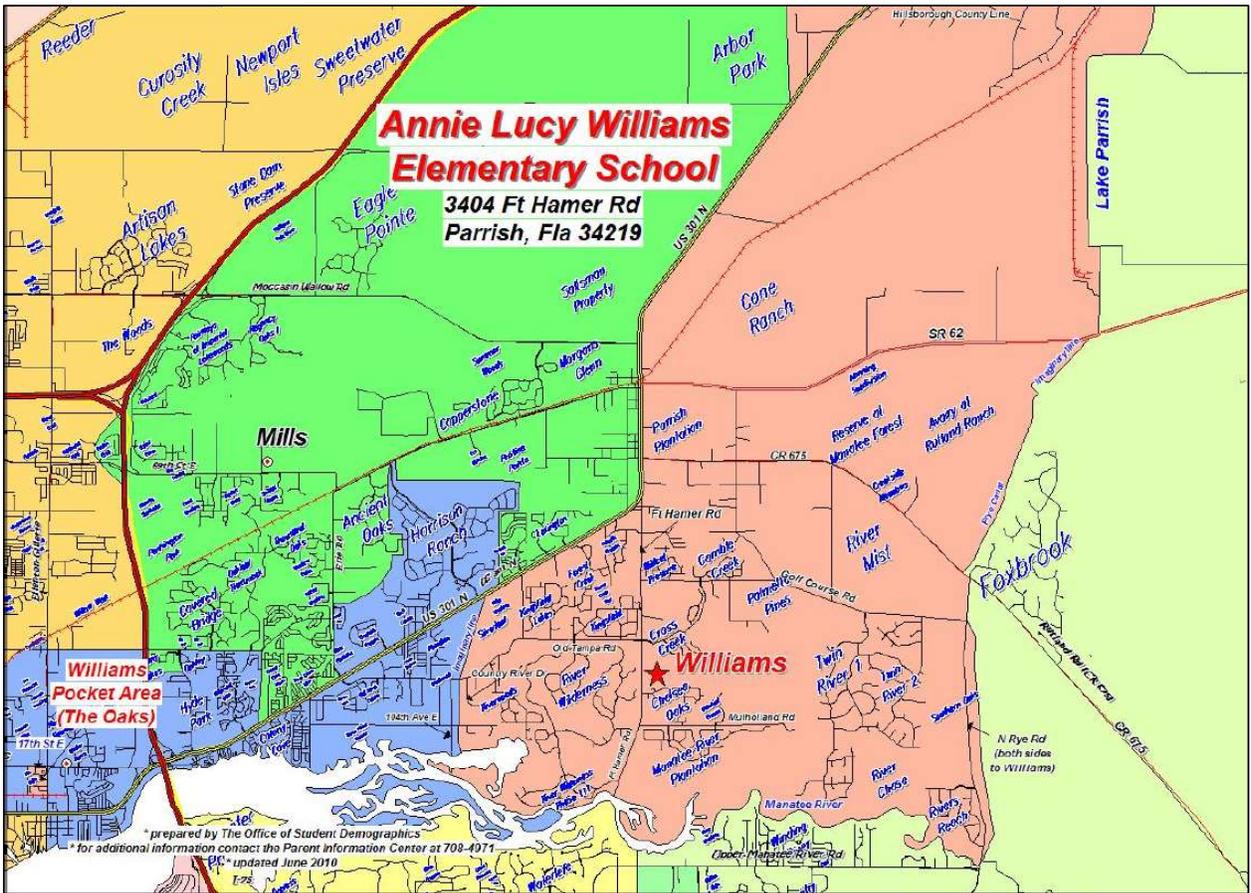
Section 3.1 identifies two schools within the study areas. Annie Lucy Williams Elementary School, located within the Fort Hamer Alternative Study Area, serves an area of the County north of the Manatee River, generally east of US 301 and west of Rye Road. Gene Witt Elementary School is located within the Rye Road Alternative Study Area and services a district that incorporates much of northeast Manatee County. The school's district is generally located north of SR 64 and east of Rye Road. See **Figures 4-5 and 4-6** for a depiction of the area served by the Annie Lucy Williams Elementary School and Gene Witt Elementary School, respectively.

FIGURE 4-4
COMMUNITY SERVICE FACILITIES WITHIN THE STUDY AREAS



Sources: Manatee County, 2012c. University of Florida, 2009a.

FIGURE 4-5
ANNIE LUCY WILLIAMS ELEMENTARY SCHOOL SERVICE AREA



Source: Manatee County School District, 2013.

No-Build Alternative

In the absence of any capacity or ROW expansion, the No-Build Alternative would have no impact on schools.

Fort Hamer Alternative

The Annie Lucy Williams Elementary School is located on Fort Hamer Road between Old Tampa Road and Mulholland Road approximately 0.5 mile north of Fort Hamer County Park. The school buildings are located approximately 450 feet east of the existing edge-of-pavement on Fort Hamer Road. An open swale, multi-use trail, parking lot, and round-about pick-up area separate the school from Fort Hamer Road. All outdoor recreation areas associated with the school are located to the rear of the buildings, away from the roadway.

The existing two-lane typical section with dedicated left-turn lanes would remain unaltered in the area of the school. No direct impacts to the school facilities are anticipated to result from the construction of the Fort Hamer Alternative. Based on the location of the school in relation to the area supported, no improvement in district access is expected to result from the construction of the proposed bridge.

SMC Model results (Sarasota/Manatee MPO, 2011) for the Year 2035 Cost Feasible Plan with the Fort Hamer Alternative included show that traffic volumes on Fort Hamer Road/Upper Manatee River Road are projected to increase from an AADT volume of 300 vehicles in year 2011 to 17,300 vehicles in 2015 (opening year of the bridge). The rapid increase in traffic is the result of the creation of a new thoroughfare connecting SR 64 with US 301. Section 4.1.3 notes that many of the trips projected to travel along the new Fort Hamer Alternative now make the river crossing via I-75. The increase in traffic on Fort Hamer Road may increase congestion in the vicinity of the school during times of student drop-off and pick-up. The increased traffic volume on Fort Hamer Road may limit the ability of pedestrians and bicyclists to cross Fort Hamer Road to access the school. Additionally, vehicular traffic on Fort Hamer Road may experience delays in exiting from the school and to making a left turn to access the school from southbound on Fort Hamer Road.

As summarized in Table 2-10, the current Manatee County Capital Improvement Program has projects either under design and /or construction along Fort Hamer Road in the vicinity of Annie Lucy Williams Elementary School. These projects include continuous sidewalks, roadway widening, shoulder improvements, and right/left turn lanes. Standard safety measures, such as reduced traffic speeds in the school zone and crossing guards, may serve to reduce the negative effects produced by the increase in traffic.

Rye Road Alternative

The Gene Witt Elementary School is located on the west side of Rye Road approximately 1.5 miles north of the Rye Road/SR 64 intersection. The school buildings are located approximately 160 feet west of the existing edge-of-pavement on Rye Road. An open swale, sidewalk, and

parking lot separate the school from Rye Road. A fenced playground associated with the school is located in front of the school, approximately 145 feet from the existing edge-of-pavement.

One travel lane in each direction and left-turn lanes would be added to this portion of Rye Road as part of this alternative. Additional ROW would be incorporated along the east side of Rye Road to support the roadway expansion. The school property would not be directly impacted by the Rye Road Alternative.

SMC Model results (Sarasota/Manatee MPO, 2011) for the Year 2035 Cost Feasible Plan with the Rye Road Alternative included shows that traffic volumes on Rye Road are projected to increase from an AADT of 5,700 vehicles in year 2011 to 14,000 vehicles in 2015 (opening year of the bridge). The rapid increase in traffic is the result of the doubling of capacity of Rye Road, Golf Course Road, and Fort Hamer Road between SR 64 and US 301. This increase in traffic along Rye Road may limit accessibility to/from the school and may limit the ability of pedestrians and bicyclists to cross Rye Road to access the school. Additionally, vehicular traffic on Rye Road may experience delays in exiting from the school and making a left turn to access the school from northbound on Rye Road.

Standard safety measures, such as reduced traffic speeds in the school zone and crossing guards, may serve to reduce the negative effects produced by the increase in traffic.

4.1.6.3 Parks and Recreation Areas

No-Build Alternative

The No-Build Alternative would provide no capacity improvement within the area of the project. The limited action associated with the No-Build Alternative provides little potential for impact to the parks located in the project area.

Fort Hamer Alternative

The Fort Hamer County Park, planned Hidden Harbour Regional Park, and Manatee River Blueway Trail are located within the Fort Hamer Alternative Study Area (see **Figure 4-7**). Coordination between the roadway design team and Manatee County staff occurred during project development. The Fort Hamer Alternative would pass through a portion of the proposed Hidden Harbour Park; however, in coordination with the County, the layout of the future park has been developed to incorporate the proposed bridge. The existing Fort Hamer County Park (park and boat ramp) would not be directly impacted by the construction of the Fort Hamer Alternative. The Manatee River Blueway (kayak/canoe trail) follows the Manatee River through the area of the proposed Fort Hamer Bridge. No infrastructure associated with the Blueway Trail occurs within the Fort Hamer Alternative Study Area. The presence of a new bridge would not preclude the use of canoes and kayaks on the trail.

**FIGURE 4-7
PARK AND RECREATION AREAS FACILITIES WITHIN THE STUDY AREAS**



Source: Manatee County, 2012d.

The greatest potential benefit associated with the construction of the Fort Hamer Alternative centers on improved cross river access. The construction of a bridge to connect Upper Manatee River Road with Fort Hamer Road would provide a crossing more proximate to the location of the existing boat ramp and proposed regional park. The crossing would reduce the length of trip needed to access the recreation facilities located at the end of Fort Hamer Road by as much as 12 miles.

Overall, the Fort Hamer Alternative would likely have a beneficial impact on use of the existing Fort Hamer County Park and proposed Hidden Harbour Regional Park.

Rye Road Alternative

The Rye Preserve and the Manatee River Blueway Trail are present along the Rye Road Alternative. The Rye Preserve, a publicly-owned park, is located at the Rye Road crossing of the Manatee River. The proposed expansion of Rye Road at the Manatee River would require the taking of land within the preserve. Conceptual designs place the proposed additional bridge structure west of the existing Rye Road Bridge. This taking would occur to the west of Rye Road away from the main body of the preserve. The location and elevation of the proposed structure above the river would allow for the maintenance of a wildlife corridor within the floodplain that serves to connect the preserve to areas west of Rye Road. The Manatee River Blueway Trail passes through the Rye Road Alternative Study Area and includes a canoe/kayak launch just west of the existing Rye Road Bridge. Widening of the Rye Road Bridge with this alternative would not directly impact the canoe/kayak launch. The presence of a new bridge would not preclude the use of canoes and kayaks on the trail.

Based on the potential for direct impact, the Rye Road Alternative would likely have a minimally negative effect on the recreational resources located in the area of the alternative.

4.1.6.4 Public Facilities

No-Build Alternative

The No-Build Alternative would provide no capacity improvement within the area of the project. The limited action associated with the No-Build Alternative provides little potential for impact to the public facilities located in the project area.

Fort Hamer Alternative

One U.S. Post Office and the Parrish Fire Control District Fire Department are located on US 301 approximately 500 feet north of the intersection of Fort Hamer Road and US 301 (**Figure 4-8**). Preliminary design shows no direct impact to either facility resultant from the Fort Hamer Alternative. As discussed previously in Chapter 1, construction of a new bridge connecting Upper Manatee River Road with Fort Hamer Road would result in improved service and response times for emergency vehicles along the Fort Hamer Road/Upper Manatee River Road corridor, for both the Parrish Fire Control District Fire Department and the East Manatee Fire Rescue Station #3.

**FIGURE 4-8
PUBLIC FACILITIES WITHIN THE STUDY AREAS**



Sources: University of Florida, 2008 and 2009b.

Rye Road Alternative

The Rye Road Alternative passes within close proximity of one water pump station, two fire stations, and one US Post Office. A Manatee County Recycle Water facility is located on the northeast corner of the Rye Road/Waterline Road intersection. This facility serves as a major conduit for water transmission within the County and it is possible that a portion of this facility occurs within the construction footprint of the Rye Road Alternative. The potential for a direct impact to this facility exists. East Manatee Fire Rescue Station 3 is located on the west side of Rye Road approximately 1.5 miles north of the Rye Road/SR 64 intersection. The widening of Rye Road along this segment of the project corridor would occur to the east of the existing roadway and would not impact the fire station. The Parrish Fire Control District and U.S. Post Office are located on US 301 just north of the US 301/Fort Hamer Road intersection. No direct impacts to these facilities are anticipated as a result of construction and operation of the Rye Road Alternative. Emergency response times from both the East Manatee Fire Station #3 and the Parrish Fire Control Fire Department remain the same with no improvements.

4.1.6.5 Pedestrian/Bicycle Facilities

No-Build Alternative

There are currently no designated bicycle facilities along either the Fort Hamer Road or Rye Road corridors. The No-Build Alternative would provide no capacity improvement within the project area. The limited action associated with the No-Build Alternative provides little potential for impact to the pedestrian and bicycle facilities located in the project area.

Fort Hamer Alternative

As noted in Section 3.1.6.5, a fragmented sidewalk network and no bicycle lanes currently exist along the Upper Manatee River Road and Fort Hamer Road corridors. The improvements proposed as part of the Fort Hamer Alternative include both sidewalks and bicycle lanes. The sidewalks and bike lanes proposed as part of the project would serve to connect many of the networks now present within the existing residential neighborhoods located along the proposed alternative. Additionally, the proposed improvements would provide connection to the planned regional park and high school.

The Fort Hamer Alternative proposes a new river crossing at the southern terminus of Fort Hamer Road near the center of an approximately 13-mile stretch of the Manatee River that supports no pedestrian or bicycle crossing. Currently, the only existing sidewalk that crosses the Manatee River within Manatee County exists on the western span of the US 41 Bridge in Downtown Bradenton. The barrier to pedestrian and bicycle movement that is created by the river serves to separate the communities north and south of the Manatee River, and reduce the viability of walking and bicycles as a viable means of travel. The inclusion of a new river crossing at the Fort Hamer Alternative location would serve to greatly improve the bicycle and pedestrian network, and reduce the length of trip required for bicyclists/pedestrians moving north/south in Manatee County.

Rye Road Alternative

Similar to the Fort Hammer Alternative, a fragmented sidewalk network and no bicycle lanes currently exist along the Rye Road Alternative. The improvements proposed as part of the Rye Road Alternative would include both sidewalks and bicycle lanes. The sidewalks and bike lanes proposed as part of the project would serve to connect many of the networks now present within the existing residential neighborhoods located along the proposed alternative. Additionally, the proposed improvements would provide connection to the Rye Preserve.

The inclusion of the sidewalks and bicycle lanes along the Rye Road Alternative would serve to connect and improve the existing bicycle and pedestrian network present in Manatee County.

4.1.7 ENVIRONMENTAL JUSTICE

No Build Alternative

The No-Build Alternative would provide no capacity improvement within the project area. The limited action associated with the No-Build Alternative provides little potential for impact to low-income or minority populations.

Fort Hamer Alternative

As show in Section 3.1.7, when compared to the County average (12.8 percent), the Fort Hamer Alternative Study Area contains a relatively small economically disadvantaged population (2.2 to 11.4 percent). Additionally, as discussed in previous sections, the potential negative impacts related to the construction of the Fort Hamer Alternative (e.g., traffic congestion, takings, noise impacts) are spread relatively evenly along the project corridor. The presence of distributed impacts and smaller population relative to the County average allows for the reasonable determination that it is unlikely the negative effects of the project would fall disproportionately on a low-income group. As a result, the environmental justice policies protecting low-income groups need not be applied in development of the Fort Hamer Alternative.

The racial minority population within the area of the Fort Hamer Alternative (5.6 to 12.9 percent) does not exceed the County-wide average for the same group (18.1 percent). The presence of a small minority population and distributed project impacts allows for the reasonable determination that it is unlikely the negative effects of the project would fall disproportionately on a minority group. As a result, the environmental justice policies protecting racial minority groups need not be applied in development of the Fort Hamer Alternative.

The number of Hispanic (ethnic minority) persons residing within the area of the Fort Hamer Alternative exceeds the overall County average in one geographic area. The Hispanic population within Tract 001914 (24.1 percent) exceeds the population represented within the County overall (14.9 percent). Additionally, the population within Tract 001914 represents a proportion of the population that is in excess of 1.5 times the County average and is “meaningfully greater” than the County average. Though a minority community may be present in Tract 001914, the tract is located at the extreme periphery of the project area and is removed from the area of the

improvement. This distance makes it unlikely that Tract 001914 would bear a substantial portion of project effects. Additionally, it is not likely that the Hispanic population present in the tract would bear a disproportionate share of the negative effects resulting from the development of the Fort Hamer Alternative. Based on the foregoing, no disproportionate effects to low-income or minority populations are anticipated to result from the construction or operation of the Fort Hamer Alternative.

Rye Road Alternative

The population figures identified for the Rye Road Alternative are similar to those of the Fort Hamer Alternative. As discussed in Section 3.1.1, the area described for each alternative differs by a single U.S. Census Tract.

When compared to Manatee County averages for low-income, racial minority, and ethnic minority groups, the Rye Road Alternative passes through an area that is generally wealthier and less diverse than the County as a whole. In one instance, the Rye Road Alternative Study Area passes within a Census Tract that has a minority population greater than the County-wide average. As described in Section 3.1.7, Tract 001914 contains a population that is 24.1 percent Hispanic. Though this figure represents a population that meets the definition of “meaningfully greater” used in this study, the potential effects associated with the development of the Rye Road Alternative on the population contained in Tract 001914 are limited due to the distance of the population from the alternative.

Based on the foregoing, no disproportionate negative effects to low-income or minority populations are anticipated to result from the construction or operation of the Rye Road Alternative.

4.1.8 CONTROVERSY POTENTIAL

As mentioned previously in this FEIS, many public and agency comments have been received addressing the need for the project, water quality impacts, and quality of life issues. At this time, a resolution of these concerns has not been reached. However, the analysis of potential impacts detailed in this FEIS describes the efforts to identify, avoid, and minimize impacts to the greatest extent possible. Chapter 5 of this FEIS describes the study’s ongoing public involvement process including all meetings, workshops, and the hearing conducted to help in the identification and resolution of issues and controversy.

Objections to a new bridge between Upper Manatee River Road and Fort Hamer Road or improving the capacity of Rye Road/Golf Course Road have largely been based in preserving the rural nature of the area. However, the existing and future land use information presented in this FEIS indicate that nearly all of the Fort Hamer Alternative and Rye Road Alternative study areas are zoned and planned as residential and would be converted to a suburban setting. These changes are to occur regardless of which alternative is selected or implemented.

4.1.9 UTILITIES AND RAILROADS

No rail lines exist within the project area; therefore, no railroads would be affected by either of the two build alternatives. Six utilities operate facilities that pass within the two build alternatives (Section 3.1.9). Requests for potential estimated relocation costs were made to the six utility providers; however, they require design-level plans to determine impacts to each of these utilities within the two build alternatives. Since design-level plans are not available, it is presumed that both build alternatives would result in the need to relocate these utilities to the edge of ROW; however, neither alternative is expected to result in the loss of or permanent impact to any utilities.

4.1.10 SUMMARY OF SOCIAL IMPACTS

Table 4-7 summarizes the potential social impacts associated with the No-Build Alternative and the two build alternatives.

**TABLE 4-7
SOCIAL IMPACTS SUMMARY**

Section	Issue	No-Build Alternative	Fort Hamer Alternative	Rye Road Alternative
4.1.1	Socioeconomic Conditions	No anticipated adverse impacts.	No anticipated adverse impacts. Proposed Action should benefit socioeconomic conditions in the project area.	No anticipated adverse impacts. Proposed Action should benefit socioeconomic conditions in the project area.
4.1.2	Land Use Characteristics (Existing and Future)	Inconsistent with Manatee County's 2020 Comprehensive Plan.	Minimal adverse impacts to existing and future land uses. Consistent with Manatee County's 2020 Comprehensive Plan future land use.	Minimal adverse impacts to existing and future land uses. Consistent with Manatee County's 2020 Comprehensive Plan future land use.
4.1.3	Traffic	74,200 AADT increase on I-75 from SR 64 to US 301 (2035) LOS F. County-wide increase in VMT and VHT.	18,900 AADT increase on Upper Manatee River Road from SR 64 to Waterlefe Boulevard (2035). 23,600 AADT crossing the Manatee River (2035). 21,200 AADT increase on Fort Hamer Road from Manatee River to US 301. 1,400 AADT decrease on I-75 from SR 64 to US 301 (2035) LOS F. County-wide reduction in VMT and VHT.	4,200 AADT increase on Rye Road from Upper Manatee River Road to Golf Course Road (2035). 500 AADT increase on I-75 from SR 64 to US 301 (2035) LOS F. Slight increase in County-wide VMT. Slight decrease in County-wide VHT.
4.1.4	Community Cohesion	No impacts.	No anticipated adverse impacts.	No anticipated adverse impacts.
4.1.5	Relocation Potential	No impacts.	No impacts.	Four residential locations affected.

Continued on next page

**TABLE 4-7 (CONTINUED)
SOCIAL IMPACTS SUMMARY**

Section	Issue	No-Build Alternative	Fort Hamer Alternative	Rye Road Alternative
4.1.6	Religious Centers	No impacts.	Traffic increase.	No anticipated adverse impacts.
	Schools	No impacts.	Traffic increase.	No anticipated adverse impacts.
	Parks and Recreation Areas	No impacts.	Traffic increase.	Traffic increase.
	Public Facilities	No impacts.	No anticipated adverse impacts. Improved emergency vehicle response times.	No anticipated adverse impacts.
	Pedestrian/ Bicycle Facilities	No sidewalks or bicycle lanes to be added.	Proposed Action would provide continuous bicycle lanes and sidewalks.	Proposed Action would provide continuous bicycle lanes and sidewalks.
4.1.7	Environmental Justice	No impacts.	No anticipated adverse impacts.	No anticipated adverse impacts.
4.1.8	Controversy Potential	Low	High	High
4.1.9	Utilities and Railroads	No impacts.	Six utility providers No railroads	Six utility providers No railroads

4.2 CULTURAL IMPACTS

Archaeological, historic, and tribal resources are all granted protection through the *National Historic Preservation Act* (NHPA). This Act establishes a specific process for the inventory, identification, classification, and documentation of the protected resources. Archaeological, historic, and tribal resources that are defined by the process as “eligible for listing on the National Register” must be avoided. If they cannot be avoided, impacts must be minimized and mitigation must be in place to the satisfaction of the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), and/or Advisory Council on Historic Preservation (ACHP). As detailed in this Section, U.S. Coast Guard (USCG) has consulted with the SHPO in accordance with NHPA.

As part of this FEIS, extensive research of available data concerning the history of Fort Hamer and Seminole emigration from this post was conducted in order to provide a thorough look in to the daily operations of the fort and its cultural and historical associations. This study was successful in documenting the history of Fort Hamer as an embarkation point for Seminoles deported to the Indian Territory in the west from 1849 to 1850 and identifying individual Seminoles who were deported from the post. In addition, further documentation included the establishment of the Fort, associated military personnel, and Fort Hamer’s importance as a supply depot. Fort Hamer was constructed in 1849 and moved in 1850. A report titled “Documentation Concerning Second Seminole War Fort Hamer and the Seminole Deportation, Manatee County, Florida” was completed, and the USCG submitted the report to the SHPO and Seminole Tribe of Florida THPO in March 2013. The SHPO acknowledged receipt of the

“historical documentation that was completed at the request of the Seminole Tribe of Florida during consultation” on April 17, 2013 (see Appendix A-4).

FHWA Lead Efforts (1999–2007) – The SHPO was provided a copy of the original Cultural Resource Assessment Survey (CRAS) documenting the investigations conducted by ACI in the previous Federal Highway Administration (FHWA)/Florida Department of Transportation (FDOT) EIS efforts. In a letter dated November 1, 2001 from SHPO to FHWA (Appendix A-4), SHPO provided the following comment:

“Additional information about this project was provided during a meeting with Ms. Marion Almy and Ms. Joan Deming of Archaeological Consultants, Inc. Based on this supplemental historical and environmental information, it is the opinion of this office that the principal structures of Fort Hamer were not located within the area of potential effect for this project. Although the portion of the site 8MA315 that exists within the proposed right-of-way is indicative of nineteenth-century activity in the vicinity, it is characterized by a limited artifact assemblage, absence of intact cultural deposits, and lack of substantive research potential (FMSF Survey #5270). Therefore, it is the opinion of this office that the portion of site 8MA315 located within the proposed right-of-way is ineligible for listing in the National Register of Historic Places...”

In January 2005, FDOT prepared a revised CRAS for FHWA and SHPO review. In correspondence to FHWA dated July 19, 2005, SHPO provided the following comments on the revised CRAS:

“The submitted CRAS included extensive documentary research concerning the history of Fort Hamer and the Seminole emigration from this post. This was conducted in order to provide a thorough examination into the daily operations of the fort and its cultural and historical associations. Through these means, this study was successful in documenting the history of Fort Hamer.

Based on the information provided in the submitted CRAS, it is the opinion of the FHWA that the proposed undertaking will have no effect on any historic properties within the project APE listed, determined eligible, or potentially eligible for listing in the NRHP. Our office concurs with this determination and finds the submitted report complete and sufficient.”

A copy of the July 19, 2005 correspondence from SHPO to FHWA is provided in Appendix A-4. An archaeological and historical survey of the Rye Road Alternative was conducted in September/October 2006 and January 2007.

USCG Lead Efforts (2010–present) – A follow-up windshield survey was conducted in 2010-2011 to confirm whether all earlier identified resources were still extant and if there were additional historic resources (50 years in age or older) that needed to be recorded. These studies are summarized in the 2011 CRAS attached as Appendix C. In keeping with the results from the

earlier reports, the 2011 CRAS (Appendix C) concluded that there were no NRHP-listed or eligible resources in the project area of potential effect (APE). The SHPO concurred with these findings on February 6, 2013 and concluded Section 106 consultation in a letter date April 17, 2013 (Appendix A-4). Consultation with the Seminole Tribe of Florida is on-going.

4.2.1 *ARCHAEOLOGICAL*

No-Build Alternative

The No-Build Alternative would provide no capacity improvements within the project area. No impacts to archaeological resources are expected to result from the No-Build Alternative. However, future projects, both public and private, may involve earth disturbing activities. If such future projects arise, a new Cultural Resources Assessment Survey would be conducted to ascertain potential impacts to archaeological resources.

Fort Hamer Alternative

Background research, including a review of the Florida Master Site Files (FMSF), the National Register of Historic Places (NRHP), and a corridor analysis prepared by Archeological Consultants, Inc. (ACI) indicated that one historic archaeological site, the Fort Hamer Site (8MA315), was recorded within or adjacent to the Fort Hamer Alternative. According to the FMSF, the site was considered potentially eligible for listing in the NRHP.

As a result of field surveys, which included visual reconnaissance, systematic subsurface shovel testing, and use of a metal detector (within the area of 8MA315), no evidence of significant cultural resources, including Fort Hamer, was found. These results are in keeping with previous archaeological investigations conducted within that portion of the archaeological APE in the vicinity of where Fort Hamer was thought to have once been situated (Janus, 1998a and 1998b). As a result of Janus's 1998 efforts in the vicinity of Fort Hamer, the SHPO determined "that the portion of the Fort Hamer site within the project area is not eligible for listing in the NRHP (Percy, 1998). SHPO also concurred with ACI's findings (Matthews, 2001). As a result of these findings, the construction and operation of the Fort Hamer Alternative is not expected to adversely impact and archaeological sites.

Rye Road Alternative

In addition, review of the FMSF and the NRHP revealed that three archaeological sites were previously recorded within or adjacent to the Rye Road Alternative. These sites include the Rye Bridge Mound (8MA715), the Mitchellville Cemetery (8MA1343), and the Waters Edge Historic Scatter (8MA1344). None was considered eligible for listing in the NRHP by the SHPO. A review of relevant site locational information for environmentally similar areas in Manatee County and the surrounding region also indicated a variable potential for the occurrence of prehistoric sites within the project APE.

Also, intensive subsurface testing near 8MA715 produced no evidence of the Rye Bridge Mound within the Rye Road Alternative archaeological APE. The Mitchellville Cemetery is located west of Rye Road and is surrounded by a metal fence within the new River's Reach

development. No evidence of the cemetery was found within the Rye Road Alternative APE. There was also no additional evidence of 8MA1344 found east of Rye Road within the APE. As a result of these findings, the construction and operation of the Rye Road Alternative is not expected to adversely impact any archaeological sites.

4.2.2 HISTORICAL

No-Build Alternative

The No-Build Alternative would provide no capacity improvements within the project area; therefore, no impacts to historic resources are expected to result from the No-Build Alternative. However, future projects, both public and private, may involve direct or indirect impacts to current and future historic resources. If such projects arise, a new Cultural Resources Assessment Survey would be conducted to ascertain potential impacts to historic resources.

Fort Hamer Alternative

Background research, including a review of the FMSF and the NRHP, indicated that four historic properties (50 years of age or older) were previously recorded within the historical APE: 8MA763, 8MA1325, 8MA1326, and 8MA1468. These were recorded within the Fort Hamer Alternative. None was considered eligible for listing in the NRHP (Matthews, 2001; Gaske, 2004 and 2006). Therefore, the construction and operation of the Fort Hamer Alternative is not expected to adversely impact any historical sites.

Rye Road Alternative

The various historical surveys for this project resulted in the identification and recording of 18 additional historic resources, including one resource group (8MA1472), and 17 buildings (8MA1213-1226 and 8MA1474-1476). These buildings represent residential structures constructed in styles and forms common for the region. They are neither distinguished by their architectural features nor known to be associated with significant events or with the lives of persons significant in the past and do not form part of a historic district. SHPO also concurred that 8MA1213-1226 are not NRHP eligible (Matthews, 2001). In addition, the resource group, which includes the Palmetto Pines “White Course,” lacks significant associations with respect to ownership, and alterations and additions have compromised its integrity. Also, many golf courses were constructed prior to this course in Manatee County. Therefore, the construction and operation of the Rye Road Alternative is not expected to adversely impact any historical sites.

4.2.3 SUMMARY OF CULTURAL RESOURCES IMPACTS

Table 4-8 summarizes the potential Cultural Resources Impacts associated with the No-Build Alternative and the two build alternatives.

**TABLE 4-8
CULTURAL RESOURCES IMPACT SUMMARY**

Section	Issue	No-Build Alternative	Fort Hamer Alternative	Rye Road Alternative
CULTURAL RESOURCES IMPACTS				
4.2.1	Archaeological	No impacts.	No adverse impacts. See SHPO concurrence letter in Appendix A-4.	No adverse impacts. See SHPO concurrence letter in Appendix A-4.
			Consultation with the Seminole Tribe of Florida is on-going. See SHPO concurrence letter in Appendix A-4.	
4.2.2	Historical	No impacts.	No adverse impacts.	No adverse impacts.

4.3 NATURAL ENVIRONMENT

4.3.1 LAND USE/VEGETATIVE COVER

No-Build Alternative

Implementation of the No-Build Alternative would not affect existing or future land use/vegetative cover within the project area. As previously stated in Section 3.3.1, the majority of existing uplands within the project area have already been developed into residential areas and golf courses, are in the process of being developed, or are approved for future development.

Fort Hamer Alternative

The Fort Hamer Alternative includes construction of a new two-lane bridge and connecting roadway segments in an area where these facilities do not currently exist. Undeveloped uplands directly affected by this alternative include approximately 19.4 acres of open land (former agriculture field) and 6.8 acres of forests, including live oaks, Brazilian pepper (*Schinus terebinthifolius*), and cabbage palm (*Sabal palmetto*). A description of the wetland impacts resulting from the Fort Hamer Alternative is provided in Section 4.3.2.

Rye Road Alternative

The Rye Road Alternative includes the widening of Rye Road (and bridge over the Manatee River), Golf Course Road (and bridge over Gamble Creek), and Fort Hamer Road from two to four lanes. Rye Road also crosses five small tributaries of Mill Creek between SR 64 and Upper Manatee River Road. Each of these crossings currently consists of box culverts or concrete pipe. With the Rye Road Alternative, these culverts and pipes would be extended to accommodate the four-lane condition. This widening would occur within or immediately adjacent to the existing ROW. Undeveloped uplands directly affected by implementation of this alternative include approximately 19 acres of agriculture (mostly pasture), 3.0 acres of open land, and 7.5 acres of forested uplands, including scrub and brushland and Brazilian pepper. A description of the wetland impacts resulting from the Rye Road Alternative is provided in Section 4.3.2.

4.3.2 WETLANDS

This section summarizes the unavoidable impacts to wetlands and other surface waters that would occur as a result of implementation of each alternative. A description of the potential surface water and wetland impacts resulting from each build alternative is provided in the Wetlands Evaluation Report (WER) in Appendix D of this FEIS. The WER is being reviewed by the U.S. Army Corps of Engineers (USACE) and National Marine Fishery Service (NMFS); both of these agencies will provide comments on the potential wetland impacts associated with each alternative.

4.3.2.1 Avoidance and Minimization

Pursuant to Executive Order 11990, *Protection of Wetlands*, federal actions should avoid, to the extent possible, the long- and short-term adverse impacts associated with the destruction or modification of wetlands and avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative. Unavoidable wetland impacts resulting from construction of the project would occur within each build alternative. Transportation safety standards for side slopes, turn radius, additional lanes, and widths necessitate these impacts. Impacts to wetlands are unavoidable for both the Fort Hamer Alternative and the Rye Road Alternative due to the presence of wetlands within the existing and proposed ROW and proximity to the bridge structures for each build alternative. However, potential wetland impacts would be minimized to the extent possible by incorporating the following measures:

- Within the Fort Hamer Alternative Study Area, construction of the new bridge would be at one of the narrowest places on the Manatee River. Both the eastern and western halves of the Fort Hamer Alternative Study Area include a widened floodplain, shallow embayments, and extensive salt marsh habitats. Spanning these wetlands would require longer bridge structures and would result in greater wetland impacts compared to the proposed crossing location.
- With the Fort Hamer Alternative, a temporary work trestle would be used to construct the bridge, which would minimize the permanent and temporary construction impacts. Use of a trestle would alleviate the need to construct a temporary causeway through the wetlands which would result in greater wetland impacts. The use of “top-down” construction is likely feasible; however, this methodology would require shorter span lengths and a greater number of pilings and pier support structures, which would increase permanent wetland impacts.
- For both build alternatives, no bridge abutments would be constructed in wetlands. Abutments on both the north and the south side of the river would be constructed in uplands.
- For both build alternatives, a stormwater management system would be constructed to meet state water quality criteria, thereby minimizing water quality impacts from stormwater discharges from roadway and bridge surfaces.

4.3.2.2 *Analysis of Wetland Impacts*

The potential wetland impacts for each build alternative were assessed by considering the type of facility to be constructed and the extent of the project footprint (i.e., construction limits) within the alternative. For the roadway segments, all wetlands and other surface waters within the proposed ROW were considered impacted since it is likely that the roadway surface, shoulders, sidewalks, and accompanying stormwater drainage and floodplain compensation facilities would occupy the full ROW.

Direct wetland impacts include fill and shading impacts. Fill impacts result from placement of bridge pilings and piers. Vegetated wetlands within the drip-line (i.e., edge-to-edge and abutment-to-abutment) of the bridges were considered impacts by shading.

Whenever a portion of a wetland is directly impacted by new construction, the SWFWMD requires an analysis of secondary impacts in the remaining portion of the wetland to account for reduced wildlife functions within the remaining wetland. Specifically, SWFWMD guidance requires that all remaining wetland areas within 25 feet of direct impacts in areas of new ROW are considered to have secondary impacts. Conversely, an analysis of secondary impacts is not required if the entire wetland is directly impacted because there is remaining wetland area in which secondary impacts could occur. Also, secondary impacts are not considered within existing ROW since these wetlands are already considered indirectly impacted (e.g., wetlands adjacent to an existing highway). For the Fort Hamer Alternative, secondary impacts were considered for wetlands adjacent to the new bridge and roadway construction since no infrastructure currently exists in these areas. In the DEIS, no secondary impacts were considered for the Rye Road Alternative since all direct impacts would occur in existing ROW adjacent to existing roadway and bridge structures.

In their comments on the DEIS, the USACE requested a 404(b)(1) analysis of the project alternatives, including secondary wetland impacts with varying buffer distances for both build alternatives. Section 4.3.2.6 has been added to this FEIS in response to this request.

4.3.2.3 *Wetland Impacts*

No-Build Alternative

With the No-Build Alternative, no additional travel lanes, roadway segments, or bridges would be constructed in the study areas other than those already programmed and not part of either build alternative. As such, no direct or indirect wetland impacts are expected to occur with the No-Build Alternative.

Fort Hamer Alternative

Table 4-9 summarizes the permanent wetland impacts resulting from the Fort Hamer Alternative. A total of 3.06 acres of wetlands would be directly impacted by the construction of this alternative; this includes 2.05 acres of dredge/fill impacts and 1.01 acres of shading impacts (2.05 + 1.01 = 3.06). An additional 1.28 acres of wetlands are considered to have secondary impacts based on SWFWMD criteria. Thus, the Fort Hamer Alternative would result in 4.34

acres of permanent wetland impacts ($3.06 + 1.28 = 4.34$). All of these impacts would require compensatory mitigation.

TABLE 4-9
PERMANENT WETLAND IMPACT SUMMARY – FORT HAMER ALTERNATIVE

Wetland	FLUCFCS Classification ¹	FWS Classification ²	Description	Direct Impact Acres		Secondary Impact Acres	Total Impact Acres
				Dredge/Fill	Shading		
Wetland 1	617	PFO1C	Mixed Wetland Hardwoods	0.50	0.00	0.14	0.64
	631	PSS1C	Wetland Scrub	1.48	0.00	0.05	1.53
	Sub-total Wetland 1			1.98	0.00	0.19	2.17
Wetland 2	631	E2SS3A	Wetland Scrub	0.01	0.10	0.04	0.15
	642	E2EM1P	Saltmarsh	0.01	0.12	0.22	0.35
	Sub-total Wetland 2			0.02	0.22	0.26	0.50
Wetland 3	612	E2SS3N	Mangroves	0.01	0.05	0.05	0.11
	615	PFO1P	Stream & Lake Swamp (Bottomland)	0.01	0.21	0.22	0.44
	642	E2EM1N	Saltmarsh	0.03	0.50	0.51	1.04
	Sub-total Wetland 3			0.05	0.76	0.78	1.59
Wetland 4	642	E2EM1N	Saltmarsh	0.0003	0.03	0.06	0.09
	Sub-total Wetland 4			0.0003	0.03	0.06	0.09
Total				2.05	1.01	1.28	4.34

¹ FDOT, 1999.

² Cowardin, *et al.*, 1979.

Totals may not add due to rounding.

Shading impacts from low bridges (i.e., bridges with a height to width ratio of less than 0.7) have been shown to result in decreased vegetative growth beneath the bridge (Broome *et al.*, 2005). Approximately 48 percent of the proposed Fort Hamer Alternative bridge would have a height-to-width ratio of 0.7, including the structure over the saltmarsh surrounding the peninsula between the north and south shorelines of the river. The remaining 52 percent of the bridge would have a height-to-width ratio between 0.4 and 0.7. The extent of wetland shading for the Fort Hamer Alternative bridge would be further reduced by the north/south orientation of the bridge, which allows more sunlight beneath the bridge in the early morning and late afternoon hours.

Sparse (less than 10 percent cover) patches of widgeon grass occur beneath the proposed Fort Hamer Alternative bridge, along the north bank of the main river channel adjacent to Wetland 3. Reduced productivity of the widgeon grass is possible in this area due to shading; however, the bridge structure would be approximately 32 feet above the water surface at this location. For this reason, and because of the north/south alignment of the structure, the total impact to widgeon grass as a result of shading is expected to be *de minimis*.

Temporary Impacts

It is anticipated that a temporary work trestle would be constructed across the Manatee River as part of this alternative. Design details of the trestle would be determined by the contractor (yet

to be selected); however, the typical section would be designed based on the weight bearing capacity needed to support the construction equipment. A similar structure used on a recent construction project consisted of a 28-foot-wide timber deck structure supported on steel pipe pilings and steel cross-beam supports. The trestle would be constructed adjacent and parallel to the permanent, two-lane bridge and would remain in place until construction of the bridge deck is completed.

A 28-foot-wide trestle would result in 0.62 acre of temporary shading impacts to vegetated wetlands and temporary *de minimis* fill impacts to wetlands and the open water portion of the Manatee River. It is anticipated that a temporary trestle would create the least amount of impacts to the mangroves, saltmarshes, and shallow portions of the Manatee River compared to other construction methodologies. Construction and use of the temporary trestle should result in insignificant, temporary wetland impacts that would restore naturally after the structure is removed.

Rye Road Alternative

Table 4-10 summarizes the permanent wetland impacts resulting from the Rye Road Alternative. A total of 2.52 acres of wetlands would be directly impacted by this alternative; this includes 2.51 acres of fill and 0.01 acre of shading impacts ($2.51 + 0.01 = 2.52$). As discussed previously, no secondary wetland impacts are considered for the Rye Road Alternative.

**TABLE 4-10
PERMANENT WETLAND IMPACT SUMMARY – RYE ROAD ALTERNATIVE**

Wetland ¹	FLUCFCS Classification ²	FWS Classification ³	Description	Direct Impact Acres		Total Impact Acres
				Fill	Shading	
Wetland 5	510	PUB2Jx	Stream (Channelized)	0.06	0.00	0.06
Wetland 6	618	PSS1C	Willow	0.19	0.00	0.19
Wetland 7	510	PUB2Jx	Stream (Channelized)	0.03	0.00	0.03
Wetland 8	510	PUB2Jx	Stream (Channelized)	0.08	0.00	0.08
Wetland 9	615	PFO1C	Stream Swamp (Bottomland)	0.07	0.00	0.07
Wetland 10	615	PFO1C	Stream Swamp (Bottomland)	0.60	0.01	0.61
Wetland 11	510/615	R2UB2/PFO1C	Stream and Stream Swamp (Bottomland)	0.20	0.00	0.20
Wetland 12	510/615	R2UB2/PFO1C	Stream and Stream Swamp (Bottomland)	0.40	0.00	0.40
Wetland 13	510/615	R2UB2/PFO1J	Stream and Stream Swamp (Bottomland)	0.22	0.00	0.22
Wetland 14	615	PFO1J	Stream Swamp (Bottomland)	0.14	0.00	0.14
Wetland 15	630	PFO1C	Wetland Forested Mixed	0.52	0.00	0.52
Total				2.51	0.01	2.52

¹ See the WER in Appendix D for a description of each impacted wetland.

² FDOT, 1999.

³ Cowardin, *et al.*, 1979.

4.3.2.4 Uniform Mitigation Assessment Method

Wetlands potentially impacted by the Fort Hamer and Rye Road Alternatives were assessed using the Uniform Mitigation Assessment Method (UMAM) pursuant to Chapter 62-345, Florida Administrative Code (F.A.C.). UMAM is a method developed by the Florida Department of Environmental Protection (FDEP) and the Water Management Districts to determine the amount of mitigation needed to offset adverse impacts to wetlands. The methodology was designed to assess functions provided by wetlands, the amount that those functions are reduced by a proposed impact, and the amount of mitigation necessary to offset the proposed functional losses. This method is also used to determine the degree of improvement in ecological value that would be created by mitigation activities. In Florida, the USACE also accepts UMAM for assessment of wetland impacts and mitigation, with some changes from the state implementation. Details of the UMAM calculations are provided in the WER in Appendix D of this FEIS.

Table 4-11 summarizes the wetland impacts and UMAM functional loss for each build alternative. The 4.34 acres of unavoidable wetland impacts for the Fort Hamer Alternative would result in a UMAM functional loss of 1.60.

**TABLE 4-11
WETLAND IMPACTS AND UMAM FUNCTIONAL LOSS**

Wetland	Fill/Shade		Secondary		Total	
	Acres	Functional Loss	Acres	Functional Loss	Acres	Functional Loss
<i>Fort Hamer Alternative</i>						
Wetland 1	1.98	1.16	0.19	0.005	2.17	1.16
Wetland 2	0.24	0.07	0.25	0.007	0.49	0.08
Wetland 3	0.81	0.32	0.78	0.03	1.59	0.34
Wetland 4	0.03	0.01	0.06	0.002	0.09	0.01
Totals (rounded)	3.06	1.56	1.28	0.04	4.34	1.60
<i>Rye Road Alternative</i>						
Wetland 5	0.06	0.01	No Secondary Impacts for Rye Road Alternative		0.06	0.01
Wetland 6	0.19	0.08			0.19	0.08
Wetland 7	0.03	0.01			0.03	0.01
Wetland 8	0.08	0.02			0.08	0.02
Wetland 9	0.07	0.02			0.07	0.02
Wetland 10	0.61	0.43			0.61	0.43
Wetland 11	0.20	0.06			0.20	0.06
Wetland 12	0.40	0.12			0.40	0.12
Wetland 13	0.22	0.06			0.21	0.06
Wetland 14	0.14	0.09			0.14	0.09
Wetland 15	0.52	0.38			0.52	0.38
Totals (rounded)	2.52	1.28			2.52	1.28

Note: Numbers may not add due to rounding.

The total area of the Rye Road Alternative requiring wetland mitigation is 2.52 acres. As shown in Table 4-11, these 2.52 acres of wetland impacts would result in a UMAM functional loss of 1.28.

4.3.2.5 Conceptual Wetland Mitigation

The term “mitigation” is widely used but is often the source of much confusion. For many resources, mitigation refers to an action or actions taken to reduce or prevent impacts prior to the impact occurring. For example, potential impacts to water quality of receiving streams as a result of stormwater runoff may be “mitigated” by the use of stormwater treatment ponds, which collect and treat the runoff prior to discharge to the receiving streams.

With respect to wetlands, actions taken to reduce or lessen impacts prior to the impact occurring are referred to as “minimization and avoidance measures” (see previous discussion in Section 4.3.1.1). All applicants for state and federal environmental permits authorizing wetland impacts must show the wetland minimization and avoidance measures for their proposed project. However, when wetland impacts are unavoidable and no practicable alternative exists, then the subsequent loss of wetlands and the ecological functions they perform must be replaced; this replacement is referred to by the regulatory agencies as “compensatory mitigation” [33 Code of Federal Regulations (CFR) Part 332], which is further defined as:

...the restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

In 2008 the USACE and U.S. Environmental Protection Agency (EPA) issued regulations governing compensatory mitigation for activities authorized by the Department of the Army (Federal Register, 2008). These regulations, as promulgated in 33 CFR Part 332, establish a hierarchy for determining the type and location of compensatory mitigation. To briefly summarize, the rule establishes a preference for the use of mitigation bank credits if a mitigation bank has the appropriate number and resource type of credits available. If the permitted impacts are not in the service area of an approved mitigation bank, or if the appropriate number and resource type of credits are otherwise unavailable, then the rule establishes a preference for in-lieu fee program credits. If an approved mitigation bank or in-lieu fee program cannot be used to provide the required compensatory mitigation, the rule establishes a preference for permittee-responsible mitigation conducted under a watershed approach.

Both build alternatives would result in unavoidable wetland impacts to freshwater and/or estuarine wetland habitats. Regardless of the build alternative ultimately constructed, wetland impacts resulting from construction of the project are required to be mitigated to satisfy all mitigation requirements of United States Code (U.S.C.) 1344 and Part IV, Chapter 373 Florida Statutes (F.S.). The mitigation would need to be sufficient to offset the UMAM functional loss resulting from the wetland impacts and to offset the loss of value and functions resulting from impacts to EFH.

At present there are no permitted wetland mitigation banks or in-lieu fee programs serving the project area of either Build alternative. As a result, the DEIS was prepared under the premise that mitigation through the purchase of mitigation credits from a wetland mitigation bank or

participation in an in-lieu fee program was not available. Therefore, a conceptual mitigation plan consisting of the creation of wetland habitat on the north side of the river was developed and presented in the DEIS. This conceptual mitigation plan is presented as Wetland Mitigation Option 1 below.

After receiving the application for a 404 Dredge and Fill permit for the Fort Hamer Alternative, the USACE noted that the purchase of credits from the Tampa Bay Mitigation Bank (TBMB) might be appropriate even though the Fort Hamer Alternative is not within the service area of the bank. Specifically the USACE stated, “*Although your project is not within the service area of any Corps-approved mitigation banks, there is a bank in the vicinity of the project (Tampa Bay Mitigation Bank) that allows linear projects outside of the bank service area to use the bank*” (see letter dated February 25, 2014 in Appendix A). As a result, Wetland Mitigation Option 2 (described below) was developed for this FEIS.

DEIS Wetland Mitigation Strategy

Conceptual mitigation for either build alternative consists of the creation of multiple wetland habitats on the north and south sides of the river in the vicinity of the Fort Hamer Alternative. On the north side of the river, the mitigation area is located within a 229-acre vacant parcel of land known as the Hidden Harbour Tract. This site is located approximately 3,700 feet east of the Fort Hamer County Park (see Figure 9 of the WER in Appendix D of this FEIS). The area had been in agricultural cultivation until 2004 when it was purchased by Manatee County. The site has not been planted with row crops since the purchase, but is maintained by occasional mowing activities.

The area to be converted for wetland mitigation is currently fallow crop land that was previously used for growing tomatoes. Bed rows are still visible and dominated by cogon grass (*Imperata cylindrical*). Associate species observed in this area include saltbush, bushy broomsedge (*Andropogon glomeratus*), rattlebox (*Sesban spp.*), and docks (*Rumex spp.*).

In its current state, the proposed mitigation site provides little habitat for wildlife. Feral hogs were observed in the fallow crop land and several species of avian raptors were observed flying overhead; however, the fields do not provide the diversity of habitats preferred by most species. Once the proposed mitigation is constructed, a mosaic of habitats would be available for wading birds, amphibians, reptiles, and other wetland-dependent species.

Additional details of this wetland mitigation plan and UMAM functional gain resulting from the mitigation sites would be developed during the state and federal permitting process and would be subject to review and approval by the permitting and commenting agencies, including the USCG, USACE, NMFS, U.S. Fish and Wildlife Service (FWS), and SWFWMD. A summary of the conceptual mitigation for each build alternative under this strategy is provided below.

No-Build Alternative

In the absence of any direct or indirect impacts to wetlands, there is no conceptual wetland mitigation for the No-Build Alternative under this strategy.

Fort Hamer Alternative

The conceptual wetland mitigation for the Fort Hamer Alternative consists of three mitigation areas (Mitigation Areas A, B, and C – shown in Figure 9 of the WER in Appendix D). Mitigation Area A is located on the south side of the Manatee River immediately adjacent to Wetland 2 and east of the proposed roadway and bridge approach. The area to be converted for wetland mitigation is predominantly disturbed oak hammock dominated by live oak and Brazilian pepper. Mitigation activities to be performed in this area include creation of approximately 0.3 acre of tidal saltmarsh that is hydrologically connected to Wetland 2 and the Manatee River. The area would be excavated below the mean high water elevation and planted with black needle rush and leather fern.

Mitigation Area B is located in the Hidden Harbour site on the north side of the river. In Mitigation Area B, 0.2 acre of mangrove wetland and 1.8 acres of saltmarsh would be created by excavating uplands to approximately 1.5 feet below the mean high water elevation and hydrologically connecting it to the tidal portion of an unnamed tributary of Gamble Creek. Red and black mangroves would be planted in a zone between the tidal creek and saltmarsh. The saltmarsh portion of this wetland would be intertidal and planted with species adapted for oligohaline conditions, including black needlebrush and leather fern. The saltmarsh would also contain a sub-tidal pool, which would hold approximately 12 to 14 inches of water at low tide.

Mitigation Area C is also located in the Hidden Harbour site adjacent to Mitigation Area B. Mitigation Area C would consist of 2.2 acres of mixed, forested wetland hardwoods created by excavating uplands to 6 inches below the seasonal high groundwater elevation and hydrologically connecting it to upstream freshwater flow from an unnamed tributary of Gamble Creek. At seasonal high water, the mitigation area would hold approximately 6 inches of water. The mixed wetland hardwoods mitigation site would be planted with laurel oak, American elm, and red maple. A transitional boundary between uplands and wetlands would be planted with buttonbush, wax myrtle, and saltbush.

Rye Road Alternative

Mitigation activities at the Hidden Harbour site for the Rye Road Alternative include the construction of approximately 3.4 acres of mixed, forested wetland hardwoods at Mitigation Area C. The mixed wetland hardwoods would be created by excavating uplands to approximately 6 inches below the seasonal high groundwater elevation and hydrologically connecting it to upstream freshwater flow from the unnamed tributary of Gamble Creek. At seasonal high water, the mitigation area would hold approximately six inches of water. The mixed wetland hardwoods mitigation site would be planted with laurel oak, American elm, and red maple. A transitional boundary between uplands and wetlands would be planted with buttonbush, wax myrtle, and saltbush.

FEIS Wetland Mitigation Strategy

At the suggestion of the USACE in correspondence dated February 25, 2014 (see Appendix A-4), this strategy consists of the purchase of credits from a USACE- and SWFWMD-approved wetland mitigation bank.

No-Build Alternative

In the absence of any direct or indirect impacts to wetlands, there is no conceptual wetland mitigation for the No-Build Alternative under this option.

Fort Hamer Alternative

The conceptual wetland mitigation for the Fort Hamer Alternative consists of the purchase of credits from the TBMB. The TBMB is located approximately 12 miles north-northeast of the Fort Hamer Alternative in Hillsborough County and is approved by the USACE and SWFWMD to sell estuarine forested, tidal marsh, oligohaline marsh, freshwater marsh, and freshwater pond credits.

The TBMB does not have credits for freshwater forested wetlands. Since the Fort Hamer Alternative would impact approximately 1.08 acre of freshwater forested wetlands, this option would require the substitution of estuarine forested credits for the freshwater forested impacts. The substitution of “out-of-kind” credits would need to be approved by the USACE, FWS, NMFS, and SWFWMD during the permitting process. The amount of credits to be purchased under this option would be determined by the agencies during permitting.

Rye Road Alternative

The conceptual wetland mitigation for the Rye Road Alternative consists of the purchase of credits from the TBMB. The TBMB does not have credits for freshwater forested wetlands. The Rye Road Alternative would impact approximately 2.35 acres of freshwater forested wetlands; therefore, this option would require the substitution of estuarine forested credits for the freshwater forested wetland impacts. The substitution of “out-of-kind” credits would need to be approved by the USACE, FWS, NMFS, and SWFWMD during the permitting process. The amount of credits to be purchased under this option would be determined by the agencies during permitting.

4.3.2.6 Compliance with 404(b)(1) Guidelines

Pursuant to Section 404(b)(1) of the Clean Water Act (CWA), the USEPA has developed guidelines for the placement of dredged or fill material into waters of the U.S. Known as the “404(b)(1) Guidelines” they are binding regulations (40 CFR Part 230) and are the environmental standards for Section 404 permit issuance under the CWA. Under the Guidelines, the “least environmentally damaging practicable alternative” to the proposed discharge is the only alternative for which a Section 404 permit can be issued. The CWA prevents the USACE from authorizing impacts to waters of the U.S. if there is a less damaging practicable alternative.

The 404(b)(1) alternative analysis is a separate action from a NEPA alternative analysis. Unlike the 404(b)(1) analysis, the lead federal agency for a NEPA analysis is only required to *identify* its environmentally preferred alternative; it does not have to select the environmentally preferred alternative. However, the 404(b)(1) Guidelines require selection of the environmentally preferred alternative. The “least environmentally damaging practicable alternative” is, in part,

one that has the least adverse impact on the aquatic ecosystem and it must not have other significant adverse environmental consequences (40 CFR 230.10(a)).

In their comments on the DEIS, the USACE requested a 404(b)(1) analysis of the project alternatives, including identification of direct and secondary wetland impacts. For the secondary impacts the USACE requested an analysis with varying buffer distances for both the Fort Hamer and Rye Road alternatives. Based on this request, secondary impacts have been quantified at 25-foot, 50-foot, and 100-foot buffers. Although not directly impacted by dredge or fill activities, these buffer areas are considered impacted by noise, edge effects, and overall reduced value of ecological functions (i.e., secondary impacts) as a result of implementation of the alternative. The results of this analysis are provided in **Table 4-12** below.

TABLE 4-12
404(b)(1) ANALYSIS DIRECT AND SECONDARY WETLAND IMPACTS

Impact Type	Impact Acres	
	Fort Hamer Alternative	Rye Road Alternative
Direct		
Permanent Dredge/Fill	2.05	2.51
Permanent Shading	1.01	0.01
Secondary		
25-ft Buffer	1.28	4.48
50-ft Buffer	8.73	7.34
100-ft Buffer	10.75	14.40
Totals		
Direct + 25-ft Buffer Secondary	4.34	7.00
Direct + 50-ft Buffer Secondary	11.79	9.86
Direct + 100-ft Buffer Secondary	13.81	16.92

Please note that the selection of these buffers is a result of the 404 permitting process and should not be confused with the buffers used for the NEPA corridor analysis previously discussed in Section 2.3.2 and 2.3.3. Other environmental consequences resulting from the implementation of each build alternative are presented throughout this chapter (see Section 4.7 for a summary of these impacts). Based on the results of the environmental analysis presented in this chapter and the analysis of direct and secondary wetland impacts presented above, it is determined that the Fort Hamer Alternative represents the least environmentally damaging practicable alternative as defined by the 404(b)(1) Guidelines.

4.3.3 *ESSENTIAL FISH HABITAT (EFH)*

No-Build Alternative

With the No-Build Alternative, no roadway improvements or bridges would be constructed in the study areas other than those already programmed and not part of either build alternative. As such, no impacts to designated EFH are expected to result from the No-Build Alternative.

Fort Hamer Alternative

Wetlands 2, 3, 4, and the Manatee River within the Fort Hamer Alternative qualify as EFH. As shown in **Table 4-13**, implementation of the Fort Hamer Alternative would impact 0.16 acre of EFH due to fill and 1.01 acres of vegetated EFH due to shading. The shading impacts would not affect the hydrology of the affected wetlands but may result in a decrease of vegetation and secondary productivity beneath the bridge. As stated previously, approximately 48 percent of the structure would have a height-width ratio of 0.7 or greater, including that portion of the structure over the saltmarsh and mangroves in Wetland 3. The mid-point of the bridge, and consequently the highest part of the bridge, occurs over these marsh/mangrove habitats and allows stormwater to flow in equal volumes from the bridge to the stormwater ponds located at each end of the structure. Thus, 75 percent of the total permanent shading area (0.76 acre of the 1.01 acres) occurs beneath that portion of the bridge with a height-width ratio of 0.7 or greater. The remaining 25 percent of shading area (0.25 acre) occurs beneath portions of the bridge with a height-width ratio of less than 0.7.

TABLE 4-13
EFH IMPACT SUMMARY – FORT HAMER ALTERNATIVE

Wetland ¹	FLUCFCS Classification ²	FWS Classification ³	Description	Impact Type	Wetland Impact (Acres)
Wetland 2	631	E2SS3A	Wetland Scrub	Shading	0.10
				Fill	0.01
	642	E2EM1P	Saltmarsh	Shading	0.12
				Fill	0.01
Sub-total Wetland 2					0.24
Wetland 3	612	E2SS3N	Mangroves	Shading	0.05
				Fill	0.01
	615	PF01P	Stream and Lake Swamp (Bottomland)	Shading	0.21
			Fill	0.1	
	642	E2EM1N	Saltmarsh	Shading	0.50
				Fill	0.03
Sub-total Wetland 3					0.81
Wetland 4	642	E2EM1N	Saltmarsh (Shoreline)	Shading	0.03
				Fill	0.0003
Sub-total Wetland 4					0.03
River 1a	510	E1UB2L	Manatee River (Open Water)	Shading	0.006
				Fill	0.06
River 1b	510	E1UB2L	Manatee River (Open Water)	Fill	0.03
Sub-total Rivers 1a and 1b					0.15
Total Impacts					1.23

¹ See the WER in Appendix D for a description of each impacted wetland.

² FDOT, 1999.

³ Cowardin, *et al.*, 1979.

Broome *et al.* (2005) reported that above-ground biomass, stem height, stem count, number of flowers, and basal area were greatly reduced beneath bridges at height-width ratios less than 0.5. At a height-width ratio of 0.68 adverse bridge shading effects on vegetation were still detected although greatly diminished. Likewise, they showed a strong correlation of bridge height-width ratio with secondary productivity with benthic invertebrate density and diversity significantly

lower beneath bridges with a height-width ratio less than 0.7. Broome *et al.* (2005) concluded: “Data indicates that shading by bridges having height-width ratios greater than 0.7 do not adversely impact the productivity or function of the underlying marsh...” Based on this analysis, the 0.25 acre of permanent shading area beneath the proposed bridge would be expected to result in reduced productivity and ecological function beneath the bridge. The remaining 0.76 acre of shading would have minimally reduced productivity and function. Shading impacts beneath the bridge may be further reduced due to the north-south orientation of the bridge; more sunlight will be present under the bridge during the morning and late afternoon hours compared to a bridge with an east-west axis. Based on this information, we conclude that the 1.01 acres of permanent shading beneath the bridge will have minimal adverse effects to red drum, gray snapper, pink shrimp, and stone crab populations and their prey species.

The temporary work trestle described previously would result in 0.62 acre of temporary shading impacts to wetlands. These impacts are expected to be minimal and should restore naturally following removal of the structure.

Water quality degradation could affect habitats designated as EFH within the Fort Hamer Alternative Study Area. To minimize potential water quality impacts, the project would be constructed in accordance with all permit conditions for maintaining water quality during construction and during operation of the facility. All stormwater runoff from the roadway and bridge structures would be directed to stormwater treatment ponds; no stormwater runoff would be directly discharged to the Manatee River or adjacent wetlands. For these reasons, no water quality induced adverse impacts to EFH or EFH-dependent species are anticipated for the Fort Hamer Alternative.

Rye Road Alternative

The Rye Road Alternative would not have fill or shading impacts to EFH; however, water quality degradation could affect downstream habitats designated as EFH. To minimize potential water quality impacts, this alternative would be constructed in accordance with all permit conditions for maintaining water quality during construction and during operation of the facility. All stormwater runoff from the roadway and bridge structures would be directed to stormwater treatment ponds; no stormwater runoff would be directly discharged to the Manatee River or adjacent wetlands. For these reasons, no water quality induced adverse impacts to EFH or EFH-dependent species are anticipated for the Rye Road Alternative.

4.3.4 WILDLIFE

No-Build Alternative

As previously described, conversion of forested uplands, agricultural areas, and other open spaces to an urban setting would occur within the project area, even with the No-Build Alternative. This loss of habitat is expected to result in a general decline in mammal and bird populations in the project area. Some bird species such as blue jays, house sparrows, and cardinals are well adapted to urban environments and local populations could actually increase with development. Wetland-dependent species such as wading birds, reptiles, and fish are not expected to be substantially affected by the No-Build Alternative since most of these habitats would remain unaffected by proposed future development. Planned and approved growth with

subsequent increases in traffic would result in an increased potential for road kill in the project area.

Fort Hamer Alternative

Implementation of the Fort Hamer Alternative would result in the conversion of approximately 19.4 acres of open land and 6.8 acres of upland forest to roadway and associated facilities. Loss of these habitats is expected to result in a general decline of mammal and bird populations in the Fort Hamer Alternative Study Area. Additional wetland/other surface water habitats would also be lost as a result of this alternative; however, the required compensation/wetland mitigation would supplant these lost habitats. Thus, the overall effect of the Fort Hamer Alternative on wetland-dependent species is expected to be minimal. The increase in traffic on Upper Manatee River Road and Fort Hamer Road as a result of this alternative would likely result in an increased potential for road kill on these roads.

Based on available information and field reviews, a bald eagle nest is located 0.52 mile west of the proposed bridge location. This nest was last documented as active by the Florida Fish and Wildlife Conservation Commission (FWC) in 2010. Due to the distance of this nest from the construction limits, construction of the Fort Hamer Alternative is not likely to affect the nesting behavior of eagles using this nest. Manatee County would resurvey the project area and review the most current FWC database for documented bald eagle nests prior to construction. If any bald eagle nests are observed or documented within or adjacent to the project area, Manatee County would coordinate with the FWS and FWC, as appropriate.

Rye Road Alternative

Implementation of the Rye Road Alternative would result in the conversion of approximately 19.0 acres of agriculture (mostly pasture), 3.0 acres of open land, and 7.5 acres of forested uplands to roadway and associated facilities. Loss of these habitats is expected to result in a general decline of mammal and bird populations in the Rye Road Alternative Study Area. Additional wetland/other surface water habitat would also be lost as a result of this alternative; however, the required compensating wetland mitigation would supplant these lost habitats. Thus, the overall effect of the Rye Road Alternative on wetland-dependent species is expected to be minimal. The widened roadway associated with this alternative would likely result in an increased potential for road kill on Rye Road, Golf Course Road, and Fort Hamer Road.

The existing Rye Road Bridge provides potential nesting habitat for bird species that are not listed as threatened or endangered, but are still afforded protection under the *Migratory Bird Treaty Act*, as amended (MBTA). Nesting birds and their nestlings are protected by the MBTA. Should the Rye Road Alternative be selected as the preferred alternative, prior to construction Manatee County would survey the existing bridge for evidence of migratory bird nests and, if present, would mitigate disturbance during construction by scheduling construction during a non-nesting time, or take other measures to prevent nests from being established until construction is complete.

4.3.5 THREATENED AND ENDANGERED SPECIES

This section summarizes the potential impacts to federal- and state-listed threatened and endangered species and their habitats that may result from each alternative. A description of the potential impacts to listed species or their habitats for each build alternative is provided in the Biological Assessment (BA) in Appendix E of this FEIS. **Tables 4-14 and 4-15** provide the effect determinations for the federally- and state-listed species for the Fort Hamer Alternative and the Rye Road Alternative, respectively.

**TABLE 4-14
LISTED SPECIES EFFECT DETERMINATIONS FOR THE FORT HAMER ALTERNATIVE**

Project Effect Determination	Federally-Listed Species
May affect, not likely to adversely affect	Smalltooth sawfish (<i>Pristis pectinata</i>) Eastern indigo snake (<i>Drymarchon corais couperi</i>) West Indian manatee (<i>Manatus trichechus</i>) and critical habitat Wood stork (<i>Mycteria americana</i>)
No effect	Florida goldenaster (<i>Chrysopsis floridana</i>) Florida scrub jay (<i>Aphelocoma coerulescens</i>) Florida grasshopper sparrow (<i>Ammodramus savannarum floridana</i>) Crested caracara (<i>Caracara cheriway</i>)
Project Effect Determination	State-Listed Species
May affect, not likely to adversely affect	Gopher tortoise (<i>Gopherus polyphemus</i>) Pine snake (<i>Pituophis melanoleucus mugitis</i>) Florida mouse (<i>Podomys floridanus</i>) Gopher frog (<i>Rana capito</i>)
No effect	<p><u>Plants</u> Golden leather fern (<i>Acrostichum aureum</i>) Many-flowered grass pink (<i>Calopogon multiflorus</i>) Florida goldenaster (<i>Chrysopsis floridana</i>) Sanibel lovegrass (<i>Eragrostis pectinacea</i> var. <i>tracyi</i>) Tampa vervain (<i>Glandularia [Verbena] tampensis</i>) Wild cotton (<i>Gossypium hirsutum</i>) Florida spiny-pod (<i>Matalea floridana</i>) Giant orchid (<i>Pteroglossaspis [Eulophia] ecristata</i>) Large-plumed beaksedge (<i>Rhynchospora megaplumosa</i>)</p> <p><u>Animals</u> Limpkin (<i>Aramus guarana</i>) Florida burrowing owl (<i>Athene cunicularia floridana</i>) Little blue heron (<i>Egretta caerulea</i>) Reddish egret (<i>Egretta rufescens</i>) Snowy egret (<i>Egretta thula</i>) Tricolored heron (<i>Egretta tricolor</i>) White ibis (<i>Eudcimus albus</i>) Southeastern American kestrel (<i>Falco sparverius paulus</i>) Florida sandhill crane (<i>Grus canadensis pratensis</i>) Brown pelican (<i>Pelecanus occidentalis</i>) Roseate spoonbill (<i>Platalea ajaja</i>) Mangrove rivulus (<i>Rivulus marmoratus</i>) Sherman's fox squirrel (<i>Sciurus niger shermanii</i>)</p>

**TABLE 4-15
LISTED SPECIES EFFECT DETERMINATIONS FOR THE RYE ROAD ALTERNATIVE**

Project Effect Determination	Federally-Listed Species
May affect, not likely to adversely affect	Eastern indigo snake (<i>Drymarchon corais couperi</i>) Crested caracara (<i>Caracara cheriway</i>) West Indian manatee (<i>Manatus trichechus</i>) and critical habitat Florida scrub jay (<i>Aphelocoma coerulescens</i>) Wood stork (<i>Mycteria americana</i>)
No effect	Smalltooth sawfish (<i>Pristis pectinata</i>) Florida goldenaster (<i>Chrysopsis floridana</i>) Florida grasshopper sparrow (<i>Ammodramus savannarum floridana</i>)
Project Effect Determination	State-Listed Species
May affect, not likely to adversely affect	Gopher tortoise (<i>Gopherus polyphemus</i>) Pine snake (<i>Pituophis melanoleucus mugitis</i>) Florida mouse (<i>Podomys floridanus</i>) Gopher frog (<i>Rana capito</i>)
No effect	<p><u>Plants</u> Golden leather fern (<i>Acrostichum aureum</i>) Many-flowered grass pink (<i>Calopogon multiflorus</i>) Florida goldenaster (<i>Chrysopsis floridana</i>) Sanibel lovegrass (<i>Eragrostis pectinacea</i> var. <i>tracyi</i>) Tampa vervain (<i>Glandularia [Verbena] tampensis</i>) Wild cotton (<i>Gossypium hirsutum</i>) Florida spiny-pod (<i>Matalea floridana</i>) Giant orchid (<i>Pteroglossaspis [Eulophia] ecristata</i>) Large-plumed beaksedge (<i>Rhynchospora megaplumosa</i>)</p> <p><u>Animals</u> Limpkin (<i>Aramus guarauna</i>) Florida burrowing owl (<i>Athene cunicularia floridana</i>) Little blue heron (<i>Egretta caerulea</i>) Reddish egret (<i>Egretta rufescens</i>) Snowy egret (<i>Egretta thula</i>) Tricolored heron (<i>Egretta tricolor</i>) White ibis (<i>Eudcimus albus</i>) Southeastern American kestrel (<i>Falco sparverius paulus</i>) Florida sandhill crane (<i>Grus canadensis pratensis</i>) Brown pelican (<i>Pelecanus occidentalis</i>) Roseate spoonbill (<i>Platalea ajaja</i>) Mangrove rivulus (<i>Rivulus marmoratus</i>) Sherman's fox squirrel (<i>Sciurus niger shermanii</i>)</p>

4.3.5.1 Federally-Listed Species

No-Build Alternative

Conversion of forested uplands, agriculture areas, and other open spaces to an urban setting would occur throughout the project area, even with the No-Build Alternative. This loss of habitat is likely to result in general population declines of listed species that may be present in these habitats. For example, federally-listed species potentially found in these types of habitat include the eastern indigo snake, Florida scrub jay, and Florida goldenaster.

Habitat for wetland-dependent federally-listed species such as the West Indian manatee and wood stork is less likely to be affected by approved future development of the project area since most development would be restricted to uplands and stormwater treatment would be required in most instances. However, increased recreational boating (i.e., power boats) within the project area would increase potential collisions with manatees.

Fort Hamer Alternative

Potential impacts to federally-listed species or their habitats that could occur as a result of either build alternative were assessed. Based on the assessment, it was determined that the Fort Hamer Alternative would have “no effect” on the Florida goldenaster, Florida scrub jay, Florida grasshopper sparrow, and crested caracara and a “may affect, not likely to adversely affect” determination was made for the smalltooth sawfish, eastern indigo snake, wood stork, West Indian manatee, and designated critical habitat for the West Indian manatee. Manatee County will provide suitable foraging habitat (SFH) compensation within the core foraging area of affected colony sites equivalent to the impacts SFH in accordance with the *Wood Stork Foraging Assessment Procedure* (FWS, 2010) and the FWS’ *Habitat Management Guidelines for the Wood Stork in the Southeast Region* (Ogden, 1990). FWS-approved construction precautions for the smalltooth sawfish, eastern indigo snake, and West Indian manatee would also be implemented during construction (see the BA in Appendix E for a copy of the construction precautions).

Rye Road Alternative

With the Rye Road Alternative, a “no effect” determination was made for the Florida goldenaster and Florida grasshopper sparrow and a “may affect, not likely to adversely affect” determination was made for the eastern indigo snake, crested caracara, Florida scrub jay, wood stork, West Indian manatee, and designated critical habitat for the West Indian manatee. To offset these potential effects, Manatee County has agreed to: (1) mitigate all wetland impacts that are suitable habitat for the American alligator and wood stork; (2) utilize FWS-approved construction precautions for the eastern indigo snake and West Indian manatee during construction; and (3) resurvey appropriate habitats in the alternative for crested caracara and Florida scrub jay nests prior to construction and to re-initiate consultation with the FWS, if needed.

4.3.5.2 State-Listed Species

No-Build Alternative

Similar to the discussion of general wildlife (Section 4.3.4) and federally-listed species (Section 4.3.5.1), conversion of remaining upland habitat to residential areas within the project area would occur, even with the No-Build Alternative. This development would result in less habitat availability and increased potential for road kill for state-listed species. Wetland-dependent state-listed species are less likely to be affected by approved future development of the project area since most development would be restricted to uplands and stormwater treatment would be required for most development.

Fort Hamer Alternative

Several state-listed species occur or have the potential to occur within the Fort Hamer Alternative Study Area (Table 3-19). Of these, implementation of the Fort Hamer Alternative results in a “may affect, not likely to adversely affect” determination for the gopher tortoise, pine snake, Florida mouse, and gopher frog. If the Fort Hamer Alternative is implemented, Manatee County would resurvey the construction footprint for the presence of gopher tortoise burrows prior to construction. If gopher tortoise or their burrows are found in or within 25 feet of the construction limits, Manatee County would coordinate with the FWC to secure permits needed to relocate the gopher tortoises and associated commensal species prior to construction.

Implementation of the Fort Hamer Alternative is expected to have “no effect” on all other state-listed species (Table 4-14). If the Fort Hamer Alternative is implemented, Manatee County would resurvey the construction limits for the presence of nesting osprey, Florida burrowing owl, and Florida sandhill crane. If any burrows or nests associated with these species are identified, Manatee County would coordinate appropriately with the FWC.

Rye Road Alternative

Several state-listed species occur or have the potential to occur within the Rye Road Alternative Study Area (Table 3-19). Of these, implementation of the Rye Road Alternative results in a “may affect, not likely to adversely affect” determination for the gopher tortoise, pine snake, Florida mouse, and gopher frog. If the Rye Road Alternative is implemented, Manatee County would resurvey the construction footprint for the presence of gopher tortoise burrows prior to construction. If gopher tortoise or their burrows are found in or within 25 feet of the construction limits, Manatee County would coordinate with the FWC to secure permits needed to relocate the gopher tortoises and associated commensal species prior to construction.

Implementation of the Rye Road Alternative is expected to have “no effect” on all other state-listed species (Table 4-15). If the Rye Road Alternative is implemented, Manatee County would resurvey the construction limits for the presence of nesting osprey, Florida burrowing owl, and Florida sandhill crane. If any burrows or nests associated with these species are identified, Manatee County would coordinate appropriately with the FWC.

4.3.5.3 Critical Habitat

No-Build Alternative

Implementation of the No-Build Alternative should not adversely affect designated critical habitat for the West Indian manatee in the Manatee River. There are no known plans for channel dredging of the river within the project area. All future developments within the project area would be required to provide stormwater treatment in accordance with state water quality criteria.

Fort Hamer Alternative

The Fort Hamer Alternative crosses a portion of the Manatee River designated as critical habitat for the West Indian manatee in 17 CFR 35.1532. Implementation of the Fort Hamer Alternative would have minor effects on widgeon grass, a potential food source for manatees in the river. Stormwater runoff from the new bridge and roadway segments would be directed to a stormwater treatment system pursuant to state requirements. For these reasons, implementation of the Fort Hamer Alternative “may affect, but is not likely to adversely affect” critical habitat for the West Indian manatee.

Rye Road Alternative

The Rye Road Alternative crosses a portion of the Manatee River designated as critical habitat for the West Indian manatee. Implementation of the Rye Road Alternative would not impact any food sources (i.e., seagrasses) for the manatee. Stormwater runoff from the bridge and additional travel lanes would be directed to a stormwater treatment system pursuant to state requirements. For these reasons, implementation of the Rye Road Alternative “may affect, but is not likely to adversely affect” critical habitat for the West Indian manatee.

4.3.5.4 Status of Agency Coordination

To ensure this *National Environmental Policy Act of 1969* (NEPA) review is in compliance with the *Fish and Wildlife Coordination Act* (16 U.S.C. 661-667e); the MBTA (16 U.S.C. 703-712; Ch. 128; July 13, 1918; 40 Stat. 755); and the *Bald and Golden Eagle Protection Act* (16 U.S.C. 668-668d, 54 Stat. 250), coordination with the FWS is required. Coordination is also required with both the FWS and NMFS under Section 7 of the *Endangered Species Act of 1973*, as amended (ESA).

Agency coordination of the project was initiated on July 8, 2010 with the publication of the Notice of Intent (NOI) to prepare an EIS in the Federal Register (2010). On July 10, 2010 the USCG invited the FWS and NMFS to participate as cooperating agencies for the EIS. Both the FWS and NMFS declined to be a cooperating agency. The DEIS for the proposed action was released for public review on July 5, 2013. A copy of the BA was provided as Appendix E of the DEIS. On July 24, 2013 the USCG initiated consultation with the NMFS and FWS pursuant to Section 7 of the ESA.

On August 8, 2013 the NMFS responded with comments on the BA and requested additional information for NMFS’ review, including a recommendation that an ESA Section 7 consultation on smalltooth sawfish be conducted. In an email dated August 29, 2013 the NMFS requested a modified consultation request that addresses the smalltooth sawfish. In emails dated August 27, 2013 the NMFS requested additional information regarding project-related impacts to estuarine resources. In a letter dated September 18, 2013 the USCG provided responses to the NMFS’ comments and requested initiation of ESA Section 7 consultation for the smalltooth sawfish. On October 2, 2013 the NMFS requested additional information regarding project impacts and construction methodology. A response to this request was provided to NMFS on October 9, 2013. On December 11, 2013, the NMFS issued an ESA concurrence letter to the USCG.

The FWS provided comments on the DEIS, BA, and ESA Section 7 consultation request on August 23, 2013. The USCG responded to the FWS with additional information on September 13, 2013. On November 29, 2013, the FWS issued an ESA concurrence letter to the USCG.

The BA has been revised to reflect the comments provided by the NMFS and FWS and includes the additional information requested by these agencies. Copies of all correspondence with federal and state agencies are included in Appendix A.

4.3.6 AQUATIC PRESERVES

No designated aquatic preserves occur within the Fort Hamer Alternative or Rye Road Alternative study areas (Section 3.3.6).

No-Build Alternative

No designated aquatic preserves occur within the overall project area; therefore, implementation of the No-Build Alternative would not result in any impacts to aquatic preserves.

Fort Hamer Alternative

No designated aquatic preserves occur within or adjacent to the Fort Hamer Alternative Study Area; therefore, no aquatic preserves would be impacted by this alternative.

Rye Road Alternative

No designated aquatic preserves occur within or adjacent to the Rye Road Alternative Study Area; therefore, no aquatic preserves would be impacted by this alternative.

4.3.7 WATER QUALITY

Generally, roadway and bridge improvement projects can result in potential impacts to water quality during construction and during operation of the completed facility via stormwater runoff. To address potential water quality issues during construction, projects are required to develop and adhere to a Stormwater Pollution Prevention Plan (SWPPP) during the construction period. In Florida, the SWPPP must be approved by the FDEP prior to the start of construction.

With either build alternative, stormwater runoff from the constructed bridges and roadways would be collected and treated via a stormwater conveyance system. A system of drainage inlets, pipes, ditches, and swales would direct stormwater runoff to treatment ponds constructed in uplands adjacent to the roadways within each alternative. The stormwater management system for either build alternative would be designed to meet the presumptive criteria requirements established by the SWFWMD in Rule 40D-4, F.A.C. Issuance of the Environmental Resource Permit (ERP) by the SWFWMD constitutes water quality certification of the project in accordance with State of Florida and EPA requirements. As of this writing, an ERP application has not been submitted to the SWFWMD.

No-Build Alternative

With the No-Build Alternative no roadway improvements or bridges would be constructed in the study areas other than those already programmed and not part of either build alternative. Therefore, the No-Build Alternative would not result in additional impacts to water quality.

Fort Hamer Alternative

As stated above, the Fort Hamer Alternative would be designed to include a stormwater collection and treatment system pursuant to state requirements. Stormwater runoff from the new bridge and roadway would be directed through this stormwater treatment system. As a result, implementation of the Fort Hamer Alternative would not result in additional water quality impacts.

Rye Road Alternative

The Rye Road Alternative would be designed to include a stormwater collection and treatment system pursuant to state requirements. Stormwater runoff from the new bridge and roadway would be directed through this stormwater treatment system. As a result, implementation of the Rye Road Alternative would not result in additional water quality impacts.

4.3.8 *OUTSTANDING FLORIDA WATERS (OFWs)*

No designated OFWs occur within the Fort Hamer Alternative or Rye Road Alternative study areas (Section 3.3.8).

No-Build Alternative

Implementation of the No-Build Alternative would not result in any impacts to designated OFWs.

Fort Hamer Alternative

No OFWs would be impacted by implementation of the Fort Hamer Alternative.

Rye Road Alternative

No OFWs would be impacted by implementation of the Rye Road Alternative.

4.3.9 *WILD AND SCENIC RIVERS*

No designated Wild and Scenic Rivers occur within the Fort Hamer Alternative or Rye Road Alternative study areas (Section 3.3.9).

No-Build Alternative

No designated Wild and Scenic Rivers would be impacted by implementation of the No-Build Alternative.

Fort Hamer Alternative

No designated Wild and Scenic Rivers would be impacted by implementation of the Fort Hamer Alternative.

Rye Road Alternative

No designated Wild and Scenic Rivers would be impacted by implementation of the Rye Road Alternative.

4.3.10 GROUNDWATER

No sole-source aquifers are present in Manatee County, including the study areas of both build alternatives (Section 3.3.10). Either build alternative would be designed, constructed, and operated to meet the presumptive criteria requirements for water quality and quantity specified by the State of Florida ERP.

No-Build Alternative

Implementation of the No-Build Alternative would have no impacts to sole-source aquifers nor would result in degradation of groundwater resources.

Fort Hamer Alternative

Implementation of the Fort Hamer Alternative would have no impacts to sole-source aquifers nor would result in degradation of groundwater resources.

Rye Road Alternative

Implementation of the Rye Road Alternative would have no impacts to sole-source aquifers nor would result in degradation of groundwater resources.

4.3.11 FLOODPLAINS AND FLOODWAYS

No-Build Alternative

Implementation of the No-Build Alternative would not result in impacts to any designated floodplains and floodways.

Fort Hamer Alternative

Within the Fort Hamer Alternative, the proposed Fort Hamer Bridge and associated roadway improvements encroach upon Zone X500 and Zone AE of the Manatee River. The proposed bridge does not impact the floodplain but the roadway approaches, proposed stormwater ponds, and access roads do impact the floodplain. Within the Fort Hamer Alternative, 6.2 acres are located within Zone X500 (between the 100-year and 500-year flood levels) and 21.7 acres are located within Zone AE (100-year flood zone). There is no impact to the Manatee River floodway.

Rye Road Alternative

Within the Rye Road Alternative, the proposed bridge widening does not impact the floodplain but the roadway bridge approaches, proposed stormwater ponds, and widened roadways do impact the floodplain. Within the footprint of the widened Rye Road and Golf Course Road, 7.9 acres are located within Zone X500 (between the 100-year and 500-year flood levels) and 13.9 acres are located within Zone AE (100-year flood zone). There is no impact to the Manatee River floodway.

Table 4-16 summarizes the floodplain impact acreage for each build alternative.

**TABLE 4-16
SUMMARY OF FLOODPLAIN ENCROACHMENT**

Alternative	Floodplain Encroachment FEMA Zone AE (acres)	Floodplain Encroachment FEMA Zone X500 (acres)
No-Build Alternative		
Existing or Proposed	0.0	0.0
Fort Hamer Alternative		
Existing	2.7	0.5
Proposed	21.7	6.2
Rye Road Alternative		
Existing	5.1	1.4
Proposed	13.9	7.9

Mitigation Measures

To compensate for the proposed floodplain impacts, floodplain mitigation measures would be required for either alternative. These mitigation measures would consist of the construction of floodplain compensation areas in each impacted drainage basin to provide floodplain compensation for the floodplain areas filled as a result of the project. These floodplain compensation areas would be located and sized during final design and permitting to meet all federal, state, and local floodplain ordinances and rules.

4.3.12 COASTAL ZONE CONSISTENCY

The State of Florida has established a Coastal Zone Management Plan (CZMP) to protect specific coastal areas throughout the state. The state Department of Community Affairs (DCA) provides determination of a project's consistency with that plan. In a letter dated October 23, 2000, the DCA determined that the Fort Hamer Bridge project, as proposed by the Federal Highway Administration (FHWA)/FDOT, was consistent with the state's CZMP (a copy of the letter is contained in Appendix K-1). A similar consistency letter has been requested on behalf of the USCG.

No-Build Alternative

The No-Build Alternative would not affect any coastal zone resources.

Fort Hamer Alternative

Implementation of the Fort Hamer Alternative would not affect any coastal zone resources.

Rye Road Alternative

Implementation of the Rye Road Alternative would not affect any coastal zone resources.

4.3.13 COASTAL BARRIER ISLAND RESOURCES

No coastal barrier islands, as defined by the *Coastal Barrier Resource Act* (16 U.S.C. 3501 et seq.), occur within the study areas for either build alternative (Section 3.3.13).

No-Build Alternative

Implementation of the No-Build Alternative would not affect any coastal barrier island resources.

Fort Hamer Alternative

Implementation of the Fort Hamer Alternative would not affect any coastal barrier island resources.

Rye Road Alternative

Implementation of the Rye Road Alternative would not affect any coastal barrier island resources.

4.3.14 FARMLANDS

No prime farmland, unique farmland, or land of statewide or local importance designated by the *Farmland Protection Policy Act* (FPPA) occurs within the Fort Hamer Alternative or Rye Road Alternative study areas (Section 3.3.14).

No-Build Alternative

Implementation of the No-Build Alternative would not result impact any FPPA-designated lands.

Fort Hamer Alternative

Implementation of the Fort Hamer Alternative would not result impact any FPPA-designated lands.

Rye Road Alternative

Implementation of the Rye Road Alternative would not result impact any FPPA-designated lands.

4.3.15 VISUAL AND AESTHETICS

These features examine not only the viewshed in which a proposed project may occur but also the visual and aesthetic quality of the project itself. For example, the proposed river crossing of the Fort Hamer Alternative is a new crossing and, therefore, introduces a new structure within a currently unobstructed viewshed, compared to the Rye Road Alternative river crossing that is adjacent to an existing structure.

Both the Fort Hamer and the Rye Road Alternatives utilize existing roadway corridors, so their impact on the viewshed along existing roadways is not significant. However, there is a substantial difference in their potential visual impacts at the Manatee River as described below.

No-Build Alternative

With the No-Build Alternative no new roadway improvements or bridges would be constructed in the study areas except those already programmed and not part of either build alternative. Therefore, implementation of the No-Build Alternative would not affect the visual and aesthetic qualities of the project area.

Fort Hamer Alternative

The Fort Hamer Alternative proposes a new mid-level fixed-span bridge across the Manatee River where no bridge currently exists. As such, the Fort Hamer Alternative results in a visual impact from the adjacent sides of the river as well as from the river itself. The bridge structures would be visible from Fort Hamer Park, the River Wilderness subdivision, and the Waterlefe subdivision.

During the design phase, Manatee County would coordinate with potentially affected property owners (e.g., homeowner associations) regarding opportunities for aesthetic treatments at the bridge and along the roadway portion of the alternative. There would be opportunities to consider adding architectural features to the approaches, piers, lighting, and superstructure of the new bridge that would minimize visual and aesthetic impacts in the immediate area. Examples include concrete and motifs impressed in concrete retaining walls. Additionally, there is the opportunity to provide a scenic overlook on the eastern side of the proposed bridge incorporated with the sidewalk.

Rye Road Alternative

In 2008, Manatee County reconstructed the two-lane, low-level, fixed-span bridge over the Manatee River on Rye Road. The Rye Road Alternative proposes a matching two-lane bridge adjacent to the new structure. As such, the proposed bridge would result in only a minor impact to the viewshed. The Rye Road Alternative also proposes to widen Rye Road, Golf Course Road, and the northern segment of Fort Hamer Road from two to four lanes. This widening would visually impact residents living adjacent to the corridor.

4.3.16 SUMMARY OF NATURAL ENVIRONMENT IMPACTS

Table 4-17 summarizes the potential natural environmental impacts associated with each alternative.

4.4 PHYSICAL CHARACTERISTICS

4.4.1 NOISE

The evaluation of impacts from noise examines those properties that are close to the project and are properties with noise-sensitive functions, such as homes, schools, churches, hospitals, and specialized medical facilities. Once these properties are identified, the projected traffic volumes are then computer-modeled to simulate the future noise conditions. If a substantial increase in noise level occurs then various noise barrier analysis are performed to examine the effectiveness of a barrier. If a barrier provides a “benefit” to a property by reducing the increase, a cost benefit analysis is then performed to determine if the expenditure is justified based on the number of properties that would benefit from the barrier.

4.4.1.1 Measured Noise Levels

Existing and future noise levels (with and without the Proposed Action) were modeled using the Traffic Noise Model (TNM-Version 2.5). To ensure that these predictions are as accurate as possible, the computer model was validated using measured noise levels at locations adjacent to the project corridors. Traffic and meteorological data including motor vehicle volumes, vehicle mix, vehicle speeds, and wind/cloud conditions were recorded during each measurement period.

The field measurements for this FEIS were conducted in accordance with the FHWA’s *Measurement of Highway-Related Noise*. The field measurements were obtained using a Metrosonics dB-3100. The Dosimeter was calibrated as per the manufacturer’s specifications before and after each monitoring period with a Metrosonics cl-304 Calibrator.

The recorded traffic data were used as input for the TNM to determine if, given the topography and actual site conditions of the area, the computer model could “re-create” the measured levels. A noise prediction model is considered within the accepted level of accuracy if measured and predicted noise levels are within a tolerance standard of 3 decibels on the A-weighted scale [dB(A)].

Table 4-18 presents the field measurements and the validation results for the Fort Hamer Alternative. As shown, the ability of the model to accurately predict noise levels for the project was confirmed. Documentation in support of the validation is located in the Noise Study Report (NSR) in Appendix F of this FEIS.

Table 4-19 presents the field measurements and the validation results for the Rye Road Alternative. As shown, the ability of the model to accurately predict noise levels for the project was confirmed. Documentation in support of the validation is located in Appendix F.

**TABLE 4-17
NATURAL ENVIRONMENT IMPACTS SUMMARY**

Section	Issue	No-Build Alternative	Fort Hamer Alternative	Rye Road Alternative
4.3.1	Land Use/Vegetative Cover	No additional impacts.	19.4 acres open land 6.8 acres forest converted to roadway, ROW, and ponds.	19.0 acres agriculture 3.0 acres open land 7.5 acres forest converted to roadway, ROW, and ponds.
4.3.2	Wetlands	No additional impacts.	2.05 acres fill 1.01 acres shading 1.28 acres secondary	2.51 acres fill 0.01 acres shading 0.00 acres secondary
4.3.3	Essential Fish Habitat (EFH)	No additional impacts.	0.16 acres fill 1.01 acres shading	0.00 acres
4.3.4	Wildlife	No additional impacts.	Localized general decline in mammal and bird populations due to habitat loss. Increased potential for road kill.	Localized general decline in mammal and bird populations due to habitat loss. Increased potential for road kill.
4.3.5	Threatened and Endangered Species	No effects.	<p>“May affect, but not likely to adversely affect:”</p> <ul style="list-style-type: none"> • Smalltooth sawfish (F) • Eastern indigo snake (F) • Wood stork (F) • West Indian manatee (F) • Critical habitat for West Indian manatee (F) • Gopher tortoise (S) • Pine snake (S) • Florida mouse (S) • Gopher frog (S) <p>(F)=Federally-Listed (S)=State-Listed</p>	<p>“May affect, but not likely to adversely affect:”</p> <ul style="list-style-type: none"> • Crested caracara (F) • Eastern indigo snake (F) • Wood stork (F) • West Indian manatee (F) • Critical habitat for West Indian manatee (F) • Florida scrub jay (F) • Gopher tortoise (S) • Pine snake (S) • Florida mouse (S) • Gopher frog (S) <p>(F)=Federally-Listed (S)=State-Listed</p>
4.3.6	Aquatic Preserves	N/A	N/A	N/A
4.3.7	Water Quality	No additional impacts.	No additional impacts.	No additional impacts.
4.3.8	Outstanding Florida Waters	N/A	N/A	N/A
4.3.9	Wild and Scenic Rivers	N/A	N/A	N/A
4.3.10	Groundwater	No additional impacts.	No additional impacts.	No additional impacts.
4.3.11	Floodplains and Floodways	No additional impacts.	27.9 acres floodplains 0.0 acres floodways Compatible with existing floodplain management programs.	21.8 acres floodplains 0.0 acres floodways Compatible with existing floodplain management programs.
4.3.12	Coastal Zone Consistency	Consistent	Consistent	Consistent
4.3.13	Coastal Barrier Island Resources	N/A	N/A	N/A
4.3.14	Farmlands	N/A	N/A	N/A
4.3.15	Visual and Aesthetics	No additional change.	New river crossing with increased vehicle traffic on Upper Manatee River Road and Fort Hamer Road.	Additional roadway and bridge lanes.

N/A = not applicable. None of these designations occur within the project area.

**TABLE 4-18
VALIDATION DATA – FORT HAMER ALTERNATIVE**

Location	Measurement Period	Noise Level (dB(A))			Valid
		Modeled	Measured	Difference	
Upper Manatee River Road	1	60.0	57.9	2.1	Yes
	2	60.5	58.2	2.3	Yes
	3	59.7	58.2	1.5	Yes
Fort Hamer Road	1	45.8	48.7	-2.9	Yes
	2	46.6	48.0	-1.4	Yes
	3	47.1	48.9	-1.8	Yes

**TABLE 4-19
VALIDATION DATA – RYE ROAD ALTERNATIVE**

Location	Measurement Period	Noise Level (dB(A))			Valid
		Modeled	Measured	Difference	
Rye Road at Country Creek	1	62.0	60.6	1.4	Yes
	2	61.7	60.6	1.1	Yes
	3	62.7	61.1	1.6	Yes
Golf Course Road west of 167th Avenue East	1	56.0	53.7	2.3	Yes
	2	56.7	54.0	2.7	Yes
	3	57.6	55.9	1.7	Yes

4.4.1.2 Results of the Noise Analysis

The TNM predicted traffic noise levels at receptors along the Fort Hamer Alternative with and without the proposed improvements. The predicted noise levels are detailed in Table 6 of the NSR located in Appendix F. The portion of the improved road between Winding Stream Way and the Manatee River is on new alignment; therefore, measured background noise levels were used to represent existing and No-Build Alternative noise levels for the receptor sites in this area (Sites 13W-35W and 4E). Documentation supporting the measured background levels and aerial maps showing the locations of the noise-sensitive receptors are included in Appendix F.

Existing exterior traffic noise levels are predicted to range from 37.5 to 54.5 dB(A). The results of the analysis indicate that existing traffic noise levels did not approach, meet, or exceed the Noise Abatement Criteria (NAC) at any of the noise-sensitive receptors.

In the future (year 2035) without the proposed improvements (No-Build), exterior traffic noise levels are predicted to range from 40.4 to 57.4 dB(A). These levels do not approach, meet, or exceed the NAC.

Finally, with the proposed improvements for the Fort Hamer Alternative, exterior traffic noise levels are predicted to range from 42.6 to 62.0 dB(A) at the 39 noise-sensitive sites evaluated. These levels do not approach, meet, or exceed the NAC. The results also indicate that one site (13W) is predicted to experience noise levels that substantially exceed existing noise levels (an increase of 15 dB(A) or more).

Note that traffic noise levels at Fort Hamer Park are not expected to approach, meet, or exceed NAC under the existing condition or in the future with either the No-Build Alternative or the two build alternatives.

The TNM predicted traffic noise levels at receptors along the Rye Road Alternative with and without the proposed improvements. The predicted noise levels are detailed in Table 7 of the NSR located in Appendix F. The results of the analysis indicate that existing traffic noise levels did not approach, meet, or exceed the NAC at any of the noise-sensitive receptors along the Rye Road Alternative.

In the future (year 2035) without the proposed improvements (No-Build), exterior traffic noise levels are predicted to range from 48.2 to 65.6 dB(A), none of which approach, meet, or exceed the NAC.

Results for the Rye Road Alternative indicate that exterior noise levels are predicted to range from 52.7 to 69.2 dB(A) at 182 noise-sensitive sites with levels predicted to approach, meet, or exceed the NAC at 13 noise-sensitive sites. Two of the impacted receptors, Sites 160 and 161, were field verified and identified as abandoned commercial landscape/nursery structures. As such, these sites were not evaluated for noise abatement. Of the remaining 11 impacted sites, two are residences in Mill Creek subdivision (Sites 1 and 21), two are residences in Country Creek (Sites 74 and 79), five are residences in Rye Acres (Sites 122-125), and two are considered scattered residences (Sites 130 and 183). Additionally, traffic noise levels for five noise-sensitive sites (Sites 154, 163, 172, 175, and 186) are predicted to increase substantially as a result of the Rye Road Alternative. All are scattered single-family residences.

Note that traffic noise levels at Rye Preserve are not expected to approach, meet, or exceed NAC under the existing condition or in the future with either the No-Build Alternative or the two build alternatives.

Aerial maps showing the locations of the noise-sensitive receptors are included in Appendix F.

4.4.1.3 Evaluation of Noise Abatement Alternatives

Utilizing the FHWA criteria, noise abatement measures must be considered when predicted traffic noise levels approach or exceed the NAC. The measures considered for this FEIS were traffic management, alternative roadway alignment, buffer zones, and noise barriers. The following discusses the feasibility (e.g., amount of noise reduction, engineering considerations) and reasonableness (e.g., number of noise-sensitive sites benefited, absolute noise levels, cost, etc.) of the measures.

Traffic Management

Traffic management measures that limit motor vehicle speeds and reduce volumes can be effective noise mitigation measures. However, these measures also negate a project's ability to accommodate forecasted traffic volumes. For example, if the posted speed were reduced, the capacity of the roadway to handle the forecast motor vehicle demand would also be reduced.

Therefore, reducing traffic speeds and/or traffic volumes is inconsistent with the goal of improving the ability of the roadway to handle the forecast volumes. Although feasible, traffic management measures are not considered a reasonable noise mitigation measure for the project.

Alternative Roadway Alignment

The proposed alignment seeks to minimize the need for additional ROW within the project corridor. Maintaining the alignment within the existing ROW, where feasible, would minimize impacts to surrounding noise-sensitive sites located both east and west of the roadway.

Noise Buffer Zones

Providing a buffer between a roadway and future noise-sensitive land uses is an abatement measure that can minimize/eliminate noise impacts in areas of future development. To encourage use of this abatement measure through local land use planning, noise contours have been developed and are further discussed later in Section 4.4.1.7.

Noise Barriers

Noise barriers have the potential to reduce noise levels by blocking the sound path between the motor vehicles on the roadway (the source) and the noise-sensitive sites adjacent to the roadway. To be effective in reducing traffic noise, a noise barrier must be relatively long, continuous (without intermittent openings), and sufficiently tall to provide the necessary reduction in noise levels. In order for a barrier to be considered both feasible and reasonable, the barrier should:

1. Provide a minimum insertion loss (IL) or noise reduction of 5 dB(A) with a design goal of 7 dB(A) or more being desirable;
2. Cost no more than \$42,000 per benefited receptor (a benefited receptor is a site that receives at least a 5 dB(A) reduction in noise from the barrier); and
3. Benefit at least two impacted noise-sensitive receptors, with one or more meeting the design goal of 7 dB(A).

The current estimated cost to construct a noise barrier (materials and labor) is \$30.00 per square foot.

Feasibility factors that relate to noise barriers include driver/pedestrian sight distance (safety), ingress and egress requirements to and from affected properties, ROW requirements (including access rights and easements for construction and/or maintenance), impacts on existing/planned utilities, and drainage.

After considering the amount of reduction that may be provided and the cost reasonableness, additional factors must also be considered when evaluating a noise barrier as a potential noise abatement measure. These factors address both the feasibility of a barrier (given site-specific details, can a barrier actually be constructed) and the reasonableness of a barrier.

Reasonableness factors can include:

- The relationship of the predicted future noise levels to the NAC (do the predicted levels approach, meet, or far surpass the NAC);
- Land use stability (are the noise-sensitive land uses likely to remain for an indefinite period of time);
- Antiquity (the amount of development that has occurred before and after the initial construction of a roadway);
- The desires of the affected property owners to have a noise barrier adjacent to their property; and
- Aesthetics.

4.4.1.4 Noise Barrier Analysis

The TNM (Version 2.5) was used to evaluate the effectiveness of noise barriers to reduce traffic noise levels at the affected noise-sensitive sites. The noise barrier lengths were optimized to maintain at least a 5 dB(A) reduction at the affected receivers while reducing excess barrier length.

As previously stated, during the year 2035 with the proposed improvements (the build alternatives), noise levels are predicted to approach, meet or exceed the NAC at 11 sites (along the Rye Road Alternative), and traffic noise levels are predicted to increase substantially at six noise-sensitive sites (one on the Fort Hamer Alternative and five on the Rye Road Alternative). The following discusses the feasibility and reasonableness of providing noise barriers for the 17 affected noise-sensitive sites.

No-Build Alternative

In the absence of any capacity improvements, no noise impacts are anticipated from the No-Build Alternative. However, traffic volumes are projected to increase over time and the No-Build Alternative does not provide any provisions for noise abatement measures.

Fort Hamer Alternative

As previously stated, traffic noise levels are not predicted to approach, meet, or exceed the NAC at any of the noise-sensitive sites along the Fort Hamer Road corridor as a result of the Fort Hamer Alternative. One noise-sensitive site was predicted to experience a substantial increase in traffic noise levels – Receptor 13W located on Winding Stream Way at the back entrance into the Waterlefe subdivision. However, in order for a noise barrier to be considered feasible, two or more impacted receptors must achieve a 5 dB(A) or greater reduction. No other receptors are benefited; therefore, a noise barrier is not considered a feasible noise abatement measure at this location.

Rye Road Alternative

As previously stated, during the Design Year (2035) for the Rye Road Alternative, traffic noise levels are predicted to approach, meet, or exceed the NAC at 11 sites, of which 10 sites are located along Rye Road and the remaining site is on Fort Hamer Road. In addition, traffic noise levels are predicted to increase substantially at five noise-sensitive sites, two on Golf Course Road, and three on Fort Hamer Road. Barriers were not modeled for Receptors 1, 21, 74, 79, 130, 154, 163, 172, 175, 183, and 186 because they are single impacted receptors (no other nearby receptors are impacted) and, as such, barriers are not considered reasonable. One noise barrier was analyzed for the Rye Road Alternative, at Rye Acres.

Barrier 1E: Residences at Rye Acres Subdivision

Barrier 1E was evaluated for the five affected residences (Receptors 122-125) located in the Rye Acres subdivision along the east side of Rye Road approximately 1 mile south of Golf Course Road. Receptor 122 represents two residences. The predicted future noise levels are as follows: Receptor 122 - 67.2 dB(A) (two sites), Receptor 123 - 68.8 dB(A), Receptor 124 - 68.6 dB(A), and Receptor 125 - 68.8 dB(A). A noise barrier was evaluated located 5 feet inside the east ROW line for Rye Road. The length of the barrier was optimized within the TNM in an attempt to provide at least 5 dB(A) of traffic noise reduction and to meet the design goal of 7 dB(A) of traffic noise reduction for at least two of the affected residences. The height of the barrier was evaluated from 8 to 22 feet in 2-foot increments.

The affected residences are located somewhat closely together facing the highway with driveways opening directly on the highway. As such, the barrier included openings for these driveways, which reduced the overall effectiveness of the barrier.

The results of Barrier 1E are provided in **Table 4-20**. As shown, the desired goal of reducing predicted traffic noise levels by 7 dB(A) or more could be achieved for two sites designated as Receptor 122 at a wall height of 16 feet. One additional receptor, Receptor 121, received a benefit of 5.5 dB(A). At a height of 16 feet, the total cost to construct the barrier is \$546,232 and the cost per benefitted receptor is \$136,558. The cost per benefitted receiver greatly exceeds the cost reasonable guideline, therefore, Barrier Rye 1E is not considered reasonable.

An aerial photograph showing the modeled noise barrier location at Rye Acres is included in Appendix F.

4.4.1.5 Summary of Noise Barrier Analysis

Based on the noise analysis performed, the noise levels for the Fort Hamer Alternative ranged from 42.6 to 62.0 dB(A) for the future year 2035 build alternative at the 39 sites evaluated, with no sites predicted to approach, meet, or exceed NAC. One site is predicted to experience a substantial increase in noise levels (an increase of 15 dB(A) or more). The noise levels ranged from 40.4 to 57.4 dB(A) for the future year 2035 No-Build Alternative.

**TABLE 4-20
BARRIER 1E: RESIDENCES AT RYE ACRES SUBDIVISION
(RECEPTORS 122-125)**

Barrier Height (ft.)	Affected Residences with Insertion Loss of dB(A)						Number of Benefited Residences			Total Estimated Cost**	Cost Per Benefited Residence	Cost Reasonable Yes/No
	5	6	7	8	9	10 or >	Affected	Other*	Total			
8	0	0	0	0	0	0	0	0	0	N/A	N/A	No
10	1	2	0	0	0	0	3	0	3	\$341,395	\$113,798	No
12	2	2	0	0	0	0	3	1	4	\$409,674	\$102,419	No
14	1	3	0	0	0	0	3	1	4	\$477,953	\$119,488	No
16	1	1	2	0	0	0	3	1	4	\$546,232	\$136,558	No
18	1	1	2	0	0	0	3	1	4	\$614,511	\$153,628	No
20	1	1	2	0	0	0	3	1	4	\$682,790	\$170,698	No
22	1	1	2	0	0	0	3	1	4	\$751,069	\$187,767	No

*Other = Receivers determined to be unaffected by the Build Alternative (traffic noise levels less than 66 dB(A), but benefited by the noise barrier.

**Current FDOT estimated cost to construct a noise barrier (materials and labor) is \$30.00 per square foot.

The noise levels for the Rye Road Alternative ranged from 52.7 to 69.2 dB(A) for the future year 2035 build alternative at the 181 sites evaluated, with 11 sites predicted to approach, meet, or exceed NAC. Five sites are predicted to experience a substantial increase in noise levels. The noise levels ranged from 48.2 to 65.6 dB(A) for the future year 2035 No-Build Alternative.

Although feasible, traffic management, alternative roadway alignments, and noise buffer zones were determined to be unreasonable methods to reduce the predicted traffic noise impacts for the 17 impacted sites. Noise barriers were evaluated to determine if barriers would be a feasible and reasonable noise abatement measure. For the Fort Hamer Alternative, noise barriers were not found to be a feasible noise abatement measure. For the Rye Road Alternative, one barrier was analyzed for the five impacted noise-sensitive sites at Rye Acres. The results of the analysis indicate that construction of the noise barrier appears feasible; however, the barrier is not considered reasonable. The effectiveness of the barrier was affected due to required property access (driveways) and the cost per benefitted receptor greatly exceeded the cost reasonable guideline. Therefore, noise barriers were not considered to be a reasonable noise abatement measure for either of the two build alternatives.

4.4.1.6 Construction Noise and Vibration

Construction of roadway improvements may have a temporary impact on noise-sensitive sites adjacent to the project corridor. Trucks, earth moving equipment, pumps, and generators are construction noise and vibration sources. Construction noise and vibration impacts would be minimized by adherence to Best Management Practices (BMPs) and current standard specifications for road and bridge construction. Special provisions can be included in the construction contract that relate to the control of noise.

4.4.1.7 Noise Contours

Land uses such as residences, schools, churches, auditoriums, recreation areas, and parks are considered incompatible with highway noise levels above 66 dB(A). In order to reduce the possibility of additional noise-related impacts, noise level contours were developed for the future improved roadway facility. These noise contours delineate the distance from the improved roadway's edge-of-travel lane to where the 66 dB(A) (based on FHWA Activity Categories B and C) is expected to occur in the year 2035 with the proposed improvements.

From Waterlefe Boulevard to Rive Isles subdivision entrance along the Fort Hamer Alternative, the 66 dB(A) noise level extends 56 feet from the improved roadway's edge-of-travel lane. Along the Rye Road Alternative the 66 dB(A) noise level extends 69 to 86 feet from the improved roadway's edge-of-travel lane, depending on the roadway segment (**Figure 4-9** and Appendix F).

4.4.2 AIR QUALITY

The analysis of air quality is conducted to determine if the existing level of specific pollutants in the area of the two build alternatives (Fort Hamer Alternative and Rye Road Alternative) would meet or exceed the National Ambient Air Quality Standards (NAAQS). The alternatives were subjected to a screening model that makes various conservative worst-case assumptions related to site conditions, meteorology and traffic. The FDOT's screening model, *CO Florida 2004* (released September 7, 2004), uses the latest EPA-approved software (*MOBILE 6.1/6.2* and *CAL3QHC*) to produce estimates of 1- and 8-hour carbon monoxide (CO) at default air quality receptor locations.

The No-Build Alternative, Fort Hamer Alternative, and Rye Road Alternative for both the opening year 2015 and the design year 2035 were evaluated. Based on the results from the screening model, the highest project-related CO 1- and 8-hour levels are not predicted to meet or exceed the 1- or 8-hour NAAQS for this pollutant for either the No-Build Alternative or the two build alternatives. As such, the project 'passes' the screening model for the No-Build Alternative, Fort Hamer Alternative, and Rye Road Alternative for both the opening and design years. The results of the screening model are included in Appendix G.

The Proposed Action is located in Manatee County, Florida, an area currently designated as being attainment for all of the NAAQS under the criteria provided in the *Clean Air Act* (CAA). Therefore, the CAA conformity requirements do not apply to the project.

Construction activities would cause short-term air quality impacts in the form of dust from earthwork and unpaved roads. These impacts would be minimized by adherence to all applicable state and local standards, regulations, and BMPs.

**FIGURE 4-9
PREDICTED NOISE CONTOURS**



4.4.3 CONSTRUCTION

Impacts from construction activities are temporary but are regulated by County requirements and state and federal permit criteria. The following discussion relates to both the Fort Hamer Alternative and Rye Road Alternative. No impacts related to construction are anticipated for the No-Build Alternative.

Construction activities associated with the Proposed Action may result in temporary air, noise, vibration, water quality, traffic flow, and visual impacts for those residents and travelers within the immediate vicinity of the project.

Air quality effects would be temporary and would primarily be in the form of emissions from diesel-powered construction equipment and dust from embankment and haul road areas. Air pollution associated with the creation of dust particles are required to be controlled through the use of watering or the application of other controlled materials.

Noise and vibration effects would result from heavy equipment movement and construction activities such as pile driving and vibratory compaction of embankments. Specific noise level problems that may arise during construction of the project would be addressed by the County's Project Engineer.

Water quality effects resulting from construction activities and related erosion and sedimentation would be controlled through the use of BMPs in accordance with state and federal permit requirements.

Maintenance of traffic and sequence of construction would be planned and scheduled so as to minimize traffic delays throughout the project corridor. Signs would be used to provide notice of road closures and other pertinent information to the traveling public. The local news media would be notified in advance of road closings and other construction-related activities that could excessively inconvenience the community, allowing motorists, residents, and business persons to plan travel routes accordingly.

A sign providing the name, address, and telephone of a County contact person would be displayed at the construction site to assist the public in obtaining immediate answers to questions and logging complaints about project activity.

Access to all businesses and residences would be maintained to the extent practical through controlled construction scheduling. Traffic delays would be controlled to the extent possible where many construction operations are in progress at the same time. The contractor would be required to maintain one lane of traffic in each direction on affected roadways at all times and to comply with County BMPs.

For residents living along the project corridor, the presence of construction equipment and materials stored for the project may be visually displeasing; however, this is a temporary condition and should pose no substantial problem in the short-term.

Construction of the roadway and bridges requires excavation of unsuitable material (muck), placement of embankments, and use of materials such as limerock, asphaltic concrete, and Portland cement concrete. Demucking is anticipated at most of the wetland sites and would be conducted in accordance with permit conditions. Disposal would be on-site in detention areas or off-site at permitted locations. The removal of structures and debris would be in accordance with local and state regulatory agencies permitting this operation. The contractor is responsible for his methods of controlling pollution on haul roads, in borrow pits, other materials pits, and areas used for disposal of waste materials from the project. Temporary erosion control would consist of temporary grassing, sodding, mulching, sandbagging, slope drains, sediment basins, sediment checks, artificial coverings, and berms.

4.4.4 CONTAMINATION

No-Build Alternative

Multiple potentially contaminated sites exist along the Fort Hamer Alternative and Rye Road Alternative. Since the No-Build Alternative does not include any ground disturbance/excavation activities, implementation of the No-Build Alternative would not result in disturbance of these sites by Manatee County. Implementation of the No-Build Alternative would not result in the potential spread of contamination from these sites resulting from any actions by Manatee County. However, if contamination is present or is migrating from any of these sites, it is likely that such contamination would remain, or would continue to migrate from these sites, with implementation of the No-Build Alternative.

Fort Hamer Alternative

One site has been identified (Table 3-23) within the construction limits of the Fort Hamer Alternative as having the potential for hazardous materials and/or petroleum contamination as defined by regulatory agencies. This site is the former golf cart, mower maintenance, and storage area associated with the golf course at Waterlefe on Upper Manatee River Road. This site is within the Manatee County ROW for the Fort Hamer Alternative. Potential concerns associated with this site include unknown past practices for disposal of liquid waste products, batteries, and pesticides. If the Fort Hamer Alternative is selected for implementation, further assessment of this site, including soil and potentially groundwater sampling, would be required. The results of this assessment would be used by Manatee County, in coordination with the FDEP, to determine the extent, if any; the site would be cleaned up prior to construction of the alternative. With this commitment, it is unlikely that implementation of the Fort Hamer Alternative would result in the spread of contamination from this site.

Rye Road Alternative

Fourteen sites have been identified (Table 3-24) along the Rye Road Alternative that have the potential for hazardous materials and/or petroleum contamination as defined by regulatory agencies. Many of these sites are associated with former agriculture operations, underground storage tanks, and aboveground storage tanks. All but three of these sites have been assigned a Facility ID number by the FDEP. If the Rye Road Alternative is selected for implementation, further assessment of these sites, including soil and potentially groundwater sampling, would be required. The results of this assessment would be used by Manatee County, in coordination with the FDEP, to determine the extent, if any; these sites would be cleaned up prior to construction of the alternative. With this commitment, it is unlikely that implementation of the Rye Road Alternative would result in the spread of contamination from these sites.

It is recommended that limited sampling and testing be conducted at the “Medium” risk sites to determine the absence or presence of environmental contamination within the two alternatives. Section 3.4.4 in Chapter 3 defines the risk ratings (e.g, No, Low, Medium, and High). Subsurface soils from the ground surface to the water table should be screened with an Organic Vapor Analyzer (OVA) equipped with a Flame Ionization Detector (FID) using the standard

FDEP headspace method. Should these samples exhibit the likelihood of impacts, soil and groundwater samples should also be collected from these locations for laboratory analysis.

Based on site conditions, samples may be analyzed for one or more of the following: Volatile Organic Compounds (VOCs) using EPA Method 8021, Ethylene Dibromide (EDB) by EPA Method 504, Total Petroleum Hydrocarbons by the FL-PRO method, Polynuclear Aromatic Hydrocarbons by EPA Method 8270, Chlorinated Pesticides by EPA Method 8081, Pesticides by EPA Method 8141, Herbicides by EPA Method 8151, and the metals arsenic, boron, copper, and zinc.

If excessively contaminated soils are discovered during excavations, testing should be conducted to determine the limits or extent of contamination. Excessively contaminated soil may not be returned into an excavation. Instead, the excessively contaminated soil should be removed and stockpiled on an impervious surface to prevent the further spread of contamination. Soil should then be further tested and treated on-site or be disposed of properly.

If contaminated groundwater is detected, testing should be conducted to determine the limits or extent of contamination. In contaminated areas, groundwater control systems should be isolated. Recovered contaminated groundwater cannot be discharged without treatment. Recovered contaminated groundwater should be collected, tested, treated on-site, and/or disposed of properly. A temporary discharge permit from FDEP would be required.

It must be recognized that the possibility still exists that other sites containing hazardous substances, hazardous wastes, petroleum products, or environmental contamination not identified during this assessment may exist on or in the immediate vicinity of either alternative. This is because regulatory agency records are not always complete; not all leaks, spills, and discharges are reported; and not all underground storage tanks (USTs) and above ground storage tanks (ASTs) are registered. Therefore, the purpose of this assessment is to reduce, but not eliminate, the unknown and uncertainty regarding the absence or presence of hazardous substances or environmental contamination that could adversely affect the Proposed Action.

Contamination during Construction

As with any roadway and bridge construction project, there is a potential for contamination impacts to occur during construction of either the Fort Hamer Alternative or Rye Road Alternative as a result of spills, leaks, or accidents. Fuels, hazardous materials, and equipment should be properly handled, stored, and maintained in accordance with state and federal requirements and permit conditions. It is the contractor's responsibility to ensure that emergency spill containment devices are readily available on-site and that on-call specialty cleanup contractors are available for spill containment and recovery should the need arise.

4.4.5 SCENIC HIGHWAYS

No designated scenic highways occur within the project area (Section 3.4.5).

No-Build Alternative

Implementation of the No-Build Alternative would not affect any designated scenic highways.

Fort Hamer Alternative

Implementation of the Fort Hamer Alternative would not affect any designated scenic highways.

Rye Road Alternative

Implementation of the Rye Road Alternative would not affect any designated scenic highways.

4.4.6 NAVIGATION

No-Build Alternative

No new bridges or travel lanes would be constructed across the Manatee River with the No-Build Alternative. Thus, implementation of the No-Build Alternative would not affect navigation of vessels on the river.

Fort Hamer Alternative

This alternative includes the construction of a two-lane, fixed-span bridge across the Manatee River.

The Fort Hamer Alternative includes construction of a mid-level, fixed-span bridge over the Manatee River with a vertical clearance of 26 feet over the channel. Surveys (Appendix A-2) and observations have revealed the presence of two private vessels upstream of the proposed bridge location that have a mast or structure height greater than 26 feet. Manatee County would coordinate with the owners of these vessels to mitigate the impact of the proposed bridge on the operation of these vessels. Mitigation options include, but are not limited to, relocation of the vessels and alternative docking arrangements.

There is a potential for temporary impacts to navigation to occur during construction of the bridge. These impacts could include short-term closure of the waterway (e.g., a few hours) as a result of movement and placement of construction barges or lifting of construction materials with cranes. To minimize environmental impacts, much of the construction would be conducted from a temporary trestle. The presence of this temporary trestle would not preclude navigation on the river; however, it is expected that mariners would need to exercise caution when navigating in the construction zone. Manatee County and the selected construction contractor would coordinate with the USCG to develop a plan to minimize disruptions to navigation on the Manatee River during construction of the bridge. Prior to construction, a Notice of Availability would be published detailing the construction plan and schedule.

When constructed in accordance with the USCG Bridge Permit conditions, it is anticipated that the Fort Hamer Alternative would result in *de minimis* effects to navigation on the Manatee River.

Rye Road Alternative

The Manatee River at the location of the existing Rye Road bridge is a navigable waterway. This alternative includes the construction of two additional lanes across the Manatee River adjacent to the existing two-lane bridge structure at Rye Road. The additional two-lane bridge structure would have the same horizontal and vertical clearance as the existing structure; thus, no impacts to navigation would result from the construction and operation of the Rye Road Alternative.

In accordance with 33 CFR 115.70, the USCG has given advance approval to the location and plans for bridges to be constructed across the waterway. Therefore, unless the USCG withdraws its advance approval, a USCG permit would not be required for the Rye Road Alternative.

4.4.7 SUMMARY OF PHYSICAL CHARACTERISTICS IMPACTS

Table 4-21 summarizes the potential physical impacts associated with each alternative.

**TABLE 4-21
PHYSICAL CHARACTERISTICS IMPACTS SUMMARY**

Section	Issue	No-Build Alternative	Fort Hamer Alternative	Rye Road Alternative
4.4.1	Noise	No impacts.	39 noise-sensitive receptors 1 meets or exceeds the NAC (includes receptors with substantial increase)	183 noise-sensitive receptors 16 meets or exceeds NAC (includes receptors with substantial increase)
4.4.2	Air Quality	Attainment	Attainment	Attainment
4.4.3	Construction	No additional impacts.	Temporary impacts of air quality, vibration, visual, noise, and maintenance of traffic.	Temporary impacts of air quality, vibration, visual, noise, and maintenance of traffic.
4.4.4	Contamination	No additional impacts.	1 Medium Risk Site	13 Low Risk Sites 1 Medium Risk Site
4.4.5	Scenic Highways	N/A	N/A	N/A
4.4.6	Navigation	No additional impacts.	2 vessels	No additional impacts.

N/A = not applicable. Designation does not occur within the project area.

4.5 INDIRECT IMPACTS

The previous sections discussed the various direct impacts associated with the No-Build Alternative and two build alternatives. Direct impacts are those:

“...which are caused by the action and occur at the same time and place.” (40 CFR Section 1508.8)

By comparison, indirect impacts are those:

“...which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” (40 CFR Section 1508.8)

Examples of indirect impacts include, but are not limited to, changes in traffic patterns and noise levels and changes to water and air quality. The indirect impacts associated with the No-Build Alternative, Fort Hamer Alternative, and Rye Road Alternative are identified and discussed in the previous sections along with the direct impacts.

Table 4-22 below lists the indirect impact issues identified for the project alternatives and the corresponding section in which each is discussed.

**TABLE 4-22
INDIRECT IMPACTS DISCUSSION SECTIONS**

Section	Issue
4.1.1	Socioeconomic Conditions
4.1.2.2	Future Land Uses
4.1.4	Community Cohesion
4.1.6.1	Religious Centers
4.1.6.2	Schools
4.1.6.4	Public Facilities
4.1.7	Environmental Justice
4.4.1	Noise
4.4.2	Air Quality

4.6 CUMULATIVE IMPACTS

4.6.1 INTRODUCTION

The CEQ’s regulations (40 CFR Sections 1500-1508) implementing the procedural provisions of NEPA, as amended (42 U.S.C. Section 4321 *et seq.*) define cumulative effect as:

“.....the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions (40 CFR Section 1508.7).”

For the purpose of this FEIS, the CEQ definition has been applied to cumulative effects. The resources discussed below are those that can be reasonably identified as potentially affected by the cumulative effects of each alternative.

This cumulative effects analysis identifies a number of environmental effects that are reasonably likely to occur as a result of implementation of each of the alternatives. These include alterations of wetlands, a change in public access across the Manatee River, traffic density and patterns, noise, and more. This FEIS neither identifies nor recommends mitigation measures for environmental effects that are not clearly and unambiguously linked to the build alternatives or more specifically related to actions subsequent to the USCG’s decision.

4.6.2 DEVELOPMENT OF REGIONAL IMPACT

Development in Florida is characterized by a process consisting of several layers of regulatory review. Florida statutes and local regulations require mitigation for any impacts on natural resources, infrastructure, or other public resources. Typically, impacts are mitigated through paying a “fair share” for the specific impact, mitigating natural resources through purchasing mitigation credits, designating or creating conservation areas, or providing public services as a part of the proposed development. Therefore, much of the cumulative effect from development in the project area is being mitigated by this process.

As a part of the development review process in Manatee County, each Development of Regional Impact (DRI) is required to obtain permits for activities, as shown in **Table 4-23**.

TABLE 4-23
PERMITTING REQUIREMENTS FOR DRI AND SUB-DRI DEVELOPMENTS

Category	Reviewing Agencies	Review/ Permit	Mitigation Measures
Botanical	Manatee County SWFWMD FDA FWS/NMFS	Protected Species - Biological Assessment/ Biological Opinion/ Incidental Take Permit Trees: Tree Removal Permit	Habitat Creation Habitat Enhancement Habitat Preservation Tree Replacement
Wildlife	Manatee County FWC FWS/NMFS	Protected Species - Biological Assessment/ Biological Opinion/ Incidental Take Permit	Habitat Creation Habitat Enhancement Habitat Preservation
Ecologic	Manatee County SWFWMD/FDEP (Wetlands) USACE (Wetlands)	404 Dredge and Fill Permit Environmental Resource Permit	Wetlands Creation Wetlands Enhancement Habitat Preservation
Stormwater	SWFWMD FDEP	Environmental Resource Permit NPDES - SWPPP	Stormwater Treatment Stormwater Attenuation Floodplain Compensation
Cultural/ Historic Resources	SHPO	Cultural Resource Clearance	Documentation Recordation Preservation

Source: Manatee County Government, 2012.

Many developments in Florida fall below the threshold of a DRI. Sub-DRI's are developments that do not meet the threshold limit as established by F.S. Chapter 380. If a project attains a threshold of development, either with the number of residential units, area of commercial or industrial space, or area impacted by natural resource extraction, it is reviewed by local, regional, and state agencies. The DRI process is a multi-level review that involves several regulatory agencies, spanning planning and growth management, and including water resources, historic and cultural resources, public safety, disaster preparedness, wildlife and ecological resources, and transportation. The public has an opportunity to review and comment on the DRI document as well as participate in a public review through the public hearing process. The Tampa Bay Regional Planning Council (TBRPC) is the coordinator of the submittal and review of DRIs in

Manatee County in addition to local, state, and applicable federal agencies. **Table 4-24** addresses the DRI threshold level for different development types applicable in Manatee County. While not all of the development types may occur in Manatee County, they were listed to illustrate the scope of development that is regulated through the DRI process.

**TABLE 4-24
THRESHOLDS FOR DRIs IN MANATEE COUNTY**

Development Type	DRI Threshold
Residential	2,000 units
Attraction	Single performance: 2,500 parking spaces or 10,000 permanent seats; or serial performance: 1,000 parking spaces or 4,000 permanent seats.
Office	300,000 square feet gross or 600,000 square feet gross in an area suitable for an increase in threshold intensity.
Retail	400,000 square feet gross or 2,500 parking spaces.
Multiuse Development	Two or more land uses - sum of the threshold is greater than 145%; or three or more land uses with at least 100 dwelling units or 15% of the applicable threshold and the sum of the threshold is greater than 160%.
Schools	5,000+ full time students or physical expansion that would increase the student population by 20%; but does not apply to campus master plan adopted by the University's board of trustees.
Single-Owner Development	Two or more developments with the same ownership shall be aggregated and treated as a single development when they are physically proximate to each other; and there is a reasonable closeness in time between the completion and 80% or less of one development and the submission to a governmental agency of a master plan for another development; or the voluntary sharing of infrastructure; or a common advertising scheme or promotional plan.

Sources: TBRPC, 2011.

4.6.3 TREND ANALYSIS METHODOLOGY

Trend analysis methodology assesses the status of resources, ecosystems, and human communities over time and usually results in graphical projection of past and future conditions. Changes in the occurrence or intensity of stress over time can also be assessed. Trend analysis provides historical context that is useful to assessing the cumulative effects of proposed actions. The trend analysis methodology for land development within the project area utilized long-range planning information, building permit and development data, as well as GIS information regarding historic, present-day, and future land use development. An analysis of historical growth and development patterns, population estimates and projections, as well as land use patterns were utilized to generate a trend analysis for the project area.

Members of the Manatee County Planning Department were interviewed regarding the historic and present-day development of the county, as well as providing insight into the future development of the central and western parts of the county.

GIS information was utilized to illustrate the historic landscape dating to 1974. The present-day development maps were reviewed to identify where subdivisions have been platted, were under construction, or had been completed. U.S. Census information for population projections were acquired and reviewed to assess changes in population over time. Table 4-23 illustrates which regulatory agencies would review potential impacts or effects from each development and determine mitigation, if necessary.

4.6.4 REGIONAL GROWTH OVERVIEW (1900-1991)

Historically, Manatee County was mostly rural and undeveloped with large tracts of land utilized for agricultural operations, primarily cattle ranches, citrus groves, and tomato fields. Maps from the turn of the century through the 1940s illustrate little development in the eastern half of the County. Population was concentrated near the coast, where fishing towns supplied fish to markets in Key West, Florida and New Orleans, Louisiana.

The transportation network consisted of narrow roads on the west side of the county, connecting north to Tampa and south to Sarasota. There were few roads that serviced the largely agricultural area in east Manatee County. A ferry service ran between Manatee County and St. Petersburg. All commerce came through Tampa, a deep-water port, until Port Manatee was constructed in 1975.

The Sunshine Skyway Bridge was originally constructed in 1954, allowing for traffic and commerce to cross between Manatee County and points north to the Tampa Bay Region. The original dual-span bridge was replaced in 1987 with one structure to facilitate I-275, a major arterial along the southwest coast of Florida.

Although historically the slowest growing of the three counties that front Tampa Bay, Manatee County has experienced dramatic recent population growth. In 1970, the population of the County was 97,115. During the 1980s, Manatee County experienced a surge in growth, a pattern that followed a statewide growth trend. As of 1991, it had grown to 215,130, gaining some of Sarasota's winter visitor population and also year round residents from Tampa and St. Petersburg.

4.6.5 REGIONAL GROWTH OVERVIEW (1991-2013)

The large agricultural operations in Manatee County, primarily citrus production, have felt the most development pressure over the past two decades. The size of the parcels, combined with the decreased domestic demand for citrus, importing of citrus from other countries, and unpredictable weather patterns, have resulted in the property owners considering alternate uses for their property. The citrus industry, once a major force in the economy and landscape of the County, is still present, but not as vigorous as its historic past. Citrus groves have given way to development, as people moving to Florida sought more affordable alternatives to living in developed areas of Tampa and St. Petersburg.

Since adoption of the Manatee County's Comprehensive Plan in 1989, the development patterns and character of the region have changed significantly from the agricultural and rural character of the area. Properties have been annexed into the municipal boundaries of Bradenton and Palmetto as these local governments have extended their boundaries east. Site Specific Comprehensive Plan Land Use Amendments have been adopted allowing for additional intensity of development within the western portions of Manatee County and along I-75. Suburban-style development in the form of gated communities, increased construction of homes and services in these areas, as well as an expanded transportation network, retail opportunities, and other community services, has been planned for and constructed.

The growth rate that tapered during the 1990s began to increase with an in-migration of residents resulting in the construction of an average of 4,000 dwelling units per year from 2000 to 2004. A surge in growth occurred from 2004 to 2005 when approximately 6,000 dwelling units constructed each year. However, the housing market collapsed in 2006. Subsequent annual housing start averages fell to approximately 1,250 new homes between 2007 and 2011 (Figure 3-6).

Although the housing market has slowed, the in-migration of people has not ceased. **Table 4-25** illustrates the populations observed in and projections for Manatee County from 2005 to 2035. The population increased by 50.49 percent between 2000 and 2010. From 2010 to 2015, the growth rate is projected to slow to 6.69 percent then accelerate to 15.8 percent from 2015 to 2025. By 2035, Manatee County is projected to have a population of 441,400.

TABLE 4-25
MANATEE COUNTY POPULATION PROJECTIONS - UNINCORPORATED AREAS

Year	Population	Population Increase	Percent Increase	Population Increase/Year
2000	211,707	-	-	-
2010	318,600	106,893	50.9	10,689
2015	339,900	21,300	6.7	4,260
2025	393,600	53,700	15.8	5,370
2035	441,400	47,800	12.1	4,780

Source: Manatee County Planning Department, 2013.

Rapid, wide-spread development has occurred within the project area since 1991. However, only seven developments have been completed within the project area. Other developments have been approved by Manatee County and are in various stages of construction. There are nearly equal amounts of single- and multi-family residential dwelling units within and adjacent to the project area (**Table 4-26**). Over 2 million square feet of proposed commercial development is approved within and abutting the project area. There are two approved DRIs within the project area.

**TABLE 4-26
PROJECTED DEVELOPMENT RELATED TO THE PROJECT AREA**

Entitlement	Development Within the Project Area	Development Abutting the Project Area	Total Approved Development
Single-Family Residential	15,415 Dwelling Units	16,815 Dwelling Units	32,230 Dwelling Units
Multi-Family Residential	1,807 Dwelling Units	1,454 Dwelling Units	3,261 Dwelling Units
Commercial	1,022,000 Square Feet	1,308,929 Square Feet	2,330,929 Square Feet

Source: Manatee County Planning Department, 2013.

There has been a change in the land use development patterns between 1974 and near-present day. In 1974, the land use within the project area was predominantly agricultural (13,736 acres), wetlands (4,521 acres), and rangelands (3,836 acres) (Manatee County Land Use Maps). Urban land use was comprised of 332 acres, the smallest land use by area. These land uses were fairly contiguous in the project area. However, 25 years later, the urban land use swelled to 4,364 acres and rangelands dropped to 773 acres. Wetlands had a minor reduction, possibly because of the amount of uplands available for development with fewer regulatory requirements and mitigation.

4.6.6 FUTURE AND PROJECTED REGIONAL GROWTH (2030)

The growth trend in Manatee County is primarily encompassed by an increase of residential and commercial development. The population projections and approved development entitlements identify that the area has capacity for future growth. These development approvals were made independently of the proposed bridge over the Manatee River, relying solely on the existing transportation network.

A comparison of the historic land use, present-day land use, and projected land use, as per Manatee County's land use mapping, illustrates a trend where there has been a loss of agricultural and rangelands, with a smaller loss of wetlands, as illustrated previously in Figure 1-7. The comparison utilized land use information that does not include the development of the Proposed Action. Land use in 1974 indicated large tracts of land utilized for agricultural and range operations. Interconnected wetlands existed adjacent to the Manatee River with extensions into some of the agricultural and rangelands. Development and urban areas occurred in the western part of the county and were small in size compared to the agricultural and rangelands.

In 1999, the amount of rangelands and agricultural areas west of I-75 were reduced in size. Development and urban areas occurred along major roadways and the agricultural and rangelands have become more fragmented. There appears to be a slight loss of wetlands, however, there is a greater loss of agricultural and rangelands to development. The projected land use in 2030 illustrates widespread development on both sides of the Manatee River, with extensive loss of agricultural and rangelands, as well as wetlands.

The results of the analysis indicate that the two build alternatives are located in an area experiencing population growth and development and that this growth and development are projected to continue in the foreseeable future. Development in this area is resulting in the conversion of agricultural land use to mixed-use developments and is consistent with Manatee County's proposed Future Land Use. Implementation of either the Fort Hamer Alternative or the Rye Road Alternative would have minimal, if any, effect on these growth and development trends.

4.6.7 CUMULATIVE IMPACTS BY ISSUE

As previously discussed in Section 4.5 and in the paragraphs above, past and present actions have dramatically altered the project area, and reasonably foreseeable future actions would continue to affect the region in such that same pattern as to-date. Regardless of the selected alternative, these actions are expected to continue to have cumulative impacts to the human and natural environment as summarized below.

4.6.7.1 Social Impacts

No-Build Alternative

With the implementation of the No-Build Alternative, the cumulative effect of past, present, and reasonably foreseeable future actions within the project area would be the steady conversion of remaining rural lands to residential developments interspersed with public lands and recreation areas (e.g., Fort Hamer Park, Hidden Harbour Park, and Rye Preserve). Limited commercial and service developments are planned in the project area. Therefore, it would be necessary for current and future residents to travel by private vehicle or public transportation to areas outside the project area to obtain goods and services and to reach employment areas. As a result, traffic counts are expected to increase throughout the project area resulting in localized increases in air emissions and noise.

Fort Hamer Alternative

The cumulative social impacts of the implementation of the Fort Hamer Alternative include the same conversion of remaining undeveloped lands in the project area to residential developments with interspersed public lands and recreation areas as with the No-Build Alternative. Even with a new bridge connecting Upper Manatee River Road and Fort Hamer Road, it would still be necessary for current and future residents in the project area to travel outside the project area to obtain goods and services and to reach employment areas. A large increase in AADT on Upper Manatee River Road and Fort Hamer Road would result with the Fort Hamer Alternative; however, by providing more direct access to goods, services, and employment areas, implementation of the Fort Hamer Alternative would result in a reduction in VMT and VHT compared to the No-Build Alternative and Rye Road Alternative. The Fort Hamer Alternative is within the Urban Services Boundary (Figure 4-1) and is not anticipated to alter current, projected, or planned growth patterns in the study area.

Rye Road Alternative

The cumulative social impacts of the implementation of the Rye Road Alternative include the same conversion of remaining undeveloped lands in the project area to residential developments, public lands, and recreation areas with the No-Build Alternative and Fort Hamer Alternative. With the addition of two more lanes of capacity along the Rye Road Alternative, it would still be necessary for current and future residents in the project area to travel outside the project area to obtain goods and services and to reach employment areas. Because the Rye Road Alternative is located further from retail and employment areas compared to the Fort Hamer Alternative, implementation of the Rye Road Alternative would not result in a reduction in VMT and VHT compared to the No-Build Alternative and Fort Hamer Alternative.

The Rye Road Alternative is located at the eastern edge of the Urban Services Boundary (Figure 4-1) and generally defines the surface transportation edge to that boundary. Development of the Rye Road Alternative would require amendments to the Manatee County's Comprehensive Plan and LRTP and, therefore, increases pressure to amend the future land use map to alter the growth pattern east of Rye Road. This would lead to the loss of undeveloped land at a much higher rate than currently anticipated.

4.6.7.2 Cultural Resource Impacts

No-Build Alternative

It is anticipated that growth and development would continue within the project area and County-wide even with the implementation of the No-Build Alternative. That anticipated growth would be guided by F.S. 267 (Historical Resources) which provides the state process to adhere to the NHPA. However, due to this process, cumulative effects to cultural resources are expected to be minimal.

Fort Hamer Alternative

Given the projected growth pattern, potential future impacts to cultural resources are anticipated to be minimal due to established State of Florida processes defined in F.S. 267. Due to the definition of historic structures as "structures in excess of 50 years," the number of potentially eligible structures would increase in the extreme northern portion of the study area. However, due to the relatively recent development of the larger study area, most structures would not be considered eligible until 2040.

Rye Road Alternative

Potential cumulative effects from the Rye Road Alternative are anticipated to be similar to the Fort Hamer Alternative with the exception of possible alterations in growth patterns to the east. This portion of Manatee County is relatively undeveloped and agricultural. Increased development presence in this area would subject current and future historic structures and archaeological resources to be exposed to a much higher possibility of involvement and impact.

4.6.7.3 Natural Environment Impacts

No-Build Alternative

The historic conversion of native upland habitats to pasture and cropland and then to residential, educational, and recreational uses with associated roadway development is the largest cumulative impact to natural resources within the project area. The historic loss of habitat and hunting pressure in the region has already resulted in the extirpation of the Florida black bear and Florida panther from the project area. With expected further development, hunting would likely decrease in the project area; however, remaining wildlife populations, including state- and federally-listed species, would continue to lose upland habitats. Wetlands such as stream swamps and marshes are less likely to be developed due to existing regulatory protections. Within the project area, the loss of upland habitats and, to a lesser degree, wetland habitats would continue into the foreseeable future until full build-out has been achieved, as approved by Manatee County. These impacts are expected to occur even with the implementation of the No-Build Alternative.

Increased impervious areas associated with existing and planned development and roadway projects in the project area have resulted, and would continue to result, in increased stormwater runoff. Prior to implementation of stormwater treatment regulations, this runoff usually discharged directly into receiving waters resulting in degradation of water quality and aspirating localized flooding. Current regulations require stormwater runoff from most developments and transportation projects to be captured and routed through a stormwater treatment system designed to meet specific standards. Encroachment into designated flood zones is required to be off-set by a similar enlargement of the storage capacity within the same drainage basin. All development and infrastructure improvement projects associated with the No-Build Alternative would be designed and constructed according to the current criteria for protecting water quality and quantity and flood zones. Thus, the cumulative impacts to water quality and quantity and flood zones within the project area as a result of the No-Build Alternative are expected to be minimal.

Fort Hamer Alternative

The cumulative natural resource impacts associated with the Fort Hamer Alternative may be viewed as a combination of the impacts resulting from the No-Build Alternative and the direct and indirect impacts resulting from the Fort Hamer Alternative. The same development and habitat loss associated with the No-Build Alternative would still occur with implementation of the Fort Hamer Alternative; however, implementation of the Fort Hamer Alternative would result in the incremental loss of additional upland and native wetland habitats as described in Section 3.3.1. The loss of wetland habitats resulting from the Fort Hamer Alternative would be off-set with the implementation of an agency-approved wetland mitigation plan; however, no such requirement exists for the loss of upland habitats. The cumulative loss of upland habitats within the project area is not expected to jeopardize the continued existence of any populations of state- and federally-listed species. Implementation of the Fort Hamer Alternative would result in less traffic on I-75 and US 301 in the project area; however, substantially greater traffic would

occur on Upper Manatee River Road and Fort Hamer Road. The traffic increase on these roads would result in a greater potential for wildlife road kill.

Similar to the development and infrastructure improvement projects associated with the No-Build Alternative, the Fort Hamer Alternative would be designed and constructed according to the current criteria for protecting water quality and quantity and flood zones. As a result, no additional adverse impacts to water quality/quantity and flood zones above those associated with the No-Build Alternative are expected with the implementation of the Fort Hamer Alternative.

Rye Road Alternative

The cumulative natural resource impacts associated with the Rye Road Alternative include those resulting from the No-Build Alternative plus the direct and indirect impacts resulting from the Rye Road Alternative. The same development and habitat loss associated with the No-Build Alternative would still occur with implementation of the Rye Road Alternative; however, implementation of the Rye Road Alternative would result in the incremental loss of additional upland and native wetland habitats as described in Section 3.3.1. The loss of wetland habitats resulting from the Rye Road Alternative would be off-set with the implementation of an agency-approved wetland mitigation plan; however, no such requirement exists for the loss of upland habitats. The cumulative loss of upland habitats within the project area is not expected to jeopardize the continued existence of any populations of state- and federally-listed species. Implementation of the Rye Road Alternative is not expected to result in appreciably greater traffic volumes in the project area; however, the two additional travel lanes would result in a greater potential for wildlife road kill along the length of the alternative.

Similar to the development and infrastructure improvement projects associated with the No-Build Alternative, the Rye Road Alternative would be designed and constructed according to the current criteria for protecting water quality and quantity and flood zones. As a result, no additional adverse impacts to water quality/quantity and flood zones above those associated with the No-Build Alternative are expected with the implementation of the Rye Road Alternative.

4.6.7.4 Physical Impacts

No-Build Alternative

An incremental increase in noise and air quality impacts are expected throughout the project area as a result of existing and planned development associated with the No-Build Alternative. Temporary increases in noise, fugitive dust, and exhaust emissions are expected at construction sites during construction of these developments and associated infrastructure improvements. Minimal to no cumulative impacts to contaminated sites and navigation are expected in the project area with implementation of the No-Build Alternative.

Fort Hamer Alternative

Implementation of the Fort Hamer Alternative would result in substantially greater traffic volumes on Upper Manatee River Road and Fort Hamer Road, which would result in increased noise and vehicle emissions along these roads compared to the No-Build Alternative. However,

this localized increase in noise and vehicle emissions is off-set by the overall reduction in VMT and VHT (with accompanying decreases in noise and emissions) in the project area with the operation of the Fort Hamer Alternative. The cumulative impacts to navigation resulting from implementation of the Fort Hamer Alternative consist of restricting the passage of vessels with a vertical clearance requirement greater than 26 feet. Currently, there are only two known vessels with a height requirement exceeding 26 feet located upstream of the proposed location of the bridge for the Fort Hamer Alternative. *De minimus* cumulative impacts resulting from potential contamination sites are expected with the Fort Hamer Alternative.

Rye Road Alternative

Implementation of the Rye Road Alternative is not expected to dramatically alter traffic movements within the project area; thus noise and vehicle emissions are expected to be similar to those associated with the No-Build Alternative. The Rye Road Alternative would not result in any additional impacts to navigation. Minimal cumulative impacts resulting from potential contamination sites are expected with the Rye Road Alternative.

4.7 SUMMARY AND RECOMMENDATION

Chapter 1 of this FEIS identified the Purpose and Need to construct additional travel lanes across the Manatee River between I-75 and Rye Road. The analyses conducted in Chapter 2 resulted in the determination that the No-Build Alternative does not meet the stated Purpose and Need and further identified two build alternatives (the Fort Hamer Alternative and the Rye Road Alternative) that met all or most of the stated Purpose and Need for the Proposed Action. The only defined need not met is the inability of the Rye Road Alternative to improve emergency response times. Both build alternatives meet all other defined needs of the Proposed Action; however, the Rye Road Alternative only minimally improves the local roadway network LOS and only minimally accommodates planned growth in the area.

Table 4-27 summarizes the social, cultural, natural environment, and physical impacts of the No-Build and two build alternatives, as discussed earlier in this chapter. The No-Build Alternative results in the fewest adverse impacts compared to the build alternatives; however, the No-Build Alternative is inconsistent with the Manatee County's 2020 Comprehensive Plan (Manatee County, 2010) and does not satisfy the demonstrated need for the Proposed Action.

With regards to social impacts, the Fort Hamer Alternative and Rye Road Alternative are similar except for those issues affected by traffic. The Fort Hamer Alternative would result in a large increase in traffic on Upper Manatee River Road and Fort Hamer Road compared to the existing condition. This increase in traffic would likely affect the ingress/egress to the Annie Lucie Williams Elementary School on Fort Hamer Road. However, this condition is to be mitigated by Manatee County with the installation of additional sidewalks and crosswalks at the school.

Both build alternatives would have minimal to no impacts on cultural resources. The widening of the Rye Road Bridge for the Rye Road Alternative would have a minimal impact on the Rye Preserve.

The Fort Hamer Alternative would have less wetland dredge/fill impacts, but more shading impacts than the Rye Road Alternative. There are more floodplain impacts associated with the Fort Hamer Alternative. These unavoidable impacts would be mitigated in accordance with federal and state permit requirements. Neither build alternative is likely to adversely affect any listed species or designated critical habitat although both build alternatives do involve crossing designated critical habitat for the West Indian manatee.

**TABLE 4-27
COMPARATIVE EVALUATION SUMMARY**

Section	Issue	No-Build Alternative	Fort Hamer Alternative	Rye Road Alternative
SOCIAL IMPACTS				
4.1.1	Socioeconomic Conditions	No anticipated adverse impacts.	No anticipated adverse impacts. Proposed Action should benefit socioeconomic conditions in the project area.	No anticipated adverse impacts. Proposed Action should benefit socioeconomic conditions in the project area.
4.1.2	Land Use Characteristics (Existing and Future)	Inconsistent with Manatee County's 2020 Comprehensive Plan.	Minimal adverse impacts to existing and future land uses. Consistent with Manatee County's 2020 Comprehensive Plan future land use.	Minimal adverse impacts to existing and future land uses. Consistent with Manatee County's 2020 Comprehensive Plan future land use.
4.1.3	Traffic	74,200 AADT increase on I-75 from SR 64 to US 301 (2035) LOS F. County-wide increase in VMT and VHT.	18,900 AADT increase on Upper Manatee River Road from SR 64 to Waterlefe Boulevard (2035). 23,600 AADT crossing the Manatee River (2035). 21,200 AADT increase on Fort Hamer Road from Manatee River to US 301. 1,400 AADT decrease on I-75 from SR 64 to US 301 (2035) LOS F. County-wide reduction in VMT and VHT.	4,200 AADT increase on Rye Road from Upper Manatee River Road to Golf Course Road (2035). 500 AADT increase on I-75 from SR 64 to US 301 (2035) LOS F. Slight increase in County-wide VMT. Slight decrease in County-wide VHT.
4.1.4	Community Cohesion	No impacts.	No anticipated adverse impacts.	No anticipated adverse impacts.
4.1.5	Relocation Potential	No impacts.	No impacts.	Four residential locations affected.
4.1.6	Religious Centers	No impacts.	Traffic increase.	No anticipated adverse impacts.
	Schools	No impacts.	Traffic increase.	No anticipated adverse impacts.
	Parks and Recreation Areas	No impacts.	Traffic increase.	Traffic increase.
	Public Facilities	No impacts.	No anticipated adverse impacts. Improved emergency vehicle response times.	No anticipated adverse impacts.
	Pedestrian/ Bicycle Facilities	No sidewalks or bicycle lanes to be added.	Proposed Action would provide continuous bicycle lanes and sidewalks.	Proposed Action would provide continuous bicycle lanes and sidewalks.
4.1.7	Environmental Justice	No impacts.	No anticipated adverse impacts.	No anticipated adverse impacts.
4.1.8	Controversy Potential	Low	High	High
4.1.9	Utilities and Railroads	No impacts.	Six utility providers No railroads	Six utility providers No railroads

Continued on next page

TABLE 4-27 (CONTINUED)
COMPARATIVE EVALUATION SUMMARY

Section	Issue	No-Build Alternative	Fort Hamer Alternative	Rye Road Alternative
CULTURAL RESOURCES IMPACTS				
4.2.1	Archaeological	No impacts.	No adverse impacts. See SHPO concurrence letter in Appendix A-4.	No adverse impacts. See SHPO concurrence letter in Appendix A-4.
			The Seminole Tribe of Florida has concurred with the research performed as part of this FEIS. See SHPO concurrence letter in Appendix A-4.	
4.2.2	Historical	No impacts.	No adverse impacts.	No adverse impacts.
NATURAL ENVIRONMENT IMPACTS				
4.3.1	Land Use/Vegetative Cover	No additional impacts.	19.4 acres open land 6.8 acres forest converted to roadway, ROW, and ponds.	19.0 acres agriculture 3.0 acres open land 7.5 acres forest converted to roadway, ROW, and ponds.
4.3.2	Wetlands	No additional impacts.	2.05 acres fill 1.01 acres shading 1.28 acres secondary	2.51 acres fill 0.01 acres shading 0.00 acres secondary
4.3.3	Essential Fish Habitat (EFH)	No additional impacts.	0.16 acres fill 1.01 acres shading	0.00 acres
4.3.4	Wildlife	No additional impacts.	Localized general decline in mammal and bird populations due to habitat loss. Increased potential for road kill.	Localized general decline in mammal and bird populations due to habitat loss. Increased potential for road kill.
4.3.5	Threatened and Endangered Species	No effects.	<p>“May affect, but not likely to adversely affect:”</p> <ul style="list-style-type: none"> • Smalltooth sawfish (F) • Eastern indigo snake (F) • Wood stork (F) • West Indian manatee (F) • Critical habitat for West Indian manatee (F) • Gopher tortoise (S) • Pine snake (S) • Florida mouse (S) • Gopher frog (S) <p>(F)=Federally-Listed (S)=State-Listed</p>	<p>“May affect, but not likely to adversely affect:”</p> <ul style="list-style-type: none"> • Crested caracara (F) • Eastern indigo snake (F) • Wood stork (F) • West Indian manatee (F) • Critical habitat for West Indian manatee (F) • Florida scrub jay (F) • Gopher tortoise (S) • Pine snake (S) • Florida mouse (S) • Gopher frog (S) <p>(F)=Federally-Listed (S)=State-Listed</p>
4.3.6	Aquatic Preserves	N/A	N/A	N/A
4.3.7	Water Quality	No additional impacts.	No additional impacts.	No additional impacts.
4.3.8	Outstanding Florida Waters	N/A	N/A	N/A
4.3.9	Wild and Scenic Rivers	N/A	N/A	N/A
4.3.10	Groundwater	No additional impacts.	No additional impacts.	No additional impacts.
4.3.11	Floodplains and Floodways	No additional impacts.	27.9 acres floodplains 0.0 acres floodways Compatible with existing floodplain management programs.	21.8 acres floodplains 0.0 acres floodways Compatible with existing floodplain management programs.
4.3.12	Coastal Zone Consistency	Consistent	Consistent	Consistent

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**TABLE 4-27 (CONTINUED)
COMPARATIVE EVALUATION SUMMARY**

Section	Issue	No-Build Alternative	Fort Hamer Alternative	Rye Road Alternative
4.3.13	Coastal Barrier Island Resources	N/A	N/A	N/A
4.3.14	Farmlands	N/A	N/A	N/A
PHYSICAL CHARACTERISTICS IMPACTS				
4.4.1	Noise	No impacts.	39 noise-sensitive receptors 1 meets or exceeds the NAC (includes receptors with substantial increase)	183 noise-sensitive receptors 16 meets or exceeds NAC (includes receptors with substantial increase)
4.4.2	Air Quality	Attainment	Attainment	Attainment
4.4.3	Construction	No additional impacts.	Temporary impacts of air quality, vibration, visual, noise, and maintenance of traffic.	Temporary impacts of air quality, vibration, visual, noise, and maintenance of traffic.
4.4.4	Contamination	No additional impacts.	1 Medium Risk Site	13 Low Risk Sites 1 Medium Risk Site
4.4.5	Scenic Highways	N/A	N/A	N/A
4.4.6	Navigation	No additional impacts.	2 vessels	No additional impacts.

Regarding physical impacts, the increased traffic associated with both build alternatives would result in an increase in noise compared to the present-day condition. Although there would be less traffic with the Rye Road Alternative compared to the Fort Hamer Alternative, there are a greater number of noise-sensitive receptors along the Rye Road Alternative. Noise impacts can be mitigated by Manatee County with speed restriction and restriction on vehicle size (e.g., trucks).

Navigation on the Manatee River would be minimally affected by the Fort Hamer Alternative; only one sailboat currently exists upstream of the bridge that would be unable to pass beneath the proposed structure. The shallow nature of the river upstream of the proposed bridge at Fort Hamer Road makes it unlikely that additional vessels requiring greater than 26 feet vertical clearance would be affected in the future by the presence of the bridge. An additional bridge structure at the Rye Road crossing of the Manatee River would have no effect on navigation.

Cumulative Effects

Neither the No-Build Alternative nor the Fort Hamer Alternative are anticipated to create any adverse or unmitigable cumulative effects. However, the Rye Road Alternative has the potential of altering the projected growth patterns in eastern Manatee County by adding development pressure east of the Urban Services Boundary and potentially moving that boundary further east.

Recommendation

It is recommended that the Fort Hamer Alternative be approved as the alternative to advance to design and construction.

Chapter 5

COMMENTS AND COORDINATION

5.1 SCOPING MEETING

The Fort Hamer Bridge Scoping Meeting for this *National Environmental Policy Act of 1969* (NEPA) study was held on Tuesday, August 17, 2010 at the Carlos E. Haile Middle School, 9501 E. State Road (SR) 64, in Bradenton, Florida. An informal open house was held from 4:00 p.m. to 6:00 p.m., and the presentation and public comment period was held from 6:00 p.m. to 8:00 p.m. The purpose of the scoping meeting was to provide an opportunity for the public to participate in the alternatives scoping process for the Fort Hamer Bridge project. The United States Coast Guard (USCG) project manager presided at the meeting. Representatives of Manatee County, the USCG, and its consultant were present at the meeting to discuss the project with the public. See Appendix A-3 for sign-in sheets and speaker cards from this meeting.

A letter announcing the scoping meeting was mailed on July 19, 2010 to public officials, agencies, and property owners within 0.5 mile of the project. A quarter-page display advertisement announcing the meeting was published in the Bradenton Herald on Friday, August 6, 2010. In addition, a Notice of Intent (NOI) for the meeting was published in the Federal Register on Friday, July 9, 2010.

In correspondence dated July 20, 2010, the USCG, as lead federal agency for this study, invited the U.S. Army Corps of Engineers (USACE), National Marine Fishery Service (NMFS), U.S. Fish and Wildlife Service (FWS), U.S. Environmental Protection Agency (EPA), and Federal Highway Administration (FHWA) to be cooperating agencies in this study. Only the USACE accepted this invitation.

A total of 264 people signed the attendance sheets at the meeting. Aerial photos showing the alternatives under evaluation were on display along with other project information. The presentation portion of the meeting began with introductory remarks by the USCG project manager, followed by a PowerPoint presentation. The presentation included a summary of the need for the project, a brief background of the project, and the alternatives under evaluation.

Following the presentation, the next portion of the meeting was devoted to receiving public comments. Specific comments and questions raised by concerned individuals were answered by email or letter following the meeting. Twenty-four (24) people spoke for the public record at the meeting.

A total of 222 comments have been received. Seventy (70) written comments were received at the scoping meeting, 24 people gave oral comments during the public comment portion of the meeting, and two people gave their comments directly to the court reporter. Forty (40) comments were submitted via the website in the days prior to the meeting. Fifty (50) comments

were submitted via the project website and email prior to the end of the comment period on August 27, 2010. Another 36 comments have been submitted after the comment period ended. **Table 5-1** summarizes comments received to date.

5.2 OTHER PUBLIC INVOLVEMENT EFFORTS

On May 27, 2010 a Manatee County Public Works Department Public Information Meeting was held in Parrish, Florida that discussed several Manatee County projects including the proposed Fort Hamer Bridge. Approximately 100 people were in attendance. Many questions and comments related to the Fort Hamer project focused on:

- Project schedule
- Potential noise impacts
- Potential safety issues (e.g., sidewalks)
- Increased traffic volumes

On July 20, 2010 representatives of the consulting team met with the Waterlefe Homeowners Association Bridge Committee at the Waterlefe Clubhouse. Approximately 40 people were in attendance. A brief PowerPoint presentation was given providing an overview of the project and the Environmental Impact Statement (EIS) process. Afterwards there was a question and answer session that addressed the following issues:

- Project schedule
- Potential noise impacts
- Potential safety issues (e.g., sidewalks)
- Increased traffic volumes
- Impact to property values
- Bridge aesthetics/lighting
- Potential personal liability issues related to errant golf balls striking cars on the bridge
- Future impacts to access via Waterlefe's northern, secondary entrance

Multiple update presentations have been made to the Manatee County Board of County Commissioners (BOCC) since the beginning of the EIS for this project. Each Manatee County BOCC meeting is broadcast on local public access cable television and agendas are published via the County's webpage and provided to residents on the BOCC mailing list.

**TABLE 5-1
COMMENTS RECEIVED**

Comment	Received Prior to Scoping Meeting (Prior to 8-17-10)	Received at Scoping Meeting (8-17-10)	Received During Comment Period (8-18-10 to 8-27-10)	Received After Comment Period (After 8-27-10)	Total
Use and/or improve existing routes and/or bridges.	10	24	12	5	51
Existing routes are already too congested.	10	21	4	3	38
The Fort Hamer Bridge would cause increased traffic.	7	11	5	2	25
The Fort Hamer Bridge would save time/gas/costs.	6	16	5	6	33
The Fort Hamer Bridge would not save time/gas/costs.	1	6	3	2	12
The Fort Hamer Bridge would cause negative noise and/or light impacts.	3	16	9	4	32
The Fort Hamer Bridge would cause negative environmental impacts.	15	29	16	6	66
The Fort Hamer Bridge would cause negative impacts to wildlife.	1	16	6	1	24
The Fort Hamer Bridge would be wasteful spending of County money in this economic downturn.	15	27	17	9	68
The Fort Hamer Bridge would create negative overall safety and/or bus stop safety impacts for pedestrians, bicyclists, and children.	17	19	2	5	43
Questioning the design of the Fort Hamer Bridge, access to and from the Fort Hamer Bridge, and/or other road widenings instead of building the Fort Hamer Bridge.	6	19	6	1	32
The negative impacts caused by the accidents on I-75 and US 301 would be repeated without the Fort Hamer Bridge.	9	12	13	1	35
The Fort Hamer Bridge is needed to create a new north/south route and to serve as an emergency evacuation route.	12	39	17	5	73
The Fort Hamer Bridge would cause negative impacts to boaters.	2	8	2	1	13
The Fort Hamer Bridge is being built for political reasons and/or governmental rules have changed since the first analysis.	7	6	2	2	17
The Fort Hamer Bridge is a "Bridge to Nowhere."	3	6	0	1	10
The Fort Hamer Bridge would cause an increase in property values.	2	4	0	3	9
The Fort Hamer Bridge would cause a decrease in property values.	3	9	2	1	15
Commenter is a Waterlefe resident: The Fort Hamer Bridge would negatively impact Waterlefe.	11	16	5	1	33

Continued on next page

**TABLE 5-1 (CONTINUED)
COMMENTS RECEIVED**

Comment	Received Prior to Scoping Meeting (Prior to 8-17-10)	Received at Scoping Meeting (8-17-10)	Received During Comment Period (8-18-10 to 8-27-10)	Received After Comment Period (After 8-27-10)	Total
Waterlefe residents were aware of the Fort Hamer Bridge being built when they purchased their homes.	7	3	9	0	19
The Fort Hamer Bridge would cause negative impacts to historic Fort Hamer and/or the Indian Trail.	1	3	1	0	5
The Fort Hamer Bridge is not necessary because the population has decreased and/or development has stopped.	4	7	5	3	19
The Fort Hamer Bridge would create growth and/or jobs.	1	17	7	4	29
The original analysis of the Fort Hamer Bridge is no longer valid.	4	6	2	0	12
Request to be added to the project mailing list.	1	1	0	6	8
Total Commenters FOR the Fort Hamer Bridge Project	17	46	21	16	100
Total Commenters AGAINST the Fort Hamer Bridge Project	23	50	29	14	116
Total Commenters	40	96	50	36	222

A project website, www.forthamerbridge.com, has been active since May 2010. The Fort Hamer website provides an overview of the Proposed Action, alternatives under consideration, a project schedule, notification of upcoming meetings, and a portal for comment submittal is linked to the USCG (www.Regulations.gov).

5.3 AGENCY COORDINATION

Prior to the development of this Final EIS (FEIS) as a USCG document, the Fort Hamer Bridge project was led by the FHWA and the Florida Department of Transportation (FDOT) during the period 1999-2006. During that period, multiple meetings were held in association with the development of the FHWA/FDOT Draft EIS (DEIS). The Comments and Coordination chapter of the last version of that DEIS can be found in Appendix K.

In May of 2010, Manatee County restarted efforts to complete the Fort Hamer EIS with USCG as the Federal Lead Agency. The following section summarizes agency coordination and consultation efforts that have occurred from 2010 to date. Copies of all correspondence can be found in Appendix A-4.

Florida Fish and Wildlife Conservation Commission (FWC)

In response to URS requests, FWC provided mapping identifying:

- Strategic Habitat Conservation Areas (SHCAs)
- Prioritized SHCAs
- Species Richness
- Priority Wetlands
- Florida Land Cover – 2003
- Manatee mortality and calving information

FWC also noted that similar mapping should be requested from the Florida Natural Areas Inventory (FNAI).

Department of Homeland Security/United States Coast Guard (DHS/USCG)

On Friday, July 9, 2010, a Notice of Intent to prepare an EIS was published in the Federal Register (75 FR 39555), which included notice of the Public and Agency Scoping Meeting (detailed in Section 5.1).

On July 20, 2010, DHS/USCG, submitted a Letter of Invitation to the following federal agencies to participate in the development of the Fort Hamer EIS as a Cooperating Agency:

- NMFS
- USACE
- U.S. Department of Transportation/FHWA
- FWS
- EPA

National Marine Fisheries Service (NMFS)

In a letter dated July 27, 2010, the NMFS declined the invitation to participate as a Cooperating Agency. On July 5, 2013 a copy of the DEIS, including the Biological Assessment (BA) and Wetlands Evaluation Report (WER) was provided to the NMFS for their review. On July 24, 2013 the USCG initiated *Magnuson-Stevens Fishery Conservation and Management Act*, as amended, (MSFCMA) consultation with the NMFS.

On August 8, 2013 the NMFS responded with comments on the DEIS, BA, and WER and requested additional information for NMFS' review, including a recommendation that an *Endangered Species Act of 1973*, as amended (ESA) consultation on smalltooth sawfish be conducted. In emails dated August 27 and 29, 2013 the NMFS requested additional information regarding project-related impacts to estuarine resources. In a letter dated September 18, 2013, the USCG provided responses to the NMFS' comments and requested initiation of ESA Section 7 consultation for the smalltooth sawfish. On October 2, 2013 the NMFS requested additional information regarding project impacts and construction methodology. A response to this request was provided to NMFS on October 9, 2013. On December 11, 2013, the NMFS issued an ESA concurrence letter to the USCG. On December 16, 2013, the NMFS issued a MSFCMA concurrence letter to the USCG.

U.S. Army Corps of Engineers (USACE)

In a letter dated July 29, 2010, the USACE accepted the invitation to participate as a Cooperating Agency. The DEIS was released for public review on July 5, 2013 with a copy provided to the USACE. On August 23, 2013 the USACE responded with comments on the DEIS. Each USACE comment is provided below followed by a response to each comment.

USACE Comments on the DEIS

Comments on the DEIS received from the USACE, dated 23 August 2013. Responses to comments are shown in bold.

Chapter 1: No comments on purpose and need. The stated project purpose, "...to provide an alternative north/south transportation route between high-growth areas of Manatee County located east of Interstate 75 (I-75), separated by the Manatee River and to improve regional

mobility” is acceptable to the Corps. The documentation of the need for the project is also acceptable.

Response: Comment noted.

Chapter 2: The Corps offers the following comment on Chapter 2:

1. Please provide additional details on the alternative alignments considered by Manatee County for the Fort Hamer Bridge, including a comparison of impacts to waters of the United States associated with each alignment. If there is an alternative alignment that has less impact than the proposed alignment, please explain why that alignment is not reasonable or practicable.

Response: The alternatives considered are detailed in Section 2.0. The impacts resulting from implementation of the alternatives are presented in Section 4.0. The two (2) build alternatives carried forward in the DEIS for evaluation were the Fort Hamer and Rye Road Alternatives.

The wetland impact acreage reported in the DEIS for the Fort Hamer Alternative was incorrectly reported due to a database error; the FEIS presents the corrected wetland impact acreage. The following summarizes the wetland impacts associated with the two build alternatives:

Impact	Fort Hamer Alternative (acres)	Rye Road Alternative (acres)
Permanent Dredge/Fill	2.05	2.51
Permanent Shading	1.01	0.01
Secondary ¹	1.28	0.00

¹ Based on SWFWMD criteria

Additional impacts associated with the alternatives include:

- Relocations – 4, Fort Hamer Alternative 0
- Protected Species – 10, Fort Hamer Alternative 9
- Noise – 183 noise-sensitive receptors, Fort Hamer Alternative 39
- Contamination – 14 potential sites, Fort Hamer Alternative 1

Furthermore, emergency response times are not improved by the Rye Road Alternative, hurricane evacuation capacity is not improved by the Rye Road Alternative, and construction costs are significantly higher for the longer Rye Road Alternative (\$23.9 million for the Fort Hamer Alternative and \$54.4 million for the Rye Road Alternative).

2. Chapter 2 should offer an explanation as to why the Fort Hamer Alternative does not require any road expansions to accommodate the proposed two-lane bridge, yet the Rye Road

Alternative requires the expansion of approximately 10 miles of roads from two lanes to four lanes, including a section of Fort Hamer Road that is within both alternatives' study areas. If the Fort Hamer Alternative does require road expansions, the impacts associated with the expansions, especially to wetlands and other surface waters, need to be identified and considered in the EIS.

Response: There is a need for 2-lanes of additional capacity across the Manatee River in eastern Manatee County. With the Fort Hamer Alternative this is achieved with a 2-lane bridge connecting 2 existing 2-lane roadways (Fort Hamer Road and Upper Manatee River Road). With the Rye Road Alternative, the existing 2-lane bridge is expanded to 4-lanes. This requires Rye Road to be widened to 4-lanes south to a logical termini (SR 64) and widened to 4-lanes north to Golf Course Road, Golf Course Road widened to 4-lanes to Fort Hamer Road and Fort Hamer Road widened to 4-lanes to a logical termini (US 301).

Chapter 3: No comments on Chapter 3.

Chapter 4: The Corps offers the following comments on Chapter 4:

1. Section 4.3.2.1: Please note that the Corps also considers the consideration of offsite alternatives to be part of avoidance. Also, consideration of alternate on-site alignments as described in the comment on Chapter 2 above, should also be part of the consideration of minimization.

Response: Section 2.2 Alternatives Considered, including Transportation Systems Management (TSM) and Multimodal Improvements, (noted above as offsite alternatives). Section 2.3.1 discusses the Step 1 screening process. During this process these two alternatives were eliminated from further consideration because they did not meet the purpose and need stated in Section 2.0.

2. In Section 4.3.2.4, the DEIS states "In Florida, the USACE has also adopted UMAM for assessment of wetland impacts and mitigation." Although the Jacksonville District accepts UMAM, and recommends that it be used to allow consistency with state and local functional assessments of wetland impacts and mitigation, we cannot and do not require or prohibit any assessment methodology. The Corps recommends revising this sentence to say "In Florida, the USACE also accepts UMAM for assessment of wetland impacts and mitigation, with some changes from the state implementation."

Response: This change has been made to Section 4.3.2.4 of the FEIS and in Section 3.3 of the Wetlands Evaluation Report (Appendix D of the FEIS).

3. The Corps accepts the wetland impact acreages, functional assessments, and conceptual mitigation for the purpose of comparing alternatives. We reserve the right to review and approve future avoidance and minimization measures, the applicant's wetland delineations and determinations, the final impact acreages including secondary impacts, functional assessments, and mitigation plans pursuant to the Corps permitting process. The Corps has provided information about the Corps' mitigation plan requirements to Manatee County.

Response: Comment noted.

4. The Corps acknowledges the ‘may affect, not likely to adversely affect’ determination for the wood stork. The statement that Manatee County will mitigate all impacts to wood stork suitable foraging habitat should be revised to state that the County will provide suitable foraging habitat compensation within the Core Foraging Area of the affected colony site(s) equivalent to the impacted SFH in accordance with the Wood Stork Foraging Assessment Procedure, and that is not contrary to the USFWS’s Habitat Management Guidelines for the Wood Stork in the Southeast Region. Otherwise, based on the September 2008 effect determination for the wood stork in central and north peninsular Florida, as developed by the Corps and the USFWS, either of the action alternatives would appear to result in a ‘may affect’ determination for the wood stork.

Response: This change has been made to Section 4.3.5.1 of the FEIS.

5. Section 4.3.5.1 should provide additional explanation on how the ‘may affect, not likely to adversely affect’ determination was made for the eastern indigo snake for both action alternatives, and for the Florida scrub jay and crested caracara for the Rye Road alternative.

Response: Section 4.3.5.1 provides only a summary listing of the effect determinations for listed species. The reader is referred to the Biological Assessment in Appendix E of the EIS for details on how the effect determinations were made.

6. The Corps’ 404(b)1 Guidelines state that the Corps can only approve the Least Environmentally Damaging Practicable Alternative (LEDPA). In addition, both the 404(b)1 Guidelines and the 404(b)1 Mitigation Memorandum of Agreement between the Corps and EPA state that compensatory mitigation cannot be used in the alternatives analysis and the determination of the LEDPA.

Response: Comment noted. Additionally, the wetland impact acreage reported in the DEIS for the Fort Hamer Alternative was incorrectly reported due to a database error; the FEIS presents the corrected wetland impact acreage. The following summarizes the wetland impacts associated with the two build alternatives:

Impact	Fort Hamer Alternative (acres)	Rye Road Alternative (acres)
Permanent Dredge/Fill	2.05	2.51
Permanent Shading	1.01	0.01
Secondary ¹	1.28	0.00

¹ Based on SWFWMD criteria

7. Section 4.7 states “The Fort Hamer Alternative would have larger impacts on natural resources compared to the Rye Road Alternative. A greater amount of wetlands and floodplains would be affected by the construction of the new bridge for the Fort Hamer Alternative than would be impacted by the Rye Road Alternative. Chapter 4 describes the following impact figures for the two alternatives (based on a 25-foot buffer as described in Section 4.3.2.2):

- Fort Hamer Alternative: 2.71 acres fill, 2.61 acres shading, 1.12 acres secondary

- Rye Road Alternative: 2.51 acres fill, 0.01 acre shading, 0.00 acre secondary

Response: As described above, the wetland impact acreage associated with the Fort Hamer Alternative has been corrected in the FEIS and the wording in Section 4.7 revised to reflect the corrected impact acreage.

However, Table 2-4 describes the following potential impacts (presumably direct and secondary) to wetlands based on a 200-foot buffer:

- Alternative 2 (Fort Hamer Alternative): 73.8 acres
- Alternative 3 (Rye Road Alternative): 86.5 acres

And Table 2-8 describes potential impacts to wetlands based on a 110-foot buffer:

- Alternative 2 (Fort Hamer Alternative): 7.5 acres
- Alternative 3 (Rye Road Alternative): 12.28 acres

8. The Corps requests that the USCG include discussion of the area of potential wetland impact within these greater buffer distances in its Chapter 4 discussion of comparative impacts between alternatives.

Response: The acreages presented in Chapter 2 and the tables therein quantify the existing resources (including wetlands) within the prescribed buffers for each of the preliminary alternatives. The term “impacts” as used in this chapter represents a hypothetical loss of the resource if the alternative were built out to the buffer limits. The true impacts associated with the build alternatives are first presented in Chapter 3; these are the impacts that would actually result from construction of the alternative.

9. The comment for Chapter 2 about impacts associated with road expansions for the Fort Hamer Alternative applies to Chapter 4 as well.

Response: See previous response.

10. It should be noted that some of the wetlands potentially impacted by the proposed project may be areas used as mitigation for wetland impacts in previous Corps permits. For example, wetlands 1 and 2 within the Fort Hamer Alternative appear to have been mitigation areas for the adjacent Waterlefe project. If it is determined that mitigation areas will be impacted, then either the Corps will require in its permit review, or ask the USCG to require its permit review, that mitigation for these impacts include additional compensation to replace the lost mitigation value.

Response: Proposed impacts to wetland mitigation areas that have been deemed successful and released by the agencies from further monitoring are treated the same as any other wetland impact; i.e., the amount of mitigation required to off-set the proposed impact is evaluated with a UMAM analysis on the actual impact area and not on previously impacted wetlands associated with other projects.

Chapter 5: As described elsewhere in the Draft EIS, the Corps accepted the invitation to become a cooperating agency. On page 5-6, there is a statement that we declined.

Response: Page 5-6 has been corrected to state that the Corps accepted the invitation to participate as a Cooperating Agency.

Chapter 6: No comments on Chapter 6

Chapter 7: No comments on Chapter 7

Chapter 8: No comments on Chapter 8

Chapter 9: No comments on Chapter 9

Appendix A: No comments on Appendix A

Appendix B: No comments on Appendix B

Appendix C: No comments on Appendix C

Appendix D: The Corps offers the following comments on Appendix D:

1. The comment for Chapter 2 about impacts associated with road expansions for the Fort Hamer Alternative applies to Appendix D as well.

Response: See response to Chapter 2 comments above.

2. The Corps' comments for Chapter 4 about wetlands apply to Appendix D as well.

Response: See response to Chapter 4 comments above

Appendix E: The Corps offers the following comments on Appendix E:

1. The Corps recommends including the comparative information on potential impacts to listed species habitat, such as the 17 acres of upland habitat within the Fort Hamer Alternative and the 38 acres of upland habitat within the Rye Road Alternative, in the Chapter 4 discussion of the alternatives.

Response: The 17 acres and 38 acres of uplands referred to in Appendix E (Biological Assessment) as being impacted are artifacts from previous working drafts of the DEIS and are not correct. Implementation of the Fort Hamer Alternative would result in the conversion of approximately 19.4 acres of upland open land and 6.8 acres of upland forest to roadway and associated facilities. Implementation of the Rye Road Alternative would result in the conversion of approximately 19.0 acres of agriculture (mostly pasture), 3.0 acres of upland open land, and 7.5 acres of upland forest to roadway and associated facilities. This information is presented in Chapter 4 and has been corrected in Appendix E.

2. The Corps recommends including additional information on what types of “suitable habitat” are present within the two alternatives in the discussion of potential impacts to the eastern indigo snake. For example, the discussion of impacts to the gopher tortoise describes 37 acres of upland habitat within the Rye Road alignment. How much of this is pasture, how much is undisturbed, how much is xeric, etc.

Response: See response to Appendix E, No. 1 above.

Appendix F: No comments on Appendix F

Appendix G: No comments on Appendix G

Appendix H: No comments on Appendix H

Appendix I: No comments on Appendix I

Appendix J: No comments on Appendix J

Appendix K: No comments on Appendix K

U.S. Department of Transportation/Federal Highway Administration (DOT/FHWA)

In a letter dated July 29, 2010, the FHWA declined the invitation to participate as a Cooperating Agency.

U.S. Fish and Wildlife Service (FWS)

In a letter dated August 24, 2010, the FWS declined the invitation to participate as a Cooperating Agency. A copy of the EIS, including the BA, was provided to the FWS on July 5, 2013. On July 24, 2013 the USCG initiated consultation with the FWS pursuant to Section 7 of the ESA. The FWS provided comments on the DEIS, BA, and ESA Section 7 consultation request on August 23, 2013. The USCG responded to the FWS with additional information on September 13, 2013. On November 29, 2013, the FWS issued an ESA concurrence letter to the USCG.

U.S. Environmental Protection Agency (EPA)

In a letter dated August 19, 2013, the EPA responded with comments on the DEIS. Each EPA comment is provided below followed by a response to each comment in bold.

EPA Comments on the DEIS

Based on our review of the DEIS, US EPA's environmental concerns are related to the footprint of the Rye Road alternative evaluated, and the construction methods and BMPs implemented during the construction of the bridge.

Rye Road Alternative

This Alternative proposes a widening of a 10+ mile segment of a road and the addition of a two-lane bridge across the Manatee River. The conceptual design and typical section shows a total width of 110' of ROW. Since this alternative widens a road segment that is more than 10 mile, minimizing the foot print can significantly reduce the impact. It is recommended to examine other alternate sections that can accommodate a 4-lane road. Alternate sections may include ones with narrower median. It is recommended to investigate the possibility of reducing the footprint of this proposed roadway while keeping the capacity near the target VMTs.

Response: The proposed typical section for the Rye Road Alternative conforms to Manatee County Transportation Department standard and AASHTO Greenbook criteria for suburban areas. Based on safety considerations and design speeds the proposed median of 22 feet is at minimum standards as well as clear zones. Sidewalks are required by County and the bicycle lane is collocated in the minimum paved shoulder width of 4 feet for a suburban typical section.

Construction Method and BMPs for the Fort Hamer Alternative

EPA recommends including more details and specifics regarding construction methods and protection measures, especially for the Fort Hamer Road new bridge Alternative. Since the new bridge will be significantly longer (2,570 feet), it is necessary to elaborate on the construction methods and techniques, on how materials will be transported to the site, and what additional specific measures and BMPs will be in place to minimize impact on the wetlands and aquatic resources in the area. Quantifying impacts on these resources can differ significantly with different construction techniques.

Response: It is not possible to elaborate on specific construction methods and techniques and what specific measures and BMPs will be in place until a construction contractor is selected for the project and he determines which methods/techniques he will employ. Without knowing specifics, we can state in general terms that the construction contractor may elect to use a temporary trestle from which to construct much of the proposed bridge. The temporary trestle would extend across the wetland areas on both sides of the main channel and would result in fewer wetland impacts than placing a temporary causeway or mats across the wetlands. The temporary trestle would not span the channel of the river; work at this segment of the bridge would likely be conducted from barges. The wetland impacts presented in the DEIS and Wetland Evaluation Report reflect the permanent wetland impacts resulting from the proposed bridge and the temporary impacts associated with a temporary construction trestle.

The concrete piles for the proposed bridge will likely be driven with a hydraulic hammer, however, there is a potential for the contractor to use water-jetting to start the piles.

It is envisioned that materials will be delivered to the construction site via truck and by barge.

State of Florida Historic Preservation Officer (SHPO)

In a letter dated January 3, 2013 DHS/USCG submitted the Cultural Resource Assessment Survey (CRAS) for the Fort Hamer EIS for review and concurrence.

In a letter dated February 6, 2013 the State of Florida SHPO concurs with the findings found within the submitted CRAS and finds the CRAS in compliance with Chapter 1A-46 FAC.

Seminole Tribe of Florida

In a letter dated August 4, 2010, the Seminole Tribe of Florida notes that “[the tribe] appreciates the invitation to this meeting [scoping] but is unable to attend.”

A meeting was held on January 7, 2011 with the Seminole Tribe of Florida to update the Tribe on the status of the project as a USCG led EIS. During that meeting the reduction of the scale of the project was discussed and the commitment from Manatee County to place a historic marker/plaque at the bridge to commemorate the events related to Fort Hamer and the Second Seminole War.

In a letter dated November 20, 2012, the Tribe acknowledges the initiation of government-to-government consultation as part of the Section 106 process.

In a letter dated January 2, 2013, DHS/USCG submitted the CRAS for the Fort Hamer EIS for review and concurrence.

In an e-mail dated March 11, 2013, the Seminole Tribe of Florida communicated with DHS/USCG that Tribe still “has a desire” to erect a commemorative marker/plaque in association with the proposed bridge.

Seminole Nation of Oklahoma

In a letter dated January 2, 2013, DHS/USCG submitted the CRAS for the Fort Hamer EIS for review and concurrence.

5.4 PUBLIC HEARING

The USCG, in cooperation with Manatee County, conducted a public meeting for the proposed construction of a highway bridge across the Manatee River in Manatee County on Wednesday, August 7, 2013 at the Bradenton Area Civic Center (aka Manatee County Civic Center), 1 Habem Blvd., Palmetto, Florida 34221.

The purpose of the meeting was to receive comments on the DEIS and the proposed project's impact on river navigation. The DEIS was on display for public review at the Coast Guard District, Manatee County Chamber of Commerce, Manatee County Central Library, and Manatee County Rocky Bluff Library, and on the USCG website prior to the meeting and for at least 10 days following the meeting.

An invitational letter for the public meeting was mailed to property owners and interested parties on July 3, 2013 and an email was sent to public officials and agencies on July 3, 2013. A document availability notification and meeting announcement was published in the *Bradenton Herald* on July 17 and July 29, 2013.

The formal presentation began at approximately 4:00 p.m. on August 7, 2013 with Randall Overton, USCG Project Manager, presiding. Marty Peate, URS Project Manager, provided a PowerPoint presentation, which included project history, a description of alternatives, and the purpose and need for the project. Following the formal presentation by the USCG and its consultant, oral statements were taken from those who had completed speaker request cards. The formal presentation and oral statements were recorded by a court reporter and has been included in an official transcript. All interested parties were afforded the opportunity to present data, views and comments, orally or in writing, on navigation, environmental impacts and historic preservation concerns.

A total of 402 people signed the attendance sheets at the meeting. Meeting handouts were provided to meeting attendees. Comment forms were available at the registration tables and at comment tables in the lobby area. Participants were encouraged to fill out a speaker request card if they desired to speak at the meeting. Twenty-nine (29) people filled out speaker cards, and 28 people spoke for the public record during the formal meeting.

Table 5-2 provides a tally of the number of written comments received as a result of this public meeting with a general summary of the issues and concerns:

A CD containing the comments received as a result of this public meeting, sign-in sheets, speaker cards, and a copy of the official public meeting transcript is attached to this summary.

**TABLE 5-2
SUMMARY OF COMMENTS RECEIVED AT THE 08/07/13 PUBLIC MEETING**

Description	Total	In Favor	Oppose	Issues/Concerns
Written Comments completed and submitted at the public meeting	82	64	18	8 – Traffic related concerns 3 – Bridge is for developers 2 – Boat/navigation safety 1 – Cultural resources specific to the location of Fort Hamer 1 – Noise 3 – General
Petitions submitted by a speaker at the public meeting	447	447	0	
CD submitted by a speaker from the For Our Bridge website	766	766	0	
Oral comments made at the public meeting	28	22	6	1 – Purpose and Need 1 – Aesthetics
Comments from Federal Register Docket website	113	96	24	4 – Traffic related concerns 4 – Environmental concerns (wildlife, wetlands) 3 – Visual and aesthetic 11 – Purpose and need 1 – Noise 2 – Water quality 2 – Navigation 1 – Logical Termini 1 – Fort Hamer Park and Boat Ramp 1 – Emergency Response
Total	1,436	1,395	48	

5.4.1 RESPONSES TO PUBLIC COMMENTS FROM THE PUBLIC HEARING

As noted in Table 5-2, over 1,400 comments were received during the Public Hearing comment period. Of those comments, 48 were in opposition to the proposed project. The following section summarizes these comments into 12 categories (Purpose and Need, Traffic, Boat Safety, Private Interests are Driving the Bridge, Noise, Aesthetics, Environmental Concerns, Water Quality, Cultural Resources, Logical Termini, Fort Hamer Park and Boat Ramp, and Emergency Response) and provides responses. The following section addresses those comments received from the public.

Purpose and Need

Several comments mention that the Purpose and Need is flawed with no specific indication of which element or elements are flawed. The stated Purpose and Need as found in Chapter 1, is to:

- Accommodate existing and project growth in eastern Manatee County:

- Section 1.2.2, Population and Employment Growth – based on 2010 U.S. Census data, Manatee County has a population of 322,833, which is a 22.3 percent increase from 264,002 in 2010. Within the census tracts inside the project area (Figure 1-1), that population has grown from 21,002 in 2000 to 47,643 in 2010, a 128.6 percent increase. The Countywide population is projected to grow to 447,910 by 2035. *The Fort Hamer Alternative is centered on the area of current and projected growth.*
- Improve the level of service (LOS) of the local roadway network:
 - Section 1.2.3, Improvements to LOS on the Local Roadway Network – Table 1-2 summarizes the No-Build Alternative annual average daily traffic (AADT) volumes in 2015 (opening year) and 2035 (design year) on major roadways in the project area. These volumes were compared to the Fort Hamer Road and Rye Road Alternatives to identify which alternative yielded the greatest network-wide improvements to volumes and, therefore, LOS. *The Fort Hamer Alternative provides the best LOS results along the corridor and throughout the network.*
- Improve emergency response times:
 - Section 1.2.4, Emergency Response and Evacuation Enhancement – according to Manatee County Emergency Medical Services (EMS) records, the current (2013) average response time for the 17 ambulances Countywide is 7.5 minutes. The National Fire Protection Association’s (NFPA’s) Standard 1710 states that for Fire Suppression Services Deployment (NFPA 1710 §5.2.4) and Emergency Medical Services Deployment (NFPA 1710 §5.3.3.3) of Initial Arriving Company shall be within 4.0 minutes of the incident 90 percent if the time. *The Fort Hamer Alternative provides the greatest improvements to emergency response times.*
- Improve hurricane evacuation capacity across the Manatee River:
 - Section 1.2.5, Hurricane Evacuation – in 2010, the State of Florida State Emergency Response Team (SERT) developed a Statewide Regional Evacuation Study Program which examined evacuation clearance times for 11 emergency management regions within the state. Manatee County is within the Tampa Bay region along with Pinellas, Hillsborough, and Pasco counties. Tables 1-3 and 1-4 summarize operation clearance times and maximum evacuating times for each of the counties and the region as a whole. Manatee County requires between 10.0 and 69.5 hours to evacuate up to 284,000 persons. During a regional evacuation the clearance time increases to 11.0 to 75.0 for 660,000 persons. *The Fort Hamer Alternative provides a local, parallel alternative to I-75 for north/south evacuation.*

Traffic

Concerns related to the general increase in traffic volumes from the Fort Hamer Alternative with the introduction of a new crossing connecting two existing roadways including safety (bicycles

and pedestrians), proximity to Annie Lucy Williams Elementary School, and access and egress to the Waterlefe Community on the southern shore of the Manatee River.

Table 4-6 summarizes the projected traffic conditions for the No-Build Alternative, Fort Hamer Alternative, and Rye Road Alternative. The following is information found in that table:

Roadway Segment	2011	2015			2035		
	No-Build AADT	No-Build AADT	Fort Hamer Alternative AADT	Rye Road Alternative AADT	No-Build AADT	Fort Hamer Alternative AADT	Rye Road Alternative AADT
Upper Manatee River Road	5,500 – 8,300	5,900 – 9,100	17,400 – 19,500	5,300	9,800 – 14,500	23,600 – 27,200	10,900 – 14,500
Fort Hamer Road	300 – 2,700	1,400 – 5,200	14,500 – 17,400	800 – 17,400	2,100 – 10,500	15,400 – 23,600	2,100 – 21,200
Rye Road	2,800 – 5,700	2,900 – 7,000	2,900 – 7,000	14,000 – 14,500	15,600 – 19,800	6,500 – 9,400	23,200 – 24,000
Golf Course Road	1,800	1,100	3,700	9,800	11,500	3,000	22,900
I-75	90,500	130,900	122,900	126,600	164,700	163,300	165,200

Traffic volumes for both Build Alternatives increase the number of vehicles on either Fort Hamer Road or Rye Road. The Fort Hamer Alternative in 2015 reduces volumes on I-75 by 8,000 vehicles per day (vpd) and in 2035 reduces volumes in Golf Course Road by 8,500 vpd and on I-75 by 1,400 vpd. Conversely, the Rye Road Alternative reduces volumes on I-75 by 3,700 vpd and in 2035 increases volumes in Golf Course Road by 11,400 vpd and on I-75 by 500 vpd. The recommended Fort Hamer Alternative has a greater regional benefit to the transportation network by removing vehicles from other segments of the network.

The recommended Fort Hamer Alternative typical sections for the roadway and bridge call for a 5-foot sidewalk and a 4-foot bike lane on the east side for both the roadway and bridge. In conjunction with the proposed typical section, Manatee County is currently constructing sidewalks on the east and west side of Fort Hamer Road from the river north to Annie Lucy Williams Elementary.

In the area of Annie Lucy Williams Elementary, Manatee County is also currently under design and permitting for roadway improvements to include widening, shoulder improvements, sidewalks, and intersection improvements for right- and left-turn lanes (see Table 2-10, Current CIP Projects).

Waterlefe residents will have right-in/right-out access at Winding Stream Way and Upper Manatee River Road. To travel north across the river (currently a movement that does not exist) vehicles travel south to a new signalized intersection approximately 750 feet south and perform a U-turn.

The proposed improvements are based on population and traffic generation projections developed using approved and adopted Future Land Use mapping from Manatee County. Table

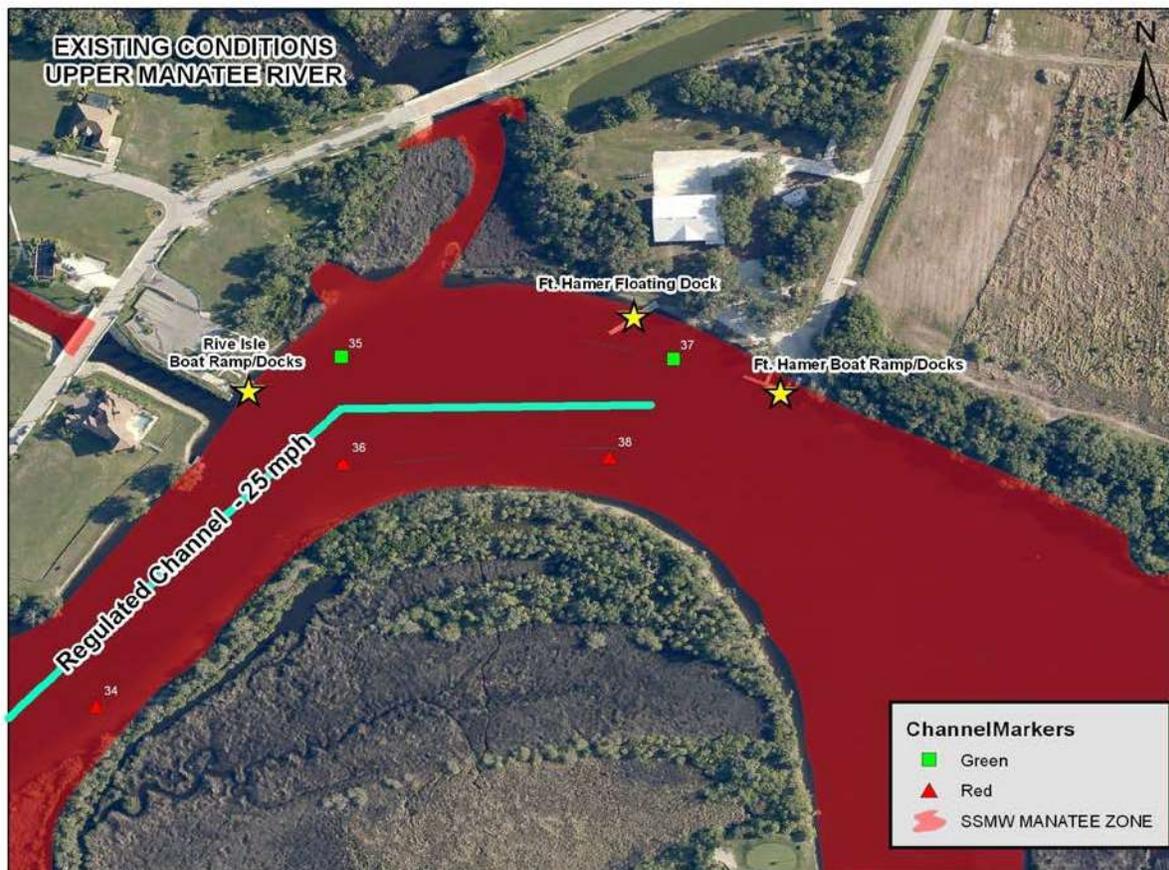
2-10 describes those projects currently on the Manatee County Capital Improvement Plan (CIP) that in conjunction with a new crossing works toward alleviating current and future mobility issues in the project area.

Boat Safety and Navigation

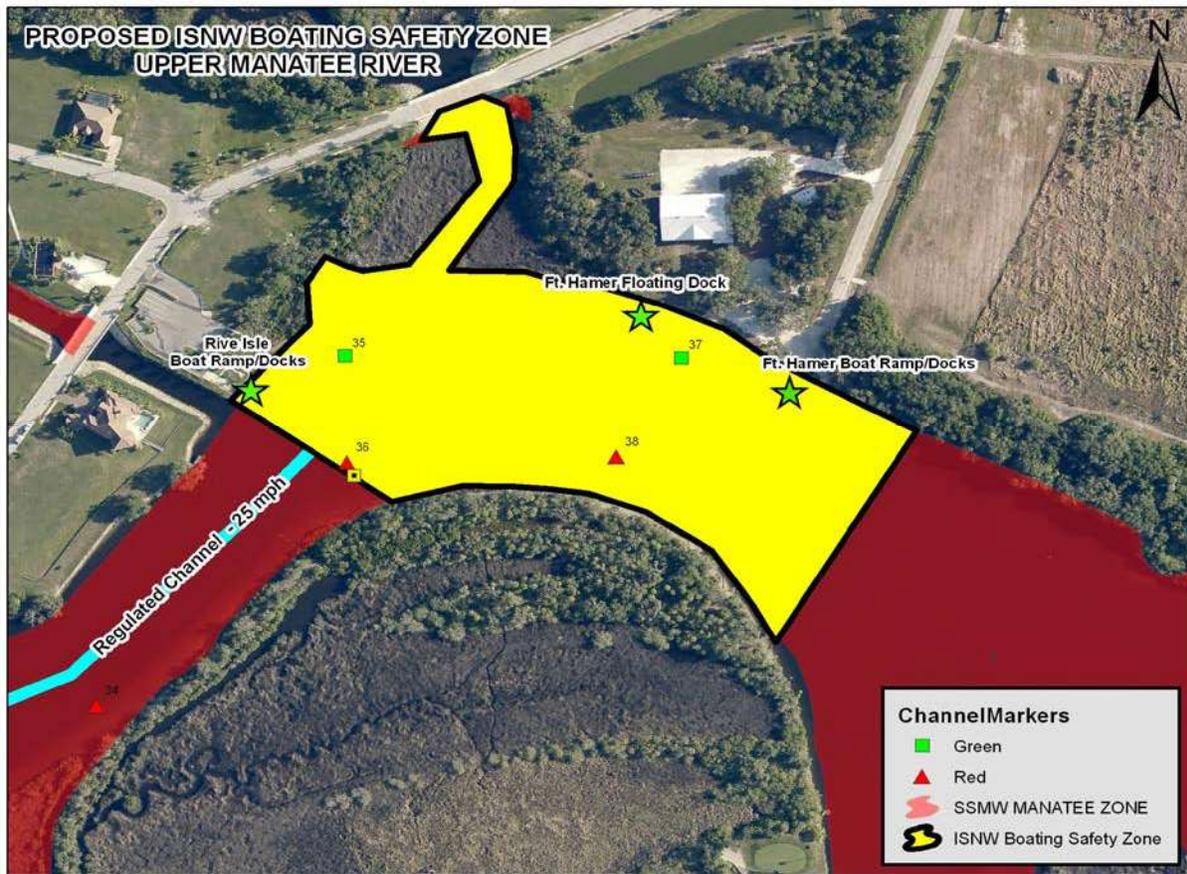
Two comments were received that had concern related to the location of the proposed bridge and boat usage. The commenters were concerned about the amount of time a boater would have traveling upstream while possibly pulling water skiers or tubers.

Based on the current FWC Manatee Protection Zones (68C-22.014 FAC), the entire area of the Manatee River east of the I-75 is marked as “Slow Speed” and 25 miles per hour (mph) in the marked channel to a point approximately 2,500 feet upstream (east) of the proposed crossing (Markers 37/38). In October 2013, Manatee County proposed and passed County Ordinance 13-37 establishing an Idle Speed No-Wake Boating Safety Zone beginning at Marker 36 (see figures below).

Existing Condition



Proposed Condition



Manatee County is authorized by 327.46(b)(1)(a) F.S. to:

“[e]stablish the following boating-restricted areas by ordinance: 1. An ordinance establishing an idle speed, no wake boating-restricted area, if the area is: a. Within 500 feet of any boat ramp, hoist, marine railway, or other launching or landing facility available for use by the general boating public on waterways more than 300 feet in width or within 300 feet of any boat ramp, hoist, marine railway, or other launching or landing facility available for use by the general boating public on waterways not exceeding 300 feet in width.”

Idle Speed – No Wake is defined as the lowest speed at which a vessel or personal watercraft may operate while maintaining steering control and forward progress.

Slow Speed – Minimum Wake is defined as the speed at which a vessel or personal watercraft proceeds when it is fully off plane, completely settled in the water and not producing a wake that endangers other vessels.

Based on the passage of County Ordinance 13-37 and the speed restrictions established there within, any vessel or boater adhering to the marked restrictions will have ample time to gain visual orientation with the proposed new bridge crossing.

Private Interests are Driving the Bridge

Several commenters expressed concern that local developers were the only parties to gain from the construction of a new bridge at the Fort Hamer Alternative location.

Figure 1-7 depicts the historic and approved development pattern for the study area. Based on the 2030 Future Land Use map, the entire study area is slated for some level of development. Section 3.1.2.2, Future Land Use, Table 3-8 indicates that the Fort Hamer and Rye Road Alternatives both have 222 acres of designated residential land use.

Noise

Two homeowners (one on Fort Hamer Road and one within the Waterlefe community) submitted comments voicing concerns related to noise impacts, potential noise barriers, and trucks.

Section 4.4.1 details the methodology and results of the noise study and barrier analysis. The noise study was performed in accordance with FHWA's Measurement of Highway-Related Noise guidance. Noise measurements were then modeled using the Traffic Noise Model (TNM) version 2.5.

Model results found that for the Fort Hamer Alternative of the 39 noise-sensitive sites evaluated, none approached, meet or exceeded noise abatement criteria (NAC) as established by FHWA guidance. One receptor was found to have a substantial increase. However, for a noise barrier to be considered feasible, two or more impacted receptors must achieve a reduction. No other receptors are benefited; therefore, a noise barrier is not considered a feasible noise abatement measure for this single receptor.

The Rye Road Alternative, however, found that of the 182 noise-sensitive sites evaluated, 11 meet and/or exceed NAC and required a noise barrier analysis. One barrier was evaluated but found not reasonable (see Table 4-19).

Upper Manatee River Road and Fort Hamer Road are local roads owned and maintained by Manatee County and; therefore, Manatee County has the authority to restrict certain types of vehicles on roadways. Manatee County has committed to posting this corridor as a "No Trucks" corridor.

Aesthetics

Several comments were received with issues related to the aesthetics of the proposed Fort Hamer Bridge and its potential impact to surrounding area.

Manatee County has committed to forming a Design Advisory Committee composed of residents proximate to the proposed Fort Hamer Bridge to gather input on such features as lighting, color schemes, railing details, façade treatments, and landscaping.

Environmental Concerns

Comments received related to environmental concerns focused on impacts to wetlands and increased potential for road kill of wild and domestic animals.

Sections 4.3.2.6, Table 4-12 summarizes the impacts to wetlands (direct and indirect) for the Fort Hamer and Rye Road Alternatives. The following is information found in that table:

Impact Type	Impact Acres	
	Fort Hamer Alternative	Rye Road Alternative
Direct		
<i>Permanent Dredge/Fill</i>	2.05	2.51
<i>Permanent Shading</i>	1.01	0.01
Secondary		
<i>25-ft Buffer</i>	1.28	4.48
<i>50-ft Buffer</i>	8.73	7.34
<i>100-ft Buffer</i>	10.75	14.40
Totals		
<i>Direct + 25-ft Buffer Secondary</i>	4.34	7.00
<i>Direct + 50-ft Buffer Secondary</i>	11.79	9.86
<i>Direct + 100-ft Buffer Secondary</i>	13.81	16.92

A Mitigation plan for these impacts is detailed in Figure 9 of the Wetland Evaluation Report (Appendix D of the FEIS).

Water Quality

Two comments were received related to concerns about water quality.

The Southwest Florida Water Management District (SWFWMD) establishes water quality criteria for stormwater run-off from roadway and bridge projects through Rule 40D-4, Florida Administrative Code (F.A.C.). These criteria must be met and demonstrated in order to receive an Environmental Resource Permit (ERP) from SWFWMD, which constitutes water quality certification of the project in accordance with State of Florida and EPA requirements.

Cultural Resources

One comment was received related to the potential of Second Seminole War Fort Hamer.

Sections 3.2 and 4.2 detail Cultural Resources within the study area and potential impacts to those resources. A Cultural Resources Assessment Survey (CRAS) was conducted and submitted to the State of Florida Division of Historic Resources, SHPO. The CRAS was approved on April 17, 2013. The CRAS found that neither Build Alternative had an adverse impact on historic or archaeological resources. A copy of the CRAS is provided in Appendix C. The SHPO further stated that,

“[i]t is the opinion of this office that the principal structures of Fort Hamer were not located within the area of potential effect for this project.”

Logical Termini

The logical termini of the Fort Hamer and Rye Road Alternatives were based on the actions necessary to satisfy the purpose of this project, to increase capacity across the Manatee River. In this case, capacity needs to be increased by two lanes. In the Fort Hamer Alternative, there is no crossing and a two lane bridge would satisfy the demand. A new crossing at Fort Hamer ties the existing two lane Upper Manatee River Road to the south with the two lane Fort Hamer Road to the north. The limits of the purposed action end once the new bridge is geometrically connected to the current roadway typical sections.

In the Rye Road Alternative, there is an existing two lane bridge. In order to increase capacity on Rye Road by two lanes it would require expanding the existing Rye Road bridge from two to four lanes. This would also require expansion of the current two-lane Rye Road north and south of the crossing from two to four lanes. In order for the improvements to operate with the added capacity, the Rye Road expansion would need to be carried to the next intersection north and south. In this case, it is SR 64 to the south and US 301 to the north. Expansion of the roadway network is needed to accompany the added two lanes of capacity across the river in order to maintain the operational effectiveness of the added capacity at the crossing.

Fort Hamer Park and Boat Ramp

During the early development of this project as an FHWA lead project the Fort Hamer Park and Boat Ramp were avoided due to the park’s protection under Section 4(f) of the USDOT Transportation Act. As part of that avoidance exercise, County staff worked in conjunction with FHWA to jointly plan for a future bridge crossing at the Fort Hamer location which included the development of a transportation easement in the regional park and rowing center that was being planned on the east side of Fort Hamer Road. The Fort Hamer Alternative has no direct impacts to the park and provides for improved and safer access to the resource.

Emergency Response

The analysis of emergency response times is a representative analysis of regional response times. In Section 1.2.4 – Emergency Response and Evacuation Enhancement, it is noted in a letter from Fire Chief Bryon Teates, that “a new crossing in the area of Fort Hamer would substantially reduce fire service mutual-aid response times. . . .”, and from EMS Chief Ronald Koper, Jr., “an additional crossing connecting the existing Upper Manatee River Road and Fort Hamer Road would improve public safety through decreased emergency response times and more efficient geographic coverage of areas proximate to the river.

Chapter 6

LIST OF PREPARERS

URS CORPORATION SOUTHERN - PRIME CONSULTANT

URS served as the Prime Consultant to Manatee County in the preparation of this Draft Environmental Impact Statement (DEIS).

Martin A. Peate, AICP – EIS Manager. M.S. Urban and Regional Planning, B.S. Political Science, 19 years of experience. Responsible for management, administration and coordination of consultant team, oversight of analysis and documentation.

Daren Carriere, P.E. – Project Manager. B.S.C.E, 29 years of experience. Responsible for management, administration and coordination of consultant team, and oversight of analysis and documentation.

Robert Johnson, P.E. – Water Resources Engineer. B.S. Environmental Engineering, 31 years of experience. Responsible for surface drainage and water resources analysis.

Tom Pride – Senior Environmental Scientist. M.S. Biology, B.S. Biology, 23 years of experience. Responsible for oversight of wetlands and protected species evaluations and quality assurance of biological studies.

Terry Cartwright – Environmental Scientist. B.S. Forest Resources and Conservation, 15 years of experience. Responsible for habitat mapping, ecological/biotic evaluations, and technical writing.

Domingo Noriega, P.E. – Senior Traffic Engineer. B.S.C.E., 29 years of experience. Responsible for traffic engineering and travel demand modeling.

Bruce Desilet, P.G. – Contamination. B.S. Geology, 34 years of experience. Responsible for contamination screening evaluations.

Lindsay Herman – Document Coordinator/Editor. 10 years of experience. Responsible for the overall document coordination including reviewing, organizing, and editing project materials for publication.

Bob Johnson – Senior Transportation Planner. B.S. Urban Planning, 33 years of experience. Responsible for traffic modeling and development of Traffic Technical Memorandum.

Megan McKinney, EI – Transportation Engineer. B.S. Industrial and Systems Engineering, 11 years of experience. Responsible for traffic engineering analysis and report preparation.

Roger Carvey – Graphics Designer. B.A. Fine Arts, 27 years of experience. Responsible for development of original graphics for environmental documents.

Debbie Wheeler – Graphics Designer. A.S. Fine Arts, 22 years of experience. Responsible for development of original graphics for environmental documents. QA/QC review of graphics.

Paul Floyd – Engineering Technician. 32 years of experience. Responsible for development of original alternatives mapping and graphics for environmental documents.

Vickie Scott, AICP – Senior Transportation Planner. B.A. Geography, 30 years of experience. Responsible for development of Noise and Air Analysis and Public Involvement Program.

Bob O'Donnell – Transportation Planner. M.P.A Transportation Planning, M.A.M Aviation Management, B.S. Civil Engineering, 13 years of experience. Responsible for development of updated Conceptual Stage Relocation Plan (CSRP), Section 4(f), and noise analyses.

Linda Lockhart, PMP – Senior Transportation Planner. M.A. Public Administration, B.A. Social Work, 13 years of experience. Responsible for development of the Purpose and Need and review of socioeconomic sections.

Adam Purcell, AICP – Transportation Planner. M.S. Urban and Regional Planning, B.S. Anthropology, 7 years of experience. Responsible for development of updated population, land use, community feature, and environmental justice analyses.

A. Brooke Haller – Geographic Information Systems Specialist. B.A. Geography, 8 years of experience. Responsible for collecting, analyzing, and creating Geographic Information System (GIS) data and maps; specifically Land Use, Wetlands, and Floodplains.

PRINCIPAL CONTRIBUTORS

ARCHAEOLOGICAL CONSULTANTS, INC.

Marion M. Almy, RPA – Principal Investigator. M.A. Public Archaeology, B.A. Anthropology, 35 years of experience. Responsible for oversight of research and presentation of Cultural Resource Assessment Survey (CRAS) report.

Sarah P. Ward – Architectural Historian. M.F.A. Historic Preservation, B.A. Art History, 13 years of experience. Responsible for archival research conducted at the local, state, regional, and national levels and preparation of history for CRAS report.

Chapter 7

***LIST OF AGENCIES, ORGANIZATIONS,
AND PERSONS TO WHOM COPIES OF
THIS STATEMENT WERE SENT***

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Chief, Natural Hazards Branch
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Ground Water/Drinking Water Board
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* Florida State Clearinghouse delivers to all state agencies in Tallahassee.

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The Honorable Marco Rubio
United States Senator
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The Honorable Bill Nelson
United States Senator
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Chapter 8

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**DEPARTMENT OF HOMELAND SECURITY
U.S. COAST GUARD FINAL ENVIRONMENTAL IMPACT STATEMENT**

FOR

**PROPOSED NEW BRIDGE ACROSS THE MANATEE RIVER, MILE 15.0,
AT PARRISH, MANATEE COUNTY, FLORIDA**

APPENDIX A

**CORRESPONDENCE
AND BOAT SURVEYS**

VARIOUS

TABLE OF CONTENTS

APPENDIX A-1

Waterlefe Transportation Easement Disclosure

Key clauses highlighted:

21.14 - Notice of Certain Conditions

21.24 - Approval of Association Lawsuits by Members

Warranty Deed citing Exhibit A (Roadway ROW to river - 3 pages)

Kimley-Horn and Associates (KHA) – 2-page excerpt

Page 2 (Jones) - Roadway ROW 84 feet required, 60 feet dedicated

APPENDIX A-2

Boat Survey Materials

September 1999 Boat Survey Responses

April 27, 2011 Boat Survey Letter

Parcel Ownership along Manatee River (Survey Recipients)

2011 Boat Survey Responses

APPENDIX A-3

Scoping Meeting Materials

Sign-In Sheets

Staff Sign-In Sheets

Speaker Cards

APPENDIX A-4

Coordination

<u>Date</u>	<u>Source</u>	<u>Subject</u>
05/06/2010	URS Corporation (URS) to Florida Natural Areas Inventory (FNAI)	Elemental Occurrence Information Request
05/06/2010	URS to FWC	Protected Species Information Request
05/06/2010	URS to USFWS	Protected Species Information Request
05/26/2010	FWC	Protect Species Information Response
07/20/2010	USCG to FWS, NMFS Protected Resources Division, NMFS SRO, USACE, United States Environmental Protection Agency (EPA), and FHWA	Invitation to be Cooperating Agency on EIS
07/27/2010	USDOC NOAA NMFS SRO	Cooperating Agency
07/29/2010	USACE	Cooperating Agency

<u>Date</u>	<u>Source</u>	<u>Subject</u>
07/29/2010	FHWA to USCG	Cooperating Agency
08/04/2010	Seminole Tribe of Florida THPO to USCG	Scoping Meeting
08/24/2010	FWS to USCG	NOI Review
09/20/2010	URS to FWC	Listed Manatee Information Request
09/24/2010	FWC	Listed Manatee Information Response - Emails (6)
11/17/2010	Seminole Tribe of Florida/USCG	Correspondence
01/13/2011	Manatee County Public Safety Department and Emergency Medical Services Division	Emergency Study Memo
01/14/2011	URS to ACI and THPO	Reintroduction Meeting
10/26/2011	Comment to USCG	Comment
10/31/2011	USCG	Response to Comment
03/07/2012	East Manatee County Fire Rescue District	Emergency Study Memo
03/30/2012	USCG Submittal of DEIS to CG-5512 Permits	
11/20/2012	Seminole Tribe of Florida THPO to USCG	Correspondence
01/02/2013	USCG to FDHR/SHPO, Seminole Nation of Oklahoma, Seminole Tribe of Florida	Correspondence
02/06/2013	FDOS DHR (SHPO) to USCG	Concurrence
03/05/2013	ACI to USCG	SHPO Response Correspondence
03/11/2013	Seminole Tribe of Florida to USCG	Correspondence
03/18/2013	USCG to SHPO	Concurrence
03/25/2013	USCG to FDOS DHR (SHPO)	Response to Concurrence
04/17/2013	FDOS SHPO to USCG	Correspondence
05/31/2013	USCG Advance Approval Letter for Rye Road Bridge	AA Letter
07/24/2013	USCG to FWS	ESA Section 7 and EFH Consultations, WER and BA Supplemental Updates
08/09/2013	NMFS to USCG	NMFS Comments on the DEIS
08/19/2013	EPA to USCG	Comments on the DEIS
08/23/2013	USACE to USCG	Comments on the DEIS
08/27/2013	NMFS to USCG	NMFS Comments on the DEIS
08/27/2013	FWS to USCG	FWS Comments on the DEIS
08/29/2013	NMFS to USCG	NMFS Comments on the DEIS
09/19/2013	USCG to FWS	Response to FWS' comments

<u>Date</u>	<u>Source</u>	<u>Subject</u>
10/09/2013	USCG to NMFS	Revised Consultation Letter and Response to NMFS' comments
10/09/2013	URS to NMFS	Response to NMFS' comments
11/29/2013	FWS to USCG	ESA Section 7 Concurrence Letter
12/11/2013	NMFS to USCG	ESA Section 7 Concurrence Letter
12/16/2013	NMFS to USCG	MSFCMA Concurrence Letter
02/25/2014	USACE to Manatee County	Wetland Mitigation and Permitting

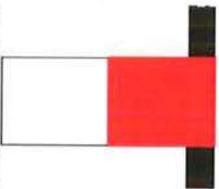
APPENDIX A-1

Waterlefe Transportation Easement Disclosure

SERVE JUSTICE. DECLARANT HEREBY SUGGESTS THAT EACH OWNER UNDERSTAND THE LEGAL CONSEQUENCES OF ACCEPTING A DEED, LEASEHOLD OR OTHER INTEREST. NO OWNER, THE DECLARANT, PARTICIPATING BUILDER, OCCUPANT OR ANY OTHER PERSON BOUND BY THIS DECLARATION WILL SEEK TO CONSOLIDATE ANY SUCH ACTION, IN WHICH A JURY TRIAL HAS BEEN WAIVED, WITH ANY OTHER ACTION IN WHICH A JURY TRIAL CANNOT OR HAS NOT BEEN WAIVED.

BK 1673 PG 4225 86 of 153

- 21.12 Enforcement Costs. If any legal action or other proceeding is brought for the enforcement of this Declaration, or because of an alleged dispute, breach, default or misrepresentation in connection with any provisions of this Declaration, the successful or prevailing party shall be entitled to recover reasonable attorney's fees, court costs and all expenses even if not taxable as court costs (including, without limitation, all such fees, costs and expenses incident to appeals), incurred in that action or proceeding, in addition to any other relief to which such party or parties may be entitled.
- 21.13 Ten Year Projection. Maintenance Program. The Ten Year Projection, and the Maintenance Program attached to this Declaration as Exhibits "G", "M", "N", "N-1", and "O" respectively, are required by the County to be attached to this Declaration. Such documents are attached solely for the purpose of meeting County requirements and do not constitute a representation, warranty or statement to any Owner or other party as to any matter. They do not create any rights on behalf of any other party. Additionally, no party other than Manatee County may or shall rely upon such documents in any manner. The Ten Year Projection is merely an estimate of the items set forth therein and is not intended to be relied upon as to being the monetary amounts actually expended or needed to be expended with respect to the items set forth therein.
- 21.14 Notice of Certain Conditions. (A) THE UPPER MANATEE RIVER/FORT HAMER ROAD IS PLANNED TO BRIDGE OVER THE MANATEE RIVER ALONG THE EASTERN BOUNDARY OF THE PROPERTIES AND NEARBY KAY ROAD IS PLANNED AS A MAJOR THOROUGHFARE ROAD ALONG THE SOUTHERN BOUNDARY OF THE PROPERTIES; AND (B) AGRICULTURAL USES EXIST AND MAY CONTINUE TO EXIST ALONG PORTIONS OF THE SOUTHERN AND WESTERN BOUNDARIES OF THE PROPERTIES AND OTHER AREAS NEAR THE PROPERTIES. SUCH AGRICULTURAL USES MAY INCLUDE THE USE OF PESTICIDES AND HERBICIDES AND THE GENERATION OF NOXIOUS ODORS, PESTS, NOISES AND ACTIVITIES ASSOCIATED WITH AGRICULTURAL USES. EACH OWNER BY ACCEPTANCE OF A DEED, LEASEHOLD, OR OTHER INTERESTS RELEASES DECLARANT AND ITS AFFILIATES FROM ANY CLAIMS RELATED TO SUCH CONDITIONS OR MATTERS.
- 21.15 COVENANTS RUNNING WITH THE LAND. IT IS THE INTENTION OF ALL PARTIES AFFECTED HEREBY (AND THEIR RESPECTIVE HEIRS, PERSONAL REPRESENTATIVES, SUCCESSORS AND ASSIGNS) THAT THESE



FEB 01 2000

any governmental authority, utility company or any other entity which at a later date are refunded in whole or in part, shall be returned to the Declarant in the event such refund is received by the Master Association.

21.24 Approval of Association Lawsuits by Members. No judicial or administrative proceeding shall be commenced or prosecuted by the Master Association unless approved by a vote of seventy-five (75 %) percent of the Owners. This Section shall not, however, apply to:

- 21.24.1 actions brought by Association to enforce the provisions of the this Declaration, the Articles, the Bylaws and the Rules and Regulations of the Master Association, (including, without limitation, the foreclosure of liens or enforcement of Architectural Review Requirements);
- 21.24.2 the imposition and collection of Assessments or Club dues as provided in this Declaration;
- 21.24.3 proceedings involving challenges to ad valorem taxation;
- 21.24.4 counterclaims brought by Association in proceedings instituted against it.

This Section shall not be amended unless the prior written approval of the Declarant is obtained, which may be granted or denied in its sole discretion. The provisions of this Section 21.24 shall survive the termination of this Declaration and the termination of any interest of the Declarant in Waterlefe.

21.25 Florida Statutes. Whenever this Declaration refers to the Florida Statutes, it shall be deemed to refer to the Florida Statutes as they exist on the date this Declaration is recorded except to the extent provided otherwise as to any particular provision of the Florida Statutes.

21.26 Rule Against Perpetuities. If any of the provisions of this Declaration shall be unenforceable, unlawful, void or voidable for violation of the rule against perpetuities, then such provisions shall, irrespective of any other Section of this Declaration, terminate eighty-nine (89) years after the date of this instrument unless by the terms of this instrument such provision would sooner terminate. This provision shall be interpreted to comply with Section 689.225, Florida Statutes 1989, so as not to violate the Florida Uniform Statutory Rule Against Perpetuities.

FEB 0 1 2000

ACCEPTED IN OPEN SESSION
BOARD OF COUNTY COMMISSIONERS, MANATEE COUNTY

BK 1623 PG 4230 91 of 153

Warranty Deed From Corporation

Return to:

Name:

Address:

This instrument prepared by:

Jim Staples, Mgr., Land Acquisition

Transportation Department

P.O. Box 1000

Bradenton, Florida 34206

Waterleaf Golf & River Club, Phase I

ID #5429.0000/6 & 5460.0005/0

Grantee(s) S.S.#(s):

BK 1623 PG 4123 DKT # 1324248 1 of 3

SPACE ABOVE THIS LINE FOR RECORDING DATA

THIS WARRANTY DEED made and executed the 18 day of AUGUST A.D. 1999 by BAY COLONY-GATEWAY, INC., a corporation existing under the laws of Delaware, and having its principal place of business at 24301 Walden Center Drive, Suite 300, Bonita Springs, Florida 34134, hereinafter called the grantor, to COUNTY OF MANATEE, a political subdivision of the state of Florida, whose post office address is P.O. Box 1000, Bradenton, Florida 34206 hereinafter called the grantee:

(Whenever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations.)

WITNESSETH: That the grantor, for and in consideration of the sum of \$1.00 and other valuable considerations, receipt whereof is hereby acknowledged, by these presents does grant, bargain, sell, alien, remise, release, convey and confirm unto the grantee, all that certain land situate in Manatee County, State of Florida, viz:

See Exhibit "A" attached hereto.

TOGETHER with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.

TO HAVE AND TO HOLD, the same in fee simple forever.

AND the grantor hereby covenants with said grantee that it is lawfully seized of said land in fee simple; that it has good right and lawful authority to sell and convey said land; that it hereby fully warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever; and that said land is free of all encumbrances.

IN WITNESS WHEREOF the said grantor has caused these presents to be executed in its name, and its corporate seal to be hereunto affixed, by its proper officers thereunto duly authorized, the day and year first above written.

Signed, sealed and delivered in the presence of:

(CORPORATE SEAL)

BAY COLONY-GATEWAY, INC. Corporation

BY: Stephen C. Pierce President Signature

STEPHEN C. PIERCE Printed Name

ATTEST: Vivien Hastings Secretary Signature

VIVIEN HASTINGS Printed Name

Witness Signature Laurel Sitterly

LAUREL SITTERLY Printed Name

Witness Signature Melanie Scire

MELANIE SCIRE Printed Name

(Signature of two witnesses or secretary required by law)

STATE OF FLORIDA COUNTY OF LEE

The foregoing instrument was acknowledged before me this 18 day of AUGUST, 1999 by STEPHEN C. PIERCE, VICE-PRESIDENT of BAY COLONY-GATEWAY, INC., a Delaware corporation, on behalf of the corporation, who is personally known to me or has produced as identification.



Notary Public Signature Laurel Y. Sitterly

LAUREL Y. SITTERLY Printed Name

ACCEPTED IN OPEN SESSION BOARD OF COUNTY COMMISSIONERS, MANATEE COUNTY FEB 1 2000

Right of Way Dedication

DATE OF SHEET: 6/25/99

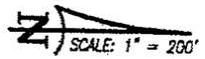
DRAWING NAME: WL11.DWG

Description: (Right of Way Dedication)

A Portion of land lying in Section 19, Township 34 South, Range 19, East, Manatee County, Florida. Described as follows:

NOTES:

1. These sketches do not represent a boundary survey. The purpose of the sketches is to graphically represent the description shown, attached hereto, has been prepared for this sketch.
2. The description shown, attached hereto, has been prepared for this sketch.
3. Bearings shown hereon refer to the East Line of Section 19, Township 34 South, Range 19 East, Being S.00°21'43"W.
4. Subject to easements and right of way of record, if any.
5. This plat has been prepared without the benefit of a Commitment for Title Insurance or a Title Policy.



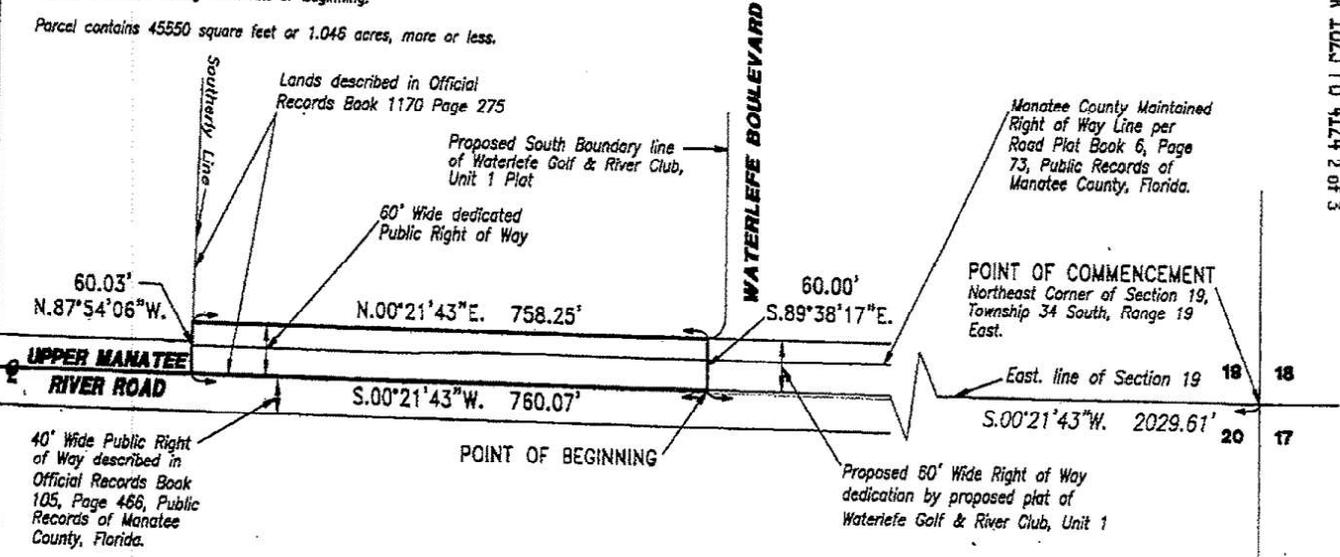
Commence at the Northeast Corner of Section 19, Township 34 South, Range 19 East, Manatee County, Florida.; thence S.00°21'43"W. along the east line of said Section 19 same being the east line of lands described in Official Records Book 1170, page 275, a distance of 2029.61 feet to the POINT OF BEGINNING.; thence continue along said East line of Section 19, S.00°21'43"W., a distance of 760.07 feet same being the southeast corner of said lands described in Official Records Book 1170, page 275; thence N.87°54'06"W. leaving said east line of Section 19 along the Southerly line of said lands described in Official Records Book 1170, page 275, a distance of 60.03 feet; thence N.00°21'43"E., a distance of 758.25 feet; thence S.89°38'17"E., a distance of 60.00 feet to a point on said East line of Section 19, same being the Point of Beginning.

Parcel contains 45550 square feet or 1.046 acres, more or less.

BK 1623 PG 4124 2 of 3

MANATEE COUNTY (Page 1 of 2)

BOARD OF COUNTY COMMISSIONERS, MANATEE COUNTY



Sketch and Description
(NOT A BOUNDARY SURVEY)

BRITT SURVEYING, INC.

Right of Way Dedication

DATE OF SHEET: 6/24/99

DRAWING NAME: WLU1.DWG

SCALE: 1" = 400'

Summary: (Right of Way Dedication)

A Portion of land lying in Government lot 4 and 5, being in Section 17, Township 34 South, Range 19 East, Manatee County, Florida, described as follows:

Commence at the Southwest Corner of Section 17, Township 34 South, Range 19 East, Manatee County, Florida; thence S.85°30'30"E along the South line of said Section 17, a distance of 619.44 feet to the POINT OF BEGINNING; thence N.52°16'06"E, a distance of 109.27 feet to the point of curvature of a curve to the left, having: a radius of 1340.00 feet, a central angle of 31°03'47", a chord bearing of N.36°44'13"E and a chord length of 717.82 feet; thence along the arc of said curve, an arc length of 726.48 feet to the end of said curve; thence N.19°01'10"E, a distance of 102.23 feet to a point on a curve to the left, having: a radius of 1340.00 feet, a central angle of 15°19'53", a chord bearing of N.08°40'23"E and a chord length of 380.40 feet; thence along the arc of said curve, an arc length of 381.69 feet to the point of tangency of said curve; thence N.00°30'47"E, a distance of 180.17 feet; thence N.09°37'09"E, a distance of 387.51 feet to the point of curvature of a curve to the left, having: a radius of 7940.00 feet, a central angle of 03°37'42", a chord bearing of N.07°48'18"E and a chord length of 502.72 feet; thence along the arc of said curve, an arc length of 502.80 feet to the end of said curve some being a point on the Mean High Water Line of Manatee River; thence S.16°04'58"E along said Mean High Water Line, a distance of 44.29 feet; thence continue along said Mean High Water Line, S.24°15'38"E, a distance of 139.12 feet; thence continue along said Mean High Water Line, S.31°23'18"E, a distance of 96.29 feet; thence continue along said Mean High Water Line, S.39°52'42"E, a distance of 76.74 feet; thence continue along said Mean High Water Line, S.28°39'38"E, a distance of 150.55 feet to a point on the east line of lands described in Official Records Book 1110, Page 1190 Public Records of Manatee County, Florida; thence S.26°31'10"W along said East line described in Official Records Book 1110, Page 1190 Public Records of Manatee County, Florida, a distance of 570.35 feet; thence continue along East line described in Official Records Book 1110, Page 1190, S.00°30'47"W, a distance of 1185.75 feet to a point on the Northern Right of Way of Upper Manatee River flood described in Official Records Book 115, Page 280, Public Records of Manatee County, Florida; thence N.85°30'12"W along said Northern line described in Official Records Book 115, Page 280, Public Records of Manatee County, Florida, a distance of 183.20 feet to a point on the Northern Right of Way line of Upper Manatee River flood described in Official Records Book 105, Page 280, Public Records of Manatee County, Florida, some being a point on a curve to the left, having: a radius of 1185.91, a central angle of 15°19'53", a chord bearing of S.82°48'40"W and a chord length of 316.26 feet; thence along the arc of said curve, an arc length of 317.33 feet to the end of said curve some being a point on the said aforementioned line of Section 17; thence N.85°30'30"W along said South line of Section 17, a distance of 219.63 feet to the Point of Beginning.

Purcell contains 507449 square feet or 11.512 acres, more or less.

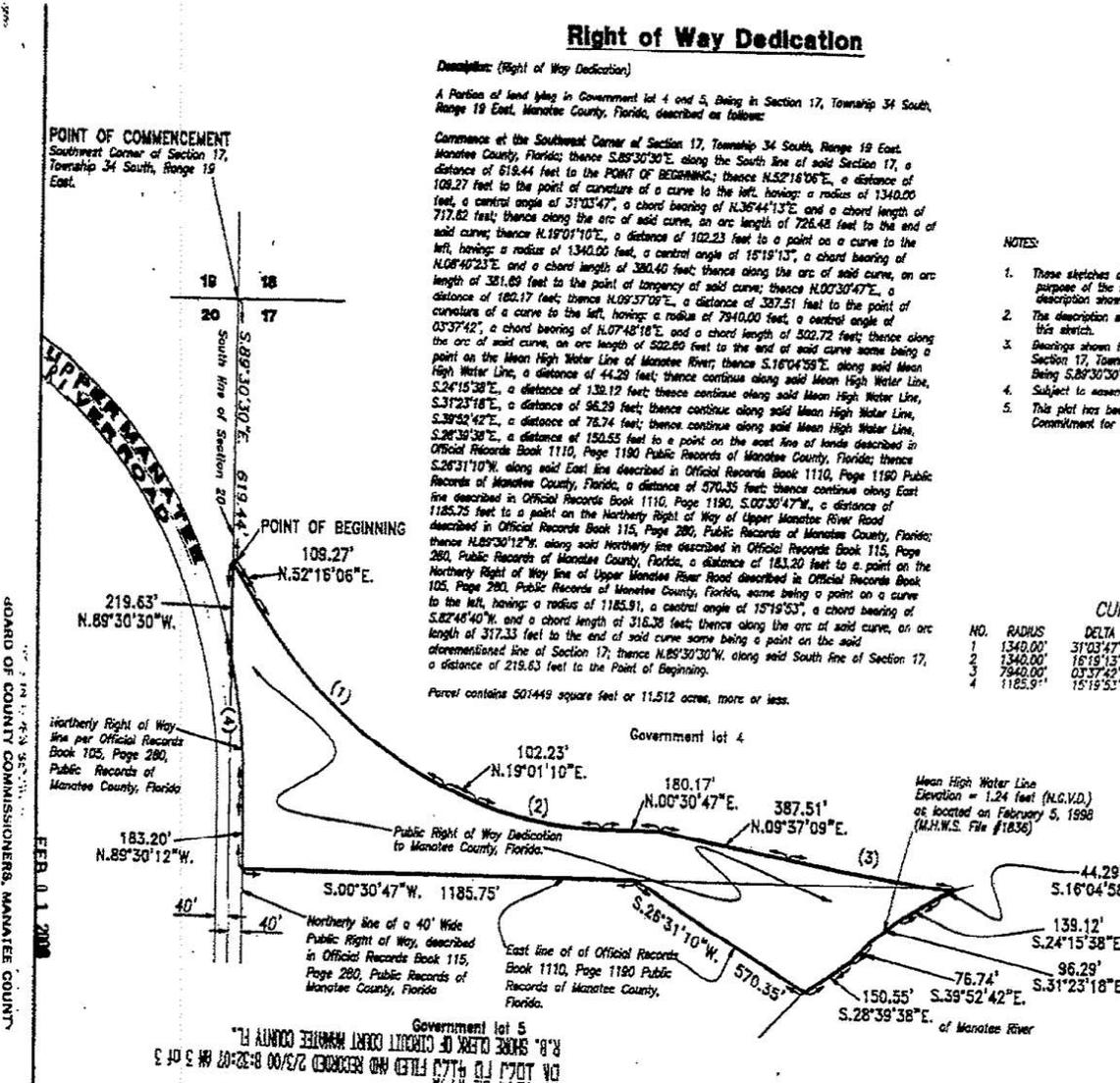
NOTES:

- These sketches do not represent a boundary survey. The purpose of the sketches is to graphically represent the description shown, attached here on.
- The description shown, attached hereto, has been prepared for this sketch.
- Bearings shown herein refer to the Southwesterly Line of Section 17, Township 34 South, Range 19 East, being S.85°30'30"E.
- Subject to assessments and right of way of record, if any.
- This plot has been prepared without the benefit of a Commitment for Title Insurance or a Title Policy.

CURVE TABLE

NO.	RADIUS	DELTA	ARC	CHORD	CHORD BEARING
1	1340.00'	31°03'47"	726.48'	717.82'	N.36°44'13"E
2	1340.00'	15°19'53"	381.69'	380.40'	N.08°40'23"E
3	7940.00'	03°37'42"	502.80'	502.72'	N.07°48'18"E
4	1185.91'	15°19'53"	317.33'	316.26'	S.82°48'40"W

Sketch and Description
(NOT A BOUNDARY SURVEY)



BOARD OF COUNTY COMMISSIONERS, MANATEE COUNTY

GOVERNMENT LOT 5
 R.B. SHORE CLERK OF CIRCUIT COURT MANATEE COUNTY FL
 ON 10/17/07 FILED AND RECORDED 2/3/00 8:32:00 AM 3 of 3
 07:27:05

BRITT SURVEYING, INC.

EXHIBIT "A" (Page 2 of 2)

K/W Dedication ORB 1623 Pg 4123
HOA DOCS. ORB 1623 Pgs 4140
153 pages



Kinsley Horn
and Associates, Inc.

PLANNING
APR 06 2000
DEPARTMENT

April 5, 2000

■
Suite 100
8506 Potter Park Drive
Sarasota, Florida
34238

Mr. Norm Luppino
Manatee County Planning Department
1112 Manatee Avenue West, 4th Floor
Bradenton, Florida 34206

Re: Waterlefe Golf and River Club

Our Ref: 048117007

Dear Mr. Luppino:

We are writing in response to your letter dated March 8, 2000, in which additional information was requested on the above referenced project. Our response is as follows:

LUPPINO

1. Please identify on the cover sheet what is being proposed with the request. Each use needs to be quantified.

Included in this Final Site Plan are: the River Club Building, the Permanent Golf Club Building, and 59 Boat Slips.

2. Parking calculations need corrections. Private community uses are required to provide one (1) space per three (3) seats or one (1) space per 250 square feet, whichever is greater. Both the River Club and Golf Club need to reflect this. The marina parking indicates 73 slips, although the marina that is part of this request was approved for a maximum of 59 slips. The footnote which references parking at the internal marina needs to be removed since it is not built and is not part of this request. Does the proposed parking spaces include the golf cart spaces.

Parking calculations are shown on SHEET 1 of the Final Site Plan. Please note that 28 spaces are cart spaces. We have restated the marina as the 59 slips included with this Final Site Plan.

3. The Final Site Plan sheets need to provide more details. How high are the buildings and structures? What are their areas and dimensions? What are their setbacks?

This information is shown in the BUILDING NOTES on the Title Sheet.

■
TEL: 941 522 2327
FAX: 941 522 2351



Kinley-Horn
and Associates, Inc.

14. Pursuant to Planning Condition 3 for the Final Site Plan approval for the temporary pro shop, an amended Final Site Plan for the overall development shall be resubmitted and approved prior to any further site plan approvals for the project. The amended site plan shall reflect the phasing reflected with that approval.

Acknowledged.

BRANNING/MAYER

1. The sewer main crossing the parking lot of the clubhouse will be privately maintained. All sewer manholes and service clean-out elevations must be set at least 4" above the 100-year flood plain.

Comment noted.

EARTLHEY/ANDRUZZI

1. No garbage service, either commercial cans or dumpster with details, shown on plan. See County Ordinance 85-11 and L.D.C. #728.

The dumpster screening appeared on the previously submitted set of plans. It is also shown on the enclosed plans on SHEET 4.

JONES

1. 84 feet of the right-of-way (42 feet half) is required per Ordinance 99-24 of the L.D.C. for Upper Manatee River Road. Portions of the right-of-way are dedeed at 40 feet half with the remainder being maintained at varying distances. There are also plans by the State to extend the road north across the river and tie into Fort Hamer Road. This should be checked into at this time.

At this time 60 feet of right-of-way has been dedicated for Upper Manatee River Road. The Upper Manatee River Road right-of-way to cross the river to tie into Fort Hamer Road, has been dedicated per the rezone stipulations.

O'SHEA

1. Decrease the impervious area in the park site.

The sidewalks in the park area have been decreased to from 8 feet to 5 feet in width. The sidewalk alignment has been reconfigured to keep the wetland buffer areas free of sidewalks.

2. Explain why only .48 acres of permanent wetland buffer impact is shown.

The southern boundary of the park site, up to part way around the tip of the point were permitted with the Phase 1 Final Site Plan. The .48 acres of Permanent Wetland Buffer Impact includes: the remainder of the buffer area in the point (.43

APPENDIX A-2
Boat Survey Materials

**September 1999
Boat Survey Responses**

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/6/99 Time: 10:15 am Surveyor: MFB Survey #: 1

Name: _____ Phone: (H) _____
Address: _____ (W) _____

e-mail: _____
Mailing List: Y N

Boat Type: small motor boat length: 17 ft. width: _____ height: under 10 ft.

Historical Use: pleasure Frequency: on weekends
(boating, fishing, etc.) (daily, weekly, monthly, etc.)

Origin: Across the bridge (Bradenton)

Direction of Travel: both
(upstream / downstream)

Destination / stops: on the bank across from dock

Other boat ramps: None

Marine Services: None
(marinas on the river, fueling, etc.)

Navigational concerns: sticks & junk thrown in the river.
(channel widths, hazardous areas, etc.)

Other: _____

(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date:

9/6

Time:

Surveyor:

Survey #:

2

Name:

Phone: (H)

Address:

(W)

e-mail:

Mailing List:

Y

N

Boat Type:

Pass by

length:

width:

height:

Historical Use:

(boating, fishing, etc.)

Frequency:

(daily, weekly, monthly, etc.)

Origin:

Direction of Travel:

(upstream / downstream)

Destination / stops:

Other boat ramps:

Marine Services :

(marinas on the river, fueling, etc.)

Navigational concerns:

(channel widths, hazardous areas, etc.)

Other:

16' sm motor 12-35 (fishing)
16' sm motor 12-35 (fishing)

(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/6 Time: Surveyor: Survey #: 3

Name: Pass-By Phone: (H) _____
Address: _____ (W) _____

e-mail: _____
Mailing List: Y N

Boat Type: _____ length: _____ width: _____ height: _____

Historical Use: _____ (boating, fishing, etc.) Frequency: _____ (daily, weekly, monthly, etc.)

Origin: _____

Direction of Travel: _____ (upstream / downstream)

Destination / stops: _____

Other boat ramps: _____

Marine Services : _____
_____ (marinas on the river, fueling, etc.)

Navigational concerns: _____

_____ (channel widths, hazardous areas, etc.)

Other: 16' flats (10³⁰)
16' flats (10⁴⁵)
Repeat Jet Ski from 9/4
Repeat Jet Ski from 9/5

(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/4/99 Time: 7:45 Surveyor: MFL Survey #: (A)

Name: Pass-by Phone: (H) _____
Address: _____ (W) _____

e-mail: _____
Mailing List: Y N

Boat Type: small motorboat^(Aft) length: 16'± width: _____ height: _____
Historical Use: fishing Frequency: _____
(boating, fishing, etc.) (daily, weekly, monthly, etc.)

Origin: Upstream
Direction of Travel: _____
(upstream / downstream)

Destination / stops: _____

Other boat ramps: _____

Marine Services : _____

(marinas on the river, fueling, etc.)

Navigational concerns: _____

(channel widths, hazardous areas, etc.)

Other: _____

(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/4 Time: 9:30 Surveyor: MRA Survey #: (5)

Name: Pass bye Phone: (H) _____
Address: _____ (W) _____

e-mail: _____
Mailing List: Y N

Boat Type: SM Motor length: 18-20' width: _____ height: <10'
Historical Use: Fish/Pleasure Frequency: _____
(boating, fishing, etc.) (daily, weekly, monthly, etc.)

Origin: _____
Direction of Travel: _____
(upstream / downstream)

Destination / stops: _____

Other boat ramps: _____

Marine Services : _____

(marinas on the river, fueling, etc.)

Navigational concerns: _____

(channel widths, hazardous areas, etc.)

Other: _____

(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD

Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/4/99 Time: 9³⁰ Surveyor: URA Survey #: (6)

Name: pass-by Phone: (H) _____
 Address: _____ (W) _____

 _____ e-mail: _____
 Mailing List: **Y** **N**

Boat Type: skiff trailer?! length: _____ width: _____ height: _____
 (photo)
 Historical Use: _____ Frequency: _____
 (boating, fishing, etc.) (daily, weekly, monthly, etc.)

Origin: _____
 Direction of Travel: _____
 (upstream / downstream)

Destination / stops: _____

Other boat ramps: _____

Marine Services : _____

 (marinas on the river, fueling, etc.)

Navigational concerns: Shallow areas each side of Ramp
along channel (+ 5 miles). Majority
of water activity @ boat ramp.
 (channel widths, hazardous areas, etc.)

Other: jet skis (2) 9³⁵ sm motor - 16' 10⁵⁵
sm. motor (16') 10¹⁵ " - 16' 11¹⁵
jet skier (2) 10²² motorized canoe - 12' 12⁴⁵
Sm motor 20'± 10²⁵ sm motor 14' 1²⁵
pontoon boat 20'± 1⁴⁵ (8-10' vertical)
 (park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD

Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/4/99 Time: 7:35 Surveyor: MRA Survey #: 7

Name: Bob Ball Phone: (H) _____

Address: **PERSONAL INFORMATION ON FILE**

Mailing List: Y N

Boat Type: SM motor boat length: 16' width: 6' 1/2' height: 4' 10'

Historical Use: fishing (boating, fishing, etc.) Frequency: 3/mo - fishing depend (daily, weekly, monthly, etc.)

Origin: Parrish

Direction of Travel: Gulf (upstream / downstream)

Destination / stops: miscellaneous fishing locations

Other boat ramps: _____

Marine Services: Greenbridge Yacht club
(marinas on the river, fueling, etc.)

Navigational concerns: _____
(channel widths, hazardous areas, etc.)

Other: cut in dike near waterlock was filled for construction
will it be reopened, or is it permanent
(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/4 Time: 10:00 Surveyor: MML Survey #: 8

Name: Ed Boale
Address: PERSONAL INFORMATION ON FILE
Phone: PERSONAL INFORMATION ON FILE
e-m: PERSONAL INFORMATION ON FILE
Mailing List: Y N

Boat Type: Motor length: 19' width: 8' height: 7'10"
Historical Use: Rec (boating, fishing, etc.) Frequency: 2x mo (daily, weekly, monthly, etc.)

Origin: Bradenton
Direction of Travel: Upstream (upstream / downstream)

Destination / stops: Cruising up & down - fishing - swimming.

Other boat ramps: Greenbridge

Marine Services: none used
(marinas on the river, fueling, etc.)

Navigational concerns: low tide - shallow areas
(channel widths, hazardous areas, etc.)

Other: more shell @ ramp - too steep.
(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/4 Time: 10:40 Surveyor: MML Survey #: (9)

Name: _____ Phone: (H) _____
Address: A/A _____ (W) _____
e-mail: _____
Mailing List: Y N

Boat Type: motor length: 16' width: 6' height: 3'
Historical Use: rec/skiing (boating, fishing, etc.) Frequency: 1x mo (daily, weekly, monthly, etc.)

Origin: Palmetto
Direction of Travel: up & down (upstream / downstream)

Destination / stops: none

Other boat ramps: Greenbridge

Marine Services: gets bait @ Greenbridge
(marinas on the river, fueling, etc.)

Navigational concerns: _____
(channel widths, hazardous areas, etc.)

Other: vandalism to park cars
(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/4 Time: 10:50 Surveyor: MML Survey #: (12)

Name: Willie Sweeney Phone: PERSONAL INFORMATION ON FILE
Address: PERSONAL INFORMATION ON FILE
e-m:
Mailing List: (Y) N

Boat Type: small motor length: 15.9' width: 6' height:
Historical Use: rec/picnic (boating, fishing, etc.) Frequency: 3 x mo (daily, weekly, monthly, etc.)

Origin: Bradenton
Direction of Travel: up & down - cruising around - (upstream / downstream)

Destination / stops: none -

Other boat ramps: none

Marine Services : none (marinas on the river, fueling, etc.)

Navigational concerns: none (channel widths, hazardous areas, etc.)

Other: parking - van parked in drive
Kids swimming around dock - can't see them -
(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/4 Time: 11:45 Surveyor: MML Survey #: (11)

Name: Tim Jones
Address: PERSONAL INFORMATION ON FILE
Phone: PERSONAL INFORMATION ON FILE
e-mail: hotmail.com
Mailing List: Y N

Boat Type: small motor length: 22' width: 6' height: _____
Historical Use: rec/ski (boating, fishing, etc.) Frequency: 6 days/wk (daily, weekly, monthly, etc.)

Origin: Bradenton
Direction of Travel: right here -- too shallow elsewhere (upstream / downstream)

Destination / stops: none

Other boat ramps: no - no salt

Marine Services: no (marinas on the river, fueling, etc.)

Navigational concerns: no (channel widths, hazardous areas, etc.)

Other: pkg in drive
vandalism - had fire slit on truck -
bumpers @ dock (park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/4 Time: 12:00 Surveyor: MML Survey #: (12)

Name: Manatee Co. Phone: (H) _____

Address: **PERSONAL INFORMATION ON FILE**

Mailing List: Y N

Boat Type: hawley length: _____ width: _____ height: _____

Historical Use: Patrol Frequency: _____
(boating, fishing, etc.) (daily, weekly, monthly, etc.)

Origin: Patrol

Direction of Travel: _____
(upstream / downstream)

Destination / stops: _____

Other boat ramps: _____

Marine Services : _____

(marinas on the river, fueling, etc.)

Navigational concerns: _____

(channel widths, hazardous areas, etc.)

Other: Homeowners - wake - jet skiers
complaints

(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/4/99 Time: 9:35 am Surveyor: Maria Survey #: (B)

Name: Clarence Price Phone: (H) _____

Address: PERSONAL INFORMATION ON FILE

Mailing List: Y N

Boat Type: _____ length: _____ width: _____ height: _____

Historical Use: fishing (boating, fishing, etc.) Frequency: on weekends (daily, weekly, monthly, etc.)

Origin: _____

Direction of Travel: (upstream / downstream)

Destination / stops: _____

Other boat ramps: _____

Marine Services : _____

(marinas on the river, fueling, etc.)

Navigational concerns: _____

(channel widths, hazardous areas, etc.)

Other: They ~~going~~ go fishing also to the Skyway and Anna Maria island. He ~~is~~ said on Sunday to many families with children that (cannot fish very well) are making to much noise.
(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/5/99 Time: 9:45 Surveyor: MML Survey #: (14)

Name: Steve Herda Phone: (H) PERSONAL INFORMATION ON FILE
Address: PERSONAL INFORMATION ON FILE (W)
e-mail: [redacted]@com
Mailing List: (Y) N

Boat Type: small mt length: 18' width: height:
Historical Use: rec (boating, fishing, etc.) Frequency: 2 x mo (daily, weekly, monthly, etc.)

Origin: PALMETTO
Direction of Travel: Downstream (upstream / downstream)

Destination / stops: Egmont Key / Gulf -

Other boat ramps: Palmetto (sometimes)

Marine Services: maybe fuel in Cortez @ Inter Coastal (marinas on the river, fueling, etc.)

Navigational concerns: Country Cove - shallow only place his ever run aground (channel widths, hazardous areas, etc.)

Other: Red signs - Swimmers - @ Ramp / dock area

(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/5 Time: 10:10 Surveyor: Survey #: (15)

Name: EDDIE Stankew Phone: (H) PERSONAL INFORMATION ON FILE
Address: PERSONAL INFORMATION ON FILE (W)
e-mail:
Mailing List: (Y) N

Boat Type: Jet Skis (2) length: width: height:
Historical Use: RCC (boating, fishing, etc.) Frequency: x weekend - summer (daily, weekly, monthly, etc.)
Origin: Bradenton x other weekend - winter
Direction of Travel: all over - down (upstream / downstream)

Destination / stops: none

Other boat ramps: Copina Bayside (close to his house)

Marine Services: NO - (marinas on the river, fueling, etc.)

Navigational concerns: Channel filling in downstream
upstream - raised canoe slideaway - Dam - full of stumps (channel widths, hazardous areas, etc.)

Other: Improve ramp.
more patrol in park / parking area
(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/5 Time: 10:53 Surveyor: MML Survey #: (16)

Name: _____ Phone: (H) _____
Address: _____ (W) _____
e-mail: _____
Mailing List: Y N

Boat Type: mkr canoe length: 13.5' width: _____ height: _____
Historical Use: fishing/rec (boating, fishing, etc.) Frequency: 1st time (daily, weekly, monthly, etc.)

Origin: Ft Pete
Direction of Travel: Both - mostly upstream - (upstream / downstream)

Destination / stops: none planned

Other boat ramps: Lake Manatee

Marine Services : no (marinas on the river, fueling, etc.)

Navigational concerns: Can't tell (channel widths, hazardous areas, etc.)

Other: _____

(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/5 Time: 11:15 Surveyor: MML Survey #: (12)

Name: William Osborne
Address: PERSONAL INFORMATION ON FILE
Phone: (H) PERSONAL INFORMATION ON FILE
(W)
e-mail:
Mailing List: Y N

Boat Type: _____ length: 15.5' width: 6' height: _____
Historical Use: rec. (boating, fishing, etc.) Frequency: 1st time (daily, weekly, monthly, etc.)

Origin: Sarasota
Direction of Travel: all over (upstream / downstream)

Destination / stops: Cruising

Other boat ramps: NA - normal stay in Sara -

Marine Services: M (marinas on the river, fueling, etc.)

Navigational concerns: none (channel widths, hazardous areas, etc.)

Other: _____

(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/5 11:15 Time: Surveyor: MML Survey #: (13)

Name: N/A Phone: (H) _____
Address: _____ (W) _____
e-mail: _____
Mailing List: Y N

Boat Type: rec. length: 15' width: _____ height: _____
Historical Use: rec. (boating, fishing, etc.) Frequency: X 2 wks. (daily, weekly, monthly, etc.)

Origin: Palmetto
Direction of Travel: upstream (upstream / downstream)

Destination / stops: none

Other boat ramps: no

Marine Services: bay fuel Orchet @ Palmetto (marinas on the river, fueling, etc.)

Navigational concerns: none (channel widths, hazardous areas, etc.)

Other: _____
_____ (park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/5 Time: 11:20 Surveyor: MML Survey #: (19)

Name: Daniel Erb
Address: PERSONAL INFORMATION ON FILE
Phone: (H) PERSONAL INFORMATION ON FILE
(W)
e-mail
Mailing List: (Y) N

Boat Type: Small motor length: 12' width: 4.5' height:
Historical Use: rec. (boating, fishing, etc.) Frequency: 1st time (daily, weekly, monthly, etc.)

Origin: Sarasota
Direction of Travel: Upstream (upstream / downstream)

Destination / stops: Dam

Other boat ramps: NO

Marine Services : NO
(marinas on the river, fueling, etc.)

Navigational concerns: Shallow areas
(channel widths, hazardous areas, etc.)

Other: nice park
(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/5 Time: 11:46 Surveyor: MML Survey #: (20)

Name: _____ Phone: (H) _____
Address: N/A _____ (W) _____
e-mail: _____
Mailing List: Y N

Boat Type: small motor length: 18' width: _____ height: _____
Historical Use: fishing (boating, fishing, etc.) Frequency: 1st use (daily, weekly, monthly, etc.)
Origin: Kingsfield
Direction of Travel: Downstream - Only (upstream / downstream)

Destination / stops: fishing holes

Other boat ramps: Skyway

Marine Services: Boat @ Cortez / Intercoastal (marinas on the river, fueling, etc.)

Navigational concerns: none known (channel widths, hazardous areas, etc.)

Other: _____

(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD

Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/5 Time: 11:55 Surveyor: MML Survey #: 21

Name: Ted Wladyka Address: PERSONAL INFORMATION ON FILE Phone: (H) PERSONAL INFORMATION ON FILE (W) PERSONAL INFORMATION ON FILE e-mail: Mailing List: (Y) N

Boat Type: Scarab length: 20' width: height:

Historical Use: rec. (boating, fishing, etc.) Frequency: 1st time (daily, weekly, monthly, etc.)

Origin: Tampa / Plant City

Direction of Travel: Downstream (upstream / downstream)

Destination / stops: Egmont Key Shell Island

Other boat ramps: Public Ramp on 41

Marine Services : NO (marinas on the river, fueling, etc.)

Navigational concerns: none (channel widths, hazardous areas, etc.)

Other: likes to come here because he can put in away from saltwater - less clean up. (park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/5 Time: 12:56 Surveyor: MMC Survey #: (22)

Name: Rick Kersey
Address: PERSONAL INFORMATION ON FILE
Phone: (H) PERSONAL INFORMATION ON FILE
(W) PERSONAL INFORMATION ON FILE
e-mail: PERSONAL INFORMATION ON FILE
Mailing List: (Y) N

Boat Type: Mtr. length: 24' width: 8' height: _____
Historical Use: rec. (boating, fishing, etc.) Frequency: 1xwk (daily, weekly, monthly, etc.)

Origin: Parish
Direction of Travel: both (upstream / downstream)

Destination / stops: no

Other boat ramps: Tivria Paumetto
Bishop Highland Pt

Marine Services: no
(marinas on the river, fueling, etc.)

Navigational concerns: fix ramp - too steep
drags-trailer
(channel widths, hazardous areas, etc.)

Other: Couldn't get down ramp
left Park
(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/5 Time: 1:49 Surveyor: MML Survey #: (23)

Name: _____ Phone: (H) _____
Address: N/A _____ (W) _____
e-mail: _____
Mailing List: Y N

Boat Type: Small mtr length: 14.6 width: _____ height: _____
Historical Use: Cruising Frequency: 1 X mo
(boating, fishing, etc.) (daily, weekly, monthly, etc.)

Origin: Rushin
Direction of Travel: upstream
(upstream / downstream)

Destination / stops: none

Other boat ramps: Ocatel (?)

Marine Services : no
(marinas on the river, fueling, etc.)

Navigational concerns: none

Other: vandals / glass
(channel widths, hazardous areas, etc.)

(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/5 Time: 1:50 Surveyor: MML Survey #: (24)

Name: _____ Phone: (H) _____
Address: N/A _____ (W) _____
e-mail: _____
Mailing List: Y N

Boat Type: Small mtr length: 14' width: _____ height: _____
Historical Use: rec Frequency: 1st time
(boating, fishing, etc.) (daily, weekly, monthly, etc.)
Origin: Palmetto
Direction of Travel: UP
(upstream / downstream)

Destination / stops: _____

Other boat ramps: Highland Shores (too crowded today)
Came here

Marine Services : NO
(marinas on the river, fueling, etc.)

Navigational concerns: none
(channel widths, hazardous areas, etc.)

Other: none
(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/5 Time: 3:20 Surveyor: MRB Survey #: (25)

Name: Christina Guajardo Phone: (H) _____

Address: **PERSONAL INFORMATION ON FILE**

Mailing List: **Y** **N**

Boat Type: Jet ski length: _____ width: _____ height: _____

Historical Use: rec (boating, fishing, etc.) Frequency: 2/month (daily, weekly, monthly, etc.)

Origin: Ruskin

Direction of Travel: both (upstream / downstream)

Destination / stops: none

Other boat ramps: None

Marine Services: None
(marinas on the river, fueling, etc.)

Navigational concerns: None
(channel widths, hazardous areas, etc.)

Other: _____

(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/5/99 Time: 10:55 Surveyor: Maria Survey #: 26

Name: Gary Hughes Phone: (H) _____

Address: PERSONAL INFORMATION ON FILE

Mailing List: Y N

Boat Type: Small motor boat length: 17 ft. width: _____ height: Under 10 ft.

Historical Use: pleasure (boating, fishing, etc.) Frequency: once a month (daily, weekly, monthly, etc.)

Origin: Bradenton

Direction of Travel: both (upstream / downstream)

Destination / stops: None

Other boat ramps: Linger Lodge (a lot in the County)

Marine Services : None (marinas on the river, fueling, etc.)

Navigational concerns: None (channel widths, hazardous areas, etc.)

Other: _____

_____ (park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/5/99 Time: 9:35 Surveyor: Maria Survey #: 27

Name: _____ Phone: (H) _____
Address: _____ (W) _____

e-mail: _____
Mailing List: Y N

Boat Type: Small motor boat length: 15 ft. width: _____ height: under 10 ft.

Historical Use: fishing Frequency: once a week
(boating, fishing, etc.) (daily, weekly, monthly, etc.)

Origin: St. Pete

Direction of Travel: _____
(upstream / downstream)

Destination / stops: None

Other boat ramps: None

Marine Services : None
(marinas on the river, fueling, etc.)

Navigational concerns: Crazy Jetski (no Courtesy^{from} Ski boats + Jetskis
(channel widths, hazardous areas, etc.)

Other: Would like to see the area a "No Wake Zone"
Increase parking even if they have to pay.
Some shelters with bait shop + better play
ground + barbaque pits. Better security.
(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/5/99 Time: 10:10 Surveyor: Maria Survey #: 28

Name: Wendy Westley
Address: PERSONAL INFORMATION ON FILE
Phone: (H) PERSONAL INFORMATION ON FILE
(W) PERSONAL INFORMATION ON FILE
e-mail: PERSONAL INFORMATION ON FILE
Mailing List: Y N

Boat Type: Jetski length: _____ width: _____ height: _____

Historical Use: pleasure (boating, fishing, etc.) Frequency: once a week (daily, weekly, monthly, etc.)

Origin: Bradenton

Direction of Travel: both (upstream / downstream)

Destination / stops: None

Other boat ramps: Coquina Bay

Marine Services : None (marinas on the river, fueling, etc.)

Navigational concerns: Filling in downstream
Dam is closing in upstream (channel widths, hazardous areas, etc.)

Other: _____

(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/5/99 Time: 11:22 Surveyor: Maria Survey #: 29

Name: Pam Hanson Phone: (H) _____

Address: PERSONAL INFORMATION ON FILE

Mailing List: Y N

Boat Type: small motor boat length: 15.5 ft. width: _____ height: under 10 ft.

Historical Use: pleasure (boating, fishing, etc.) Frequency: (once) on weekends (daily, weekly, monthly, etc.)

Origin: Bradenton

Direction of Travel: both (upstream / downstream)

Destination / stops: Lama Beach

Other boat ramps: Regatta

Marine Services: None (marinas on the river, fueling, etc.)

Navigational concerns: None (channel widths, hazardous areas, etc.)

Other: Clean up the dam in order to get to Rye Bridge (park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/5/99 Time: 11:45 a.m. Surveyor: Maria Survey #: (30)

Name: _____ Phone: (H) _____
Address: _____ (W) _____

e-mail: _____
Mailing List: Y N

Boat Type: Jetski length: _____ width: _____ height: _____

Historical Use: pleasure (boating, fishing, etc.) Frequency: 1st time (daily, weekly, monthly, etc.)

Origin: Bradenton

Direction of Travel: both (upstream / downstream)

Destination / stops: none

Other boat ramps: outgas

Marine Services : none (marinas on the river, fueling, etc.)

Navigational concerns: none (channel widths, hazardous areas, etc.)

Other: _____

(park usage, note parking, circulation, weather related delays, etc.)

UPPER MANATEE RIVER ROAD
Boat User Survey - Ft. Hamer Boat Ramp

Date: 9/5/99 Time: 11:54 Surveyor: Maria Survey #: (31)

Name: Nelson Hernandez Phone: (H) _____

Address: PERSONAL INFORMATION ON FILE

Mailing List: Y N

Boat Type: speed boat length: 21 ft. width: _____ height: _____
Scarab

Historical Use: pleasure (boating, fishing, etc.) Frequency: _____ (daily, weekly, monthly, etc.)

Origin: Palmetto

Direction of Travel: downstream (upstream / downstream)

Destination / stops: Shell Island

Other boat ramps: Palmetto ramp

Marine Services : None (marinas on the river, fueling, etc.)

Navigational concerns: Water too shallow going downstream (not marked well) (channel widths, hazardous areas, etc.)

Other: _____ (park usage, note parking, circulation, weather related delays, etc.)