

**Florida Department of Transportation
ENVIRONMENTAL DETERMINATION**

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1993 JUL 26 AM 10:30

I. GENERAL INFORMATION:

- a. County: Pasco, Hernando
- b. Project Name: SR 45 (US 41)/SR 700(US 98)
- c. Project Limits: From SR 52 in Pasco County to CR 485B (Yontz Rd.) in Hernando County
- d. Project Numbers: 15060-1510 State F-8888(27) Federal 71115924, 7112085, 7112086 WPA

II. PROJECT DESCRIPTION:

- a. Existing: See Attachment A
- b. Proposed Improvements: See Attachment A

III. CLASS OF ACTION:

- a. Class of Action
 - Environmental Assessment
 - Environmental Impact Statement
 - Type 2 Categorical Exclusion
- b. Other Actions (Only for EA or EIS)
 - Section 4(f) Evaluation
 - Section 106 Consultation
 - Endangered Species Assessment
- c. Public Involvement
 - 1. () A public hearing is not required, therefore, approval of this Type 2 Categorical Exclusion constitutes acceptance of the location and design concepts for this project.
 - 2. (X) A public hearing was held on June 6, 1989 and a transcript is included with the Environmental Determination. Approval of this Type 2 Categorical Exclusion Determination constitutes acceptance of the location and design concepts for this project.
 - () An opportunity for a public hearing was afforded and a certification of opportunity is included with the Environmental Determination. Approval of this Type 2 Categorical Exclusion Determination constitutes acceptance of the location and design concepts for this project.
 - 3. () A public hearing will be held and the public hearing transcript will be provided at a later date. Approval of this Type 2 Categorical Exclusion DOES NOT constitute acceptance of this project's location and design concepts.
 - () An opportunity for a public hearing will be afforded and a certification of opportunity will be provided at a later date. Approval of this Type 2 Categorical Exclusion Determination DOES NOT constitute acceptance of this project's location and design concepts.

IV. REVIEWER'S SIGNATURE BLOCK:

Donald J. Skelton / FOR MICHAEL J. COLEMAN 7/23/93
 District Project Development and Environment Engineer Date

Rick Adair 7/23/93
 District Environmental Administrator Date

Mainer Klabe 7/29/93
 FHWA Area Engineer Date

V. FHWA CONCURRENCE BLOCK:

Melinda Ridemore 7/30/93
 (For) Division Administrator Date

6. IMPACT EVALUATION

Topical Categories	S i g n	M i n	N o n e	N o i n v	REMARKS
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A. SOCIAL IMPACTS:

1. Land Use Changes	()	(X)	()	()	See Attachment A
2. Community Cohesion	()	()	(X)	()	" "
3. Relocation Potential	()	(X)	()	()	" "
4. Churches & Schools	()	()	()	(X)	
5. Title VI Considerations	()	()	(X)	()	See Attachment A
6. Controversy Potential	()	(X)	()	()	" "
7. Energy	()	()	(X)	()	" "
8. Utilities and Railroads	()	(X)	()	()	" "

B. CULTURAL IMPACTS:

1. Section 4(f) lands	()	()	(X)	()	See Attachment A
2. Historic Sites/Districts	()	()	(X)	()	SHPO letter dated 9/27/91
3. Archeological Sites	()	()	(X)	()	SHPO letter dated 7/31/84
4. Recreation Areas	()	()	(X)	()	See Attachment A

C. NATURAL ENVIRONMENT:

1. Wetlands	()	(X)	()	()	See Attachment A
2. Aquatic Preserves	()	()	()	(X)	
3. Water Quality	()	(X)	()	()	See Attachment A
4. Outstanding Fla. Waters	()	()	()	(X)	
5. Wild and Scenic Rivers	()	()	()	(X)	
6. Floodplains	()	(X)	()	()	See Attachment A
7. Coastal Zone Consistency	()	()	(X)	()	Office of the Governor letter dated 10/15/84
8. Coastal Barrier Islands	()	()	()	(X)	
9. Wildlife and Habitat	()	()	(X)	()	See Attachment A
10. Farmlands	()	()	(X)	()	" "

D. PHYSICAL IMPACTS:

1. Noise	()	(X)	()	()	See Attachment A
2. Air	()	()	(X)	()	" "
3. Construction	()	(X)	()	()	" "
4. Contamination	()	(X)	()	()	" "
5. Navigation	()	()	()	(X)	

- a. () FHWA has determined that a Coast Guard Permit IS NOT required in accordance with 23 CFR 650, Subpart H.
- b. () FHWA has determined that a Coast Guard Permit IS required in accordance with 23 CFR 650, Subpart H.

E. PERMITS REQUIRED

Florida Department of Environmental Regulation - Dredge and Fill (to be acquired during the final design phase)
 Southwest Florida Water Management District - Surface Water Management (to be acquired during the final design phase)
 U.S. Army Corps of Engineers - Nationwide (to be acquired during the final design phase)

7. WETLANDS FINDING:

Based upon the above considerations, it is 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.

ATTACHMENT A

II. PROJECT DESCRIPTION

a. Existing: The length of the project is approximately 19.3 miles (See Figure 1) . Within the study area, US 41 (SR 45) and SR 700 (US 98) are two lane roadways. State Road 45 has 28 feet of pavement with 6 foot grassed shoulders. The rural right-of-way on SR 45 varies in width from 100 to 250 feet, while urban right-of-way is approximately 128 feet wide. State Road 700 has 24 feet of pavement with 8 foot grassed shoulders and right-of-way of 50 to 90 feet. Existing drainage is accomplished primarily through shoulder drainage to roadside swales. The existing roadway is projected to operate at a level-of-service (LOS) "F" in the year 2010.

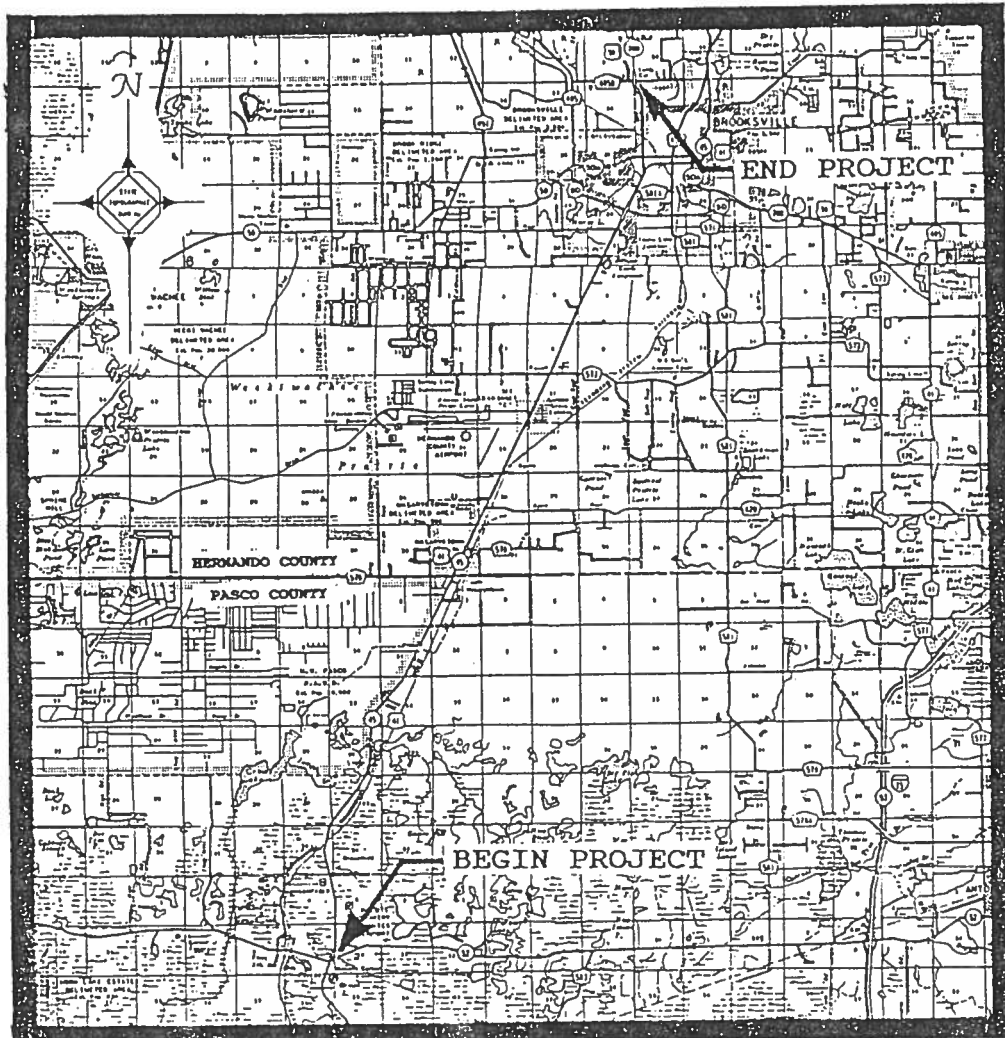
b. Proposed Improvements: Proposed improvements to SR 45 and SR 700 include primarily the construction of additional travel lanes and intersection improvements. The improvements on SR 45 from SR 52 to Moreland Road would include a rural four lane divided typical section with provisions for the future expansion to an ultimate six lane divided section. From Moreland Road to 1,400 feet north of Springhill Road, SR 45 is to be improved to an urban six lane divided section. A rural six lane divided section is proposed from 1,400 feet north of Springhill Road to 1,400 feet south of Mason Smith Road. From 1,400 feet south of Mason Smith Road to SR 700, SR 45 is to be improved to an urban six lane divided section. The improvements on SR 700 from SR 45 to Yontz Road (CR 485B) would be an urban four lane typical section divided by a 14 foot two way left turn lane. The bridge and Scott's Big "D" Creek is recommended for improvement without replacement. The bridge at Canal C-534 is recommended for improvement without replacement. These improvements will require the acquisition of approximately 112 acres of additional roadway right-of-way. Right-of-way acquisition is estimated to result in the displacement of 36 residences and 15 businesses. The proposed improvements will result in improved capacity and increased safety. The facility will operate at a projected LOS "D" by the design year 2010.

6A. SOCIAL IMPACTS

1. Land Use Changes

The proposed involvement will have a minimal effect upon land use in the study area. Currently, SR 45 serves as the primary route between the cities of Tampa and Brooksville and serves as the main thoroughfare through the unincorporated towns of Garden Grove and Masaryktown. State Road 700 serves as a bypass route around the City of Brooksville between SR 45 and Yontz Road. The land uses along the corridor are predominantly commercial, residential and agricultural/pasture. There is some vacant land found along the

PROJECT LOCATION MAP



SR 45 (US 41) & SR 700 (US 98) FROM SR 52 IN PASCO COUNTY TO
 CR 485B (YONTZ ROAD) IN HERNANDO COUNTY
 WPI NUMBERS 7115924, 7112085 & 7112086
 STATE PROJECT NUMBERS 14010-1514, 08010-1519 & 08010-1509
 FEDERAL AID PROJECT NUMBER F-8888(27)

corridor; therefore, changes in land use could occur in the future. The improvement will provide more efficient operating conditions and easier accessibility along the corridor. The proposed improvements are consistent with the City of Brooksville, Hernando and Pasco County's Comprehensive Plans and the State Comprehensive Plan.

2. Community Cohesion

The proposed improvements will have no effect upon neighborhood values. The quality of life in the study area will be improved with safety features for pedestrians, bicyclists and motorized traffic. Since the project proposes improvements to an existing roadway, no splitting or isolation of neighborhoods will occur. Socioeconomic and demographic factors such as population, employment and ethnic distribution would not be adversely affected by the proposed improvements.

3. Relocation Potential

The proposed roadway improvements would require the acquisition of approximately 112 acres of property. This will result in the displacement of approximately 36 homes and 15 businesses. The right-of-way and relocation estimates are approximate since the design of the roadway is preliminary at this time.

The relocations which are necessary are not considered to be especially unique or extraordinary in nature. Homes are available in the study area of comparable value and character for residential relocation. Suitable commercial sites exist in the vicinity for the business relocations. Within the relocation area, most businesses are not major employers and a limited number of businesses employ a substantial number of employees. The temporary closing of businesses during relocation would minimally affect the local economy or employment. However, one roof truss manufacturing business named Route 41 Manufacturing, Inc., may lose up to 40 percent of its manufacturing operations area to right-of-way acquisition. This is an unavoidable impact of the project. Although this business may be able to continue to operate, due to the nature of its operation, i.e., manufacturing, storage of finished goods, and distribution of roof trusses, it would most likely do so at a less efficient operating level after activities for the project have occurred.

In order to minimize the unavoidable effects of right-of-way acquisition and displacement of people, the FDOT will carry out a right-of-way and relocation program in accordance with Florida Statute 339.09 and the uniform Relocation Assistance and Real Property Acquisition Act of 1970 (Public Law 91-646) as amended.

The brochures which describe in detail the Department's relocation assistance program and right-of-way acquisition program are "Your Relocation" and "Right-of-Way for Transportation". Both of these brochures are distributed at all public hearings and are available upon request. Relocation resources are available to all residential and business relocates without discrimination.

5. Title VI Considerations

The project improvements will not impact any particular organization or group within the study area (including ethnic groups, minorities, the elderly and the disabled). This project has been developed in accordance with the Civil Rights Act of 1964, as amended by the Civil Rights Act of 1968.

6. Controversy Potential

An Advanced Notification was forwarded to national, state and local agencies having interest or involvement in the project. Comments from the agencies which responded were related primarily to procedural requirements and were not controversial in nature.

A Public Information Workshop was held on January 26, 1989 to inform residents and interested parties of the design alternatives being considered for this project. A Public Hearing was held on June 6, 1989. Ninety-seven people attended the Public Hearing. Nineteen people provided their comments to the court reporter or in writing by June 16, 1989. Most of the people who provided comments endorsed the project, mainly due to the traffic congestion of the existing roadway. Other comments received were related to FDOT funding, access, right-of-way, safety, air quality and noise. The owner of Route 41 Manufacturing expressed his concern regarding the proposed project's affect on his business which is discussed in the Relocation Potential section of this document.

7. Energy

Energy will be expended during construction and maintenance of the facility but will be saved in fuel economy as a result of improved travel conditions.

8. Utilities and Railroads

Some utilities adjacent to the existing facility would require relocation prior to the construction of proposed improvements. Utility owners with facilities located within or adjacent to the roadway include: Florida Power Corporation, General Telephone and Southern Bell Telephone Company. Coordination between the

Department and the utility companies has been performed and will be maintained throughout the project. Specific relocation requirements will be determined by the Department Utility Coordinator during final engineering design. Utility relocation is not expected to significantly impact the area residents nor their utility service.

There is one mainline railroad crossing within the SR 45 corridor project limits located approximately 2.5 miles north of SR 52 and one spur crossing located approximately 2.2 miles north of the Pasco/Hernando county line. A mainline crossing on US 98 is located north of Brooksville approximately 0.8 mile north of SR 50A.

6B. CULTURAL IMPACTS

1. Section 4(f) Lands

The proposed project will not use any publicly owned land of an existing or proposed park, recreation area or wildlife and waterfowl refuge or a land of a historic site of national, state or local significance. Therefore, this project is not involved with section 4(f) properties.

The Masaryk Hotel, which is eligible for listing on the National Register of Historic Places, is located adjacent to the roadway on the east side. The site has not operated as a hotel since the late 1950's although is currently operating as a restaurant. The SHPO letter dated September 27, 1991 states "This project will have no effect on the historic character of the hotel property".

2. Historic Sites/Districts

A Cultural Resource Assessment, including background research and a field survey coordinated with the State Historic Preservation Officer (SHPO), was performed for this project and the section of US 98/SR 700 between the Hernando County/Citrus County line and US 19. Within the limits of this project, one historic property, the Masaryk Hotel (Master Site File 8HE65), was identified and determined eligible for listing on the National Register of Historic Places. The SHPO letter is dated September 27, 1991. Through the application of the Criteria of Adverse Effect, the Federal Highway Administration in consultation with the SHPO determined that the proposed road improvements in the vicinity of the Masaryk Hotel will be accomplished within the existing right-of-way and therefore will not constitute an adverse effect on the property. Based on the fact that no additional historical sites or properties are expected to be encountered during subsequent project development, the Federal Highway Administration has

determined that no other National Register properties would be impacted.

3. Archeological Sites

A Cultural Resource Assessment, including background research and a field survey coordinated with the State Historic Preservation Officer (SHPO), was performed for this project and the section of SR 700 between the Hernando County/Citrus County line and US 19. No archeological sites or properties were identified, nor are any expected to be encountered during subsequent project development. The Federal Highway Administration, after consultation with the SHPO, has determined that no resources listed or eligible for listing on the National Register of Historic Places would be impacted. The SHPO letter is dated July 31, 1984.

4. Recreation Areas

The Varn-McKethan Recreational Complex consists of approximately 116 acres of land situated south of SR 50A and west of SR 45. The Complex consists of two adjacent parks: the Tom Varn Park which fronts on SR 50A and the Bud McKethan Park which fronts on SR 45. The Bud McKethan Park consists of approximately 5 acres with approximately 300 feet of frontage on SR 45. The park has little vegetation along the frontage and is bisected by a deep drainage ditch running east to west. The recreational facilities are all set back a considerable distance (approximately 225 feet) from the roadway. Acquisition of right-of-way will not be required from the complex to complete the proposed improvements to SR 45.

Noise level increases, aesthetic features, access into the Park, possible vibration impacts and ecological intrusion were reviewed in relation to the proposed project. Based on these items, the proposed project's proximity impacts will not substantially impair nor diminish the recreational activities, features or attributes of the Park which would be protected by Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. 303).

6C. NATURAL ENVIRONMENT

1. Wetlands

Twenty-nine wetland sites totalling approximately 1388 acres were identified within or adjacent to the project area. The proposed improvements will impact approximately 14.4 acres or 1% of the total wetland acreage in the area. These impacts include mixed hardwood swamps, cypress swamps, freshwater marshes, wet prairies, vegetated ditches, ponds and lakes. The depressions are generally

isolated basins. Several wetlands border lakes or excavated ponds. Since extensive suitable habitat exists adjacent to the study area, minimal impacts to existing natural systems are expected.

For this project, the six evaluated wetland types rated similarly regarding the "Recreation", "Production Export", "Uniqueness/Heritage", and "Ground Water Recharge/Discharge" functions. Project wetlands generally showed greater variability when evaluated for the "Floodflow Alteration", "Sediment Stabilization", "Sediment/Toxicant Retention", "Nutrient Removal" functions, and "Wildlife" values. This is to be expected since the wetland types represent different watersheds, water regimes, capacities, vegetation, etc.

On-site evaluation of site conditions in comparison to the WET 2.1 evaluation exhibit similar ratings. However, the proposed potential impact areas have generally lower ratings than expressed by the Assessment Areas. This is to be expected since the potential impact areas are adjacent to the existing highways and other urbanized facilities. There is not any potential impact that would result in changes of the WET 2.1 rating for any wetland along the corridor. The quantity of wetland area impact is expected to be minor since the majority of proposed road improvements occur within existing Florida Department of Transportation right-of-way which includes only the edges of previously impacted (due to existing road) wetland areas.

Mitigation will be required for the impacted wetlands by the U.S. Army Corps of Engineers, Florida Department of Environmental Regulation and the Southwest Florida Water Management District. A mitigation plan will be developed utilizing existing right-of-way followed by areas adjacent to the right-of-way and as a last resort, off-site areas. The plan may consist of any combination of preservation, restoration, enhancement and creation of wetlands. All wetlands mitigation types and ratios will be coordinated with the above agencies at the permit application stage. Anticipated ratios for the types of impacts would be as follows: 2.5:1 for forested wetlands, 1.5:1 for non-forested wetlands.

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

3. Water Quality

The existing drainage occurs primarily through cross-drains and roadside ditches. The proposed project is anticipated to improve surface water quality in the long term due to the construction of a combination of open ditches, detention ponds and enclosed drainage systems.

The impacts of this discharge into the various wetlands within the project limits have been determined as per the guidelines contained in FHWA Publications, "Constituents of Highway Runoff" (1981), "Effects of Highway Runoff on Receiving Waters" (1987), and "Pollutant Loadings and Impacts from Highway Stormwater Runoff" (1990). The appropriate stormwater management practices contained in FHWA Publications, "Management Practices for Mitigation of Highway Stormwater Runoff Pollution" (1985), and "Retention, Detention, and Overload Flow for Pollutant Removal from Highway Stormwater Runoff: Interim Guidelines for Management Measures" (1988) will be used to mitigate stormwater runoff impacts.

The Florida Department of Transportation will coordinate with the Florida Department of Environmental Regulation and the Southwest Florida Water Management District personnel and provide them with a preliminary Wetland Evaluation/Permit Coordination report describing the conceptual design of the stormwater management system for this project. As a result of that coordination, the Department will develop a stormwater treatment system for the project in accordance with Chapter 17-25, F.A.C. The Department will continue the coordination effort during subsequent project development stages to ensure compliance with Chapter 17-25, F.A.C. Coordination does not relieve the Department of the necessity to acquire permits under 17-25, F.A.C., nor does the preliminary review ensure a favorable permitting review. Short term impacts to surface water quality during construction would be minimized through the use of Best Management Practices.

The impacts of the proposed project on surface water quality will essentially be limited to the adverse effects of erosion during construction. These potentially adverse effects of construction are considered temporary and minimal. This project is not expected to have any adverse effect on ground water, recharge areas or public water supplies. This will be affected by adherence to Chapters 17-3 and 17-25 of the FAC and FDOT's "Standard Specifications for Road and Bridge Construction".

To date, one groundwater well has tentatively been identified within the proposed project's right-of-way. If necessary, the Department will assess and compensate for any damages to the well during the in right-of-way acquisition process. Otherwise, the proposed project will have no significant impact on water resources in the project area.

6. Floodplains

A floodplain evaluation was conducted to determine the proposed project's encroachment on floodplains. The project area is located on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) for Pasco County (Community No. 120230, Panels 225-D, 075-C, and 250-E) and Hernando County (Community No. 120110, Panels

325-B and 175-B). The existing roadway traverses FEMA designated flood zones of A, B and C. The improvement will result in encroachment into the 100-year floodplain (Zone A). Impacts would be both longitudinal and transverse to the floodplain. All encroachments to the 100-year floodplain will be mitigated for in accordance with local and regional regulations. No designated floodways are located within the project limits. The proposed improvements represent a minor change in the area's topography, would not result in any increased development pressure within floodplains, and would result in better access for emergency services and evacuation purposes. According to the Floodplain Evaluation Criteria developed by the Drainage Office of the Department in consultation with FHWA, this project involves floodplain evaluation Categories 3 (projects involving modification to existing drainage structures), 4 (projects on existing alignment involving replacement of existing drainage structures with no record of drainage problems) and 5 (projects on existing alignment involving replacement of drainage structures in heavily urbanized floodplains).

For the Category 3 involvement, the modifications to 38 existing drainage structures will not involve the replacement of any existing drainage structures or the construction of any new structures. Drainage structure modifications included in this Category will result in an insignificant change in their capacity to carry floodwater. This change will cause minimal increases in flood heights and flood limits. These minimal increases will not result in any significant adverse impacts on the natural and beneficial floodplain values or any significant change in flood risks or damage. There will not be a significant change in the potential for interruption or termination of emergency service or emergency evacuation routes.

For the Category 4 involvement, the modification of the two existing structures in this Category will be able to perform hydraulically in a manner equal to or greater than the existing structure, backwater surface elevations are not expected to increase. As a result, there will be no significant adverse impacts on natural and beneficial floodplain values. There will be no significant change in the potential for interruption or termination of emergency service evacuation routes. The Category 4 structures include Structure S-33 located between Daniel Ave. and Buena Vista Ave. and Structure S-36 located at North Ave.

For the Category 5 involvement, the proposed replacement of drainage structure S-30 (located between SR 50 and Mason-Smith Rd.) is limited to a hydraulically equivalent structure. The limitations to the hydraulic equivalency being proposed are basically due to restrictions imposed by the geometrics of design, existing development, cost feasibility or practicability. An alternative encroachment location is not considered in this Category since it defeats the project purpose and is economically

unfeasible. Existing flooding will continue, although will not be increased because of flooding conditions in the project area are inherent in the topography or are a result of other outside contributing sources. There is no practical alternative to totally eradicate flood impacts or even reduce them in any significant amount. The proposed structure will be hydraulically equivalent to or greater than the existing structure, backwater surface elevations are not expected to increase. As a result, the project will not affect existing flood heights or floodplain limits. This project will not result in any new or increased adverse environmental impacts. There will be no significant change in the potential for interruption or termination of emergency service or emergency evaluation routes.

Based on these evaluations, it has been determined that Category 3, 4 and 5 floodplain encroachments are not significant.

The present SR 45 alignment traverses established residential and business districts which would continue to experience an increase in traffic demand regardless of improvements in a parallel corridor. Any improvements would require purchasing all new right-of-way and would have not a distinct advantage over the existing corridor. Specific alignments for the project are limited to a corridor that encompassed the existing facility. Since this facility is an existing 2 lane roadway with proposed improvements to a 4 and 6 lane roadway and is included in the applicable local comprehensive plans a new corridor has been determined to be infeasible. All longitudinal encroachments will be minimized by keeping the basic alignment along the existing roadway. Alternate longitudinal encroachment locations are not considered economically feasible.

The applicable local comprehensive plans indicate that development will continue to occur along the existing corridor. This project is consistent with the local plans to relieve congestion and planned growth in the area.

7. Coastal Zone Consistency

On October 15, 1984, The Office of Planning and Budget, Office of The Governor determined that this project is consistent with the Florida Coastal Zone Management Plan.

9. Wildlife and Habitat

This project has been evaluated for impacts on threatened and endangered species. A literature review along with various field surveys were conducted to determine those possible threatened and endangered species which may inhabit the project area. This included, among other methods, using the FDOT's computer list of

threatened and endangered species (August, 1992). In addition, the U.S. Fish and Wildlife Service (USFWS) and the Florida Natural Areas Inventory (FNAI) were contacted for lists of confirmed, reported or potentially occurring threatened and endangered species. Based on a review of the published literature, advanced notification responses, agency contacts and field reviews, the search resulted in the findings that no listed species would be affected by the proposed project. Furthermore, the potential for impacts to critical habitat was assessed as to the relationship of the project to the USFW's designated "Critical Habitat" and it was found that the project would not involve any of these areas. Therefore, the project will have "No Effect" on any federally protected threatened or endangered species. The USFWS concurred with this determination on July 20, 1993.

10. Farmlands

Through coordination with the U.S. Soil Conservation Service, it has been determined that no farmlands as defined by 7 CFR 658 are located in the project vicinity.

6D. PHYSICAL IMPACTS

1. Noise

A noise impact evaluation conducted in accordance with 23 CFR, Part 772 indicated that the proposed improvements would result in noise levels which approach or exceed FHWA Noise Abatement Criteria (NAC). The approximate number of noise sensitive sites which would experience noise levels which approach or exceed the criteria of 65 dBA (Leq) is 154 for existing conditions, 196 in the year 2010 with no improvements and 253 in the year 2010 with the proposed improvements. Noise levels are projected to increase over existing conditions by 1 to 8 dBA.

Because noise levels are projected to approach or exceed the NAC, several noise abatement measures were considered. Noise abatement walls reduce noise levels by blocking the sound path between a roadway and the noise receiver. To be effective, a noise abatement wall must have continuous length and sufficient height to block the sound. The numerous access driveways and connecting roadways along SR 45 preclude the construction of sufficiently long barrier walls to effectively reduce noise levels.

Additional abatement measures which were considered include alignment selection, traffic system management and property acquisition. Alignment selection involves the orientation of the project location in such a manner as to minimize impacts and costs. Shifting the alignment along the existing corridor is not effective

in reducing noise levels because noise sensitive sites are found on both sides of the existing roadway. Traffic management measures which limit vehicle type, speed, volume and time of operation may be utilized in some cases to reduce noise levels. Traffic management measures which limit vehicle type, speed, volume and time of operation may be utilized in some cases to reduce noise levels. Traffic management measures are not considered appropriate for this project due to their effect on the capacity and level of service of the improved roadway. Property acquisition to provide buffer zones is not recommended for this project because of the huge amount of land necessary for effective noise abatement.

One of the most effective noise abatement measures is the proper application of land use controls to minimize future impacts. Local jurisdictions with zoning authority can develop policies to limit the growth of noise sensitive land uses adjacent to the roadway.

Based on the noise analyses performed to date, there appears to be no apparent solutions available to mitigate the noise impacts at the identified noise impacted areas.

2. Air Quality

In accordance with 23 CFR, Part 770 directives, a study was conducted to evaluate the effect of the project alternatives upon air quality. The results of the evaluation indicated that in the opening year 2000 and the design year 2010, the proposed improvements will result in carbon monoxide concentrations which are within the National Ambient Air Quality Standards. Because of the enhanced traffic flow, it is estimated that the proposed project will result in slightly improved air quality in the project area.

This project is in an area where the State Implementation Plan (SIP) does not contain any transportation control measures. Therefore, the conformity procedures of 23 CFR 770 do not apply to this project. This project is in conformance with the SIP because it will not cause violations of air quality standards and will not interfere with any transportation control measures.

3. Construction

Construction activities for the proposed project will have minimal air, noise, water quality, traffic flow, and visual impacts for those residents and travelers within the immediate vicinity of the project.

The air quality impact will be temporary and will 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 airborne particles will be effectively controlled through the use of watering or the application of calcium chloride in accordance with FDOT's "Standard Specifications for Road and Bridge Construction".

Noise and vibration impacts will be from heavy equipment movement and construction activities. Noise control measures will include those contained in FDOT's "Standard Specifications for Road and Bridge Construction".

Water quality impacts resulting from erosion and sedimentation will be controlled in accordance with FDOT's "Standard Specifications for Road and Bridge Construction" and through the use of Best Management Practices.

Maintenance of traffic and sequence of construction will be planned and scheduled so as to minimize traffic delays throughout the project. Signs will be used as appropriate to provide pertinent information to the travelling public. The local news media will be notified in advance of construction related activities which could excessively inconvenience the community so that motorists can plan travel routes in advance.

Access to all businesses and residences will be maintained to the extent practical through controlled construction scheduling. Traffic delays will be controlled to the extent possible where many construction operations are in progress at the same time. The contractor will be required to maintain two lanes of traffic in each direction on SR 45 at all times and to comply with the Best Management Practices of FDOT.

For the residents living along the project, some of the materials stored for the project may be displeasing visually; however, this would be a temporary condition and should pose no substantial problem.

Construction of the roadway may require excavation of unsuitable material (muck), placement of embankments, and use of materials, such as limerock, asphaltic concrete, and portland cement concrete. Demucking may be necessary at some of the wetland sites and will be controlled by adhering to the FDOT's "Standard Specifications for Road and Bridge Construction". Disposal will be on-site in detention areas or off-site. The removal of structures and debris will be in accordance with local and State regulation 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 features as specified in the FDOT's "Standard Specifications for Road and Bridge Construction", will consist of temporary grassing, sodding, mulching, sandbagging, slope drains, sediment basins, sediment checks, artificial covering, and berms.

4. Contamination

A hazardous materials investigation was conducted in order to identify locations of known or potentially hazardous material or petroleum contamination involvement and to assess the potential impacts to the proposed project. There were 61 sites evaluated within the project limits. One of the sites is known to contain some degree of subsurface petroleum contamination and is under review by the Department of Environmental Regulation. The proposed improvements are estimated to require right-of-way acquisition at nine of the 61 locations. Acquisition of these sites with underground storage tanks would be necessary for roadway right-of-way. Appropriate measures will be taken by the Department to prevent hazardous material contamination at these locations after acquisition and prior to construction. This proposed project contains no known significant contamination involvement.