

#4

ADMINISTRATIVE ACTION  
ENVIRONMENTAL ASSESSMENT

U.S. Department of Transportation  
Federal Highway Administration  
Region Four

and

Florida Department of Transportation

State Project Number 14120-1518  
Federal Project Number F-270-1(2)  
Budget Item Number 1115879

State Road 52 from State Road 55 (U.S. 19) to State Road 93  
(Interstate 75) in Pasco County, Florida

The Proposed Action Consists of Upgrading State Road 52 to a  
Multilane Divided Highway for a Length of Approximately 23.3 Miles

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

Approved for public availability

10/19/87  
Date

Dennis B. Lubke  
for Division Administrator  
Federal Highway Administration

TABLE OF CONTENTS

<u>Section</u>		<u>Page</u>
1.0	<u>DESCRIPTION OF THE PROPOSED ACTION</u>	1-1
2.0	<u>EXISTING CONDITIONS AND NEED</u>	2-1
2.1	EXISTING CONDITIONS	2-1
2.2	PLANNING BASIS FOR THE PROPOSED ACTION	2-1
2.3	TRANSPORTATION DEMAND	2-3
2.4	SOCIAL DEMANDS AND ECONOMIC DEVELOPMENT	2-3
2.5	ACCIDENT ANALYSIS	2-5
2.6	MODAL INTERRELATIONSHIPS	2-7
2.7	NONMOTORIZED MODE OF TRANSPORTATION	2-7
2.8	DEFICIENCIES OF THE EXISTING SYSTEM	2-8
2.9	EMERGENCY SERVICES	2-9
2.10	SYSTEM LINKAGE	2-9
3.0	<u>ALTERNATIVES CONSIDERED</u>	3-1
3.1	ALTERNATIVE CORRIDOR CONSIDERATIONS	3-1
3.2	NO-BUILD ALTERNATIVE	3-1
3.3	POSTPONING THE IMPROVEMENTS	3-2
3.4	TRAFFIC OPERATION IMPROVEMENTS	3-2
3.5	MASS TRANSIT	3-2
3.6	PROPOSED DESIGN CONCEPTS	3-3
	3.6.1 <u>Urban Alternative</u>	3-3
	3.6.2 <u>Rural Alternative</u>	3-5
	3.6.3 <u>Controlled Access Alternative</u>	3-5
	3.6.4 <u>Design Considerations</u>	3-6
3.7	ALTERNATIVE ALIGNMENTS	3-7
	3.7.1 <u>Alignments Considered</u>	3-7
	3.7.2 <u>Selection Criteria for the Proposed Alignment</u>	3-8
	3.7.3 <u>Proposed Alignment</u>	3-10
4.0	<u>IMPACTS</u>	4-1
4.1	LAND USE	4-1
4.2	BIOLOGICAL COMMUNITIES	4-7
	4.2.1 <u>Community Descriptions</u>	4-7
	4.2.2 <u>Community Impacts</u>	4-22

TABLE OF CONTENTS  
(Continued, Page 2 of 2)

<u>Section</u>	<u>Page</u>
4.3 ENDANGERED AND THREATENED SPECIES	4-26
4.4 FARMLANDS	4-32
4.5 AIR QUALITY IMPACTS	4-32
4.6 NOISE IMPACTS	4-38
4.7 HISTORICAL AND ARCHAEOLOGICAL RESOURCES IMPACTS	4-44
4.8 WETLANDS INVOLVEMENT	4-45
4.8.1 <u>Mixed Hardwood Swamps</u>	4-51
4.8.2 <u>Cypress Swamps</u>	4-55
4.8.3 <u>Freshwater Marsh/Shallow Ponds</u>	4-61
4.8.4 <u>Borrow Pit</u>	4-67
4.8.5 <u>Mitigation for Wetland Losses</u>	4-67c
4.9 RECREATION/PARKLAND RESOURCES	4-68
4.10 OUTSTANDING FLORIDA WATERS	4-68
4.11 WATER QUALITY IMPACTS	4-68
4.12 FLOODPLAIN INVOLVEMENT	4-69
4.13 COASTAL ZONES CONSISTENCY	4-79
4.14 RELOCATION IMPACTS	4-79
4.15 COMMUNITY IMPACTS	4-82
4.16 HAZARDOUS WASTES	4-85
4.17 CONSTRUCTION IMPACTS	4-88
4.17.1 <u>Water Quality</u>	4-88
4.17.2 <u>Noise</u>	4-88
4.17.3 <u>Air</u>	4-88
4.17.4 <u>Utilities</u>	4-89
4.17.5 <u>Maintenance of Traffic During Construction</u>	4-89
5.0 <u>COMMENTS AND COORDINATION</u>	5-1
5.1 GOVERNMENTAL AGENCY RESPONSES	5-1
5.2 PUBLIC INVOLVEMENT	5-5
BIBLIOGRAPHY	
APPENDIX	

LIST OF TABLES

<u>Section</u>		<u>Page</u>
2.3-1	Existing and Projected Average Daily Two-Way Traffic Volumes Along SR 52	2-4
2.5-1	Accident History for SR 52 from U.S. 19 to I-75	2-6
2.10-1	North-South Roadways Along SR 52 from U.S. 19 to I-75	2-10
3.7-1	Evaluation of Alignments for SR 52	3-11
3.7-2	Configuration of the Proposed Alignment for SR 52	3-16
3.7-3	Estimated Cost of the Proposed Alignment for SR 52 From U.S. 19 to I-75	3-18
4.2-1	Common Wildlife Species Expected to Occur Along SR 52 by Habitat Types	4-9
4.2-2	Species Listed as Endangered, Threatened, or of Special Concern by the State of Florida that Might Occur with the SR 52 Project Corridor	4-13
4.5-1	Receptor Locations for Air Quality Analysis	4-34
4.5-2	1-Hour and 8-Hour Projected CO Concentrations (ppm) at the SR 52/CR 1 Intersection	4-36
4.5-3	1-Hour and 8-Hour Projected CO Concentrations (ppm) at the SR 52/U.S. 19 Intersection	4-37
4.6-1	Noise Receptor Sites	4-40
4.6-2	Computer-Projected Exterior Noise Levels (L <sub>10</sub> ) at Sensitive Sites for the Build and No-Build Alternatives and the FHWA Noise Abatement Criteria (NAC)	4-41
4.8-1	Wetland and Floodplain Involvement by Site	4-48
4.8-2	Summary of Wetland Involvement by U.S. Fish and Wildlife Service Wetland Classification Types for the 14 Mixed Hardwood Swamps Along SR 52	4-52

LIST OF TABLES  
(Continued, Page 2 of 2)

<u>Section</u>		<u>Page</u>
4.8-3	Summary of Wetland Involvement by U.S. Fish and Wildlife Service Wetland Classification Types for the 31 Cypress Swamps Along SR 52	4-56
4.8-4	Summary of Wetland Involvement by U.S. Fish and Wildlife Service Wetland Classification Types for the 33 Freshwater Marsh/Shallow Ponds and a Borrow Pit Along SR 52	4-62

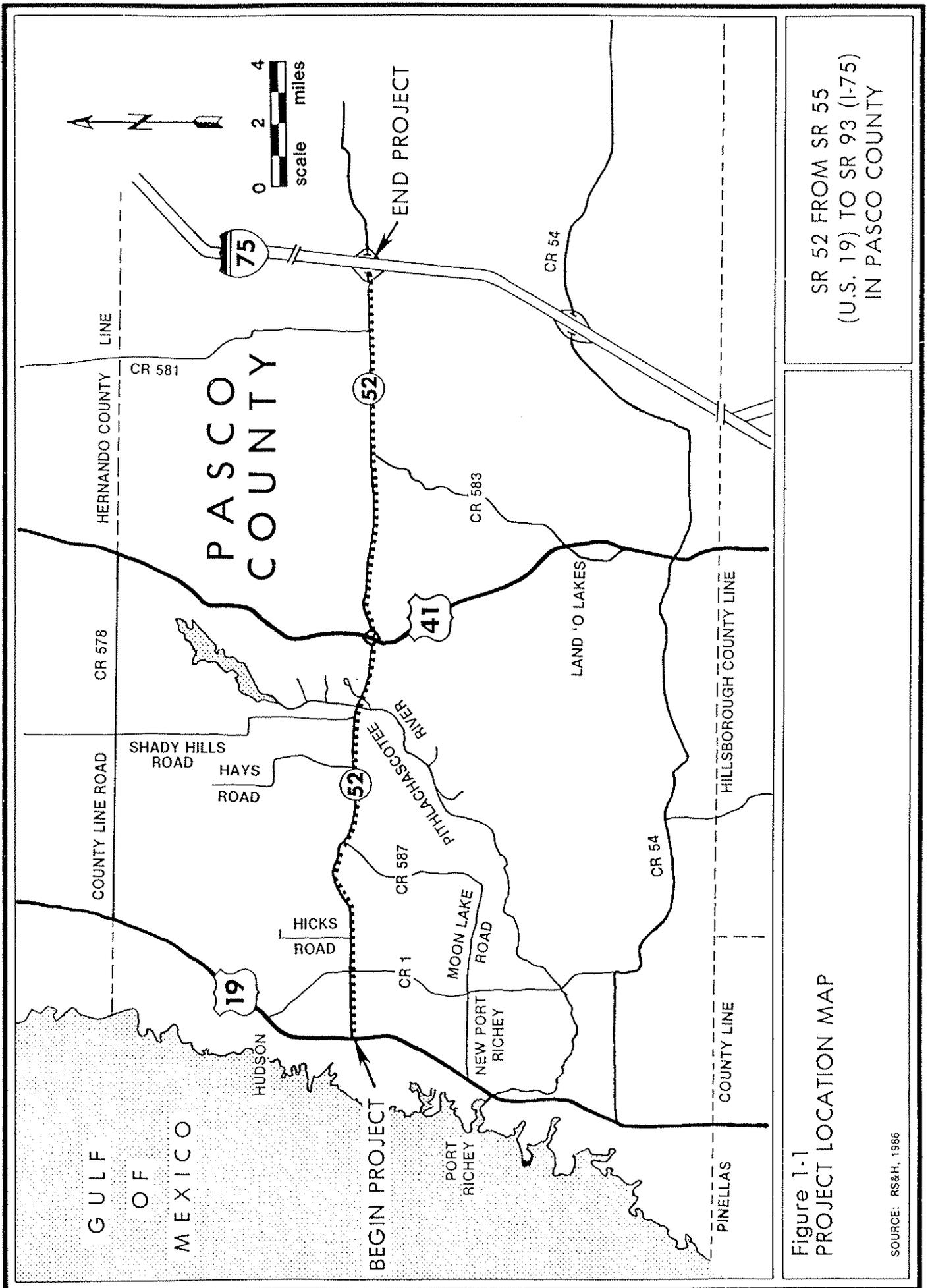
LIST OF FIGURES

<u>Figure</u>		<u>Page</u>
1-1	Project Location Map	1-2
2.1-1	Existing Cross Sections	2-2
3.6-1	Proposed Typical Cross Sections	3-4
4.1-1	Existing Land Use	4-2
4.6-1	Noise Receptor Location Map	4-39
4.8-1	Wetland Site Location Map	4-46
4.12-1	Floodplain Site Location Map	4-70
4.14-1	Location of Residences and Businesses to be Relocated	4-81
4.16-1	Potential Hazardous Waste Sites	4-86

## 1.0 DESCRIPTION OF THE PROPOSED ACTION

This project considers improvements to a section of State Road (SR) 52 from SR 55 (U.S. 19) to SR 93 (I-75) in central Pasco County on Florida's west coast (see Figure 1-1). The proposed action is to upgrade this 23.3-mile section of SR 52 from the existing two-lane roadway to a multilane, divided highway. A six-lane, divided urban cross section is proposed from U.S. 19 to County Road (CR) 587 (Moon Lake Road), and a four-lane rural cross section is proposed from Moon Lake Road to I-75. The bridge over Bear Creek, located approximately 1.5 miles east of U.S. 19 will be replaced as part of this project. Other culverts and box culverts located within the project limits will be replaced or widened as warranted. These highway improvements will provide adequate capacity through the 2010 design year.

The intersection of U.S. 19 and the interchange of I-75 with SR 52 were determined to be outside the scope of this project. The U.S. 19 and SR 52 intersection is part of a separate study concerning improvements to U.S. 19 north and south of SR 52. The improvements to this intersection are not included in the Florida Department of Transportation (FDOT) current 5-year work program. The I-75 interchange with SR 52 was previously improved to a multilane facility under I-75 and will connect with the improvements proposed for this project.



SR 52 FROM SR 55  
(U.S. 19) TO SR 93 (I-75)  
IN PASCO COUNTY

Figure 1-1  
PROJECT LOCATION MAP

SOURCE: RS&H, 1986

## 2.0 EXISTING CONDITIONS AND NEED

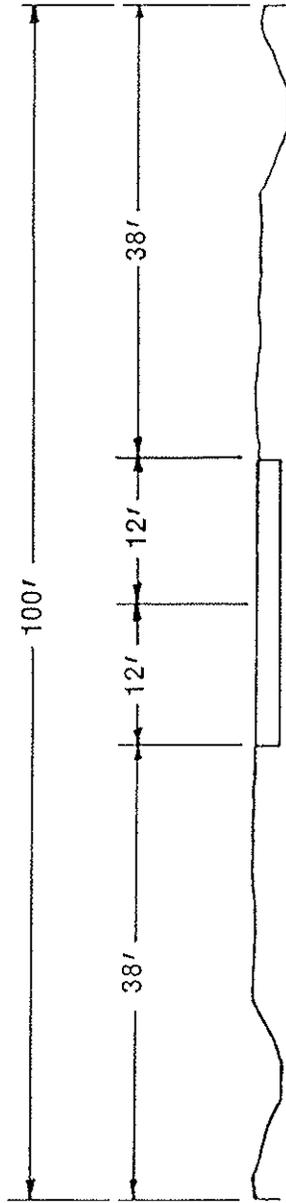
### 2.1 EXISTING CONDITIONS

SR 52 is a two-lane, undivided highway with 24-foot-wide pavement between U.S. 19 and U.S. 41 and 20-foot-wide pavement between U.S. 41 and I-75. The cross sections of the existing roadway are of rural design with the pavement generally centered within the 100 feet of existing right-of-way (see Figure 2.1-1). SR 52 has been widened at intersections of major north-south routes and at entrances to large developments to provide additional turn lanes. The land adjacent to SR 52 from U.S. 19 to Moon Lake Road has developed an urban character with a significant amount of residential, office, and commercial development. From Moon Lake Road to I-75, the area surrounding the existing right-of-way is generally open land with minor amounts of residential and commercial development. Wetlands are common along this section of SR 52.

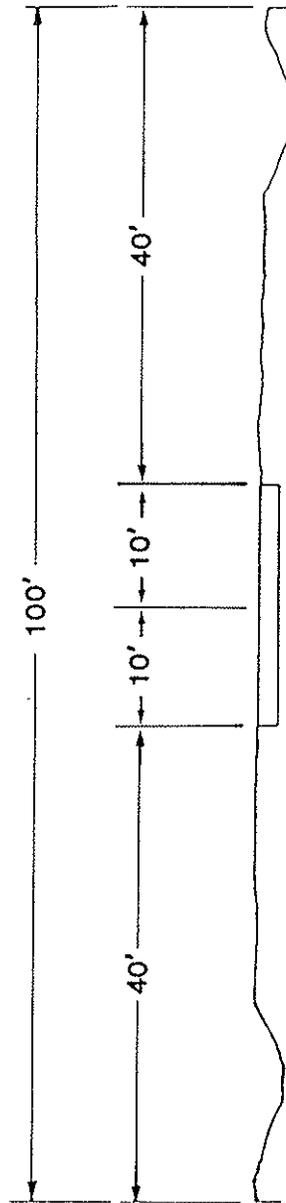
### 2.2 PLANNING BASIS FOR THE PROPOSED ACTION

The Federal Aid Highway Act of 1962 requires an ongoing transportation planning process in urbanized areas in order to receive federal funds for transportation improvements. Pursuant to this Act, which calls for a continuing, cooperative, comprehensive transportation planning process, Pasco County has developed the West Pasco County Area Transportation Study (WPCATS). The most recent WPCATS reevaluation is the 1995 Transportation Plan which indicates a need for a six-lane facility between U.S. 19 and Hicks Road. The proposed action is consistent with the adopted transportation plan and with Pasco County's long-range transportation goals for a six-lane facility between Hicks Road and Moon Lake Road and a four-lane facility between Moon Lake Road and I-75 (see the Pasco County Metropolitan Planning Organization's (MPO) letter regarding Transportation Plan Consistency in the Appendix). The need for these facilities is based on projected traffic increases.

# EXISTING 2-LANE UNDIVIDED ROADWAY



(U.S. 19 TO U.S. 41)



(U.S. 41 TO I-75)

FIGURE 2.1-1  
EXISTING CROSS SECTIONS

SR 52 FROM SR 55  
(U.S. 19) TO SR 93 (I-75)  
IN PASCO COUNTY

SOURCE: RS&H, 1986

### 2.3 TRANSPORTATION DEMAND

The projection of traffic demand within the project limits was the subject of a traffic report previously prepared for the Florida Department of Transportation (FDOT) in 1984. Baseline traffic data were estimated from land use and growth data supplied by Pasco County, as well as 24-hour machine counts. These data were input to the Quick Response System (QRS) computer program to develop traffic projections for SR 52.

The existing and projected average daily two-way traffic volumes at locations along SR 52 for the 1985, 1990, 2000, and the 2010 design years are shown in Table 2.3-1.

Unacceptable operating conditions, Level of Service E (LOS E), currently exist during the peak hour on SR 52 from U.S. 19 through the CR 1 intersection to the vicinity of Illinois Avenue. The existing traffic signal at CR 1 operates at LOS E during the peak hour. By 1990 all signalized intersections from U.S. 19 to CR 587 are expected to be operating at LOS E during the peak hour. The 2010 traffic projections indicate that SR 52 will be operating at LOS E from U.S. 19 to I-75, the entire length of the project. LOS E is considered unacceptable because it represents operations at low operating speeds, with volumes at or near highway capacity. Flow is unstable, and stoppages may be of momentary duration.

### 2.4 SOCIAL DEMANDS AND ECONOMIC DEVELOPMENT

Along SR 52, there is a mixture of commercial, residential, and undeveloped land uses (see Section 4.1, Land Use). From U.S. 19 to Moon Lake Road, the land adjacent to SR 52 has become highly urbanized, consisting primarily of commercial and service-related businesses (see Sheets A and B of Figure 4.1-1). Included are retail shopping centers, small offices, medical clinics, banks, recreational facilities, and other related development. Further removed from the roadway, the land surrounding this section of SR 52 is rapidly being developed into

Table 2.3-1. Existing and Projected Average Daily Two-Way Traffic Volumes Along SR 52

Locations	1985	1990	2000	2010
<u>Urban Area</u>				
U.S. 19 to CR 1	21,880	43,800	51,400	60,300
CR 1 to CR 587 (Moon Lake Road)	22,550	36,400	44,500	52,400
<u>Rural Area</u>				
CR 587 to Shady Hills	9,300	20,200	24,500	28,800
Shady Hills to U.S. 41	8,910	18,200	22,000	25,700
U.S. 41 to CR 583	4,430	12,200	14,900	17,600
CR 583 to I-75	5,600	10,300	12,700	15,100

Source: RS&H, 1986.

residential uses. This rapid development is expected to continue and result in substantial traffic increases on SR 52. Some specific developments that will contribute to increased traffic on SR 52 include:

- Beacon Woods East (4,483 dwelling units and 33.5 acres of commercial use),
- Pointe West (1,760 dwelling units),
- Meadow Oaks (955 dwelling units),
- Crews Lakes (2,100 dwelling units),
- Golden Acres (561 dwelling units), and
- Mablebridge (1,800 dwelling units and 150 acres of golf course).

From Moon Lake Road to I-75, the land adjacent to SR 52 consists predominantly of agricultural lands and wetlands with only minor amounts of residential and commercial land uses (see Sheets C and D of Figure 4.1-1). Projections indicate that this section will also experience continued growth in the future, which will also contribute to traffic increases.

## 2.5 ACCIDENT ANALYSIS

SR 52 accident data supplied by FDOT for the years 1978 through 1985 for the area within the project boundaries were reviewed. Table 2.5-1 shows for each year the number of accidents by type, accident rate, number of fatalities and injuries, and estimated economic loss.

Over 50 percent of the accidents occurred in the 3-mile segment at the western end of the project running from U.S. 19 to Hicks Road. The majority of these accidents consisted of left-turn and rear-end collisions. It is anticipated that these types of accidents will be reduced by increasing the capacity of the roadway and by providing left-turn lanes to remove left-turning vehicles from the through-travel lanes.

SR 52 accident rates were compared with the statewide average. The rate for the entire length of the project was below the statewide average for

Table 2.5-1. Accident History for SR 52 from U.S. 19 to I-75 (23.3 Miles)

Year	Number of Accidents			Rate Per Million Vehicle Miles	Number of Fatalities	Number of Injuries	Economic Loss*
	Left Turn	Rear End	Other Types				
1978	46	33	71	1.14	7	90	\$2,212,000
1979	45	33	97	1.25	3	113	1,611,000
1980	51	52	81	1.21	2	135	1,580,000
1981	31	50	76	1.10	2	87	1,197,000
1982	44	50	95	1.22	3	124	1,706,000
1983	22	48	99	1.08	6	70	2,219,000
1984	21	37	84	1.09	1	162	1,830,600
1985	17	53	85	1.13	1	154	1,764,200

\* Values for Economic Loss: Fatality = \$200,000; Injury = \$8,000; Property Damage = \$1,000.  
(National Safety Council, 1982).

Sources: Florida Department of Transportation Accident Records, 1978-1985.  
RS&H, 1987.

each year (1978 to 1985) reviewed. Accident rates at the following intersections, however, did exceed the statewide average: SR 52 with U.S. 19, CR 1, Moon Lake Road, and U.S. 41. The proposed build alternative will help reduce the potential for accidents at these locations.

The remainder of SR 52, within the project limits, has experienced a relatively low number of accidents. This is due to low traffic volumes, few intersections, and a generally straight alignment. No significant accident pattern was identified in this review. The recommended improvements will enhance the flow of traffic on SR 52 and should reduce some of the rear-end and left-turn accidents previously experienced on this road.

## 2.6 MODAL INTERRELATIONSHIPS

The primary transportation mode within the project limits is by automobile. Currently there are no regularly scheduled mass transit services in the SR 52 corridor. At this time, Pasco County has no plans to develop transit service within this corridor.

## 2.7 NONMOTORIZED MODE OF TRANSPORTATION

In recent years, nonmotorized modes have become a viable means of transportation. Therefore, pedestrian and bicycle facilities were considered during the development of the proposed highway improvements.

Although no bicyclists were observed using SR 52 during field reviews, an interest in bicycles in the area is indicated by the presence of a bicycle shop along SR 52. Currently, SR 52 does not have any special design features to safely accommodate bicycles, and the majority of SR 52 is without sidewalks. Therefore, bicyclists and pedestrians must share the roadway with motorized vehicles or use the grass shoulders.

The proposed highway design accommodates bicycles and pedestrians in the urban section (between U.S. 19 and Moon Lake Road). The outer lanes of the proposed roadway are 14 feet wide in this section. This area

includes an additional 2 feet of pavement for bicycle use. In addition, this section includes 5-foot sidewalks on both sides of the roadway.

In the rural section (Moon Lake Road to I-75), 4 feet of the proposed 10-foot outside shoulders will be paved to accommodate bicycle traffic. Since the rural section is generally undeveloped, sidewalks were not included in the proposed improvements.

Accommodations for bicycles and pedestrians that have been incorporated into the proposed SR 52 design are consistent with Pasco County policy, which states that these forms of transportation will be considered in all federally funded road improvement projects (see the The Pasco County MPO's letter regarding bicycle coordination in the Appendix). The proposed design is also consistent with the State of Florida minimum regulations pertaining to bicycles. These improvements to SR 52 should provide safe bicycle and pedestrian usage and increase the potential use for both in the region.

## 2.8 DEFICIENCIES OF THE EXISTING SYSTEM

The existing two-lane cross sections for SR 52 is indicated in Figure 2.1-1. The current traffic conditions (as described in Section 2.3, Transportation Demand) are at an unacceptable LOS between U.S. 19 and Illinois Avenue during peak hour on SR 52. The projected demand on all of SR 52 within the project limits will exceed the capacity of the existing two-lane road by the 2010 design year.

In addition, the horizontal curvature at the SR 52/U.S. 41 intersection of 6 degrees was greater than the 4-degree 15-minute curve recommended in the Manual of Uniform Minimum Standards for Design, Construction, and Maintenance of Streets and Highways (FDOT, 1984a). This curve results in a poor alignment for SR 52 at the U.S. 41 intersection. No other deficiencies in horizontal or vertical alignment have been identified.

## 2.9 EMERGENCY SERVICES

SR 52 is a major east-west arterial in Pasco County that connects the gulf coastal areas with hurricane-safe areas to the east. This provides an evacuation route for residents located in Port Richey, New Port Richey, Hudson, Bayonet Point, and neighboring developments in Pasco County. According to Mr. Anador Gonzalo, Director of the Pasco County Emergency Services Department (see letter in the Appendix), traffic congestion on SR 52 during periods of heavy traffic causes delays in providing emergency service. In addition, the Director indicated that SR 52 has many curves where passing is dangerous due to blind spots, and that these road improvements will greatly enhance emergency response times and facilitate evacuation.

## 2.10 SYSTEM LINKAGE

SR 52 begins at U.S. 19 and continues eastward to U.S. 301 in Dade City, a distance of approximately 32 miles. This project covers the section from U.S. 19 to I-75, a distance of 23.3 miles. The significant north-south roads that connect with SR 52 within the project limits are identified by location and classification in Table 2.10-1. As indicated in this table, there are a number of north-south roads which intersect SR 52. The number of roads oriented east-west in Pasco County, however, is limited. SR 52 provides the most direct access from the heavily developed western portion of Pasco County east to I-75 and on to Dade City. As previously indicated, County Line Road to the north and CR 54 to the south are other major east-west roads in Pasco County. They lack the continuity and direct access that is provided by SR 52. The importance of SR 52 to the highway system will continue to increase in the future as the county develops.

Table 2.10-1. North-South Roadways Along SR 52 from U.S. 19 to I-75

Classification	Roadway	Location
Interstate	I-75	Eastern Project Limit
U.S. Highways	U.S. 19 U.S. 41	Western Project Limit 12 miles east of U.S. 19, 11 miles west of I-75
Urban, Major Collectors	CR 1 CR 587 (Moon Lake Road)	2 miles east of U.S. 19 5.5 miles east of U.S. 19
Rural, Major Collectors	CR 583 CR 581	6 miles west of I-75 2 miles west of I-75
Urban, Minor Collectors	Majestic Boulevard LaMadera Boulevard Illinois Avenue Hicks Road Shadow Ridge Boulevard	0.7 miles east of U.S. 19 1.3 miles east of U.S. 19 2.5 miles east of U.S. 19 3 miles east of U.S. 19 5 miles east of U.S. 19
Rural, Minor Collectors	Hays Road Shady Hills Road	9 miles east of U.S. 19 10.5 miles east of U.S. 19

Source: RS&H, 1986.

### 3.0 ALTERNATIVES CONSIDERED

#### 3.1 ALTERNATIVE CORRIDOR CONSIDERATIONS

As can be seen in Figure 1-1, SR 52 roughly bisects Pasco County in an east-west direction and provides the most direct connection between U.S. 19 and I-75. CR 578 (County Line Road) runs along the northern border of the county and connects U.S. 19 with U.S. 41. CR 578 is located approximately 7 miles north of SR 52 and does not provide a direct connection to I-75. CR 54, located approximately 9 miles south of SR 52, provides the only other east-west continuous connection between U.S. 19 and I-75 in Pasco County. This route is considerably more circuitous than SR 52 and is far enough away to constitute its own corridor. Purchase of the right-of-way necessary to create an entirely new corridor would be prohibitively expensive. In addition, a new corridor would have to pass through existing built-up areas. This would result in a considerable amount of business and residential relocations and would disrupt existing neighborhoods. Based on the above review, it has been concluded that there are no viable corridors other than SR 52 to carry the projected traffic.

#### 3.2 NO-BUILD ALTERNATIVE

The No-Build alternative would allow the existing facility to remain without substantial improvement. The existing roadway on SR 52 has two lanes for through traffic, one in each direction, with widenings for turn lanes at a number of intersections. The advantages associated with this alternative are that no capital outlay would be required for construction and right-of-way acquisition; the displacement of residents and business would not be required; and existing development and environmentally sensitive areas would not be disrupted during the construction period. The main disadvantage is that the existing number of lanes is not adequate to serve the projected traffic at an acceptable level of service. Traffic volumes on the section between U.S. 19 and CR 1 already exceed 21,800 vehicles per day and are projected to exceed 60,000 vehicles per day by the 2010 design year (see Table 2.3-1). A considerable growth in traffic is expected throughout the SR 52

corridor. With this level of traffic demand and the lack of alternate routes for use by the motoring public, SR 52 will become extremely congested. This will create long delays, increase the potential for accidents, and decrease emergency service response time. Based upon these factors, the proposed Build action has been developed as a design alternative; however, the No-Build alternative will continue to be considered as a valid alternative until after the public hearing when a final recommendation will be made.

### 3.3 POSTPONING THE IMPROVEMENTS

Another potential alternative is to postpone any improvements to SR 52. Portions of the existing roadway are already extremely congested. The extent of congestion will continue to expand as the area surrounding SR 52 develops. In addition, future development along SR 52 is likely to encroach on the recommended right-of-way line. Therefore, delaying improvement of SR 52 would result in increased construction right-of-way costs, relocations, and added fuel consumption due to increased delays. Postponing improvements is therefore not considered a viable alternative.

### 3.4 TRAFFIC OPERATION IMPROVEMENTS

Upgrading of the existing two-lane roadway by providing wide shoulders and increasing the number of turn lanes at the major intersections would provide a minor capacity increase. This would not meet the projected traffic demand for this facility. For this reason, upgrading the existing facility with these traffic operations improvements is not considered a viable alternative.

### 3.5 MASS TRANSIT

Local mass transit facilities are not currently available along the SR 52 corridor. This area has relatively low land use densities and, as a result, has widely scattered origins and destinations for the trips being made. This lack of development concentration would make it difficult for mass transit to capture more than 4 percent of the trips

along SR 52. Additionally, Pasco County has no plans at this time to develop transit service within this corridor. Mass transit will not adequately serve to decrease the transportation demand in the near future and, therefore, cannot be a viable alternative.

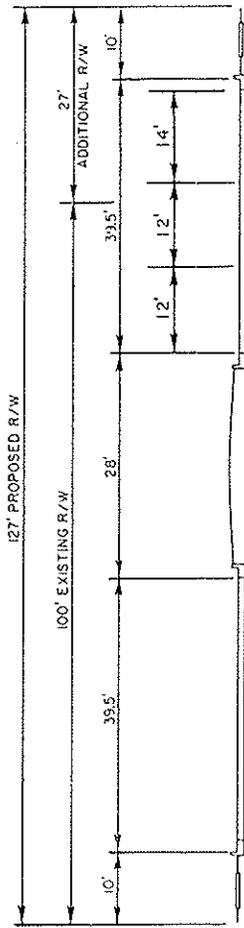
### 3.6 PROPOSED DESIGN CONCEPTS

The design alternatives were developed to provide an acceptable LOS for the expected traffic demand on SR 52 through the 2010 design year. To account for differences in traffic demand and the fact that the western urban section has significantly higher land costs than the eastern end, the following alternatives were considered.

#### 3.6.1 Urban Alternative

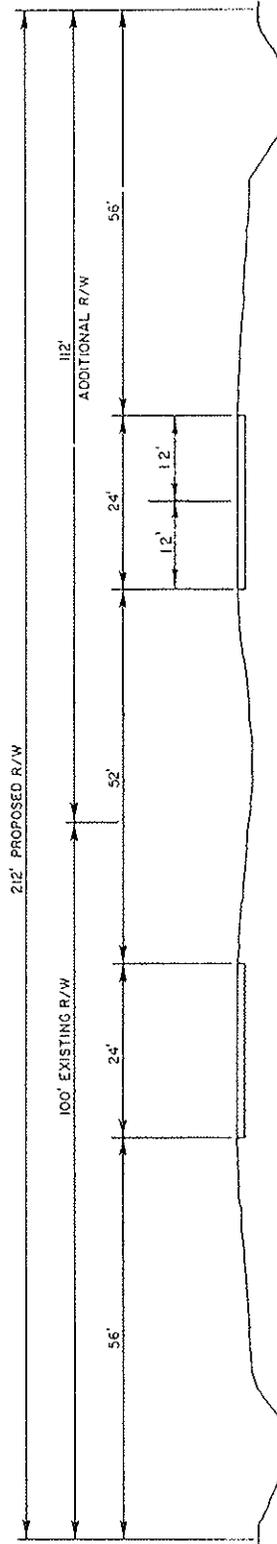
From U.S. 19 to Moon Lake Road, SR 52 has an urban character with a considerable amount of commercial land use. This intense development results in high land values and correspondingly high right-of-way acquisition costs. Thus, a 127-foot urban cross section will be considerably less expensive than a 212-foot rural cross section and is therefore proposed to be used within these limits. Six lanes for through traffic (three in each direction) are required to handle projected traffic demands.

The typical urban cross section provides two 12-foot-wide lanes on the inside and a 14-foot-wide outer lane in each direction (see Figure 3.6-1). The 14-foot-wide outer lane is provided to accommodate bicycle traffic. The center median dividing strip will be 28 feet wide to allow room for dual left-turn lanes at intersections with high turning volumes. The 28-foot-wide median will also allow turn lanes for opposite directions of travel to be constructed "back to back" if needed. Since there is considerable land remaining to be developed in the urban section, the identification of all locations that will require dual left-turn lanes or "back to back" turn lanes could not accurately be determined. It was therefore considered desirable to develop the 28-foot-wide median throughout the urban section to keep the through



TYPICAL URBAN SECTION

(U.S. 19 TO MOON LAKE ROAD)



TYPICAL RURAL SECTION

(MOON LAKE ROAD TO I-75)

FIGURE 3.6-1  
PROPOSED TYPICAL CROSS SECTIONS

SR 52 FROM SR 55  
(U.S. 19) TO SR 93 (I-75)  
IN PASCO COUNTY

SOURCE: RS&H, 1986

lanes from frequently shifting alignment. The total right-of-way required for the urban cross section is 127 feet in width. The urban pavement would be constructed using curbs and gutters, with provision of underground drainage to handle stormwater runoff. This urban cross section would be used for a distance of approximately .6 miles. Following improvement, all of the signalized intersections within the section proposed for the 6-lane urban cross section will operate at an acceptable Level of Service D or better in the peak hour through the 2010 design year.

### 3.6.2 Rural Alternative

SR 52 from Moon Lake Road to I-75 is sparsely developed at this time. The land costs are considerably lower than in the section to the west; therefore, rural cross sections become more economical to build than urban cross sections. The projected traffic demand declines east of Moon Lake Road. For this reason, only four lanes for through traffic will be required in this segment by the 2010 design year.

The typical rural cross section provides a four-lane divided pavement with two 12-foot-wide lanes for each direction of traffic (see Figure 3.6-1). A 52-foot-wide median is proposed for this cross section. The rural section will extend from CR 587 to I-75, a distance of approximately 17 miles. A 56-foot-wide margin from the edge of the pavement to the right-of-way line on each side of the roadway is provided. This will allow room for 10-foot-wide shoulders, 4 feet of which will be paved for bicycle use, and 46 feet for surface drainage swales. The total right-of-way width needed for this cross section is 212 feet. Following improvement to a 4-lane divided rural cross section, all of the intersections within this segment of the project will operate at LOS C or better through the 2010 design year.

### 3.6.3 Controlled Access Alternative

The possibility of a controlled access road in the rural section was also considered. The projected traffic demand was not sufficient to

justify the added expense of constructing separate access roads beside the limited-access route. This alternative was, therefore, dropped from further consideration.

#### 3.6.4 Design Considerations

Design Speeds and Degree of Curvature--The design speeds used in this study are 45 mph for the urban section and 70 mph for the rural section. These design speeds are generally set above the expected posted speed. It is expected that the posted speed limit in the urban section will be 40 mph. It is expected that the rural section will be posted at an existing legal maximum of 55-mph. A 70-mph design speed has been used to obtain safe operating characteristics. The maximum degree of horizontal curvature allowed for the urban section is 6 degrees using a 0.05-foot/foot superelevation rate, while the maximum allowed for the rural section is 3 degrees 30 minutes using a maximum superelevation rate of 0.10 foot/foot.

Railroad Grade Crossing--There is one railroad-grade crossing of SR 52 within the project limits. The CSX Transportation (formerly Seaboard Coast Line Railroad) crosses SR 52 west of U.S. 41. According to FDOT guidelines construction of railroad-grade crossings are considered when train/motor vehicle conflicts exceed 20 trains per day and 5,000 vehicles per lane per day. There are currently two train crossings per day on Tuesdays, Thursdays, and Saturdays as a train crosses from Brooksville to Tampa and returns. This section of SR 52 is expected to carry 25,700 vehicles per day by 2010. Since there is an average of less than one train per day using the crossing, the train/motor vehicle conflict is not sufficient to warrant construction of a railroad-grade separation. An improved at-grade crossing will be included with the rural-design cross section at this location.

Potential to Save the Existing Pavement--The ability to save the existing pavement for use with the improved roadway has been reviewed. An urban cross section is recommended from U.S. 19 to Moon Lake Road.

The existing pavement was constructed as a rural cross section, providing open drainage and very little grade. As a result, the existing pavement would not drain properly if it were to be converted to an urban cross section. The rural portions of SR 52 have been reviewed for possible resurfacing and use in the rural cross section. The FDOT district pavement design engineer has evaluated the existing base and surface. Due to low soil support provided by the existing embankment and 6-inch limerock base, the district pavement design engineer has recommended that the roadway be reconstructed. Therefore, new pavement will have to be constructed on the entire length of SR 52.

### 3.7 ALTERNATIVE ALIGNMENTS

#### 3.7.1 Alignments Considered

North Alignment--With this alignment, all of the additional right-of-way required would be obtained along the north side of the road. This would be an additional 27 feet in the case of the urban section and 112 feet in the case of the rural section.

South Alignment--This alignment would require the same amount of additional right-of-way as the north alignment, but it would be acquired from the south side only.

Centered Alignment--This alignment would utilize equal amounts of right-of-way on each side of the existing roadway. The urban section would require 13.5 feet from each side of the road, while the rural section would take an additional 56 feet from each side.

Combined Alignment--A combined alignment would shift between north, centered, and south alignments as needed to minimize negative impacts and maximize benefits.

#### 3.7.2 Selection Criteria for the Proposed Alignment

The proposed alignment was selected using the following goals:

1. Minimize road construction costs,

2. Minimize right-of-way acquisition costs,
3. Minimize the number of relocations,
4. Minimize environmental impacts,
5. Improve roadway geometrics, and
6. Minimize utility relocation costs.

Road Construction Costs--The urban section will require reconstruction of the existing roadway and placement of new pavement with curb and gutter sections and underground drainage. This will be required for each alternative, therefore, there is no difference in construction cost for any of the alternatives in the urban section. Similarly, the rural cross section will require entirely new pavement regardless of the alternative selected. Road construction costs, therefore, are not a determining factor in the selection of the preferred alignment.

Cost estimates have been prepared for this new road construction using FDOT long-range estimates which were prepared on May 1, 1986. The urban cross section would be constructed for a distance of 6.11 miles of 6-lane pavement at an estimated cost of \$13,148,400. The rural 4-lane cross section would be used for 17.23 miles and would cost \$26,185,300.

Right-of-Way Costs--Right-of-way cost estimates were obtained for the north, south, and centered alignments using the recommended right-of-way widths discussed earlier. The alignments included acquisition of all of the needed right-of-way north of the existing right-of-way, total acquisition to the south of existing, and centered on the existing centerline. The right-of-way cost estimates obtained from FDOT include costs for the purchase of the right-of-way including severance, support costs, administrative settlement, court award and legal settlements, and relocation costs, including costs for signs.

Number of Relocations--The number of relocations, both for business and residential use, were obtained for the three right-of-way acquisition alternatives and are discussed in detail in Section 3.7.3, Proposed Alignment.

Environmental Impacts--The rural section of SR 52 passes through a number of wetland areas. Determination of the preferred alignment considered the impact of the recommended right-of-way on the adjacent environmentally sensitive areas (i.e., wetlands).

Roadway Geometrics--At a number of locations, improvements in roadway geometrics were a factor in the selection of the preferred alignment. The maximum degree of curvature used in the preferred alignment is 3 degrees 30 minutes for both the urban and rural sections.

Utilities--A number of utilities are located within the SR 52 right-of-way, with the greatest number located in the urbanized western end of the project. The Withlacoochee River Electric Company (WREA) has overhead electric lines running the entire length of the project. Poles for this utility vary from the north side of the road to the south side at a number of locations. Florida Power has an overhead line that runs from U.S. 19 to east of Plaza Drive. Storer Cable Television has a cable on the WREA poles that follow a south-side alignment for most of the length from U.S. 19 to 0.5 mile east of Moon Lake Road, CR 587. The Pasco County Water Department has a water line that is located between 38 and 42 feet south of the centerline of SR 52 from U.S. 19 to Moon Lake Road. General Telephone Company has an overhead line running from U.S. 19 to 0.3 mile west of Hicks Road on the north side of SR 52. The telephone company also has a number of buried cables within the road right-of-way. SR 52 from U.S. 19 to Moon Lake Road has between one and eleven buried cables spread within the right-of-way north of the existing pavement. From approximately 0.4 mile east of U.S. 19 to Moon Lake Road there are one to two buried cables located south of the road. All of the utilities are located within the road right-of-way with the exception of five WREA poles located just outside the south right-of-way line in the vicinity of CR 1. The utilities located within the right-of-way are scattered north and south of the existing pavement.

Most of the buried utilities will require relocation or adjustment no matter which alignment is selected, and no significant differences in costs for relocating of utilities following the north, south, or centered alignments were identified.

### 3.7.3 Proposed Alignment

The four alignment alternatives were compared in light of the selection criteria outlined in Section 3.7.2. It was determined that construction and utility relocation costs would be virtually the same no matter which alternative is selected. Neither the north, centered, or south alignment could provide a combination of the least right-of-way cost, least number of relocations, minimum environmental impact, and best roadway geometrics. In fact, there were many conflicts between these goals. Therefore, the combined alignment was chosen as the most prudent build alternative because it optimizes the goals listed above. The process used to select the proposed combined alignment is discussed in the following paragraphs.

U.S. 19 to CR 587, Moon Lake Road--Urban Cross Section--This section of SR 52 contains the highest densities of urban development. Much of the road frontage has been developed into commercial, office, and residential uses. As a result, there are very few environmentally sensitive areas within the urban limits. Selection of the preferred route, therefore, centered on minimizing right-of-way costs and relocations. Because there are a number of curves in the alignment of this road, the logical place to transition from a north to centered or south alignment is in one of these curves. Efforts have also been made to flatten these curves, where possible, to improve roadway geometrics.

Table 3.7-1 provides a comparison of right-of-way costs, number of relocations, relative environmental impacts by alignment, and indicates the preferred alignment. The preferred alignment for SR 52 from U.S. 19 to La Madera Boulevard is to acquire additional right-of-way needed along the south side. This alignment is less expensive than either of

Table 3.7-1. Evaluation of Alignments for SR 52

Location	Segment Length	North			Centered			South			Preferred		
		R/W (\$)	Bus/Res Reloc.	Env. (Acres)	R/W (\$)	Bus/Res Reloc.	Env. (Acres)	R/W (\$)	Bus/Res Reloc.	Env. (Acres)	R/W (\$)	Bus/Res Reloc.	Env. (Acres)
U.S. 19 to LaMadera Blvd.	1.29	2,439,900	1/1	0.00	3,068,600	1/0	0.00	2,213,000	0/0	0.00	2,213,000	0/0	0.00
LaMadera Blvd. to Illinois	1.19	2,084,900	2/0	0.00	3,014,200	2/0	0.00	2,287,000	0/0	0.00	2,287,000†	0/0	0.00
Illinois to Bear Creek Dr.	1.48	2,158,500	0/0	1.14	2,559,400	0/0	0.82	1,806,200	0/0	0.51	1,806,200	0/0	0.51
Bear Creek Dr. to 0.2 Mile East of Choctaw Ridge	0.4	1,130,300*	0/0	0.00	1,362,800	0/0	0.00	1,003,700	0/0	0.00	1,003,700	0/0	0.00
0.2 Mile East of Choctaw Ridge to 0.2 Mile West of Sugar Creek	1.19	1,754,500	0/0	0.00	1,616,400	0/0	0.28	802,000	0/0	0.55	802,000	0/0	0.55
0.2 Mile West of Sugar Creek to Moon Lake Road	0.56	171,000	0/0	0.12	196,400	0/0	0.57	132,000	0/0	0.91	132,000	0/0	0.91
<b>TOTAL URBAN SECTION</b>	6.11	9,739,100	3/1	1.26	11,817,800	3/0	1.67	8,243,900	0/0	1.97	8,243,900	0/0	1.97
Moon Lake Road to 0.3 Mile East of Hayes Road	2.42	1,278,000	0/0	5.16	1,593,800	0/0	4.24	1,266,000	0/0	5.50	1,266,000	0/0	5.50
0.3 Mile East of Hayes Road to 0.5 Mile East of Murcott May	0.74	269,000	0/0	0.75	373,300	0/0	0.71	340,500	0/0	1.26	269,000	0/0	0.75
0.5 Mile East of Murcott May to 0.3 Mile East of SCL Railroad	2.47	1,870,000	2/4	4.60	3,145,800	5/12	3.51	2,690,900	2/17	4.06	1,870,000	2/4	4.60
0.3 Mile East of SCL Railroad to 0.2 Mile West of U.S. 41	0.41	821,600	6/6	0.06	555,600	1/3	0.25	325,600	0/0	0.51	304,500	0/0	0.20
0.2 Mile West of U.S. 41 to 0.35 Mile East of U.S. 41	0.55	499,500	4/0	0.56	549,600	2/0	0.55	600,500	6/0	0.78	597,500	4/0	0.98
0.35 Mile East of U.S. 41 to 1.15 Miles East of U.S. 41	0.8	998,300	0/0	3.51	849,300	0/0	3.87	519,000	0/0	4.25	519,000	0/0	3.16
1.15 Miles East of U.S. 41 to 0.4 Mile East of Pasco Trails Blvd.	1.34	507,000	0/0	7.08	613,700	0/0	7.59	470,000	0/0	8.72	507,000	0/0	5.80
0.4 Mile East of Pasco Trails Blvd. to 2 Miles East of Pasco Trails Blvd.	1.6	580,000	0/0	3.12	726,400	0/0	2.87	552,000	0/0	3.23	552,000	0/0	2.43
2 Miles East of Pasco Trails Blvd. to 2.5 Miles East of Pasco Trails Blvd.	0.5	263,000	0/0	4.35	316,600	0/0	3.82	246,000	0/0	3.04	246,000	0/0	2.54
2.5 Miles East of Pasco Trails Blvd. to I-75	6.4	4,167,500	2/14	21.97	5,269,400	1/14	16.27	2,807,000	0/1	13.03	2,807,000	0/0	13.03
<b>TOTAL RURAL SECTION</b>	17.23	11,253,900	14/24	51.16	13,993,500	9/29	43.68	9,817,500	8/17	44.38	8,938,000	6/4	41.16
<b>PROJECT TOTAL</b>	23.24	20,993,000	17/25	52.42	25,811,300	12/29	45.35	18,061,400	8/17	46.35	17,181,900	6/4	43.13

\* Includes transition cost for acquisition on both sides of R/W (see text).

† South Alignment preferred due to eagles' nest on north side of SR 52 at La Madera Boulevard.

Source: RS&H, 1987.

4/02/87

the other alternatives and requires no relocations. From La Madera Boulevard to Illinois Road the south alignment has been selected. An eagle's nest is located approximately 350 feet north of the centerline of SR 52 in the vicinity of La Madera Boulevard. In order to reduce impacts on this eagle's nest, a south alignment at this location is preferred. The alignment is kept to the south for the segment leading to Illinois Road because there is no suitable place to transition to the north in this segment. This alignment will require no business or residential relocations, while a north alignment would have required two business relocations. From Illinois Road to Bear Creek Drive, the south alignment is the favored route due to lower costs and less wetland involvement.

The potential to move the alignment to the north from Bear Creek Drive to 0.2 mile east of Choctaw Ridge was investigated. There are no relocations for either the south or north alignment and no significant environmental impacts. The north alignment would cost \$1,130,300, while the south would cost \$1,003,700. The north alignment cost includes the right-of-way cost for a north-only alignment and a transition from the south alignment. This would require purchase of right-of-way from both sides of the existing right-of-way thereby increasing the number of parcels that would be acquired. It is estimated that the eight additional parcels would add \$152,000 in support cost, administrative settlement, court award, legal settlement, and appraisal fees to the \$978,300 cost for the north only alignment. The total cost for the north alignment would then be approximately \$1,130,300, considerably more than the south alignment. The south alignment is therefore preferred.

From the 0.2 mile east of Choctaw Ridge to 0.2 mile west of Sugar Creek the south alignment is preferred due to significantly lower right-of-way costs. From 0.2 mile west of Sugar Creek to CR 587, Moon Lake Road, the south alignment has again been selected due to lower right-of-way costs. There is a minor amount of environmentally sensitive land within both of

4/02/87

these sections. There is a total of 1.42 acres of wetlands affected by the south alignment, 0.12 acre affected by the north alignment, and 0.85 acre affected by a center alignment. The wetland impacts were not considered a significant enough factor to shift the road from a southern alignment.

CR 587 to I-75--Rural Cross Section--The rural cross section begins at Moon Lake Road and extends to the eastern project terminus at I-75. From Moon Lake Road to 0.3 mile east of Hayes Road, the south alignment has been recommended to improve roadway geometrics and lower right-of-way costs. The south alignment involves slightly more wetland than the other alternatives; however, the difference was not considered sufficiently significant to shift the alignment from the south. A subalter-nate considered straightening the alignment between two reverse curves located 0.15 mile and 0.77 mile east of Moon Lake Road. The straightened alignment would impact an additional 1.13 acres of wetlands and is also estimated to cost an additional \$97,000 more than the south alignment. Since the curves on the south alignment are within the design parameters for the rural cross section and there would be greater environmental impacts and higher costs to straighten the road, it has been recommended that the south alignment be followed.

From 0.3 mile east of Hayes Road to 0.5 mile east of Murcott Way consideration was given to determining the best location to shift the alignment to the north in order to connect with the best alignment to the east. It was determined that a shift to the north in this segment would be the best alignment since it would only impact one wetland system, while a centered or south alignment would have impacted wetland systems on both sides of the road.

From 0.5 mile east of Murcott Way to 0.3 mile east of the Seaboard Coast Line Railroad (SCLRR), the north alignment has been recommended due to significantly lower right-of-way acquisition costs and fewer relocations of businesses and residents. The northern alignment will impact 0.34 to

1.26 more acres of wetlands than the other alignments; however, the difference is not considered a significant enough factor to increase the number of relocations associated with the other alignments. The preferred alignment shifts back to the south from 0.3 mile east of the SCLRR to 0.2 mile west of U.S. 41 to minimize right-of-way costs and eliminate the need to relocate any businesses or residences. Wetland involvement for all three alignments was minimal.

The alignment at U.S. 41 and SR 52 is included in the segment from 0.2 mile west to 0.35 mile east of U.S. 41. This alignment has some special considerations. The existing curve on SR 52 at this location is 6 degrees. This is sharper than the 3-degree-30-minute maximum allowed for the 70 mph design speed. In addition, studies are currently underway to determine needed improvements to U.S. 41 north and south of SR 52. The study to the north uses a basic right-of-way width of 206 feet which will provide two 12-foot-wide travel lanes in each direction separated by a 46-foot-wide median. The study to the south uses a basic right-of-way width of 200 feet which will provide two 12-foot wide travel lanes in each direction separated by a 40-foot-wide median. There is a new shopping center in the southeast quadrant of this intersection. In order to minimize right-of-way acquisition costs and to improve geometrics for SR 52, the curve on SR 52 has been flattened to 1 degree 15 minutes. Additional right-of-way required for U.S. 41 is recommended to be acquired to the west of the centerline. A 206-foot-wide right-of-way is recommended through the SR 52 intersection for U.S. 41. This will match the right-of-way to the north and can be transitioned to 200 feet south of SR 52. From 0.35 mile to 1.15 miles east of U.S. 41 the preferred alignment is along the south side due to lower right-of-way costs. The proposed alignment for this section will impact more wetlands (0.2 to 0.43 acre) than the north, south, or center alignments. However, the increase in wetland impacts was considered an unavoidable consequence of improving roadway geometrics.

4/02/87

The section of SR 52 from 1.15 miles east of U.S. 41 to 0.4 mile east of Pasco Trails Boulevard has extensive wetland involvement. The cypress swamp system along the southern alignment of SR 52 was avoided due to the system's expansive and somewhat pristine nature. Cypress swamps function as recharge, stormwater retention, and water purification systems. Cypress swamps also provide a prime habitat for a diverse assemblage of wildlife species, including state and federally listed endangered and threatened animals. Therefore, since a smaller area of the overall wetland system will be altered through improvements along the northern alternative, this alternative is preferred.

From 0.4 mile to 2 miles east of Pasco Trails Boulevard the preferred alignment begins in the center and transitions to the south to minimize environmental impact. The preferred alignment will impact less wetlands (0.44 to 0.88 acre) than the north, south, or center alignments. The section from 2.0 to 2.5 miles east of Pasco Trails Boulevard crosses between two wetlands on either side of the existing right-of-way. The south alignment was selected due to lower wetland impact and to keep the impacts that do result confined to one side of the road. The preferred alignment will impact less wetlands (0.50 acre to 1.81 acres) than the north, south, or center alignments. From 2.5 miles east of Pasco Trails Boulevard to I-75, the preferred alignment follows the south alignment due to lower right-of-way costs, a lower number of relocations, and less environmental impacts. Wetland impacts associated with the southern alignment were 3.24 to 8.94 acres less than the north and center alignments.

Proposed Combined Alignment--As was identified above, an alignment using right-of-way acquisition totally from the north side for the entire length of the project, from the south side for the entire length of the project, or centered on the existing right-of-way would not maximize the selection criteria. The configuration of the proposed combined alignment is summarized in Table 3.7-2.

Table 3.7-2. Configuration of the Proposed Alignment for SR 52.

Location	Segment Length	Alignment
U.S. 19 to LaMadera Blvd.	1.29	South
LaMadera Blvd. to Illinois	1.19	South
Illinois to Bear Creek Drive	1.48	South
Bear Creek Dr. to 0.2 Mile East of Choctaw Ridge	0.4	South
0.2 Mile East of Choctaw Ridge to 0.2 Mile West of Sugar Creek	1.19	South
0.2 Mile West of Sugar Creek to Moon Lake Road	<u>0.56</u>	South
TOTAL URBAN SECTION	6.11	
Moon Lake Road to 0.3 Mile East of Hayes Road	2.42	South
0.3 Mile East of Haynes Road to 0.5 Mile East of Murcott Way	0.74	North
0.5 Mile East of Murcott Way to 0.3 Mile East of SCL Railroad	2.47	North
0.3 Mile East of SCL Railroad to 0.2 Mile West of U.S. 41	0.41	South
0.2 Mile West of U.S. 41 to 0.35 Mile East of U.S. 41	0.55	South
0.35 Mile East of U.S. 41 to 1.15 Miles East of U.S. 41	0.8	South
1.15 Miles East of U.S. 41 to 0.4 Mile East of Pasco Trails Blvd.	1.34	North
0.4 Mile East of Pasco Trails Blvd. to 2 Miles East of Pasco Trails Blvd.	1.6	South
2 Miles East of Pasco Trails Blvd. to 2.5 Miles East of Pasco Trails Blvd.	0.5	South
2.5 Miles East of Pasco Trails Blvd. to I-75	<u>6.4</u>	South
TOTAL RURAL SECTION	17.23	
PROJECT TOTAL	23.34	

Source: RS&H, 1986.

As indicated in Table 3.7-3, the proposed alignment for the urban section on SR 52 from U.S. 19 to CR 587 is estimated to have a right-of-way cost of \$8,243,900 and a construction cost of \$13,148,400. There would be no business or residential relocations within the 6.11-mile urban section, and only 1.97 acres of wetlands would be impacted by the proposed alignment.

As indicated in Table 3.7-3, the proposed alignment for the rural section on SR 52 from CR 587 to I-75 has an estimated right-of-way cost of \$8,938,000 and a construction cost of \$26,185,300. There would be a total of six business and four residential relocations over the 17.23-mile length of the rural section. It is also estimated that 41.16 acres of wetland areas would be affected.

Table 3.7-3. Estimated Cost of the Proposed Alignment for SR 52 from U.S. 19 to I-75

Segment	Length	Right-of-Way Cost	Construction Cost	Total Cost	Business/Residential Relocations	Wetland Areas Affected (Acres)
U.S. 19 to CR 587 Urban Section	6.11	\$ 8,243,900	\$13,148,400	\$21,392,300	0/0	1.97
CR 587 to I-75 Rural Section	<u>17.23</u>	<u>\$ 8,938,000</u>	<u>\$26,185,300</u>	<u>\$35,123,300</u>	<u>6/4</u>	<u>41.16</u>
U.S. 19 to I-75 PROJECT TOTAL	23.34	\$17,181,900	\$39,333,700	\$56,515,600	6/4	43.13

Source: RS&H, 1987.

#### 4.0 IMPACTS

##### 4.1 LAND USE

Figure 4.1-1 illustrates existing land use within 200 feet of the present centerline of SR 52. Between U.S. 19 and Moon Lake Road (Sheets A and B of Figure 4.1-1), the predominant land use is commercial, with areas of single-family, multifamily, and mobile homes interspersed and located behind the commercial areas. SR 52 provides access to major residential developments such as Ponderosa Park, Bay Point Village, and Bear Creek as well as to the many strip shopping commercial developments along SR 52.

Between Moon Lake Road and I-75 (Sheets C and D of Figure 4.1-1), land is predominantly undeveloped, with several large areas under agricultural uses (pastures) and lesser areas of residential, commercial, and light industrial usage. The areas of commercial and residential land uses are located within 1 mile of the intersections of U.S. Highway 41 (Gowers Corner), CR 581 (Pasco), and I-75. Access to new residential developments such as Pasco Trails and Meadow Oaks is provided by SR 52.

According to the Future Land Use Element of the Pasco County Comprehensive Plan (1982), the county plans to pattern future land uses after the existing land use and zoning patterns. The Comprehensive Plan intends to guide urban development and provide public facilities and services where feasible to achieve optimum land use relationships with the natural environment and existing land uses. Zoning district designations in the project area range from agricultural to various residential and commercial designations. Between U.S. 19 and Moon Lake Road, the majority of the frontage along SR 52 is zoned for general commercial use, with access driveways leading to areas designated for single-family residential and single-family mobile home districts behind the commercial frontage. Between Moon Lake Road and I-75, most of the frontage is designated for agricultural use, with residential, commercial, light industrial, and planned unit development designations in the vicinity of the intersections of U.S. 41, CR 581, Moon Lake Road, and I-75.

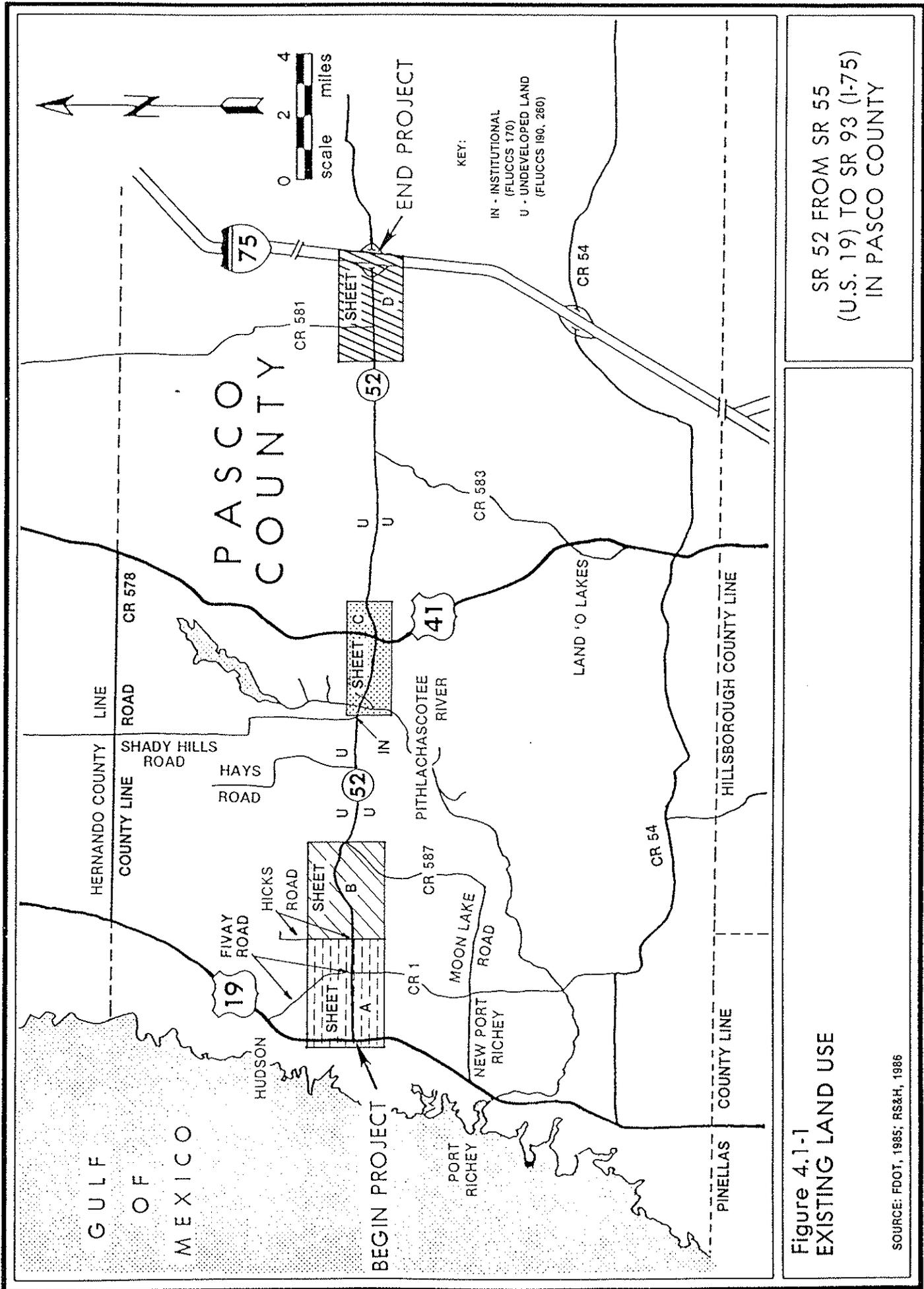
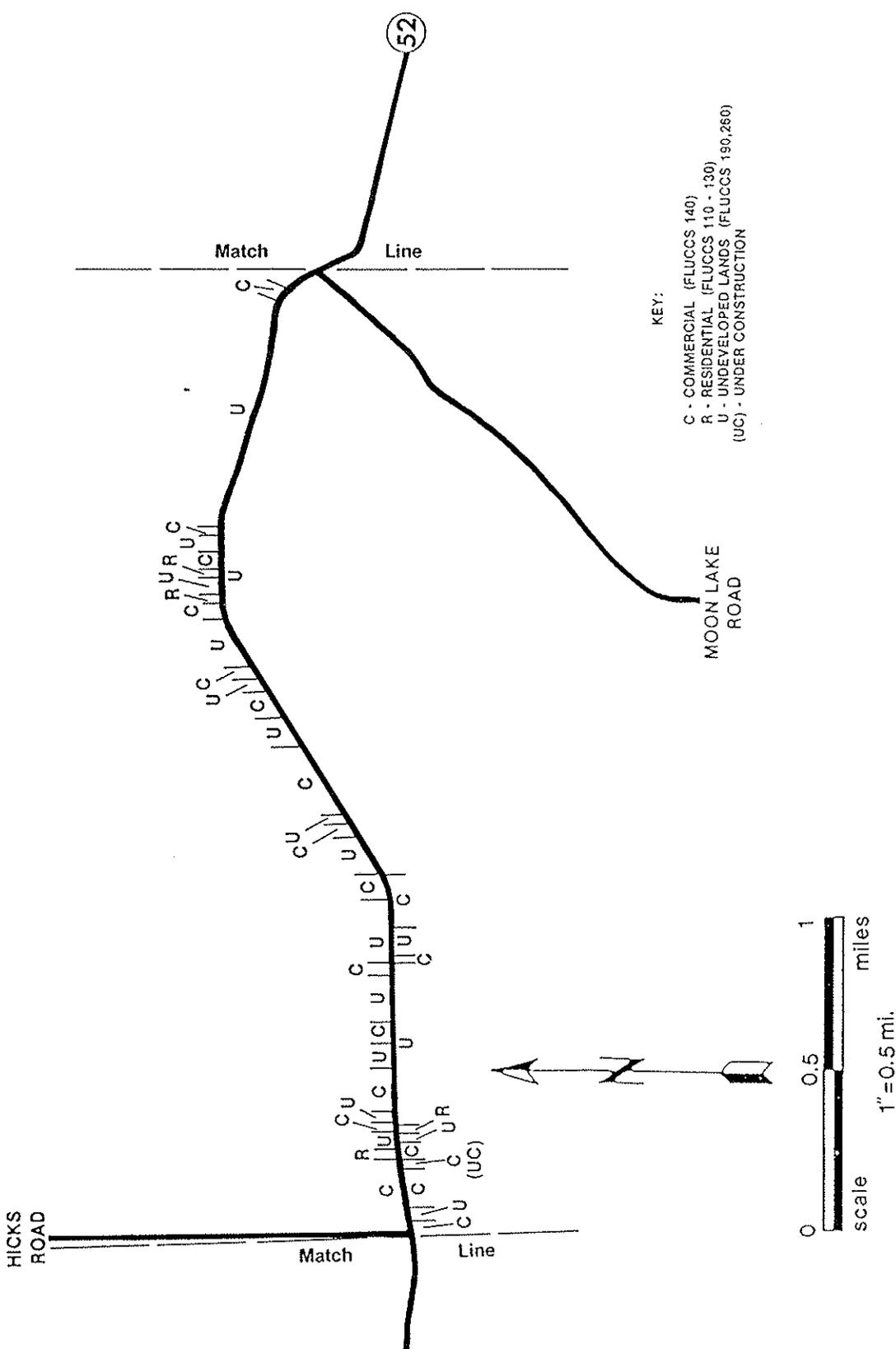


Figure 4.1-1  
EXISTING LAND USE

SR 52 FROM SR 55  
(U.S. 19) TO SR 93 (I-75)  
IN PASCO COUNTY

SOURCE: FDOT, 1985; RS&H, 1986





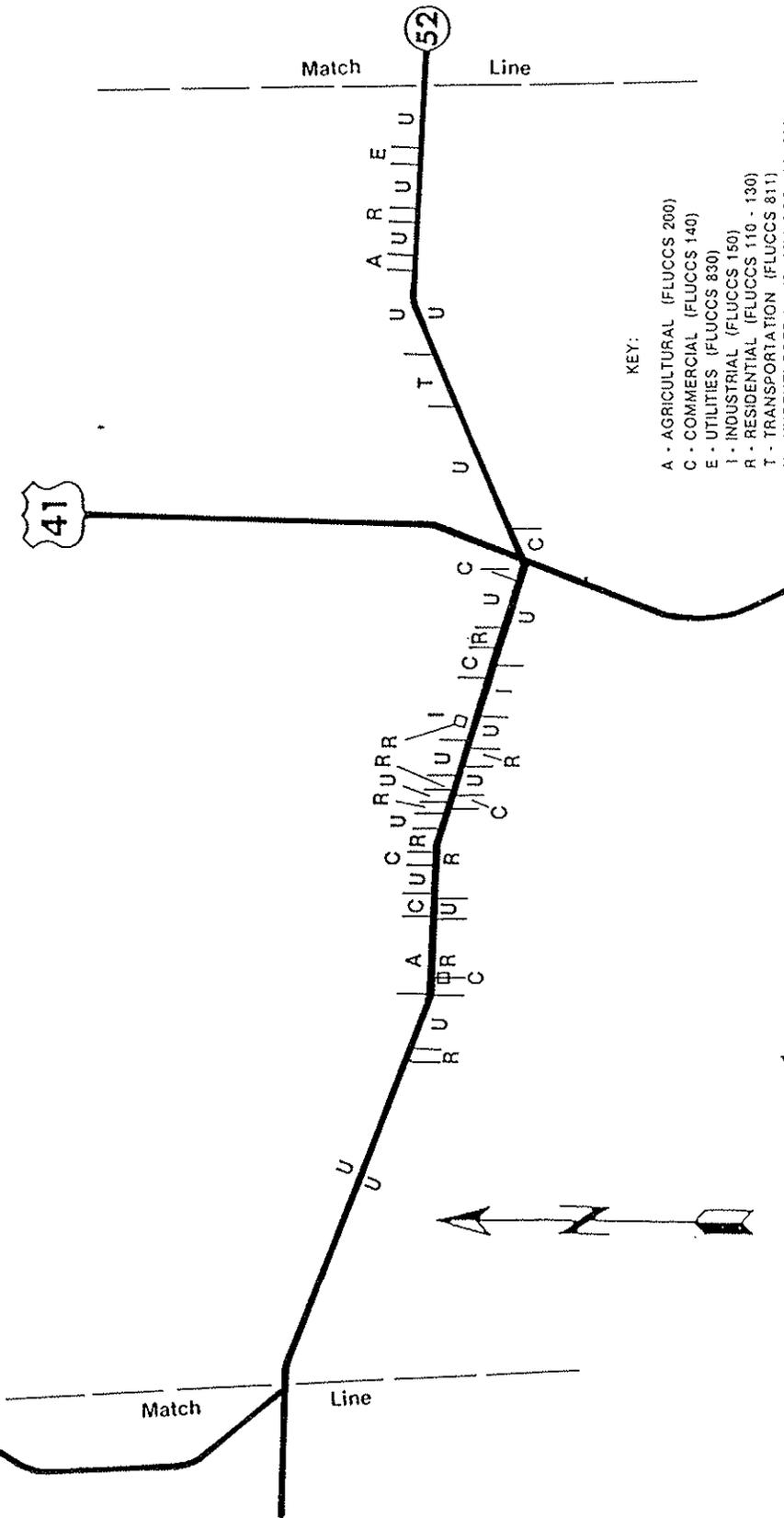
KEY:  
 C - COMMERCIAL (FLUCCS 140)  
 R - RESIDENTIAL (FLUCCS 110 - 130)  
 U - UNDEVELOPED LANDS (FLUCCS 190,260)  
 (UC) - UNDER CONSTRUCTION

SR 52 FROM SR 55  
 (U.S. 19) TO SR 93 (I-75)  
 IN PASCO COUNTY

Figure 4.1-1  
 SHEET B  
 EXISTING LAND USE

SOURCE: FDOT, 1985; RS&H, 1986

SHADY HILLS ROAD



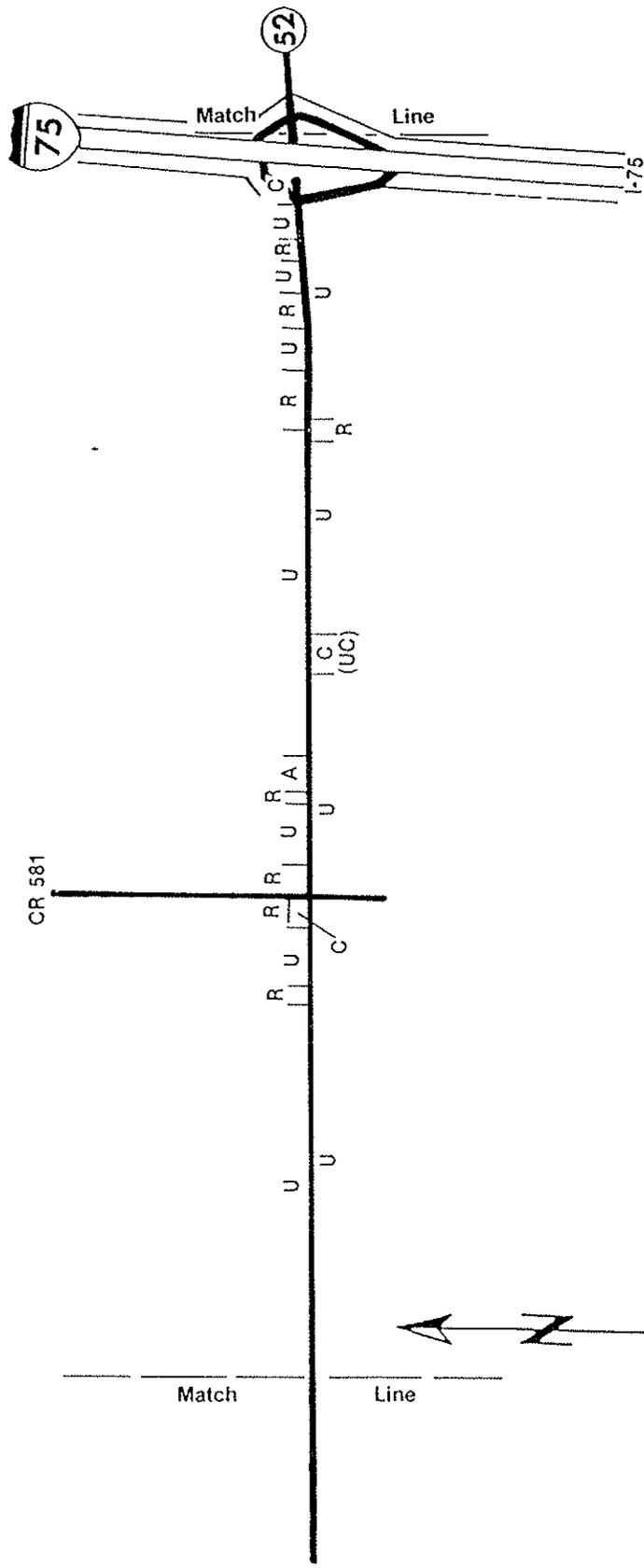
KEY:

- A - AGRICULTURAL (FLUCCS 200)
- C - COMMERCIAL (FLUCCS 140)
- E - UTILITIES (FLUCCS 830)
- I - INDUSTRIAL (FLUCCS 150)
- R - RESIDENTIAL (FLUCCS 110 - 130)
- T - TRANSPORTATION (FLUCCS 811)
- U - UNDEVELOPED LAND (FLUCCS 190, 260)

Figure 4.1-1  
SHEET C  
EXISTING LAND USE

SOURCE: FDOT, 1985; RS&H, 1986

SR 52 FROM SR 55  
(U.S. 19) TO SR 93 (I-75)  
IN PASCO COUNTY



KEY:

- A - AGRICULTURE (FLUCCS 200)
- C - COMMERCIAL (FLUCCS 140)
- R - RESIDENTIAL (FLUCCS 110 - 130)
- U - UNDEVELOPED LAND (FLUCCS 190, 280)
- (UC) - UNDER CONSTRUCTION

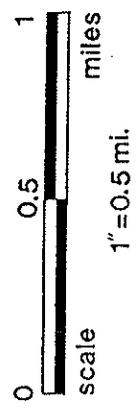


Figure 4.1-1  
SHEET D  
EXISTING LAND USE

SOURCE: FDOT, 1985; AS&H, 1986

SR 52 FROM SR 55  
(U.S. 19) TO SR 93 (I-75)  
IN PASCO COUNTY

The construction of the proposed roadway will have minimal impacts on land use and zoning. Right-of-way acquisition is limited to 27 feet in the urban section and 112 feet in the rural section. A total of only four residences and six businesses will be relocated (described in Section 4.14, Relocation Impacts). Impacts of the proposed project on existing land use patterns are anticipated to be minimal. The proposed upgrading will increase accessibility to the land adjacent to SR 52 and its crossroads, thereby potentially hastening development. Impacts on future land use patterns, however, are expected to be minimal and in keeping with the goals established in the Pasco County Comprehensive Plan.

#### 4.2 BIOLOGICAL COMMUNITIES

The project corridor was surveyed for biological communities and significant vegetation unique to the area. Five upland and three wetland communities were identified. They are:

##### Upland communities

- Turkey oak-longleaf pine sandhill,
- Pine flatwoods,
- Oak scrub,
- Oak hammock, and
- Grassland/Palmetto rangeland.

##### Wetland communities

- Cypress swamp,
- Mixed hardwood swamp, and
- Freshwater marsh/Shallow pond.

##### 4.2.1 Community Descriptions

The eight biological communities differ in floral and faunal components. The approximate acreage occurring within the proposed right-of-way, the general distribution along the project corridor, and the characteristic flora are described below for each community type. Numerous wildlife

species will find suitable habitat in these communities. Common wildlife species are listed in Table 4.2-1. Wildlife species listed by the State of Florida or by the U.S. Fish and Wildlife Service (USFWS) as endangered, threatened, or of special concern are listed in Table 4.2-2 and Section 4.3, Endangered and Threatened Species, respectively. Twenty-six species of wildlife were observed within the project corridor. This includes 19 common wildlife species and seven listed by the State of Florida or USFWS as endangered, threatened, or of special concern (see Tables 4.2-1 and 4.2-2, respectively).

Turkey Oak-Longleaf Pine Sandhill--Approximately 12.5 acres of sandhill community occur within the proposed right-of-way. The sandhill communities are scattered between CR 1 and CR 583.

Plant species in the sandhill community are adapted to the well drained sandy soils and xeric conditions in these areas. Turkey oak (Quercus laevis) dominates the sandhill communities along the project corridor. Longleaf pine (Pinus palustris), sand live oak (Quercus geminata), and wild persimmon (Diospyros virginiana) are scattered throughout the community. Longleaf pine probably dominated these communities in the recent past but was removed by logging activities, and its regrowth was subsequently suppressed by lack of frequent fires. Shrub and herb understory layers are open to moderately dense in the sandhill communities. The herb layer contains numerous sandy areas completely devoid of vegetation. The variability in understory cover is probably a result of historic differences in the frequencies of fire, clearing, and grazing activity in individual stands. The common understory plants include:

Shrub layer

Running oak	<u>Quercus pumila</u>
Gopher apple	<u>Licania michauxii</u>
Blackberries	<u>Rubus</u> spp.
Pawpaw	<u>Asimina reticulata</u>
Saw palmetto	<u>Serenoa repens</u>
Sparkleberry	<u>Vaccinium arboreum</u>

Table 4.2-1. Common Wildlife Species Expected to Occur or Were Observed Along SR 52 by Habitat Types

Species Common Name	Scientific Name	Sandhill	Pine Flatwood	Scrub Oak	Oak Hamrock	Grassland/		Cypress Swamp	Mixed		Freshwater Swamp/ Shal low Pond
						Palmetto Rangeland	Hardwood Swamp				
<u>Birds</u>											
American Robin*	<u>Turdus migratorius</u>	X	X			X			X		X
Ahinga	<u>Anhinga anhinga</u>							X			
Bachman's Sparrow	<u>Amphispiza aestivalis</u>		X	X							
Barred Owl	<u>Strix varia</u>							X			
Black-Crowned Night Heron	<u>Nycticorax nycticorax</u>							X			X
Black Vulture*	<u>Coragyps atratus</u>	X	X					X			
Blue-Gray Gnatcatcher	<u>Poliophtila caerulea</u>	X	X		X			X			
Blue Jay*	<u>Cyanocitta cristata</u>	X			X			X			
Blue-Winged Teal	<u>Anas discors</u>										X
Boat-Tailed Grackle*	<u>Quiscalus major</u>		X			X			X		
Bobwhite Quail	<u>Colinus virginianus</u>	X	X			X					X
Brown-Headed Nuthatch	<u>Sitta pusilla</u>	X	X								
Brown Thrasher	<u>Toxostoma rufum</u>	X			X						
Cardinal	<u>Cardinalis cardinalis</u>				X						
Carolina Wren	<u>Thryothorus ludovicianus</u>				X			X			
Cattle Egret*	<u>Bubulcus ibis</u>		X								X
Common Crow	<u>Corvus brachyrhynchos</u>	X	X			X		X			X
Common Grackle	<u>Quiscalus quiscula</u>	X	X			X		X			X
Common Nighthawk	<u>Chordeiles minor</u>	X	X			X					
Common Yellowthroat	<u>Geothlypis trichas</u>	X	X			X					
Coot	<u>Fulica americana</u>										X
Florida Duck	<u>Anas fulvigula</u>										X
Great Blue Heron*	<u>Ardea herodias</u>							X			X
Great Egret*	<u>Casmerodius albus</u>							X			X
Ground Dove	<u>Columbina passerina</u>	X									
Killdeer	<u>Charadrius vociferus</u>					X					X
Kingfisher*	<u>Ceryle alcyon</u>										X
Louisiana Heron	<u>Hydranassa tricolor</u>							X			X
Marsh Hawk	<u>Circus cyaneus</u>					X					X

Table 4.2-1. Common Wildlife Species Expected to Occur or Were Observed Along SR 52 by Habitat Types (Continued, Page 2 of 4)

Species Common Name	Scientific Name	Sandhill	Pine		Scrub Oak	Oak Hamock	Grassland/ Palmetto Rangeland		Cypress Swamp	Mixed Hardwood Swamp	Freshwater Swamp/ Shallow Pond	
			Flatwood									
<u>Birds (cont'd)</u>												
Meadowlark*	<u>Sturnella magna</u>		X					X				
Mockingbird*	<u>Mimus polyglottos</u>		X				X			X		
Mourning Dove*	<u>Zenaidura macroura</u>	X	X				X			X		
Osprey*	<u>Pandion haliaetus</u>											X
Pileated Woodpecker	<u>Dryocopus pileatus</u>	X	X			X			X			
Pine Warbler	<u>Dendroica pinus</u>		X							X		
Prothonotary Warbler	<u>Dendroica virens</u>							X				
Purple Gallinule	<u>Porphyrio martinica</u>											X
Red-Bellied Woodpecker	<u>Melanerpes carolinus</u>	X	X			X				X		
Red-Headed Woodpecker	<u>Melanerpes erythrocephalus</u>					X				X		
Red-Shouldered Hawk*	<u>Buteo lineatus</u>							X				X
Red-Winged Blackbird*	<u>Agelaius phoeniceus</u>							X				X
Rufous-Sided Towhee	<u>Pipilo erythrophthalmus</u>	X	X			X		X				X
Snowy Egret	<u>Egretta thula</u>											X
Summer Tanager	<u>Piranga rubra rubra</u>	X										X
Tufted Titmouse*	<u>Parus bicolor</u>		X							X		X
Turkey Vulture*	<u>Cathartes aura</u>							X				
Whip-Poor-Will	<u>Caprimulgus vociferus</u>		X					X		X		
White Ibis*	<u>Eudocimus albus</u>		X					X				X
Wood Duck	<u>Aix sponsa</u>								X			
Yellow-Throated Warbler	<u>Dendroica dominica</u>		X									
<u>Mammals</u>												
Bobcat	<u>Lynx rufus</u>		X									
Cotton Mouse	<u>Peromyscus gossypinus</u>	X			X					X		X
Eastern Cottontail	<u>Sylvilagus floridanus</u>		X		X							
Eastern Mole	<u>Scalopus aquaticus</u>				X							
Florida Mouse	<u>Peromyscus floridanus</u>	X										
Golden Mouse	<u>Peromyscus nuttalli</u>				X							
Gray Fox	<u>Urocyon cinereoargenteus</u>	X			X							

Table 4.2-1. Common Wildlife Species Expected to Occur Along SR 52 by Habitat Types (Continued, Page 3 of 4)

Species Common Name	Scientific Name	Sandhill	Pine Flatwood	Scrub Oak	Oak Hamock	Grassland/ Palmetto Rangeland	Cypress Swamp	Mixed Hardwood Swamp	Freshwater Swamp/ Shallow Pond
<u>Mammals (cont'd)</u>									
Gray Squirrel	<u>Sciurus carolinensis</u>				X		X	X	
Hispid Cotton Rat	<u>Sigmodon hispidus</u>	X	X			X			X
Least Shrew	<u>Cryptotis parva</u>			X		X			
Marsh Rabbit	<u>Sylvilagus palustris</u>								X
Nine-Banded Armadillo*	<u>Dasypus novemcinctus</u>	X	X	X	X	X			
Oldfield Mouse	<u>Peromyscus polionotus</u>			X					
Otter	<u>Lutra canadensis</u>		X		X		X	X	X
Raccoon*	<u>Procyon lotor</u>				X			X	X
Rice Rat	<u>Orzomys palustris</u>							X	X
Southeastern Myotis	<u>Myotis austroriparius</u>							X	
Southeastern Pocket Gopher	<u>Geomys pinetis</u>	X							
Striped Skunk	<u>Mephitis mephitis</u>			X					
Virginia Opossum	<u>Didelphis virginiana</u>		X	X	X	X		X	
White-Tailed Deer	<u>Odocoileus virginianus</u>		X	X	X			X	X
<u>Amphibians</u>									
Cricket Frog	<u>Acris gryllus</u>		X				X	X	X
Dusky Salamander	<u>Desmognathus fuscus</u>						X	X	
Eastern Spadefoot Toad	<u>Scaphiopus holbrookii</u>			X	X				
Florida Chorus Frog	<u>Pseudacris nigrita verrucosa</u>		X			X		X	X
Greater Siren	<u>Siren lacertina</u>						X	X	X
Green Treefrog	<u>Hyla cinerea</u>		X		X				
Oak Toad	<u>Bufo quercicus</u>	X	X	X					X
Pig Frog	<u>Rana grylio</u>						X		X
Pine Woods Treefrog	<u>Hyla femoralis</u>	X	X	X			X		X
Southern Toad	<u>Bufo terrestris</u>	X	X	X	X	X		X	X
Squirrel Treefrog	<u>Hyla squirella</u>	X	X	X			X	X	X

Table 4.2-1. Common Wildlife Species Expected to Occur or Were Observed Along SR 52 by Habitat Types (Continued, Page 4 of 4)

Species Common Name	Scientific Name	Sandhill	Pine Flatwood	Scrub Oak	Oak Hamock	Grassland/ Palmetto Rangeland	Cypress Swamp	Mixed	
								Hardwood Swamp	Freshwater Swamp/ Shallow Pond
<u>Reptiles</u>									
Black Racer	<u>Coluber constrictor</u>	X	X	X	X	X	X	X	X
Brown Water Snake	<u>Nerodia taxipilota</u>					X	X		X
Chicken Turtle	<u>Dierochelys reticularia</u>								X
Eastern Fence Lizard	<u>Sceloporus undulatus</u>	X	X	X			X		
Five-Lined Skink	<u>Eumeces inexpectatus</u>		X	X			X		
Florida Water Snake	<u>Nerodia fasciata pictiventris</u>		X	X			X	X	X
Green Anole	<u>Anolis carolinensis</u>	X	X	X	X		X	X	X
Ground Skink	<u>Scincella lateralis</u>	X	X	X			X		
Pygmy Rattlesnake	<u>Sistrurus miliarius barouri</u>		X						X
Six-Lined Racer Runner	<u>Cnemidophorus sexlineatus</u>	X	X	X		X			X
Southern Leopard Frog	<u>Rana utricularia</u>						X		X
Southern Ribbon Snake	<u>Thamnophis sauritus sackeni</u>							X	X

\* Observed along SR 52.

Source: RS&H, 1986.

Table 4.2-2. Species Listed as Endangered, Threatened, or of Special Concern by the State of Florida That Might Occur or Were Observed Within the SR 52 Project Corridor

Species	State Status	Sandhill	Pine Flatwood	Scrub Oak	Oak Hammock	Grassland/ Palmetto Rangeland	Cypress Swamp	Mixed Hardwood Swamp	Freshwater Marsh/ Shallow Pond
<b>MAMMALS</b>									
Florida Panther	Et	X	X	X	X	X	X	X	X
Florida Mouse	SSC	X	X	X					
Sherman's Fox Squirrel*	SSC	X	X	X			X		
<b>BIRDS</b>									
Florida Scrub Jay	T			X					
Limpkin	SSC						X	X	
Ivory-Billed Woodpecker	Et				X		X		
Little Blue Heron	SSC						X		
Snowy Egret	SSC							X	
Louisiana Heron	SSC							X	
Arctic Peregrine Falcon	Et**					X			
Southeastern Kestrel*	T	X	X			X			
Florida Sandhill Crane*	T					X			
Southern Bald Eagle*	T†	X	X	X	X	X	X	X	X
Wood Stork*	Et						X		X
Red-Cockaded Woodpecker	T†	X	X					X	
Bachman's Warbler	Et				X			X	
<b>AMPHIBIANS/REPTILES</b>									
American Alligator*	SSC**						X	X	X
Eastern Inigo Snake	T**	X	X	X	X	X	X	X	X
Florida Pine Snake	SSC	X	X	X	X	X	X	X	X
Gopher Frog	SSC			X					X
Gopher Tortoise*	SSC	X	X	X					
Short-Tailed Snake	T	X	X	X					

\* Observed Along SR 52.

† Listed by USFWS as Endangered.

\*\* Listed by USFWS as Threatened.

E = Endangered.

Herbaceous layer

Wiregrass	<u>Aristida stricta</u>
Deer's tongue	<u>Trilisa odoratissima</u>
Elephant's-foot	<u>Elephantopus</u> spp.
Asters	<u>Aster</u> spp.
Bracken fern	<u>Pteridium aquilinum</u>

Pine Flatwoods--Several phases of pine forest occur within the project corridor (i.e., longleaf pine flatwoods, slash pine flatwoods, and slash pine plantations). Approximately 31 acres of pine flatwoods and 23 acres of slash pine plantation are within the proposed right-of-way. Most pine flatwoods occur between CR 583 and I-75 and between CR 587 and Sandy Hills Road. The slash pine plantations occur between US 41 and CR 585.

Longleaf pine flatwoods, the most prevalent, occur on the drier sites which are typically transitional areas between the longleaf pine-turkey oak sandhills and the wetter slash pine flatwoods. Slash pines (Pinus elliottii) are dominant on wetter sites and also have been planted in areas originally dominated by longleaf pines. An occasional laurel oak (Quercus laurifolia) is also found within these pine flatwood communities.

The vegetative appearance of pine flatwoods along the project corridor is determined from the frequency and intensity of recent fires and past logging activities. Typically, in the absence of fire, longleaf pine flatwoods succeed to a xeric community dominated by oaks. Slash pine flatwoods, without fire, succeed to either mesic hardwoods hammocks in drier areas or bayheads in wetter areas.

The vegetative appearance of slash pine plantations is also influenced by the density of the planted trees. The dense canopy reduces the understory cover in these plantations. Consequently the understory is more open than in pine flatwoods. In addition there is a dense layer of pine needles on the ground surface.

The common understory plants in these three phases of pine forest include:

Shrub layer

Saw palmetto	<u>Serenoa repens</u>
Gallberry	<u>Ilex glabra</u>
Running oak	<u>Quercus pumila</u>
Myrtle oak	<u>Quercus myrtifolia</u>
Wax myrtle	<u>Myrica cerifera</u>
Fetterbush	<u>Lyonia lucida</u>
Blueberries	<u>Vaccinium spp.</u>
Pawpaw	<u>Asimina reticulata</u>

Herbaceous layer

Wiregrass	<u>Aristida stricta</u>
Panic grasses	<u>Panicum spp.</u>
Broomsedge	<u>Andropogon virginicus</u>

Oak Scrub--Approximately 24 acres of oak scrub community occurs within the proposed right-of-way. Most of the oak scrub community involved occurs between CR 587 and Pithlachascotee River.

As with the sandhill communities, the oak scrub areas are xeric with well drained sandy soils. Composition of oak scrub stands varies along the project route from nearly 100 percent oaks to a combination of oaks and longleaf pines. Sand live oak (Quercus geminata) is the dominant oak species, but myrtle oak (Quercus myrtifolia) and Chapman's oak (Quercus chapmanii) also occur. These communities range from dense stands of shrub size oaks to mature oak stands with open understories. Oak scrub communities in this area probably developed from successional shifts of turkey oak-longleaf pine sandhills or sand pine scrub communities brought about by the absence of fire or the occurrence of intensive logging of longleaf pine trees.

10/10/86

The oak scrub understory strata includes many of the same plant species as in the sandhill communities, but plant diversity is usually greater.

Common understory plants include:

Shrub layer

Dwarf live oak	<u>Quercus minima</u>
Saw palmetto	<u>Serenoa repens</u>
Rusty lyonia	<u>Lyonia ferruginea</u>
Winged sumac	<u>Rhus copallina</u>
Queen's delight	<u>Stillingia sylvatica</u>
Gopher apple	<u>Licania michauxii</u>
Shiny blueberry	<u>Vaccinium myrsinites</u>

Herbaceous layer

Wiregrass	<u>Aristida stricta</u>
Broomsedge	<u>Andropogon virginicus</u>
Milkworts	<u>Polygala</u> spp.
Rattleboxes	<u>Crotalaria</u> spp.
Greenbrier	<u>Smilax auriculata</u>

Oak Hammock--Portions of seven oak hammocks occur within the proposed right-of-way representing a total involvement of approximately 4 acres. These stands occur in pastures or old fields between U.S. 41 and CR 581. Oaks were probably left to provide shade and shelter for livestock.

Laurel oak and live oak (Quercus virginiana) are the dominant species of the canopy layer with longleaf pine also common in some stands. The subcanopy includes water oak (Quercus nigra) and small longleaf pine. The tree canopy varies but is typically dense. The understory layers are open to dense and include wiregrass, saw palmetto, ragweed (Ambrosia artemisiifolia) and rabbit tobacco (Gnaphalium obtusifolium).

Predominant vines are greenbriers (Smilax spp.) and muscadine grape (Vitis munsoniana). Stands within maintained pastures contain similar understory plant species listed for the grassland/rangeland communities.

Common understory species also include:

Shrub Layer

Beauty-berry	<u>Callicarpa americana</u>
Coralbean	<u>Erythrina herbacea</u>
Gallberry	<u>Ilex glabra</u>

Herbaceous layer

Poison ivy	<u>Toxicodendron radicans</u>
Dichanthelium grasses	<u>Dichanthelium</u> spp.
Thelypteris ferns	<u>Thelypteris</u> spp.

Grassland/Palmetto Range--Grasslands represent approximately 59 percent (240 of 405 acres) of the proposed right-of-way limits. Grasslands are divided into roadside ruderal, improved pasture, and rangeland communities. Roadside ruderal represents the largest portion of grasslands (160 acres). Palmetto rangeland and pasture occupy another 11 and 69 acres, respectively.

Roadside ruderal occurs along most of SR 52. Both native grasses (e.g., carpet grasses (Axonopus spp.), introduced grasses such as bahia grass (Paspalum notatum), bermuda grass (Cynodon dactylon), and numerous herbs occur along the maintained right-of-way. Common herbaceous plants include:

Caesar's weed	<u>Urena lobata</u>
Carpetweed	<u>Lippia nodiflora</u>
Sandspurs	<u>Cenchrus</u> spp.
Ragweed	<u>Ambrosia artemisiifolia</u>
Begger-ticks	<u>Bidens alba</u>
Southern Gaura	<u>Gaura angustifolia</u>

Palmetto rangeland and improved pastures occur mainly between CR 587 and I-75. Extensive areas of pine flatwoods were cleared of trees and converted into pastures or rangelands along SR 52. Little upland forest remains within the project corridor between CR 583 and I-75.

Improved pastures/fields generally consist of fields planted in grasses such as crab grass (Digitaria spp.), bahia grass, or white clover (Trifolium repens).

Rangelands include abandoned pastures (old fields) and unimproved areas which are generally managed to promote grasses by controlled burning and tree removal. The composition of rangelands are dependent upon the actual management techniques, present and past grazing intensity, and/or water availability.

The composition and physiognomy ranges from open fields of native grasses, saw palmetto, and an occasional live oak tree to a dense stand of shrubs (saw palmetto, wax myrtle, gallberry, and fetterbush) with scattered pine trees. Understory plant species are similar to the pine flatwoods and are listed in the pine flatwood community description.

In addition to the previously described plants, a variety of remnant shrub species occur along fence lines and ecotones surrounding roadside ruderal, pastures, and rangeland. Sand live oak and turkey oak are common in drier sites. Saw palmetto and fetterbush are common on wetter soils.

Cypress Swamp--Portions of 31 cypress swamps, a total of approximately 15.6 acres, occur within the proposed right-of-way. Most of these cypress swamps occur between CR 587 and CR 581.

The cypress swamps are dominated by bald (Taxodium distichum) or pond cypress (Taxodium ascendens). They vary from relatively dense to open stands and are found in three general configurations along the length of the project which are: 1) isolated pond cypress stands, ranging from 0.5 to 162 acres; 2) large continuous floodplain stands of bald cypress, such as the strands associated with Bear and Buckhorn Creeks; and 3) bald cypress fringes, which are usually less than 100 feet wide and found along the margins of lakes, ponds, and marshes.

10/10/86

In addition to cypress, red maple (Acer rubrum), black gum (Nyssa sylvatica), and Carolina willow (Salix caroliniana) occur in varying amounts. In the project corridor, these other species are more prevalent in cypress stands associated with creeks and less prevalent in isolated stands of cypress, regardless of the stand size. The percent understory cover is variable due to the influence of canopy cover, water regime, and cattle grazing. The dominant understory plants include:

Shrub layer

Buttonbush

Cephalanthus occidentalis

Wax myrtle

Myrica cerifera

Bamboobrier

Smilax laurifolia

Herbaceous layer

Cinnamon fern

Osmunda cinnamomea

Royal fern

Osmunda regalis

Pickerelweed

Pontederia cordata

Sphagnum mosses

Sphagnum spp.

Maidencane

Panicum hemitomom

Sawgrass

Cladium jamaicense

Cattail

Typha spp.

Mixed Hardwood Swamp--Portions of 14 mixed hardwoods swamps, a total of approximately 12.8 acres, occur in the proposed right-of-way. Mixed hardwood swamps are associated with Cypress Creek, the Pithlachascotee River, and their unnamed tributaries and floodplains.

Hardwood swamps occur between semipermanently flooded cypress swamps and well drained upland forest. The hardwood swamps occur on soils which are seasonally submerged or saturated and on sites where the cypress have been logged. Red maple and bald cypress are the dominant canopy trees, but other tree species are also present in varying amounts. These include laurel oak, sweet bay (Magnolia virginiana), and black gum. The understory is generally open or sparse due to the canopy closure. However, a dense understory occurs along the edges of the

10/10/86

hardwood swamps that were previously bisected by SR 52. Understory plants consist of immature hardwood species mentioned above and also include:

Shrub layer

Buttonbush	<u>Cephalanthus occidentalis</u>
Wax myrtle	<u>Myrica cerifera</u>
Dahoon holly	<u>Ilex cassine</u>
Carolina willow	<u>Salix caroliniana</u>

Herbaceous layer

Cinnamon fern	<u>Osmunda cinnamomea</u>
Royal fern	<u>Osmunda regalis</u>
Lizard's tail	<u>Saururus cernuus</u>
Sedges	<u>Cyperus</u> spp.
Rushes	<u>Juncus</u> spp.
Panic grasses	<u>Panicum</u> spp.

Freshwater Marsh/Shallow Pond--Portions of 33 freshwater marsh and shallow ponds, approximately 14.4 acres, occur within the project corridor. Most of the marshes and ponds occur between CR 587 and the Pithlachascotee River and between US 41 and CR 581.

There is considerable variation within this community type. Characteristics of individual marsh/pond areas are determined predominantly by hydroperiod and frequency of burning. The period of inundation varies from temporarily flooded after a rainfall event to permanently flooded. In general, they are shallow, nonforested wetlands with gradually sloping shorelines. Associated vegetation typically exhibits a zonation of species. A highly diverse transitional area usually exists between the normal low-water stage dominated by wetland species and the extreme high-water contour that is delineated by the upland species.

Along SR 52, the freshwater marsh/shallow pond communities include:

- 1) seasonally wet areas (wet prairies), which are usually dominated by

10/10/86

smartweed (Polygonum hydropiperoides) and soft rush (Juncus effusus);  
 2) semipermanently to permanently inundated areas dominated by maidencane, pickerelweed, soft rush, or a mixture of the three species;  
 3) shrub marshes dominated by Carolina willow, cattail and wax myrtle;  
 and 4) the littoral zone of ponds and open shallow creek channels which contain plant species similar to those associated with marshes.  
 However, the deep water areas of ponds contain only rooted, floating plants, such as fragrant white water lily (Nymphaea odorata) and hearts (Nymphoides aquatica), and submergents, such as Florida elodea (Hydrilla verticillata).

The common freshwater marsh/shallow pond vegetation includes:

Shrub layer

Carolina willow	<u>Salix caroliniana</u>
Buttonbush	<u>Cephalanthus occidentalis</u>
St. John's-worts	<u>Hypericum</u> spp.
Primrose willow	<u>Ludwigia peruviana</u>

Herbaceous layer

Pickerelweed	<u>Pontederia cordata</u>
Maidencane	<u>Panicum hemitomon</u>
Cattails	<u>Typha</u> spp.
Arrowhead	<u>Sagittaria graminea</u>
Soft rush	<u>Juncus effusus</u>
Carpet grasses	<u>Axonopus</u> spp.
Sawgrass	<u>Cladium jamaicense</u>
Sand cordgrass	<u>Spartina bakeri</u>
Beak rushes	<u>Rhynchospora</u> spp.
Coinwort	<u>Centella asiatica</u>
Dog fennel	<u>Eupatorium capillifolium</u>
Club rushes	<u>Eleocharis</u> spp.
Bladderworts	<u>Utricularia</u> spp.
Fragrant white water lily	<u>Nymphaea odorata</u>
Smartweed	<u>Polygonum hydropiperoides</u>

4.2.2 Community Impacts

Floral--Impacts to biological communities include the clearing of the vegetation within the proposed right-of-way for the expansion of the roadway and clear recovery area, and filling and dredging of these areas during the construction of the roadway section. Approximately 377.3 acres representing eight biological communities occur within the proposed right-of-way. The maximum involvement of these eight community types is as follows:

<u>Upland communities</u>	<u>Acres</u>
Turkey oak-longleaf pine sandhill	12.5
Pine flatwoods	
Longleaf pine flatwoods	21.0
Slash pine flatwoods	10.0
Slash pine plantations	23.0
Oak scrub	24.0
Oak hammock	4.0
Grassland/Palmetto rangeland	
Roadside ruderal	160.0
Improved pasture/fields	69.0
Palmetto rangeland	11.0
Total	334.5
<u>Wetland communities</u>	
Cypress swamp	15.6
Mixed hardwood swamp	12.8
Freshwater marsh/Shallow pond	14.4
Total	42.8

The proposed project will slightly reduce the abundance of the upland community types in the region. However, no significant regional impacts to the upland community types will result from the proposed highway improvements. At this time these upland community types are not

11/25/86

regionally unique or scarce. The majority of uplands within the proposed right-of-way (229 of 334 acres) that will be impacted will be grasslands (roadside ruderal, pastures, and fields) which are man-induced and maintained communities. The implementation of the proposed rural typical section with roadside ditches/swales and grass medians will result in the reestablishment of much of the roadside ruderal habitat. The remaining 105 acres of upland habitat are divided between oak scrub, oak hammock, sandhill, and the three phases of pine flatwoods. The habitat loss for these community types ranges from 4 to 24 acres and is distributed over the entire 23.3-mile project. The majority of loss occurs in the 17.3-mile rural section of the project between Moon Lake Road and I-75. The habitat losses are considered minimal when compared to overall abundance of similar habitat in the region.

The impacts to the wetland communities (freshwater marshes/shallow ponds, cypress swamps, and mixed hardwood swamps) were significantly minimized by selective location of the proposed new laneage. An estimated 43.1 acres of wetland communities fall within the proposed right-of-way limits. Not all of the wetlands within the right-of-way will need to be destroyed. Losses will be minimized by selectively clearing and grubbing the individual wetlands. In addition, a portion of the drainage ditches/swales resulting from the project will provide new wetland habitat (seasonal marshes). The extent to which these additional measures will be possible can not be determined until final design. A more detailed discussion of impacts to these wetland communities and individual wetlands is found in Section 4.8, Wetlands Involvement.

Wildlife Populations--No significant adverse regional impacts to nonendangered wildlife populations in the region are expected from the proposed highway improvements. Impacts to wildlife in the area will consist of a minor reduction in abundance as a result of the loss of habitat adjacent to the roadway. Habitat loss occurs over the entire 23.3-mile project as a thin strip ranging in width from 27 feet in the

urban section to 112 feet in the rural section. The majority of habitat loss occurs in the 17.3-mile rural section as previously mentioned. The total habitat loss is considered insignificant when compared to the amount available in the region. In addition, the more mobile wildlife species (birds, snakes, and larger mammals) which are displaced may find suitable habitat in adjacent areas if carrying capacities are not already exceeded. No important wildlife population centers have been identified within the project corridor.

Sensitive Wildlife Species--Impacts to wildlife species listed by the U.S. Fish and Wildlife Service are discussed in Section 4.3, Endangered and Threatened Species. Impacts to wildlife species listed exclusively by the State of Florida that may possibly use areas within the project corridor are described below. The project corridor is known to be within the existing or historical range of 22 species listed by the state and federal governments that might find suitable habitat within the project corridor. Of the 22 listed species, 13 species (7 birds, 3 snakes, 2 mammals, and 1 amphibian) are exclusively listed by the State of Florida (Table 4.2-2). Four of these species, Sherman's fox squirrel, Florida sandhill crane, southeastern kestrel (sparrow hawk), and gopher tortoise, were observed along SR 52 between U.S. 19 and I-75.

A Sherman's fox squirrel was found dead along SR 52, approximately 0.25 mile west of U.S. 41. Longleaf pine flatwoods occurred on both sides of the road where the squirrel was found. Fox squirrels typically prefer to inhabit longleaf pine-turkey oak communities but they also occur in reduced numbers in turkey oak forests and on the margins of pine flatwoods and cypress ponds. Since the preferred longleaf pine-turkey oak habitat does not occur within the project corridor and there is an abundance of marginal habitat, no significant impacts on fox squirrel populations in the region are anticipated from the road improvement.

A pair of sandhill cranes was observed in a cattle pasture north of SR 52 about 0.75 mile east of U.S. 41. Florida sandhill cranes

typically prefer wet prairies, low-lying improved cattle pastures, and sparsely vegetated marshes for feeding and nesting. Nesting areas were not noted during field surveys or previously reported in the literature regarding the project area. Significant impacts on sandhill cranes are not anticipated, although some of the foraging areas will be reduced slightly by road construction. The crane's preferred habitat is quite abundant in the region west of U.S. 41 and will continue to exist after the proposed improvement is implemented.

Several kestrels were seen east of CR 583 perched on telephone wires and flying over slash pine flatwoods. Southeastern kestrels utilize grassland and open pine flatwoods for nesting and feeding. No kestrel nests were observed during any of the field surveys. Significant impacts on kestrels are not anticipated to result from road improvements because of the abundance of nesting and foraging habitat in the region.

Gopher tortoises occupy xeric community types with well drained soils. In these communities, the tortoise excavates semipermanent burrows and feeds on various herbs and grasses. Tortoise burrows are important components in these xeric communities because their burrows have been known to provide habitat for at least 36 species. Four of the thirty-six species are potentially endangered species (indigo snake, gopher frog, pine snake, and Florida mouse). A gopher tortoise and four active and four inactive burrows were observed in turkey oak-longleaf pine communities within the proposed right-of-way. It is expected that tortoises occur in virtually all turkey oak-longleaf pine and oak scrub stands along SR 52. The number actually affected by the roadway improvements cannot be determined at this time because the number of tortoises and burrow locations within the project limits is subject to change before construction begins. Prior to construction, young gopher tortoises may initiate new burrows, and adults may die or be removed by humans. Since gopher tortoises live in burrows and are relatively slow-moving animals, they are most likely to be injured or killed during the clearing activities. To lessen the impact to the tortoises in the

area, a thorough field survey will be conducted prior to clearing activities. If numerous active burrows are found within the proposed right-of-way, a coordinated effort with wildlife agencies or organizations will be made to relocate tortoises. If the above recommendations are followed, significant regional impacts to the gopher tortoise population are not anticipated.

Other state listed species which occur in xeric communities and possibly occur within the project corridor include the Florida mouse, Florida scrub jay, gopher frog, Florida pine snake, and short-tailed snake. These species; their signs, and/or nests were not observed within the project corridor. Significant adverse impacts to these species are not anticipated considering the relative abundance of xeric communities in the region, the small amount of habitat loss, and the disturbed nature of the habitat being impacted. To lessen the impacts on the pine snake and short-tailed snake, the contractor will be advised of the State of Florida's listed status and the legal protection of these snakes. They will be instructed that snakes encountered during construction must be relocated unharmed.

Four state listed bird species (limpkin, little blue heron, snowy egret, and Louisiana heron) probably use the freshwater marshes and shallow ponds within the project corridor for foraging. No nesting rookeries were observed during field surveys or have been reported in the vicinity of SR 52. Loss of some possible feeding areas will occur; however, no significant impacts are expected to these species due to the proposed wetland mitigation described in Section 4.8.5. In addition, alternative feeding areas for these species (marshes and shallow ponds) are available and abundant in the region.

#### 4.3 ENDANGERED AND THREATENED SPECIES

In compliance with the Endangered Species Act of 1973 and amendments thereto, the proposed improvements have been evaluated for impacts on threatened and endangered species. This project is not located in an

area designated as critical habitat by the U.S. Department of Interior. No federally endangered or threatened plant species occur within the project corridor or Pasco County. However, the project area lies within the historic range of nine wildlife species classified as endangered or threatened by the U.S. Fish and Wildlife Service (USFWS). They are:

Endangered species

Wood stork	<u>Mycteria americana</u>
Southern bald eagle	<u>Haliaeetus leucocephalus leucocephalus</u>
Red-cockaded woodpecker	<u>Picoides borealis</u>
Ivory-billed woodpecker	<u>Campephilus principalis</u>
Bachman's warbler	<u>Vermivora bachmanii</u>
Florida panther	<u>Felis concolor coryi</u>

Threatened species

Arctic peregrine falcon	<u>Falco peregrinus tundrius</u>
Eastern indigo snake	<u>Drymarchon corais couperi</u>
American alligator	<u>Alligator mississippiensis</u>

The southern bald eagle, the wood stork, and the American alligator were observed within the project corridor. However, the alligator is not potentially endangered in Florida. It is listed because of its similarity of appearance to alligator populations which are endangered in other states and to other listed crocodiles [e.g. American crocodile (Crocodylus acutus)] and enforcement personnel would have problems distinguishing between listed and unlisted populations. Alligators are commonly found in semipermanent and permanent wetlands in Florida. No nests or important population centers were located in the wetland areas along SR 52; therefore, no adverse impacts are expected to occur to this species.

A pair of southern bald eagles were seen north of the project corridor in March and April of 1986, perched beside a nest. The eagle's nest is approximately 350 feet north of the center line of SR 52 and approximately 2 miles from the gulf coast. The nest is in the top of a

large cypress tree which is located approximately 300 feet from the western edge of a 24-acre cypress swamp. Approximately 60 percent of the area within a 0.5-mile radius of the nest is now developed. During subsequent field inspections in June and July of 1986, the pair of eagles was not observed. During the March and April field inspections, fledglings were not observed at the nest. However, a Pasco County Audubon Society member reported at least one fledging in the nest in 1986. The Florida Game and Fresh Water Fish Commission (FGFWFC) indicated that the nest has been used by eagles in 1985, 1984, and 1980 but not in 1982 or 1981. FGFWFC had no information pertaining to the use of the eagle's nest in 1983.

No other eagles or nests were observed along the project corridor. According to information provided by FGFWFC, no other eagle nests occur within 0.5 mile of the project corridor. The closest nest is located approximately 2 miles to the south of SR 52/US 19.

The current threats to Florida's bald eagle population are destruction of nesting habitat, degradation of aquatic feeding sites and disturbance of nesting eagles by man. There are no old-growth forests being cleared, and there is an insignificant loss of potential feeding sites (open water from lakes and ponds) along the corridor when compared to the availability in the region. Considering the above, significant impacts to future nest sites and feeding areas are not expected as a result of the road improvements.

To limit disturbances to nesting eagles, the USFWS management guidelines for bald eagles recommend restricting activity within the nesting territory. The nesting territory is divided into two protective zones, the primary and secondary management zones, which are composed of a 750- and 1,500-foot radius from the nest tree, respectively. They advise that no construction activities should be undertaken in the primary zone. In the secondary zone, only limited activities should be undertaken and should be restricted to the nonnesting season. They do,

3/11/87

however, provide for reduction in the primary zone when a particular pair of bald eagles is determined to be tolerant of close human activities.

The closest portion of existing SR 52, the northern edge of the cleared north right-of-way, is only 310 feet from the nest. In this case, however, a reduction in the primary zone is justified because the eagles have exhibited a tolerance to human activities. These eagles have returned to this nesting site for the last 3 years (4 of the last 7 years), despite the increasing urban development surrounding the nest and its proximity to SR 52. Commercial and residential development occurs within 400 to 500 feet of the nest. Also, an average of over 12,000 vehicles per day passed within 375 feet of the nest on SR 52 in 1985. Since the observed eagles have demonstrated a tolerance to increased human activity, including vehicular traffic and development, it is assumed that this tolerance will continue.

The proposed roadway design and alignment in this area maximizes the distance between the roadway and the eagles' nest. The proposed urban typical section minimizes the amount of additional right-of-way required to 27 feet. This additional width will be acquired from the south side of SR 52. Upon completion of the project, the center line of the new road will be 13.5 feet further south. This will move some of the vehicular traffic farther away from the nest, but the edge of the pavement and some vehicular traffic will also be moved 20.5 feet closer to the nest. The pavement encroachment towards the eagles' nest, however, occurs within the 32-foot existing cleared right-of-way. Additional clearing of lands north of the right-of-way, towards the nest, will not be necessary. Based on the previous discussions, the disturbance resulting from the closer pavement and vehicular traffic is expected to be minimal. In addition, the proposed roadway design, which includes a curb, will deter vehicles from pulling off and stopping in the vicinity of the eagles' nest.

Construction-related activities, such as land clearing and leveling, and the removal of old pavement, will result in increased noise and dust levels which could adversely impact the eagles. To minimize any adverse effects, construction within 1,450 feet of either side of La Madera Boulevard will be confined to the eagles' nonnesting season (approximately May 15 to October 1).

During preliminary coordination, USFWS and FGFWFC concurred with the assessment of the tolerance of these eagles and the planned efforts to minimize adverse impacts. Therefore, based on the discussion of eagles from the preceding paragraphs and USFWS and FGFWFC concurrence, no significant adverse impacts to eagles are anticipated from the proposed project.

Fourteen wood storks were observed along SR 52 between U.S. 19 and I-75 during a field investigation in March of 1986: six were flying over SR 52, seven were seen foraging in a wet prairie, and one was observed in a shallow pond in a cattle pasture. No rookeries were observed or are known to exist within 1000 feet of the proposed alignment. However, since 3 of the 20 nesting colonies in Florida occur in Pasco County east of I-75, the region's marshes, shallow ponds, and cypress swamps are commonly used for foraging by wood storks between February and July. Such wetlands are preferred feeding sites for wood storks which feed primarily on small fish. The decline in the wood stork population has been attributed to the loss and degradation of wetland feeding sites. Changes in natural water regimes by man has reduced the abundance and availability of small fish in some areas.

The proposed improvements will not significantly impact the wood stork population. Although the project will slightly reduce the available wood stork feeding sites in the region, the relative amount of wetlands to be impacted is relatively small compared to the availability in the region. The proposed creation of wetlands described in Section 4.8-5 will help mitigate this loss. In addition, priority will be given during final design to maintain the natural drainage and, whenever possible, to reestablish previously disrupted patterns in wetlands.

The Florida panther, ivory-billed woodpecker, and red-cockaded woodpecker were not observed and are unlikely to occur in the project corridor. The Florida panther has been verified only in South Florida in recent times. It is estimated that less than 30 individuals remain in the wild in South Florida. The ivory-billed woodpecker has not been sighted in recent times in the United States (it was possibly sighted in Texas in 1967). The ivory-billed woodpecker typically inhabits mature bottom land hardwood forest which does not occur within the project corridor. Red-cockaded woodpecker colonies are scattered throughout Florida; however no colonies are presently known within the project corridor or in the general area. Red-cockaded woodpeckers inhabit over-mature pine stands. Cavity trees are usually infected with red-heart (Phellinus pini) disease. Signs of red-heart disease and over-mature pine stands were not observed within the project corridor. Based on these observations and circumstances, it is concluded that no adverse impacts to the panther, ivory-billed woodpecker or red-cockaded woodpecker will result from the proposed project.

#### 4.4 FARMLANDS

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

#### 4.5 AIR QUALITY IMPACTS

In accordance with 23 CFR 770, an assessment of the probable impact of the proposed action on local air quality was conducted. The methodology utilized conforms to the Department's Guidelines for Microscale Analysis of Air Quality Near Highways in Florida. The TEXIN algorithm was used to determine projected CO concentrations. This computer model combines: 1) traffic analysis at an intersection; 2) MOBILE2, which provides vehicle carbon monoxide (CO) emission factors based on projected traffic characteristics; and 3) CALINE3, a finite line source dispersion model which processes data on roadway orientation and design, vehicle emission factors, traffic, and meteorological information to calculate the

10/10/86

concentration of roadway-induced CO at specific receptors. All projections were made using the worst probable meteorological conditions which would be expected to result in the maximum possible 1- and 8-hour average concentrations at the selected receptor points. These conditions include an atmospheric stability class of D (neutral), a wind speed of 2 mph, an ambient air temperature of 52°F, and the worst wind angle for each receptor location. Since it is not probable that these severe conditions would continue over an entire 8-hour period, a persistence factor of 0.6 was used in determining 8-hour CO concentrations to reflect the likely variability in weather conditions over time. In addition, the average hourly traffic volume during the peak 8-hour period was assumed to be 75 percent of the peak-hour volume. Due to the lack of empirical data regarding background CO concentrations in the area, a value of 1.5 ppm was assumed for both 1- and 8-hour calculations. This value has been shown to be representative in similar suburban areas. A complete listing of input data is presented in the separate air quality report which was prepared in conjunction with this EA.

Based on an evaluation of traffic data, it was determined that the intersections of CR 1 and U.S. 19 with SR 52 would be expected to experience the most severe air quality conditions. Therefore, detailed evaluation of CO concentrations was limited to these areas.

Due to the absence of any more sensitive sites in proximity to the roadway, parking lots closest to each intersection were chosen as sites for the worst-case receptors. One receptor was placed in each quadrant of the intersection on the corner of the parking lot nearest the intersection. Table 4.5-1 gives the distance from each receptor to the nearest roadway edge.

CO concentrations were calculated for the existing facilities (1985), for the first year of operation (1990) build/no-build alternatives, and for design year (2010) build/no-build alternatives. The build

Table 4.5-1. Receptor Locations for Air Quality Analysis

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Intersection of SR 52 and U.S. 19 for the No-Build Alternative

Receptor 1: 20 feet north of SR 52; 50 feet east of U.S. 19.

Receptor 2: 25 feet south of SR 52; 35 feet east of U.S. 19.

Receptor 3: 30 feet south of SR 52; 40 feet west of U.S. 19.

Receptor 4: 30 feet north of SR 52; 45 feet west of U.S. 19.

Intersection of SR 52 and U.S. 19 for the Build Alternative

Receptor 1: same as no-build alternative.

Receptor 2: 15 feet south of SR 52; 35 feet east of U.S. 19.

Receptor 3: same as no-build alternative.

Receptor 4: same as no-build alternative.

Intersection of SR 52 and CR 1 for the No-Build Alternative

Receptor 1: 40 feet north of SR 52; 30 feet east of CR 1.

Receptor 2: 60 feet south of SR 52; 25 feet east of CR 1.

Receptor 3: 30 feet south of SR 52; 25 feet west of CR 1.

Intersection of SR 52 and CR 1 for the Build Alternative

Receptor 1: 30 feet north of SR 52; 15 feet east of CR 1.

Receptor 2: 15 feet south of SR 52; 10 feet east of CR 1.

Receptor 3: 15 feet south of SR 52; 10 feet west of CR 1.

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Source: RS&H, 1986.

alternative includes the recommended intersection improvements for CR 1 and U.S. 19 in addition to the widening of SR 52.

The results of the air quality analysis (Tables 4.5-2 and 4.5-3) indicate that the proposed action will not result in a violation of the National Ambient Air Quality Standards (NAAQS) for maximum 1-hour (35 ppm) and 8-hour (9 ppm) CO concentrations. The maximum 1- and 8-hour concentrations projected for the build alternative at the SR 52/CR 1 intersection are 10.7 and 5.6 ppm, respectively. The maximum 1- and 8-hour concentrations projected for the build alternative at the SR 52/U.S. 19 intersection are 10.2 and 5.4 ppm, respectively. The 1990 and 2010 build alternative projections are lower than the projections for the no-build alternative due to improved traffic flow. The improved traffic flow at the intersections results in less excess emissions caused by idling, acceleration, and deceleration.

Although there is an NAAQS for airborne lead, monitoring by the FDER has shown no recent violations of the standard in Florida. In addition, increasingly stringent EPA regulations governing lead concentrations in gasoline are resulting in significantly lower measured lead levels in Florida. Therefore, motor vehicle lead emissions from the study area will not have a significant effect on the environment, regardless of which alternative is chosen.

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. 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.

Construction activities may cause minor short-term air quality impacts in the form of dust from earthwork and unpaved roads and smoke from open burning. These impacts will be minimized by adherence to all state and

Table 4.5-2. 1-Hour and 8-Hour Projected CO Concentrations (ppm) at the SR 52/CR 1 Intersection

Year	Receptor	Worst-Case Wind Angle†	Concentrations (ppm)*	
			1-Hour	8-Hour
<u>Without Project</u>				
1985	1	195	10.3	5.5
	2	335	8.5	4.7
	3	25	9.3	5.0
1990	1	195	10.3	5.5
	2	325	7.9	4.4
	3	75	10.5	5.6
2010	1	195	14.1	7.2
	2	290	11.6	6.0
	3	75	14.6	7.4
<u>With Project</u>				
1990	1	200	9.9	5.3
	2	300	10.1	5.3
	3	45	9.5	5.1
2010	1	200	10.6	5.7
	2	310	10.7	5.6
	3	75	10.5	5.6

\* 1-hour and 8-hour concentrations include a background of 1.5 ppm.

† Wind angles are in degrees from north.

Source: RS&H, 1986.

Table 4.5-3. 1-Hour and 8-Hour Projected CO Concentrations (ppm) at the SR 52/U.S. 19 Intersection

Year	Receptor	Worst-Case Wind Angle†	Concentrations (ppm)*	
			1-Hour	8-Hour
<u>Without Project</u>				
1985	1	225	12.6	6.5
	2	315	12.9	6.6
	3	75	11.9	6.2
	4	105	12.1	6.3
1990	1	105	12.0	6.2
	2	75	12.9	6.6
	3	80	12.9	6.6
	4	100	12.8	6.6
2010	1	105	14.3	7.3
	2	75	15.3	7.7
	3	80	14.4	7.3
	4	100	14.7	7.4
<u>With Project</u>				
1990	1	220	8.9	4.8
	2	335	8.8	4.8
	3	80	10.1	5.4
	4	100	10.2	5.4
2010	1	200	8.6	4.7
	2	340	8.5	4.7
	3	80	9.8	5.2
	4	100	9.6	5.1

\* 1-hour and 8-hour concentrations include a background of 1.5 ppm.

† Wind angles are in degrees from north.

Source: RS&H, 1986.

local regulations and to the FDOT Standard Specifications for Road and Bridge Construction.

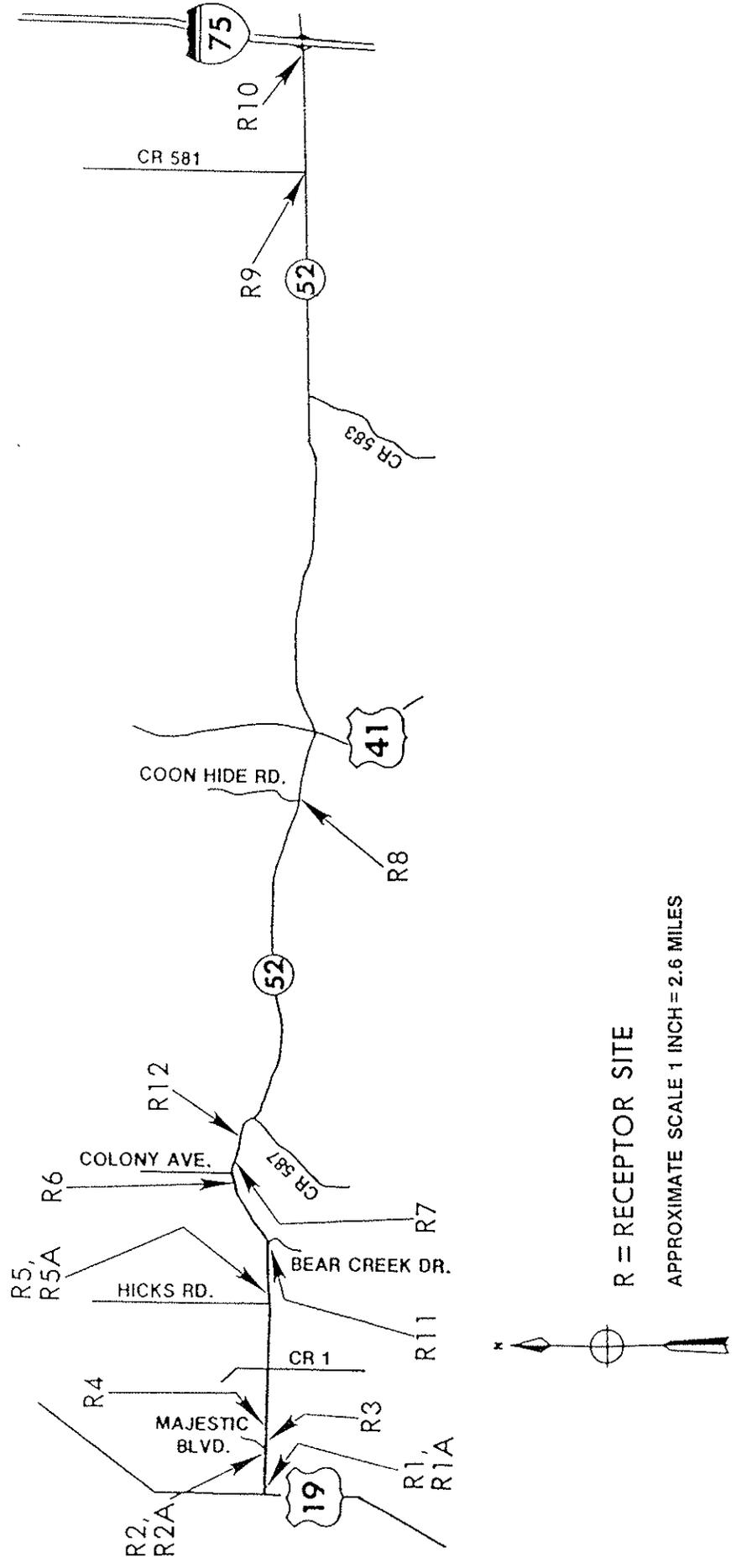
#### 4.6 NOISE IMPACTS

Estimation of the potential noise impacts associated with this improvement was accomplished through the use of the FLAMOD noise prediction model. A Noise Study Report, which contains the detailed methodology and results of the noise impact study conducted as part of this EA, has been prepared and is available from the Bartow District Office of FDOT. The results of this report are summarized below.

Fifteen receptor sites were selected to represent all of the noise-sensitive areas along the project (Figure 4.6-1). Sites 1 through 12 are adjacent to SR 52 and 1A, 2A, and 5A represent second-row houses at sites 1, 2, and 5. The noise receptor sites are described in Table 4.6-1. Computer-projected exterior  $L_{10}$  levels at these sites are summarized in Table 4.6-2.

Sites 7 and 1A are not expected to experience noise levels which approach (within 2 dBA) or exceed the Federal Noise Abatement Criteria (70 dBA) as a result of this improvement. Also, the noise increase/impact relationship at these two sites is not considered substantial according to FDOT criteria. Therefore, noise attenuation techniques were not considered. The increased noise levels at these sites are due to increased traffic and the closer proximity of the new lanes.

Sites 3, 4, 5A, 8, 9, 10, 11, and 12 approach the noise criteria level in 2010 for the build scenario. The noise increase/impact relationship at these sites is not considered substantial. However, because the sites approach or exceed the 70-dBA noise criteria level, attenuation techniques were considered. Noise levels increase, except at Site 9, as a result of traffic volume increases and/or closer proximity of the new lanes. Site 9 is expected to experience a slight decrease in noise



SR 52 FROM SR 55  
 (U.S. 19) TO SR 93 (I-75)  
 IN PASCO COUNTY

FIGURE 4.6-1  
 NOISE RECEPTOR LOCATION MAP

SOURCE: RS&H, 1986

Table 4.6-1. Noise Receptor Sites

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Noise Receptor 1:	Residence located south of SR 52; 850 feet east of U.S. 19. Representative of 3 residences.
Noise Receptor 1A:	Residence located south of SR 52; 700 feet east of U.S. 19. Represents a second-row residence.
Noise Receptor 2:	Residence located north of SR 52; 420 feet west of Majestic Blvd. Representative of 2 residences.
Noise Receptor 2A:	Residence located north of SR 52; 420 feet west of Majestic Blvd. Representative of 2 second-row residences.
Noise Receptor 3:	St. Marks Presbyterian Church located south of SR 52; 875 feet east of Majestic Blvd.
Noise Receptor 4:	Bear Creek Nursing Home located north of SR 52; 1,680 feet east of Majestic Blvd.
Noise Receptor 5:	Representative of 2 mobile homes north of SR 52; 1,150 feet east of Hicks Road.
Noise Receptor 5A:	Representative of 2 second-row mobile homes north of SR 52; 1,150 feet east of Hicks Road.
Noise Receptor 6:	Residence located north of SR 52; 840 feet west of Colony Avenue. Representative of 1 residence and 2 apartment buildings.
Noise Receptor 7:	Faith United Methodist Church located south of SR 52; 800 feet east of Colony Avenue.
Noise Receptor 8:	Residence located south of SR 52 across from Coon Hide Road. Representative of 15 residences.
Noise Receptor 9:	Residence located north of SR 52; 250 feet east of SR 581. Representative of 12 residences.
Noise Receptor 10:	Residence located north of SR 52; 1,020 feet west of I-75. Representative of 4 residences.
Noise Receptor 11:	Setback line of the proposed Pointe West development south of SR 52; 900 feet west of Bear Creek Drive.
Noise Receptor 12:	Setback line of the proposed Sugar Creek development north of SR 52.

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Source: RS&H, 1986.

Table 4.6-2. Computer-Projected Exterior Noise Levels ( $L_{10}$ ) at Sensitive Sites for the Build and No-Build Alternatives and FHWA Noise Abatement Criteria (NAC)

Site	Existing $L_{10}$ (1985)	Future $L_{10}$		FHWA NAC
		No Build (2010)	Build (2010)	
1	63	63	73	70
1A*	53	53	62	70
2	67	67	76	70
2A*	63	63	71	70
3	60	60	68	70
4	62	62	68	70
5	65	65	73	70
5A*	62	62	69	70
6	64	65	71	70
7	56	56	63	70
8	68	69	69	70
9	70	72	69	70
10	65	69	69	70
11	61	62	70	70
12	68	69	70	70

\* "A" represents second-row residences at Sites 1, 2, and 5.

Source: RS&H, 1987.

3/11/87

levels (70 dBA to 69 dBA) because the new alignment would shift the lanes farther away from the site. Noise projections for the 2010 build scenario indicate that Sites 8 and 12 will increase slightly from existing conditions (from 68 dBA to 69 and 70 dBA, respectively). Increases of less than 3 dBA usually are not detectable by the human ear. Sites 3, 4, 5A, 10, and 11 will experience noise levels 4 to 9 dBA higher than the existing levels.

Noise projections also indicate that Sites 1, 2, 2A, 5, and 6 will experience noise levels in excess of the 70 dBA noise criteria in either the 1990 or 2010 build scenario. The high noise-level projections at these locations are a result of traffic volume increases and/or closer proximity of the new lanes. Sites 2A, representing the second row of houses at Site 2, and 6 will experience noise levels 7 to 8 dBA higher than existing levels but will only exceed the 70 dBA criteria by 1 dBA in 2010. Sites 1, 2, and 5 will experience noise-level increases of 8 to 10 dBA over existing levels and will exceed the 70 dBA criteria by 3 to 6 dBA.

Federal-Aid Highway Program Manual, Volume 7, Chapter 7, Section 3, (FHPM 7-7-3) states that undeveloped areas for which developments are planned, designed, and programmed before or during the highway planning and design phase are to be treated as developed areas. Based on information from local planning and zoning officials, it has been determined that there are five planned developments adjacent to this roadway segment. Three of these developments will have residential areas set back 500 feet or more from the roadway edge and thus will experience negligible impacts from the proposed action. The remaining two proposed developments, represented by Receptor Sites 11 and 12, will experience only minor impacts by this action. The distance from the roadway edge used in these projections is from the roadway to the setback line of the development instead of the actual distance to a residential site.

3/11/87

Therefore, the noise-level projections are conservatively high. Noise impacts at these sites can be reduced by utilizing the isopleths provided below to locate dwellings.

The implementation of several noise attenuation techniques was considered at the 12 noise-sensitive sites that approach or exceed the 70 dBA noise criteria level. This involves Sites 1, 2, 2A, 3, 4, 5, 5A, 6, 8, 9, 10, 11, and 12 (representing 43 residences, a church, a nursing home, two apartment buildings, and 2 proposed developments). Noise attenuation techniques were not considered at the remaining two sites (Sites 1A and 7). These two sites will not experience noise levels that exceed the noise criteria level, and the noise increase/impact relationship was not substantial. The methods examined included traffic management, smooth-type pavement, realignment, vegetative barriers, and structural barriers. The imposition of a reduced speed limit or restrictions on heavy truck traffic would deter the utility of SR 52 as a major east-west route between U.S. 19 and I-75. Smooth-type pavement would create unsafe road surface conditions, especially when wet. Vegetative barriers would be ineffective at all sites due to insufficient distance between the receptor site and the roadway.

Structural noise barriers are only marginally effective along a free-access facility such as SR 52. Numerous side streets, driveways, and commercial accesses would result in the need for a large number of openings in the barrier. Openings in a noise barrier seriously degrade its efficiency.

Alignment shifts, based on safe roadway design, were considered as a noise attenuation technique. However, for a shift to be considered effective, the overall noise abatement benefits should outweigh any adverse effects and the costs of the noise abatement measure. Since alignment shifts at Sites 1, 2, 2A, 3, 4, 5, 5A, 8, 9, 10, and 11 would only increase impacts to other sites, they were not considered prudent.

7/21/87

At Sites 6 and 12 an alignment shift of an additional 40 and 55 feet, respectively, to reduce the noise level by 3 dBA would not impact any existing businesses or residences on the opposite side of the road. However, at Site 6 it would cost an additional \$24,800 to acquire the necessary right-of-way (1.9 acres of undeveloped lands, including 0.2 acre of wetlands), and at Site 12 it would cost an additional \$31,400 to acquire the necessary right-of-way (2.4 acres of undeveloped lands, including 0.7 acres of wetlands). Mitigation is not considered prudent at these two sites, since the increase/impact relationship at these sites would not be substantial according to FDOT criteria, and a shift in alignment would result in additional costs and wetland impacts.

None of the attenuation methods considered were found to be practical at any of the sites which approach or are in excess of FHWA criteria. It is therefore determined that the noise impacts are an unavoidable consequence of the proposed project.

#### 4.7 HISTORICAL AND ARCHAEOLOGICAL RESOURCES IMPACTS

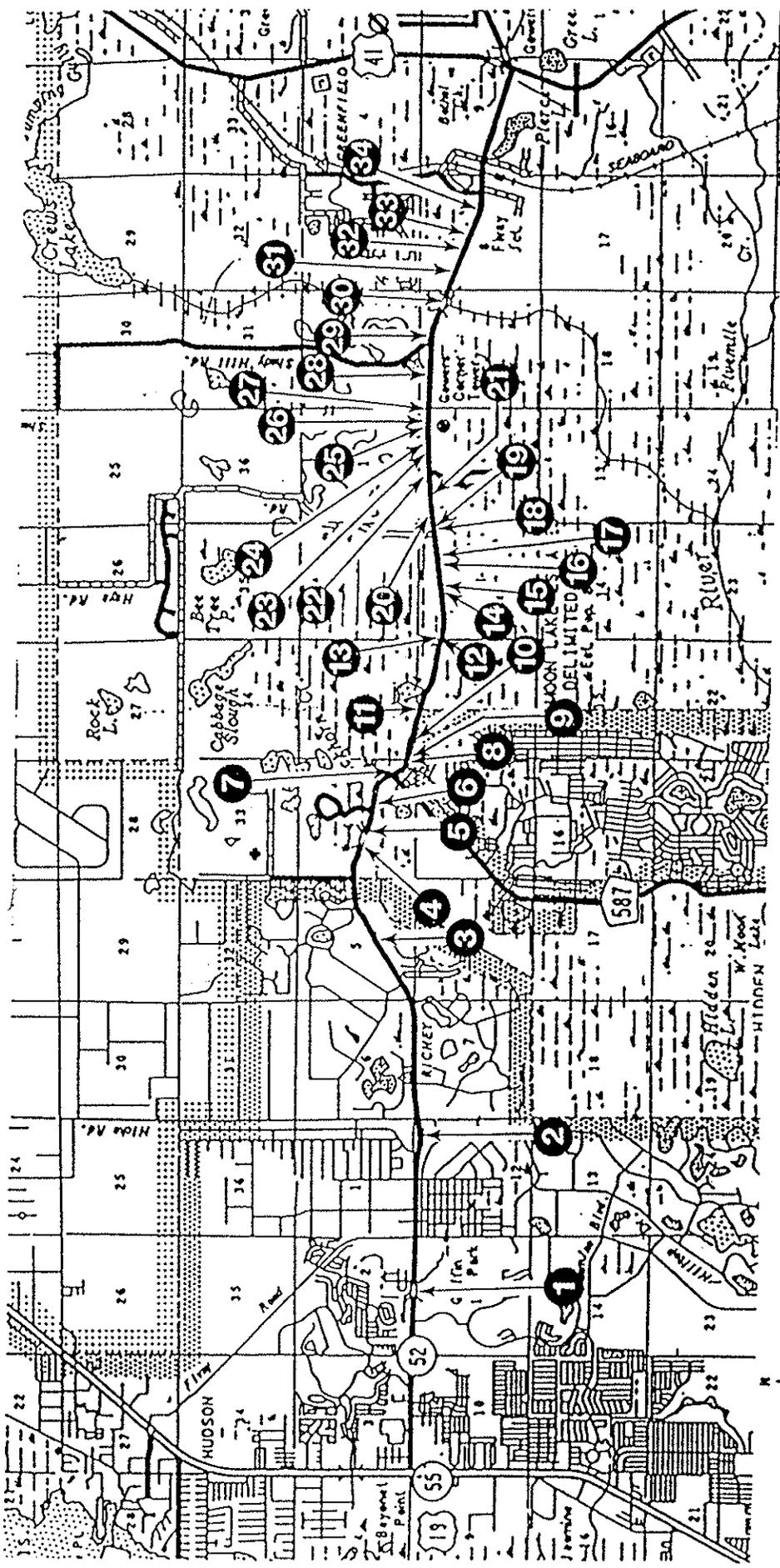
A cultural resources assessment, including background research and a field survey coordinated with the State Historic Preservation Officer (SHPO), was performed for the project. No archaeological or historic sites or properties were identified nor are any expected to be encountered during subsequent project development. The Federal Highway Administration, after consultation with SHPO, has determined that no resources listed, or eligible for listing, on the National Register of Historic Places would be impacted (see letter from the State Historic Preservation Office in the Appendix).

#### 4.8 WETLANDS INVOLVEMENT

In compliance with Executive Order 11990, Protection of Wetlands, the proposed project has been evaluated to determine the potential impacts on wetlands. Along the 20.3-mile length of the project, 79 wetland sites that lie partially or wholly within the proposed right-of-way were identified: 14 mixed hardwood swamps, which include the Buckhorn Creek, Cypress Creek, and Pithlachascotee River; 31 cypress swamps, including Bear Creek; 33 freshwater marsh/shallow ponds; and a borrow pit. See Figure 4.8-1 for a wetland site location map and Table 4.8-1 for a site-specific summary of wetland involvement (i.e., the area within the proposed right-of-way). A site-specific summary of wetland involvement by USFWS wetland classification types is included in tables within Sections 4.8.1 through 4.8.4 (see Tables 4.8-2, 4.8-3, and 4.8-4). These tables also include the total area (i.e., size) of the wetland involved. A total of 43.1 acres of wetland habitat (12.79 acres of mixed hardwood swamps, 15.61 acres of cypress swamps, 14.39 acres of freshwater marsh/ponds, and 0.34 acre of borrow pit) occurs within the proposed right-of-way and may be directly affected by the proposed project. The total wetland involvement and impacts to large wetland systems were minimized by selective placement of the new lanes when there were no other overriding human or economic consequences (see Section 3.7, Alternative Alignments Section). The preferred alignment impacts less wetland area (2.2 to 9.3 acres) than the other three alignments considered (see Table 3.7-1).

The primary function of the wetlands occurring within the proposed right-of-way is to serve as fish and wildlife habitat. Additional wetland functions include flood control, sediment and pollution control, and ground water recharge. The creeks and larger freshwater marshes and ponds also function as recreational resources (e.g., fishing and canoeing).

The important role of wetlands to fish and wildlife is well recognized and documented (USFWS, 1984; USACOE, 1979; Clark, 1979). Wetlands of all sizes provide habitat (i.e., food, water, and space) for a great variety of invertebrate and vertebrate animals. Some animals (e.g.,



APPROXIMATE SCALE 1 INCH = 1.4 MILES

FIGURE 4.8-1  
SHEET A  
WETLAND SITE LOCATION MAP

SR 52 FROM SR 55  
(U.S. 19) TO SR 93 (I-75)  
IN PASCO COUNTY

SOURCE: RS&H, 1986

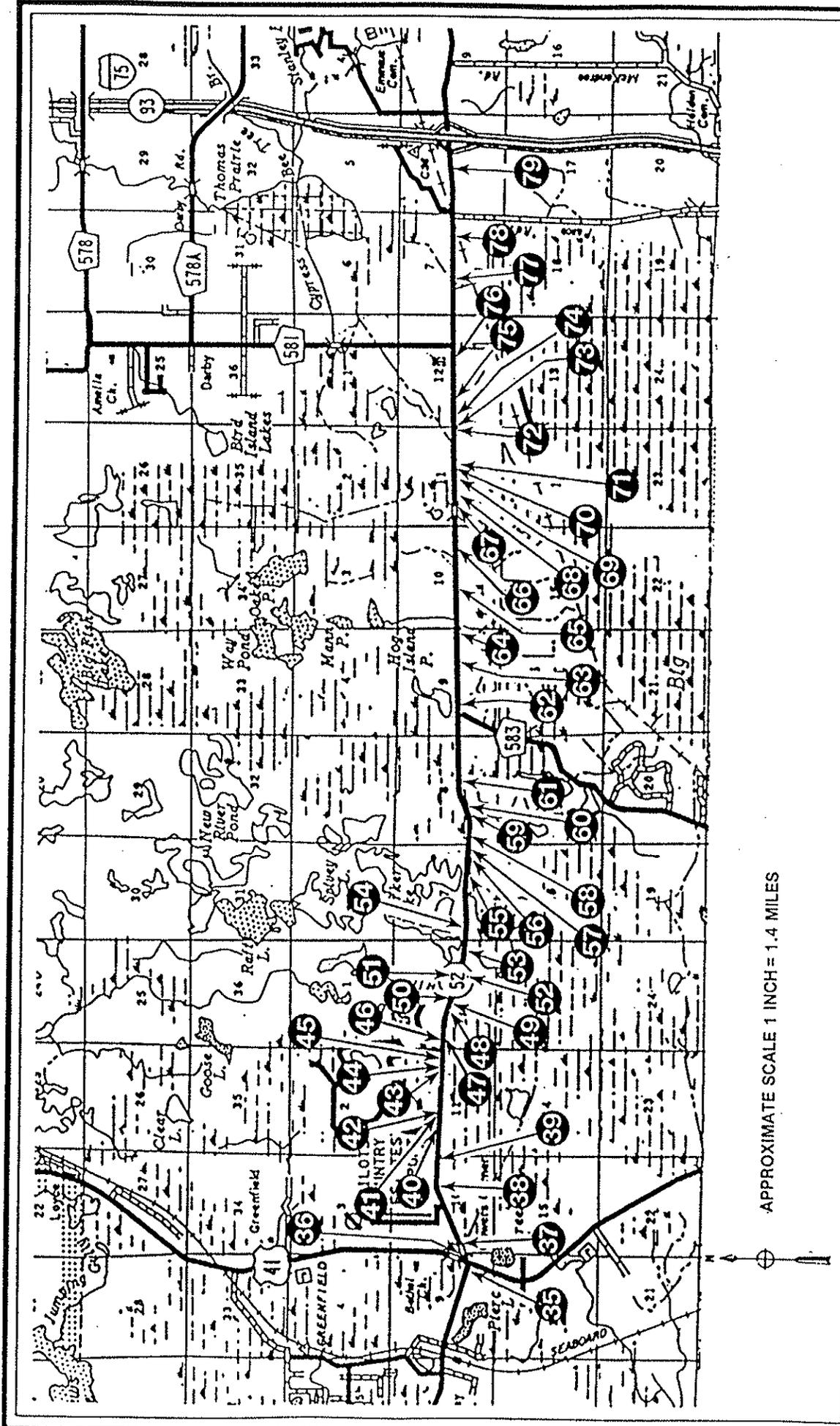


FIGURE 4.8-1  
SHEET B  
WETLAND SITE LOCATION MAP

SR 52 FROM SR 55  
(U.S. 19) TO SR 93 (I-75)  
IN PASCO COUNTY

SOURCE: RS&H, 1986

Table 4-8.1. Wetland and Floodplain Involvement by Site

Site	Description	Maximum Acreage of Involvement	
		Wetlands	Floodplains
F1	Coastal Floodplain	--	0.23
W1-F2	Cypress Strand/Bear Creek	0.27	1.73
W2-F3	Freshwater Marsh	0.24	0.24
W3-F4	Isolated Cypress Swamp	0.30	0.30
W4-F5	Mixed Hardwood Swamp	0.25	0.25
W5-F6	Mixed Hardwood Swamp/Buckhorn Creek	0.04	0.04
W6-F7	Mixed Hardwood Swamp	0.87	0.87
W7-F8	Mixed Hardwood Swamp	0.18	0.18
W8-F9	Isolated Cypress Swamp	0.22	1.97
W9-F9	Mixed Hardwood Swamp	0.74	--
W10-F9	Isolated Cypress Swamp	0.96	--
W11-F9	Isolated Cypress Swamp	0.05	--
W12-F10	Mixed Hardwood Swamp	0.84	1.06
W13-F10	Isolated Cypress Swamp	0.22	--
W14-F11	Isolated Cypress Swamp	0.36	0.59
W15-F11	Freshwater Shrub Marsh	0.23	--
W16-F12	Isolated Cypress Swamp	0.64	0.81
W17-F12	Freshwater Marsh	0.17	--
W18-F13	Isolated Cypress Swamp	0.50	0.89
W19-F13	Freshwater Marsh	0.11	--
W20-F13	Isolated Cypress Swamp	0.09	--
W21-F13	Cypress Strand	0.19	--
W22-F14	Freshwater Marsh/Shallow Pond	0.37	0.75
W23-F14	Freshwater Marsh/Shallow Pond	0.35	--
W24-F14	Isolated Cypress Swamp	0.03	--
W25-F15	Freshwater Marsh/Shallow Pond	0.18	0.27
W26-F15	Cypress Swamp/Shallow Pond	0.09	--
W27-F16	Freshwater Marsh/Shallow Pond	0.39	3.97
W28-F16	Freshwater Marsh/Shallow Pond	0.34	--
W29-F16	Mixed Hardwood Swamp	0.51	--
W30-F17	Mixed Hardwood Swamp/Pithlachascotee River	1.01	1.54
W31-F18	Freshwater Shrub Marsh	0.53	0.53

Table 4-8.1. Wetland and Floodplain Involvement by Site (Continued, Page 2 of 3)

Site	Description	Maximum Acreage of Involvement	
		Wetlands	Floodplains
W32-F19	Mixed Hardwood Swamp	0.88	1.54
W33-F20	Cypress Strand	0.16	0.92
W34-F20	Cypress Strand	0.51	--
W35-F21	Isolated Cypress Swamp	0.20	0.20
W36-F22	Mixed Hardwood Swamp	0.20	0.98
W37-F22	Cypress Strand	0.78	--
W38-F23	Mixed Hardwood Swamp	1.57	2.00
W39-F24	Freshwater Shrub Marsh	0.17	0.17
W40-F25	Isolated Cypress Swamp	0.23	2.0
W41-F25	Freshwater Marsh/Shallow Pond	0.44	--
W42-F25	Freshwater Marsh/Shallow Pond	0.75	--
W43-F26	Cypress Strand	3.38	3.47
W44-F27	Isolated Cypress Swamp	0.36	1.28
W45-F27	Freshwater Marsh/Shallow Pond	0.16	--
W46-F28	Isolated Cypress Swamp	0.29	0.39
W47-F28	Freshwater Marsh	0.10	--
W48-F29	Freshwater Marsh/Shallow Pond	0.14	0.76
W49-F29	Cypress Swamp/Shallow Pond	0.10	--
W50-F29	Freshwater Marsh	0.51	--
W51-F30	Freshwater Marsh/Shallow Pond	1.55	2.37
W52-F30	Freshwater Marsh	0.55	--
W53-F30	Freshwater Marsh	0.27	--
W54-F31	Freshwater Marsh	0.11	0.11
W55-F32	Freshwater Marsh/Shallow Pond	0.09	0.09
W56-F33	Freshwater Marsh/Shallow Pond	1.52	2.29
W57-F33	Freshwater Marsh	0.20	--
W58-F33	Cypress Swamp/Shallow Pond	0.57	--
W59-F34	Freshwater Marsh/Shallow Pond	1.43	3.00
W60-F34	Cypress Swamp/Shallow Pond	1.61	--
W61-F35	Freshwater Marsh	0.61	0.61
W62-F36	Cypress Strand	0.19	0.19
W63-F37	Mixed Hardwood Swamp	1.31	2.42
W64-F37	Isolated Cypress Swamp	0.77	--
W65-F37	Isolated Cypress Swamp	0.34	--

Table 4-8.1. Wetland and Floodplain Involvement by Site (Continued, Page 3 of 3)

Site	Description	Maximum Acreage of Involvement	
		Wetlands	Floodplains
W66-F38	Cypress Strand	1.49	1.49
W67-F39	Mixed Hardwood Swamp/Cypress Creek	1.89	2.05
W68-F40	Shallow Pond	0.25	0.25
W69-F41	Freshwater Marsh	0.61	9.64
W70-F41	Freshwater Shrub Marsh	0.55	---
W71-F41	Isolated Cypress Swamp	0.30	---
W72-F41	Mixed Hardwood Swamp	2.50	---
W73-F41	Freshwater Marsh	0.74	---
W74-F41	Isolated Cypress Swamp	0.23	---
W75-F42	Freshwater Marsh	0.66	0.66
W76-F43	Freshwater Marsh	0.06	0.06
W77-F44	Barrow Pit	0.34	0.34
W78-F45	Freshwater Shrub Marsh	0.01	0.01
W79-F46	Isolated Cypress Swamp	0.18	0.18
	TOTAL	43.13	55.69

W = Wetland Site  
F = Floodplain Site

Source: RS&H, 1986.

fish and crustaceans) are totally dependent upon wetlands, while others (e.g., certain insects and amphibians) depend on wetlands only during particular stages of their life cycles. Most amphibians are dependent upon wetlands for reproduction. Other animals (e.g., wading and migratory birds, mammals, and reptiles) use wetlands for food, water, nesting, and cover requirements. The wetlands along SR 52 are also important in providing food and nesting habitat for state and federally-listed wildlife species. These include the southern bald eagle, sandhill crane, and wood stork. As development (i.e., agricultural, residential, and commercial) continues in the uplands of the project vicinity, these wetlands will become even more valuable to fish and wildlife.

The floral and faunal components of the mixed hardwood swamp, cypress swamp, and freshwater marsh/shallow ponds communities were described in detail in Section 4.2, Biological Communities.

#### 4.8.1 Mixed Hardwood Swamps

The 14 mixed hardwood swamp sites (W4, W5, W6, W7, W9, W12, W29, W30, W32, W36, W38, W63, W67, and W72) involve a maximum total encroachment of 12.8 acres. Thirteen of these sites are associated with floodplains and drainage basins of creeks and are part of larger stands ranging in approximate size from 7 to 4,117 acres (Table 4.8-2). The other site, W29, is a 0.5-acre, hydrologically isolated swamp. These hardwood swamps are particularly important to fish and wildlife. The high floral diversity within this wetland type provides habitat for many wildlife species. In addition, due to the contiguous nature of these wetlands, they provide a corridor for fish and wildlife movements between areas.

Twelve of the 14 sites have been previously impacted from the initial construction of SR 52. However, these 12 wetlands have functionally recovered (i.e., provide quality habitat for fish and wildlife) from this disturbance. Sites W29 and W7 have not been previously disturbed.

Table 4.8-2. Summary of Wetland Involvement by U.S. Fish and Wildlife Service Wetland Classification Types for the 14 Mixed Hardwood Swamps Along SR 52

<u>Mixed Hardwood Swamp</u>		Maximum Acreage Of Involvement	Wetland* Size (Acres)	<u>U.S. Fish and Wildlife Service Wetland Classification</u>
W4		0.25	193.00**	System: Palustrine
W5/Buckhorn Creek		0.04	193.00	Class: Forested
W6		0.87	193.00**	Subclass: Deciduous
W7		0.18†	1,818.00††	Water Regime: Semi-permanently Flooded
W9		0.74	1,818.00††	
W32		0.88	180.00	
W38		1.57	49.00	
W63		1.31	7.00	
W72		2.50	42.00	
TOTAL		8.34	471.00	
W30/Pithlachascotee River		1.01	3,381.00	System: Palustrine
W67/Cypress Creek		1.89	4,117.00	Class: Forested
TOTAL		2.90	7,498.00	Subclass: Deciduous
				Water Regime: Seasonally Flooded
W12		0.84	1,818.00	System: Palustrine
W29		0.51†	0.51	Class: Forested
W36		0.20	3,381.00***	Subclass: Deciduous/Broad-Leaved Evergreen
TOTAL		1.55	1,818.51	Water Regime: Seasonally Flooded
GRAND TOTAL		12.79	9,787.51	

\* Wetland size was taken from National Wetland Inventory maps (USFWS, 1981) or determined by planimeter from 1:100 aerial photos.  
 † Wetland not previously encroached upon by SR 52.  
 \*\* Not included in total, this site is part of the wetland associated with Site W5.  
 †† Not included in total, this site is part of the wetland associated with Site W12.  
 \*\*\* Not included in total, this site is part of the wetland associated with Site W30.

Source: RS&H, 1987.

Several USFWS wetland classification types (USFWS, 1979) are represented within the mixed hardwood swamp category (Table 4.8-2). These wetland types differ in their dominant hardwood tree species composition and water regimes. Sites W30 and W67 represent the portions of hardwood swamps within the proposed right-of-way that are associated with the Pithlachascotee River and Cypress Creek, respectively. These sites are classified as follows: System--Palustrine, Class--Forested, Subclass--Deciduous, and Water Regime--Seasonally Flooded. In the area of SR 52, the Pithlachascotee River (Site W30) is a major intermittent stream with an ill-defined stream bed that flows through a 400-foot-wide hardwood swamp dominated by cypress and red maple. The stream flows from north to south, originating from Crews Lake. The northern alignment for the proposed roadway, as described in Section 3.7, Alternative Alignments, was selected at this location because it minimizes wetland encroachment. Approximately 1.01 acre of wetlands on the north side will be involved. Cypress Creek, which also flows generally from north to south, is a tributary of the Hillsborough River. The section of the creek within the proposed right-of-way (Site W67) is in the upper reaches of the Cypress Creek Watershed where there is often no flow and maximum depths rarely exceed 3 feet (Hicks, 1985). The stream bed is ill-defined and runs through a 600- to 700-foot-wide mixed hardwood swamp. A southern alignment was selected because it would minimize wetland encroachment. A maximum of 1.89 acres on the south side of SR 52 will be involved in the road improvements. On the south side of SR 52, within the proposed right-of-way, most of the large cypress trees have been recently removed. The south side is now dominated by red maple and black gum trees and is relatively open. Selective clearing and grubbing will be used to minimize the impacts to Sites W67 and W30.

Hardwood swamp Sites W4, W5, W6, W7, W9, W32, W38, W63, and W72 are dominated by cypress and/or red maple and are semipermanently flooded. A total of approximately 8.34 acres will be involved. These sites are classified as follows: System--Palustrine, Class--Forested, Subclass--Deciduous, and Water Regime--Semipermanently Flooded. The wetland

involvement at Site W7 (approximately 0.18 acre) is positioned within the proposed right-of-way such that selective clearing and grubbing will be used to avoid encroachment at this site. Site W7 borders a large freshwater marsh. Encroachment at Sites W4 and W5 (0.25 and 0.04 acre, respectively) by the proposed southern alignment was considered unavoidable due to overriding economic considerations. An alternative alignment which would avoid these sites would cost an additional \$950,000 in right-of-way cost (FDOT, 1986a). Selective clearing and grubbing will be used to minimize encroachment at these sites. The wetland involvements of Sites W6, W9, W32, W38, W63, and W72, range from 0.74 to 2.5 acres. While encroachment at these six sites is unavoidable due to the abundance of wetlands on both sides of SR 52, impacts will be minimized by selective clearing and grubbing. Changes in the road alignment to reduce involvement at each of these sites would only shift the encroachment to another wetland.

Hardwood swamp Sites W12, W29, and W36 are seasonally flooded and consist of a mixture of sweetbay, loblolly bay, red maple, and cypress. A total of approximately 1.55 acres are involved at these sites. The sites are classified as follows: System--Palustrine, Class--Forested, Subclass-- Deciduous/Broad Leaved Evergreen, and Water Regime--Seasonally Flooded. Encroachment at Sites W12, W29, and W36 will be minimized by selective clearing and grubbing. Impacts to all three of these sites are unavoidable. Site W29, a 0.5-acre, hydrologically isolated swamp, is totally within the proposed right-of-way. Over 50 percent of this swamp will be filled. Sites W12 and W36 are part of the large floodplains associated with Buckhorn Creek and the Pithlachascotee River, respectively. Involvement will be limited to 0.84 acre at Site W12 and 0.20 acre at Site W36. A shift in the proposed roadway alignment at these sites would increase the total wetland involvement.

7-3-7  
The 14 hardwood swamps within the proposed right-of-way are relatively high quality forested wetlands. These include the 12 hardwood swamps previously impacted from the initial construction of SR 52. Impacts to

the hardwood swamps within the project corridor were minimized by the selective placement of the new roadway laneage. The majority of the proposed alignment was chosen based on the least involvement of wetlands and impacts to large wetland systems. Involvement at six sites (W29, W30, W38, W63, W67, and W72) was considered substantial. A substantial wetland involvement within the proposed right-of-way is considered to be one that is greater than 20 percent or greater than 1 acre. This magnitude of reduction of individual wetlands will impact local fish and wildlife populations.

Overall, approximately 12.79 acres of hardwood swamps occur within the proposed right-of-way. The 12.79 acres represent 0.1 percent of the total area (9,787 acres) of impacted hardwood swamps. Approximately 60 percent of the total 12.79 acres which lie within the proposed right-of-way limits are anticipated to be filled for the roadway. Selective clearing and grubbing will minimize the encroachment to the remainder. The expected loss of hardwood swamp relative to availability in the region is not regionally significant.

#### 4.8.2 Cypress Swamps

Portions of 31 cypress swamps lie within the proposed right-of-way involving a maximum total encroachment of 15.6 acres. These include isolated cypress stands, cypress strands, and cypress associated with freshwater marshes and/or shallow ponds (Table 4.8-3). No old-growth cypress was observed within the project corridor. The 31 cypress swamps provide habitat for many fish and wildlife species. Although cypress swamps typically do not have the high species diversity which is associated with hardwood swamps, they are still important to the fish and wildlife species that use them. These include many wading birds, reptiles, and amphibians. Also, the cypress strands are important in providing a corridor for movement of fish and wildlife between areas. The isolated wetlands in the developed portion of the area (i.e., cattle pastures) are also an important refuge for fish and wildlife. Cypress swamps associated with freshwater marshes and/or shallow ponds increase

Table 4.8-3. Summary of Wetland Involvement by U.S. Fish and Wildlife Service Wetland Classification Types for the 31 Cypress Swamps Along SR 52.

Site Number	Maximum Acreage Of Involvement	Wetland Size* (Acres)	U.S. Fish and Wildlife Service Wetland Classification
<b>CYPRESS SWAMP</b>			
<b>Isolated Cypress Swamps</b>			
W3	0.30	4.50	System: Palustrine Class: Forested Subclass: Needle-Leaved Deciduous Water Regime: Semipermanently Flooded
W6	0.22	0.22	
W10	0.96	2.00	
W11	1.00	1.00	
W13	0.22	0.45	
W14	0.36	0.68	
W16	0.64	3.50	
W18	0.50	0.50	
W20	0.09	8.00	
W24	0.03†	0.03	
W35	0.20	0.40	
W40	0.23	0.23	
W44	0.36	0.36	
W46	0.29†	4.00	
W64	0.77	0.77	
W65	0.34†	0.50	
W71	0.30	0.30	
W74	0.23†	0.23	
W79	0.18†	2.30	
<b>TOTAL</b>	<b>6.27</b>	<b>29.97</b>	
<b>Cypress Strand</b>			
W1	0.27	1,480.00	
W21	0.19†	61.00	
W33	0.16†	180.00**	
W34	0.51†	11.00	
W37	0.78	3,381.00††	
W43	3.38	152.00	
W62	0.19†	110.00	
W66	1.49	43.00	
<b>TOTAL</b>	<b>6.97</b>	<b>1,857.00</b>	
<b>Cypress Swamp Surrounding Shallow Ponds</b>			
W26	0.09†	0.60	
W49	0.10†	0.10	
W58	0.57	4.00	
W60	1.61	2.00	
<b>TOTAL</b>	<b>2.37</b>	<b>6.70</b>	
<b>GRAND TOTAL</b>	<b>15.61</b>	<b>1,893.67</b>	

\* Wetland size was taken from national Wetland Inventory maps (USFWS, 1981) or determined by planimeter from 1:100 aerial photos.

† Wetland not previously encroached upon by SR 52.

\*\* Not included in total, this site is part of the wetland associated with Site W32.

†† Not included in total, this site is part of the wetland associated with Site W30.

Source: RSKH, 1987.

the wildlife diversity normally associated with marshes or ponds. The cypress trees provide convenient nesting and roosting trees for wading birds and birds of prey (e.g., osprey and southern bald eagle).

All 31 sites are classified as follows: System--Palustrine, Class--Forested, Subclass--Needle-Leaved Deciduous, and Water Regime--Semi-permanently Flooded.

Nineteen cypress swamp sites (W3, W8, W10, W11, W13, W14, W16, W18, W20, W24, W35, W40, W44, W46, W64, W65, W71, W74, and W79) are part of isolated wetlands ranging in size from 0.03 to 8.0 acres (Table 4.8-3). Approximately 6.27 acres of hydrologically isolated cypress swamps occur within the proposed right-of-way. It is anticipated that six of these cypress swamp sites within the proposed right-of-way (W11, W13, W20, W24, W46, and W79), with a combined total of 0.86 acre, will not be encroached upon by the proposed widening of SR 52. These wetlands are far enough from the proposed roadway edge that selective clearing and grubbing will be used to avoid impacts to these sites. The wetlands associated with the remaining 13 sites range in size from 0.22 to 4.5 acres. These 13 wetlands provide quality habitat for fish and wildlife species. Sites W3, W10, W14, W16, W65, and W74 are natural, hydrologically isolated wetlands. Of these sites, W65 and W74 have not been previously encroached upon. The other seven swamp sites (W8, W18, W35, W44, W40, W64, and W71) resulted from the segmentation of larger cypress swamps during the initial construction of SR 52.

At 18 of the 19 sites, selective placement of the proposed laneage has minimized wetland involvement. For the remaining site (W3), alignment was chosen based on significantly lower right-of-way cost. To shift alignment to avoid the 0.3 acre of the 5-acre swamp at this site would cost an additional \$950,000 (this includes the avoidance of sites W4 and W5 as discussed in the previous section). Therefore, avoidance of this cypress swamp was not considered prudent based on cost.

Wetlands associated with Sites W8 and W40 (0.22 and 0.23 acres, respectively) are totally within the proposed right-of-way and will be filled for the proposed roadway improvements. Sites W18, W44, W64, W71, and W74 are also totally within the proposed right-of-way and are 0.23- to 0.77-acre wetlands. About 50 percent of these sites will be filled for the proposed roadway. Selective clearing and grubbing will be used to minimize impacts to the remaining portion of the wetlands within the proposed right-of-way.

Sites W10, W14, W35, and W65 are swamps ranging in size from 0.5 to 2.0 acres. The involvement for Sites W14, W35, and W65 is between 0.20 and 0.36 acres, whereas the involvement of Site W10 is 0.96 acre. It is anticipated that approximately 25 percent of the total area of these wetlands will be filled for the proposed roadway. The impacts to the remaining wetland areas within the right-of-way will be minimized by selectively clearing and grubbing.

Site W16 is part of a 3.5-acre wetland. Approximately 25 percent of this wetland occurs within the proposed right-of-way, and approximately 10 percent of this total will be filled. The impacts to the remaining portions of the wetlands will be minimized by selectively clearing and grubbing.

Cypress strands account for 8 of the 31 cypress wetlands sites (W1, W21, W33, W34, W37, W43, W62, and W66) that the project encroaches upon. These cypress strands range in size from 43.0 to 3,381.0 acres. A total of 6.97 acres is within the proposed right-of-way. The proposed alignment minimizes the wetland acreage involved in the area of these eight sites. These eight wetlands, which provide quality habitat for fish and wildlife species, include four wetlands (W1, W37, W43, and W66) previously disturbed during the initial construction of SR 52. The involvement at Sites W66 and W43 (1.49 and 3.38 acres, respectively) was considered substantial. The involvement at each of the six remaining sites was less than 5 percent and less than 1 acre.

Site W1, Bear Creek, is intermittent, with an ill-defined creek bed which flows through a 1,480-acre cypress swamp. A south alignment was selected to minimize the amount of wetlands involved. An encroachment of 0.27 acre is expected. This includes the previously cleared right-of-way, which is now covered with 10- to 15-foot-tall cypress trees (approximately 0.1 acre) and 0.18 acre of previously undisturbed cypress stand. Site W33 has 0.16 acre within the proposed right-of-way, and is far enough from the roadway laneage that clearing or filling is not anticipated. Site W37, a 3,381-acre cypress stand, had 0.78 acre of wetland involvement. Sites W21, W34, and W62 are associated with wetlands that range in size from 11 to 110 acres. Only the tips of these swamps will be affected. The involvement for these three sites ranges from 0.19 to 0.51 acre. Impacts to all eight sites will be reduced by selective clearing and grubbing.

The remaining 4 of 31 cypress wetlands (Sites W26, W49, W58, and W60) are cypress stands which surround, or are adjacent to, shallow ponds and freshwater marshes. Sites W26 and W49 are small stands of cypress (0.6 and 0.1 acre, respectively). These cypress stands are part of larger wetlands (3.5 and 6 acres, respectively), that have not been previously encroached upon by the existing SR 52 roadway. A maximum of 0.1 acre of cypress will be impacted at each site. In the area of involvement, the cypress stand which surrounds these sites is only several trees wide and is not considered substantial. Both sites provide quality habitat for wildlife, as do Sites W58 and W60, which have been previously bisected by SR 52. Both sites are associated with cypress stands which partially surround large freshwater marsh/shallow pond (438 and 96 acres, respectively). At Site W58, the east and west sides of the cypress-ringed marsh was previously bisected by the roadway. The stand is south of SR 52 and approximately 75 feet wide on the east and west sides. The wetland area within the proposed right-of-way consists of 0.33 acre to the east and 0.24 acre to the west, and is not considered substantial. At Site W60, the cypress is 125 feet wide and parallels the road on the south side of SR 52. This wide strip accounts for approximately 1.61 acres of wetlands, which is considered

substantial involvement. The total encroachment will be reduced by selective clearing and grubbing for both Sites W60 and W58. Shifts in the proposed alignment would not reduce wetland involvement. Wetland involvements for the alternative alignments at these sites are equal to, or slightly greater than, those for the proposed alignment.

In summary, the project will result in encroachment (i.e., dredging or filling) upon 24 of the 31 cypress swamps that occur in the project corridor. No old-growth or "specimen" cypress trees will be impacted by the project. Cypress swamp involvement was minimized by selective placement of the proposed new roadway laneage. Selective clearing and grubbing will further minimize the total area of wetland disturbance. The involvement in 11 of the 19 hydrologically isolated cypress swamps will be substantial (i.e., between 20 and 100 percent of the wetland's total area). Twelve of these nineteen wetlands are less than 0.77 acre, and seven are totally within the proposed right-of-way. The involvement in the remaining 8 of 19 hydrologically isolated cypress swamps will be minimal (i.e., less than 20 percent of the wetland's total area). The involvement in six of the eight cypress strand sites will also be minimal (less than 5 percent or 1 acre). The involvement in the remaining two sites will be 1.49 and 3.38 acres, which is considered substantial. The involvement of one of the four cypress swamps surrounding shallow pond sites will be substantial (80 percent within the proposed right-of-way). The involvement in the remaining three sites will be minimal (less than 14 percent or 1 acre).

The substantial involvement of 14 cypress swamps (11.68 acres) will reduce local wildlife populations by direct loss of quality habitat and habitat diversity. The involvement in the remaining 17 cypress swamps is small and should not impact fish and wildlife populations substantially.

Overall, approximately 15.61 acres of cypress swamps occur within the proposed right-of-way. This represents 0.8 percent of the total area (1,893.67 acres) of these swamps. Therefore, the expected total loss of cypress swamp resulting from the project is not considered regionally significant.

#### 4.8.3 Freshwater Marsh/Shallow Ponds

Portions of 33 freshwater marshes/shallow ponds lie within the proposed right-of-way, involving a maximum of 14.4 acres. Several USFWS wetland types are represented within this category (see Table 4.8-4). The wetland types differ in amounts of open water, dominant plant species, and water regimes. They include seasonally and semipermanently flooded marshes and shrub marshes and permanently flooded shallow ponds. These heterogeneous wetlands provide a great variety of fish and wildlife habitat. Therefore, as a group, they are important within the region. The primary productivity levels (i.e., fundamental link in the food chain) in these wetlands are generally higher than in forested wetlands. These wetland types are particularly important to wildlife species adapted to open water areas and/or fluctuating water levels (e.g., ducks, wading birds, turtles, and alligator).

Nine of the thirty-three freshwater marshes (Sites W2, W50, W52, W53, W54, W57, W61, W73, W76) are seasonally flooded. These freshwater marshes (wet prairies) occur in low-lying areas surrounded by uplands, or in ecotones between uplands and the semipermanently and permanently flooded wetlands. Approximately 3.29 acres of wet prairies occur within the project right-of-way. These sites are classified as follows: System--Palustrine, Class--Emergent, Subclass--Persistent, and Water Regime--Seasonally Flooded. The wetland involvement was minimized by selective placement of the proposed roadway at these sites. Wetlands associated with Sites W2, W53, W61, W73, W76 have been previously bisected by SR 52, while Sites W50, W52, W54, and W57 have been encroached upon but not bisected. These nine wetlands have recovered from this disturbance (i.e., regained their normal function and currently provide quality habitat for fish and wildlife). Site W54 occurs on the edge of a 405-acre marsh and has less than 0.11 acre within the right-of-way. Due to the size and location of this wetland acreage, selective clearing and grubbing operations can be utilized to avoid impacts associated with construction of the proposed roadway. Sites W73 and W76, which are remnants of wetland areas that were

Table 4.8-4. Summary of Wetland Involvement by U.S. Fish and Wildlife Service Wetland Classification Types for the 33 Freshwater Marsh/Shallow Ponds and a Borrow Pit Along SR 52

Site Number	Maximum Acreage Of Involvement	Wetland Size* (Acres)	U.S. Fish and Wildlife Service Wetland Classification
<u>Freshwater Marsh (Seasonally Flooded)</u>			
W2	0.24	0.40	System: Palustrine Class: Emergent Subclass: Persistent Water Regime: Seasonally Flooded
W50	0.51	25.00†	
W52	0.55	5.00	
W53	0.27	6.00	
W54	0.11	405.00	
W57	0.20	0.40	
W61	0.61	10.00	
W73	0.74	0.74	
W76	0.06	0.06	
TOTAL	3.29	427.60	
<u>Freshwater Marsh (Semipermanently Flooded)</u>			
W17	0.17	0.17	System: Palustrine Class: Emergent Subclass: Persistent Water Regime: Semipermanently Flooded
W19	0.11	0.11	
W47	0.10	28.00	
W69	0.61	1.50	
W75	0.66	1.50	
TOTAL	1.65	31.28	
<u>Freshwater Shrub Marsh</u>			
W15	0.23**	3.50	System: Palustrine Class: Shrub Subclass: Deciduous and Class: Emergent Subclass: Persistent Water Regime: Seasonally Flooded/Semipermanently Flooded
W31	0.53**	1.75	
W39	0.17**	21.00	
W70	0.55	0.55	
W78	0.01	0.01	
TOTAL	1.49	26.81	
<u>Freshwater Marsh/Shallow Pond</u>			
W22	0.37**	16.00	System: Palustrine Class: Emergent/Open Water Subclass: Persistent Water Regime: Permanently Flooded
W23	0.35**	16.00††	
W25	0.18**	3.50	
W27	0.39	0.39	
W28	0.34**	9.00	
W41	0.44	0.44	
W42	0.75	1.00	
W45	0.16	0.25	
TOTAL	2.98	30.58	
<u>Shallow Pond (Littoral Zone Vegetated)</u>			
W48	0.14	6.00	System: Palustrine Class: Aquatic Bed/Open Water Subclass: Floating-Leaved Water Regime: Permanently Flooded
W51	1.55	25.00	
W55	0.09**	47.00	
W56	1.52	438.00	
W59	1.43	96.00	
TOTAL	4.73	612.00	
W68	0.25**	0.25	Class: Open Water Water Regime: Permanently Flooded Special Modifier: Artificial
<u>Borrow Pit</u>			
W77	0.34**	0.45	System: Lacustrine Subsystem: Littoral Class: Unconsolidated Bottom Water Regime: Permanently Flooded Water Chemistry: Freshwater Special Modifier: Artificial
GRAND TOTAL	14.73	1,128.97	

\* Wetland size was taken from National Wetland Inventory Maps (USFWS, 1981) or determined by planimeter from 1:100 aerial photos.

† Not included in total, this site is part of the wetland associated with Site 51.

\*\* Wetland not previously encroached upon by SR 52.

†† Not included in total, this site is part of the wetland associated with Site W22.

Source: RSGH, 1987.

previously bisected by SR 52, are totally within the proposed right-of-way (approximately 0.74 and 0.06 acre, respectively). These sites will be completely filled during the construction of the proposed roadway. Also, most of Sites W2 and W57, which total less than 0.5 acre, occur within the proposed right-of-way. It is anticipated that approximately 50 percent of these sites will be filled for the roadway. Selective clearing and grubbing will be used to minimize impacts to the remaining portion of the wetlands within the proposed right-of-way. The involvement of Sites W50, W52, W53, and W61 (0.51, 0.55, 0.27, and 0.61 acres, respectively) occur on the edge of marshes ranging in size between 5.0 and 25.0 acres. The total area impacted will be reduced by selective clearing and grubbing at these four sites.

Five of the thirty-three freshwater marsh sites (Sites W17, W19, W47, W69, and W75) are semipermanently flooded and have a combined total of 1.65 acres within the proposed right-of-way. These five sites are classified as follows: System--Palustrine, Class--Emergent, Subclass--Persistent, and Water Regime--Semipermanently Flooded. The proposed alignment minimizes the wetland acreage involved at these five sites. Site 47 has less than 0.1 acre within the proposed right-of-way and is far enough away from the roadway alignment that clearing or filling is not anticipated. Sites W17, W19, W69, and W75 have been previously segmented by SR 52 and, with the exception of W17 and W19, provide quality wildlife habitat. Marshes associated with Site W17 and part of Site W19 resulted from previous clearing of cypress for the existing SR 52 right-of-way. These 0.17- and 0.11-acre marshes occur within the proposed right-of-way and will be filled during the construction of the roadway. At Site W69 and W75, 40 percent of these 1.5-acre marshes occur within the proposed right-of-way. It is anticipated that one-third of the area in these marshes will be filled for the proposed roadway. Impacts to the remaining portion within the right-of-way for these sites will be minimized by selective clearing and grubbing.

7/17/87

Five of the thirty-three freshwater marshes are shrub marshes that are dominated by willows and/or small cypress. Four of the five marsh sites are seasonally flooded (W15, W39, W70, and W78) and have a combined total of 0.96 acre within the proposed right-of-way. They are classified as follows: System--Palustrine, Class--Scrub-Shrub, Subclass--Deciduous/Class--Emergent, Subclass--Persistent, and Water Regime--Seasonally Flooded. The other shrub marsh, W31, with 0.53 acre of involvement, is similarly classified with the exception of its semipermanently flooded water regime.

The proposed alignment minimizes the wetland acreage involved at these five sites. Shifts in the proposed alignment would result in an increase in wetland impacts. Two of the five sites (W70 and W78) were previously bisected by SR 52. Site W78 is a 0.01-acre remnant wetland to the south of SR 52 and will be totally eliminated by the proposed project. W78 is not considered quality wildlife habitat due to its disturbed nature and relatively small size. The shrub marsh at Site W70, which has recovered and does provide quality wildlife habitat, is also totally within the proposed right-of-way. It is anticipated that approximately 60 percent of this 0.55-acre wetland will be filled. Sites W31, W15, and W39 provide quality wildlife habitat and have not been previously disturbed by SR 52. At Site W31, 0.53 acre of a 1.75-acre shrub marsh is involved. Approximately 0.2 acre at this site is anticipated to be filled for the proposed roadway. The involvement at Sites W15 and W39, which range from 0.17 and 0.22 acre, is relatively small compared to the total area of these wetlands (3.5- and 21-acres, respectively). Selective clearing and grubbing will minimize the encroachment at these three sites.

Eight of the thirty-three freshwater marsh/shallow pond sites (W22, W23, W25, W27, W28, W41, W42, and W45) are associated with shallow ponds and have a combined total of 2.98 acres within the proposed right-of-way. These wetlands sites are classified as follows: System--Palustrine, Class--Emergent, Subclass--Persistent/Class--Open Water, and Water Regime--Permanently Flooded. Site W27 is a pickerelweed pond which

provides wildlife habitat despite being previously segmented by SR 52. The remnant 0.39-acre pond occurs within the proposed right-of-way. It is anticipated that 50 percent of this pond will be filled for the proposed roadway. Sites W41, W42, and W45, which were also previously bisected by SR 52, are portions of cypress swamps that have been cleared and/or dredged to create three shallow ponds. These ponds were presumably created to provide water for cattle. Due to the disturbance, Sites W41, W42, and W45 are not considered high quality wetlands or wildlife habitat. The involvement at Sites W41 and W42 is 0.44 and 0.75 acres, respectively. Most of the ponds at these sites occur within the proposed right-of-way. It is anticipated that approximately 0.12 and 0.42 acre of Sites W41 and W42, respectively, will be filled for the proposed roadway. This includes the central portions of these ponds that are vegetated with maidencane and small cypress trees. The pond at Site W45 has sections which are vegetated with cattails. Approximately 50 percent of this 0.25-acre pond occurs within the proposed right-of-way. It is anticipated that only 0.05 acre of this pond will be filled because of the pond's relative position to the proposed new lanes. At Sites W27, W41, W42, and W45 selective clearing and grubbing will be used to minimize the impacts to the remaining portions of these ponds within the proposed right-of-way. In addition, wetland involvement was minimized by the selective placement of the proposed new laneage at these sites. The proposed alignment encroaches upon the smaller side of the previously bisected swamps. Sites W22, W23, W25, and W28 are natural ponds ranging in size from 3.5 to 16.0 acres that have not been previously disturbed by SR 52 and provide quality wildlife habitat. Most of the involvement at these sites, which ranges from 0.18 to 0.37 acre, occurs within the vegetated areas of these shallow ponds. The dominant plants include St. Johnswort, maidencane, and pickerelweed. Encroachment will be minimized by selective clearing and grubbing. The proposed alignment minimizes the wetland acreage involved at these four sites.

Six of the thirty-three freshwater marsh/shallow pond sites (W48, W51, W55, W56, W59, W68) are associated with ponds representing a total maximum involvement of 4.98 acres. Sites W48, W51, W55, W56, and W59 are classified as follows: System--Palustrine, Class--Aquatic Bed/Open Water, Subclass--Floating-leaved, and Water Regime--Permanently Flooded. Site W55 has 0.09 acre within the proposed right-of-way and is far enough from the roadway laneage that clearing or filling is not anticipated. Sites W48, W51, W56, and W59 are considered high quality wildlife habitat. These sites have recovered from previous disturbance from the original construction of SR 52. Site W48 is associated with a 6-acre pond that has been previously encroached upon by SR 52. Involvement at this site will be limited to 0.14 acre. Encroachment at this site is expected to be slight and will be further minimized by selective clearing and grubbing. Sites W51, W56, and W59 are associated with wetlands ranging from 15 to 438 acres that have been previously segmented by SR 52. Each has a maximum involvement of approximately 1.5 acres. It is anticipated that 0.75 acre at each of these sites will be filled for the roadway. Shifts in alignment at these three sites and Site W48 will not reduce wetland involvement. The proposed alignment minimizes wetland involvement at all of these sites.

Site W68 is classified as follows: System--Palustrine, Class--Open Water, Water Regime--Permanently Flooded, Special Modifier--Artificial. This site is a 0.25-acre pond within the proposed right-of-way and is in the middle of a cattle pasture. The pond was presumably created to provide water for cattle. A small amount of pickerelweed occurs in this pond. Over 50 percent of the pond will be filled for the roadway. The proposed alignment at this site reduces the involvement of natural wetlands. Due to this wetlands artificial nature, Site W68 is not considered a high quality wetland.

Overall, the proposed project will probably encroach upon 30 of the 33 freshwater marsh/shallow ponds within the proposed right-of-way. A total of approximately 14.39 acres of freshwater marsh/shallow ponds will

7/16/87

be involved. The 14.39 acres represent 1.3 percent of the total area (1,128.97 acres) of these wetlands. Therefore, the expected loss of freshwater marsh/shallow ponds resulting from the project is not considered regionally significant. The total wetland involvement and impacts to previously undisturbed marsh/ponds were minimized by selective placement of the proposed alignment. The involvements at 19 of the 33 freshwater marsh/shallow pond sites are considered substantial. The involvement at 4 of these sites is greater than 1.43 acres and at 15 sites the involvement is greater than 30 percent. Nine of the 19 sites are totally within the proposed alignment. Five of these nine sites, which range in size from 0.01 to 0.76 acre, will be completely filled. Between 11 and 75 percent of the remaining 10 sites, which range in size from 0.25 acre to 1.50 acres, will be filled. However, 8 of these 19 impacted sites are the smaller remnants from the previously bisected wetland. Therefore, the impacts to the larger wetlands were avoided. The involvement at the remaining 11 of 30 sites that will be encroached upon ranged from 0.17 to 0.61 acre, which was small relative to the size of the wetlands which ranged in size from 3.5 to 405 acres. Selective clearing and grubbing will be used to minimize the encroachment at these marshes and ponds where it is applicable. The involvement of these 19 freshwater marsh/shallow pond sites (10.37 acres) will reduce local fish and wildlife populations by direct loss of quality habitat and habitat diversity.

#### 4.8.4 Borrow Pit

Site W77, a borrow pit, is a manmade wet area. The resulting side slopes are steep with only a narrow border of such pioneering wetland species as maidencane, pickerelweed, and wax myrtle. Between 50 and 75 percent of the 0.45-acre borrow pit will be filled. The site does not appear to be utilized extensively by wildlife. Due to the upland origin, disturbed nature, and limited amount of associated wetland vegetation of this site, the maximum potential encroachment identified is not considered significant and Site W77 is not considered a high

9/16/87

quality wetland. This site is classified as follows:

System--Lacustrine, Subsystem--Limnetic, Class--Unconsolidated Bottom, Water Regime--Permanently Flooded, Water Chemistry--Fresh, and Special Modifier--Artificial.

The proposed improvements to SR 52 will result in a maximum wetland involvement of 43.13 acres (12.79 acres of mixed hardwood swamps, 15.61 acres of cypress swamps, and 14.39 acres of freshwater marsh/ponds and 0.34 acre of a borrow pit). These 43.13 acres represent 0.34 percent of the total area (12,810 acres) of the 79 wetlands that lie partially or wholly within the proposed right-of-way. The involvement at 38 of 79 wetland sites is considered minor (i.e., less than one acre or 20 percent of the wetland occurs within the right-of-way). These wetlands occupy a total of 11.8 acres within the proposed right-of-way. The involvement at the 41 remaining sites is considered substantial (i.e., greater than one acre or 20 percent of the wetland occurs within the right-of-way). These wetlands occupy a total of 31.3 acres within the proposed right-of-way. It is anticipated that at least 8 of these wetlands will be completely filled as a result of the proposed improvements.

It is estimated that 73 of the 79 wetlands involved (approximately 41.2 acres) are high quality wetlands (i.e., provide essential habitat and water quality benefits). The remaining six wetlands (W41, W42, W45, W68, W77, and W78), totaling 1.91 acres, are marshy/surface water systems that are either a result of dredging operations (approximately 1.81 acres) or initial construction of SR 52 (less than 0.1 acre). These six wetlands have marginal habitat and water quality values due to their artificial, disturbed nature and small size.

Wetland impacts have been minimized by utilizing the existing SR 52 alignment, since this area has already been subject to disturbances associated with previous roadway construction. Wetland involvement will also be minimized by selective placement of the proposed roadway where there are no other overriding human or economic factors. In most cases,

9/16/87

the alignment was chosen based on minimization of wetland impacts and avoidance of large wetland systems. Most of the other wetland involvement was unavoidable because of the abundance and distribution of wetlands in the region. To minimize total wetland loss, selective clearing and grubbing will be implemented during construction. The remaining portion of involved wetlands will be cleared and filled during the construction of the roadway. It is anticipated that at least 60 percent of the 43.13 acres involved will be filled for the roadway. To minimize regional wetland losses, mitigation for wetlands impacted (see Section 4.8.5, Mitigation for Wetland Losses) will be determined during the permitting and final design phases. The actual proportion to be impacted will not be known until the final design. To minimize short- and long-term impacts due to construction, activities will be adhered to as described in Section 104 of the FDOT Standard Specification for Road and Bridge Construction. Wetland involvement will not be minimized by additional bridging or by extension of existing bridge lengths.

The involvement of 43.1 acres of wetlands is not considered to be regionally significant. However, the substantial involvement with 41 of the 79 wetlands and the cumulative loss or modification of 43.1 acres of wetlands is considered a substantial unavoidable adverse impact for several reasons. This loss will substantially reduce the amount and diversity of fish and wildlife habitat in the immediate area. As previously mentioned, these wetlands are important habitat for fish and wildlife, and this importance will increase as the uplands in the region are developed. The loss will also reduce the total amount of floodplain available for storm water and floodwaters (see Section 4.12) and the available area for ground water recharge. In addition, the total wetland loss (43.1 acres) will also be contributing to the cumulative decline of wetlands in Florida. It is estimated that one-third of Florida wetlands have been lost since 1955 (Hampson, 1984). Therefore, mitigation is proposed to offset the unavoidable adverse wetland impacts, as requested by the Florida Game and Fresh Water Fish

Commission and the U.S. Environmental Protection Agency (see letters in the Appendix).

#### MITIGATION FOR WETLAND LOSSES

Although all reasonable measures were taken during the preliminary design stages to avoid wetland impacts, the proposed improvements to SR 52 will impact a maximum of 43.13 acres of wetlands at 79 locations. Although formal jurisdictional determinations have not been conducted by the permitting agencies, it is expected that all wetland encroachment sites will require permits from the U.S. Army Corps of Engineers (COE) and the Southwest Florida Water Management District (SWFWMD). Permits from the Florida Department of Environmental Regulation (DER) are required only at wetland encroachment areas associated with waters of the state as defined in Section 403.031, Florida Statutes (FS) (i.e., wetlands contiguous or connected to streams, rivers, lakes, etc.). In this regard, the wetland areas requiring DER permits will be a subset of those areas requiring COE and SWFWMD permits.

The permitting agencies will require mitigative measures to offset the impacts associated with wetland encroachment. The policy of the permitting agencies is to accept mitigation as a last resort, only after the project has been sufficiently demonstrated to be water dependent and/or have no reasonable alternatives to wetland encroachment. As previously stated, the impacts to wetlands have been minimized to the greatest extent possible by selective placement of the proposed alignment.

SWFWMD will review the surface water management plan for the planned improvements to SR 52. Issuance of a Surface Water Management Permit pursuant to Chapter 40D-4, Florida Administrative Code (FAC), is necessary before construction can begin. The SWFWMD review will consider impacts to fish and wildlife functions and values, as well as impacts to water quality and quantity. The current SWFWMD mitigation policy adheres to requirements of a Draft Mitigation Rule which is pending adoption. This policy requires compensatory measures to offset

9/17/87

the impacts of encroachment into wetlands. Measures accepted as compensation can include one or more of the following:

- 1--Mitigation (i.e., wetland creation);
- 2--Inclusion of upland areas, beyond any required buffer zones, to maintain upland/wetland habitat diversity;
- 3--Establishment of vegetated littoral zones in onsite open water-bodies;
- 4--Protection of exempt wetlands;
- 5--Restoration of wetlands that have been previously impacted;
- 6--Compensation on offsite lands; and
- 7--Other reasonable measures, such as providing unlike wetland habitat.

The SWFWMD standard ratios for mitigation are 2.5 acres of wetlands created for each acre of forested wetland impacted and 1.5 acres of wetland created for each acre of nonforested wetland impacted.

Typically, the created wetlands are required to be in-kind to the wetlands impacted.

DER has jurisdiction and requires permits for encroachment into wetlands defined as waters of the state. Their review criteria includes impacts to fish and wildlife functions as well as water quality. A new DER mitigation rule (Chapter 17-12-300, FAC) has been formally proposed by the Environmental Regulation Commission (ERC) and is in the process of being filed.

If formally adopted, the new rule may have a higher degree of flexibility in accepting various forms of mitigation (i.e., enhancement, conservation easements, etc.) than past DER policies. However, the standard DER mitigation requirements are still expected to be more rigidly defined than those of other agencies. The proposed DER standard mitigation is creation of wetlands contiguous to waters of the state, with a ratio of 2 acres of created wetlands for each acre of DER jurisdictional wetland removed. On a case-by-case basis, this ratio may be subject to variation.

9/17/87

COE has dredge and fill jurisdiction over all wetlands impacted by the proposed project. Their review criteria will consider impacts to both water quality and fish and wildlife habitat. Although the COE has no official mitigation regulation, mitigation may be required as a result of environmental reviews during interagency meetings. Participants in this review process include the COE, FWS, U.S. Environmental Protection Agency (EPA), National Marine Fisheries Service (NMFS), and the Regional Planning Council (RPC). Mitigation is a requirement of permit issuance if the alteration of wetlands is demonstrated to not be in the public interest. In general, the ratios and categories of mitigation required by SWFWMD are acceptable to COE and the other review agencies previously mentioned.

Although the exact acreages and limits of wetland involvement will not be defined until the detailed design stage, preliminary figures indicate that a maximum of 43.13 acres of wetlands will be unavoidably impacted at 79 locations. Of this total, 28.4 acres will involve encroachment into forested wetlands and 14.73 acres will involve encroachment into herbaceous wetlands.

Various compensatory measures were considered to offset the wetland impacts of the proposed project. Of the various possible categories, only wetland creation and upland preservation were determined to be feasible due to specific project conditions. Whereas the DER jurisdictional areas are a subset of the SWFWMD/COE jurisdictional wetlands, adherence to the SWFWMD mitigation requirements should satisfy all concerned agencies. In this regard, removal of 43.13 acres of wetlands may require the creation of 93.1 acres of wetlands; 71.0 acres of which are to be forested and 22.1 acres of which are to be herbaceous wetland systems. Preservation of unique high quality upland areas could possibly be utilized for compensation of a portion of the impacted isolated wetland systems in lieu of creation efforts.

Potential mitigation sites adjacent to SR 52 are abundant between Moon Lake Road and I-75. A small portion of the mitigation for small,

9/17/87

isolated, and disturbed wetlands will be accomplished by the creation of drainage swales within proposed right-of-way. The majority of the mitigation areas will be located outside the proposed right-of-way.

Where possible, the mitigation sites will be located adjacent to existing wetlands, especially those systems that will be impacted. The proximity of adjacent wetland sites will provide the newly created sites with a future seed source, thereby aiding their establishment. Mitigation sites will be selected in the design and permitting stage based upon the least ecological impact to surrounding habitats (e.g., the use of pastures or other altered areas adjacent to wetlands), and the availability and cost of suitable lands.

The general methodology for wetland mitigation will include excavation of upland areas adjacent to existing wetlands. The final elevation of the created wetlands will be approved by agency biologists experienced in wetland ecology and mitigation. The proposed elevations will be based on hydrological and biological indicators within the existing adjacent wetland systems in order to provide appropriate wetland hydroperiods. Specifics of the mitigation plans (i.e., species composition, size and density of planting material, mulching, monitoring, etc.) will be determined at the permitting stage.

Although the wetland systems proposed to be impacted are not unique or regionally significant, virtually all (73 of 79) are considered high quality wetland systems which provide valuable benefits to fish and wildlife, including endangered species, as well as functioning in flood control, sediment and pollution control, and ground water recharge.

The remaining six wetlands, as discussed previously, are low quality systems created artificially through construction activities. Therefore, no mitigation is proposed for these areas.

9/17/87

Finally, it should be understood that the wetland permitting agencies previously mentioned, have not conducted site-specific field assessments of the wetlands involved along SR 52. Therefore, the acreages of wetland involvement and mitigation may change slightly once the permit process is initiated. However, every effort has been made during the EA process to provide as close an approximation of wetlands involvement and mitigation, as possible.

#### 4.9 RECREATION/PARKLAND RESOURCES

The proposed improvement will not require the use of any park, wildlife refuge, or recreational land as defined in Section 4(f) of the 1966 U.S. Department of Transportation Act, as amended. Therefore, FHWA has determined that Section 4(f) does not apply.

#### 4.10 OUTSTANDING FLORIDA WATERS

No Outstanding Florida Waters, as defined by Chapter 17-3.041, Florida Administrative Code, will be involved with the proposed alternative.

#### 4.11 WATER QUALITY IMPACTS

Final drainage design will be in compliance with Chapter 17-25, FAC, The Stormwater Rule. Preliminary studies indicate that stormwater treatment will consist predominantly of detention and/or retention with filtration provided in the ditches and swales associated with SR 52. FDOT has initiated preliminary stormwater coordination with the Southwest District Office of FDER. Coordination has also been initiated with the Southwest Florida Water Management District, which has been delegated by FDER to review the proposed method of stormwater treatment for this project. Coordination with both agencies will continue throughout the project's development.

Because of the state-of-the-art in highway stormwater research, it is not possible at this time to determine the impacts of this project's discharge on local freshwater water bodies or the Gulf of Mexico. However, Best Management Practices will be used during the construction phase for erosion control and water quality considerations. Any additional stormwater treatment measures over and above Best Management Practices found necessary to comply with Chapter 17-25, Federal Administration Code, will be funded by the state.

No adverse impacts on either surficial or deep ground water aquifers are expected. The majority of transportation-related pollutants never leave the soil of the roadside swales.

3/11/87

#### 4.12 FLOODPLAIN INVOLVEMENT

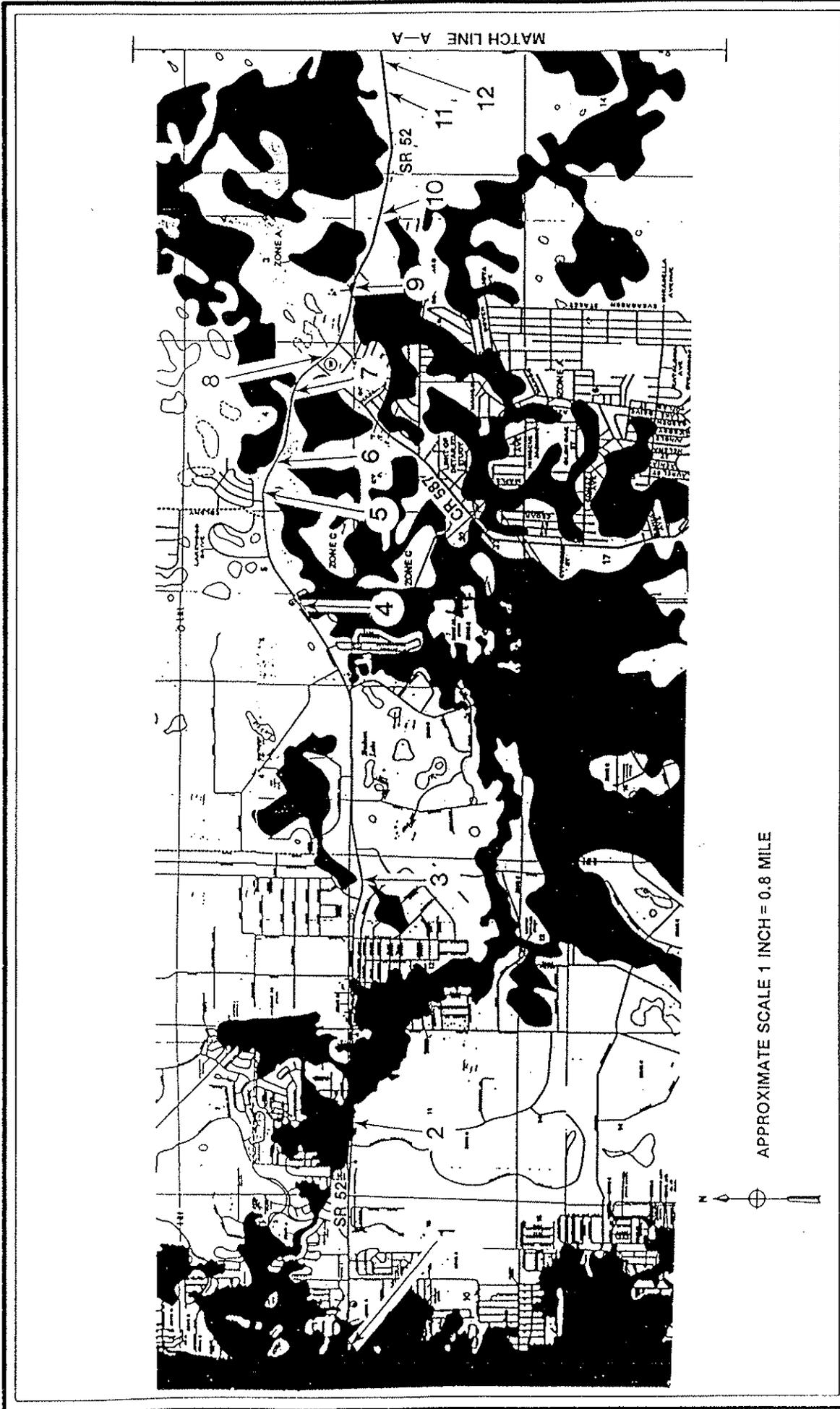
In compliance with Executive Order 11988, "Floodplain Management," the proposed action has been evaluated to determine the extent of potential impacts associated with base floodplain encroachment.

Flood Insurance Rate Maps (Community 120230, Panels 0180C, 0185C, 0225C, 0250C, and 0275C, effective March 15, 1984), United States Department of Interior Geologic Survey (USGS) Quadrangle Maps, Florida Department of Transportation (FDOT) Maintenance Records, aerial photographs, and field reviews were utilized to identify and evaluate base floodplain encroachments.

In accordance with Federal-Aid Highway Program Manual Volume 6, Chapter 7, Section 3, Subsection 2 (FHPM 6-7-3-2), a location hydraulic study was done. A summary of this study is included in the following discussion.

According to the preliminary hydraulic study, the existing drainage structures have been in place and functioning satisfactorily in all but one location since the early sixties. Overtopping of the roadway has been reported at the intersection of SR 52 and Zimmerman Road. The area surrounding this intersection is not designated as base floodplain by flood insurance maps and is not associated with any wetlands. Drainage problems in this area will be studied in detail during final design.

It was determined that the proposed project will encroach upon the base floodplain at 46 locations including the gulf coastal storm surge floodplain, Bear Creek, Buckhorn Creek, Pithlachascotee River, Cypress Creek, and portions of 41 wetlands that lie partially or wholly within the proposed right-of-way. Twenty of these wetland sites are associated with the large contiguous floodplains of the above-mentioned creeks and river and two tributaries (one of the Pithlachascotee River and one of the Cypress Creek). The remaining 21 sites are isolated depressional wetlands. [See Figures 4.12-1 for a floodplain site location map and



SR 52 FROM SR 55  
(U.S. 19) TO SR 93 (I-75)  
IN PASCO COUNTY

FIGURE 4.12-1  
SHEET A  
FLOODPLAIN SITE LOCATION MAP

SOURCE: RS&H, 1986

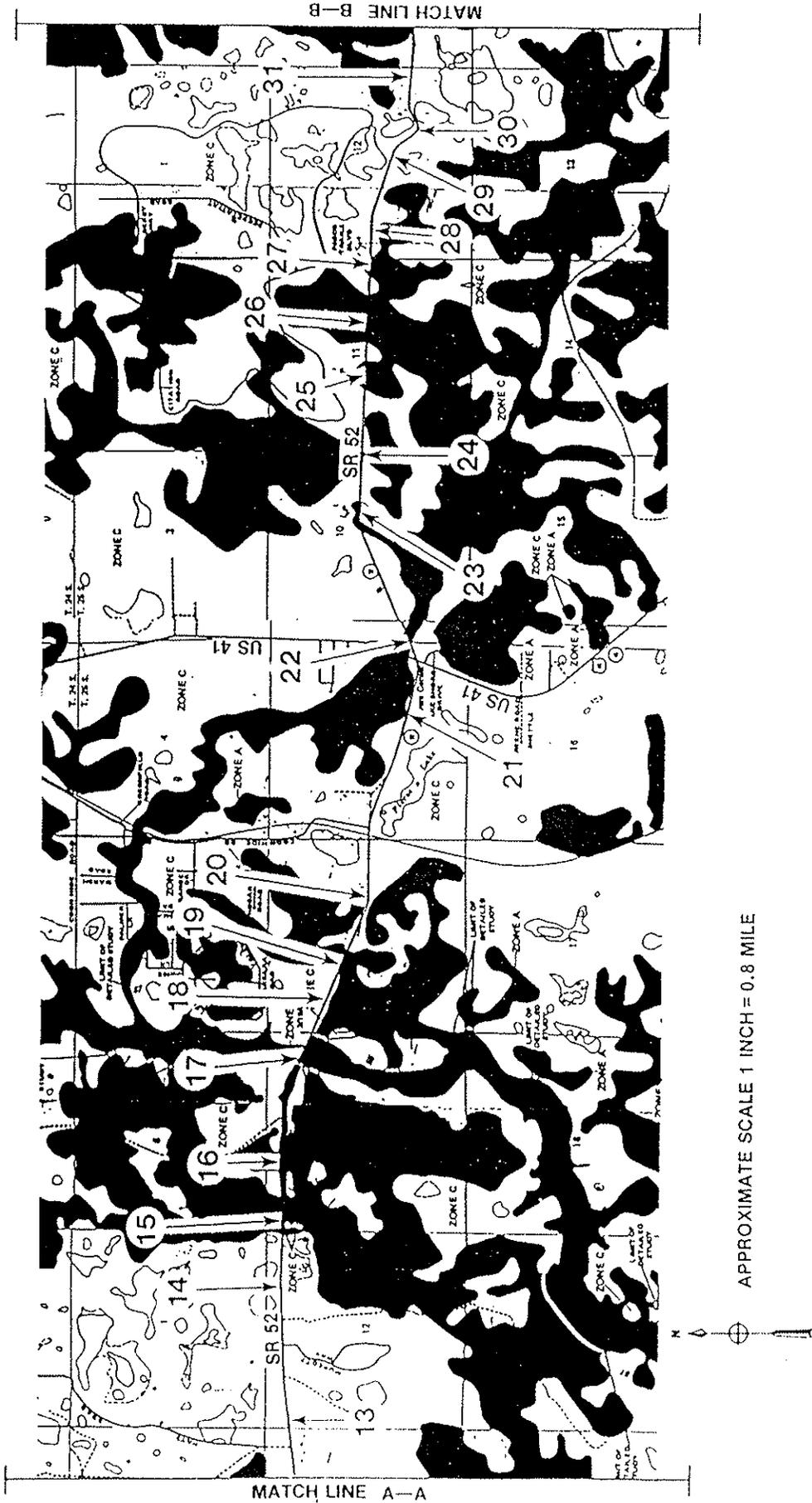
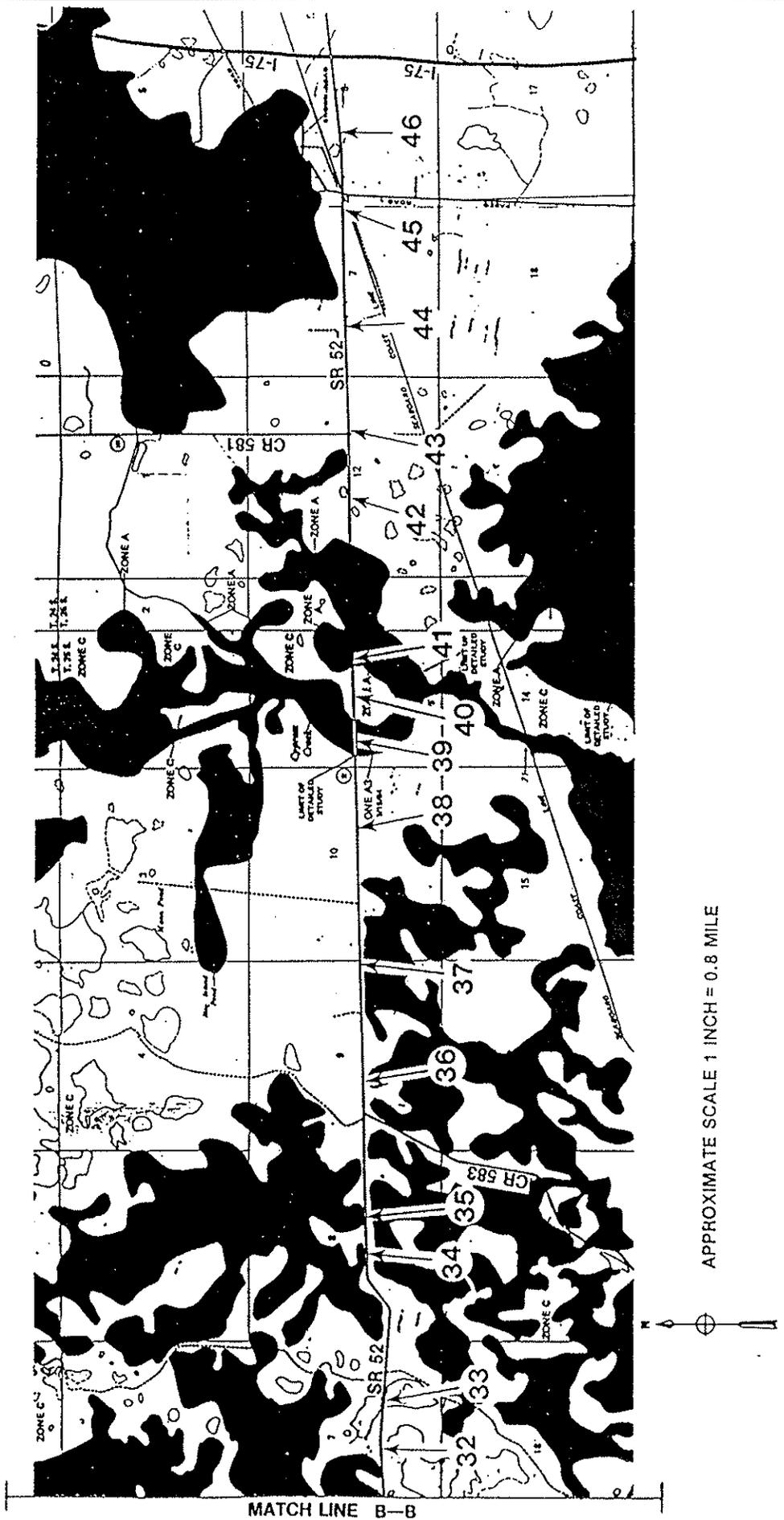


FIGURE 4.12-1  
 SHEET B  
 FLOODPLAIN SITE LOCATION MAP

SOURCE: RS&H, 1986

SR 52 FROM SR 55  
 (U.S. 19) TO SR 93 (I-75)  
 IN PASCO COUNTY



SR 52 FROM SR 55  
(U.S. 19) TO SR 93 (I-75)  
IN PASCO COUNTY

FIGURE 4.12-1  
SHEET C  
FLOODPLAIN SITE LOCATION MAP

SOURCE: RSAH, 1985

Table 4.8-1 for a site-specific summary of floodplain involvement (i.e., the area within the proposed right-of-way)].

The amount of potential base floodplain encroachment was identified by calculating the amount of additional right-of-way being acquired within these areas. In this manner it was determined that the proposed (23.3-mile project will result in a maximum potential encroachment on approximately 55.7 acres of base floodplain. There are no longitudinal encroachments or involvement with any designated floodways.

As can be seen in Table 4.8-1, floodplain areas along SR 52 generally correspond to wetland areas with the exception of the floodplains associated with the creeks and rivers which are usually larger than the actual wetlands. For this reason, measures presented in Section 4.8 to minimize wetland encroachment will also serve to minimize floodplain involvement. These measures include the placement of the new roadway width to the north or south of or centered on the existing pavement and selective clearing and grubbing wherever possible in a manner that minimizes floodplain/wetland impacts.

The first 375 feet of the project (Site F1) occurs within the eastern edge of the gulf coastal storm surge floodplain. Encroachment at Site F1 involves approximately 0.23 acre. The alignment of the existing SR 52 and planned road improvements is perpendicular to the area occupied by this storm surge floodplain. Therefore, while longitudinal shifts cannot be made to avoid the floodplain, this alignment will not block receding flood waters. Two crossdrains (18 and 24 inches in diameter) are currently used to minimize flooding. It is anticipated that drainage connection will be provided under the new facility as well. Considering the peripheral nature and minimal amount of encroachment, the road alignment, and lack of wetland vegetation, this encroachment is not considered significant.

The floodplain at Site F2, which is part of the large contiguous floodplain of Bear Creek, was previously bisected by SR 52. A 50-foot bridge and two 2- by 2-foot culverts are currently used to convey water beneath SR 52. According to FDOT maintenance records and field reviews, these structures have been functioning adequately; they will, however, be thoroughly reevaluated during final drainage design. Significant increases in backwater at this site do have the potential to impact the residential development to the north of Bear Creek, but there is presently no plan to construct a more restrictive structure. Therefore, there should be no significant risk to this development as a result of increased backwater flooding. This floodplain site will experience a maximum involvement of 1.73 acres of base floodplain. However, only 0.27 acre of wetlands will be involved with the proposed southern alignment. Realignment of the new lanes would not significantly reduce this floodplain encroachment since similar base floodplain encroachment would occur on either side of the existing roadway. However, the alignment to the north would significantly increase wetland involvement. Due to the small amount of encroachment relative to the floodplain in the area, this encroachment is not considered significant.

Encroachment at Site F6, Buckhorn Creek, involves approximately 0.04 acre. The floodplain on the south side of the existing roadway is considerably smaller than that on the north. The proposed placement of the new lanes to the south of the existing roadway would significantly minimize the base floodplain encroachment at this site. A triple 10- by 5-foot box culvert is used to connect the flow of the previously bisected creek. According to FDOT maintenance records and field reviews, the existing box culvert is functioning adequately. There are no plans to construct a more restrictive structure at this location. Therefore, there will be no significant risk of backwater flooding. Considering the small area of encroachment, this encroachment is not considered significant.

Site F-17, Pithlachascotee River, will experience a maximum encroachment of 1.54 acres of base floodplain. The floodplain on the north side of

the existing roadway is considerably smaller than that on the south. The proposed placement of the new lanes to the north of the existing roadway would significantly minimize the base floodplain encroachment at this site. A triple 10- by 7-foot box culvert is used to connect the flow of the previously bisected creek. As with Buckhorn Creek, the existing structure is adequate according to FDOT maintenance records and field reviews. Since there are no plans to construct a more restrictive structure, there will be no significant risk of backwater flooding. Considering the small area of encroachment relative to the floodplain in the area, this encroachment is not considered significant.

Site F-39, Cypress Creek, will experience a maximum base floodplain encroachment of 2.05 acres. Similar amounts of base floodplain occur on either side of the existing roadway. As with Site F-2, Bear Creek, realignment of the proposed lanes would not reduce the floodplain involvement, but the other alignments would increase the total wetland involvement. Therefore, the southern alignment was selected to minimize the wetland/floodplain encroachment. A quadrangular 12- by 10-foot box culvert is used to connect the flow of the previously bisected creek. The existing structure is functioning adequately according to FDOT maintenance records and field reviews, and there are no plans to construct a more restrictive structure. In addition, since this area is surrounded by cattle pasture, there will be no significant risk from backwater flooding. Considering the small area of encroachment relative to the overall floodplain size and the adequacy of the existing structure, this encroachment is not considered significant.

In addition to the floodplain associated with the actual river and creeks mentioned above, there are 20 floodplain sites associated with the large contiguous wetlands of these waterways. These include floodplain sites associated with Bear Creek (F4, F5, F9, and F10), Buckhorn Creek (F7), Pithlachascotee River (F16, F19, and F20), an unnamed tributary of the Pithlachascotee River (F21, F22, F23, F25, F26, F27, F34, F35, F36, and F37), and an unnamed tributary of Cypress Creek

(F41 and F43). Fifteen of these floodplain sites were previously bisected by SR 52 (F9, F10, F16, F19, F21, F22, F23, F25, F26, F27, F34, F35, F37, F41, and F43). Of these 15 sites, all but F21 and F16 currently have drainage structures to convey floodwaters beneath SR 52. According to FDOT maintenance records and field reviews, the existing structures are adequate. The adequacy of the existing structures, as well as the need for additional structures, at Site F21 and F16 will be thoroughly evaluated during final drainage design. The large floodplain encroachments at Sites F41, F16, F26, F34, and F37 (9.6, 3.9, 3.5, 3.0, and 2.4 acres, respectively) are unavoidable because the existing and proposed roadway runs perpendicular to the floodplain associated with these sites and similar amounts of floodplain occur on either side of the roadway. Therefore, shifts in alignment would not decrease the total amount of floodplain encroachment.

Floodplains associated with Sites F4, F5, F7, F20, and F36 have been previously encroached upon by SR 52. Previous and proposed encroachments at these sites occur on the edges of these large contiguous floodplains. Previous encroachment was such that the existing drainage structures beneath SR 52 have not been necessary. The need for crossdrains will be thoroughly evaluated during final drainage design. Additional encroachments of these sites range from 0.19 to 0.92 acre. Although selection of a northern alignment could reduce the floodplain involvement at Sites F4, F5, and F7 by a total of 1.42 acres, such a shift in alignment would increase right-of-way costs by a minimum of \$950,000. Due to the relatively small area of floodplain that would be saved and the drastic cost impacts, selection of the north alignment to reduce involvement to these floodplains was not considered prudent. The proposed alignment minimizes the encroachment at Sites F20 and F36. Shifts in alignment would increase floodplain encroachment.

The remaining 21 floodplain sites (F3, F8, F11, F12, F13, F14, F15, F18, F24, F28, F29, F30, F31, F32, F33, F38, F40, F42, F44, F45, and F46) are associated with isolated depressional wetlands. For practical purposes,

3/11/87

the base floodplain involvement at these particular sites is the same as the wetland involvements, approximately 13.0 acres. Five of these sites (F8, F28, F31, F32, and F46) are positioned within the right-of-way such that encroachment can probably be avoided by selective clearing and grubbing of the wetlands. Currently, none of these five sites have drainage structures beneath SR 52. The need for structures will be thoroughly evaluated during final drainage design.

Floodplain Sites F14, F30, F33, and F45 have been previously bisected or encroached upon by the existing SR 52 roadway and have existing drainage structures (either a 30- or 36-inch concrete pipe) beneath SR 52. FDOT maintenance records do not indicate any functional problems at these structures. The adequacy of these structures will be evaluated during final drainage design. The floodplain involvement, which is only 0.01 acre at Site F45 and 1.49 to 2.3 acres at the remaining sites, was specifically minimized by the proposed alignment. Therefore, shifts in the alignment to avoid these floodplains sites would not reduce floodplain involvement. The total base floodplain involvement at these sites will be further minimized by selective clearing and grubbing of the wetlands.

Floodplain Sites F3, F11, F12, F13, F29, and F42 have also been previously encroached upon or bisected by SR 52 but do not have existing crossdrains beneath the roadway. Because of additional involvement at these six sites, ranging from 0.24 to 0.89 acre, the need for structures will be reevaluated during final drainage design. The total floodplain involvement was minimized by selective placement of the proposed alignment and will be further minimized by selective clearing and grubbing of the wetlands involved at these sites.

Floodplain Sites F15, F18, F24, F40, F44 have not been previously disturbed by the existing SR 52 roadway. The floodplain involvement at these sites, which was minimized by selective placement of the proposed alignment, ranges from 0.17 to 0.53 acre. The total floodplain

involvement at these sites will be further minimized by selective clearing and grubbing of the wetlands. The need for crossdrains beneath SR 52 will be evaluated during final drainage design.

The proposed improvement to this 20.3-mile section of SR 52 will result in a maximum base floodplain encroachment of approximately 55.1 acres. Base floodplain encroachment was minimized by utilizing the existing corridor since this area has already been subject to disturbances. The combined alignment, which utilizes the selective placement of the new lanes relative to the existing roadway at major floodplain sites, has significantly minimized encroachment. Base floodplain encroachments and impacts to natural and beneficial floodplain values will further be minimized by utilizing selective clearing and grubbing during construction. Also, the proposed creation of wetlands which is described in Section 4.8.5, Mitigation for Wetland Losses, will help mitigate floodplain loss. Therefore, the proposed project will not have a significant impact on natural floodplain values. In addition, Pasco County is a participant in the National Flood Insurance Program. The County's Flood Drainage Prevention Ordinance forms a basis for regulating the utilization of base floodplain areas in order to prevent incompatible floodplain development.

State Road 52 is a major route for emergency vehicles and is designated as an important hurricane evacuation route in the Tampa Bay Region Hurricane Evacuation Plan (Tampa Bay Regional Planning Council, 1984). This publication identifies the capacity of the existing SR 52 as being a limiting factor in evacuation clearance times, especially under short-response scenarios. The proposed upgrading of the roadway will significantly increase the efficiency with which an evacuation can be accomplished.

Based on this evaluation and proposed wetland mitigation, it has been concluded that the proposed action does not constitute a significant base floodplain encroachment. The proposed wetland mitigation will help

restore floodplain volumes lost to roadway fills. The design standards specified in FHPM 6-7-3-2 shall be complied with during the final design and construction of the facility.

#### 4.13 COASTAL ZONES CONSISTENCY

The Office of Planning and Budget, Office of the Governor has determined that this project is consistent with the Florida Coastal Zone Management Plan. (See letter in the Appendix.)

#### 4.14 RELOCATION IMPACTS

To minimize the unavoidable effects of right-of-way acquisition and displacement of people, FDOT will carry out a right-of-way and relocation program in accordance with Chapter 339.09, FS, and the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 (Public Law 91-646).

FDOT provides advance notification of impending right-of-way acquisition. Before acquiring right-of-way, all properties are appraised on the basis of comparable sales and land use values in the area. Owners of property to be acquired will be offered and paid fair market value for their property rights.

No person lawfully occupying real property will be required to move without at least 90 days written notice of the intended vacation date, and no occupant of a residential property will be required to move until decent, safe, and sanitary replacement housing is made available. "Made available" means that the affected person has either by himself obtained and has the right of possession of replacement housing, or that FDOT has offered the person to be relocated decent, safe, and sanitary housing that is within his financial means and available for immediate occupancy.

At least one relocation specialist is assigned to each highway project to carry out the relocation assistance and payments program. A

relocation specialist will contact each person and business to be relocated to determine individual needs and desires and to provide information, answer questions, and give assistance in finding replacement property. Relocation services and payments are provided without regard to race, color, religion, sex, or national origin.

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

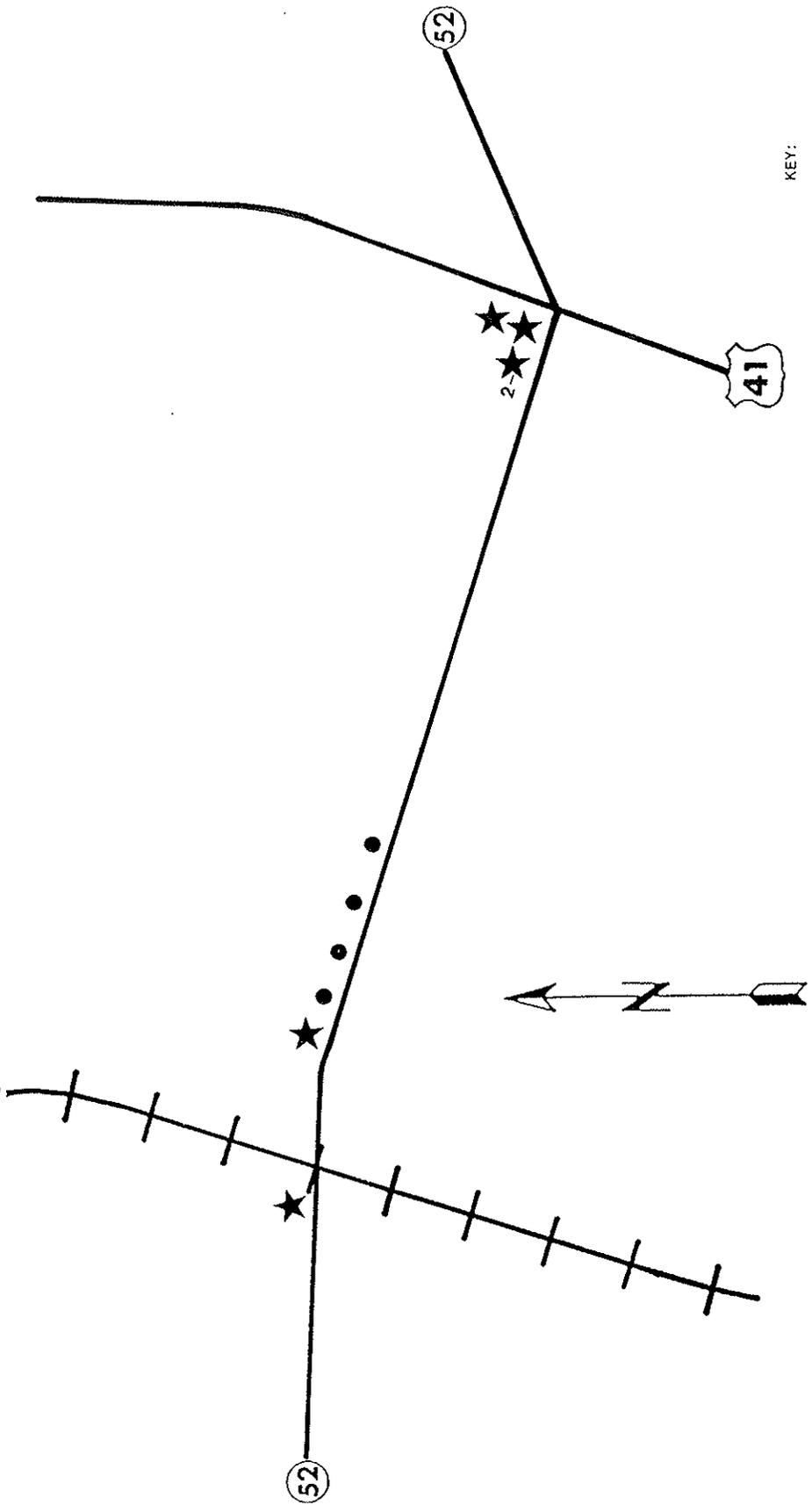
Financial assistance is available to the eligible relocatee to:

- A. Compensate the relocatee for the costs of moving from homes, businesses, and farm operations acquired for a highway project;
- B. Make up the difference, if any, between the amount paid for the acquired dwelling and the cost of an available dwelling on the private market;
- C. Provide reimbursement of expenses such as legal fees and closing costs incurred in buying a replacement dwelling or in selling the acquired property to FDOT; and
- D. Make payment for any increased interest cost resulting from having to get another mortgage at a higher interest rate.

Replacement housing payments, increased interest payments, and closing costs are limited to \$15,000 combined total per relocation.

In the Conceptual Stage Relocation Plan (FDOT, 1986b), it is estimated that four owner-occupied residences, four retail businesses, and two service businesses will be displaced by the project. Figure 4.14-1 illustrates the location of each residence and business to be relocated. Three of the businesses are owner occupied, two are business tenants,

SEABOARD COASTLINE RAILROAD



KEY:  
★ BUSINESS  
● RESIDENCES

0 880  
scale feet  
1" = 880'

FIGURE 4.14-1  
LOCATION OF RESIDENCES AND BUSINESSES TO BE RELOCATED

SR 52 FROM SR 55  
(U.S. 19) TO SR 93 (I-75)  
IN PASCO COUNTY

SOURCE: FDOT, 1986; RS&H, 1986

and one is business rental of real estate. There are no nonprofit organizations, farms, or community or recreational facilities to be displaced. Estimated relocation costs for displaced signs, residences, and businesses are approximately \$284,000 (FDOT, 1986b). Estimated costs for additional right-of-way that does not include relocations are approximately \$16,971,300 (FDOT, 1986a) and include acquisition of portions of parking lots and driveways.

The Conceptual Stage Relocation Plan divided the proposed project into two neighborhood study areas. Study Area I runs from U.S. 19 to Shadow Ridge Boulevard, and Study Area II runs from Shadow Ridge Boulevard to I-75. Analysis of Study Area I resulted in no displacement of residences or businesses; however, relocation of some signs will be necessary. In Study Area II the total number of residences and businesses to be relocated are four and six, respectively; all are located within the Gowers Corner Community (U.S. 41 and SR 52).

A total of eight persons residing in the four residential units will be displaced. None of these persons are of school age, handicapped, disabled, or receiving any social services. The average annual income of the displaced families is \$9,614.00. The average age of the structures in which these persons reside is 20.5 years.

It has been determined that, within the SR 52 corridor, there is sufficient existing residential and commercial space for sale or lease, and sufficient vacant land available for development, to accommodate the small number of residential and business displacements. In the community of Gowers Corner, vacant land is available for development if the displacees choose to remain in the same market area.

#### 4.15 COMMUNITY IMPACTS

West Pasco County is one of the fastest growing areas in Florida. The total population of the county in 1985 was 223,272 [Bureau of Economic and Business Research (BEBR), 1985], an increase of 17 percent over the

3/11/87

1980 U.S. Bureau of the Census population statistics (FDOT, 1986b). Present growth trends indicate continued growth in the west and east portion of the county with the interior remaining largely undeveloped. Populations projections for 1990 and 2000 are estimated at 284,600 and 362,600, a 27.5- and 62.4-percent increase over 1985 population statistics, respectively.

Pasco County relies on trade and service industries, which provide 67.0 percent of the county's employment opportunities (BEER, 1985). Construction industry, agriculture, and agriculture manufacturing are also important sources of employment. Pasco County is being viewed by many industrial businesses as a possible area for relocation because of progressive northward movement of the large commercial and industrial areas in Hillsborough and Pinellas Counties. Many of the new industries are seeking to avoid the traffic congestion of the Bay area, and land is more available for sale or lease in Pasco County. In addition, the Pasco County Chamber of Commerce has undertaken intense marketing activities to attract new industries to the county. The transportation link provided by SR 52 is an important aspect of this development.

This project has been developed in accordance with the Civil Rights Act of 1964, as amended by the Civil Rights Act of 1968. The proposed project will not require relocation of school-age children, nonprofit organizations, or minorities. In addition, there will be no displacement of community facilities and services or major commercial areas. Some commercial areas, especially between U.S. 19 and Moon Lake Road will lose portions of the parking areas associated with the business, the result of which could cause possible loss of business. However, the expansion of SR 52 will result in improving traffic flow and a reduction of travel time. This should increase the visibility of many businesses and result in improved sales and services.

The proposed improvements can be implemented with minimal impacts on the local communities (Gowers Corner, Bayonet Point, Pasco) and are not

expected to disrupt present neighborhood cohesion and uniformity. There is sufficient vacant land for sale or lease in the Gowers Corner area for the six businesses and four residences that are being relocated (mentioned in Section 4.14, Relocation Impacts). Gowers Corner Community is a small compact community; if these six businesses decide not to relocate or open new businesses in the area, residents would be inconvenienced and the manner in which they have historically conducted some of their business would be changed. Residents would have to travel farther and deal with strangers for certain goods and services.

#### 4.16 HAZARDOUS WASTES

The project was evaluated for potential hazardous waste involvement in the areas where additional right-of-way will be taken. No large, regionally important sites were found. The following text addresses those sites where additional right-of-way will encroach upon underground fuel tanks or other areas of known or possible contamination. This is a synopsis of a detailed report available at the Bartow office of FDOT.

Site 1 (map, p. 4-86) is an auto air conditioning shop in the southeast quadrant of the SR 52/US 19 intersection. It is a former gas station and still sells gasoline and diesel fuel. The proposed right-of-way will encroach upon the pump island and apparently the diesel tank as well. Because there is no monitoring system installed and the station has been operating since about 1974, groundwater samples should be taken well in advance of construction contract letting.

Site 2 is a convenience store/gas station in the southeast quadrant of the SR 52/CR 1 intersection. The proposed right-of-way will encroach upon all three underground tanks. Monitoring wells are in place. Their records should be checked prior to right-of-way appraisal.

Site 3 is two sets of mini-warehouses, immediately east of Site 2. The proposed right-of-way will encroach upon both buildings, including an area of contaminated soil in front of one of the bays. This soil will have to be removed or treated on site. All the bays in this complex should be checked for contamination and for containers of hazardous substances during the right-of-way phase.

Site 4 is an auto electric shop roughly 0.4 mile east of CR 1. It operated as a gas station from 1967-1972 (approx.). The proposed right-of-way will encroach upon the old pump island and possibly all three underground tanks. The likelihood of significant contamination is relatively slight because of the short duration of operation as a gas station. However, groundwater samples should be taken well in advance of construction contract letting.

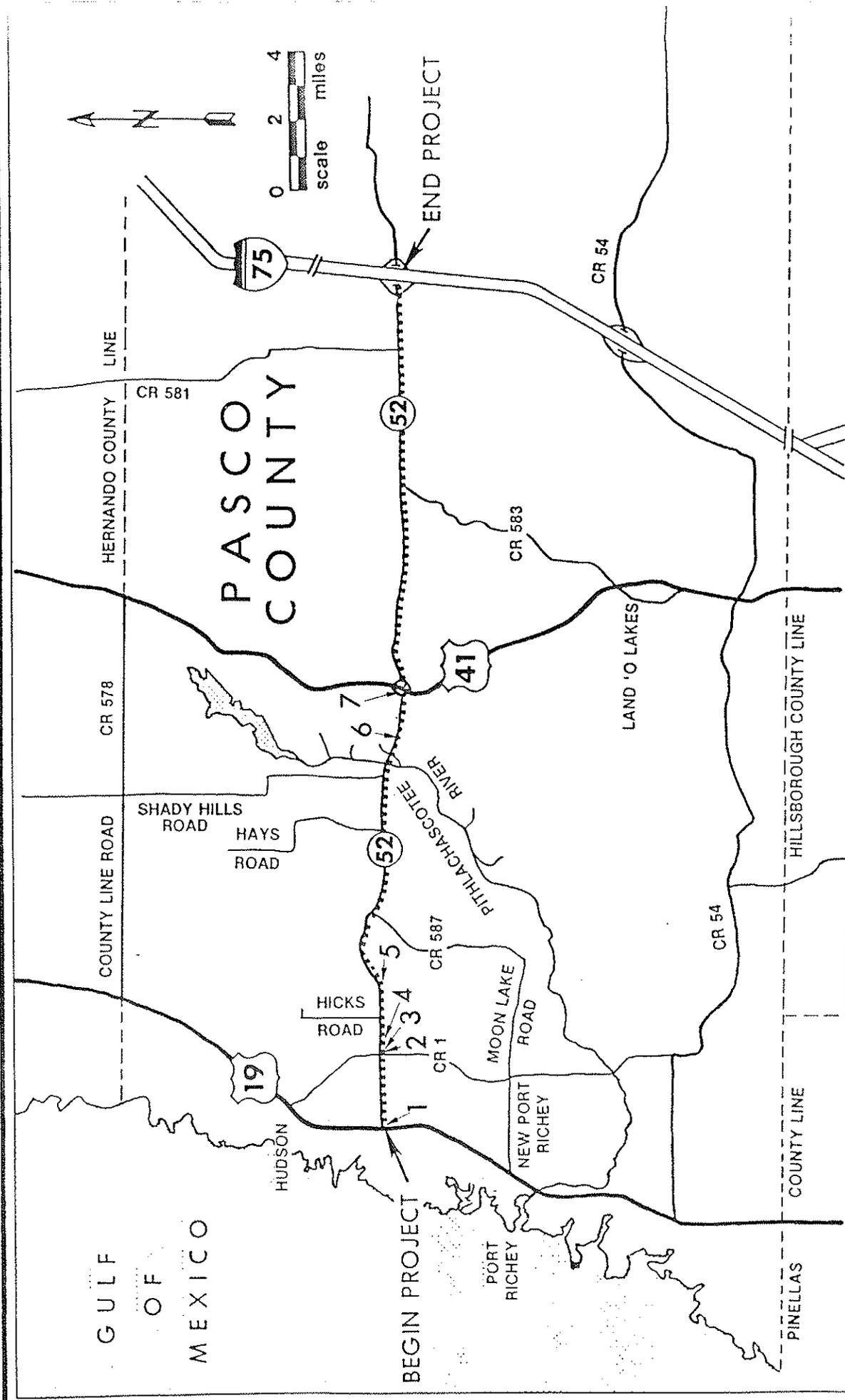


Figure 4.16-1  
 POTENTIAL HAZARDOUS WASTE SITES

SR 52 FROM SR 55  
 (U.S. 19) TO SR 93 (I-75)  
 IN PASCO COUNTY

Site 5 is a convenience store/gas station in the southeast quadrant of the SR 52/Bear Creek Drive intersection. The proposed right-of-way will encroach upon the pump island and apparently two of the underground tanks. Monitoring wells are in place. Their records should be checked prior to right-of-way appraisal.

Site 6 consists of a restaurant and an auto salvage yard, located roughly 0.8 mile west of US 41. The restaurant site operated as a gas station for about 20 years until it and the adjoining salvage yard were purchased by their present owner six years ago. The proposed right-of-way will take the front of the salvage yard and almost all of the restaurant site, encompassing two underground fuel tanks as well as areas of contaminated soil behind the restaurant and in front of the salvage yard. Groundwater samples should be taken well in advance of construction. The contaminated soils will have to be removed or treated on site.

Site 7 is a convenience store/gas station in the northwest quadrant of the SR 52/US 41 intersection. The proposed right-of-way will take the entire site. Monitoring wells are in place and their records should be checked prior to right-of-way appraisal.

Pasco County and the Soil Conservation Service (SCS) were consulted concerning hazardous waste. The county has had no report of contaminated wells or other contamination in the project corridor. The SCS indicated only Sites 6 and 7 are located where soils may be highly corrosive to steel tanks.

All of these sites, as well as any additional sites which become established or are discovered in the interim, will be assessed at each of the reevaluation phases. Prior to right-of-way acquisition, appropriate action will be taken to initiate resolution of contamination problems.

#### 4.17 CONSTRUCTION IMPACTS

##### 4.17.1 Water Quality

Potential effects of the construction of bridge and culvert crossings include turbidity and sedimentation. These impacts will be minimized by strict adherence to Section 104 of the FDOT Standard Specifications for Road and Bridge Construction. This section requires such measures as revegetation of denuded areas as soon as possible and the use of floating and staked silt barriers as necessary.

##### 4.17.2 Noise

During construction, there is a potential for noise impacts significantly greater than those resulting from normal traffic operations. Construction noise will be minimized by adherence to the controls listed in the 1986 edition of FDOT's Standard Specifications. In addition, all noise-sensitive sites and the following special provisions will be included in the construction contract.

1. The contractor will limit construction activities requiring the use of heavy equipment in the vicinity of residences to the time period between the hours of 7:00 AM and 6:00 PM, unless written permission is obtained from the project engineer.
2. The contractor shall not work on Sundays or legal holidays in the vicinity of noise-sensitive sites except to protect the public health and/or safety or by written permission from the project engineer.
3. In the event the above restrictions are not adequate to keep construction noise to an acceptable level as determined by the project engineer, he may direct the use of other controls and abatement measures.

##### 4.17.3 Air

Slight increases in the pollutant level of particulates may occur during construction. However, this effect will be minimized by FDOT's dust

control measures and through adherence to open burning regulations prescribed by FDER.

#### 4.17.4 Utilities

A number of utilities are associated with the SR 52 corridor, with the greatest number located in the urbanized western end of the project. The Withlacoochee River Electric Company (WREC) has overhead electric lines running the entire length of the project. Poles for this utility vary from the north side of the road to the south side at a number of locations. Florida Power has an overhead line that runs from U.S. 19 to east of Plaza Drive. Storer Cable Television has a cable on the WREC poles that follows a south-side alignment for most of the length from U.S. 19 to 0.5 mile east of Moon Lake Road, CR 587. The Pasco County Water Department has a water line that is located between 38 and 42 feet south of the centerline of SR 52 from U.S. 19 to Moon Lake Road. General Telephone Company has an overhead line running from U.S. 19 to 0.3 mile west of Hicks Road on the north side of SR 52. The telephone company also has a number of buried cables within the right-of-way. SR 52 from U.S. 19 to Moon Lake Road has between 1 and 11 buried cables spread within the right-of-way north of the existing pavement. From approximately 0.4 mile east of U.S. 19 to Moon Lake Road, there are buried cables located south of the road. All of the utilities are located within the road right-of-way with the exception of five WREC poles located just outside the south right-of-way line in the vicinity of CR 1. Utility relocation within the existing right-of-way is the burden of the utility owner, while those outside the right-of-way would require relocation at the Department's expense. Early and close coordination with the utility companies prior to construction will provide sufficient lead time for relocation of facilities without incurring adverse operational impacts.

#### 4.17.5 Maintenance of Traffic During Construction

Traffic flow will be maintained on the existing facility during construction. The contractor will be responsible for the maintenance of

traffic, including the erection and control of safety devices for the safe and expeditious movement of traffic during construction operations. Access to all businesses and residences will be maintained.

## 5.0 COMMENTS AND COORDINATION

### 5.1 GOVERNMENTAL AGENCY RESPONSES

Preliminary comments concerning this project were solicited from numerous governmental agencies through the State Planning and Development Clearinghouse. The Clearinghouse has indicated that the proposed improvement will be in accord with state plans, projects, programs, and objectives when consideration is given to the comments expressed by the reviewing agencies. Those agencies which responded to this early notification were:

- Tampa Bay Regional Planning Council;
- FDER, Intergovernmental Programs Review Section;
- Florida Game and Fresh Water Fish Commission;
- Florida Department of Natural Resources;
- Florida Department of Community Affairs;
- Florida Department of State, Division of Archives, History and Records Management;
- United States Department of Agriculture, Soil Conservation Service;
- EPA; and
- United States Coast Guard.

The Department of Community Affairs and the Department of Natural Resources had no substantive comments and each found the project to be consistent with the goals and objectives of their agency. The responses from all other agencies are summarized below. Copies of the response letters are included in the appendix.

1. Comment: The Tampa Bay Regional Planning Council found the proposed project to be consistent with council policy to encourage the maintenance of a level of service (LOS) C daily capacity. They recommended that the Department consider geometric and/or signalization improvements to SR 52 intersections with Little Road, CR 587,

10/10/86

U.S. 41 (SR 45), CR 583, and CR 581. It was further recommended that best management practices for water pollution abatement be employed and that all culverts and bridge structures be designed to accommodate a 100-year event.

Disposition: The SR 52/Little Road intersection upgrading is proposed by the Department, and a separate study is underway for U.S. 41 (SR 45). Recommended improvements for county implementation of the SR 52/CR 587 intersection were included in the SR 52 Traffic Report, which was prepared in conjunction with this project. Improvements will be developed for the intersections of CR 583 and CR 581 when traffic increases warrant.

Water quality impacts will be minimized by strict adherence to Section 104 of FDOT Standard Specifications for Road and Bridge Construction. Bridges and culverts will be designed to meet federal and state standards for a state primary facility. This requires capacity for a 50-year event for bridges and a 25-year event for culverts.

2. Comment: FDER determined that the portion of the project lying between U.S. 19 and CR 587 was consistent with their authorities in the Florida Coastal Zone Management Program. However, they did not feel that enough information was available at that time to determine the consistency of the portion of the project from CR 587 to I-75. They recommended that an Environmental Impact Statement (EIS) be prepared to evaluate impacts on wetlands, floodplains, air quality, noise, water quality, as well as the need for the project. They suggested that limiting the scope of the project to SR 52 west of CR 587 be considered.

Disposition: The Federal Highway Administration has preliminarily determined that an EA will adequately serve to evaluate and

document the anticipated environmental impacts of the proposed improvements to SR 52. If, at a later date, they determine that an EIS would be more appropriate, the EA will be converted to an EIS and circulated as such.

It has been determined that limiting the ultimate improvement of SR 52 to the portion between U.S. 19 and CR 587 would severely compromise the roadway function as a major east-west artery. The minimization of encroachment into wetlands and floodplains was a major consideration in development of the proposed "Build" alternative. After further review, FDER preliminarily determined that the entire project from U.S. 19 to I-75 is consistent with their authorities in the Coastal Zone Management Program.

3. Comment: The Florida Game and Fresh Water Fish Commission recommended a thorough inventory and documentation of the natural habitats and wildlife species occurring within the project corridor, with particular attention to species listed by the Commission as endangered, threatened, or of special concern. They further recommended that involvement in wetlands and other wildlife habitat be minimized and unavoidable adverse impacts be appropriately mitigated.

Disposition: Section 4.2 addresses anticipated impacts to wildlife species and other habitat and Section 4.3 addresses endangered species. The minimization of encroachment in wetlands and other wildlife habitat was a major consideration in the development of the proposed "Build" alternative. Significant unavoidable adverse impacts will be mitigated.

4. Comment: The Florida Department of State, Division of Archives, History and Records Management responded that a review of the Florida Master Site File indicated that there are no recorded archaeological or historic sites within the project area. They continued, however, stating that the area had never been subjected to a systematic

professional survey and determined that there was a reasonable probability that the proposed project could impact sites potentially eligible for listing on the National Register of Historic Places or otherwise of national, state, or local significance. It was recommended that a comprehensive survey be performed before initiation of clearing or construction activities.

Disposition: A comprehensive professional archaeological and historic survey was conducted in coordination with the State Historic Preservation Officer. No archaeological or historic sites or properties were identified. .

5. Comment: The U.S. Department of Agriculture, Soil Conservation Service, stated that there are no prime or unique farmlands involved in the proposed project.

Disposition: None required.

6. Comment: EPA stated that, since there was minimal specific information available at the time of the early notification, they could only express general concerns regarding wetlands water quality, air quality, and noise. They requested that they be contacted when more specific information on these subjects became available.

Disposition: All areas of concern to EPA are addressed in the EA. A copy will be provided for their reference.

7. Comment: The U.S. Coast Guard stated that they had no permitting jurisdiction within the project corridor.

Disposition: None required.

In addition to those agencies that responded to early notification, FDOT has also initiated stormwater coordination with the Southwest District Office of FDER and Southwest Florida Water Management District. Stormwater coordination with both agencies will continue throughout project development.

Also, preliminary coordination with USFWS and FGFWFC was initiated to assess potential impacts of the proposed project to a pair of eagles. These eagles have been using a nest which is approximately 310 feet from the existing SR 52 pavement edge. A discussion of the eagles' nest location, the eagles' tolerance to vehicular traffic and human activities, and steps to minimize impacts to this nesting pair of eagles was included in Section 4.3, Endangered and Threatened Species. Both agencies concurred with the assessment of tolerance and methods to avoid adverse impacts in this section.

## 5.2 PUBLIC INVOLVEMENT

A public information workshop on this project was held in accordance with Council on Environmental Quality regulations, Federal Highway Administration regulations, and Florida Statute 339.155 on June 19, 1986, from 2:00 PM to 7:00 PM in the cafetorium of the Moon Lake Elementary School, 12019 Tree Breeze Drive, New Port Richey, Florida. Department representatives were present during the 5-hour period to answer questions and discuss the proposed improvements.

Notification of the workshop was accomplished by letters to property owners whose property lies in whole or in part at least 300 feet from the centerline of the proposal. Letters were also mailed to elected and appointed officials and other interested parties. A quarter-page legal advertisement appeared in the Pasco Times on June 14, 1986.

The meeting was attended by 156 people: 9 public officials or staff, 11 real estate agents, 13 business owners/managers, 4 representatives of civic associations, 4 news media representatives, 1 church pastor,

7/21/87

75 private citizens, and 39 persons who did not identify any affiliation but are assumed to be predominantly private citizens. Four letters regarding the project were received by the Department during the subsequent 10-day comment period. These letters were responded to in writing by the Department.

Participants were generally in favor of the upgrading and wanted at least the western portion implemented as soon as possible. Other comments included the location of median cuts and how they would affect access to particular businesses. Several persons requested traffic signals at specific locations, predominantly in the business section on the western end of the project and at major subdivision entrances. These requests will be considered during detailed design. One resident along SR 52 identified a drainage problem which she believed was associated with roadway runoff. Her written statement will be forwarded to the Department's design section for serious consideration during the detailed design of SR 52 roadway and drainage plans. A resident of Gulf Highlands requested the consideration of sidewalks from Meadow Drive to U.S. 19. An urban section, including 5-foot-wide sidewalks on each side of the roadway, is proposed from U.S. 19 to Moon Lake Road. A letter was received from Withlacoochee River Electric Cooperation, Inc. (WREC), requesting a right-of-way acquisition schedule to help them coordinate their work schedules. All available data were provided to WREC by the Department. The Department will continue to coordinate with all utilities to provide sufficient lead time for relocation of facilities.

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- U.S. Fish and Wildlife Service. 1985 Updated. Endangered and Threatened Species of the Southeastern United States. U.S. Fish and Wildlife Service Region 4, Atlanta, Georgia.

APPENDICES

APPENDICES

Response to Advanced Notification Package--Office of the Governor, State Clearinghouse Summary	A-1
Response to Advanced Notification Package--Florida Game and Fresh Water Fish Commission	A-3
Response to Advanced Notification Package--Florida Department of Environmental Regulation	A-5
Response to Advanced Notification Package--State Historic Preservation Officer	A-7
Response to Advanced Notification Package--United States Department of Agriculture, Soil Conservation Service	A-9
Response to Advanced Notification Package--Tampa Bay Regional Planning Council	A-11
Response to Advanced Notification Package--United States Coast Guard	A-12
Response to Advanced Notification Package--United States Environmental Protection Agency	A-13
Coastal Zone Consistency Determination Letter--Office of the Governor, Office of Planning and Budgeting	A-17
Letter of Determination of No Impact--State Historic Preservation Officer	A-19
Letter from the Pasco County Emergency Services Department	A-21
Letter from the Pasco County MPO Regarding Consistency with the Pasco County Transportation Plan	A-22
Letter from the Pasco County MPO Regarding Bicycle Lane Considerations	A-23



BOB GRAHAM  
GOVERNOR

STATE OF FLORIDA

# Office of the Governor

THE CAPITOL  
TALLAHASSEE 32301



October 17, 1984

Mr. J. C. Kraft, Chief  
Bureau of Environment  
Department of Transportation  
Burns Building MS 37  
Tallahassee, Florida 32301

RE: State Project #14120-1518 - Work Program #1115879 - SR 52  
Pasco County

SAI: FL8405301272C

Dear Mr. Kraft:

The State Clearinghouse in compliance with Presidential Executive Order #12372, the Governor's Executive Order 85-150, the Coastal Zone Management Act, and the National Environmental Policy Act has coordinated a review of your advanced notification of intent to apply for federal assistance in the amount of \$36,375,000, for the above referenced project.

During the review process we received comments from the Departments of Community Affairs, Environmental Regulation, Game and Fresh Water Fish Commission, Natural Resources, and State. The Departments of Community Affairs and Natural Resources had no substantive comments and found the project is consistent with the goals and objectives of their agency.

The Department of State corresponded directly with you on June 4, 1984, concerning archaeological sites potentially located in the area. They request a professional archaeological and historic survey be performed along the project tract prior to any land clearing or ground disturbing activities. The survey report should be submitted to their office for final review.

The Game and Fresh Water Fish Commission expressed concern regarding potential significant impacts of this project on the fish and wildlife resources and native habitats of the area. They request a thorough inventory and documentation of the natural habitats and wildlife species occurring within the project corridor. Areas which are determined to support endangered or threatened species should be avoided during alignment selection. Unavoidable adverse impacts should be minimized and mitigated to the greatest extent possible.

Mr. J. C. Kraft  
Page two

The Department of Environmental Regulation reviewed the project and found the proposed activity will impact wetlands and floodplain areas, particularly in that portion of the project east of C.R. 587. They determined that the project is likely to adversely impact regional aquatic resources. They also determined that there is insufficient information provided in the advanced notification to determine if that portion of the project east of C.R. 587 is consistent with Department of Environmental Regulation's authorities in the Florida Coastal Management Program. Department of Environmental Regulation requests the Department of Transportation to prepare an environmental impact statement addressing 10 topics listed in their letter in order for that agency to make a consistency determination, as well as addressing impacts to aquatic resources. Their letter constitutes the basis for a state objection to the project under the Florida Coastal Management Program.

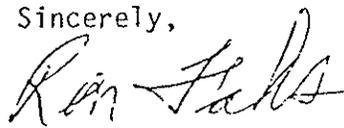
An alternative proposed by Department of Environmental Regulation which would allow the project to be conducted in a manner consistent with the Florida Coastal Management Program would be to limit the scope of the project to only that portion located west of C.R. 587. At this phase or review Department of Environmental Regulation does not have a consistency objection to that portion of the project.

The project will only be in accord with State plans, programs, procedures, and objectives when action has been taken on the requests and comments of our reviewing agencies. Action must also be taken to satisfy Department of Environmental Regulation's consistency objections based on the insufficiency of information provided. The comment letters from the Department of State, Game and Fresh Water Fish Commission, and Department of Environmental Regulation at attached for your attention.

Please append a copy of this letter to your application, and on Item 3a of the SF424 form insert the above referenced State Application Identifier (SAI) number. Completion of these requirements will assure the federal agency of your compliance with the provisions of Florida's Intergovernmental Coordination and Review Process, and will assist the federal agency in preparing the Notification of Grant-In-Aid Action in accordance with Federal Assistance Award Data System (FAADS). Accommodating this request will reduce the chance of unnecessary delays in processing your application.

Thank you for your cooperation.

Sincerely,



Ron Fahs, Director  
Intergovernmental Coordination

RF/mt  
Enclosure  
CC: DER  
DOS

GFWFC  
Wendy Giesy

# FLORIDA GAME AND FRESH WATER FISH COMMISSION

C. TOM RAINEY, D.V.M.    THOMAS L. HIRES, SR.    WILLIAM G. BOSTICK, JR.    J.H. BAROCO    MRS. GILBERT W. HUMPHREY  
Chairman, Miami    Vice-Chairman, Lake Wales    Winter Haven    Pensacola    Miccosukee

ROBERT M. BRANTLY, Executive Director  
F.G. BANKS, Assistant Executive Director



FARRIS BRYANT BUILDING  
620 South Meridian Street  
Tallahassee, Florida 32301  
(904) 488-1960

June 26, 1984

GOVERNOR'S OFFICE  
Planning and Budgeting  
Intergovernmental Coord.

JUN 29 1984

RECEIVED

Mr. Ron Fahs, Director of  
Intergovernmental Coordination  
State Planning and Development  
Clearinghouse  
Office of Planning and Budgeting  
Executive Office of the Governor  
The Capitol  
Tallahassee, Florida 32301

Re: SAI FL 8405301272C  
Department of Transportation  
Pasco County

Dear Mr. Fahs:

The Office of Environmental Services of the Florida Game and Fresh Water Fish Commission has reviewed the referenced request for comments pursuant to Intergovernmental Coordination and Federal Consistency Project Review, dated May 31, 1984, and offers the following comments.

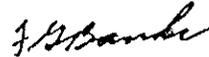
The Florida Department of Transportation proposal to upgrade 23.3 miles of S.R. 52 from a two-lane highway to a multi-lane divided highway could have significant adverse impacts upon the fish and wildlife resources and native habitats of Pasco County. The biological assessment lists a variety of habitats including pine flatwoods, sandhill scrub, xeric oak scrub, cypress strands and domes, freshwater marshes, wet prairies, and mixed hardwood swamps. Domestic habitats include agricultural, residential, and commercial lands.

We recommend thorough inventory and documentation of the natural habitats and wildlife species occurring within the project corridor, with particular attention to species listed by the Commission as endangered, threatened, or of special concern (document enclosed). During alignment selection, wetlands and those uplands which support endangered or threatened species should be avoided if possible. Bridging, right-of-way width reduction, and extensive culverting should be implemented as necessary to minimize adverse impacts upon wetland vegetation and hydrology. If unavoidable adverse environmental impacts are anticipated, appropriate mitigatory measures should be presented in the environmental assessment.

Mr. Ron Fahs  
Page 2

We appreciate the opportunity to comment on this early notification package, and look forward to reviewing the project environmental assessment. Please call me if we can be of further assistance.

Sincerely,



F. G. Banks  
Assistant Executive Director

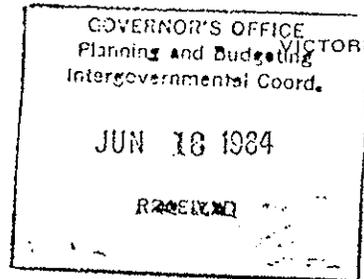
FGB/RF/rs

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301-8241



June 18, 1984



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

Mr. Ron Fahs, Director  
Intergovernmental Coordination  
State Planning and Development  
Clearinghouse  
Office of the Governor  
421 Carlton Building  
Tallahassee, Florida 32301

Dear Mr. Fahs:

Re: Department of Transportation, Advance Notification  
of Intent to Apply for Federal Assistance to Upgrade  
State Road 52 from U.S. 19 to I-75, Pasco County,  
Florida, SAI No. FL8405301272C

The Department of Transportation proposes to upgrade approximately 23.3 miles of S.R. 52 to provide a multi-lane divided highway between U.S. 19 and I-75. The Department of Environmental Regulation has reviewed the advance notification and offers the following comments and suggestions.

The proposed construction will require permits from the Department, pursuant to Chapters 253 and 403, Florida Statutes, and water quality certification under Public Law 92-500. Project plans should be coordinated with our Southwest District Office in Tampa.

Based on the traffic counts provided in the advance notification and our environmental review, the project seems to consist of two separate segments. Segment #1 involves improvements to S.R. 52 between U.S. 19 and C.R. 587; segment #2 involves improvements to S.R. 52 between C.R. 587 and I-75. A review of aerial photographs indicates that most of the residential and commercial development of the area is concentrated in the western portion of the highway corridor and that little development exists east of C.R. 587.

Widening S.R. 52 will impact both wetland and floodplain areas, particularly in segment #2 of the project (between C.R. 587 and I-75). Wetlands and floodplains are considered important areas because of their great ecological and economic importance. Some of the more important and cost free functions of floodplains and wetlands include: high biological productivity; providing food, habitat and breeding areas for numerous plant and animal species; maintaining natural drainage patterns and other hydrologic functions; shielding land areas from erosion and storm damage; providing

Mr. Ron Fahs  
Page Two  
June 18, 1984

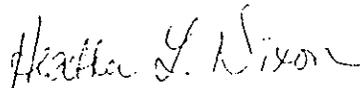
storage areas for storm and flood water; and purifying water through natural soil and vegetation filtration processes. Presidential Executive Orders 11988, Floodplain Management, and 11990, Protection of Wetlands, require federal agencies to restore, preserve and enhance the natural and beneficial values served by floodplains and wetlands. Federal agencies are supposed to minimize the destruction, loss and degradation of such areas when undertaking, financing or assisting construction or other improvements.

As the project will likely adversely impact regional aquatic resources, we request that an environmental impact statement (EIS) be prepared under the guidelines described in the National Environmental Policy Act of 1969. The EIS should address the following topics: (1) impacts of induced development on sensitive lands along the eastern portion of the project, (2) acreages of wetlands and floodplains involved in the project, (3) noise impacts, (4) air quality impacts, (5) water quality impacts, (6) stormwater management design compliance with Chapter 17-25, Florida Administrative Code, (7) the impacts of the loss of floodplains and wetland habitat, (8) justification for the project east of C.R. 587, (9) the need for any more than four lanes, and structural alternatives to roadway widening.

We do not object to proceeding with the environmental evaluation of roadway improvements, including nonstructural alternatives, to the project west of C.R. 587. Therefore, based on the information provided in the advance notification, this portion of the project is consistent with the DER's authorities in the Florida Coastal Management Program. We cannot determine the consistency of the project east of C.R. 587 without more information. We request the DOT to supply the draft EIS addressing the above topics when it is prepared so that we may complete our consistency review. We strongly suggest that the scope of the project be limited to roadway widening between U.S. 19 and C.R. 587 on S.R. 52. The environmental impacts of this smaller project would be considerably lessened and in fact, we feel that possibly only an environmental assessment would be necessary were the scope of the project limited as described above.

We appreciate the opportunity to comment on this advance notification.

Sincerely,



Heather L. Nixon  
Environmental Specialist  
Intergovernmental Programs  
Review Section

HLN/jb

cc: Dr. Richard D. Garrity



FLORIDA DEPARTMENT OF STATE  
George Firestone  
Secretary of State

DIVISION OF ARCHIVES,  
HISTORY AND RECORDS MANAGEMENT  
The Capitol, Tallahassee, Florida 32301-8020  
(904) 488-1480

June 4, 1984

In Reply Refer To:

Louis D. Tesar  
Historic Preservation  
Supervisor  
(904)487-2333

Mr. J.C. Kraft, Chief  
Bureau of Environment  
Department of Transportation  
605 Suwannee Street  
Tallahassee, Florida 32301

RE: Cultural Resource Assessment Request  
State Project No. 14120-1518; State Road 52 from State  
Road 55/U.S. Highway 19 to State Road 93/Interstate 75,  
Pasco County, Florida

Dear Mr. Kraft:

In accordance with the procedures contained in 36 C.F.R., Part 800 ("Procedures for the Protection of Historic and Cultural Properties"), we have reviewed the above referenced project for possible impact to archaeological and historical sites or properties listed, or eligible for listing, in the National Register of Historic Places. The authorities for these procedures are the National Historic Preservation Act of 1966 (Public Law 89-665) as amended by P.L. 91-243, P.L. 93-54, P.L. 94-422, P.L. 94-458 and P.L. 96-515, and Presidential Executive Order 11593 ("Protection and Enhancement of the Cultural Environment").

A review of the Florida Master Site File indicates that there are no archaeological or historic sites recorded within the project area. However, the lack of sites is not considered significant because the area has never been subjected to a systematic, professional survey to locate such sites. Data from environmentally similar areas in Pasco County indicate that archaeological and historic sites, especially the former, are likely to occur

Mr. J.C. Kraft  
June 4, 1984  
Page Two

within the subject tract. It is, therefore, the opinion of this office that there is a reasonable probability of project activities impacting archaeological and historic sites and properties potentially eligible for listing on the National Register of Historic Places, of otherwise of national, state or local significance.

Since potentially significant archaeological and historic sites may be present, it is our recommendation that, prior to initiating any land clearing or ground disturbing activities, the project tract should be subjected to a systematic, professional archaeological and historical survey. The purpose of this survey will be to locate and assess the significance of cultural resources present. The resultant survey report should be forwarded to this agency in order to complete the process of reviewing the impact of this project on archaeological and historic resources.

If you have any questions concerning our comments, please do not hesitate to contact us.

Your interest and cooperation in helping to protect Florida's archaeological and historical resources are appreciated.

Sincerely,

  
for George W. Percy  
State Historic  
Preservation Officer

GWP:Tkp



United States  
Department of  
Agriculture

Soil  
Conservation  
Service

401 SE First Avenue, Room 248  
Gainesville, FL 32601

RECEIVED

July 2, 1984

JUL 5 1984

Mr. C. L. Irwin, Administrator  
Environmental Impact Review  
Haydon Burns Building  
605 Suwannee Street  
Tallahassee, FL 32301-8064

Dear Mr. Irwin:

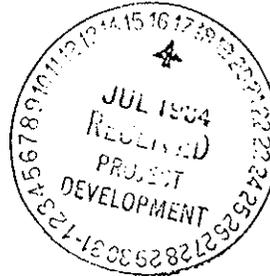
Subject: Advance Notification  
State Project Number 14120-1518  
Federal Aid Project Number F-270-1(2)  
Pasco County, Florida

We have reviewed the above Advance Notification. There are no prime or unique farmlands involved in the proposed project. We have no further comments regarding this proposal.

Thank you for giving us the opportunity to review this document.

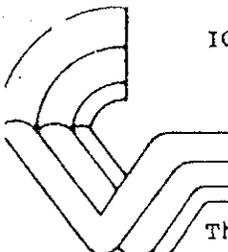
Sincerely,

  
JAMES W. MITCHELL  
State Conservationist



cc:  
Ron Fahs, State Planning & Development Clearinghouse, Tallahassee





# CLEARINGHOUSE REVIEW

The Florida Department of Transportation (FDOT) has requested review and comment on a proposal to replace 23.3 miles of SR 52, a two lane highway with a multi-lane divided highway from US 19 to Interstate I-75. Location; Pasco County; Agency: FDOT; Funding Request: Federal - \$36,375,000; State - \$12,125,000; Total - \$48,500.00.

Local Comments Requested From:

New Port Richey/West Pasco County Metropolitan Planning Organization: No comments received as of May 25, 1984

Council Comments and Recommendations:

This project has been reviewed for consistency with the Council's adopted growth policy, the Future of the Region. The proposal has been found to be consistent with Council policy to encourage the maintenance of a Level of Service (LOS) C daily capacity.

A significant portion of this 23.2 mile alignment already operates below an acceptable LOS such as the segment of SR 52 between US 19 and CR 587.

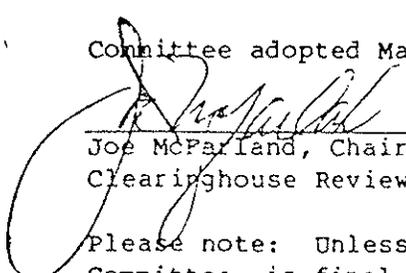
During the design phase of the project, it is recommended that the Florida Department of Transportation (FDOT) consider geometric and/or signalization improvements to SR 52 intersections with Little Road, CR 587, US 41 (SR 45), CR 583 and CR 581.

It is further recommended that best management practices for water pollution abatement be employed by the contractor and that FDOT review the effectiveness of these BMPs. Finally, it is recommended that all culverts and bridge structures be designed to accommodate a 100-year event.

This project is regionally significant and no concerns have been raised during the review which would preclude its approval.

It is therefore recommended that this proposal be approved for funding. Further, it is recommended that any additional comments addressing local concerns be considered prior to approval.

Committee adopted May 29, 1984.



\_\_\_\_\_  
Joe McFarland, Chairman  
Clearinghouse Review Committee

Please note: Unless otherwise notified, action by the Clearinghouse Review Committee is final. Please append a copy to your application to indicate compliance with clearinghouse requirements. The committee's comments constitute compliance with Florida's Intergovernmental Coordination and Review process only.

Commander  
Seventh Coast Guard District

Federal Bldg.  
51 S.W. 1st Ave  
Miami, FL 33130  
Staff Symbol: (oan)  
Phone: (305) 350-1103

16591/FLA  
Serial: 591

AUG 6 1984

Florida Department of Transportation  
Attn: Mr. J.C. Kraft  
605 Suwannee Street, MS 37  
Tallahassee, FL 32304

PROPOSED UPGRADING OF STATE ROAD 52 FROM SR 55 (U.S. 19) TO SR 93  
(I-75), PASCO COUNTY, FL (STATE PROJECT #14120-1518)

The Coast Guard has no bridge permitting jurisdiction over the project corridor.

Sincerely,

L. R. MONTELO  
Lieutenant Junior Grade  
U. S. Coast Guard  
Chief, Aids to Navigation Branch, Acting  
Seventh Coast Guard District  
By direction of the District Commander

Copy: Florida Department of Transportation, Bartow ✓



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET  
ATLANTA, GEORGIA 30365

RECEIVED  
AUG 2 1984

JUL 30 1984  
4PM-EA/GM

Mr. C.L. Irwin  
Environmental Impact Review  
Florida Department of Transportation  
605 Suwannee Street  
Tallahassee, Florida 32301-8064



WJG  
RAM

Dear Mr. Irwin:

We have reviewed the following Advance Notification packages:

- 1) Upgrading SR-52 (State #14120-1518, Federal #F-270-1(2), EPA #A-FHW-E40623-FL) in Pasco County.
- 2) Palmetto Expressway SR-826 - PD&E Study (State #87260-1587, Federal #M-6071-(17), EPA #A-FHW-E40624-FL) in Dade County.
- 3) Apollo 11 Boulevard at US 1 to CR511/US 1 intersection in Melbourne, Florida (State #70000-1537, 70000-1538, and 70000-1539, Federal #M-8500(3), M-8500(2), and M-8500(1), EPA #A-FHW-E40613-FL) in Brevard County.
- 4) Upgrading US17/92 (State #77010-1533, Federal #M-8827-(6), EPA #A-FHW-E40614-FL) in Seminole County.
- 5) Modifications to I-95 (State #72020-1465, Federal #IR-95-5 (135)351, EPA #A-FHW-E40605-FL) in Duval County.
- 6) Upgrading SR24 (State #26090-1519, Federal #F-376-1(6), EPA #A-FHW-E40622-FL) in Alachua County.
- 7) SR A-1-A stub construction (State #86030-1513, Federal #M-6857-(1), EPA #A-FHW-E40612-FL) in Broward County.
- 8) Upgrading SR 5/U.S. 1 (State #93040-1527, Federal #F-485-4(25), EPA #E40617-FL) in Palm Beach County.
- 9) Upgrading S.R. 955 (State #87002-1505, Federal #M-6103-(1), EPA #A-FHW-E40618-FL) in Dade County.
- 10) Upgrading SR90/U.S. 41/Tamiami Trail (State #03010-1545, Federal #F-020-1(20), EPA #A-FHW-E40615-FL) in Collier County.
- 11) Upgrading SR45 (State #'s 14010-1514, 08010-1519, 08080-1509, and 02100-1504, Federal #F-888-(27) and F-8889(2), EPA #A-FHW-E50254-FL) in Pasco, Hernando, and Citrus Counties.

All of the above projects involve relatively major highway construction; however, few specific details were available in this material. Hence, we can only offer the same kind of general observations regarding environmental guidelines stipulations that have probably already been provided by your own technical staff. However, as soon as your detailed planning has progressed to the point that specifics are available regarding alignment, design, etc., please contact us at 404-881-7901 for coordination on environmental matters of mutual interest. We are enclosing a copy of "Special Concerns" which outlines some environmental concerns associated with generic highway projects and should be beneficial to your planning process.

If we can be of further assistance, please feel free to contact us.

Sincerely yours,

*for R. B. Rogers*

Sheppard N. Moore, Chief  
Environmental Review Section  
Environmental Assessment Branch

Attachment: "Special Concerns"

## SPECIAL CONCERNS

The following list is a generalized synopsis of special concerns relevant to generic highway projects.

### Wetlands/Water Quality

- Protection of wetlands pursuant to the Section 404 Guidelines of the Clean Water Act.
- Avoiding/minimizing wetland activities such as:
  - \* channel realignments
  - \* dredging and filling
  - \* flow alterations causing wetland drainage or flooding
  - \* erosion and siltation
  - \* habitat loss
  - \* disturbance of rare and endangered species
- Conformance with Executive Order 11988 ("Floodplain Management") and Executive Order 11990 ("Protection of Wetlands"), if federal funds are involved.
- Avoidance of environmental impacts and feasible mitigation for unavoidable impacts (e.g., wetland creation and restoration).
- Public complaints concerning construction-related wetland alteration and state mechanisms to properly address them.

### Air Quality

- Conformance with National Ambient Air Quality Standards (NAAQS) of the Clean Air Act to determine whether a site is located in an attainment, non-attainment, or unclassifiable area.
- Conformance with the State Implementation Plan (SIP)
- Conformance with the Prevention of Significant Deterioration (PSD) regulations.
- Conformance with EPA and state modeling guidance.
- Existing and predicted levels of various relevant air-quality parameters such as carbon monoxide (CO).
- Public complaints concerning construction-related fugitive emissions and state mechanisms to properly address them.

## Noise

- Conformance of on-site existing (ambient) and project predicted noise levels with noise abatement criteria for commercial/institutional receptors ( $L_{10}=75\text{dBA}$ ;  $L_{eq}=72\text{ dBA}$ ) and sensitive residential/institutional receptors (residences, churches, schools, etc.:  $L_{10}=70\text{ dBA}$ ;  $L_{eq}=67\text{dBA}$ ). Preferred descriptors for existing, predicted, and noise abatement levels are  $L_{eq}(1)$  or  $L_{10}$ . The hour (1) of the  $L_{eq}(1)$  descriptor should be defined (e.g., peak rush hour).  $L_{eq}(24)$  values are also helpful in association with  $L_{eq}(1)$  data.
  - Preferrably, determinations for predicted noise levels should be made for all noise receptors along the entire highway corridor (as opposed to just specific sites along the corridor) affected by the project and should be compared with existing (ambient) noise levels. The number of affected noise receptors should be arranged into the following groups:
    - \* receptors receiving an increase of 5-10 dBA
    - \* receptors receiving an increase of 11-15 dBA
    - \* receptors receiving an increase of over 15 dBA
    - \* receptors receiving an increase above the noise abatement criteria.
- These groups in turn should be organized by kinds of receptors (commercial/industrial versus residential/institutional), although a grand total of affected receptors should also be calculated. Overlaps within the above four groups should be indicated to avoid duplication which would result in an inaccurate total number of affected receptors (e.g., a receptor could experience a 5-10 dBA increase and could also be above the noise abatement criterion for that kind of receptor).
- Project-related noise level elevations: all project-generated noise increases above the existing site noise level are considered important, particularly if above abatement levels and/or if long termed. An increase of 5dBA is considered important and a 10dBA increase is considered significant, even if the final elevated noise levels are below abatement criteria. Feasible mitigation for project-generated increases above the abatement criteria should be accomplished and feasible mitigation for increases of 10 dBA or more (below the abatement criteria) should be considered.
  - Additional helpful information includes the existing and project predicted percentage of trucks using the old/new highway.
  - Also of concern are public complaints concerning construction-related noise emissions and state mechanisms to properly address them.

## Office of the Governor

THE CAPITOL  
TALLAHASSEE 32301BOB GRAHAM  
GOVERNOR

December 4, 1986

Mr. J. C. Kraft  
 Chief, Bureau of Environment  
 Department of Transportation  
 Burns Building MS 37  
 Tallahassee, Florida 32301

RE: State Project #14120-1518, SR 52, Pasco County

SAI: FL8405301272C

Dear Mr. Kraft:

This is to clarify and reiterate the state position on the above referenced project at the request of your office. Following a meeting between members of your staff, DER Intergovernmental Coordination, Division of Permitting, and this office in the early fall, this project was reviewed for appropriateness of the state response. This project was not the primary focus of the fall meeting (the Apollo-Hickory Alignment was), but was discussed prior to the meeting in the same context--e.g., appropriateness of the federal consistency response. The two projects are different and the Clearinghouse responses communicating the state position reflect this. In the case of SR 52, DER had ample justification for finding the project inconsistent with the Florida Coastal Management Program, but decided to give DOT comments that would allow a portion of the project to proceed. It is further apparent that a finding of inconsistency for the entire project would have required more extensive negotiations. The Department of Environmental Regulation indicated in recent conversation, however, that they agreed to language finding such a project consistent at the Advance Notification phase, and review of the environmental document for consistency with their statutory authority in the FCMP will be revisited once it is circulated for review.

This is to notify you that funding for highway improvements along the existing alignment is consistent with the Florida Coastal Management Program at the Advanced Notification phase. Subsequent environmental documents will be reviewed for consistency with the FCMP as provided for in 15 CFR 930.39 and the MOU. The subsequent environmental document should provide thorough information regarding the location and extent of any wetlands dredging and

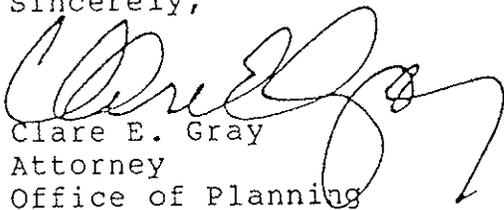


Mr. J. C. Kraft  
December 4, 1986  
Page Two

filling, borrow sources, dredge and fill activities associated with bridge construction, and stormwater management.

If you have questions or need further assistance in this matter, please contact me at 488-8114.

Sincerely,



Clare E. Gray  
Attorney  
Office of Planning  
and Budgeting

CEG/mem



FLORIDA DEPARTMENT OF STATE

George Firestone  
Secretary of State

DIVISION OF ARCHIVES,  
HISTORY AND RECORDS MANAGEMENT  
The Capitol, Tallahassee, Florida 32301-8020  
(904) 488-1480

June 4, 1986

In Reply Refer to:

Mr. Michael Wisenbaker  
Historic Sites Specialist  
(904) 487-2333

Mr. J. C. Kraft, Chief  
Bureau of Environment  
Florida Department of Transportation  
Burns Building  
Tallahassee, Florida 32301

Re: Cultural Resource Assessment Request Review  
Federal Aid Project F-270-1(2), State Project No. 14120-1518  
Proposed Upgrading of SR 52 from SR 55 to SR 93 (approx. 23.3  
miles) in Pasco County, Florida

Dear Mr. Kraft:

In accordance with the procedures contained in 36 C.F.R., Part 800 ("Procedures for the Protection of Historic and Cultural Properties"), we have reviewed the above referenced project for possible impact to archaeological and historical sites or properties listed, or eligible for listing, in the National Register of Historic Places. The authorities for these procedures are the National Historic Preservation Act of 1966 (Public Law 89-665) as amended by P.L. 91-243, P.L. 93-54, P.L. 94-422, P.L. 94-458 and P.L. 96-515, and Presidential Executive Order 11593 ("Protection and Enhancement of the Cultural Environment").

We have reviewed the results of field surveys of the above referenced project, performed by Mr. William Browning, Archaeologist, and Ms. Melissa Wiedenfeld, Historic Sites Specialist, employed by the Florida Department of Transportation. No sites listed, or eligible for listing, in the National Register of Historic Places, or otherwise of national, state or local significance, were encountered during the survey. Therefore, it is the determination of this office that this project will have no effect on any such resources, and that the project may proceed without further involvement

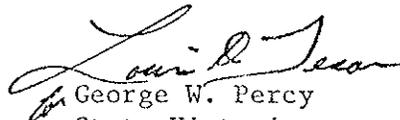
Mr. J. C. Kraft  
Page Two  
June 4, 1986

with this office.

If you have any questions concerning our comments, please do not hesitate to contact us.

Your interest and cooperation in helping to protect Florida's archaeological and historical resources are appreciated.

Sincerely,

  
George W. Percy  
State Historic  
Preservation Officer

GWP/efk



## PASCO COUNTY, FLORIDA

PHONE (813) 847-8188

EMERGENCY SERVICES DEPARTMENT  
530 SUNSET ROAD  
NEW PORT RICHEY, FL 33552

August 20, 1986

Mr. James Mykytka  
Environmental Scientist  
Reynolds, Smith and Hills  
Architects . Engineers . Planners, Inc.  
1715 N. Westshore Boulevard  
Suite 500  
P. O. Box 22003  
Tampa, FL 33622-2003

Dear Mr. Mykytka:

The existing State Road 52 roadway creates delays due to congestion during periods of heavy traffic. State Road 52 has many curves where blind spots for passing are dangerous.

Road construction would naturally create delays due to increased traffic back-ups on the single lane highway.

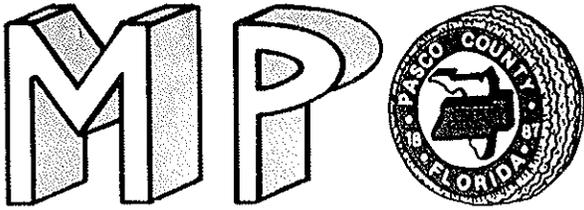
Your proposal would greatly enhance response times and alleviate existing and future growth that will be experienced. State Road 52 is a main artery in Pasco County, and is designated as such during an evacuation.

If you have any further questions or desire additional information, please do not hesitate to contact me.

Sincerely,

Amador J. Gonzalo  
Emergency Services Director

AJG/bcj



NEW PORT RICHEY / WEST PASCO  
METROPOLITAN PLANNING ORGANIZATION

7530 Little Road • New Port Richey • Florida • 33553  
(813) 847•8132

October 9, 1986

Mr. Ray Moses  
Project Development Engineer  
Florida Dept. of Transportation  
Post Office Box 1249  
Bartow, FL 33830



RE: Project #14120-1518, S.R. 52 - U.S. 19 to I-75

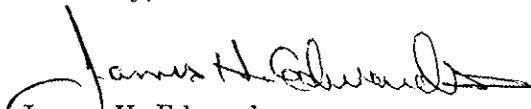
Dear Mr. Moses:

Per the request from FDOT, we have reviewed the issue of consistency between the MPO adopted plan and the improvement plans for S.R. 52. In 1984, the MPO adopted a 1995 Long-Range Transportation Plan. This ten-year plan was essentially a cost-feasible plan, meaning that a cap delineating a specific dollar amount was identified and projects were selected based on the monies available. Those projects deemed as "priority projects" would be incorporated into the plan up to the established cap. As more money was identified as available, more projects would be incorporated into the plan.

The plan, which is now being updated, reflects the need to multilane S.R. 52 from U.S. 19 to Hicks Road. Projected volumes identify the need to continue the multilaning to Moon Lake Road. The absence of the Hicks Road to Moon Lake Road section merely indicates that there was a lack of monies available in which to incorporate this project into the Long-Range Plan. In other words, if more monies were available, the entire length of S.R. 52 from U.S. 19 to Moon Lake Road would have been identified as a needed improvement in the plan. Due to the time frame (1995) and the geographical limits of the study, those portions of S.R. 52 east of Moon Lake Road are not shown on the plan. However, this absence should not be construed as a lack of need for improvements east of Moon Lake Road. The amount of development now occurring and expected future development in what now is predominantly a rural area will necessitate the multilaning of the facility by the mid-1990's. Please keep in mind that S.R. 52 provides the only viable east/west link from the heavily urbanized portion of West Pasco County to the Interstate System.

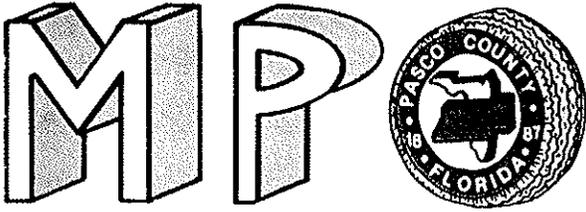
I hope what I have provided will clarify the issue of plan consistency as it relates to improvements being planned for S.R. 52. If you require any further information, please contact me at your convenience.

Sincerely,

  
James H. Edwards  
Transportation Planning  
Coordinator

JHE/r10/09/02

cc: James G. Kennedy, Director, FDOT-Tampa, 4950 W. Kennedy Blvd., Suite 404, Tampa, FL 33609



NEW PORT RICHEY / WEST PASCO  
METROPOLITAN PLANNING ORGANIZATION

7530 Little Road • New Port Richey • Florida • 33553  
(813) 847•8132

October 8, 1986



Mr. Ray Moses  
Project Development Engineer  
Florida Department of Transportation  
P.O. Box 1249  
Bartow, Florida 33830

Re: Project #14120-1518/S.R. 52, U.S. 19 to I-75

Dear Mr. Moses:

The purpose of this letter is to define the Pasco County MPO's position in regards to bicycle lane considerations on road improvement projects.

The MPO on March 13, 1986, passed a motion regarding the need to incorporate bicycle lanes on all federally funded intersection improvement projects in Pasco County. Included in this motion was a request that all other federal, state and local projects address the issue of providing bicycle considerations in the design phase of improvement projects. The type of improvement discussed was consistent with the current FDOT policy, which calls for the construction of a 14' outside curb lane for those projects with a curb and gutter design, and a 4' paved shoulder on rural roadway sections.

Based on the previous actions of the MPO, it would be appropriate to incorporate bicycle lanes in the design of the S.R. 52 multi-laning project. This action would be consistent with the MPO desires.

I hope that this information clarifies the MPO's position regarding this issue. If additional information is required, please advise.

Sincerely,

A handwritten signature in cursive script that reads 'James H. Edwards'.

James H. Edwards  
Transportation Planning Coordinator

JHE/fa

cc: James G. Kennedy, FDOT-Tampa