

# **FINAL NOISE STUDY REPORT**

**PD&E Study  
I-75 (S.R. 93) from South of S.R. 56 to North of S.R. 52  
Pasco County**

**Work Program Item Segment No. 258736 1  
Federal Aid Program No. NH-75-1(91)275**

**This project evaluates improvement alternatives for I-75 (S.R. 93) from south of  
S.R. 56 to north of S.R. 52 in Pasco County, Florida.  
The approximate length of the project is 19.15 kilometers (11.902 miles).**

Prepared for:

**Florida Department of Transportation  
District Seven  
11201 North McKinley Drive  
Tampa, Florida 33612-6403**

**December 2000**

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District Seven  
11201 North McKinley Drive  
Tampa, Florida 33612-6403**

Prepared by:

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**December 2000**

## EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT) is currently conducting a Project Development and Environment (PD&E) Study on a portion of I-75 (S.R. 93) from south of S.R. 56 to north of S.R. 52 in Pasco County. The roadway is proposed to be improved from the current four lane limited access freeway to a six lane limited access freeway. The existing bridges within the project limits will be widened or replaced.

The objectives of the noise study are to identify noise sensitive sites adjacent to the proposed project, compare and evaluate traffic noise levels at these sites with and without the project, and evaluate the need for and effectiveness of noise abatement measures. Construction noise and predicted noise level contours for the Preferred Alternative are also addressed.

For the design year (2020) Preferred Build Alternative 5, 32 noise sensitive sites are predicted to experience outdoor traffic noise levels that approach or exceed the FHWA Noise Abatement Criteria (NAC) for Activity Category B. Noise levels at the affected sites are predicted to range from 66.3 to 71.3 dBA. Predicted increases above existing noise levels range from 1.3 to 1.7 dBA. No noise sensitive sites are predicted to experience interior noise levels that approach or exceed the FHWA NAC for Activity Category E.

Noise abatement measures were evaluated for affected noise sensitive sites. Abatement measures considered include traffic system management, alignment modifications, property acquisition, land use controls and noise barriers. None of the abatement measures were determined to be feasible and cost reasonable.

New development is occurring on the west side of I-75 just south of S.R. 52 and also on the east side of I-75, approximately 1000 meters (m) [3,280 feet (ft)] north of S.R. 54. Noise sensitive sites at these locations are expected to approach or exceed the NAC. The exact location and number of noise sensitive sites are being determined at this time. Those noise sensitive sites which have received a building permit prior to the date of public knowledge, or LDA, will be addressed during subsequent design, right of way (ROW) and construction

phase reevaluations. Those noise sensitive sites which receive a building permit after the LDA date will not be considered for future noise abatement reevaluation.

Noise effects at other noise sensitive sites were determined to be an unavoidable consequence of the proposed project. Land use controls were identified as a measure to limit the effects of traffic noise in areas of future development. A copy of the final Noise Study Report will be furnished to local officials to assist them in the planning of compatible land uses for future development.

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## 1.0 INTRODUCTION

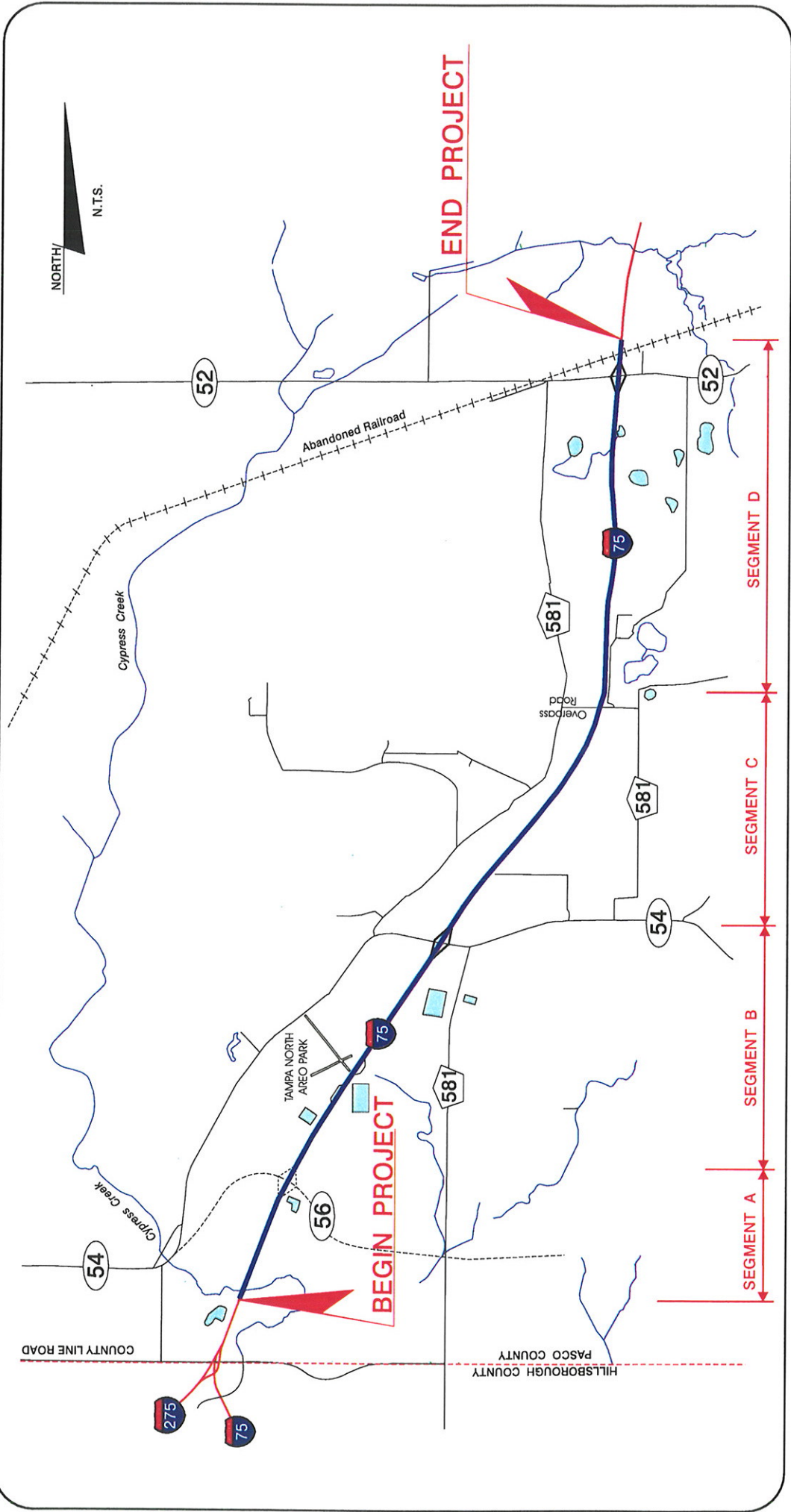
The Florida Department of Transportation (FDOT) is conducting a Project Development and Environment (PD&E) Study for improvement alternatives along I-75 (S.R. 93) from south of S.R. 56 to north of S.R. 52 in Pasco County, Florida. The project location map in Figure 1 illustrates the location and limits of the study.

The objective of the PD&E Study is to provide documented environmental and engineering analyses to assist the FDOT in reaching a decision on the type, location and conceptual design of the necessary improvements, in order to accommodate future traffic demand in a safe and efficient manner. The PD&E Study also satisfies the requirements of the National Environmental Policy Act (NEPA) and the Federal Highway Administration (FHWA) in order to qualify future development phases of the project for Federal-aid funding.

This report documents the need for the improvements, and develops and evaluates improvement alternatives as they relate to the transportation facility. Information relating to the engineering and environmental characteristics essential for alternatives evaluation and analytical decisions was collected. Once sufficient data were available, design criteria were established and “build” alternatives were developed. The comparison of these alternatives to the “No Build” alternative was based on a variety of parameters with the goal being to identify the alternative having the least impact, while providing the necessary improvements. The design year for analysis is Year 2020.

The objectives of the noise study are to identify noise sensitive sites adjacent to the proposed project, compare and evaluate traffic noise levels at these sites with and without the preferred alternative, and evaluate the need for and effectiveness of noise abatement measures. Construction noise, construction vibration, and predicted noise level contours for the build condition are also addressed.





FLORIDA DEPARTMENT OF TRANSPORTATION

**I-75 (S.R. 93)**  
**PD&E STUDY**  
 From South of S.R. 56 to North of S.R. 52  
 Pasco County, Florida

**PROJECT LOCATION MAP**

**LEGEND**

- Project Limits
- River / Water
- Railroad
- State Road Numbers
- County Road Numbers
- Proposed Roadway

WPI Seg No. 258736.1  
 FAP No. NH-75-1(9)275

FIGURE 1

## 1.1 Project Need

The I-75 corridor from south of S.R. 56 to north of S.R. 52 is proposed to be improved from a four-lane to a six-lane freeway. The need for this improvement was established based on the evaluation of the following:

- The existing and expected future quality of traffic operations along the I-75 study corridor under the No-Project alternative,
- Traffic safety statistics for the period between 1991 and 1995,
- Local governments' long-range transportation plans designated need, and
- Social and economic demands.

According to the Pasco County Comprehensive Plan<sup>1</sup> and the Pasco County Metropolitan Planning Organization Adopted 2015 Cost Affordable Transportation Plan<sup>2</sup>, the existing I-75 corridor is functionally classified as a freeway and as a future six-lane facility from the Hillsborough County line to S.R. 54. The I-75 corridor is designated as a four-lane facility from S.R. 54 through the remainder of Pasco County to the Hernando County line. The improvements under consideration for the I-75 corridor are consistent with the anticipated approval of the Pasco County Metropolitan Planning Organization 2020 Cost Affordable Transportation Plan<sup>3</sup>.

## 1.2 Existing Facility

The I-75 corridor is primarily a north/south facility which, in its entirety, extends from a southern terminus at Miami, Florida to a northern terminus at Sault Saint Marie, Michigan. The PD&E Study corridor encompasses the portion of I-75 from south of the proposed interchange with S.R. 56 to north of the existing interchange with S.R. 52, in Pasco County, Florida, a distance of approximately 19.15 kilometers (km) [11.902 miles (mi)]. I-75's functional classification is "rural interstate." The facility is also a part of the Federal Aid Interstate System, the Florida Intrastate Highway System (FIHS) and State Highway System.

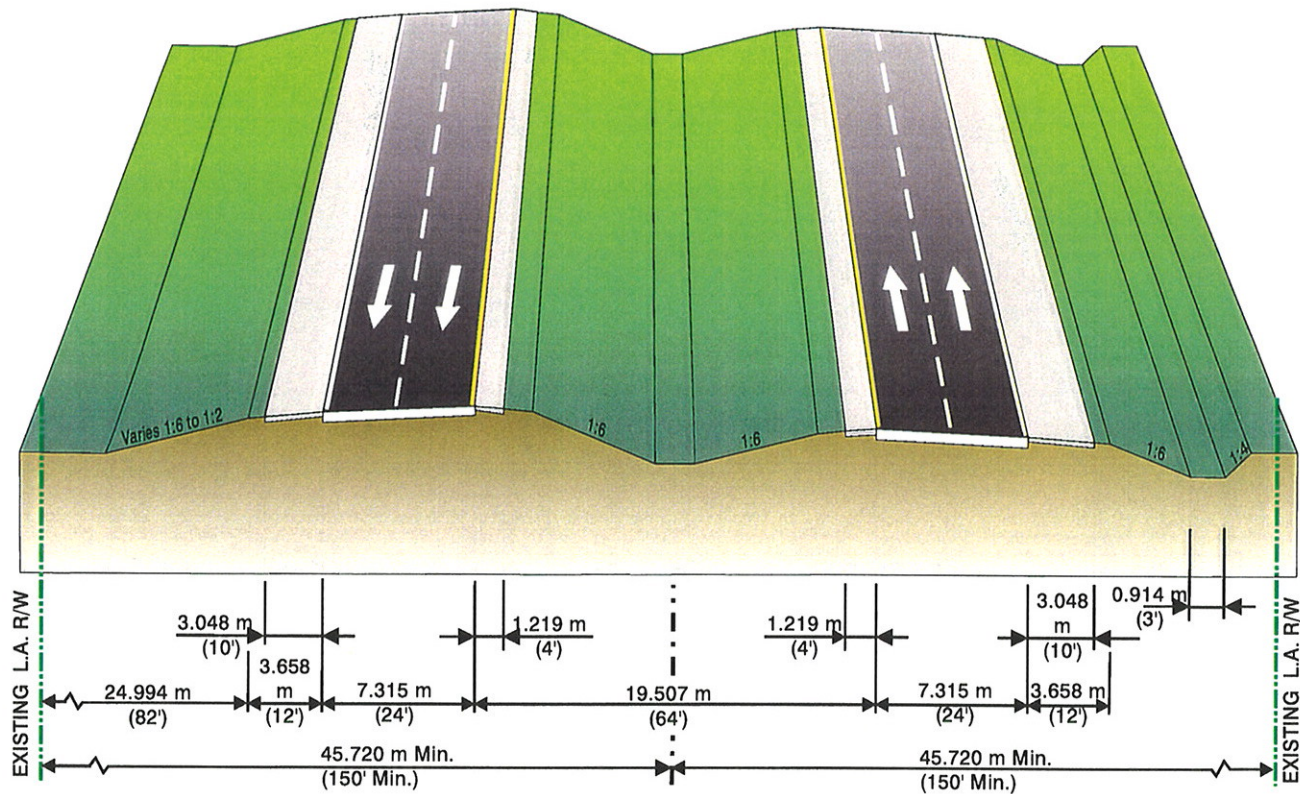
Please note, the new S.R. 56 interchange is currently under construction and has a scheduled opening year of August 2001. This interchange will therefore be considered an existing condition for the PD&E Study.

Within the study corridor, the existing I-75 mainline roadway primarily features two 3.658 meters (m) (12 feet [ft]) lanes each way, a 19.507 m (64 ft) depressed, grassed median, 3.658 m (12 ft) graded outside shoulders (of which 3.048 m [10 ft] is paved), 2.438 m (8 ft) graded inside shoulders (of which 1.219 m [4 ft] is paved), intermittent open roadside ditches on both sides and a minimum limited access right of way (ROW) width of 91.44 m (300 ft). (See Figure 2.) However, the northbound roadway currently features four lanes from south of Cypress Creek to just north of the creek, then tapers successively to three lanes and finally to two lanes near the location of the proposed S.R. 56 northbound exit ramp. The proposed S.R. 56 interchange project will widen only the northbound I-75 roadway in order to maintain the four lanes to the new exit ramp, and thereafter three lanes to the new entrance ramp terminal. In addition, the southbound I-75 roadway currently flares from two lanes to three lanes just north of the bridge over Cypress Creek.

### **1.3 Proposed Improvements**

The preferred alternative mainline typical section features three 3.6 m (12 ft) lanes each way, 3.6 m (12 ft) outside shoulders (of which 3.0 m/10 ft is paved), while retaining the existing 19.507 m (64 ft) depressed median and 3.657 m (12 ft) inside shoulders (of which 3.048 m/10 ft is paved). A reduced border width of 21.567 m (70 ft) is proposed in order to avoid the need for additional ROW acquisition (see Figure 3). Since the resultant border width is less than the required 25.0 m (82 ft), a design variation will be required to pursue this typical section.

Providing a loop ramp in the northwest quadrant of the I-75/ S.R. 52 interchange would eliminate the conflict of the westbound to southbound left-turn movement with the eastbound through movement. The loop ramp would also eliminate the conflict of the westbound to southbound left-turn movement with the eastbound to southbound right-turn movement, as



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I-75 (S.R. 93)

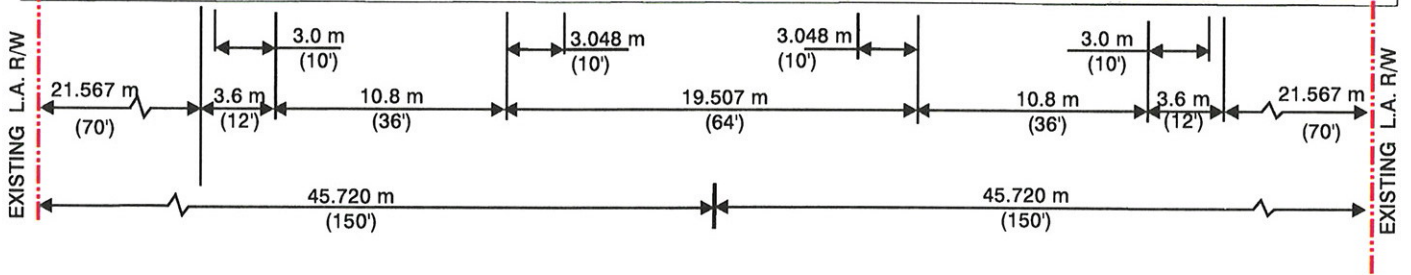
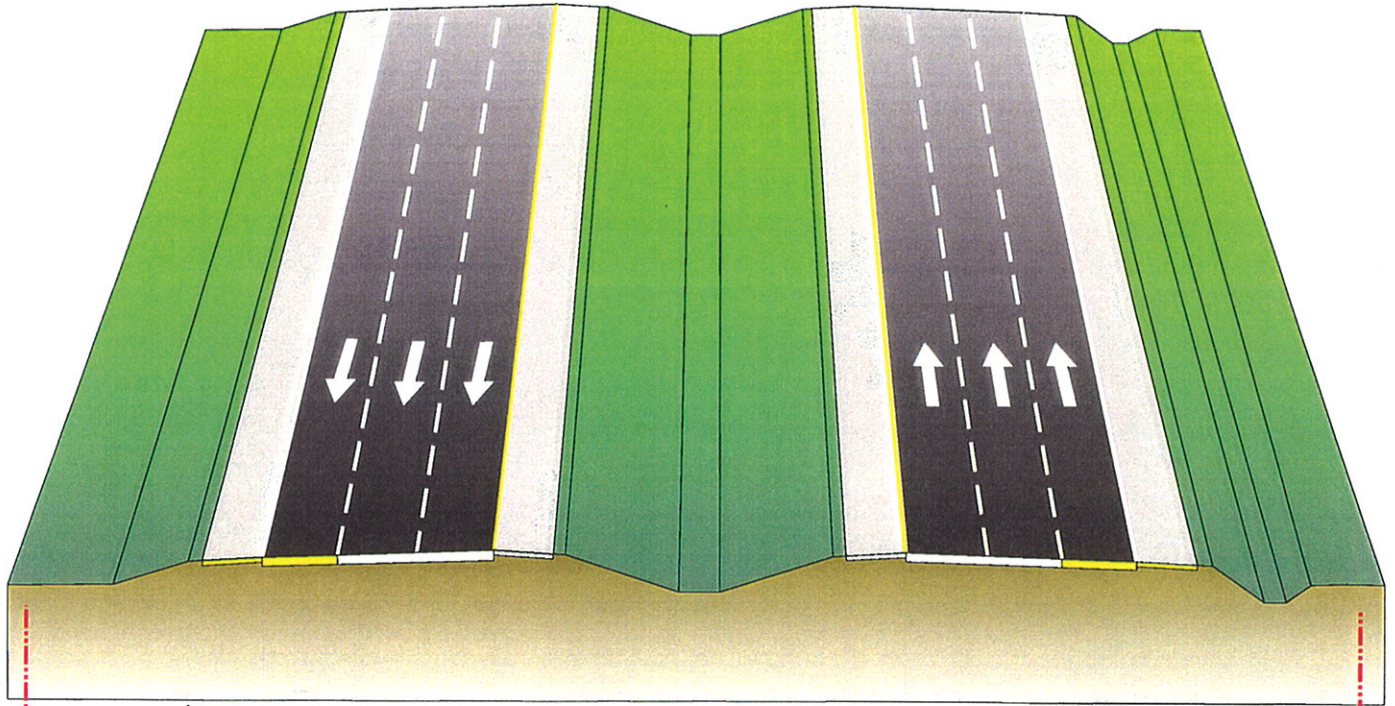
PD&E STUDY

From South of S.R. 56 to North of S.R. 52  
Pasco County, Florida

**EXISTING I-75 ROADWAY  
TYPICAL SECTION**

WPI Seg No. 258736 1  
FAP No. NH-75-1(91)275

FIGURE 2



DESIGN SPEED: 110 km/h (70 mph)

**LEGEND**

Denotes Widening

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**I-75 (S.R. 93)**

**PD&E STUDY**

From South of S.R. 56 to North of S.R. 52  
Pasco County, Florida

**PROPOSED TYPICAL SECTION**

WPI Seg No. 258736 1  
FAP No. NH-75-1(91)275

FIGURE 3

these movements merge together on the southbound entrance ramp to I-75. The implementation of the loop ramp would reduce the signal operation from the existing three-phase to a two-phase signal operation, thus increasing the capacity of the intersection on the west side of the interchange. The loop ramp would ensure that the interchange could accommodate heavier traffic volumes while maintaining an acceptable LOS. Significantly higher traffic volumes, especially for the westbound to southbound movement, could be accommodated at the interchange. This would reduce queuing on the west side of the interchange and prevent potential queues from extending into the east side of the interchange.

The Interchange Modification Report was reviewed and preliminarily accepted by FHWA. The recommended loop ramp alternative was selected as the most cost effective alternative which meets the objectives of the IMR. This alternative accommodates future travel demand, maintains an acceptable level of service, and by eliminating the need for an additional interstate access location, does not degrade the operations of the interstate mainline. Queuing on the northbound exit ramp will also be reduced, thus improving safety along the interstate mainline. This loop ramp alternative also provides for heavy vehicles safe and easy access to adjacent land uses and to the southbound interstate. The recommended loop ramp alternative requires the least amount of ROW, has the least potential of affecting the surrounding environment, and improves traffic operations for local cross streets and cross street intersections.

Increasing capacity at the S.R. 52 interchange is necessary because it will address the anticipated future development in the north and eastern areas of Pasco County.

#### **1.4 Project Segmentation**

Project segmentation is used in this type of study in order to effectively assess and compare the impacts of each alternative in different geographical areas within the project. After

considering the interchange locations and type and age of existing structures along I-75 the project was divided into four study segments as follows:

- Segment A: South of Cypress Creek to north of the proposed S.R. 56 interchange.
- Segment B: North of the proposed S.R. 56 interchange to north of the S.R. 54 interchange.
- Segment C: North of the S.R. 54 interchange to north of Overpass Road.
- Segment D: North of Overpass Road to north of the S.R. 52 interchange.

## 2.0 METHODOLOGY

All noise levels generated for this study were produced using the FHWA STAMINA 2.0 (Florida Version STAMINA 2.1) traffic noise prediction model. All noise levels, measured and predicted, are expressed in decibels (dB) on the "A"-scale (dBA). This scale most closely approximates the response characteristics of the human ear for low level sound. All noise levels are reported as hourly equivalent noise levels ( $L_{\text{aeq1h}}$ ). The  $L_{\text{aeq1h}}$  is defined as the equivalent steady-state sound level that, in a given hourly period, contains the same acoustic energy as the time-varying sound level for the same hourly period.

The traffic data utilized for input into the traffic noise prediction computer model was developed from the Revised Draft Traffic Report<sup>4</sup>, October 1997 and the Level of Service (LOS) tables from the Highway Capacity Manual, Special Report 209<sup>5</sup> in accordance with FDOT, District 7 standard procedures. For modeling purposes the lesser of the demand traffic volume or LOS C volume was used. The traffic segments and their corresponding volumes and posted speeds are shown in Table 1. A peak hour factor (K) of 9.18% was used for existing, No-Project and Build traffic to determine hourly traffic volumes from Annual Average Daily Traffic (AADT) figures. The percent of trucks used differed for the various scenarios and ranged from 0.33% to 1.53% for medium trucks and 6.67% to 9.22% for heavy trucks, (T = 7.0% to 10.45%). The traffic data sheets are included in Appendix A.

**Table 1  
Traffic Data**

<b>Traffic Segment</b>	<b>Existing 1997 AADT</b>	<b>KM/H (MPH) (Posted)</b>	<b>No-Project 2020 AADT</b>	<b>KM/H (MPH)</b>	<b>Build 2020 AADT</b>	<b>KM/H (MPH)</b>
Segment A from Cypress Creek bridge to S.R. 56	58,600 (D)	110(70)	73,400 (C)	110(70)	97,900 (C)	110(70)
Segment B from S.R. 56 to S.R. 54	48,800 (C)	110(70)	48,800 (C)	110(70)	73,400 (C)	110(70)
Segment C from S.R. 54 to Overpass Road	48,800 (C)	110(70)	48,800 (C)	110(70)	73,400 (C)	110(70)
Segment D from Overpass Road to S.R. 52	48,800 (C)	110(70)	48,800 (C)	110(70)	73,400 (C)	110(70)

(C) Denotes LOS C traffic  
(D) Denotes demand traffic

### 3.0 TRAFFIC NOISE ANALYSIS

#### 3.1 Noise Sensitive Sites

A noise sensitive site is any property (owner occupied, rented, or leased) where frequent exterior human use occurs and where a lowered noise level would be of benefit. The FHWA has established noise levels at which noise abatement must be considered. These noise levels are referred to as the Noise Abatement Criteria (NAC). As shown in Table 2, the NAC vary according to the activity category. Noise abatement measures were considered when future predicted traffic noise levels "approached" or exceeded the NAC. The FDOT considers the term "approach" to mean within 1 dBA of the FHWA criteria.



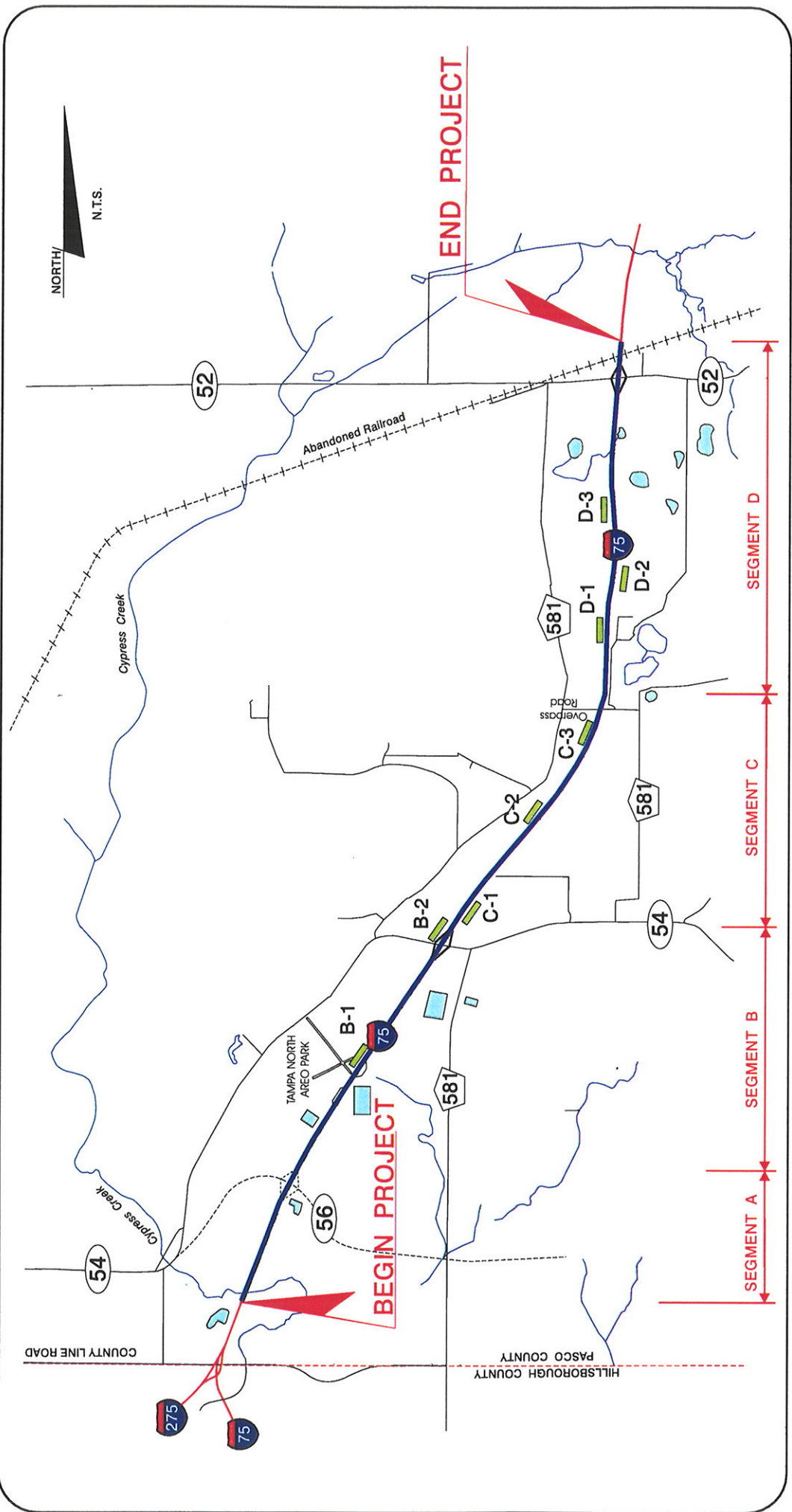
**Table 2  
FHWA Noise Abatement Criteria**

<b>Activity Category</b>	<b>Leq (h)</b>	<b>Description of Land Use Activity Category</b>
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Developed lands, properties, or activities not included in Categories A or B.
D	--	Undeveloped lands.
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Source: 23 CFR Part 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise<sup>6</sup>, Federal Highway Administration, U.S. Department of Transportation, as amended.

The existing land uses along the proposed project corridor are primarily agricultural, residential, commercial and industrial. The residential uses located along the project corridor are classified as FHWA Land Use Category B. Noise study areas were established by reviewing the proximity of noise sensitive sites to each other and grouping the sites (e.g., a neighborhood with a continuous row of residences adjacent to I-75, etc.) The noise sensitive areas are identified as follows. Figure 4 denotes the location of these areas.

- Segment B, Area 1 (B-1) includes one single family residence located on the west side of I-75 at the Tampa North Aero Park (formerly Topp of Tampa Airport).
- Segment B, Area 2 (B-2) includes two motels with outdoor swimming pools located in the northwest quadrant of the interchange at S.R. 54.



**FLORIDA DEPARTMENT OF TRANSPORTATION**

**I-75 (S.R. 93)  
PD&E STUDY**

From South of S.R. 56 to North of S.R. 52  
Pasco County, Florida

**NOISE SENSITIVE AREAS**

**LEGEND**

- Project Limits
- River / Water
- Railroad
- State Road Numbers
- County Road Numbers
- Proposed Roadway
- Noise Sensitive Areas
- Segment - Area

- Segment C, Area 1 (C-1) includes two single family residences located on the east side of I-75 approximately 1.5 km (1.0 mi) north of S.R. 54.
- Segment C, Area 2 (C-2) includes the shuffleboard court, swimming pool and three permanently fixed travel trailers at Quail Run Campground located on the west side of I-75 approximately 2.9 km (1.8 mi) north of S.R. 54.
- Segment C, Area 3 (C-3) includes 14 single family residences in Williams Acres located on the west side of I-75 approximately 4.5 km (2.8 mi) north of S.R. 54.
- Segment D, Area 1 (D-1) includes four single family residences located on the west side of I-75 approximately 4.4 km (2.7 mi) south of S.R. 52.
- Segment D, Area 2 (D-2) includes 13 single family residences located on the east side of I-75 approximately 4.4 km (2.7 mi) south of S.R. 52.
- Segment D, Area 3 (D-3) includes two single family residences located on the west side of I-75 approximately 1.1 km (0.68 mi) south of S.R. 52.

Receiver locations are shown in the Appendix B.

Pasco County has developed a 2010 Land Use Plan Map in their Comprehensive Plan to provide guidance for future planning. The designated land uses on the 2010 Land Use Plan Map for the I-75 project corridor indicate that future land uses will follow the established trends of the existing land uses in the study area. In the southern portion of the project, the areas adjacent to the roadway are designated as low density residential, industrial, and mixed use, which allows commercial, light industrial, corporate parks, hotels and residential uses. It is expected that the new S.R. 56 interchange area will transition to mixed land uses upon construction of the interchange. Future land use designations for the northern segment of the project, from S.R. 54 north, are low density residential, major public/semi public use, mixed

use and agricultural. These land use classifications have been determined to be appropriate for the designated areas based on existing development patterns, the availability of public facilities, and continuing market demands.

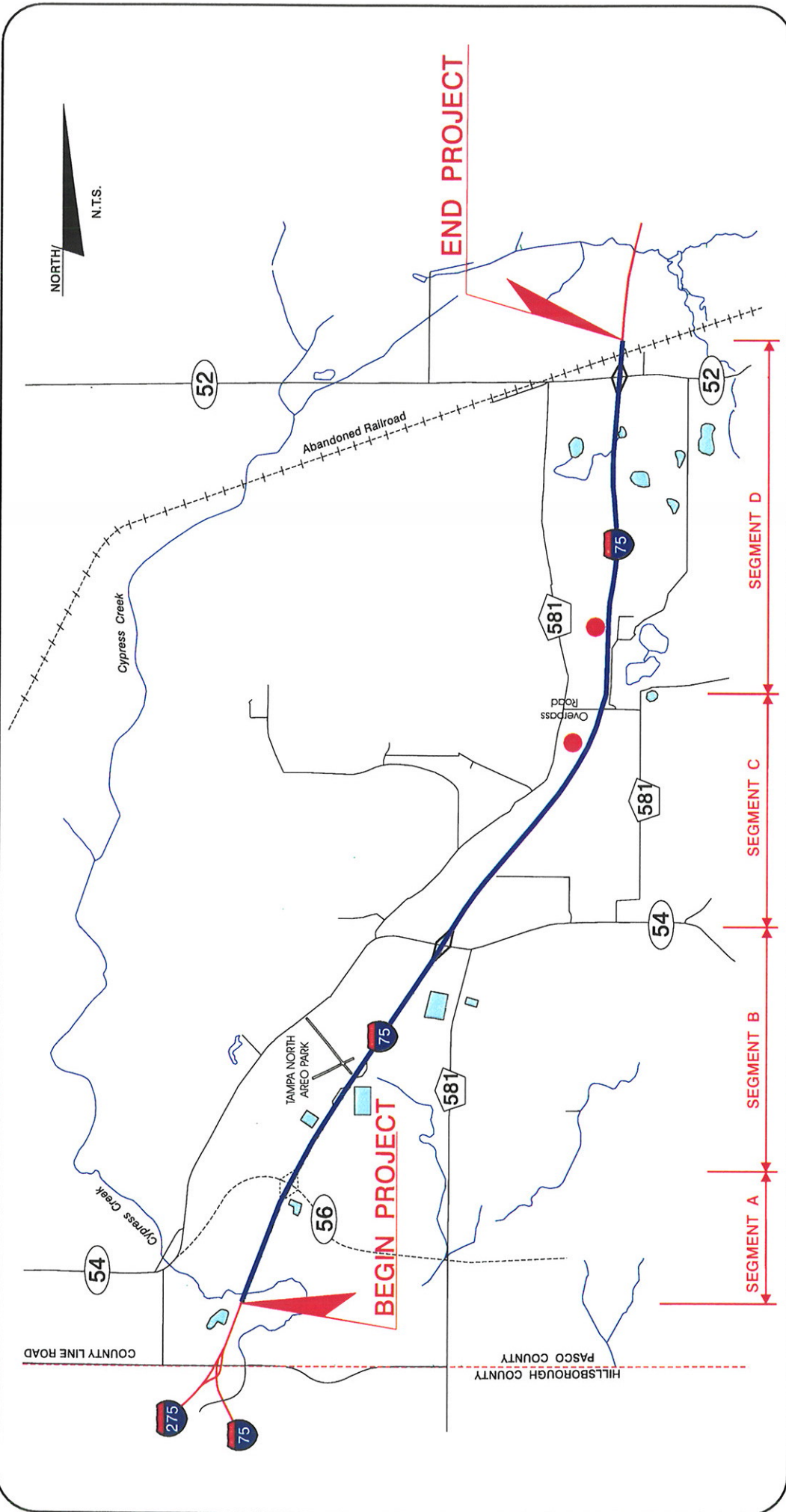
As noted, the local planning agencies will receive copies of this report to be used for planning compatible land uses in this area.

### **3.2 Measured Noise Levels**

Before using STAMINA to predict noise levels at a given location, its accuracy must be verified, or validated. To do this, existing traffic noise levels are measured in the field and compared against STAMINA output. Input parameters necessary to run the STAMINA model include traffic volumes and speeds, vehicle type, roadway geometry, receiver location and height, type of propagation (hard site versus soft site), variations in terrain between the noise source and receiver, and the presence of any barriers or buffers. Since the noise propagation environment varies from place to place – due to changes in traffic volumes, roadway geometry, terrain, etc. – validations should be attempted at places where such changes are noted.

Field measurements were taken in accordance with the FHWA Measurement of Highway-Related Noise: Final Report<sup>7</sup>. Each field measurement was obtained using a Metrosonics 308-dBA dosimeter. The dosimeter was calibrated before and after each monitoring period using a Metrosonics Sound Level Calibrator. Speeds were obtained with a MPH, model K-15, K-band hand-held radar gun.

To validate the STAMINA model for this project, field measurements were taken at two locations along the project corridor (See Figure 5). Site selection for the field measurements was based on a location where a representative sampling of free-flow traffic could be obtained and, when possible, where noise sensitive sites were located. Vehicle counts, vehicle classifications, and speeds were also recorded. Table 3 presents the field measurements and the validation results using the FDOT STAMINA computer model.



**FLORIDA DEPARTMENT OF TRANSPORTATION**

**I-75 (S.R. 93)  
PD&E STUDY**

From South of S.R. 56 to North of S.R. 52  
Pasco County, Florida

**NOISE VALIDATION SITES**

**LEGEND**

- Project Limits
- River / Water
- Railroad
- State Road Numbers
- County Road Numbers
- Proposed Roadway
- Validation Site

The noise prediction computer model is approved for use if measured and predicted noise levels are within the FDOT tolerance standard of 3 dBA. As shown in Table 3, the ability of the STAMINA computer model to accurately predict noise levels for this project was confirmed as the levels are within the FDOT tolerance standard. The traffic data and the printouts of the field monitoring results are provided in Appendix C of this report.

**Table 3  
Validation**

Location	Time of Day	Field Measure	Computer Validation	Difference
Segment C - Quail Run RV Park - west of I-75, north of S.R. 54	9:50 AM	74.9 dBA	74.5 dBA	0.4 dBA
Segment D - Single family residence - west of I-75, south of S.R. 52	12:00 PM	75.7 dBA	76.4 dBA	0.7 dBA

### 3.3 Predicted Noise Levels

The 66 dBA noise contour for the Preferred Alternative was estimated using the STAMINA computer model and previously discussed traffic volumes and speed data from the project's Traffic Report. The 66 dBA contour, which delineates points of equal noise level, does not consider any shielding of noise provided by structures between the receiver and the roadway. Additionally, the noise contours do not account for traffic noise from sources other than I-75 (e.g. frontage roads for ramps). The 66 dBA noise contour is included in order to identify those noise sensitive sites for which noise abatement considerations are warranted and for use by local officials in planning noise compatible future land uses adjacent to the proposed facility. The noise level contours are provided in Table 4. All distances reported are measured from the proposed centerline of I-75.

**Table 4  
66 dBA Noise Contour for Design Year Build Conditions\***

Segment	2020 Build m(ft)
A	**
B	140 m (459 ft)
C	153 m (502 ft)
D	150 m (492 ft)

\* All distances are measured from the center line of the roadway.

\*\* Noise contour will be addressed as part of the S.R. 56 and I-275 widening projects.

**Table 5  
Number of Noise Sensitive  
Sites Within the 66 dBA Contour  
for the Preferred Alternative**

Segment	2020 Preferred Alternative
A	0
B	3
C	17
D	12
<b>Total</b>	<b>32</b>

Table 5 shows the number of noise sensitive sites expected to approach or exceed NAC for each alternative using existing and future land use information and the STAMINA generated noise contours.

In addition to approaching or exceeding the NAC, sensitive sites are considered affected if the Preferred Alternative is predicted to cause a substantial increase in noise level. The FDOT defines the term “substantial increase” as 15 or more dBA above the existing noise

level as a direct result of the transportation improvement project. As indicated in Table 6, the range of increase in predicted noise levels from the Existing condition to the Preferred Build condition is generally 1.3 - 1.7 dBA, therefore, there are no effects due to substantial increase. The range of increase in predicted noise levels from the No-Project condition to the Preferred Build condition is generally 1.3 - 2.0 dBA.

### **3.4 Noise Analysis**

Based on the noise contours, a review of the land use data, proximity of noise sensitive sites to I-75 and field verification of noise sensitive site locations, 45 noise sensitive sites were modeled. The noise sensitive sites include scattered residential dwellings, one residential subdivision, two motels and an RV park. In the RV park - Quail Run Campground - the pool area, shuffleboard area, and those travel trailers which are permanently installed were counted as noise sensitive sites. (At the initiation of the project, it was determined that in situations where an RV park has some permanent residents, some temporary or seasonal residents, and some visitors, only those structures which are fixed should be counted as noise sensitive receivers.) Discussions with the owner indicated that most of the rental spaces in the park are occupied on a short-term basis by temporary residents who drive their RV or travel trailer in and out each year.

A description of the noise sensitive sites, their locations, and predicted noise levels are noted in Table 6. All predictions are for exterior uses, except for sites with no evidence of outdoor activity or sites necessitating interior readings, such as motels. At these locations a reduction of 25 dBA is assumed to occur from structural attenuation in accordance with FHWA's Highway Traffic Noise Analysis and Abatement<sup>8</sup>, Policy and Guidance, June 1995.



**Table 6  
Existing and Future Noise Levels (dBA)  
For Noise Sensitive Sites**

Rec. #	Seg. #	Area #	Location	Existing 1997	2020 No-Project	2020 Build
1	B	1	Residence at Tampa North Aero Park	65.9	65.6	67.4
1	B	2	Swimming pool at Master's Inn	66.4	66.4	67.7
2I*	B	2	Master's Inn (inside)	42.0	41.9	43.5
3	B	2	Swimming pool at Comfort Inn	66.4	66.1	67.9
4I*	B	2	Comfort Inn (inside)	42.5	42.2	44.0
1	C	1	Residence east side of I-75, 1.5 km north of S.R. 54	63.6	63.3	65.1
2	C	1	Residence east side of I-75, 1.5 km north of S.R. 54	63.1	62.8	64.6
1	C	2	Swimming pool at Quail Run RV Park	68.6	68.3	70.3
2	C	2	Shuffleboard at Quail Run RV Park	69.6	69.3	71.3
3	C	2	Residence at Quail Run RV Park	65.7	65.4	67.3
4	C	2	Residence at Quail Run RV Park	64.9	64.6	66.5
5	C	2	Residence at Quail Run RV Park	64.7	64.4	66.3
1	C	3	Residence at Williams Acres	66.0	65.7	67.5
2	C	3	Residence at Williams Acres	69.4	69.1	71.0
3	C	3	Residence at Williams Acres	67.3	67.0	68.9
4	C	3	Residence at Williams Acres	67.3	67.0	68.8
5	C	3	Residence at Williams Acres	67.0	66.7	68.6
6	C	3	Residence at Williams Acres	64.9	64.6	66.4
7	C	3	Residence at Williams Acres	67.5	67.2	69.0

**Table 6**  
**Existing and Future Noise Levels (dBA)**  
**For Noise Sensitive Sites (cont.)**

Rec. #	Seg. #	Area #	Location	Existing 1997	2020 No-Project	2020 Build
8	C	3	Residence at Williams Acres	69.9	69.6	71.5
9	C	3	Residence at Williams Acres	68.0	67.7	69.6
10	C	3	Residence at Williams Acres	64.3	64.0	65.8
11	C	3	Residence at Williams Acres	67.9	67.6	69.5
12	C	3	Residence at Williams Acres	67.2	66.9	68.7
13	C	3	Residence at Williams Acres	66.3	66.0	67.8
14	C	3	Residence at Williams Acres	64.1	63.8	65.6
1	D	1	Residence west of I-75 and 4.4 km south of S.R. 52	68.5	68.2	70.1
2	D	1	Residence west of I-75 and 4.4 km south of S.R. 52	65.6	65.4	67.2
3	D	1	Residence west of I-75 and 4.4 km south of S.R. 52	64.8	64.5	66.4
4	D	1	Residence west of I-75 and 4.4 km south of S.R. 52	64.0	63.7	65.5
1	D	2	Residence east of I-75 and 4.4 km south of S.R. 52	66.1	65.8	67.6
2	D	2	Residence east of I-75 and 4.4 km south of S.R. 52	66.2	65.9	67.7
3	D	2	Residence east of I-75 and 4.4 km south of S.R. 52	67.2	66.9	68.7
4	D	2	Residence east of I-75 and 4.4 km south of S.R. 52	66.6	66.3	68.1

**Table 6**  
**Existing and Future Noise Levels (dBA)**  
**For Noise Sensitive Sites (cont.)**

Rec. #	Seg. #	Area #	Location	Existing 1997	2020 No-Project	2020 Build
5	D	2	Residence east of I-75 and 4.4 km south of S.R. 52	65.6	65.3	67.1
6	D	2	Residence east of I-75 and 4.4 km south of S.R. 52	67.9	67.6	69.5
7	D	2	Residence east of I-75 and 4.4 km south of S.R. 52	68.2	67.9	69.7
8	D	2	Residence east of I-75 and 4.4 km south of S.R. 52	68.7	68.4	70.3
9	D	2	Residence east of I-75 and 4.4 km south of S.R. 52	63.7	63.4	65.2
10	D	2	Residence east of I-75 and 4.4 km south of S.R. 52	61.8	61.5	63.3
11	D	2	Residence east of I-75 and 4.4 km south of S.R. 52	62.9	62.6	64.4
12	D	2	Residence east of I-75 and 4.4 km south of S.R. 52	62.1	61.8	63.6
13	D	2	Residence east of I-75 and 4.4 km south of S.R. 52	61.5	61.2	63.0
1	D	3	Residence west of I-75 and 1.1 km south of S.R. 52	62.2	61.9	63.7
2	D	3	Residence west of I-75 and 1.1 km south of S.R. 52	65.0	64.7	66.5

\* "I" denotes interior noise levels. Readings are reduced by 25 dBA to account for structural attenuation.

As shown in the above referenced table, the 2020 No-Project sound levels are less than the existing. This is due to a decreased truck factor in the 2020 No-Project design year.

Table 6 indicates the worst case noise levels at each noise sensitive site for the existing facility in 1997; the existing facility in 2020 under the No-Project scenario and; the proposed facility in 2020 for the Preferred Alternative. A total of 32 noise sensitive sites are predicted to approach or exceed the NAC for the Preferred Alternative.

### **3.5 Noise Abatement Techniques**

As stipulated by 23 CFR Part 772, the FHWA requires that noise abatement measures be evaluated if the noise level at a sensitive site approaches or exceeds the NAC. Therefore, abatement was evaluated for the 32 noise sensitive sites affected by traffic noise. Abatement measures considered include traffic system management, alignment modifications, property acquisition, land use controls and noise barriers.

#### **3.5.1 Traffic System Management Measures**

Traffic system management measures that limit motor vehicle speeds and reduce traffic volumes can be used to abate traffic noise. However, these measures also conflict with the purpose of providing a facility that can accommodate forecasted traffic volumes. For example, a substantial speed reduction on I-75 would lower traffic noise levels. However, the capacity of the roadway to handle traffic would also be reduced. Therefore, reducing traffic speeds and/or volumes is inconsistent with the goal of improving the capacity of the roadway.

Measures which prohibit truck traffic on roadways can also be effective noise mitigation measures. However, I-75 is a major limited access facility providing for the movement of goods for both intra- and interstate commerce. Therefore, prohibiting trucks on the roadway would put an unreasonable hardship on the intra- and interstate commerce industry. Therefore, traffic system management techniques are not considered reasonable abatement measures.

### **3.5.2 Alignment Modifications**

Alignment modification generally involves orientating and/or siting the roadway at sufficient distances from noise sensitive areas so as to minimize traffic noise. Since this project involves lane additions to the existing roadway, the existing profiles and alignment dictate the proposed horizontal and vertical alignment with project costs and detrimental effects on land use minimized by staying within the existing corridor. An alignment modification that could provide a substantial noise reduction is, therefore, not a feasible or reasonable measure.

### **3.5.3 Property Acquisition**

Noise sensitive sites are scattered along the length of the project and the cost of acquiring sufficient property to provide buffer zones for these sites would be excessive. Therefore, it is not reasonable to consider property acquisition as an effective noise abatement technique for this project.

### **3.5.4 Land Use Controls**

Land use controls can be used to minimize noise sensitive sites that may be affected by traffic noise. Within the study area, properties adjacent to I-75 are minimally developed. Information provided in this report can be used by local planning officials as a guide to minimize development of noise sensitive land uses in proximity to I-75.

### **3.5.5 Noise Barriers**

Noise barriers reduce noise levels by blocking the sound path between a roadway and noise sensitive sites. To be effective in reducing traffic noise, a noise barrier must be relatively long, continuous (with no intermittent openings), and sufficiently high enough to provide the necessary reduction in noise levels. Noise barriers are most often used on high speed, limited access facilities, such as I-75, where noise levels are high and there is adequate space for continuously long and sufficiently high barriers.

In order for a barrier to be considered feasible and economically reasonable it must meet the following minimum conditions:

1. Provide a minimum insertion loss (I.L.) (noise reduction) of at least 5 dBA with a design goal of 10 dBA or more.
2. Cost must not exceed \$30,000 per benefitted receiver unless a higher level of expenditure can be justified by other circumstances.

However, other important factors such as community desires, adjacent land uses, safety and barrier constructability and maintenance also play important roles. These criteria are evaluated more closely during the engineering design phase of the project.

### **3.6 Noise Barrier Analysis**

In order to analyze the effectiveness of noise barriers, the STAMINA/OPTIMA computer program was utilized. Based on an examination of noise sensitive sites affected by traffic noise, noise barriers were evaluated at four locations with all modeled barriers located on the proposed right-of-way (ROW) line.

The following section discusses the feasibility and reasonableness of providing noise barriers at the affected noise sensitive sites.

#### **Quail Run Campground (Segment C, Area 2)**

Within this campground, one swimming pool, one shuffleboard court and three travel trailers which are permanently installed are predicted to experience noise levels that approach or exceed the NAC in year 2020. A noise barrier 384 m (1260 ft) long and 5.2 m (17 ft) high would provide a 5 dBA reduction to five noise sensitive sites at a cost of \$85,680 per sensitive site. This is the lowest cost per benefitted site that could be achieved. Because of the distance from the roadway to the noise sensitive sites and the low density of noise sensitive sites ( which includes the permanently fixed travel trailers), constructing a noise

barrier to reduce noise levels at this location is not considered a cost reasonable abatement measure.

### **Residences at Williams Acres (Segment C, Area 3)**

Within this neighborhood, 12 residences are predicted to experience noise levels that approach or exceed the NAC in year 2020. A noise barrier 520 m (1706 ft) long and 5.5 m (18 ft) high would provide a 5 dBA reduction to twelve residences at a cost of \$51,180 per benefited residence. This is the lowest cost per benefited residence that could be achieved. Because of the distance from the roadway to the noise sensitive sites and the low density of noise sensitive sites, constructing a noise barrier to reduce noise levels at this location is not considered a cost reasonable abatement measure.

### **Isolated Noise Sensitive Sites (Segment B, Area 1; Segment B Area 2; and Segment D, Area 1)**

Typically, noise barriers are not cost reasonable for isolated residences. The three noise sensitive areas listed above were reviewed to determine which area would be best suited for a noise barrier. Since the residence in Segment D, Area 1, is in closest proximity to I-75, this site was selected for examining the feasibility and cost reasonableness of providing a noise barrier for an isolated noise sensitive site. A noise barrier 162 m (531 ft) long and 5.2 m (17 ft) high would provide a 5 dBA reduction at a cost of \$180,540. This was the lowest cost that could be achieved. Because of the distance from the roadway to the noise sensitive site, constructing a noise barrier to reduce noise levels at this location is not considered to be a cost reasonable abatement measure. Likewise, providing a noise barrier at the other isolated noise sensitive sites (swimming pools at the Master's Inn and Comfort Inn; residence at Tampa North Aero Park) would not be cost reasonable.

### **Residences west of I-75 and 4.4 km south of S.R. 52 (Segment D, Area 1)**

Within this area, two residences are predicted to experience noise levels that approach or exceed the NAC in year 2020. A noise barrier 350 m (1148 ft) long and 5.5 m (18 ft) high would provide a 5 dBA reduction to two residences at a cost of \$206,640 per benefited residence. This is the lowest cost per benefited residence that could be achieved. Because of the distance from the roadway to the noise sensitive sites and the low density of noise sensitive sites, constructing a noise barrier to reduce noise levels at this location is not considered a cost reasonable abatement measure.

### **Residences east of I-75 and 4.4 km south of S.R. 52 (Segment D, Area 2)**

Within this neighborhood, 8 residences are predicted to experience noise levels that approach or exceed the NAC in year 2020. A noise barrier 547 m (1795 ft) long and 5.2 m (17 ft) high would provide a 5 dBA reduction to two residences at a cost of \$76,288 per benefited residence. This was the lowest cost per benefited residence that could be achieved. Because of the distance from the roadway to the noise sensitive sites and the low density of noise sensitive sites, constructing a noise barrier to reduce noise levels at this location is not considered a cost reasonable abatement measure.

### **Residence west of I-75 and 1.1 km south of S.R. 52 (Segment D, Area 3)**

Within this area, a single residence is predicted to experience noise levels that approach the NAC in Year 2000. Additional residences are anticipated in this area and the exact location and number of noise sensitive sites are being determined at this time. Those noise sensitive sites which have received a building permit prior to the LDA date will be addressed during subsequent design, ROW and construction phase reevaluations. Those noise sensitive sites which receive a building permit after the LDA date will not be considered for future noise abatement reevaluation.



#### **4.0 CONSTRUCTION NOISE AND VIBRATION**

During the construction phase of the proposed project, short-term noise effects may occur as a result of both stationary and mobile construction equipment. The construction noise will be temporary at any one location.

Construction noise will be controlled by adherence to the controls listed in the most recent edition of the FDOT Standard Specifications for Road and Bridge Construction<sup>9</sup>.

Specific noise problems that may arise during construction of the project will be addressed by the Construction Engineer in cooperation with the appropriate FDOT District Environmental Specialist.

Using the FDOT's partial listing of vibration sensitive sites, only residential sites were identified as potentially affected by construction vibration. During final design, potential vibration impacts caused by construction will be reanalyzed, any local noise/vibration ordinances will be identified and provisions will be added to the project's construction specifications as needed.

#### **5.0 PUBLIC INVOLVEMENT**

An ongoing public involvement process is being carried out during the PD&E Study.

Coordination with local agencies and officials is also ongoing. The appropriate local planning authorities will be provided with a copy of this report which may be used during site planning of this area to avoid locating noise sensitive land uses within the 66 dBA noise contour.

## 6.0 REFERENCES

1. Pasco County Comprehensive Plan; Pasco County Planning Department; Pasco County, Florida; December 1995.
2. Pasco County Metropolitan Planning Organization Adopted 2015 Cost Affordable Transportation Plan; Pasco County Metropolitan Planning Organization; New Port Richey, Florida; December 18, 1995.
3. Pasco County Metropolitan Planning Organization 2020 Cost Affordable Transportation Plan; Pasco County Metropolitan Planning Organization; New Port Richey, Florida.
4. Revised Draft Traffic Report; Post, Buckley, Schuh & Jernigan, Inc., prepared for Florida Department of Transportation, District Seven; Tampa, Florida; October 1997.
5. Highway Capacity Manual, Special Report 209.
6. Title 23 CFR, Part 772, Federal Highway Administration, U.S. Department of Transportation, Procedures for Abatement of Highway Traffic Noise and Construction Noise, April 1, 1992 Edition.
7. Federal Highway Administration Measurement of Highway-Related Noise: Final Report. May 1996.
8. Federal Highway Administration Highway Traffic Noise Analysis and Abatement, Policy and Guidance, June 1995.
9. Florida Department of Transportation, Standard Specifications for Road and Bridge Construction, 2000.

## **APPENDICES**

**Appendix A: Existing and Build Traffic Data**

**Appendix B: Receiver Locations**

**Appendix C: Validation**

**Appendix A**

**Existing and Build Traffic Data**

**TRAFFIC DATA FOR NOISE STUDIES  
FDOT DISTRICT 7**

State Project Number(s): 14140-1423

Work Project Number(s): 7147619

Federal Aid Number(s): NH-75-1(91)275

Project Description: I-75 from south of S.R. 56 to north of S.R. 52

Segment Description: Segment A, south of S.R. 56 (Cypress Creek) to S.R. 56

**Existing Facility:**

Year:	<u>1997</u>				K =	<u>9.18</u>	%
*ADT					D =	<u>54.46</u>	%
LOS C	<u>73,400</u>				T =	<u>19.33</u>	% for 24 Hours
Demand	<u>58,600</u>				T =	<u>9.67</u>	% Design Hour
Auto Speed	<u>70</u>	MT Speed	<u>70</u>	HT Speed	<u>70</u>	MT =	<u>0.45</u> % DHV
Posted Speed	<u>70</u> mph					HT =	<u>9.22</u> % DHV
	<u>112.651</u> kmh						

**Without Project (design year):**

Year:	<u>2020</u>				K =	<u>9.18</u>	%
*ADT					D =	<u>54.46</u>	%
LOS C	<u>73,400</u>				T =	<u>14</u>	% for 24 Hours
Demand	<u>118,300</u>				T =	<u>7</u>	% Design Hour
Auto Speed	<u>70</u>	MT Speed	<u>70</u>	HT Speed	<u>70</u>	MT =	<u>0.33</u> % DHV
Posted Speed	<u>70</u> mph					HT =	<u>6.67</u> % DHV
	<u>112.651</u> kmh						

**With Project (design year):**

Year:	<u>2020</u>				K =	<u>9.18</u>	%
*ADT					D =	<u>54.46</u>	%
LOS C	<u>97,900</u>				T =	<u>14</u>	% for 24 Hours
Demand	<u>118,300</u>				T =	<u>7</u>	% Design Hour
Auto Speed	<u>70</u>	MT Speed	<u>70</u>	HT Speed	<u>70</u>	MT =	<u>0.33</u> % DHV
Posted Speed	<u>70</u> mph					HT =	<u>6.67</u> % DHV
	<u>112.651</u> kmh						

\* ADT = Capacity @ LOS or Demand  
(whichever is less)

**TRAFFIC DATA FOR NOISE STUDIES  
FDOT DISTRICT 7**

State Project Number(s): 14140-1423

Work Project Number(s): 7147619

Federal Aid Number(s): NH-75-1(91)275

Project Description: I-75 from south of S.R. 56 to north of S.R. 52

Segment Description: Segment B, S.R. 56 to S.R. 54

**Existing Facility:**

Year:	<u>1997</u>				K =	<u>9.18</u>	%
*ADT					D =	<u>54.46</u>	%
LOS C	<u>48,800</u>				T =	<u>19.33</u>	% for 24 Hours
Demand	<u>58,600</u>				T =	<u>9.67</u>	% Design Hour
Auto Speed	<u>70</u>	MT Speed	<u>70</u>	HT Speed	<u>70</u>	MT =	<u>0.45</u> % DHV
Posted Speed	<u>70</u> mph					HT =	<u>9.22</u> % DHV
	<u>112.651</u> kmh						

**Without Project (design year):**

Year:	<u>2020</u>				K =	<u>9.18</u>	%
*ADT					D =	<u>54.46</u>	%
LOS C	<u>48,800</u>				T =	<u>15</u>	% for 24 Hours
Demand	<u>86,900</u>				T =	<u>7.5</u>	% Design Hour
Auto Speed	<u>70</u>	MT Speed	<u>70</u>	HT Speed	<u>70</u>	MT =	<u>0.37</u> % DHV
Posted Speed	<u>70</u> mph					HT =	<u>7.13</u> % DHV
	<u>112.651</u> kmh						

**With Project (design year):**

Year:	<u>2020</u>				K =	<u>9.18</u>	%
*ADT					D =	<u>54.46</u>	%
LOS C	<u>73,400</u>				T =	<u>15</u>	% for 24 Hours
Demand	<u>86,900</u>				T =	<u>7.5</u>	% Design Hour
Auto Speed	<u>70</u>	MT Speed	<u>70</u>	HT Speed	<u>70</u>	MT =	<u>0.37</u> % DHV
Posted Speed	<u>70</u> mph					HT =	<u>7.13</u> % DHV
	<u>112.651</u> kmh						

\* ADT = Capacity @ LOS or Demand  
(whichever is less)

**TRAFFIC DATA FOR NOISE STUDIES  
FDOT DISTRICT 7**

State Project Number(s): 14140-1423

Work Project Number(s): 7147619

Federal Aid Number(s): NH-75-1(91)275

Project Description: I-75 from south of S.R. 56 to north of S.R. 52

Segment Description: Segment B, S.R. 54 west of I-75 interchange

**Existing Facility:**

Year:	<u>1997</u>		K =	<u>9.44</u>	%
*ADT			D =	<u>57</u>	%
LOS C	<u>15,200</u>		T =	<u>6</u>	% for 24 Hours
Demand	<u>16,000</u>		T =	<u>3</u>	% Design Hour
Auto Speed		MT Speed		MT =	<u>2</u> % DHV
Posted Speed	<u>45</u> mph <u>70</u> kmh			HT =	<u>1</u> % DHV

**Without Project (design year):**

Year:	<u>2020</u>		K =	<u>9.44</u>	%
*ADT			D =	<u>57</u>	%
LOS C	<u>33,200</u>		T =	<u>6</u>	% for 24 Hours
Demand	<u>18,200</u>		T =	<u>3</u>	% Design Hour
Auto Speed		MT Speed		MT =	<u>2</u> % DHV
Posted Speed	<u>45</u> mph <u>70</u> kmh			HT =	<u>1</u> % DHV

**With Project (design year):**

Year:	<u>2020</u>		K =	<u>9.44</u>	%
*ADT			D =	<u>57</u>	%
LOS C	<u>33,300</u>		T =	<u>6</u>	% for 24 Hours
Demand	<u>18,200</u>		T =	<u>3</u>	% Design Hour
Auto Speed		MT Speed		MT =	<u>2</u> % DHV
Posted Speed	<u>45</u> mph <u>70</u> kmh			HT =	<u>1</u> % DHV

\* ADT = Capacity @ LOS or Demand  
(whichever is less)

**TRAFFIC DATA FOR NOISE STUDIES  
FDOT DISTRICT 7**

State Project Number(s): 14140-1423

Work Project Number(s): 7147619

Federal Aid Number(s): NH-75-1(91)275

Project Description: I-75 from south of S.R. 56 to north of S.R. 52

Segment Description: Segment C, S.R. 54 to Overpass Road

**Existing Facility:**

Year:	<u>1997</u>				K =	<u>9.18</u>	%
*ADT					D =	<u>54.46</u>	%
LOS C	<u>48,800</u>				T =	<u>20.9</u>	% for 24 Hours
Demand	<u>49,500</u>				T =	<u>10.45</u>	% Design Hour
Auto Speed	<u>70</u>	MT Speed	<u>70</u>	HT Speed	<u>70</u>	MT =	<u>1.53</u> % DHV
Posted Speed	<u>70</u> mph					HT =	<u>8.92</u> % DHV
	<u>112.651</u> kmh						

**Without Project (design year):**

Year:	<u>2020</u>				K =	<u>9.18</u>	%
*ADT					D =	<u>54.46</u>	%
LOS C	<u>48,800</u>				T =	<u>17</u>	% for 24 Hours
Demand	<u>74,900</u>				T =	<u>8.5</u>	% Design Hour
Auto Speed	<u>70</u>	MT Speed	<u>70</u>	HT Speed	<u>70</u>	MT =	<u>1.24</u> % DHV
Posted Speed	<u>70</u> mph					HT =	<u>7.26</u> % DHV
	<u>112.651</u> kmh						

**With Project (design year):**

Year:	<u>2020</u>				K =	<u>9.18</u>	%
*ADT					D =	<u>54.46</u>	%
LOS C	<u>73,400</u>				T =	<u>17</u>	% for 24 Hours
Demand	<u>74,900</u>				T =	<u>8.5</u>	% Design Hour
Auto Speed	<u>70</u>	MT Speed	<u>70</u>	HT Speed	<u>70</u>	MT =	<u>1.24</u> % DHV
Posted Speed	<u>70</u> mph					HT =	<u>7.26</u> % DHV
	<u>112.651</u> kmh						

\* ADT = Capacity @ LOS or Demand  
(whichever is less)



**TRAFFIC DATA FOR NOISE STUDIES  
FDOT DISTRICT 7**

State Project Number(s): 14140-1423

Work Project Number(s): 7147619

Federal Aid Number(s): NH-75-1(91)275

Project Description: I-75 from south of S.R. 56 to north of S.R. 52

Segment Description: Segment D, Overpass Road to S.R. 52

**Existing Facility:**

Year:	<u>1997</u>				K = <u>9.18</u> %	
*ADT					D = <u>54.46</u> %	
LOS C	<u>48,800</u>				T = <u>20.9</u> % for 24 Hours	
Demand	<u>49,500</u>				T = <u>10.45</u> % Design Hour	
Auto Speed	<u>70</u>	MT Speed	<u>70</u>	HT Speed	<u>70</u>	MT = <u>1.53</u> % DHV
Posted Speed	<u>70</u> mph					HT = <u>8.92</u> % DHV
	<u>112.651</u> kmh					

**Without Project (design year):**

Year:	<u>2020</u>				K = <u>9.18</u> %	
*ADT					D = <u>54.46</u> %	
LOS C	<u>48,800</u>				T = <u>17</u> % for 24 Hours	
Demand	<u>74,900</u>				T = <u>8.5</u> % Design Hour	
Auto Speed	<u>70</u>	MT Speed	<u>70</u>	HT Speed	<u>70</u>	MT = <u>1.24</u> % DHV
Posted Speed	<u>70</u> mph					HT = <u>7.26</u> % DHV
	<u>112.651</u> kmh					

**With Project (design year):**

Year:	<u>2020</u>				K = <u>9.18</u> %	
*ADT					D = <u>54.46</u> %	
LOS C	<u>73,400</u>				T = <u>17</u> % for 24 Hours	
Demand	<u>74,900</u>				T = <u>8.5</u> % Design Hour	
Auto Speed	<u>70</u>	MT Speed	<u>70</u>	HT Speed	<u>70</u>	MT = <u>1.24</u> % DHV
Posted Speed	<u>70</u> mph					HT = <u>7.26</u> % DHV
	<u>112.651</u> kmh					

\* ADT = Capacity @ LOS or Demand  
(whichever is less)

**TRAFFIC DATA FOR NOISE STUDIES  
FDOT DISTRICT 7**

State Project Number(s): 14140-1423

Work Project Number(s): 7147619

Federal Aid Number(s): NH-75-1(91)275

Project Description: I-75 from south of S.R. 56 to north of S.R. 52

Segment Description: Segment B, Southbound Exit Ramp at S.R. 54 / I-75 interchange

**Existing Facility:**

Year:	<u>1997</u>		K =	<u>14</u>	%
*ADT			D =	<u>100</u>	%
LOS C	<u>Not Available</u>		T =	<u>6</u>	% for 24 Hours
Demand	<u>2,200</u>		T =	<u>3</u>	% Design Hour
Auto Speed		MT Speed		HT Speed	
			MT =	<u>1</u>	% DHV
Posted Speed	<u>35</u> mph	Estimated based on deficiencies	HT =	<u>2</u>	% DHV
	<u>60</u> kmh				

**Without Project (design year):**

Year:	<u>2020</u>		K =	<u>10</u>	%
*ADT			D =	<u>100</u>	%
LOS C	<u>Not Available</u>		T =	<u>6</u>	% for 24 Hours
Demand	<u>4,800</u>		T =	<u>3</u>	% Design Hour
Auto Speed		MT Speed		HT Speed	
			MT =	<u>1</u>	% DHV
Posted Speed	<u>35</u> mph	Estimated based on deficiencies	HT =	<u>2</u>	% DHV
	<u>60</u> kmh				

**With Project (design year):**

Year:	<u>2020</u>		K =	<u>10</u>	%
*ADT			D =	<u>100</u>	%
LOS C	<u>Not Available</u>		T =	<u>6</u>	% for 24 Hours
Demand	<u>4,800</u>		T =	<u>3</u>	% Design Hour
Auto Speed		MT Speed		HT Speed	
			MT =	<u>1</u>	% DHV
Posted Speed	<u>45</u> mph	Design speed less 5 MPH	HT =	<u>2</u>	% DHV
	<u>70</u> kmh				

\* ADT = Capacity @ LOS or Demand  
(whichever is less)

**TRAFFIC DATA FOR NOISE STUDIES  
FDOT DISTRICT 7**

State Project Number(s): 14140-1423

Work Project Number(s): 7147619

Federal Aid Number(s): NH-75-1(91)275

Project Description: I-75 from south of S.R. 56 to north of S.R. 52

Segment Description: Segment B, Southbound Entrance Ramp at S.R. 54 / I-75 interchange

**Existing Facility:**

Year:	<u>1997</u>		K =	<u>19</u>	%
*ADT			D =	<u>100</u>	%
LOS C	<u>Not Available</u>		T =	<u>6</u>	% for 24 Hours
Demand	<u>6,800</u>		T =	<u>3</u>	% Design Hour
Auto Speed		MT Speed		HT Speed	
			MT =	<u>1</u>	% DHV
Posted Speed	<u>35</u> mph	Estimated based on deficiencies	HT =	<u>2</u>	% DHV
	<u>60</u> kmh				

**Without Project (design year):**

Year:	<u>2020</u>		K =	<u>10</u>	%
*ADT			D =	<u>100</u>	%
LOS C	<u>Not Available</u>		T =	<u>6</u>	% for 24 Hours
Demand	<u>10,800</u>		T =	<u>3</u>	% Design Hour
Auto Speed		MT Speed		HT Speed	
			MT =	<u>1</u>	% DHV
Posted Speed	<u>35</u> mph	Estimated based on deficiencies	HT =	<u>2</u>	% DHV
	<u>60</u> kmh				

**With Project (design year):**

Year:	<u>2020</u>		K =	<u>10</u>	%
*ADT			D =	<u>100</u>	%
LOS C	<u>Not Available</u>		T =	<u>6</u>	% for 24 Hours
Demand	<u>10,800</u>		T =	<u>3</u>	% Design Hour
Auto Speed		MT Speed		HT Speed	
			MT =	<u>1</u>	% DHV
Posted Speed	<u>45</u> mph	Design less 5 MPH	HT =	<u>2</u>	% DHV
	<u>70</u> kmh				

\* ADT = Capacity @ LOS or Demand  
(whichever is less)

**Appendix B**

**Receiver Locations**

# SEGMENT A

BEGIN PROJECT

50 M

WETLAND 1B

WIDEN EXISTING BRIDGE

WETLAND 1B

CYPRUS CREEK

190

191

192

193

194

195

196

197

WETLAND 1A

CYPRUS CREEK

WETLAND 1

PREFERRED ALTERNATIVE

FLIGHT DATE: JUNE 7, 1997

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| EXISTING LIMITED ACCESS RIGHT OF WAY | PROPERTY LINES            | WETLAND BOUNDARY |  |
| PROPOSED RIGHT OF WAY                | EXISTING RIGHT OF WAY     | FLUCPCS MAPPING  |  |



FLORIDA DEPARTMENT OF TRANSPORTATION

I-75 PDE STUDY FROM SOUTH OF S.R.56 TO NORTH OF S.R. 52 PASCO COUNTY, FLORIDA



**PREFERRED ALTERNATIVE**

FLIGHT DATE: JUNE 7, 1997

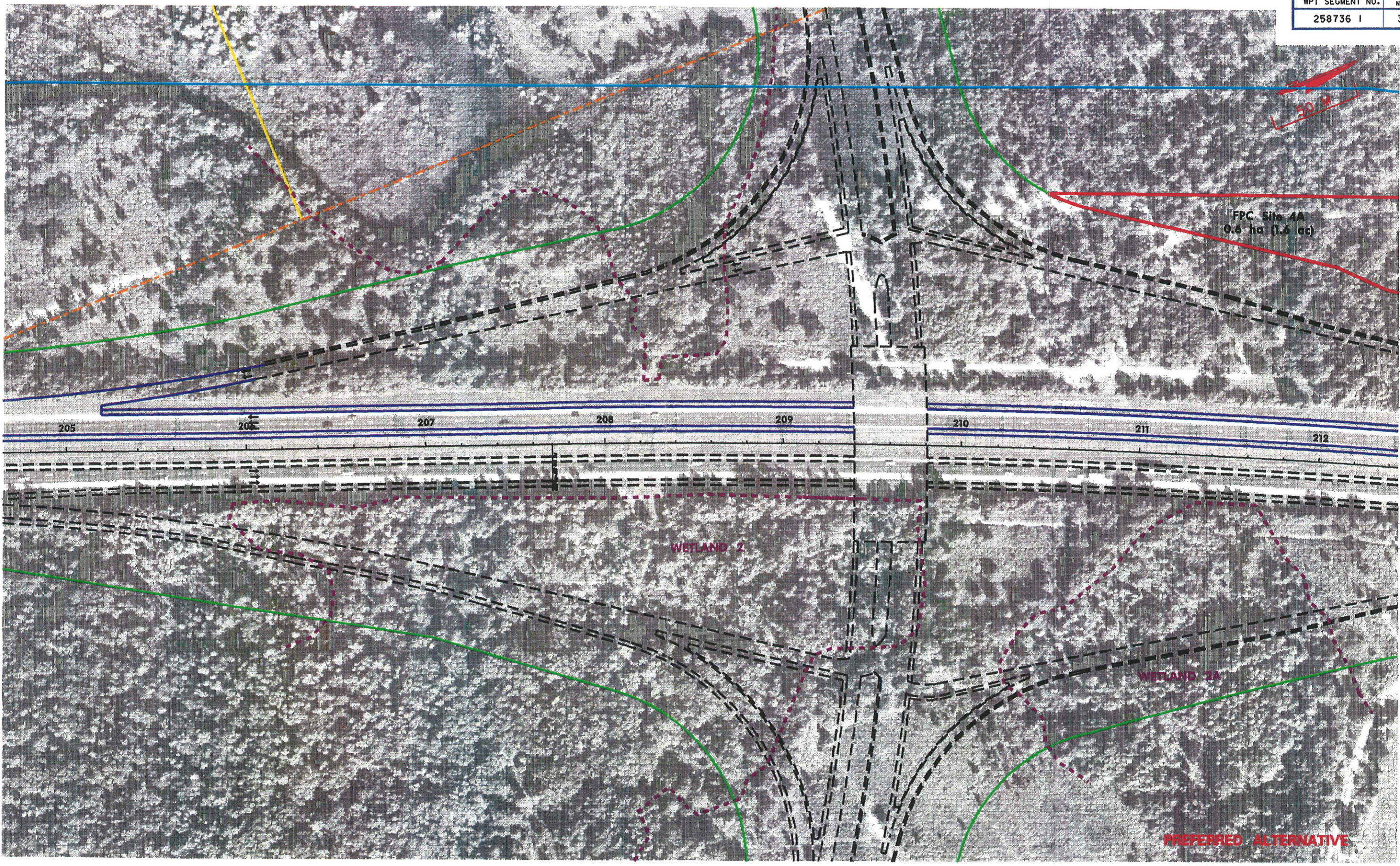
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| EXISTING LIMITED ACCESS RIGHT OF WAY | PROPERTY LINES            | WETLAND BOUNDARY |  |
| PROPOSED RIGHT OF WAY                | EXISTING RIGHT OF WAY     | FLUCPCS MAPPING  |  |



FLORIDA DEPARTMENT OF  
TRANSPORTATION

I-75 PDE STUDY  
FROM SOUTH OF S.R. 56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA



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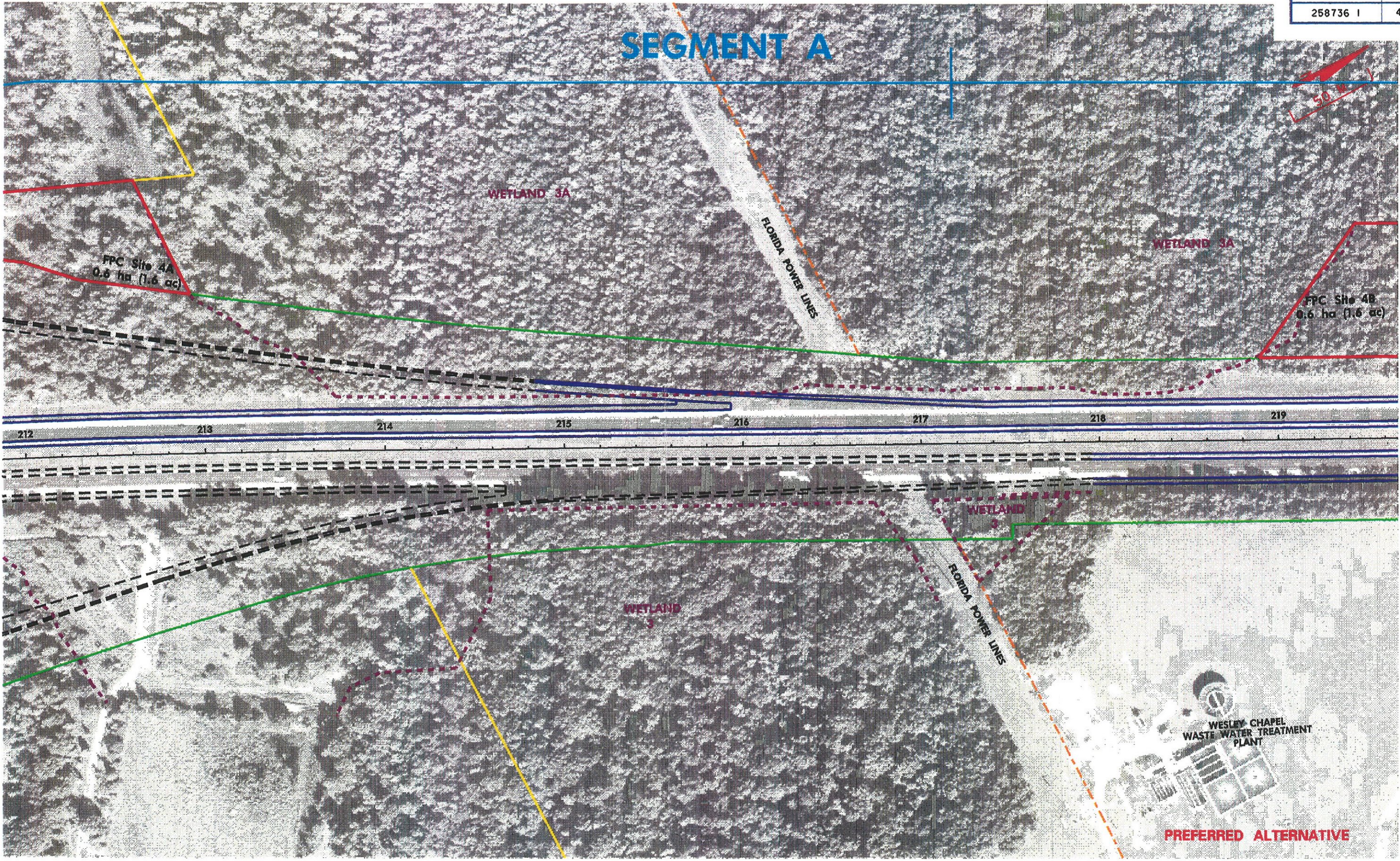
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| EXISTING LIMITED ACCESS RIGHT OF WAY | PROPERTY LINES            | WETLAND BOUNDARY |  |
| PROPOSED RIGHT OF WAY                | EXISTING RIGHT OF WAY     | FLUCPCS MAPPING  |  |



FLORIDA DEPARTMENT OF  
TRANSPORTATION

FLIGHT DATE: JUNE 7, 1997  
I-75 PDE STUDY  
FROM SOUTH OF S.R. 56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA

# SEGMENT A



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| EXISTING LIMITED ACCESS RIGHT OF WAY | PROPERTY LINES            | WETLAND BOUNDARY |  |
| PROPOSED RIGHT OF WAY                | EXISTING RIGHT OF WAY     | FLUCPCS MAPPING  |  |

**PBSJ** PROJECT ENGINEERING & DESIGN, INC.  
1300 W. GULFVIEW STREET, SUITE 300  
TAMPA, FLORIDA 33607-4000

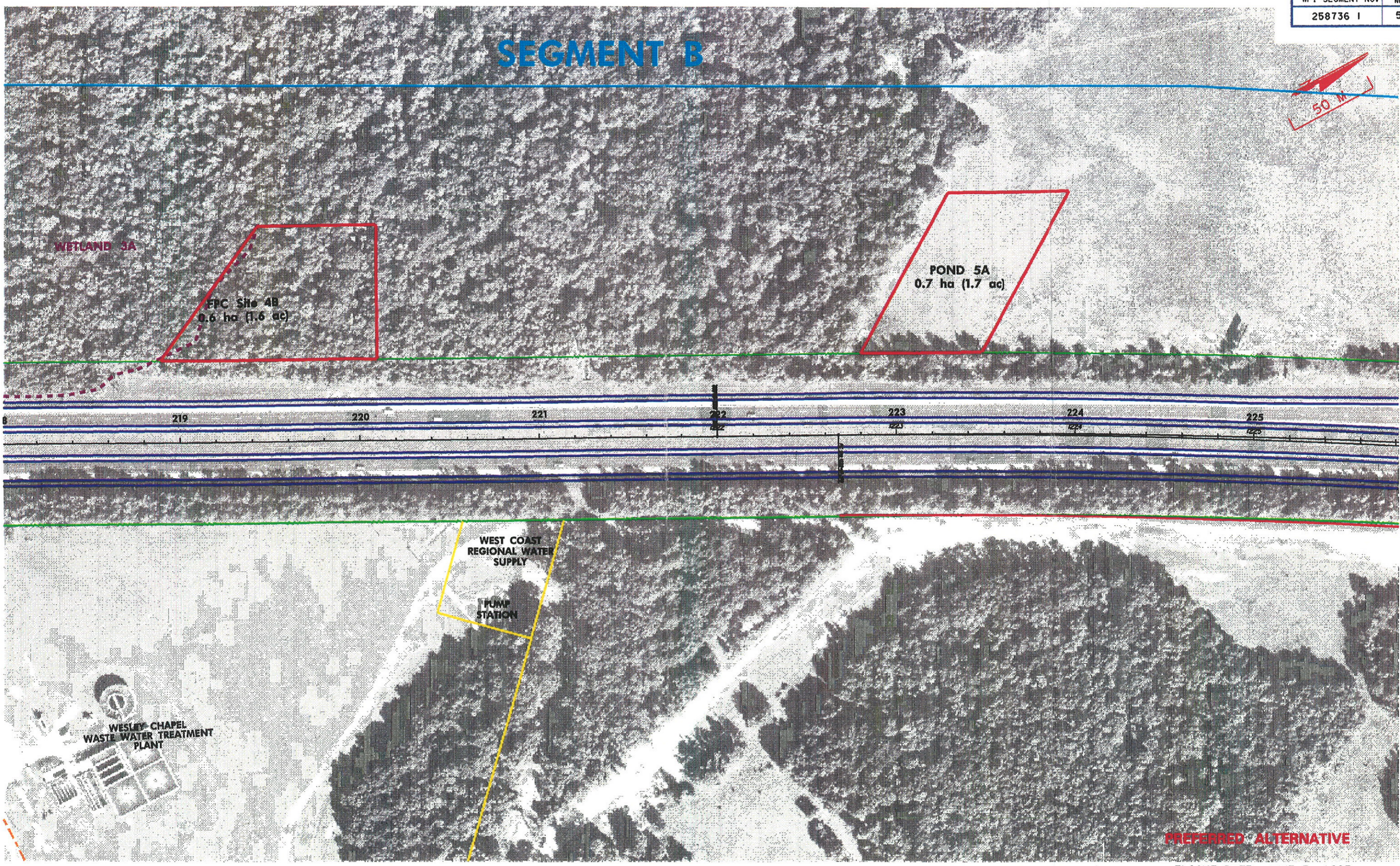
FLORIDA DEPARTMENT OF  
TRANSPORTATION

1-75 PDE STUDY  
FROM SOUTH OF S.R.56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA

FLIGHT DATE: JUNE 7, 1997



# SEGMENT B



**PREFERRED ALTERNATIVE**

FLIGHT DATE: JUNE 7, 1997

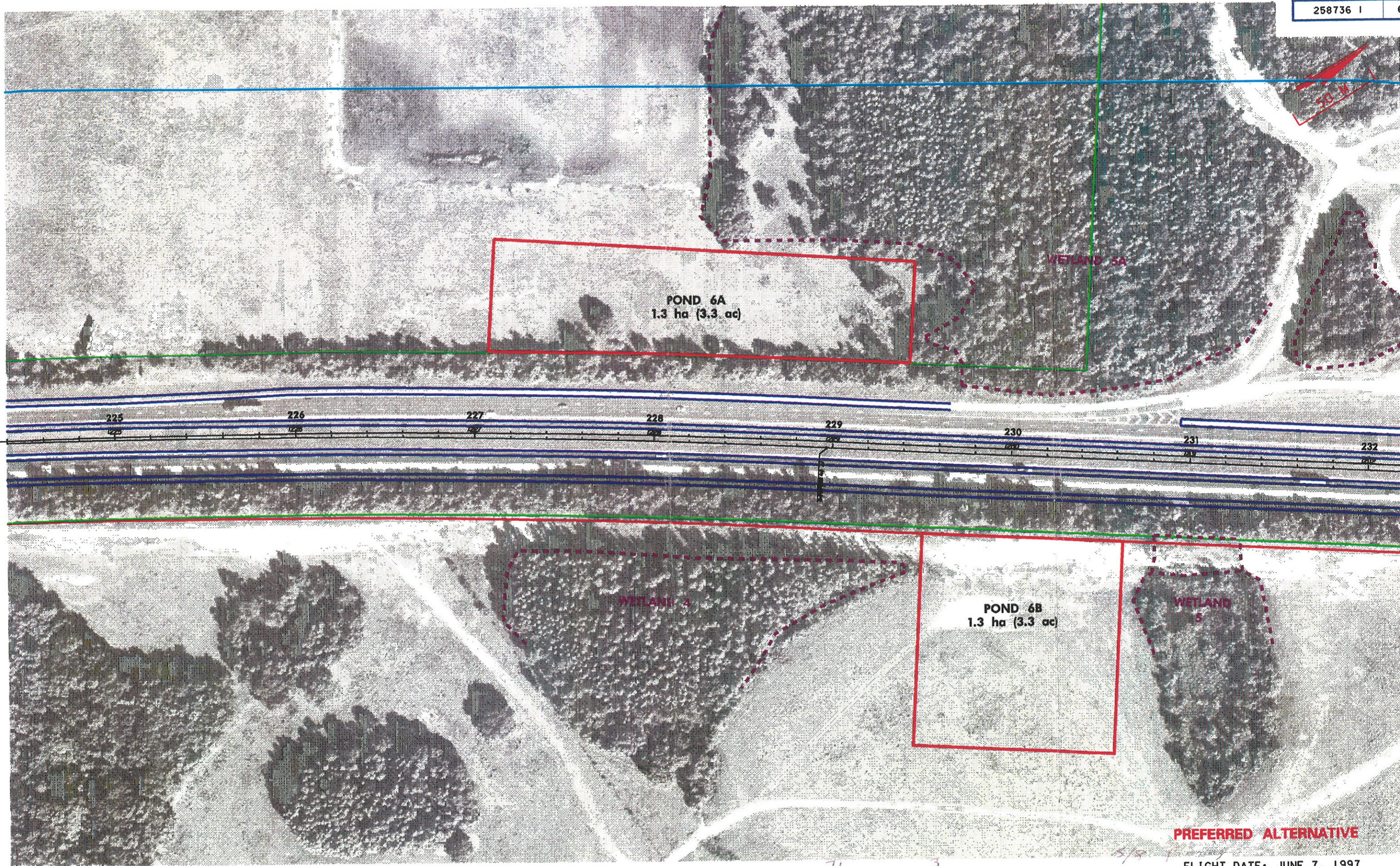
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| EXISTING LIMITED ACCESS RIGHT OF WAY | PROPERTY LINES            | WETLAND BOUNDARY |  |
| PROPOSED RIGHT OF WAY                | EXISTING RIGHT OF WAY     | FLUCPCS MAPPING  |  |



FLORIDA DEPARTMENT OF  
TRANSPORTATION

I-75 PDE STUDY  
FROM SOUTH OF S.R. 56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA

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| EXISTING LIMITED ACCESS RIGHT OF WAY | PROPERTY LINES            | WETLAND BOUNDARY |  |
| PROPOSED RIGHT OF WAY                | EXISTING RIGHT OF WAY     | FLUCPCS MAPPING  |  |



FLORIDA DEPARTMENT OF  
TRANSPORTATION

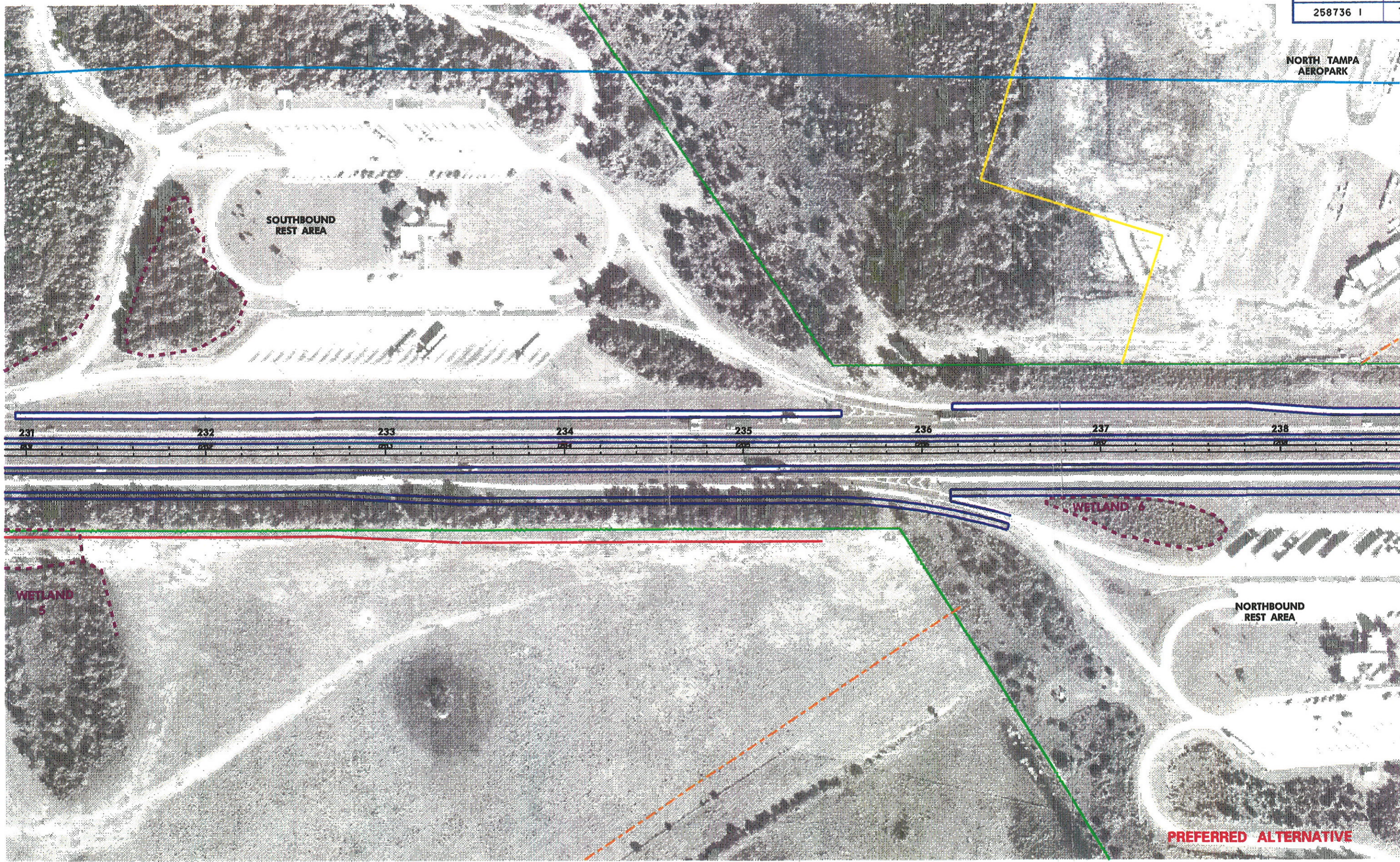
I-75 PDE STUDY  
FROM SOUTH OF S.R. 56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA

**PREFERRED ALTERNATIVE**  
FLIGHT DATE: JUNE 7, 1997

NORTH TAMPA  
AEROPARK

SOUTHBOUND  
REST AREA

NORTHBOUND  
REST AREA



**PREFERRED ALTERNATIVE**

FLIGHT DATE: JUNE 7, 1997

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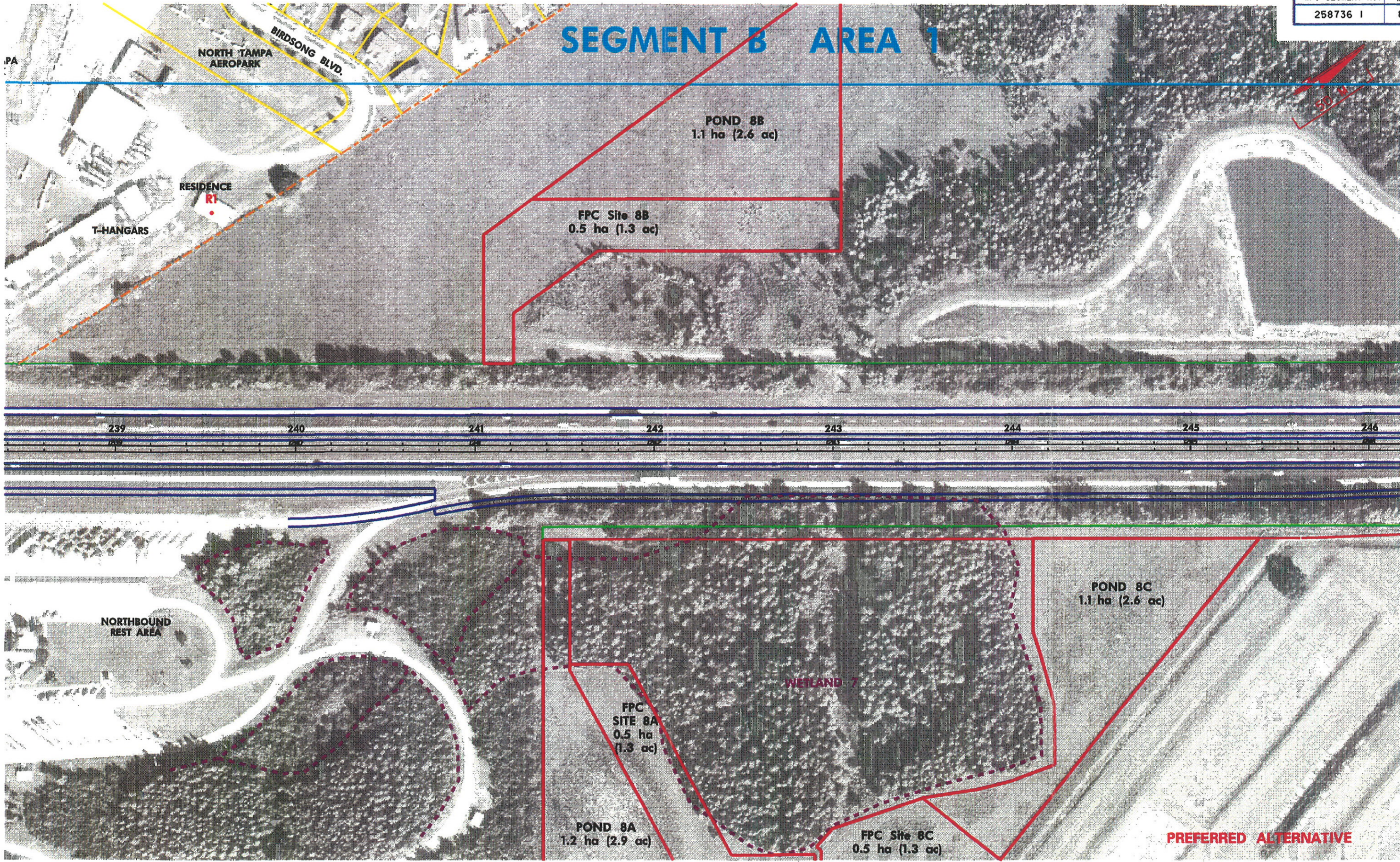
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EXISTING LIMITED ACCESS RIGHT OF WAY	PROPERTY LINES	WETLAND BOUNDARY	
PROPOSED RIGHT OF WAY	EXISTING RIGHT OF WAY	FLUCPCS MAPPING	



FLORIDA DEPARTMENT OF  
TRANSPORTATION

I-75 PDE STUDY  
FROM SOUTH OF S.R. 56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA

# SEGMENT B AREA 1



**PREFERRED ALTERNATIVE**

FLIGHT DATE: JUNE 7, 1997

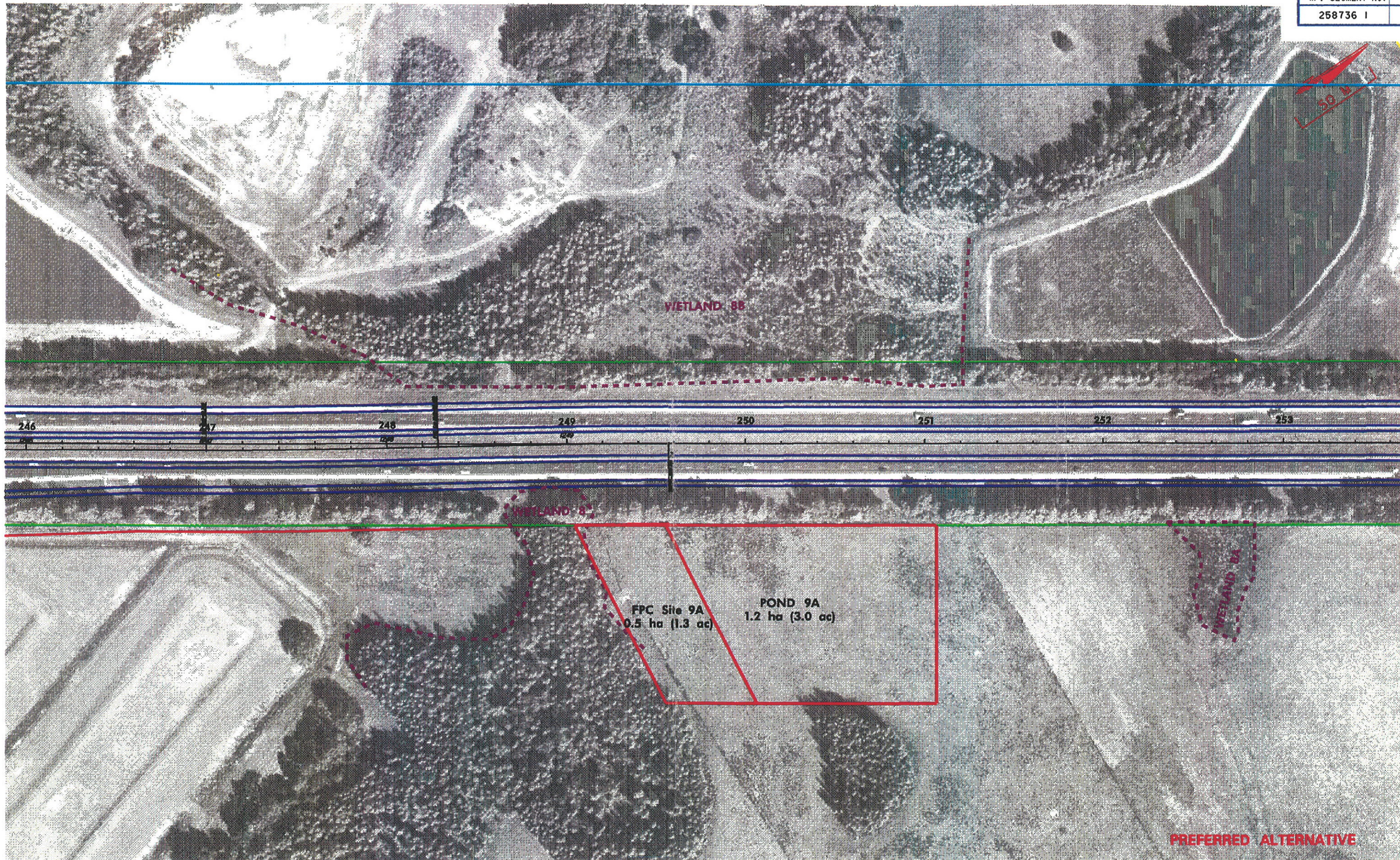
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| EXISTING LIMITED ACCESS RIGHT OF WAY | PROPERTY LINES            | WETLAND BOUNDARY |  |
| PROPOSED RIGHT OF WAY                | EXISTING RIGHT OF WAY     | NOISE RECEIVERS  |  |



FLORIDA DEPARTMENT OF TRANSPORTATION

I-75 PDE STUDY FROM SOUTH OF S.R. 56 TO NORTH OF S.R. 52 PASCO COUNTY, FLORIDA

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**PREFERRED ALTERNATIVE**

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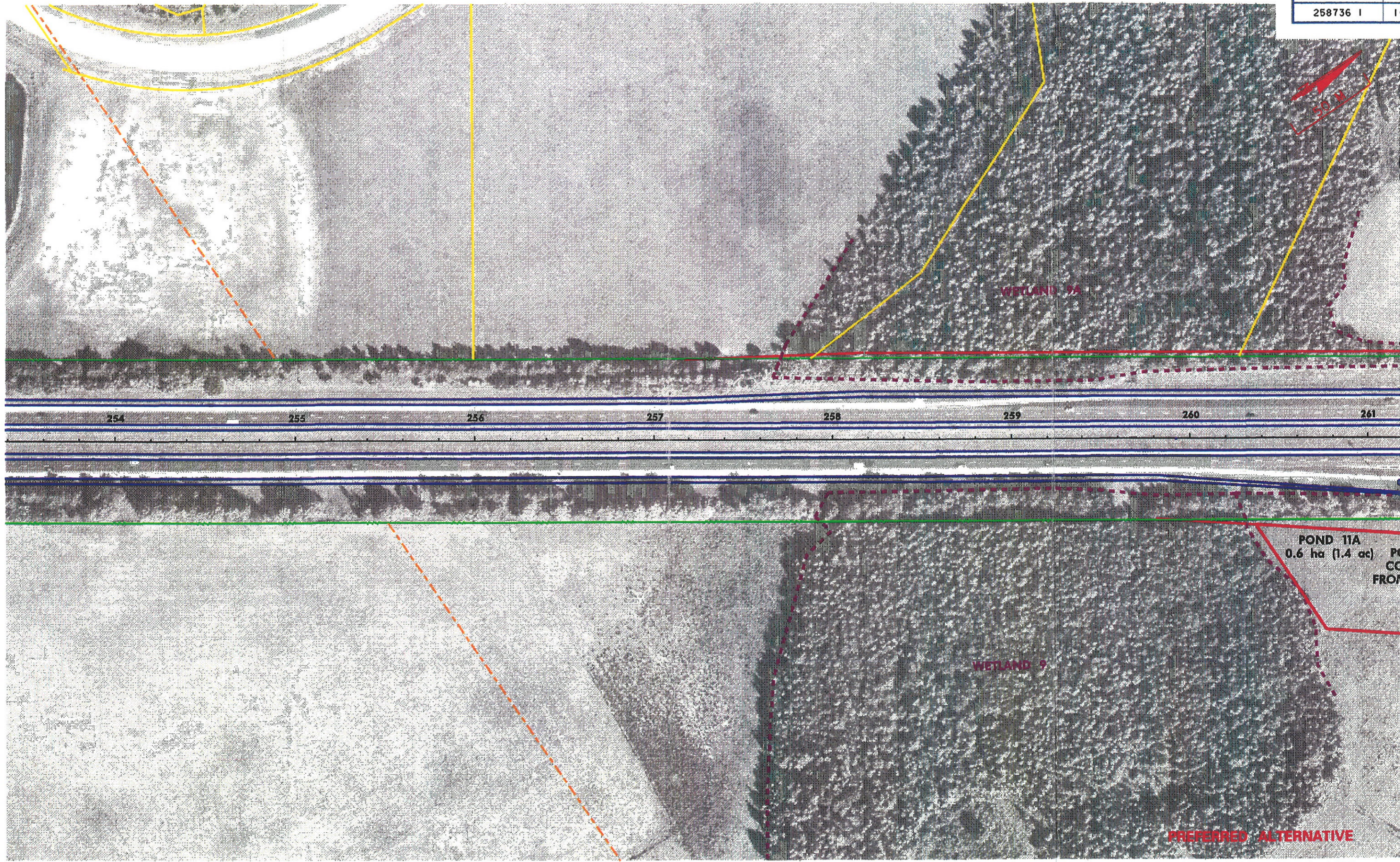
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| EXISTING LIMITED ACCESS RIGHT OF WAY | PROPERTY LINES            | WETLAND BOUNDARY |  |
| PROPOSED RIGHT OF WAY                | EXISTING RIGHT OF WAY     | FLUCPCS MAPPING  |  |



FLORIDA DEPARTMENT OF  
TRANSPORTATION

I-75 PDE STUDY  
FROM SOUTH OF S.R. 56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA



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|  | EXISTING LIMITED ACCESS RIGHT OF WAY |  | PROPERTY LINES            |  | WETLAND BOUNDARY |  | FLUCPCS MAPPING  |
|  | PROPOSED RIGHT OF WAY                |  | EXISTING RIGHT OF WAY     |  |                  |  |  |

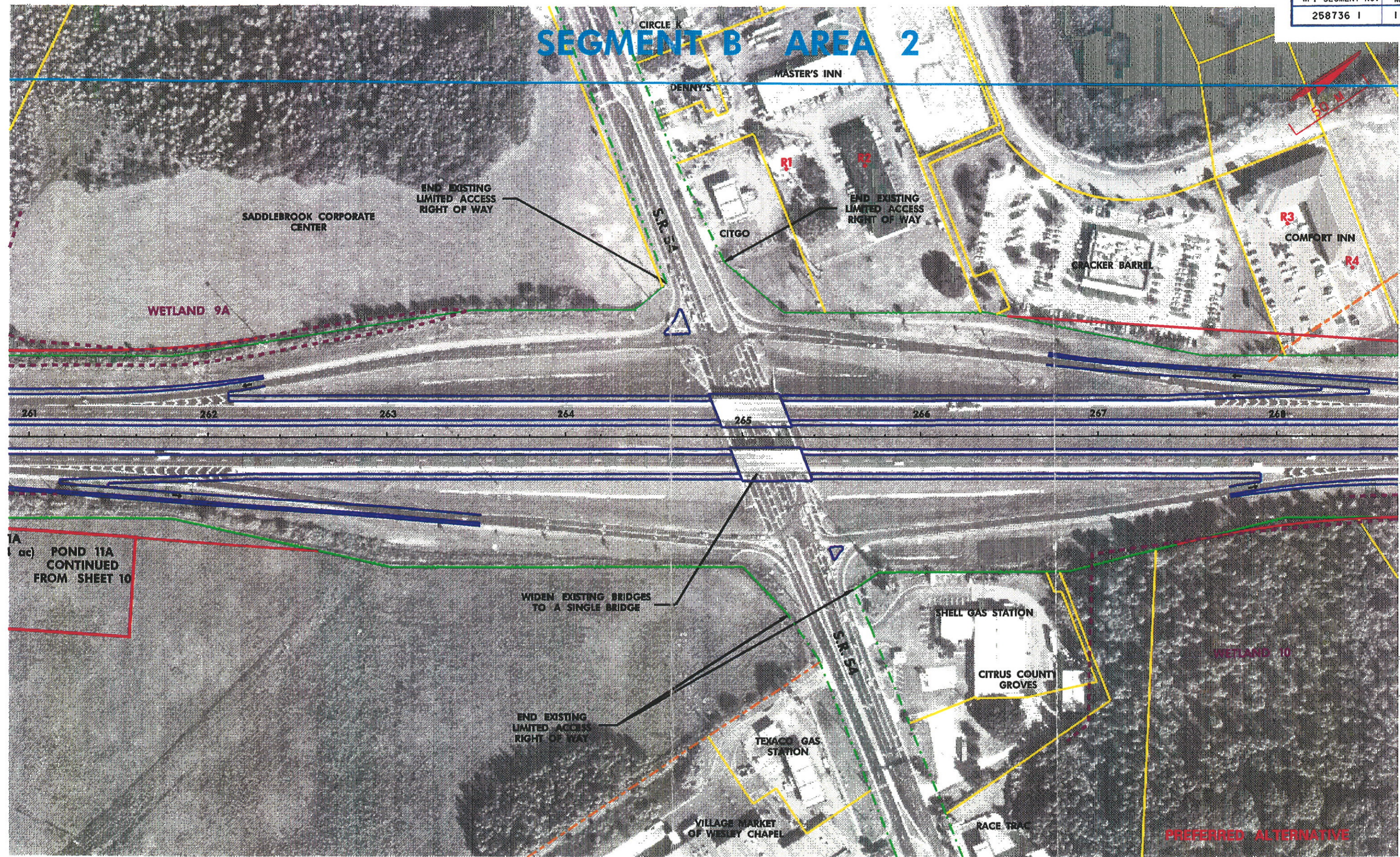


FLORIDA DEPARTMENT OF  
TRANSPORTATION

I-75 PDE STUDY  
FROM SOUTH OF S.R. 56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA

FLIGHT DATE: JUNE 7, 1997

# SEGMENT B AREA 2



1A  
(ac) POND 11A  
CONTINUED  
FROM SHEET 10

PREFERRED ALTERNATIVE

FLIGHT DATE: JUNE 7, 1997

- |                                      |                           |                    |  |
|--------------------------------------|---------------------------|--------------------|--|
| PROPOSED LIMITED ACCESS RIGHT OF WAY | PROPOSED EDGE OF PAVEMENT | SECTION LINES      | FUTURE EXISTING EDGE OF PAVEMENT (CONSTRUCTED BY OTHERS) |
| EXISTING LIMITED ACCESS RIGHT OF WAY | PROPERTY LINES            | WETLAND BOUNDARY   |  |
| PROPOSED RIGHT OF WAY                | EXISTING RIGHT OF WAY     | R1 NOISE RECEIVERS |  |



FLORIDA DEPARTMENT OF  
TRANSPORTATION

I-75 PDE STUDY  
FROM SOUTH OF S.R.56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA



**PREFERRED ALTERNATIVE**

FLIGHT DATE: JUNE 7, 1997

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| EXISTING LIMITED ACCESS RIGHT OF WAY | PROPERTY LINES            | WETLAND BOUNDARY   |  |
| PROPOSED RIGHT OF WAY                | EXISTING RIGHT OF WAY     | R1 NOISE RECEIVERS |  |



FLORIDA DEPARTMENT OF  
TRANSPORTATION

I-75 PDE STUDY  
FROM SOUTH OF S.R.56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA





**PREFERRED ALTERNATIVE**

FLIGHT DATE: JUNE 7, 1997

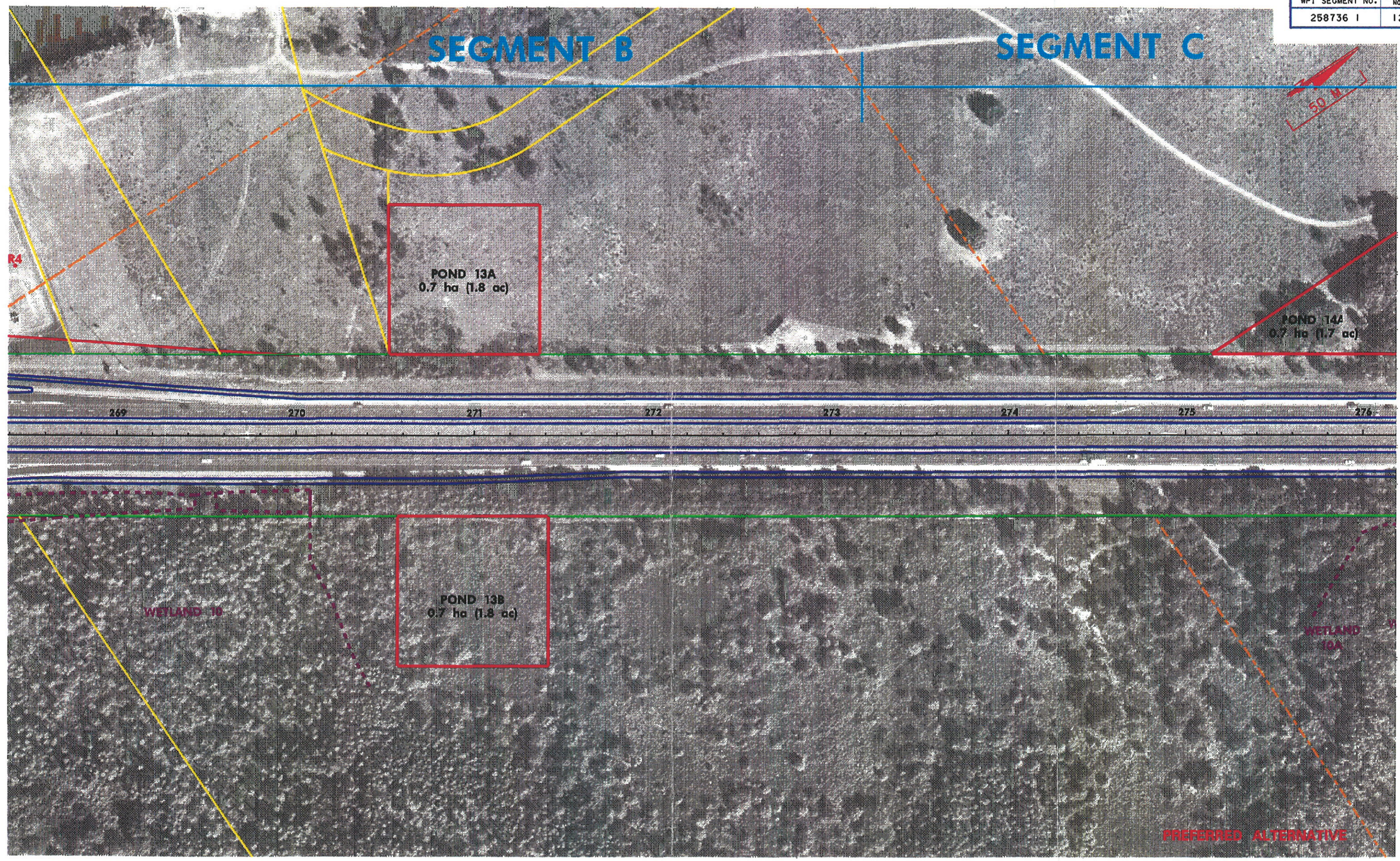
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| EXISTING LIMITED ACCESS RIGHT OF WAY | PROPERTY LINES            | WETLAND BOUNDARY |  |
| PROPOSED RIGHT OF WAY                | EXISTING RIGHT OF WAY     | FLUCPCS MAPPING  |  |



FLORIDA DEPARTMENT OF  
TRANSPORTATION

I-75 PDE STUDY  
FROM SOUTH OF S.R.56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA



PREFERRED ALTERNATIVE

FLIGHT DATE: JUNE 7, 1997

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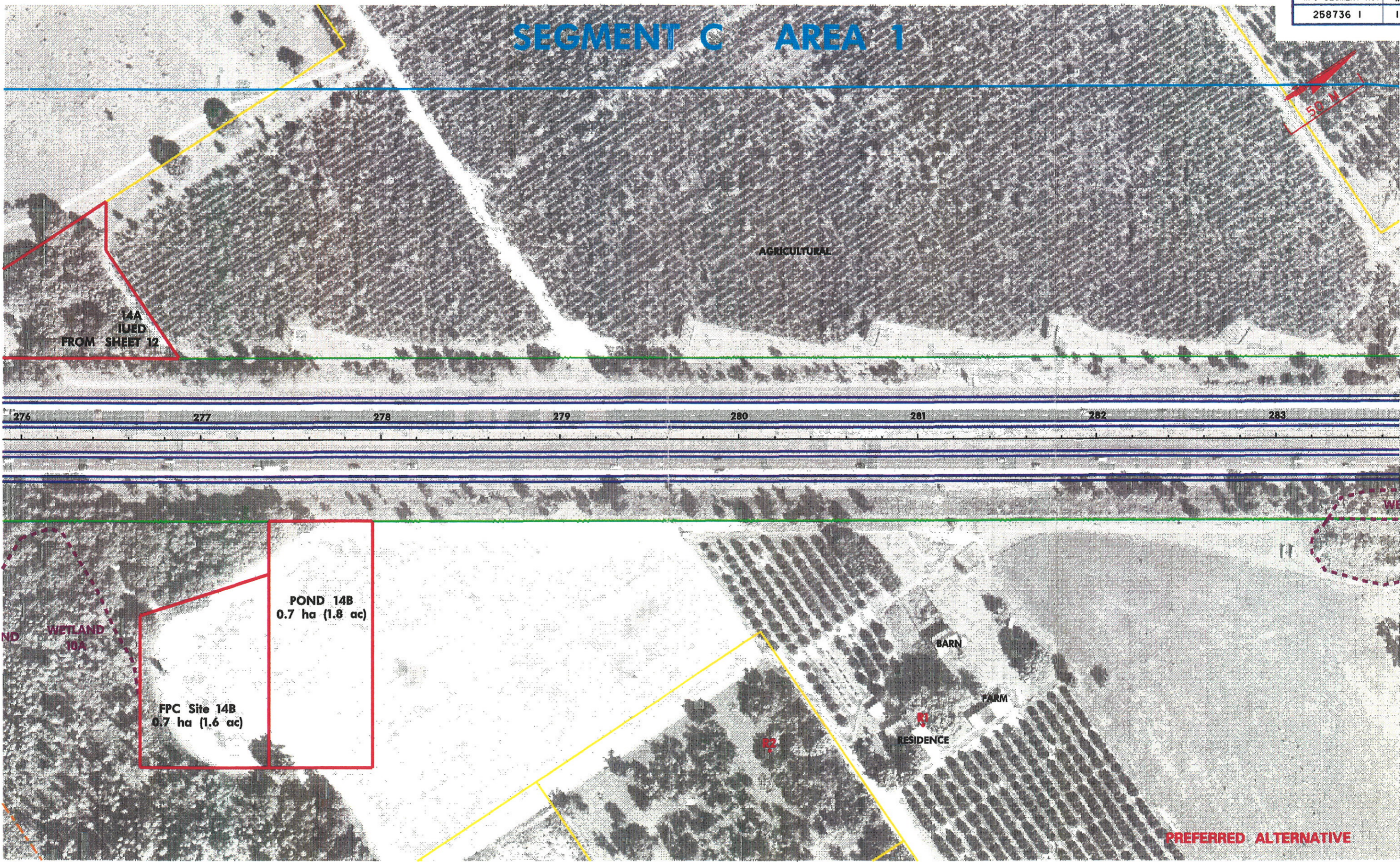
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| EXISTING LIMITED ACCESS RIGHT OF WAY | PROPERTY LINES            | WETLAND BOUNDARY |  |
| PROPOSED RIGHT OF WAY                | EXISTING RIGHT OF WAY     | FLUCPCS MAPPING  |  |



FLORIDA DEPARTMENT OF  
TRANSPORTATION

I-75 PDE STUDY  
FROM SOUTH OF S.R. 56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA

# SEGMENT C AREA 1



14A  
ILLUSTRATED  
FROM SHEET 12

AGRICULTURAL

276 277 278 279 280 281 282 283

POND 14B  
0.7 ha (1.8 ac)

FPC Site 14B  
0.7 ha (1.6 ac)

BARN

FARM

RESIDENCE

PREFERRED ALTERNATIVE

FLIGHT DATE: JUNE 7, 1997

- |                                      |                           |                  |  |
|--------------------------------------|---------------------------|------------------|--|
| PROPOSED LIMITED ACCESS RIGHT OF WAY | PROPOSED EDGE OF PAVEMENT | SECTION LINES    | FUTURE EXISTING EDGE OF PAVEMENT (CONSTRUCTED BY OTHERS) |
| EXISTING LIMITED ACCESS RIGHT OF WAY | PROPERTY LINES            | WETLAND BOUNDARY |  |
| PROPOSED RIGHT OF WAY                | EXISTING RIGHT OF WAY     | NOISE RECEIVERS  |  |



FLORIDA DEPARTMENT OF  
TRANSPORTATION

I-75 PDE STUDY  
FROM SOUTH OF S.R. 56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA

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| EXISTING LIMITED ACCESS RIGHT OF WAY | PROPERTY LINES            | WETLAND BOUNDARY |  |
| PROPOSED RIGHT OF WAY                | EXISTING RIGHT OF WAY     | FLUCPCS MAPPING  |  |

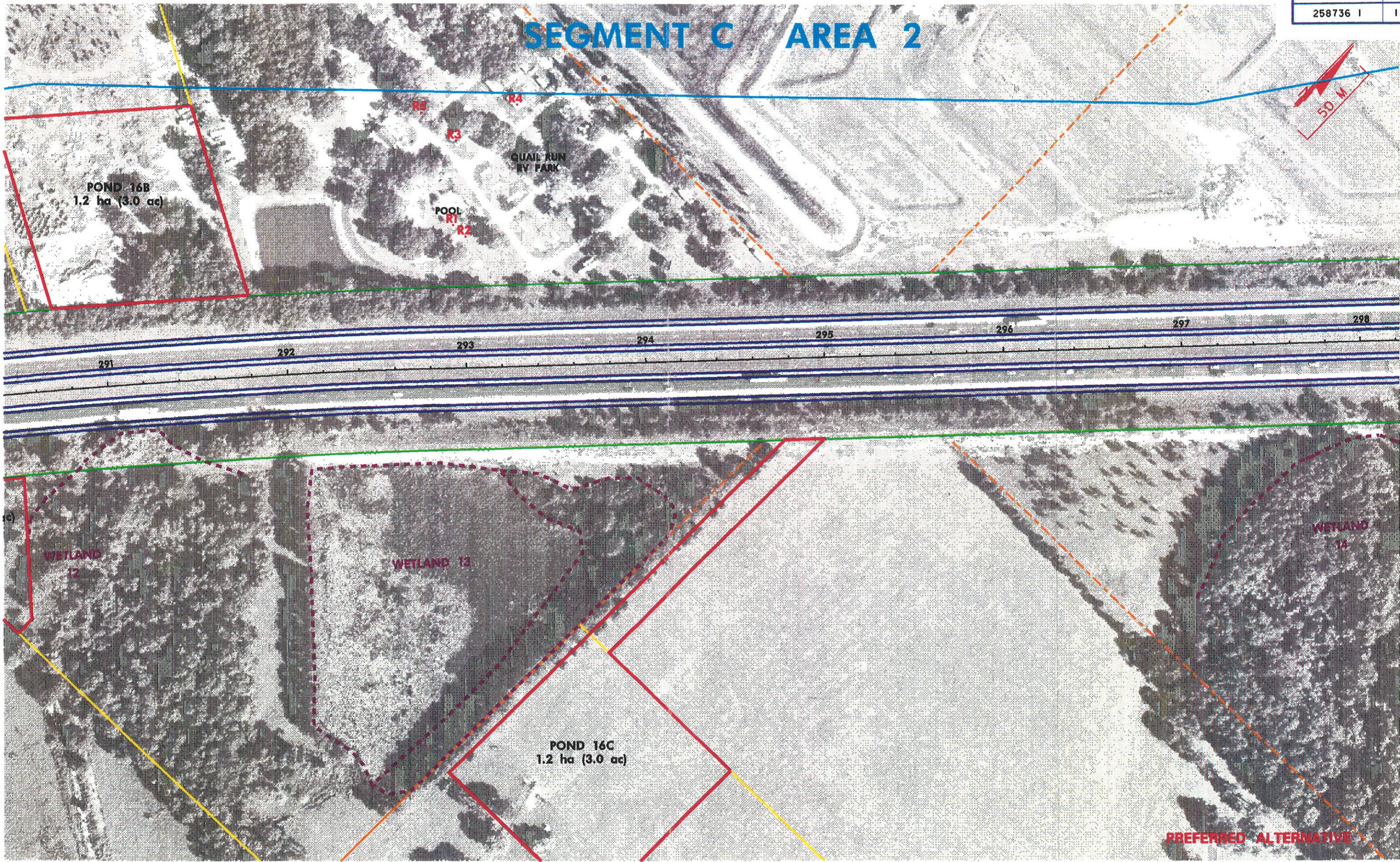


FLORIDA DEPARTMENT OF  
TRANSPORTATION

I-75 PDE STUDY  
FROM SOUTH OF S.R.56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA

FLIGHT DATE: JUNE 7, 1997

# SEGMENT C AREA 2



**PREFERRED ALTERNATIVE**

FLIGHT DATE: JUNE 7, 1997

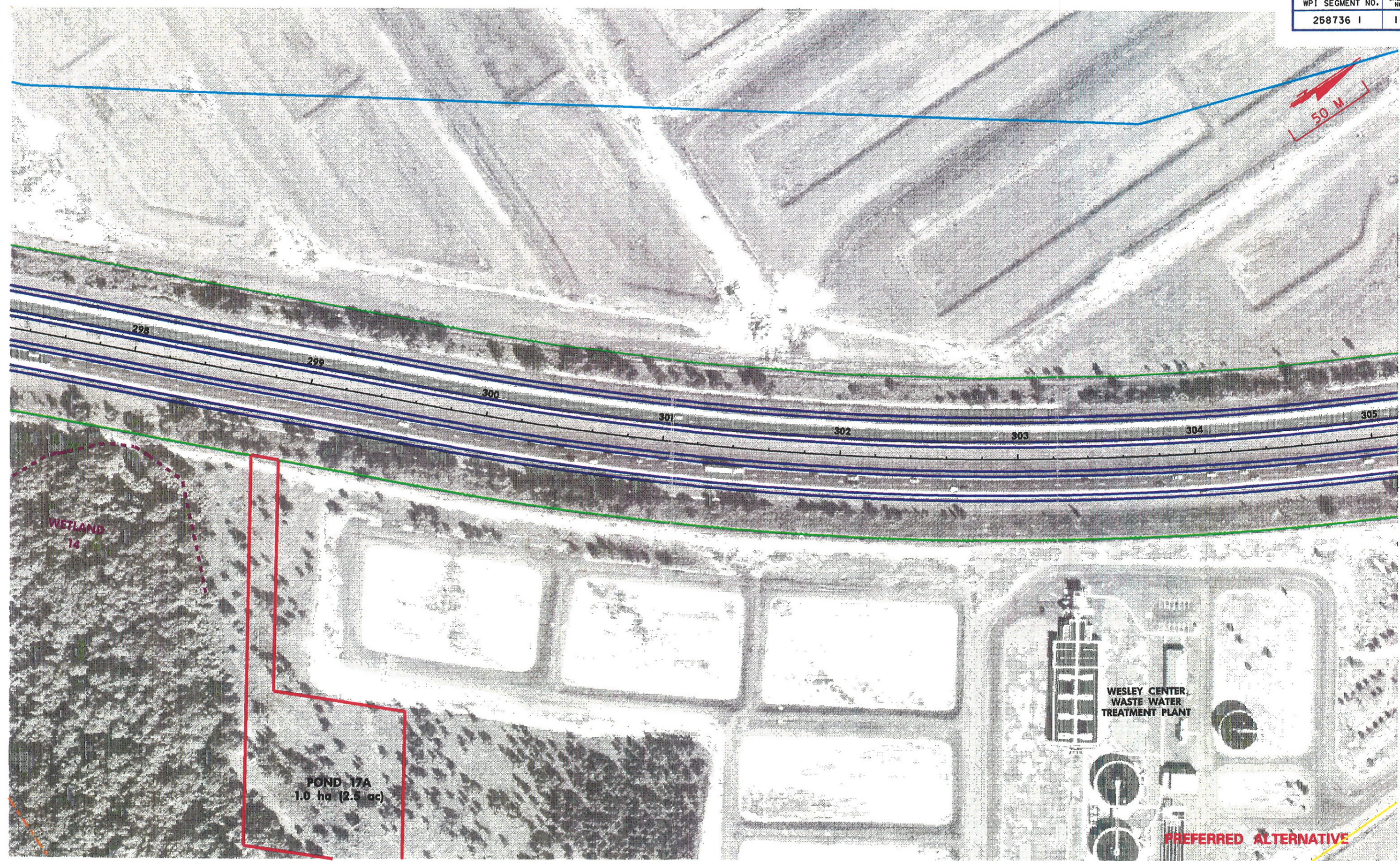
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| EXISTING LIMITED ACCESS RIGHT OF WAY | PROPERTY LINES            | WETLAND BOUNDARY |  |
| PROPOSED RIGHT OF WAY                | EXISTING RIGHT OF WAY     | NOISE RECEIVERS  |  |



FLORIDA DEPARTMENT OF TRANSPORTATION

I-75 PDE STUDY  
FROM SOUTH OF S.R.56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA



- |                                      |                           |                  |  |
|--------------------------------------|---------------------------|------------------|--|
| PROPOSED LIMITED ACCESS RIGHT OF WAY | PROPOSED EDGE OF PAVEMENT | SECTION LINES    | FUTURE EXISTING EDGE OF PAVEMENT (CONSTRUCTED BY OTHERS) |
| EXISTING LIMITED ACCESS RIGHT OF WAY | PROPERTY LINES            | WETLAND BOUNDARY |  |
| PROPOSED RIGHT OF WAY                | EXISTING RIGHT OF WAY     | FLUCPCS MAPPING  |  |



FLORIDA DEPARTMENT OF TRANSPORTATION

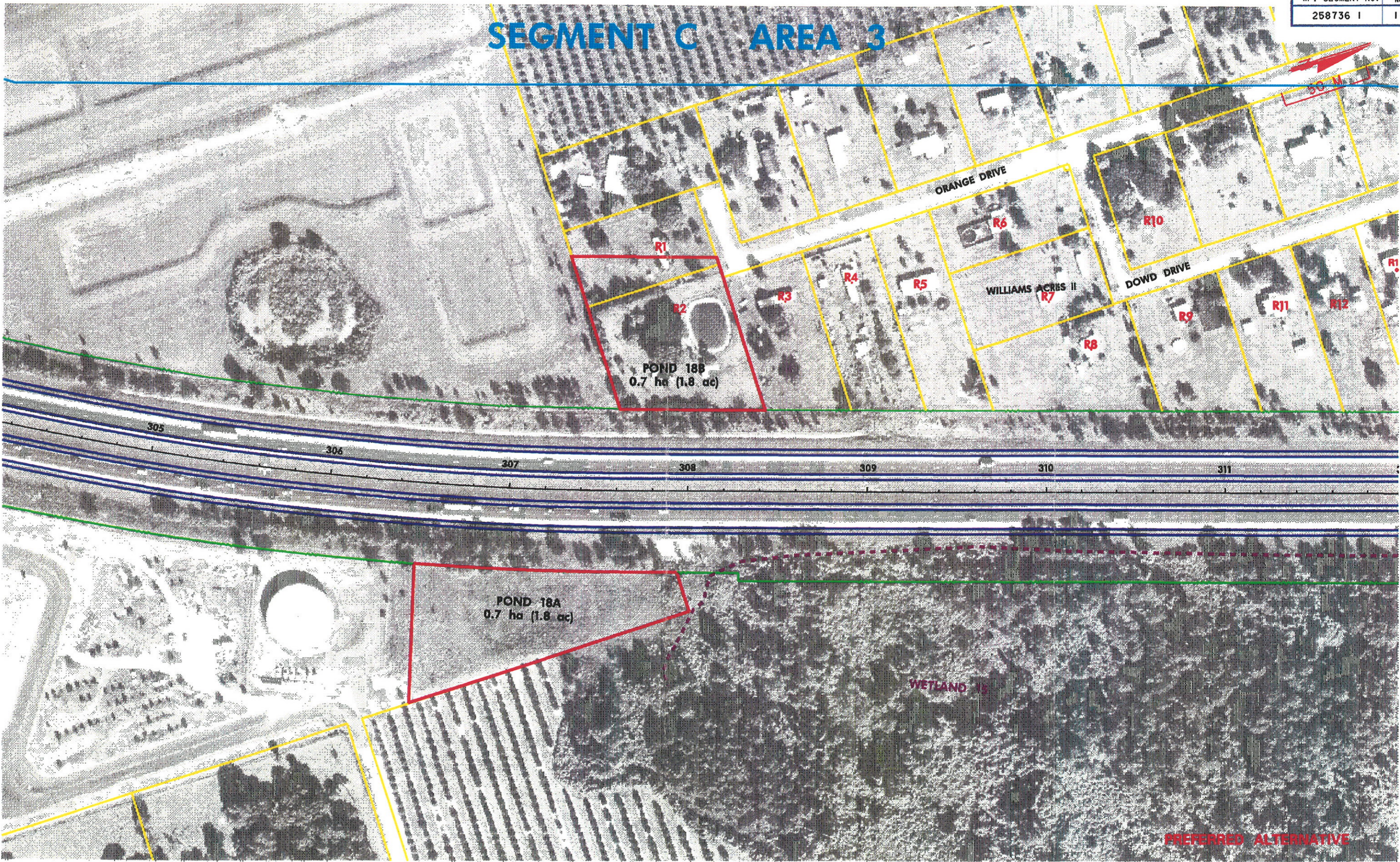
I-75 PDE STUDY FROM SOUTH OF S.R. 56 TO NORTH OF S.R. 52 PASCO COUNTY, FLORIDA

FLIGHT DATE: JUNE 7, 1997

**PREFERRED ALTERNATIVE**

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# SEGMENT C AREA 3



**PREFERRED ALTERNATIVE**

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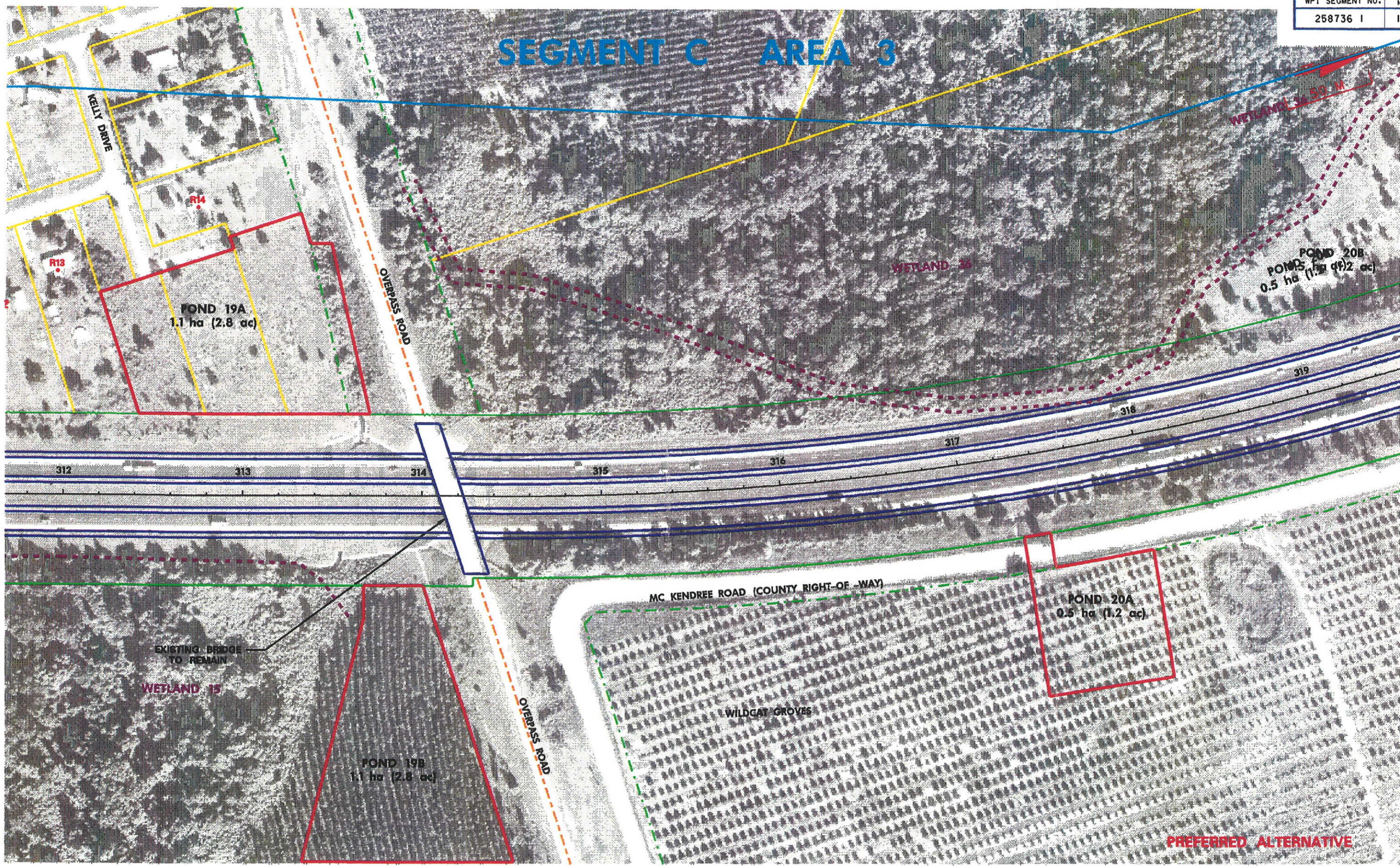
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| EXISTING LIMITED ACCESS RIGHT OF WAY | PROPERTY LINES            | WETLAND BOUNDARY     |  |
| PROPOSED RIGHT OF WAY                | EXISTING RIGHT OF WAY     | R1 ● NOISE RECEIVERS |  |



FLORIDA DEPARTMENT OF TRANSPORTATION

I-75 PDE STUDY  
FROM SOUTH OF S.R.56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA

# SEGMENT C AREA 3



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| EXISTING LIMITED ACCESS RIGHT OF WAY | PROPERTY LINES            | WETLAND BOUNDARY |  |
| PROPOSED RIGHT OF WAY                | EXISTING RIGHT OF WAY     | NOISE RECEIVERS  |  |

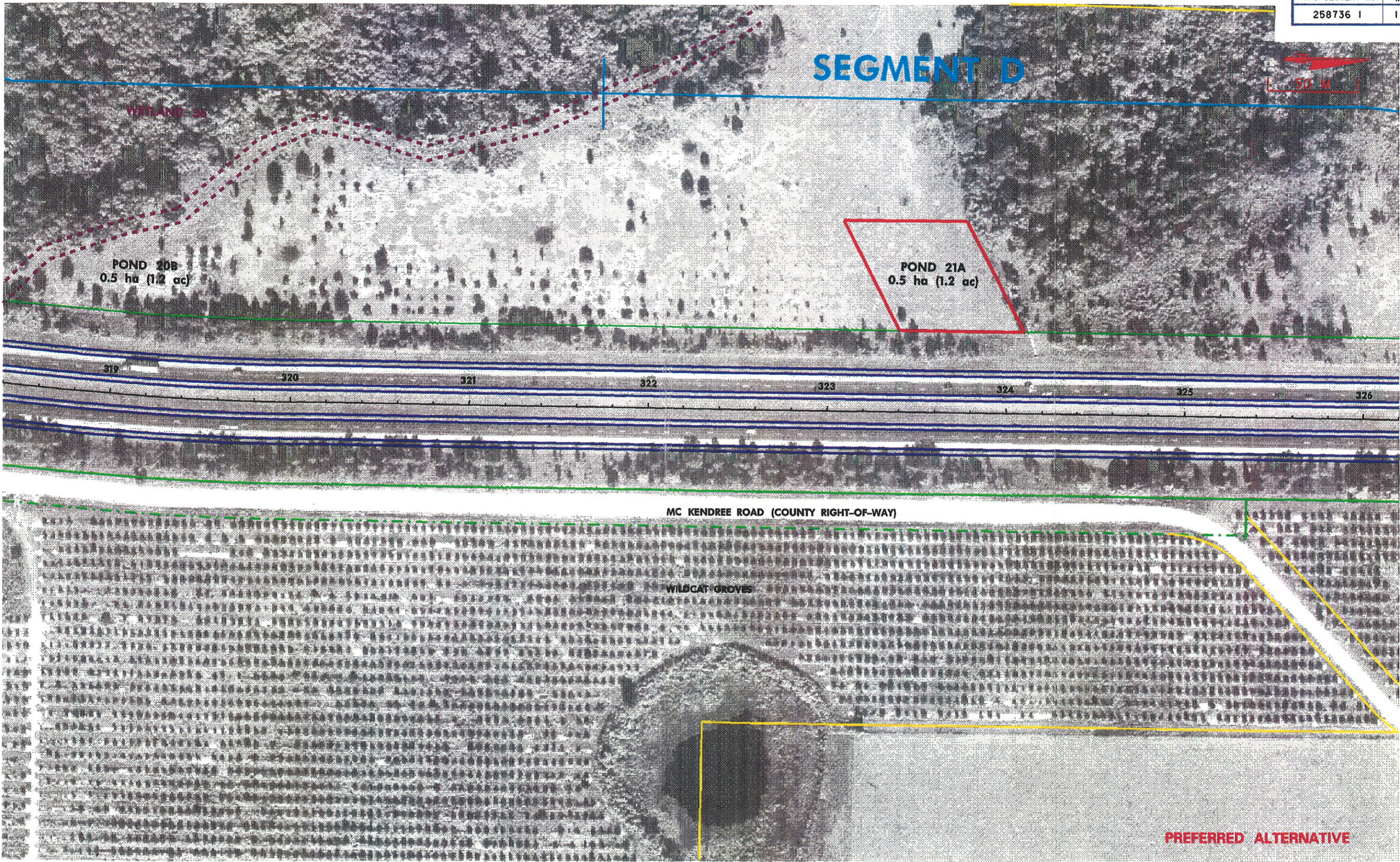


FLORIDA DEPARTMENT OF  
TRANSPORTATION

I-75 PDE STUDY  
FROM SOUTH OF S.R.56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA

**PREFERRED ALTERNATIVE**  
FLIGHT DATE: JUNE 7, 1997





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| EXISTING LIMITED ACCESS RIGHT OF WAY | PROPERTY LINES            | WETLAND BOUNDARY |  |
| PROPOSED RIGHT OF WAY                | EXISTING RIGHT OF WAY     | FLUCPCS MAPPING  |  |

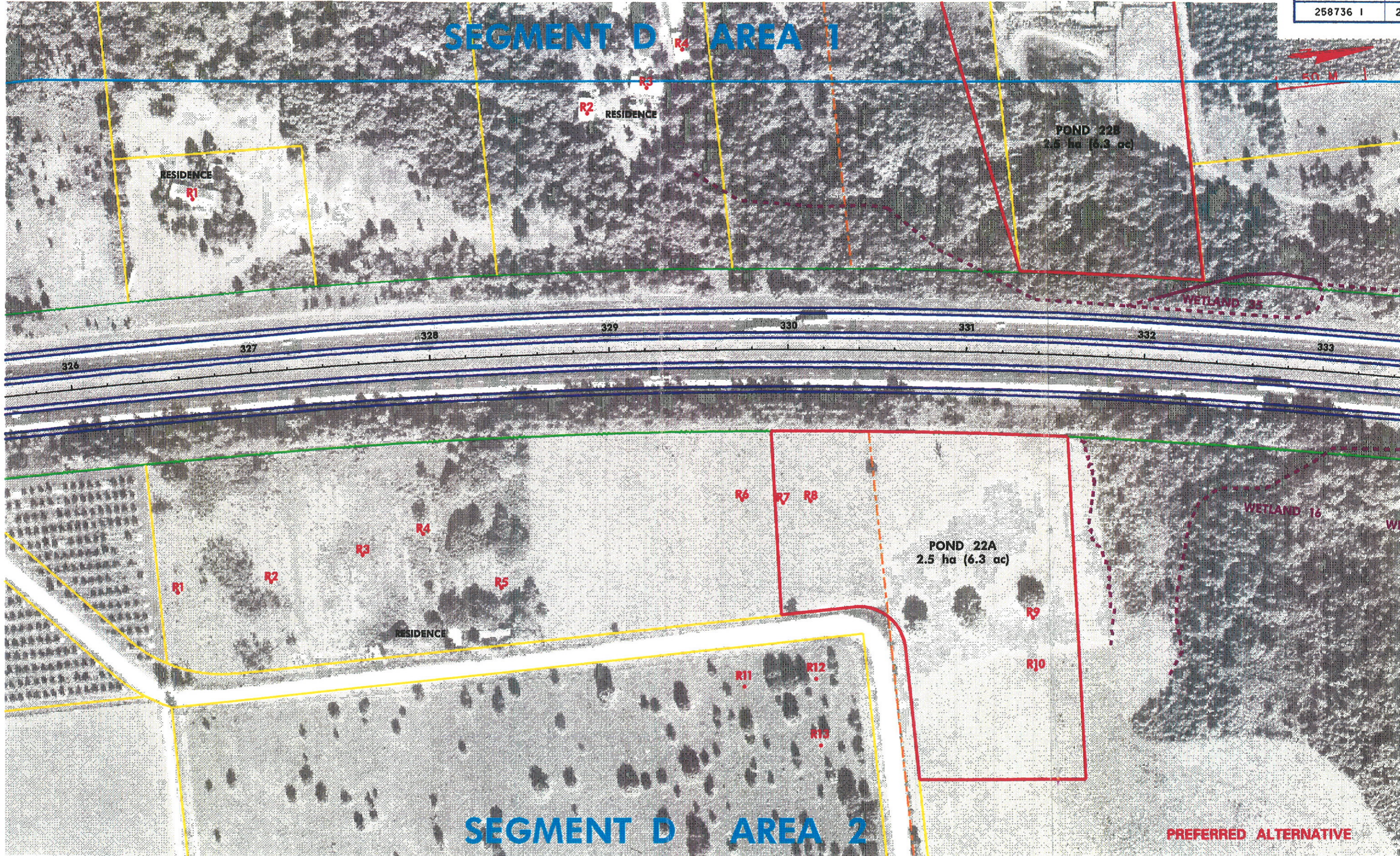


FLORIDA DEPARTMENT OF  
TRANSPORTATION

FLIGHT DATE: JUNE 7, 1997

I-75 PDE STUDY  
FROM SOUTH OF S.R.56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA

**PREFERRED ALTERNATIVE**



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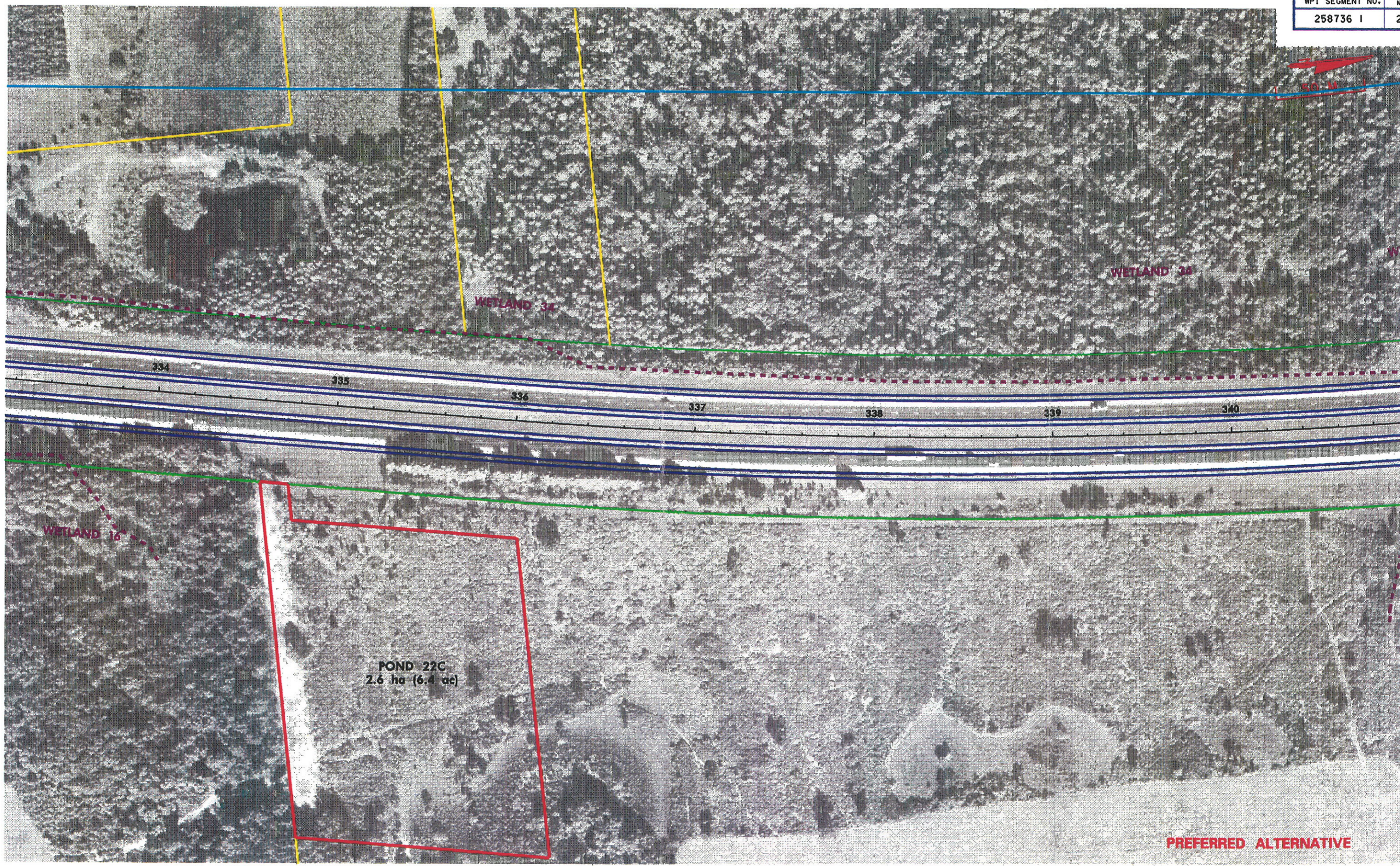
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| EXISTING LIMITED ACCESS RIGHT OF WAY | PROPERTY LINES            | WETLAND BOUNDARY     |  |
| PROPOSED RIGHT OF WAY                | EXISTING RIGHT OF WAY     | R1 ● NOISE RECEIVERS |  |



FLORIDA DEPARTMENT OF  
TRANSPORTATION

I-75 PDE STUDY  
FROM SOUTH OF S.R.56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA

PREFERRED ALTERNATIVE  
FLIGHT DATE: JUNE 7, 1997



**PREFERRED ALTERNATIVE**

FLIGHT DATE: JUNE 7, 1997

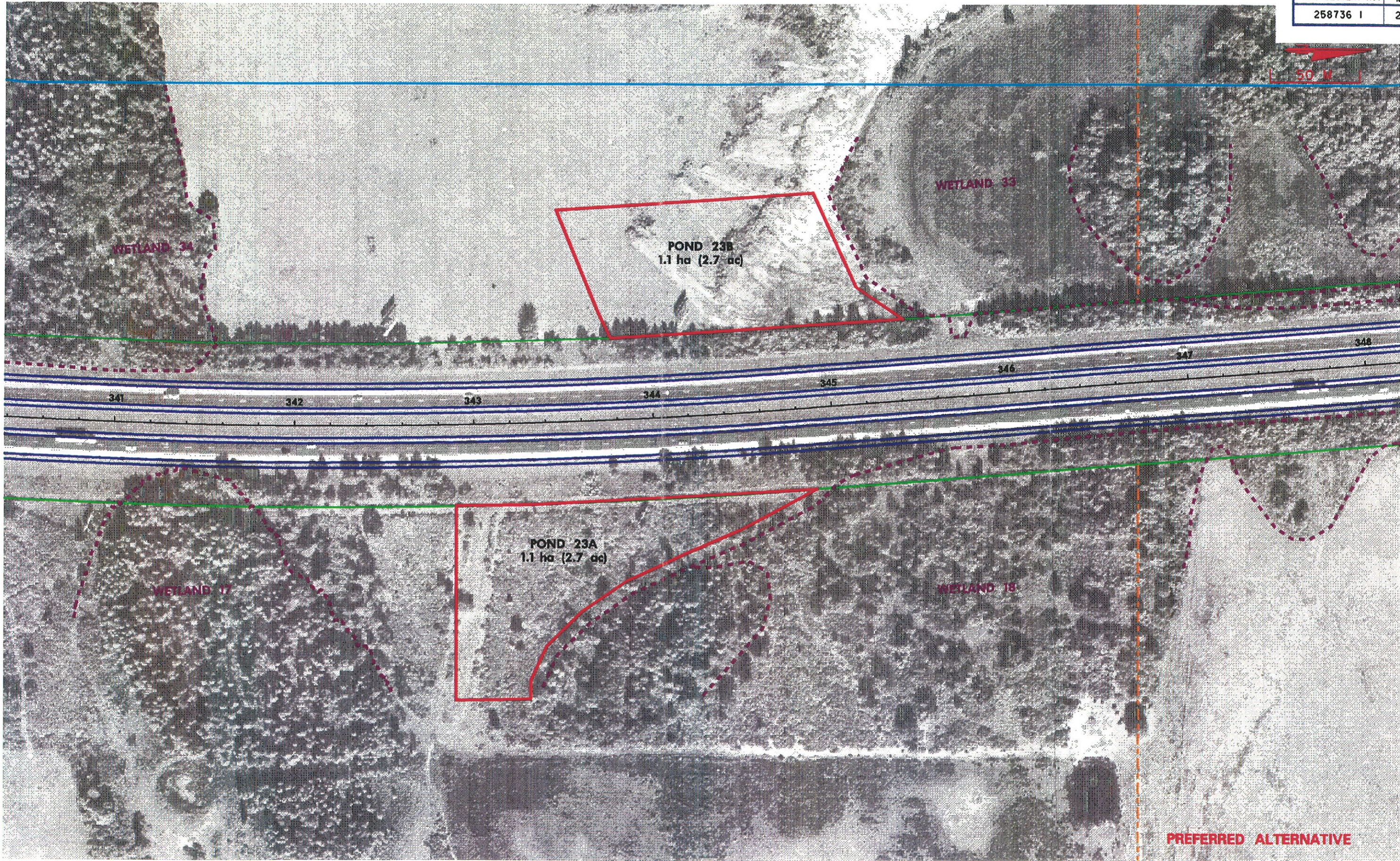
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| PROPOSED LIMITED ACCESS RIGHT OF WAY | PROPOSED EDGE OF PAVEMENT | SECTION LINES    | FUTURE EXISTING EDGE OF PAVEMENT (CONSTRUCTED BY OTHERS) |
| EXISTING LIMITED ACCESS RIGHT OF WAY | PROPERTY LINES            | WETLAND BOUNDARY |  |
| PROPOSED RIGHT OF WAY                | EXISTING RIGHT OF WAY     | FLUCPCS MAPPING  |  |



FLORIDA DEPARTMENT OF  
TRANSPORTATION

I-75 PDE STUDY  
FROM SOUTH OF S.R. 56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA



**PREFERRED ALTERNATIVE**

FLIGHT DATE: JUNE 7, 1997

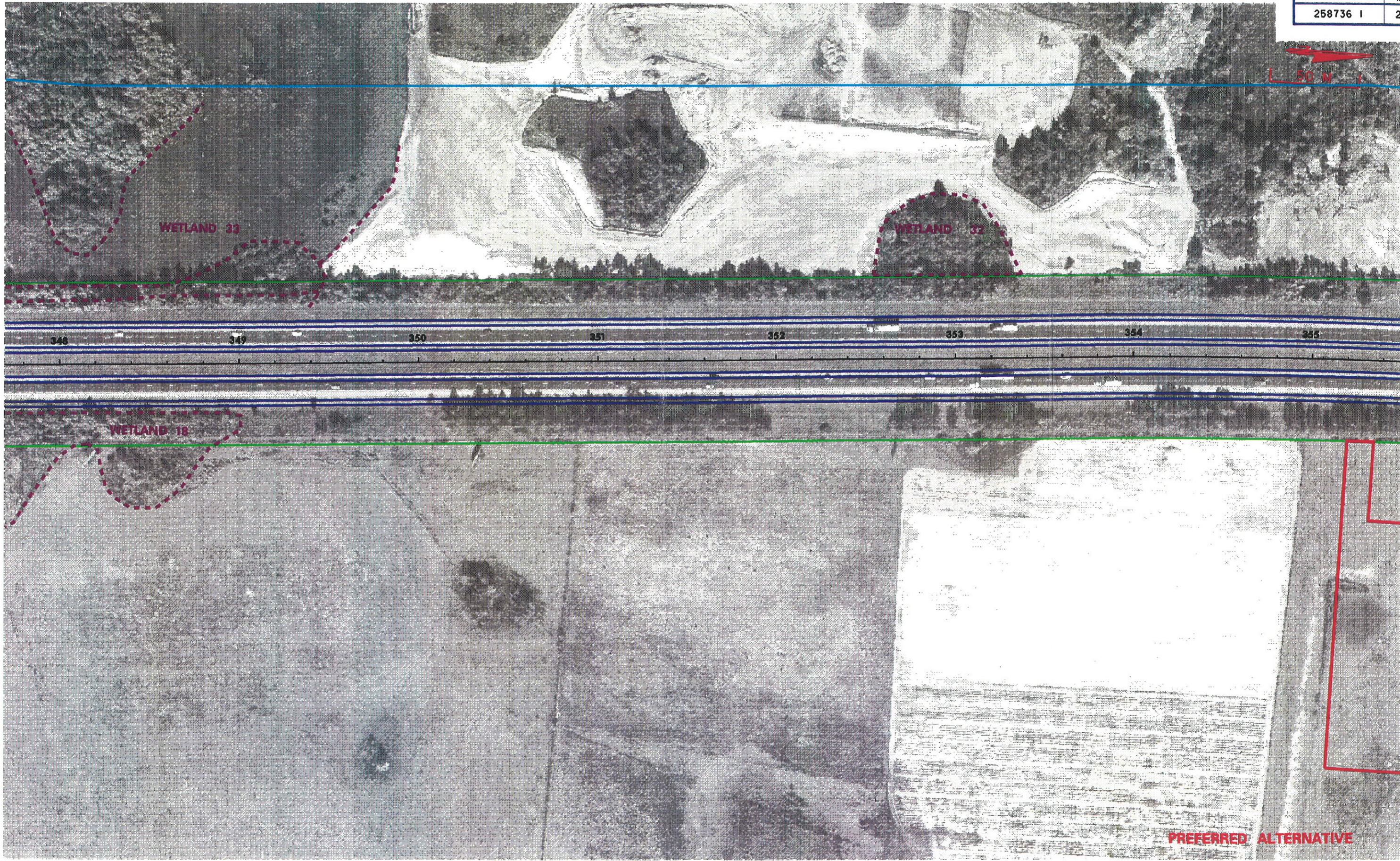
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| PROPOSED LIMITED ACCESS RIGHT OF WAY | PROPOSED EDGE OF PAVEMENT | SECTION LINES    | FUTURE EXISTING EDGE OF PAVEMENT (CONSTRUCTED BY OTHERS) |
| EXISTING LIMITED ACCESS RIGHT OF WAY | PROPERTY LINES            | WETLAND BOUNDARY |  |
| PROPOSED RIGHT OF WAY                | EXISTING RIGHT OF WAY     | FLUCPCS MAPPING  |  |

**PBSJ**  
PLANNING, DESIGN & CONSTRUCTION  
 CONSULTING, ENGINEERING & SURVEYING  
 530 W. GORRIS STREET, SUITE 300  
 TAMPA, FLORIDA 33607-0000

FLORIDA DEPARTMENT OF  
TRANSPORTATION

I-75 PDE STUDY  
FROM SOUTH OF S.R. 56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA



**PREFERRED ALTERNATIVE**

FLIGHT DATE: JUNE 7, 1997

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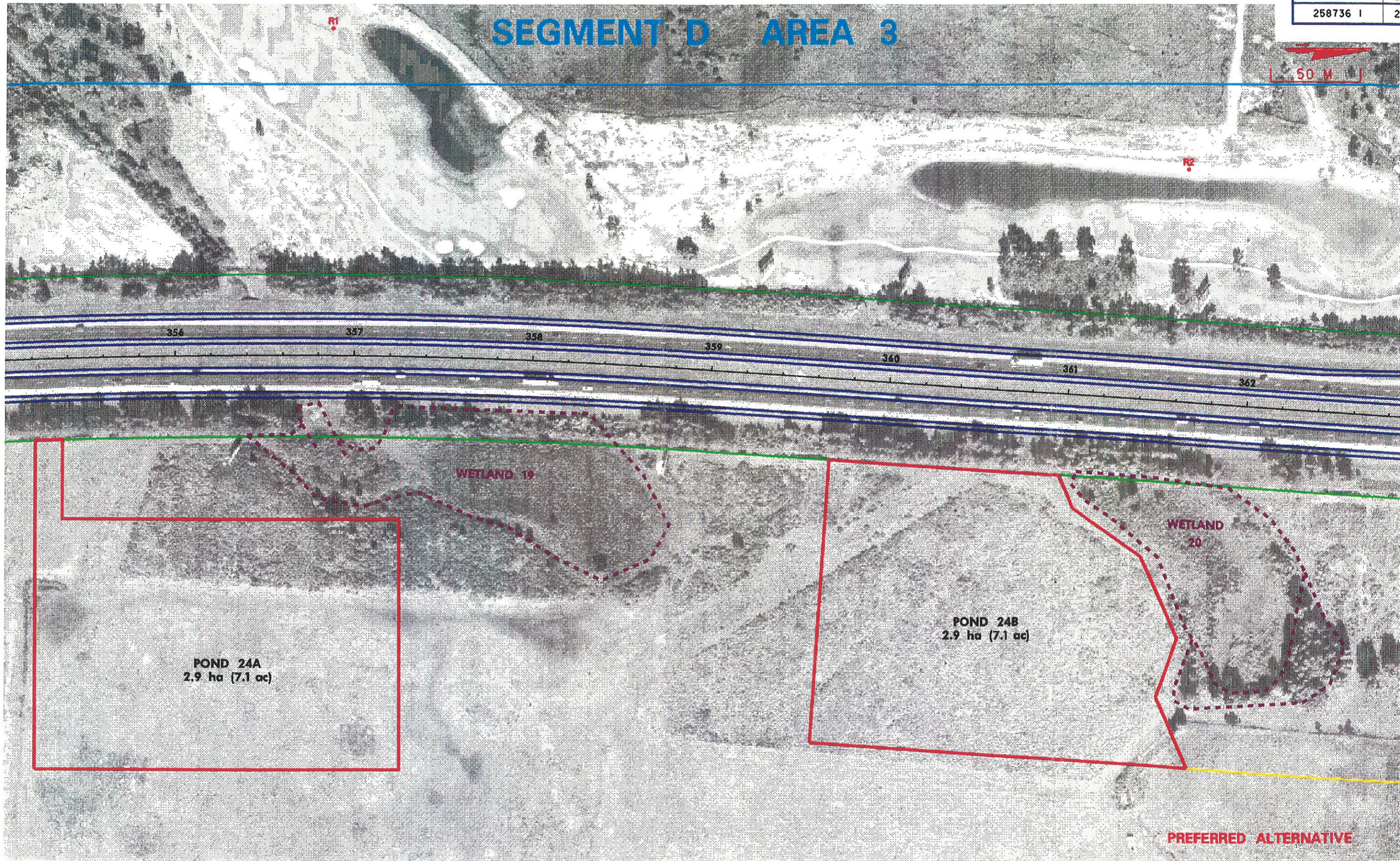
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	EXISTING LIMITED ACCESS RIGHT OF WAY		PROPERTY LINES		WETLAND BOUNDARY		FLUCPCS MAPPING
	PROPOSED RIGHT OF WAY		EXISTING RIGHT OF WAY				



FLORIDA DEPARTMENT OF  
TRANSPORTATION

I-75 PDE STUDY  
FROM SOUTH OF S.R. 56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA

# SEGMENT D AREA 3



**PREFERRED ALTERNATIVE**

FLIGHT DATE: JUNE 7, 1997

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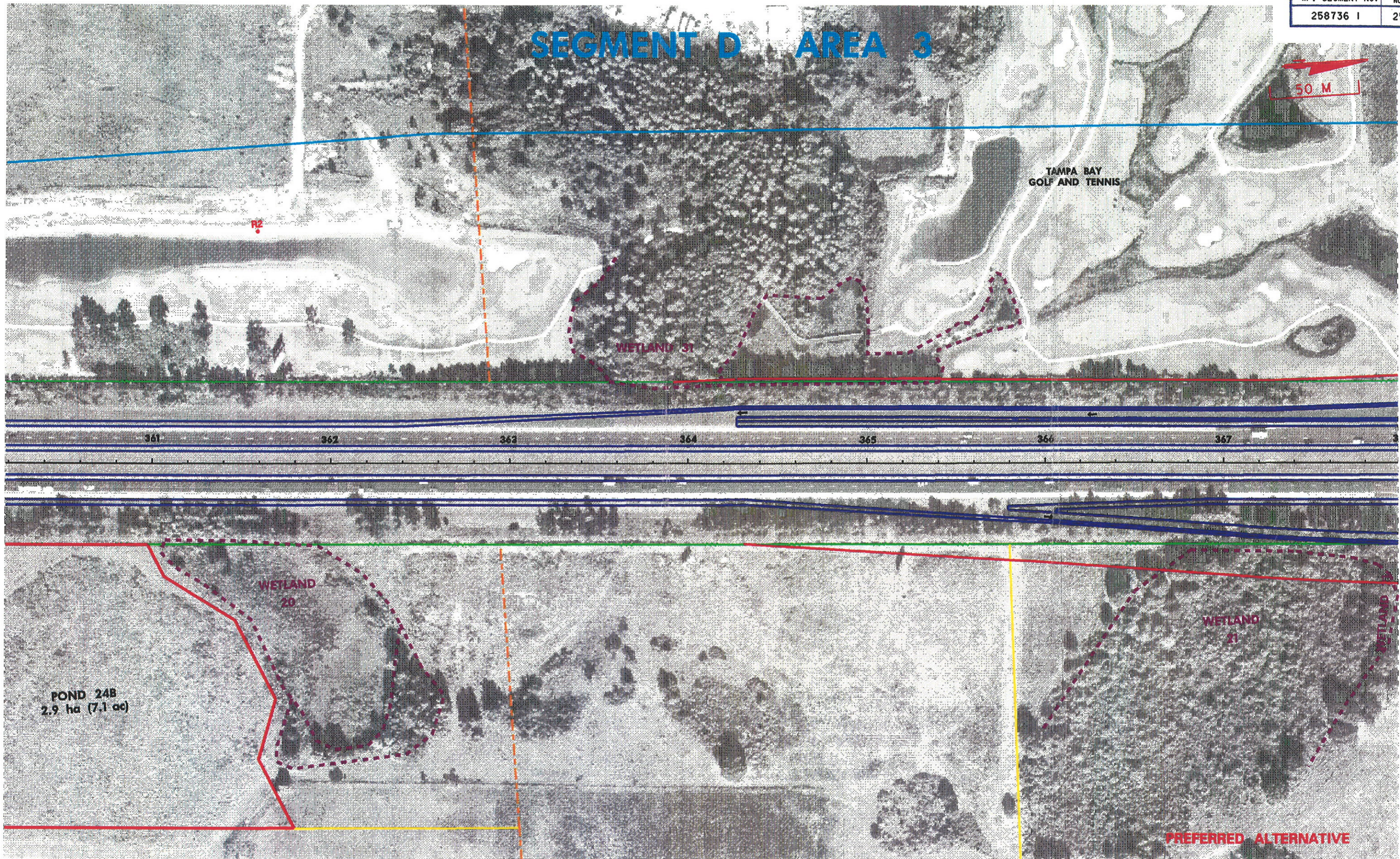
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EXISTING LIMITED ACCESS RIGHT OF WAY	PROPERTY LINES	WETLAND BOUNDARY	
PROPOSED RIGHT OF WAY	EXISTING RIGHT OF WAY	R1 ● NOISE RECEIVERS	



FLORIDA DEPARTMENT OF  
TRANSPORTATION

I-75 PDE STUDY  
FROM SOUTH OF S.R. 56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA

# SEGMENT D AREA 3



20-JUN-2000 13:07  
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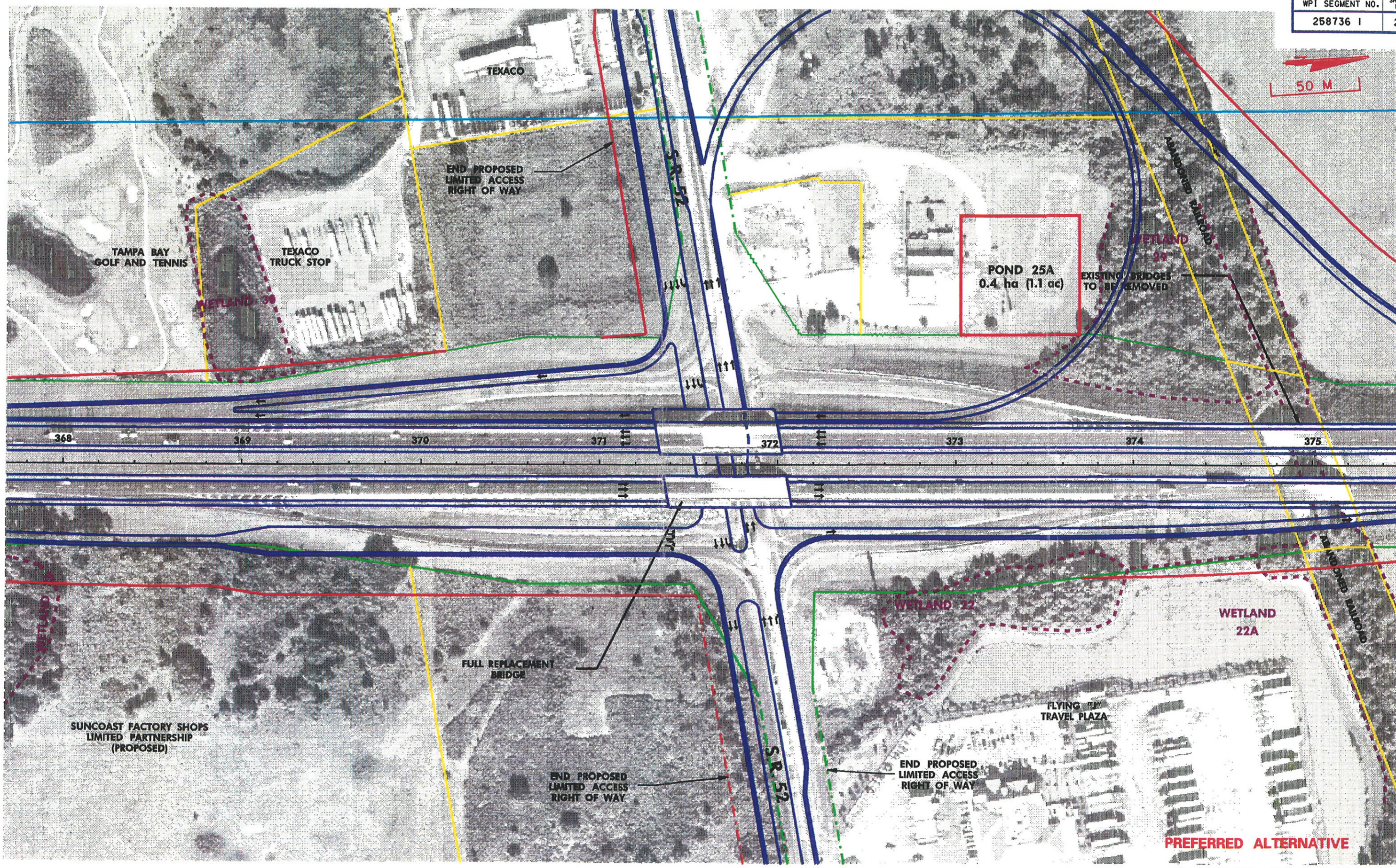
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|--------------------------------------|---------------------------|------------------|--|
| PROPOSED LIMITED ACCESS RIGHT OF WAY | PROPOSED EDGE OF PAVEMENT | SECTION LINES    | FUTURE EXISTING EDGE OF PAVEMENT (CONSTRUCTED BY OTHERS) |
| EXISTING LIMITED ACCESS RIGHT OF WAY | PROPERTY LINES            | WETLAND BOUNDARY |  |
| PROPOSED RIGHT OF WAY                | EXISTING RIGHT OF WAY     | FLUCPCS MAPPING  |  |



FLORIDA DEPARTMENT OF  
TRANSPORTATION

I-75 PDE STUDY  
FROM SOUTH OF S.R. 56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA

FLIGHT DATE: JUNE 7, 1997



**PREFERRED ALTERNATIVE**

FLIGHT DATE: JUNE 7, 1997

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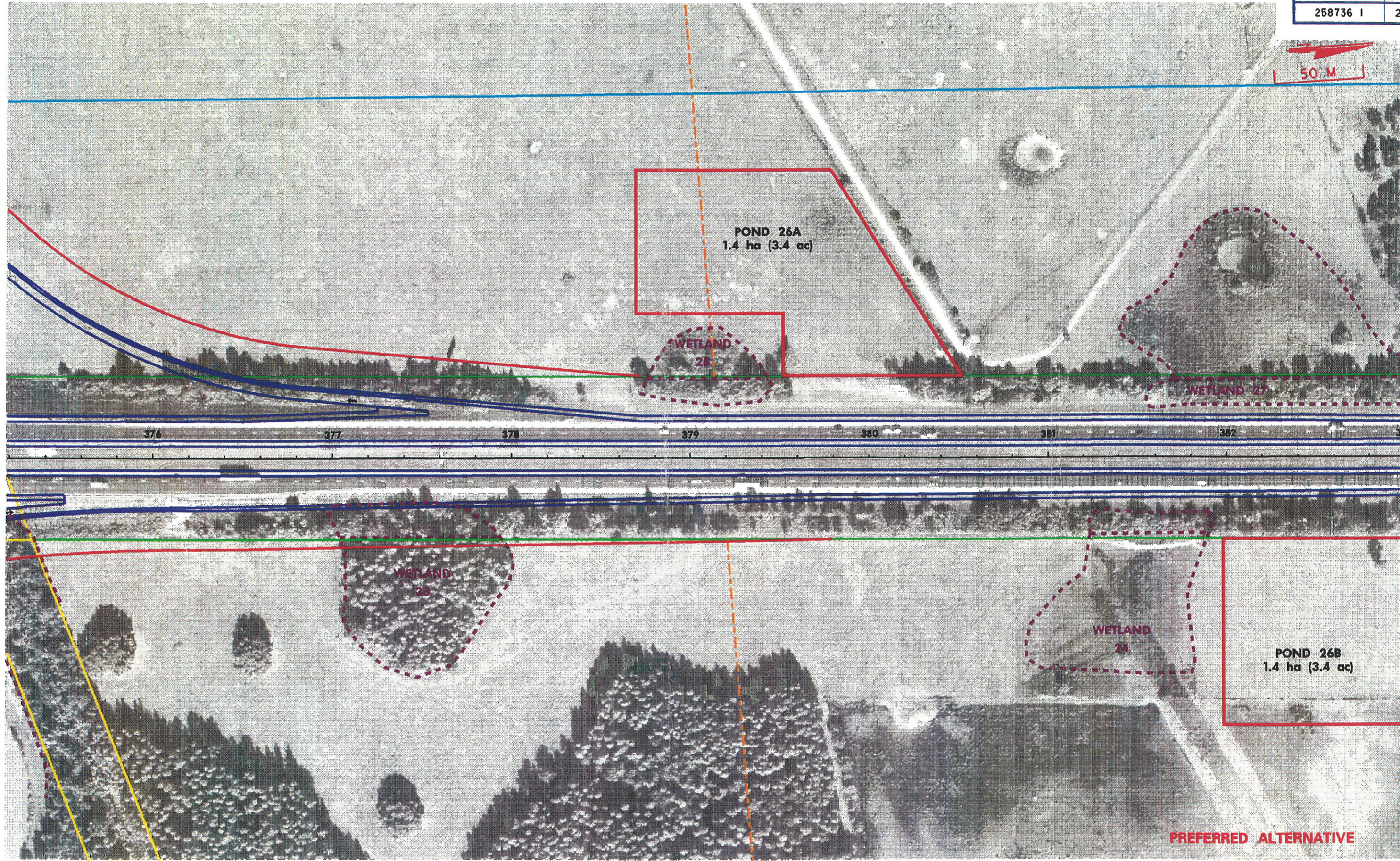
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|--|--------------------------------------|--|---------------------------|--|------------------|--|--|
|  | PROPOSED LIMITED ACCESS RIGHT OF WAY |  | PROPOSED EDGE OF PAVEMENT |  | SECTION LINES    |  | FUTURE EXISTING EDGE OF PAVEMENT (CONSTRUCTED BY OTHERS) |
|  | EXISTING LIMITED ACCESS RIGHT OF WAY |  | PROPERTY LINES            |  | WETLAND BOUNDARY |  |  |
|  | PROPOSED RIGHT OF WAY                |  | EXISTING RIGHT OF WAY     |  | FLUCPCS MAPPING  |  |  |



FLORIDA DEPARTMENT OF TRANSPORTATION

I-75 PDE STUDY  
FROM SOUTH OF S.R. 56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA





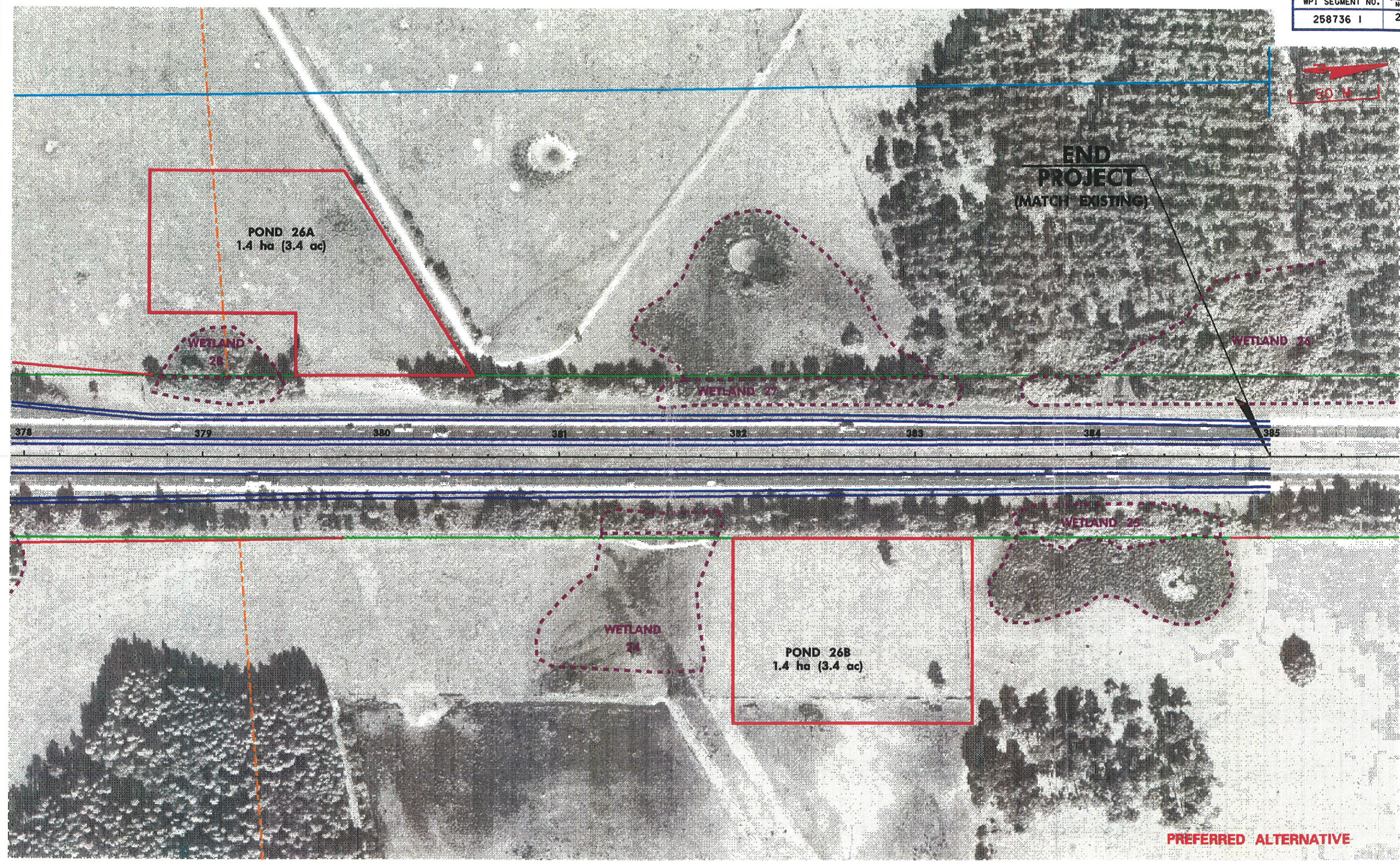
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PROPOSED LIMITED ACCESS RIGHT OF WAY	PROPOSED EDGE OF PAVEMENT	SECTION LINES	FUTURE EXISTING EDGE OF PAVEMENT (CONSTRUCTED BY OTHERS)
EXISTING LIMITED ACCESS RIGHT OF WAY	PROPERTY LINES	WETLAND BOUNDARY	
PROPOSED RIGHT OF WAY	EXISTING RIGHT OF WAY	FLUCPCS MAPPING	

**PBSJ**  
PLANNING, DESIGN & CONSTRUCTION INC.  
 5300 W. CHANCE STREET, SUITE 300  
 TAMPA, FLORIDA 33607-0000

FLORIDA DEPARTMENT OF  
TRANSPORTATION

FLIGHT DATE: JUNE 7, 1997  
 I-75 PDE STUDY  
 FROM SOUTH OF S.R. 56 TO NORTH OF S.R. 52  
 PASCO COUNTY, FLORIDA



378 379 380 381 382 383 384 385

**PREFERRED ALTERNATIVE**

FLIGHT DATE: JUNE 7, 1997

20-JUN-2000 13:10  
C:\projects\175\PLANPA28.DGN

PROPOSED LIMITED ACCESS RIGHT OF WAY	PROPOSED EDGE OF PAVEMENT	SECTION LINES	FUTURE EXISTING EDGE OF PAVEMENT (CONSTRUCTED BY OTHERS)
EXISTING LIMITED ACCESS RIGHT OF WAY	PROPERTY LINES	WETLAND BOUNDARY	FLUCFCS MAPPING
PROPOSED RIGHT OF WAY	EXISTING RIGHT OF WAY		



FLORIDA DEPARTMENT OF  
TRANSPORTATION

I-75 PDE STUDY  
FROM SOUTH OF S.R.56 TO NORTH OF S.R. 52  
PASCO COUNTY, FLORIDA

**Appendix C**

**Validation**

NOISE DATA  
FIELD VALIDATION

Date 7-10-97

Project I-75

SPN \_\_\_\_\_ WPI \_\_\_\_\_

Location W. side of I-75, south of SR52  
Trailer Park

Distance from Center of Near Travel Lane 75 ft.

Width of Roadway/Lanes 111 ft. 12 ft. # lanes 4

Barrier/Buffer None

Terrain Flat Grade None

Height of Noise Receiver 5 ft. Length of Run 10 min. Time 9:50 (am) (pm)

Traffic:

Cars	=NB	<u>234</u>	x6	<u>1404</u>	<u>72</u> mph	Posted Speed
	SB	<u>171</u>	x6	<u>1026</u>	mph	<u>70</u> mph
MT	=NB	<u>11</u>	x6	<u>66</u>	<u>64</u> mph	
	SB	<u>11</u>	x6	<u>66</u>	mph	
HT	=NB	<u>42</u>	x6	<u>252</u>	<u>69</u> mph	
	SB	<u>46</u>	x6	<u>276</u>	mph	

Unusual Events: None

Results:

Field Staff:

Lav (Leq)	<u>74.9</u> dB	<u>V. Scott</u>
Lpk (peak)	<u>83.7</u> dB	<u>J. Wise</u>
Computer	<u>74.5</u> dB	<u>C. Attardo</u>

(Site sketch on back)

**NOISE DATA SHEET  
TRAFFIC SPEEDS FOR VALIDATION  
OF NOISE MODEL**

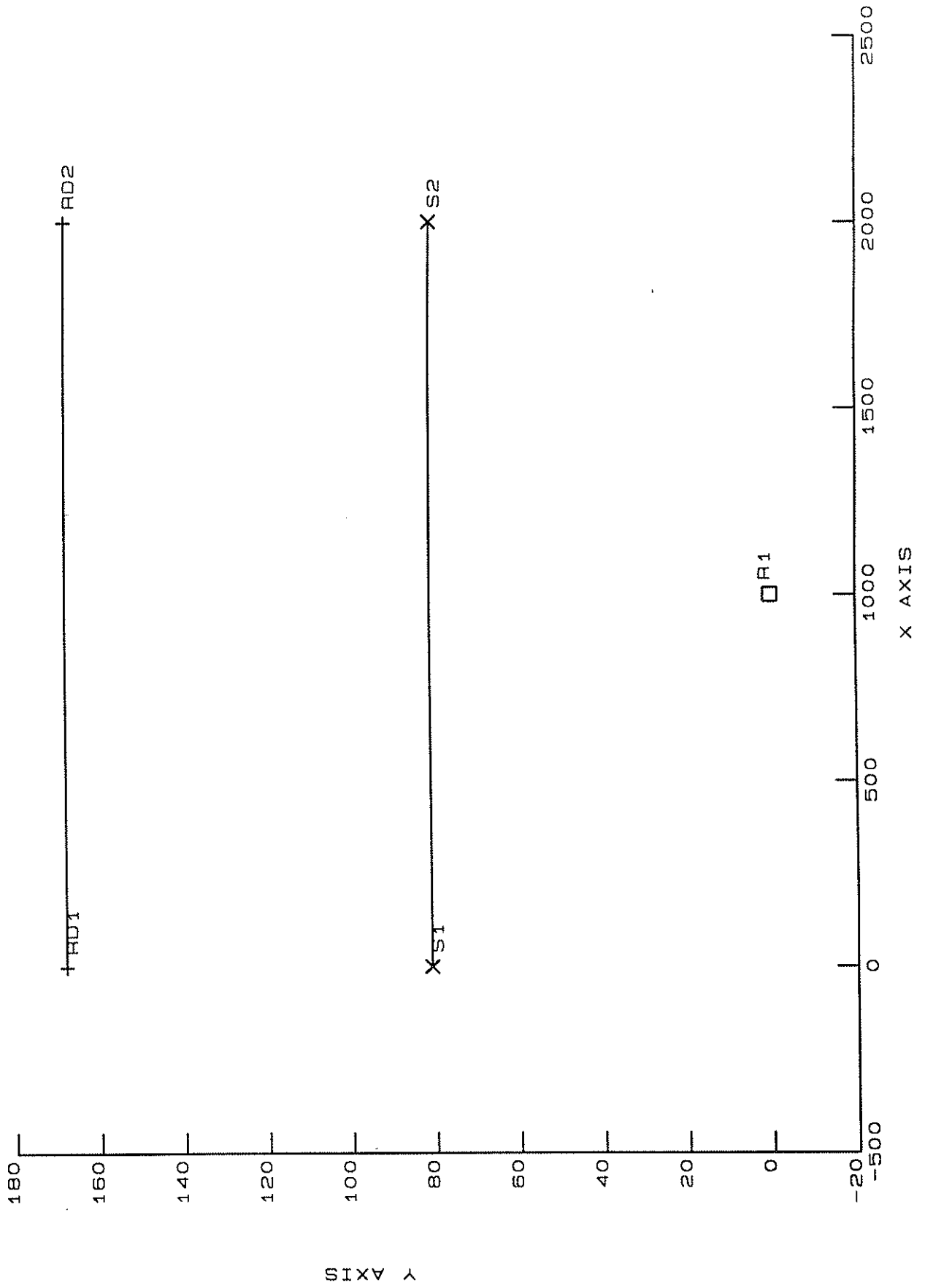
DATE: 7/16/97

PROJECT: I-75

LOCATION: W. side of I-75, South of SR 52, TV Trailer Park

CARS			MEDIUM TRUCKS	HEAVY TRUCKS
72	77		69	70
69	75		65	62
67	69		65	70
61	83		61	69
68	68		55	65
68	74		67	67
65	73		71	67
71	81		55	72
64	68		64	73
73	71			69
70	77			69
68	70			69
70	75			76
70	75			75
79				62
70				63
75				63
72				71
84				75
AVG.	72		AVG. 64	AVG. 69

I-75, VALIDATION AT TRAILER PARK, W SIDE OF 75, S OF SR 52



1 STAMINA 2.1/BCR MESSAGE FILE

\*\*\*\*\*

\*\*NOW READING INPUT FILE\*\*

PROBLEM TITLE(80 CHAR) = I-75, VALIDATION AT TRAILER PARK, W SIDE OF 75, S  
ROADWAY TITLE (60 CHAR) = NORTHBOUND  
ROADWAY ENDPOINT ID (8 CHAR) = RD1  
ROADWAY ENDPOINT ID (8 CHAR) = RD2  
ROADWAY TITLE (60 CHAR) = SOUTHBOUND  
ROADWAY ENDPOINT ID (8 CHAR) = S1  
ROADWAY ENDPOINT ID (8 CHAR) = S2  
RECEIVER TITLE (80 CHAR) = RECEIVER  
RECEIVER ID (8 CHAR) = R1  
ALPHA TITLE (80 CHAR) = ALPHA FACTORS  
SHIELDING TITLE (80 CHAR) = NO SHIELDING

\*\*\* END OF DATA ENCOUNTERED \*\*\*  
\*\*\* PROCESSING BEGINS \*\*\*

OREQUESTED PLOTTING PARAMETERS

XSCA= 200.00YSCA= 200.00

XAX= 30.00YAX= 30.00

O PLOTTING THE ENTIRE INPUT FILE

ONUMBER OF ROADWAYS, BARRIERS AND RECEIVERS TO PLOT

IRD1 = 2 IBR1 = 0 IRC1 = 1

OMAXIMUM AND MINIMUM X AND Y COORDINATES

XXM = 2000.000 XMN = .000

YYM = 168.000 YMN = .000

OX AND Y ACTUAL AXIS LENGTH

XLN = 13.000 YLN = 3.000

X AND Y ORIGINS

XCOR = -200.000 YCOR = -200.000

X AND Y ACTUAL PLOTTING SCALES

XSCA = 200.000 YSCA = 200.000

\*\*\* RECEIVER 1 PROCESSED \*\*\*, LEQ = 74.5

STAMINA 2.1/BCR  
 FHWA VERSION 3 (MARCH 1983)  
 TRAFFIC NOISE PREDICTION MODEL

(INPUT UNITS- ENGLISH , OUTPUT UNITS- METRIC )

I-75, VALIDATION AT TRAILER PARK, W SIDE OF 75, S OF SR 52

VEHICLE SPEED SUPPLIED IS GREATER THAN 70 MPH.. ADJUSTED TO 70. ROADWAY NO

VEHICLE SPEED SUPPLIED IS GREATER THAN 70 MPH.. ADJUSTED TO 70. ROADWAY NO

PROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

ROADWAY 1 NORTHBOUND

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1404.	113.
HT	252.	111.
MT	66.	103.

-----COORDINATES-----

	X	Y	Z	GRADE
RD1	0.	51.	.0	0
RD2	610.	51.	.0	0

ROADWAY 2 SOUTHBOUND

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1026.	113.
HT	276.	111.
MT	66.	103.

-----COORDINATES-----

	X	Y	Z	GRADE
S1	0.	25.	.0	0
S2	610.	25.	.0	0



RECEIVER

	-----COORDINATES-----		
	X	Y	Z
R1	305.	0.	1.5

ALPHA FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 *	.5
2 *	.5

SHIELDING FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 *	.0
2 *	.0

RECEIVER	LEQ (H)	L10
R1	74.5	78.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 50.0 DBA

ROADWAY SEGMENT

1	1
	68.7
2	1
	73.2

**NOISE DATA  
FIELD VALIDATION**

Date 7-10-92

Project I-75

SPN \_\_\_\_\_ WPI \_\_\_\_\_

Location House w. side of I-75, South of SR 52

Distance from Center of Near Travel Lane 50 ft.

Width of Roadway/Lanes 111 ft. 12 ft. # lanes 4

Barrier/Buffer None

Terrain Flat Grade None

Height of Noise Receiver 5 ft. Length of Run 10 min. Time 12:00(am) ~~(pm)~~

**Traffic:**

Cars	=	<sup>NB</sup>	<u>162</u>	x6	<u>972</u>	<u>68</u> mph	Posted Speed
			<u>SB</u>	<u>156</u>	x6	<u>936</u>	<u>70</u> mph
MT	=	<sup>NB</sup>	<u>12</u>	x6	<u>72</u>	<u>65</u> mph	
			<u>SB</u>	<u>14</u>	x6	<u>84</u>	
HT	=	<sup>NB</sup>	<u>71</u>	x6	<u>426</u>	<u>66</u> mph	
			<u>SB</u>	<u>39</u>	x6	<u>234</u>	

Unusual Events: \_\_\_\_\_

**Results:**

**Field Staff:**

Lav (Leq) 75.7 dB

Lpk (peak) 84.4 dB

Computer 76.4 dB

V. Scott

J. Wise

C. Attardo

(Site sketch on back)

**NOISE DATA SHEET  
TRAFFIC SPEEDS FOR VALIDATION  
OF NOISE MODEL**

DATE: 7-10-97

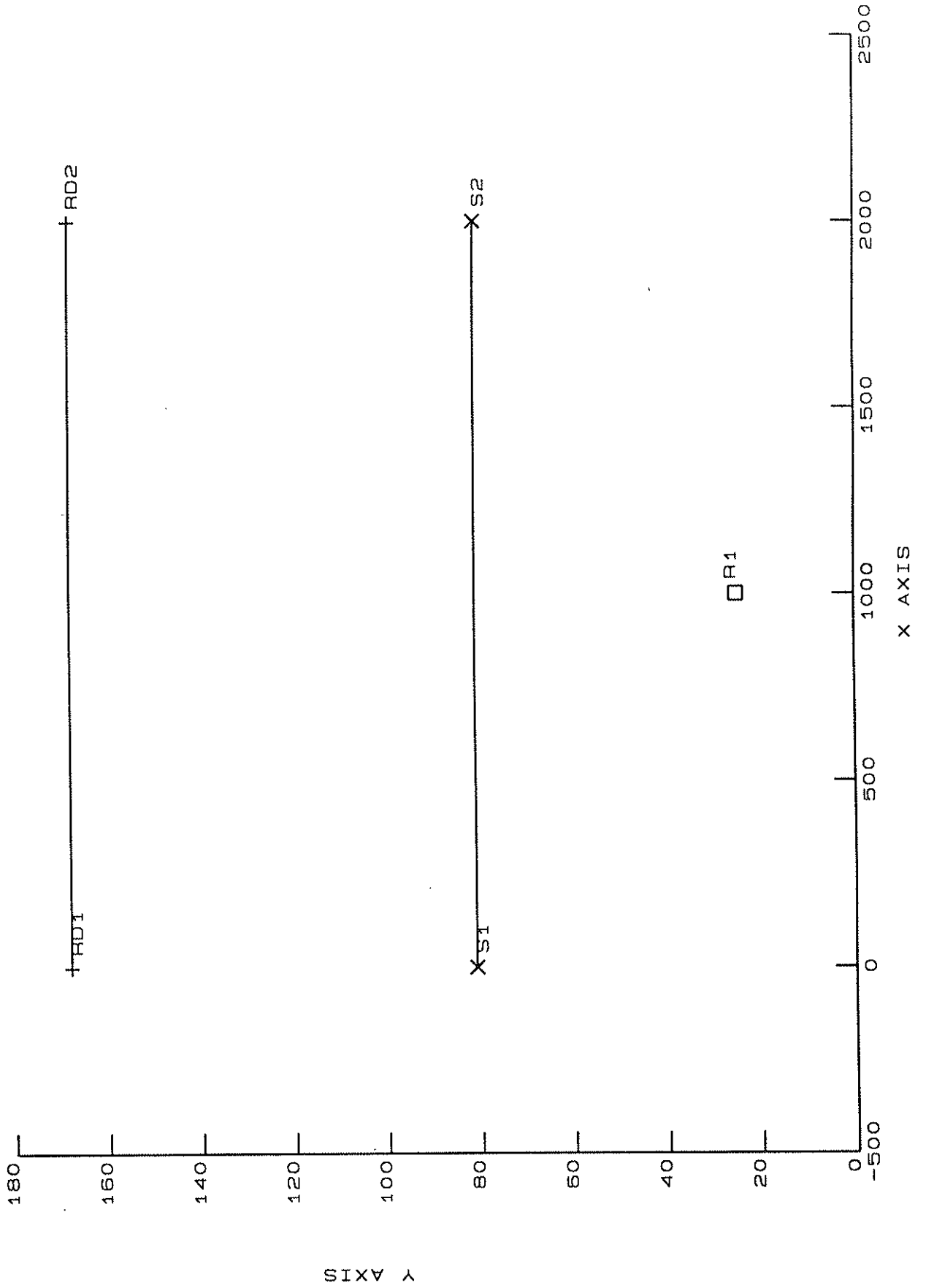
PROJECT: I-75

LOCATION: House w. side of I-75, South of SR 52

CARS			MEDIUM TRUCKS	HEAVY TRUCKS
71	73		65	68
66	71		74	62
67	66		68	61
66	68		67	59
70	69		68	62
70	64		68	64
67	69		69	68
70	68		58	72
69	71		59	73
70	65		62	70
67	70		62	72
77			62	72
68			69	67
73				66
65				65
67				56
65				73
65				60
59				67
AVG.	68		AVG. 65	AVG. 66

68

I-75, VALIDATION AT HOUSE, W SIDE OF 75. S OF SR 52



1 STAMINA 2.1/BCR MESSAGE FILE

\*\*\*\*\*

\*\*NOW READING INPUT FILE\*\*

PROBLEM TITLE(80 CHAR) = I-75, VALIDATION AT HOUSE, W SIDE OF 75, S OF SR  
ROADWAY TITLE (60 CHAR) = NORTHBOUND  
ROADWAY ENDPOINT ID (8 CHAR) = RD1  
ROADWAY ENDPOINT ID (8 CHAR) = RD2  
ROADWAY TITLE (60 CHAR) = SOUTHBOUND  
ROADWAY ENDPOINT ID (8 CHAR) = S1  
ROADWAY ENDPOINT ID (8 CHAR) = S2  
RECEIVER TITLE (80 CHAR) = RECEIVER  
RECEIVER ID (8 CHAR) = R1  
ALPHA TITLE (80 CHAR) = ALPHA FACTORS  
SHIELDING TITLE (80 CHAR) = NO SHIELDING

\*\*\* END OF DATA ENCOUNTERED \*\*\*  
\*\*\* PROCESSING BEGINS \*\*\*

OREQUESTED PLOTTING PARAMETERS

XSCA= 200.00YSCA= 200.00

XAX= 30.00YAX= 30.00

O PLOTTING THE ENTIRE INPUT FILE

ONUMBER OF ROADWAYS, BARRIERS AND RECEIVERS TO PLOT

IRD1 = 2 IBR1 = 0 IRC1 = 1

OMAXIMUM AND MINIMUM X AND Y COORDINATES

XXM = 2000.000 XMN = .000

YYM = 168.000 YMN = 25.000

OX AND Y ACTUAL AXIS LENGTH

XLN = 13.000 YLN = 3.000

X AND Y ORIGINS

XCOR = -200.000 YCOR = -200.000

X AND Y ACTUAL PLOTTING SCALES

XSCA = 200.000 YSCA = 200.000

\*\*\* RECEIVER 1 PROCESSED \*\*\* , LEQ = 76.4

STAMINA 2.1/BCR  
 FHWA VERSION 3 (MARCH 1983)  
 TRAFFIC NOISE PREDICTION MODEL

(INPUT UNITS- ENGLISH , OUTPUT UNITS- METRIC )

I-75, VALIDATION AT HOUSE, W SIDE OF 75, S OF SR 52

PROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

ROADWAY 1 NORTHBOUND

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	972.	109.
HT	426.	106.
MT	72.	105.

-----COORDINATES-----

	X	Y	Z	GRADE
RD1	0.	51.	.0	0
RD2	610.	51.	.0	0

ROADWAY 2 SOUTHBOUND

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	936.	109.
HT	234.	106.
MT	84.	105.

-----COORDINATES-----

	X	Y	Z	GRADE
S1	0.	25.	.0	0
S2	610.	25.	.0	0

RECEIVER

-----COORDINATES-----

	X	Y	Z
R1	305.	8.	1.5

ALPHA FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 *	.5
2 *	.5

SHIELDING FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 *	.0
2 *	.0

RECEIVER	LEQ(H)	L10
R1	76.4	79.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 50.0 DBA

ROADWAY SEGMENT

1	1
	70.5
2	1
	75.1