

# I-75 (SR 93A)

## **FINAL PRELIMINARY ENGINEERING REPORT**

***PD&E Study from South of Fowler Avenue, Hillsborough County, to South of SR 56, Pasco County***

*WPI Segment No.: 408459 1  
Federal Aid Project Number: 0751 105 I*

***Reevaluation Study from South of SR 56 to CR 54, Pasco County***

*WPI Segment No.: 258736 1  
Federal Aid Project Number: NH-75-1(91)275*

**Florida Department  
of Transportation  
District Seven**



**April 2004**

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PRELIMINARY ENGINEERING REPORT**

**I-75 Hillsborough and Pasco Counties  
Project Development & Environment Study**

**PD&E Study from South of Fowler Avenue, Hillsborough County to  
South of SR 56, Pasco County**

WPI Segment Number: 408459 1  
Federal Aid Project Number: NH-07-1-275

**Reevaluation Study from South of SR 56 to  
CR 54, Pasco County**

WPI Segment Number: 258736 1  
Federal Aid Project Number: NH-75-1-(91)275

The proposed action involves improvements to I-75 from south of Fowler Avenue to County Road 54, a distance of approximately 13.9 miles.

**Florida Department of Transportation  
District Seven**

Prepared by:  
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April 5, 2004

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Appendix A SHPO Coordination Letters

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## **1.0 EXECUTIVE SUMMARY**

The Florida Department of Transportation (FDOT) has conducted studies to evaluate and document the proposed improvements to Interstate (I-75) from south of Fowler Avenue in Hillsborough County to County Road (CR) 54 in Pasco County. A Project Development and Environment (PD&E) Study was conducted for the I-75 segment from south of Fowler Avenue to south of State Road (SR) 56 in Hillsborough and Pasco Counties, Florida. A Design Change Reevaluation Study has been approved by the Federal Highway Administration (FHWA) for the remaining I-75 segment from south of SR 56 to CR 54 in Pasco County. The Reevaluation Study compared and documented the newly approved design concepts to those contained in the I-75 PD&E Study that was approved by the FHWA on November 27, 2000. The combined length of these studies was approximately 13.9 miles.

The existing facility from south of Fowler Avenue to south of SR 56 is typically a four-lane limited access highway. This study evaluates six-lane and six-lane with auxiliary lanes typical section alternatives and a No-Build Alternative.

### **1.1 Commitments**

The FDOT is committed to the construction of feasible and reasonable noise abatement measures at the noise-affected locations identified during this Study, contingent upon the following conditions:

1. Detailed noise analysis updates during the final design process continue to support the opportunity to provide noise abatement walls at NSA 1 and NSA 5;
2. Community input regarding desires, types, heights, and locations of barriers has been solicited by the FDOT; and
3. Safety and engineering aspects as related to the roadway user and the adjacent property owner have been reviewed.

## 1.2 Recommendations

The recommended improvements for the Preferred Alternative are summarized by segment below.

Segment	Recommended Improvement	Typical Sections
<b>A</b> Fowler Avenue to Fletcher Avenue	Six lanes with two auxiliary lanes (three through and one auxiliary lane in each direction) and a merge/diverge lane between the on- and off-ramps for each direction of travel.	Roadway: Typical varies Bridges: Figures 8-1 and 8-2 See Section 8.4.1 and 9.2.1
<b>B&amp;C</b> Fletcher Avenue to Bruce B. Downs Boulevard.	Six lanes with two auxiliary lanes (three through and one auxiliary lane in each direction)	Roadway: Figures 8-3 and 8-4 Bridge: Figure 8-5 See Sections 8.4.1, 9.2.2 and 9.2.3
<b>D</b> Bruce B. Downs Boulevard to South of I-275 Apex	Six lanes (three through lanes in each direction)	Roadway: Figure 8-6 Bridge: Figure 8-7 See Sections 8.4.1 and 9.2.4
<b>E</b> South of I-275 Apex to south of SR 56	Six lanes with four auxiliary lanes (three through lanes in each direction with one northbound auxiliary lane and three southbound auxiliary lanes). A two-lane off-ramp from I-75 and I-275 would run parallel to the I-75 mainline to SR 56.	Roadway: Figure 8-9 Bridge: Figure 8-11 See Sections 8.4.1 and 9.2.5
<b>F</b> South of SR 56 to CR 54	Six lanes with two auxiliary lanes (three through and one auxiliary lane in each direction)	Roadway: Figures 8-12 and 8-13 See Sections 8.4.1 and 9.2.6 (Reevaluation Study Limits)

## 2.0 INTRODUCTION

The FDOT has conducted studies to evaluate and document the proposed improvements to I-75 from south of Fowler Avenue in Hillsborough County to CR 54 in Pasco County. A PD&E Study was conducted for the I-75 segment from south of Fowler Avenue to south of SR 56 in Hillsborough and Pasco Counties, Florida. A Design Change Reevaluation has been approved by the FHWA for the remaining I-75 segment from south of SR 56 to CR 54 in Pasco County. The Reevaluation Study compared and documented the new approved design concepts to those contained in the I-75 PD&E Study that was approved by the FHWA on November 27, 2000. The combined length of these studies was approximately 13.9 miles. Figure 2-1 indicates the limits of the PD&E and Reevaluation Studies.

The general objective of both Studies was to provide documented information necessary for the FDOT to reach a decision on the type, design and location of improvements to I-75. This study incorporated all recommended improvements contained in the FHWA approved Interchange Modification Report for I-75 at CR 581 (Bruce B. Downs Boulevard), hereinafter referred to as the I-75/CR581 IMR.

This Preliminary Engineering Report has been prepared in accordance with the FDOT's PD&E Manual, Part One, Chapter 9, and is consistent with the appropriate editions of the standard publications listed in Section 9-2.3.1 of the PD&E Manual. The preliminary engineering concepts reflect and are consistent with federal, state and local guidelines and planning requirements.

### 2.1 Purpose

The purposes of the PD&E and Reevaluation Studies were to determine the best options to meet future traffic requirements for the I-75 project corridor.

This report documents information regarding the need for this project, develops the proposed improvement alternatives, and evaluates the socioeconomic, cultural and environmental effects of implementing these alternatives. The No-Build Alternative has remained a viable alternative throughout the study process.

The objectives of this report are to:

- identify, research and analyze the various engineering and environmental factors which will be instrumental in the formulation of a design concept for the proposed improvements;
- analyze alternative preliminary engineering concepts; and
- document the public involvement program to date.

## 2.2 Project Description

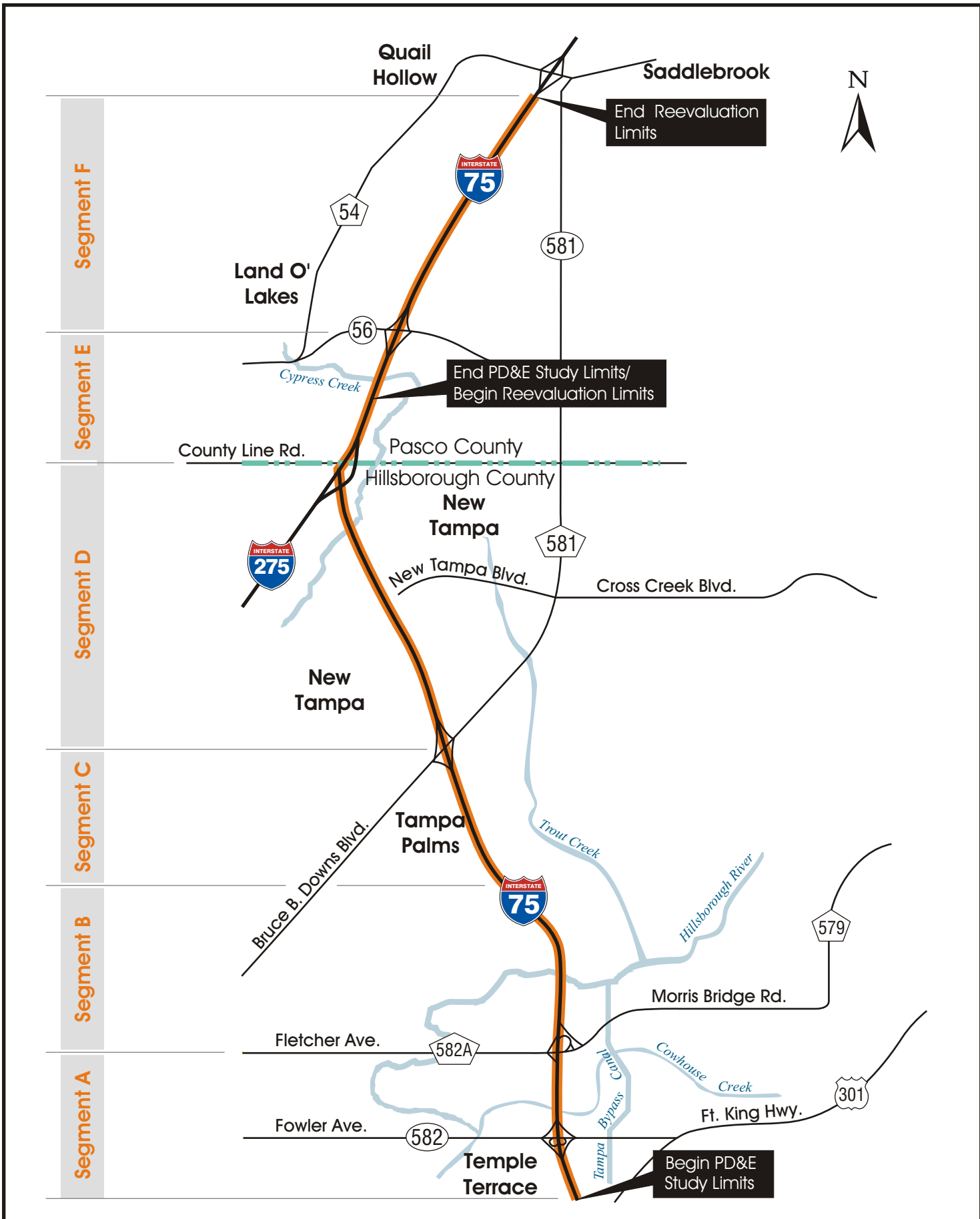
The PD&E Study addressed proposed improvements to I-75 from south of Fowler Avenue in Hillsborough County to south of SR 56 in Pasco County. The existing facility is typically a four-lane limited access highway. This Study evaluated six-lane and six-lane with auxiliary lanes typical section alternatives and a No-Build Alternative.

A Design Change Reevaluation of Work Program Item Segment No. 258736 1 was approved by the FHWA for the I-75 section from south of SR 56 to CR 54. The previous PD&E Study, approved by the FHWA on November 27, 2000, evaluated adding two lanes (one lane in each direction) to the existing roadway from south of SR 56 to north of SR 52. This Reevaluation Study evaluated design changes within a portion of this original Study.

In order to simplify the alternatives analysis, the I-75 project corridor was divided into the following study segments:

- Segment A – from Fowler Avenue to Fletcher Avenue
- Segment B – from Fletcher Avenue to 3,000 feet north of the Hillsborough River
- Segment C – from 3,000 feet north of the Hillsborough River to Bruce B. Downs Boulevard
- Segment D – from Bruce B. Downs Boulevard to the I-275 interchange
- Segment E – from the I-275 interchange to SR 56
- Segment F – from SR 56 to CR 54

All segments were evaluated to determine the effects of providing additional capacity to accommodate future traffic demand.



**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
 Hillsborough and Pasco Counties  
 WPI Seg. No: 408459 1 / FAP No: 0751 105 I  
 WPI Seg. No: 258736 1 / FAP No: NH-75-1-(91)275

**PROJECT LOCATION MAP**

**Figure 2-1**

## **3.0 NEED FOR IMPROVEMENT**

One of FDOT's primary goals is to provide continuous movement of people and goods with increased safety and efficiency. The improvements proposed for the I-75 project corridor are needed to accommodate future traffic projections, improve traffic circulation and enhance safety conditions.

Traffic demands along I-75 from Fowler Avenue to CR 54 have increased in recent years. Forecasts indicate further traffic increases due to developments in northern Hillsborough and southern Pasco Counties. Several I-75 freeway segments and ramps are experiencing a high level of congestion in the peak hours. The Traffic Technical Memorandum prepared for this project recommended that I-75 be widened to provide additional capacity throughout the entire study limits.

### **3.1 Area Needs**

#### **3.1.1 System Linkage**

I-75 is the only existing major north-south limited access route along the central highlands and western coast of Florida. In the project study area, I-75 runs north from south of Fowler Avenue in Hillsborough County to CR 54 in Pasco County. Traveling north, I-75 intersects with East Fowler Avenue (SR 582). This short east-west route in Tampa begins at North Florida Avenue (US 41 Business) and ends at US Highway 301. Continuing north, I-75 next intersects with East Fletcher Avenue (CR 582A), another short east-west route in Tampa. East Fletcher Avenue begins west of Dale Mabry Highway (SR 597) at South Village Drive and ends at I-75. I-75 continues north through the community of Tampa Palms and intersects Bruce B. Downs Boulevard (CR 581), a rural arterial highway that is located in Hillsborough and Pasco Counties. This highway has a southwest/northeast alignment in the vicinity of I-75. I-75 then merges with I-275 at the Hillsborough/Pasco County line. The I-75/I-275 junction does not provide for the northbound I-275 to southbound I-75 movement or the northbound I-75 to southbound I-275 movement. The first full interchange north of the Bruce B. Downs Boulevard interchange is SR 56, a four- to six-lane east-west corridor that stretches approximately 3 miles from CR 54 at Cypress Creek to Bruce B. Downs Boulevard. SR 56 is the first exit from I-75 in Pasco County heading north from Tampa. Continuing north, I-75 intersects CR 54 at the northern end of the project. CR 54 is a four-lane divided arterial with one dedicated through lane heading eastward and one westward.

#### **3.1.2 Transportation Demand**

According to the FDOT District Seven Construction Hillsborough and Pasco Counties web pages, March 2, 2004, construction projects that have direct connections with this proposed action include:

- I-75 from south of Fowler Avenue to the Hillsborough/Pasco County line – resurfacing (project completion early 2004)

- I-75 from south of I-4 to south of Fowler Avenue – rehabilitating the concrete travel lanes and ramps of I-75 and upgrading the I-75 mainline bridges (project completion fall 2005)
- I-75 from the Hillsborough/Pasco County line to south of SR 54 – add guardrail (project start spring 2004)

According to the Hillsborough County 2025 Long Range Transportation Plan, Adopted November 13, 2001, the following projects have direct connections with this proposed action:

- Fletcher Avenue from Morris Bridge Road to I-75 – sidewalk project
- Fowler Avenue from I-75 to US Highway 301 – sidewalk project
- Fowler Avenue from Morris Bridge Road to I-75 – sidewalk project
- Bruce B. Downs Boulevard from Bearss Avenue to County Line Road – need six lanes
- Modifications to the I-75/Bruce B. Downs Boulevard interchange

According to the Pasco County MPO 2025 Transportation Plan, November 2001, the following projects that were identified in the 2007-2025 Needs Plan Highway Cost Summary that have a direct connection with the proposed action include:

- Bruce B. Downs Boulevard from County Line Road to CR 54 – need six lanes
- SR 56 from SR 54 to I-75 – need six lanes
- CR 54 from Pasco Road to I-75 – need six lanes
- CR 54 from I-75 to Bruce B. Downs Boulevard – need six lanes

Although the Hillsborough County 2025 Highway Needs Assessment map calls for ten lanes on I-75 from Fowler Avenue to Fletcher Avenue, eight lanes from Fletcher Avenue to Bruce B. Downs Boulevard and six lanes from Bruce B. Downs Boulevard to the Hillsborough/Pasco County line, the 2025 Cost Affordable map makes provisions for only six lanes. Similarly, the Pasco County 2025 Needs Plan Improved Roads (2007-2025) map calls for ten lanes on I-75 from the Hillsborough/Pasco County line to SR 56 and eight lanes from SR 56 to CR 54, but the Cost Affordable Plan Improved Roads (2007-2025) map makes provisions for only six lanes. Since the project proposes to add one lane in each direction for a total of six traffic lanes from Fowler Avenue in Hillsborough County to CR 54 in Pasco County, the project is consistent with the intent of the Hillsborough and Pasco Counties Needs Plans.

### **3.1.3 Social Demands or Economic Developments**

Several types of developments that have the potential to affect vehicular demand on the project corridor are currently underway or are proposed in proximity to the project. Based on a review of the Tampa Bay Regional Planning Council (TBRPC) files, there are several Developments of Regional Impact (DRI) in proximity to the project corridor.

These DRIs propose to develop approximately 19,300 acres within the study area for the following uses:

- 34,508 residential units
- 5.5 million square feet of retail use



- 10.4 million square feet of office space
- 3,173 hotel rooms
- 863,000 square feet dedicated to service centers
- 3.4 million square feet reserved for industrial uses

According to the DRI proposals, most of the development will occur along the major arterials in Hillsborough County; however, approximately half of the residential and retail development under consideration will occur in Pasco County. Based on population and employment projections through 2025, a 52 percent growth in travel demand is anticipated in Hillsborough County and a 26 percent growth is projected for Pasco County for the next 20 years.

With the future development of the study area, the proposed improvements to I-75 would benefit the anticipated social and economic demands by enhancing travel mobility, limiting traffic congestion to parallel arterials, improving accessibility to commercial areas along the arterials, and providing for the continuous movement of people and goods with increased safety and efficiency.

## **3.2 Project Corridor Needs**

### **3.2.1 Capacity**

According to the Traffic Technical Memorandum prepared for this project, severe traffic congestion was found to exist in the northbound direction on I-75 during the PM peak hour, and in the southbound direction on I-75 during the AM peak hour. Both directions of the I-75 mainline need capacity improvements in the form of basic lane additions and merge/diverge/weave improvements, to minimize traffic congestion.

During the AM peak hour, the I-75 mainline segment between Bruce B. Downs Boulevard and Fletcher Avenue operates at Level of Service (LOS) F in the southbound direction. The overcapacity condition that exists on this segment of the I-75 mainline also results in LOS F traffic operations in the merge area of the southbound on-ramp from Bruce B. Downs Boulevard, and in the diverge area of the southbound off-ramp to Fletcher Avenue. During the PM peak hour, the I-75 mainline segment south of Bruce B. Downs Boulevard operates at LOS E in the northbound direction.

### **3.2.2 Safety**

Traffic crash records for the five-year period between 1995 and 1999 were reviewed to evaluate traffic safety in the study corridor. Based on the analyses, 622 crashes occurred along the study corridor during this time. Approximately 45 percent of the crashes included movement type collisions. Approximately 24 percent of the crashes were associated with fixed objects. Twenty-two fatalities and 556 injuries occurred within the I-75 project limits between 1995 and 1999.

Safety ratios were also calculated for segment locations within the study corridor. Safety ratios above 1.000 indicate that the segment locations experience vehicle collisions above average and, therefore, traffic safety at these locations may need to be improved. No segments within the project limits experienced safety ratios greater than 1.000 during the five-year period evaluated.

For additional information regarding safety and crash data, refer to Section 4.1.9.

## **4.0 EXISTING CONDITIONS**

### **4.1 Existing Roadway Characteristics**

Existing roadway conditions were derived from a review of the I-75 construction drawings, FDOT Straight Line Diagrams of Road Inventory (SLDs) and field reconnaissance.

#### **4.1.1 Functional and Access Management Classification**

I-75 is considered an Urban Principal Arterial (Interstate) from Fowler Avenue to Fletcher Avenue. From Fletcher Avenue to the end of the project, I-75 is classified as a Rural Principal Arterial (Interstate).

#### **4.1.2 I-75 Mainline Typical Sections**

In Hillsborough County, I-75 is typically contained within a 324-foot right-of-way. In Pasco County, the I-75 right-of-way is generally 300 feet wide. The posted speed limit is 70 mph. The existing typical sections for the I-75 mainline are described below.

##### **4.1.2.1 Segment A**

At the beginning of the project from south of Fowler Avenue to Fletcher Avenue, the I-75 right-of-way varies from 324 feet to 415 feet. In Segment A, I-75 has four 12-foot general purpose lanes (two in each direction) and one 12-foot merge/diverge lane between the on- and off-ramp (in each direction), 8-foot inside shoulders (4 feet paved), 10-foot outside paved shoulders and a minimum 64-foot median. The existing typical section for Segment A is shown in Figure 4-1.

##### **4.1.2.2 Segment B**

From Fletcher Avenue to approximately 3,000 feet north of the Hillsborough River, the I-75 right-of-way varies from 324 feet to 500 feet. In Segment B, I-75 has four 12-foot general purpose lanes (two in each direction), 8-foot inside shoulders (4 feet paved) and 12-foot outside shoulders (10 feet paved). The median width varies from 88 feet to 112 feet. The existing typical section for Segment B is shown in Figure 4-2.

##### **4.1.2.3 Segment C**

From approximately 3,000 feet north of the Hillsborough River to Bruce B. Downs Boulevard, the I-75 right-of-way varies from 324 feet to 344 feet. In Segment C, I-75 has four 12-foot general purpose lanes (two in each direction), 8-foot inside shoulders (4 feet paved) and 12-foot outside shoulders (10 feet paved). The median width varies from 88 feet to 112 feet. The existing typical section for Segment C is shown in Figure 4-2.

#### 4.1.2.4 Segment D

From Bruce B. Downs Boulevard to the I-275 interchange, I-75 is generally contained within a 324-foot right-of-way. In Segment D, I-75 has four 12-foot general purpose lanes (two in each direction), 8-foot inside shoulders (4 feet paved), 12-foot outside shoulders (10 feet paved) and a minimum 88-foot median. The typical section for Segment D is shown in Figure 4-2.

#### 4.1.2.5 Segment E

From the I-275 interchange to SR 56, the I-75 right-of-way varies from 300 feet to 364 feet. In Segment E, I-75 has five 12-foot general purpose lanes (three northbound and two southbound lanes), two 12-foot northbound auxiliary lanes (one in each direction), 8-foot inside shoulders (4 feet paved), 12-foot outside shoulders (10 feet paved) and a minimum 64-foot median. The typical section for Segment E is shown in Figure 4-3.

#### 4.1.2.6 Segment F

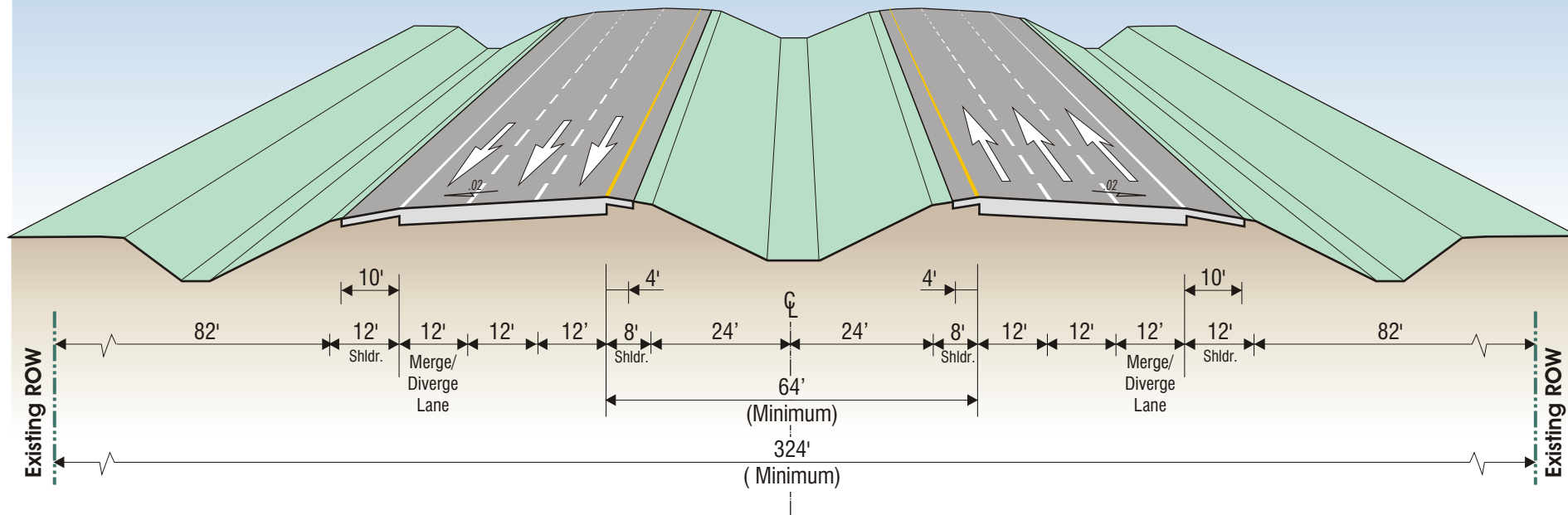
From SR 56 to CR 54, I-75 is generally contained within a 300-foot right-of-way. In Segment F, I-75 has four 12-foot general purpose lanes (two in each direction), 8-foot inside shoulders (4 feet paved), 12-foot outside shoulders (10 feet paved) and a 64-foot median. The typical section for Segment F is shown in Figure 4-4.

### 4.1.3 Pedestrian, Handicapped and Bicycle Facilities

I-75 is a limited access interstate facility that accordingly prohibits bicycle and pedestrian traffic. Sidewalks and crosswalks are provided at Bruce B. Downs Boulevard. There are no other pedestrian, handicapped or bicycle facilities located at any of the other interchanges in the study corridor.

### 4.1.4 Right-of-Way

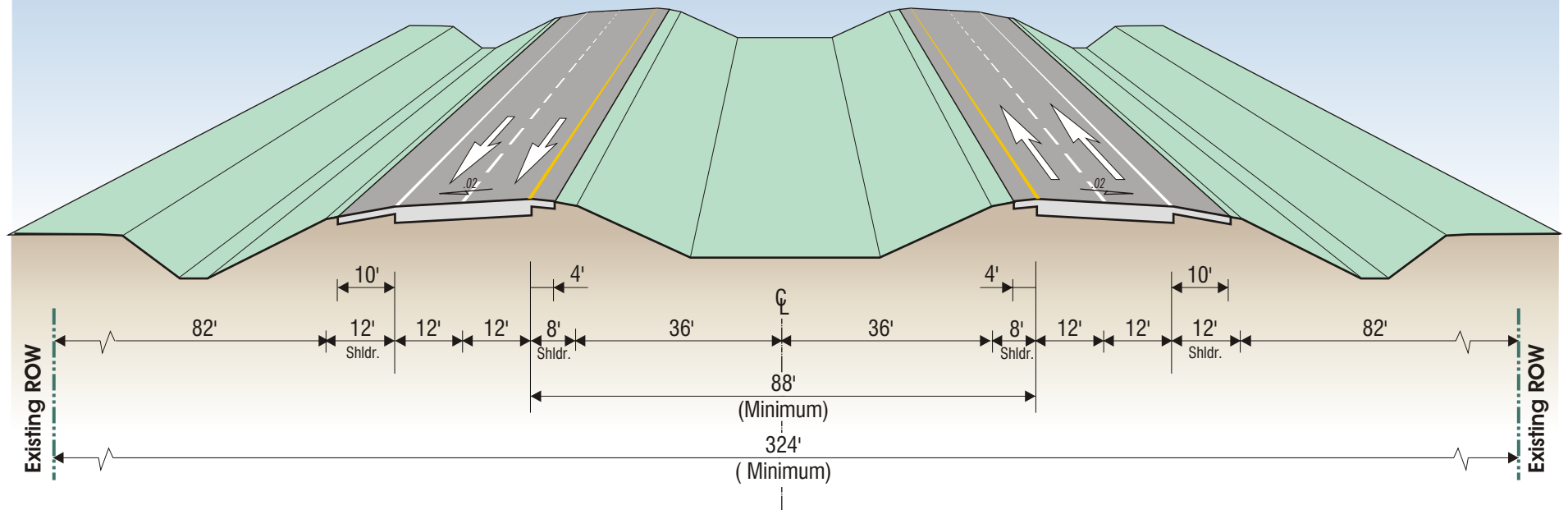
I-75 is typically contained within a 324-foot right-of-way in Hillsborough County and a 300-foot right-of-way in Pasco County. The existing right-of-way is shown on the Concept Plans in Section 10.0.



**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
 Hillsborough and Pasco Counties  
 WPI Seg. No: 408459 1 / FAP No: 0751 105 1  
 WPI Seg. No: 258736 1 / FAP No: NH-75-1-(91)275

**EXISTING ROADWAY TYPICAL SECTION - SEGMENT A**  
**FROM SOUTH OF FOWLER AVENUE TO FLETCHER AVENUE**  
**Four General Purpose Lanes and Two Auxiliary Lanes**

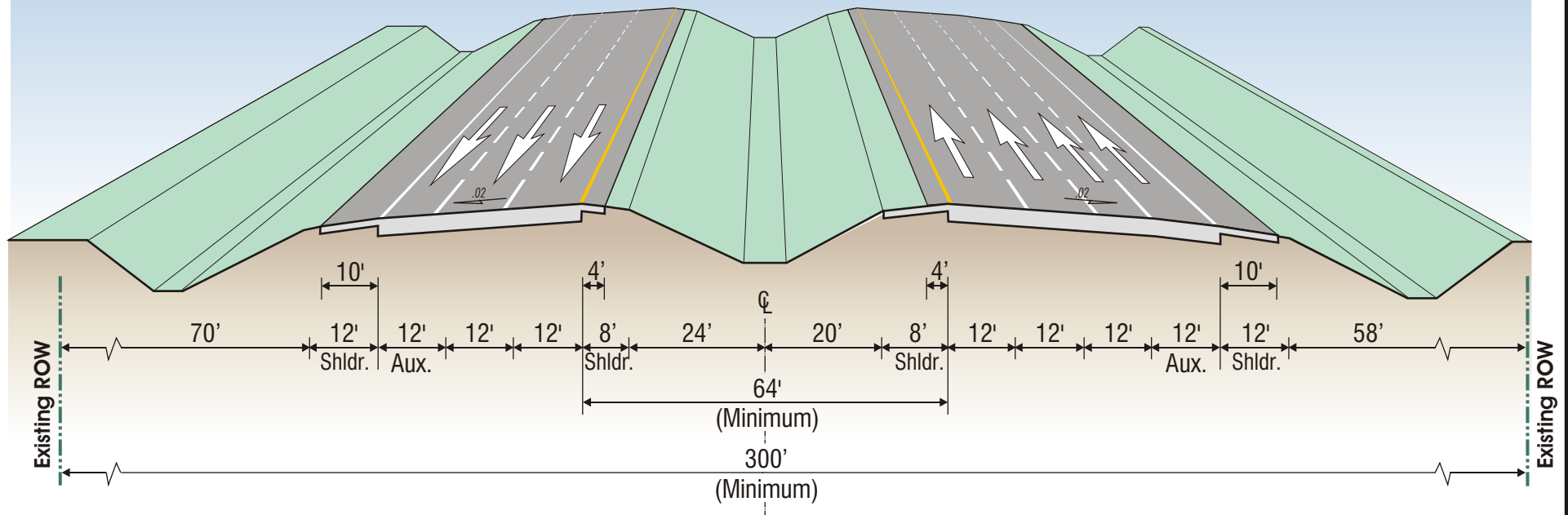
Figure  
 4-1



**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
 Hillsborough and Pasco Counties  
 WPI Seg. No: 408459 1 / FAP No: 0751 105 1  
 WPI Seg. No: 258736 1 / FAP No: NH-75-1-(91)275

**EXISTING ROADWAY TYPICAL SECTION - SEGMENTS B, C & D**  
**FROM FLETCHER AVENUE TO I-75/I-275 INTERCHANGE**  
**Four General Purpose Lanes**

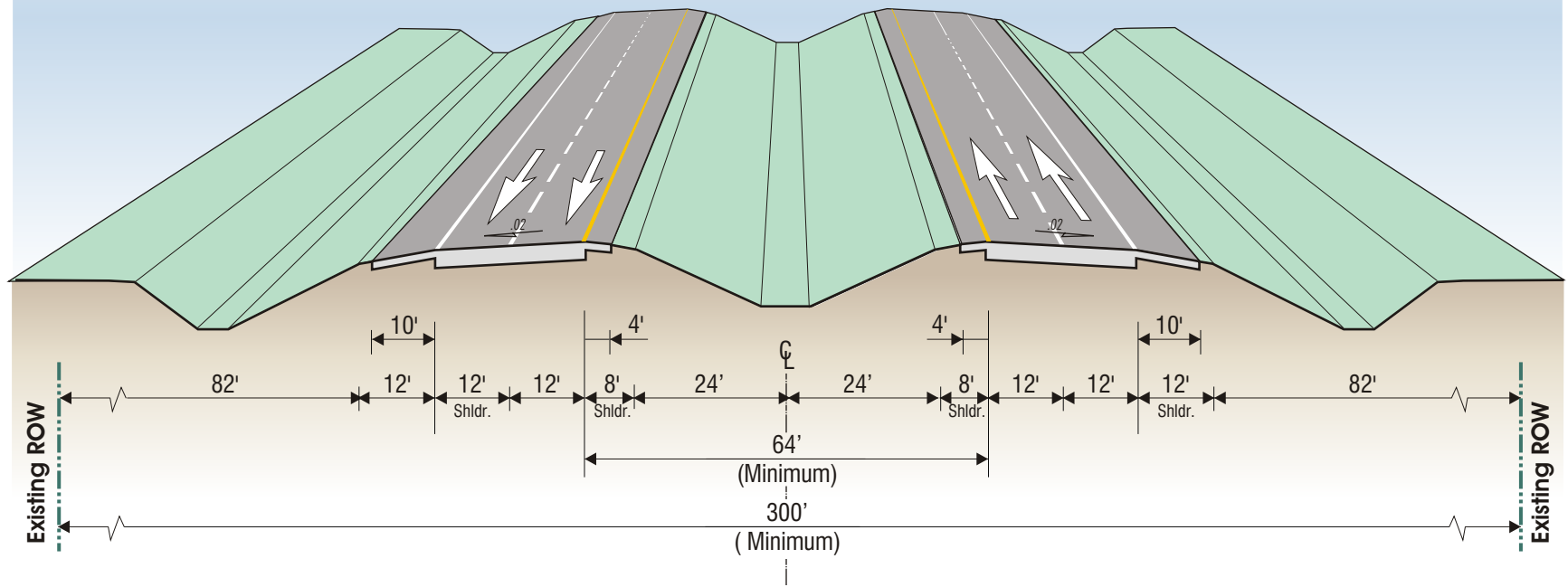
Figure  
**4-2**



**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
 Hillsborough and Pasco Counties  
 WPI Seg. No: 408459 1 / FAP No: 0751 105 1  
 WPI Seg. No: 258736 1 / FAP No: NH-75-1-(91)275

**EXISTING ROADWAY TYPICAL SECTION - SEGMENT E**  
**FROM THE I/75/I-275 INTERCHANGE TO SR 56**  
**Five General Purpose Lanes and Two Auxiliary Lanes**

Figure  
 4-3



**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
 Hillsborough and Pasco Counties  
 WPI Seg. No: 408459 1 / FAP No: 0751 105 1  
 WPI Seg. No: 258736 1 / FAP No: NH-75-1-(91)275

**EXISTING ROADWAY TYPICAL SECTION - SEGMENT F**  
**FROM SR 56 TO SOUTH OF CR 54**  
**Four General Purpose Lanes**

Figure  
 4-4



#### 4.1.5 Horizontal Alignment

The existing horizontal alignment for the project corridor is shown in Table 4-1.

**Table 4-1  
Existing Horizontal Alignment**

Station		Bearing & Distance or Curve Data
P.C.	1830+36.17	
P.I.	1851+57.50	$\Delta = 31^\circ 02' 17''$ , $D = 00^\circ 45' 00''$ , $T = 2,121.34'$ , $L = 4,138.41'$ , $R = 7,639.44'$
P.T.	1871+74.57	
		Bearing = N $09^\circ 25' 31''$ W, Distance = 4,343.09'
P.C.	1908+70.21	
P.I.	1915+17.66	$\Delta = 09^\circ 41' 19''$ , $D = 00^\circ 45' 00''$ , $T = 647.45'$ , $L = 1,291.82'$ , $R = 7,639.44'$
P.T.	1921+62.03	
		Bearing = N $00^\circ 15' 48''$ E, Distance = 9,704.93'
P.C.	2018+66.96	
P.I.	2045+90.10	$\Delta = 50^\circ 50' 29''$ , $D = 01^\circ 00' 00''$ , $T = 2,723.14'$ , $L = 5,084.14'$ , $R = 5,729.58'$
P.T.	2069+51.10	
		Bearing = N $50^\circ 34' 41''$ W, Distance = 977.28'
P.C.	2079+28.38	
P.I.	2096+52.63	$\Delta = 33^\circ 29' 50''$ , $D = 01^\circ 00' 00''$ , $T = 1,724.26'$ , $L = 3,349.72'$ , $R = 5,729.58'$
P.T.	2112+78.10	
		Bearing = N $17^\circ 04' 51''$ W, Distance = 12,426.19'
P.C.	2237+04.29	
P.I.	2244+12.45	$\Delta = 14^\circ 05' 30''$ , $D = 01^\circ 00' 00''$ , $T = 708.16'$ , $L = 1,409.17'$ , $R = 5,729.58'$
P.T.	2251+13.46	
		Bearing = N $31^\circ 10' 21''$ E, Distance = 6,681.73'
P.C.	2317+95.19	
P.I.	2345+86.60	$\Delta = 51^\circ 57' 00''$ , $D = 01^\circ 00' 00''$ , $T = 2,791.41'$ , $L = 5,195.00'$ , $R = 5,729.58'$
P.T.	2369+90.19	
		Bearing = N $20^\circ 46' 39''$ E, Distance = 68.97'
<b>Hillsborough/Pasco County Line</b>		
Equation: STA 2370+59.16 (BK) = STA 2370+60.50 (AH)		
		Bearing = N $20^\circ 46' 39''$ E, Distance = 1,949.53
Equation: STA 2390+10.04 (BK) = STA 617+73.37 (AH)		
		Bearing = N $20^\circ 46' 39''$ E, Distance = 7,357.53'
P.C.	2317+95.19	
P.I.	2345+86.60	$\Delta = 51^\circ 57' 00''$ , $D = 1^\circ 00' 00''$ , $T = 2,791.41'$ , $L = 5,195.00'$ , $R = 5,729.58'$
P.T.	2369+90.09	
		Bearing = N $20^\circ 46' 39''$ E, Distance = 68.97'
Equation: STA 2370+59.16 (BK) = STA 2370+60.50 (AH) 60.5		
		Bearing = N $20^\circ 46' 39''$ E, Distance = 1,949.53'
Equation: STA 2390+10.04 (BK) = STA 617+73.37 (AH)		

**Table 4-1  
Existing Horizontal Alignment**

Station		Bearing & Distance or Curve Data
		Bearing = N 20° 46' 39" E, Distance = 6,379.81'
P.C.	681+53.18	
P.I.	691+30.90	$\Delta = 06^\circ 30' 40"$ , D = 00° 20' 00", T = 977.72', L = 1,953.33', R = 17,188.73'
P.T.	701+06.51	
		Bearing = N 27° 17' 19" E, Distance = 3,040.60'
P.C.	731+47.11	
P.I.	741+40.21	$\Delta = 06^\circ 36' 48"$ , D = 00° 20' 00", T = 993.10', L = 1,984.00', R = 17,188.73'
P.T.	751+31.11	
		Bearing = N 33° 54' 07" E, Distance = 18,864.79'
P.C.	939+95.90	
P.I.	950+43.61	$\Delta = 10^\circ 26' 53"$ , D = 00° 30' 00", T = 1,047.71', L = 2,089.61', R = 11,459.16'
P.T.	960+85.52	
		Bearing = N 44° 21' 00" E, Distance = 2,258.95'
P.C.	983.44.46	
P.I.	996+79.78	$\Delta = 26^\circ 14' 17"$ , D = 01° 00' 00", T = 1,335.42', L = 2,623.81', R = 5,729.58'
P.T.	1009+68.27	
		Bearing = N 18° 06' 43" E, Distance = 2,210.86'
P.C.	1031+79.13	
P.I.	1040+98.75	$\Delta = 18^\circ 14' 13"$ , D = 01° 00' 00", T = 919.62', L = 1,823.69', R = 5,729.58'
P.T.	1050+02.82	
		Bearing = N 00° 07' 30" W, Bearing = 2,062.56'
P.C.	1070+65.39	
P.I.	1081+34.33	$\Delta = 10^\circ 39' 31"$ , D = 00° 30' 00", T = 1,068.95', L = 2,131.72', R = 11,459.16'
P.T.	1091+97.11	
		Bearing = N 10° 32' 01" W, Bearing = 2,467.97'

#### 4.1.6 Vertical Alignment

The existing vertical alignment for the project corridor is shown in Table 4-2.

**Table 4-2  
Existing Vertical Alignment**

PVI Sta.	Location	Back Slope	Ahead Slope	VC Length	Crest or Sag	At Interch.	"K" Value
<b>BEGIN PROJECT - DATA NOT AVAILABLE ON FOWLER INTERCHANGE - BEGIN SPLIT SECTION</b>							
1950+50.00 NB	South of SR 582 Interchange	-0.350	0.970	800	Sag	Yes	606
1951+50.00 SB	South of SR 582 Interchange	-0.367	1.020	800	Sag	Yes	577
1968+00.00 SB	Over SR 582 Interchange	1.020	-2.000	1,600	Crest	Yes	530
1968+50.00 NB	Over SR 582 Interchange	0.970	-2.000	1,600	Crest	Yes	539
1982+22.00 SB	North of SR 582 Interchange	-2.000	0.000	800	Sag	Yes	400
1982+60.00 NB	North of SR 582 Interchange	-2.000	0.000	800	Sag	Yes	400
<b>END SPLIT SECTION</b>							
2015+00.00		0.000	0.130	800	Sag	No	6,154
2025+00.00		0.130	-0.200	1,000	Crest	No	3,030
2036+50.00		-2.000	0.000	800	Sag	No	400
2121+50.00		0.000	0.200	800	Sag	No	4,000
2159+90.00	South of CR 581 Interchange	0.200	2.000	800	Sag	Yes	444
2175+50.00	Over CR 581 Interchange	2.000	-2.000	2,100	Crest	Yes	525
2190+19.00	North of CR 581 Interchange	-2.000	0.000	800	Sag	Yes	400
2226+00.00		0.000	0.050	800	Sag	No	16,000
2236+00.00		0.050	0.000	1,000	Crest	No	20,000
2270+00.00		0.000	-2.000	1,000	Crest	No	500
2280+00.00		-2.000	0.000	1,000	Sag	No	500
<b>BEGIN SPLIT SECTION</b>							
2299+00.00 SB		0.000	0.200	900	Sag	No	4,500
2299+00.00 NB		0.000	0.300	900	Sag	No	3,000
2309+50.00 NB		0.300	-0.300	1,200	Crest	No	2,000
2310+00.00 SB		0.200	-0.276	1,200	Crest	No	2,521
2319+50.00 NB		-0.300	0.800	800	Sag	No	727
2320+00.00 SB		-0.276	0.800	800	Sag	No	743
2328+88.75 NB	North of Cypress Creek S	0.800	-0.200	1,000	Crest	No	1,000
2329+00.00 SB	North of Cypress Creek S	0.800	-0.200	1,000	Crest	No	1,000
2352+48.75 NB	South of Cypress Creek S	-0.200	0.600	800	Sag	No	1,000
2353+05.27 SB	South of Cypress Creek S	-0.200	0.600	1,000	Sag	No	1,250
2366+00.00 NB		0.600	-0.139	1,000	Crest	No	1,353
2367+37.03 SB		0.600	-0.314	1,000	Crest	No	1,095
<b>END SPLIT SECTION - HILLSBOROUGH/PASCO COUNTY LINE</b>							
2375+37.03	I-275 Interchange	-0.139	0.000	800	Sag	No	5,755
<b>EQUATION: STA2390+12.79 (BK) = STA 617+73.37 (AH)</b>							
637+00.00	North of Cypress Creek N	0.000	0.800	400	Sag	No	500
641+50.00	Over Cypress Creek N	0.800	-0.800	500	Crest	No	313
646+00.00	South of Cypress Creek N	-0.800	0.000	400	Sag	No	500
732+00.00		0.000	0.780	400	Sag	No	513
742+00.00		0.780	0.000	500	Crest	No	641
<b>BEGIN SPLIT SECTION</b>							
754+00.00 SB	PVI	0.000	0.200				
759+00.00 NB	PVI	0.000	0.200				
769+00.00 NB	PVI	0.200	0.300				
771+00.00 SB	PVI	0.200	0.150				
779+00.00 NB	PVI	0.300	0.110				
783+00.00 SB	PVI	0.150	0.000				
789+00.00 NB	PVI	0.110	-0.100				
798+00.00 NB	PVI	-0.100	0.000				
<b>END SPLIT SECTION</b>							
804+00.00		0.000	0.300	400	Sag	No	1,333
814+00.00		0.300	0.000	500	Crest	No	1,667
828+00.00		0.000	0.300	400	Sag	No	1,333
843+00.00		0.300	0.000	500	Crest	No	1,667
852+50.00	PVI	0.000	0.200				
860+00.00	South of CR 54 Interchange	0.200	3.000	400	Sag	Yes	143
868+50.00	Over CR 54 Interchange	3.000	-3.000	1,300	Crest	Yes	217
878+00.00	North of CR 54 Interchange	-3.000	-0.200	600	Sag	Yes	214
885+00.00	PVI	-0.200	0.000				
899+00.00	PVI	0.000	0.100				
906+00.00		0.100	0.333	400	Sag	No	1,717
918+00.00		0.333	-0.250	500	Crest	No	858
<b>END OF PROJECT</b>							

Source: 2003 FDOT Plans Prep. Manual, 2001 AASHTO Standards, Design Speed: 70 mph, Highway Type: Interstate Freeway

## **4.1.7 Stormwater Drainage Facilities**

### **4.1.7.1 Topography and Hydrologic Features**

The I-75 project corridor extends from south of Fowler Avenue in Hillsborough County to CR 54 in Pasco County. The project is about 14 miles long and lies entirely within the Hillsborough River Watershed. Within the project limits, the Hillsborough River watershed is comprised of a variety of smaller tributary sub-basins, some of which either cross or exist in the vicinity of I-75. Some of these tributaries include Cypress Creek, Trout Creek, Clay Gulley Creek, Cabbage Swamp and Cowhouse Creek. None of these waterways are considered to be restrictive or have adverse flooding conditions associated with them.

The existing corridor is drained through the use of a rural system design which is composed of roadside swales, median drains and cross drains that convey stormwater runoff through the right-of-way and into appropriate tributaries to the Hillsborough River. The existing roadway facility is designed to drain to the outside and into the roadside ditches, which convey the stormwater runoff to the cross drains. No storm sewer systems exist within the mainline.

The natural topography from the headwaters of the Cabbage Swamp/Trout Creek Basin, up near CR 54 down to Hillsborough River and Cowhouse Creek in the vicinity of Fowler and Fletcher Avenue, ranges from elevation of 25 feet to 75 feet. The gradient of the topography is fairly consistent and does not change abruptly from the north to the south end of the project.

### **4.1.7.2 Stormwater Management Facilities**

I-75 in Hillsborough and Pasco Counties is within the jurisdiction of the Southwest Florida Water Management District (SWFWMD). With the exception of the SR 56 interchange ramps; there are no other stormwater management facilities within the project limits. The new SR 56 interchange, located in Pasco County, was constructed with ditch blocks within its roadside swales. These ditch blocks make it possible to provide treatment and attenuation for the SR 56 ramp runoff. For the remainder of the corridor, minimal treatment (filtration) is provided by the grass swales and ditches. There are no physical control devices to prevent debris from being conveyed downstream other than grates on ditch bottom inlets. Routine maintenance activities performed by the FDOT Maintenance Office include grass cutting and large debris/trash pickup.

### **4.1.7.3 Existing Cross Drains**

Twenty-eight cross drains exist within the project limits and are summarized in Table 4-3. Data provided in the Existing Cross Drain Inventory Table was obtained from FDOT construction plans, as-built drawings and drainage maps. These drainage structures were field verified and also compared with those reported in drainage studies and Federal Emergency Management Agency (FEMA)-supported Flood Insurance Studies.

According to the FDOT Maintenance Subcontractor, the project's drainage structures are generally in good operating condition. Siltation was noted in some cross drains.

**Table 4-3  
Existing Cross Drains**

CD #	Station	No. and CD Size	Type	Flow Direction	U/S Invert (ft-msl)	D/S Invert (ft-msl)	Hillsborough River Sub-Basin	Comments
1	1923+05	±340' Bridge		West	-	-	Cowhouse Creek	Cowhouse Creek Main Channel
2	2028+76	±458' Bridge		West	-	-	Hillsborough River	Hillsborough River Main Channel
3	2077+90	(1) 12' x 5'	CBC	East	27.50	27.30	Trout Creek	Tributary Main Channel
4	2096+00	(1) 24"	RCP	West	33.00	32.00	Trout Creek	
5	2106+00	(1) 24"	RCP	West	32.80	32.40	Trout Creek	
6	2114+00	(1) 42"	RCP	West	31.90	31.40	Trout Creek	
7	2128+00	(1) 42"	RCP	West	33.50	33.10	Trout Creek	
8	2195+00	(1) 36"	RCP	West	39.90	39.50	Cypress Creek	
9	2208+00	(1) 42"	RCP	West	40.20	39.80	Cypress Creek	
10	2228+00	(1) 24"	RCP	West	42.70	42.00	Cypress Creek	
11	2252+00	(2) 30", 36"	RCP	East	42.20	41.80	Cypress Creek	
12	2262+00	(1) 24"	RCP	West	42.60	41.60	Cypress Creek	
13	2276+15	(2) 10' x 4'	CBC	West	37.40	37.10	Cypress Creek	
14	2293+09.5	(1) 4' x 4'	CBC	West	36.20	35.90	Cypress Creek	
15	2320+68.8	(1) 10' x 6'	CBC	West	35.50	33.20	Cypress Creek	
16	2332+00	±203' Bridge		West	-	-	Cypress Creek	Cypress Creek Main Channel
17	2349+00	(1) 24"	RCP	East	44.50	42.00	Cypress Creek	Drains I-75/I-275 Apex
18	2359+00	(1) 30"	RCP	East	44.50	44.20	Cypress Creek	Drains I-75/I-275 Infield
19	613+70	(1) 10' x 4'	CBC	East	45.70	45.50	Cypress Creek	
20	640+59.99	±156' Bridge		East	-	-	Cypress Creek	Bridge Over Cypress Creek
21	653+00	(1) 10' x 10'	CBC	East	43.70	42.50	Cypress Creek	
22	683+27	(1) 4' x 4'	CBC	East	49.00	48.80	Cypress Creek	
23	712+00	(3) 12' x 5'	CBC	East	48.00	47.80	Cabbage Swamp	Cabbage Swamp Main Channel
24	726+00	(2) 30"	RCP	East	50.49	50.48	Cabbage Swamp	
25	753+00	(1) 36"	RCP	East	57.40	57.00	Cabbage Swamp	
26	797+30	(1) 6' x 3'	CBC	East	63.00	62.80	Trout Creek	Tributary #22 Main Channel
27	816+00	(2) 36"	RCP	West	66.00	65.80	Trout Creek	
28	852+00	(2) 36"	RCP	West	70.46	70.45	Trout Creek	

#### 4.1.7.4 Other Drainage Features

In addition to the cross drains identified in the previous section, there are numerous median drains within the project limits which drain the I-75 mainline drainage. Modifications to these median drains to accommodate the proposed widening should not cause encroachments into the base floodplain.

#### 4.1.7.5 Flooding History

FDOT drainage maps, United States Geological Survey (USGS) Quadrangle maps, SWFWMD topographic maps, FEMA Flood Insurance Rate Map (FIRM), and FEMA Flood Insurance Studies (FIS) developed for Hillsborough County and Pasco County were used to identify flood-prone areas within the I-75 corridor. A field inspection was conducted to identify obvious drainage problems. Additionally, FDOT maintenance personnel in the Tampa Maintenance and Brooksville Maintenance offices were interviewed. No recorded flooding problems have been identified with any of the drainage structures on this project.

FEMA has prepared an FIS for the unincorporated areas of Hillsborough and Pasco Counties. The FIRM Community-Panel Numbers that cover the project area are: 120230 430E, 120230 0410E, 120230 425E, 120112 0230E, 120122 0236C, 120122 0238C, 120112 0070E, & 120112 0210E. A map developed from the Flood Insurance Rate Maps shown in Figure 4-5.

#### 4.1.7.6 Regulatory Floodways

The project crosses over one regulatory floodway. Section 60.3 (d) (3) of the National Flood Insurance Program (NFIP) regulations states that a community shall “*prohibit encroachment, including fill, new construction, substantial improvements, and other developments within the adopted regulatory floodways unless it has be demonstrated through hydrologic and hydraulic analysis performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base (100-year) flood discharge.*”

Flood Boundary and Floodway Maps (FBFM) were inspected and the Hillsborough and Pasco Counties Floodplain coordinators were interviewed in order to assess Regulatory Floodways in and adjacent to the I-75 corridor. I-75 crosses a regulatory floodway south of the I-275 interchange at Cypress Creek. According to the regulatory floodway map, the Hillsborough River is considered a regulatory floodway west of the project limits. Therefore, the project does not cross the regulatory floodway at the Hillsborough River. Based on inspection of the regulatory floodway maps covering Pasco County, there are no regulatory floodways in or adjacent to the I-75 corridor in Pasco County.

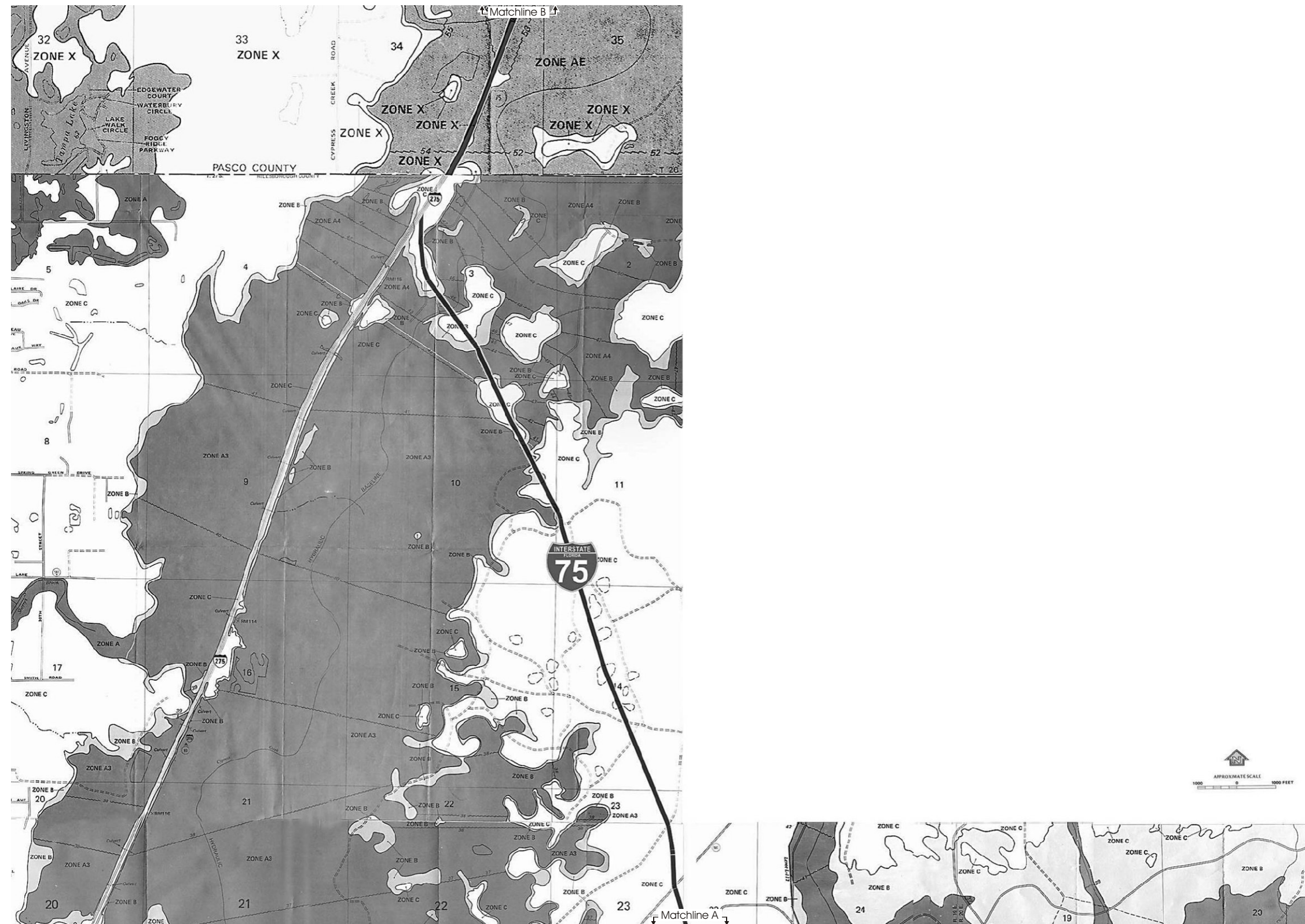
The Flood Boundary and Floodway Map is shown in Figure 4-6.



SOURCE: NFIP Floodway Map Panel 230

**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
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 WPI Seg. No: 258736 1 / FAP No: NH-75-1-(91)275

FEMA FLOOD INSURANCE RATE MAP



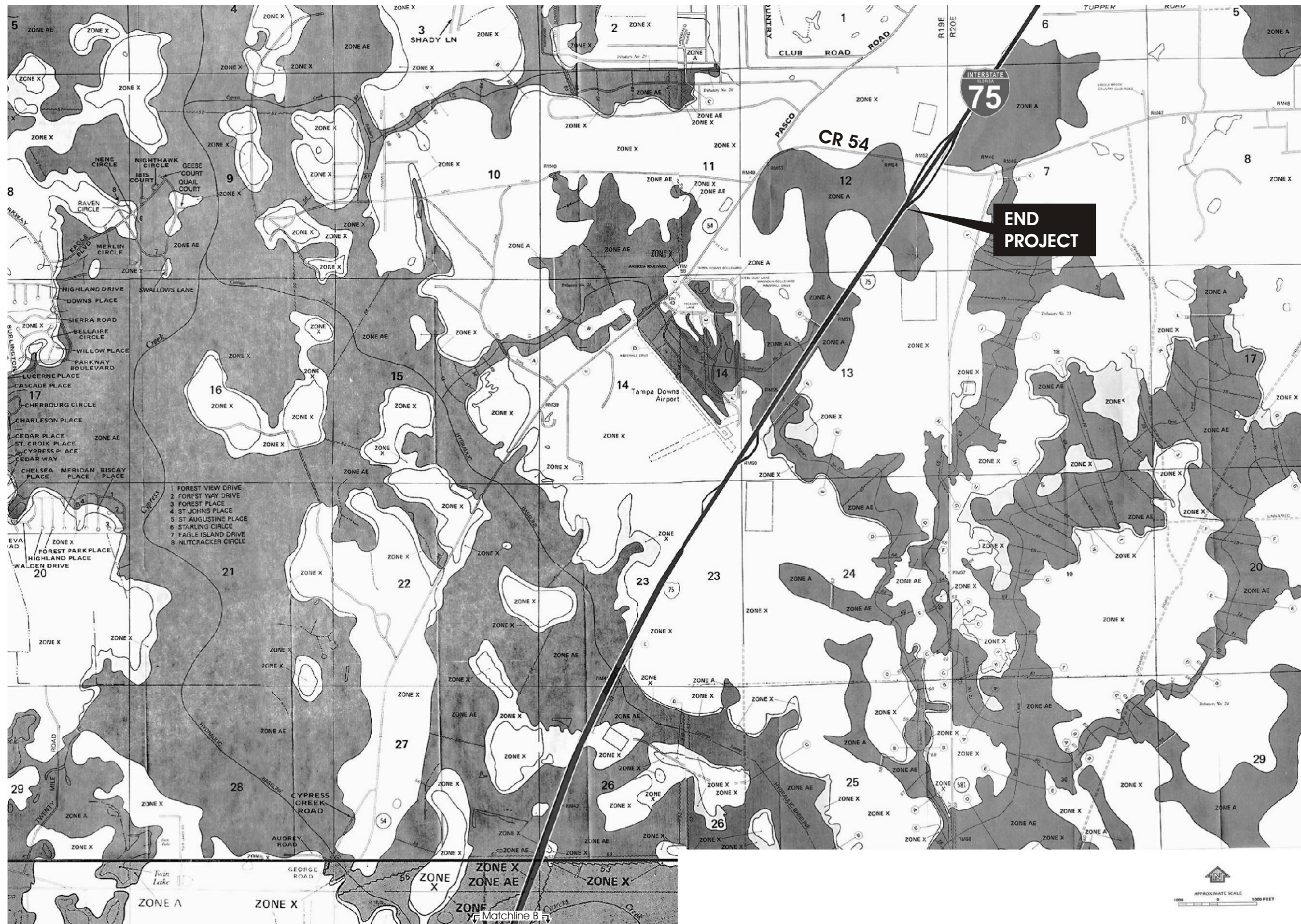
SOURCE: FEMA Firm 120230 0425E, 120112 0070E, 120112 0210E

**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
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FEMA FLOOD INSURANCE RATE MAP

Figure  
 4-5  
 (Continued)



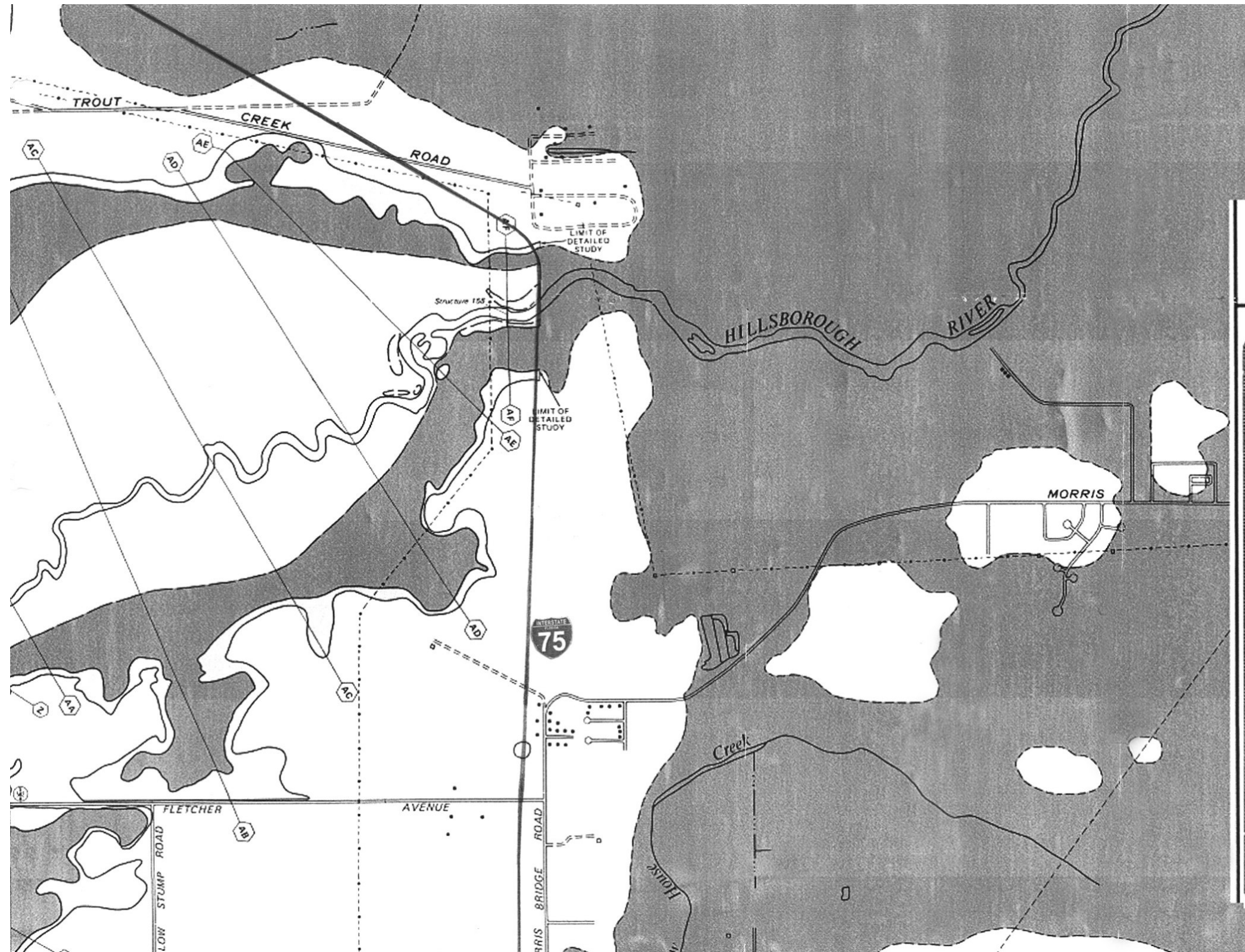



SOURCE: FEMA Firm 120230 430E, 120230 0410E, 120230 0425E

**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
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FEMA FLOOD INSURANCE RATE MAP

Figure  
 4-5  
 (Continued)



  
 APPROXIMATE SCALE  
 1000 0 1000 FEET

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**NATIONAL FLOOD INSURANCE PROGRAM**  
**FLOODWAY**  
**FLOOD BOUNDARY AND**  
**FLOODWAY MAP**  
**HILLSBOROUGH COUNTY,**  
**FLORIDA**  
 (UNINCORPORATED AREAS)


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**PANEL 230 OF 825**  
(SEE MAP INDEX FOR PANELS NOT PRINTED)

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**COMMUNITY-PANEL NUMBER**  
 120112 0230  
**EFFECTIVE DATE:**  
 JUNE 18, 1980

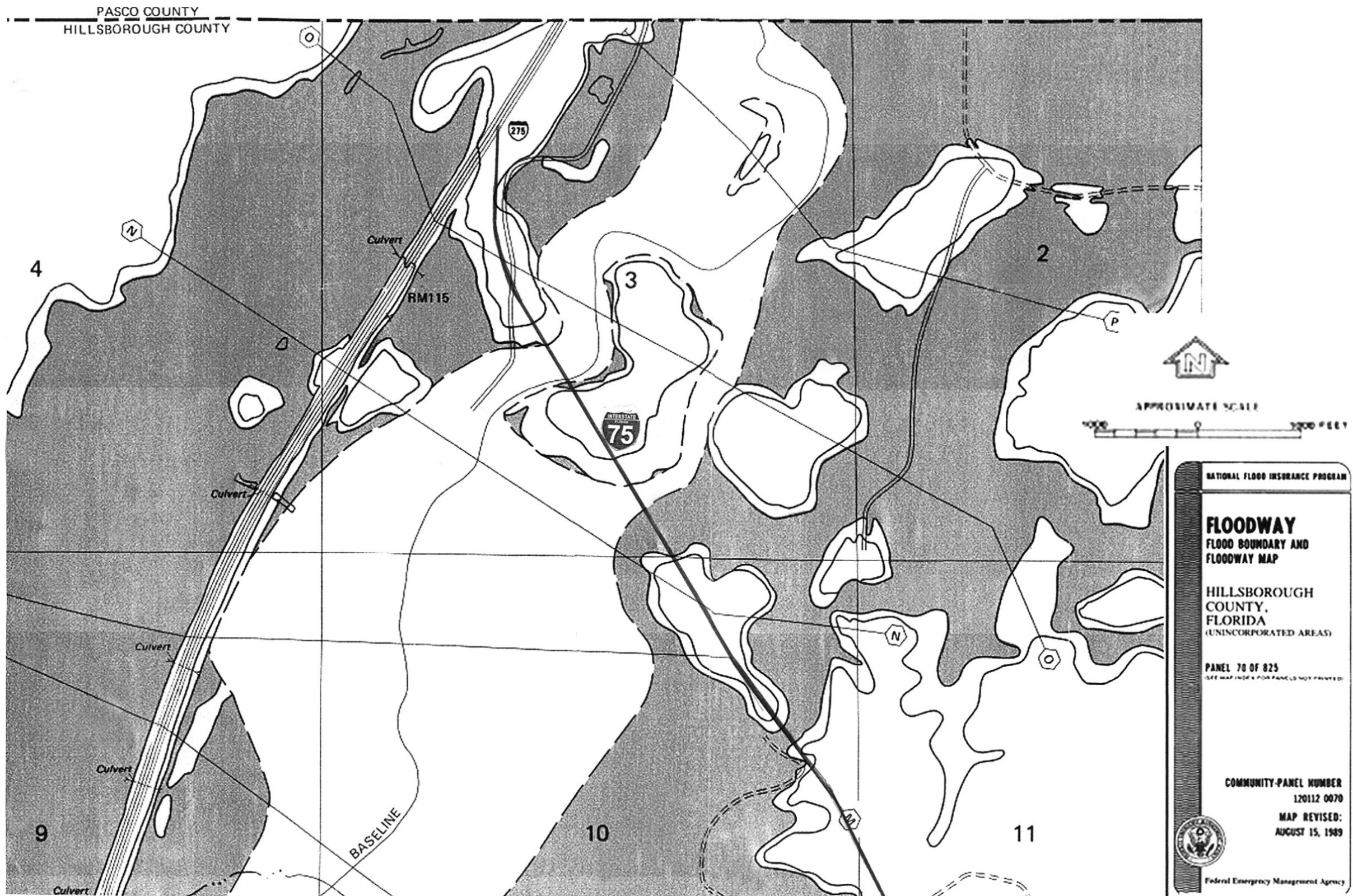
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**U.S. DEPARTMENT OF HOUSING**  
**AND URBAN DEVELOPMENT**  
 FEDERAL INSURANCE ADMINISTRATION

**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
 Hillsborough and Pasco Counties  
 WPI Seg. No: 408459 1 / FAP No: 0751 105 1  
 WPI Seg. No: 258736 1 / FAP No: NH-75-1-(91)275

**FLOOD BOUNDARY AND FLOODWAY MAP**

Figure  
4-6



**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
 Hillsborough and Pasco Counties  
 WPI Seg. No: 408459 1 / FAP No: 0751 105 1  
 WPI Seg. No: 258736 1 / FAP No: NH-75-1-(91)275

**FLOOD BOUNDARY AND FLOODWAY MAP**

**Figure 4-6**  
 (Continued)

#### **4.1.8 Geotechnical and Generalized Soils Data**

Karst topography is characteristic of the geomorphology of the I-75 project area and is evident of a high variability of the top of a relatively shallow competent limestone and the potential for the occurrence of cavities in the limestone strata. This information was verified based on a review of soil borings performed in the vicinity of the Fletcher Avenue interchange and soil borings performed at Cabbage Swamp, as part of the SR 56 design. The top of the limestone was found to be about 40 to 50 feet below land surface (bls) at the Fletcher Avenue interchange and at a depth of 30 to 80 feet at Cabbage Swamp. The top of the limestone found at Cabbage Swamp exhibits a high variability at a depth of 20 to 30 feet. The occurrence of cavities affects the morphology of the region creating distinct depressional areas, referred to as sinkholes. Sinkholes are present immediately north of the Fletcher Avenue interchange.

The surficial soils of the I-75 corridor generally consist of loose fine sand to slightly clayey fine sand. Depressional areas are common along the I-75 mainline and some are subject to frequent flooding. The soils present at the depressional areas have high clay and organic matter content. The Soils Map is shown in Figure 4-7.

The soils found along I-75 between the Fowler Avenue and the Fletcher Avenue interchanges are associated with loose fine sand to a depth of 80 inches. Seasonal High Ground Water Table (SHGWT) is found at a depth of 80 inches or more bls. I-75 crosses Cowhouse Creek and the Hillsborough River between Fowler and Fletcher Avenues and north of Fletcher Avenue, respectively. The floodplains associated with these waterways consist of soils with a high clay and organic content. The SHGWT is generally found above ground.

The soils found along I-75 north of the Hillsborough River in the vicinity of the Bruce B. Downs Boulevard interchange are composed primarily of loose fine sand with clay content. Pockets of depressional areas are common along the mainline and are characterized by poor drainage and frequent flooding.

I-75 crosses over Cypress Creek near the north end of Hillsborough County. The Cypress Creek flood basin is west of the mainline. The soils present in the floodplains and drainage basins in the immediate vicinity of I-75 are clayey soils with some organic matter. The SHGWT is generally found above ground. South of the Hillsborough/Pasco County line, some natural drainage patterns are present that run east to west into the Cypress Creek basin. The soils are composed of surficial loose fine sands with a sandy to clayey sand subsoil. The SHGWT is at a depth of 24 inches bls for most of the year.

I-75 passes over Cypress Creek for the second time in Pasco County. The floodplain in this area is generally broad and is approximately 0.5 miles long. The soils along I-75 generally have a sandy surficial soil and clayey subsoil, although some areas are composed of a clayey content. The SHGWT is generally found at the ground surface. The SR 56 interchange is located in the Cypress Creek flood basin. Pockets of deleterious (muck) material were encountered in the immediate vicinity of I-75 during the design and construction of the SR 56 interchange.

The soils found along I-75 from the SR 56 interchange to approximately 0.75 miles north are composed of loose fine sand to a depth of 80 inches. The SHGWT is estimated at a depth of 2 to 3.5 feet bls in most years. North of this section, I-75 passes through a 0.25-mile section of Cabbage Swamp. The soils found in this section have high clay and organic matter content and an above ground SHGWT. The soils along I-75 between Cabbage Swamp and the CR 54 interchange consist of loose fine sand to an approximate depth of 30 inches bls and clayey sand subsoil. The SHGWT is estimated to be at a depth of 10 inches bls. Some areas along the I-75 mainline have soils that consist of surficial muck. These areas are oblong in shape, and are typically covered with hardwoods.

#### 4.1.9 Crash Data

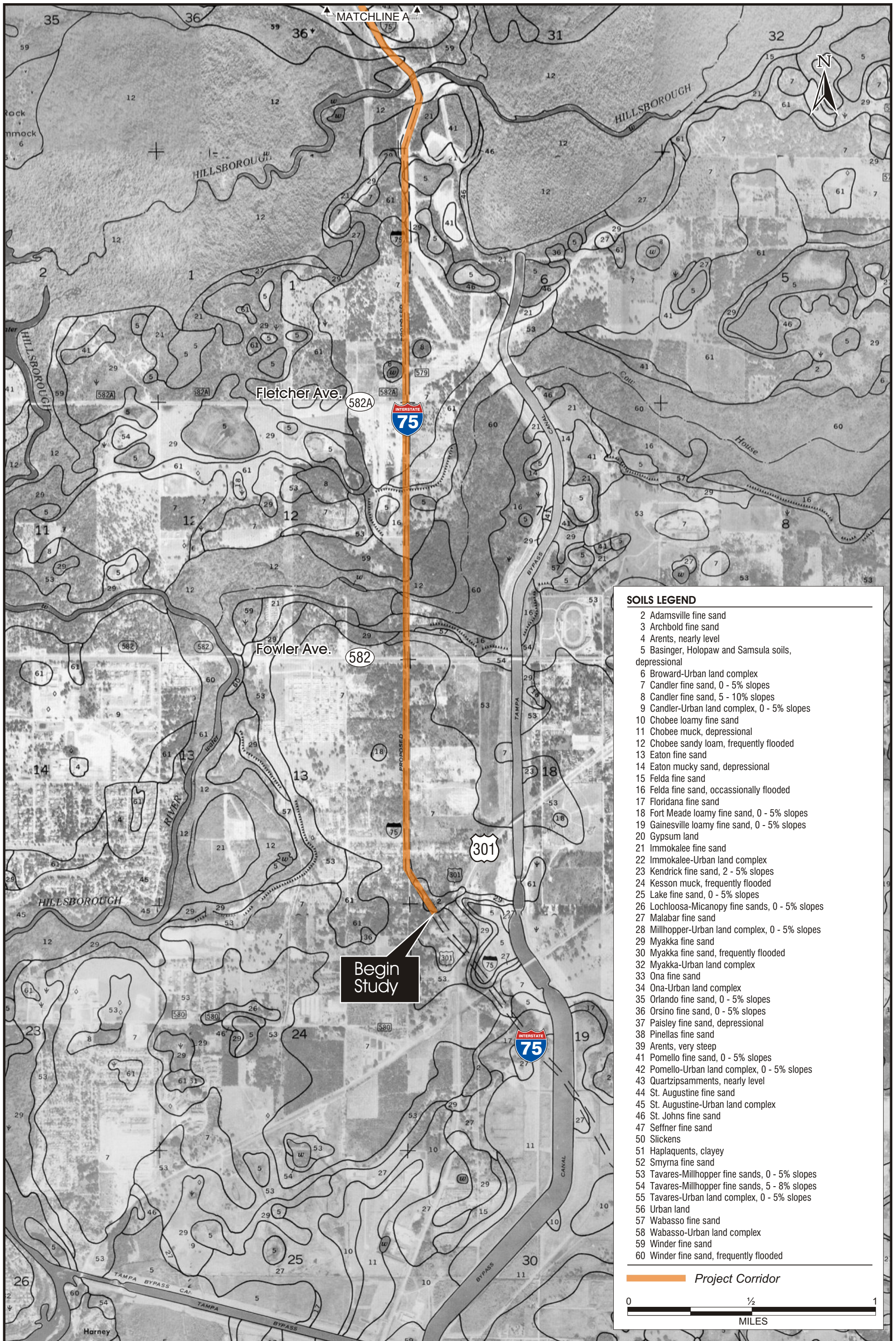
To evaluate traffic safety in the study corridor, traffic crash records for the five-year period between 1995 and 1999 (the latest available data when this Study started) were obtained from the FDOT Roadway Characteristics Inventory (RCI) database. The data collected were analyzed to determine the characteristics of crashes that occurred within the study corridor. Based on the crash analyses, 622 crashes occurred along the study corridor during this time period. Approximately 45 percent included movement type collisions that are typically associated with head-on, rear-end, left/right turn, angles, sideswipes, and backed-into types of collisions. Approximately 24 percent of the crashes were associated with fixed objects. This category includes sign/sign post, parked car, concrete barrier wall, tree/shrub, other fixed objects, bridge/pier/abutment, fence and guardrail, and utility or light poles. Twenty-two fatalities and 556 injuries occurred within the project limits along the I-75 study corridor between 1995 and 1999. Table 4-4 summarizes the total number of crashes that occurred within the project limits from 1995 to 1999.

**Table 4-4  
Total Number of Crashes from 1995 to 1999**

Year	Number of Crashes by Crash Type								Number of Crashes Involving	
	Movement <sup>1</sup>	Fixed Objects <sup>2</sup>	Over-turned	All Other	Moveable Object in Road	Ran into Ditch/Culvert/Water	Ped/Bike	Total	Injuries	Fatalities
1995	34	21	9	10	7	5	1	87	66	2
1996	26	20	4	8	1	14	1	74	77	1
1997	49	33	16	8	7	10	0	123	97	3
1998	67	38	12	9	5	20	0	151	126	5
1999	106	39	17	11	2	11	1	187	190	11
<b>Total</b>	<b>282</b>	<b>151</b>	<b>58</b>	<b>46</b>	<b>22</b>	<b>60</b>	<b>3</b>	<b>622</b>	<b>556</b>	<b>22</b>

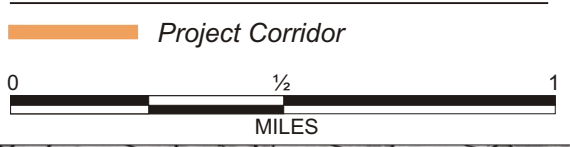
Notes: <sup>1</sup> The "Movement" category includes head-on, rear-end, left/right turn, angles, sideswipes and backed-into types of collisions.

<sup>2</sup> The "Fixed Objects" category includes sign/sign post, parked car, concrete barrier wall, tree/shrub, other fixed objects, bridge/pier/abutment, fence and guardrail, and utility pole/light pole collisions.



**SOILS LEGEND**

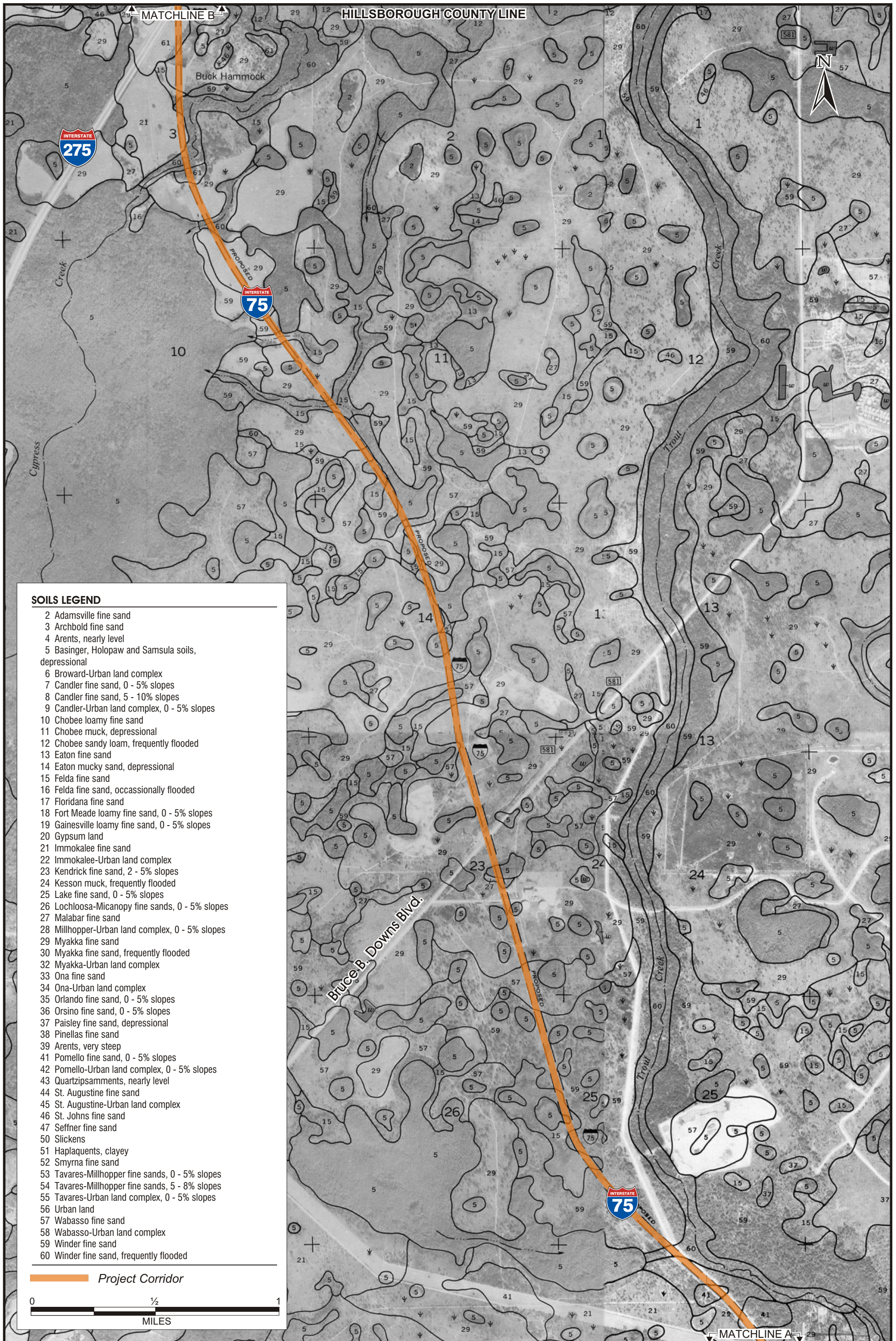
- 2 Adamsville fine sand
- 3 Archbold fine sand
- 4 Arents, nearly level
- 5 Basinger, Holopaw and Samsula soils, depressional
- 6 Broward-Urban land complex
- 7 Candler fine sand, 0 - 5% slopes
- 8 Candler fine sand, 5 - 10% slopes
- 9 Candler-Urban land complex, 0 - 5% slopes
- 10 Chobee loamy fine sand
- 11 Chobee muck, depressional
- 12 Chobee sandy loam, frequently flooded
- 13 Eaton fine sand
- 14 Eaton mucky sand, depressional
- 15 Felda fine sand
- 16 Felda fine sand, occasionally flooded
- 17 Floridana fine sand
- 18 Fort Meade loamy fine sand, 0 - 5% slopes
- 19 Gainesville loamy fine sand, 0 - 5% slopes
- 20 Gypsum land
- 21 Immokalee fine sand
- 22 Immokalee-Urban land complex
- 23 Kendrick fine sand, 2 - 5% slopes
- 24 Kesson muck, frequently flooded
- 25 Lake fine sand, 0 - 5% slopes
- 26 Lochloosa-Micanopy fine sands, 0 - 5% slopes
- 27 Malabar fine sand
- 28 Millhopper-Urban land complex, 0 - 5% slopes
- 29 Myakka fine sand
- 30 Myakka fine sand, frequently flooded
- 32 Myakka-Urban land complex
- 33 Ona fine sand
- 34 Ona-Urban land complex
- 35 Orlando fine sand, 0 - 5% slopes
- 36 Orsino fine sand, 0 - 5% slopes
- 37 Paisley fine sand, depressional
- 38 Pinellas fine sand
- 39 Arents, very steep
- 41 Pomello fine sand, 0 - 5% slopes
- 42 Pomello-Urban land complex, 0 - 5% slopes
- 43 Quartzipsamments, nearly level
- 44 St. Augustine fine sand
- 45 St. Augustine-Urban land complex
- 46 St. Johns fine sand
- 47 Seffner fine sand
- 50 Slickens
- 51 Haplaquents, clayey
- 52 Smyrna fine sand
- 53 Tavares-Millhopper fine sands, 0 - 5% slopes
- 54 Tavares-Millhopper fine sands, 5 - 8% slopes
- 55 Tavares-Urban land complex, 0 - 5% slopes
- 56 Urban land
- 57 Wabasso fine sand
- 58 Wabasso-Urban land complex
- 59 Winder fine sand
- 60 Winder fine sand, frequently flooded



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**SOILS MAP**  
 Hillsborough County

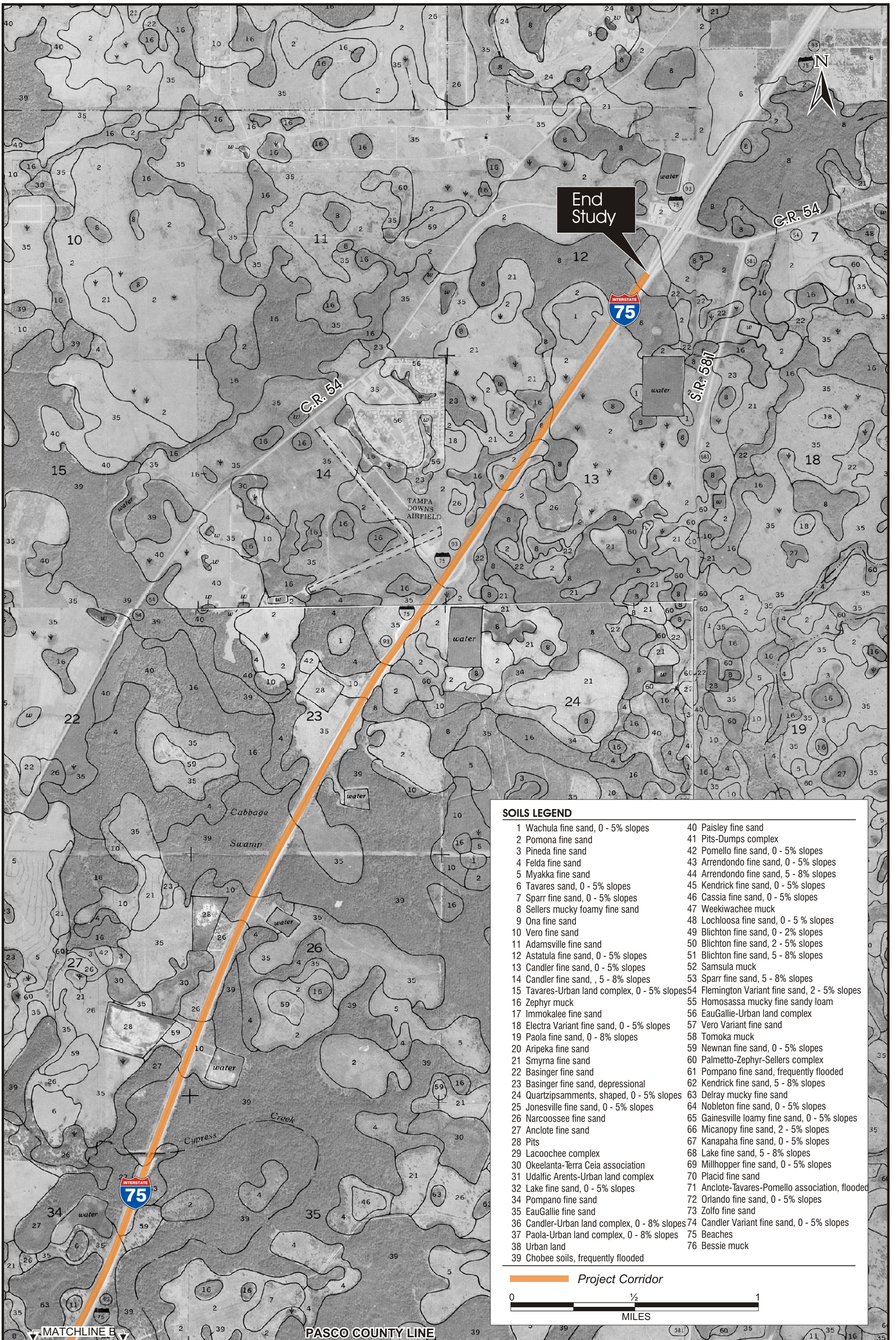
**Figure**  
 4-7



**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
 Hillsborough and Pasco Counties  
 WPI Seg. No: 408459 1 / FAP No: 0751 105 1  
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**SOILS MAP**  
**Hillsborough County**

**Figure**  
**4-7**  
 (Continued)



**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
 Hillsborough and Pasco Counties  
 WPI Seg. No: 408459 1 / FAP No: 0751 105 1  
 WPI Seg. No: 258736 1 / FAP No: NH-75-1-(91)275

**SOILS MAP**  
**Pasco County**

**Figure**  
**4-7**  
 (Continued)



As part of the analysis of crash data, safety ratios were also calculated for segment locations within the study corridor. The safety ratio calculations are based on the methodology outlined in the FDOT Highway Safety Improvement Program Guideline. Safety ratios above 1.000 indicate that the segment locations experience vehicle collisions above average and, therefore, traffic safety at these locations may need to be improved. No segments within the project limits experienced safety ratios greater than 1.000 during the five-year period from 1995 to 1999.

#### **4.1.10 Intersections and Signalization**

Six interchanges are located within the project limits. The interchanges at Fowler Avenue, Fletcher Avenue, Bruce B. Downs Boulevard, SR 56, and CR 54 are signalized. The I-275 interchange is the only limited access roadway in the study area that connects to the I-75 corridor. The I-75 study corridor typically contains two lanes in each direction, except preceding and following the interchanges, where the access ramps transition into the mainline. The locations of the interchanges are shown on the Project Location Map in Figure 2-1 and on the Concept Plans in Section 10.0. The configuration of each interchange is discussed herein.

##### **4.1.10.1 Fowler Avenue Interchange**

This interchange consists of a cloverleaf/directional configuration with two cloverleaf access ramps to and from northbound I-75. A fly-over ramp carries northbound I-75 traffic to westbound Fowler Avenue. I-75 southbound is accessible to eastbound and westbound Fowler Avenue via single-lane access ramps. Two unsignalized intersections connect the I-75 on- and off-ramps with Fowler Avenue. Fowler Avenue is a four-lane divided arterial.

##### **4.1.10.2 Fletcher Avenue Interchange**

This interchange is a diamond configuration with a loop ramp in the northeast quadrant providing access from northbound I-75 to eastbound and westbound Fletcher Avenue by way of a signalized intersection at the ramp terminus. The I-75 northbound on-ramp from Fletcher Avenue is a free-flow single-lane ramp. The I-75 southbound on- and off-ramps are single-lane ramps. Fletcher Avenue is a four-lane divided arterial. A merge/diverge lane is provided in each direction of travel between the Fowler and Fletcher Avenue interchanges between the on- and off-ramps.

##### **4.1.10.3 Bruce B. Downs Boulevard (CR 581) Interchange**

The existing Bruce B. Downs Boulevard interchange is a diamond configuration. The intersections of the I-75 ramp terminals with Bruce B. Downs Boulevard are signalized. Single-lane ramps are currently provided for the southbound off-ramp, the southbound on-ramp, and the northbound on-ramp. Dual left-turn lanes are provided for the southbound Bruce B. Downs Boulevard to southbound I-75 movement. Although dual left-turn lanes are provided for the southbound Bruce B. Downs Boulevard to southbound I-75 movement, the inside lane is tapered out on the on-ramp prior to the ramp merge with the I-75 mainline.

The northbound I-75 off-ramp was recently widened to provide a two-lane off-ramp. A parallel deceleration lane was constructed on the I-75 mainline at the diverge area. Dual left-turn lanes are provided on this ramp for the northbound I-75 to southbound Bruce B. Downs Boulevard movement. Two right-turn lanes are also provided on this ramp for the

northbound I-75 to northbound Bruce B. Down Boulevard movement. The other right-turn lane is located immediately adjacent to the dual left-turn lanes and is subject to signal control.

Improvements to this interchange have been studied under the Bruce B. Downs Interchange Modification Report Study. The FHWA approved IMR recommended Build Alternative provides a two-lane grade-separated flyover ramp for the southbound Bruce B. Downs Boulevard to southbound I-75 movement. The flyover ramp diverges from the southbound Bruce B. Downs Boulevard mainline approximately 800 feet south of the Dona Michelle Drive intersection. This flyover ramp crosses over the northbound I-75 on-ramp, the I-75 mainline, Bruce B. Downs Boulevard and the southbound I-75 on-ramp from northbound Bruce B. Downs Boulevard. The flyover ramp joins the southbound I-75 mainline approximately 650 feet south of the existing on-ramp gore. The outside lane of the flyover ramp is transitioned out over a distance of 1,800 feet while the inside lane of the flyover continues southward as a lane addition on the I-75 mainline. The additional lane that is added from the flyover extends south of the Fletcher Avenue off-ramp. A separate on-ramp is provided for the northbound Bruce B. Down Boulevard to southbound I-75 movement. This on-ramp joins the I-75 mainline approximately 1,380 feet upstream from the flyover ramp gore and is tapered out over a distance of 1,250 feet. This alternative increases the total number of mainline access points from four to five.

According to the approved IMR, the existing two-lane northbound off-ramp to Bruce B. Downs Boulevard will be widened to four lanes approximately 700 feet north of the mainline diverge gore providing 1,250 feet of dual left-turn and dual right-turn lane storage. Both the left-turn and right-turn movements are controlled by the traffic signal on this side of the interchange. The existing single-lane ramps to and from the north (i.e., the northbound I-75 on-ramp from Bruce B. Downs Boulevard and the southbound I-75 off-ramp to Bruce B. Downs Boulevard) are retained; however, the northbound I-75 on-ramp is shifted closer to the northbound I-75 mainline to reduce the total length of the flyover bridge. The relocation of the northbound I-75 on-ramp requires a similar relocation (shift) of the northbound I-75 off-ramp so that these two ramps “line-up” with each other and can be controlled by one traffic signal. The locations of these ramp gores on the I-75 mainline remain the same as in the existing configuration. Dual left-turn lanes are provided at both of these ramps.

#### 4.1.10.4 I-275 Interchange

I-275 terminates into I-75 just north of the Hillsborough/Pasco County line forming a semi-directional Y-interchange. Two I-275 northbound lanes join two I-75 northbound lanes to form a four-lane transition section. Similarly, an I-75 southbound three-lane transition section exists in Pasco County prior to the I-275 interchange. The outer lane of the transition section splits from the I-75 mainline to form two I-275 southbound lanes. No interchange access is provided from I-275 to I-75 southbound.

#### 4.1.10.5 SR 56 Interchange

The SR 56 interchange was opened to traffic in early 2002 and features a diamond configuration. Eastbound and westbound movements at SR 56 are controlled by signalized intersections at the termini of the on-ramps. The northbound on-ramp and the southbound off-ramp are single-lane ramps. The northbound off-ramp and the southbound on-ramp are two-lane ramps. SR 56 is a four-lane facility west of I-75 and a six-lane facility east of I-75.

#### 4.1.10.6 CR 54 Interchange

CR 54 has a diamond interchange configuration. All four on- and off-ramps are single-lane. Both I-75 northbound and southbound ramp termini with CR 54 are signalized. CR 54 is a two-lane facility (one lane in each direction) through the interchange.

#### 4.1.11 Lighting

The project corridor contains high mast lighting to illuminate the interchanges at Fowler Avenue, Fletcher Avenue, Bruce B. Downs Boulevard, SR 56, and CR 54. Conventional lower mast lighting exists along the mainline and within the rest area at milepost 276.

#### 4.1.12 Utilities/Railroads

##### 4.1.12.1 Utilities

Utilities that were identified through the Utility Request Package are generally described below:

- Florida Gas Transmission

A 14-inch underground gas pipeline crosses I-75 immediately north of the Fowler Avenue interchange at approximately station number 1922+00, and parallel to the northbound on-ramp and southbound off-ramp.

A 30-inch underground gas pipeline crosses I-75 immediately south of the Hillsborough River at approximately station number 2029+00. From approximately 100 feet from the western edge of the I-75 existing right-of-way, this pipeline continues along I-75 from approximately station number 2029+00 to the southern end of the Bruce B. Downs Boulevard interchange.

A 30-inch underground gas pipeline, located along Lizard's Tail Road (approximately 100 feet from the western edge of the I-75 southbound lane), begins near the northern end of the Bruce B. Downs Boulevard interchange. The pipeline continues along I-75 to south of County Line Road where it turns west, away from I-75.

- Florida Power

A 115 kilovolt above ground transmission line crosses I-75 north of the Hillsborough River at approximately station number 2050+00.

- Pasco County Utilities

A 24-inch ductile iron pipe water line, a 24-inch ductile iron pipe reclaimed water main and a 16-inch ductile iron pipe sewer force main cross under the I-75 right-of-way north of the SR 56 interchange.

A 16-inch and a 12-inch ductile iron pipe sewer force main are located adjacent to the eastern edge of the I-75 right-of-way from north of the SR 56 interchange to south of the northbound rest area.

A 14-inch ductile iron pipe sewer force main and a 10-inch ductile iron pipe reclaimed water main crosses under the I-75 right-of-way north of the northbound rest area. Both utility lines continue north, adjacent to the western edge of the I-75 right-of-way, for approximately 600 feet.

A 16-inch ductile iron pipe water line and an 8-inch polyvinylchloride pipe sewer force main cross under the I-75 right-of-way at the CR 54 interchange.

An 18-inch high density polyethylene pipe sewer force main is located adjacent to the eastern edge of the I-75 right-of-way. The sewer force main begins at the CR 54 interchange and ends north of the project limits.

A 16-inch polyvinylchloride sewer force main crosses under the I-75 right-of-way approximately 2,000 feet north of the CR 54 interchange.

- Tampa Bay Water (formerly West Coast Regional Water Services Authority)

A 66-inch and a 24-inch underground potable water supply lines cross I-75 between the southbound and northbound rest areas.

- TECO Peoples Gas

A 4-inch underground natural gas pipeline is located approximately 100 feet from the western edge of the I-75 existing right-of-way. The pipeline continues along I-75 from the northern end of the Fowler Avenue interchange to the southern end of the Fletcher Avenue interchange.

A six-inch underground natural gas pipeline crosses under I-75 along the median of the Bruce B. Downs Boulevard interchange and under I-75 and I-275 immediately north of County Line Road.

A 4-inch underground natural gas pipeline crosses under I-75 along the southern edge of the CR 54 interchange.

- Verizon Florida, Inc.

Underground telephone cables cross I-75 south of the Fowler Avenue interchange along Navajo Avenue and at the Fowler Avenue interchange. An underground telephone cable crosses I-75 at the Fowler Avenue interchange. This utility is out of service or is proposed for removal. A buried 12-inch steel casing cable is located approximately 400 feet from the eastern edge of the I-75 existing right-of-way immediately south of the Fowler Avenue interchange. The cable crosses Fowler Avenue and the I-75 northbound on- and off-ramps. An underground telephone cable is located approximately 350 feet from the eastern edge of the I-75 existing right-of-way at the Fowler Avenue interchange. The cable crosses Fowler Avenue. This utility is either out of service or is proposed for removal. An underground telephone cable crosses I-75 at 127<sup>th</sup> Avenue (north of the Fowler Avenue interchange). Underground telephone cables cross under I-75 along the northern and southern edge of Bruce B. Downs Boulevard.

A buried telephone cable is located approximately 175 feet from the western edge of the I-75 existing right-of-way. The cable begins at the northern end of the Bruce B. Downs Boulevard interchange at approximately station number 2196+00 and ends at approximately station number 2262+00. A portion of this utility, from station number 2209+00 to station number 2262+00, is either not in use or is proposed for removal.

A cellular tower is located at the southwest quadrant of the intersection of County Line Road and I-275, approximately 300 feet from the western edge of the I-75 existing right-of-way.

A buried telephone cable is located approximately 50 feet from the western edge of the I-75 existing right-of-way. The cable crosses I-75 in the vicinity of the northbound rest area at approximately station number 783+00. A buried cable is located approximately 50 feet from the western edge of the I-75 existing right-of-way. The cable begins at approximately station number 831+00 and ends immediately south of CR 54. An underground telephone cable crosses under I-75 at CR 54.

- City of Tampa

The project will have no involvement with utilities provided by the City of Tampa.

- Hillsborough County Utilities

The project will have no involvement with utilities provided by Hillsborough County.

#### 4.1.12.2 Railroads

There are no railroad crossings within the study corridor.

#### 4.1.13 Pavement Conditions

The FDOT Pavement Condition Forecast, December 2002, shows that the I-75 project corridor has crack ratings ranging from 6.0 to 10.0, ride ratings ranging from 8.3 to 8.9 and rut ratings ranging from 8.0 to 9.0 for year 2002. Distress ratings range on a scale from 0 to 10 with 0 being the worst. A rating of 6.4 or less in any rating is considered deficient pavement.

The five-year forecast (year 2007) for the I-75 project corridor anticipates crack ratings to range from 4.0 to 9.0, ride ratings to range from 7.9 to 8.9 and rut ratings to range from 8.0 to 9.0.

## 4.2 Existing Structures

There are 24 existing bridge structures within the project study area. Eight are water crossings over Cowhouse Creek, Hillsborough River, and two separate crossings over Cypress Creek. Thirteen are I-75 bridges over cross roads and ramps at Fowler Avenue, 127<sup>th</sup> Avenue, Fletcher Avenue, Bruce B. Downs Boulevard, and CR 54. At the I-275 apex area, I-275 passes underneath the County Line Road bridges and I-75 passes underneath northbound I-275. The existing bridge information is shown in Table 4-5.

**Table 4-5  
Existing Bridges Within the I-75 Project Study Area**

Bridge No.	Bridge Location and Mile Post	Inside Shoulder Width (ft)	Travel Lane Width (ft)	Outside Shoulder Width (ft)	Deck Width	No. of Spans	Span Lengths	Total Bridge Length (ft)	Year Built
100403	I-75 SB over Fowler Avenue MP 31.092	6	24	10	42'-9"	4	(2) 32'-3" (2) 89'-3"	243	1985
100404	I-75 NB over Fowler Avenue MP 31.092	6	36	10	54'-9"	4	(2) 32'-3" (2) 89'-3"	243	1985
100406	Ramp A-1 over Fowler Avenue MP 0.168	6	15	6	29'-9"	4	(1) 32'-0" (1) 96'-0" (1) 100'-5" (1) 35'-1"	263.5	1985
100407	I-75 SB over Ramp A-1 MP 31.210	6	24	10	42'-9"	3	(1) 38'-0" (1) 80'-0" (1) 33'-3"	151.25	1985
100408	I-75 NB over Ramp A-1 MP 31.210	6	36	10	54'-9"	3	(1) 35'-0" (1) 81'-6" (1) 30'-9"	147.25	1985
100481	I-75 SB over Cowhouse Creek MP 31.356	6	varies	10	varies	4	(3) 90'-0" (1) 70'-0"	340	1984
100482	I-75 NB over Cowhouse Creek MP 31.356	6	36	10	54'-9"	4	(3) 90'-0" (1) 80'-0"	350	1984
100400	I-75 SB over 127 <sup>th</sup> Avenue MP 31.599	6	36	10	54'-9"	3	(2) 37'-7" (1) 57'-10"	133	1985
100401	I-75 NB over 127 <sup>th</sup> Avenue MP 31.599	6	36	1	54'-9"	3	(2) 37'-7" (1) 57'-10"	133	1985
100391	I-75 SB over Fletcher Avenue MP 32.183	6	24	10	42'-9"	4	(2) 31'-0" (2) 79'-6"	221	1982
100420	I-75 NB over Fletcher Avenue MP 32.203	6	51	6'	varies	4	(2) 32'-0" (2) 83'-8"	231.33	1982
100387	I-75 SB over Hillsborough River MP 33.365	6	24	10	42'-9"	7	(4) 66'-6" (1) 47'-0" (1) 67'-3" (1) 77'-9"	458	1984
100388	I-75 NB over Hillsborough River MP 33.343	6	24	10	42'-9"	7	(4) 65'-8" (1) 64'-10" (1) 67'-4" (1) 57'-5"	452.25	1984
100367	I-75 SB over Bruce B. Downs Blvd. MP 36.121	6	24	10	42'-9"	4	(2) 34'-6" (2) 87'-7"	246.17	1984
100368	I-75 NB over Bruce B. Downs Blvd. MP 36.137	6	24	10	42'-9"	4	(2) 34'-6" (2) 87'-7"	246.17	1984
100411	I-275 NB over I-75 MP 39.496	6	24	10	42'-9"	4	(1) 75'-0" (1) 140'-0" (1) 150'-0" (1) 80'-0"	445	1982
100412	I-75 SB over Cypress Creek MP 39.150	6	24	10	42'-9"	3	(3) 67'-8"	203	1982
100413	I-75 NB over Cypress Creek MP 39.147	6	24	10	42'-9"	3	(3) 67'-8"	203	1982
100492	County Line Rd. over I-75 & I-275 SB MP 0.000	8	24	8	42'-9"	6	(1) 37'-0" (1) 103'-0" (1) 97'-0" (2) 94'-0" (1) 44'-0"	469	1986
100493	County Line Road over I-275 NB MP 0.000	8	24	8	42'-9"	3	(1) 39'-0" (1) 88'-0" (1) 31'-0"	158	1985
140061	I-75 SB over Cypress Creek MP 0.786	10	36	10	58'-9"	3	(3) 52'-0"	156	1963
140062	I-75 NB over Cypress Creek MP 0.780	10	48	10	70'-9"	3	(3) 52'-0"	156	1963

**Table 4-5  
Existing Bridges Within the I-75 Project Study Area**

Bridge No.	Bridge Location and Mile Post	Inside Shoulder Width (ft)	Travel Lane Width (ft)	Outside Shoulder Width (ft)	Deck Width	No. of Spans	Span Lengths	Total Bridge Length (ft)	Year Built
140048	I-75 SB over CR 54 MP 5.109	4	24	10	44'-2"	3	(2) 39'-0" (1) 50'-6"	128.50	1964
140049	I-75 NB over CR 54 MP 5.115	4	24	10	44'-2"	3	(2) 39'-0" (1) 50'-6"	128.50	1964

#### 4.2.1 Current Conditions and Year of Construction

The structural evaluation is based on a rating scale of 0 through 9. A rating of 9 indicates the best condition, considering the combined condition of the superstructure and substructure, as well as the inventory rating. Table 4-6 shows the current condition (structural rating) for the 24 structures.

**Table 4-6  
Current Conditions and Year of Construction**

Bridge Number	National Bridge Inventory Ratings <sup>1</sup>			Sufficiency Rating
	Deck Slab	Superstructure	Substructure	
100403	8	8	8	95.6
100404	7	8	8	97.0
100406	8	8	8	99.0
100407	8	7	8	96.5
100408	8	7	8	95.2
100481	7	8	8	91.1
100482	7	8	8	96.2
100400	8	8	8	95.2
100401	8	8	8	95.2
100411	7	7	8	90.9
100391	8	8	8	98.0
100420	8	8	8	97.0
100387	7	8	8	96.9
100388	7	8	8	96.6
100367	7	8	8	98.0
100368	7	7	8	94.0
100412	7	8	7	97.3
100413	7	8	7	97.2
100492	7	7	8	93.1
100493	7	7	8	91.0
140061	7	8	7	96.9
140062	7	8	7	91.6
140048 <sup>2</sup>	8	7	8	91.8
140049 <sup>2</sup>	8	7	8	91.9

Notes: 1. Rating Definitions: 8 = Very Good; 7 = Good; 6 = Satisfactory  
2. Bridge is classified as Functionally Obsolete

## 4.2.2 Horizontal and Vertical Alignment and Clearances

The horizontal alignment and minimum horizontal and vertical clearances for each of the 23 structures are listed in Table 4-7.

**Table 4-7  
Horizontal and Vertical Alignment**

Bridge Number	Horizontal Alignment	Minimum Horizontal Clearance	Minimum Vertical Clearance
100403	Curved	29'-10"/17'-0"	16'-3"
100404	Curved	29'-10"/17'-0"	16'-3"
100406	Curved	30'-2"/20'-0"	16'-3"
100407	Curved	30'-2"/30'-2"	17'-2"
100408	Curved	30'-2"/30'-2"	17'-2"
100481	Tangent	86'-6"	17'-3"
100482	Curved	86'-6"	16'-6"
100400	Tangent	16'-1"	16'-4"
100401	Tangent	16'-1"	16'-4"
100411	Curved	30'-4"	16'-6"
100391	Tangent	17'-4"/16'-9"	16'-0"
100420	Curved	17'-4"/16'-9"	16'-0"
100387	Curved	62'-6"	6'-3"
100388	Curved	62'-6"	7'-3"
100367	Tangent	4'-6"/23'-6"	15'-9"
100368	Tangent	4'-6"/23'-6"	15'-9"
100412	Curved	64'-6"	3'-0"
100413	Curved	64'-6"	3'-0"
100492	Tangent	26'-3"/29'-10"	16'-4"/18'-7"
100493	Tangent	30'-0"/30'-0"	17'-0"
140061	Tangent	49'-0"	2'-0"
140062	Tangent	49'-0"	2'-0"
140048	Tangent	3'-0"	15'-1"
140049	Tangent	3'-0"	15'-1"

## 4.3 Existing Environmental Conditions

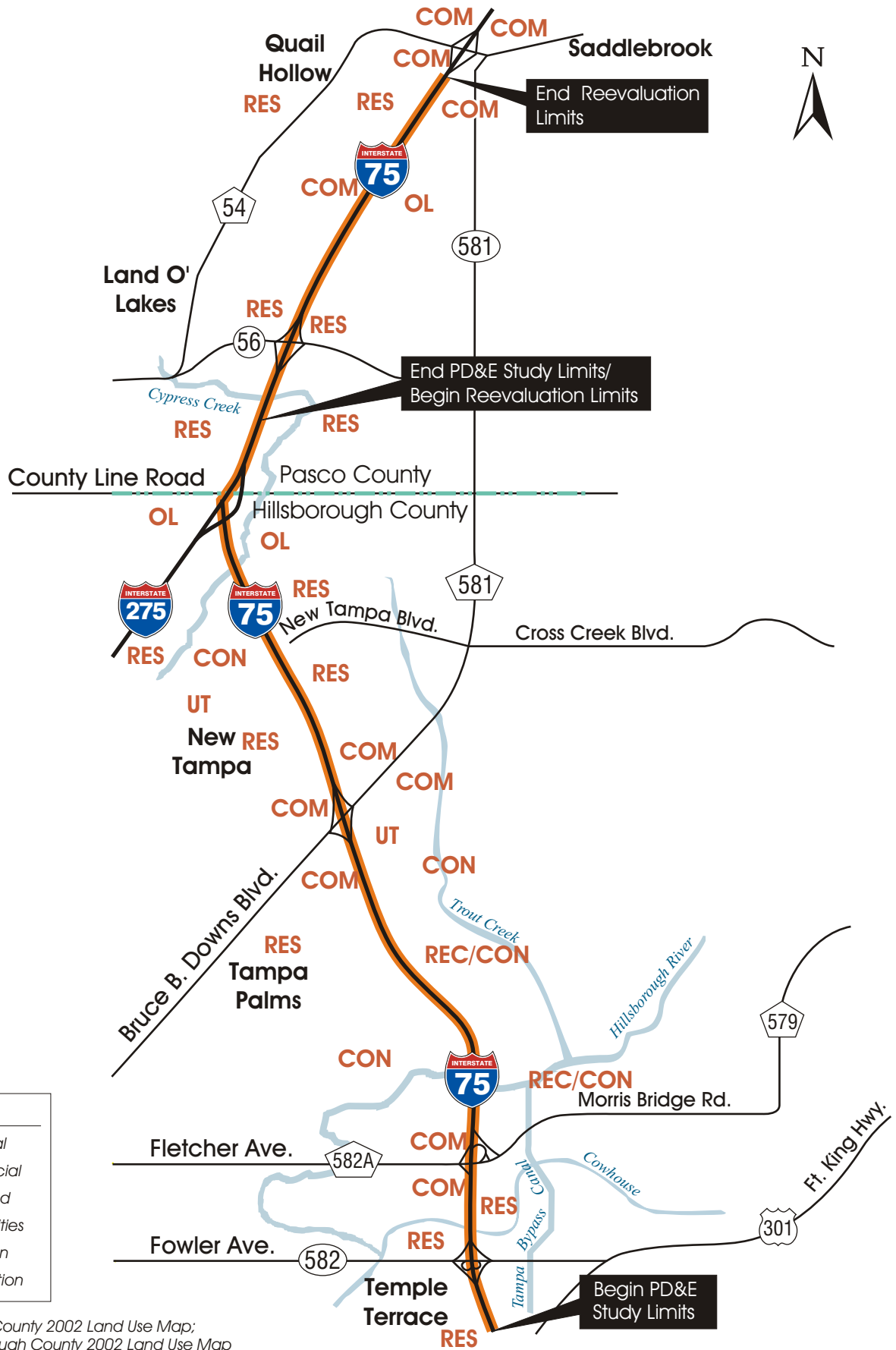
### 4.3.1 Land Use Data

Field investigations and other historical documentation provided land use information for the I-75 project corridor. The Hillsborough County, Pasco County and Temple Terrace Existing and Future Land Use Maps, and current and historical aerial photography of both counties were examined to provide a comparison of land use changes.

#### 4.3.1.1 Existing Land Use

The project corridor primarily contains open, agricultural and conservation lands and residential, water and commercial uses. A small portion of the corridor is designated for recreation/open space and public uses. The existing land uses in the project corridor are further described below. The existing land use is shown in Figure 4-8.





LEGEND	
RES	- Residential
COM	- Commercial
OL	- Open Land
UT	- Public/Utilities
REC	- Recreation
CON	- Conservation

SOURCES: Pasco County 2002 Land Use Map;  
Hillsborough County 2002 Land Use Map

**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
 Hillsborough and Pasco Counties  
 WPI Seg. No: 408459 1 / FAP No: 0751 105 I  
 WPI Seg. No: 258736 1 / FAP No: NH-75-1-(91)275

**EXISTING LAND USE**

Figure  
4-8

### Residential

Approximately 15 percent of the project corridor contains residential areas. Primarily low density and some medium density residential land uses are scattered throughout the project area. The most densely populated area along the corridor lies between US 301 and Fletcher Avenue with a higher concentration located on the west side of I-75. Other residential properties are located in the southwest and northeast quadrants of the Bruce B. Downs Boulevard interchange. In Pasco County, a residential development is located just north of the southbound rest area and also in the northeast quadrant of the SR 56 interchange.

### Agricultural/Rural and Open Land

Approximately 50 percent of the project corridor contains undeveloped/open land and areas classified as agricultural/rural land. These areas are scattered throughout the project corridor and are intermixed with residential and commercial properties.

### Commercial & Services

About 10 percent of the corridor contains developed commercial uses. Strip malls and commercial uses are predominantly located on the major arterials on both sides of the interchanges except for the east side of the Fowler Avenue interchange and the SR 56 interchange. Commercial properties along the arterials include gasoline stations, banks, office complexes/parks, shopping centers, medical clinic, car dealerships, restaurants, and convenience stores.

### Industrial

The Tampa Bay Aero Park, located west of I-75 between SR 56 and CR 54 is designated as an industrial use.

### Public/Utilities

Utilities in the project area include the City of Tampa water treatment plant (WTP) located in the southeast quadrant of the Bruce B. Downs interchange. A small WTP is located on the east side of the project corridor just north of SR 56. The public facilities designation also includes the northbound and southbound rest areas in Pasco County. Freedom High School and Liberty Middle School are located in the northwest quadrant of the Bruce B. Downs Boulevard interchange.

### Recreation/Open Space

Approximately five percent of the project corridor contains recreation/open space areas. Wilderness Park encompasses approximately 7,200 acres of the Lower Hillsborough Flood Detention Area (LHFDA), making it the largest regional park in Hillsborough County. The park is managed by Hillsborough County under agreement with the Southwest Florida Water Management District. The LHFDA is located northeast of Tampa and is to the east of I-75. Within Wilderness Park are five park sites. Flatwoods Park is adjacent to the I-75 corridor. The New Tampa Nature Park is currently under development by the City of Tampa. It is generally situated south of Bruce B. Downs Boulevard and east of I-75.

## Conservation Lands

Approximately 20 percent of the project corridor contains conservation lands that are primarily affiliated with the Hillsborough River and Cypress Creek.

## Water

The Hillsborough River, Cowhouse Creek, Cypress Creek and the Tampa Bypass Canal and their associated tributaries comprise most of the water uses in the project corridor.

### 4.3.1.2 Future Land Use

The Hillsborough and Pasco Counties Future Land Use Maps show that most land uses currently classified as agricultural/open land will be used for residential areas in the future. The area around the CR 54 interchange will become predominantly commercial/retail surrounded by areas of residential uses. The City of Temple Terrace Future Land Use Map shows that commercial land use will dominate the areas around the Fowler and Fletcher Avenues interchanges. Areas currently designated as conservation lands will remain unchanged. The Future Land Use Map is shown in Figure 4-9.

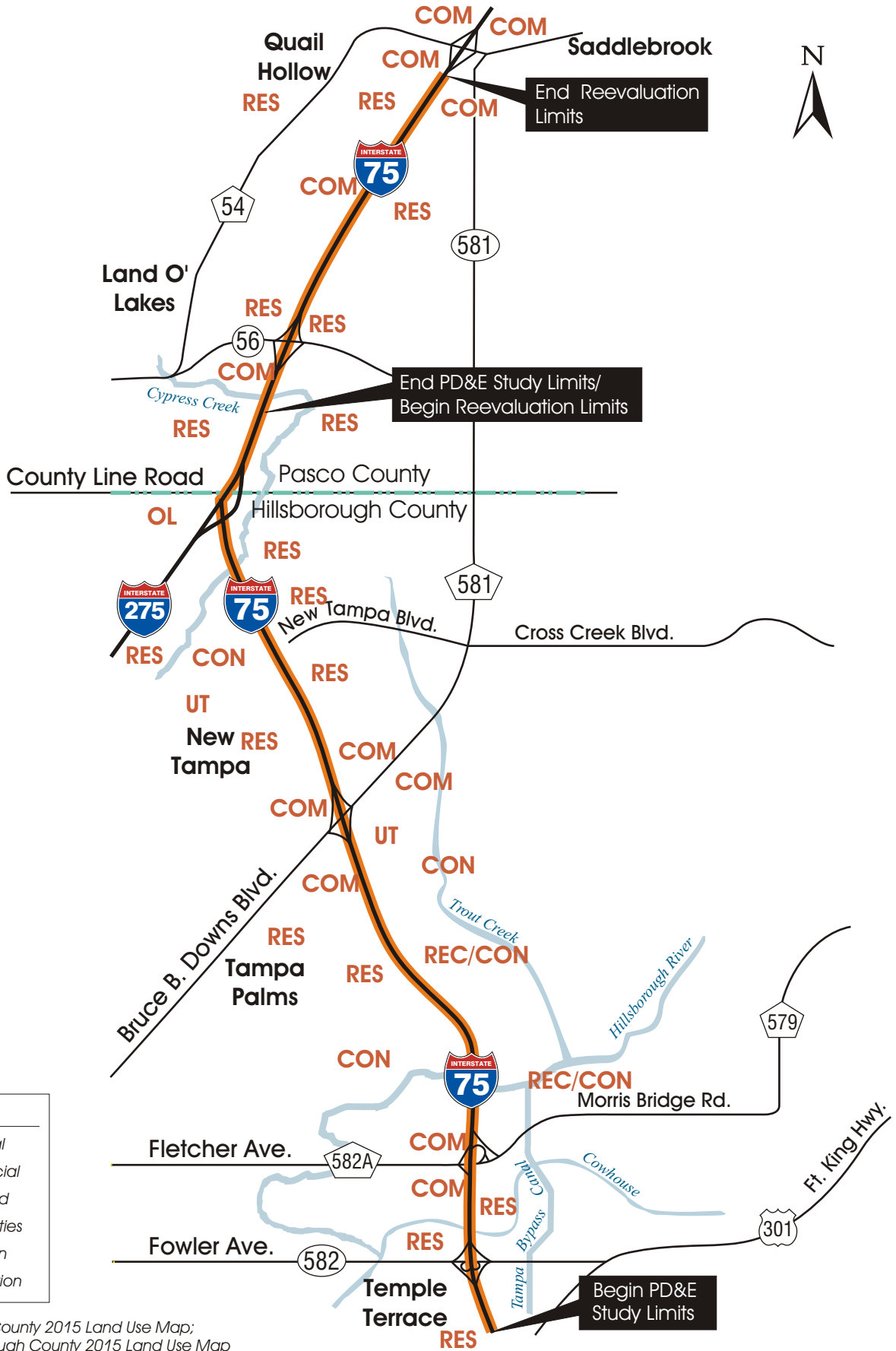
## **4.3.2 Cultural Features and Community Services**

There are numerous cultural features and community services in or near the project study area, including schools, religious institutions and recreational facilities. Community services are shown in Figure 4-10.

### 4.3.2.1 Archaeological and Historic Site Field Survey

A Cultural Resources Assessment Survey (CRAS) was undertaken to comply with Section 106 of the National Historic Preservation Act of 1966 (Public Law 89-655), as amended, and the implementing regulations 36 CFR 800 (revised May 1999), as well as the provisions contained in the revised Chapter 267, Florida Statutes. All work was carried out in conformity with Part 2, Chapter 12 - Archaeological and Historical Resources - of the FDOT's PD&E Manual (revised January 1999), and the standards contained in the Historic Preservation Compliance Review Program of the Florida Department of State, Division of Historical Resources Manual (revised November 1990).

The purpose of the CRAS was to locate, identify, and evaluate any cultural resources contained within the project Area of Potential Effect (APE) and to assess their significance in terms of eligibility for listing in the National Register of Historic Places (NRHP). The historical/architectural and archaeological field surveys were conducted between November 2002 and March 2003. This report documents the results of the CRAS component of the PD&E Study and Reevaluation, and includes the roadway alignment alternatives as well as proposed alternate pond and Floodplain Compensation (FPC) sites.



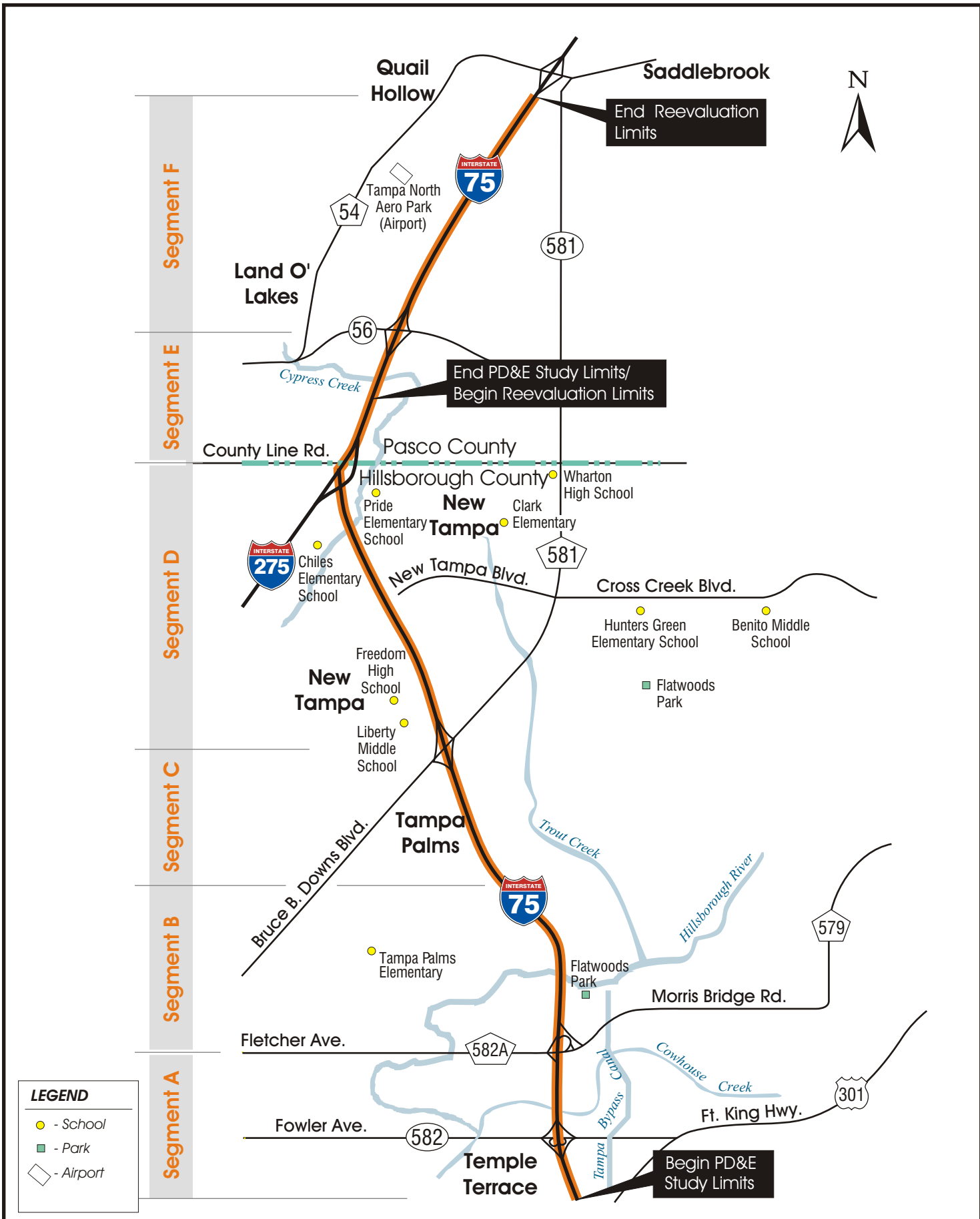
LEGEND	
RES	- Residential
COM	Commercial
OL	- Open Land
UT	- Public/Utilities
REC	- Recreation
CON	Conservation

SOURCES: Pasco County 2015 Land Use Map;  
Hillsborough County 2015 Land Use Map

**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
 Hillsborough and Pasco Counties  
 WPI Seg. No: 408459 1 / FAP No: 0751 105 I  
 WPI Seg. No: 258736 1 / FAP No: NH-75-1-(91)275

**FUTURE LAND USE**

Figure  
4-9



**LEGEND**

- - School
- - Park
- ◇ - Airport

**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
 Hillsborough and Pasco Counties  
 WPI Seg. No: 408459 1 / FAP No: 0751 105 I  
 WPI Seg. No: 258736 1 / FAP No: NH-75-1-(91)275

**COMMUNITY SERVICES MAP**

**Figure 4-10**

Archaeological background research, including a review of the Florida Master Site File (FMSF) and the NRHP, indicated that 28 archaeological sites are located within or adjacent to the project corridor. Among these resources, six (8HI99, 8HI450, 8HI471, 8HI472, 8HI473, and 8HI483) were determined NRHP-eligible by the Florida State Historic Preservation Officer (SHPO) in 1979. Field survey was concentrated within each of these site areas, as contained within the existing and proposed rights-of-way, as well as proposed alternate pond and FPC sites. A review of relevant site location information for environmentally similar areas within Hillsborough and Pasco Counties and the surrounding region indicated a moderate to high probability for the occurrence of prehistoric sites at a few locations within the project APE. The background research also indicated that sites, if present, would most likely be small lithic or artifact scatters. The results of the historical research suggested a low potential for historic period archaeological sites.

The investigation resulted in the identification and evaluation of one newly recorded site, 28 previously recorded archaeological sites, one archaeological occurrence, and two historical structures.

The newly recorded site, 8HI7877 is a small lithic scatter. Based on the information provided in the Study, the SHPO concurred with the determination that the site does not meet the criteria for listing in the NRHP. The location of 15 previously recorded sites could not be verified by this investigation, including site 8HI450 that was considered eligible for listing in the NRHP. The locations of 13 other previously recorded sites were verified and updated FMSF has been provided. These included 8HI10, 8HI99, 8HI471, 8HI472, 8HI473, 8HI483, 8HI5431, 8HI5432, 8PA357, 8PA480, 8PA481, 8PA632, and 8PA633. Of these, 8HI99, 8HI471, 8HI472, 8HI473, and 8HI483 were evaluated previously as eligible for listing in the NRHP.

The SHPO concurred with the findings of this Study, that 8HI99 could no longer be located, that 8HI471 and 8HI472 have suffered significant damage as a result of the construction of I-75 and that no significant archaeological deposits associated with site 8HI471 and 8HI472 are contained within the project APE.

The SHPO also concurred with the field study results regarding the identification and evaluation of two historic buildings, 8HI7839 and 8HI7840. Both are modest Frame Vernacular style residences constructed in the 1940's. Neither is considered eligible for listing in the NRHP.

The SHPO concurred with the finding of the Study that the proposed development plans will have no effect to properties of historical or archaeological value. The SHPO coordination letters are provided in Appendix A.

#### 4.3.2.2 Evacuation Routes and Emergency Services

Evacuation Routes – I-75 is classified as a major north-south hurricane evacuation route in the event of a weather emergency in the Hillsborough and Pasco Counties Long Range Transportation Plans (LRTPs). US 301, Fletcher Avenue, SR 56, and CR 54 are designated as hurricane evacuation routes that tie into the I-75 corridor.

Emergency shelters that are in proximity to the project corridor include Chiles Elementary School - 16541 West Tampa Palms Boulevard, Wharton High School - 20150 Bruce B. Downs Boulevard and Benito Middle School - 10101 Cross Creek Boulevard.

A special needs medical shelter is located at the University of Southern Florida Sun Dome at 4202 East Fowler Avenue in Tampa.

Emergency Services – Fire and rescue services within the project corridor are provided by the City of Tampa, the City of Temple Terrace, the Hillsborough and Pasco County Fire Departments, the Hillsborough and Pasco Counties Sheriff's Offices, and the Florida Highway Patrol.

#### 4.3.2.3 Potential Section 4(f) Properties

Three potential Section 4(f) properties exist within the project area: Flatwoods Park, the Cypress Creek Preserve Environmental Lands Acquisition and Protection Program (ELAPP) area, and the New Tampa Nature Park. All of these sites are located within Hillsborough County.

Flatwoods Park is located immediately east of the I-75 right-of-way, north of Fletcher Avenue. It is owned by the SWFWMD and maintained by Hillsborough County.

The Cypress Creek Preserve ELAPP area is situated on both sides of Cypress Creek east of Livingston Road, west of I-75, and north of Bruce B. Downs Boulevard. The park is situated adjacent to Lizard's Tail Road, which is adjacent to the I-75 limited access right-of-way.

The New Tampa Nature Park is a City of Tampa property purchased under the ELAPP program. It is currently being planned by the City of Tampa.

The recommended project would not require the acquisition of any right-of-way from any of these properties. Additionally, the recommended project would not impair or diminish the activities, features, or attributes that qualify these Section 4(f) properties for protection. Therefore, the recommended project will have no involvement with these Section 4(f) properties.

#### 4.3.2.4 Educational and Religious Institutions

Educational Institutions - The I-75 project corridor is served by the Hillsborough County and Pasco County Boards of Education. Table 4-8 lists the nine public schools (all within Hillsborough County) within an approximate 2-mile radius of the project corridor.

Religious Institutions – The following religious institutions are within an approximate 1-mile radius of the project corridor:

- Tampa Bay Presbyterian Church is located at 19911 Bruce B. Downs Boulevard in Tampa
- Palms Baptist Church is located at 6031 Tampa Palms Boulevard in Tampa
- Victorious Life Church is located at 6224 Old Pasco Road in Wesley Chapel

**Table 4-8  
Educational Institutions**

School Name	Address
Benito Middle	10101 Cross Creek Boulevard
Chiles Elementary	16541 West Tampa Palms Boulevard
Clark Elementary	19002 Wood Sage Drive
Freedom High	17410 Commerce Park Boulevard
Hunters Green Elementary	9202 Highland Oak Drive
Liberty Middle	17400 Commerce Park Boulevard
Pride Elementary	18271 Kinnan Street
Tampa Palms Elementary	6100 Tampa Palms Boulevard
Wharton High	20150 Bruce B. Downs Boulevard

There are no known non-profit organizations within the project corridor that have the potential to be affected by the proposed improvements.

### **4.3.3 Natural and Biological Features**

#### **4.3.3.1 Wetlands**

In accordance with Executive Order 11990, Protection of Wetlands, dated May 23, 1977, a study was conducted to assess the potential wetland effects of the proposed project. The purposes of the study are to: 1) describe the existing wetlands and other surface water features within the project corridor; 2) present qualitative and quantitative information regarding potential wetland effects and conceptual mitigation alternatives; 3) identify permitting and coordination requirements for the project; 4) solicit comments from regulatory agencies with jurisdiction in the study area; and, 5) provide a decision-making tool to aid the project engineers in designating a recommended alternative that will minimize environmental effects within the project corridor to the greatest extent practicable.

Wetlands within the project limits were initially identified through review of mapping resources including the Soil Surveys of Hillsborough and Pasco Counties, United States Fish and Wildlife Service (USFWS) National Wetlands Inventory mapping, and 1:1000 scale project aerial photography. Wetlands were identified in the field utilizing the United States Army Corps of Engineers (USACOE), Federal Manual for Identifying and Delineating Jurisdictional Wetlands (1987). The wetlands were classified according to the USFWS methodology (Cowardin, *et.al.*, 1979). The land use, vegetation cover and land form for each wetland was identified using the FDOT Florida Land Use, Cover and Forms Classification System (FLUCFCS), Second Edition, September 1985.

Sizes of existing wetlands and potential wetland effects were determined planimetrically from project aerial photographs. Wetlands which may be potentially affected by the project were assessed for functional significance using the Wetland Rapid Assessment Procedure (WRAP) as developed by the South Florida Water Management District and utilized by the USACOE.

Seventy-seven wetlands have been identified within the project study area. These wetlands are located within and adjacent to the proposed right-of-way. Fifty-seven wetlands exist within Hillsborough County, and 21 wetlands are located within Pasco County. Wetlands within the project area are comprised largely of palustrine forested systems, most of which



are dominated by cypress (*Taxodium* sp.) or deciduous hardwoods such as red maple (*Acer rubrum*) and sweetgum (*Liquidambar styraciflua*). Other wetland types include palustrine emergent marsh and palustrine scrub-shrub wetlands dominated by Carolina willow (*Salix caroliniana*) and primrose willow (*Ludwigia peruviana*). I-75 crosses riverine systems at Cowhouse Creek (a tributary of the Hillsborough River), the Hillsborough River, and Cypress Creek (at two locations). All three riverine systems are classified as Class I waterbodies. Two of these waterbodies, the Hillsborough River and Cypress Creek, are also designated as Outstanding Florida Waters.

A summary of the wetland areas by type and Wetlands Rapid Assessment Procedure (WRAP) score is provided in the separately prepared Wetland Evaluation Report.

#### 4.3.3.2 Threatened and Endangered Species

Pursuant to section 7(c) of the Endangered Species Act of 1973, as amended, the study area was evaluated for the potential occurrence of threatened and endangered species. Preliminary data for the Endangered Species Technical Memorandum were collected through literature and online searches of available information to determine if protected species and critical habitat occur within the project area. Data sources reviewed include the Florida Breeding Bird Atlas online data (FFWCC, 1995), Eagle nest locator data online (FFWCC, 2002), National Marine Fisheries Service (NMFS, 2002) online data, Bureau of Protected Species Management online data (FFWCC, 2002), Florida Natural Inventory (FNAI 1997-1999) Data, Florida Division of Forestry (DOF 2002) online data for Federally listed Plants, Florida Fish and Wildlife Conservation Commission (FWCC) Official Lists of Florida's Endangered Species, Threatened Species, and species of Special Concern (1997), Field Guide to the Rare Animals and Plants of Florida (FNAI, 2000), SWFWMD and Florida Geographic Data Library (FGDL) GIS databases. A list of threatened and endangered plants and animals that may occur within the project area was developed after review of available information. Additionally, detailed analysis of aerial photographs of the project area and the Hillsborough County (NRCS 1989) and Pasco County (NRCS 1982) soil surveys were reviewed in order to assess and quantify the habitat types that may contain protected species. These habitats were then assigned a FLUCFCS code (FDOT, 1999) and potentially occurring species were noted for each location within the project area.

Results of a February 26, 2002 field inspection indicated the presence of several gopher tortoise (*Gopherus polyphemus*) burrows along the eastern side of the right-of-way. These were located along the grassed edges of the maintained portions of the right-of-way, where dry, sandy soils persist. These gopher tortoise burrows were not evident during a site visit conducted on December 17, 2002. No specific occurrences or observations were made for any other listed species that would occur within Pasco and Hillsborough Counties. The lack of specific habitat for listed species within the study area is to be expected as the corridor is urban in nature and is highly developed in some areas. Additionally, no native upland habitats will be affected as a part of the project.

Coordination with the FFWCC indicates that there are no known bald eagle nests within 1 mile of the I-75 project site. No occurrence records of listed species or critical habitat are contained within the FFWCC database for the project area.

No threatened or endangered plant species were observed within the project corridor.

A bird rookery and nesting area exists adjacent to the project area south of the apex between the I-275 northbound and I-75 southbound lanes. It is entirely contained within the Cypress Creek Preserve, land acquired through the Hillsborough County ELAPP. Although this area will not be directly affected by the proposed project, additional field surveys, coordination and effect analysis will be required during the design phase of this project to insure that effects to the rookery are avoided or minimized.

On November 5, 2003, the FDOT initiated informal consultation with the US Fish and Wildlife Service (USFWS) regarding impacts on threatened and endangered species. On December 22, 2003, the USFWS indicated "The Proposed action is not likely to adversely affect resources protected by the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et. seq.). This finding fulfills the requirements of the Act."

#### **4.3.4 Hazardous Materials and Petroleum Site Data**

A Level 1 Contamination Screening of the I-75 project corridor was conducted to determine the potential for contamination of the I-75 right-of-way from adjacent properties and business operations.

A Contamination Screening Evaluation Report (CSER) was prepared pursuant to the FHWA's Technical Advisory T 6640.8A, dated October 30, 1987, and in accordance with the FDOT's PD&E Manual, Part 2, Chapter 22, dated February 8, 1994, as further modified and clarified by the District Contamination Impact Coordinator. The purpose of this CSER is to present the preliminary findings of a literature, file and field review of the potential for finding hazardous materials and petroleum contamination on parcels along the proposed alignment which may affect the proposed improvements.

A total of 24 potential contamination sites were evaluated. The potential contamination sites are listed in Table 4-9.

Fourteen sites were identified as having the potential for petroleum or hazardous materials contamination for the PD&E Study from south of Fowler Avenue to south of SR 56. Of the 14 sites, 11 are considered to be potential petroleum sites, two are considered to be a potential hazardous materials sites and one is considered to be both a potential petroleum and hazardous materials site. No sites in the project area received a rating of HIGH. One site received a rating of MEDIUM, eight sites received a rating of LOW and five sites received a rating of NO.

The one site rated as having a MEDIUM potential for contamination involvement is Site No. 2 - Morris Bridge Landfill (Segment A).

Ten sites were identified as having the potential for petroleum or hazardous materials contamination for the Reevaluation from south of SR 56 to CR 54. Of the 10 sites, eight are considered to be potential petroleum sites and two are considered to be potential hazardous materials sites. No sites in the project area received a rating of HIGH. Four sites received a rating of MEDIUM, five sites received a rating of LOW and one site received a rating of NO.

**Table 4-9  
Potential Hazardous Materials and Petroleum Sites**

Site No.	Facility Name & Location Facility ID #	Haz or Pet.	Database	Activity or Concern	Tanks Y/N	SIC Code	Distance from ROW (feet)		Risk Rating
							Exist.	Prop.	
<b>SEGMENT A - Fowler Avenue to Fletcher Avenue</b>									
1	Raulerson & Son, Inc. 10611 Raulerson Ranch Road Tampa, FL 33637 (813) 985-6886 Facility ID # 298736769	P	TANKS	<ul style="list-style-type: none"> <li>agricultural fuel user</li> <li>1 AST and 1 UST</li> </ul>	Y	5172	200	N/C	LOW
2	Morris Bridge Landfill Intersection of Morris Bridge Road and Fowler Avenue Tampa, FL 33612 EPA ID #FLD981748080 GMS ID #4029P8163	H	CERCLIS FINDS SLDWST	<ul style="list-style-type: none"> <li>closed landfill</li> <li>black substance (possible iron bacteria) found in local potable wells</li> </ul>	N	4959	adjacent	N/C	MEDIUM
3	Mitchell Associates, Inc. 8432 East Fowler Avenue Tampa, FL 33637 (813) 985-2642 Facility ID # 298736726	P	TANKS	<ul style="list-style-type: none"> <li>fuel user/non-retail</li> <li>all tanks were removed (1 AST and 2 USTs)</li> </ul>	N	5172	adjacent	N/C	NO
4	Tampa Towers, Inc. Southeast of the I-75 and Fletcher Avenue Interchange Site ID #FL1299 FCC # 1033601	P	Field review	<ul style="list-style-type: none"> <li>communication tower</li> <li>abandoned AST (rusted)</li> </ul>	Y	3669 5172	adjacent	N/C	LOW
<b>SEGMENT B - Fletcher Avenue to 3,000 Feet North of the Hillsborough River</b>									
5	Motor Vehicle Accident Fuel Spill I-75 north of Fletcher Avenue Temple Terrace, FL Incident # 19223	P	ERNS	<ul style="list-style-type: none"> <li>automobile accident</li> <li>gasoline spill in the I-75 median</li> </ul>	N	4789 5172	median	N/C	LOW
6	Bioxide AST Hidden River Corporate Center Tampa, FL	H	Field review	<ul style="list-style-type: none"> <li>1 AST containing bioxide used for odor control at the sewer pump station</li> </ul>	Y	4952	500	N/C	NO
7	SSE Transportation Co. Fuel Spill I-75 north at the bridge over the Hillsborough River Tampa, FL Incident # 178562	P	ERNS	<ul style="list-style-type: none"> <li>tractor trailer</li> <li>ruptured fuel tank</li> </ul>	N	4789 5172	within	N/C	LOW
8	Abandoned Drums Hillsborough River along I-75 Incident # 104149	P	ERNS	<ul style="list-style-type: none"> <li>two 55 gallons waste oil drums found in the river</li> </ul>	N	5172	adjacent	N/C	LOW
<b>SEGMENT C - 3,000 Feet North of the Hillsborough River to Bruce B. Downs Boulevard</b>									
9	Tampa Electric Company Sprint Tower West of I-75 mainline, south on Tampa Palms Boulevard East Site ID #TA03XC037	P	Field review	<ul style="list-style-type: none"> <li>communication tower</li> </ul>	N	3669	25	N/C	NO
10	Morris Bridge Water Treatment Plant 17101 CR 581 (Bruce B. Downs Boulevard), Tampa, FL Facility ID # 298624903 GMS ID # 6290327	H/P	TANKS	<ul style="list-style-type: none"> <li>2 USTs removed</li> <li>3 ASTs in service</li> </ul>	Y	4941 5172	adjacent	N/C	LOW
<b>SEGMENT D - Bruce B. Downs Boulevard to the I-275 Interchange</b>									
11	7-11 Food Store #33019 5102 Pointe of Tampa Way Tampa, FL Facility ID # 299804628	P	TANKS	<ul style="list-style-type: none"> <li>retail gasoline station</li> <li>2 USTs in service</li> </ul>	Y	5172	adjacent	N/C	LOW
12	USAA 17200 Commerce Park Blvd. Tampa, FL 33647 Facility ID # N/A	P	Field review	<ul style="list-style-type: none"> <li>insurance company</li> <li>1 AST</li> </ul>	Y	5172	185	N/C	LOW

**Table 4-9  
Potential Hazardous Materials and Petroleum Sites**

Site No.	Facility Name & Location Facility ID #	Haz or Pet.	Database	Activity or Concern	Tanks Y/N	SIC Code	Distance from ROW (feet)		Risk Rating
							Exist.	Prop.	
13	Cellular Telephone Tower NW quadrant of I-75 and Bruce B. Downs Boulevard interchange	P	Field review	<ul style="list-style-type: none"> <li>communication tower</li> </ul>	N	3669	within	N/C	NO
14	Crown and Castle International Corporation Tower SW quadrant of I-75/County Line Road Site ID # 813765	P	Field review	<ul style="list-style-type: none"> <li>communication tower</li> </ul>	N	3669	75	N/C	NO
<b>SEGMENT E - I-275 Interchange to SR 56</b>									
15	Former Construction Staging Area SE of the I-75 and SR 56 interchange	H	Field review	<ul style="list-style-type: none"> <li>construction debris</li> <li>1 AST removed</li> </ul>	N	1611	adjacent	N/C	NO
<b>SEGMENT F - SR 56 to CR 54</b>									
16	Old Wesley Chapel Waste Water Treatment Plant 26400 Florida Power Road Zephyrhills, FL 33544 Facility ID # N/A	H	Field review	<ul style="list-style-type: none"> <li>closed due to compliance enforcement</li> </ul>	N	4952	325	N/C	LOW
17	Tampa North Aero Park 4241 Birdsong Boulevard Lutz, FL 33549 Facility ID # 299400278	P	Field review	<ul style="list-style-type: none"> <li>6 ASTs in service</li> </ul>	Y	5172	800	N/C	LOW
18	Citrus Country Shell 28009 CR 54 Zephyrhills, FL 33544 Facility ID # 518515016	P	TANKS PCTS	<ul style="list-style-type: none"> <li>retail gasoline station</li> <li>1 UST in service</li> <li>contamination reported</li> </ul>	Y	5172	190	N/C	MEDIUM
19	Texaco – Wesley Chapel 28014 CR 54 Zephyrhills, FL 33544 (813) 247-4731 Facility ID # 519046575	P	TANKS PCTS	<ul style="list-style-type: none"> <li>retail gasoline station</li> <li>3 USTs in service</li> <li>contamination reported</li> </ul>	Y	5172	200	N/C	MEDIUM
20	RaceTrac #407 28053 CR 54, Zephyrhills, FL 33543 (770) 431-7600 Facility ID # 519100181	P	TANKS	<ul style="list-style-type: none"> <li>retail gasoline station</li> <li>3 USTs in service</li> </ul>	Y	5172	325	N/C	LOW
21	Citgo 27829 CR 54 Wesley Chapel, FL 33543 Facility ID # 518515078	P	TANKS PCTS	<ul style="list-style-type: none"> <li>retail gasoline station</li> <li>4 USTs in service</li> <li>1 UST removed</li> <li>contamination reported</li> </ul>	Y	5172	45	N/C	MEDIUM
22	Denny's – Master's Economy Inn 27807 CR 54 Wesley Chapel, FL 33543 Facility ID # 519201573	P	TANKS PCTS	<ul style="list-style-type: none"> <li>contamination reported</li> </ul>	N	5172	260	N/C	MEDIUM
23	Amoco 27741 CR 54 Wesley Chapel, FL 33543 Facility ID # 518520035 EPA ID # FLD984211425	P	NONTSD TANKS PCTS	<ul style="list-style-type: none"> <li>retail gasoline station</li> <li>4 USTs in service</li> <li>contamination reported</li> </ul>	Y	5172	370	N/C	LOW
24	Circle K #7475 27707 CR 54 Wesley Chapel, FL 33543 Facility ID # 518520488 EPA ID # FLD984254748	P	COMHAZ RCRIS FINDS TANKS PCTS	<ul style="list-style-type: none"> <li>retail gasoline station</li> <li>4 USTs in service</li> <li>contamination reported</li> </ul>	Y	5172	1,800	N/C	LOW

Notes. UST – Underground Storage Tank  
AST – Above ground Storage Tank  
N/C – No change

The four sites rated as having a MEDIUM potential for contamination involvement are:

- Site No. 18 - Citrus Country Shell (Segment F)
- Site No. 19 - Texaco – Wesley Chapel (Segment F)
- Site No. 21 - Citgo (Segment F)
- Site No. 22 - Denny's – Master's Economy Inn (Segment F)

It is recommended that a Level 2 Contamination Assessment be conducted for the five sites rated as having a MEDIUM potential for contamination involvement.

This Level 2 Contamination Assessment should be accomplished prior to the project right-of-way phase and coordinated with appropriate offices to insure that where contamination is verified to exist and is likely to affect construction, appropriate steps are taken to avoid the contamination or have the contamination remediated prior to any construction activity at that location. Properties which are confirmed to have contamination present should be further assessed to completely identify the type, amount and area of contamination.

## 5.0 DESIGN CRITERIA

The design criteria for this project are shown in Table 5-1.

**Table 5-1  
Design Criteria**

Design Element	Design Standard	Source(s)	
Design Vehicle	WB-60	FDOT	
Design Year	2028	FDOT Plans Preparation Manual (20 years from opening)	
<b>Design Speed</b>			
Mainline I-75 – Rural Interstate	70 mph	FDOT Plans Preparation Manual, Page 1-16 2001 AASHTO, Page 829-830, Exhibit 10-56	
Mainline I-75 – Urban Interstate	60 mph		
Direct Connection Ramp	<i>Middle Range</i>		<i>Upper Range</i>
	50 mph for 70 mph (Rural)		60 mph for 70 mph (Rural)
Loop Ramp	45 mph for 60 mph (Urban)		50 mph for 60 mph (Urban)
	35 mph for 70 mph (Rural) 30 mph for 60 mph (Urban)		
<b>Median Width</b>			
Median I-75	64 ft	FDOT Plans Preparation Manual, Page 2-44, Table 2.2.1	
<b>Border Width</b>			
Mainline I-75	94 ft minimum (Width may be reduced as long as design meets requirement of clear zone, horizontal clearance, drainage, and maintenance access)	FDOT Plans Preparation Manual, Page 2-52, Table 2.5.1	
<b>Minimum Radius (Max. Degree of Curve)</b>			
Mainline I-75 – Rural Interstate	1,637 ft (3°30')	FDOT Plans Preparation Manual, Pages 2-61 & 2-64, Tables 2.8.3 and 2.9.1	
Mainline I-75 – Urban Interstate	1,091 ft (5°15')		
Direct Connection Ramp	694 ft (8°15')		
Loop Ramp	310 ft (18°28')		
<b>Length of Horizontal Curve</b>			
Mainline I-75 – Rural	Desirable: 30(V) Where V is equal to the design speed of the roadway	FDOT Plans Preparation Manual, Page 2-60, Table 2.8.2a	
Maximum Shoulder "Roll-Over"	7%	FDOT Design Standard Index No. 510, 1 of 2	

**Table 5-1  
Design Criteria**

<b>Design Element</b>	<b>Design Standard</b>	<b>Source(s)</b>	
<b>Maximum Degree of Horizontal Curve</b>			
Mainline I-75	3° 00'	FDOT Plans Preparation Manual, Page 2-61, Table 2.8.1	
<b>Superelevation Transition</b>			
<i>Maximum</i>		FDOT Design Standards Index, No. 510, 1 of 2	
Mainline I-75	0.10 ft/ft		
<i>Transition</i>			
Tangent	80%		
Curve	20%		
<b>On-/Off-Ramp Design</b>			
Loop Ramp	Parallel Type/Parallel Type	2001 AASHTO, Pages 849 to 866	
Direct Connection Ramp	Taper Type/ Direct Connect		
<b>On-Ramp</b>			
<i>Direct Connection Ramp</i>		2001 AASHTO, Pages 849 & 851, Exhibit 10-70	
Taper	50:1 (minimum)		
Acceleration Length, 70 mph	580 ft		
Acceleration Length, 60 mph	180 ft		
<i>Loop Ramp</i>			
Taper	300 ft (minimum)		
Acceleration Length, 70 mph	1,230 ft		
Acceleration Length, 60 mph	910 ft		
<b>Off-Ramp</b>			
<i>Direct Connection Ramp</i>			2001 AASHTO, Pages 851 to 862, Exhibit 10-73 FDOT Design Standards Index, No. 525
Taper	2° to 5° (4° minimum)		
Acceleration Length, 70 mph	580		
Acceleration Length, 60 mph	420		
<i>Loop Ramp</i>			
Taper	300 ft		
Deceleration Length, 70 mph	490 ft		
Deceleration Length, 60 mph	430 ft		
<b>Maximum Profile Grade</b>			
Mainline I-75 – Rural Interstate	3%	FDOT Plans Preparation Manual, Page 2-55, Table 2.6.1	
Mainline I-75 – Urban Interstate	3%		
Direct Connection Ramp	3% to 5%		
Loop Ramp	4% to 6%		
<b>Maximum Change in Grade without Vertical Curve</b>			
Mainline I-75 - Rural	0.20%	FDOT Plans Preparation Manual, Page 2-55, Table 2.6.2	
Mainline I-75 - Urban	0.40%		
Direct Connection Ramp	0.60%		
Loop Ramp	1.00%		
<b>Minimum Stopping Sight Distance</b>			
Interstate – Rural (70 mph)	820 feet	FDOT Plans Preparation Manual, Page 2-57, Table 2.7.1	
Interstate – Urban (60 mph)	730 feet		

**Table 5-1  
Design Criteria**

<b>Design Element</b>	<b>Design Standard</b>	<b>Source(s)</b>
<b>Maximum Crest Vertical Curve (Use mid to upper range of K value as desirable)</b>		
Mainline I-75 – Rural Interstate	K =506 (1,000 ft min. for open highways) (1,800 ft min. at interchanges)	FDOT Plans Preparation Manual, Page 2-62, Table 2.8.5  FDOT Plans Preparation Manual, Page 2-62, Table 2.8.5
Mainline I-75 – Urban Interstate	K =313 (1,000 ft min. for open highways) (1,800 ft min. at interchanges)	
Diamond Ramp	K = 136 (300 ft minimum)	
Loop Ramp	K = 47	
<b>Minimum Sag Vertical Curve (Use mid to upper range of K value as desirable)</b>		
Mainline I-75 – Rural Interstate	K = 206 (800 ft minimum)	FDOT Plans Preparation, Page 2-63, Table 2.8.6
Mainline I-75 – Urban Interstate	K = 157 (800 ft minimum)	
Direct Connection Ramp	K = 96 (200 ft minimum)	
Loop Ramp	K = 49	
<b>Minimum Vertical Clearance</b>		
Bridges over I-75	16.5 ft (16 ft min per AASHTO with 6 in allowance for overlay)	FDOT Plans Preparation, Page 2-69, Table 2.10.1
I-75 Bridges Over Water	12 ft	FDOT Plans Preparation, Page 2-20
Overhead Signs	17.5 ft	FDOT Plans Preparation, Page 2-75, Table 2.10.2
High Speed Rail	23.5 ft	FDOT Plans Preparation, Page 2-73 Table 2.10.1
Light/Commuter Rail	17.5 ft	FDOT Standard Specification for Design and Construction of Railways, September 1993, Section 2.1.1
<b>Typical Roadway Cross Section Slopes</b>		
Roadways	0.02 ft/ft, (2 lane max.)	FDOT Plans Preparation Manual, Pages 2-42 & 2-45, Table 2.1.1 & 2.3.1
Inside Shoulder	0.05 ft/ft	
Outside Shoulder	0.06 ft/ft	



**Table 5-1  
Design Criteria**

Design Element	Design Standard		Source(s)	
<b>Roadside Slopes</b>				
For facility with projected 20 year AADT of 1500 or greater and design speed of 45 mph or greater				
	<i>Height of Fill (feet)</i>	<i>Rate</i>	FDOT Plans Preparation Manual, Page 2-51, Table 2.4.1	
Front Slope	0 – 5	1:6		
	5 – 10	1:6 to edge of clear zone, then 1:4		
	10 – 20	1:6 to edge of clear zone, then 1:3		
	>20	1:2 with guardrail		
Back Slope	All	1:4 or 1:3 with a standard width trapezoidal ditch and 1:6 front slope		
<b>Clear Zone - Minimum from edge of travel way (Applies to recovery slopes and fixed objects. Does not apply to frangible base structures.)</b>				
Mainline I-75	36 ft		FDOT Plans Preparation Manual, Page 2-81, Table 2.11.9	
Auxiliary Lane	24 ft			
<b>Lane Widths</b>				
Mainline I-75	12 ft		FDOT Plans Preparation Manual, Page 2-85, Table 2.14.1	
<i>Large Radii (≥ 500 feet)</i>				
One-Lane Ramp	15 ft		FDOT Plans Preparation Manual, Page 2-41, Table 2.1.2	
Two-Lane Ramp	24 ft			
<i>Small Radii (&lt; 500 ft)</i>				
One-Lane Ramp	15 ft – Case I-C		FDOT Plans Preparation Manual, Page 2-85, Table 2.14.1 2001 AASHTO, Pages 842 & 844, Exhibit 10-67	
Two-Lane Ramp	28 ft – Case III-C			
<b>Shoulder Width - Roadway</b>				
<i>Highway Type</i>	<i>Full Width</i>		<i>Paved Width</i>	
	<i>Outside</i>	<i>Inside</i>	<i>Outside</i>	<i>Inside</i>
Mainline I-75	12 ft	12 ft	10 ft	10 ft min. (3-lane roadway)
Auxiliary Lane (1-lane term.)	12 ft	N/A	10 ft	N/A
One-Lane Ramp	6 ft	6 ft	4 ft	2 ft min.
<i>Two Lane Ramp</i>				
Interstate	12 ft	8 ft	10 ft	4 ft
Non-interstate	10 ft	8 ft	8 ft	24ft

**Table 5-1  
Design Criteria**

<b>Design Element</b>	<b>Design Standard</b>		<b>Source(s)</b>
<b>Shoulder Width – Bridges</b>			
<i>Highway Type</i>	<i>Inside</i>	<i>Outside</i>	FDOT Plans Preparation Manual, Page 2-36, Figure 2.0.1
Mainline I-75, 4+ lanes	10 ft	10 ft	
Mainline I-75, 6+ lanes	10 ft	10 ft	
Auxiliary lanes	N/A	10 ft	
One-Lane Ramp	6 ft	6 ft	
Two-Lane Ramp	6 ft	10 ft	

## **6.0 TRAFFIC**

The technical traffic analysis data in this section are a summary of the data contained in the Traffic Technical Memorandum (I-75 Traffic Memo), Interstate 75, Hillsborough and Pasco Counties. The I-75 Traffic Memo summarizes the analyses of traffic operations focused on existing and future conditions using isolated and corridor-wide systems analysis techniques. The isolated traffic operations analysis, conducted using the Highway Capacity Manual (HCM) procedures utilizing the Highway Capacity Software (HCS), identified problem areas and identified improvement recommendations. Similarly, CORSIM, a system-wide simulation model developed by FHWA, was used to identify the problem areas and provide remedial solutions from the systems perspective.

Another traffic evaluation model called SYNCHRO (Version 5.0) was used to determine optimized signal timings for input to the CORSIM model for the opening and design years. The CORSIM models for existing conditions (2002), developed for the Fowler Avenue and CR 54 interchanges, were used to validate/calibrate future year CORSIM models to predict future traffic operating conditions and needed improvements along the I-75 mainlines, ramps, intersecting arterials, and ramp terminal intersections.

### **6.1 Existing Traffic Conditions**

The analysis of existing conditions (also known as the base condition) identified traffic operational deficiencies and needed improvements.

#### **6.1.1 Previous Traffic Studies**

The Fletcher Avenue and Bruce B. Downs Boulevard interchanges were studied as part of the Interchange Modification Report (IMR) for I-75 at CR 581 (Bruce B. Downs Boulevard). A summary of the traffic operations analysis results for these two interchanges has been incorporated from that report. Portions of the traffic operations analysis from the City of Tampa East-West Road PIMR were also incorporated.

#### **6.1.2 Existing Traffic Volumes and Characteristics**

The following traffic volume counts were conducted for this study.

Continuous 72-hour bi-directional vehicle classification counts were conducted using machine traffic counters at the following six locations:

- On northbound I-75 south of Fowler Avenue
- On southbound I-75 south of Fowler Avenue
- On northbound I-75 north of I-275
- On southbound I-75 north of I-275
- On northbound I-75 north of CR 54
- On southbound I-75 north of CR 54

Twenty-four hour machine traffic counts were conducted over a three-day period at the following six locations:

- On the off-ramp from southbound I-75 to Fowler Avenue
- On the on-ramp from Fowler Avenue to southbound I-75
- On the off-ramp from northbound I-75 to Fowler Avenue
- On the off-ramp from northbound I-75 to eastbound Fowler Avenue
- On the on-ramp from westbound Fowler Avenue to northbound I-75
- On the on-ramp from eastbound Fowler Avenue to northbound I-75

Manual vehicle turning movement counts were conducted in the morning (6:00 AM - 9:00 AM), noon (11:30 AM - 1:30 PM), and evening (3:00 PM - 6:00 PM) peak periods, in 15-minute increments. The counts included both automobiles and trucks, and were conducted on all approaches at the following intersections:

- I-75 southbound off-ramp/Fowler Avenue
- I-75 southbound off-ramp/CR 54
- I-75 northbound off-ramp/CR 54

The seasonal adjustment factor (1.01), and the axle adjustment factor (0.88) were obtained from the 2001 Florida Traffic Information CD-ROM. The seasonal adjustment factor was used to adjust the 24-hour and the manual turning movement counts to account for seasonal traffic fluctuations.

Traffic counts for this study were conducted in December 2001. However, traffic counts for the Bruce B. Downs Boulevard interchange (as referenced in the I-75/CR 581 IMR), were conducted in September 2002. The adjusted existing year 2002 Annual Average Daily Traffic (AADT), and AM and PM peak hour traffic volumes used in this study, are illustrated on Figure 6-1, Figure 6-2 and Figure 6-3, respectively. The traffic counts were conducted after the SR 56 interchange opened to the public.

## **6.2 Multimodal Transportation System Considerations**

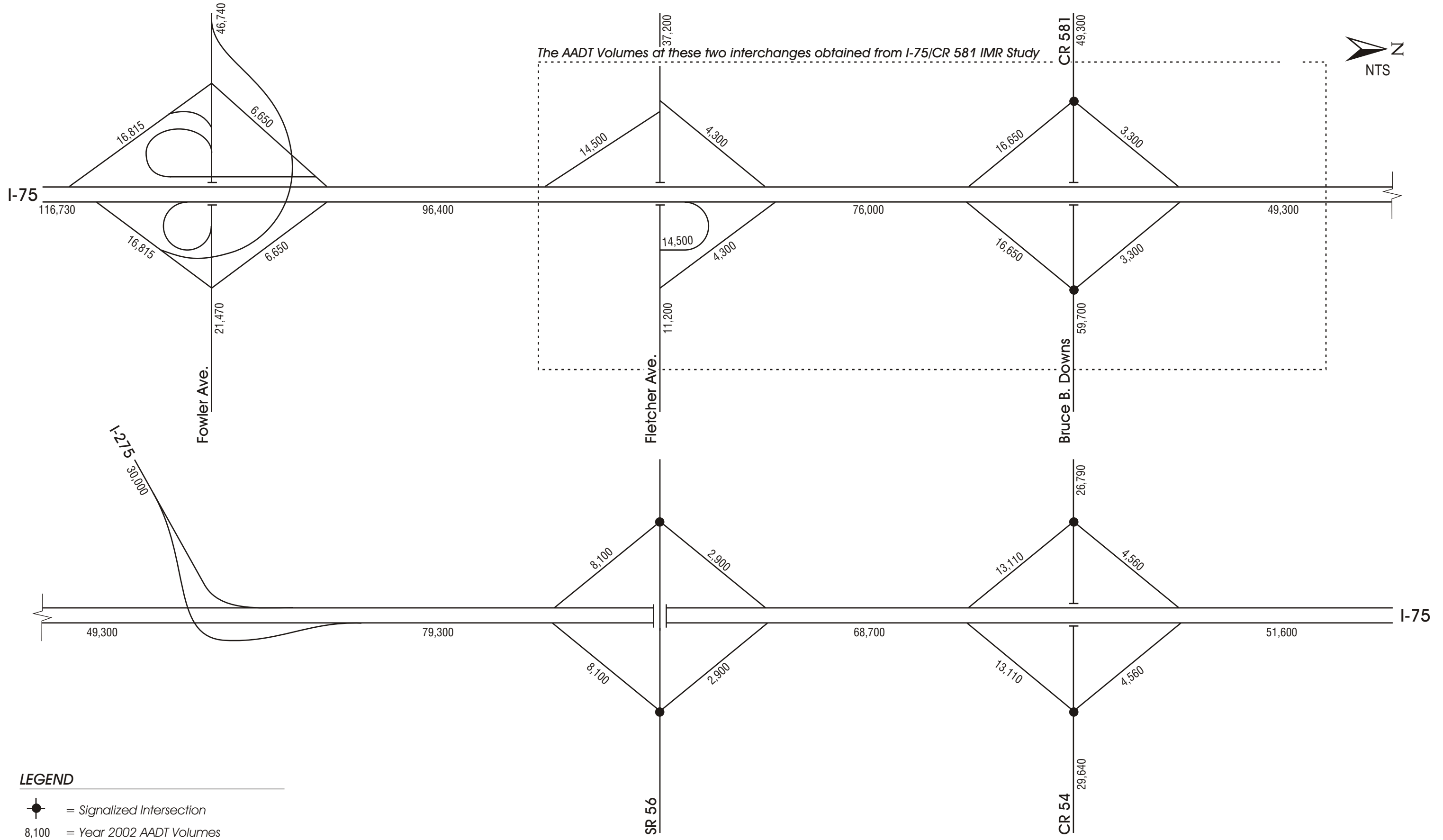
### **6.2.1 Bus Service**

The service area for the Hillsborough Area Regional Transit (HARTline) includes Hillsborough County and the cities of Tampa and Temple Terrace. Connections to the public transportation system are available from the Fowler Avenue, Fletcher Avenue and Bruce B. Downs Boulevard interchanges. HARTline does not operate any bus lines on I-75 within the project limits or on the cross streets in the vicinity of the project.


There is no direct connection from I-75 to the Pasco County public transportation system. Fixed-route transit buses operate throughout Pasco County, Dade City and Zephyrhills.

### **6.2.2 Railroad Crossings**

There are no railroad crossings within the study corridor.



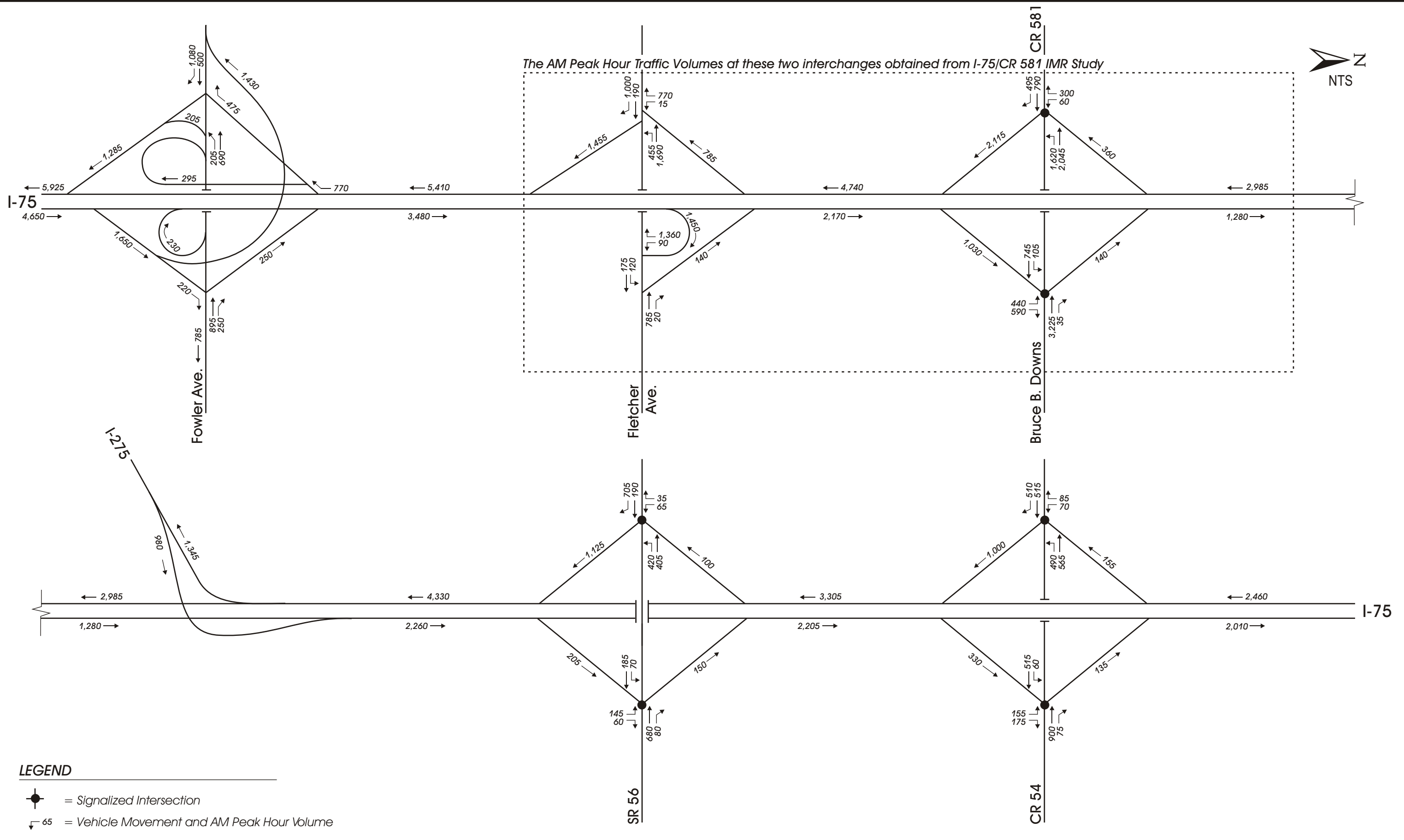
**LEGEND**

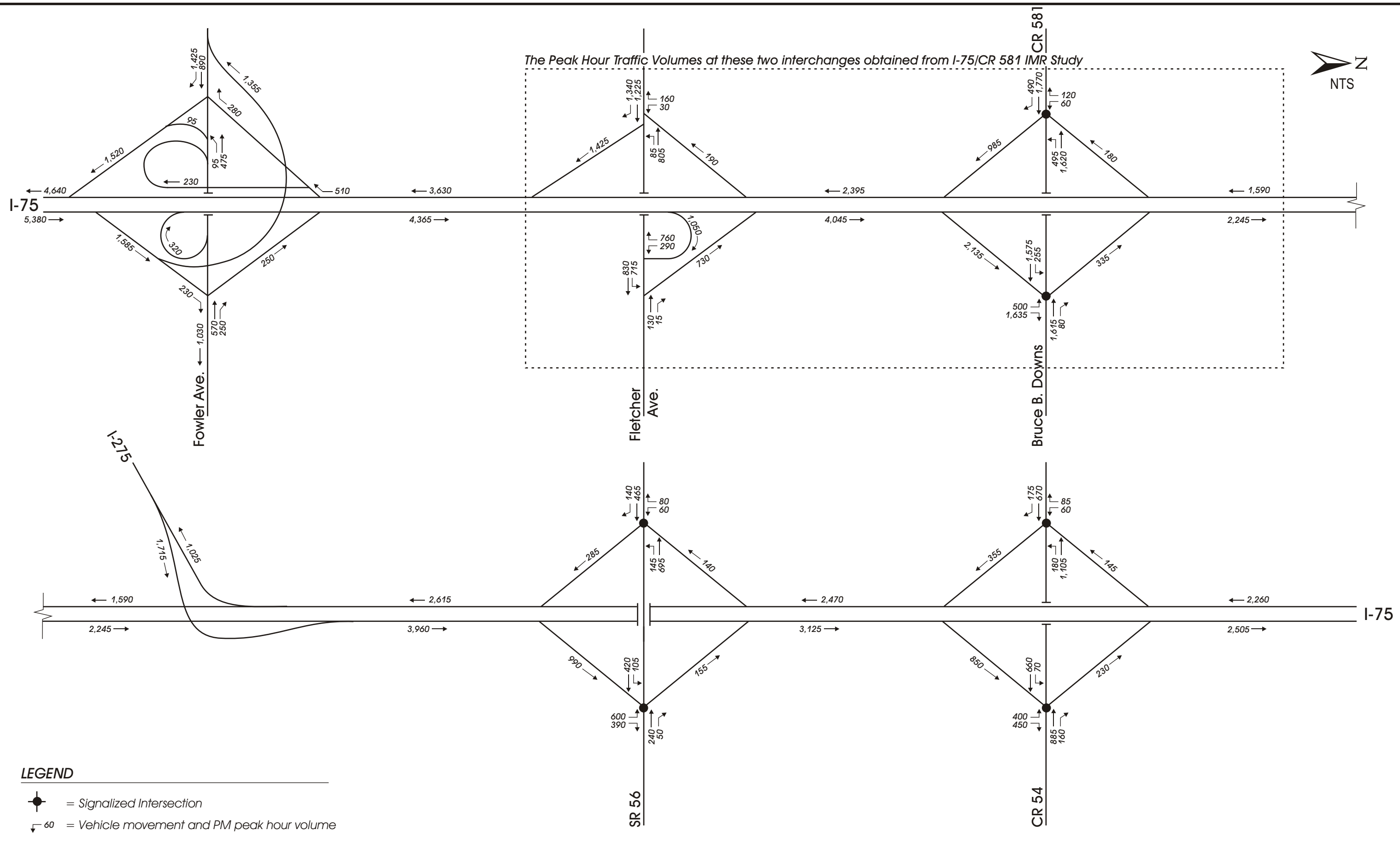
-  = Signalized Intersection
- 8,100 = Year 2002 AADT Volumes

**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
 Hillsborough and Pasco Counties  
 WPI Seg. No: 408459 1 / FAP No: 0751 105 1  
 WPI Seg. No: 258736 1 / FAP No: NH-75-1-(91)275

**YEAR 2002 ANNUAL AVERAGE DAILY TRAFFIC VOLUMES**

**Figure 6-1**





**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
 Hillsborough and Pasco Counties  
 WPI Seg. No: 408459 1 / FAP No: 0751 105 1  
 WPI Seg. No: 258736 1 / FAP No: NH-75-1-(91)275

**YEAR 2002 PM PEAK HOUR TRAFFIC VOLUMES**

**Figure 6-3**

### **6.2.3 Airports**

There are three airports within the vicinity of the project. Tampa International Airport is located approximately 15 miles southwest of the project corridor. Access to the airport from I-75 south is via I-275. The Tampa North Aero Park is located southwest of I-75 and CR 54, near the southbound I-75 rest area. Access to the park from I-75 north is via CR 54. The Zephyrhills Municipal Airport is located approximately 10 miles east of I-75 and CR 54. Access to the airport from I-75 north is via CR 54.

### **6.2.4 Park and Ride Facilities**

The Temple Terrace City Hall Park and Ride Lot is located at 113<sup>th</sup> Avenue, southwest of I-75 and Fowler Avenue.

## **6.3 Traffic Analysis Assumptions**

The  $K_{30}$  factor for I-75 (9.60%), the  $K_{30}$  factor for arterial roadways (9.20%), and the  $D_{30}$  factor for I-75 (55.10%), documented in the I-75/CR 581 IMR, were adopted for use in this study. The  $D_{30}$  factor for Fowler Avenue (53.52%) and CR 54 (57.10%) were obtained from the Year 2001 Florida Traffic Information CD-ROM. A  $D_{30}$  factor was not available for the newly opened interchange at SR 56. Therefore, the same  $D_{30}$  factor used for CR 54 was used for SR 56.

## **6.4 Traffic Volume Projections**

### **6.4.1 Annual Average Daily Traffic Volumes**

A spreadsheet showing the estimated future AADT volumes for I-75 was provided by the FDOT. These volumes were compared with the AADT volumes for the Bruce B. Downs Boulevard and Fletcher Avenue interchanges, documented in the I-75/CR 581 IMR. The AADT traffic volumes provided by the FDOT for this study were adjusted to achieve compatibility with the volumes documented in the I-75/CR 581 IMR. Figure 6-4 and Figure 6-5 illustrate the AADT volumes for the year 2008 (opening) and 2028 (design) respectively.

### **6.4.2 Design Hour Volumes**

To calculate the Design Hour volumes (DHV), the Directional Design Hour Volume DDHV was converted to turning movement volumes at the intersections within the study area. It was assumed that the percentage of traffic turning left, right or proceeding through at an intersection approach, will be approximately the same in the design year as the existing year (2002). The DHVs for the design year 2028 at the Fletcher Avenue and Bruce B. Downs Boulevard interchanges were obtained from the I-75/CR 581 IMR. The AM and PM DHVs for the opening year (2008) and the design year (2028) are illustrated in Figure 6-6 through Figure 6-9.



## **6.5 Level of Service**

### **6.5.1 Existing Level of Service**

#### **6.5.1.1 Fowler Avenue Interchange**

During the AM peak hour (7:00 AM - 8:00 AM), I-75 southbound, between the on-ramps from Fletcher Avenue to the off-ramp to Fowler Avenue, operates at LOS F. Due to the heavy on-ramp traffic from Fletcher Avenue to I-75, the ramp merge point operates at LOS F (confirmed by HCS analysis). A high number of lane changes (approximately 2,000 veh/hr) after merging is also a contributing factor for the failure of this section of the I-75 mainline. Southbound I-75, south of the Fowler Avenue off-ramp, also operates at LOS F due to heavy traffic volumes (4,500 veh/hr). The northbound I-75 mainline operates at LOS C.

The PM peak hour (4:45 PM - 5:45 PM) peak direction is the reverse of the AM peak hour, with the heavier traffic flow in the northbound direction. All the northbound I-75 mainline segments operate at LOS F except for the location downstream off the I-75 northbound entrance ramp which operates at LOS D. In the southbound direction, all five mainline segments are operating at LOS D or better during the PM peak hour in the year 2002. All the ramps to and from Fowler Avenue operate at LOS E or better (Along the Fowler Avenue arterial, traffic flow is at, or near, the posted speed limit with no congestion observed.).

#### **6.5.1.2 Fletcher Avenue Interchange**

In the AM peak hour the northbound on-ramp to I-75 from Fletcher Avenue operates at LOS B. The southbound off-ramp from I-75 to Fletcher Avenue operates at LOS F. North of the Fletcher Avenue interchange, the I-75 mainline operates at LOS C in the northbound direction and LOS F in the southbound direction.

In the PM peak hour the northbound on-ramp operates at LOS D and the southbound off-ramp operates at LOS C. North of the Fletcher Avenue interchange, the northbound mainline operates at LOS E and the southbound mainline operates at LOS C.

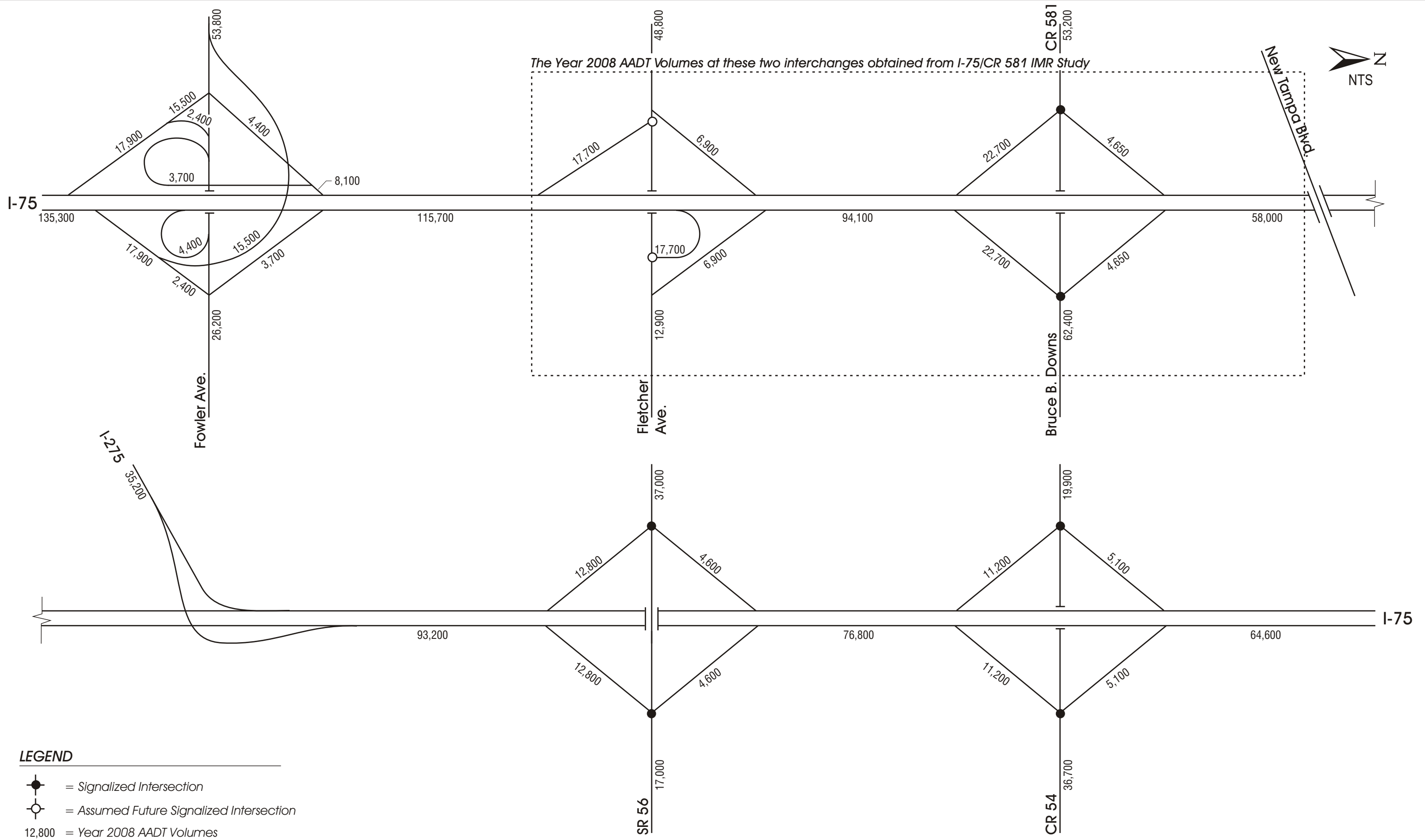
#### **6.5.1.3 Bruce B. Downs Boulevard Interchange**

In the AM peak hour, the northbound off-ramp to Bruce B. Downs Boulevard operates at LOS A. The northbound on-ramp to I-75 operates at LOS B. The southbound off-ramp from I-75 to Bruce B. Downs Boulevard operates at LOS D. The southbound on-ramp to I-75 from Bruce B. Downs Boulevard operates at LOS F.

In the PM peak hour, the northbound off-ramp to Bruce B. Downs Boulevard operates at LOS C. The northbound on-ramp to I-75 operates at LOS B. The southbound off-ramp from I-75 to Bruce B. Downs Boulevard operates at LOS B. The southbound on-ramp to I-75 from Bruce B. Downs Boulevard operates at LOS B.

#### **6.5.1.4 SR 56 Interchange**

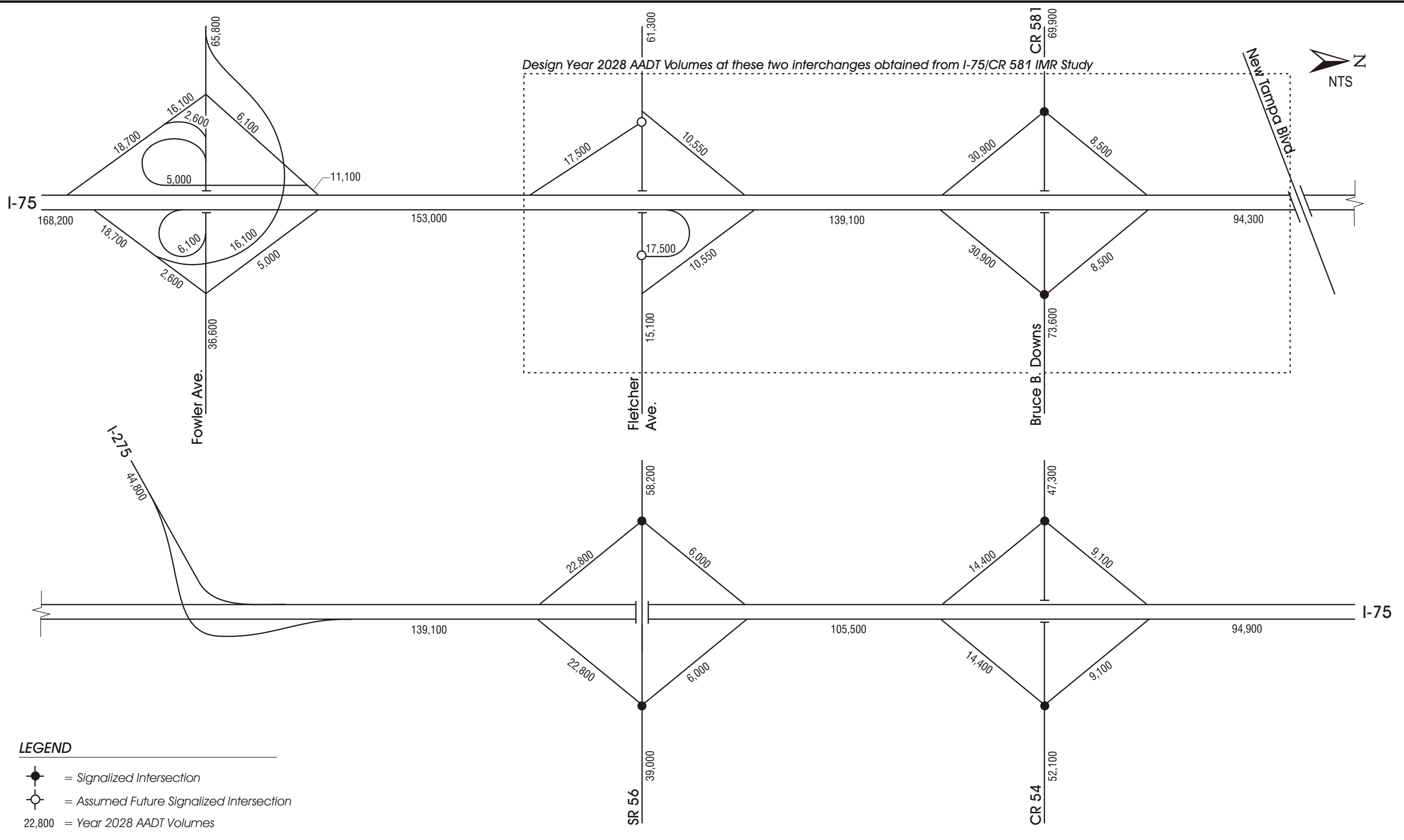
In the AM peak hour, the northbound off-ramp to SR 56 operates at LOS A. The northbound on-ramp to I-75 operates at LOS B. The southbound off-ramp from I-75 to SR 56 operates at LOS D. The capacity of the southbound on-ramp to I-75 from SR 56 exceeds demand.



**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
 Hillsborough and Pasco Counties  
 WPI Seg. No: 408459 1 / FAP No: 0751 105 1  
 WPI Seg. No: 258736 1 / FAP No: NH-75-1-(91)275

**OPENING YEAR (2008) ANNUAL AVERAGE DAILY TRAFFIC VOLUMES**

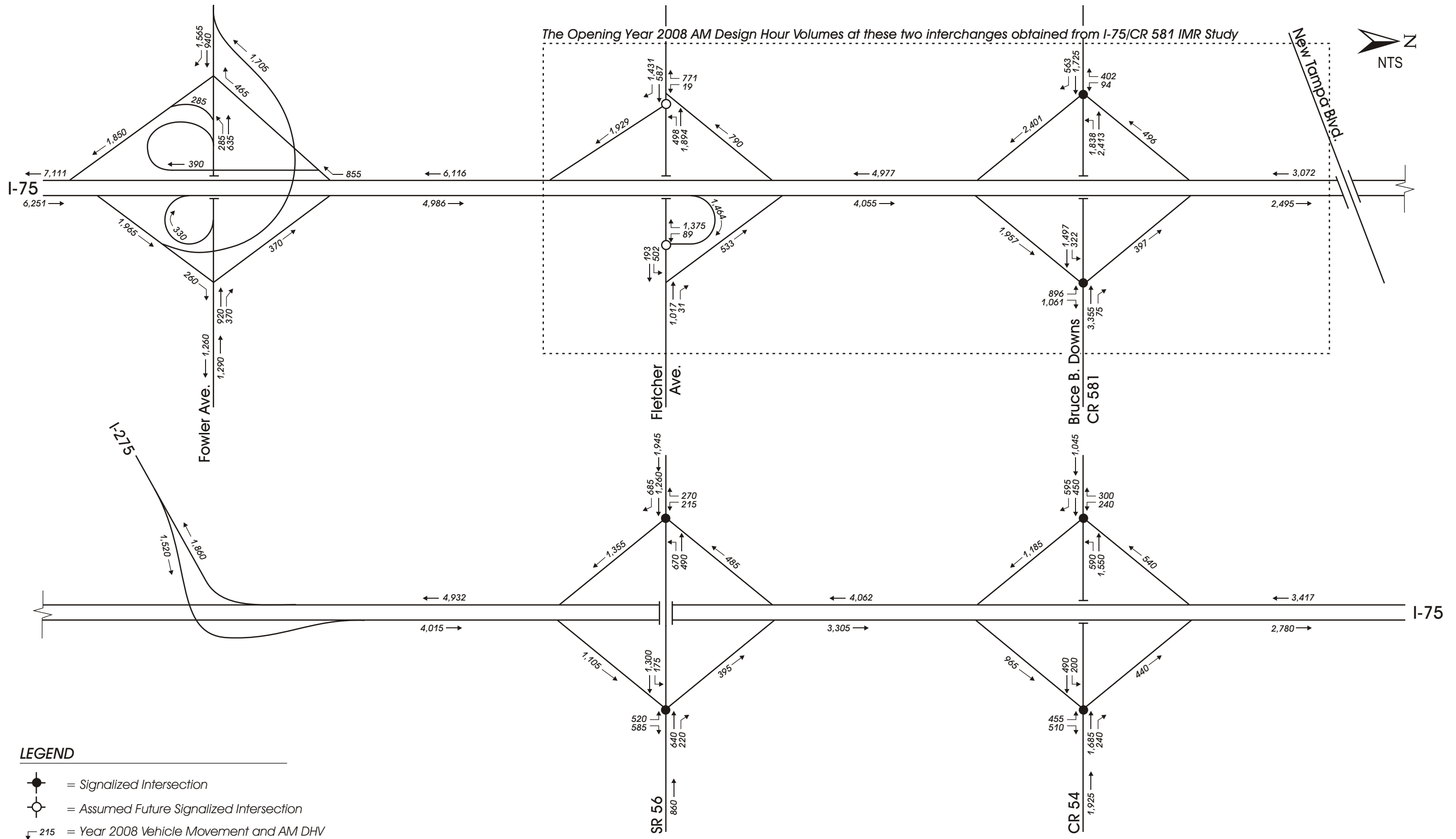
**Figure 6-4**

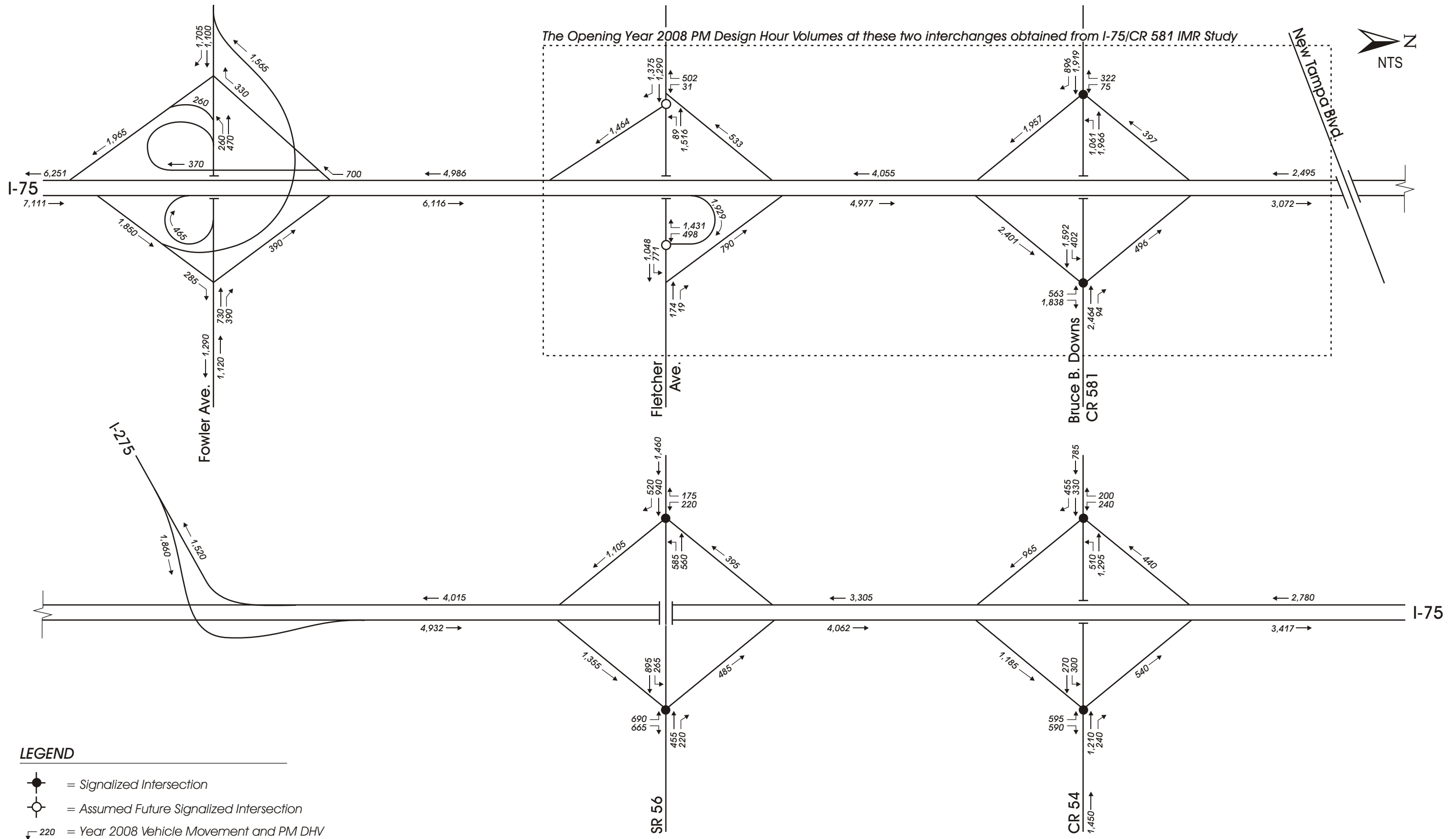


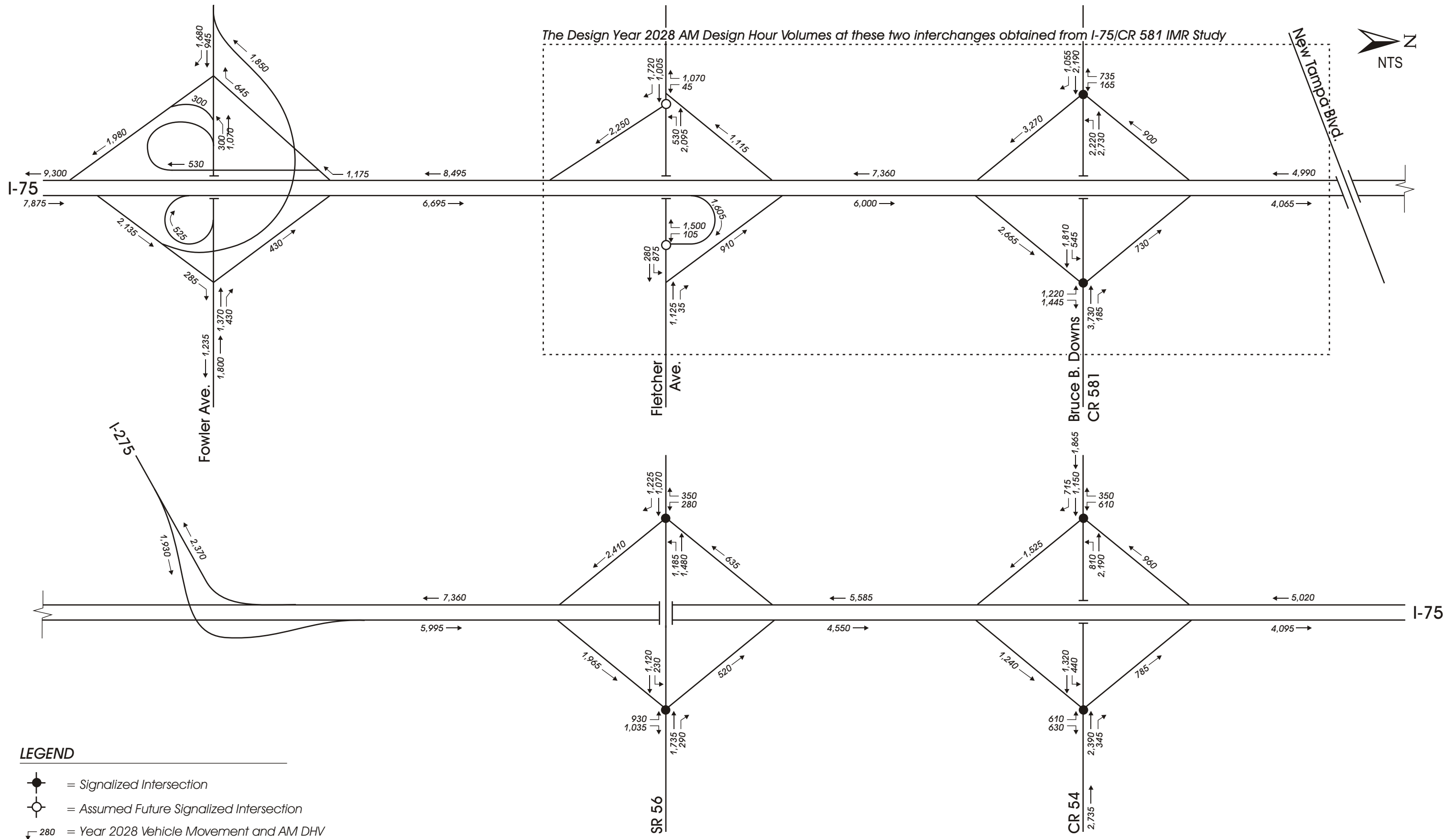
**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
 Hillsborough and Pasco Counties  
 WPI Seg. No: 408459 1 / FAP No: 0751 105 1  
 WPI Seg. No: 258736 1 / FAP No: NH-75-1-(91)275

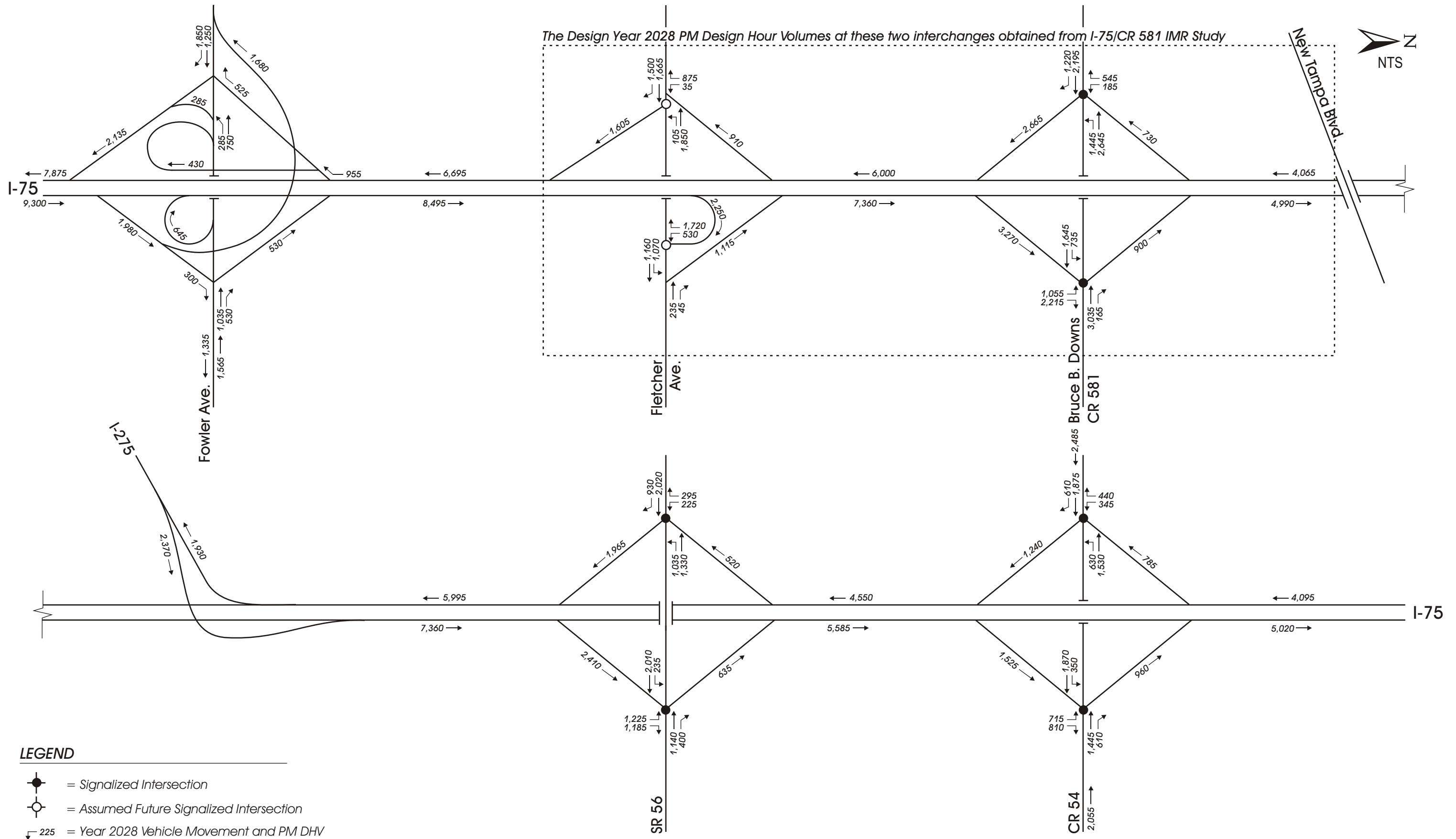
**DESIGN YEAR (2028) ANNUAL AVERAGE DAILY TRAFFIC VOLUMES**

**Figure 6-5**









In the PM peak hour, the northbound off-ramp to SR 56 operates at LOS B. The northbound on-ramp to I-75 operates at LOS B. The southbound off-ramp from I-75 to SR 56 operates at LOS C. The capacity of the southbound on-ramp to I-75 from SR 56 exceeds demand.

#### 6.5.1.5 CR 54 Interchange

During the AM peak hour (7:00 AM - 8:00 AM) the I-75 mainline operates at LOS F or LOS E in the southbound direction, and operates at LOS C or better in the northbound direction. During the PM peak hour (4:00 PM - 5:00 PM), the I-75 mainline operates at LOS E or better in both directions. During the AM peak hour, the northbound on- and off-ramps operate at LOS A. The on-ramp to southbound I-75 from CR 54 operates at LOS F due to high on-ramp traffic volumes (2,045 vph). The ramp starts with two lanes at CR 54 but tapers to one lane as it approaches I-75. This results in congestion on the ramp, and due to heavy traffic volumes on the southbound I-75 mainline, on the ramp merge also. During the PM peak hour, the northbound off ramp to CR 54 operates at LOS D and the northbound on ramp from CR 54 operates at LOS A. The southbound off ramp to CR 54 operates at LOS A and the southbound on ramp from CR 54 operates at LOS B during the PM peak hour.

The left turning traffic originating from the east and west on CR 54, and destined to the I-75 southbound and I-75 northbound on-ramps, respectively, are barrier separated from the CR 54 eastbound and westbound through traffic to prevent lane changes within the interchange. The CORSIM results for the southbound left-turning traffic at the west intersection indicates that this movement operates at LOS E.

### 6.5.2 Future Level of Service

The HCS model was used to evaluate both No-Build and Build conditions using an isolated analysis approach and CORSIM models were used to provide a system-wide analysis for the Build condition. The future level of service for the existing condition and build alternative were compared to the FHWA's requirement to provide LOS D for interstate facilities.

#### 6.5.2.1 No-Build Alternative

With the existing roadway geometry, most freeway segments and ramps within the study area are expected to operate at LOS E or worse in the design year (2028) as illustrated on Figure 6-10.

#### 6.5.2.2 Build Alternative

Traffic analyses were conducted for the design year (2028) traffic volumes using the recommended Build Alternative roadway geometry and the HCS 2000 and CORSIM analysis procedures. The recommended improvements are expected to provide LOS D or better within the study area, except for the segment between Fowler and Fletcher Avenues.

Additional lanes would be required on the mainline to provide for LOS D. See Figure 6-11 for the project LOS for the Build Alternative.



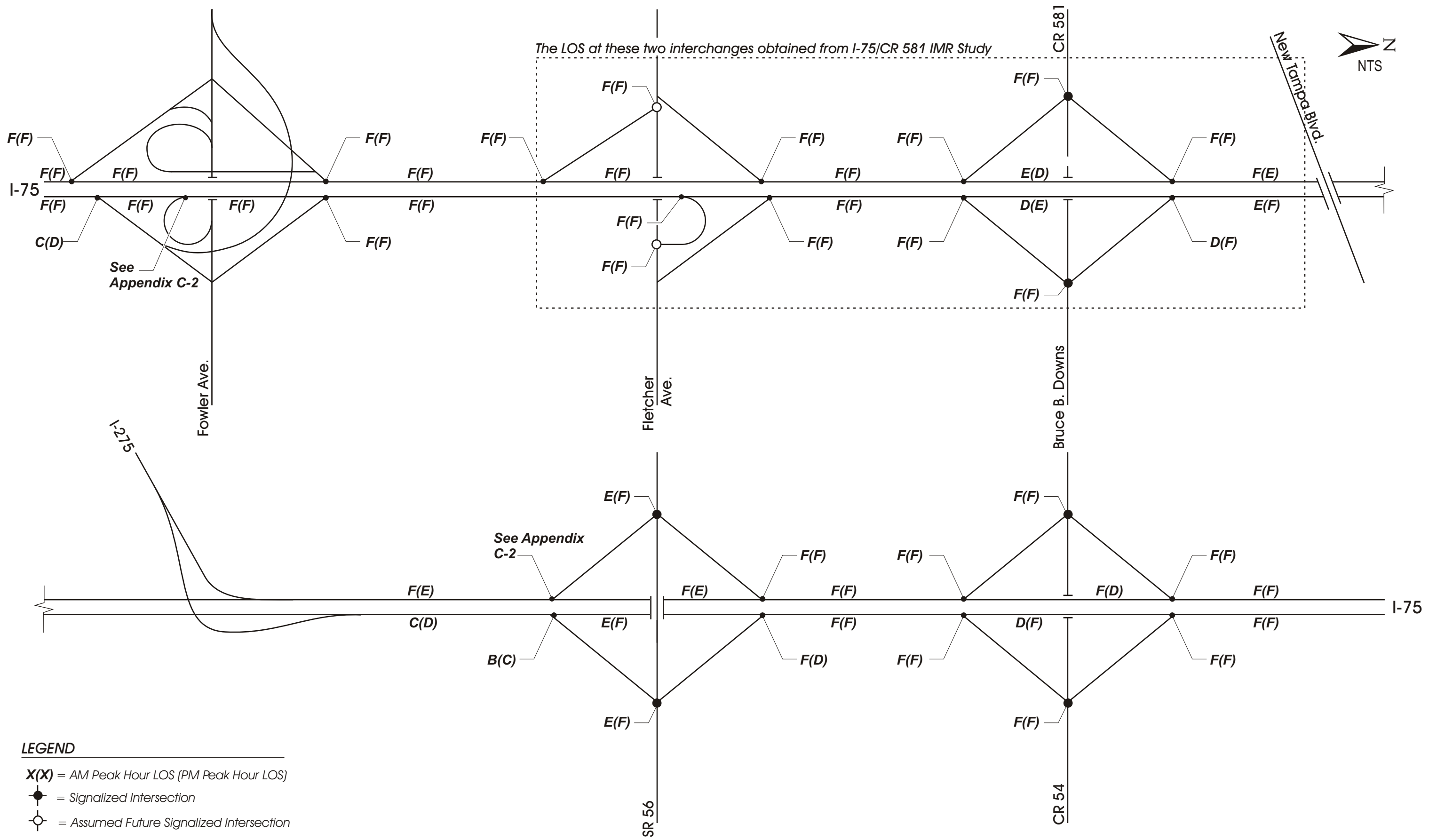
## 6.6 Recommended Improvements

Based on the results of the traffic operations analyses, it is recommended that the design year (2028) Build Alternative, listed in Table 6-1 and illustrated on Figure 6-12 be approved for final design.

**Table 6-1  
Recommended Improvements**

Segment	Recommended Improvement
<b>A</b> Fowler Avenue to Fletcher Avenue	Six lanes with two auxiliary lanes (three through and one auxiliary lane in each direction) and a merge/diverge lane between the on- and off-ramps for each direction of travel.
<b>B&amp;C</b> Fletcher Avenue to Bruce B. Downs Boulevard.	Six lanes with two auxiliary lanes (three through and one auxiliary lane in each direction)
<b>D</b> Bruce B. Downs Boulevard to South of I-275 Apex	Six lanes (three through lanes in each direction)
<b>E</b> South of I-275 Apex to south of SR 56	Six lanes with four auxiliary lanes (three through and two auxiliary lanes in each direction)
<b>F</b> South of SR 56 to CR 54	Six lanes with two auxiliary lanes (three through and one auxiliary lane in each direction). (Reevaluation Study Limits)

During this PD&E Study, alternatives were developed and evaluated for the I-275 Apex area (Segment E) that would reduce or eliminate weaving movements in the northbound direction. As a result, the recommendations listed here differ in Segment E from those recommended as the Preferred Alternative. For the Preferred Alternative, the Segment E typical section would consist of six through lanes with four auxiliary lanes (three through lanes in each direction with one northbound auxiliary lane and three southbound auxiliary lanes). A two-lane off-ramp from I-75 and I-275 would run parallel to the I-75 mainline to SR 56.



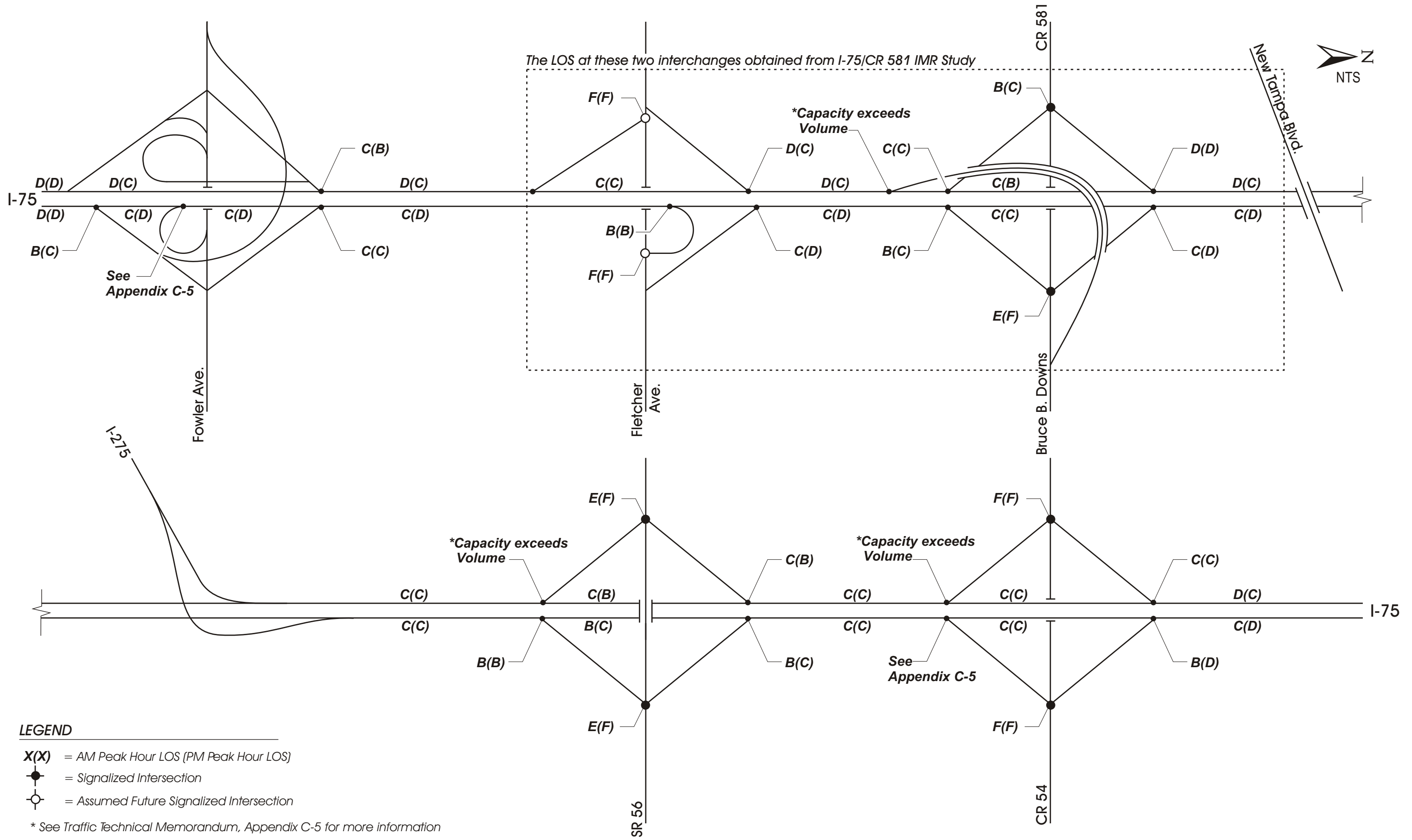
**LEGEND**

- X(X)** = AM Peak Hour LOS (PM Peak Hour LOS)
- = Signalized Intersection
- = Assumed Future Signalized Intersection

**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
 Hillsborough and Pasco Counties  
 WPI Seg. No: 408459 1 / FAP No: 0751 105 1  
 WPI Seg. No: 258736 1 / FAP No: NH-75-1-(91)275

**YEAR 2028 NO-BUILD LEVEL OF SERVICE**

**Figure 6-10**



**LEGEND**

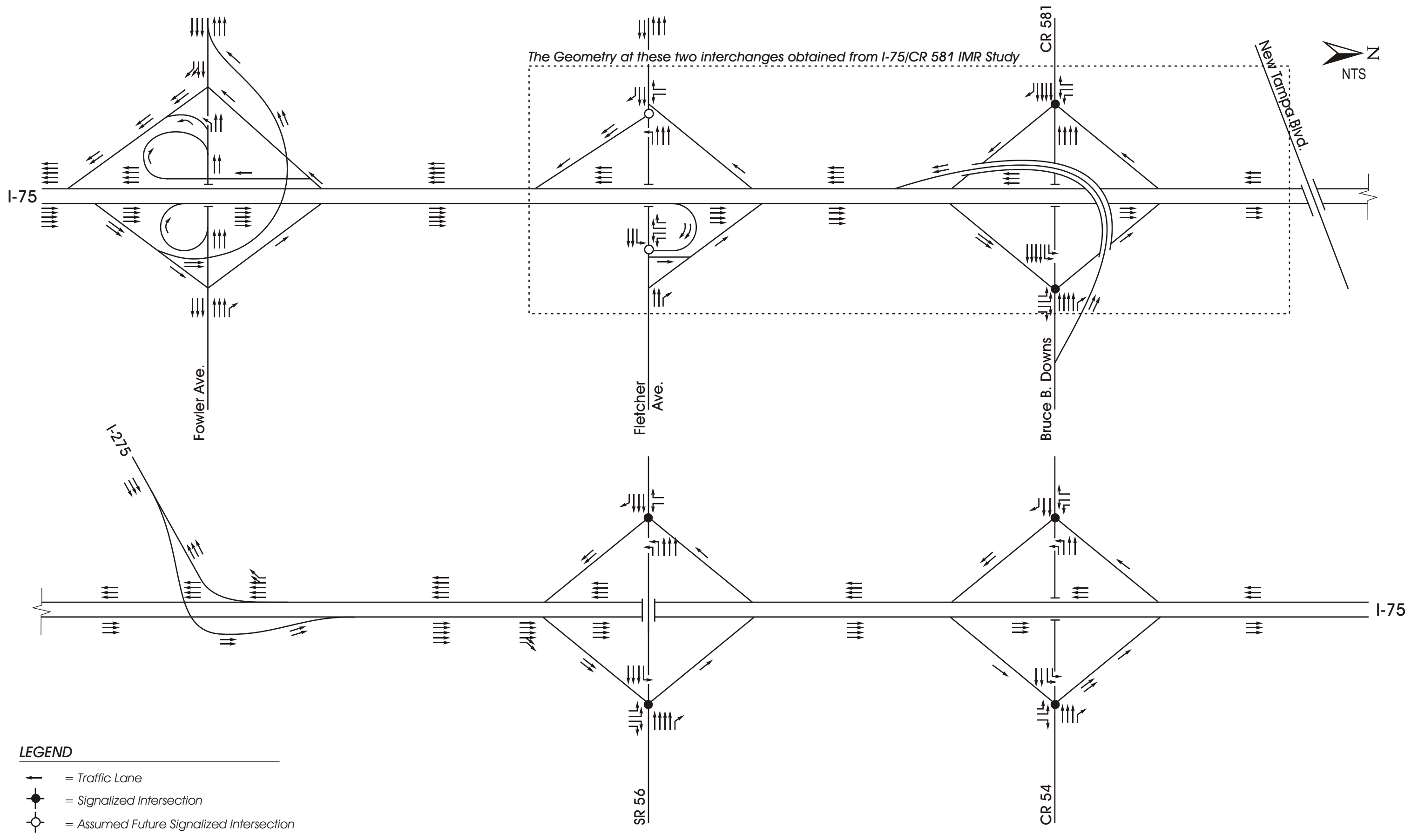
- X(X)** = AM Peak Hour LOS (PM Peak Hour LOS)
- = Signalized Intersection
- = Assumed Future Signalized Intersection

\* See Traffic Technical Memorandum, Appendix C-5 for more information

**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
 Hillsborough and Pasco Counties  
 WPI Seg. No: 408459 1 / FAP No: 0751 105 1  
 WPI Seg. No: 258736 1 / FAP No: NH-75-1-(91)275

**YEAR 2028 BUILD LEVEL OF SERVICE**

**Figure  
6-11**



**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
 Hillsborough and Pasco Counties  
 WPI Seg. No: 408459 1 / FAP No: 0751 105 1  
 WPI Seg. No: 258736 1 / FAP No: NH-75-1-(91)275

**YEAR (2028) BUILD ROADWAY GEOMETRY**

**Figure  
6-12**

## **7.0 CORRIDOR ANALYSIS**

The corridor analysis for the I-75 project was limited to the existing corridor. It was determined that relocation of I-75 to an alternate corridor is not a viable option for this project. Improvements to I-75 along its existing location are an integral part of the LRTPs for Hillsborough and Pasco Counties.

## **8.0 ALTERNATIVE ANALYSIS**

The analysis described in this section follows the project development process by examining the various alternatives considered (No-Build, Multimodal, Transportation System Management, and Construction) for this project. This section describes the analysis for each alternative and the reasons why they were rejected or accepted for further evaluation.

### **8.1 No-Build Alternative**

The No-Build Alternative leaves the I-75 corridor in its current condition while allowing for routine maintenance. There are advantages and disadvantages associated with the No-Build Alternative. Based on the considerations listed below, the proposed action has been developed as a design alternative. The No-Build Alternative has remained a viable alternative throughout the study process.

#### **8.1.1 Advantages**

The advantages of the No-Build Alternative are:

- No inconvenience to traffic flow due to construction operations.
- No expenditure of funds for right-of-way acquisition, engineering design or construction, except for routine maintenance.
- No direct effects to the adjacent natural and human environment.

#### **8.1.2 Disadvantages**

The disadvantages of the No-Build Alternative are:

- Increased traffic demand that would result in an unacceptable level of service.
- Increased road user costs and crash potential.
- Decrease in air quality.
- A continued rise in maintenance costs due to deterioration of the roadway.
- No improvement in emergency service response time or in the highway's use as a critical emergency evacuation route.

## **8.2 Multimodal Alternatives**

The Multimodal Alternative utilizes public transportation or alternative transportation modes to substitute for the public use of personal motor vehicles. As discussed below, the Multimodal Alternative to the proposed improvements to the I-75 corridor was eliminated from further consideration because these systems do not provide the additional capacity needed to accommodate anticipated traffic projections, nor do they improve traffic circulation or safety conditions.

### **8.2.1 Rail Service**

Tampa Union Station is located approximately 12 miles southwest of the project corridor. This type of rail service primarily provides transportation opportunities for interregional travel. The I-75 project corridor is used by both interregional and local traffic. However, the majority of north-south interregional traffic in this area is accommodated on I-75. Therefore, the rail alternative was rejected as a transportation alternative to the proposed improvements to the I-75 corridor. However, the proposed improvements will preserve the necessary median width that could be utilized for a rail corridor if needed in the future.

### **8.2.2 Bus Service**

The service area for the HARTline includes Hillsborough County and the cities of Tampa and Temple Terrace. Connections to the public transportation system are available from the Fowler Avenue, Fletcher Avenue and Bruce B. Downs Boulevard interchanges.

There is no direct connection from I-75 to the Pasco County public transportation system. Fixed-route transit buses operate throughout Pasco County, Dade City and Zephyrhills.

Currently, bus service in the Tampa area does not draw a significant number of vehicle trips from the I-75 corridor and there are no current plans to increase bus service to the area. Therefore, the bus alternative was rejected as a transportation alternative to the proposed improvements to the I-75 corridor.

### **8.2.3 Airports**

Tampa International Airport is located approximately 15 miles southwest of the project corridor. The Zephyrhills Municipal Airport is located approximately 10 miles east of I-75 and CR 54. Access to the Zephyrhills airport from I-75 north is via CR 54. The Tampa North Aero Park is located west of I-75, near the southbound I-75 rest area. Air travelers to and from Hillsborough and Pasco Counties areas must use surface transportation to access the airports. The airport alternative was rejected as a transportation alternative to the proposed improvements to the I-75 corridor.

### **8.2.4 Pedestrian and Bicycle Service**

I-75 is a limited access interstate facility on which bicycle and pedestrian traffic is prohibited. Therefore, consideration for providing this type of service is not relevant.

## **8.3 Transportation Systems Management Alternative**

Transportation Systems Management (TSM) activities such as interchange ramp improvements, separate turn lanes, ramp terminal traffic signal timing optimization, improvements to signing, and marking and roadway lighting would improve traffic safety. TSM improvements can also provide additional storage on-ramps to avoid congestion on the mainline. TSM activities may improve traffic flow, but do not address the system's capacity needs for through traffic on the mainline. Therefore, the TSM Alternative was eliminated from further consideration as an alternative to additional lanes on the mainline of I-75.

## 8.4 Construction Alternatives

The study alternatives considered for the I-75 project were construction alternatives because the No-Build, Multimodal and TSM Alternatives do not meet the future transportation needs of the region. Without improvements to I-75, traffic congestion will increase as the level of service falls to an unacceptable level, and emergency response times and social services transport eventually deteriorate.

### 8.4.1 Typical Sections

#### 8.4.1.1 Segment A - Fowler Avenue to Fletcher Avenue

##### Roadway

The existing roadway geometry is in transition from south of Fowler Avenue to Fletcher Avenue. Generally speaking, improvements would include adding one travel lane and one auxiliary lane in each direction of travel. A minimum 64-foot median would be provided. The transitions would minimize effects to existing ramps, preserve the 64-foot median, and set the alignment to avoid effects to the large sinkhole situated in the center of the median north of Fowler Avenue. In this segment, I-75 would have six 12-foot travel lanes (three in each direction), two 12-foot auxiliary lanes (one in each direction), one merge/diverge ramp lane for the on- and off-ramp (in each direction), and 12-foot inside and outside shoulders (10 feet paved). No graphical typical section figure is provided for the I-75 mainline in Segment A because there is no continuous typical section in the segment.

##### Bridges

I-75 Over Fowler Avenue and Ramp A-1 - The existing I-75 southbound and northbound bridges over Fowler Avenue (Bridge Nos. 100403 and 100404, respectively) and Ramp A-1 (Bridge Nos. 100407 and 100408, respectively) would be widened. The southbound bridges would be widened on both sides, while the northbound bridges would be widened on the inside. The existing bridges are on a curved alignment with a superelevation of 2.9 percent. Widening on the high side would allow the widened portion to utilize the same AASHTO beam types as the existing bridges. However, widening on the low side would require a shallower superstructure than the existing bridge to avoid encroaching on the existing minimum vertical clearance. There are several existing buried telephone lines and an underground 14-inch gas line in the vicinity of the piers for the bridges over Fowler Avenue. These utilities may need to be relocated during construction.

The proposed bridge typical section at I-75 over Fowler Avenue and Ramp A-1 is shown in Figure 8-1.



Ramp A-1 Over Fowler Avenue - The existing Ramp A-1 bridge over Fowler Avenue (Bridge No. 100406) would be widened to the outside to accommodate the two-lane proposed typical section. The existing bridge is on a curved alignment with a superelevation of 8.8 percent. Widening would be on the high side allowing the widened portion to utilize the same AASHTO beam types as the existing bridge. There are several existing buried telephone lines and an underground 14-inch gas line in the vicinity of the piers for the bridge over Fowler Avenue. These utilities may need to be relocated during construction.

The proposed bridge typical section for I-75 Ramp A-1 over Fowler Avenue is shown in Figure 8-1.

I-75 Over Cowhouse Creek - The existing I-75 southbound and northbound bridges over Cowhouse Creek (Bridge Nos. 100481 and 100482, respectively) would be widened on both sides. The existing southbound bridge is on a tangent alignment with a cross slope of 2.0 percent and the northbound bridge is on a curved alignment with a superelevation of 2.9 percent. The existing excess vertical clearance would allow the widened portions to utilize the same AASHTO beam types as the existing bridges.

The proposed bridge typical section at I-75 over Cowhouse Creek is shown in Figure 8-2.

I-75 Over 127<sup>th</sup> Avenue - The existing I-75 southbound and northbound bridges over 127<sup>th</sup> Avenue (Bridge Nos. 100400 and 100401, respectively) would be widened. The northbound bridge would need to be widened on both sides, while the southbound bridges would only need to be widened on the inside. The existing bridges are on a tangent alignment with a normal crown (2 percent cross slope). Widening on the high side allows the widened portion to utilize the same AASHTO beam types as the existing bridges. However, widening on the low side would require a shallower superstructure than the existing bridge to avoid encroaching on the existing minimum vertical clearance

The proposed bridge typical section at I-75 over 127<sup>th</sup> Avenue is shown in Figure 8-2.

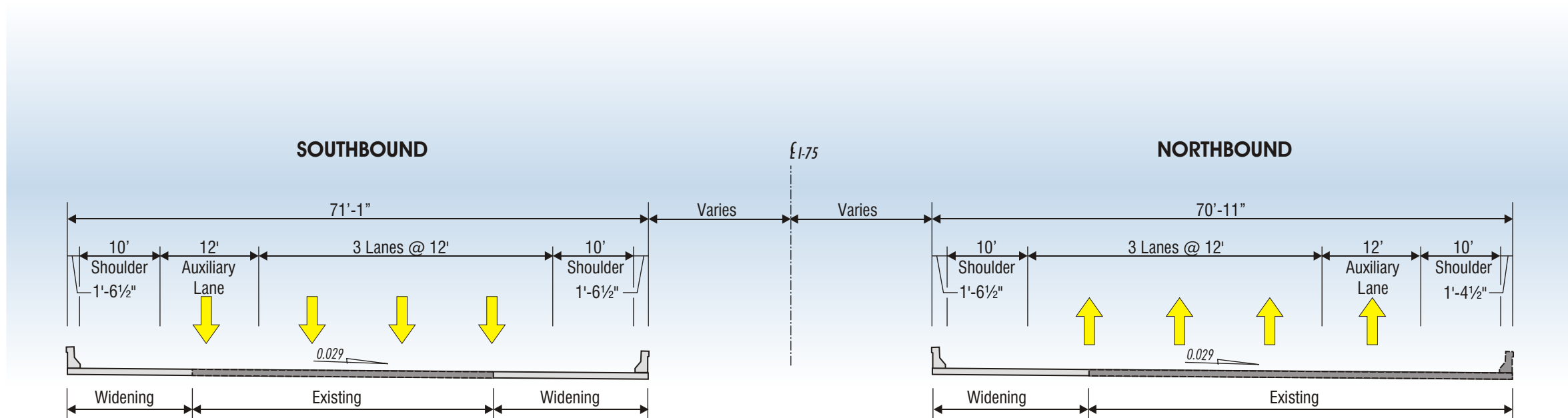
#### 8.4.1.2 Segment B – Fletcher Avenue to 3,000 Feet North of the Hillsborough River

##### Roadway

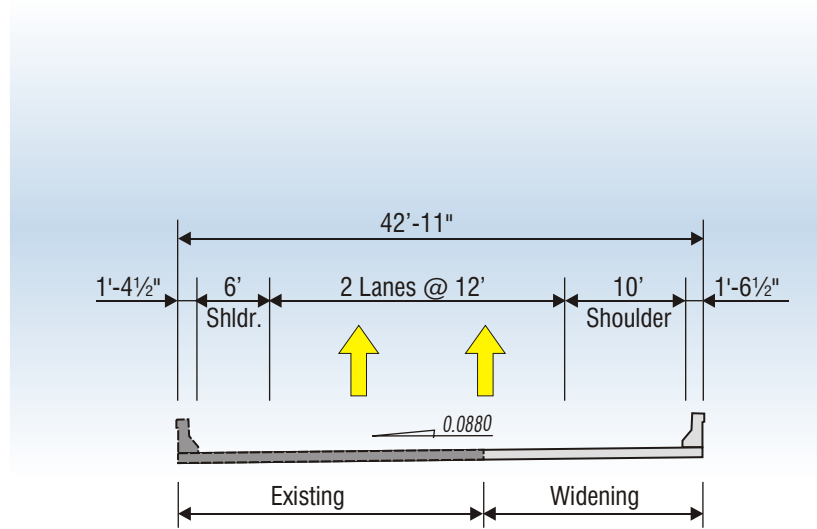
In this segment, two typical sections would be used. Both typical sections would add an additional through lane and an auxiliary lane in each direction.

From Fletcher Avenue to just south of the Hillsborough River, the widening would be to the outside to avoid effects to the sinkhole located north of Fowler Avenue. The facility in this segment would include three through lanes and an auxiliary lane in each direction of travel. The median width varies with a minimum width of 88 feet.



From south of the Hillsborough River to 3,000 feet north of the Hillsborough River, the through lane would be constructed to the inside and the auxiliary lane to the outside of the existing lanes. The median would be a minimum of 64 feet wide. In Segment B, I-75 would have six 12-foot travel lanes (three in each direction), two 12-foot auxiliary lanes (one in each direction) and 12-foot inside and outside shoulders (10 feet paved). The proposed typical sections for Segment B are shown in Figure 8-3 and Figure 8-4.

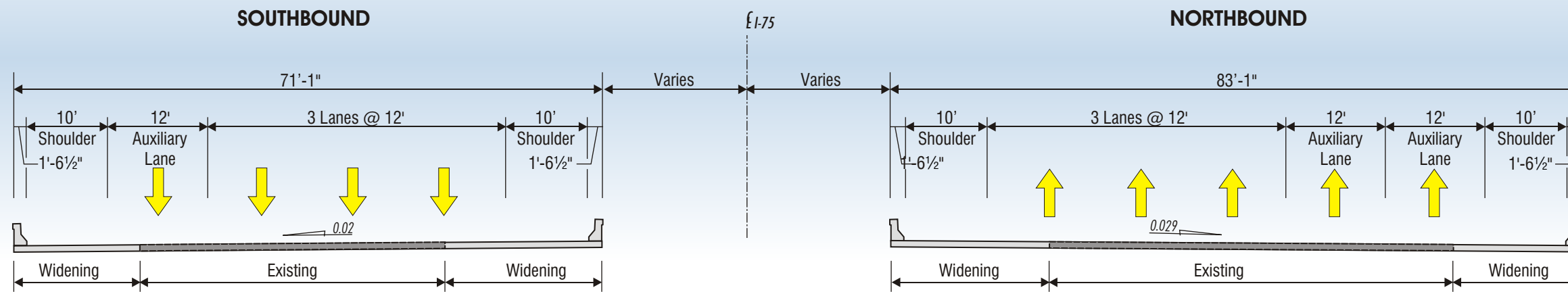


PROPOSED BRIDGE TYPICAL SECTION AT I-75 OVER FOWLER AVENUE AND RAMP A-1

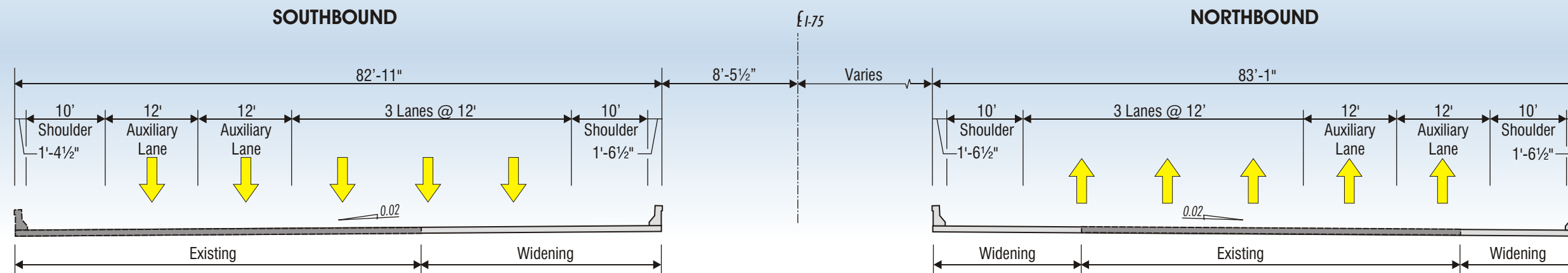


PROPOSED BRIDGE TYPICAL SECTION AT RAMP A-1 OVER FOWLER AVENUE

**LEGEND**  
 Existing Bridge  
 New Construction

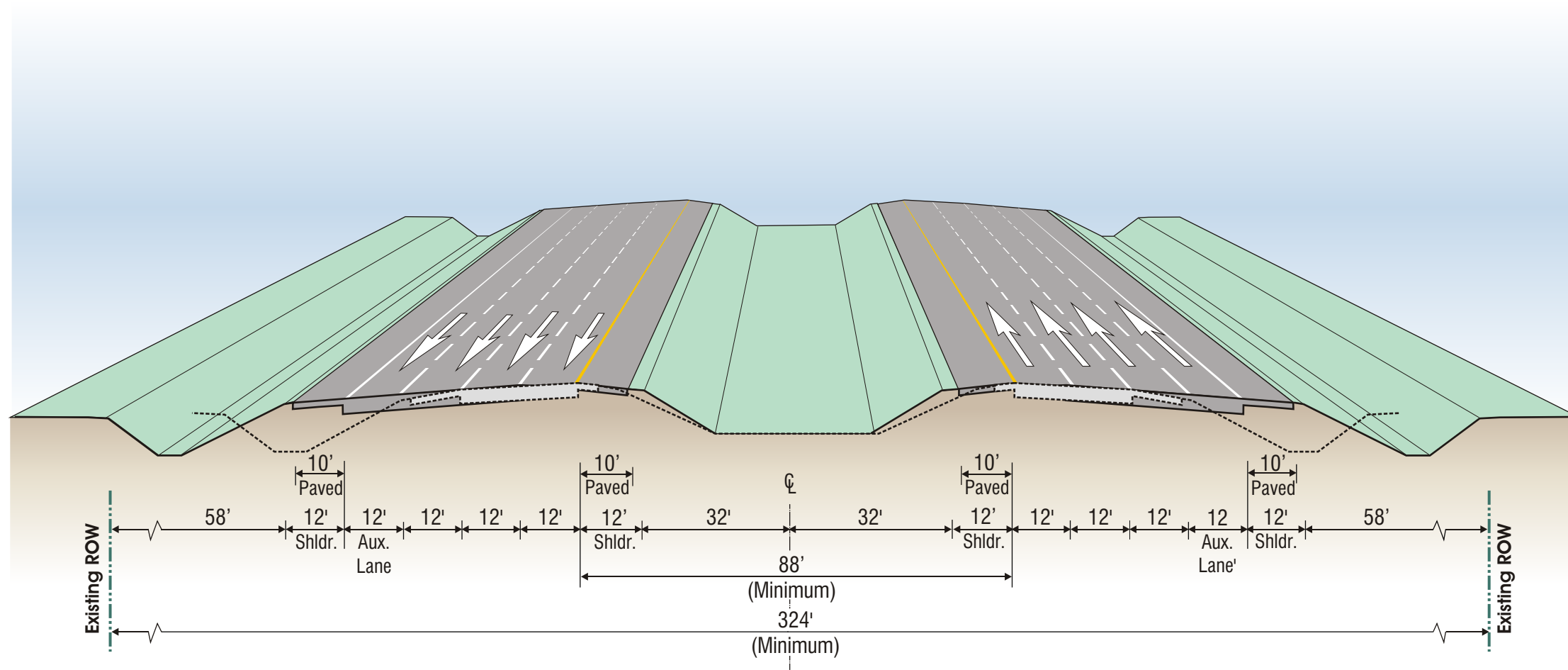


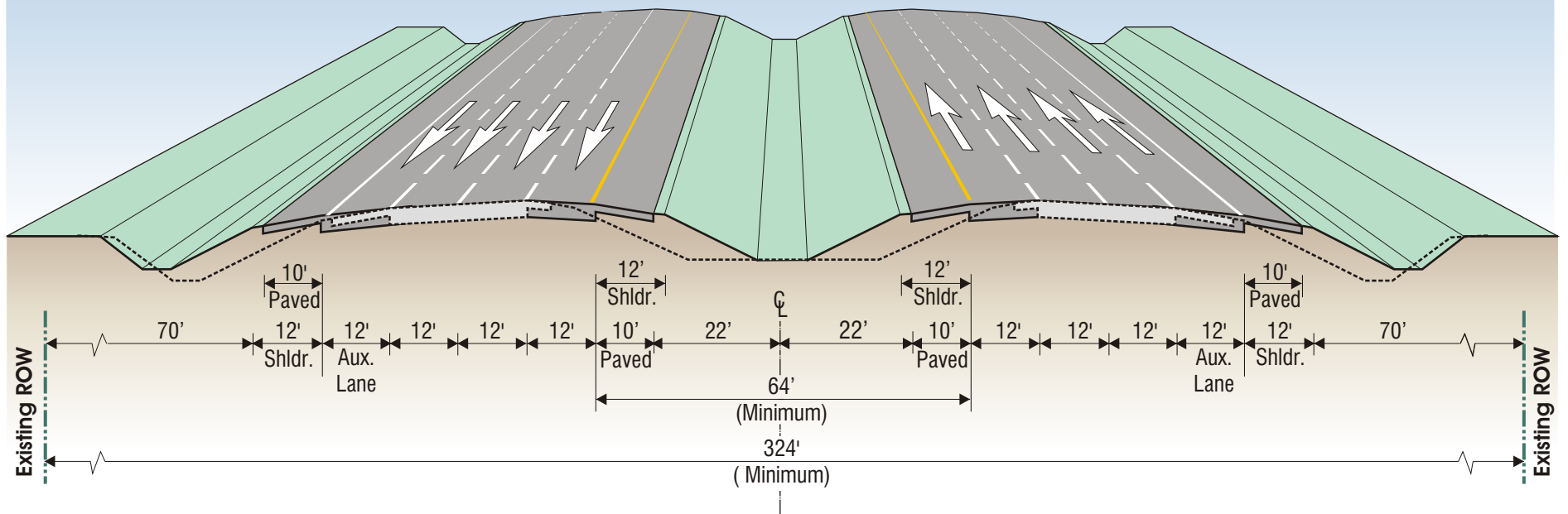
PROPOSED BRIDGE TYPICAL SECTION AT I-75 OVER COWHOUSE CREEK



PROPOSED BRIDGE TYPICAL SECTION AT I-75 OVER 127TH AVENUE

**LEGEND**  
  
 Existing Bridge  
 New Construction





**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
 Hillsborough and Pasco Counties  
 WPI Seg. No: 408459 1 / FAP No: 0751 105 1  
 WPI Seg. No: 258736 1 / FAP No: NH-75-1-(91)275

**PROPOSED SIX-LANE TYPICAL SECTION WITH AUXILIARY LANES -  
 NORTH PORTION OF SEGMENT B & C  
 FROM 3000' NORTH OF THE HILLSBOROUGH RIVER TO BRUCE B. DOWNS BOULEVARD  
 Six General Purpose Lanes with Two Auxiliary Lanes**

Figure  
**8-4**

## Bridges

I-75 Over Fletcher Avenue - The existing I-75 southbound and northbound bridges over Fletcher Avenue (Bridge Nos. 100391 and 100420, respectively) would be widened. Both bridges would need to be widened on the outside to avoid the existing sinkhole between the bridges. The existing southbound bridge is on a tangent alignment, while the existing northbound bridge is on a curved alignment. Both bridges have a normal crown (2 percent cross slope). Widening on the outside (low side) would require a shallower superstructure than the existing bridge to avoid encroaching on the existing minimum vertical clearance.

The proposed bridge typical section at I-75 over Fletcher Avenue is shown in Figure 8-5.

I-75 Over Hillsborough River - The existing I-75 southbound and northbound bridges over the Hillsborough River (Bridge Nos. 100387 and 100388, respectively) would be widened on both sides. The existing bridges are on a curved alignment with a superelevation of 3.9 percent. The existing excess vertical clearance for the northbound bridge would allow the widened portions to utilize the same AASHTO beam types as the existing bridge. For the southbound bridge, widening on the high side would allow the widened portion to utilize the same AASHTO beam types as the existing bridge. However, widening on the low side may require a shallower superstructure than the existing bridge to avoid encroaching on the existing minimum vertical clearance. There is an underground 30-inch gas line crossing under the bridges on the south side of the Hillsborough River. This may need to be relocated during construction.

The proposed bridge typical section at I-75 over the Hillsborough River is shown in Figure 8-5.

### 8.4.1.3 Segment C – 3,000 Feet North of the Hillsborough River to Bruce B. Downs Boulevard

## Roadway

From approximately 3,000 feet north of the Hillsborough River to Bruce B. Downs Boulevard, the typical section for Segment C would be a continuation of that provided for the northern portion of Segment B (six travel lanes with two auxiliary lanes). See Figure 8-4.

## Bridges

There are no bridges within Segment C that would be affected by this project.

### 8.4.1.4 Segment D – Bruce B. Downs Boulevard to the I-275 Interchange

## Roadway

From Bruce B. Downs Boulevard to the I-275 interchange, a six-lane typical section would be provided by adding one lane to the median in each direction. In this segment, the typical section would consist of six 12-foot travel lanes (three in each direction), 12-foot inside and outside shoulders (10 feet paved) and a 64-foot median. The typical section for Segment D is shown in Figure 8-6.

## Bridges

I-75 Over Bruce B. Downs Boulevard – The existing I-75 southbound and northbound bridges over Bruce B. Downs Boulevard (Bridge Nos. 100367 and 100368, respectively) would be replaced with new longer and wider bridges. The new bridges would have an approximate length of 276 feet and be on a tangent alignment with a normal crown (2 percent cross slope). Viable superstructure types consist of steel plate girders and box girders for a single or two span arrangement and AASHTO beams, Florida bulb-tee beams, and Florida U-beams for a two or three span arrangement. An Acrow detour bridge located between the two existing bridges would most likely be required to facilitate maintenance of traffic during bridge replacement. There is an underground 6-inch gas line crossing under the bridge in the median along Bruce B. Downs Boulevard. This may need to be relocated during construction

The proposed bridge typical section at I-75 over Bruce B. Downs Boulevard is shown in Figure 8-7.

I-75 Over Cypress Creek (Hillsborough County) – The existing I-75 southbound and northbound bridges over Cypress Creek in Hillsborough County (Bridge Nos. 100412 and 100413, respectively) will be widened on the inside. Both bridges are on a curved alignment with a superelevation of 3.9 percent. Widening on the high side would allow the widened portion to utilize the same AASHTO beam types as the existing bridges. However, widening on the low side would require a shallower superstructure than the existing bridge to avoid encroaching on the existing minimum vertical clearance

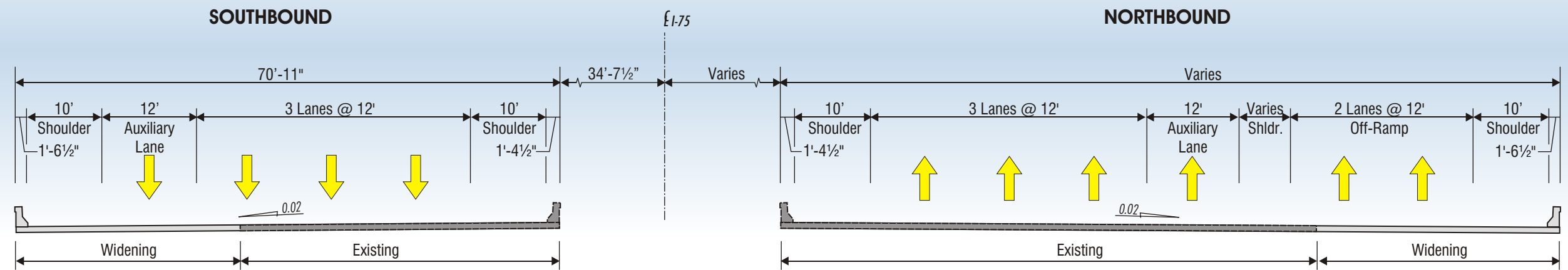
The proposed bridge typical section at I-75 over Cypress Creek (Hillsborough County) is shown in Figure 8-7.

### 8.4.1.5 Segment E – I-275 Interchange to SR 56

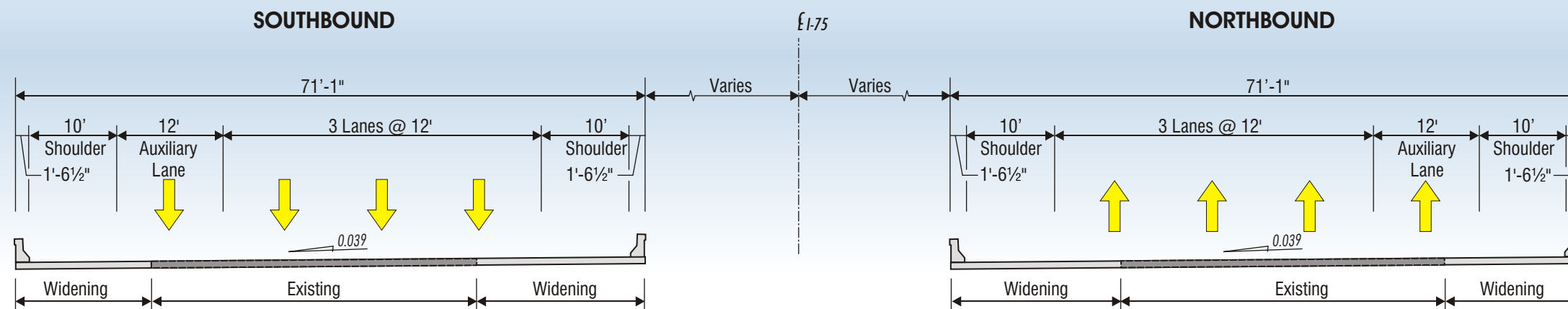
## Roadway

From the I-275 interchange to SR 56, two typical sections were considered. The one that was selected was determined by the interchange configuration that was selected for I-75/I-275 (see Section 8.4.3.3). The typical section for Options 1 and 2 would consist of six 12-foot travel lanes (three in each direction), five 12-foot auxiliary lanes (three in the southbound direction and two in the northbound direction), 12-foot inside and outside shoulders (10 feet paved), and a 64-foot median. This typical section is shown in Figure 8-8.



The typical section for the I-275/I-75 interchange Option 3 would consist of six 12-foot travel lanes (three in each direction), three 12-foot auxiliary lanes in the southbound direction, one 12-foot auxiliary lane in the northbound direction, 12-foot shoulders (10 feet paved) and a 64-foot median. A two-lane ramp would run parallel to the mainline. This typical section is shown in Figure 8-9.



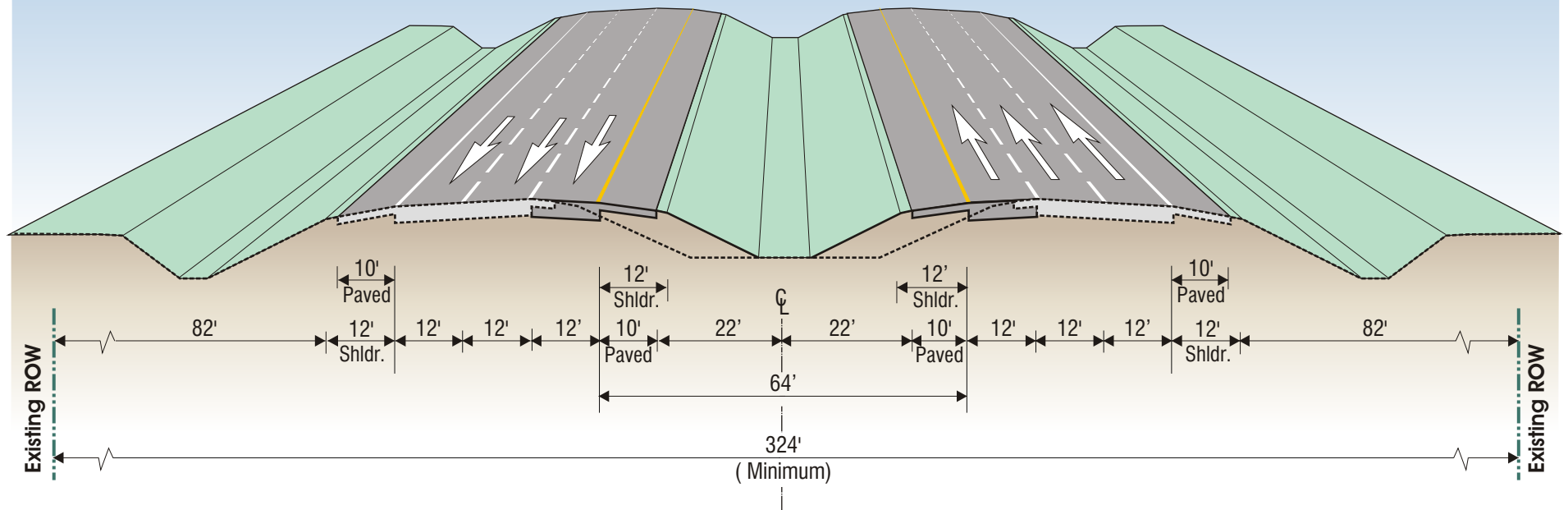
PROPOSED BRIDGE TYPICAL SECTION AT I-75 OVER FLETCHER AVENUE



PROPOSED BRIDGE TYPICAL SECTION AT I-75 OVER HILLSBOROUGH RIVER

**LEGEND**  
 Existing Bridge  
 New Construction

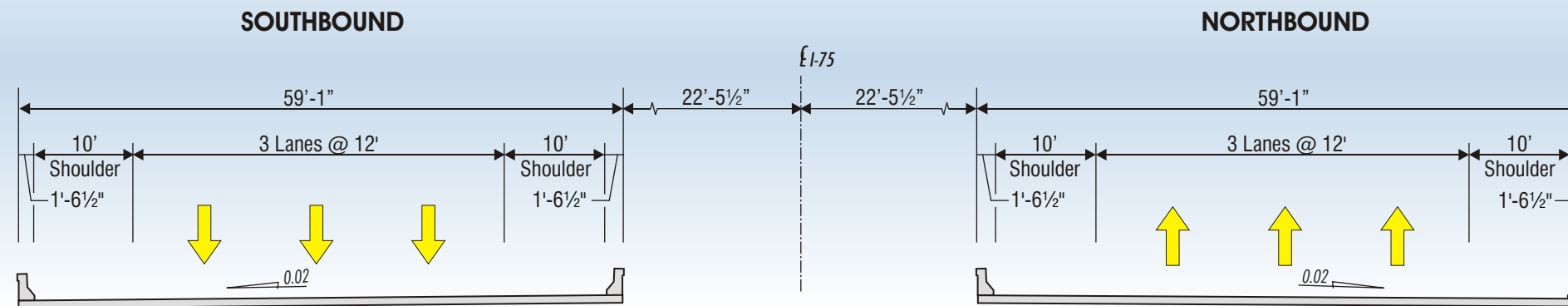




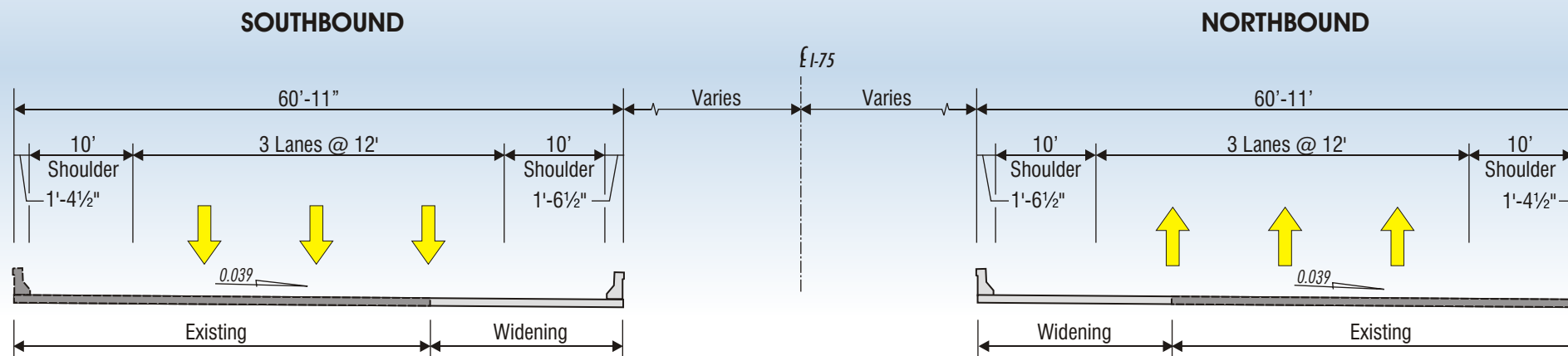
**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
 Hillsborough and Pasco Counties  
 WPI Seg. No: 408459 1 / FAP No: 0751 105 1  
 WPI Seg. No: 258736 1 / FAP No: NH-75-1-(91)275

**PROPOSED SIX-LANE TYPICAL SECTION - SEGMENT D**  
**FROM BRUCE B. DOWNS BOULEVARD TO THE I-75/I-275 INTERCHANGE**  
 Six General Purpose Lanes

Figure  
 8-6



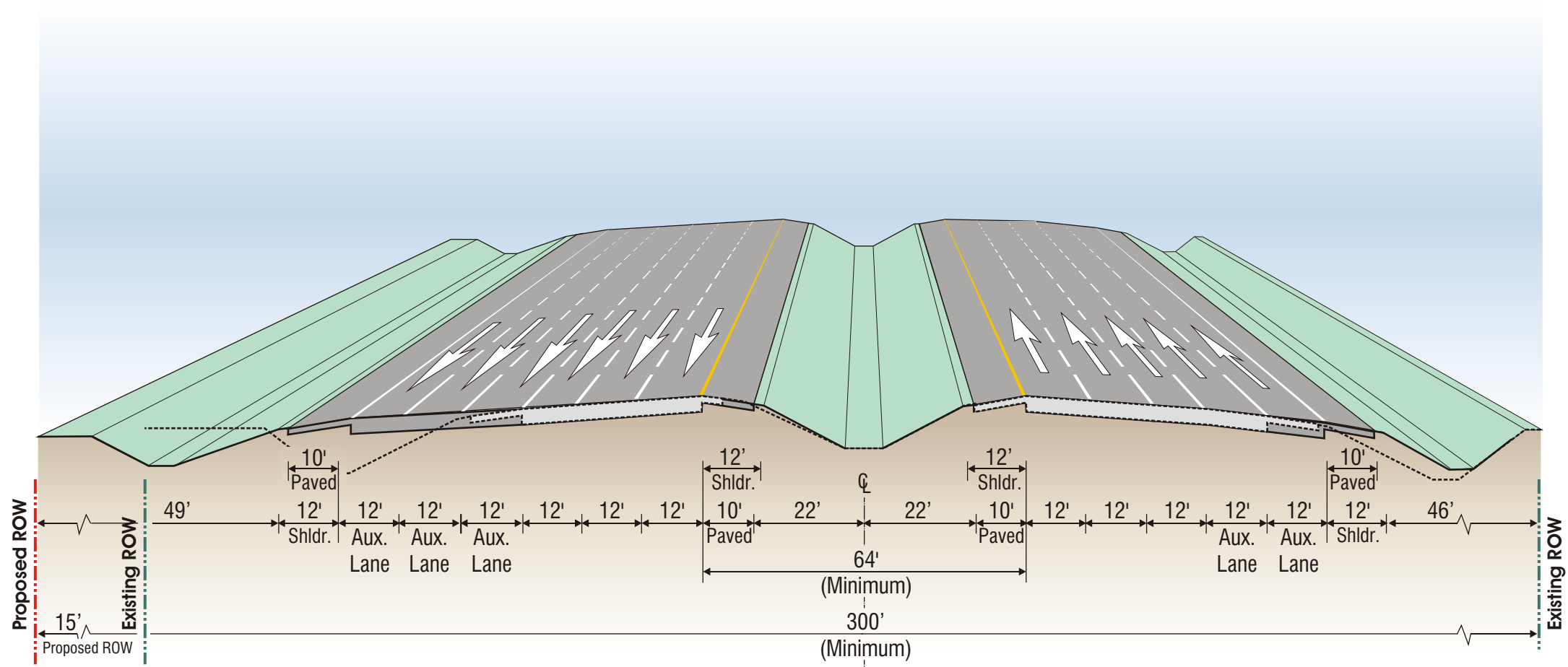
PROPOSED BRIDGE TYPICAL SECTION AT I-75 OVER BRUCE B. DOWNS BOULEVARD

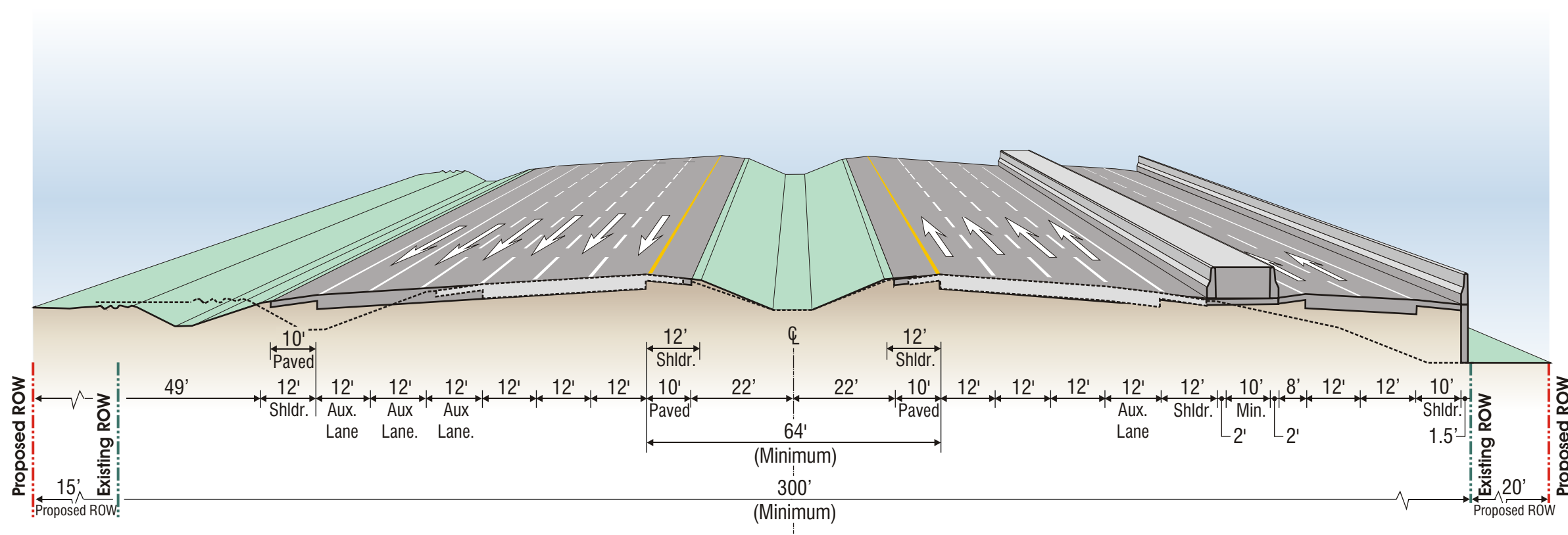


PROPOSED BRIDGE TYPICAL SECTION AT I-75 OVER CYPRESS CREEK (HILLSBOROUGH COUNTY)

**LEGEND**  

Existing Bridge  
New Construction





## Bridges

I-75 Over Cypress Creek (Pasco County) – I-275 Interchange Option 1: The existing I-75 southbound and northbound bridges over Cypress Creek in Pasco County (Bridge Nos. 140061 and 140062, respectively) would be widened to the outside. Both existing bridges are on a tangent alignment with a normal crown and have been previously widened on both sides. Widening on the outside (low side) would require a shallower superstructure than the existing bridge to avoid encroaching on the existing minimum vertical clearance. The limited superstructure depth for the outside widening of the southbound bridge may make a separate new bridge a viable alternative.

I-275 Interchange Option 3: The existing I-75 bridges over Cypress Creek in Pasco County (Bridge Nos. 140061 and 140062) would be widened to the outside. Both existing bridges are on a tangent alignment with a normal crown and have been previously widened on both sides. Widening on the outside (low side) would require a shallower superstructure than the existing bridge to avoid encroaching on the existing minimum vertical clearance. With the limited superstructure depth for the outside widening of the northbound bridge, widening does not appear to be feasible and a separate new bridge for the on-ramp lanes should be considered. Likewise, the limited superstructure depth for the outside widening of the southbound bridge may make a separate new bridge a viable alternative.

I-275 Northbound Over I-75 – The existing bridge (Bridge No. 100411) can accommodate the proposed widening of the I-75 mainline without any structural modifications. However, the existing vertical clearance of 16 feet 6 inches would be reduced to approximately 16 feet 3 inches. A design exception would need to be obtained for this reduced vertical clearance.

Option 1 and 3: The existing I-275 northbound bridge over I-75 (Bridge No. 100411) would be replaced with a new longer and wider bridge. The new bridge would have an approximate length of 512 feet and be on a new curved alignment to the north of the existing bridge to facilitate maintenance of traffic during bridge replacement. Viable superstructure types consist of curved steel plate girders and box girders for either a two- or four-span arrangement. There is an underground 30-inch gas line crossing under the bridge on the west side of I-75. This may need to be relocated during construction.

The proposed bridge typical sections at the I-275/I-75 interchange – Option 1 and Option 3 are shown in Figure 8-10 and Figure 8-11.

### 8.4.1.6 Segment F – SR 56 to CR 54

## Roadway

In this segment, I-75 would have six 12-foot travel lanes (three in each direction), two 12-foot auxiliary lanes (one in each direction) and 12-foot inside and outside shoulders (10 feet paved). The median would be 64 feet wide. Two typical sections would be used from the SR 56 interchange to CR 54.

In the vicinity of the North Tampa Aero Park Airport, a typical section that holds the western edge of pavement constant would be used. This would avoid effects to the airport that already has a displaced threshold due to glide slope constraints. This typical section would widen in the existing median for the southbound direction. For the northbound direction, new construction would occur to the outside of the existing lanes. The two existing northbound lanes would be demolished. This typical section is provided Figure 8-12. Appendix B contains a copy of a Memorandum from the FDOT's Aviation Office addressing the airport glide slope issue.

Both south and north of the airport, one through lane and one auxiliary lane would be provided for each direction of travel to the outside of the existing lanes. This would preserve the 64-foot median. This typical section is provided in Figure 8-13.

### Bridges

There are no bridges within this segment.

## **8.4.2 Alignments**

Generally, the proposed improvements follow the existing alignment. The only major deviation is in the vicinity of the North Tampa Aero Park Airport. To hold the existing western edge of pavement constant, a 0°20'0" curve is introduced at Station 724+40.80 and continues for 1,982.52 feet. The alignment is then tangent to the existing alignment for approximately 6,229 feet to Station 811+53.53. At this point, a 0°45'0" deflection is used to bring the alignment back to match the existing alignment at Station 829+98.54, a distance of approximately 1,849 feet.

## **8.4.3 Interchanges**

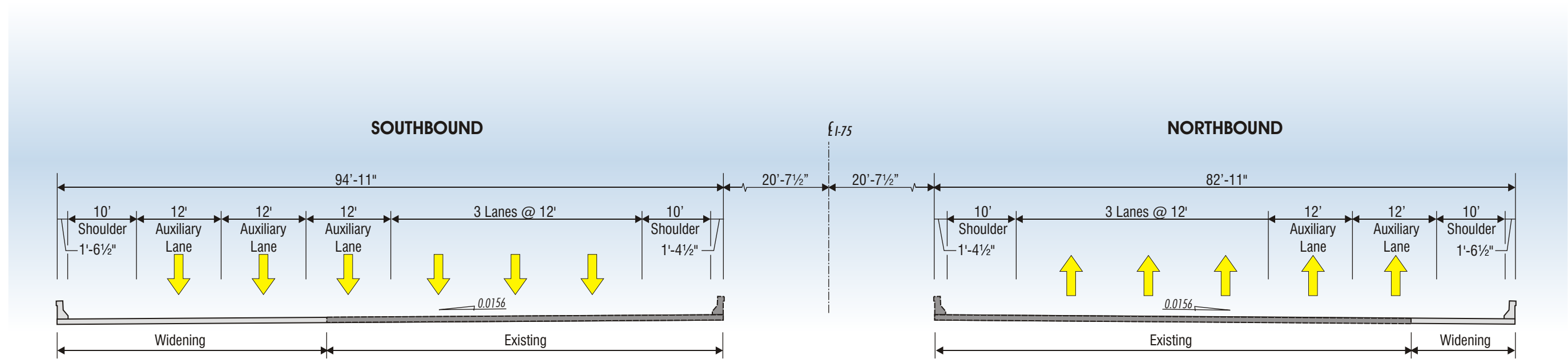
The proposed interchange improvements are described below and shown on the Concept Plans in Section 10.0.

### 8.4.3.1 Fowler Avenue

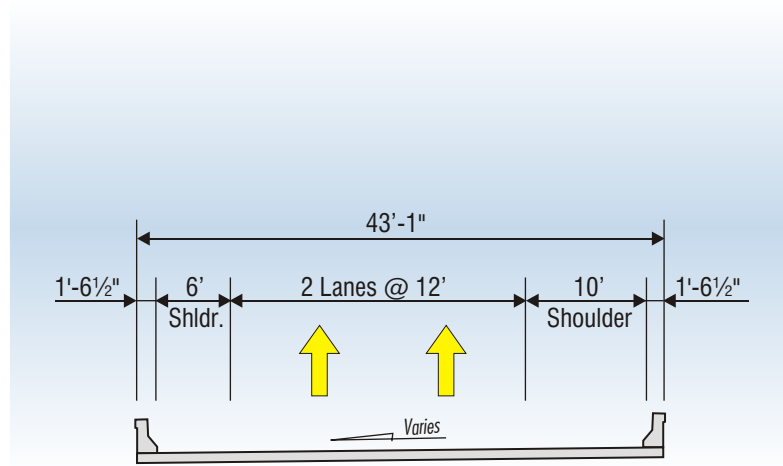
This interchange consists of a cloverleaf/directional configuration with two cloverleaf access ramps to and from the north of I-75. A fly-over ramp carries northbound I-75 traffic to westbound Fowler Avenue. The only improvement to this interchange would be the widening of this fly-over ramp from one lane to two lanes.

### 8.4.3.2 Fletcher Avenue



This interchange is a diamond configuration with a loop ramp in the northeast quadrant providing access to both east and westbound Fletcher Avenue from I-75. Improvements would include widening the loop ramp from one lane to two lanes. Dual left-turn storage (to eastbound Fletcher Avenue) would be provided. The southbound on-ramp would be widened to two lanes for a greater distance, but would still taper to one lane before merging with the I-75 mainline.

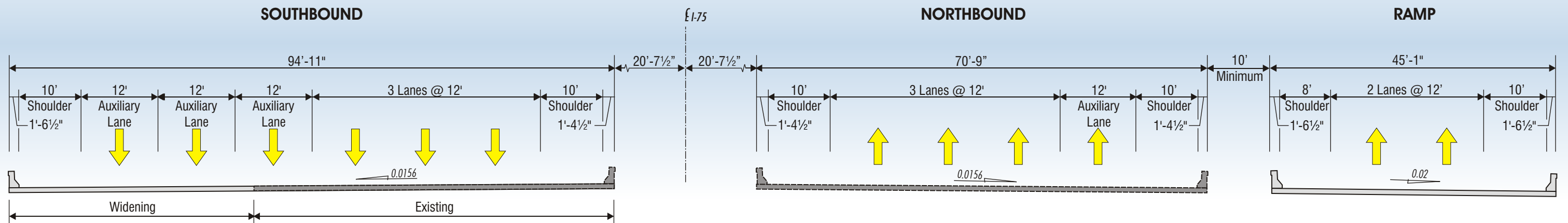


PROPOSED BRIDGE TYPICAL SECTION AT I-75 OVER CYPRESS CREEK (PASCO COUNTY)

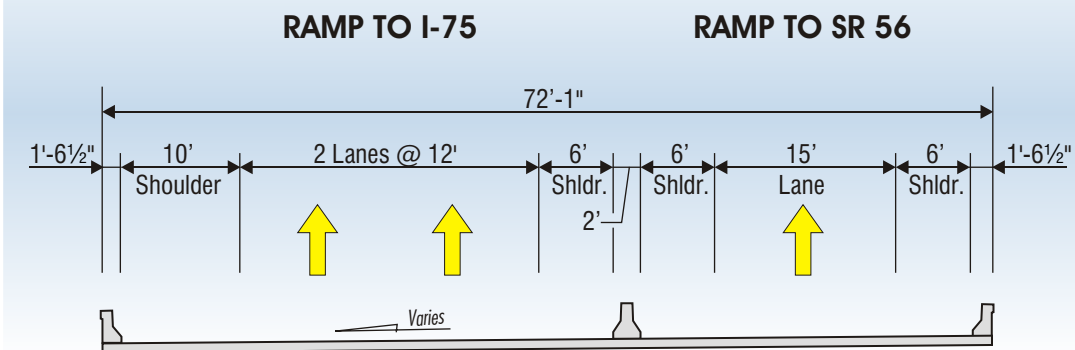


PROPOSED BRIDGE TYPICAL SECTION AT I-275 NB OVER I-75

**LEGEND**  
 Existing Bridge  
 New Construction



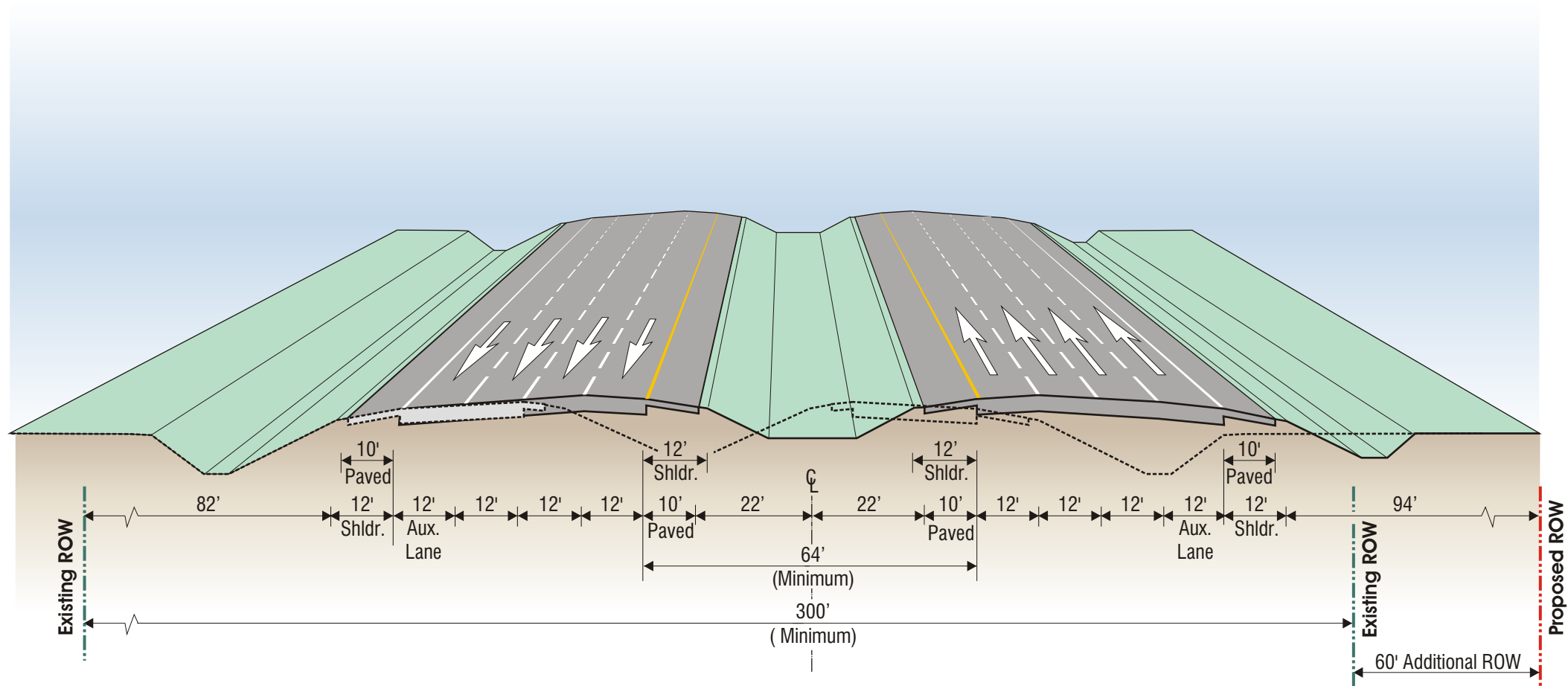
PROPOSED BRIDGE TYPICAL SECTION AT I-75 OVER CYPRESS CREEK (PASCO COUNTY)

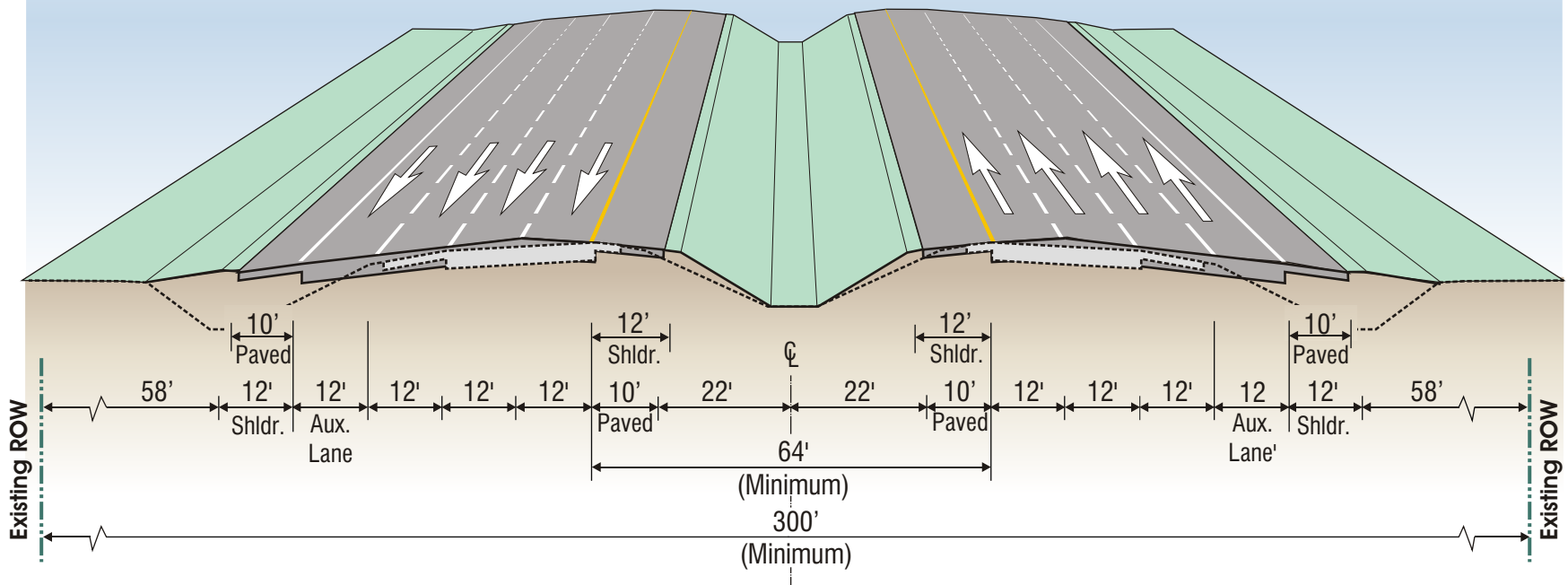


PROPOSED BRIDGE TYPICAL SECTION AT I-275 NB OVER I-75

**LEGEND**  
 Existing Bridge  
 New Construction







**I - 75 PD&E Study**  
 from south of Fowler Avenue to CR 54  
 Hillsborough and Pasco Counties  
 WPI Seg. No: 408459 1 / FAP No: 0751 105 1  
 WPI Seg. No: 258736 1 / FAP No: NH-75-1-(91)275

**PROPOSED SIX-LANE TYPICAL SECTION WITH AUXILIARY LANES- SEGMENT F**  
**NORTH AND SOUTH OF THE AIRPORT FROM SR 56 TO SOUTH OF CR 54**  
 Six General Purpose Lanes with Two Auxiliary Lanes

Figure  
 8-13

#### 8.4.3.3 Bruce B. Downs Boulevard

The improvements to Bruce B. Downs Boulevard were evaluated and documented in the I-75/CR 581 IMR. These improvements were summarized in the existing conditions section of this document.

#### 8.4.3.4 I-275

Three alternatives were considered for this interchange. All three would involve replacing the I-275 northbound structure over I-75. The new structure would be located on the north side of the existing structure and would be lengthened to accommodate the I-75 widening to three lanes in each direction. Each of the alternatives would provide six lanes in the southbound direction that would split into three southbound lanes for I-275 and three southbound lanes for I-75.

Option 1 would replace the existing two-lane I-275 northbound bridge with a longer structure without providing additional lanes. It would remain a two-lane structure. The longer structure would accommodate the proposed widening of I-75 from four to six lanes. The two northbound lanes of I-275 would join with the three northbound lanes of I-75 to form a five-lane typical section.

Option 2 would replace the existing two-lane I-275 northbound bridge with a longer structure that would provide three travel lanes. The longer structure would accommodate the proposed widening of I-75 from four to six lanes. The three northbound lanes of I-275 would join with the three northbound lanes of I-75 to form a six-lane typical section that would merge to five lanes northbound before the bridge over Cypress Creek.

Option 3 would replace the existing two-lane I-275 northbound bridge with a longer bridge that would provide two through lanes and one lane off-ramp to SR 56. The off-ramp to SR 56 from I-275 would begin before the I-275 bridge and run along I-275, join with a ramp from I-75 to make a two-lane ramp that extends parallel to the I-75 mainline to SR 56.

An off-ramp from I-75 to SR 56 would begin south of the I-275 overpass bridge and join with the I-275 ramp before passing under the County Line Road bridge. The two-lane ramp would run parallel to the I-75 mainline to SR 56. Beginning the ramp south of the merge of I-75 and I-275 would eliminate the weaving between I-275 traffic proceeding northbound on I-75 and I-75 northbound traffic exiting at SR 56.

The two northbound through lanes of I-275 would join with the three northbound I-75 lanes. The five lanes would then transition to four lanes before the bridge over Cypress Creek.

A traffic analysis was conducted for the three alternatives. It was concluded that Option 1 would perform as well as Option 2 with lower construction costs. Therefore, Option 2 was eliminated from further consideration.

Option 1 was designed to avoid any conflicts with Option 3. Therefore, Option 1 represents a phasing of Option 3. Option 1 can be constructed and then, at a later date, Option 3 can be implemented.

8.4.3.5 SR 56

The SR 56 interchange features a diamond configuration. The only modification to the SR 56 interchange would be the relocation of the northbound off-ramp in Option 3.

## 8.5 Evaluation Matrices

The only portion of the project in which different alignments are being considered is for the I-75/I-275 interchange. The traffic operations, environmental effects and right-of-way cost estimates for the remaining I-275 and I-75 interchange alternatives are shown in the Alternatives Evaluation Matrix provided as Table 8-1.

Option 1 would provide LOS C and affect 31.53 acres of wetlands at the I-75/I-275 interchange at a total cost of approximately \$74.0 million. Option 3 would provide LOS B and affect 34.04 acres of wetlands at the I-75/I-275 interchange at a cost of approximately \$104.6 million.

**Table 8-1  
Alternative Evaluation Matrix  
I-75/I-275 Interchange to CR 54**

Evaluation Factor	Measure	Alternative		
		No-Build	Option 1	Option 3
Traffic Operations	LOS	F	C	B
Compatible with Transit Corridor	Y/N	N	Y	Y
Relocations	No.	0	0	0
Contamination Sites	No.	0	0	0
Wetlands	Acres	0	31.53	34.04
Cultural Resources (NRHP Eligible?)	No.	0	0	0
Right-of-Way Cost	\$ (millions)	\$0	\$9.6	\$13.5
Design Cost (15% of Const.)	\$ (millions)	\$0.0	\$7.1	\$10.2
Construction Cost	\$ (millions)	\$0.0	\$47.4	\$67.8
CEI Cost (at 15% of Const.)	\$ (millions)	\$0.0	\$7.1	\$10.2
Mitigation Cost	\$ (millions)	\$0.0	\$2.8	\$2.9
<b>Total Cost</b>	<b>\$ (millions)</b>	<b>\$0.0</b>	<b>\$74.0</b>	<b>\$104.6</b>

## **8.6 Selection of a Recommended Alternative**

Option 3 was selected as the recommended alternative for the I-275 apex area. It would provide the higher LOS and would also allow for the staging of improvements in the apex. Option 1 could be constructed initially and then Option 3 implemented at a later date.

## **9.0 PRELIMINARY DESIGN ANALYSIS**

### **9.1 Design Traffic Volumes**

The AM and PM peak design hour traffic volumes for the opening year (2008) and design year (2028) improvements are shown in Figure 6-6 through Figure 6-9.

### **9.2 Typical Sections**

#### **9.2.1 Segment A – Fowler Avenue to Fletcher Avenue**

The selected roadway and bridge typical sections for this segment are discussed in Section 8.4.1.

#### **9.2.2 Segment B – Fletcher Avenue to 3,000 Feet North of the Hillsborough River**

The selected roadway and bridge typical sections for this segment are discussed in Section 8.4.1.

#### **9.2.3 Segment C – 3,000 Feet North of the Hillsborough River to Bruce B. Downs Boulevard**

The selected roadway typical section for this segment are discussed in Section 8.4.1.

#### **9.2.4 Segment D – Bruce B. Downs Boulevard to the I-275 Interchange**

The selected roadway and bridge typical sections for this segment are discussed in Section 8.4.1.

#### **9.2.5 Segment E – I-275 Interchange to SR 56**

##### **9.2.5.1 Roadway**

The typical section for this segment would consist of six 12-foot travel lanes (three in each direction), three 12-foot auxiliary lanes in the southbound direction, one 12-foot auxiliary lane in the northbound direction, 12-foot shoulders (10 feet paved) and a 64-foot median. A two-lane ramp would run parallel to the mainline. This typical section is shown in Figure 8-9.

### 9.2.5.2 Bridges

I-75 Over Cypress Creek (Pasco County) The existing I-75 southbound and northbound bridges over Cypress Creek in Pasco County (Bridge Nos. 140061 and 140062, respectively) would be widened to the outside. Both existing bridges are on a tangent alignment with a normal crown and have been previously widened on both sides. Widening on the outside (low side) would require a shallower superstructure than the existing bridge to avoid encroaching on the existing minimum vertical clearance. With the limited superstructure depth for the outside widening of the northbound bridge, widening does not appear to be feasible and a separate new bridge for the on-ramp lanes should be considered. Likewise, the limited superstructure depth for the outside widening of the southbound bridge may make a separate new bridge a viable alternative.

I-275 Northbound Over I-75 –The existing I-275 northbound bridge over I-75 (Bridge No. 100411) would be replaced with a new longer and wider bridge. The new bridge would have an approximate length of 512 feet and be on a new curved alignment to the north of the existing bridge to facilitate maintenance of traffic during bridge replacement. Viable superstructure types consist of curved steel plate girders and box girders for either a two- or four-span arrangement. There is an underground 30-inch gas line crossing under the bridge on the west side of I-75. This may need to be relocated during construction.

The proposed bridge typical sections at the I-275/I-75 Interchange are shown in Figure 8-10 and Figure 8-11.

### 9.2.6 Segment F – SR 56 to CR 54

The selected roadway typical sections for this segment are discussed in Section 8.4.1.

## 9.3 Interchange Concepts

The proposed interchange improvements at Fowler Avenue, Fletcher Avenue, Bruce B. Downs Boulevard, I-275, and SR 56 are discussed in Section 8.4.3. The recommended interchange concept for I-275 is Option 3. The interchange concept is shown on the Concept Plans in Section 10.

## 9.4 Alignment and Right-of-Way Needs

The improvements will use the existing I-75 alignment and will require right-of-way for the roadway mainline improvements, stormwater management facilities and floodplain compensation sites. The preliminary sizes and locations of the ponds and floodplain compensation sites have been determined in the separately prepared Pond Siting Report.

The estimated right-of-way costs by Work Program segment are shown in Table 9-1.

**Table 9-1  
Estimated Project Costs by Work Program Segment (in \$ millions)**

<b>Work Program Segment</b>	<b>Right-of-Way</b>	<b>Construction</b>	<b>Design</b>	<b>CEI</b>	<b>Total Cost</b>
From south of Fowler Avenue to Bruce B. Downs Boulevard	4.3	73.2	11.0	11.0	99.5
From Bruce B. Downs Boulevard to south of the I-275 Apex	1.7	8.0	1.2	1.2	12.1
From south of the I-275 Apex to CR 54	13.5	67.8 <sup>1</sup>	10.2	10.2	101.7
<b>Total</b>	<b>19.5</b>	<b>149.0</b>	<b>22.4</b>	<b>22.4</b>	<b>213.3</b>

1. This cost does not include the construction cost for improvements to the CR 54 interchange that are estimated to total \$19.2 million.

## 9.5 Relocations

There are no business or residential relocations associated with the proposed improvements as indicated in the project Evaluation Matrix provided as Table 9-2.

## 9.6 Construction and Total Project Costs

Construction costs were estimated using procedures found in the FDOT Long Range Estimates Manual. The construction is estimated to be \$149.0 million. Estimated construction costs by project segment are shown in Table 9-1.

## 9.7 Preliminary Engineering Costs

Preliminary engineering costs were estimated at 15 percent of the total construction costs. The preliminary engineering would be approximately \$22.4 million. Estimated preliminary engineering costs by project segment are shown in Table 9-1.

## 9.8 Production Schedule

The Five-Year Adopted Work Program is shown in Table 9-3.



**Table 9-2  
Evaluation Matrix**

Evaluation Factors	Recommended Build Alternative		
	PD&E Segment	Reevaluation Segment	Total
<b>Potential Relocations</b>			
Business	0	0	0
Residential	0	0	0
Non-Profit Organization	0	0	0
<b>Noise Effects</b>			
Sites exceeding the 66dba Isopleth	101	0	101
<b>Cultural Resources</b>			
Historic Structures	NO INVOLVEMENT		
Archaeological Sites	NO INVOLVEMENT		
Parks [Section4(f)]	NO INVOLVEMENT		
<b>Natural/Physical Environmental Effects</b>			
Wetlands (acres)	67.15	16.75	83.9
Floodplain Encroachment (acres)	59.57	35.44	95.01
Potential Threatened & Endangered Species	NO INVOLVEMENT		
Potential Contamination Sites (Med/High)	1/0	4/0	5/0
<b>Project Estimated Costs (Million\$)</b>			
Right-of-Way Cost <sup>1</sup>	-	-	\$19.50
Engineering Cost <sup>2</sup>	-	-	\$22.4
Construction Cost <sup>3</sup>	-	-	\$149.0
Construction Engineering and Inspection Costs	-	-	\$22.4
<b>Total Cost</b>	-	-	<b>\$213.3</b>

Notes: 1. Estimate completed in August 2003, includes stormwater ponds  
2. Estimated as 15% of construction cost  
3. Estimate completed in October 2003.

**Table 9-3  
Five-Year Adopted Work Program**

<b>Project Segment</b>	<b>Phase</b>	<b>Fiscal Year</b>
From south of Fowler Avenue to Bruce B. Downs Boulevard.	Design	04/05
	Right-of-Way Acquisition	06/07
	Construction	Not funded
From Bruce B. Downs Boulevard to south of I-275 Apex	Design	04/05
	Right-of-Way Acquisition	06/07
	Construction	Not funded
From south of I-275 Apex to CR 54	Design	04/05
	Right-of-Way Acquisition	Not funded
	Construction	Not funded

## 9.9 Recycling of Salvageable Material

Removal of any portion of the existing facility will be in accordance with all permitting requirements and specifications. Lead paint on existing structures shall be disposed of in accordance with all applicable laws and procedures. Disposal of the existing bridge components and/or any other unsuitable materials, as appropriate, shall be the responsibility of the contractor. The existing concrete decks from the I-75 bridges could be recycled into the proposed roadway construction as:

- base course (after crushing to specified gradation),
- channel linings, or
- fill material (after partial crushing).

This type of reuse would require the removal of the structural steel embedded in the concrete deck and could make this type of reuse cost prohibitive.

Other recycling options include:

- Concrete rubble for artificial reef construction
- Allowing the contractor to own and stockpile the removed concrete for future use in other construction projects

An important element of the recycling of concrete pavement is to establish ownership of the stockpiled materials in the request for proposals so that competitive bidding can be maintained.

## 9.10 User Benefits

The I-75 project corridor in Hillsborough and Pasco Counties is developing as a population support area for the metropolitan areas of Tampa and Zephyrhills. Improved access to and from Hillsborough and Pasco Counties will enhance the local community assets by providing

life choice flexibility for local residents desiring to work and recreate outside the counties while also providing the residents of surrounding counties the opportunity to commute to and within Hillsborough and Pasco Counties for work, shopping and recreation.

I-75 serves as the major weather emergency evacuation route for and through Hillsborough and Pasco Counties. The quality of life for residents would be enhanced knowing that egress through and from Hillsborough and Pasco Counties in weather emergencies would be improved by the additional capacity provided by the improvements. Additional mainline capacity and interchange improvements, improved signing and marking, and improved level of traffic service may decrease the potential for crashes.

## **9.11 Pedestrian and Bicycle Facilities**

The I-75 corridor is a limited access interstate facility on which non-motorized (bicycle and pedestrian) traffic is prohibited.

## **9.12 Safety**

The proposed improvements will be designed and constructed to meet FDOT and AASHTO safety standards and requirements. The crashes experienced on I-75 are typical of those types associated with traffic congestion on limited access facilities. Approximately 45 percent are movement type crashes. Implementing the proposed project will improve the LOS, which may reduce the potential for crashes.

## **9.13 Economic and Community Development**

The project is consistent with the local transportation plans and would provide the improvements necessary to support the future land uses projected for Hillsborough and Pasco Counties.

## **9.14 Environmental Effects**

### **9.14.1 Wetlands and Other Surface Waters**

#### 9.14.1.1 Potential Effects to Wetlands

Potential wetland effects for the proposed improvements are summarized in the separately prepared Wetland Evaluation Report. The proposed projects addressed in both studies are anticipated to affect approximately 83.9 acres of wetlands (67.15 acres in the PD&E Study and 16.75 in the Reevaluation Study). Forested systems, hardwood and cypress swamps, constitute three-quarters of the potential wetland effects. Most of the remaining quarter of wetland effects is to shrub and herbaceous wetlands. Very little effect will occur to riverine systems. The vast majority of direct wetland effects resulting from the proposed improvements are within the existing right-of-way, involving previously disturbed, lower quality wetland fringes.

#### 9.14.1.2 Wetland Mitigation Alternatives

Mitigation policies have been established by the USACOE, the Florida Department of Environmental Protection, and the Water Management Districts. Options for mitigating the loss of wetlands include mitigation banking, upland and/or wetland preservation, wetland restoration, enhancement, and creation. Mitigation in the form of a transfer of \$84,937 (FY 2002/2003) per acre of effect to the SWFWMD is also available. These funds are used to finance mitigation programs.

Onsite mitigation opportunities of restoration or creation do not exist for this project because of the highly urban nature of the project site and the limited opportunity for right-of-way acquisition. Mitigation for wetland effects that will result from the construction of this project, therefore, will be mitigated as required by Part IV Chapter 373, F.S. and 33 U.S.C.s. 1344 through Section 373.4137, F.S. (Senate Bill 1986).

#### 9.14.2 Water Quality

Water quality treatment will be required for runoff generated by the widening of I-75. Reference should be made to Part B of the Environmental Resource Permitting Manual issued by the SWFWMD.

Treatment Method: The soils within the project limits are predominantly poorly drained fine sands with seasonal high groundwater elevations within 1 foot of natural grade. Given the high groundwater table, it is anticipated that wet detention treatment will be the treatment method of choice for this project. The minimum volume of runoff required to be treated utilizing this method of treatment is equal to 1 inch of runoff from the new impervious surface area.

A majority of the receiving water bodies are designated Outstanding Florida Waters (OFW) including Hillsborough River and Cypress Creek. Consequently, any proposed direct discharge to these waterways must provide water quality treatment of a volume 50 percent greater than what is typically required.

#### 9.14.3 Farmlands

Provisions of the Farmland Protection Policy Act of 1984 do not apply to this project.

#### 9.14.4 Floodplains

It has been determined through coordination with local, state, and federal water resource and floodplain management agencies that the project will cross one regulatory floodway at Cypress Creek, south of the I-275/I-75 interchange. Therefore, it will be necessary to demonstrate through hydrologic and hydraulic analysis performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base (100-year) flood discharge.

The proposed drainage structures must be designed to perform hydraulically in a manner equal to or greater than existing structures. Similarly, backwater surface elevations must be maintained or reduced. As a result, there will be no adverse effects on natural or beneficial floodplain values. There will be no significant change in flood risk, or in potential for interruption of emergency service or emergency evacuation routes.

#### **9.14.5 Wildlife and Habitat**

Preliminary habitat and vegetative mapping of the study area was conducted in February 2002. The habitat and vegetation mapping was based on the Florida Land Use, Cover and Forms Classification System developed by the FDOT. Surveying for protected species was conducted on February 26 and December 17, 2002. The list of protected species potentially occurring within the study area is based on consideration of species range, available habitat within the study area, literature reviews, and agency coordination. The preliminary assessments and the habitats in the project area and agency coordination show it is likely species known to use pine flatwoods with palmetto understory, longleaf pine-xeric oak, mixed coniferous forests, hardwood, and emergent wetlands may occur.

As a result of the survey efforts and research of the study area, 19 protected animals (4 federal and 15 state) and 15 protected plants (4 federal and 11 state) were identified as having the potential to utilize or inhabit the study area. On November 5, 2003, the FDOT initiated informal consultation with the US Fish and Wildlife Service (USFWS) regarding impacts on threatened and endangered species. On December 22, 2003, the USFWS indicated "The Proposed action is not likely to adversely affect resources protected by the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et. seq.). This finding fulfills the requirements of the Act."

#### **9.14.6 Noise**

A Noise Study Report was prepared in accordance with the methodology established in Title 23 Code of Federal Regulations Part 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise, and the FDOT PD&E Manual, Part 2, Chapter 17 (November 2001).

Primarily low density and some medium density residential land uses are scattered throughout the project area. The noise sensitive sites adjacent to I-75 (within the PD&E and Reevaluation Study limits) include 269 single-family residences. The residences include isolated homes as well as homes within the subdivisions of Primrose Garden, Enclave at Tampa Palms, Danforth, The Preserves, and Saddlebrook Village West. The homes were grouped into nine noise sensitive areas (NSA). Table 9-4 lists the location and description of each NSA. The first seven NSAs and NSA 9 are included in the PD&E Study and NSA 8 is included in the Reevaluation Study.

The results of the noise study indicate that 101 out of 269 sites are predicted to approach or exceed the NAC for Activity Category B as a result of the Build Alternative. The increase in noise levels from both the existing condition and No-Build Alternative to the Build Alternative is predicted to range from 0.1 to 5.3 dBA. No substantial increases above the existing noise levels were predicted.

**Table 9-4  
Noise Sensitive Areas**

<b>Noise Sensitive Area (NSA)</b>	<b>Location</b>	<b>Land Use</b>	<b>Years Constructed*</b>
NSA 1	West of I-75 and south of the Fowler Avenue interchange (STA 1860+00 to 1900+00)	single-family residences	1962 – 1980
NSA 2	East of I-75 and south of the Fowler Avenue interchange (STA 1862+00 to 1879+00)	single-family residences	1971 – 1972
NSA 3 Primrose Garden	West of I-75 and north of the Fowler Avenue interchange (STA 1914+00 to 1924+00)	single-family residences	1952 – 1984
NSA 4	East of I-75 and north of the Fowler Avenue interchange (STA 1918+00 to 1968+00)	single-family residences and mobile homes	late 1950's – early 1960's
NSA 5 Enclave at Tampa Palms	West of I-75 and north of the Fletcher Avenue interchange (STA 2056+00 to 2080+00)	single-family residences	late 1980's – mid 1990's
NSA 6 Danforth	East of I-75 and north of the Bruce B. Downs Boulevard interchange (STA 2228+00 to 2246+00)	single-family residences	early 2000's
NSA 7 The Preserves	East of I-75 and north of the Bruce B. Downs Boulevard interchange (STA 2276+00 to 2280+00)	single-family residences	early 2000's
NSA 8 Saddlebrook Village West	West of I-75 and north of SR 56 interchange (STA 782+00 to 792+00)	single-family residences	late 1990's
NSA 9 Buckingham at Tampa Palms	West of I-75 and north of the Fletcher Avenue interchange (STA 2094+00 to 2130+00)	single-family residences	2003

Note: \*The years that the homes were constructed were obtained from the Hillsborough and Pasco Counties Property Appraisers' internet databases.

Noise barriers were determined to be the only potentially feasible abatement measure for this project. Noise barriers were evaluated at NSAs 1, 2, 4, 5, 7, and 8. Noise barrier were not evaluated for NSAs 3, 6, and 9 since noise sensitive receivers at those locations were not predicted to exceed the NAC as a result of the Build Alternative. According to the results, noise barriers adjacent to NSA 1 and NSA 5 would provide at least the minimum insertion loss of 5.0 dBA and would meet the cost reasonable criterion of \$35,000 per benefited residence.

None of the abatement measures considered for NSAs 2, 4, 7, and 8 were determined to be both reasonable and feasible to abate future traffic noise. Based on the noise analysis performed to date, there appears to be no apparent solutions available to mitigate the traffic noise at these locations.

During the Reevaluation Study, a noise barrier review was performed that addressed the new homes that were constructed in the Egret Landing subdivision of the Tampa Bay Golf and Country Club, located just south of SR 52 on the west side of I-75. The review addressed the noise sensitive sites within the subdivision that received a building permit as of the original PD&E Study's Location Design Acceptance (LDA) date of November 27, 2000.

The review/analysis evaluated the cost reasonableness of a noise barrier for the noise sensitive sites that received a building permit as of the LDA date. The review found that a barrier would not be cost reasonable. Therefore, the Study's commitment has been fulfilled.

Refer to the Noise Study Report prepared for this project for further information.

### **9.14.7 Air Quality**

An Air Quality Report was prepared in accordance with the methodology established in the FDOT PD&E Manual, Part 2, Chapter 16. The proposed alternatives were subjected to FDOT's COSCREEN98 (revised August 2000 & September 2002) air quality screening model. The screening test is intended to allow an appropriate level of analysis for highway projects that have very little or no effect on air quality. The COSCREEN98 computer program makes a number of conservative assumptions about the project and indicates whether the project needs a more detailed computer analysis. The results of the COSCREEN98 program indicate that a detailed analysis is not necessary.

Using the COSCREEN98 program, CO concentrations were calculated at the closest receptor to the No-Build and Build Alternatives for both the Opening Year (2008) and the Design Year (2028) of the project. The closest possible air quality sensitive site (receptor) was determined to be approximately 107 feet west of the existing I-75 edge-of-pavement and approximately 611 feet south of the Fowler Avenue existing edge-of-pavement, just northeast of the Morris Bridge Road/Navajo Avenue intersection. This receptor is located near the most congested (heaviest traffic) area of the I-75 project corridor. This receptor is also the closest receptor to I-75. One "worst-case" receptor was used in COSCREEN98.

The National Ambient Air Quality Standards (NAAQS) for CO are 35 parts per million (ppm) for the 1-hour period and 9 ppm for the 8-hour period. The results of this air quality analysis show that the predicted CO concentrations, including background, will fall below the NAAQS for CO for all alternatives. Therefore, it is anticipated that this project will not have a significant effect on air quality.

Hillsborough and Pasco Counties, including the I-75 project corridor, are located in the West Central Florida Intrastate Air Quality Control Region as defined in Section 302(f) of the Clean Air Act, 42 U.S.C. 1857h(f). The I-75 project corridor located in Pasco County is currently designated as an attainment area for all automobile-related pollutant standards; therefore, conformity does not apply. The I-75 project corridor located in Hillsborough County is in an area that has been designated as maintenance for the ozone standards under the criteria provided in the Clean Air Act Amendments of 1990. This project is included in the urban area's current approved conforming Transportation Improvement Plan (TIP). This project is included in the area's Conformity Determination report that was approved by the Metropolitan Planning Organization and Federal Highway Administration/Federal Transit Administration. The project's design concept and scope are the same as that found in the conforming plan and TIP.

For further information regarding air, refer to the Air Quality Report prepared for this project.

#### **9.14.8 Construction**

Construction activities for the widening of I-75 will have temporary air, noise, water, wetlands, traffic flow, and visual effects for those residents and travelers within the immediate vicinity of the project.

Any temporary construction related effects will be controlled in accordance with FDOT's Standard Specifications for Road and Bridge Construction.

#### **9.14.9 Contamination**

A total of 24 potential contamination sites were evaluated. Fourteen sites were identified as having the potential for petroleum or hazardous materials contamination for the PD&E Study from south of Fowler Avenue to south of SR 56. Of the 14 sites, 11 are considered to be potential petroleum sites, two are considered to be a potential hazardous materials sites and one is considered to be both a potential petroleum and hazardous materials site. No sites in the project area received a rating of HIGH. One site received a rating of MEDIUM, eight sites received a rating of LOW and five sites received a rating of NO.

The one site rated as having a MEDIUM potential for contamination involvement is Site No. 2 - Morris Bridge Landfill (Segment A).

Ten sites were identified as having the potential for petroleum or hazardous materials contamination for the Reevaluation from south of SR 56 to CR 54. Of the 10 sites, eight are considered to be potential petroleum sites and two are considered to be potential hazardous materials sites. No sites in the project area received a rating of HIGH. Four sites received a rating of MEDIUM, five sites received a rating of LOW and one site received a rating of NO.

The four sites rated as having a MEDIUM potential for contamination involvement are:

- Site No. 18 - Citrus Country Shell (Segment F)
- Site No. 19 - Texaco – Wesley Chapel (Segment F)
- Site No. 21 - Citgo (Segment F)
- Site No. 22 - Denny's – Master's Economy Inn (Segment F)

It is recommended that a Level 2 Contamination Assessment be conducted for the five sites rated as having a MEDIUM potential for contamination involvement.

This Level 2 Contamination Assessment should be accomplished prior to the project right-of-way phase and coordinated with appropriate offices to insure that where contamination is verified to exist and is likely to affect construction, appropriate steps are taken to avoid the contamination or have the contamination remediated prior to any construction activity at that location. Properties which are confirmed to have contamination present should be further assessed to completely identify the type, amount and area of contamination.

For additional information regarding contamination, refer to the Contamination Screening Evaluation Report prepared for this project.



## 9.15 Utility Effects

The existing utilities within the I-75 study area that have the potential to be affected by the various alternatives for the proposed improvements are summarized in Section 4.1.12. The exact locations and conflicts with these systems will be determined during the subsequent design phase of this project.

## 9.16 Traffic Control Plan

Maintenance of traffic and sequence of construction will be planned and scheduled so as to minimize traffic delays. Access of all businesses, residences, and recreational facilities will be maintained to the extent practical through controlled construction scheduling. Signage will be used, as appropriate, to provide pertinent information to the traveling public. The local news media will be notified in advance of road closings and other construction related activities which could excessively inconvenience the community, so that motorists, residents, and business persons can plan travel routes accordingly. All provisions of the most current edition of the FDOT's Standard Specifications for Road and Bridge Constructions will be followed.

I-75 provides access to numerous residences and businesses along this corridor. Due to its importance, I-75 should remain functional throughout the duration of the construction activities. The existing number of travel lanes should be maintained to the maximum extent possible. Lane closures, if necessary, should occur during off-peak hours.

A detailed traffic control plan will be developed during the design phases of this project. The following conceptual construction sequence will help maintain traffic operations along I-75.

### 9.16.1 Mainline Roadway

- Relocate existing utilities within the right-of-way.
- Construct stormwater ponds (if ponds are proposed in these areas).
- Construct temporary pavement as necessary to maintain existing two-way traffic.
- Construct the widening of either the northbound or southbound lanes including shoulders, while maintaining the traffic on a combination of the existing and temporary pavement.

### 9.16.2 Bridges

Maintain existing traffic on the northbound or southbound structure and widen the structure.

## **9.17 Results of Public Involvement Program**

### **9.17.1 Advance Notification**

The FDOT initiated early project coordination on January 22, 2002, by distribution of an Advance Notification (AN) Package to the Florida State Clearinghouse, Office of the Governor, Tallahassee, Florida, in accordance with Executive Order 83-150. The FDOT received notification that the Clearinghouse received the AN and forwarded the package to the appropriate agencies. No controversial comments were received as a result of the AN process. Responses received were summarized in the Study's Comments and Coordination Report.

### **9.17.2 Public Hearing**

A formal Public Hearing was held on December 17, 2003, in the auditorium at the Florida Department of Transportation, District 7 Headquarters, located at 11201 North McKinley Drive in Tampa, Florida. The Hearing was held from 5:00 p.m. to 7:00 p.m. to present the PD&E Study and Reevaluation and to give the public the opportunity to express their views concerning the conceptual design and social, economic and environmental effects of the proposed improvements. The Study's supporting documents were available for public review prior to and after the Hearing from November 26, 2003 through January 5, 2004 at the New Tampa Regional Library, 10001 Cross Creek Boulevard in Tampa.

Notification was accomplished by electronic mail to public officials and by direct mail to federal, state, regional, and Hillsborough and Pasco Counties agencies, interested citizens and property owners whose property lies in whole or in part within 300 feet from the centerline of the proposed project.

Legal display advertisements for the Hearing were published on November 27, 2003 and December 11, 2003 in the Metro section of the Tampa Tribune. Forty-four people (not including FDOT staff) signed the attendance rosters.

Copies of the Public Hearing materials, including the legal display advertisement and the newsletter sent to officials, agencies and property owners are included in Appendix C of the Comments and Coordination Report. Copies of the Hearing brochure, recommended build alternative, display graphics, and attendance rosters are included in the Public Hearing Project Scrap Book that was prepared for this project.

The formal portion of the Hearing began at 6:00 p.m. Robert Clifford, AICP, Modal Planning and Development Manager for the FDOT, District 7, presided at the Hearing. Following introductory remarks, Mr. Clifford provided a summary of the FDOT's engineering and environmental studies associated with the proposed improvements and showed a video about the project. The next portion of the Hearing was devoted to oral comments.

Attendees were able to offer statements as part of the Official Public Hearing Record in one of four ways: (1) make an oral statement during the formal portion of the Hearing; (2) make an oral statement to the court reporter during the informal portion of the Hearing; (3) complete the Comment Form and submit it to the court reporter or drop it in the 'Comment Form' box; or (4) complete and mail the Comment Form to the FDOT - District 7.

Three oral statements were provided to the court reporter during the informal portion of the Hearing, one oral comment was provided during the formal portion of the Hearing and 86 written comment sheets were received. One written comment form and one oral comment included comments on both noise and another issue. Thus, 92 comments were received. Copies of the written comments are maintained in the project file. A summary of the oral and written comments received is shown in Table 9-5.

**Table 9-5  
Summary of Comments Received**

Issue	# Comments	% of Total
Noise Impacts	84	91.30%
Integrity of the natural gas lines & working with residents	1	1.09%
Request the FDOT buys whole parcel for a pond rather than just a strip	1	1.09%
Alternative system of access connecting County Line Road and I-275 near the apex	1	1.09%
Miscellaneous Comments or Requests for Information	5	5.43%
<b>Total</b>	<b>92</b>	<b>100%</b>

Approximately 91 percent of the comments concerned noise levels. Most of those commenting are residents within the subdivisions in Tampa Palms. Fifty residents from Tremont Village signed form letters stating they are negatively affected in terms of quality of life by the traffic noise on I-75 and wish to be considered in the noise barrier analysis. Many of these residents also wrote individual comments restating their concerns about noise.

As a result of the analysis, noise barriers have been determined to be cost reasonable at two locations, south of Fowler Avenue on the west side of I-75 and the Enclave Subdivision of Tampa Palms.

There were 18 requests to be added to the project mailing list and three requests for additional project information. Other miscellaneous comments are summarized below.

**Comment:** One person requested that the FDOT purchase her whole parcel of land for a pond rather than just a strip of this parcel.

**Response:** If the residual portion of the parcel is found to be an uneconomic remainder the FDOT may purchase the entire parcel.

**Comment:** One person suggested an alternative system of access roads connecting County Line Road and I-275 near the Apex. He also requested the FDOT coordinate with the homeowner's associations in the area.

**Response:** Due to the proximity of the I-275/I-75 Apex area, connections to County Line Road would adversely affect traffic operations on the I-275 and I-75 mainlines. Throughout the Study, the FDOT has conducted a public coordination process. Ongoing coordination will be maintained throughout the design and construction phases of the project.

**Comment:** One person commented on the newly installed natural gas lines in the project area and the effects on these lines due to increased volumes and weight on I-75. He is concerned about any hazardous conditions to the highway and nearby residents. Another concern is the amount of involvement the residents have in the process.

**Response:** The FDOT coordinates transportation improvement projects with utility providers to ensure that neither the roadway nor the utility are adversely affected. Throughout the study, the FDOT has conducted a public coordination process. Ongoing coordination will be maintained throughout the design and construction phases of the project.

## **9.18 Value Engineering**

A Value Engineering review is being conducted for the project.

## **9.19 Drainage**

The proposed drainage system will be designed to convey stormwater runoff away from the roadway. It is expected that the proposed roadway drainage system will consist of modifications to the existing rural system design which is composed of roadside swales, median drains and cross drains. All of the existing cross drains within the project limits will require lengthening or other modifications to accommodate the proposed improvements. All the runoff will be directed to stormwater management ponds located in the infield areas at the interchanges or outside the existing right-of-way in proximity to outfall locations. A Preliminary Pond Siting Report evaluated several alternative sites for each drainage basin. The pond site alternatives were ranked and a preferred pond site was selected for each basin. The subsequent design phase of this project will further assess the availability and suitability of the stormwater management pond locations.

The proposed storm water management facility design will include, at a minimum, the water quantity requirements for water quality effects as required by the SWFWMD Rules.

## **9.20 Bridge Analysis**

Generally, the bridge typical section along I-75 will consist of dual bridges, each widened to match the proposed roadway typical sections. Twelve-foot shoulders will be provided across bridges with at least three travel lanes, except the existing shoulder width will be used on the side of an existing bridge that is not widened.

Existing bridges with sub-standard minimum horizontal and/or vertical clearances will be widened without reducing existing clearances (see Table 4-7). Where existing bridges have excess horizontal and/or vertical clearances, the widened portions will not reduce clearances below the required minimum clearances specified in Chapter 2 of the FDOT Plans Preparation Manual (2003 edition). New bridges will also satisfy the required minimum horizontal and vertical clearances specified in Chapter 2 of the FDOT Plans Preparation Manual (2003 edition).

For a detailed discussion of the proposed bridge improvements, refer to Section 8.4.

## **9.21 Access Management**

I-75 is classified as Access Class 1, Limited Access Highway. The proposed improvements will not modify the existing interchange spacing.

## **9.22 Aesthetics and Landscaping**

Aesthetics of the proposed improvements to I-75 would be comparable to the existing conditions. Landscaping opportunities could be provided in clear zone areas within the existing right-of-way. However, no specific landscaping suggestions or requests have been received by the FDOT to date.

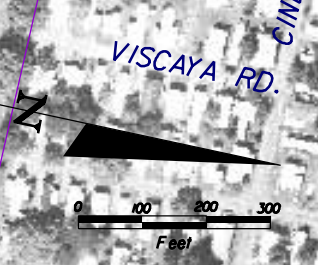
## **9.23 Section 4(f) Properties**

The proposed improvements for this project will not affect Section 4(f) properties.

## **10.0 CONCEPT PLANS**

**LEGEND**

- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- EXISTING L/A RIGHT-OF-WAY
- PROPOSED L/A RIGHT-OF-WAY
- PROPERTY LINES
- WETLAND BOUNDARY
- PROPOSED PAVEMENT
- PROPOSED BRIDGE WIDENING
- RECOMMENDED POND AND FLOODPLAIN COMPENSATION AREA
- POTENTIAL CONTAMINATION SITE
- POTENTIAL NOISE BARRIER



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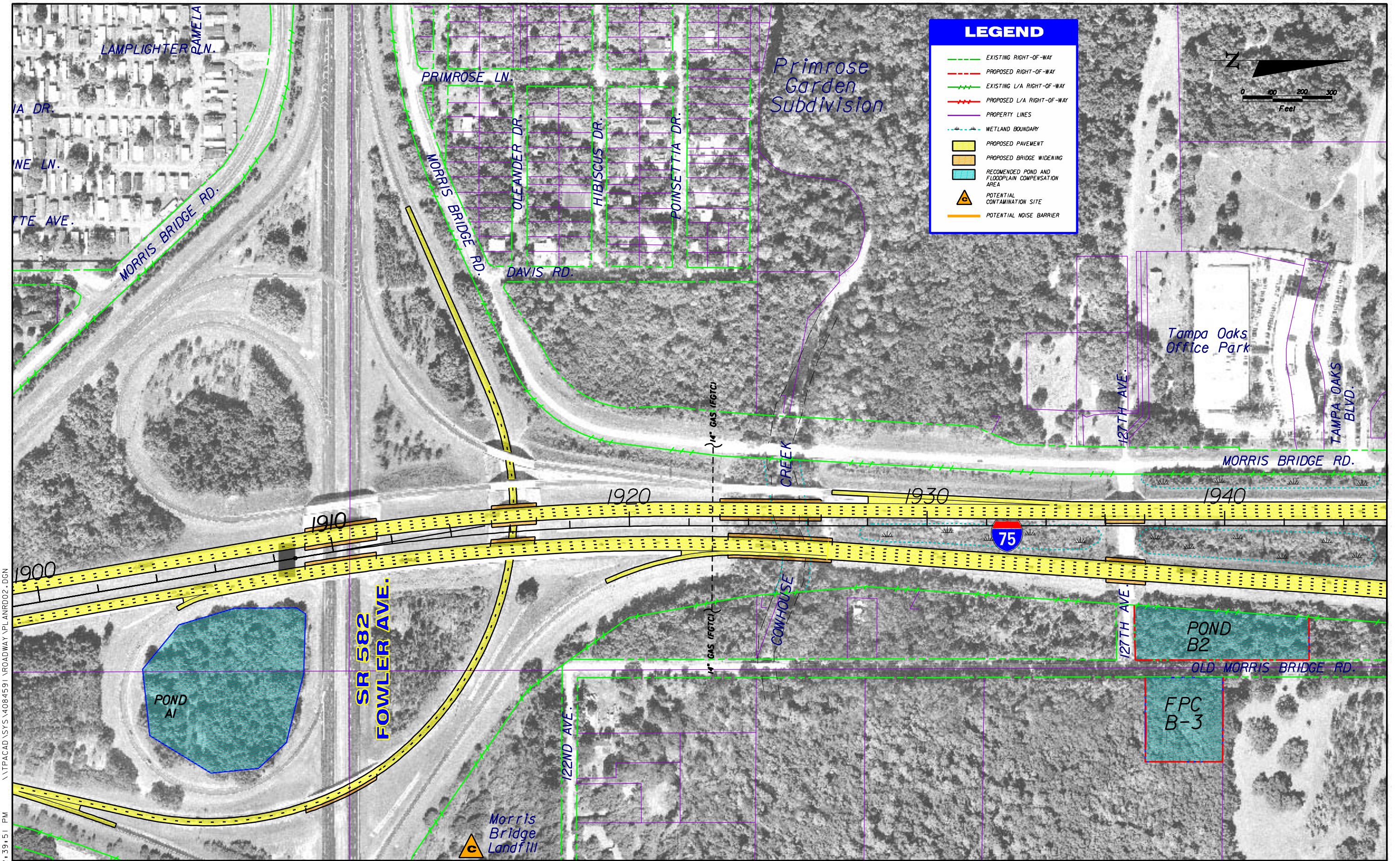
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		REEVALUATION STUDY FROM SOUTH OF SR 56 TO CR 54, PASCO CO. WPI SEG. No. 258736 I [F. A. P. No. NH-75-I (19) 275]	

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ROAD NO.	COUNTIES	FINANCIAL PROJECT ID
SR 93A	HILLSBOROUGH & PASCO	408459-1-22-01

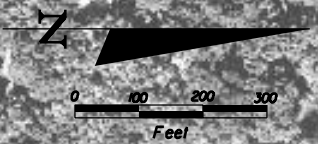
**CONCEPT PLANS I-75 (S.R. 93A)  
 FROM SOUTH OF FOWLER AVENUE  
 TO CR. 54**

SHEET NO.	1
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**LEGEND**

- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- - - EXISTING L/A RIGHT-OF-WAY
- - - PROPOSED L/A RIGHT-OF-WAY
- PROPERTY LINES
- WETLAND BOUNDARY
- PROPOSED PAVEMENT
- PROPOSED BRIDGE WIDENING
- RECOMMENDED POND AND FLOODPLAIN COMPENSATION AREA
- ▲ POTENTIAL CONTAMINATION SITE
- POTENTIAL NOISE BARRIER



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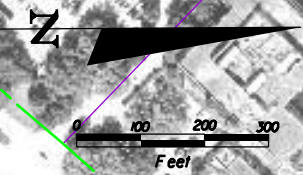
**CONCEPT PLANS I-75 (S.R. 93A)**  
**FROM SOUTH OF FOWLER AVENUE**  
**TO CR. 54**

SHEET NO.
2



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- PROPOSED RIGHT-OF-WAY
- EXISTING L/A RIGHT-OF-WAY
- PROPOSED L/A RIGHT-OF-WAY
- PROPERTY LINES
- WETLAND BOUNDARY
- PROPOSED PAVEMENT
- PROPOSED BRIDGE WIDENING
- RECOMMENDED POND AND FLOODPLAIN COMPENSATION AREA
- POTENTIAL CONTAMINATION SITE
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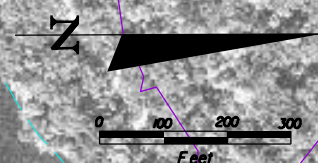
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 TO CR. 54**

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	PROPOSED L/A RIGHT-OF-WAY
	PROPERTY LINES
	WETLAND BOUNDARY
	PROPOSED PAVEMENT
	PROPOSED BRIDGE WIDENING
	RECOMMENDED POND AND FLOODPLAIN COMPENSATION AREA
	POTENTIAL CONTAMINATION SITE
	POTENTIAL NOISE BARRIER

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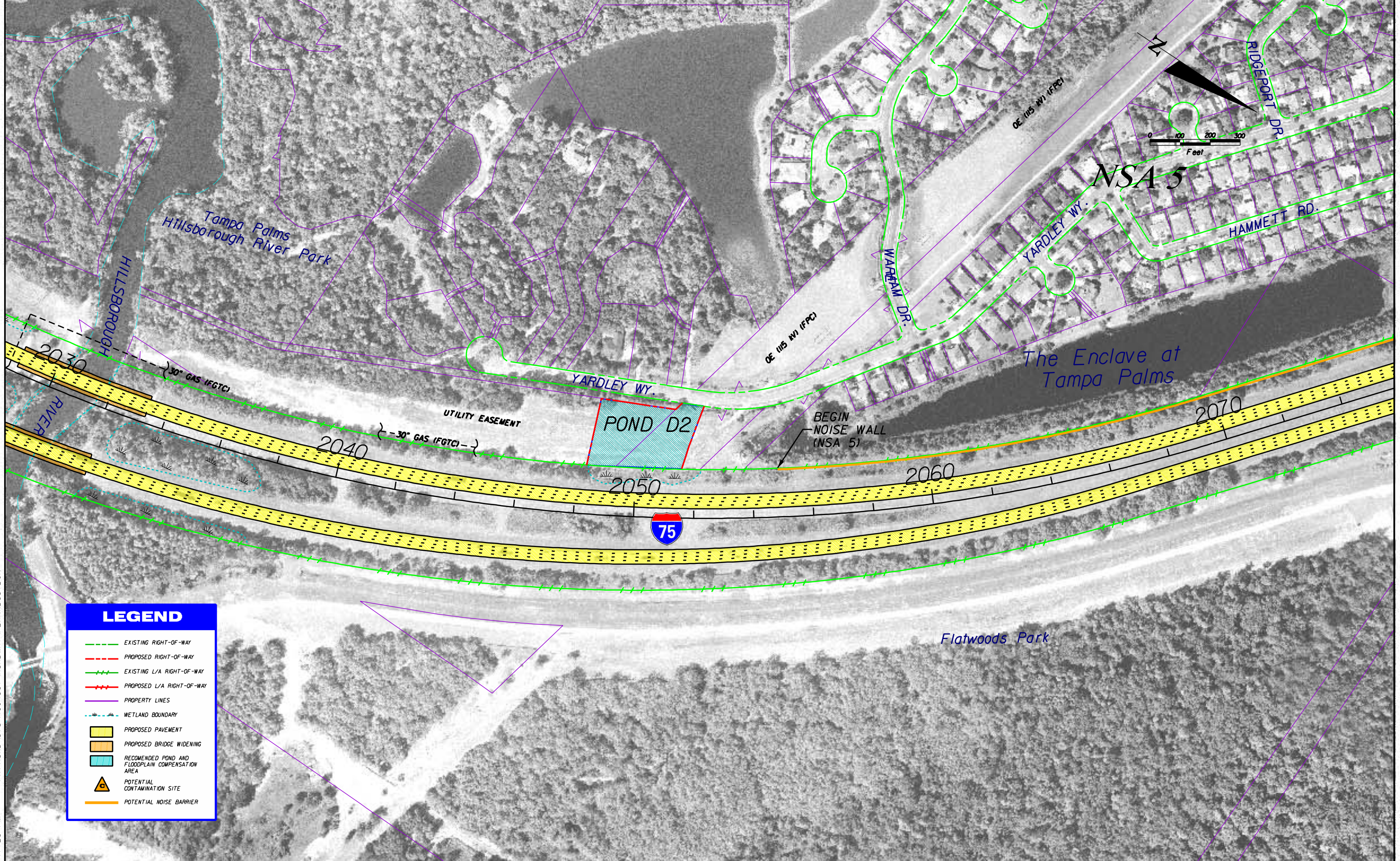
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 FROM SOUTH OF FOWLER AVENUE  
 TO CR. 54**

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**LEGEND**

- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- EXISTING L/A RIGHT-OF-WAY
- PROPOSED L/A RIGHT-OF-WAY
- PROPERTY LINES
- WETLAND BOUNDARY
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**CONCEPT PLANS I-75 (SR. 93A)  
FROM SOUTH OF FOWLER AVENUE  
TO CR. 54**

SHEET NO.  5
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**LEGEND**

- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- EXISTING L/A RIGHT-OF-WAY
- PROPOSED L/A RIGHT-OF-WAY
- PROPERTY LINES
- WETLAND BOUNDARY
- PROPOSED PAVEMENT
- PROPOSED BRIDGE WIDENING
- RECOMMENDED POND AND FLOODPLAIN COMPENSATION AREA
- ▲ POTENTIAL CONTAMINATION SITE
- POTENTIAL NOISE BARRIER

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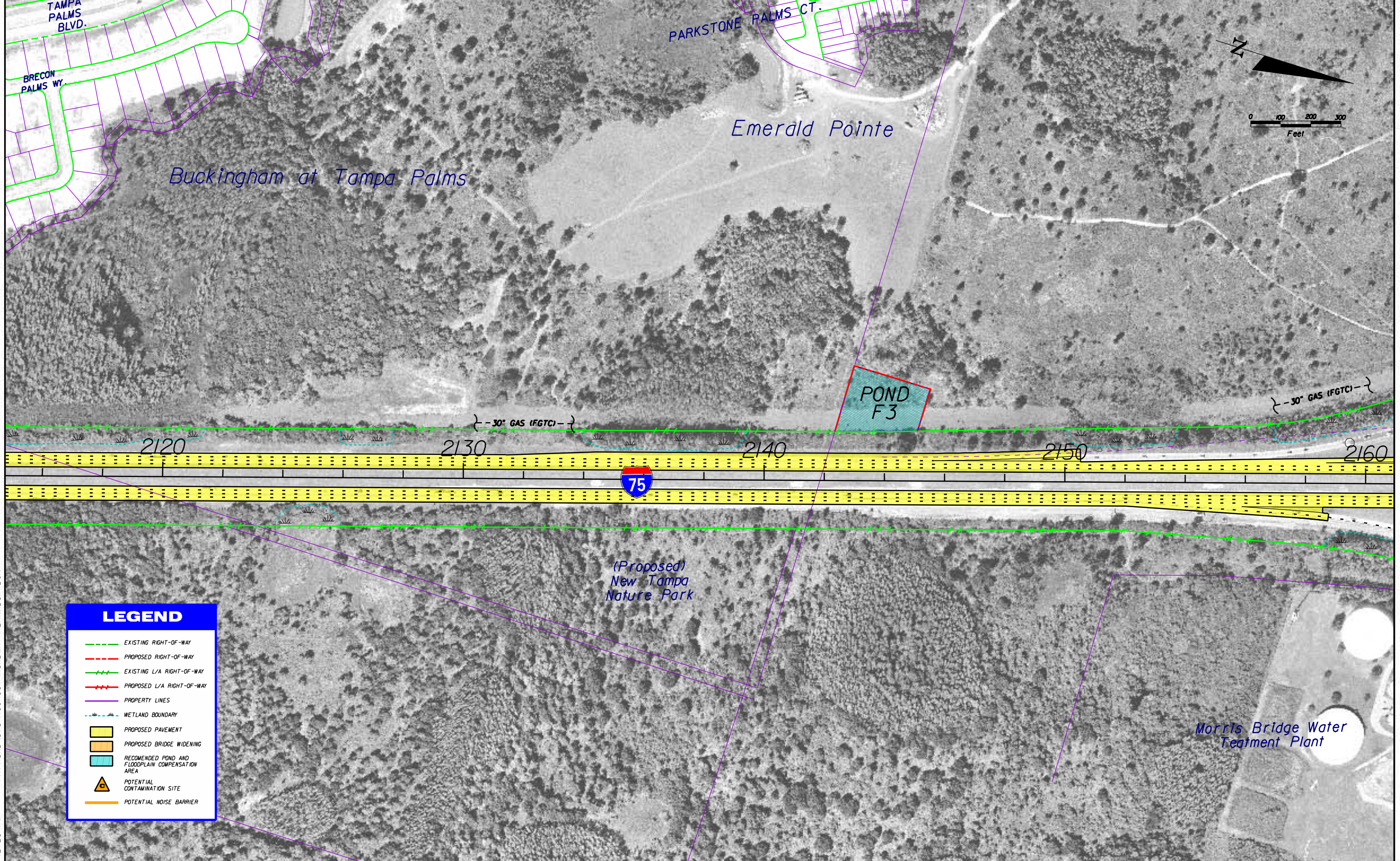
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				(RECOMMENDED ALTERNATIVE)			

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**CONCEPT PLANS I-75 (SR. 93A)**  
**FROM SOUTH OF FOWLER AVENUE**  
**TO CR. 54**

SHEET NO.	6
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**LEGEND**

- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- EXISTING L/A RIGHT-OF-WAY
- PROPOSED L/A RIGHT-OF-WAY
- PROPERTY LINES
- WETLAND BOUNDARY
- PROPOSED PAVEMENT
- PROPOSED BRIDGE WIDENING
- RECOMMENDED POND AND FLOODPLAIN COMPENSATION AREA
- ▲ POTENTIAL CONTAMINATION SITE
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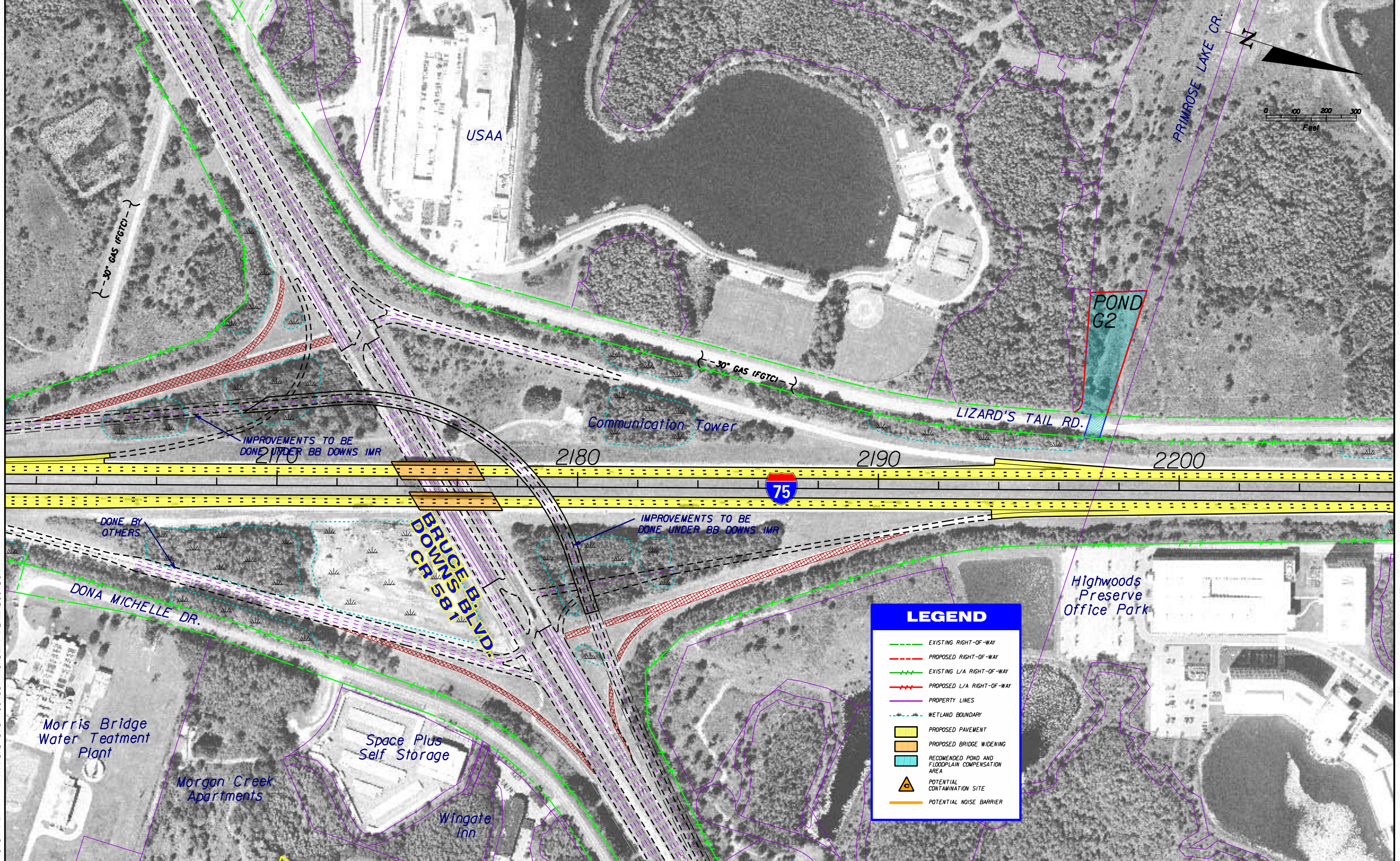


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TO CR. 54**

SHEET NO.	7
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**LEGEND**

- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- EXISTING L/A RIGHT-OF-WAY
- PROPOSED L/A RIGHT-OF-WAY
- PROPERTY LINES
- WETLAND BOUNDARY
- PROPOSED PAVEMENT
- PROPOSED BRIDGE WIDENING
- RECOMMENDED POND AND FLOODPLAIN COMPENSATION AREA
- ▲ POTENTIAL CONTAMINATION SITE
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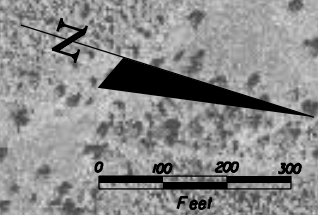
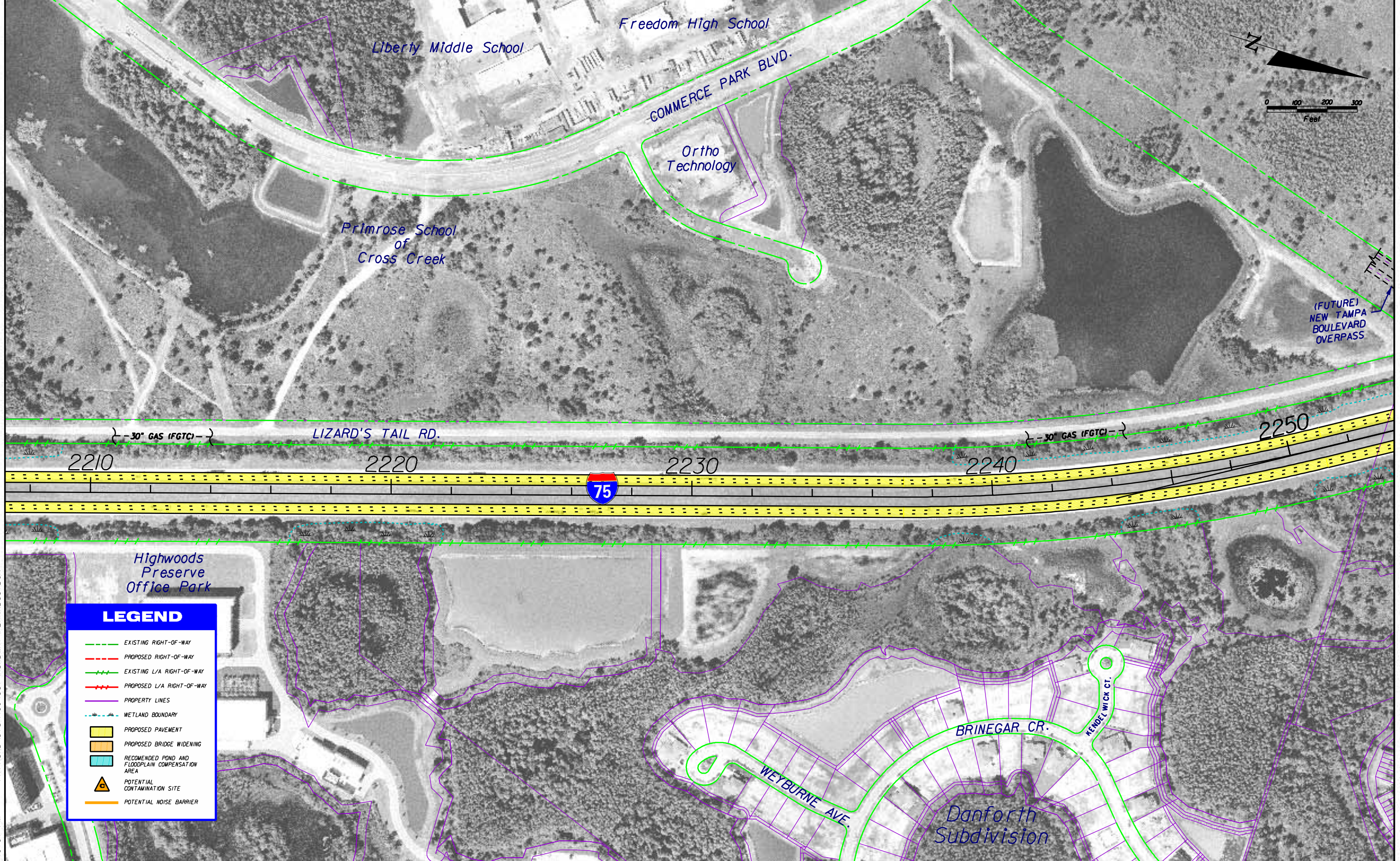
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**CONCEPT PLANS I-75 (S.R. 93A)**  
**FROM SOUTH OF FOWLER AVENUE**  
**TO CR. 54**

SHEET NO.  
8



**LEGEND**

- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- EXISTING L/A RIGHT-OF-WAY
- PROPOSED L/A RIGHT-OF-WAY
- PROPERTY LINES
- WETLAND BOUNDARY
- PROPOSED PAVEMENT
- PROPOSED BRIDGE WIDENING
- RECOMMENDED POND AND FLOODPLAIN COMPENSATION AREA
- ▲ POTENTIAL CONTAMINATION SITE
- POTENTIAL NOISE BARRIER

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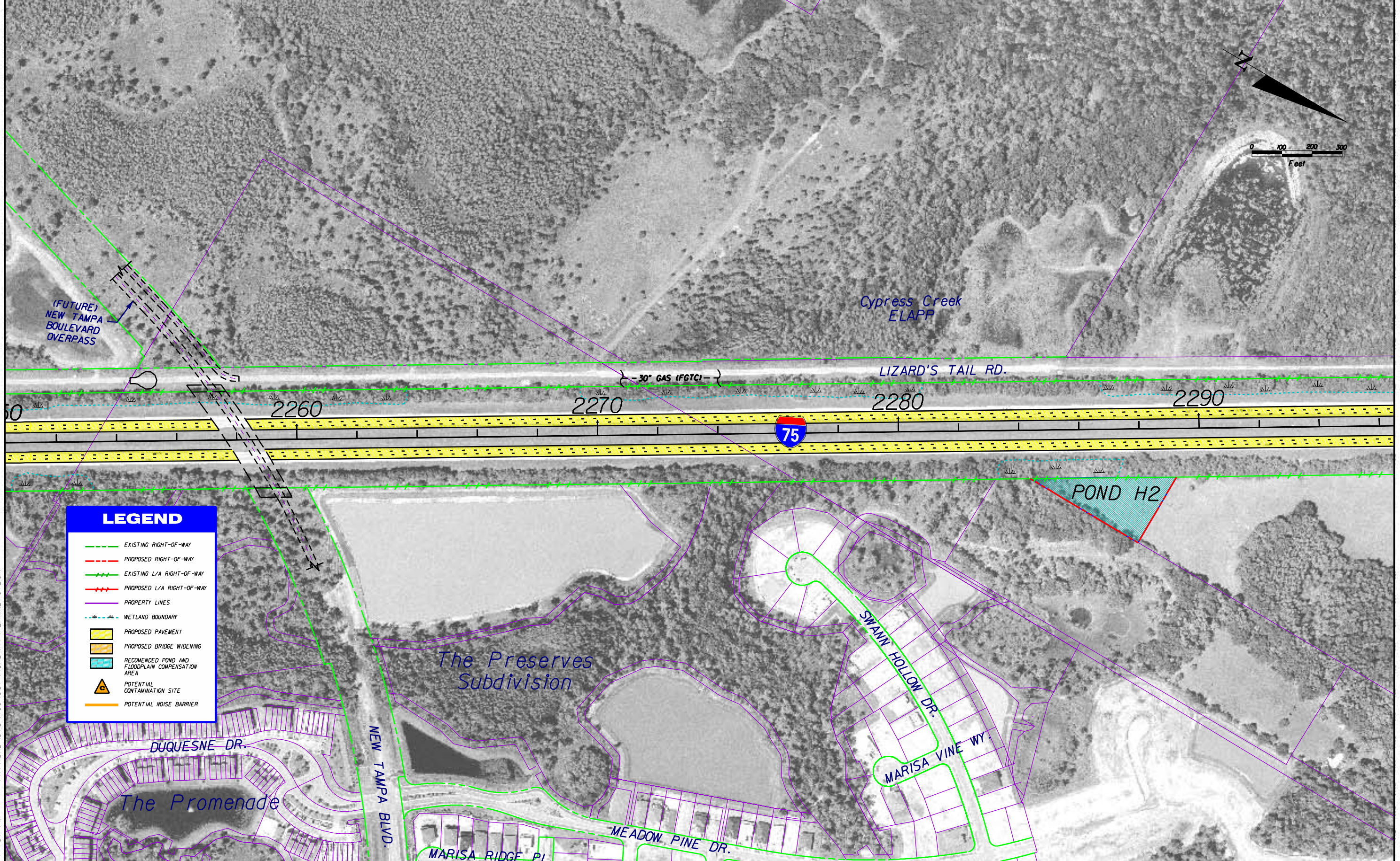
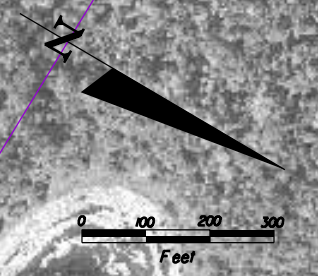
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**FROM SOUTH OF FOWLER AVENUE**  
**TO CR. 54**

SHEET NO.	9
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**LEGEND**

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- PROPOSED RIGHT-OF-WAY
- EXISTING L/A RIGHT-OF-WAY
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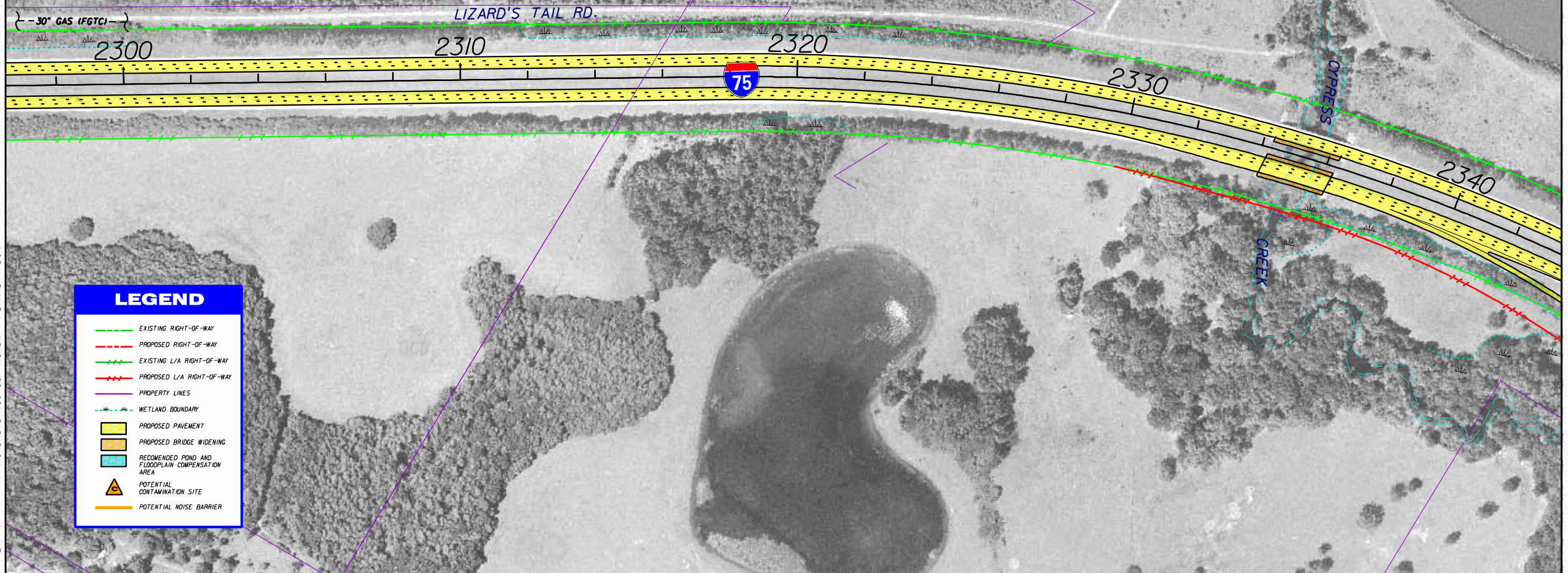
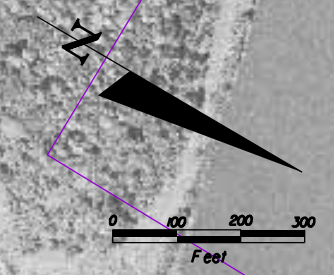
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SR 93A	HILLSBOROUGH & PASCO	408459-1-22-01

**CONCEPT PLANS I-75 (S.R. 93A)**  
**FROM SOUTH OF FOWLER AVENUE**  
**TO CR. 54**

SHEET NO.	10
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**LEGEND**

- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- EXISTING L/A RIGHT-OF-WAY
- PROPOSED L/A RIGHT-OF-WAY
- PROPERTY LINES
- WETLAND BOUNDARY
- PROPOSED PAVEMENT
- PROPOSED BRIDGE WIDENING
- RECOMMENDED POND AND FLOODPLAIN COMPENSATION AREA
- C POTENTIAL CONTAMINATION SITE
- POTENTIAL NOISE BARRIER

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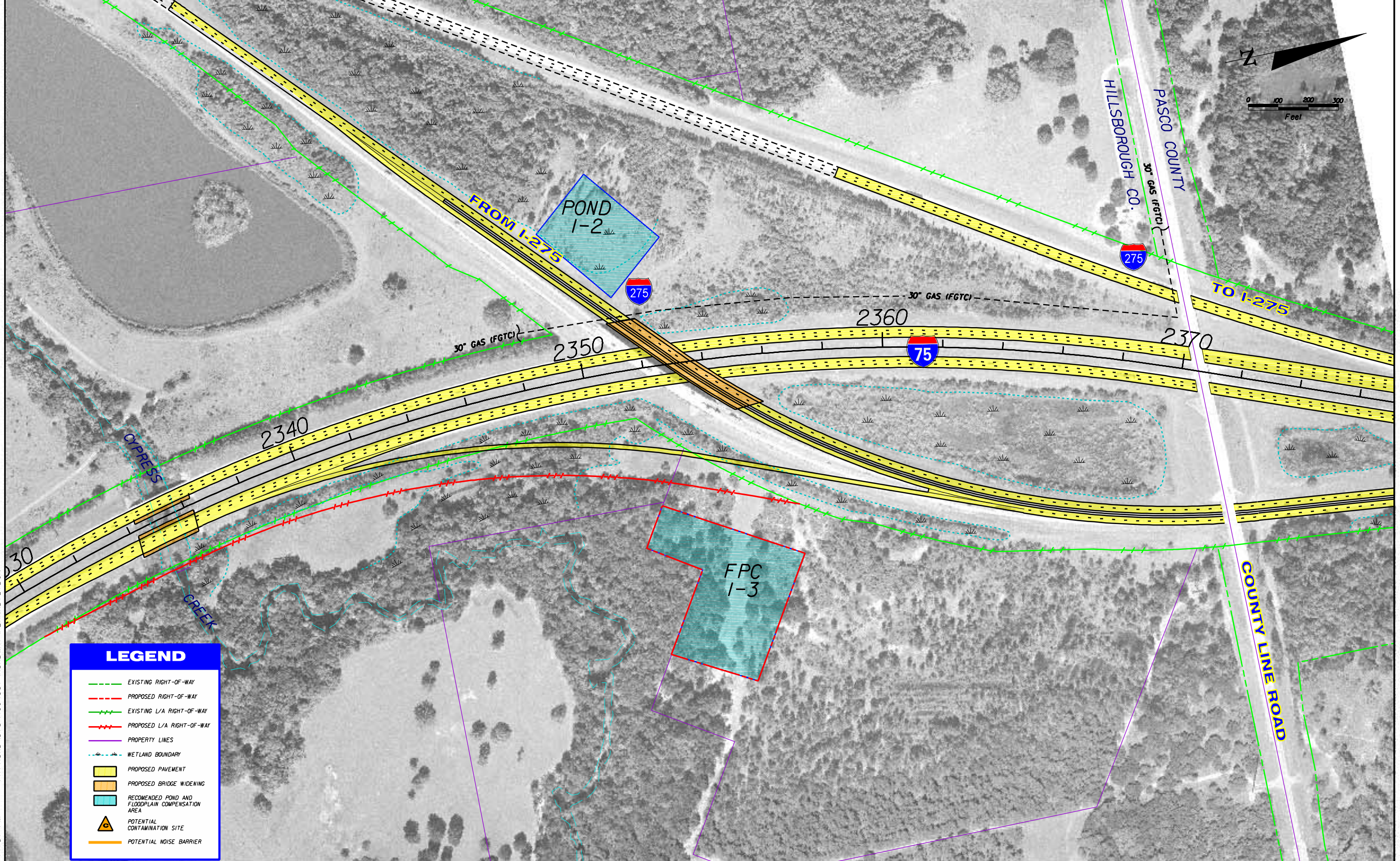
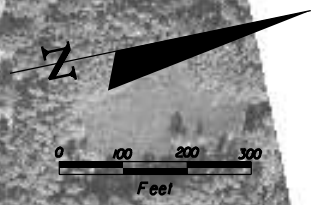
REVISIONS			
DATE	BY	DESCRIPTION	DATE
3-2002		PDR&E STUDY SOUTH OF FOWLER AVE., HILLSBOROUGH CO., TO SOUTH OF SR 96, PASCO CO. WPI SEG. No. 408459 I [F. A. P. No. 075I 105I]	1-12-2004
		REEVALUATION STUDY FROM SOUTH OF SR 56 TO CR 54, PASCO CO. WPI SEG. No. 258736 I [F. A. P. No. NH-75-I (9I) 275]	

**Parsons Brinckerhoff**  
**Quade & Douglas, Inc.**  
 5405 West Cypress St., Suite 300  
 Tampa, Florida 33607  
 ENGINEERING BUSINESS  
 NUMBER: E800001462

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTIES	FINANCIAL PROJECT ID
SR 93A	HILLSBOROUGH & PASCO	408459-1-22-01

**CONCEPT PLANS I-75 (S.R. 93A)  
FROM SOUTH OF FOWLER AVENUE  
TO CR. 54**

SHEET NO.
11



LEGEND	
	EXISTING RIGHT-OF-WAY
	PROPOSED RIGHT-OF-WAY
	EXISTING L/A RIGHT-OF-WAY
	PROPOSED L/A RIGHT-OF-WAY
	PROPERTY LINES
	WETLAND BOUNDARY
	PROPOSED PAVEMENT
	PROPOSED BRIDGE WIDENING
	RECOMMENDED POND AND FLOODPLAIN COMPENSATION AREA
	POTENTIAL CONTAMINATION SITE
	POTENTIAL NOISE BARRIER

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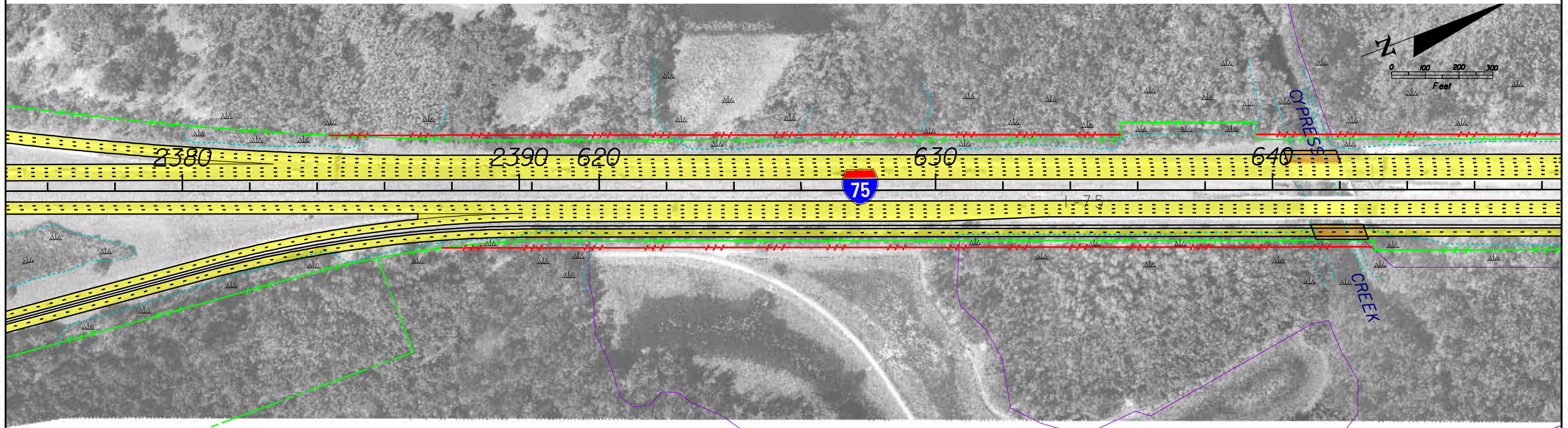
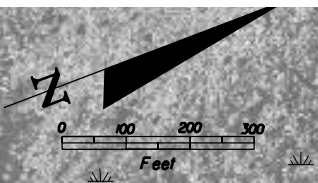
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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
3-2002		PDR&E STUDY SOUTH OF FOWLER AVE., HILLSBOROUGH CO., TO SOUTH OF SR 96, PASCO CO. WPI SEG. No. 408459 I [F. A. P. No. 075I 105I]	1-12-2004		DATE OF PHOTOGRAPHY DATE OF FINAL FIELD REVIEW  (RECOMMENDED ALTERNATIVE)
		REEVALUATION STUDY FROM SOUTH OF SR 56 TO CR 54, PASCO CO. WPI SEG. No. 258736 I [F. A. P. No. NH-75-I (19) 275]			

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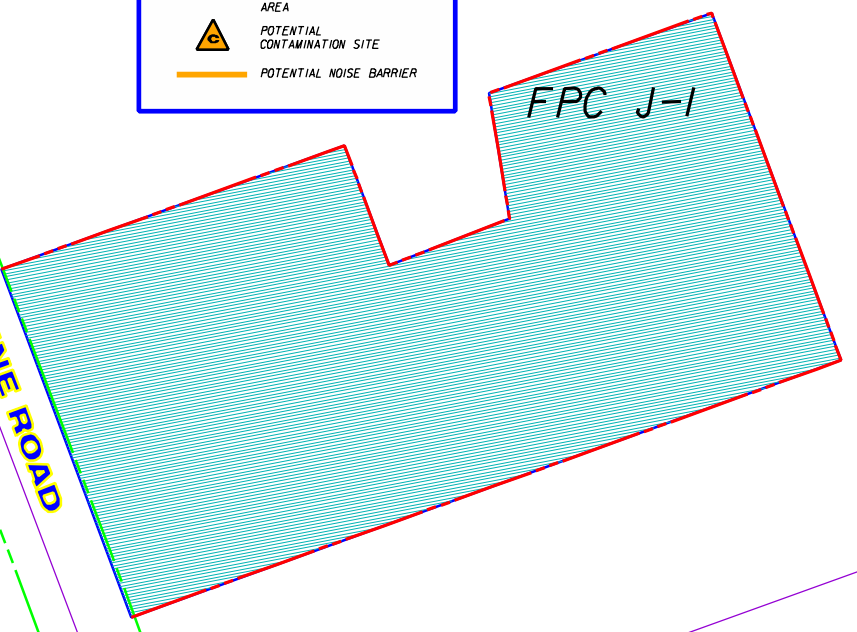
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTIES	FINANCIAL PROJECT ID
SR 93A	HILLSBOROUGH & PASCO	408459-1-22-01

**CONCEPT PLANS I-75 (SR. 93A)  
 FROM SOUTH OF FOWLER AVENUE  
 TO CR. 54**

SHEET NO.	12
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LEGEND	
	EXISTING RIGHT-OF-WAY
	PROPOSED RIGHT-OF-WAY
	EXISTING L/A RIGHT-OF-WAY
	PROPOSED L/A RIGHT-OF-WAY
	PROPERTY LINES
	WETLAND BOUNDARY
	PROPOSED PAVEMENT
	PROPOSED BRIDGE WIDENING
	RECOMMENDED POND AND FLOODPLAIN COMPENSATION AREA
	POTENTIAL CONTAMINATION SITE
	POTENTIAL NOISE BARRIER



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REVISIONS					
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		REEVALUATION STUDY FROM SOUTH OF SR 56 TO CR 54, PASCO CO. WPI SEG. No. 258736 1 [F. A. P. No. NH-75-1 (19) 275]	1-12-2004		DATE OF FINAL FIELD REVIEW
(RECOMMENDED ALTERNATIVE)					

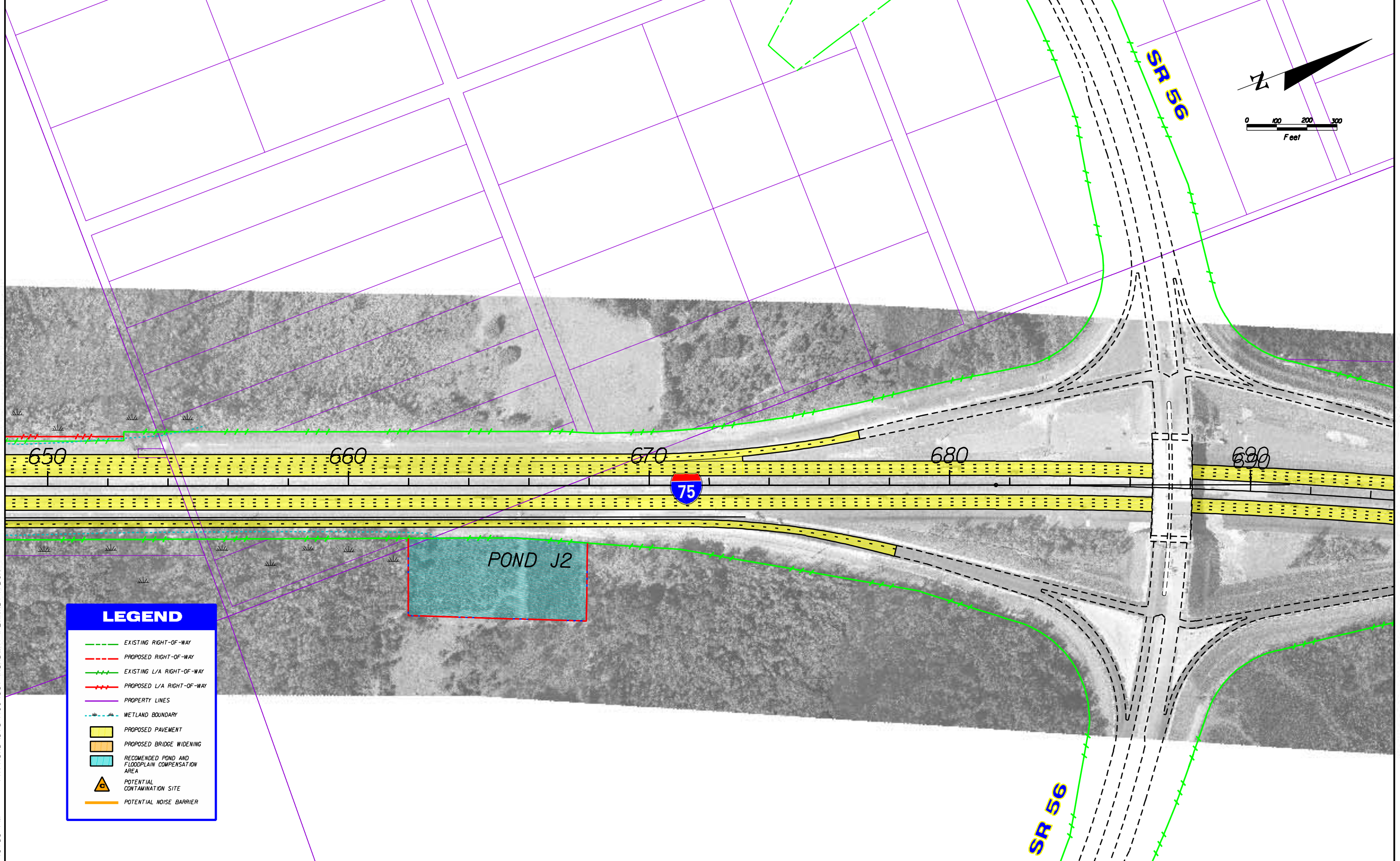
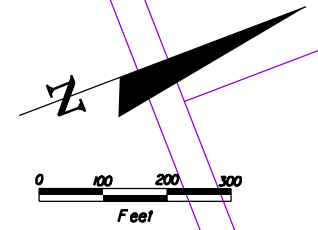


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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTIES	FINANCIAL PROJECT ID
SR 93A	HILLSBOROUGH & PASCO	408459-1-22-01

**CONCEPT PLANS I-75 (S.R. 93A)  
FROM SOUTH OF FOWLER AVENUE  
TO CR. 54**

SHEET NO.	13
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**LEGEND**

- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- EXISTING L/A RIGHT-OF-WAY
- PROPOSED L/A RIGHT-OF-WAY
- PROPERTY LINES
- WETLAND BOUNDARY
- PROPOSED PAVEMENT
- PROPOSED BRIDGE WIDENING
- RECOMMENDED POND AND FLOODPLAIN COMPENSATION AREA
- ▲ POTENTIAL CONTAMINATION SITE
- POTENTIAL NOISE BARRIER

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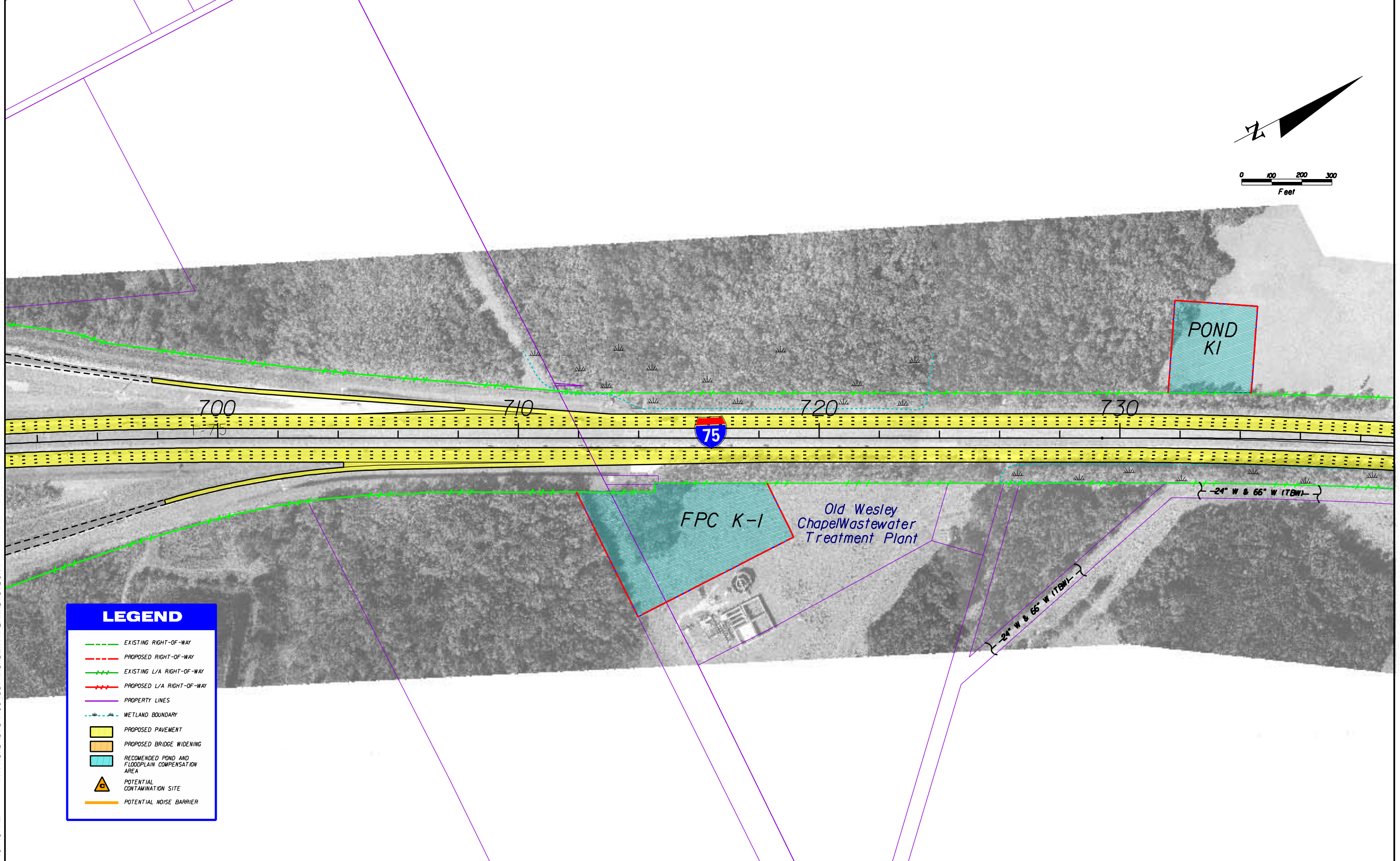
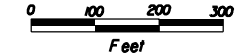
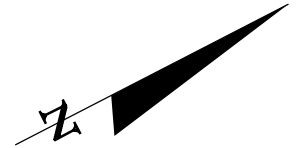
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DATE	BY	DESCRIPTION	
3-2002		PDR&E STUDY SOUTH OF FOWLER AVE., HILLSBOROUGH CO., TO SOUTH OF SR 56, PASCO CO. WPI SEG. No. 408459 I [F. A. P. No. 075I 105I]	
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTIES	FINANCIAL PROJECT ID
SR 93A	HILLSBOROUGH & PASCO	408459-1-22-01

**CONCEPT PLANS I-75 (S.R. 93A)**  
**FROM SOUTH OF FOWLER AVENUE**  
**TO CR. 54**

SHEET NO.  14
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LEGEND	
	EXISTING RIGHT-OF-WAY
	PROPOSED RIGHT-OF-WAY
	EXISTING L/A RIGHT-OF-WAY
	PROPOSED L/A RIGHT-OF-WAY
	PROPERTY LINES
	WETLAND BOUNDARY
	PROPOSED PAVEMENT
	PROPOSED BRIDGE WIDENING
	RECOMMENDED POND AND FLOODPLAIN COMPENSATION AREA
	POTENTIAL CONTAMINATION SITE
	POTENTIAL NOISE BARRIER

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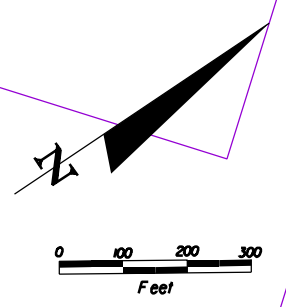
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DATE	BY	DESCRIPTION	
3-2002		PDR&E STUDY SOUTH OF FOWLER AVE., HILLSBOROUGH CO., TO SOUTH OF SR 96, PASCO CO. WPI SEG. No. 408459 1 [F. A. P. No. 0751 1051]	
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTIES	FINANCIAL PROJECT ID
SR 93A	HILLSBOROUGH & PASCO	408459-1-22-01

**CONCEPT PLANS I-75 (S.R. 93A)  
 FROM SOUTH OF FOWLER AVENUE  
 TO C.R. 54**

SHEET NO.	15
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(Former FDOT  
Borrow Pit)

North Tampa  
Aero Park

Southbound  
Rest Area

Northbound  
Rest Area

Seven Oaks

STILL BROOK DR.  
SHOREGRASS DR.  
EDENFIELD LN.

FLIGHT  
PATH  
FLIGHT  
APPROACH LIMITS

740 750 760 770 780

D = 0°-20'-0"  
R = 17188.5'  
L = 1982.52'

-24° W & 66° W (TBN)

24° W & 66° W (TBN)



**LEGEND**

- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- EXISTING L/A RIGHT-OF-WAY
- PROPOSED L/A RIGHT-OF-WAY
- PROPERTY LINES
- WETLAND BOUNDARY
- PROPOSED PAVEMENT
- PROPOSED BRIDGE WIDENING
- RECOMMENDED POND AND FLOODPLAIN COMPENSATION AREA
- ▲ POTENTIAL CONTAMINATION SITE
- POTENTIAL NOISE BARRIER

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
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		REEVALUATION STUDY FROM SOUTH OF SR 56 TO CR 54, PASCO CO. WPI SEG. No. 258736 I [F. A. P. No. NH-75-1 (91) 275]			



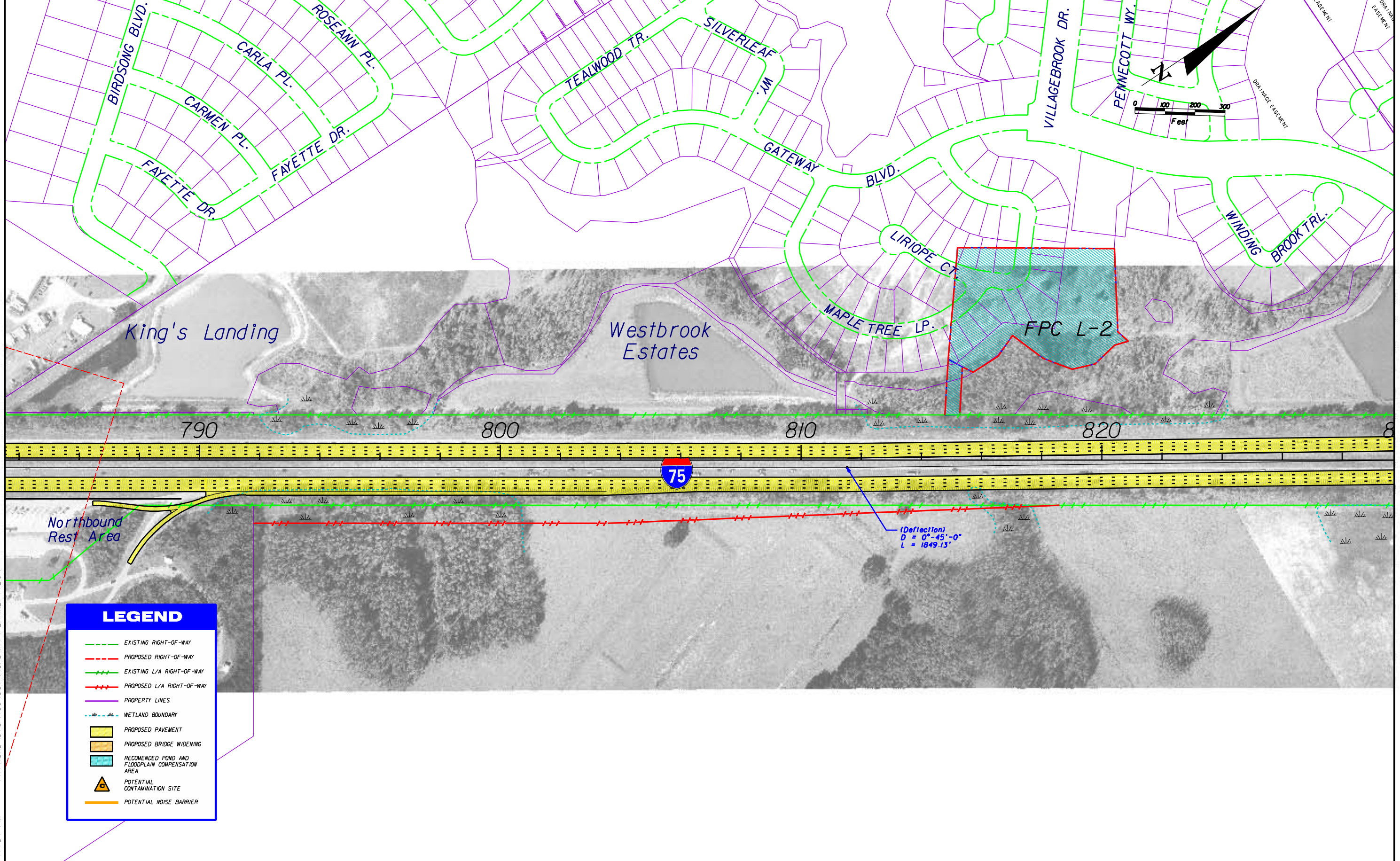
**Parsons Brinckerhoff**  
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTIES	FINANCIAL PROJECT ID
SR 93A	HILLSBOROUGH & PASCO	408459-1-22-01

**CONCEPT PLANS I-75 (SR. 93A)**  
**FROM SOUTH OF FOWLER AVENUE**  
**TO CR. 54**

SHEET NO.  
16

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LEGEND	
	EXISTING RIGHT-OF-WAY
	PROPOSED RIGHT-OF-WAY
	EXISTING L/A RIGHT-OF-WAY
	PROPOSED L/A RIGHT-OF-WAY
	PROPERTY LINES
	WETLAND BOUNDARY
	PROPOSED PAVEMENT
	PROPOSED BRIDGE WIDENING
	RECOMMENDED POND AND FLOODPLAIN COMPENSATION AREA
	POTENTIAL CONTAMINATION SITE
	POTENTIAL NOISE BARRIER

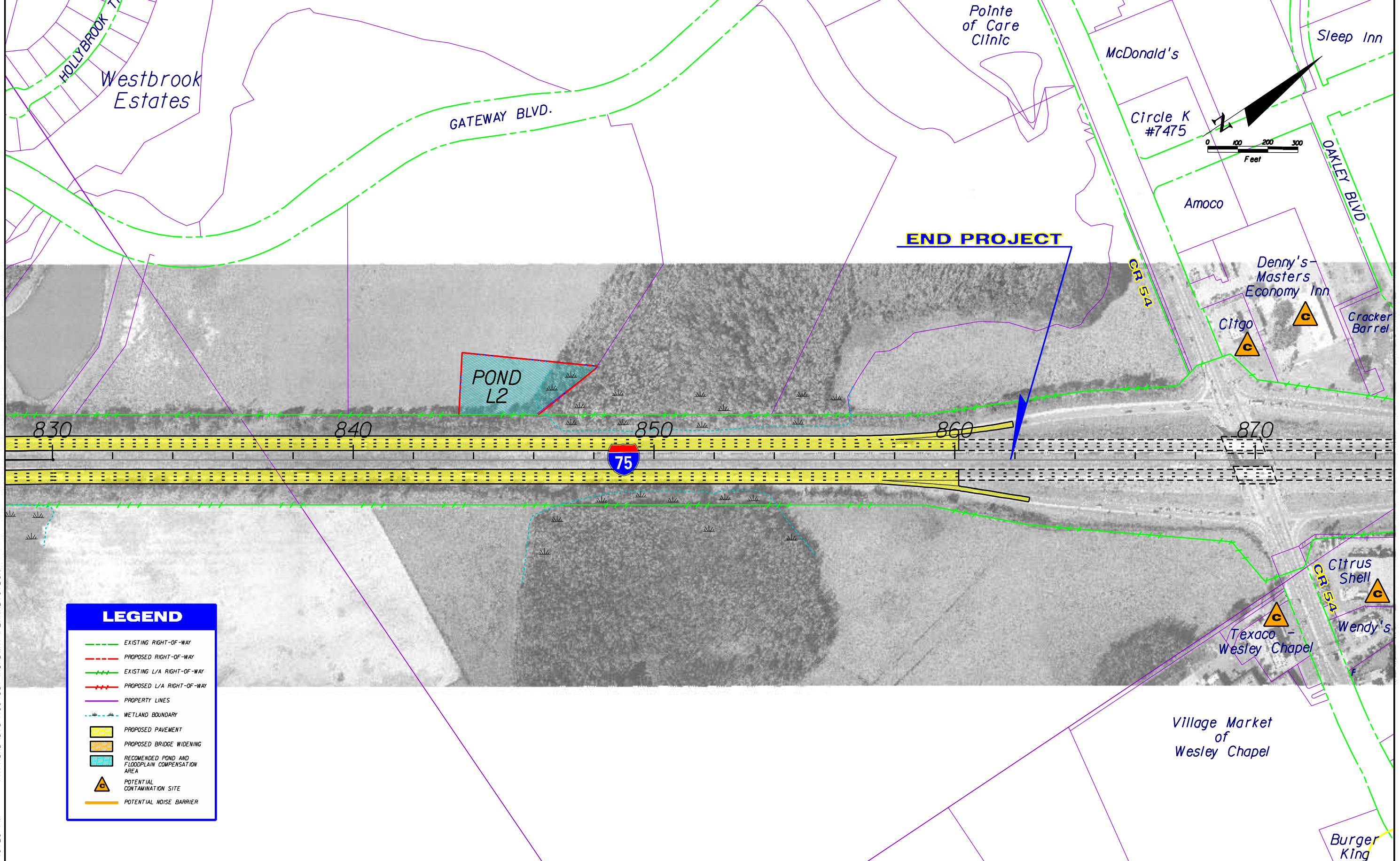
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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
		PDR&E STUDY SOUTH OF FOWLER AVE., HILLSBOROUGH CO., TO SOUTH OF SR 96, PASCO CO. WPI SEG. No. 408459 I [F. A. P. No. 0751 1051]	3-2002		DATE OF PHOTOGRAPHY
		REEVALUATION STUDY FROM SOUTH OF SR 56 TO CR 54, PASCO CO. WPI SEG. No. 258736 I [F. A. P. No. NH-75-I (19) 275]	1-12-2004		DATE OF FINAL FIELD REVIEW
(RECOMMENDED ALTERNATIVE)					

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 Tampa, Florida 33607  
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTIES	FINANCIAL PROJECT ID
SR 93A	HILLSBOROUGH & PASCO	408459-1-22-01

**CONCEPT PLANS I-75 (SR. 93A)**  
**FROM SOUTH OF FOWLER AVENUE**  
**TO CR. 54**

SHEET NO.	17
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**LEGEND**

- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- EXISTING L/A RIGHT-OF-WAY
- PROPOSED L/A RIGHT-OF-WAY
- PROPERTY LINES
- WETLAND BOUNDARY
- PROPOSED PAVEMENT
- PROPOSED BRIDGE WIDENING
- RECOMMENDED POND AND FLOODPLAIN COMPENSATION AREA
- ▲ POTENTIAL CONTAMINATION SITE
- POTENTIAL NOISE BARRIER

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REVISIONS					
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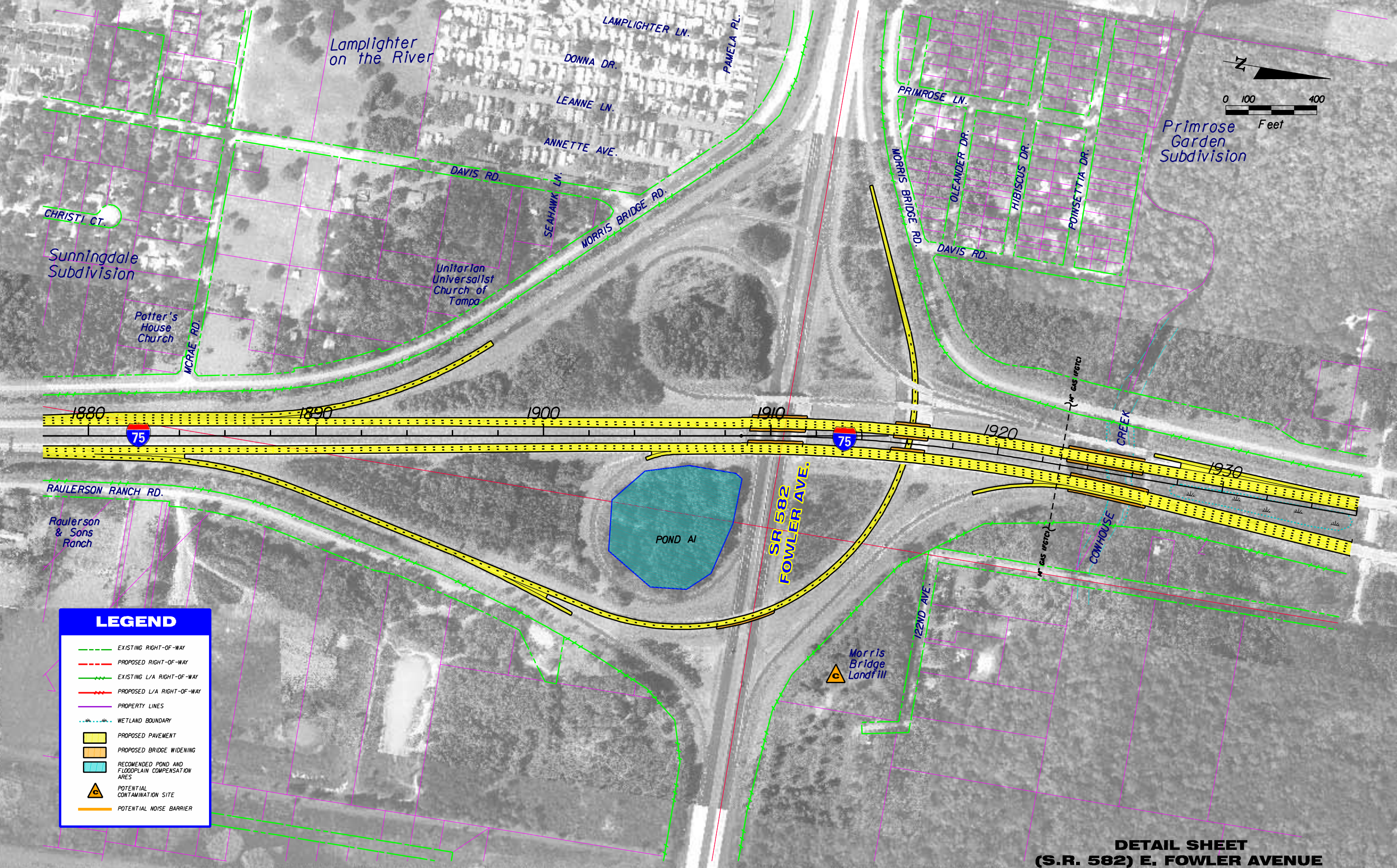
<b>STATE OF FLORIDA</b> <b>DEPARTMENT OF TRANSPORTATION</b>		
ROAD NO.	COUNTIES	FINANCIAL PROJECT ID
SR 93A	HILLSBOROUGH & PASCO	408459-1-22-01

**CONCEPT PLANS I-75 (SR. 93A)**  
**FROM SOUTH OF FOWLER AVENUE**  
**TO CR. 54**

SHEET NO.
18



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**LEGEND**

- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- EXISTING L/A RIGHT-OF-WAY
- PROPOSED L/A RIGHT-OF-WAY
- PROPERTY LINES
- WETLAND BOUNDARY
- PROPOSED PAVEMENT
- PROPOSED BRIDGE WIDENING
- RECOMMENDED POND AND FLOODPLAIN COMPENSATION AREAS
- ▲ POTENTIAL CONTAMINATION SITE
- POTENTIAL NOISE BARRIER

**DETAIL SHEET  
(S.R. 582) E. FOWLER AVENUE**

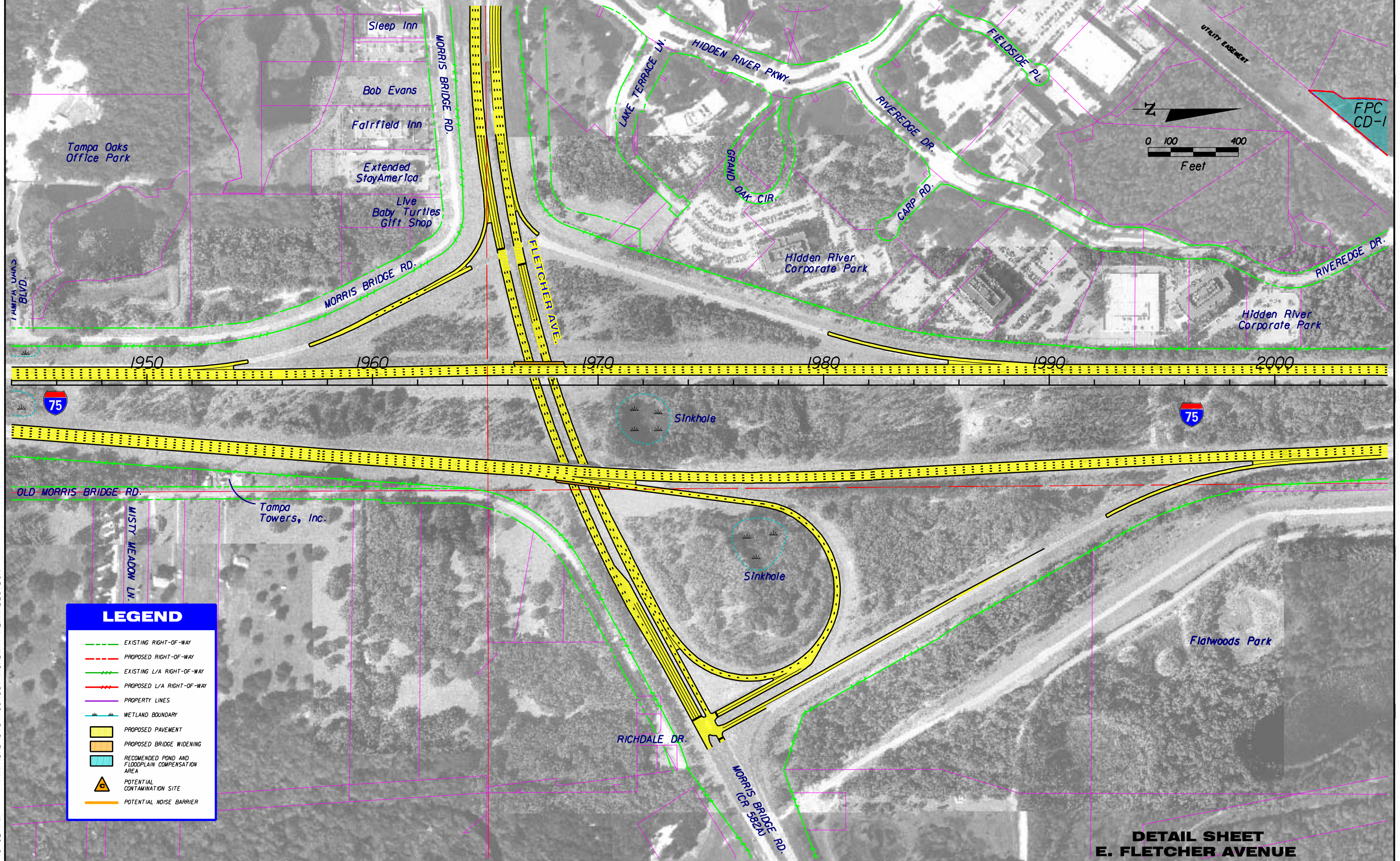
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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
3-2002		PDR&E STUDY SOUTH OF FOWLER AVE., HILLSBOROUGH CO., TO SOUTH OF SR 56, PASCO CO. WPI SEG. No. 408459 I [F. A. P. No. 0751 1051]	1-12-2004		DATE OF PHOTOGRAPHY DATE OF FINAL FIELD REVIEW  (RECOMMENDED ALTERNATIVE)
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTIES	FINANCIAL PROJECT ID
SR 93A	HILLSBOROUGH & PASCO	408459-1-22-01

**CONCEPT PLANS I-75 (S.R. 93A)  
FROM SOUTH OF FOWLER AVENUE  
TO CR. 54**

SHEET NO.  
  
**19**



**DETAIL SHEET  
E. FLETCHER AVENUE**

**CONCEPT PLANS I-75 (S.R. 93A)  
FROM SOUTH OF FOWLER AVENUE  
TO C.R. 54**

SHEET NO.  
**20**

LEGEND	
	EXISTING RIGHT-OF-WAY
	PROPOSED RIGHT-OF-WAY
	EXISTING L/A RIGHT-OF-WAY
	PROPOSED L/A RIGHT-OF-WAY
	PROPERTY LINES
	WETLAND BOUNDARY
	PROPOSED PAVEMENT
	PROPOSED BRIDGE WIDENING
	RECOMMENDED POND AND FLOODPLAIN COMPENSATION AREA
	POTENTIAL CONTAMINATION SITE
	POTENTIAL NOISE BARRIER

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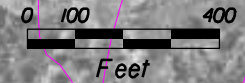
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTIES	FINANCIAL PROJECT ID
SR 93A	HILLSBOROUGH & PASCO	408459-1-22-01

Emerald Pointe

7-Eleven

USAA

PRIMROSE LAKE CR.



POND G2

LIZARD'S TAIL RD.

Communication Tower

2150

2160

2170

2180

2190

2200



DONA MICHELLE DR.

BRUCE B. DOWNS BLVD.

Highwoods Preserve Office Park

(Proposed) New Tampa Nature Park

Morris Bridge Water Treatment Plant

Morgan Creek Apartments

Space Plus Self Storage

Wingate Inn

Big Bear Crossing Shopping Center

Hunter's Key Apartments

Kauffman Tire

Sherwin Williams

Shell/Taco Bell

Lee Roy Selmons

Krispy Kreme

**DETAIL SHEET (CR 581)  
BRUCE B. DOWNS BOULEVARD**

**LEGEND**

- EXISTING RIGHT-OF-WAY
- - - PROPOSED RIGHT-OF-WAY
- EXISTING L/A RIGHT-OF-WAY
- - - PROPOSED L/A RIGHT-OF-WAY
- PROPERTY LINES
- WETLAND BOUNDARY
- PROPOSED PAVEMENT
- PROPOSED BRIDGE WIDENING
- RECOMMENDED POND AND FLOODPLAIN COMPENSATION AREA
- ▲ POTENTIAL CONTAMINATION SITE
- POTENTIAL NOISE BARRIER

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PDR&E STUDY SOUTH OF FOWLER AVE., HILLSBOROUGH CO., TO SOUTH OF SR 56, PASCO CO. WPI SEG. No. 408459 I [F. A. P. No. 075I 105I]		DATE OF PHOTOGRAPHY DATE OF FINAL FIELD REVIEW (RECOMMENDED ALTERNATIVE)	
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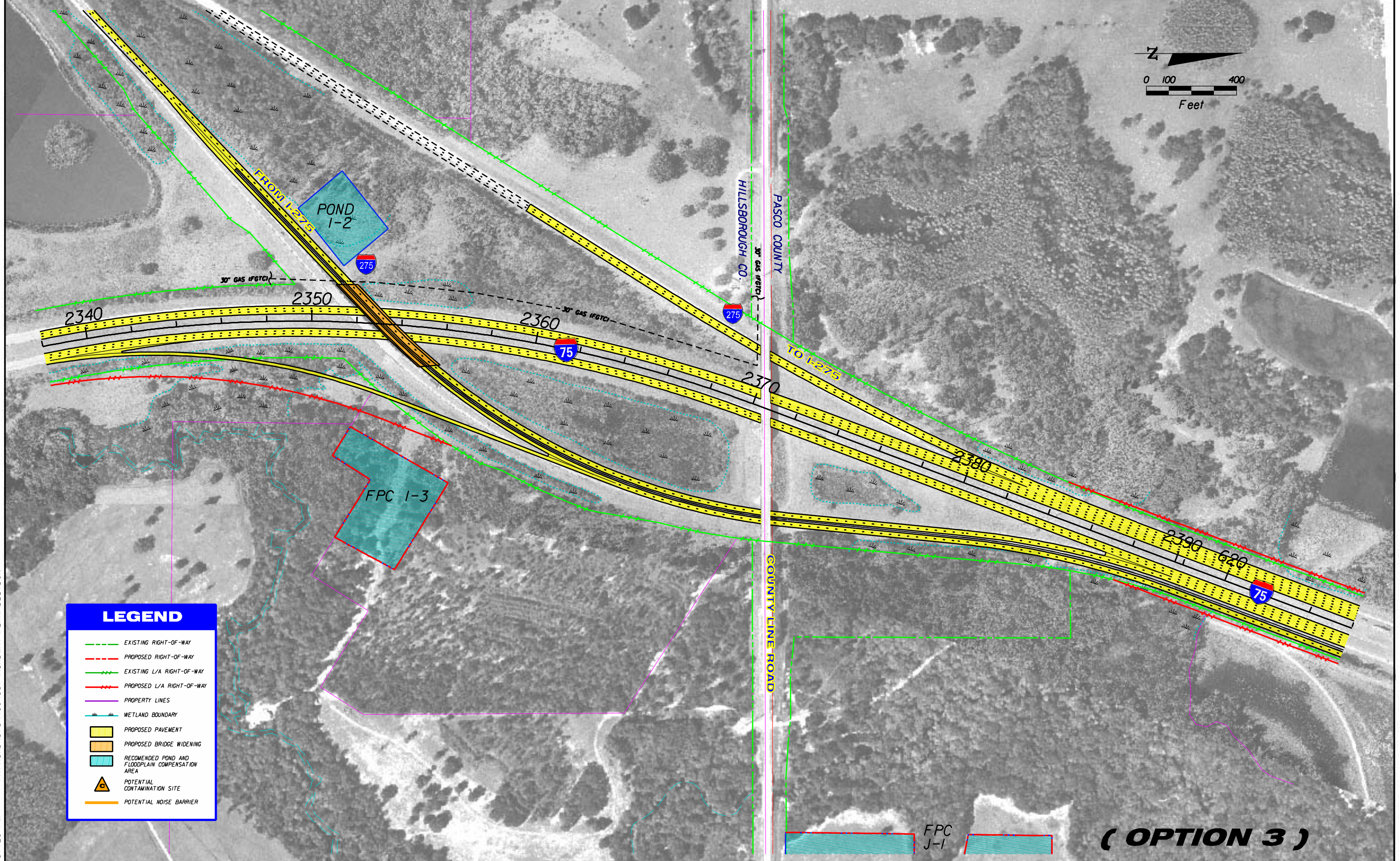
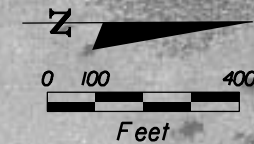


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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTIES	FINANCIAL PROJECT ID
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**CONCEPT PLANS I-75 (S.R. 93A)  
FROM SOUTH OF FOWLER AVENUE  
TO CR. 54**

SHEET NO.  
**21**



LEGEND	
	EXISTING RIGHT-OF-WAY
	PROPOSED RIGHT-OF-WAY
	EXISTING L/A RIGHT-OF-WAY
	PROPOSED L/A RIGHT-OF-WAY
	PROPERTY LINES
	WETLAND BOUNDARY
	PROPOSED PAVEMENT
	PROPOSED BRIDGE WIDENING
	RECOMMENDED POND AND FLOODPLAIN COMPENSATION AREA
	POTENTIAL CONTAMINATION SITE
	POTENTIAL NOISE BARRIER

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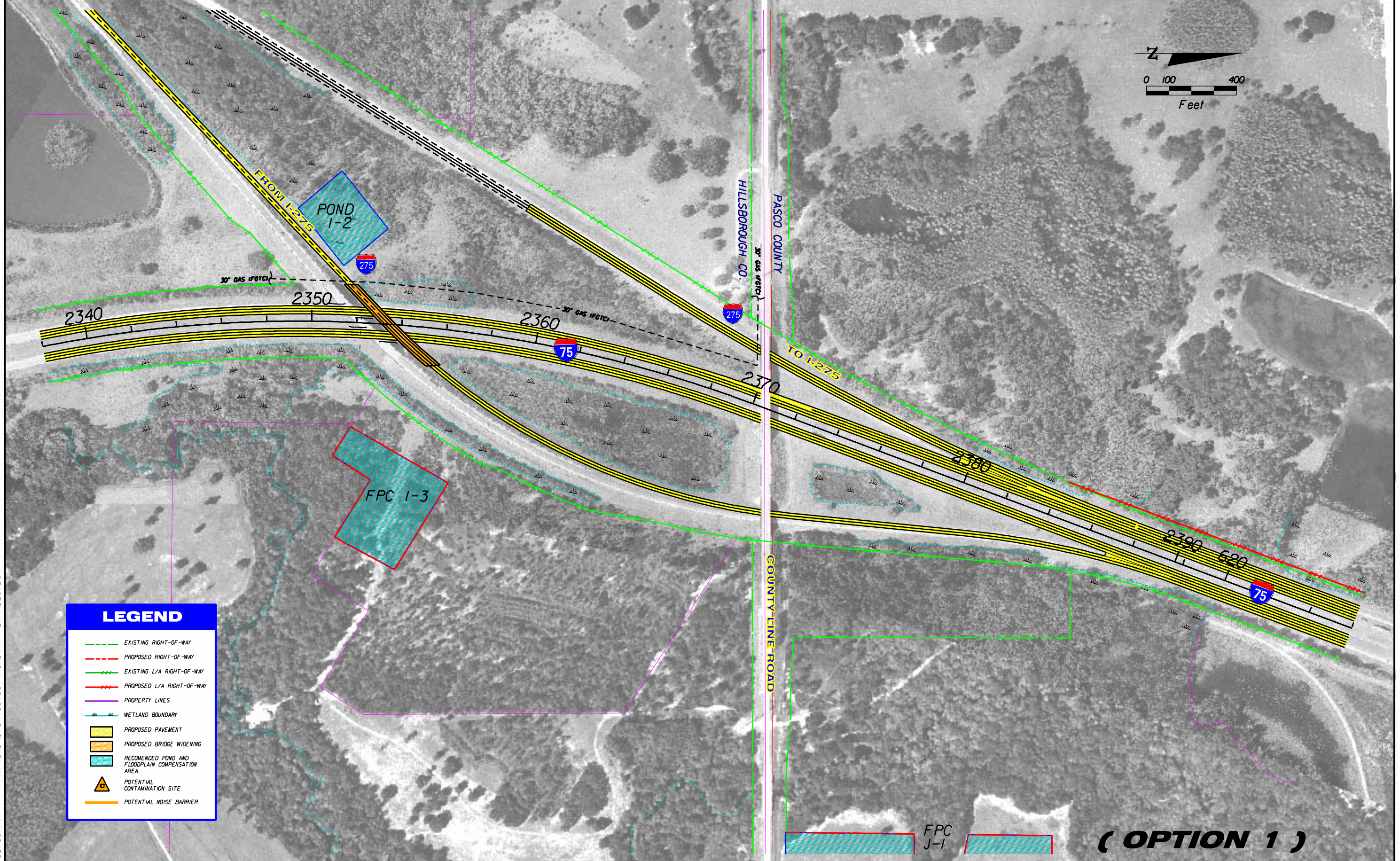
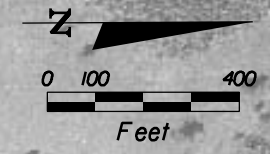
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
3-2002		PDR&E STUDY SOUTH OF FOWLER AVE., HILLSBOROUGH CO., TO SOUTH OF SR 96, PASCO CO. WPI SEG. No. 408459 1 [F. A. P. No. 0751 1051]	1-12-2004		DATE OF PHOTOGRAPHY DATE OF FINAL FIELD REVIEW (RECOMMENDED ALTERNATIVE)
		REEVALUATION STUDY FROM SOUTH OF SR 56 TO CR 54, PASCO CO. WPI SEG. No. 258736 1 [F. A. P. No. NH-75-1 (19) 275]			

**Parsons Brinckerhoff**  
 Quade & Douglas, Inc.  
 5405 West Cypress St. Suite 300  
 Tampa, Florida 33607  
 ENGINEERING BUSINESS  
 NUMBER# E800001462

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTIES	FINANCIAL PROJECT ID
SR 93A	HILLSBOROUGH & PASCO	408459-1-22-01

**CONCEPT PLANS I-75 (S.R. 93A)**  
**FROM SOUTH OF FOWLER AVENUE**  
**TO CR. 54**

SHEET NO.
22



LEGEND	
	EXISTING RIGHT-OF-WAY
	PROPOSED RIGHT-OF-WAY
	EXISTING L/A RIGHT-OF-WAY
	PROPOSED L/A RIGHT-OF-WAY
	PROPERTY LINES
	WETLAND BOUNDARY
	PROPOSED PAVEMENT
	PROPOSED BRIDGE WIDENING
	RECOMMENDED POND AND FLOODPLAIN COMPENSATION AREA
	POTENTIAL CONTAMINATION SITE
	POTENTIAL NOISE BARRIER

**( OPTION 1 )**

03/22/2004 02:52:03 PM \\TPACAD\SYS\4084591\ROADWAY\PLANRD23.DGN

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
3-2002		PD&E STUDY SOUTH OF FOWLER AVE., HILLSBOROUGH CO., TO SOUTH OF SR 96, PASCO CO. WPI SEG. No. 408459 1 [F. A. P. No. 0751 1051]	1-12-2004		DATE OF PHOTOGRAPHY DATE OF FINAL FIELD REVIEW  (RECOMMENDED ALTERNATIVE)
		REEVALUATION STUDY FROM SOUTH OF SR 56 TO CR 54, PASCO CO. WPI SEG. No. 258736 1 [F. A. P. No. NH-75-1 (19) 275]			



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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTIES	FINANCIAL PROJECT ID
SR 93A	HILLSBOROUGH & PASCO	408459-1-22-01

**CONCEPT PLANS I-75 (SR. 93A)**  
**FROM SOUTH OF FOWLER AVENUE**  
**TO CR. 54**

SHEET NO.  
**23**

# **Appendix A**

## **SHPO Coordination Letters**

RECEIVED  
2003 OCT 29 PM 4



FLORIDA DEPARTMENT OF STATE  
**Glenda E. Hood**  
Secretary of State  
DIVISION OF HISTORICAL RESOURCES

October 20, 2003

Mr. James E. St. John  
Attn: Marvin L. Williams  
U.S. Department of Transportation  
Federal Highway Administration, Florida Division  
227 N. Bronough Street, Suite 2015  
Tallahassee, Florida 32301

Re: DHR Project No. 2003-8830 / Received by DHR: October 8, 2003  
Financial Management No. 40859-1 / Federal-Aid Project No. 075-1 (105)  
*Cultural Resource Assessment Survey: 1-75 (SR 93A) from South of Fowler Avenue to South of  
CR 54, 1-75 Project Development and Environment (PD&E) Study  
Hillsborough and Pasco County, Florida*

Dear Mr. St. John:

Our office received the referenced project in accordance with Section 106 of the *National Historic Preservation Act of 1966* (Public Law 89-665), as amended in 1992, and 36 *C.F.R., Part 800: Protection of Historic Properties*. The State Historic Preservation Officer is to advise and assist federal agencies when identifying historic properties listed or eligible for listing in the *National Register of Historic Places*, assessing effects upon them, and considering alternatives to avoid or minimize adverse effects.

The investigation of the PD&E Study project Area of Potential Effect, including the existing and proposed rights-of-way as well as the proposed pond sites and Flood Plain Compensation sites, resulted in the identification and evaluation of one newly recorded site, 28 previously recorded archaeological sites, one archaeological occurrence, and two historical structures.

The newly recorded site, 8HI7877 is a small lithic scatter. It is the opinion of Archaeological Consultants, Inc. (ACI), that due to the paucity of temporally diagnostic artifacts and the sparse assemblage, site 8HI7877 does not meet the criteria for listing in the *National Register of Historic Places*. Based on the information provided, our office concurs with this determination. We further note that, since the tests were excavated near the corners of the proposed pond site, it is probable that the site area extends outside the boundaries of this proposed facility. We recommend additional testing, in case project plans change to include any area outside of site 8HI7877 as identified in the present investigation.

The location of 15 previously recorded sites could not be verified by this investigation, including site 8HI450 that was considered eligible for listing in the *National Register of Historic Places*.

The locations of 13 other previously recorded sites were verified and updated Florida Master Site File (FMSF) has been provided. These include 8HI10, 8HI99, 8HI471, 8HI472, 8HI473, 8HI483, 8HI5431, 8HI5432, 8PA357, 8PA480, 8PA481, 8PA632, and 8PA633.

500 S. Bronough Street • Tallahassee, FL 32399-0250 • <http://www.flheritage.com>

Director's Office  
(850) 245-6300 • FAX: 245-6435

Archaeological Research  
(850) 245-6444 • FAX: 245-6436

Historic Preservation  
(850) 245-6333 • FAX: 245-6437

Historical Museums  
(850) 245-6400 • FAX: 245-6433

Palm Beach Regional Office  
(561) 279-1475 • FAX: 279-1476

St. Augustine Regional Office  
(904) 825-5045 • FAX: 825-5044

Tampa Regional Office  
(813) 272-3843 • FAX: 272-2340

Mr. St. John  
October 20, 2003  
Page 2

Of the total 28 previously recorded archaeological sites, six sites (8HI99, 8HI450, 8HI471, 8HI472, 8HI473, and 8HI483) were considered potentially eligible for listing in the *National Register of Historic Places* in 1979.

The Florida SHPO subsequently considered 8HI99 ineligible for the *National Register of Historic Places* in 1994. Archaeological testing of 8HI99, as contained within the referenced project area, indicated an absence of significant cultural material and hence, it is the opinion of ACI that site 8HI99 does not appear to be eligible for listing in the *National Register of Historic Places*. Based on the information provided, our office concurs with this determination.

While 8HI450 was considered eligible for listing in the *National Register of Historic Places* in 1979, the current investigations could not locate the site. No significant information was derived from the present investigation of sites 8HI471 and 8HI472 and it is the opinion of ACI that both sites have suffered damage as a result of the construction of I-75, and no significant archaeological deposits associated with site 8HI471 and 8HI472 are contained within the project APE. Based on the information provided, our office concurs with this determination.

The archaeological occurrence (AO #1) was identified by a single flake and did not appear to meet the minimum criteria for listing as an archaeological site.

The two historic structures 8HI7839 and 8HI7840 are Frame Vernacular Style residences representing commonly occurring types of local architecture. Due to common design, non-historic alterations, and lack of known significant historical associations, it is the opinion of ACI that these structures do not appear to meet the criteria for listing in the *National Register of Historic Places*. Based on the information provided, our office concurs with this determination. It is the opinion of ACI that the proposed developmental plans will have no effect on properties of historical or archaeological value. Based on the information provided, our office concurs with this determination.

We find the submitted report complete but insufficient in accordance with Chapter 1A-46, *Florida Administrative Code*. The requested information should be identified as an addendum to the referenced report, and include the above DHR Number (2003-8830). The report will be considered sufficient on receipt of the following information.

- Information regarding site 8HI473 and site 8HI483 is disparate in the project report (page 6-19, 6-23) and on the FMSF site forms - please clarify.
- Black and white photographs of 8HI7839 and 8HI7840 for FMSF records.

If you have any questions concerning our comments, please contact Mini Sharma, Historic Sites Specialist, at [mtsharma@dos.state.fl.us](mailto:mtsharma@dos.state.fl.us) or (850) 245-6333. Your interest in protecting Florida's historic properties is appreciated.

Sincerely,



Janet Snyder Matthews, Ph.D., Director, and  
State Historic Preservation Officer

Xc: Mr. Leroy Irwin, FDOT-CEMO  
Mr. Waddah Farah, FDOT District Seven, Planning / EMO  
Ms. Marion Almy, Archaeological Consultants, Inc.



P01057



FLORIDA DEPARTMENT OF STATE  
**Glenda E. Hood**  
Secretary of State  
DIVISION OF HISTORICAL RESOURCES

RECEIVED  
DEC 08 2003

Mr. James E. St. John  
Attn: Marvin L. Williams  
U.S. Department of Transportation  
Federal Highway Administration, Florida Division  
227 N. Bronough Street, Suite 2015  
Tallahassee, Florida 32301

November 25, 2003

Re: DHR Project No. 2003-8830B  
Additional Information Received by DHR: November 25, 2003 *LML 12/1/03*  
Financial Management No. 40859-1 / Federal-Aid Project No. 075-1 (105)  
*Cultural Resource Assessment Survey: 1-75 (SR 93A) from South of Fowler Avenue to South of CR 54. 1-75 Project Development and Environment (PD&E) Study Hillsborough and Pasco County, Florida*

Dear Mr. St. John:

Our office received the additional information on the referenced project. Based on the information provided, our office finds the submitted report complete and sufficient in accordance with Chapter 1A-46, *Florida Administrative Code*.

If you have any questions concerning our comments, please contact Mini Sharma, Historic Sites Special.st, at mtsharma@dos.state.fl.us or (850) 245-6333. Your interest in protecting Florida's historic properties is appreciated.

Sincerely,

*Barbara E. Mattick*  
*Historic Preservation Supervisor*

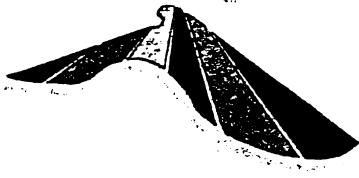
*for* Janet Snyder Matthews, Ph.D., Director, and  
State Historic Preservation Officer

Xc: Mr. Leroy Irwin, FDOT-CEMO  
Mr. Waddah Farah, FDOT District Seven, Planning / EMO  
Ms. Joan Deming, Archaeological Consultants, Inc.

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- |   |  |   |   |
|---|--|---|---|
| <input type="checkbox"/> Director's Office<br>(850) 245-6300 • FAX: 245-6435          | <input type="checkbox"/> Archaeological Research<br>(850) 245-6444 • FAX: 245-6436       | <input checked="" type="checkbox"/> Historic Preservation<br>(850) 245-6333 • FAX: 245-6437 | <input type="checkbox"/> Historical Museums<br>(850) 245-6400 • FAX: 245-6433 |
| <input type="checkbox"/> Palm Beach Regional Office<br>(561) 279-1475 • FAX: 279-1476 | <input type="checkbox"/> St. Augustine Regional Office<br>(904) 825-5045 • FAX: 825-5044 | <input type="checkbox"/> Tampa Regional Office<br>(813) 272-3843 • FAX: 272-2340            |   |

**Appendix B**  
**FDOT Aviation Office Coordination**  
**Memorandum**



# MEMORANDUM

State of Florida Department of Transportation

AVIATION OFFICE

10-415.111-1

10-475.xx 6

RECEIVED 1998

MAY - 2 1998

**DATE:** May 6, 1998

**TO:** Kirk R. Bogen, District 7, PD&E Project Manager

**FROM:** A. J. Roberts, Jr., Aviation Office, Land Use Planning Manager

**COPY:** Wm. J. Ashbaker, State Aviation Manager; Charles W. Arnold, Planning Administrator; Harry Reed, Dist 7 Public Transportation Manager; Paul Sexton, Chief Administrative Law

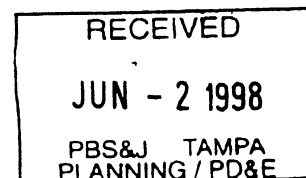
**SUBJECT:** Review and Comment; FP No. 2587361 31 01/FAP No. NH-75-1(91)275  
I-75 PD&E Study  
Pasco County

I have reviewed the PD&E Study in the vicinity of Tampa North Aero Park in southern Pasco County per your April 3, 1998 memorandum. I recommend that Alternative No. 1 not be considered a viable option because it will cause a greater impact to the airport than results from the existing road. Any option that would cause the Department to issue a license with operating limitations pursuant to Ch 330, FS, or degrade the runway capability, could give the airport's owner sufficient justification to claim a "taking".

While both Alternatives will require an Airspace Obstruction Permit, pursuant to Ch. 333.025, Alternative 2 does not place a new traverse way nearer to the runway than exists with the current turnout for the southbound rest stop. This Alternative, therefore, has no greater impact than the existing road, requires no airport license operating limitations and does not affect the continued licensing of the facility as a public airport. The current roadway configuration existed before the airport site selection was approved and its first license issued by the State.

The following factors are considerations in my analysis:

- (a). Tampa North Aero Park is a privately owned **public airport** under the Department's airspace protection obligations of Ch. 333.025, FS.
- (b). The Department has a statutory requirement to provide airspace protection for public airports in local government jurisdictions, where airspace protection by airport zoning ordinance has not adopted by the local government as is the case for Pasco County.



(c). An Airspace Obstruction Permit is required for any erection, alteration or modification that would exceed a federal obstruction standard contained in FAR Part 77.23.

(d). Far Part 77.23 establishes Interstate Highways as traverse ways having a height 17 feet above the paved portion of the road for airspace obstruction purposes.

(e). The lowest obstruction standard applicable to the project is for the imaginary approach surface to the airport's northwest runway(RWY 32).

(f). The RWY 32 imaginary approach surface is a trapezoid, longitudinally centered on the extended runway centerline, extending outward and upward at a 20:1 slope for 5,000' beginning 200' from the runway end point at the end point elevation of 67.07' Above Mean Sea Level(AMSL). The inner width of the surface is 125' either side of centerline expanding uniformly to a width 625' either side of centerline at 5000'.

(g). Imaginary surface height calculation above a specific project location is made by: (1) measuring the linear distance in feet from the runway end, along the extended centerline to a perpendicular to the point the traverse way first crosses the side flare of the approach surface trapezoid; (2) Subtract 200 from the measured centerline distance and divide the remainder by 20 to establish the surface height above the runway end point; (3) Add the RWY end elevation to determine the imaginary approach surface AMSL elevation at the selected project location.

(h). The traverse way elevation AMSL is established by adding 17' to the elevation of the paved area at the specified project location. Surface elevations for selected project points were provided by Steve Gordillo per the attached FAX.

(i). If the traverse way elevation exceeds the approach surface elevation, operation of the runway will be adversely affected. Objects which exceed the 20:1 imaginary approach surface result in displacement of the runway's threshold, the point beyond which aircraft must land, to assure minimum obstacle clearance above the object. Displacing the threshold effectively reduces the landing length of the runway, degrading its utility.

(j). RWY 32 has an existing displaced threshold for poles in the approach area.

Three locations were analyzed at the point each enters the imaginary approach surface trapezoid: (1) the existing turnout to the southbound rest stop; (2) Alternative 1, the altered turnout to the southbound rest stop required by the third southbound lane added outside of the existing lanes; (3) Alternative 2, the nearest edge of the third southbound lane added inside the current median area.

(1)	<u>At Distance:</u>	<u>Road Elev.:</u>	<u>Traverse Elev:</u>	<u>Exceeds by:</u>
	<b>459.32'(140m)</b>	<b>65.10' AMSL</b>	<b>82.10' AMSL</b>	<b>2.06'</b>
		<u>20:1 Slope Hgt:</u>	<u>Surface Elev:</u>	
		<b>12.97'</b>	<b>80.04' AMSL</b>	

The current road exceeds the imaginary approach surface by 2.06'. This has no impact

on operation of the runway because the existing displaced threshold provides adequate obstacle clearance over the current traverse way. Additionally, this roadway configuration existed before the airport site selection was approved and the runway constructed. Documents in the airport file recognize specified runway obstacle clearance surfaces over I-75 and SR54 with stipulations the runway may not be altered to cause these clearances above the roads to be decreased.

(2)	<u>At Distance:</u>	<u>Road Elev:</u>	<u>Traverse Elev:</u>	<u>Exceeds by:</u>
	<b>436.35'(133m)</b>	<b>64.59' AMSL</b>	<b>81.59' AMSL</b>	<b>2.70'</b>
		<u>20:1 Slope Hgt:</u>	<u>Surface Elev:</u>	
		<b>11.82'</b>	<b>78.89' AMSL</b>	

This alternative moves the paved roadway and thus the 17' high traverse way obstruction closer to the runway end. This traverse way exceeds the imaginary approach surface 2.70', an amount greater than for the existing road. This would require a greater runway threshold displacement than is required by the existing road. The additional threshold displacement would effectively shorten the runway currently available for landing.

(3)	<u>At Distance:</u>	<u>Road Elev:</u>	<u>Traverse Elev:</u>	<u>Exceeds by:</u>
	<b>498.69'(152m)</b>	<b>65.58' AMSL</b>	<b>82.58' AMSL</b>	<b>0.46'</b>
		<u>20:1 Slope Hgt:</u>	<u>Surface Elev:</u>	
		<b>14.93'</b>	<b>82.12' AMSL</b>	

The new paved area exceeds the imaginary approach surface by 0.46'. This has no impact on the runway because it is "shadowed" by the traverse way of the existing turnout to the southbound rest stop.

Options for consideration: For either alternative, if the finished paved road elevation is reduced so that the 17' traverse way does not exceed the imaginary approach surface or the transition surfaces to its sides, the provisions for an Airspace Obstruction Permit in Ch 333 no longer apply. Notice of construction to the FAA will still be required for both Alternatives. For Alternative 1, this would require an approximate three foot decrease in the road bed along the turnout. If this is feasible, Alternative 1 again becomes a viable option. Alternative 2 requires a maximum reduction of only 6" to clear the obstruction surface. I recommend this be included in the design criteria. I can provide a cross section drawing of the imaginary approach surface as it lies above the project area if this will be helpful.

FAA Form 7460-1 Submittal: I am returning the original form and attachments. The scale photo maps are ideal attachments to submit with the 7460. In **5. Height and Elevation, Item A**, of the Form, you should enter the elevation(AMSL) of the surface of the completed paved surface as accurately as can be determined. An elevation profile along the project axis as it crosses the approach trapezoid, referenced to the overhead photo, would provide more precise information for the FAA analysis. In **5. Height and Elevation, Item B**, of the Form, enter "Traverse Way" after "17 feet".