FINAL
PRELIMINARY ENGINEERING REPORT

Financial Project Number: 255362 1
Federal Aid Project Number: XU-311-1(33)

U.S. 301 (S.R. 41)
I-4 to Fowler Avenue
Hillsborough County, Florida

This project evaluates the widening of U.S. 301 (S.R. 41)
from I-4 to Fowler Avenue in Hillsborough County, Florida.
The approximate length of the project is 7.4 kilometers (4.6 miles) .

December 1997
Revised September 1998

FDOT District Seven
Prepared by:

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47653
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SECTION 1.0
SUMMARY

1.1 COMMITMENTS

Construction

In addition to the provisions detailed in the Florida Department of Transportation's (FDOT's) "Standard Specifications for Roads and Bridge Construction" and to minimize impacts to the human and natural environment, the FDOT is committed to the following:

Specific noise impact problems that may arise during construction of the project will be addressed by the FDOT's Construction Engineer. Special measures that will be taken to minimize construction noise impacts are as follows:

Where the project engineer determines that noise-sensitive residential sites exist at the time of construction, the contractor will use static rollers for compaction of embankment, subgrade, base, asphalt, etc.

Screen all stationary equipment such as pumps, compressors, generators, etc., from noise sensitive receivers if that equipment is to operate beyond normal working hours. If it is feasible, screen this equipment during normal working hours to reduce noise impacts.

Other construction-related commitments to be provided in the design plans or contractual documents for the proposed project are:

Restriction of operating hours for lighting the construction areas will be determined and required of the contractor prior to beginning construction activities that require lighting.

Coordination with the local media and law enforcement agencies will be undertaken prior to commencing construction activities to ensure that construction-related impacts are minimized or adequately mitigated when work during non-daylight hours is required.

Public Lands

The Tampa Bypass Canal/Harney Canal and adjacent properties are publicly owned and managed by the Southwest Florida Water Management District (SWFWMD). The primary use of this property is for flood control, however, limited secondary recreational use is allowed. Given that this property is publicly owned and provides recreational use, it has been determined that Section 4(f) of the Department of Transportation Act applies to the property. Therefore, the Department will attempt to avoid or minimize use of all SWFWMD property. Accordingly, the preferred pond sites are those not situated within SWFWMD property. However, even non-SWFWMD owned pond sites would require drainage facilities and easements through SWFWMD property. Therefore, during the design phase of the project, the Department will comply with the requirements of Section 4(f) and coordinate the approval of a Section 4(f) Evaluation with the Federal Highway Administration (FHWA) prior to using any SWFWMD properties for drainage purposes.

Noise

During design, the property owners of the Lynch trailer Park are to be contacted prior to the Phase I plans submittal to confirm that a noise abatement wall is not desired. See section 9.14.10, Noise Impacts, for further information regarding this commitment.

Coordination with Vandenberg Airport

The Hillsborough County Aviation Authority (HCAA) should be contacted and coordinated with during the design phase of this project concerning any affects of the proposed improvements on Vandenberg Airport. Of particular concern is the use of cranes during construction of the new bridge over the Harney Canal and the location of street lighting along the roadway. Contact Ed Cooley with

the HCAA at (813) 870-8775.

1.2 RECOMMENDATIONS

1.2.1 Roadway Typical Section

The preferred alternative (Alternative "D") is a four lane divided suburban typical section consisting of two 3.6 m (12 ft) travel lanes and 1.5 m (5 ft) outside paved shoulders in each direction. Drainage is handled by roadside swales on the outside of the travel lanes. Sidewalks are included between the right of way (ROW) line and the drainage swales. See Figure 8-7.

This typical section can be built within the existing 61 m (200 ft) ROW, except for intersection improvements at Sligh Avenue and Harney Road, stormwater ponds and floodplain compensation sites.

The preferred alternative includes bicycle and pedestrian facilities. Sidewalks will be built on each side of the roadway for pedestrian use. Pedestrian signals and crosswalks are to be constructed at the signalized intersections as part of this project. On the bridges, separate walkways for pedestrians will be built. For bicyclists, a five foot wide paved shoulder is available for their use.

Street lighting is also recommended on this project, because of the high rate of crashes at night.

Public transit can also be accommodated with the preferred alternative. Although there are no existing bus routes along this section of U.S. 301, the Hillsborough County MPO has emphasized the importance of allowing for expansion of Bus service to his area. As the area develops and the need for public transportation increases, future bus stop locations with bus pads and shelters can be added by constructing a side drain and filling in the ditch.

The Department anticipates continuing development and increasing traffic along this roadway, even beyond the design year for this project, 2020. Six lanes are likely to be required eventually, so the preferred alternative should and will accommodate this. When six lanes are required, it will be necessary (after FHWA approval of an environmental document) to convert the roadway to an urban

section with a closed drainage system to avoid costly ROW acquisition. The preferred alternative shall be designed so that it can be converted to an urban section with curb and gutter when widened to six lanes without reconstructing the pavement. A minimum gutter grade of 0.3% is to be used throughout the project to allow for the conversion to an urban section. This will require the use of a "sawtooth" profile at the beginning of the project which has a 3000 m (9800 ft) long section with a flat grade.

1.2.2 Bridge Typical Section

The existing bridges over the Harney Canal and the Tampa Bypass Canal were constructed 20 years ago and have approximately 30 years remaining of useful life. These bridges are structurally sound and meet the minimum standards set by the FHWA for bridge width. (See section 4.2 for details on the existing condition of the bridges). This Report recommends that the existing bridges be used for the northbound lanes of the proposed four lane roadway. However, it will be necessary to widen the existing bridges approximately 0.9 m (3 ft) to accommodate the proposed typical section which includes a pedestrian walkway. See Figure 8-5. A preliminary investigation determined that no additional pilings will be required for the 0.9 m widening. The construction cost of the widening is estimated to be $50,000 for the Tampa Bypass Canal bridge and $130,000 for the Harney Canal bridge.

To accommodate the southbound traffic, two new bridges are to be constructed to the west of the existing bridges. A Bridge Design Report was not prepared for this study, this will be done in the final design phase of this project. It is expected that the new bridges will be approximately the same length as the existing bridges. A cost estimate for the new bridges was prepared using the Department's LRE system. The cost of constructing the new bridge over the Harney Canal is estimated to be $366,000 with a length of 60 m (197 ft). The cost of constructing the new bridge over the Tampa Bypass Canal is estimated to be $940,000 with a length of 154 m (505 ft).

The proposed typical bridge section is shown in Figure 8-5.

1.2.3 Other Considerations

It is recommended that new traffic counts be taken at the intersection of Sligh Avenue/Maple Lane

and U.S. 301 when the design phase of this project begins. The I-4 project under construction (FP No. 258459 1) involves the construction of a new roadway which connects to U.S. 301 at Breckenridge Parkway and should reduce the amount of traffic on Maple Lane. The need for proposed improvements at this intersection, including left and right turn lanes at Maple Lane should be reconfirmed based on future year projections of the new traffic counts.

There are currently two median openings being constructed at the U.S. 301 Truck Stop, as part of the Interstate 4 widening project, (FP No. 258459 1) to allow for separation between passenger vehicle and commercial truck traffic. The spacing of the two median openings does not meet minimum standards for U.S. 301's access class 3 classification. The access on this section of U.S. 301 should be reassessed when the final design phase of this project begins, to investigate ways to bring the median opening spacing in conformance with minimum standards. One possibility is to allow trucks access on Maple Lane behind the truck stop, so that they can enter and exit U.S. 301 at either the Breckenridge signal or the one at Sligh Avenue. This would eliminate the need for one of the two median openings at the truck stop, improving the safety of this intersection of U.S. 301.

Special Features

It is recommended that additional pavement be added at intersections and median openings, to allow for large trucks to make U-turns. See plan sheets in Appendix D for recommended locations.

SECTION 2.0
INTRODUCTION

2.1 OVERVIEW

The FDOT is conducting a Project Development and Environment (PD&E) study for the improvement of U.S. 301 (S.R. 41) generally between I-4 (S.R. 400) and Fowler Avenue, in Hillsborough County, Florida. Figure 2-1 illustrates the location and limits of the project and its relationship to the regional highway system.

The objective of the PD&E study is to provide documented information and analyses which will help the FDOT and the FHWA reach a decision on the type, design and location of the necessary improvements along U.S. 301 to accommodate the future traffic demand in a safe and efficient manner. The PD&E study satisfies the requirements of the National Environmental Policy Act (NEPA) and the FHWA in order to qualify the design, ROW acquisition, and construction phases of the project for future federal funding.

This report documents the information necessary to confirm the need for this project and develops and evaluates various improvement alternatives as they relate to the transportation facility. Information relating to the engineering and environmental characteristics essential for alignment criteria were set and alternatives were developed. Comparison of alternatives was based on a variety of parameters using a matrix format. This analytical process identified the alternative that would have the least impact while providing the necessary improvements. The design year of the analysis was Year 2020.

2.2 PURPOSE

This report identifies the current and future deficiencies that should be expected along U.S. 301 if the existing geometric characteristics are maintained, and presents feasible improvement alternatives that will meet future traffic demands. This report documents the development of all improvement alternatives after consideration of socioeconomic, cultural and environmental impacts, identifies the

most viable alternative, and presents the reasons for rejecting other alternatives.

2.3 PROJECT DESCRIPTION

The U.S. 301 (S.R. 41) corridor is a north/south primary arterial facility that has an interchange connection to Interstate 4 (I-4). The location and limits of the approximately 7.4 kilometers (4.6 miles) long project are shown in Figure 2-1. Figure 2-2 presents a more detailed map including key roadways that will be referenced throughout this report. Appendix A of this report includes copies of roadway maps and the Department's straight line diagrams illustrating all intersecting streets and roadways. The entire project is located in unincorporated Hillsborough County. The project travels through the following sections of the Public Land System: starting in Section 36, the project passes through section 25 in Township 28 South, Range 19 East; then travels through sections 30, 19, 18, 17, and 8 in Township 28 South, Range 20 East. U.S. 301 currently transitions from a four lane rural roadway to a two lane rural roadway at the beginning of the project just north of I-4 and continues as a two lane rural roadway for the length of the project.

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P.E. Number

Scott Farash
10/16/98

U.S. 301 PD&E STUDY
PROJECT LOCATION MAP

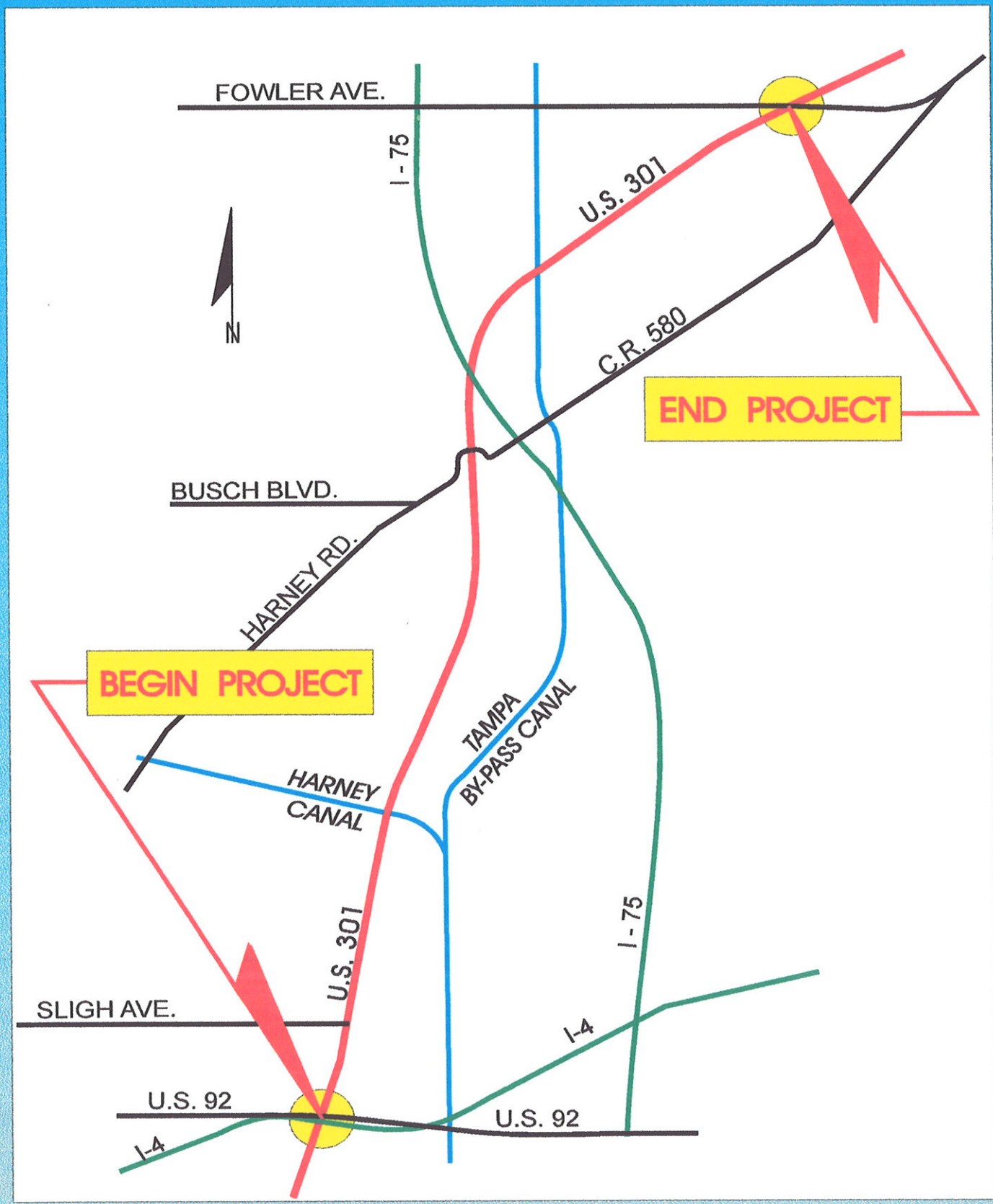
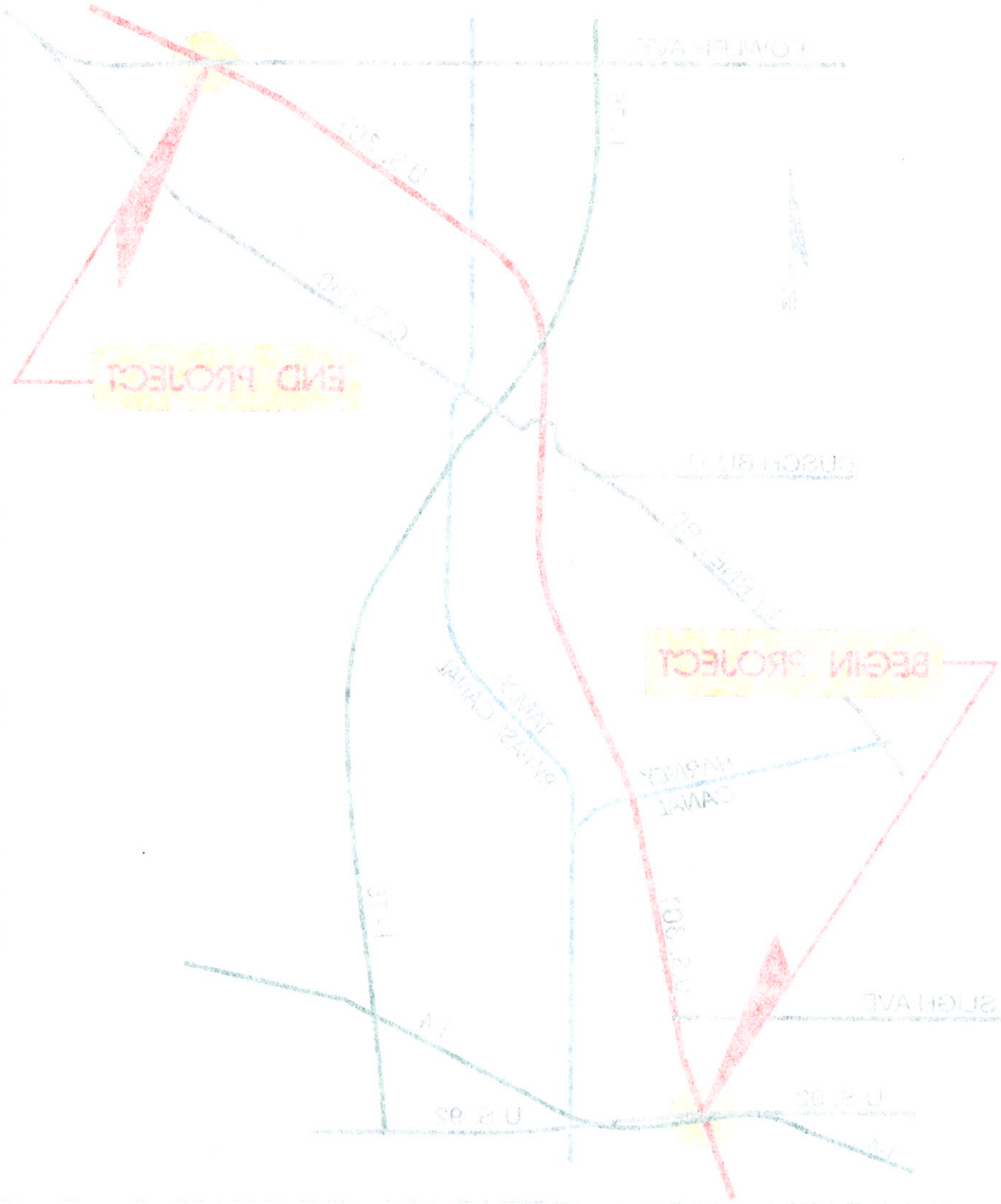
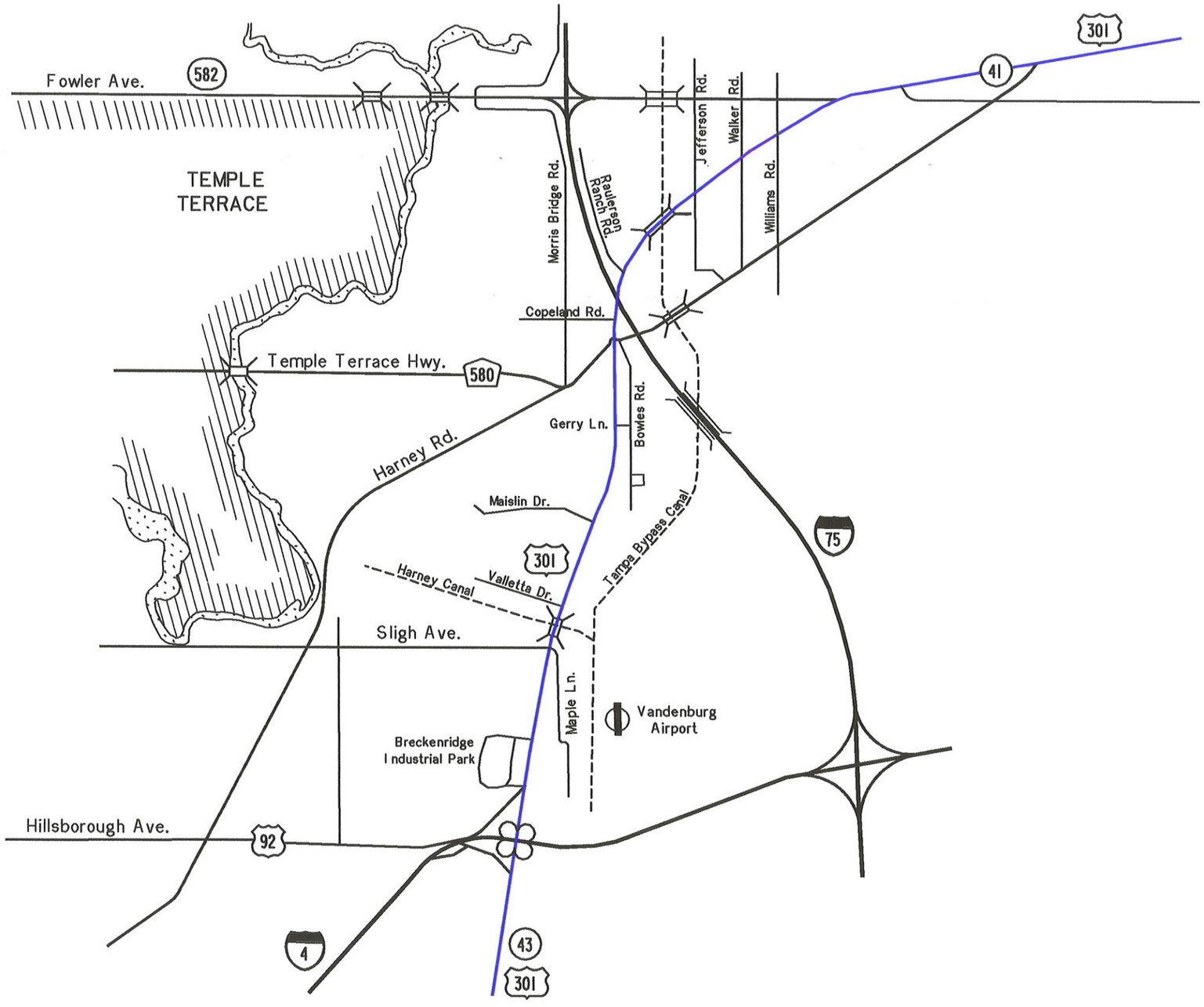


FIGURE 2-1


END PROJECT
BEGIN PROJECT



STATE OF FLORIDA

DEPT. OF TRANSPORTATION

U.S. 301
I-4 TO FOWLER AVE.

EXISTING ROADWAY NETWORK

Figure 2-2

SECTION 3.0
NEED FOR IMPROVEMENT

3.1 DEFICIENCIES

U.S. 301 between I-4 and Fowler Avenue is a 2-lane roadway which has operated since its construction without any major improvements. The section south of this project is a 4-lane divided roadway, which transitions to 2 lanes just north of I-4. Growth in this area has placed increasingly heavy traffic demands on this highway.

Traffic volumes for 1997 along U.S. 301 range from 10,000 vehicles per day (vpd) at Fowler Avenue to 27,500 vpd at I-4. The projected traffic volumes for the year 2020 range from 17,000 vpd at Fowler Avenue to 38,000 vpd at I-4.

To accommodate the expected continued growth in traffic, this section of U.S. 301 will require four travel lanes, two in each direction. For a more detailed explanation of traffic volumes and analysis, see section 6 of this report, which summarizes the Traffic Technical Memorandum for this project.

3.2 SAFETY

The high traffic volumes in the section from I-4 to Sligh Avenue currently exceed the capacity of the two lane roadway, which increases the probability of crashes. Currently, there are approximately two crashes per million vehicle miles, which is above the statewide average of 0.7 crashes per million vehicle miles for similar two lane roadways. By the year 2020, the entire project length will be operating at a Level of Service (LOS) E or F, which is unacceptable.

The existing two lane section of U.S. 301 from I-4 to Fowler Avenue has a number of characteristics which may be contributing to the accident rate. The two lane roadway is undivided, which makes the chance of a head-on collision due to an errant vehicle more likely than on a divided roadway with a median to separate opposing traffic. The use of the opposing traffic lane to pass slow moving vehicles also increases the chance of a head-on collision. The lack of a median to control access for

left turning vehicles increases the number of conflicts with through traffic as vehicles enter and leave driveways along the roadway.

At the signalized intersections, particularly Harney Road, the high turning volumes result in an unacceptable amount of congestion to which a number of crashes may be attributed. (See Section 4.1.9 for a summary of accident data.)

3.3 CONSISTENCY WITH TRANSPORTATION PLAN

The Hillsborough County Metropolitan Planning Organization (MPO) has the responsibility of developing a long range transportation plan for the county to serve the needs of the metropolitan area over the next 20 to 25 years. The adopted 2015 Long Range Transportation Plan (LRTP), updated in 1995 has identified the section of U.S. 301 from I-4 to Harney Road to be improved from two lanes to a four lane divided roadway.

This PD&E Study's limits, from I-4 to Fowler Avenue, extend past the MPO's terminus at Harney Road, for two reasons. One reason is that Fowler Avenue is a more logical terminus, having an interchange with I-75. The other reason is that the projected 2020 traffic volume will require four lanes for the entire project, including the section from Harney Road to Fowler Avenue, which is documented in the Traffic Memorandum.

The FHWA has approved the project limits, from I-4 to Fowler Avenue, with the understanding that Location and Design Concept Acceptance (LDCA) will only be granted for the section from I-4 to Harney Road in the MPO's plan. A copy of the letter from the FHWA is included in Appendix B. The MPO has suggested in a letter (dated October 20, 1997) that if the FDOT plans on improving U.S. 301 between I-4 and Fowler Avenue, it request the MPO amend the LRTP to extend the northern limit of the U.S. 301 improvement to Fowler Avenue. The MPO will then consider including the section of U.S. 301 from Harney Road to Fowler Avenue when the LRTP is updated in 1998 before the 2020 LRTP is finalized. If the MPO's LRTP is amended so that the U.S. 301 project matches the PD&E Study limits prior to FHWA LDCA, then the entire section from I-4 to Fowler Avenue can proceed to final design when this study is complete. If the LRTP is amended

after LDCA, then the remaining portion of the project can be reevaluated and subsequently approved by the FHWA.

3.4 SOCIAL/ECONOMIC DEMANDS

According to population projections from Hillsborough County and the regional traffic model developed by FDOT's Planning Department, travel demand is expected to continue to grow in this area. Most of the land on both sides of U.S. 301 is zoned as community mixed-use 12, which allows commercial, industrial, and residential uses, with a maximum of 12 dwelling units per acre. The future land use of this area is intended to be urban, with development allowed as transportation and public facility services needed to support these developments are made available. The section of U.S. 301 being studied is expected to become increasingly commercial (particularly the area near I-4) which will result in increased traffic on this road.

There are a number of industrial warehouse and distribution buildings under construction or planned in a five mile stretch of the U.S. 301 Corridor ending at I-4. These expansions total more than one million square feet of new buildings. One of these, Hampton Oaks, is within the project limits just north of I-4. The other industrial parks are on or near U.S. 301 between Bloomingdale Avenue and I-4.[1]

3.5 MODAL INTERRELATIONSHIPS

There is no rail, mass transit, or HOV lanes planned for U.S. 301. Vandenberg Airport which is located near U.S. 301, serves small private aircraft and is currently expanding, adding a new runway to handle an anticipated increase in flights. This anticipated increase in volume at the airport will result in more vehicles on U.S. 301 and Maple Lane, contributing to the need for this project. Improvements at the signalized intersections, including Sligh Avenue/Maple lane, are to be incorporated in this project.

[1] Tampa Tribune article, Monday, August 25, 1997, Business and Finance section pages 10-11.

There are no existing sidewalks to serve pedestrian needs. Although pedestrian volumes are low at present, the number of pedestrians is expected to increase as the area becomes more urban and commercialized. Sidewalks are to be included in this project, along with a bicycle lane or paved shoulders for bicycle use.

SECTION 4.0
EXISTING CONDITIONS

4.1 EXISTING ROADWAY CHARACTERISTICS

4.1.1 Functional Classification

Based on AASHTO functional classification, U.S. 301/State Road 41 (S.R. 41) is classified as an urban principal arterial.

Classifications of other important roads in the study area are:

Interstate 4 (I-4): Urban Interstate

Interstate 75 (I-75): Urban Interstate

Fowler Avenue (S.R. 582): Urban Minor Arterial

4.1.2 Typical Sections

Throughout the project limits, U.S. 301 is currently a 2-lane rural roadway with 12 ft wide lanes, grass shoulders, and drainage ditches. The existing Typical Section is shown in Figure 4-1.

4.1.3 Pedestrian and Bicycle Facilities

There are no existing pedestrian facilities in the study area. The existing 1.2 meter (4 ft) paved shoulders are available for bicycle use.

4.1.4 Right of Way

The existing ROW width was obtained from FDOT ROW maps. The existing ROW is 61 m (200 ft). The existing 2-lane roadway was constructed with a 20.7 meter (68 ft) offset from the east ROW line to allow a 4-lane section to be centered in the existing ROW with a 40 foot median.

4.1.5 Horizontal Alignment

Table 4-1 summarizes the existing horizontal alignment characteristics of the project based on information obtained from FDOT ROW maps and a metric baseline alignment survey completed in June 1996 for this project.

TABLE 4-1

EXISTING HORIZONTAL ALIGNMENT CHARACTERISTICS ALONG U.S. 301

CURVE P.I. BASELINE STATION	VICINITY OF	DEGREE OF DEFLECTION	RADIUS (meters)	DIRECTION OF DEFLECTION
120+07.79	North of Sligh Avenue	11 deg. 59 min. 33 sec.	1746.379	Right
134+82.48	North of Bypass Canal	22 deg. 31 min. 03 sec.	1746.379	Left
152+63.27	North of I-75 Overpass	53 deg. 43 min. 03 sec.	873.190	Right
174+87.80	South of Fowler Avenue	28 deg. 51 min. 20 sec.	1746.379	Right

Source: Metric Baseline Alignment Survey

4.1.6 Vertical Alignment

A profile survey was done for this project to analyze the existing roadway profile, since the original construction plans for U.S. 301 were not available. Elevations were taken along the existing survey baseline every 25 meters. Vertical grades and curve lengths were estimated from the profile survey. A summary of the vertical alignment is provided in Table 4-2.

Vertical sight distance was checked at all Vertical Points of Intersection (VPI's). The existing vertical curves meet minimum sight distance requirements for an 80 km/hr (50 mph) design speed. There are three VPI locations which do not have a vertical curve, but have an algebraic difference in grades which requires a curve. These locations would have to be reconstructed if the existing pavement is to be used for the northbound lanes or else an exception would be required.

There is a long flat section with a 0% grade from the beginning of the project to 200 meters south of Harney Road. If the suburban section is selected as the preferred alternative in final recommendation, it should be designed with a minimum gutter grade of 0.3%, even though ditches are used for stormwater conveyance. This would allow for the roadway to be converted to an urban section without reconstructing the pavement if widening to six lanes becomes necessary.

TABLE 4-2

EXISTING VERTICAL ALIGNMENT CHARACTERISTICS ALONG U.S. 301

BASELINE STATION (METRIC)	GRADE (%)	APPROXIMATE VPI ELEVATION (METERS)	APPROXIMATE CURVE LENGTH (METERS)
110+00		7.126	
	0.0		
143+33		7.126	200
	2.00		
147+03		14.532	250
	-1.65		
150+34		9.076	225
	+3.50		
153+13		18.847	250
	-.63		
158+00		15.776	No Curve
	-1.68		
159+67		12.962	200
	+0.82		
163+65		16.217	150
	-0.89		
165+97		14.150	225
	+0.82		
168+80		16.457	No Curve
	-0.10		
172+63		16.091	No Curve
	-1.27		
175+02		13.067	100
	+0.62		
180+32		16.372	200
	-1.23		

4.1.7 Drainage

A Location Hydraulic Report (LHR)[1] has been prepared for the U.S. 301 (S.R. 41) PD&E Study. This section presents a summary of findings from these efforts.

4.1.7.1 Soils Information

The Soil Survey of Hillsborough County, Florida[2] was reviewed to identify the soil types along the project. A map of the soil types in the study area is shown in Figure 4-2. In general, soils are sandy and range from poorly to excessively drained. More information on the soil types and characteristics is provided in Section 4.1.8, and detailed descriptions of the soil types are in the Location Hydraulics Report.

4.1.7.2 Base Floodplains

The preferred alternative was not selected at the time the LHR was prepared. For analysis, all computations for crossdrain extensions and replacements and floodplain encroachments are based on the impacts associated with the widest rural typical section. The preferred alternative to be presented at the Public Hearing is a suburban section, which fits inside the existing ROW. If the suburban section remains the preferred in the final recommendation, the impacts to floodplains will be reduced.

The Federal Emergency Management Agency (FEMA) has completed a Flood Insurance Study for Hillsborough County, dated January 16, 1987. Portions of the study area are located within the floodplain limits as shown on the FIRM Community Panels 120112 0236C, 120112 0238C, 120112 0240C, and 120112 0376C as compiled by FEMA (see Figure 4-3). However, the FIRM maps do not reflect the effects of the Tampa Bypass Canal (TBC) constructed in 1979. Therefore, the *Regulation Manual for Lower Hillsborough Flood Detention Area and Tampa Bypass Canal* (Manual) was consulted to obtain flood stages for the TBC.

[1] Location Hydraulics Report; Post, Buckley, Schuh, and Jernigan, Inc.; Tampa, FL; August 1997.

[2] Soil Survey of Hillsborough County, Florida; United States Department of Agriculture, Soil Conservation Services; Washington, D.C., 1989.

U.S. 301 PD&E STUDY
EXISTING TYPICAL SECTION

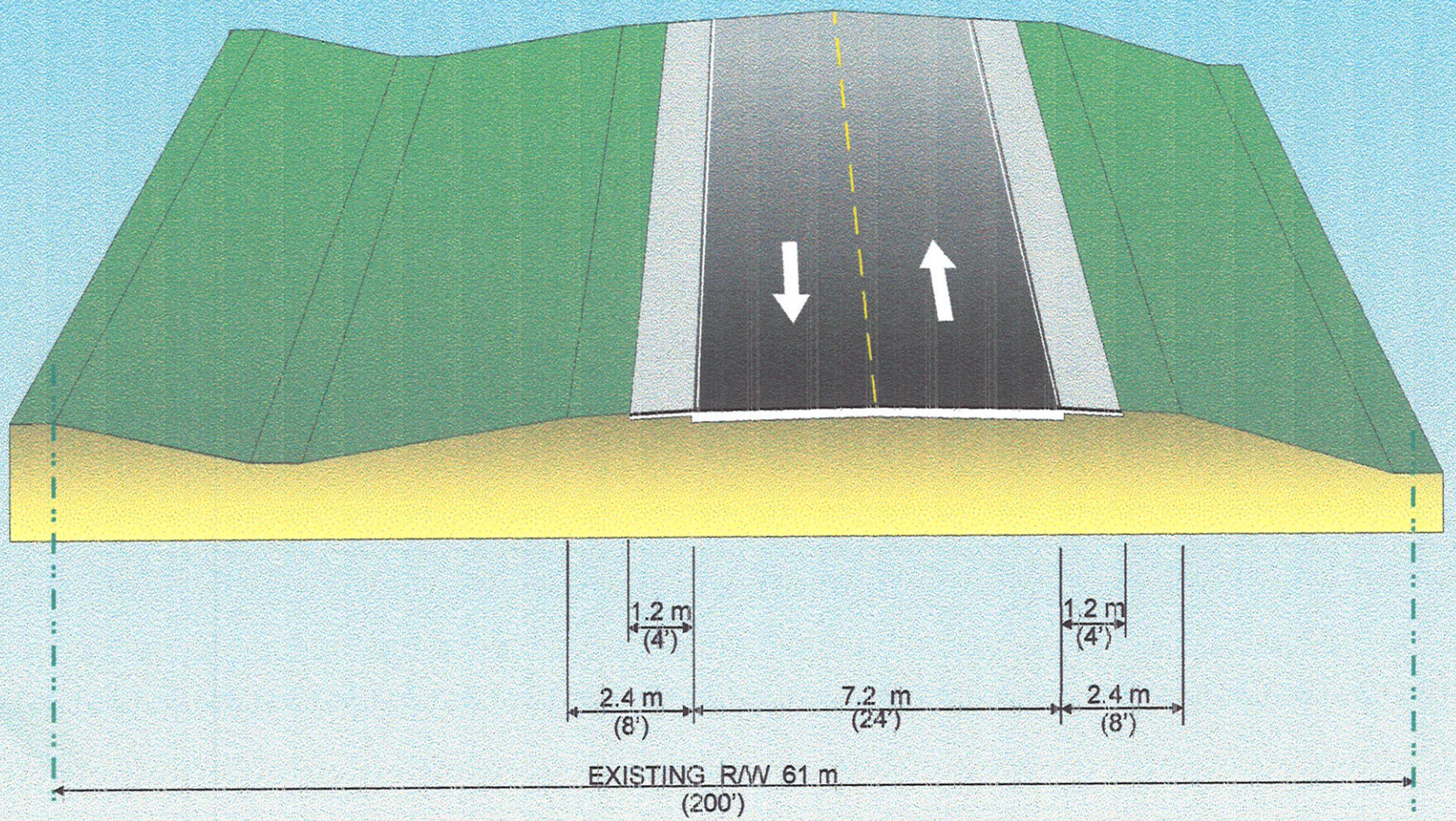
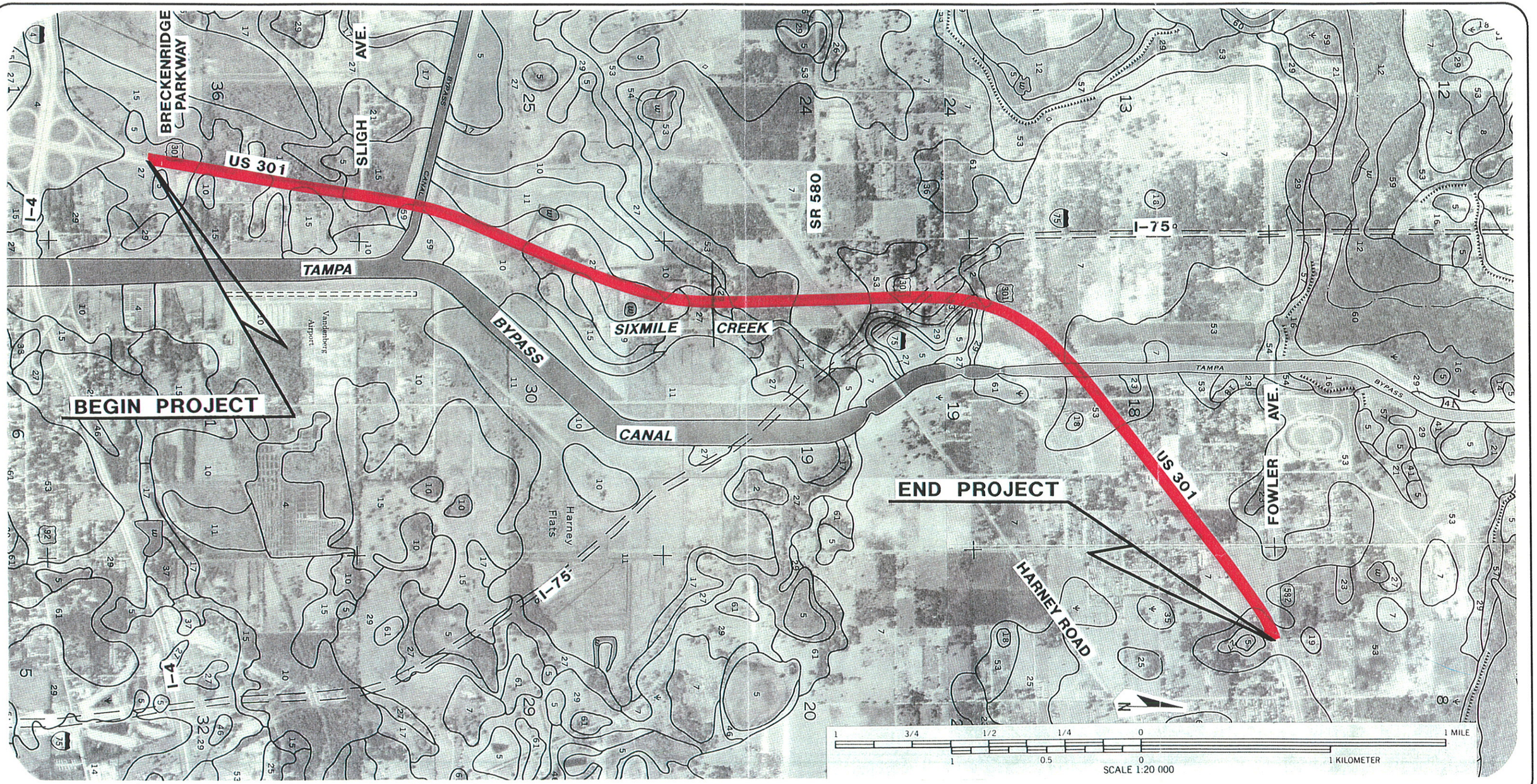


FIGURE 4-1



Source: Soil Survey of Hillsborough County 1989 Sheets 24 & 33

FLORIDA DEPARTMENT OF TRANSPORTATION

U.S. 301
I-4 to Fowler Ave.
Hillsborough County, Florida

SOIL SURVEY DATA

SPN# 10260 - 1509
WPI# 7113598
FAP# XU - 311 - 1 (33)

FIGURE 4-2

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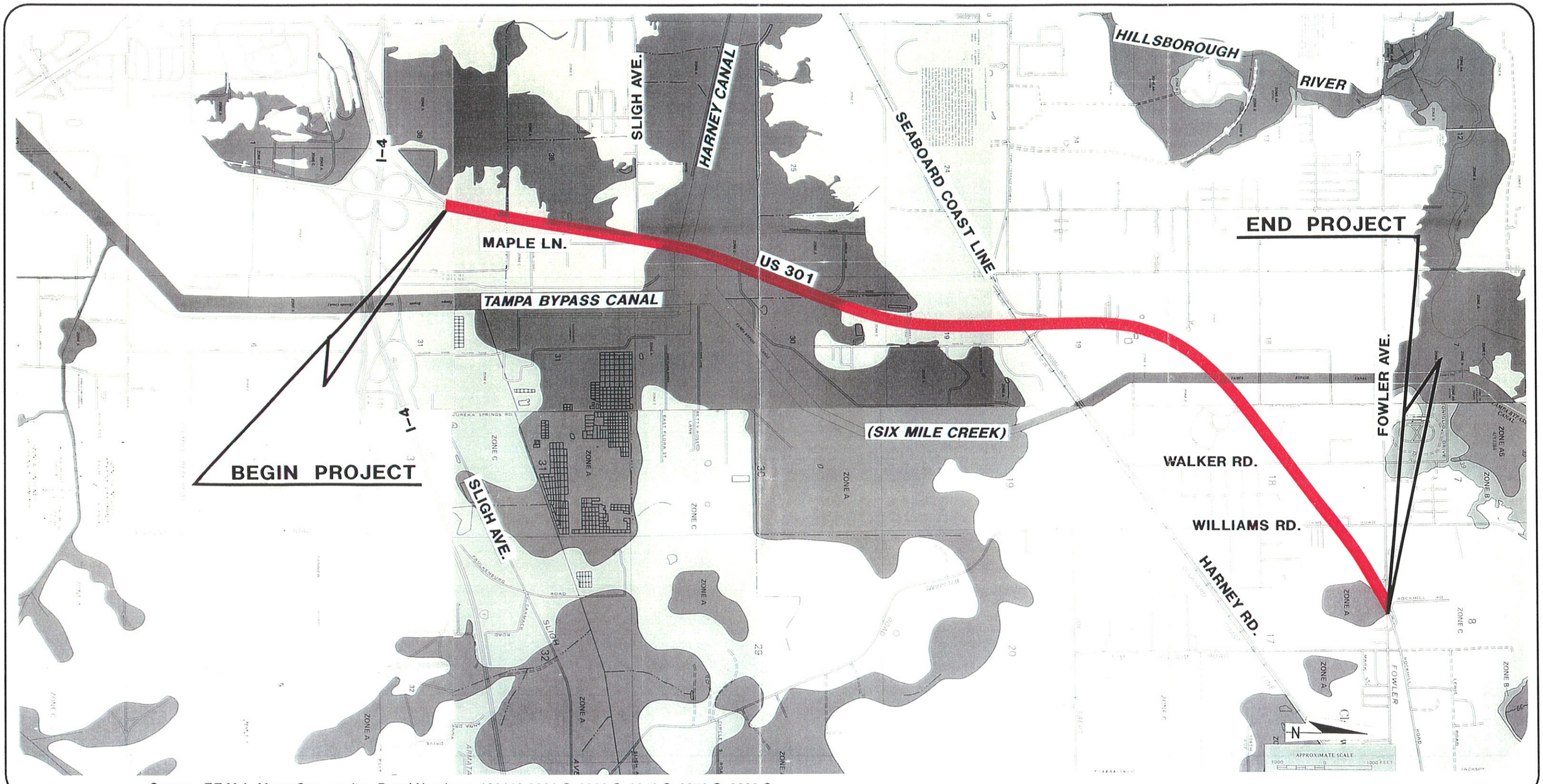

Source: F.E.M.A. Maps Community - Panel Numbers: 120112 0236 C, 0238 C, 0240 C, 0376 C, 0380 C

LEGEND

FEMA 100 Year Floodplain not Including the Effects of the Tampa Bypass Canal

FLORIDA DEPARTMENT OF TRANSPORTATION

U.S. 301
I-4 to Fowler Ave.
Hillsborough County, Florida

FEDERAL EMERGENCY MANAGEMENT AGENCY (F.E.M.A.) MAP

SPN# 10260 - 1509
WPI# 7113598
FAP# XU - 311 - 1 (33)

FIGURE 4-3

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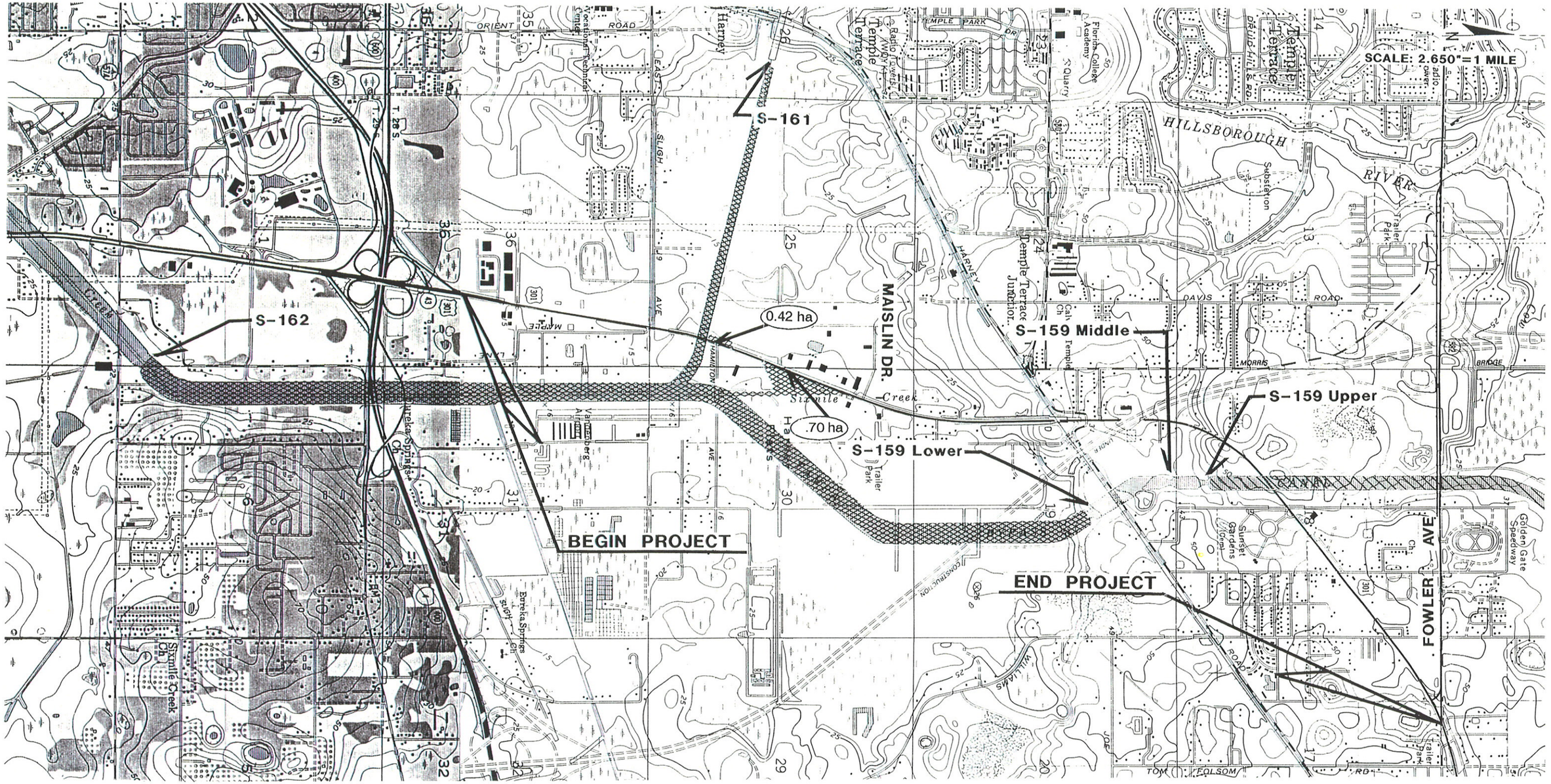

LEGEND

- 100 Year Floodplain as Established for S-162 by the *Regulation Manual for Lower HillsboroughFlood Detention Area and Tampa Bypass Canal*
- 100 Year Floodplain as Established for S-159 Upper by the *Regulation Manual for Lower HillsboroughFlood Detention Area and Tampa Bypass Canal*
- 100 Year Floodplain Impacted by Roadway Improvements

FLORIDA DEPARTMENT OF TRANSPORTATION

U.S. 301
I-4 to Fowler Ave.
Hillsborough County, Florida

100 YEAR FLOODPLAIN AS ESTABLISHED BY S-162 & S-159 UPPER

SPN# 10260 - 1509
WPI# 7113598
FAP# XU - 311 - 1 (33)

FIGURE 4-4

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There are five, manually controlled, structures (see Figure 4-4) along the TBC which regulate water levels at different locations within the TBC. Within the project limits, water levels are controlled by S-159 Upper and S-162. The optimum water control levels for all five structures, which include all events up to and including the 500-year event, are listed in Table 4-3.

TABLE 4-3

CONTROL STRUCTURE DATA

Structure	Location	Headwater Elevation (m)	Tailwater Elevation (m)	Headwater Elevation (ft)	Tailwater Elevation (ft)
S-159 Upper	On TBC 2,000 ft upstream of Harney Road	7.41	6.22	24.3	20.4
S-159 Middle	On TBC, 1,300 ft above Harney Road	6.22	4.15-4.57	20.4	13.6-15.0
S-159 Lower	On TBC, 500 ft below Harney Road	4.15-4.57	3.66-4.57	13.6-15.0	12.0-15.0
S-161	On Harney Canal, 1,600 ft east of intersection of Harney Canal and Hillsborough River	5.94-6.71	3.66-4.57	19.5-22	12.0-15.0
S-162	On TBC, just upstream of MLK Boulevard	3.66-4.57	3.05	12.0-15.0	10.0

When the optimum water level exceeds those in Table 4-3, the control gates are opened to reduce water levels within the canal. As stated in the Manual, the maximum headwater elevation south of Structures S-159 Lower and S-161 and north of S-162 should not exceed 4.85 m (15.9 ft) with the gates opened or closed. The 100-year floodplain elevation was determined by control elevations within the Tampa Bypass canal since the FEMA study did not include the effects of the Tampa Bypass Canal when determining the 100-year floodplain elevations. The Manual also states that the peak headwater elevation for S-162, 4.85 m (15.9 ft), is the maximum stage one can expect the Tampa Bypass Canal to reach from S-162 to -159 Lower (south of I-75 to Harney Road). This evaluation was considered a very conservative estimation of the 100-year floodplain elevation and was used to determine impacts to the 100-year floodplain (see Figure 4-4). The following areas lie within the 100-year floodplain as established by S-162:

- From approximately 350 m (1150 ft) north of Sligh Avenue to 490 m (1600 ft) north of East Sligh Avenue adjacent to U.S. 301 on the east.
- From approximately 180 m (600 ft) south of Maislin Drive to 620 m (2050 ft) south of Maislin Drive adjacent to U.S. 301 on the west.

From Harney Road to Fowler Avenue, the 100-year flood stage was determined, from the Manual, to be elevation 7.41 m (24.3 ft). This elevation is the peak headwater elevation for S-159 Upper. Within this area of the project, there are no impacts to the 100-year floodplain as established by S-159 Upper.

The project corridor has two areas (noted above) which lie in the 100-year floodplain determined by the peak headwater elevations for the control structures on the TBC. The first area is approximately 0.70 hectares (ha) [1.72 acres (ac)] and the second area is approximately 0.42 ha (1.03 ac). The project crosses the floodplain transversely. These floodplain encroachments may require compensation for any fill involvement in these areas. No longitudinal crossings of the floodplain are located within the project limits.

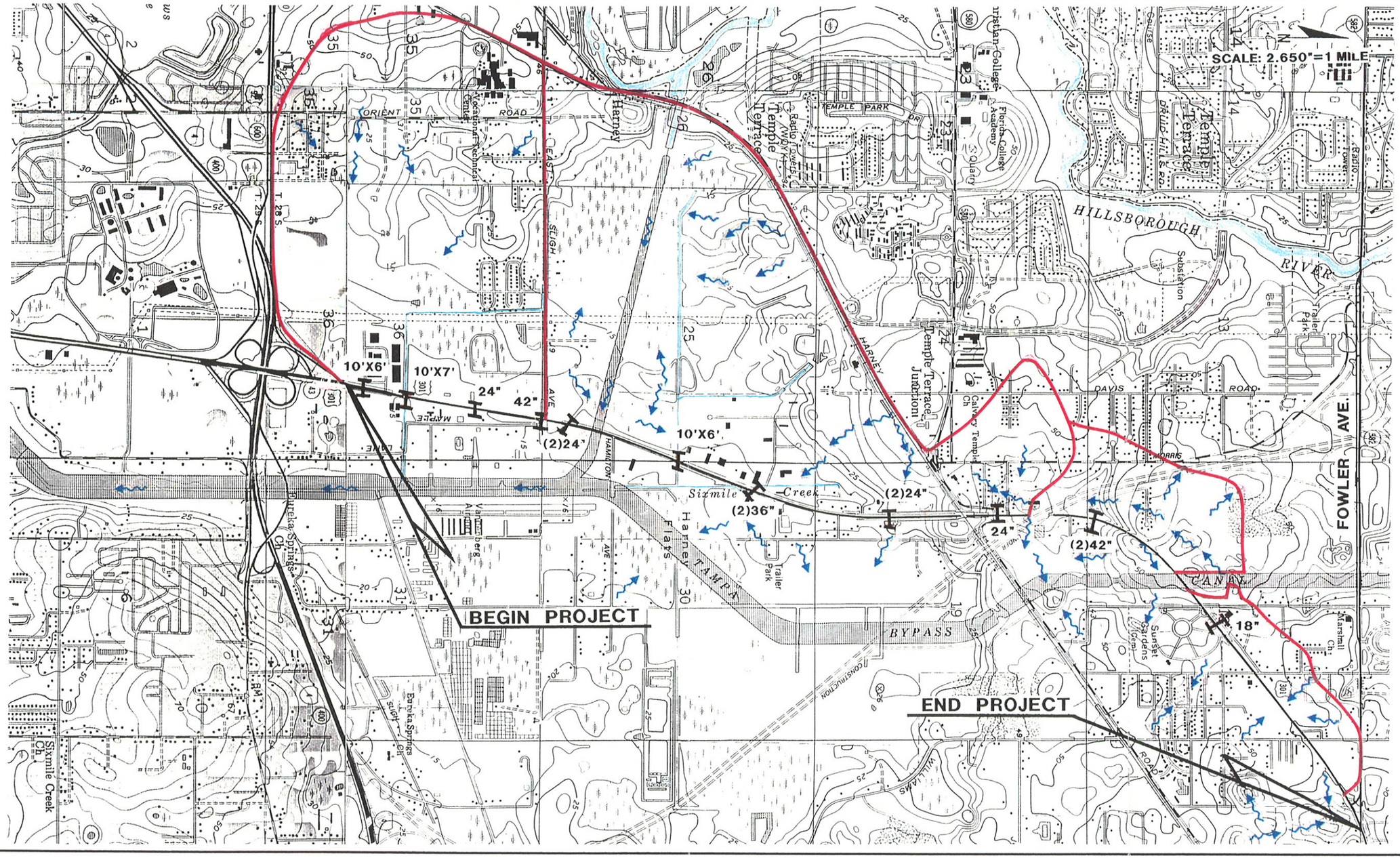
The proposed structures will perform hydraulically in a manner equal to or greater than the existing structures, and backwater surface elevations are not expected to increase. As a result, there will be no significant adverse impacts on the natural and beneficial floodplain values or any significant change in flood risks or damage. There will not be a significant change in the potential for interruption or termination of emergency service evacuation routes. Therefore, it has been determined that this encroachment is not significant.

4.1.7.3 Regulated Floodways

It has been determined through consultation with local, state, and federal water resources and floodplain management agencies that there is no regulatory floodway involvement on the proposed project and that the project will not support base floodplain development that is incompatible with existing floodplain management programs.

4.1.7.4 Drainage Patterns

The existing drainage patterns were determined using the United States Geological Survey (USGS) quadrangle maps and SWFWMD contour aerials. The existing drainage features in the area are characterized by gently to moderately sloping poorly drained and well vegetated terrain. The drainage patterns are shown in Figure 4-5.



LEGEND

- Basin Boundary
- Direction of Flow
- Cross Drain

FLORIDA DEPARTMENT OF TRANSPORTATION

U.S. 301
I-4 to Fowler Ave.
Hillsborough County, Florida

DRAINAGE PATTERNS

SPN# 10260 - 1509
WPI# 7113598
FAP# XU - 311 - 1 (33)

FIGURE 4-5

C:\COREL 301-4-F\ REPORTS\ PER\ FIG_4-5\ 6-12-98

4.1.7.5 Hydraulic Adequacy of Existing Drainage Crossings

Existing cross drain information is shown in Table 4-4 and recommended replacement structure sizes are shown in Table 4-5. Since there are no unresolved drainage complaints throughout the project limits, minimal design computations may be required for those cross drains requiring modification or replacement. Each culvert was analyzed using the discharge associated with a velocity of 1.83 m per second (mps) [6 ft per second (fps)]. The analysis was completed using the alternative with the widest typical section and the highest design speed, in order to yield the longest extension. The 50-year and 100-year events were analyzed to determine the head differential between the existing cross drains and the proposed cross drains. These cross drains were analyzed using the procedures set forth in the FDOT Drainage Manual Volume 2A, applying the HEC-5 nomograph and the culvert capacity worksheet. A more detailed design will be completed during the design phase, of this project, to determine actual pipe sizes based on more appropriate design flows and actual pipe lengths.

As-built drawings were used to determine flowline elevations at each structure. Since a design survey has not been completed for this project, flowline elevations not shown on the as-built drawings were either scaled off the drainage structure sheets or assumed. Assumed flowlines are shown as n/a in Table 4-4. An assumed physical slope of approximately 0.1% was used as the physical slope of those pipes with assumed flowline elevations. Tailwaters were assumed at one foot above the crown of the existing cross drains to determine a head differential between the existing and proposed pipes. If lengthening the existing cross drains caused a 3.5 cm (0.1 foot) rise in the headwaters for the 100-year event, the cross drains were increased in size.

Results of the analysis lead to the conclusion that ten of the twelve cross drains will need to be replaced (see Table 4-5).

4.1.7.6 Drainage Problems

The FDOT District Seven office, located in Tampa, was contacted concerning any flooding problems in the vicinity of, or caused by, U.S. 301 from north of the I-4 interchange to Fowler Avenue.

According to the previous Assistant Maintenance Engineer, U.S. 301 once had two areas within the project limits that flooded. The first flooding problem was located at Sligh Avenue, where ponding occurred within the ROW. The second flooding problem was located at Raulerson Ranch Road which has a 900 mm (36 in) RCP in a sag condition. The flooding problem was associated with the outfall for this structure. Approximately fifteen years ago the Tampa Bypass Canal was built and the outfall for the flooding structure was connected to the canal. The construction of the canal appears to have eliminated both flooding problems for the past fifteen years. Jerry Sanford of the District Seven FDOT Maintenance Department confirmed that there are no recent flooding incidents on U.S. 301 in the project area.

TABLE 4-4

EXISTING CROSSDRAIN INFORMATION

STR	STA	Description	Flow Direction	Size (mm)	Size (ft or in)	Length (m)	Length (ft)	Inverts		Inverts	
								West (m)	East (m)	West (ft)	East (ft)
1	106+38	EW-CBC-EW	E-W	3048 x 1829	10' x 6'	57.30	188.0	5.33	5.35	17.48	17.56
2	108+84	EW-CBC-EW	W-E	3048 x 2134	10' x 7'	57.30	188.0	n/a	n/a	n/a	n/a
3	112+84	EW-RCP-EW	E-W	600	24"	24.69	81.0	4.60	4.60	15.10	15.10
4	111+06	EW-RCP-EW	E-W	1050	42"	23.47	77.0	4.02	4.21	13.20	13.80
5	118+68	EW-RCP-EW	E-W	(2)-600	(2)-24"	14.63	48.0	4.61	4.67	15.12	15.32
6	125+36	EW-CBC-EW	W-E	3048 x 1829	10' x 6'	15.24	50.0	4.01	4.00	13.15	13.14
7	130+18	EW-RCP-EW	W-E	(2)-900	(2)-36"	27.13	89.0	4.22	4.19	13.85	13.75
8	136+74	EW-RCP-EW	E-W	(2)-600	(2)-24"	12.80	42.0	5.43	5.64	17.80	18.50
9	138+58	EW-RCP-EW	W-E	750	30"	18.29	60.0	5.52	5.39	18.10	17.70
10	144+94	EW-RCP-EW	W-E	600	24"	29.26	96.0	8.80	8.59	28.87	28.17
11	150+30	EW-RCP-EW	W-E	(2)-1050	(2)-42'	32.92	108.0	n/a	n/a	n/a	n/a
12	160+32	EW-RCP-EW	E-W	450	18"	22.25	73.0	11.76	11.79	38.60	38.68

EW: Endwall
CBC: Concrete Box Culvert
RCP: Reinforced Concrete Pipe
W: West
E: East
n/a: Information not available

TABLE 4-5

RECOMMENDED CROSSDRAIN SIZE

Structure Number	Location (Station)	Existing Structure Size	Hydraulic Adequacy	Proposed Structure Size
S-3	112+84	600 RCP	Inadequate	750 RCP
S-4	111+06	1050 RCP	Inadequate	2-900 RCP
S-5	118+68	2-600 RCP	Inadequate	2-750 RCP
S-6	125+36	3048 x 1829 mm CBC	Inadequate	3657 x 1829 mm CBC
S-7	130+18	2-900 RCP	Inadequate	3-750 RCP
S-8	136+74	2-600 RCP	Inadequate	2-750 RCP
S-9	138+58	750 RCP	Inadequate	2-600 RCP
S-10	144+94	600 RCP	Inadequate	750 RCP
S-11	150+30	2-1050 RCP	Inadequate	2-1200 RCP
S-12	160+32	450 RCP	Inadequate	600 RCP

4.1.8 Geotechnical Data

A Geotechnical Study was done by PSI for this project to test soil conditions along the roadway and at the proposed pond sites. This section summarizes the results of the study. For more detailed information see the Geotechnical Services Report, finalized in August 1998.

4.1.8.1 Geology

The geology of Hillsborough County can be briefly described as surficial sands and clay, sandy clays and clayey sands overlaying limestone.

4.1.8.2 Soils

The soils within the limits of the project were categorized according to the USDA, SCS Soil Survey of Hillsborough County. The soil survey map for Hillsborough County, shown in Figure 4-2, indicates that there are nine (9) mapping units along the corridor. The mapping units are shown in Table 4-7. The soils located within the project corridor from just north of the U.S. 301/I-4 interchange to 0.8 km (4.97 mi) south of Harney Road are poorly drained and moderately permeable soils. In general, the surficial soils found in low lying depressions and flatwoods consist of fine silty sands, and sand-silt-clay mixtures with some muck areas. The slopes are usually flat ranging from 0 to 2 percent. These soils are classified as hydrologic group B/D, which in their natural state function as a D soil, with the muck soil being classified as a hydrologic group D. The seasonal high water generally exists at a depth of 0-0.3 m (0-1 ft) below the natural ground surface for the sandy soils and +0.6-0.3 m (+2-1.0 ft) above/below the natural ground surface for the muck soils.

The soils located from 0.8 km (0.5 mi) south of Harney Road to Fowler Avenue are moderately well drained to excessively drained soils. Typically the surficial soils found in upland areas consist of one fine silty sands, and sand-silt-clay mixtures. The slopes are usually flat to gently sloping, ranging form 0 to 5 percent. These soils are classified as hydrologic group A. The seasonal high water generally exists at a depth of 1.1 - > 1.8 m (3.5 - > 6.0 ft) below the natural ground surface.

4.1.8.3 Soils Sampling and Testing

The soils testing for this project consisted of the following:

1. Performed a preliminary roadway soil survey consisting of thirty-two (32) auger borings to depths of 2 to 2.4 meters. The borings were performed along the roadway alignment and in the proposed intersection improvement areas. The borings were generally performed on alternating sides of the alignment at an interval of approximately every 300 meters. Two of the borings were performed in proposed pond area 7.
2. Performed two (2) SPT borings to depths of 6.1 to 7.6 meters in the high embankment areas along U.S. 301 south of Harney Road.
3. Performed eighteen (18) power auger borings to depths of 3.0 to 7.6 meters in eight (8) of the proposed pond areas.
4. Obtained soil samples for standard classification testing and laboratory testing. Tests included Limerock Bearing Ratio (LBR), grain size analysis, moisture content, Atterberg limits, and corrosion.
5. Performed field permeability tests along the subject alignment in the proposed pond areas.
6. Measured existing groundwater tables and estimated seasonal high groundwater tables.

Soil Boring Results

Based upon the exploratory borings and results of the laboratory testing, the near surface soils along the project alignment have been grouped into seven (7) strata. See Table 4-6. Each stratum group exhibits a range of engineering properties related to suitability for roadway construction as outlined by FDOT Standard Index 505. The Roadway Soils Survey, Figure 4-12, shows the general range of engineering properties measured in the laboratory for the various soil strata encountered during our preliminary investigation.

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION
MATERIAL AND RESEARCH

DATE OF SURVEY: JUNE - JULY 1998
SURVEY MADE BY: PSI
SUBMITTED BY: CHING L. KUO, PhD., P.E.

FIN. PROJ. No. 25536212101

DISTRICT: SEVEN
ROAD No.: U.S. 301
COUNTY: HILLSBOROUGH

CROSS SECTION SOIL SURVEY FOR THE DESIGN OF ROADS

SURVEY BEGINS STA. 119+44 SURVEY ENDS STA. 189+06

		ORGANIC CONTENT		MOISTURE CONTENT		SIEVE ANALYSIS RESULTS % PASS						ATTERBERG LIMITS (%)					CORROSION TEST RESULTS				
STRATUM NO.	LBR VALUE (%)	No. OF TESTS	% ORGANIC	No. OF TESTS	MOISTURE CONTENT	No. OF TESTS	10 MESH	40 MESH	60 MESH	100 MESH	200 MESH	NO. OF TESTS	LIQUID LIMIT	PLASTIC INDEX	AASHTO GROUP	DESCRIPTION	NO. OF TESTS	RESISTIVITY OHM-CM	CHLORIDES PPM	SULFATE PPM	pH
1	18-36	--	-----	--	-----	3	100	92-95	73-81	42-45	4-6	--	-----	-----	A-3	DARK BROWN SLIGHTLY SILTY FINE SAND	13	1,600-120,000	15-30	0-276	5.1-6.6
2	58	3	3-4	7	8-25	14	100	94-99	69-96	29-74	13-29	4	19-26	1-8	A-2-4	BROWN SILTY FINE SAND	5	600-21,000	15	7-24,870	5.4-7.3
3	-----	--	-----	3	17-25	7	100	94-99	84-92	50-70	28-34	4	27-32	12-17	A-2-6	REDDISH-GRAY CLAYEY FINE SAND	--	-----	-----	-----	-----
4	-----	--	-----	4	21-24	5	100	99-100	93-96	57-77	36-39	4	24-40	12-22	A-6	GRAY SANDY CLAY	--	-----	-----	-----	-----
5	-----	--	-----	2	25-29	2	100	98-100	89-97	75-89	40-49	2	42-48	22-26	A-7-6	GREEN CLAY	--	-----	-----	-----	-----
6	-----	--	-----	1	32	1	100	100	95	72	43	1	44	13	A-7-5	GRAY/GREEN CLAY	--	-----	-----	-----	-----
7	-----	4	6-32	4	23-100	5	100	74-99	59-93	37-69	21-37	--	-----	-----	A-8	MUCK	--	-----	-----	-----	-----

EMBANKMENT AND SUBGRADE MATERIAL

STRATA BOUNDARIES ARE APPROXIMATE AND REPRESENT SOIL STRATA AT EACH TEST HOLE LOCATION ONLY.

WATER TABLE ENCOUNTERED

GNEWATER TABLE NOT ENCOUNTERED

A WITH TRACE ORGANICS

B WITH CLAY LENSES

C WITH LIMESTONE FRAGMENTS

NOTES:

1. THE MATERIAL FROM STRATUM NUMBER 1 APPEARS SATISFACTORY FOR USE IN THE EMBANKMENT WHEN UTILIZED IN ACCORDANCE WITH INDEX 505.
2. THE MATERIAL FROM STRATUM NUMBER 2 APPEARS SATISFACTORY FOR USE IN THE EMBANKMENT WHEN UTILIZED IN ACCORDANCE WITH INDEX 505. HOWEVER, THIS MATERIAL IS LIKELY TO RETAIN EXCESS MOISTURE AND BE DIFFICULT TO DRY AND COMPACT. IT SHOULD BE USED IN THE EMBANKMENT ABOVE THE WATER LEVEL EXISTING AT THE TIME OF CONSTRUCTION. THIS MATERIAL MAY NOT BE USED IN THE SUBGRADE PORTION OF THE ROADBED DUE TO ITS ORGANIC CONTENT.
3. THE MATERIAL FROM STRATA NUMBERS 3,4,5 AND 6 IS PLASTIC MATERIAL AND SHALL BE REMOVED IN ACCORDANCE WITH INDEX 500. IT MAY BE PLACED ABOVE THE EXISTING WATER LEVEL (AT THE TIME OF CONSTRUCTION) TO WITHIN 4 FEET OF THE PROPOSED BASE. IT SHOULD BE PLACED UNIFORMLY IN THE LOWER PORTION OF THE EMBANKMENT FOR SOME DISTANCE ALONG THE PROJECT RATHER THAN FULL DEPTH FOR SHORT DISTANCES.
4. THE MATERIAL FROM STRATUM NUMBER 7 IS MUCK/A-8 MATERIAL AND SHALL BE OVEREXCAVATED WITHIN THE PROPOSED EMBANKMENT LIMITS. THIS MATERIAL MAY BE USED IN THE EMBANKMENT CONSTRUCTION AS OUTLINED IN FDOT INDEX 505. THIS MATERIAL SHALL NOT BE USED IN THE CONSTRUCTION OF STORMWATER POND BERMS WITH THE EXCEPTION OF MUCK USED AS A SUPPLEMENT TO CONSTRUCT TOP SOIL AS DESCRIBED IN SECTION 162 OF THE FDOT STANDARD SPECIFICATIONS.

REVISIONS								
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY			DRAWN BY		
CHECKED BY			CHECKED BY		
SUPERVISED BY:					

PSI ENVIRONMENTAL GEOTECHNICAL CONSTRUCTION

ROAD NO.	COUNTY	PROJECT NO.

FLORIDA DEPARTMENT OF TRANSPORTATION
APPROVED BY:
DATE:

ROADWAY SOILS SURVEY
FIGURE 4-12

TABLE 4-6

SOIL TESTING STRATA

Stratum	Soil Description	AASHTO Soil Classification
1	Dark Brown Slightly Silty Fine Sand	A-3
2	Brown Silty Fine Sand	A-2-4
3	Reddish Gray Clayey Fine Sand	A-2-6
4	Gray Sandy Clay	A-6
5	Green Clay	A-7-6
6	Gray/Green Clay	A-7-5
7	Muck	A-8

Groundwater

The groundwater table was encountered in approximately half of the borings performed and varied from 0.9 to 6.4 meters below existing grades at the tested locations.

Groundwater conditions will vary with environmental variations and seasonal conditions, such as the frequency and magnitude of rainfall patterns, as well as man-made influences, such as existing swales, drainage ponds, and underdrains.

Seasonal High Groundwater Table (SHGWT) depths were estimated along the project alignment and pond areas from several of the roadway and pond borings performed. The results are presented in Table 4-9. These estimates are based on the soil stratigraphy, USDA information, ground surface topography, vegetation, and past experience. Field boring locations were determined by PSI personnel as based on the existing baseline of survey and were later converted to the centerline of construction for this report.

GEOTECHNICAL ENGINEERING EVALUATIONS AND RECOMMENDATIONS

General

In general, the existing shallow subsurface soils encountered in the borings performed are capable of supporting the proposed construction of a typical pavement section after subgrade preparation in accordance with FDOT Standards. Buried organic soils, debris and unsuitable soils encountered during construction should be removed and replaced with clean compacted sandy soils when encountered at the surface or in open excavations. Similarly, plastic soils, if encountered during construction within the pavement section, should be removed and placed in areas not affecting pavement performance.

The removal of topsoil, near-surface clayey soils (if encountered during construction) and surficial organic soils should be accomplished in accordance with the FDOT Standard Specifications for Road and Bridge Construction and Index 500. Site preparation should consist of normal clearing and grubbing followed by compaction of subgrade soils. Backfill should consist of materials conforming with FDOT Index 505 and compacted in general accordance with the FDOT Standard Specifications for Road and Bridge Construction. Materials directly beneath the base should be "SELECT" materials.

Organic soils (organic contents of 6 to 32 percent) were encountered at several locations along the alignment and in several of the proposed pond sites at various depth intervals between 0.6 and 7.3 meters below existing grade. The delineation of the vertical and lateral extent of these suspect areas was not performed in this PD&E phase and should be performed in the future stages of the project.

Pavement Design Considerations

Eight Limerock Bearing Ratio (LBR) tests were performed on near surface soils obtained at various locations along the roadway alignment. The LBR tests yielded values ranging from 18 to 58 percent. The FDOT 90 percentile method yielded a design LBR value of 24 percent. We recommend a

design LBR value of 24 percent be used for the existing project soils for use in pavement design. For a summary of LBR test results, see Table 4-8.

Groundwater levels along the roadway alignment were encountered at depths of approximately 0.9 to 6.4 meters below existing grades at approximately half of the boring locations. The seasonal high water table data is provided in Table 4-9. The minimum separation between the bottom of the base and the estimated SHGWT levels shall be designed in accordance with the FDOT Drainage Manual and other related FDOT and FHWA guidelines. However, if more significant cuts on the order of 1 meter or greater are proposed, the choice of base material would depend upon the relationship of final roadway improvement grades and the bottom of the base to the estimated SHGWT levels. Coquina shell base materials are more resistant to wet conditions than limerock and the separation can be somewhat reduced. Crushed concrete is also less sensitive to moisture than limerock, but should be treated in the same fashion. An asphaltic concrete base may also be used in areas of high groundwater.

Groundwater Control

Depending upon groundwater levels at the time of construction, some form of dewatering may be required to achieve the required compaction. Groundwater can normally be controlled in shallow excavations with pumps and sumps. During subgrade soil preparation any plastic soils below design grade could become disturbed by construction activities. If this becomes the case, the contractor may be directed by the owners representative to remove the disturbed or pumping soils to a depth of 300 to 460 mm below design grade and backfill the area with structural fill. In such situations, FDOT Indexes 500 and 505 should be followed closely.

General Roadway Construction Recommendations

Site preparation and roadway construction should be done in accordance with the latest FDOT Standard Specifications for Road and Bridge Construction and Roadway and Traffic Design Standards. Temporary excavation side slopes should also be shored in accordance with OSHA

requirements.

On-Site Soil Suitability

In general, the majority of the fine sands (A-3; Stratum 1) can be moved and used for grading purposes, site leveling, general engineering fill, structural fill and backfill in other areas, provided the fill is free of organic materials, clay, debris or any other material deemed unsuitable for construction. All fill should be placed in accordance with recommendations provided in this report. Silty fine sand soils (A-2-4) may be used as embankment soils as described in FDOT Index 505. However, this material may not be used in the subgrade portion of the roadbed due to its organic content. Clayey soils (A-2-6, A-6, A-7-5 and A-7-6) may be used as embankment soils as described in FDOT Index 505. The muck (A-8) encountered shall be over-excavated within the proposed embankment limits. This material may be used in the embankment construction as outlined in FDOT Index 505. This material shall not be used in the construction of stormwater pond berms with the exception of muck used as a supplement to construct top soil as described in section 162 of the FDOT Standard Specifications.

PRELIMINARY EVALUATION OF STORMWATER RETENTION POND AREAS

In general, the fourteen (14) auger borings performed in the pond areas (3, 7, 10, 23, 25, 27 and 29) generally encountered fine sands (A-3) underlain by silty fine sands (A-2-4) to a depth of 3 meters below existing grades. Several of the borings performed in these pond areas also encountered muck (A-8), clayey fine sand (A-2-6) and clay (A-6) at various depth intervals. Borings performed in Ponds 11 and 15 were extended to depths of 4.6 to 7.6 meters below existing grades since these pond areas were covered with fill material approximately 4 to 5 meters above existing grades. The borings performed in Pond 11 encountered silty and clayey fine sands (A-2-4 and A-2-6) underlain by clays (A-6, A-7-6) and muck (A-8) to the boring termination depths. The borings performed in Pond 15 generally encountered silty fine sands (A-2-4) underlain by clayey fine sands (A-2-6) to the boring termination depths. Several borings encountered clays (A-6, A-7-6) and muck (A-8) at various depth intervals.

The groundwater tables in pond areas 3, 7, 10, 11 and 23 varied from 0.9 to 3.0 meters below existing grades. The groundwater table was not encountered within the depths of the borings performed in the remaining ponds. Estimated seasonal high water tables for the pond areas varied from 0.3 to >3.0 meters below existing grades. Horizontal and vertical field permeability results for five (5) of the pond areas vary from $3.1x10^{-2}$ cm/sec (26.8 m/day) to $4.4x10^{-2}$ cm/sec (38.0 m/day) and $5.1x10^{-4}$ cm/sec (0.4 m/day) to $1.7x10^{-2}$ cm/sec (14.7 m/day), respectively.

ENVIRONMENTAL CLASSIFICATION (Corrosion Test Rest Results)

Corrosion tests were performed on eighteen (18) random samples from the roadway and pond auger borings. For a complete summary of test results, see the Geotechnical Services Report. Based on the FDOT's "Structures Design Guidelines, Section 7.2, Topic No. 625-020-150b", the roadway subsurface environment has been classified as slightly to extremely aggressive for both steel and concrete. Resistivity and pH values varied from 600 to 120,000 ohm-cm and from 5.4 to 7.3, respectively. Sulfate and chloride values varied from 0 to 24,870 ppm and from 15 to 30 ppm, respectively.

TABLE 4-7

SUMMARY OF USDA SOIL SURVEY

USDA Symbol and Soil Name	Classification				Seasonal High Water Table			Risk of Corrosion	
	Depth (m)	AASHTO Group	USCS Group	Permeability (m/day)	Depth (m)	Kind	Month	Uncoated Steel	Concrete
Basinger, Holopaw and Samsula Soils (5)	0 - 0.2	A-3	SP	3.6 - 12.2	+0.6 - 0.3	Apparent	Jun - Feb	High	Moderate
	0.2 - 0.7	A-3, A-2-4	SP, SP-SM	3.6 - 12.2					
	0.7 - 1.1	A-3, A-2-4	SP, SP-SM	3.6 - 12.2					
	1.1 - 2.0	A-3, A-2-4	SP, SP-SM	3.6 - 12.2					
Candler (7)	0 - 0.2	A-3	SP, SP-SM	3.6 - 12.2	>1.8	—	—	Low	High
	0.2 - 1.8	A-3	SP, SP-SM	3.6 - 12.2					
	1.8 - 2.0	A-3, A-2-4	SP-SM	3.6 - 12.2					
Chobee (10)	0 - 0.4	A-2-4	SP-SM, SM	1.2 - 3.6	0 - 0.3	Apparent	Jun - Feb	Moderate	Low
	0.4 - 1.2	A-2-6, A-2-7, A-6, A-7	SC	<0.1					
	1.2 - 2.0	A-2-4, A-2-6, A-6, A-7	SP-SM, SM, SC, SM-SC	0.1 - 3.6					
Chobee (11)	0 - 0.1	— —	PT	3.6 - 12.2	+0.6 - 0.3	Apparent	Jun - Dec	High	High
	0.1 - 0.3	A-2-4	SP-SM, SM	1.2 - 3.6					
	0.3 - 1.2	A-2-4, A-2-6, A-6, A-7	SP-SM, SM, SC, SM-SC	<0.1					
	1.2 - 2.0	A-2-4	SP-SM, SM	1.2 - 3.6					
Felda (15)	0 - 0.6	A-3	SP, SP-SM	3.6 - 12.2	0 - 0.3	Apparent	Jul - Mar	High	Moderate
	0.6 - 1.1	A-2-4, A-2-6	SM, SM-SC, SC	0.4 - 3.6					
	1.1 - 2.0	A-3, A-2-4	SP, SP-SM	3.6 - 12.2					
Floridana (17)	0 - 0.3	A-3, A-2-4	SP-SM, SM	0.06 - 0.1	0 - 0.3	Apparent	Jun - Feb	Moderate	Low
	0.3 - 0.7	A-3	SP, SP-SM	0.03 - 0.06					
	0.7 - 1.5	A-2-4, A-2-6	SC, SM-SC	0.06 - 0.1					
	1.5 - 2.0	— —	— —	— —					
Malabar (27)	0 - 0.3	A-3	SP, SP-SM	3.6 - 12.2	0 - 0.3	Apparent	Jun - Nov	High	Low
	0.3 - 0.8	A-3, A-2-4	SP, SP-SM	3.6 - 12.2					
	0.8 - 1.3	A-3	SP, SP-SM	3.6 - 12.2					
	1.3 - 1.7	A-2, A-4, A-6	SC, SM-SC, SM	<0.1					
	1.7 - 2.0	A-3, A-2-4	SP-SM, SM	3.6 - 12.2					
Myakka (29)	0 - 0.6	A-3	SP, SP-SM	3.6 - 12.2	0 - 0.3	Apparent	Jun - Nov	High	High
	0.6 - 0.8	A-3, A-2-4	SM, SP-SM	0.4 - 3.6					
	0.8 - 2.0	A-3	SP, SP-SM	3.6 - 12.2					
Tavares (53)	0 - 0.2	A-3	SP, SP-SM	>3.6	1.1 - 1.8	Apparent	Jun - Dec	Low	High
	0.2 - 2.0	A-3	SP, SP-SM	>3.6					

TABLE 4-8

SUMMARY OF LIMEROCK BEARING RATIO TEST RESULTS

Sample Number	Sample Location		AASHTO Classification	Stratum Number	Optimum Moisture Content (%)	Maximum Dry Unit Weight (kN/m^3)	LBR Value (%)
	Station Number	Offset[1]					
1	122+00	18 RT	A-2-4	2	11	18.5	58
2	128+00	18 RT	A-3	1	12	17.9	32
3	143+00	8 LT	A-3	1	12	16.8	18
4	149+79	70 RT	A-3	1	11	17.1	40
5	158+00	0 LT	A-3	1	12	17.3	24
6	170+00	20 RT	A-3	1	14	17.3	36
7	179+46	52 LT	A-3	1	12	17.1	29
8	188+00	0 LT	A-3	1	11	17.2	35

(1) Offset was measured from the Centerline of Construction in meters.

TABLE 4-9

GROUNDWATER TABLE DEPTH AT STORMWATER PONDS

Pond No.	Boring		Groundwater Table Depth (Meters)	Depth to Confining Layer* (Meters)
	No.	Station and Offset (Meters)		
3	P3-1	120+22, 200 RT	1.5	—
	P3-2	120+93, 246 RT	1.2	—
7	P7-1	124+95, 184 LT	1.9	—
	P7-2	125+33, 193 LT	2.0	—
10	P10-1	132+89, 70 RT	0.9	0.6
	P10-2	134+09, 53 RT	0.9	1.8
11	P11-1	134+99, 273 RT	2.4	1.0
	P11-2	135+50, 332 RT	3.0	0.9
	P11-3	136+10, 357 RT	2.1	0.0
15	P15-1	143+03, 514 RT	GNE	1.2
	P15-2	143+52, 511 RT	GNE	1.2
	P15-3	144+03, 511 RT	GNE	0.0
23	P23-1	157+70, 71 LT	2.4	2.7
	P23-2	158+18, 65 LT	2.1	—
25	P25-1	168+56, 165 LT	GNE	—
	P25-2	168+45, 247 LT	GNE	—
27	P27-1	169+60, 87 LT	GNE	—
	P27-2	169+41, 181 LT	GNE	—
29	P29-1	176+54, 171 RT	GNE	—
	P29-2	176+91, 125 RT	GNE	—

GNE Groundwater table not encountered within the depth of the boring performed

* " — " Not encountered within the depth of the borings

4.1.9 Accident Data

Annual accident reports were obtained from the FDOT records for the section of U.S. 301 between Interstate 4 (M.P.0.000) and north of Fowler Avenue (M.P. 5.000) for the years 1992 through 1996. A summary of these reports is presented in Tables 4-10, 4-11, and 4-12. As shown in Table 4-10, a total of 352 vehicle collisions were reported in the five year period. A significant number of crashes were rear end (92) and right angle (91) crashes. Table 4-11 summarizes crashes involving a vehicle running off the road in the five year period studied, 16 of these ended in the ditch. Table 4-12 summarizes crashes at night and on wet pavement.

For the period studied, there were approximately two crashes per million vehicle miles, which is above the statewide average of 0.7 per million vehicle miles for similar two lane roadways.

There was one roadway segment with a significantly high crash rate. The section from Walker Road to Fowler Avenue east of U.S. 301 (0.8 miles in length) had an average of 20 crashes per year. This roadway segment includes the intersections at Walker Road, Williams Road, Fowler Avenue west (signalized), and Fowler Avenue east. See section 9.12 for a discussion on the effect of the proposed improvements on the crash rate.

A review of the crash data revealed a high percentage of crashes at night. There was an average of two fatalities per year during the period studied, all occurring at night. Of the ten fatalities, four were pedestrians. A lighting warrant study was done to investigate whether street lighting is justified for this section of U.S. 301. The study concluded that lighting is justified because of the high night time crash rate. See sections 4.1.11 and 9.12 for more details.

TABLE 4-10

CRASH DATA SUMMARY

Section 10260, S.R. 41, U.S. 301, From Interstate 4 (0.000) To north of Fowler Avenue (5.000). Number of Crashes by Crash Type										Number of Crashes Involving	
YEAR	REAR END	RIGHT ANGLE	LEFT TURN	RUN OFF ROAD	SIDE SWIPE	PEDES-TRIAN	HEAD ON	OTHERS	TOTAL	INJURY	FATALITY
1992	12	23	11	9	4	4	1	9	73	47	1
1993	15	12	10	8	3	4	2	4	58	28	3
1994	19	17	10	12	3	1	4	9	75	46	2
1995	18	19	9	2	6	2	1	3	60	32	3
1996	28	20	10	13	8	1	1	5	86	55	1
TOTAL	92	91	50	44	24	12	9	31	352	208	10

TABLE 4-11

RUN OFF ROAD CRASH SUMMARY

Section 10260, S.R. 41, U.S. 301, From Interstate 4 (0.000) To north of Fowler Avenue (5.000). Number of Crashes by Run Off Road Crash Type								Number of Crashes Involving	
YEAR	RAN INTO DITCH	OVER-TURNED	GUARD-RAIL	JACK-KNIFED	HIT SIGNS SIGN POSTS	OTHERS	TOTAL	INJURY	FATALITY
1992	2	2	2	2	1	0	9	5	0
1993	4	1	1	0	0	2	8	5	0
1994	4	2	1	2	1	2	12	6	0
1995	0	1	0	0	0	1	2	1	0
1996	6	2	3	0	1	1	13	9	0
TOTAL	16	8	7	4	3	6	44	26	0

The traffic signals are maintained by Hillsborough County.

TABLE 4-12

NIGHT / WET PAVEMENT CRASH ANALYSIS

	1992	1993	1994	1995	1996	TOTAL	AVERAGE
`otal Crashes	73	58	75	60	86	352	70.40
Fatalities	1	3	2	3	1	10	2.00
njuries	74	47	82	58	86	347	69.40
Property Damage	25	27	27	25	30	134	26.80
`otal Crashes at Night	30	27	36	25	29	147	29.40
Fatalities at Night	1	2	2	3	1	10	2.00
.njuries at Night	32	26	40	28	32	158	31.60
`roperty Damage at Night	10	11	14	9	7	51	10.20
Percent of Night Crashes	41%	46%	48%	41%	33%	---	41%
Total Crashes on Wet Pavement	10	9	22	18	25	84	16.80
atalities on Wet Pavement	1	2	1	1	0	5	1.00
Injuries on Wet Pavement	15	7	22	24	24	92	18.40
roperty Damage on Wet Pavement	1	5	9	5	8	18	3.60
Percent of Wet Weather Crashes	13%	15%	29%	30%	29%	---	23%
)ff Road Crashes	9	8	12	2	13	44	8.80
Off Road Crashes at Night	6	6	8	2	9	31	6.20
)ff Road Crashes on Wet Pavement	2	0	5	0	4	11	2.20

4.1.10 Traffic Signals, Locations and Intersection Design

There are three signalized intersections: at Sligh Avenue, Harney Road, and Fowler Avenue. Figure 4-6 graphically illustrates the existing intersection lane geometry at each signalized intersection.

4.1.11 Lighting

There is no existing overhead street lighting on U.S. 301 within the project limits. A lighting warrant study was done which concluded that lighting was justified on this project because of the high night time crash rate. See Safety, Section 9.12 and the Preferred Alternative Section 8.5.

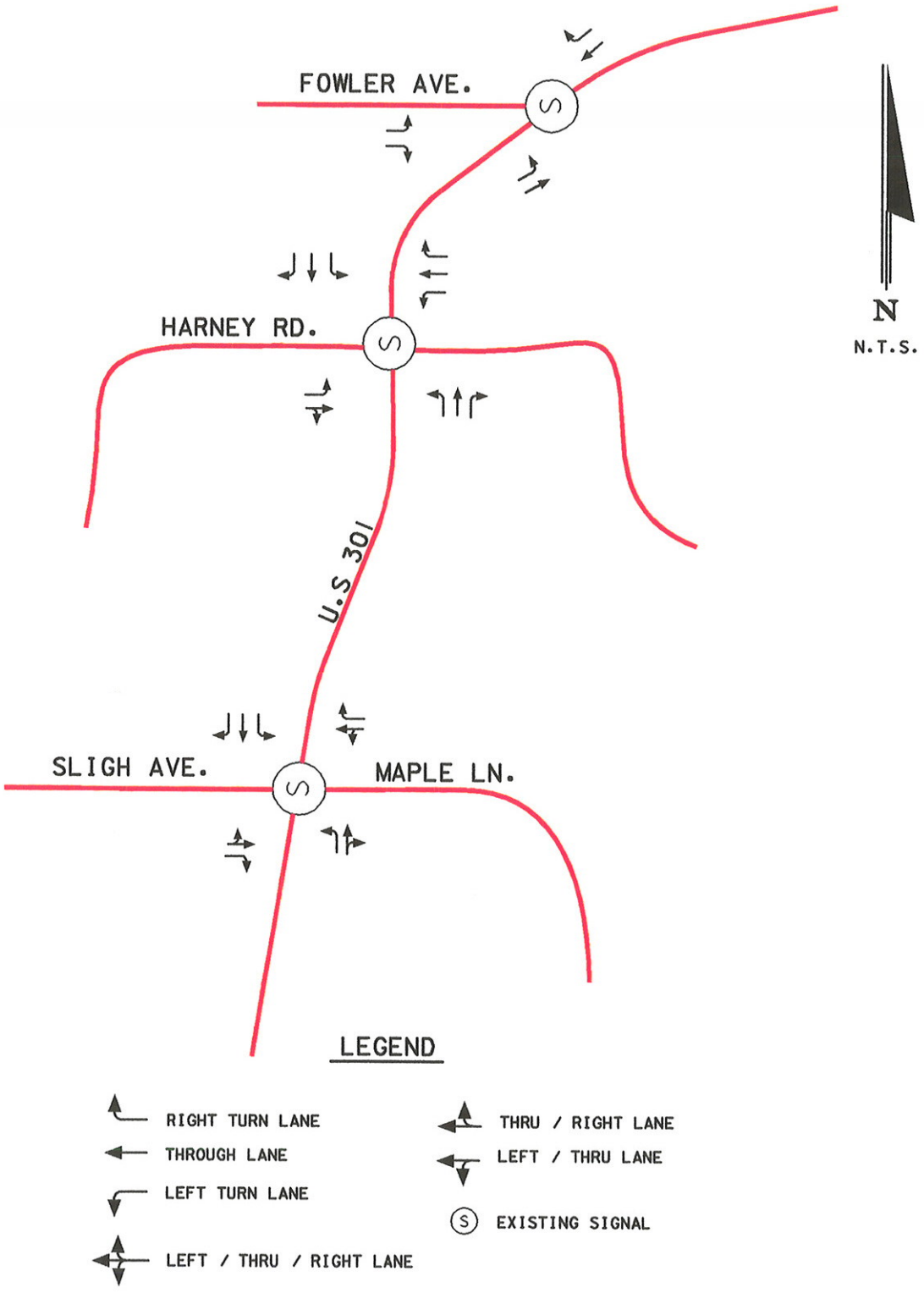
4.1.12 Utilities

A Utility Assessment Package has been completed for this project, which is summarized below.

In order to ultimately evaluate potential utility conflicts associated with the most feasible improvement alternative, all available information must be obtained concerning the location and characteristics of major existing or proposed utilities with the U.S. 301 corridor. As the first step in the process, a preliminary list of utility owners to contact was developed. Candidate owners for this "contact" list were those owners known to operate or have plans to operate facilities within the Hillsborough County area. The permit department of Tampa Maintenance and District Seven Staff of FDOT were contacted to verify the completeness of the list. The resulting "contact" list is shown below.

- Tampa Electric
- GTE Florida, Inc.
- City of Temple Terrace
- AT&T
- Peoples Gas Company
- City of Tampa Water Department
- Time Warner, Inc.

Each utility owner on the above list was then contacted by telephone and asked to verify ownership or operation of any utility facilities, existing or proposed (regardless of the proposed project), within



DISTRICT VII
PD&E

U.S. 301
I-4 TO FOWLER AVE.

EXISTING INTERSECTION LANE CONFIGURATIONS

FIGURE 4-6

the U.S. 301 corridor from I-4 to Fowler Avenue. AT&T and Peoples Gas indicated they have no such facilities. No further coordination was necessary with these utility owners.

The remaining companies on the "contact" list confirmed ownership of utility facilities within the project corridor. These owners were then provided with two sets of aerial-photography-based plans depicting existing drainage structures, ROW lines, highway stationing numbers, and the conceptual layout of the most feasible roadway improvement alternative. The owners were asked to mark and return one set with an indication of existing facilities and proposed adjustments.

The existing facilities indicated by the utility owners are summarized in Table 4-13.

TABLE 4-13

EXISTING UTILITIES ALONG U.S. 301/I-4 TO FOWLER AVE.

OWNER	UTILITY TYPE	AERIAL (A) BURIED (B)	SIDE	LOCATION
GTE FLORIDA	TELEPHONE CABLE	B	W/E	CROSSES @ BRECKENRIDGE PKWY.
INC.		B	W	BRECKENRIDGE PKWY. TO STA 118+00.
		B	W	114+80 N/W ALONG PL.
		A	W/E	CROSSES 301 @ STA 114+90.
		A	W/E	CROSSES 301 @ STA. 116+90.
		A	E	ALONG THE EAST SIDE OF MAPLE LN. TO STA. 125+50.
		B	W	STA. 127+60 WESTERLY.
		A	W/E	CROSSES 301 @ STA. 127+60 N/E TO STA. 127+90.
		A	E	STA. 127+90 TO STA. 37+70.
		B	W	VELLETTA DR. TO TEMPLE TERR. HWY.
		B	W	WEST ALONG THE SOUTH SIDE OF VELLETTA DR.
		B	W	STA. 129+50 WEST TO GATOR FORD.
		B	E	STA. 130+00 EAST TO THE SWFWMD.
		A	E/W	STA. 131+75 WEST TO WEST CENTRAL SIGN INC.
		B	W	STA. 133+00 WEST TO GULF COAST THERMO KING
		A	W	STA. 135+90 WEST TO MORGAN CORP.
		B	E/W	CROSSES 301 @ STA. 136+65, THEN ALONG SOUTH SIDE OF MAISLIN DR.

TABLE 4-13 (Continued)
EXISTING UTILITIES ALONG U.S. 301/I-4 TO FOWLER AVE.

OWNER	UTILITY TYPE	AERIAL (A) BURIED (B)	SIDE	LOCATION
GTE FLORIDA	TELEPHONE CABLE	B	W	WEST ALONG THE NORTH SIDE OF MAISLIN DR.
INC.		A	W	STA. 140+00 TO 144+30.
		A	E/W	CROSSES 301 @ STA. 140+70.
		A	E/W	CROSSES 301 @ STA. 142+40.
		A	E/W	CROSSES 301 @ STA. 148+95.
		B	E/W	CROSSES 301 @ HARNEY RD. & ESTHEL RD.
		A	W	COPELAND RD. TO I-75.
		B	W	I-75 TO STA. 155+30.
		B	E/W	CROSSES 301 @ STA. 155+30.
		A	E	I-75 TO STA. 158+00.
		A	W	STA. 155+30 TO STA. 157+60.
		A	N/S	CROSSES 301 @ JEFFERSON RD.
		A	N	JEFFERSON RD. TO WALKER RD.
		A	N/S	CROSSES 301 @ WALKER RD.
		B	N/S	CROSSES 301 @ WALKER RD.
		A	N	WALKER RD. TO STA. 173+00.
		B	S	SOUTH ALONG THE EAST SIDE OF WILLIAMS RD.
		B	N	NORTH ALONG THE EAST SIDE OF WILLIAMS RD.
		B	N	ALONG FOWLER AVE TO STA. 181+95.
		B	N/S	CROSSES 301 @ STA. 181+95.
		B	N	ALONG FOWLER AVE. TO ROCK HILL RD, ALONG ROCK HILL RD TO END OF PROJECT.
		A	S	STA. 181+95 ALONG FOWLER AVE TO TOM

TABLE 4-13 (Continued)
EXISTING UTILITIES ALONG U.S. 301/I-4 TO FOWLER AVE.

OWNER	UTILITY TYPE	AERIAL (A) BURIED (B)	SIDE	LOCATION
CITY OF TAMPA WATER DEPT.	WATER MAIN	B	E	STA. 118+00 TO SLIGH AVE.
		B	E/W	CROSSES 301 @ SLIGH AVE.
CITY OF TEMPLE TERRACE	4" WATER MAIN	B	E/W	CROSSES 301 @ STA. 128+80.
	8" WATER MAIN	B	E/W	CROSSES 301 @ STA. 129+50.
	FORCE MAIN	B	W	SOUTH OF VALLETTA DR. TO THE NORTH SIDE OF MAISLIN DR.
	SANITARY FORCE MAIN	B	E/W	CROSSES 301 @ STA. 150+45.
	SANITARY FORCE MAIN	B	E	S/E COR. OF 301 & HARNEY RD. TO T.T.Y.S.C.
	10" WATER MAIN	B	W	COPELAND RD. TO RAULERSON RANCH RD.
	4" WATER MAIN	B	N/S	CROSSES 301 @ STA. 159+40.
	4" WATER MAIN	B	N	STA. 159+40 TO 160+40.
	10" WATER MAIN	B	N/S	CROSSES 301 @ THE WEST SIDE OF JEFFERSON RD
	10" WATER MAIN	B	N	CROSSES WILLIAMS RD. TO STA. 175+20.
	2" WATER MAIN	B	N/S	CROSSES 301 JUST WEST OF WILLIAMS RD.
TAMPA ELECTRIC COMPANY	230 KV TRANSMISSION CIRCUITS (3 EA)	A		SOUTH OF I-4 AND 301 INTERCHANGE
	69 KV CIRCUIT (1EA)	A		PARALLEL WITH U.S. 301 ON NORTHWEST SIDE BY TAMPA BY-PASS CANAL AND THEN CROSSES @ FOWLER AVE.
	13 KV CIRCUITS	A		THROUGHOUT THE AREA, PARALLEL WITH U.S. 301.
	LATERAL CROSSINGS	A		THROUGHOUT PROJECT.

TABLE 4-13 (Continued)
EXISTING UTILITIES ALONG U.S. 301/I-4 TO FOWLER AVE.

OWNER	UTILITY TYPE	AERIAL (A) BURIED (B)	SIDE	LOCATION
TIME WARNER COM.	CABLE	A&B		THROUGHOUT PROJECT.
FLORIDA GAS TRANSMISSION CO.	NATURAL GAS	B	N/S	CROSSES ON THE EAST SIDE OF THE TAMPA BYPASS CANAL.
		B	N/S	CROSSES AT WILLIAMS RD.
		B	N/S	FROM FOWLER AVE TO KINGS RD. (ALONG ROCKHILL RD.)
		B	N/S	CROSSES EAST OF KINGS RD.
		B	S	KINGS RD. TO END OF PROJECT.

Utility Impacts

As previously discussed and summarized in Table 4-13 of this report, several utility distribution lines are located within the existing U.S. 301 ROW, including aerial and buried power lines, aerial and buried telephone cables, aerial cable television lines, potable water mains, force mains, and gas mains. Depending on their location and depth, implementation of the recommended improvements for the project may require adjustment of some of these facilities. A set of plans identifying the preferred alternative was sent to the utility companies to provide utility relocation costs. Table 4-14 identifies the cost associated with utility relocations. These costs are not included in the total estimated project costs since they will be incurred by the utility owners.

TABLE 4-14
UTILITY RELOCATION COST
(ESTIMATED)

UTILITY COMPANY	UNDERGROUND RELOCATION	OVERHEAD RELOCATION
CITY OF TEMPLE TERRACE	$ 500,000.00	
CITY OF TAMPA WATER DEPT.	$ 155,165.50	
TIME WARNER COMMUNICATIONS	$ 23,480.00	$ 100,000.00
FLORIDA GAS TRANSMISSION CO.	NO RESPONSE TO DATE	
GTE FLORIDA, INC.	NO RESPONSE TO DATE	
TAMPA ELECTRIC COMPANY		$ 398,000
TOTAL	$ 678,645.50	$ 100,000.00

In addition to the utilities listed in Table 4-13, there is a water pipeline being considered by the West Coast Regional Water Supply Authority along the Tampa Bypass Canal, which crosses U.S. 301. This is one possible route for the pipeline, which is part of the "South-Central Intertie Project", connecting well fields in Hillsborough County. After meeting with the consultant evaluating the pipeline routes, it was concluded that the pipe crossing will not conflict with the proposed improvements on U.S. 301, since the new grade should be at least as high as the existing grade. As shown in this table, a number of utility distribution lines including telephone, electric, cable, gas and water lines are located within the existing ROW of U.S. 301.

4.1.13 Structural and Operational Conditions

It should be noted that Hillsborough County government is planning an intersection improvement at Harney Road and U.S. 301. The intersection is to be relocated south in order to straighten out Harney Road. Dual left turn lanes are to be added on Harney Road from both east and west onto U.S. 301. The County's plan also shows a turning ramp for traffic turning right from westbound Harney Road onto northbound U.S. 301.

4.1.14 Railroad Crossings

There are no railroad crossings within the project limits.

4.1.15 Posted Speed Limits

The existing speed limit is 45 mph (70 km/hr) from the start of the project to M.P.1.484 (just north of the SWFWMD office). From M.P.1.484 to the end of the project, the posted speed is 55 mph (90 km/hr).

4.2 EXISTING BRIDGES

4.2.1 Type of Structure

There are two existing bridges on U.S. 301 within the project limits. One bridge (#100337) crosses the Harney Canal, the other bridge (#100339) crosses the Tampa Bypass Canal. Both bridges have two lanes, carrying one lane of traffic in each direction. The bridges are both 12.2 m (40 ft) wide,

with 2.4 m (8 ft) shoulders on each side. Both bridges are low level fixed span, with a concrete column, girder and floor beam structure.

There are also two bridges on I-75, #100477 and #100478, which pass over U.S. 301 just north of Harney Road. These bridges have concrete columns with steel girders and a concrete slab surface. Both bridges were constructed with an extra span to the west of the existing lanes on U.S. 301 so that U.S. 301 could be widened to four lanes without reconstructing these overpasses.

4.2.2 Current Condition and Year of Construction

A summary of the latest bridge inspection reports for each bridge, showing the year of construction and a rating of the condition of each component is provided in Table 4-15.

4.2.3 Horizontal and Vertical Alignment

Bridge #100337 over the Harney Canal is on a horizontal curve with 1746 meter radius (or one degree curve). This bridge is on a flat section of roadway, with a 0.0% grade.

Bridge #100339 over the Tampa Bypass Canal is on a tangent section of roadway. The vertical grade is -0.60%.

4.2.4 Span Arrangement - Number and Length

A summary of the number and length of spans is provided in Table 4-15.

4.2.5 Channel Data

The primary function of the Harney and Tampa Bypass Canals is flood control. There are dams upstream and downstream of the bridges which regulate the water level of the canal. The dams prevent the use of the canal by large boats or ships. Recreational use is permitted by SWFWMD, and small boats can be carried to the canal, although no boat ramps are available.

The condition of the channel for both bridges #100337 and #100339 is good, with no significant scour noted in the bridge reports.

Bridge #100337 over the Harney Canal was inspected on October 30, 1992. The distance from the top of the bridge rail to waterline is 9.1 ft. The distance from the top of the bridge rail to the mudline is 23.7 ft. (maximum), giving a water depth of 14.6 ft.

Bridge #100339 over the Tampa Bypass Canal was inspected on April 27, 1994. The distance from the top of the bridge rail to waterline is 31.0 ft. The distance from the top of the bridge rail to the mud line is 39.0 ft. (maximum), giving a water depth of 8.0 ft.

4.2.6 Ship Impact Data

Neither the Harney Canal nor the Tampa Bypass Canal are considered to be navigable waterways in the area of U.S. 301, since dams prevent ship's access to the canals. These canals meet the conditions for exemption from USCG navigational permit requirements noted in 23 CFR 650, subpart H. The canals are not used or susceptible to use by reasonable improvement as a means to transport interstate or foreign commerce because of the flood control dams near U.S. 301. The canals are also not tidally influenced.

TABLE 4-15

BRIDGE INSPECTION SUMMARY

General Data:	Bridge Number			
	100337	**100339**	**100477**	**100478**
Year Constructed	1977	1978	1983	1983
Year Reconstructed	N/A	N/A	N/A	N/A
Dates Inspected	9/30/92	4/27/94	8/12/96	8/12/96
Overall Length	196 ft.	504 ft.	146.6 ft.	151.5 ft.
Maximum Span Length	29 ft.	72 ft.	55.5 ft.	52.7 ft.
Number of Spans	7	7	4	4
Numerical Condition Rating:				
Substructure	8	7	8	8
Superstructure	8	7	8	8
Deck	7	7	7	7
Approach Roadway	8	7	7	8
Channel	8	8	N/A	N/A
Structural Sufficiency:				
Sufficiency Rating	87.3	95.0	85.5	86.9
Significant deficiency	No	No	No	No

4.3 ENVIRONMENTAL CHARACTERISTICS

4.3.1 Land Use Data

The existing land use along U.S. 301 is mixed, with predominantly commercial and industrial use and some residences. The proposed land use in the Hillsborough County Local Government Comprehensive Plan (LGCP) is to remain mixed. Future uses are expected to become increasingly commercial along U.S. 301 as traffic increases. There are a number of industrial parks along the U.S. 301 corridor expanding warehouse space. See Section 3.4 for more details.

Maps of the existing and planned usage from the Hillsborough County LGCP are shown in Figures 4-7 and 4-8.

4.3.2 Cultural Features and Community Services

A Cultural Resource Assessment, including background research and a field survey coordinated with the State Historic Preservation Officer (SHPO), was performed for the project. As a result of the assessment, four previously unrecorded archaeological sites (9HI5926-5929), one previously recorded archaeological site (8HI505), and ten previously unrecorded historic structures (8HI5930, 8HI5948-5949, and 8HI5953-5959) were identified. The FHWA, after application of the National Register Criteria of Significance, found that the sites were not eligible for listing on the National Register of Historic Places. The SHPO rendered the same opinion. Based on the fact that no additional archaeological or historical sites or properties are expected to be encountered during subsequent project development, the FHWA, after consultation with the SHPO, has determined that no National Register properties would be impacted.

There are a number of community facilities along U.S. 301. There are four churches, the Harney Baptist Church, the Calvary Tabernacle Church the Macedonia M.B. Church, and the Faith Temple. All churches are on the west side of U.S. 301.

The Sunset Memory Gardens Cemetery is on the east side of U.S. 301, north of Jefferson Road.

The Temple Terrace Youth Sports Complex is also on the east side of U.S. 301, which is operated

by the City of Temple Terrace on land leased from the SWFWMD.

The community facilities are shown on Figure 4-9.

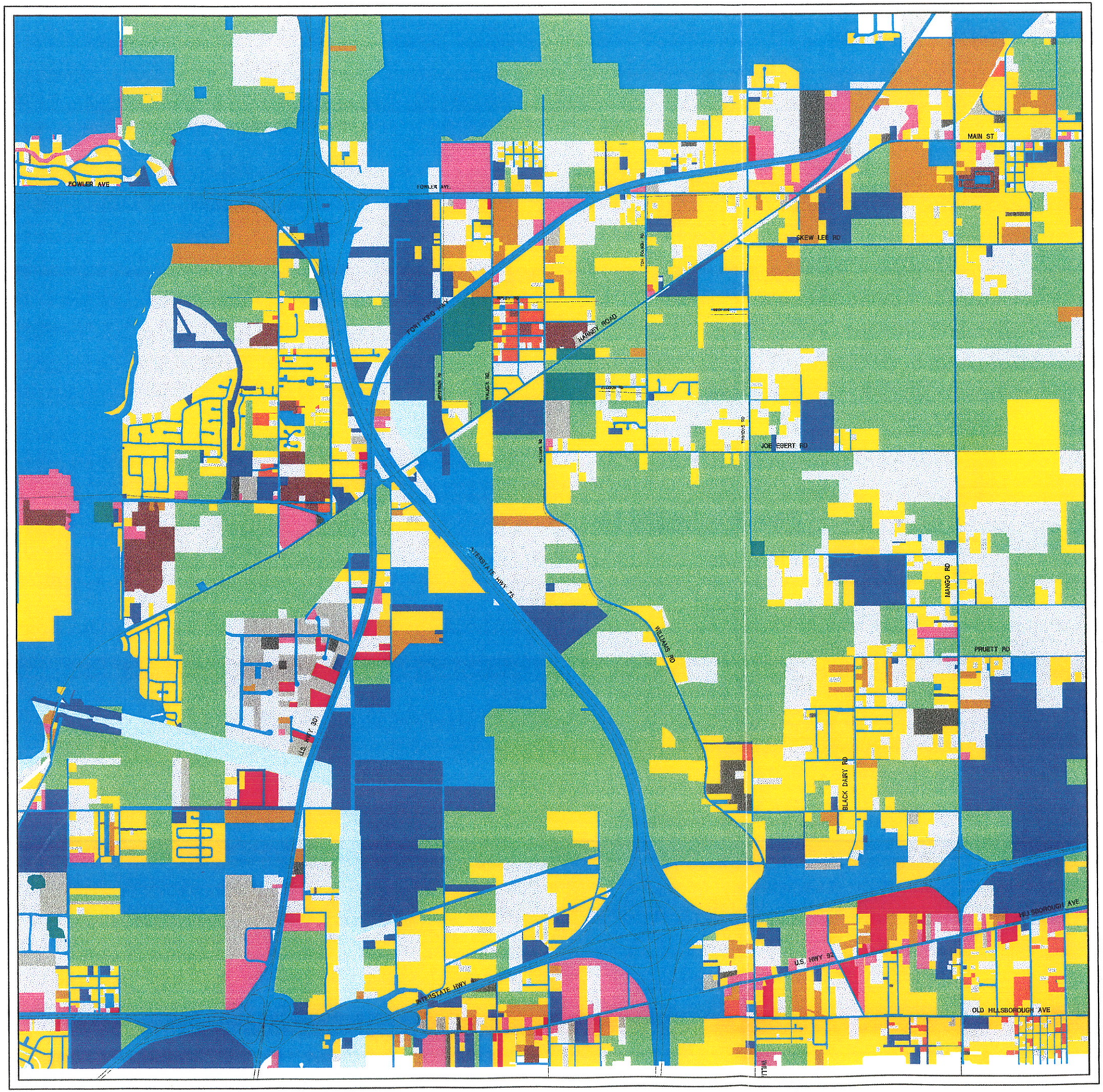
4.3.3 Natural and Biological Features

4.3.3.1 Wetlands

In accordance with Executive Order 11990, "Protection of Wetlands" (May 1977), the proposed project has been evaluated for potential impacts to wetlands. Preliminary wetland determinations were based on information from US Geological Survey 7.5 minute series Topographic Maps, Soil Conservation Service's *Soil Survey of Hillsborough County,* U.S. Fish and Wildlife Service's(USFWS) National Wetlands Inventory Maps, and aerial photography. Field delineations of wetland boundaries were conducted in June of 1996 and January of 1997. A combined Wetland Evaluation Report and Biological Assessment was prepared for this project which details the impacts of each alternative. A summary of the wetland determination process and impacts in the report is contained in this section.

A total of forty-seven wetland and deepwater habitats have been identified along the project corridor. Thirty-three wetland sites have the potential to be impacted by the proposed project. Figure 4-10 depicts the approximate locations of the wetland sites. All wetlands affected by the project have been grouped and classified according to the USFWS's *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et.al., 1979).

Initial field reconnaissance revealed areas that have been previously dehydrated and/or heavily disturbed by current land uses. The wetland surface hydrology has been severed by the construction of the flood control/water supply project (Tampa Bypass Canal, Harney Canal) and building of the original roadway. Implementation of the proposed project will potentially impact between 3.03 hectares (7.51 acres) to 3.71 hectares (9.18 acres) of wetlands. The project's impact on wetlands is considered minor since the wetland encroachments will occur in areas that were impacted previously or created as a result of the original road construction. Typical vegetation observed in the forested



1993 GENERALIZED EXISTING LAND USE

- Agricultural
- Single Family / Mobile Home
- Two Family
- Multi-Family
- Mobile Home Park
- Public / Quasi-Public / Institutions
- Public Communications / Utilities
- Right of Way / Roads / Highways
- Educational
- Heavy Commercial
- Light Commercial
- Heavy Industrial
- Light Industrial
- Mining
- Recreational / Open Space
- Natural
- Vacant
- Water

- Cockroach Bay Aquatic Preserve Boundary
- COUNTY BOUNDARY
- TAMPA SERVICE AREA
- URBAN SERVICE AREA
- EXPANSION SERVICE AREA
- EXISTING MAJOR ROADS

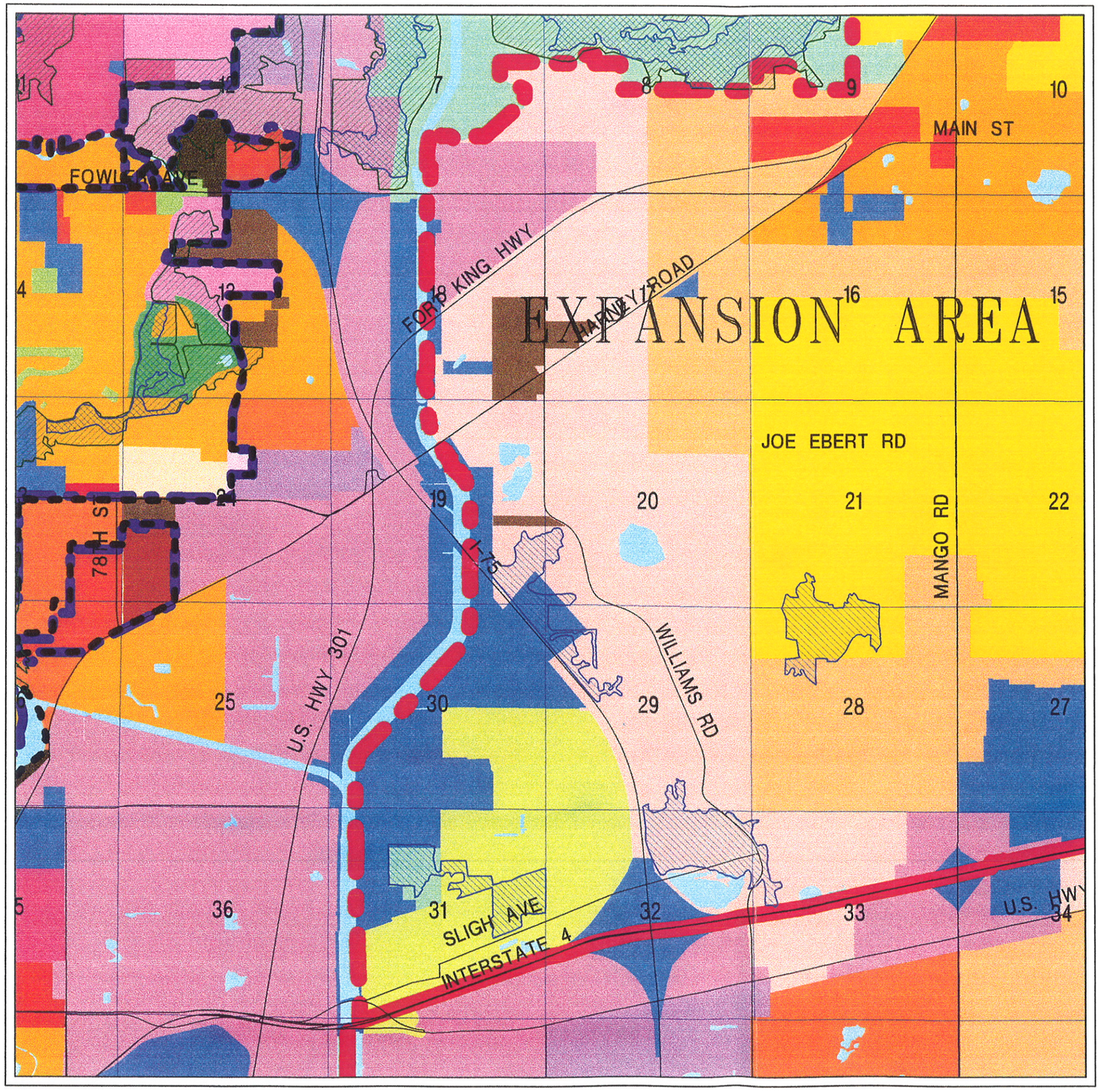
SCALE: Feet
0 800 1600 2400 3200

NORTH

Map printed: Oct 11, 1996
Script: vporter. Author: dierings
SRF file: e:\uSRFlori

THE PLANNING COMMISSION

Figure 4-7



ADOPTED 2015 FUTURE LAND USE

October 27, 1994

AGRICULTURAL/MINING–1/20	(.25 FAR)
AGRICULTURAL–1/10	(.25 FAR)
AGRICULTURAL/RURAL–1/5	(.25 FAR)
AGRICULTURAL ESTATE–1/2.5	(.25 FAR)
RESIDENTIAL–1	(.25 FAR)
RESIDENTIAL PLANNED–1	(.35 FAR)
RESIDENTIAL–2	(.25 FAR)
RESIDENTIAL PLANNED–2	(.35 FAR)
RESIDENTIAL–4	(.25 FAR)
RESIDENTIAL–6	(.25 FAR)
RESIDENTIAL–9	(.35 FAR)
RESIDENTIAL–12	(.35 FAR)
RESIDENTIAL–20	(.35 FAR)
NEIGHBORHOOD MIXED USE–4	(.35 FAR)
SUBURBAN MIXED USE–6	(.35 FAR)
COMMUNITY MIXED USE–12	(.50 FAR)
URBAN MIXED USE–20	(1.0 FAR)
REGIONAL MIXED USE–35	(2.0 FAR)
OFFICE COMMERCIAL–20	(.75 FAR)
RESEARCH CORPORATE PARK	(1.0 FAR)
LIGHT INDUSTRIAL PLANNED	(.50 FAR)
LIGHT INDUSTRIAL	(.50 FAR)
HEAVY INDUSTRIAL	(.50 FAR)
PUBLIC/QUASI–PUBLIC	
NATURAL PRESERVATION	
WATER	

ENVIRONMENTALLY SENSITIVE AREAS
(POTENTIAL AREAS–SUBJECT TO APPLICABLE REGULATIONS)

- SIGNIFICANT WILDLIFE HABITAT
- WETLANDS

ROADS AND BOUNDARY LINES

- Cockroach Bay Aquatic Preserve Boundary
- COUNTY BOUNDARY
- PLANNING AREA BOUNDARY
- TAMPA SERVICE AREA
- URBAN SERVICE AREA
- EXPANSION SERVICE AREA
- EXISTING ROADS
- PROPOSED ROADS (Conceptual Alignment)
- COASTAL HIGH HAZARD AREA LIMIT

DATA SOURCES: Basemap, roads, water from Hillsborough County Engineering Services; Parcel lines and data from Hillsborough County Property Appraiser. Wetlands from SWFWMD. Significant Wildlife Habitat from Planning and Development Management based on satellite imagery. Only Wetlands greater than 40 acres depicted.

REPRODUCTION: This sheet may not be reproduced in part or full for sale to anyone without specific approval of the Hillsborough County City–County Planning Commission.

ACCURACY: It is intended that the accuracy of the base map comply with U.S. national map accuracy standards. However, such accuracy is not guaranteed by the Hillsborough County City–County Planning Commission. This map is for illustrative purposes only for the cities of Tampa, Temple Terrace and Plant City.

NOTE: This map contains existing and proposed roadways.

SCALE: Feet

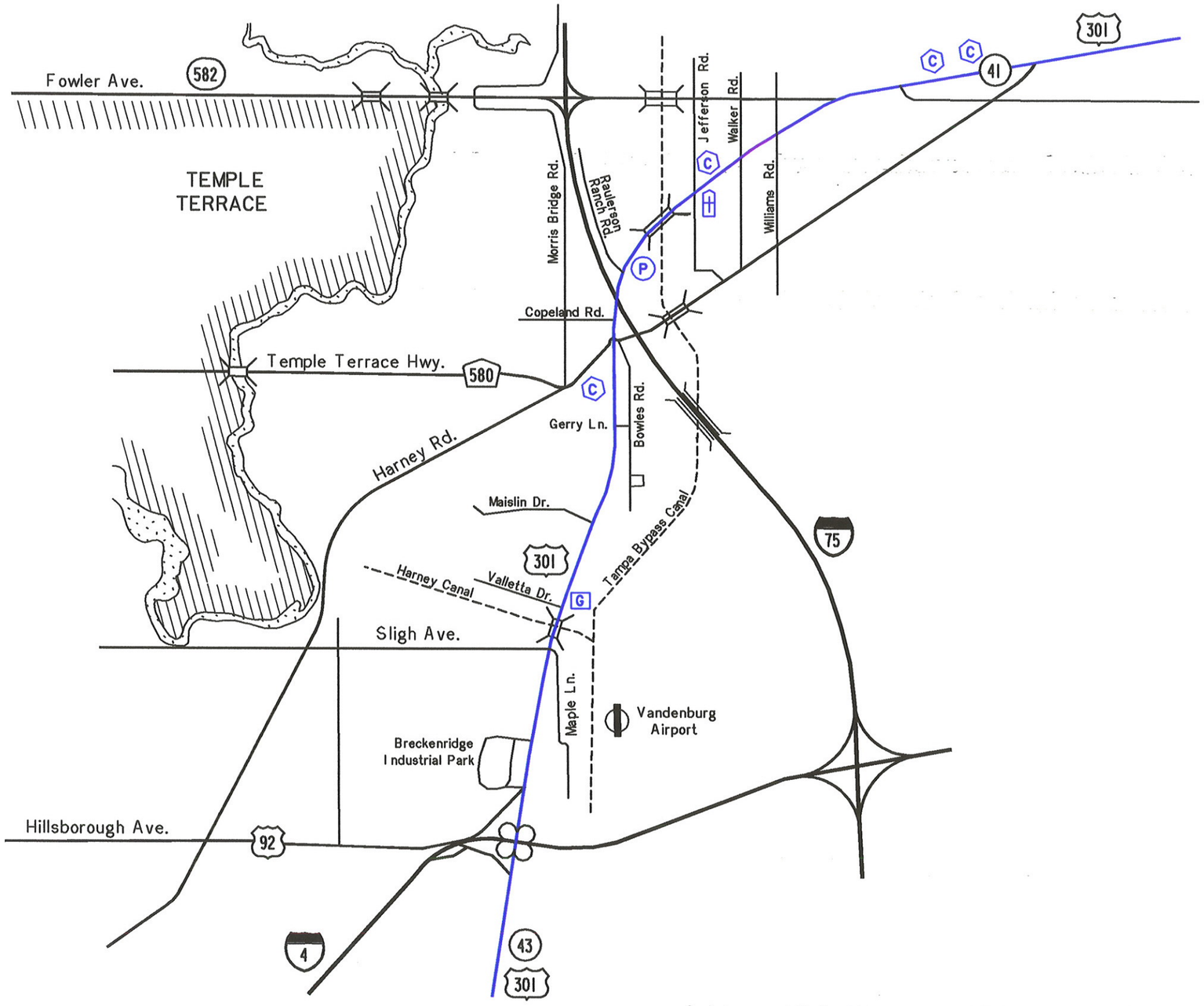
0 800 1600 2400 3200

NORTH

Map printed: Sep 17, 1996
Script: vportscr. Author: dierings
SRF file: fluSRFrcot

THE PLANNING COMMISSION

Figure 4–8.



N

LEGEND

C PLACES OF WORSHIP

1. HARNEY BAPTIST CHRUCH
2. CALVARY TABERNACLE CHURCH
3. MACEDONIA M.B. CHURCH
3. FAITH TEMPLE

CEMETERIES

1. SUNSET MEMORY GARDENS

P PARKS & RECREATION

1. TEMPLE TERRACE YOUTH SPORTS COMPLEX

G GOVERNMENT OFFICE

1. SWFWMD OFFICE

STATE OF FLORIDA
DEPT. OF TRANSPORTATION

U.S. 301
I-4 TO FOWLER AVE.

COMMUNITY FACILITIES SERVING THE STUDY AREA

Figure 4-9

STATE OF FLORIDA

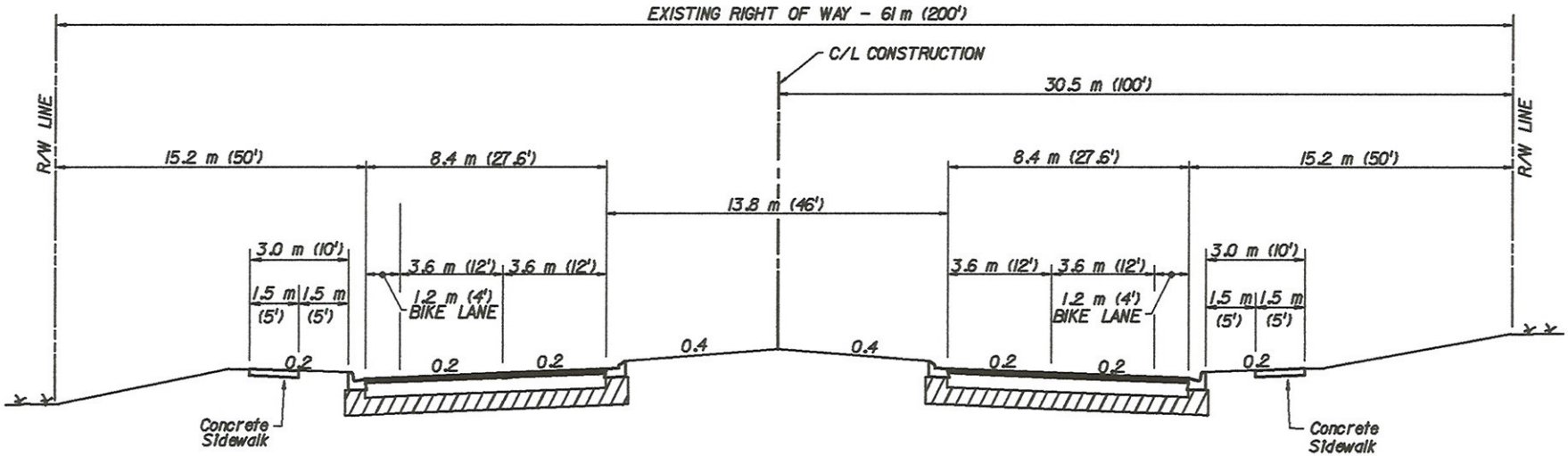
DEPT. OF TRANSPORTATION

US 301

FROM I-4 TO FOWLER AVE.

PROPOSED TYPICAL SECTION

ALTERNATIVE "C"

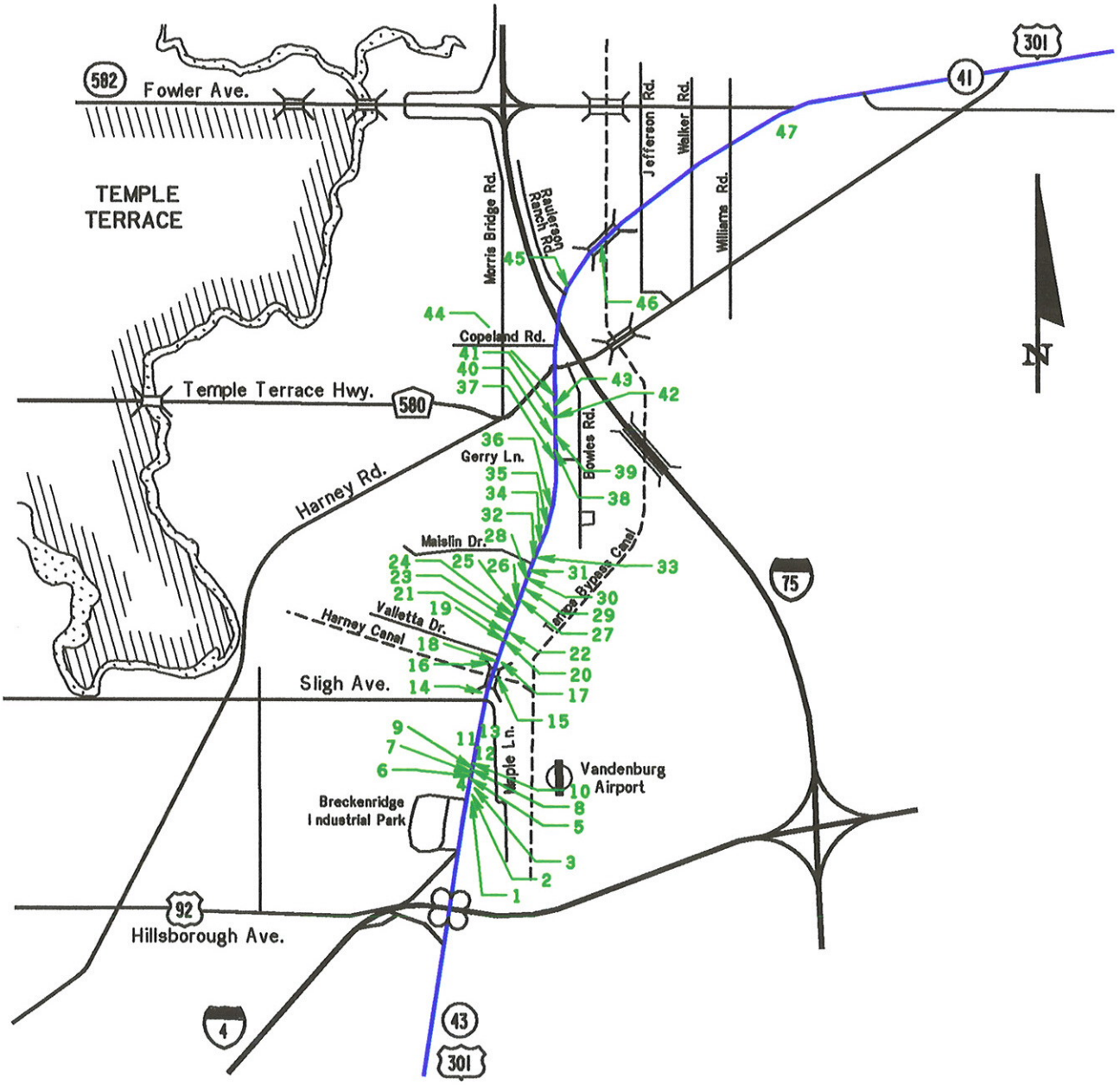


PROPOSED TYPICAL SECTION

ALTERNATIVE "C"

DESIGN SPEED - 70 km/h (45 mph)

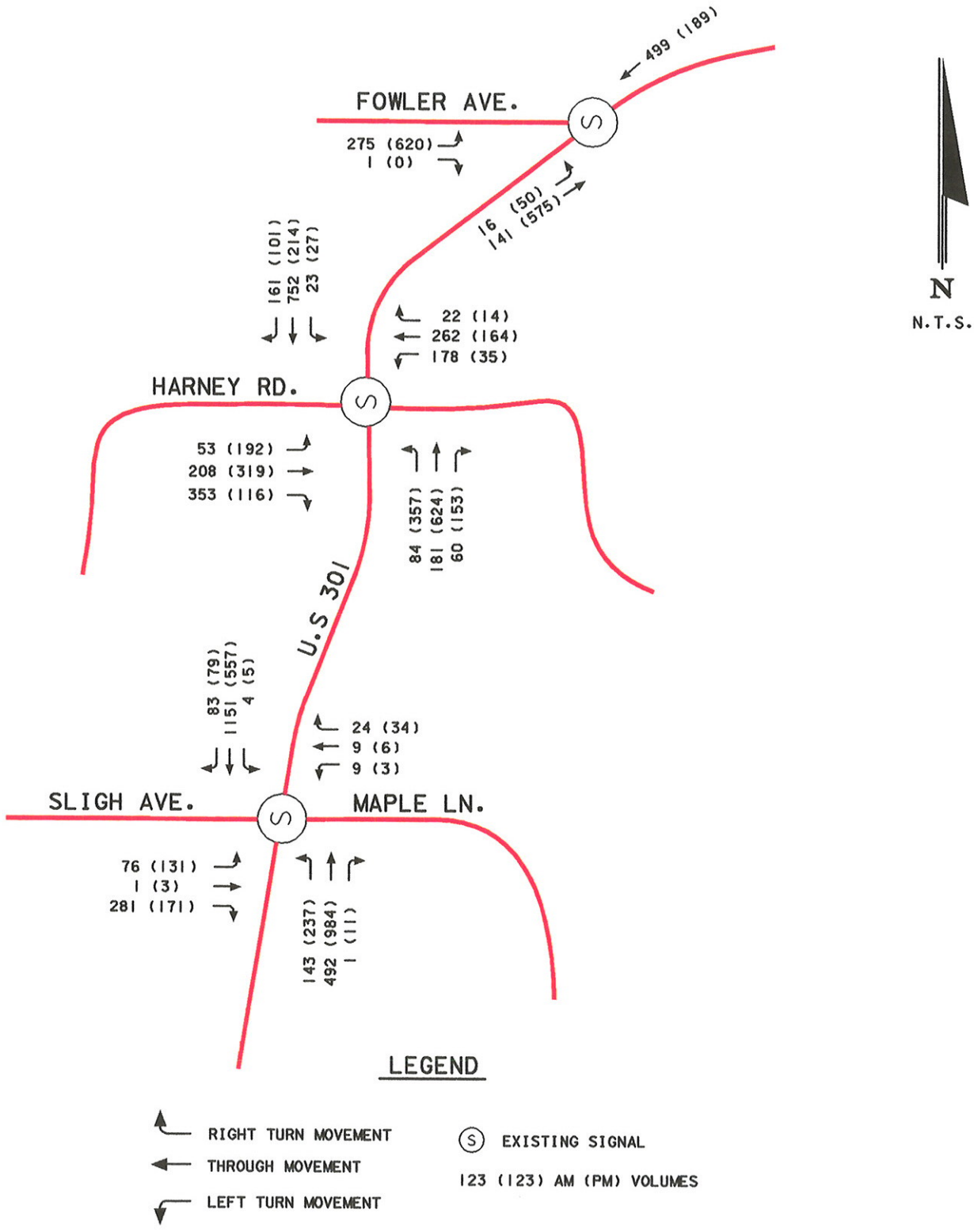
Figure 8-3



U.S. 301
FROM I-4 TO FOWLER AVENUE

WETLAND LOCATION MAP

FIGURE 4-10

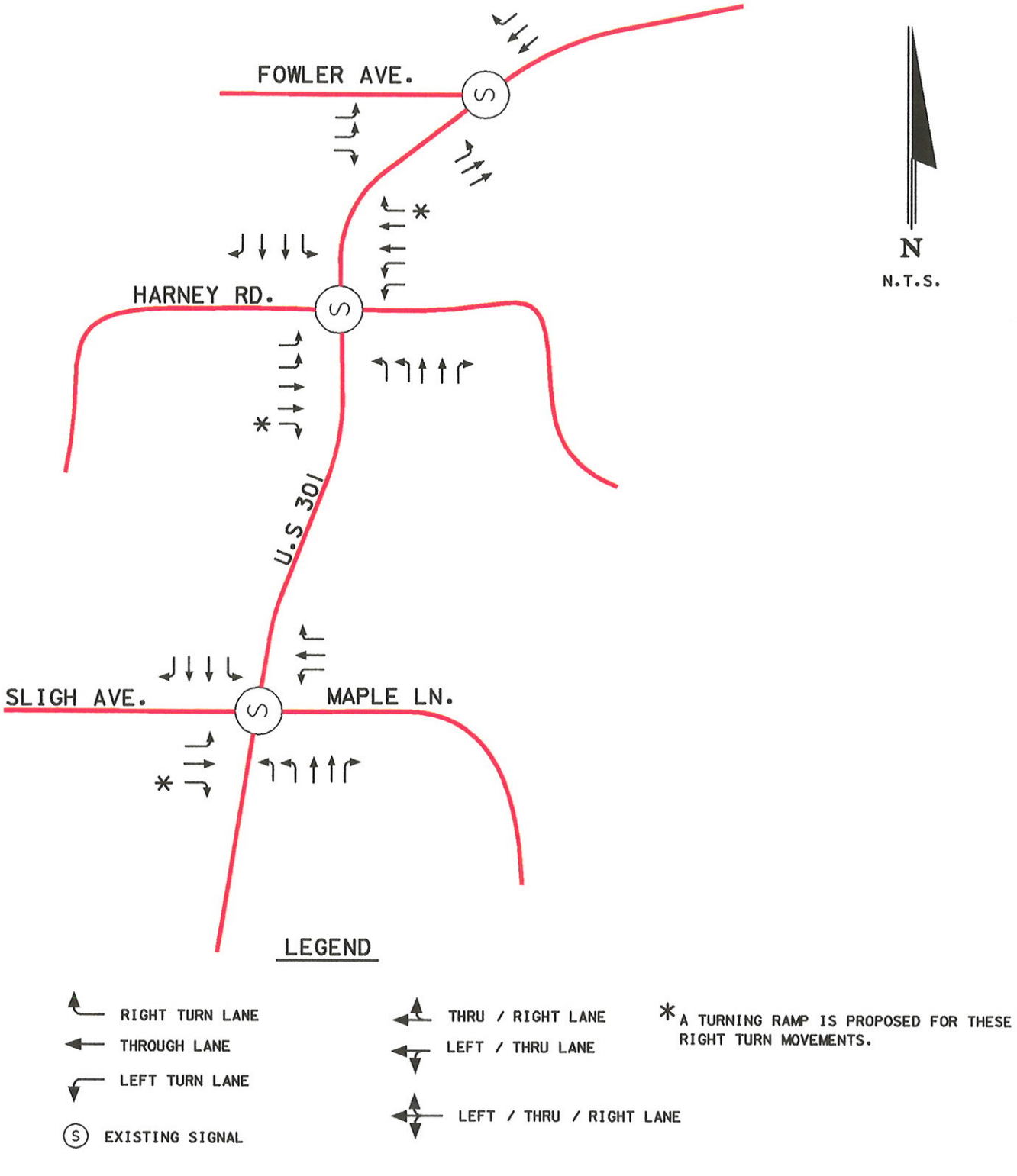


DISTRICT VII
PD&E

U.S. 301
I-4 TO FOWLER AVE.

1996 AM/PM PEAK HOUR TURNING MOVEMENT COUNTS

FIGURE 6-1

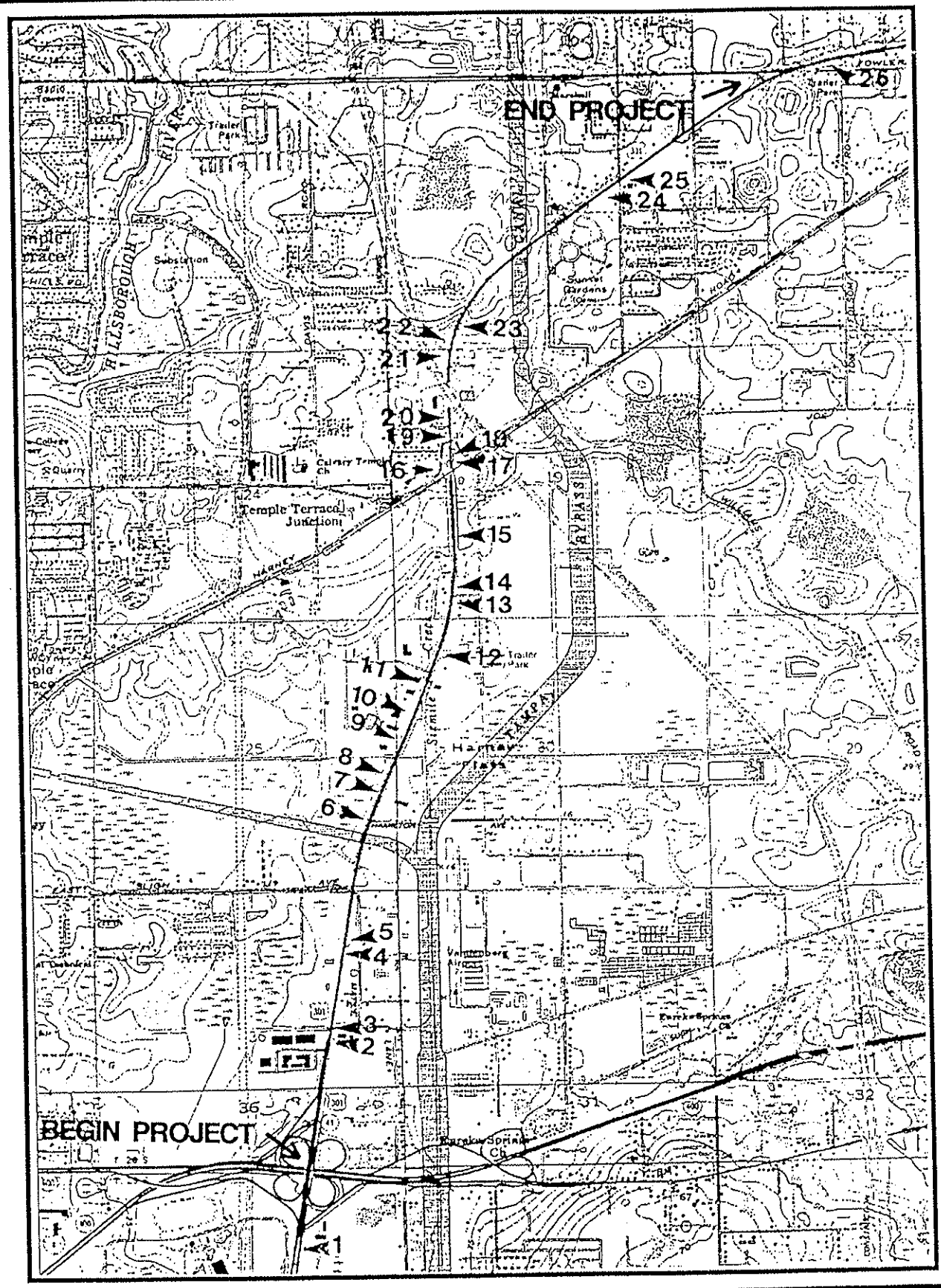


DISTRICT VII
PD&E

U.S. 301
I-4 TO FOWLER AVE.

PROPOSED INTERSECTION LANE CONFIGURATIONS

FIGURE 6-2



Project No.:	19173
Date:	9/26/96
Drawn By:	LP
Checked By:	PLW
Scale:	1"=2000'

Figure 1.1
SITE LOCATION MAP
LEVEL I HAZARDOUS MATERIAL INVESTIGATION
US 301 – FROM I-4 TO FOWLER AVENUE
SOURCE: USGS THONOTOSASSA QUADRANGLE
PHOTO REVISED 1987

OHM Remediation Services Corp.

TABLE 4-17

Contamination Risk Evaluation Summary

U.S. 301 from I-4 to Fowler Avenue

Hillsborough County, Florida

Site No.	Site Name	SIC Codes	I.D. No.	Contamination Concerns	Storage Tanks	Distance from ROW (m/ft)	Evaluation Ranking
1	RaceTrac Gas Station	5541	298625186	fuels	Y	5/15 E	Medium
2	Highway Equipment & Supplies	3711	298627516	fuels	Y	180/600 E	Low
3	Jacobsen Turf Equipment	3523	NA	waste oils	N	60/200 E	No
4	Tampa 301 Truck Stop	5541	298625206	fuels	Y	15/50 E	High
5	Hughes Supply, Inc.	3088	298944712	plastic	Y	210/700 E	Low
6	Tampa Volvo	5511	NA	waste oils	Y	240/800 W	Low
7	Gator Ford	5511	NA	waste oils	Y	300/1,000 W	Low
8	Gulf Coast Thermo King	4222	299047239	waste oils	Y	270/900 W	High
9	West Central Signs, Inc.	3479	NA	waste oils	Y	330/1,100 W	Low
10	Barnes Industrial Plastic Piping, Inc.	3088	NA	plastic	N	240/800 W	Low
11	Florida Utility Trailers, Inc.	5511	NA	waste oil	Y	180/600 W	Low
12	Langston's Used Auto Parts	5511	298626963	waste oil	Y	270/900 E	High
13	Texaco Rapid Service	5541	298624848	fuels	Y	3/10 E	High
14	1st Choice Equipment	3599	NA	hydraulic oils	N	9/30 E	High

TABLE 4-17
(Continued)
Contamination Risk Evaluation Summary

Site No.	Site Name	SIC Codes	I.D. No.	Contamination Concerns	Storage Tanks	Distance from ROW (m/ft)	Evaluation Ranking
15	North South Machinery Sales and Exporter, Inc.	3599	NA	hydraulic oils	N	9/30 E	High
16	Jose's Auto Service	5541	299200313	fuels	Y	180/600 W	Medium
17	Sunshine State Wrecker Sales	5511	NA	waste oil	N	10/40 E	High
18	Weeks Hydraulics Corps.	3594	NA	hydraulic oils	N	45/150 E	High
19	Tire and Muffler Shop	5511	NA	waste oil	N	90/300 W	High
20	Mitchell's Auto Body	5511	NA	waste oil	N	90/300 W	High
21	Terrace Auto Repair, Inc.	5511	NA	waste oil	N	60/200 W	Low
22	U.S. Tractor Equipment, Inc.	3599	NA	waste oil	N	330/1,100 W	Low
23	Strickland Transport, Inc.	3599	NA	waste oil	N	455/1,500 E	Medium
24	Texaco Gas Station	5541	292204138	fuels	Y	10/40 E	Medium
25	AG Equipment, Inc.	3599	NA	waste oil	N	180/600 E	Low
26	Scotchman/BP Gas Station	5541	298625030	fuels	Y	15/50 E	High

LEGEND:

ROW = Right of way SIC = Standard Industry Classification

SECTION 5.0
DESIGN STANDARDS AND CRITERIA

The preferred alternative is a four lane divided suburban section with a raised median and open swales for drainage. This section will accommodate traffic through the design year, 2020. However, development is likely to continue and traffic will increase beyond the design year. Eventually six lanes will probably be required. At that time it will be necessary to convert to an urban section with curb and gutter to avoid costly ROW acquisition. For this reason, it is important that the preferred alternative be designed to allow for widening to six lanes without reconstructing the pavement.

5.1 DESIGN STANDARDS

Design Period: 20 years

Flexible pavement design: Document 625-010-002

Design speed: 80 km/hr for the preferred alternative

Design Vehicle: WB-15

Lane widths: 3.6 meters

Shoulder widths: 3 meters

Paved shoulder widths: 1.5 meters

Cross Slopes: 0.02 standard

Superelevation: Maximum allowed is 0.10 however superelevation should be limited to 0.05 to allow for improvement to an urban section.

Side Slopes: Front slopes 6:1 or flatter (existing)
Back slopes 4:1 or flatter (existing)

Vertical Alignment and curvature: Minimum length of curve = 100 meters
Minimum "K" value = 36 for crest curves
Minimum "K" value = 25 for sag curves
(Not less than 0.6 X Design speed in km/hr expressed in meters)

Vertical Clearance for Bridges (over a Roadway): 5.05 meters

Grades: Since an urban section requires minimum grade of 0.3%, the preferred typical

section should have this minimum grade to allow for improvement to urban section.

Horizontal Alignment: Minimum length = 3 X Design Speed = 240 meters
Minimum radius = 270 meters
Minimum radius using normal cross slopes = 2600 meters

Horizontal clearance for Light Poles: 6.1 m from travel lane, 4.3 m from auxiliary lane.

Clear Zone: 7.2 meters (24 ft)

Intersections: Control radii 23 meters (Design vehicle WB-15)

Pedestrian and Bicyclist needs: 1.5 meter paved shoulders for bicyclists.
1.5 meter sidewalks at back of ditch for pedestrians.

Utilities: See Utility Accommodation Guide

Traffic Control Devices: See Manual on Uniform Traffic Control Devices (MUTCD)

Bridge Loading: HS-20 (same as existing bridges)

Bridge width: 13.65 meters, including a separate walkway for pedestrians.

Design Exceptions and Variances: No exceptions or variances are proposed.

5.2 DESIGN CRITERIA

This report was prepared consistent with the current edition of the following publications:

1. Roadway Design Geometrics and Criteria found in Volume I, Plans Preparation Manual, FDOT, 625-000-005 (Metric), January 1998.
2. A Policy on Geometric Design of Highways and Streets, Washington, D.C., AASHTO.
3. Manual on Uniform Traffic Control Devices (MUTCD), FHWA, Washington D.C.
4. Highway Capacity Manual, Transportation Research Board, Washington, D.C.
5. Bicycle Facilities Planning and Design Manual, FDOT.
6. Drainage Manual, Florida Department of Transportation, and Supplements, Topic # 625-040-001.
7. Standard Drawings, Structure Design Office, FDOT, Topic # 625-020-300.
8. Structures Design Guidelines, FDOT, Topic # 625-020-150.

9. Flexible Pavement Design Manual, FDOT, Topic # 625-010-002.
10. Rigid Pavement Design Manual, FDOT, Topic # 625-010-006.
11. Utility Accommodation Guide, FDOT, Topic # 710-020-001.
12. Pavement Type Section Manual, FDOT, Topic # 625-010-005.
13. Life-Cycle Cost Analysis for Transportation Projects, FDOT.
14. FDOT Standard Specifications for Road and Bridge Construction.
15. Computer-Aided Design and Drafting (CADD) Roadway standards Manual, FDOT, Topic # 625-010-007.
16. Computer Aided Design and Drafting (CADD) Structures Standard Manual, FDOT.
17. Roadway and Traffic Design Standards, FDOT, Topic # 625-010-003.
18. Guide for Selecting, Locating, and Designing Traffic Barriers, AASHTO.
19. Roadside Design Guide, AASHTO.
20. Florida Highway Landscape Guide, FDOT.
21. Facilities Access for Persons with Disabilities, FDOT Procedure Topic # 625-010-015.
22. Major Urban Corridor Studies Policy, FDOT, Topic # 000-725-010.
23. Environmental Policy, FDOT, Topic #000-625-001.
24. Maximum Number of Lanes on the State Highway System to be Provided by Department Funds Policy, FDOT, Topic # 000-525-040.
25. Median Opening Decision Process, FDOT, Topic # 625-010-020.

SECTION 6.0
TRAFFIC

6.1 EXISTING CONDITIONS

U.S. 301 is a north/south route that travels from Bradenton, Florida to the Florida State Line and continues northward into Georgia. This project is located in Hillsborough County and is approximately 7.4 kilometers (km) (4.6 miles) in length. There are two bridges within the project limits. There is a two lane bridge (#10337) over the Harney Canal. The other bridge, over the Tampa Bypass Canal (#10339), is also two lanes. South of the project limits, the roadway is currently a four-lane divided rural highway, which transitions to a two-lane undivided roadway just north of I-4 at Breckenridge Parkway.

There are three traffic signals within the project limits: at Sligh Avenue, Harney Road and Fowler Avenue. Turning movement counts were taken at each of these signalized intersections to perform a detailed analysis. There are no railroad crossings or pedestrian facilities within the project limits. The existing speed limit for the roadway facility is 45 mph (70 km/hr) from the start of the project to M.P. 1.484 (just north of the SWFWMD office). From M.P. 1.484 to the end of the project, the posted speed is 55 mph (90 km/hr).

As mentioned previously, this project (the section from I-4 to Harney Road) is designated for improvement in the Hillsborough County MPO's LRTP. Four travel lanes are anticipated to accommodate future traffic conditions along this roadway project. The existing bridges over Harney Canal (#10337) and the Tampa Bypass Canal (#10339) are to be used for the northbound lanes of the proposed four lane section. The existing bridges are 40 ft wide, however, and will have to be widened to construct a separate walkway for pedestrians. New bridges are proposed to be built to accommodate the southbound traffic. The majority of the existing land use along the road is expected to remain the same, mostly commercial with some industrial and residential.

There is an intersection improvement project planned at Harney Road, currently under design by Hillsborough County. This intersection improvement will realign Harney Road at U.S. 301, cutting

through the existing hill at the (out-of-service) railroad underpass to design tangent sections on each side of U.S. 301. Hillsborough County's preliminary concept plans show dual left turn lanes on Harney Road from both east and westbound legs onto U.S. 301. Additional improvements at this intersection will be required by the design year of this PD&E Study, 2020.

Access Management

This section of U.S. 301 is classified as an access Class 3 facility. An access Class 3 roadway is a controlled access facility that provides limited access to adjacent land in order to minimize the effect on through traffic flow.

Improvement of this facility to four lanes would include the construction of a restrictive median. A restrictive median is a type of barrier that separates the traffic traveling in opposite directions (e.g., concrete barrier, grassed median, etc.). The spacing requirements and proposed locations of median openings are discussed in Section 9.22 of this report.

6.2 MULTI-MODAL TRANSPORTATION SYSTEM CONSIDERATIONS

A review of the comprehensive plans for unincorporated Hillsborough County, and publications including the 2015 Long Range Transportation Plan, the Hillsborough County Mass Transit Corridor Alternatives Analysis Study, and the Commuter Rail Study was undertaken to determine the effect local transit plans would have on the U.S. 301 corridor. Review of these sources indicate that:

- None of the plans reviewed identified the U.S. 301 corridor as a viable light rail corridor;
- The Interstate 4 (I-4) improvements, currently under construction, allow for the use of its median for a high-speed commuter rail line;
- The Hillsborough County Traffic Forecasting Model Program included a transit element which assigns a certain number of trips to transit facilities in the development of the Year 2015 design hour volumes;
- There are no existing bus routes on the section of U.S. 301 being studied. However, a conceptual bus route, # 76, identified as the "East Sligh Avenue Feeder to Hillsborough Avenue Station" travels along U.S. 301 from Sligh Avenue to I-4. This conceptual bus route

is included in both 2005 Interim and 2015 Long Range Transportation Plan improvements as a local route;

- U.S. 301 from I-4 to the Pasco County Line is a *Designated Regional Roadway* in the 2015 LRTP; *Designated Regional Roadways* are major roadways that provide the movement of people and goods across multi-jurisdictions and provide emergency routing of vehicles for evacuations.
- U.S. 301 from I-4 to Bullard Parkway (Harney Road) is designated as *Sensitive to Area Residents (STAR)*. This means it is designated for widening, but the improvements should include special amenities and consideration to minimize potential impacts due to adjacent land uses, and the environment. This section of U.S. 301 has been designated as a *STAR* roadway by the MPO because of wildlife concerns.

The conceptual bus route would not reduce the need for widening U.S. 301, but the additional through lanes will help improve the Level of Service (LOS) to lessen the delay for buses traveling along U.S. 301.

6.3 TRAFFIC ANALYSIS ASSUMPTIONS

The FDOT Planning Department has developed a Regional Transportation Analysis Model for a four county area to arrive at the projected 2015 traffic. Traffic counts at the count stations 59, 5262, and 5261 and the projected 2015 traffic were used to extrapolate the design year, 2020 projected traffic. The latest 1997 traffic counts, 2015 AADT's, and 2020 AADT's are listed in the following table.

TABLE 6-1

AVERAGE ANNUAL DAILY TRAFFIC VOLUMES (AADT)			
U.S. 301 Section	**1997 Current**	**2015 Regional Model**	**2020 Projected**
I-4 to Sligh	27,500	35,000	38,000
Sligh to Harney	12,400	24,200	28,000
Harney to Fowler	10,100	15,300	17,000

Review of current growth rates for the count stations 59, 5262, and 5261 and the growth rates used

to project the traffic volumes in the Regional Model indicates that the projected FDOT 2015 and 2020 daily traffic volumes are reasonable.

The design hour traffic (2020) conditions were determined for the existing roadway and for an alternate four-lane facility. The design hour factors used for the highway capacity analysis were provided by the FDOT Planning Department. A K-factor of 10.1 percent was used to convert the 2020 AADT to the design hour traffic. This K_{30} factor is an average developed by the FDOT Planning Department for U.S. 301.

The HCS Multilane Highway analysis was used to determine the operating conditions for a four-lane highway facility. The analysis assumed a four-lane divided highway that includes new two-lane bridges and uses the existing two-lane bridges.

Turning movement counts taken in May 1996 were used to project turning movement volumes to the Design Year 2020. The 1996 turning movement counts are shown in Figure 6-1. These counts were increased by 10% to get the peak volumes for 1996.

The 1996 peak turning movement volumes were then increased by a certain percentage per year to figure the projected turning movement volumes. For example, the north and southbound traffic was increased by 1.7% per year, which is the growth rate between the 1994 count and the 2015 projected traffic. The FDOT Planning Department also supplied projected 2015 AADT's for the signalized side streets which were used in addition to the U.S. 301 AADT's to determine the projected turning movement volumes.

6.4 EXISTING TRAFFIC VOLUMES

The Highway Capacity Software (HCS) was used to determine existing operating conditions within the project limits. Since the majority of the project is currently a two-lane undivided roadway, the HCS Two-Lane Highways options was used to evaluate this roadway.

The Highway Capacity Manual (HCM) definition for level terrain is any combination of horizontal

and vertical alignments that permits heavy vehicles to maintain approximately the same speed as passenger cars. The HCM definition for rolling terrain is any combination of horizontal and vertical alignments causing heavy vehicles to reduce their speed substantially below that of passenger cars but not causing heavy vehicles to operate at crawl speeds for any significant amount of time. Given the existing characteristics of this roadway facility, the level terrain option was selected as the most appropriate.

The entire project length of U.S. 301 is contained within a FHWA Urbanized Area Boundary. The minimum Level of Service for an "Urbanized Area" is LOS D , according to "Florida's Level of Service Standards and Guidelines Manual for Planning", topic No. 525-000-005-C. The existing (and projected) traffic volumes are shown in Table 6-1. The roadway is currently operating at LOS F during the AM and PM peak hours in the section from I-4 to Sligh Avenue.

6.5 TRAFFIC VOLUME PROJECTIONS

The projected 2015 AADT volumes from the Regional Model and the 2020 projected traffic volumes are shown in Table 6-1.

6.6 LEVEL OF SERVICE

The Arterial Level of Service for three sections of U.S. 301 with existing and proposed traffic is shown in the table below.

TABLE 6-2

Level of Service Summary			
U.S. 301 Section	Existing Two Lane 1994 Traffic	No-Build 2020 Traffic	Proposed Four Lane 2020 Design Year Traffic
I-4 to Sligh	F	F	C
Sligh to Harney	D	F	B
Harney to Fowler	D	E	A

The three signalized intersections were analyzed to determine the current Level of Service using the

Highway Capacity Software Program. The existing lane configurations are shown in Figure 4-6.

All of the intersections have fully actuated signals. The maximum signal timing currently programmed was entered into the HCS analysis to calculate the LOS. As Table 6-3 shows, both Sligh Avenue and Harney Road intersections are operating at LOS F. This is due to high through traffic on U.S. 301 overwhelming the single lane in each direction. The high turning movement volumes require additional turn lanes for some movements, which is discussed below.

The proposed lane configurations for the three signalized intersections are shown in Figure 6-2. During the LOS analysis it became apparent that additional turn lanes were needed to meet the required Level of Service.

At Harney Road, the intersection project currently under design by Hillsborough County will make some improvements, but additional work will be required to meet the demands of the year 2020. A dual left turn lane on northbound U.S. 301 for traffic turning onto westbound Harney Road is recommended. Turning ramps are proposed for the high volume of traffic turning right from eastbound Harney Road onto southbound U.S. 301 and westbound Harney Road onto northbound U.S. 301. The right turn movements from Harney Road onto U.S. 301 are not included in the intersection analysis because of the right turn ramps and acceleration lanes proposed. These ramps will allow right turns to occur independently of the signal phasing.

At Sligh Avenue, left and right turn lanes will be required for all legs of the intersection by the year 2020. Dual left turn lanes will be needed for northbound traffic on U.S. 301. Since Sligh Avenue is a two lane road, it will have to be widened to allow for merging traffic from the dual NB left turn lanes. A ramp for eastbound traffic turning right onto US 301 similar to the ones proposed at Harney is recommended, due to the high design year volume (559 vehicles in the Peak Hour).

At Fowler Avenue, dual left turn lanes are needed to meet the Level of Service requirement for eastbound traffic turning onto U.S. 301. The four lane section should be extended past the horizontal curve at Fowler to allow the northbound traffic to safely merge to one lane.

With the proposed four laning and additional turn lanes (see Figure 6-1), all of the intersections will operate at LOS C or better in the year 2020. The Level of Service of each intersection is summarized below in Table 6-3.

TABLE 6-3

Intersection Level of Service (LOS)			
Side Street	Existing Year 1996	No-Build Year 2020	Proposed Design Year 2020
Sligh Avenue	F	F	C
Harney Road	F	F	C
Fowler Avenue	D	F	C

6.7 REFERENCES

1. Traffic Technical Memorandum; District Seven PD&E Department, April 1997.
2. Florida's Level of Service Standards and Guidelines Manual for Planning; Florida Department of Transportation; Tallahassee, Florida; 1995.
3. Future of Hillsborough County Comprehensive Plan; Hillsborough County Planning Department; Tampa, Florida; revised on November 18, 1991.
4. 2015 Long Range Transportation Plan; Hillsborough County Metropolitan Planning Organization (MPO); Tampa, Florida; Adopted on December 5, 1995.
5. Hillsborough County Mass Transit Corridor Alternatives Analysis Study; Bechtel Civil, Inc. et al; Tampa, Florida; July 1989.
6. Highway Capacity Manual; Transportation Research Board, Washington D.C., 1994

SECTION 7.0
CORRIDOR ANALYSIS

7.1 EVALUATION OF ALTERNATIVE CORRIDORS

The section of U.S. 301 being studied is a north-south route in eastern Hillsborough County, which serves a diverse group of travel demands. The most important of these are:

- Commuters traveling to office complexes near U.S. 301 (Breckenridge and Hampton Oaks). This type of travel may increase significantly as there is undeveloped land along U.S. 301 remaining between I-4 and Sligh Avenue. (See Section 4.3.1 for further discussion on commercial developments planned on U.S. 301.)
- Industrial businesses along U.S. 301 (including the U.S. 301 Truck Stop) which generate a high volume of truck traffic.
- Trips between Tampa and the Thonotosassa area.
- Access needs of residents on and near U.S. 301.

Five alternative routes were investigated to determine if a feasible alternative exists to improving U.S. 301, which are discussed below.

Alternative 1 - I-75

This is a limited access freeway with interchanges at I-4 and Fowler Avenue. One alternative route would be to head east on I-4 to I-75, get off the interstate at Fowler Avenue and head east back to U.S. 301. This route would add approximately 3½ miles to the trip.

Alternative 2 - S.R. 583 (56 Street)

This alternative route diverts from U.S. 301 at I-4 heading west, exiting on U.S. 92 (S.R. 600) west to S.R. 583. On S.R. 583, travel north to S.R. 582 (Fowler Avenue), go east to U.S. 301. This route would add approximately nine miles to the trip. Additional ROW would be required to widen S.R. 583 from four lanes to six lanes.

Alternative 3 - C.R. 579 (Mango Road)

This alternative route begins at I-4 heading east, going north on C.R. 579 to Fowler Avenue. This is currently a two lane rural road with no shoulders traveling through an area which is principally agricultural (Orange groves) and residential (Mobile homes). Additional ROW would also be required to widen C.R. 579 to four lanes.

Alternative 4 - Williams Road - Sligh Avenue

This route begins at I-4, exiting at U.S. 92, crossing I-4 to Sligh Avenue, heading east to Williams Road and north on Williams Road to U.S. 301. These sections of Sligh Avenue and Williams Road are two lane rural roads in a residential area, with numerous tight horizontal curves which would require a design speed lower than 70 km/hr (45 mph). Additional ROW would also be required to widen Sligh Avenue and Williams Road to four lanes.

Alternative 5 - Harney Road

Another route is I-4 west to U.S. 92 (Hillsborough Avenue) north on Orient Road, west on Sligh Avenue and north on Harney Road to U.S. 301. A variation of this alternative is to turn off Harney Road onto Morris Bridge Road, going north to Fowler Avenue, then east to U.S. 301 which would add another 1½ miles to the trip. The roads on this alternative route are all county roads, in residential areas, unsuitable for the type and volume of traffic traveling on U.S. 301. In addition, the sharp turns at the intersections of Sligh Avenue with Orient Road and Harney Road could not be navigated by the large trucks which comprise a high percentage (>10%) of the traffic on U.S. 301.

None of the alternatives adequately serve the travel demands on this corridor, particularly those requiring access to the businesses and residences along U.S. 301. As businesses develop along the U.S. 301 corridor, the roadway will become increasingly congested, even if one (or more) of these alternative routes are improved.

7.2 SELECTION OF VIABLE ALTERNATIVES

The appropriate corridor focus should be on improving U.S. 301 as there is no other viable alternative which meets the travel needs identified in Section 7.1.

SECTION 8.0
ALTERNATIVE ALIGNMENT ANALYSIS

To develop an improved roadway facility for U.S. 301 that is in the best overall public interest, engineering, environmental, and economic factors as well as social/cultural conditions must be taken into consideration. The improved facility should be designed to safely and efficiently accommodate the projected design-year vehicular traffic as well as bicycle and pedestrian traffic. The design and alignment of the improved facility must consider sensitive environmental conditions and areas. Sites potentially contaminated with hazardous and/or petroleum materials should be avoided. The alignment should be placed so as to optimize the possibilities for construction staging and maintenance of traffic. Access control techniques to promote safe and efficient operations should be used. These criteria have a direct bearing on the selection of the preferred design concepts.

Included in the following sections are the roadway and structure improvement alternative concepts developed for U.S. 301 from I-4 to Fowler Avenue, preceded by the "No-Project" alternative.

8.1 NO PROJECT ALTERNATIVE

As mentioned in Section 7, there are no alternative facilities that could serve the travel demand of the commercial and industrial businesses along U.S. 301.

The No-Project alternative consists of canceling the project or postponing improvement of U.S. 301 beyond the Design Year 2020. Certain advantages and disadvantages would be associated with the implementation of the No-Project alternative.

The advantages of the No-Project alternative include:

- No new construction costs.
- No disruption to the existing land uses due to construction activities.
- No disruption to traffic due to construction activities.
- No ROW acquisitions.
- No business and residential relocations.
- No environmental impacts.

The disadvantages of the No-Project alternative include:

- Unacceptable levels of service on the existing roadway network (see Section 6).
- Increased traffic congestion causing increased road user costs due to travel delay.
- Deterioration of air quality caused by traffic congestion.
- Further deterioration of the existing safety deficiencies due to the traffic increases; increase of economic losses due to increase in vehicle collisions.
- Emergency service response time increases.
- Deceleration of economic growth.
- Increased roadway maintenance costs.
- No improved stormwater management via stormwater attenuation and treatment.

Postponement of the project may jeopardize its future economic feasibility due to the current escalation of construction and ROW costs. During the time that the project development is delayed, land development could occur that would escalate land values and potential business damages.

The No-Project alternative will remain under consideration throughout the alternatives analysis and evaluation process.

8.2 TRANSPORTATION SYSTEM MANAGEMENT

The objective of Transportation System Management (TSM) is to create additional capacity without constructing additional through lanes. This is accomplished by measures such as adding turn lanes at intersections, changing signal timing and phases and removing on-street parking. The possibility of using TSM as an alternative to widening to four lanes was considered and rejected for the following reason.

The traffic analysis (see Section 6) showed that four lanes were required to meet the projected demand of the year 2020. There are intersection improvements proposed at Sligh Avenue, Harney Road, and Fowler Avenue, which involve adding turn lanes and modifying the signal timing to meet the traffic demand in the Design Year. The intersection improvements will result in less delay at the

intersections. Without these improvements, the benefit of widening to four lanes would not be fully realized. However, the intersection improvements alone would not accommodate the arterial traffic volumes.

8.3 STUDY ALTERNATIVES

The PD&E Study for U.S. 301 began in April of 1996. Initially, detailed information was collected, documented, and evaluated on the environmental, socioeconomic, land use, archaeological, and historical features for the area. This information was then used to develop the conceptual design and alternatives analysis for the project. Four "Build" Alternatives have been developed and are analyzed in this report. The "No-Build" Alternative remains viable throughout the study and selection process.

All "Build" Alternatives propose the widening of the existing two lane roadway to a four lane divided roadway with intersection improvements at Sligh Avenue, Harney Road, and Fowler Avenue. Only one bridge typical section is being considered for all four alternatives. Two of the alternatives would require additional ROW from the west side of U.S. 301 for the proposed roadway improvements. Acquisition of ROW from the west side of U.S. 301 would avoid impacts to the Temple Terrace Sports Complex and Sunset Memory Gardens Cemetery. The other two alternatives could accommodate the proposed roadway improvements within the existing ROW. However, all "Build" Alternatives would require ROW for pond sites and floodplain compensation requirements. Finally, the ROW required for the four lane improvements for each alternative would accommodate any future six laning of U.S. 301 without the acquisition of additional ROW.

A four lane rural section with a 12 meter (40 ft) median was considered, and rejected for this project. The existing 61 m (200 ft) ROW was originally purchased to allow for a 12 m (40 ft) median when widened to four lanes. However, the construction of this median width would make the eventual six laning more difficult and expensive. If this section was widened to six lanes to the inside, only 4.8 m (16 ft) would remain, which is below the minimum 6.6 m (22 ft) currently required for an urban section. If widened to six lanes to the outside, maintaining a rural section would require ROW acquisition that would increase significantly in cost as development continues along the U.S. 301

corridor. This could more properly be handled by buying 1.8 m (6 ft) of ROW when it is four laned, which is alternative "A" (see description below). If this four lane rural section was modified to an urban section when six laned, it would be similar to Alternative "D" described below, except that the wider median would make construction more expensive than Alternative "D".

The four "Build" Alternatives are outlined below.

Alternative A, Figure 8.1, is a rural typical section consisting of two 3.6 m (12 ft) travel lanes and 1.5 m (5 ft) paved outside shoulders in each direction, separated by a 13.8 m (46 ft) grassed median. Roadside swales would be used for drainage. This alternative requires approximately 1.8 m (6 ft) of additional ROW from the west side of U.S. 301.

Alternative B, Figure 8.2, is also a rural typical section consisting of two 3.6 m (12 ft) travel lanes and 1.5 m (5 ft) paved outside shoulders in each direction with roadside swales for drainage. However, the median for this typical section increases from 13.8 m (46 ft) to 19.2 m (63 ft), allowing for an increase in the posted speed to 65 miles per hour. Approximately 7.3 m (24 ft) of additional ROW would be acquired from the west side of U.S. 301.

Alternative C, Figure 8.3, is an urban typical section consisting of two 3.6 m (12 ft) travel lanes and 1.2 m (4 ft) bike lane in each direction with curb and gutter on both sides of the road. The travel lanes would be separated by a 13.8 m (46 ft) raised median. An underground pipe system would handle drainage as opposed to open swales or ditches. This typical section could be built within existing ROW except for the intersection improvements at Sligh Avenue and Harney Road, and stormwater ponds and floodplain mitigation.

Alternative D, Figure 8.4, is a suburban typical section consisting of two 3.6 m (12 ft) travel lanes and 1.5 m (5 ft) outside paved shoulders in each direction. The travel lanes would be separated by a raised 6.6 m (22 ft) median with a mountable (Type E) curb. Drainage would be accommodated by roadside swales on the outside of the travel lanes. Sidewalks can be added adjacent to the ROW line at the back of the ditch. This typical section could also be built within the existing ROW except for intersection improvements at Sligh Avenue and Harney Road, stormwater ponds and floodplain mitigation.

STATE OF FLORIDA

DEPT. OF TRANSPORTATION

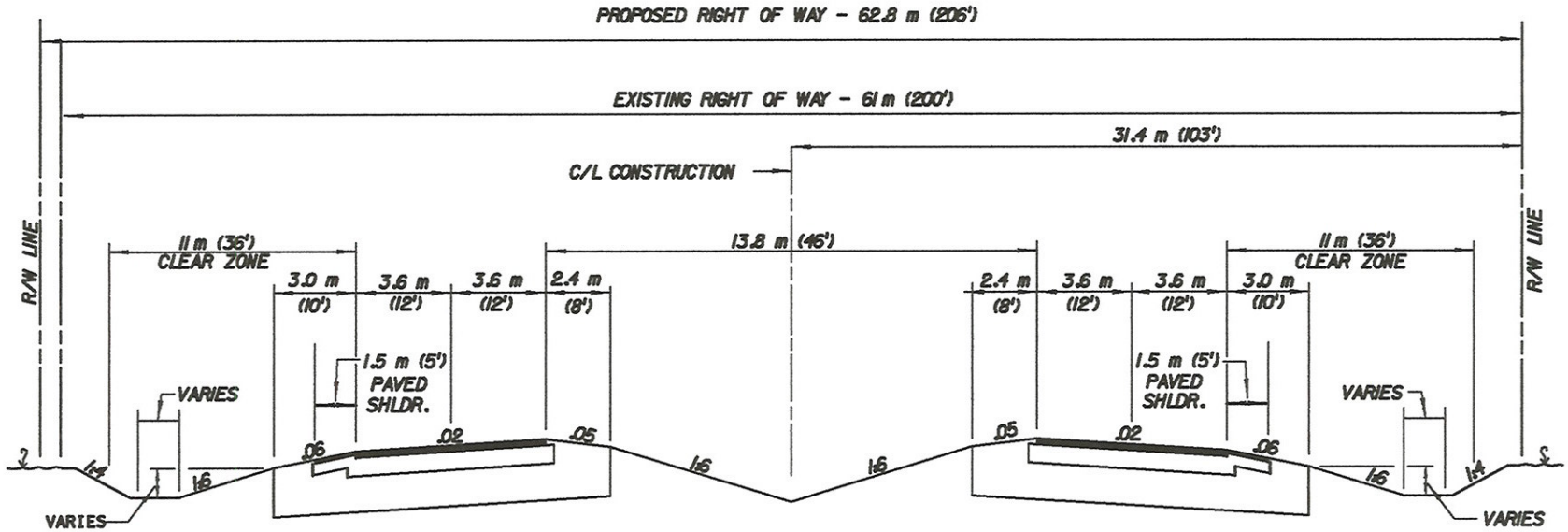
US 301

FROM I-4 TO FOWLER AVE.

PROPOSED TYPICAL SECTION

ALTERNATIVE "A"

Figure 8-1



PROPOSED TYPICAL SECTION

ALTERNATIVE "A"

DESIGN SPEED - 100 km/h (60 mph)

communities includes Red Maple, Water Oak, Laurel Oak, Bald Cypress, American Elm, Sabal Palm, and Live Oak. The typical plant assemblage include Arrowhead, Pickerel Weed, Cattail, Bulrush, Spike Rush, Pennywort, and Star Rush. Table 4-16 quantifies wetland impacts according to design alternative and are classified as emergent and forested.

Table 4-16

Wetland Impact Areas

Alternative Design	Classification		Total Hectares/Acres
	Emergent	Forested	
A	1.23 (3.04)	1.99 (4.93)	3.22 (7.97)
B	1.31 (3.23)	2.40 (5.95)	3.71 (9.18)
C & D	1.18 (2.92)	1.85 (4.59)	3.03 (7.51)

4.3.3.2 Wildlife and Habitat

Suitable habitat for federally listed species was investigated for presence or absence by FDOT staff. The project corridor was mapped adhering to *Florida Land Use, Cover and Forms Classification System* (FDOT 1985). The Hillsborough County MPO has designated this section of U.S. 301 as Sensitive to Area Residents (STAR), because of wildlife concerns. The aerials along with the classification legend are contained in the combined Wetland Evaluation Report and Biological Assessment. Surveys were then conducted in each habitat type for species known to occur or utilize the classified habitats. These surveys were performed in July through August of 1996 and January and March of 1997. In addition, random surveys were performed along the corridor throughout the duration of the study (June 1996 - April 1997) to obtain data on resident and transient species.

Federally Listed Species

No federally threatened or endangered floral species were observed or are known to occur within the project corridor. The entire corridor was surveyed on numerous occasions, strongly indicating the absence of these species. Faunal species federally classified as threatened or endangered that have

the potential to be present include the bald eagle, wood stork, and Eastern indigo snake.

The project has been evaluated for impacts on federally protected threatened and endangered species. A literature review was conducted to determine those possible threatened or endangered species which may inhabit the project area. This included, among other methods, using the USFWS's "The Red Book", FGFWFC's "Florida's Endangered Species, Threatened Species and Species of Special Concern Official Lists", "Florida Atlas of Breeding Sites For Herons And Their Allies (updated 1986-89)", "Source of Wildlife, Eagle Nests and Public Lands Data Maps", and Florida Natural Areas Inventory's "Matrix of Habitats and Distribution By County of Rare/Endangered Species in Florida.

Based on the above results of the literature review and the field surveys conducted for the proposed roadway improvements, the Department has determined that no federally listed threatened or endangered species will be affected by the project. Furthermore, the proposed project is not located in an area designated as critical habitat by the U.S. Department of the Interior. Therefore, FDOT on behalf of the FHWA has determined that the proposed project will have "No Effect" on any federally protected threatened or endangered species.

4.3.4 Hazardous Materials Sites

A Level I Contamination Assessment was conducted of the project corridor for the proposed improvements to U.S. 301. The report is based on a detailed site investigation and review of records maintained by the Florida Department of Environment Protection (FDEP), other regulatory agencies, and companies in the immediate vicinity of the project. The purpose of the contamination evaluation is to locate and define areas along the existing roadway and the proposed alignments where contamination of soil and groundwater by petroleum or hazardous materials has occurred, where contamination or deleterious conditions may exist, and where the potential for contamination exists due to present or past land use.

A total of 52 sites were identified within a half-mile of U.S. 301 for the project limits using the federal and state database search by Radius Data Corporation, Inc. Of these, 26 are located adjacent

to the ROW and are gas stations, auto repair shops, suspect former gas stations, and light industries such as truck and construction equipment service, sales, and repair. The potential impacts of these sites on the project are summarized below. A tabulation of the risk evaluation criteria and the individual ratings for these sites is provided in Table 4-17. These sites are shown in Figure 4-11. The remaining sites, comprised of construction, warehousing, and other electrical and mechanical manufacturers, are located about a quarter of a mile or more from the ROW.

The U.S. EPA National Priorities List (NPL) database, updated March 1996, was reviewed to identify any Superfund sites located within or near the project corridor. (A Superfund Site is any controlled or abandoned hazardous waste site identified for priority remedial actions by the U.S. EPA in the interests of public and environmental safety). No Superfund sites are listed within or near the corridor.

A total of 26 sites with a potential for having an impact on the project were identified and evaluated using the PD&E Risk Evaluation Guidelines. Five are active gas stations, 10 are transportation related companies and the remaining 11 are light industries and auto repair shops.

Three of the five gas stations, Sites 4, 13, and 26, have been rated High as regulatory records indicate contamination or remedial actions. A Level II soil and groundwater investigation for petroleum constituents is recommended for these sites. One site, Site 24, has been rated Medium as remedial actions are currently ongoing. Close liaison with the FDEP and, based on Remediation progress, a Level II assessment are recommended for this site. The other, Site 1, is an EDI site and the most recent inspection report does not indicate any contamination. This has been rated Medium and liaison with the FDEP is recommended. Depending on progress of Remediation at the site, a Level II assessment in support of utility installation, is recommended.

Site 12 is a used auto parts shop with a considerable number of junk cars on the premises. A precautionary Level II soil and groundwater investigation for petroleum constituents, solvents, and heavy metals is recommended. Sites 8, 14, and 15 are transportation companies and construction machinery shops with heavy machinery on the premises. As junk or abandoned cars can leak

transmission and other fluids, a precautionary Level II soil and groundwater investigation for petroleum constituents, solvents, and heavy metals is also recommended for these sites. The approximate cost to perform these investigations is $6,500 per site.

Sites 16, 17, 18, 19, 20, and 23 are heavy machinery and auto repair shops which do not exhibit good housekeeping practices. Additionally, the project corridor in the vicinity of these sites is at a lower level and is therefore susceptible to surface water and groundwater contamination from these higher areas. Sites 16 and 23 have had documented petroleum release; however, it is not known whether closure assessments were performed at these sites. A precautionary Level II soil and groundwater investigation for petroleum constituents, solvents, and heavy metals is recommended for these sites. The estimated costs for these assessments is $6,500 per site.

Site 3 has been ranked No risk as the FDEP records show no cause for concern. The remaining Sites, 2, 5 through 7, 9 through 11, 21, 22, and 25, have been rated Low as the FDEP and Hillsborough County EPC records show no cause for concern. Further environmental assessment is not recommended for these sites.

A Level I assessment was also performed for the 30 alternate pond sites. Of the 30 alternate sites, 26 were rated as No or Low risk, with no further environmental assessment recommended. The four remaining pond sites, numbers 1, 11, 20, and 30 had a Medium or High risk evaluation rating. A Level II soil and ground water investigation is recommended for these four sites if they are selected as preferred pond site locations.

PROPOSED TYPICAL SECTION

ALTERNATIVE "B"

DESIGN SPEED - 110 km/h (70 mph)

STATE OF FLORIDA

DEPT. OF TRANSPORTATION

US 301

FROM I-4 TO FOWLER AVE.

PROPOSED TYPICAL SECTION

ALTERNATIVE "B"

Figure 8-2

Bridge Structures

For all the "Build" Alternatives new bridge structures will be built parallel to the existing structures over the Harney and Tampa Bypass Canals. The typical section for both of the proposed bridges consists of two 3.6 m (12 ft) travel lanes and 3.0 m (10 ft) paved outside shoulders. The existing structures will accommodate northbound traffic, while the new structures will accommodate southbound traffic. For all "Build" Alternatives, the bridges will be built within the existing 61 m (200 ft) of ROW. The bridge typical section is shown on Figure 8-5.

There are common advantages and disadvantages for any of the "Build" Alternatives. They are outlined below:

Advantages:

- Accommodation of projected traffic
- Acceptable project levels of service
- Improved drainage and water quality treatment
- Consistency with the LRTP

Disadvantages:

- Minor environmental and socio-economic impacts
- Temporary construction inconvenience and delays

8.4 EVALUATION MATRIX

The evaluation matrix comparing each alternative is shown in Figure 8-6.

8.5 PREFERRED ALTERNATIVE

After a thorough analysis of each alternative, including environmental and social impacts, costs of construction and ROW, recommendations from the V.E. Study and all public comments from the Public Workshop were considered, Alternative D has been selected as the preferred alternative.

The preferred alternative is a suburban typical section consisting of two 3.6 m (12 ft) travel lanes and 1.5 m (5 ft) outside paved shoulders in each direction. Drainage is handled by roadside swales on the outside of the travel lanes. Sidewalks are included between the ROW line and the drainage swales. See Figure 8-7.

This typical section can be built within the existing 61 m (200 ft) ROW, except for intersection improvements at Sligh Avenue and Harney Road, stormwater ponds and floodplain mitigation.

The selection process for the preferred alternative is outlined below.

Alternatives A and B, the two rural sections, were rejected due to their higher cost and environmental impacts. These alternatives required ROW acquisition along the entire project length, greatly increasing the total cost of the project. The wetland and floodplain impacts were higher than the other alternatives, C and D, which fit in the existing ROW. Business and residential relocations would also be required for Alternatives A and B. The two remaining Alternatives, C and D were then compared to select the preferred alternative.

The suburban section, Alternative D has the following advantages over the urban section, Alternative C:

- Safety: The posted speed is currently 55 mph for most of the project, with a high percentage of truck traffic due to the industrial buildings and warehouses along U.S. 301. The roadway's clear zone, sight distance, and relatively low number of sidestreets and driveways allow traffic to travel safely at this speed. The most important advantage of the suburban section over the urban section is the added safety which the shoulder and clear zone provides, allowing drivers of errant vehicles to recover and return to the roadway without losing control. The shoulder also allows for disabled vehicles to pull off the road, reducing the likelihood of a rear-end collision.

  The suburban section is also safer for pedestrians, as the sidewalk is farther away from traffic.
- Cost: The suburban section, Alternative "D" is the least expensive alternative, $1.8 million less than the urban section, Alternative "C".
- Public Comments: Of the ten written comments received at the Public Workshop, four of these stated a preference for Alternative "D", the suburban section. The MPO's letter was the only one favoring Alternative "C". The other five comments did not express a preference for any of the alternatives.

- Another advantage of the suburban section over the urban section with curb and gutter is the relative ease with which new driveway connections, right turn lanes, deceleration lanes, and bus bays can be added, without having to reconstruct curb and gutter or possibly relocate a storm water inlet.

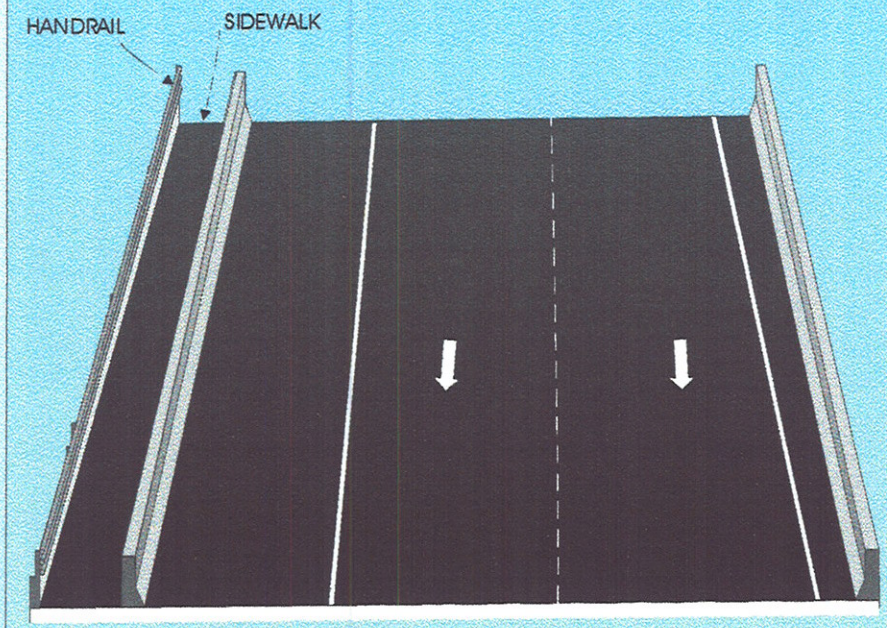
The preferred alternative includes bicycle and pedestrian facilities. There are sidewalks on each side of the roadway for pedestrian use. Pedestrian signals and crosswalks are to be constructed at the signalized intersections as part of this project. On the bridges, separate walkways for pedestrians will be built. For bicyclists, a five foot wide paved shoulder is available for their use.

Street lighting is recommended for this project as part of the improvements. A study was done which concluded that lighting is justified because of the high night time crash rate.

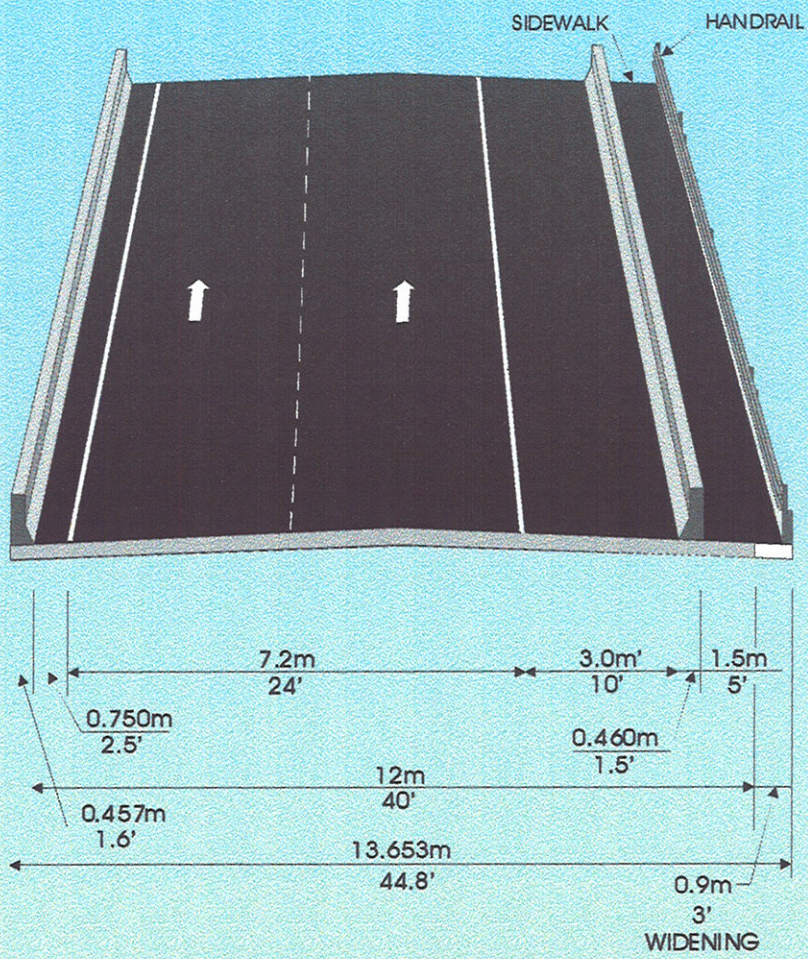
Public transit can also be accommodated with the preferred alternative. Although there are no existing bus routes along this section of U.S. 301, the Hillsborough County MPO has emphasized the importance of allowing for expansion of bus service to this area. As the area develops and the need for public transportation increases, future bus stop locations with bus pads and shelters can be added by constructing a side drain and filling in the ditch.

The Department anticipates contributing development and increasing traffic along this roadway, even beyond the design year for this project, 2020. Six lanes are likely to be required eventually, so the preferred alternative should and will accommodate this. When six lanes are required, it will be necessary to convert to an urban section with a closed drainage system to avoid costly ROW acquisition. The preferred alternative shall be designed so that it can be converted to an urban section with curb and gutter when widened to six lanes without reconstructing the pavement. A minimum gutter grade of 0.3 % is to be used throughout the project to allow for the conversion to an urban section. This will require the use of a "sawtooth" profile at the beginning of the project which has a 3000 m (9800 ft) long section with a flat grade.

U.S. 301 PD&E STUDY
PROPOSED BRIDGE TYPICAL SECTION



PROPOSED BRIDGE



EXISTING BRIDGE

FIGURE 8-5

U.S. 301 PD&E STUDY
ALTERNATIVES EVALUATION MATRIX

IMPACTS		ALTERNATIVES				
Evaluation Factors	Criteria Ranking	No - Build	ALT. "A"	ALT. "B"	ALT. "C"	PREFERRED ALTERNATIVE
COSTS						
Right of Way	Cost (in millions)	0	$ 8.3	$ 15.4	$ 4.6	$ 4.6
Design	Cost (in millions)	0	$ 1.0	$ 1.2	$ 1.3	$ 1.1
Construction	Cost (in millions)	0	$ 10.3	$ 11.7	$ 12.6	$ 11.3
C.E.I.	Cost (in millions)	0	$ 1.0	$ 1.2	$ 1.3	$ 1.1
TOTAL	Cost (in millions)	0	$ 20.6	$ 29.5	$ 19.8	$ 18.1
SOCIAL						
Residential Relocations	No. of Potential Sites Affected	0	0	1	0	0
Business Relocations	No. of Potential Sites Affected	0	1	10	0	0
Parks & Public Properties	No. of Potential Sites Affected	0	1	1	1	1
TOTAL	No. of Potential Sites Affected	0	2	12	1	1
ENVIRONMENTAL						
Wetlands	Hectares (Acres) Impacted	0	3.22 (7.97)	3.71 (9.18)	3.03 (7.51)	3.03 (7.51)
Floodplains	No. of Sites Affected	0	2	2	2	2
Noise	No. of Sites Affected	0	39	43	38	40
Air Quality	No. of Sites Affected	0	0	0	0	0
Contamination	No. of Potential Sites Identified	0	26	26	26	26
CULTURAL RESOURCES						
Historic Sites / Districts	No. of Sites Affected	0	0	0	0	0
Archaeological	No. of Sites Affected	0	0	0	0	0

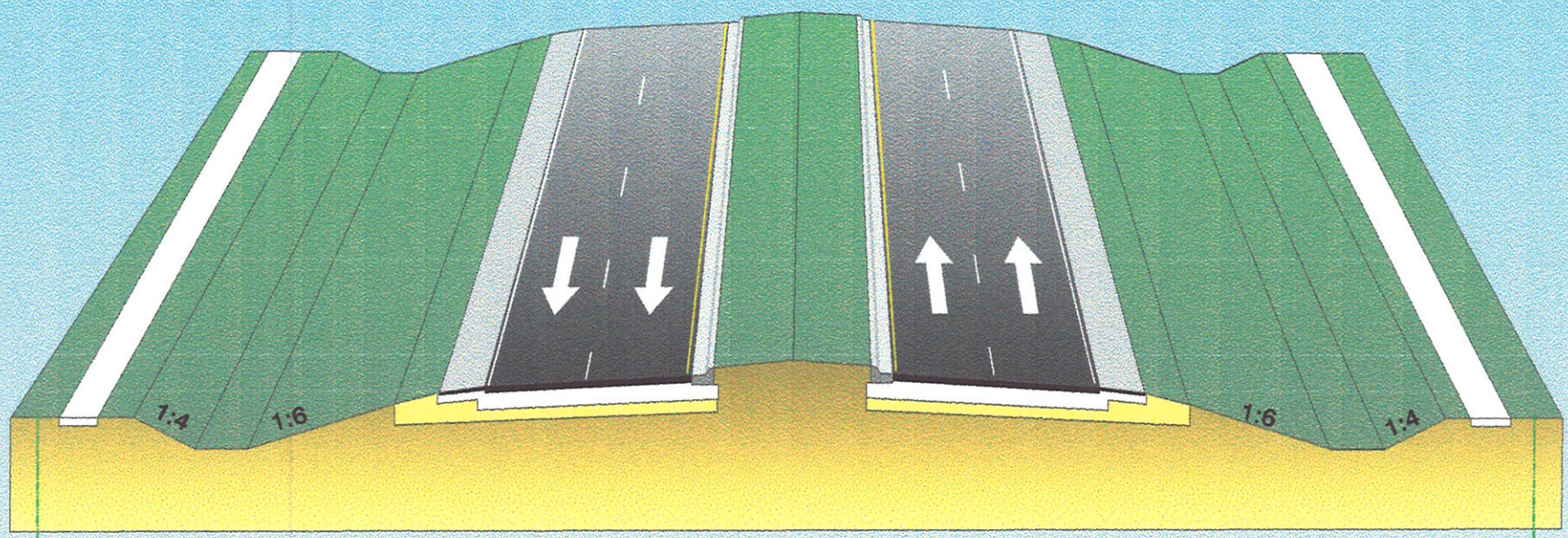
FIGURE 8-6

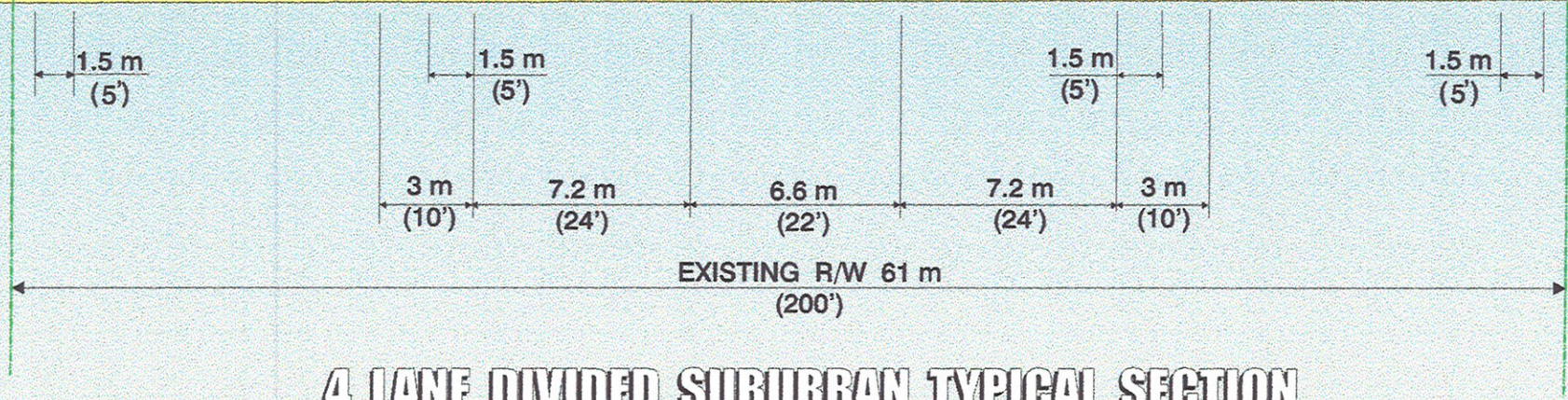
US 301 [illegible] STUDY
ALTERNATIVES EVALUATION MATRIX

IMPACTS		ALTERNATIVES				
Evaluation Factors	Criteria Ranking	No - Build	ALT. "A"	ALT "B"	ALT "C"	PREFERRED ALTERNATIVE
COSTS						
Right of Way	Cost (in millions)	0	$ [illegible]	$ 16.4	$ 4.6	[illegible]
Design	Cost (in millions)	0	$ 1.0	$ 1.2	$ 1.0	[illegible]
Construction	Cost (in millions)	0	$ 16.2	$ 11.7	$ 12.6	[illegible]
C.E.I.	Cost (in millions)		$ 1.0	$ [illegible]	$ 1.3	[illegible]
TOTAL	Cost (in millions)	[illegible]	$ [illegible]	$ 29.5	$ 19.[illegible]	[illegible]
SOCIAL						
Residential Relocations	No. of Potential Sites Affected	[illegible]	0	[illegible]	0	[illegible]
Business Relocations	No. of Potential Sites Affected	[illegible]	[illegible]	16	0	0
Parks & Public Properties	No. of Potential Sites Affected	0	1	[illegible]	1	[illegible]
TOTAL	No. of Potential Sites Affected	0	0	[illegible]	[illegible]	[illegible]
ENVIRONMENTAL						
Wetlands	Hectares (Acres) Impacted	0	3.22 (7.87)	[illegible]	3.00 (7.57)	[illegible]
Floodplains	No. of Sites Affected	0	2	2	2	2
Noise	No. of Sites Affected	0	38	[illegible]	13	[illegible]
Air Quality	No. of Sites Affected	0	0	0	0	[illegible]
Contamination	No. of Potential Sites Identified	0	25	20	25	[illegible]
CULTURAL RESOURCES						
Historic Sites / Districts	No. of Sites Affected	0	0	0	0	[illegible]
Archaeological	No. of Sites Affected	0	0	0	0	[illegible]

FIGURE 8-8

U.S. 301 PD&E STUDY
PREFERRED ALTERNATIVE





4 LANE DIVIDED SUBURBAN TYPICAL SECTION

FIGURE 8-7

SECTION 9.0
PRELIMINARY DESIGN ANALYSIS

9.1 DESIGN TRAFFIC VOLUMES

The Design Traffic Volumes are detailed in Section 6, Traffic.

9.2 TYPICAL SECTION

Typical sections for each alternative are shown in section 8.3. The preferred typical section is on Figure 8-7.

9.3 INTERSECTION CONCEPTS AND SIGNAL ANALYSIS

Each of the signalized intersections was analyzed using HCS software to determine what improvements are needed to maintain at least LOS D in the design year, 2020. The intersection analysis and the proposed improvements were previously summarized in Section 6.6.

The existing lane configurations are shown in Figure 4-6. Many improvements will be required to meet the demands of 2020 traffic, including additional left and right turn lanes, turning ramps and dual left turn lanes for some movements. The proposed lane configurations at the signalized intersections are shown in Figure 6-1. The proposed intersection improvements are also shown on the plan sheets in Appendix D.

With the proposed improvements, a Level of Service C is predicted at all signalized intersections in the design year.

9.4 ALIGNMENT AND RIGHT OF WAY NEEDS

Acquisition of ROW along U.S. 301 was needed for two alternatives, A&B. Additional ROW needed was taken from the west side of U.S. 301 to avoid impacting the Temple Terrace Youth Sports Complex and the Sunset Memory Gardens Cemetery. The other two build alternatives, C and D, can be built within the existing 61 m (200 ft) ROW and are centered in that ROW. All of the alternatives require ROW acquisition for intersection improvements at Sligh Avenue and Harney

Road. ROW for pond sites is also required for all alternatives. See section 9.19, Drainage, for further discussion on pond site sizes and locations.

The preferred alternative "D" is centered in the existing ROW. The anticipated ROW required at the intersections with Sligh Avenue and Harney Road are shown on the plan sheets in Appendix D. The locations of the preferred pond sites and floodplain mitigation sites are shown in Figure 9-1. See also section 9.19 Drainage in this report and the Preliminary Pond Siting report for further information on pond sites.

9.4.1 Vertical Alignment

The proposed profile grade is expected to be about the same elevation as the existing grade, since there is no history of flooding along the project. If the proposed profile grade is the same as the existing or slightly higher, the proposed typical section should fit in the existing ROW for the preferred alternative with the exception of the cut section just south of Harney Road. The proposed ROW needed in this area is shown on the plan sheets in Appendix D.

The proposed profile grade for the preferred alternative should be designed to allow for the eventual construction of a curb and gutter section with a closed drainage system. Designing the proposed profile with a minimum gutter grade (0.3%) will eliminate the need for reconstruction if a curb and gutter section is used when six lanes are needed.

9.5 RELOCATIONS

The relocations for each alternative are presented in section 8.4, in the Evaluation matrix. There are no residential or business relocations with the preferred alternative.

A Conceptual Stage Relocation Plan (CSRP) has been completed for this project in compliance with the FDOT and FHWA 49 CFR, Part 24, Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally Assisted Programs, and the State of Florida Department of Transportation Right of Way Procedures, Chapter 9, Section 1, Rule Chapter 14-66, Florida Administrative Code.

The objective of the study is to identify the residential and business entities displaced and assess the community impact, if any, caused by the proposed project. It should be noted displacements occur not only from physical impact to structures, but may be from significant loss of parking, close proximity to the ROW, as well as ingress/egress problems.

The corridor, U.S. 301 from I-4 to Fowler Avenue, which calls for the existing two-lanes to be upgraded to a four lane divided highway, will be constructed almost entirely within the existing ROW, except for small areas at the intersections of Sligh Avenue and Harney Road, and pond sites.

In view of the fact that the CSRP is intended to address displacements necessitated by project improvements and in this case there are no displacements, the result is a **Negative Impact Statement.**

9.6 RIGHT OF WAY COSTS

The Alternatives Evaluation Matrix in section 8.4 summarized the estimated ROW costs for each alternative. These estimates include costs of ROW acquisition for all of the following:

- A strip of ROW to the west of the existing ROW for the length of the project (Alternatives A&B only).
- ROW needed for intersection improvements at Sligh Avenue and Harney Road.
- Pond sites and floodplain mitigation sites.

No ROW acquisition is planned for wetland mitigation. Recent legislation authorizes FDOT to pay $75,000 per acre of wetland impact to the FDEP and SWFWMD as compensation for the impacts. The money will be used by the permitting agencies for mitigation projects, eliminating the requirement of FDOT to create mitigation sites for each project. The $75,000 cost per impacted acre is included in the construction cost estimate. For further explanation of wetland mitigation, see section 4.3.3.3.

ROW cost estimates were done for each alternative in 1997. Alternatives C and D have the lowest

ROW cost, $4.6 million. Alternative A has a ROW Cost of $8.3 million, and Alternative B is highest at $15.4 million.

9.7 CONSTRUCTION COSTS

The Alternatives Evaluation Matrix in section 8.4 summarized the estimated construction costs for each alternative. These costs include the construction cost of two new bridges at Harney Canal and the Tampa Bypass Canal. The costs were calculated with the use of the Departments' Long Range Estimate (LRE) method.

The construction cost for each alternative is as follows:

Alternative A	$10.3 million
Alternative B	$11.7 million
Alternative C	$12.6 million
Alternative D	$11.3 million

9.8 PRELIMINARY ENGINEERING AND CONSTRUCTION ENGINEERING COSTS

The costs of engineering (final design) and Construction, Engineering and Inspection (CEI) were each estimated as 10.0 percent of the construction costs for each alternative.

9.9 RECYCLING OF SALVAGEABLE MATERIALS

During construction of the project, recycling of re-useable materials will occur to the greatest extent possible. Where possible, milling of the existing pavement to use in the new pavement will be considered to reduce the volume of the materials that need to be hauled and disposed of away from the project and to reduce the cost of purchasing materials suitable for pavement construction. Other materials, such as guardrail, signs, drainage concrete pipes, etc., will also be salvaged and re-used for regular maintenance operations if they are deemed to be in good condition.

9.10 USER BENEFITS

Numerous benefits will be realized by the public after the preferred build alternative is constructed. Savings in travel time and vehicle operating costs and traffic accident reduction are the main

benefits. Based on statistical data developed from research on "before and after" studies of roadways that experienced similar types of improvements as those proposed for U.S. 301, it is expected that accident rates along U.S. 301 will drop significantly. The proposed improvements are expected to eliminate or reduce traffic accident types such as head-on, rear-end, and angle-type collisions. Other benefits expected to be realized by the public include better access to the Temple Terrace Youth Park and other community facilities, improved emergency-vehicle response time and greater comfort for motorists as traffic operations will become more efficient.

9.11 PEDESTRIAN AND BICYCLE FACILITIES

The Hillsborough County MPO has designated this section of U.S. 301 as "STAR", *Sensitive to Area Residents.* This means that consideration should be given to lessening potential adverse impacts to adjacent land uses and the environment. The MPO has stated in a letter to FDOT dated October 20, 1997 that bicycle and pedestrian facilities should be provided. This was recommended for two reasons, because of the "STAR" designation and also because a majority of the project falls within the City of Tampa's and Hillsborough County's Urban Service Area.

To accommodate pedestrians, the preferred alternative includes a 1.5 m (5 ft) sidewalk on each side of the roadway between the ditch and the ROW line. Pedestrian signals and crosswalks are to be constructed at the signalized intersections as part of this project. On the bridges, separate walkways for pedestrians will be built. All proposed pedestrian facilities will meet the standards of the Americans with Disabilities Act (ADA).

9.12 SAFETY

The proposed improvements will upgrade U.S. 301 to a safe and efficient transportation facility. The increased roadway capacity is expected to result in less congestion therefore reducing the probability for accidents. Provision of a median separator between the northbound and southbound traffic will reduce head-on vehicle collisions. Addition of a second lane in each direction will allow for easy and safe passing of slow-moving vehicles. The 1.5 m (5') wide paved shoulders will allow bicyclists to share the roadway with motor vehicles while observing the rules of the road. The placement of sidewalks, crosswalks at signalized intersections and other safety provisions will provide safe

pedestrian circulation.

The design and alignment of the roadway will meet applicable safety standards. Adherence to the design speed as it applies to establishing and setting minimum values on critical roadway design features will be closely followed. Roadway design elements including curvature, sight distance, width and clearance will meet or exceed FDOT's minimum roadway design standards. Access control techniques to promote safe and efficient traffic circulation will also be used.

According to "before and after" safety studies performed on facilities that have undergone the same type of improvements, widening of U.S. 301 according to the above-described standards could result in a reduction of traffic accidents by as much as 65 percent. The reduced traffic accident types include head-on, rear-end, and angle-type collisions.

An examination of the crash reports revealed a high percentage of crashes at night (See Table 4.12). There were also ten fatalities in the five year period studied, all of which occurred at night. A lighting warrant study was done by the Department's Traffic Operations Department to investigate the need for lighting. The study concluded that lighting is justified because of the high rate of crashes at night. While the overall crash rate is expected to decline when the roadway is improved to a four lane divided facility, even without lighting, the high crash rate at night indicates the need for street lights.

9.13 ECONOMIC AND COMMUNITY DEVELOPMENT

As previously presented in section 3, transportation plans developed by the Hillsborough County MPO call for widening U.S. 301 to four lanes within the project limits. This transportation plan was developed after thorough evaluation of the future population and development growth in the region of the project. The proposed U.S. 301 improvements, developed through the process previously described in Section 8, respond to and fully accommodate the projected need for upgrading U.S. 301 to a multi-lane facility.

The anticipated increase in commercial development along U.S. 301 will generate new employment

opportunities and enlarge the tax base of the community, benefiting the area's economy. The additional lanes will allow residents to the north (particularly the Thonotosassa area) to commute to and from work with much less delay.

The preferred alternative allows for the widening of U.S. 301 to six lanes without the purchase of additional ROW, when the traffic volumes exceed the capacity of four lanes.

9.14 ENVIRONMENTAL IMPACTS

9.14.1 Land Use

The future land uses in the vicinity of the project were previously shown in Figure 4-8. Since, as discussed in Section 4.3, the proposed improvements of U.S. 301 are consistent with the long range planning for this region of Hillsborough County, they supplement the future land use plans without substantial adverse impacts.

9.14.2 Community Cohesion

The proposed improvements of U.S. 301 should have minimal adverse impact on community cohesion. No splitting or isolation of neighborhoods will occur, since the project proposes improvements to an existing roadway that acts as a boundary for the residential areas along the project limits. There are no residential or business relocations with the preferred alternative.

The addition of a raised median, while improving safety and lessening delay, also has the effect of making vehicles traveling within a neighborhood fronting U.S. 301 take a longer route in some cases. For a great majority of the properties along U.S. 301 this will have no effect on community cohesion, since it is predominantly commercial and industrial. There is one neighborhood, however, just north of Fowler Avenue which currently uses Rockhill Road as a frontage road along U.S. 301. Rockhill Road is a local street within the existing ROW of U.S. 301 and will be removed when the proposed improvements are made. This should have only a minor effect on community cohesion, since travel along U.S. 301 in this neighborhood is not eliminated. The travel route is sometimes longer, but actual travel time in the peak hours may be reduced due to the difficulty of making a left

turn on the existing two lane roadway. The project improvements are therefore not expected to substantially impact community cohesiveness.

9.14.3 Archaeological and Historical Resources

A Cultural Resource Assessment, including background research and a field survey coordinated with the State Historic Preservation Officer (SHPO), was performed for the project. As a result of the assessment, four previously unrecorded archaeological sites (9HI5926-5929), one previously recorded archaeological site (8HI505), and ten previously unrecorded historic structures (8HI5930, 8HI5948-5949, and 8HI5953-5959) were identified. The FHWA, after application of the National Register Criteria of Significance, found that the sites were not eligible for listing on the National Register of Historic Places. The SHPO rendered the same opinion. Based on the fact that no additional archaeological or historical sites or properties are expected to be encountered during subsequent project development, the FHWA, after consultation with the SHPO, has determined that no National Register properties would be impacted.

9.14.4 Section 4(f) Impacts

The Tampa Bypass Canal and Harney Canal are publicly owned and managed by the SWFWMD. The primary use of this property is for flood control, however, limited secondary recreational use is allowed. Fishing and hiking are permitted although dams prevent access to this area of the canal by boat and there are no improved boat ramps in the area. Portions of this SWFWMD property can be developed into a higher use park (such as the Temple Terrace Youth Park) by local governments.

Given that this property is publicly owned and provides recreational use, it has been determined that Section 4(f) of the Department of Transportation Act applies to the property. Therefore, the Department, will attempt to avoid or minimize use of all SWFWMD property. Accordingly, the preferred pond sites are those not situated within SWFWMD property. However, even non-SWFWMD owned pond sites would require drainage facilities and easements through SWFWMD property. Therefore, during the design phase of the project, the Department will have to comply with the requirements of Section 4(f) and coordinate the approval of a Section 4(f) Evaluation with the FHWA prior to using any of SWFWMD properties for drainage purposes.

9.14.5 Wetland Impacts and Mitigation

The wetland section of the combined Wetland Evaluation Report and Biological Assessment was summarized previously in Section 4.3.3.1. A total of forty-seven wetland and deepwater habitats were identified along the project, with thirty-three of these sites having the potential to be impacted by the proposed improvements. The project's impact on wetlands is considered minor since the wetland encroachments will occur in areas that were impacted previously or created as a result of the original road construction.

Environmental permits will be required from the following agencies:

- U.S. Army Corps of Engineers (ACOE)
- Southwest Florida Water Management District (SWFWMD)
- Florida Department of Environmental Protection (FDEP)

There are no practical alternatives to this construction in wetlands. All practical measures will be used to reduce harm to wetlands. Short term construction related impacts will be minimized by adherence to FDOT's "Standard Specifications for Road and Bridge Construction".

Recently legislation was passed regarding wetland mitigation for FDOT projects. This new legislation (FS 373.4137, as created by SB 1986) authorizes FDOT to pay $75,000 for each acre of wetland impact to the FDEP and SWFWMD. The funds raised will be utilized for aquatic weed control and to fund project specific mitigation plans approved by the legislature. FDOT plans on using this method on this project for wetland mitigation.

9.14.6 Aquatic Preserves

Aquatic preserves are sovereignty submerged lands that are to be preserved in their natural or existing condition so that their aesthetic, biological, and scientific values, which determine whether or not a body of water be designated as an aquatic preserve, may endure for the enjoyment of future generations. Most aquatic preserves are located along the coast and involve marine or estuarine environments with the exception of a few aquatic preserves which are located inland.

The District Environmental Management Office has determined that the project is not located in an aquatic preserve.

9.14.7 Water Quality Impacts

A Water Quality Impact Evaluation (WQIE) will be completed for this project to identify surface water and ground water impacts resulting from storm water runoff. The additional pavement constructed will create more runoff, which will be conveyed in ditches to stormwater ponds for treatment.

The proposed Storm Water facility design will include, at minimum, the water quantity requirements for water quality impacts as required by the SWFWMD in Rule(s) Chapters 40D-4, 40D-40, 40D-400, F.A.C. Therefore, no further mitigation for water quality impacts will be needed.

9.14.8 Threatened and Endangered Species

The Biological Assessment section of the combined Wetland Evaluation and Biological Assessment Report was summarized previously in section 4.3.3.2. Based on literature review and field surveys the Department has determined that no federally listed threatened or endangered species will be affected by the project, including the preferred pond site locations. The United States Fish and Wildlife Service (USFWS) concurred with this in a letter dated October 27, 1997 stating that "the proposed action is not likely to adversely affect resources protected by the Endangered Species Act of 1973".

9.14.9 Potential Hazardous Materials Sites

The findings of Hazardous Materials investigations for this project was summarized in section 4.3.4. A total of 26 sites along the U.S. 301 corridor with a potential for having an impact on the project were identified and evaluated. Eleven of these sites were rated as Low or No risk, with no further environmental assessment recommended. The remaining fifteen sites were rated as Medium or High risk, with a Level II soil and groundwater investigation recommended for these sites.

The 30 Alternate pond sites were also investigated for hazardous material contamination. A Level

I assessment was completed, and the results of this report were used in the selection of the preferred pond site locations. All of the preferred pond sites had a Low or No risk rating, with no further environmental assessment recommended.

9.14.10 Noise Impacts

A Noise Study Report was completed for this project in May 1998, which evaluates noise level increases and presents possible noise abatement considerations for the proposed improvements. The results of this report are summarized below.

Noise isopleths for the preferred Build Alternative indicate that the 65 decibel (dBA) isopleth extends between 40.8 m (134 ft) and 58.2 m (191 ft) along U.S. 301 between I-4 and Fowler Avenue. Based on this data, a total of 40 noise sensitive receivers were identified within the 65 dBA isopleth warranting abatement consideration.

One noise barrier was found to be feasible and economically reasonable for the Lynch Trailer Park at the south end of the project. The noise barrier was modeled at the ROW line and a length of 63.1 m (207 ft) and 3.0 m (10 ft) high is predicted to provide a 5 dBA insertion loss for four mobile homes. The estimated total cost of the barrier is $41,400 or $10,350 per benefitted receiver. Since most of the other residential areas have direct driveway access onto U.S. 301 the ability to model continuous noise barriers was limited.

The owners of the Lynch Trailer Park, Mr. and Mrs. Joel Lynch were sent a certified letter on May 12, 1998, and again on June 26, 1998, informing them of the noise impacts and the proposed noise barrier along their property. In the second letter they were asked to contact the Department by July 10, 1998, about their future plans for the property and interest in a noise barrier. As of August 5, 1998 no response has been received. The Department will contact the owner of the trailer park again during design prior to the Phase I plans submittal to confirm that a noise abatement wall is not desired.

9.14.11 Air Quality Impacts

An air quality impact analysis was conducted in accordance with the Clean Air Act Amendments

(CAAA) of 1990 to determine the effects of the proposed improvements on U.S. 301. The objective of the analysis is to determine whether project-related motor vehicle emissions will cause or contribute to an exceedance of the National Ambient Air Quality Standards (NAAQS) for carbon monoxide (CO), the most prevalent air pollutant emission from motor vehicles.

The air quality analysis for U.S. 301 was accomplished by performing the computerized FDOT "Screening Test", COSCREEN. Built into this program are various worst-case assumptions about meteorological, traffic, and site conditions. COSCREEN uses these assumptions in the FHWA-approved MOBILE5A and CALINE3 models to determine a "critical distance". This critical distance represents the closest distance a receptor can be to an intersection roadway link without risk of significant air quality impact.

A receptor site is a place where people can reasonably be expected to spend a significant amount of time, such as the back yard of a residence. Sites which are especially sensitive to air pollution (such as hospitals, nursing homes, schools, or day care centers) should also be considered. A project passes COSCREEN if all reasonable receptors are further from the intersection's roadway links than the critical distance.

The intersection of U.S. 301 and Sligh Avenue was selected for analysis because it represented the worst-case intersection. It has the highest traffic volume of all the study corridor intersections and has reasonable receptor sites near roadway delay links within 152 m (500 ft) of the intersection.

No sensitive receptors are within the critical distance, which was calculated by the screening test to be less than 3 m (10 ft). Therefore, this project will not have a significant impact on air quality.

9.15 UTILITY IMPACTS

As previously discussed in section 4.1.12 and summarized in Table 4-10 of this report, a number of utility distribution lines are located in the existing ROW of U.S. 301. Construction of this project may require relocation of some utilities. The estimated cost of relocating each utility should this be necessary, is shown in Table 4-11.

Street lighting is proposed as part of this project (See Section 9.12). The Hillsborough County Aviation Authority should be contacted to coordinate possible conflicts of the street lighting with flight paths to Vandenberg Airport.

The West Regional Water Supply Authority should also be contacted to check on the status of the planned pipeline along the Tampa Bay Bypass Canal which will cross under U.S. 301.

9.16 TRAFFIC CONTROL PLAN

U.S. 301 is a major arterial that provides a primary route for residents in northeast Hillsborough County to connect with I-4. U.S. 301 also provides access to numerous commercial businesses as well as office parks, and other community facilities, such as the Temple Terrace Youth Park. Due to its importance, U.S. 301 should remain functional throughout the duration of the construction activities. The existing number of travel lanes should be maintained to the maximum extent possible.

The existing two lanes were constructed at an offset from the center of the existing 61 m (200') ROW to allow for widening to four lanes, making maintenance of traffic a relatively simple process.

The following construction sequence will help maintain traffic operations along U.S. 301:

1. Relocate existing utilities within the ROW.
2. Construct ponds and stormwater system.
3. Construct new southbound roadway, including the two new bridges across the Tampa Bypass Canal and Harney Canal.
4. Divert traffic to the newly constructed lanes and reconstruct the existing road for the northbound lanes.

The construction of the new bridge at the Harney Canal may require cranes or other equipment which could affect the flight paths for Vandenberg Airport nearby. The Hillsborough County Aviation Authority should be contacted during the final design of this project as Traffic Control

plans are developed. Contact Ed Cooley or Susan Lane at (813) 870-8775.

9.17 RESULTS OF PUBLIC INVOLVEMENT PROGRAM

A comprehensive Public Involvement Program was developed and implemented as part of this study. The purpose of this program was to inform and solicit responses from all interested parties including local residents, public officials and agencies, and business owners. The program includes a Kickoff meeting, an Advance Notification Package, a Public Alternatives Workshop, and a Public Hearing. The Public Involvement Program and the results of its implementation are documented in the Comments and Coordination Report. A brief summary of the major steps in this process is presented in this section.

9.17.1 Kick-off Meeting

On May 22, 1996, local public officials and local government staff were invited to attend the project kick-off meeting. The purpose of this meeting was to introduce the project and to obtain comments regarding issues and concerns.

Four people attended the meeting, representing Hillsborough County (Engineering Department, the Sheriff's Office and Maintenance Department), and the SWFWMD. A list of the comments expressed at the meeting is provided in Appendix C.

9.17.2 Advance Notification

In accordance with the PD&E guidelines, an Advance Notification (AN) package was mailed to the Department of Community Affairs (DCA) on April 29, 1996. Responses from the agencies were collected by the DCA and sent to the Department on June 28, 1996.

9.17.3 Public Alternatives Workshop

A Public Alternatives Workshop was held by FDOT on September 29, 1997 from 5:30 to 8:30 p.m. at the FDOT District Seven Office, 11201 N. McKinley Drive, Tampa, Florida. The meeting was an informal workshop and consisted of a video, display of the feasible alternatives on aerial photos, and presentation of reports and other materials completed up to that date on the subject project.

FDOT and study team staff were available to explain the presented information and answer questions.

Forty people registered as attending the workshop. Comments were solicited from the public on a form which was attached to an informational handout distributed at the meeting. Written comments were received from 10 people. A summary of the comments is provided below.

There were a total of 10 written comments received, which are summarized below.

Four (4) comments stated a preference for Alternative "D", the suburban section. The reasons given for this choice were that it had the lowest cost, and the location of the through lanes placed traffic furthest from the ROW line, which should result in less traffic noise.

The Hillsborough County Metropolitan Planning Organization (MPO) sent a letter stating their preference for Alternative "C", the urban section with enclosed drainage and sidewalks. One reason for their recommendation is the *Sensitive to Area Residents (STAR)* designation for this facility, which in this case means that bicycle and pedestrian facilities should be provided. Although all of the alternatives accommodated bicyclists (with paved shoulders or a bicycle lane) the urban typical section (Alternative "C") was the only one that showed a sidewalk to be constructed. (The suburban section, Alternative "D" has since been revised to include a sidewalk near the ROW line.) The other reason for the MPO's preference for an urban section is that the project falls within the County's urban boundary and within the City of Tampa's and Hillsborough County's Urban Service Areas.

There were no comments stating a preference for the rural sections, Alternatives A and B. No comments were received preferring the "No-Build" alternative or opposing the project.

A letter was received from a representative of the U.S. 301 Truck Stop property concerning median openings in front of the property. Median opening locations and type in this area have been determined by the Median Access Committee for the I-4 improvement project, which will widen U.S. 301 in this area to four lanes. A copy of the letter was forwarded to the Project Manager of the

I-4 project. The median openings in front of the Truck Stop will be constructed as part of the I-4 project.

A phone call was received from Ms. Lane with the Hillsborough County Aviation Authority (HCAA) concerning the possible effects of the project on Vandenberg Airport. The HCAA should be contacted when the design phase of this project begins to allow them to review the design for any effects to the airport, such as lighting (if added to the project) or cranes used in the construction of the proposed bridge over the Harney Canal. This is mentioned in the commitments section of this report.

Other comments received concerned the Location of Pond Sites, recommending some alternate sites other than those shown during the Public Workshop as preferred locations. These comments have been reviewed and the alternative sites investigated by the drainage designer. The revised locations will be shown in a Final Pond Site Report and at the Public Hearing.

9.17.4 Public Hearing

The Public Hearing was held on Thursday, June, 30, 1998, at the District Seven Headquarters, 11201 N. McKinley Drive, Tampa, Florida, from 5:30 to 8:30 p.m. The following techniques were used to notify the public about the meeting: letters to property owners within 91.4 km (300 ft) of the centerline of the Preferred "Build" Alternative; letters to elected and appointed officials; two quarter-page legal display advertisements in the Tampa Tribune (June 9, 1998 and June 25, 1998); one advertisement in the Florida Administrative Weekly (May 29, 1998); and one Press Release (June 29, 1998).

From 5:30 p.m. to 7:30 p.m., a project video was continuously looped every 15 minutes for viewing in the Executive Conference Room. Graphic displays of project information including the Preferred "Build" Alternative conceptual plans and the Evaluation Matrix, as well as Right-of-Way and Access Management information were set up for viewing in the Auditorium. Department staff answered questions and received comments. At 7:00 p.m., the Department made a formal presentation regarding the project and its associated impacts. Time for public testimony followed the

presentation. After the formal session, the informal session continued until 8:30 p.m. A court reporter was available to receive comments during the formal and informal portions of the Hearing.

Close to 50 people attended the Hearing. Three people made comments during the formal public testimony period and one person made a statement to the court reporter before the presentation. Seven written comments were submitted at the Public Hearing and throughout the ten day comment period ending on July 10, 1998.

In general, comments regarding the proposed improvement to U.S. 301 related to:

- Access and median openings, particularly around the southern section of the project (I-4);
- Drainage/stormwater ponds;
- Request for additional signalized intersections; and
- Requests for additional information

One of the written comments received was from a member of the Hillsborough County Metropolitan Planning Organization (MPO). That member endorsed an urban typical section, Alternative C, from the Workshop, as their preferred alternative. The basis for this request was that an urban typical section with curb and gutter on both the inside and the outside shoulders necessitates a lower design speed. However, this alternative had already been evaluated and eliminated during the Alternative Analysis stage following the Public Workshop. Please see the "Alternatives Analysis" section of this report for a detailed explanation. All remaining comments from the Public Hearing, and the corresponding FDOT responses are summarized in the Comments and Coordination Report.

9.18 VALUE ENGINEERING

A Value Engineering (V.E.) Study (#97-07-02) for this project was completed on February 6, 1998.

The V.E. Study began in October 1997 after the Public Workshop. The V.E. team looked at ways to add value to the preferred alternative "D", the suburban section. The team focused on improving traffic operations and design of the stormwater and floodplain compensation ponds.

The recommendations made by the V.E. team are listed below, along with responses by the Project Engineer and any actions taken.

Recommendation: Add right turn lane on northbound U.S. 301 to eastbound Fowler Avenue.
Response: A right turn lane has been added at this location. A right turn lane was also added at the Temple Terrace Youth Sports Complex, the SWFWMD entrance, and at Jefferson Road. No ROW will be needed to construct these right turn lanes.

Recommendation: Combine Ponds #8 and #14.
Response: Pond Site #14 was not selected as a preferred pond site or a floodplain compensation site. The V.E. team must have been referring to Pond Site #15, which was selected as a preferred pond site, not as floodplain compensation. The Pond Siting Report has recently been revised. There is only one floodplain site for the project , which has been relocated to avoid impacting SWFWMD 4(f) property. Pond Site 10 (FPC-10) is now the preferred floodplain compensation site.

Recommendation: Relocate Pond #23 to east side of U.S. 301.
Response: Pond #23 was selected as the preferred site in Basin 5 because it is much less expensive than the two alternative sites on the east side of U.S. 301, Ponds 21 and 22. The V.E. team questioned the hydraulic feasibility of Pond #23, as SWFWMD maps indicate the existing ground is too high. Pond site 23 will be reevaluated before the Final Pond Siting Report is completed to make sure it is hydraulically feasible. A Geotech study will be done for this project to verify that the preferred pond sites are feasible.

Recommendation: Install traffic signal at U.S. 301 and Maislin Boulevard.
Response: A signal warrant was done at this intersection in March 1997, which did not recommend signalization at this time. However, the V.E. team noted that there are a number of vacant parcels in this commercial trucking/warehouse area which may be developed before this project is constructed. The V.E. team recommends that another signal warrant study be done prior to beginning the final design phase of this project, and that the long range estimate be revised to allow for funding to design and construct this signal if needed.

The cost of designing and construction of a signal at this intersection will be added to the LRE for the preferred alternative. It will be noted in the Commitments and Recommendations section of the Preliminary Engineering Report that the need for a signal at this intersection will be evaluated during the scope development process for final design.

9.19 DRAINAGE

A Location Hydraulic Report (LHR) and Pond Siting Report were prepared to determine the drainage requirements for this project.

The LHR findings were summarized in Section 4.1.7. It was determined that 10 of the 12 existing crossdrains cannot handle the runoff of the proposed four lane section and will have to be replaced with larger crossdrains. A summary of the proposed crossdrain sizes is given in Table 4-4.

The Pond Siting Report addresses the stormwater management facilities (SMF) required for this project and includes a pond site alternative analysis. The study provided pond locations that are both hydraulically functional and environmentally permittable based on the best available information. See Figure 9-1 for locations of Pond Sites. Pond site locations were analyzed and evaluated for cultural resources such as historic structures and archaeological sites; environmental impacts including wetlands, upland habitat, and protected species involvement; petroleum and hazardous materials contamination; economic factors including construction cost and acquisition of ROW; and hydrology [soil types and seasonal high water table (SHWT) and hydraulics].

9.19.1 Design Information Sources

The following sources were used to locate and size the alternative pond sites and floodplain compensation sites:

- FDOT Drainage Manual, 1997
- SWFWMD Environmental Resource Permitting Manual, October 1995
- SWFWMD Aerials, September 1976
- USDA SCS Soil Survey of Hillsborough County Florida, May 1989
- USGS Quadrangle Map, 1987 Photo Revised
- Field Review May 7, 1997

- Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map (FIRM), April 17, 1984
- FDOT U.S. 301 Plan Set, April 1992
- Regulation Manual for Lower Hillsborough Flood Detection Area and Tampa Bypass Canal, 1983

9.19.2 Design Assumptions

All assumptions made were based on the best available information. The general assumptions are listed below:

Seasonal High Water Determination

The assumptions for the Seasonal High Water Table (SHWT) determinations are critical for the pond designs. For each site, an average ground elevation was determined from the SWFWMD aerials. Then, from the USDA, SCS Soil Survey of Hillsborough County, the appropriate SHWT range for the existing soils was used to estimate the elevation of the SHWT for each pond site. Soil borings were taken at each preferred pond site location to verify that the selected pond sites are feasible. See the Geotechnical Report, June 1998, for further discussion.

Treatment Method

The method of stormwater treatment for this project will be wet detention. The wet detention method involves storing the stormwater in a wet pond above the SHWT. Water quality treatment will be provided for the first 2.54 cm (1 in) of rainfall over the directly connected impervious area.

Pond and Floodplain Compensation Site Configuration

The preferred pond and floodplain compensation sites will include a 6.1 m (20 ft) perimeter strip for maintenance activities, a minimum of 1:4 side slopes, and a minimum of 0.30 m (1 ft) of freeboard. The inside berm radius of the pond should be 15:24 m (50 ft) with a minimum radius of 10.67 m (35 ft).

Pond Volume

Pond volumes were estimated by calculating the required treatment volume and adding the storage volume required for attenuation. However, if the preferred pond sites discharge into the TBC, attenuation will not be required. Pond sizes were estimated by multiplying the length of roadway by the ROW width by 15%.

9.19.3 Methodology

A review of the 1976 SWFWMD aerial photos was completed to determine potential pond site and floodplain compensation site locations. These sites were also evaluated by field review. On May 7, 1997, a field review was conducted and thirty potential pond sites were identified, shown on Figure 9-1. For each site, the SHWT was estimated by subtracting the average depth to the SHWT (SCS Soil Survey) from the average existing ground elevation. However, since this report addresses preliminary locations without survey information, the depth to SHWT was limited to 0.9 m (3 ft). Pond sizes were based on the volume required to treat the first 2.54 cm (1 in) of runoff from the directly connected impervious areas. To conservatively size the ponds before a pre-application meeting, the directly connected impervious areas included all four travel lanes and the area of the ponds. According to the SWFWMD Environmental Resource Permit Manual, if the stormwater runoff from the new pavement can be separated from the stormwater run-off from the old pavement, it will not require treatment. During the design phase of this project, treatment of the additional pavement only should be evaluated. Floodplain compensation areas were sized to provide the volume of 100-year floodplain lost by the construction of the roadway. For alternate pond site and floodplain compensation site locations see Figure 9-1.

9.19.4 Site Selection

After the thirty sites were identified, additional analysis of the sites was performed. The analysis considered hydraulics, wetland impacts, floodplain encroachments, hazardous materials impacts, protected species involvement, cultural resource evaluation and ROW acquisition costs. Ranking of sites was based on a total weighting of 100% with each factor weighted equally. Preferred pond sites and floodplain compensation sites were selected by analyzing the information collected and utilizing SWFWMD contour aerials in lieu of a detailed survey. It should be noted, that although

floodplain compensation is proposed, the TBC's influence on flood waters may eliminate the need for floodplain compensation. This should be discussed with SWFWMD at the pre-application meeting for the design phase. The preferred sites were as follows:

Preferred Pond Site	Location	Area
Pond Site 3	Station 114+00	0.88 hectares (ha)[2.18 acres (ac)]
Pond Site 7	Station 118+40	0.34 ha (0.85 ac)
Pond Site 11	Station 130+60	1.24 ha (3.07 ac)
Pond Site 15	Station 135+40	1.36 ha (3.37 ac)
Pond Site 23	Station 150+50	0.56 ha (1.38 ac)
Pond Site 25	Station 162+20	0.92 ha (2.27 ac)
Pond Site 27	Station 163+50	0.92 ha (2.27 ac)
Pond Site 29	Station 171+60	0.54 ha (1.33 ac)
Pond Site 10 (FPC-10)	Station 126+60	0.34 ha (0.85 ac)

The sites were assessed by a comparative analysis, in which the roadway was divided into eight different basins as shown in Figure 9-1 and pond sites within each basin were evaluated against each other. Basin delineation for floodplain compensation included the entire study area, due to the presence of the TBC and its influence on flood waters. Floodplain compensation sites (FPC-X) were also evaluated against each other. For details of the analysis, see the Pond Siting Report, revised in June 1998.

Several pond sites are situated near the TBC. This property is publicly owned and is managed by SWFWMD. The primary use of this property is for flood control, however, limited secondary recreational use is allowed. Fishing and hiking are permitted although dams prevent access to this area of the canal by boat and there are no paved boat ramps in the area. Portions of this SWFWMD property can be developed into a higher use park (such as the Temple Terrace Youth Park) by local governments. Given that this property is publicly owned and provides recreational use, it has been determined that Section 4(f) of the Department of Transportation Act applies. Therefore, the Department will attempt to avoid or minimize use of all SWFWMD property. Accordingly, the

preferred pond sites are those not situated within SWFWMD property. However, even non-SWFWMD owned pond sites would require drainage facilities and easements through SWFWMD property. Therefore, during the design phase of the project, the Department will have to comply with the requirements of Section 4(f) and coordinate the approval of a Section 4(f) Evaluation with the FHWA prior to using any SWFWMD properties for drainage purposes.

9.20 BRIDGE ANALYSIS

As discussed in Section 4.2 of this report, there are four existing bridge structures within the project limits. There are two bridges on I-75 (one northbound, one southbound) which cross over U.S. 301. The other two bridges are on U.S. 301, crossing the Harney Canal and Tampa Bypass Canal.

9.20.1 I-75 Bridges

The widening of U.S. 301 is not expected to affect the I-75 Bridges. As mentioned in Section 4.2, these bridges were constructed with an extra span to the west of the existing lanes on U.S. 301 so that U.S. 301 could be widened to four lanes without reconstructing these overpasses. A six lane section would also fit under the I-75 spans when it is needed.

9.20.2 Canal Crossing Bridges

The existing bridges over the Harney Canal and the Tampa Bypass Canal were constructed 20 years ago and have approximately 30 years remaining of useful life. These bridges are structurally sound and meet the minimum standards set by the FHWA for bridge width. (See section 4.2 for details on the existing condition of the bridges). This report recommends that the existing bridges be used for the northbound lanes of the proposed four lane roadway. However, it would be necessary to widen the existing bridges approximately 0.9 m (3 ft) to accommodate the proposed typical section which includes a pedestrian walkway. See Figure 8-5. A preliminary investigation determined that no additional pilings will be required for the 0.9 m widening. The construction cost of the widening is estimated to be $50,000 for the Harney Canal bridge and $130,000 for the Tampa Bypass Canal bridge.

To accommodate the southbound traffic, two new bridges are to be constructed to the west of the

existing bridges. A Bridge Design Report was not prepared for this study, since the design phase of this project is not in the Department's current Five Year Work Program. It is expected that the new bridges will be approximately the same length as the existing bridges. A cost estimate for the new bridges was prepared using the Department's LRE system. The Harney Canal bridge cost is estimated to be $366,000 with a length of 60 m (197 ft). The Tampa Bypass Canal bridge cost is estimated to be $940,000 with a length of 154 m (505 ft).

The proposed typical bridge section is shown in Figure 8-5.

9.21 SPECIAL FEATURES

It is recommended that additional pavement be added at intersections and median openings to allow for large trucks to make U-turns. There are numerous commercial distributing and industrial businesses in the area which generate considerable truck traffic. The large WB-15 trucks would have difficulty making U-turns when the four lane divided section is constructed. An additional 12 feet of pavement is proposed where U-turns are allowed. See the plan sheets in Appendix D for locations of the additional pavement.

9.22 ACCESS MANAGEMENT

This section of U.S. 301 is classified as an access Class 3 facility. An access Class 3 roadway is a controlled access facility that provides limited access to adjacent land in order to minimize the effect on through traffic flow. The FDOT access management criteria is documented in a report entitled

Rules of the Department of Transportation Chapter 14-97, State Highway System Access Management Classification System and Standards[1] *(Rule 14-97).*

An access class 3 roadway facility with a posted speed of greater than 45 mph for this roadway (M.P. 1.484 to Fowler Avenue) requires a minimum spacing of 200 m (660 ft.) between connections. There are numerous driveways, paved and unpaved, on both sides of the road. The spacing between driveways is sometimes less than required.

[1] Florida Department of Transportation System Planning Office. *Rules of the Department of Transportation Chapter 14-97, State Highway Access Management Classification System and Standards, December 1990.*

There is one driveway in an intersection return at the Sunset Gardens Memorial Cemetery on the northeast corner of Jefferson Road. The accident reports for the years 1992-1996 were checked, and there were five crashes at this intersection during the five year period. In two of the five crashes, the driveway may have been a contributing factor. None of the crashes resulted in a fatality. The cemetery has a unique semi-circular driveway entrance which connects to the center of the site by a divided roadway. To relocate their driveway would require the cemetery to rearrange the layout of the plots and their entrance with formal landscaping. Therefore, no modification of this driveway is proposed.

9.22.1 Median Openings

Since U.S. 301 is an access Class 3 roadway facility, improvement of this facility to four lanes would include the construction of a restrictive median. A restrictive median is a type of barrier that separates the traffic traveling in opposite directions (e.g., concrete barrier, grassed median, etc.).

The minimum spacing requirements for median openings is given in Rule 14-97. A full median opening allows all turning movements from both the state highway and the adjacent connection. For a Class 3 roadway, the minimum spacing between full median openings is 800 m (½ mile). These full median openings will be placed at major intersections and connections to businesses or side streets with a high volume of turning movements. A partial/Directional Median opening allows only U-turn and left turn movements.

The FDOT minimum spacing between partial/directional openings is 400 m (1/4 mile). There are many connections to businesses, commercial centers and minor side streets. Because of spacing requirements, it is not possible to allow full access at each of these locations. Directional median openings will be placed between the full median openings at locations that will minimize the number of U-turns required in the area.

A number of property owners expressed their concerns at the Public Workshop about the proposed locations of median openings.

Elmer Singletary, representing the U.S. 301 Truck Stop, requested two full median openings at the Truck Stop to allow separation of the semi-trucks from passenger cars and small trucks. It was explained to him that the median opening locations in this area (near I-4) have already been reviewed and that the median will be constructed as part of the I-4 project (FP No. 258459 1) currently under construction. See section 9.17.3 for further discussion.

Some residents in the area near Rockhill Road, north of Fowler Avenue expressed their concern about the difficulty in traveling in their neighborhood (particularly to the church) when a median is constructed. The current design will require some drivers to turn right and make a U-turn on U.S. 301 to travel in their neighborhood. There are three existing connections to Rockhill Road and U.S. 301 in this area. Traffic counts were taken at the three connections between Rockhill Road and U.S. 301 to determine a possible location for a median opening and the number of vehicles that would be affected. Based on the results of the traffic study, a median opening with a left turn lane will be provided at Bradley Road. See plan sheets 11 & 12 in Appendix D for an illustration of the median opening.

Margaret Carr, representing the management of the Shopping Center at the corner of U.S. 301 and Fowler Avenue objected to the lack of median openings on U.S. 301 for the Shopping Center. Currently there are two driveways on the west side of U.S. 301. It was explained that the minimum access standards do not allow an opening between Williams Road and Fowler Avenue, and that northbound vehicles on U.S. 301 can still access the Shopping Center by turning onto Williams Road or Fowler Avenue. Traffic counts at the existing driveways will be taken to determine the number of vehicles turning left in and out of these driveways.

On March 6, 1997 a meeting of the FDOT District Seven Median Review Committee was held to discuss the location of median openings for this project. In attendance were the committee members and the PD&E Project Engineer. A summary of the recommended locations of median openings is provided in Table 9-1.

TABLE 9-1

Summary of Median Openings

Connection	Median Type	Median Spacing (M)	Meets Criteria	Remarks
Breckenridge Parkway	F			Major Traffic Generator
		420	No	Meets Directional
U.S. 301 Truck Stop/Motel 6	F			Need Full to Accommodate Truck Movements To Truckstop
		560	No	Meets Directional
Sligh Ave.	F			
		560	No	
SWFWMD/ Valletta Drive	F			
		760	Yes	
Maislin	D			(T-Intersection)
		660	Yes	
Harney Baptist Church/ North-South Machinery	D			
		560	Yes	
Harney Road	F			
		700	Yes	
Raulerson Ranch Road	D			(T-Intersection)
		350	No	

TABLE 9-1
(Continued)
Summary of Median Openings

Connection	Median Type	Median Spacing (M)	Meets Criteria	Remarks
Temple Terrace Sports Complex	D			(T-Intersection)
		560	Yes	
Jefferson Road	F			
		500	No	
Walker Road	F			
		520	No	
Williams Road	F			
		450	Yes	
Fowler Avenue	D			
		500	Yes	
Fowler Avenue East	D			(Possible Relocation)
		400	Yes	
Bradley Road	D			(T-Intersection)

LEGEND: Median Types F = Full
D = Directional

The median openings which do not meet the minimum spacing criteria of Rule 14-97 are discussed below. It is noted, however that the average median opening spacing opening is 500 meters, less than the 400 meter minimum. At the beginning of the project, there are two major traffic generators for which full median openings are proposed. The Breckenridge Office Complex has sufficient traffic to justify a full median opening. A full median opening is also proposed 420 meters away at the U.S. 301 Truck Stop. The Truck Stop generates a large amount of truck traffic which could cause safety and operational problems from trucks making U-turns if a full median opening is not

provided. This section of U.S. 301 is to be widened to four lanes as part of the I-4 project, WPI Seg. No. 258459 1, which is reconstructing the U.S. 301 overpass at I-4.

Another location where the minimum spacing criteria is not met is between Raulerson Ranch Road and the Temple Terrace Sports Complex. The directional openings are 350 meters apart, however the minimum opening is 400 meters. Raulerson Ranch Road provides the only access to residences between I-75 and U.S. 301. The Temple Terrace Sports Complex is a public recreational facility which has a significant number of vehicles entering and leaving for sports events. The median opening spacing is justified for these reasons.

At the north end of the project there are three intersections with full median openings proposed, with spacing less than the 800 meters minimum. Each of these three intersections, Jefferson Road, Walker Road, and Williams Road are collector roads with through traffic used by local residents. To avoid the additional traffic and U-turns on U.S. 301, these sidestreets were provided with full median openings.

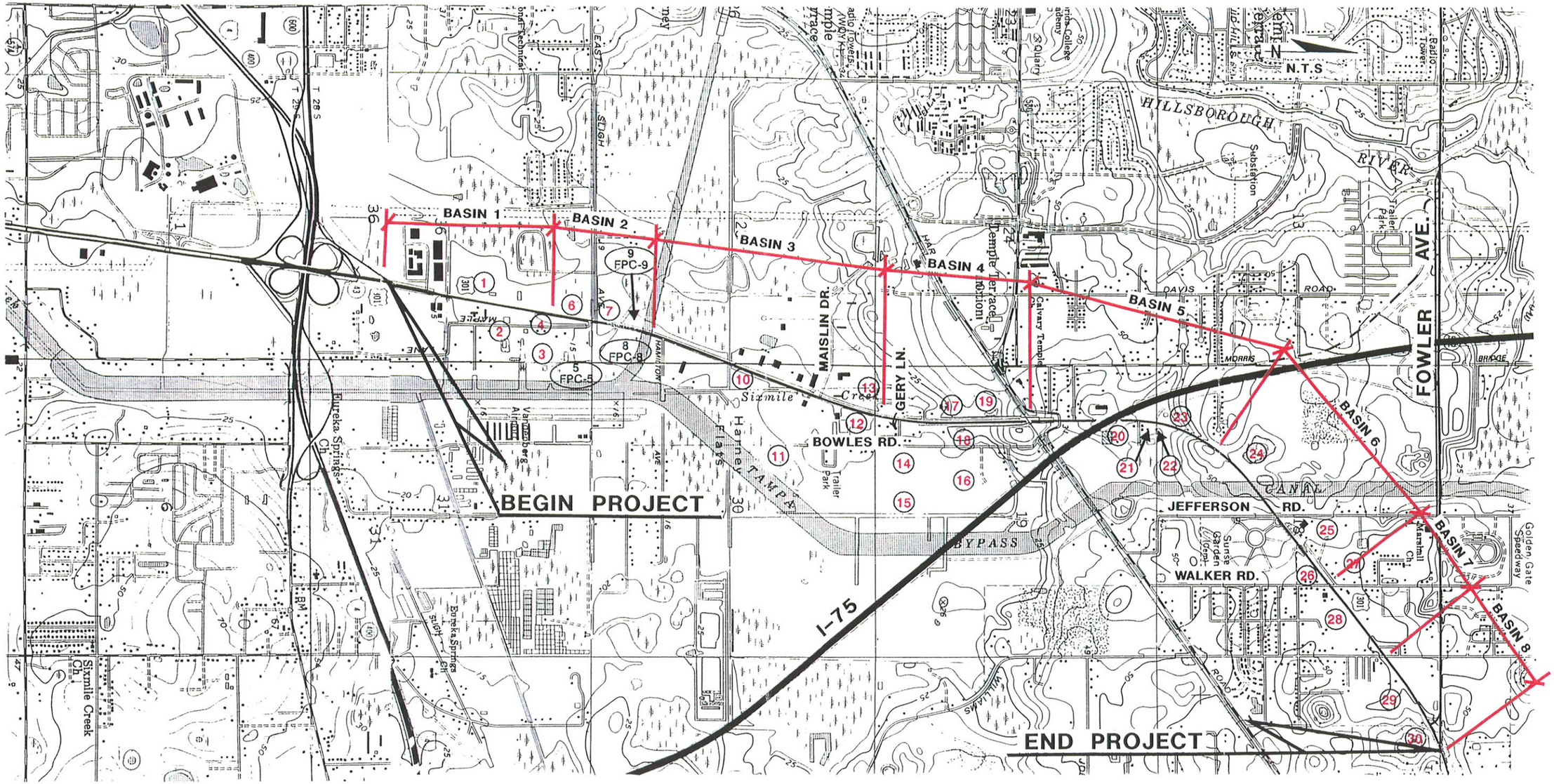
9.23 AESTHETICS AND LANDSCAPING

There is no special landscaping planned for this project at this time. Landscaping may be added, with a construction cost of up to one percent of the total construction cost of the project, if Hillsborough County will agree to maintain the landscaping after it is constructed.

The aesthetics of the two proposed bridges will be considered during the design phase of this project. Since the existing bridges are to remain, the new bridges should match closely the appearance of the existing ones.

APPENDIX A

Straight Line Diagrams and Street Maps



LEGEND

(1) Alternative Pond Site

(1 / FPC-1) Alternative Floodplain Compensation Site

FLORIDA DEPARTMENT OF TRANSPORTATION

U.S. 301

I-4 to Fowler Ave.

Hillsborough County, Florida

ALTERNATIVE POND AND FLOODPLAIN COMPENSATION SITES

SPN# 10260 - 1509
WPI# 7113598
FAP# XU - 311 - 1 (33)

FIGURE 9-1

:\COREL_301-I4-F\REPORTS_PER\FIG_9-1\6-12-98

THONOTOSASSA

TEMPLE TERRACE

MANGO

TAMPA BYPASS CANAL

MORRIS BRIDGE

FOWLER AVE E

HARNEY RD

DALE MABRY HWY

US HWY 301 N

BRANDON

LAKEWOOD ESTATES

KEEBLER

SUNSET GARDENS CEMETERY

FRANKLIN GREEN FOLSOM E.S.

THOUSAND OAKS

CITRUS KNOLL MHP

MATURES CLASSROOM CENTER

TPOUT CREEK PARK

LANGERS MHP

VANDENBERG AIRPORT

HOLIDAY HEIGHTS

THE WOODLANDS

BRECKENRIDGE INDUSTRIAL PARK

SEMINOLE RESERVATION

FLORIDA FAIRGROUNDS

FLORIDA EXPO PARK

INTERSTATE BUSINESS PARK

HILLSBOROUGH COMMUNITY COLLEGE

TAMPA PALMS

TAMPA PALMS GOLF AND COUNTRY CLUB

PANTREE OAKS

RIVERFRONT PARK

LETTUCE LAKE PARK

HIDDEN RIVER CORPORATE CENTER

UNIV. OF SOUTH FLORIDA

OLD TEMPLE TERRACE CEMETERY

ROLLING TERRACE

FLORIDA ACADEMY

TEMPLE CREST

RIVER RUN

RIVERDALE

LAUREL OAK VILLAGE

TEMPLE OAKS

TEMPLE TERRACE HWY

TEMPLE TERRACE CITY HALL

TEMPLE TERRACE POLICE DEPT

TEMPLE TERRACE PUBLIC LIBRARY

TEMPLE TERRACE E.S.

TEMPLE TERRACE M.S.

TEMPLE TERRACE SENIOR H.S.

RIVERVIEW BEND APTS

RIVER LANDING

EASTWOOD VILLAGE CENTER

TAMPA VOCATIONAL H.S.

MARY HELP OF CHRISTIANS SCHOOL FOR BOYS

EASTLAKE LIBRARY

EASTLAKE SUBSTATION

EASTLAKE SQUARE MALL

FAIRGROUNDS OUTLET MALL

COMMERCE BUSINESS PARK

SUGARGREEN

ORIENT PARK

CENTRO ASTURIANO MEMORIAL PARK CEMETERY

SOUTH ST COMMERCE PARK

ORANGE HILL CEMETERY

FLORIDA TRANSPORTATION

HCPS OFF BROADWAY

HCPS OFF

EMS 410

FIRE STATION

POLICE

HOSPITAL

AIRPORT

CEMETERY

PARK

SCHOOL

LIBRARY

GOLF COURSE

OBSERVATORY

BALL FIELD

DOME

MUSEUM OF SCIENCE AND INDUSTRY

TAMPA BAY BLVD

FLETCHER AVE E

56TH ST N

50TH ST N

ORIENT RD

CLEWIS RD

DR MARTIN LUTHER KING JR BLVD

BROADWAY

TAMPA EAST BLVD

6 7 8 9 10 11 12 13

41 301 582 93 92 574 400 583 580 600 581 43

STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

FLORIDA DEPARTMENT OF TRANSPORTATION — DIVISION OF PLANNING AND PROGRAMMING

COUNTY ROUTE NO.	STATE ROAD NO.	COUNTY	SEC. NO.	SHT. NO.
301	41	HILLSBOROUGH	10260000	1 OF 1

8501-1964 | 3502-1975 | 3503-1977 | 8501-1964 | 8501-1964 | 3504-1978 | 8501-1964 | 10075-3417-1986 | 8501-1964 | 3505-1978 | 8501-1964

10190095 — 10190096 — 10190097

BRUCE DOWNS BLVD. — SLIGH AVE. — MAPLE LN. — TAMPA BY-PASS CANAL — BETTY LN. — MAISLIN DR. — GERRY LN. — CR 582 COPELAND DR. — HARNEY RD. — I-75 — ROGERSON RANCH RD. — TAMPA BY-PASS CANAL — JEFFERSON RD. — WALKER RD.

108'-48' 40' LNN MED 2-10' LWN SHLDS

52'-24' 12' PTD MED 2-8' LWN SHLDS

40'-24' 2-8' LWN SHLDS

78'-48' 10' PTD MED 2-10' LWN SHLDS

40'-24' 2-8' LWN SHLDS

56'-24' 12' PTD MED 10' LWN SHLD LT 4' PVD 6' LWN SHLD RT.

40'-24' 2-8' LWN SHLD

3" AC / 8" LR — 2½" AC — (2"AC)+3" AC / 8" LR — 4" AC / 10" LR — 5½" AC — 2½" AC / 8" LR — *(2"AC)+1½"AC+1"FC-1 / 8" LR — (2"AC)+1½"AC+1"FC-1 / 8" LR — *(2"AC)+1½"AC+1"FC-1 / 8" LR — (2½"AC)+5½"FC-2 / 8" LR — 4½" AC / 10" LR — 2½" AC / 8" LR

Δ·8°34'18" Rt | D·2° | PI·.535 | PC·.414 | PRC·.495 | PT·.576 | PT·.454 | Δ·8°34'18" Lt

Δ·12° Rt | PC·.147 | D·1° | PT·.374 | PI·.261

PC·1.962 | D·1° | PT·2.388 | PI·2.178 | Δ·22°31' Lt

N 01°02'41" W

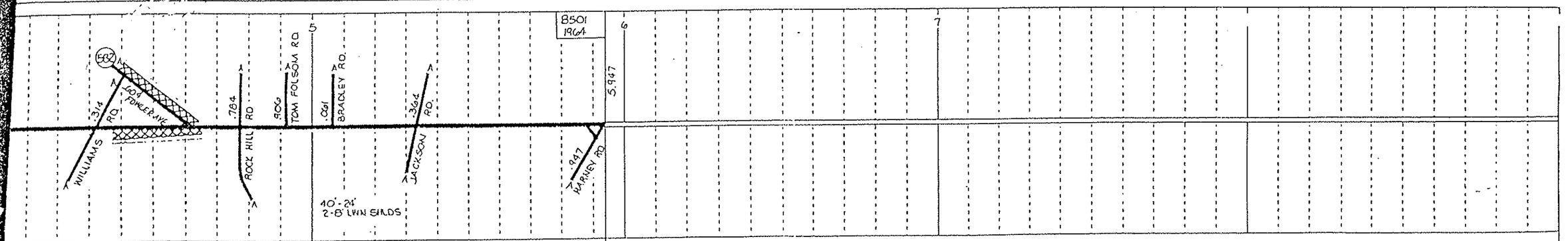
PI·3.284 | Δ·53°42' Rt | PC·3.009 | D·2° | PT·3.518

N 52°40'02" E

#78 — UNLM 34' — UNLM # 114 34' — .180 48'x130' CP — .260 18'x120' CP — .417 10'x6'x188' CB — .563 10'x7'x141' CB — .835 24'x81' CP — .075 42'x77' CP — .175 OBL-24'x48' CP — OD 24' — .253 / .290 — #337 — 196 — UNLM 40' 36¢ — .588 10'x6'x50' CB — .905 OBL-42'x89' CP — .344 OBL-24'x42' CP — .808 24'x96' CP — #477 1986 UP 24' — .913 / .928 — 79' — 36¢ — 74' — .966 / .989 — #478 1986 — 121' — 74' — .137 36'x54' CP — .141 OBL-42'x108' CP — OD 24' — .505 / .601 — 501 — UNLM 41' — #339

URBAN PRINCIPAL ARTERIAL

FEDERAL AID PRIMARY



2½" AC — 8" LR

Δ·28°51' Rt | PC·.388 | D·1° | PT·.934 | PI·.667

PC·.666 | D·3° | PT·.963 | PI·.824 | Δ·47°05' Lt

.689 24"x49" CP — .175 24"x61" CP — .398 24"x49" CP — .685 24"x64" CP — 5.947

URBAN PRINCIPAL ARTERIAL | RURAL PRINCIPAL ARTERIAL

FEDERAL AID PRIMARY

APPENDIX B

Communication Memorandums and Correspondence

1113598.5

TELEPHONE CONVERSATION RECORD

FDOT PROJECT MANAGEMENT

INCOMING: ____ OUTGOING: ✓ TIME: 9:20 AM DATE: 3-22-96

SUBJECT: US301 - "STAR" Information SPN: 10260-158

CONVERSATION WITH: Frank Valpakis WPI: 1113598

REPRESENTING: Hillsborough County MPO PHONE: 272-5940

I called Mr. Valpakis w/ MPO to find out more about their designating US301 from I-4 to Ballast Pkwy as "Sensitive to Area Residents".

The 2015 LongRange Plan listed this project as requiring Special treatments but did not specify what the concerns are - whether noise impacts to businesses and residents, environmental factors etc. or what treatments if any are recommended.

Mr Valpakis said that he would find me info. on the special concerns - should arrive next week. Week of April 1st

Scott F.

He called me back later the same day. Mr Valpakis checked on the 'STAR' designation. Someone who lives in the area was concerned about wildlife in the section north of the I 75 underpass. Since the project now ends before this area and we will investigate wildlife in PD&E (as always) there is no special action needed.

BY: Scott Farash ROUTE TO: File

c:\forms\phonerec

FLORIDA DEPARTMENT OF TRANSPORTATION

LAWTON CHILES
GOVERNOR

BEN G. WATTS
SECRETARY

11201 N. MCKINLEY DRIVE • TAMPA, FLORIDA 33612-6483 • (813) 975-6116 • 1-800-226-7220
PLANNING MS 7-340

DATE: January 7, 1997

TO: Mike Coleman

FROM: Daniel R. Lamb

COPIES: Donald J. Skelton

SUBJECT: U.S. 301 PD&E Study Corridor Limits

In response to your request, we have reviewed current and future projected traffic volumes on U.S. 301 between I-4 and Fowler Avenue to determine whether the project limits for the subject PD&E study should include the portion between Harney Road and Fowler Avenue. Based on our analysis, I recommend that the project limits for the PD&E study be confined to the segment from I-4 to Harney Road. That is, the portion from Harney Road to Fowler Avenue should not be included. The reasons for this are as follows:

(1) Projected 2015 AADT on the portion of the corridor from Harney Road to Fowler Avenue is 15,300. By 2020, the AADT projection is 17,000. Technically, this could be justification for the four laning of this roadway since Department Level of Service Standards call for maintaining a Level of Service "D" on this type of roadway, and the maximum Level of Service "D" service volume is 16,600. However, because the projected 2020 AADT is only slightly above the threshold, the need for widening is at best marginal.

This is especially critical in light of the fact that the Hillsborough County Long Range Transportation Plan (LRTP) must be maintained as cost affordable. That means that to add this project, another project must be eliminated to free up the funds to pay for it. Other State Highway projects included in the LRTP either have much higher projected future traffic volumes and much worse Level of Service conditions or have much higher priorities for reasons other than congestion relief.

(2) The Hillsborough County MPO has indicated in my discussions with them that they do not intend to amend their plan to include four laning U.S. 301 north of Harney Road, especially given that it would mean dropping another project in the adopted plan to fund this project.

(3) Projected 2015 AADT on U.S. 301 south of Harney is 24,300. By 2020, projected AADT reaches 28,000. This is significantly higher than the portion of the roadway north of Harney and indicates that traffic movements and characteristics are significantly

different between the two segments of roadway. In fact, a major movement on the corridor appears to be between U.S. 301 south of Harney and Temple Terrace Highway / Bullard Parkway / Busch Boulevard. This would indicate that Harney would make a logical northern limit for the PD&E study.

Given the above facts, we recommend that the limits of the U.S. 301 PD&E study extend only from I-4 to Harney Road, and not include the portion of the roadway from Harney Road to Fowler Avenue.

If you have any questions, please contact me or Fawzi Bitar.

FLORIDA
LAWTON CHILES
GOVERNOR

DEPARTMENT OF TRANSPORTATION
11201 N. McKINLEY DRIVE - TAMPA, FL 33612-6403 -1-800-226-7220
PD&E DEPARTMENT MS 7-500

BEN G. WATTS
SECRETARY

January 13, 1997

Mr. J.R. Skinner
Division Administrator
Federal Highway Administration
227 N. Bronough Street, Room 2015
Tallahassee, FL 32301-2015

Attention: Mr. Greg Jones, Transportation Engineer

RE: WPI No. 7113598/FAP No. XU-311-1(33)/SPN 10260-1509
US 301 Logical Termini

Dear Mr. Skinner:

During your (Mr. Jones) last visit to District Seven we did a field review of US 301 and discussed whether the northern terminus of the project should be at Harney Road or Fowler Avenue. Our PD&E study limits were initially set at I-4 and Fowler Avenue, although the Hillsborough County MOP's 2015 Long Range Transportation Plan (LRTP) limits were from I-4 to Harney Road. Your Design Inspection Report dated December 12, 1996 summarizing the findings of our field trip on December 14, 1996 stated that the current 2015 LRTP should be amended to extend the project to Fowler Road.

The District Seven Planning Department has reviewed the traffic volumes and discussed the issue with the Hillsborough County MPO. Their recommendation is that the PD&E study end at Harney Road, primarily because of the substantial drop in traffic at Harney Road from 28,000 to 17,000 in the design year. Additionally, the MPO is reluctant to extend the limits north from Harney Road to Fowler Avenue because the funding implications are that a different project would have to be removed from the LRTP. A copy of the letter from Planning detailing the reasons for their conclusion is attached.

We ask that the FHWA reconsider Harney Road as the logical terminus based on the reasons in the attached letter.
Perhaps we can discuss this during your next visit to the District at the end of this month.

Sincerely,

Scott Farash

Scott Farash, P.E.
Project Manager

SF/ck
Attachment
cc: M. Coleman
:7113598.20

→ File

7113598.5

U.S. Department of Transportation
Federal Highway Administration

RECEIVED
DISTRICT SECRETARY
DISTRICT SEVEN
97 FEB 27 AM 11:31

Florida Division Office

227 N. Bronough St.
Room 2015
Tallahassee, Florida 32301

February 20, 1997

IN REPLY REFER TO HPO-FL

Mr. William H. McDaniel, Jr.
District Secretary
Florida Department of Transportation
11201 N. McKinley Drive
Tampa, Florida 33612

RECEIVED FDOT
97 FEB -5 AM 9:06

Attention: Mr. Michael J. Coleman

Dear Mr. McDaniel:

Subject: FAP No. XU-311-1(33)
WPI Nos. 7113598
State Project Nos. 10260-1509
US-301 PD&E Study
Hillsborough County

We have reviewed the information contained in Mr. Scott Farash's letter dated January 13, 1997 concerning the subject project. This included updated traffic forecasts, a review of the project need, the Long Range Transportation Plan (LRTP), plus the prior field review of the project.

The issues discussed to date on this project are very similar those of the SR-39 project addressed in our letter dated December 12, 1996. At that time, we indicated that there were two possible scenarios for the development of the PD&E study. You could look at the longer corridor, as the traffic data suggests that a need for widening could very well be established up to Fowler Avenue. Or you could set the PD&E limits at Harney Road, as that would also be a logical northern termini.

Consistency with the LRTP remains an issue. If the Department studies the longer of the two segments, this would need to be resolved before we could proceed forward. Through coordination with the Hillsborough County Metropolitan Planning Organization (MPO), a decision would need to be made to either amend the LRTP or to request location and design approval for only that segment of the study that was in the approved LRTP. Either way, we are limited in giving approval for advancement using Federal funds to only that section of roadway that was in an approved LRTP.

-more-

In summary, the PD&E study could be completed with either northern limit. However, we would only be able to advance for Federal funding that portion that is listed in the approved LRTP at the time of the request.

I hope this has answered the questions on this project. If you have any other questions, please call our office.

Sincerely yours,

Mark O. Bartlett

For: J. R. Skinner
Division Administrator

1113598.6

FLORIDA DEPARTMENT OF TRANSPORTATION

LAWTON CHILES
GOVERNOR

[illegible]
PD&E DEPARTMENT MS [illegible]

ALAN C. MATTS
SECRETARY

April 18, 1997

Mr. Joe Zambito
Senior Planning Manager
Hillsborough County Metropolitan Planning Organization
601 E. Kennedy, 18th Floor
Tampa, FL 33602-5117

RE: WPI No. 7113598/FAP No. XU-311-1(33)/SPN 10260-1509
U.S. 301 PD&E Study - I-4 to Fowler Avenue/Hillsborough County

Dear Mr. Zambito:

This letter is in response to your comments on the Traffic Memorandum for the above referenced project. Your main concern was that the project limits for the PD&E Study (from I-4 to Fowler Avenue) did not match the MPO's LRTP (from I-4 to Harney Road). I wanted to resolve this issue before responding to your comments and finalizing the Traffic Memo.

The FHWA has relaxed their requirement that a PD&E Study's limits always match the local MPO's plan, allowing us to study a longer length in some cases when justified. We now have FHWA's permission to end the PD&E study at either Harney Road or Fowler Avenue, with the understanding that Location and Design acceptance (LDA) would only be granted for the section in the MPO's plan, from I-4 to Harney Road. A copy of the letter from FHWA is enclosed. I have also included a copy of a letter to FHWA informing them that we have chosen to study out to Fowler Avenue and will request LDA for the segment in the LRTP.

Your comment asking how the 2020 traffic was developed may not have the same importance now that the segment from Harney Road to Fowler Avenue can be included in the study without amending the MPO's LRTP. However, if you would like more information on how the projected 2015 traffic was generated, please call Mr. Fawzi Bitar at 975-6433.

A copy of the Final Traffic Technical Memorandum is enclosed for your review.

Sincerely,

Scott Farash, P.E.
Project Manager

SF:gr

Enclosures

cc: Jerry Comellas

7113598.5

FLORIDA DEPARTMENT OF TRANSPORTATION

11201 N. McKINLEY DRIVE • TAMPA, FL 33612-6403 • 1-800-226-7220
PD&E DEPARTMENT MS 7-500

LAWTON CHILES
GOVERNOR

THOMAS F. BARRY, Jr.
SECRETARY

FWS Log No. 98-109 D 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.

U.S. Fish and Wildlife Service
6620 Southpoint Drive South, Suite 310
Jacksonville, FL 32216
(904) 232-2580 FAX (904) 232-2404

Michael M. Bentzien 10-27-97
Michael M. Bentzien Date
Assistant Field Supervisor

October 16, 1997

Ms. Deborah D. Manz
U.S. Fish and Wildlife Service
P.O. Box 19247
Tampa, FL 33686-9247

RE: WPI No.7113598/SPN 10260-1509
US 301, From Interstate 4 (SR 400) to Fowler Avenue (SR 582)

Dear Ms. Manz:

The Florida Department of Transportation is proposing improvements to approximately 7.4 kilometers (4.6 miles) of US 301 from Interstate 4 (SR 400) to Fowler Avenue (SR 582) in Hillsborough County. The proposed improvements include widening the existing roadway from the current undivided two-lane facility to a divided four-lane facility. The study team analyzed four alternatives in the existing corridor. A Public Workshop was held September 29, 1997, to present the various alternatives to the public and receive early input on the proposed concepts. A Wetland Evaluation Report / Biological Assessment has been prepared to address the biota within the proposed project corridor.

This proposed project has been evaluated for impacts on federally protected threatened and endangered species. Based on the results of the literature review and field surveys conducted, the Department has concluded that no federally listed threatened or endangered species will be affected by the proposed improvements. Furthermore, the proposed project is not located in an area designated as Critical Habitat by the U.S. Department of Interior. Therefore, the Department on behalf of the Federal Highway Administration, has determined that the proposed actions will have "No Effect" on any federally protected threatened or endangered species.

If your office concurs with this determination, please respond to the Department in writing at your earliest convenience. If your agency would like a site review or any additional information, please feel free to call me at (813) 975-6457.

Sincerely,

Todd Mecklenborg
Biologist

RECEI

Southwest Florida Water Management District

2379 Broad Street • Brooksville, Florida 34609-6899 • 1-800-423-1476 (Florida Only)
or (352) 796-7211 • SUNCOM 628-4150 • T.D.D. Number Only (Florida Only): 1-800-231-6103
Internet address: http://www.dep.state.fl.us/swfwmd

7601 Highway 301 North
Tampa, Florida 33637-6759
1-800-836-0797 or (813) 985-7481
SUNCOM 578-2070

170 Century Boulevard
Bartow, Florida 33830-7700
1-800-492-7862 or (941) 534-1448
SUNCOM 572-6200

115 Corporation Way
Venice, Florida 34292-3524
1-800-320-3503 or (941) 486-1212
SUNCOM 526-6900

2303 Highway 44 West
Inverness, Florida 34453-3899
(352) 637-1360

An Equal Opportunity Employer

October 6, 1997

Mr. Michael J. Coleman, P.E.
Florida Department of Transportation
11201 N. McKinley Drive
Tampa, Florida 33612-6403

Subject: Work Program Item No. 7113598
State Project No. 10260-1509
US-301 Widening from I-4 to Fowler Ave.
SWF Parcel No. 13-Land Use

Dear Mr. Coleman:

On September 29, I had the opportunity to attend the Public Alternatives Workshop for the US-301 proposed road widening project. This was the first time I had attended such a workshop. I congratulate FDOT - the workshop was extremely well organized, very informative, and the consultants and FDOT personnel did an outstanding job in explaining the details.

The following are our comments:

- If additional R/W is acquired from the west side of US-301 it will not affect the District's Tampa Service Office or the Temple Terrace Sports Complex, both of which are located to the east of US-301. The Sports Complex is under lease, from the District, to the City of Temple Terrace.

- Flood Plain Compensation Pond No.8, located east of US-301 and south of Harney Canal, would cause some problems. In this area we have constructed a sculling launch site. At least twice a year the Florida Intercollegiate and the Florida Scholastic Rowing Association hold their sculling races on the Tampa Bypass Canal (TBC). In March 1997, the Sunshine State Conference Rowing Championship drew several hundred athletes and spectators. Proposed Pond No. 8 is located in the center of this activity zone.

- Perhaps the flood plain compensation pond could be located west of US-301 and south of Harney Canal as this would have less impact on recreation than east of US-301.

- If I understood Frank Schwarz correctly, it may be possible to locate the flood plain compensation pond somewhere between S-159 and S-162. When the design criteria has been determined, I believe it would be appropriate for FDOT to discuss the potential location(s) with our District engineers. I would be happy to arrange a meeting.

- The TBC and Harney Canal are an integral part of the U.S. Army Corps of Engineers (COE) Four River Basins Project; the District is the local sponsor. Any changes or modifications to the canal prism or canal R/W will require COE approval. We will coordinate the review process with the COE.

- This letter addressed the District's proprietary concerns. It will be necessary for FDOT to coordinate any permitting process with our District Regulatory Department. They are located at the Tampa Service Office.

It is my understanding that in August 1998, FDOT will have selected one of the four design alternatives and a public meeting will be held to discuss same. Please contact me when FDOT is ready to discuss design alternatives with the District. I may me telephoned at SunCom 628-4464 or 1-800-423-1476, extension 4464.

Cordially,

K R Kramer

Kenneth R. Kramer
Sr. Land Resources Specialist
Land Resources Department

KRK/lac
c: Fritz Musselmann
Lloyd Roberts
John Heuer
Robert Maglievaz
Gordon McClung

7113598.

FLORIDA DEPARTMENT OF TRANSPORTATION

LAWTON CHILES
GOVERNOR

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PD&E DEPARTMENT, MS 7-500

THOMAS F. BARRY, Jr.
SECRETARY

October 15, 1997

Mr. Kenneth R. Kramer, CLP
Southwest Florida Water Management District
2379 Broad Street (U.S. 41 South)
Brooksville, Florida 34609-6899

RE: SP No. 10260-1509/ WPI No. 7113598/ FAP No. XU-311-1(33)
Preferred Floodplain Compensation Sites FPC-8 and FPC-9

Dear Mr. Kramer:

As per discussions at the Alternatives Workshop on September 29, 1997, I am forwarding to you a copy of the plan sheet including Pond 8 (FPC-8) and Pond 9 (FPC-9). These sites were evaluated along with six other sites to provide floodplain compensation along the U.S. 301 corridor. FPC-8 and FPC-9 were ranked as equally desirable. Therefore, either site could have been chosen as the preferred. To accommodate your concern of impacts to present and future recreational activities, we will revisit these sites placing more weight on FPC-9. We will also recommend, in the Pond Siting Report, that the future designer contact you prior to beginning design on any site owned by SWFWMD.

Should you have any questions or comments, please call me at (813) 975-6456.

Sincerely,

Scott Farash, P.E.
PD&E Project Manager

SF/RKS
Attachment
cc: R. Pscion - PBS&J
F. Schwarz - PBS&J

1113598 5

TELEPHONE CONVERSATION RECORD

FDOT PROJECT MANAGEMENT

INCOMING: / OUTGOING: ____ TIME: 1:20 PM DATE: 1/2/98

SUBJECT: U.S. 301 Preferred Alternative SPN: 10260-1509

CONVERSATION WITH: Joe Zambito WPI: 1113598

REPRESENTING: Hillsborough County MPO PHONE: 272-5940

Mr. Zambito returned my call earlier today to discuss the selection of the preferred alternative for this project.

In a letter dated December 29, 1997, the MPO requested that we provide the urban section for Alt. "C". He also mentioned the lower design speed and reduced damage as reasons for their preference.

I explained that the design speed would not affect the horizontal alignment of the road, since the existing road was designed for 70 mph and the build alternatives have alignments outside of the existing row. The difference in design speed would not affect the termination lengths for the lanes.

I suggested that representatives from the FDOT and the MPO meet to discuss the alternatives in detail. He said that he would call me back next week to set up a meeting.

BY: Ted Kucek ROUTE TO: File

71358.7

TELEPHONE CONVERSATION RECORD

FDOT PROJECT MANAGEMENT

INCOMING: ____ OUTGOING: ✓ TIME: 2:40 PM DATE: 9/30/97

SUBJECT: Coordination during Design & Construction SPN: 10260-1509

CONVERSATION WITH: Susan Lane WPI: 7113598

REPRESENTING: Hillsborough County Aviation Authority PHONE: 870-8775

Ms. Lane came to the Public Workshop last night (on Sept 29, 1997), requesting coordination between FDOT and HCAA on this project due to close proximity with Vandenberg Airport.

She spoke with Mike Coleman & left two forms to be completed a, FAA Form 7460, and a "Notice of Proposed Construction."

I explained it was too early in the process to fill out a Permit for construction, since we have not selected a preferred alternative yet and the Design and Construction phases are not funded in the Five Year Work Program. She agreed, when the schedule was explained to her.

She asked to be contacted when Design begins, I told her I would mention this in the P.E. Report.

Specifically, in the Traffic Section 6.2 - mention the new runway under construction expanding the airport & it's possible effect on traffic.
Section 9.15 Utility Impacts, Lighting added → check w HCAA
" 9.16 Traffic Control Plan Comments → " "
" 6.1 Commitments → Contact HCAA

BY: Scott Farwell ROUTE TO: File

DCJC SESF
RA RA File

7113598.7

Metropolitan Planning Organization

October 20, 1997

RECEIVED FDOT
97 OCT 22 PM 12:53

Mr. Michael J. Coleman P. E.
District Seven PD&E Engineer
Florida Department of Transportation
11201 North McKinley Drive
Tampa, Florida 33612-6403

Dear Mr. Coleman:

Re: US 301 PD&E Study, I-4 to Fowler Avenue

Thank you for the opportunity to provide comments on the Department's PD&E study for the referenced project. Staff attended your workshop on September 29th and we are providing the following comments based on the information presented at that meeting.

Staff has looked at the four alternatives presented at the workshop and recommends that the Department pursue alternative "C". We feel that this alternative better complies with the MPO's Long Range Transportation Plan "STAR" designation for this facility. As you may recall, the "STAR" designation means that the facility should be particularly sensitive to adjacent properties. The Long Range Transportation Plan defines this (among other things) as providing bicycle and pedestrian facilities. Alternative "C" provides both a four foot bicycle facility in each direction and sidewalks on both sides.

It should also be noted that a majority of the proposed improvement falls within the urban boundary and within the City of Tampa's and Hillsborough County's Urban Service Areas. These areas are expected to develop with urban characteristics in future years. Therefore, we feel that Alternative "C" which provides urban amenities such as enclosed drainage, sidewalks, etc. is the most appropriate.

Finally, the portion of the improvement north of Bullard Pky/Harney Rd is not included in the current Long Range Transportation Plan. If the PD&E study concludes that improvements are to be made, the Department should ask that the MPO consider extending the northern limit of the US 301 improvement as a part of the Plan update that will be adopted late next year.

GOOD POINT. WE WILL NEED TO DO THIS.

Should you have any question on this matter, please call me at 272-5940.

Sincerely,

Lucilla L. Ayer, AICP
Executive Director

xc: MPO Board Members

I:\tran_mpo\corresp\1997\us301.doc

Hillsborough County
Metropolitan Planning Organization
601 E. Kennedy, 18th Floor
P. O. Box 1110
Tampa, Florida 33601-1110
813/272-5940
FAX NO. 813/272-6258
FAX NO. 813/272-6255

7113598.5

Metropolitan Planning Organization

December 29, 1997

RECEIVED
97 DEC 31 PM 1:26

Mr. Scott Farash, P.E.
PD&E Project Manager
FDOT District Seven
11201 N. McKinley Drive
MS 7-500
Tampa, Florida 33612

Dear Mr. Farash:

Re: U. S. 301 PD&E Study, I-4 to Fowler Ave
WPI No: 7113598, SP No: 10260-1509, FAP No: XU-311-1(33)

Per your transmittal of December 19, 1997, we have reviewed the referenced PD&E Study and provide the following comments:

As noted in our letter of October 20, 1997, the project is located within the census urbanized area boundary and we believe that an urban section, with its lower design speed, sidewalks, enclosed drainage, etc., is more appropriate for this type of area. Consequently, we urge the Department to pursue proposed typical section alternative "C".

We believe that the higher speeds accommodated by alternatives "A", "B", & "D", are inappropriate for an urban setting and will cause problems in the future as urban level development takes place along the roadway.

Again, we request that whichever alternative is chosen, that sidewalks by provided and that pedestrian facilities be provided at each signalized intersection to facilitate pedestrian crossings.

Thank you for the opportunity to review the PD&E document. Should you have any question on our comments, please call me at 272-5940.

Sincerely,

Joe Zamb, for

Lucilla L. Ayer, AICP
Executive Director

Hillsborough County
Metropolitan Planning Organization
P.O. Box 1110
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813/272-5940
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FLORIDA DEPARTMENT OF TRANSPORTATION

LAWTON CHILES
GOVERNOR

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PD&E Department M.S. 7-500

THOMAS F. BARRY, Jr.
SECRETARY

February 23, 1998

Ms. Lucilla L. Ayer, AICP
Executive Director
Hillsborough County Metropolitan Planning Organization
601 E. Kennedy Boulevard, 18th Floor
P.O. Box 1110
Tampa, FL 33601-1110

RE: WPI No. 7113598/ SP No. 10260-1509/ FAP No. XU-311-1(33)
U.S. 301 from I-4 to Fowler Avenue/ Preferred Typical Section

Dear Ms. Ayer:

The purpose of this letter is to inform you of the Department's selection of the suburban section, Alternative "D", as the preferred alternative for the above referenced project. The reasons for selecting Alternative "D", rather than Alternative "C" which was recommended by the MPO, are explained below.

First I would like to briefly relate the history of the MPO/Department communication on this matter. If I have misstated your views or omitted anything, please let me know.

The MPO first expressed its preference for an urban section in a letter dated October 20, 1997. The principal reasons mentioned were (1) bicycle and pedestrian facilities were included in the urban section and (2) the project falls within the City of Tampa's and Hillsborough County's Urban Service Areas, which are expected to develop urban characteristics in the future. Although the urban section was the only alternative at the Public Workshop that included a sidewalk, the suburban section has been revised to include a sidewalk near the right of way line.

On January 16th, representatives from the Department and the MPO met to discuss the alternatives and try to reach a consensus on the preferred alternative. At that time, you re-articulated the MPO's reasons for recommending the urban section. As I understand your position, the principal reason for the MPO's preference is that the project area is within the adopted urban service area and proposed urban development area, hence the urban section is the only alternative compatible with the long range plans for these areas. You also expressed concern about the unsightly appearance of ditches on the existing roadway (and other roadways) and urged the Department to select the urban section with a closed drainage system as the preferred alternative.

Some of the reasons why we have selected the suburban section as the preferred alternative are:

- Safety: The posted speed is currently 55 mph for most of the project, with a high percentage of truck traffic due to the industrial buildings and warehouses along U.S. 301. The roadway's clear zone, sight distance, and relatively low number of sidestreets and driveways allow traffic to travel safely at this speed. The most important advantage of the suburban section over the urban section is the added safety which the shoulder and clear zone provides, allowing drivers of errant vehicles to recover and return to the roadway without losing control. The shoulder also allows for disabled vehicles to pull off the road, reducing the likelihood of a rear-end collision.

  The suburban section is also safer for pedestrians, as the sidewalk is farther away from traffic.

- Cost: The suburban section, Alternative "D" is the least expensive alternative, $1.8 million less than the urban section, Alternative "C". The two rural sections, Alternatives "A" and "B" were considerably more expensive than the suburban section, by $3.3 million and $10.7 million respectively.

- Environmental Impacts: The rural sections had significantly more environmental impacts than the urban and suburban sections because of the right of way acquisitions required. The urban and suburban sections had an equal number of impacts.

- Public Comments: Of the ten written comments received at the Public Workshop, four of these stated a preference for Alternative "D", the suburban section. The MPO's letter was the only one favoring Alternative "C". The other five comments did not express a preference for any of the alternatives.

- Another advantage of the suburban section over the urban section with curb and gutter is the relative ease with which right turn lanes, deceleration lanes, and bus bays can be added, without having to reconstruct curb and gutter or possibly relocate a storm water inlet.

We understand and agree with the MPO's desire to accommodate alternate modes of transportation, including buses, pedestrians, and bicyclists. The paved shoulders are available for bicycle use, and sidewalks have been added to the suburban section for pedestrian use. Pedestrian signals and crosswalks are to be included at the signalized intersections as a part of this project. As the area develops and the need for public transportation increases, bus pads and bus shelters can be added where needed by constructing a side drain and filling in the ditch.

The Department recognizes that as vacant land is developed and residential properties are converted to commercial uses, vehicle speeds will lower and a curb and gutter section may become more appropriate. Eventually six lanes will probably be required and at that time it will be necessary to convert to an urban section to avoid costly right of way acquisition. The suburban section will be designed with a minimum gutter grade and proper super-elevation on curves so that it can be converted to an urban section with curb and gutter when widened to six lanes without reconstructing the pavement. Ponds will be of sufficient size to handle storm water run off from six lanes without purchasing additional right of way. Every effort is being made to allow for future development and widening of U.S. 301 to minimize the disruption of businesses, residences, and the cost to taxpayers.

We understand the MPO's concern with the aesthetics of the project and that ditches with standing water are undesirable. The ditches on this project will be designed for conveyance only, with proposed ponds to be constructed for retention and treatment of storm water. Additionally, landscaping is a possibility which we did not discuss at our meeting. Hillsborough County could be reimbursed for landscaping design and installation expenses up to one percent of the roadway construction cost, if party to a maintenance agreement.

I hope that this adequately explains the Department's decision. If you have any further concerns, please call me at (813) 975-6456.

Sincerely,

Scott Farash

Scott Farash, P.E.
Project Manager

SF/RKS
cc: Ken Hartmann, P.E.
Don Skelton, P.E.

7113598.5

Metropolitan Planning Organization

March 16, 1998

RECEIVED

Mr. Scott Farash, P. E.
PD&E Project Manager
FDOT District Seven
11201 N. McKinley Drive
MS 7-500
Tampa, Florida 33612

Dear Mr. Farash:

Re: WPI No. 7113598/ SP No. 1509/ FAP No. XU-311-1(33)
US 301 from I-4 to Fowler Avenue/ Preferred Typical Section

Thank you for informing us of the Department's decision on the preferred alternative for the above referenced project. However, we are disappointed at the Department's decision on selecting the suburban section as the design concept for this project, even after our lengthy discussion on the potential incompatibility of such design to the proposed adjacent land uses.

It is our understanding that the Department's rationale for choosing the suburban typical section is based on current roadway and development characteristics. However, as we have pointed out before, the Hillsborough County Comprehensive plan designates the area surrounding this roadway as "community mixed use -12". This designation allows a variety of commercial uses and high density residential of up to 12 dwelling units per acre. We believe that the area surrounding the roadway will be developed in a much more urban character than what is existing today.

As you may be aware, US 301 was designated as a STAR (Sensitive to Area Residents) facility. The existing 2015 Long Range Transportation Plan has a principle that promotes the usage of urban design criteria for transportation improvements to increase their visual appeal and reduce negative impacts on users and area inhabitants.

Last month, the MPO Board adopted the goals and objectives that govern the development of the 2020 Long Range Transportation Plan. One of the guiding principles addresses the desire to "apply Urban Design Concepts to roadway capacity improvement located within the Urban Area".

Hillsborough County
Metropolitan Planning Organization
P.O. Box 1110
601 E. Kennedy, 18th Floor
Tampa, Florida 33601-1110
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FAX NO: 813/272-6258
FAX NO: 813/272-6255

It was explained to us that this road widening would not occur for another 10 years. Based on the growth experienced in this County, it becomes more compelling for us to look into the future land use scenarios and not the current development characteristics in deciding on an appropriate design concept. Because the improved roadway will have to service the area for 20 years or more, we believe that the urban typical section (Alternative "C") is more appropriate to serve the anticipated development pattern of the area.

With respect to the cost of the urban section, we feel that the extra $1.8 million (about 10%) is not significant given the overall cost of the project and is well worth the cost in terms of providing the amenities that are appropriate for the anticipated development characteristics. In addition, by providing the enclosed drainage system now, there would be a significant savings in the future should the roadway ever need to be widened to six lanes.

With respect to the four citizens that indicated a preference for alternative "D", we wondered if their preference might have been based on the fact the roadway would be further from their property with the suburban section than with the urban section (because of the wider median used in the urban section). However, we do not know if they had been told that if the road were to be widened to six lanes, that the edge of pavement would be much closer with the suburban that the urban section.

We are also concerned about the high design speed for this project. It was indicated to us that due to the current rural nature of the adjacent areas, people are driving at high speed now and therefore the roadway should be designed to accommodate them. Once again, because of the location of this roadway which is actually west of I-75 and well within the Urban Service Area (a Land Use terminology) and Urban Boundaries (a Transportation terminology), we believe that high speed should be controlled and not encouraged. A roadway design based on the higher design speed tends to result in higher vehicle speeds. This could result in future enforcement problems as the area develops a more urbanized character.

Finally, it was pointed out to us that it would be more expensive to retrofit deceleration lanes, turn lanes, bus bays etc. after the roadway is built with curb & gutter. We could not have agreed with you more, and that is precisely the reason why it is so important to have these amenities provided for as part of the initial construction.

The MPO's Livable Roadways Committee recently discussed the proposed improvements to US 301, and the Department's selection of the suburban typical section for this project, and expressed several concerns. But before taking any official action, they decided to ask the Department for a presentation so that they can consider all the issues. I believe they will be contacting your office in the near future to arrange for this presentation.

In conclusion, we urge the Department to consider the fact that this roadway will have a very long useful life, and based on the way the development characteristics are expected to change, to seriously consider the urban section as the most appropriate for this road.

We hope that the recommendations from the MPO, the Planning Commission and soon, the Livable Roadways Committee would be of value to the Department in pursuing the optimal design for this project.

Should you have any question on the above, please call me at 272-5940.

Sincerely,

Lucilla L. Ayer, AICP
Executive Director

Linda Saul-Sena, Chairperson, Livable Roadways Committee
Ken Hartmann, P.E., District Seven Secretary
Don Skelton, P.E., District Director of Planning & Programs

FLORIDA DEPARTMENT OF TRANSPORTATION

LAWTON CHILES
GOVERNOR

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PD&E Department M.S. 7-500

THOMAS F. BARRY, Jr.
SECRETARY

April 20, 1998

Ms. Lucilla L. Ayer, AICP
Executive Director
Hillsborough County Metropolitan Planning Organization (MPO)
601 E. Kennedy Boulevard, 18th Floor
P.O. Box 1110
Tampa, FL 33601-1110

RE: FP No. 2553621/ FAP No. XU-311-1(33)
U.S. 301 from I-4 to Fowler Avenue/ Preferred Typical Section

Dear Ms. Ayer:

In response to your letter dated March 16, 1998, this letter is intended to clarify the Department's reasons for selecting a suburban section as the preferred alternative.

The preferred alternative is not designed only for current roadway and development characteristics. It is designed to accommodate anticipated future needs of the area, including alternate modes of transportation. The preferred alternative incorporates urban design concepts, with sidewalks, pedestrian signals, and crosswalks at signalized intersections. The paved shoulders are available for bicycle use.

The important difference between the preferred alternative, which is a suburban cross section, and an urban section is that stormwater is conveyed in ditches rather than a closed drainage system with curb and gutter, inlets and underground pipes. It is this difference that seems to be the source of concern with the MPO.

In the Department's view, the suburban section's main advantage over an urban section is the added safety which the shoulder and clear recovery zone provide. This is important since vehicles are currently traveling at speeds of 55 mph and are expected to continue to travel at high speed when this project is constructed.

It is also important to distinguish between posted speed and design speed. A posted maximum speed is not the highest speed that might be used by relatively few drivers. It is usually about the 85 percentile speed value determined by a speed study. This is defined in the AASHTO Publication "A Policy on Geometric Design of Highways and Streets" and has been adopted by the Department as the standard for determining posted speed. A speed study was recently done on U.S. 301, north of

Harney Road, which found the 85 percentile speeds at 53.5 mph and 55.0 mph for north and southbound traffic, respectively.

The design speed is a different matter. The design speed is generally set 5-10 mph greater than the expected posted speed for added safety, but is limited to 80 km/h (50 mph) for the suburban section of the proposed median curb. The design speed used on U.S. 301 will not affect vehicle speeds, as the horizontal and vertical alignment was originally designed for 70 mph. As the area develops and becomes more urbanized, the posted speed can be lowered to match the new traffic characteristics. That has already happened in the section south of the Harney Canal towards the I-4 interchange, where the posted speed is currently 45 mph.

As far as costs are concerned, the additional $1.8 million to construct an urban section may mean another project would have to be delayed. It is true that the cost of constructing the closed drainage system now would be less than in the future because of inflation, but this could not be considered as savings. While the cost of building the enclosed drainage system could be expected to rise with inflation, so would the cost of another project which is delayed because of the additional $1.8 million spent on this project.

You may have misunderstood our letter dated February 23rd, which listed the advantages of a suburban section. Concerning the addition of right turn lanes, acceleration/deceleration lanes, and bus bays, the letter referred to accommodating future development after construction of this project. The initial construction would be designed to handle the projected traffic for the design year, 2020. It would also accommodate all existing businesses and residents' driveways. Any future land development or bus routes added along U.S. 301 after the initial construction may require new driveways and bus bays. The advantage of the preferred alternative here is that the additional pavement can be added without reconstructing curb and gutter or relocating storm water inlets.

Concerning the four citizens' preference for the suburban section, Alternative "D", two of them mentioned that the roadway would be farther away from their property as the reason for their preference. One gave lower cost as the reason, and the last gave no reason. The edge of the pavement is 12 feet farther away from the right of way line with the suburban section than the urban section. The suburban section with a 22-foot median was designed to be widened to the outside when six laned, whereas the urban section with a 46-foot median to the inside. The outside edges of the pavement will in fact be in the same location for both sections when six laned.

We would be happy to arrange a meeting if you would like to discuss these issues further. You can reach me at (813) 975-6077 or the Project Manager, Scott Farash at (813) 975-6456.

Sincerely,

Michael J. Coleman, P.E.
District PD&E Engineer

MJC/SF/RKS
cc: Kenneth Hartmann, District Secretary
Jack King, Acting Director of Production
Dwayne Kile, District Design Engineer
Jerry Comellas, District Project Development Engineer
Scott Farash, PD&E Project Manager

Hillsborough County
City-County
Planning
Commission

THE PLANNING COMMISSION

February 10, 1998

Mr. Scott Farash, P.E.
PD&E Project Manager
FDOT District Seven
11201 N. McKinley Drive
MS7-500
Tampa, FL 33612

Dear Mr. Farash:

RE: U.S. 301 PD&E Study, I-4 to Fowler Avenue
WPI No: 7113598, SP No: 10260-1509, FAP No. XU-311-1(33)

The Planning Commission staff has had the opportunity to review the proposed "suburban" design for U.S. Highway 301. We are concerned that a "suburban" design is not compatible with the long range goals of Hillsborough County's adopted comprehensive plan. The project is located within the adopted urban service area and proposed urban development area.

The long term vision of the plan is to encourage more compact, pedestrian-oriented development within the urban development area. The Planning Commission staff finds that a high speed "suburban" design for this section of Highway 301 is incompatible with that long term vision.

Hillsborough County and the City of Tampa have recently been named Sustainable Communities by the State Department of Community Affairs. This agreement calls for us to maximize opportunities for development within areas that have existing infrastructure and are within the proposed urban development boundary. This concept was an important component of the Sustainable Communities agreement; therefore, we need to make sure that major decisions support the agreement goals, as well as the adopted comprehensive plan.

601 E. Kennedy, 18th Floor
P.O. Box 1110
Tampa, Florida 33601-1110
813/272-5940
FAX 813/272-6258
FAX 813/272-6255
Internet E-Mail
planning@pinet.com

The Planning Commission staff recommends that an urban cross section with appropriate pedestrian and bicycle facilities be constructed in this section of Highway 301 in order to be consistent with the adopted Hillsborough County Comprehensive Plan and in implementation of the adopted urban service boundaries.

Thank you for the opportunity to comment on this proposal. Please call me at 272-5940 if you have any questions.

Sincerely,

Robert B. Hunter, AICP
Executive Director

RBH/sm

FLORIDA DEPARTMENT OF TRANSPORTATION

LAWTON CHILES
GOVERNOR

11201 N. McKINLEY DRIVE * TAMPA, FL 33612-6403 * (813) 975-6077 * 1-800-226-7220
PD&E Department M.S. 7-500

THOMAS F. BARRY, Jr.
SECRETARY

March 16, 1998

Mr. Robert Hunter, AICP
Executive Director
Hillsborough County City - County Planning Commission
601 E. Kennedy Boulevard, 18th Floor
P.O. Box 1110
Tampa, FL 33601-1110

RE: WPI No. 7113598/ SP No. 10260-1509/ FAP No. XU-311-1(33)
U.S. 301 PD&E Study, I-4 to Fowler Avenue/ Hillsborough County

Dear Mr. Hunter:

I am writing in response to your letter dated February 10, 1998, in which you commented on the preferred alternative for U.S. 301. You expressed concern about the suburban section selected as the preferred alternative not being compatible with the long range goals of Hillsborough County's adopted comprehensive plan. The reasons why the Department has selected this preferred alternative are explained below.

First I would like to explain the nature of the preferred alternative's typical section. It is called "suburban" because it is a hybrid section, combining elements of both urban and rural sections. It has a raised median with mountable curb separating opposing traffic normally found on an urban section. Storm water runoff is conveyed by open ditches, as in a rural section.

The suburban section combines the advantages of rural and urban sections, and eliminates the disadvantages of each. The main disadvantage of a rural section for this project is that it does not fit in the existing right of way (ROW), resulting in additional ROW cost and increased environmental impacts. The main disadvantage of an urban section for this project is the lack of a clear recovery zone and shoulder, which are important safety features, considering the high amount of truck traffic and vehicle speeds. The suburban section has the added safety of a clear recovery zone and shoulder provided by a rural section, yet it fits inside the existing ROW.

The suburban section for this project has all of the pedestrian and bicycle amenities typically associated with an urban section. It has a five foot wide sidewalk on each side of the road for pedestrian use. Pedestrian signals and crosswalks are to be constructed at the signalized intersections as part of this project. As the area develops and the need for public transportation increases, bus pads

and bus shelters can be added at bus stop locations by constructing a side drain and filling in the ditch. For bicyclists, a five foot wide paved shoulder is provided.

The principal reasons why we have selected the suburban section as the preferred alternative rather than the urban section are:

- Safety: The most important advantage is the added safety which the shoulder and clear zone provides. The posted speed is currently 55 mph for most of the project, with a high percentage of truck traffic due to the industrial buildings and warehouses along U.S. 301. The roadway's clear zone, sight distance, and relatively low number of sidestreets and driveways allow traffic to travel safely at this speed. The clear zone allows drivers of errant vehicles to recover and return to the roadway without losing control. The shoulder also allows for disabled vehicles to pull off the road, reducing the likelihood of a rear-end collision.

  The suburban section is also safer for pedestrians, as the sidewalk is farther away from traffic.

- Cost: The suburban section, Alternative "D" is the least expensive alternative, $1.8 million less than the urban section, Alternative "C".

- Public Comments: Of the ten written comments received at the Public Workshop, four of these stated a preference for Alternative "D", the suburban section. The MPO's letter was the only one favoring Alternative "C", the urban section. The other five comments did not express a preference for any of the alternatives.

- Another advantage is the relative ease with which right turn lanes, acceleration/deceleration lanes, and bus bays can be added, without having to reconstruct curb and gutter or possibly relocate a storm water inlet.

The Department recognizes that as vacant land is developed and residential properties are converted to commercial uses, vehicle speeds will lower and a curb and gutter section may become more appropriate. When this type of development occurs, six lanes will probably be required and at that time it will be necessary to convert to an urban section to avoid costly ROW acquisition. The suburban section will be properly designed so that it can be converted to an urban section with curb and gutter when widened to six lanes without reconstructing the pavement. Ponds will be of sufficient size to handle storm water runoff from six lanes without purchasing additional ROW. Every effort is being made to maximize opportunities for development while minimizing the disruption of businesses, residences, and the cost to taxpayers.

Your letter did not mention a concern with aesthetics, but if desired, landscaping could be added to this project, in the median and at the back of the ditch near the sidewalk. Hillsborough County could be reimbursed for landscaping design and installation expenses up to one percent of the roadway construction cost, if party to a maintenance agreement.

The preferred alternative is based on an analysis of all the engineering, environmental, economic data and public input available at this stage of the project, however it is not final. We will continue to seek input from public officials such as yourself and the general public as part of the PD&E public involvement process. The final determination will not be made until after the formal public hearing which is to be held later this year.

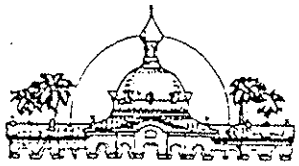
If you have any further concerns, please call me at (813) 975-6456.

Sincerely,

Scott Farash

Scott Farash, P.E.
Project Manager

SF/RKS
cc: J. King
M. Coleman
D. Skelton
B. Clifford



May 14, 1998

Mr. Kenneth A. Hartmann , P.E.
FDOT District Seven Secretary
Florida Department of Transportation
11201 N. Malcolm McKinley Drive
Tampa, Florida 33612-6403

Dear Mr. Hartmann:

Re: Widening of US 301 in Eastern Hillsborough County

It has come to my attention that the Florida Department of Transportation is planning to widen US 301 north of the Interstate to a four lane road. I have been told that your office has decided to widen this road with a design that includes open ditches on each side for drainage.

I believe that such a design is not conducive to the use of public transportation and is not aesthetically compatible with the anticipated future surrounding land uses. In addition, I feel that the "openness" of the wide right-of-way with ditches on both sides will encourage higher speed that will be difficult to control without continuous enforcement by the Sheriff's Department.

As an elected representative of the citizens in this part of the county, I am puzzled that this type of design is being pursued. Hillsborough County is one of the fastest growing areas in the state and we should be designing our roadways to serve a more developed urban character. By this, I mean that there should be curbs, sidewalks, bicycle facilities, underground drainage, landscaping and amenities for transit service, etc.

While I'm sure there are "engineering" reasons that you have selected the open ditch design, including probable lower initial cost, I believe that it is in the best interest of my constituents that we improve this roadway in such a manner as to provide the "people friendly" amenities that are expected in an urbanizing area.

I ask that you reconsider your decision on the design of this improvement and that your office proceed with an improvement to this roadway that meets the needs and expectations of not only the automobile, but the people of the community as well.

I look forward to a favorable response on this request and believe that by working together, we can develop a project that will best serve the needs of the community in the near term as well as in the future.

Sincerely,

Thomas Scott
County Commissioner

FLORIDA DEPARTMENT OF TRANSPORTATION

LAWTON CHILES
GOVERNOR

11201 N. McKINLEY DRIVE * TAMPA, FL 33612-6403 * 975-6039 * 1-800-226-7220

THOMAS F. BARRY JR.
SECRETARY

June 23, 1998

The Honorable Thomas Scott
Chairman, Hillsborough County Board of County Commissioners
601 E. Kennedy Boulevard
P.O. Box 1110
Tampa, FL 33601-1110

RE: WPI No. 255362 1/ FAP No. XU-311-1(33)
U.S. 301 from I-4 to Fowler Avenue/ Preferred Typical Section

Dear Commissioner Scott:

Thank you for meeting with me on June 11, regarding your letter dated May 14, 1998, on the proposed typical section of U.S. 301. As we discussed, I'd like to explain the issues in writing as to why we are proposing the swale roadway section rather than a curb and gutter section.

First, I would like to alleviate your concern about accommodating public transit and alternative modes of transportation. The suburban section for this project has all of the bicycle and pedestrian amenities typically associated with an urban section. It has a sidewalk on each side of the roadway for pedestrian use. Pedestrian signals and crosswalks are to be constructed at the signalized intersections as part of this project. On the bridges, separate walkways for pedestrians are provided. Although there are no existing bus routes along this section of U.S. 301, the Department recognizes the importance of allowing for the expansion of bus service to this area. As the area develops and the need for public transportation increases, bus pads and bus shelters can be added at future bus stop locations by constructing a side drain and filling in the swale. For bicyclists, a five foot wide paved shoulder is available for their use.

Concerning the issue of high speed, the current posted speed limit is 55 mph. A speed study was recently completed on U.S. 301 north of Harney Road to check vehicle speeds. This study yielded an 85th percentile speed of approximately 55 mph, which verifies that this is the appropriate posted speed. Drivers tend to travel at a speed they feel safe when traffic permits them to select their own speed, which depends largely on sight distance. The horizontal and vertical alignment and distance between side streets and driveways allow traffic to travel safely at 55 mph. Vehicles are expected to continue to travel at this speed when the road is widened to four lanes, regardless of which typical section is constructed. Vehicle speeds may lower, however, as the area develops and becomes more urbanized. At that time, the posted speed can be reduced to match the new traffic characteristics. In fact, the more highly developed section south of the Harney Canal towards the I-4 interchange is currently posted at 45 mph.

We recognize that development will continue and traffic will increase along this roadway, even beyond the design year for this project, 2020. Six lanes are likely to be required eventually, so the preferred alternative accommodates this. As vacant land is developed, and land uses change, vehicle speeds will lower and a curb and gutter section may become more appropriate. When six lanes are required, it will be necessary to convert to an urban, curb and gutter section to avoid costly right of way acquisition. The suburban section will be properly designed so that it can be converted to an urban section with curb and gutter when widened to six lanes without reconstructing the pavement. Another advantage to the suburban section over an urban section is the flexibility to add pavement as the area develops without having to reconstruct curb and gutter or relocate an inlet. Bus bays, right turn lanes, acceleration/deceleration lanes and new driveway connections can all be added relatively easily. Every effort is being made to accommodate new development while minimizing the disruption of businesses, area residents, and the cost to taxpayers.

The Department shares your concern with aesthetics and would like to work with the County to include landscaping in this project. The swales on this project will be designed for conveyance of stormwater only, with offsight ponds to be constructed for retention and treatment. This will keep the swales clear of water in times between rains. The preferred alternative has the potential for landscaping, both in the median and adjacent to the sidewalk, which could greatly improve the appearance of the project.

As you may be aware, the Department has a grant program administered by the Florida Highway Beautification Council to encourage the addition of landscaping on state roads. The grants match funds contributed by local governments for the design and installation of landscaping. In addition, District Seven has a program that would reimburse Hillsborough County for landscaping design and installation expenses up to 1% of the roadway construction cost. Both of these programs require a maintenance agreement between the local government and the Department. All that is required at this time is for the County to send us a "Letter of Interest" agreeing to maintain the landscaping after construction. A sample "Letter of Interest" form is included with this letter.

If the County is unable to locate funding for landscaping maintenance, another possibility to enhance the appearance of the roadway is the Department's Wildflower Program. In this program, wildflower seeds are spread and the mowing schedule is adjusted to allow the flowers to grow and regerminate annually. No maintenance agreement is required for this.

I hope this addresses the concerns you shared with me at our June 11, meeting. Please contact me if I can answer any further questions on this project.

Sincerely,

Kenneth A. Hartmann, P.E.
District Seven Secretary

KAH/SF/RKS
cc: J. King
D. Skelton
M. Coleman
S. Farash

7: 3598.5

Bicycle Advisory Committee
Hillsborough County

March 9, 1998

RECEI

Mr. Scott Farash, P.E., Project Manger
Florida Department of Transportation
District Seven MS 7-500
11021 N. Malcolm McKinley Blvd.
Tampa, Florida 33612

RE: U.S. 301, I-4 to Fowler Avenue

Dear Mr. Farash:

As the Bicycle/Pedestrian Coordinator for the MPO, I have reviewed the design plans for U.S. 301 and have shared them with the Bicycle Advisory Committee members.

Currently, all of the typical sections with the exception of one, indicate a 5' paved shoulder on both sides of the roadway and no sidewalk. Paved shoulders, in rural areas, are suitable for bicycle travel. When pedestrians are introduced, they also use the shoulder which causes potential conflict with cyclists. Separate facilities for both modes is recommended.

Further, when we considering future development along this particular section of U.S. 301 from I-4 to Fowler, we felt that the design would be more appropriate as an urban section, with the bike lanes signed and marked. Retrofitting in the future would be quite difficult, therefore incorporating the bicycle lanes now shows insight and sets an example for other communities to follow.

If you have any questions, please call me at 813-272-5940.

Sincerely,

Gena Torres
Bicycle/Pedestrian Coordinator

file 7113598.cor

FLORIDA DEPARTMENT OF TRANSPORTATION

LAWTON CHILES
GOVERNOR

11201 N. McKINLEY DRIVE * TAMPA, FL 33612-6403 * 975-6077 * 1-800-226-7220
FDOT Department M.S. 7-500

THOMAS F. BARRY, Jr.
SECRETARY

March 27, 1998

Ms. Gena Torres
Bicycle/ Pedestrian Coordinator
Hillsborough County Metropolitan Planning Organization
601 E. Kennedy Boulevard, 18th Floor
P.O. Box 1110
Tampa, FL 33601-1110

RE: FM No. 2553621/ FAP No. XU-311-1(33)
U.S. 301 from I-4 to Fowler Avenue/ Preferred Typical Section

Dear Ms. Torres:

I am writing in response to your letter dated March 9, 1998, concerning bicycle and pedestrian facilities on U.S. 301.

The preferred alternative for this project is a "suburban" section, which includes a sidewalk on each side of the road near the right of way line. A drawing of the preferred typical section showing sidewalks is included with this letter. Sidewalks were added to the suburban section in response to the MPO's comments on the alternatives shown at the Public Workshop held in September 1997.

The preferred alternatives' typical section is called "suburban" because it is a hybrid section, combining elements of both urban and rural sections. It has a raised median with mountable curb separating opposing traffic normally found on an urban section. Storm water runoff is conveyed by open ditches, as in a rural section.

The suburban section for this project has all of the pedestrian and bicycle amenities typically associated with an urban section. It has a five foot wide sidewalk on each side of the road for pedestrian use. Pedestrian signals and crosswalks are to be constructed at the signalized intersections as part of this project. As the area develops and the need for public transportation increases, bus pads and bus shelters can be added at bus stop locations by constructing a side drain and filling in the ditch. For bicyclists, a five foot wide paved shoulder is provided.

The suburban section combines the advantages of rural and urban sections, without the principle disadvantages of each. The main disadvantage of a rural section is that is does not fit in the existing right of way (ROW), resulting in additional cost for ROW acquisition and increased environmental impacts. The main disadvantage of an urban section is the lack of a clear zone and shoulder, which

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PD&E Department M.S. 7-500

are important safety features, considering the high amount of truck traffic and vehicle speeds. The suburban section has the added safety of a clear zone and shoulder provided by a rural section, yet it fits inside the existing ROW.

The principal reasons why we have selected the suburban section as the preferred alternative rather than the urban section are:

- Safety: The most important advantage is the added safety which the shoulder and clear zone provides. The posted speed is currently 55 mph for most of the project, with a high percentage of truck traffic due to the industrial buildings and warehouses along U.S. 301. The roadway's clear zone, sight distance, and relatively low number of sidestreets and driveways allow traffic to travel safely at this speed. The clear zone allows drivers of errant vehicles to recover and return to the roadway without losing control. The shoulder also allows for disabled vehicles to pull off the road, reducing the likelihood of a rear-end collision.

  The suburban section is also safer for pedestrians, as the sidewalk is farther away from traffic.

- Cost: The suburban section, Alternative "D" is the least expensive alternative, $1.8 million less than the urban section, Alternative "C".

- Public Comments: Of the ten written comments received at the Public Workshop, four of these stated a preference for Alternative "D", the suburban section. The MPO's letter was the only one favoring Alternative "C", the urban section. The other five comments did not express a preference for any of the alternatives.

- Another advantage is the relative ease with which right turn lanes, acceleration/deceleration lanes, and bus bays can be added, without having to reconstruct curb and gutter or possibly relocate a storm water inlet.

The Department recognizes that as vacant land is developed and residential properties are converted to commercial uses, vehicle speeds will lower and a curb and gutter section may become more appropriate. When six lanes are needed a curbed section will be used to avoid costly right of way acquisition.

The preferred alternative is based on an analysis of all the engineering, environmental, economic data and public input available at this stage of the project, however it is not final. We will continue to seek input from public agencies and the general public as part of the PD&E public involvement process. The final determination will not be made until after the formal public hearing which is to be held later this year.

If you have any further concerns, please call me at (813) 975-6456.

Sincerely,

Scott Farash

Scott Farash, P.E.
Project Manager

SF/RKS
cc: J. Comellas
K. Nosworthy

JC RA PS SF File

Metropolitan Planning Organization

June 30, 1998

Mr. Michael J. Coleman P. E.
District Seven PD&E Engineer
Florida Department of Transportation
11201 North McKinley Drive
Tampa, Florida 33612-6403

Dear Mr. Coleman:

Re: US 301 PD&E Study, I-4 to Fowler Avenue
WPI No: 7113598, SP No: 10260-1509, FAP No: XU-311-1(33)
FPN: 255362 1

On behalf of the Hillsborough County Metropolitan Planning Organization, I am again requesting that the Department select the "urban" typical section (alternative "C") as the preferred alternative for the above referenced project. As we have stated before, we feel that roadways within the urban area boundary should be designed for lower speeds and to provide urban amenities such as sidewalks, bicycle facilities and underground drainage. We also believe that the urban section is more accommodating to future public transportation.

Following is a listing of previous correspondence relating to this project, copies of which are attached for your consideration.

- Letter to you from me dated October 20, 1997, explaining that US 301 is designated a "STAR" (Sensitive to Area Residents) facility on the MPO's LRTP, indicating that Alternative "C" is preferred, and explaining that the limits of the referenced project are not consistent with the adopted 2015 LRTP.

- Letter to Scott Farash from me dated December 29, 1997, urging the Department to pursue alternative "C" as the preferred typical section.

- Letter to Scott Farash from Robert Hunter, Executive Director of the Hillsborough County City-County Planning Commission, explaining that the "suburban" section (alternative "D") is not consistent with the Planning Commission's long term vision to encourage more compact, pedestrian oriented development within the urban development area.

- Letter to Scott Farash from Gena Torres, Hillsborough County Bicycle/Pedestrian Coordinator, dated March 9, 1998, indicating that the Bicycle Advisory Committee felt that an "urban section" with

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Metropolitan Planning Organization
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www.plancom.org

signed and marked bicycle facilities, would be more appropriate for this area of US 301.

- Letter to Scott Farash from me dated March 16, 1998, pointing out that the US 301 project is within the "Urban Service Area" (a Comprehensive Plan designation) and that the MPO had adopted goals and objectives that promote the application of "urban design concepts to roadway capacity improvements located within the Urban Service Area". We again pointed out that US 301 was designated as a STAR facility in the adopted LRTP and urged the Department to "consider the fact that this roadway will have a very long useful life, and based on the way the development characteristics are expected to change, to seriously consider the urban section as the most appropriate for this project".

We again request that the Department select the urban section (alternative "C") as the most appropriate design for the referenced project.

Should you have any questions on the above or wish to discuss it further, please call me at 272-5940.

Sincerely,

Joe Zamlich for

Lucilla L. Ayer, AICP
Executive Director

Attachments: Letter from Lucie Ayer dated October 20, 1997
Letter from Lucie Ayer dated December 29, 1997
Letter from Robert Hunter dated February 10, 1998
Letter from Gena Torres dated March 9, 1998
Letter from Lucie Ayer dated March 16, 1998

cc: Scott Paine, Chairman, Hillsborough MPO

255362.8

FLORIDA DEPARTMENT OF TRANSPORTATION

LAWTON CHILES
GOVERNOR

11201 N. McKINLEY DRIVE * TAMPA, FL 33612-6403 * (813) 975-6077 * 1-800-226-7220
PD&E Department M.S. 7-500

THOMAS F. BARRY, Jr.
SECRETARY

July 22, 1998

Ms. Lucilla L. Ayer, AICP
Executive Director
Hillsborough County Metropolitan Planning Organization
601 E. Kennedy Boulevard, 18th Floor
P.O. Box 1110
Tampa, FL 33601-1110

RE: WPI Seg. No. 255362 1/ FAP No. XU-311-1(33)
U.S. 301 PD&E Study from I-4 to Fowler Avenue

Dear Ms. Ayer:

This is in response to your letter delivered at the June 30, 1998, Public Hearing requesting an urban typical section for this project.

First, I would like to respond to your concern about accommodating public transit and alternative modes of transportation. The suburban section for this project has all of the bicycle and pedestrian amenities typically associated with an urban section. It has a sidewalk on each side of the roadway for pedestrian use. Pedestrian signals and crosswalks are to be constructed at the signalized intersections as part of this project. On the bridges, separate walkways for pedestrians are provided. For bicyclists, a five foot wide paved shoulder is available for their use.

Although there are no existing bus routes along this section of U.S. 301, the Department recognizes the importance of allowing for the expansion of bus service to this area. As the area develops and the need for public transportation increases, bus pads and bus shelters can be added at future bus stop locations by constructing a side drain and filling in the swale. Bus bays can be actually added more easily to a suburban section than an urban section since there are no stormwater inlets or curb and gutter to reconstruct.

The preferred alternative was selected after a thorough analysis considering all factors including engineering principles, environmental and social impacts, costs, and comments from the public.

The selection process is outlined below.

Alternatives "A" and "B", the two rural sections, were rejected due to their higher cost and environmental impacts. These alternatives required ROW acquisition along the entire project length.

greatly increasing the total cost of the project. The wetland and floodplain impacts were higher than the other alternatives, "C" and "D", which fit in the existing ROW. Business and residential relocations would also be required for Alternatives "A" and "B". The two remaining Alternatives, C and D were then compared to select the preferred alternative.

The suburban section, Alternative "D" has the following advantages over the urban section, Alternative "C": (These advantages were stated previously in our responses to your correspondence attached to your June 30th letter.)

- Safety: The posted speed is currently 55 mph for most of the project, with a high percentage of truck traffic due to the industrial buildings and warehouses along U.S. 301. The roadway's clear zone, sight distance, and relatively low number of sidestreets and driveways allow traffic to travel safely at this speed. The most important advantage of the suburban section over the urban section is the added safety which the shoulder and clear zone provides, allowing drivers of errant vehicles to recover and return to the roadway without losing control. The shoulder also allows for disabled vehicles to pull off the road, reducing the likelihood of a rear-end collision.

- Cost: The suburban section, Alternative "D" is the least expensive alternative, $1.8 million less than the urban section, Alternative "C".

- Public Comments: Of the ten written comments received at the Public Workshop, four of these stated a preference for Alternative "D", the suburban section. The MPO's letter was the only one favoring Alternative "C". The other five comments did not express a preference for any of the alternatives. Comments from the Public Hearing.

- Another advantage of the suburban section over the urban section with curb and gutter is the relative ease with which new driveway connections, right turn lanes, deceleration lanes, and bus bays can be added, without having to reconstruct curb and gutter or possibly relocate a storm water inlet.

Currently, the limits of the PD&E Study do not match the MPO's adopted 2015 LRTP. Fowler Avenue was selected as a more logical terminus of the project for two reasons. One reason is that Fowler Avenue has an interchange on I-75 near U.S. 301. The other reason in that a traffic analysis showed the need for four lanes out to Fowler Avenue in order to meet the minimum Level of Service for U.S. 301 in the Design year, 2020. We ask that the MPO extend the northern limit of the project from Harney Road to Fowler Avenue in the 2020 LRTP so that the limits are consistent.

Thank you for your comments and interest in this project. The Department will make a final decision on the preferred alternative after all comments from the Public Hearing are received and considered.

Sincerely,

Jeraldo Comellas, P.E.
Acting PD&E Engineer

JC/SF/RKS
cc: K. Hartmann, J. King

APPENDIX C

Summary of Comments Received from Public Meetings

S.C. JC
SF SF
HA PS
file

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COMMENTS AND RECOMMENDATIONS

PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY
PUBLIC ALTERNATIVES WORKSHOP

WORK PROGRAM ITEM NO. 7113598
STATE PROJECT NO. 10260-1509

U.S. 301
I-4 to Fowler Avenue (S.R. 582)
Hillsborough County, Florida

RECEIVED
97 OCT -8 PM 2:50

Name: Brenda Enfinger
Address: 9124 E Nadeje Ave
City: Tampa State: FL Zip: 33637
Telephone: Work 626-4895 daytime
Home 985-1890

Note: Please sign and return to a FDOT representative or mail to: Michael J. Coleman, P.E., District Seven PD&E Engineer, 11201 N. McKinley Drive, Tampa, Florida 33612-6403. Please have comments postmarked by October 9, 1997 so project development may proceed.

In reviewing the proposed plans I believe plan "D" would best serve our neighborhood needs.
We island homes are sandwiched in by I-75 & the by-pass canal. The widening of US 301 will add to the noise level we will now live with and it will bring more traffic closer to our homes. Plan "D" keeps the traffic the furthest away.
As to retention ponds I would not think you would need a retention pond on the by-pass side of a hill. It would seem the ponds on the property on the east side of US 301 below the Strickland property. I believe the property is called Bay City Tree Farms. This land is flooded every rain storm as it is a natural low spot for our area.
I would also like to see a traffic light installed at the intersection of Rankin-Kahlil Rd & US 301 as this is our only way out and with 4 lanes crossing it will cause more traffic hazards. It could be placed on a timing light & only change as needed.
I would be glad to volunteer any input you might need. Our neighborhood is comprised of 20 + year owners & ownership residents. We have been through quite a bit in planning. Please call on us.

(Use Reverse Side If Necessary)

7113598.04

COMMENTS AND RECOMMENDATIONS

PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY
PUBLIC ALTERNATIVES WORKSHOP

RECEIVED FDOT
97 OCT -8 PM 2:51

WORK PROGRAM ITEM NO. 7113598
STATE PROJECT NO. 10260-1509

U.S. 301
I-4 to Fowler Avenue (S.R. 582)
Hillsborough County, Florida

Name: RONALD L & MARTHA L. MOORE
Address: 9025 E. NAVAJO AVENUE
City: TAMPA State: FL Zip: 33637
Telephone: 813-985-3723- OR WORK 813 626 2136

Note: Please sign and return to a FDOT representative or mail to: Michael J. Coleman, P.E., District Seven PD&E Engineer, 11201 N. McKinley Drive, Tampa, Florida 33612-6403. Please have comments postmarked by October 9, 1997 so project development may proceed.

I WISH TO PICK PLAN "D"
I THINK POND FOR RETENTION SHOULD BE AT LOWER LEVEL. CLOSER TO RAULERSON RANCH ROAD.
I WOULD LIKE TO BE NOTIFIED OF ANY MEETINGS ON THIS ISSUE.
THANK YOU FOR YOUR TIME

Ronald L. Moore

(Use Reverse Side If Necessary)

7113598.09

COMMENTS AND RECOMMENDATIONS

PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY
PUBLIC ALTERNATIVES WORKSHOP

WORK PROGRAM ITEM NO. 7113598
STATE PROJECT NO. 10260-1509

U.S. 301
I-4 to Fowler Avenue (S.R. 582)
Hillsborough County, Florida

RECEIVED FDOT
97 OCT -9 PM 2:34

Name: Mr. & Mrs. C. Wheelock
9919 Highway 301 N.
Tampa, FL 33637

City: _____ State: _____ Zip: _____

Telephone: 813 985-2901

Note: Please sign and return to a FDOT representative or mail to: Michael J. Coleman, P.E., District Seven PD&E Engineer, 11201 N. McKinley Drive, Tampa, Florida 33612-6403. Please have comments postmarked by October 9, 1997 so project development may proceed.

Dear Sir, Our suggestion ! Block 9919-301 N.
Having a "median" seems to be more of a nuisance than a help with a 4 lane road. We feel the Right of Way clearly marked as the existing one now — keeps the flow of traffic more fluid.
Hope you contact us if this is not expressed clearly.
Looking forward to the improvements
Thanks —
Ruth & Cliff Wheelock
Cosmic Book Center

(Use Reverse Side If Necessary)

COMMENTS AND RECOMMENDATIONS

PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY
PUBLIC ALTERNATIVES WORKSHOP

WORK PROGRAM ITEM NO. 7113598
STATE PROJECT NO. 10260-1509

U.S. 301
I-4 to Fowler Avenue (S.R. 582)
Hillsborough County, Florida

Name: DENNIS LAWSTON
Address: 8011 N HWY 301
City: TAMPA State: FLA Zip: 33637
Telephone: 935-7541

Note: Please sign and return to a FDOT representative or mail to: Michael J. Coleman, P.E., District Seven PD&E Engineer, 11201 N. McKinley Drive, Tampa, Florida 33612-6403. Please have comments postmarked by October 9, 1997 so project development may proceed.

ALT (D) LOWER COST IN RIGHT-OF-WAYS

INTERESTED IN SEEING NE OUTLER 301 + WALKER FOR ROAD?

(Use Reverse Side If Necessary)

COMMENTS AND RECOMMENDATIONS

PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY
PUBLIC ALTERNATIVES WORKSHOP

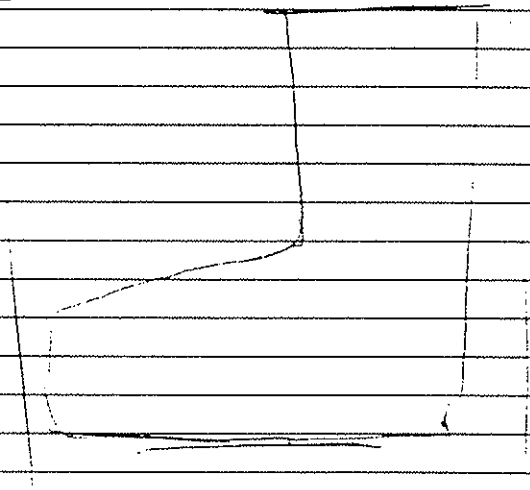
WORK PROGRAM ITEM NO. 7113598
STATE PROJECT NO. 10260-1509

U.S. 301
I-4 to Fowler Avenue (S.R. 582)
Hillsborough County, Florida

Name: John A. Otte Jr Trust (John Coffill)
Address: 7439 East Hillsborough Ave
City: Tampa State: FL Zip: 33610
Telephone: 813 621 0679

Note: Please sign and return to a FDOT representative or mail to: Michael J. Coleman, P.E., District Seven PD&E Engineer, 11201 N. McKinley Drive, Tampa, Florida 33612-6403. Please have comments postmarked by October 9, 1997 so project development may proceed.

Pond Site 2 - Consideration should be given to
locating pond to align with property lines.
Appears that approximately 100' lies on property
to North.
Pond could be shifted deg-leg.
Maybe here



(Use Reverse Side If Necessary)

COMMENTS AND RECOMMENDATIONS

PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY
PUBLIC ALTERNATIVES WORKSHOP

WORK PROGRAM ITEM NO. 7113598
STATE PROJECT NO. 10260-1509

U.S. 301
I-4 to Fowler Avenue (S.R. 582)
Hillsborough County, Florida

Name: HENRY REIDENBACH (STEINBRENNER & ASSOC.)
Add.: 5012 LEMON ST.
City: TAMPA State: FL Zip: 33609
Telephone: 813-289-0502

Note: Please sign and return to a FDOT representative or mail to: Michael J. Coleman, P.E., District Seven PD&E Engineer, 11201 N. McKinley Drive, Tampa, Florida 33612-6403. Please have comments postmarked by October 9, 1997 so project development may proceed.

I AM IN FAVOR OF THIS EXPANSION

(Use Reverse Side If Necessary)

Attention Scott Farnsin P E

COMMENTS AND RECOMMENDATIONS

PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY
PUBLIC ALTERNATIVES WORKSHOP

Alternative 'D' supporter

J.C.

WORK PROGRAM ITEM NO. 7113598
STATE PROJECT NO. 10260-1509

U.S. 301
I-4 to Fowler Avenue (S.R. 582)
Hillsborough County, Florida

Name: Ina Kennerson
Address: 6843 Magic Lane
City: Tampa State: FL Zip: 33610
Telephone: 626-2341

Note: Please sign and return to a FDOT representative or mail to: Michael J. Coleman, P.E., District Seven PD&E Engineer, 11201 N. McKinley Drive, Tampa, Florida 33612-6403. Please have comments postmarked by October 9, 1997 so project development may proceed.

There does not need to be a four lane road built in front of this property as the county is installing a Major intersection at Sweetwater Blvd. just south of the Sligh Ave & 301 intersection. This intersection should be sufficient to handle the traffic flow off of and on to Bloomingdale Airport.

I prefer the alternative "D" as a possible option to the widening of US 301

Please call me for any other input you may wish.

(Use Reverse Side If Necessary)

C JC SC SF LL PS FILE 7113598.07

RECEIVED
97 SEP 16 PM 12:57

STEINER & ASSOCIATES

SEPTEMBER 15, 1997

MR. MICHAEL J. COLEMAN, P.E.
DISTRICT PD&E ENGINEER
FLORIDA DEPT. OF TRANSPORTATION
11201 N. MCKINLEY DRIVE
TAMPA, FL 33612-6403

RE: SP#: 10260-1509/WPI#: 7113598
HILLSBOROUGH COUNTY/U.S. 301 PD&E STUDY FROM I-4 TO FOWLER AVENUE

Dear Mr. Coleman,

We own five(5) communities that will be effected by the subject road improvement.

We support the project and encourage you to expedite the construction.

Very truly yours,

Nelson C. Steiner

NCS/pjm

ns\memo

Licensed Real Estate Broker • Investment Real Estate • Manufactured Home Communities
5012 Lemon Street • Tampa. Florida 33609 • Tampa (813) 289-0500 • Fax (813) 289-2617

COMMENTS AND RECOMMENDATIONS

PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY
PUBLIC ALTERNATIVES WORKSHOP

WORK PROGRAM ITEM NO. 7113598
STATE PROJECT NO. 10260-1509

U.S. 301
I-4 to Fowler Avenue (S.R. 582)
Hillsborough County, Florida

Name: Elmer L. Singletary representing J.H. Williams Oil Company, Inc.
Address: 1237 East Twiggs Street, P.O. Box 439
City: Tampa State: FL Zip: 33601-0439
Telephone: (813) 228-7776

Note: Please sign and return to a FDOT representative or mail to: Michael J. Coleman, P.E., District Seven PD&E Engineer, 11201 N. McKinley Drive, Tampa, Florida 33612-6403. Please have comments postmarked by October 9, 1997 so project development may proceed.

I work for J.H. Williams Oil Company. Our Company owns the Tampa 301 Truck Stop real estate and Sub-Lease the property to Royce Abernathy. The facility serves the interstate, intra-state, and local fueling needs and servicing requirements of the trucking industry.

The facility serves two basic classes of trade:

1. Over the road semi class trucks that are served at our diesel fuel islands located at the northerly end of our facility. These vehicles generally enter and exit through our northern ingress/egress.
2. Passenger cars and small truck vehicles are served at our gasoline islands and this traffic enters/exits at our southern ingress/egress. Additionally this area is where our 150 seat restaurant, store and small vehicle parking is located.

The two (2) classes of trade demand separation of vehicle types for safety and functionality. We currently have this separation.

Our current northern ingress/egress is sixty (60') feet wide. The preponderance of vehicles using this entrance are semis and are North bound, right turn in. The preponderance of traffic leaving exit to the left, South bound.

FDOT is proposing to reduce this ingress/egress to forty-eight (48') feet. We suggest that this will create a degree of back-up traffic on U.S. 301 in that exiting trucks will be attempting to enter U.S.

(Use Reverse Side If Necessary)

(continued from reverse side)

301 simultaneously as arriving trucks enter. Turning radius is critical to moving trucks off of the highway. We suggest that the opening remain as is. FDOT is proposing a median cut at this ingress/egress.

Our current Southern ingress/egress is five hundred twenty-eight (528') feet South of our Northern ingress/egress and is currently one hundred ten (110') feet wide. FDOT is proposing to reduce the opening to approximately thirty-eight (38') feet ±.

The preponderance of vehicles using this ingress/egress are approaching from the South and are right turn in, when exiting the majority are left turn out, South bound. Proposed FDOT design plans will encompass a median at this point and preclude left turn out.

We suggest that a directional South bound opening be placed in the median to allow cars and small trucks exiting our Southern ingress/egress, left turn capability. We have made this suggestion in past FDOT presentations. At your public meeting held on Monday, September 29, 1997 REF 301 PD&E Study it was indicated to me by your staff people assisting at the meeting that their was a planned decel lane and opening in the median that would allow for left turn of North bound traffic at precisely the same location that we have been requesting left turn South bound.

Under the proposed, it has been suggested that traffic leaving our Southerly driveway would exit right to a median cut approximately five hundred (500') feet ± to the North and U-turn to go South.

We suggest that this method may create a greater safety problem than allowing a left turn median cut.

There is no practical solution to internal routing of cars to the northern exit.

We ask that you please give us your every consideration.

Elmer Singletary

Pat Smith CAM
Commercial Property Manager

RMC Realty Companies, Ltd.

13) 960-8154 [illegible]31
X: (813) 963-2596

1733 West Fletcher Ave.
Tampa, Florida 33612

J.C. JC RA RA PS SF SF
RS File

AND RECOMMENDATIONS

IENT AND ENVIRONMENT (PD&E) STUDY
PUBLIC HEARING

WPI Seg. No. 255362 1

U.S. 301
(Interstate 4 to Fowler Avenue)
Hillsborough County, Florida

Name: PAT Smith - RMC Realty
Address: 1733 W FLETCHER AVE
City: TAMPA State: FL Zip: 33612
Telephone: 813. 960 8154

Note: Please sign and return to a FDOT representative or mail to: Jerry Comellas Jr., P.E., Acting District Seven PD&E Engineer, 11201 N. McKinley Drive, Tampa, Florida 33612-6403. Please have comments postmarked by July 10, 1998 so project development may proceed.

I AM THE PROPERTY MANAGER FOR THE UNIVERSITY EAST S.C. MY CONCERN IS THE 2 ENTRANCES THAT FACE 301 WHICH IS THE FRONT OF THE SHOPPING CENTER WILL ONLY HAVE ACCESS INTO THE CENTER BY RIGHT LANE ONLY. CUSTOMERS MUST ACCESS TO THE REAR BEFORE THE SHOPPING CENTER — OR PASS IT TO MAKE U-TURN - THIS WOULD DEFINITELY DISADVANTAGE THE TENANTS OF THIS SHOPPING CENTER, SINCE THEY ALREADY MUST CROSS OVER FOWLER, WITH NO TRAFFIC LIGHTS. PLEASE SEND A COPY OF THE SITE MAP DISPLAYED ON THE WALL TO MY ATTENTION TO DISCUSS WITH THE OWNERS OF THE SHOPPING CENTER

(Use Reverse Side

JC RA PS SF SF File

COMMENTS AND RECOMMENDATIONS

PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY
PUBLIC HEARING

WPI Seg. No. 255362 1

U.S. 301
(Interstate 4 to Fowler Avenue)
Hillsborough County, Florida

Name: Louis & Jeanie Puttey
Address: 4608 S. Dakota St.
City: Tampa State: FL Zip: 33611
Telephone: 813/831-0651

Note: Please sign and return to a FDOT representative or mail to: Jerry Comellas Jr., P.E., Acting District Seven PD&E Engineer, 11201 N. McKinley Drive, Tampa, Florida 33612-6403. Please have comments postmarked by July 10, 1998 so project development may proceed.

Particular attention should be paid to the drainage culvert under U.S. 301 at Maisler Drive. Water from a drainage ditch running North & South just West of Hedley Road (not paved) is supposed to drain under U.S. 301 from this ditch & feed down the East Side of U.S. 301. We are concerned that this culvert be continued and improved to provide proper drainage to our property.

We also want a provision to be made for a driveway out to our property — #1397

(Use Reverse Side If Necessary)

(To Fla. D.O.T. District 7 office - Attn. Jerry Comellas Jr., Acting Dist. 7 PD&E Engineer)

Comments and Recommendations

Project Development and Environment (PD&E) Study
Public Hearing

WPI Seg. No. 255362 1

U.S. 301
(Interstate 4 to Fowler Avenue)
Hillsborough County, Florida

Name: Wayne Gochnauer
Address: 6815 Maple Lane
City: Tampa. State: Florida. Zip: 33610
Telephone: (813) 621-2632

Regards: Location of "Proposed Pond 3"

My mother, Helen Gochnauer (who has placed this property in a trust following the death of my father about a year ago), was unable to be at the June 30th meeting due to flying out that morning for a two week out of state trip. I therefor attended the meeting as a representative.

Per my conversation with Mr. Frank Schwartz at the above mentioned meeting, I understand that the site (known as Proposed Pond 3) is considered to be the sole option for a location in the applicable basin.

As this location involves a portion of our family's pasture, I would prefer to see an area [elsewhere] used, that is not in current usage. The image of preference being given to utilizing land that is currently in use over wooded areas (seemingly all such being considered as "wetlands") and higher valued land (as that with road frontage) is not a pleasant thought.

One preferred suggestion would be the combining of the basin for this area (basin 2?) with the basin to the north, with an adequately sized pond located NW of the U.S. 301 / Sligh Ave. intersection, which pond I believe is drafted as being along the Harney Canal.

There is property both to the south and east of us that is currently under-utilized.

That vacant land to the south (which would likely entail a longer pipe run if using the same proposed easement to Maple Lane) has an existing pond at the east end

which may or may not be incorporated into a highway stormwater pond. I realize that doing so may disturb the alligator(s) which makes its home there. That applies to the existing pond in the S.W. corner of our property also.

The (O'Berry) property to the east has an area of unutilized land to the north of the two existing ponds, these latter ponds being in line with the drainage ditch which is along our south property line. The outflow (to the Tampa Bypass Canal) easement would pass through this area anyway under the proposed pond location. Either a pond or an outflow easement at the northern portion of that property could involve a small former dump in the N.W. corner.

If an [inflow] easement were ruled to be required through the western portion of our property (along Maple Lane), it would preferably be located to the south of the buildings, where it would cause a lesser disturbance to its current usage. As referred to in conversation with Mr Schwartz, this would also necessitate the removal of fewer cypress trees.

Any required highway stormwater pond on the property should be located along the East side or possibly in the S.E. corner, with allowance made for that drainage which flows to the S.E. corner. If such need arises, my mother may have some input on that.

Disclaimer: The opinions expressed herein are mine, and do not necessarily reflect those of any landowners and/or other residents of this neighborhood.

Sincerely, W. Gochnauer

J.C JC RA V. PS SF SF File

COMMENTS AND RECOMMENDATIONS

PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY
PUBLIC HEARING

WPI Seg. No. 255362 1

U.S. 301
(Interstate 4 to Fowler Avenue)
Hillsborough County, Florida

Name: Louis & Jeanie Puttey
Address: 4608 S. Datura St
City: Tampa State: FL Zip: 33611
Telephone: 813/831-0651

Note: Please sign and return to a FDOT representative or mail to: Jerry Comellas Jr., P.E., Acting District Seven PD&E Engineer, 11201 N. McKinley Drive, Tampa, Florida 33612-6403. Please have comments postmarked by July 10, 1998 so project development may proceed.

Particular attention should be paid to the drainage Culvert under U.S. 301 at Maisland Drive. Water from a drainage ditch running North & South just West of Hadley Road (not developed) is supposed to drain under U.S. 301 from this ditch & flow down the East Side of U.S. 301. We are concerned that this Culvert be continued and improved to provide proper drainage to our property.

We also want a provision to be made for a driveway onto our property — #1397

(Use Reverse Side If Necessary)

Louis E. Puttey

Scott - AYI & F
255362 1.07

COMMENTS AND RECOMMENDATIONS

PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY
PUBLIC HEARING

WPI Seg. No. 255362 1

U.S. 301
(Interstate 4 to Fowler Avenue)
Hillsborough County, Florida

Name: Macedonia MB Church
Address: 9750 Rockhill Road
City: Thonotosassa State: Fla Zip: 33592
Telephone: 986-5576

Note: Please sign and return to a FDOT representative or mail to: Jerry Comellas Jr., P.E., Acting District Seven PD&E Engineer, 11201 N. McKinley Drive, Tampa, Florida 33612-6403. Please have comments postmarked by July 10, 1998 so project development may proceed.

(1) Ingress and Egress from macdonia property South of church building
(2) Traffic light at Bradley Road and 301 Highway intersection.
(3) Walk way for side road from Jackson Road to William Road. This allow space for our children to walk to and from church, resident area and Sterling Height Park. We are in need of walking space due to U lane highway and increased traffic flow.
(4) Traffic light at intersection of Walker Road and Highway 301. due to U lowd highway and school bus crossing.

(Use Reverse Side If Necessary)

2553621.07 Please Find out what their comments are? (1)

COMMENTS AND RECOMMENDATIONS

PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY
PUBLIC HEARING

RECEIVED FDOT
98 JUL -9 AM 8:20

WPI Seg. No. 255362 1

U.S. 301
(Interstate 4 to Fowler Avenue)
Hillsborough County, Florida

→ Name: Macedonia M. B. Church
Address: 9750 Rockhill Road
City: Thonotosassa State: Fla Zip: 33592
Telephone: 986-5576

Note: Please sign and return to a FDOT representative or mail to: Jerry Comellas Jr., P.E., Acting District Seven PD&E Engineer, 11201 N. McKinley Drive, Tampa, Florida 33612-6403. Please have comments postmarked by July 10, 1998 so project development may proceed.

Ruthie Anderson
Sharon Watkins
Geraldine Seabrook
Theresa R Benson
Marva V Jackson
Brenda James
Etta Mae Eberhardt
Katrina Cooper
Leon Cooper
Arnold Williams
Minnie Bethea
Ingalee Cooper
Sherell Cooper
Jakeri A. Mosley
Lorrette A. Mosley
Pearl Mosley
Jerry Mosley
J.C. Mosley
Edna L. Larry
Debra Smith
Tom Smith
Linda Burston
Priscilla Singleton
Mary C. Smith
Angela R. James
Judy A Brown
Loretta C. Hicks
Cydrena Starks
Willie Simmons
Vonda Stubbs
Tommy Simmons
Derek Starks
Charlotte Luke
Elizabeth Garrett
Henry L. Garrett
Barbara Jones

(Use Reverse Side If Necessary)

(over)

Betty Reynolds
Eva Liggins
Jannie Brown
Dinah S. Butler
Sarah E Moseley
Louise Wagner
Yvonne F. Smith

JC RA PS SESF RS File

COMMENTS AND RECOMMENDATIONS

PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY
PUBLIC HEARING

WPI Seg. No. 255362 1

U.S. 301
(Interstate 4 to Fowler Avenue)
Hillsborough County, Florida

Name: T.E. McLAUGHLIN - Hills. Co. D.P.W. - 22 FL.
Address: P.O. Box 1110
City: TAMPA State: FL Zip: 33601
Telephone: 272-5912

Note: Please sign and return to a FDOT representative or mail to: Jerry Comellas Jr., P.E., Acting District Seven PD&E Engineer, 11201 N. McKinley Drive, Tampa, Florida 33612-6403. Please have comments postmarked by July 10, 1998 so project development may proceed.

Would please like to have 2 copies of 2nd Draft Prel. ENG. Report Rev. June 1998

and -

2 copies of Alternative (Preferred) drawing of US-301 & Harney Rd. Intersection on air photo background with yellow highlight indicating proposed improvements.

Thank you

T E McLaughlin

(Use Reverse Side If Necessary)

COMMENTS AND RECOMMENDATIONS

(3)

PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY PUBLIC HEARING

RECEIVED PD&E
98 JUL -9 AM 8:20

WPI Seg. No. 255362 1

U.S. 301
(Interstate 4 to Fowler Avenue)
Hillsborough County, Florida

Name: The Nicole Community
Address: All Nations Church
City: _____ State: _____ Zip: _____
Telephone: _____

Note: Please sign and return to a FDOT representative or mail to: Jerry Comellas Jr., P.E., Acting District Seven PD&E Engineer, 11201 N. McKinley Drive, Tampa, Florida 33612-6403. Please have comments postmarked by July 10, 1998 so project development may proceed.

Ernestine Hannah
Deborah Walker
Sally Thomas
Willis Thomas
Adric Richardson
Vincent Small
Ruby B. Lindsey
Cathy Williams
John B. Williams
Kenneth Stubbs
Willie A. Tucker, Jr.
Jane Kilpatrick
Allen Kilpatrick
Ashley Thomas
Rosalind Thomas

(Use Reverse Side If Necessary)

(4)

Rev. W. T. Jackson

Enroll A. Ester

DEA Burton

Ruby R. Banks

Rosyne Starks

Elder Arvin BROWN

S.S. Clarthea BROWN

Frank Jr. wp

Eddie Johnson

Cottie M. Starks

Mr. Gregory Reynolds Sr.

Mrs. Cassie Williams

JC RA PS SZ SF

COMMENTS AND RECOMMENDATIONS RS File

PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY
PUBLIC HEARING

WPI Seg. No. 255362 1

U.S. 301
(Interstate 4 to Fowler Avenue)
Hillsborough County, Florida

Name: T.E. McLAUGHLIN - Hills. Co. D.P.W. - 22 FL.
Address: P.O. Box 1110
City: TAMPA State: FL Zip: 33601
Telephone: 272-5912

Note: Please sign and return to a FDOT representative or mail to: Jerry Comellas Jr., P.E., Acting District Seven PD&E Engineer, 11201 N. McKinley Drive, Tampa, Florida 33612-6403. Please have comments postmarked by July 10, 1998 so project development may proceed.

Would please like to have 2 copies of 2nd Draft Prel. ENG. Report Rev. June 1998

and —

2 copies of Alternative (Preferred) drawing of US-301 & Harney Rd. Intersection on air photo background with yellow highlight indicating proposed improvements.

Thank you

T E McLaughlin

(Use Reverse Side If Necessary)

SCOTT - FYI #2
255362 1 .07

COMMENTS AND RECOMMENDATIONS

PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY
PUBLIC HEARING

WPI Seg. No. 255362 1

U.S. 301
(Interstate 4 to Fowler Avenue)
Hillsborough County, Florida

RECEIVED PM
98 JUL 10 PM 4:42

Name: John A. Martin
Address: P.O. Box 82824
City: Tampa State: Fl Zip: 33682
Telephone: (813) 202-0215

Note: Please sign and return to a FDOT representative or mail to: Jerry Comellas Jr., P.E., Acting District Seven PD&E Engineer, 11201 N. McKinley Drive, Tampa, Florida 33612-6403. Please have comments postmarked by July 10, 1998 so project development may proceed.

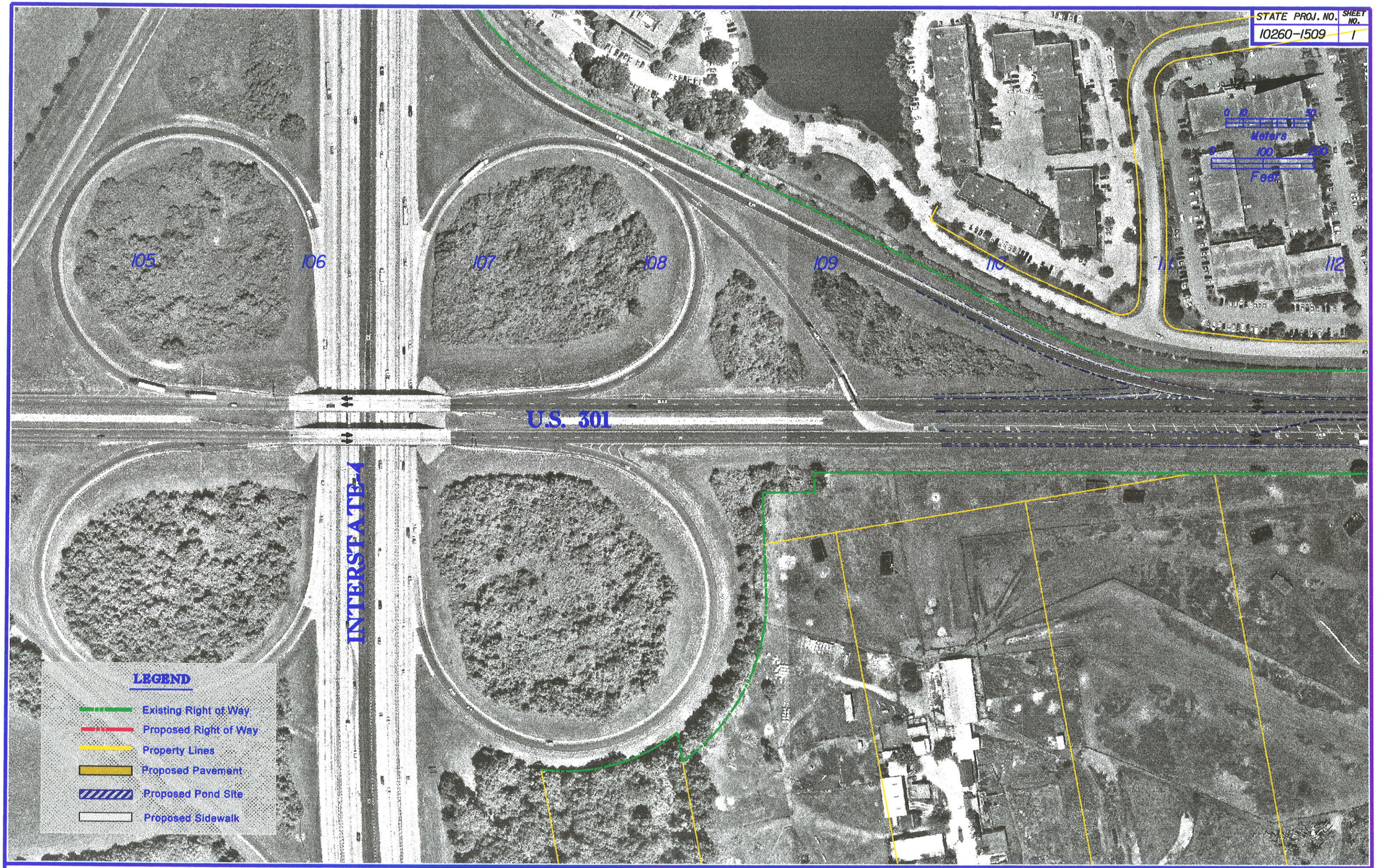
Your design apparently does not include a traffic light at the 301 truckstop which is a necessity for emerging trucks. Your design definitely does not include a traffic light at Walker Road / Rt 301 which is also a necessity due to the high volume of school buses crossing at this point. The school bus facility is at Walker Rd/ Harney Rd. Why are you trying to get school children killed?

Also, when people have a flat tire or some other car problem they generally pull off the road. Grass with a sand base could cause loss of control. It also would make changing a tire extremely dangerous. Another thing is the design of your retention ponds. Since an ecological breakdown of pollutants would be prevented, your design may be a violation of federal law.

(Use Reverse Side If Necessary)

John Martin

STATE PROJ. NO.	SHEET NO.
10260-1509	1



REVISIONS

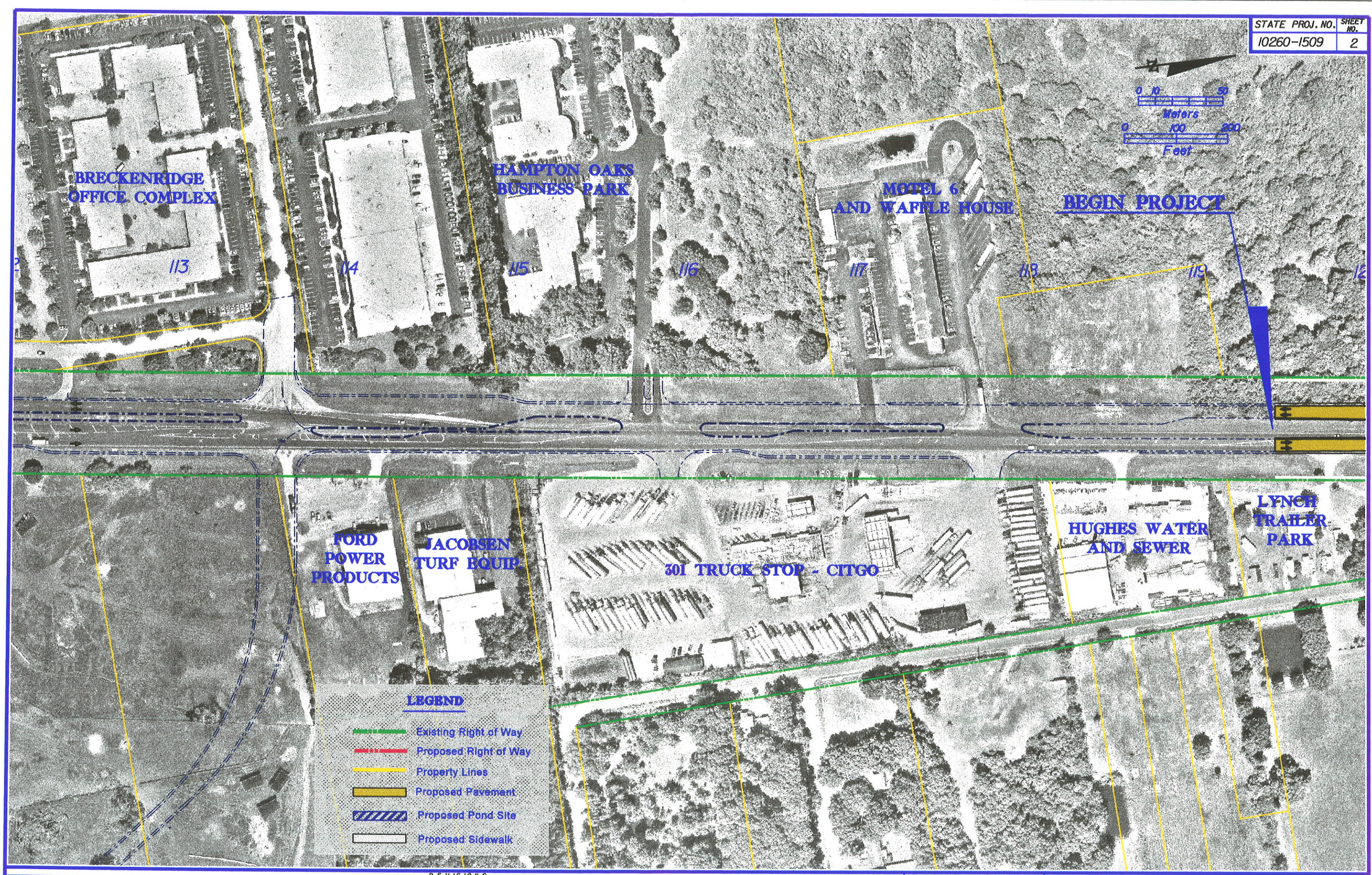
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

US 301 - I4 TO FOWLER AVE.

PREFERRED ALTERNATIVE

STATE PROJ. NO.	SHEET NO.
10260-1509	2



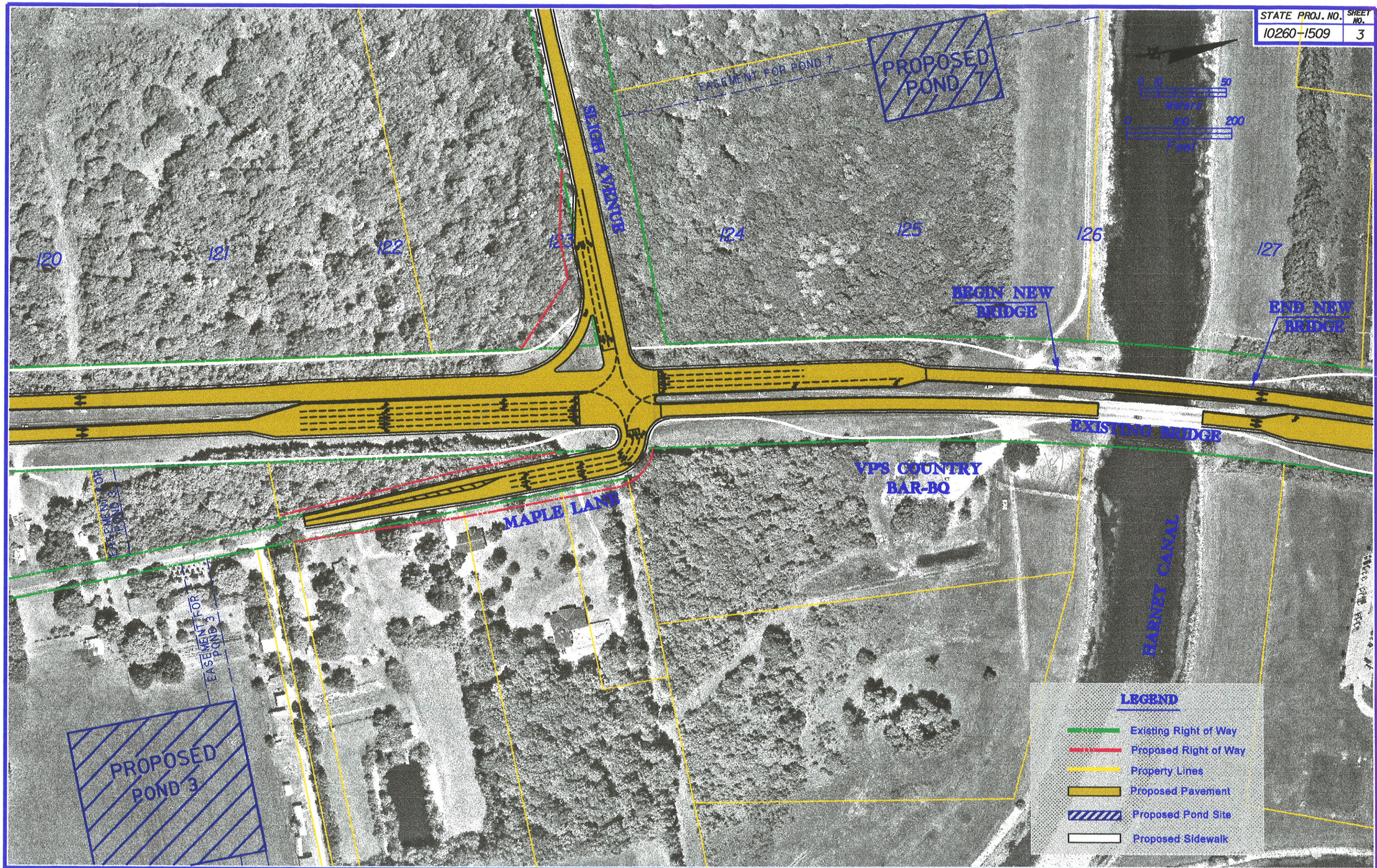
REVISIONS														
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

U.S. 301 - I-4 TO FOWLER AVE.

PREFERRED ALTERNATIVE

STATE PROJ. NO.	SHEET NO.
10260-1509	3



REVISIONS																	
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

U.S. 301 - I-4 TO FOWLER AVE.

PREFERRED ALTERNATIVE

#######SITIME#######
#######DGNSPECIFICATION#######

STATE PROJ. NO.	SHEET NO.
10260-1509	4

VOLVO DEALER

128

VALLETTA DRIVE

129

GATOR FORD

130

131

132

WEST CENTRAL SIGN INC.

133

GULF COAST THERMO KING

134

FLORIDA UTILITY TRAILERS

135

BARNS IND.

0 50 100

Meters

0 100 200

Feet

SOUTH WEST FLORIDA WATER MANAGEMENT DISTRICT

PROPOSED FLOOD PLAIN COMPENSATION SITE 10

EASEMENT FOR FLOOD PLAIN COMPENSATION SITE 10

LEGEND

- Existing Right of Way
- Proposed Right of Way
- Property Lines
- Proposed Pavement
- Proposed Pond Site
- Proposed Sidewalk

REVISIONS

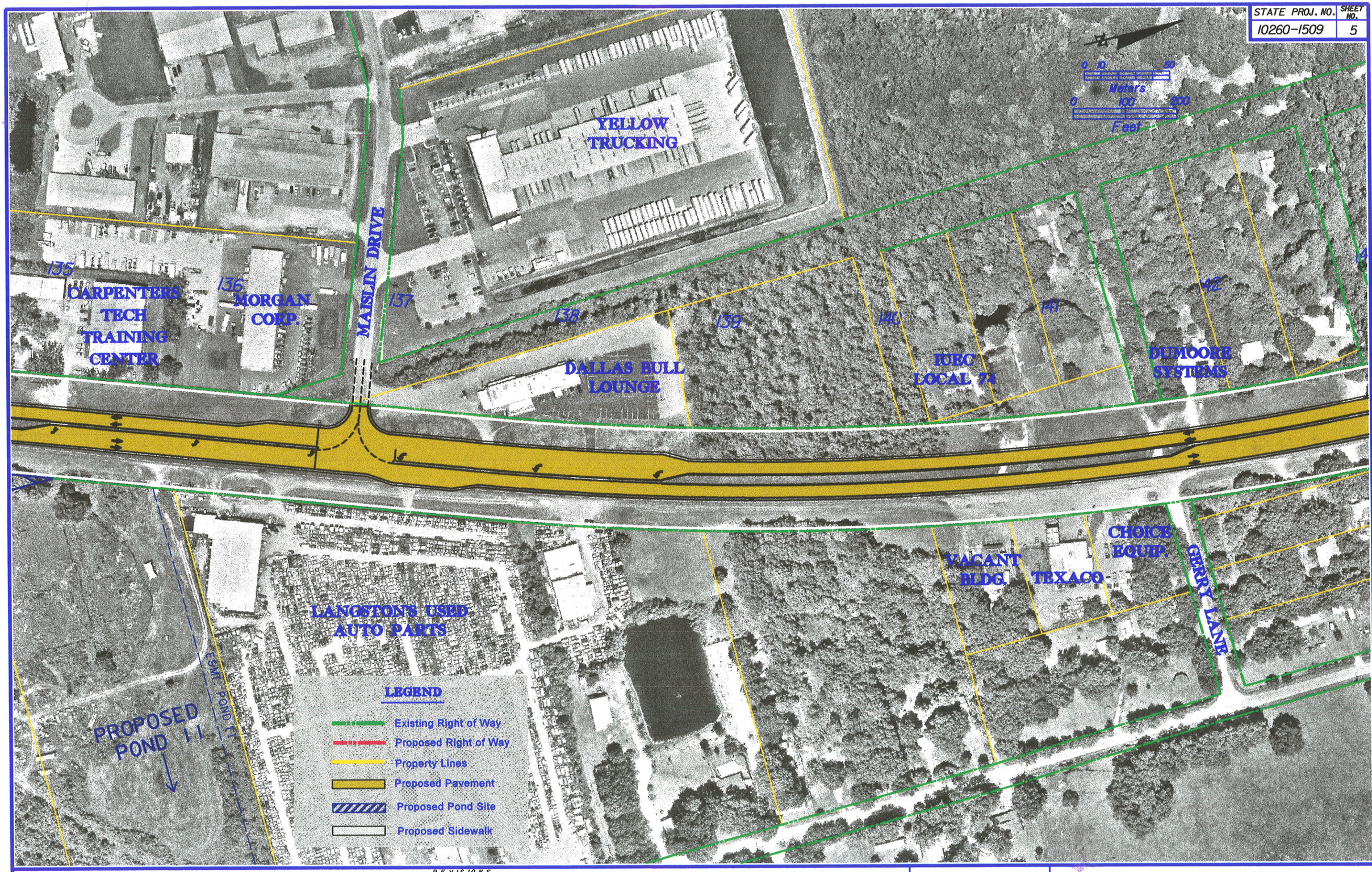
DATE	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

U.S. 301 - I-4 TO FOWLER AVE.

PREFERRED ALTERNATIVE

STATE PROJ. NO.	SHEET NO.
10260-1509	5



REVISIONS															
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

U.S. 301 - I-4 TO FOWLER AVE.

PREFERRED ALTERNATIVE

$$$$$$$ST TIME$$$$$$$
$$$$$$$DGNSPECIFICATION$$$$$$$

STATE PROJ. NO.	SHEET NO.
10260-1509	6

0 50 Meters

0 100 200 Feet

HARNEY ROAD

142 143 144 145 146 147 148 149

HARNEY BAPTIST CHURCH

NORTH SOUTH MACHINERY SALES

EASEMENT FOR POND 15

EASEMENT FOR POND 15

PROPOSED POND 15

BOWLES ROAD

LEGEND

- Existing Right of Way
- Proposed Right of Way
- Property Lines
- Proposed Pavement
- Proposed Pond Site
- Proposed Sidewalk

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

U.S. 301 - I-4 TO FOWLER AVE.

PREFERRED ALTERNATIVE

$$$$$$CVTIME$$$$$$ #MSPEC

STATE PROJ. NO.	SHEET NO.
10260-1509	7

ESTEEL ROAD

COPELAND ROAD

RAULERSON RANCH RD.

BARNETT ROAD

INTERSTATE 75

150

151

152

153

154

155

156

157

BEVERAGE CASTLE

JOSES AUTO SERVICE

MULTI-MILE TIRES

MITCHELLS AUTO BODY

TERRACE AUTO REPAIR

SUNSHINE STATE WRECKER SALES

SOUTHERN WRECKER SALES

WEEKS HYDRAULICS

REEDS APLIANC.

COMIC BOOKS

COSMIC BOOK CENTER

BAY AREA CHAIN SAW

EASEMENT FOR POND 23

EASEMENT FOR POND 23

EASEMENT FOR POND 23

0 10 30
Meters

0 100 200
Feet

LEGEND

- Existing Right of Way
- Proposed Right of Way
- Property Lines
- Proposed Pavement
- Proposed Pond Site
- Proposed Sidewalk

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

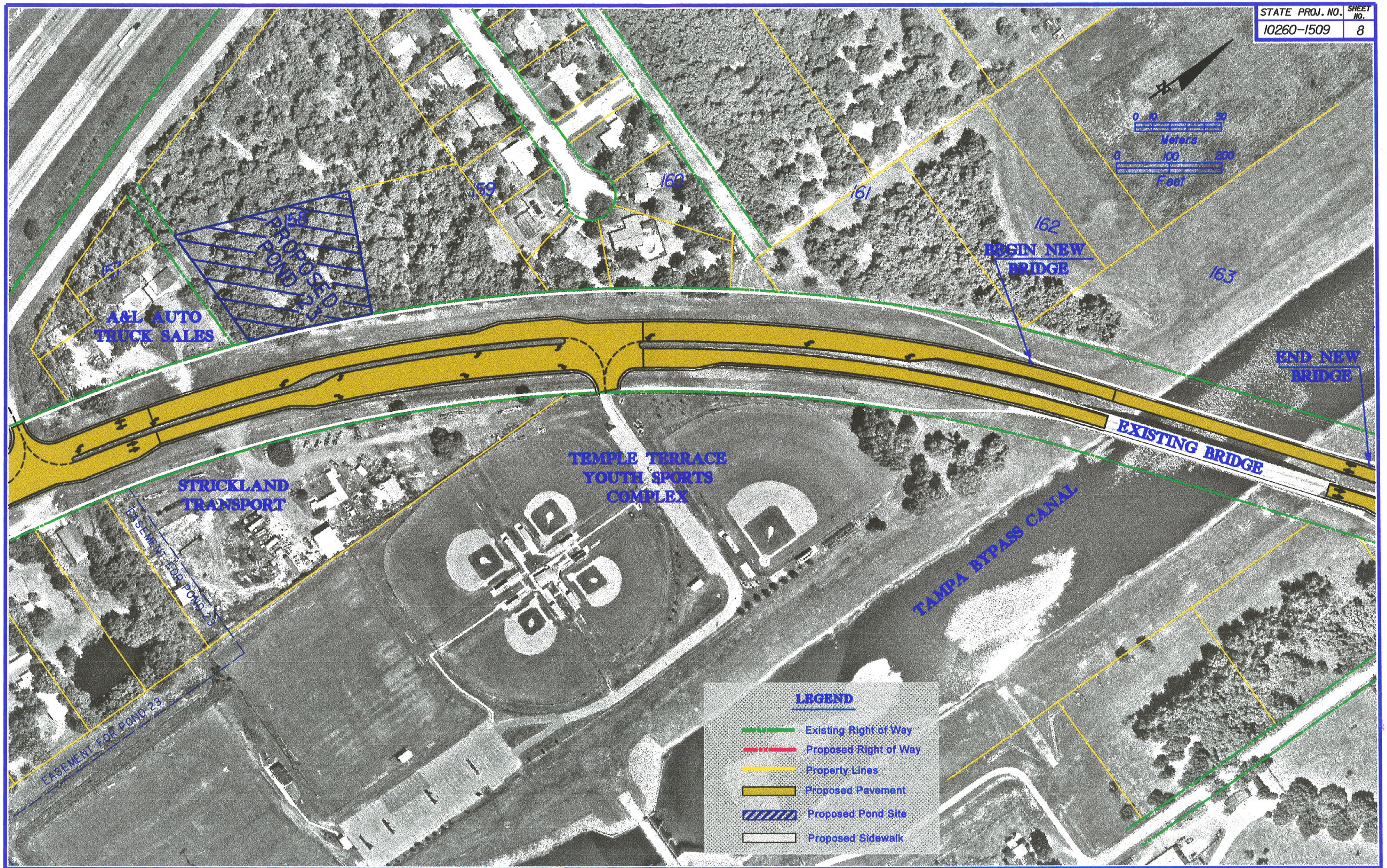
U.S. 301 - I-4 TO FOWLER AVE.

PREFERRED ALTERNATIVE

$$$$$$$$DGNSPECIFICATION$$$$$$$$

$$$$$$$$TIME$$$$$$$$

STATE PROJ. NO.	SHEET NO.
10260-1509	8



REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

U.S. 301 - I-4 TO FOWLER AVE.

PREFERRED ALTERNATIVE

STATE PROJ. NO.	SHEET NO.
10260-1509	9

TAMPA BYPASS CANAL

164

165

166

CALVART TABERNACLE CHURCH

167

168

PROPOSED POND 25

PROPOSED POND 27

169

170

EASEMENT FOR POND 25 AND 27

171

DEL RIO JUNCTION REST.

0 50 Meters

0 100 200 Feet

JEFFERSON ROAD

SUNSET MEMORY GARDENS CEMETARY

WALKER ROAD

GUITARS & CADILLACS BAR

LEGEND

- Existing Right of Way
- Proposed Right of Way
- Property Lines
- Proposed Pavement
- Proposed Pond Site
- Proposed Sidewalk

REVISIONS

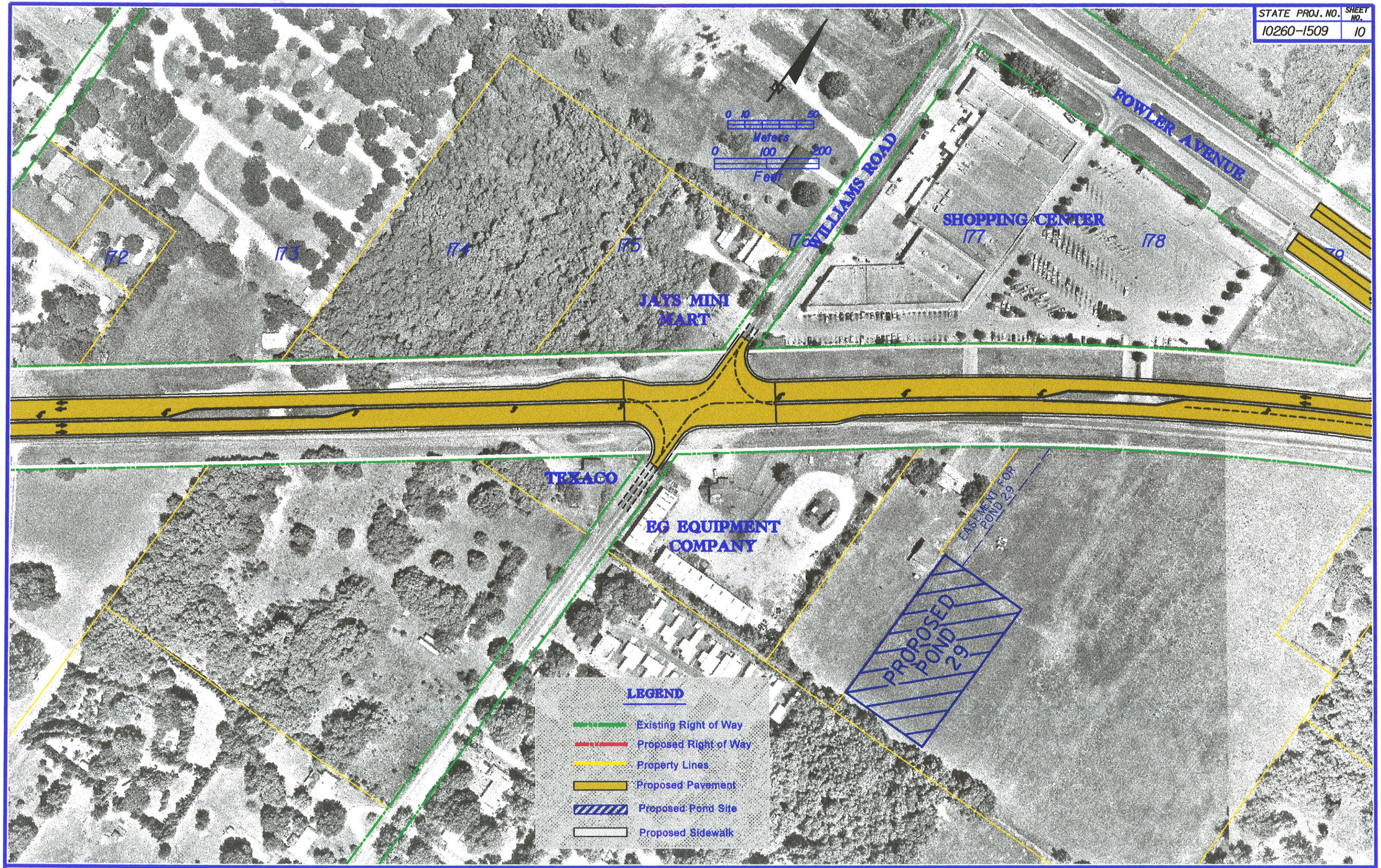
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

U.S. 301 - I-4 TO FOWLER AVE.

PREFERRED ALTERNATIVE

STATE PROJ. NO.	SHEET NO.
10260-1509	10



REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

U.S. 301 - I-4 TO FOWLER AVE.

PREFERRED ALTERNATIVE

TIME#
$$$$$$$$DGNSPECIFICATION$$$$$$$$

STATE PROJ. NO.	SHEET NO.
10260-1509	11

FOWLER AVENUE

ROCKHILL ROAD

TOM FOLSOM ROAD

U.S. 301

COMPANION ANIMAL HOSP.

BP GAS STATION

FOWLER AVENUE

180 181 182 183 184 185 186

N

0 10 50
Meters

0 100 200
Feet

LEGEND

- Existing Right of Way
- Proposed Right of Way
- Property Lines
- Proposed Pavement
- Proposed Pond Site
- Proposed Sidewalk

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

U.S. 301 - I-4 TO FOWLER AVE.

PREFERRED ALTERNATIVE

~~~~~~~/TIMES~~~~~~
########DGNSPECIFICATION########
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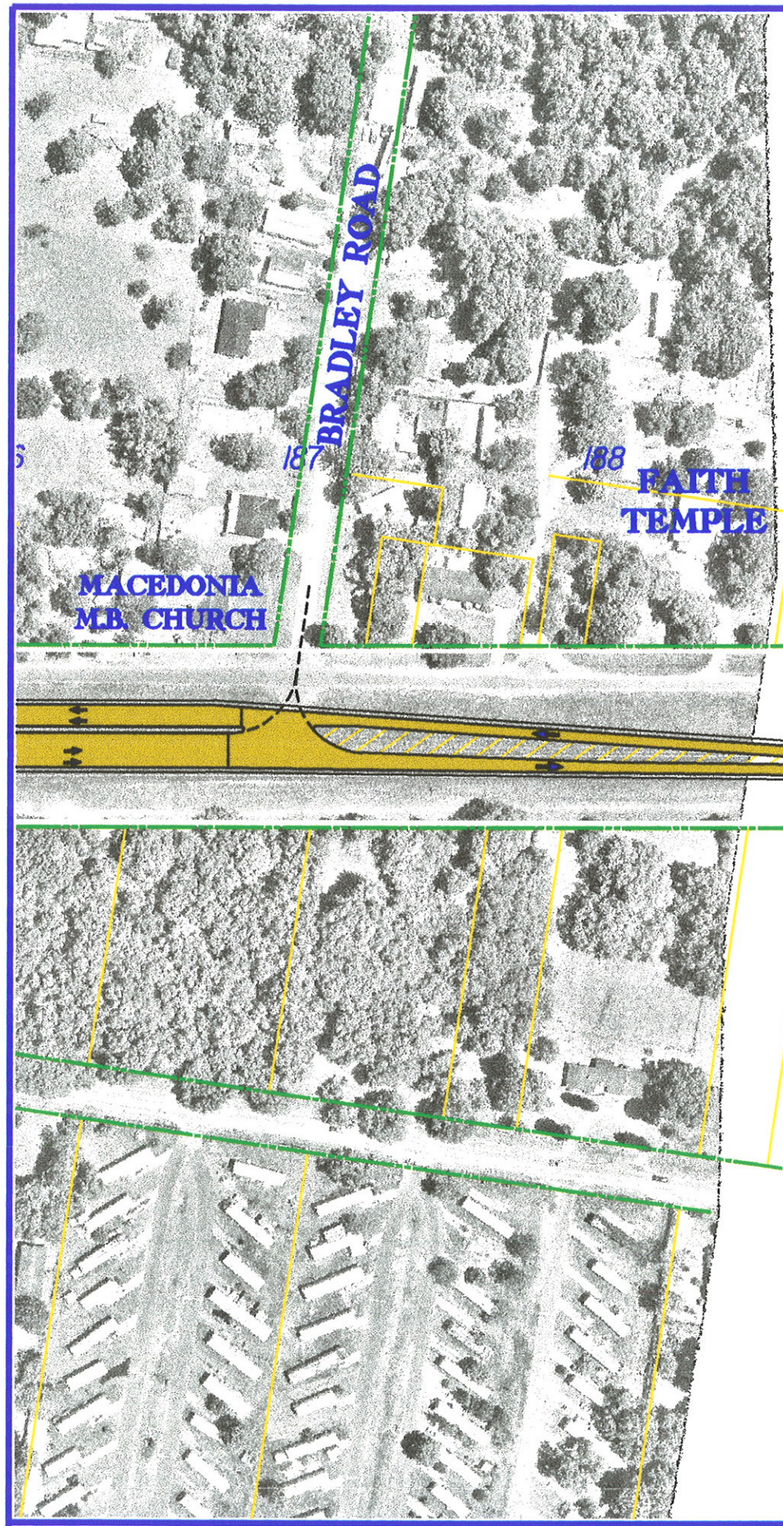
STATE PROJ. NO.	SHEET NO.
10260-1509	12



N

0 10 50
Meters

0 100 200
Feet

LEGEND

- Existing Right of Way
- Proposed Right of Way
- Property Lines
- Proposed Pavement
- Proposed Pond Site
- Proposed Sidewalk

REVISIONS														
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

U.S. 301 - I-4 TO FOWLER AVE.

PREFERRED ALTERNATIVE

$$$$$$$$DGNSPECIFICATION$$$$$$$$
$$$$$$$$TIME$$$$$$$$