

FINAL PRELIMINARY ENGINEERING REPORT

For

**US 301 (SR 43) Project Development and Environment (PD&E) Study
From Falkenburg Road to Causeway Boulevard
WPI SEG. NO.: 421140-6
Hillsborough County**

August 2008

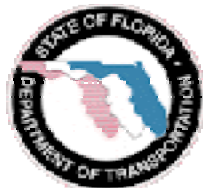
Prepared for:

Hillsborough County



In Cooperation With

Florida Department of Transportation – District 7



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August 2008

Kimley-Horn and Associates, Inc.
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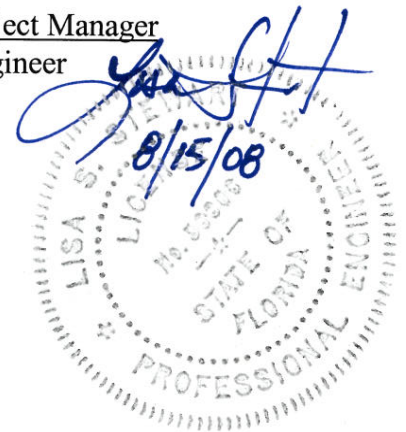


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1.0 EXECUTIVE SUMMARY

This Preliminary Engineering Report (PER) has been prepared for the Hillsborough County Engineering Services Department in cooperation with the Florida Department of Transportation (FDOT) as part of the Project Development and Environment (PD&E) Study for the widening of US Highway 301 (SR 43) from a 4-lane rural section to a 6-lane rural section. The project begins at Falkenburg Road and extends approximately 0.75 miles to the north to Causeway Boulevard.

The recommended typical section for the Build Alternative consists of six 12-foot travel lanes, three lanes in each direction, a 41-foot grass median, 12-foot outside shoulders (5 feet of which is paved) and 5-foot sidewalks will be added near the right-of-way (R/W) line from Falkenburg Road to Wes Kearney Way, thereby making the sidewalks continuous on both sides of the road for the length of the project. The existing 8-foot wide inside shoulders, 4 feet of which are paved, will be retained. The existing roadside swales will be re-graded for stormwater. The R/W width varies from 200 to 249 feet.

Two alternatives were considered, the Build Alternative and No-Build Alternative.

As a result of the Public Hearing, environmental studies and interagency coordination, the Build Alternative has been selected as the Recommended Alternative which will result in widening of US Highway 301 (SR 43) from a 4-lane rural section to a 6-lane rural section.

Commitments

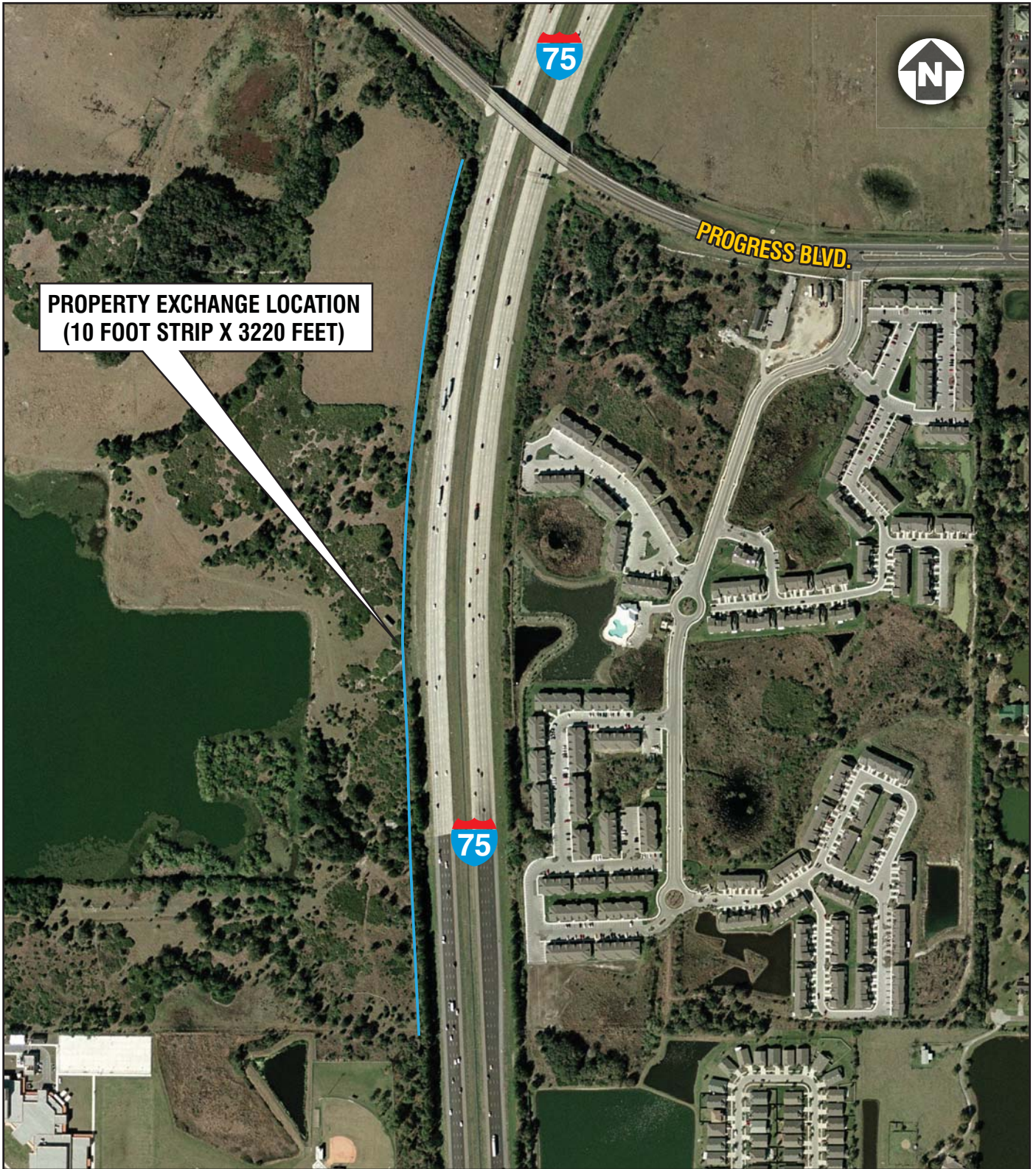
Hillsborough County is committed to the following:

- If construction activities are anticipated to occur in an area with contamination concerns, a site assessment will be performed to the degree necessary prior to final design approval by FDOT to determine levels of contamination, evaluate clean-up options and associated costs. In the event construction is proposed within an area of known contamination, the contractor will be required to implement avoidance or remediation measures required by the FDOT.
- The developer (Centex Homes) has agreed to exchange property with FDOT for the use of R/W within US Highway 301 for water quality treatment. This property is 0.74 acres consisting of a 10-foot wide, 3,220 foot-long strip, adjacent to the existing west limited access R/W of I-75 (SR 93) and just south of Progress Boulevard (SR 676) (see *Figure 1*). Hillsborough County will facilitate this exchange.

Recommendations

Based on the results of the environmental and engineering analysis, interagency coordination, and the public hearing, the alternative recommended for implementation is the Build Alternative, which consists of widening US Highway 301 within the project limits to 6 lanes (3 lanes in each direction). The Build Alternative will complete the important link of US Highway 301 in the north-south roadway transportation system, and increasing the facility from four to six lanes will enhance operation and improve safety. The improvements will also benefit emergency evacuation.

A more detailed description of the improvements is provided in Attachment 1, "Project Description," *Section 2.1.2, Proposed Improvements*.



**PROPERTY EXCHANGE LOCATION
(10 FOOT STRIP X 3220 FEET)**



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and Associates, Inc.**

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AERIAL MAP

**PROPERTY EXCHANGE LOCATION
I-75 and PROGRESS BLVD.
HILLSBOROUGH COUNTY, FL**

| | | | |
|-----------------|-------------------------|----------------------|--------------|
| SCALE: 1:500 | PROJ. NO.: 048805007 | DATE: August 2008 | FIGURE: 1 |
|-----------------|-------------------------|----------------------|--------------|

2.0 INTRODUCTION

2.1 Purpose

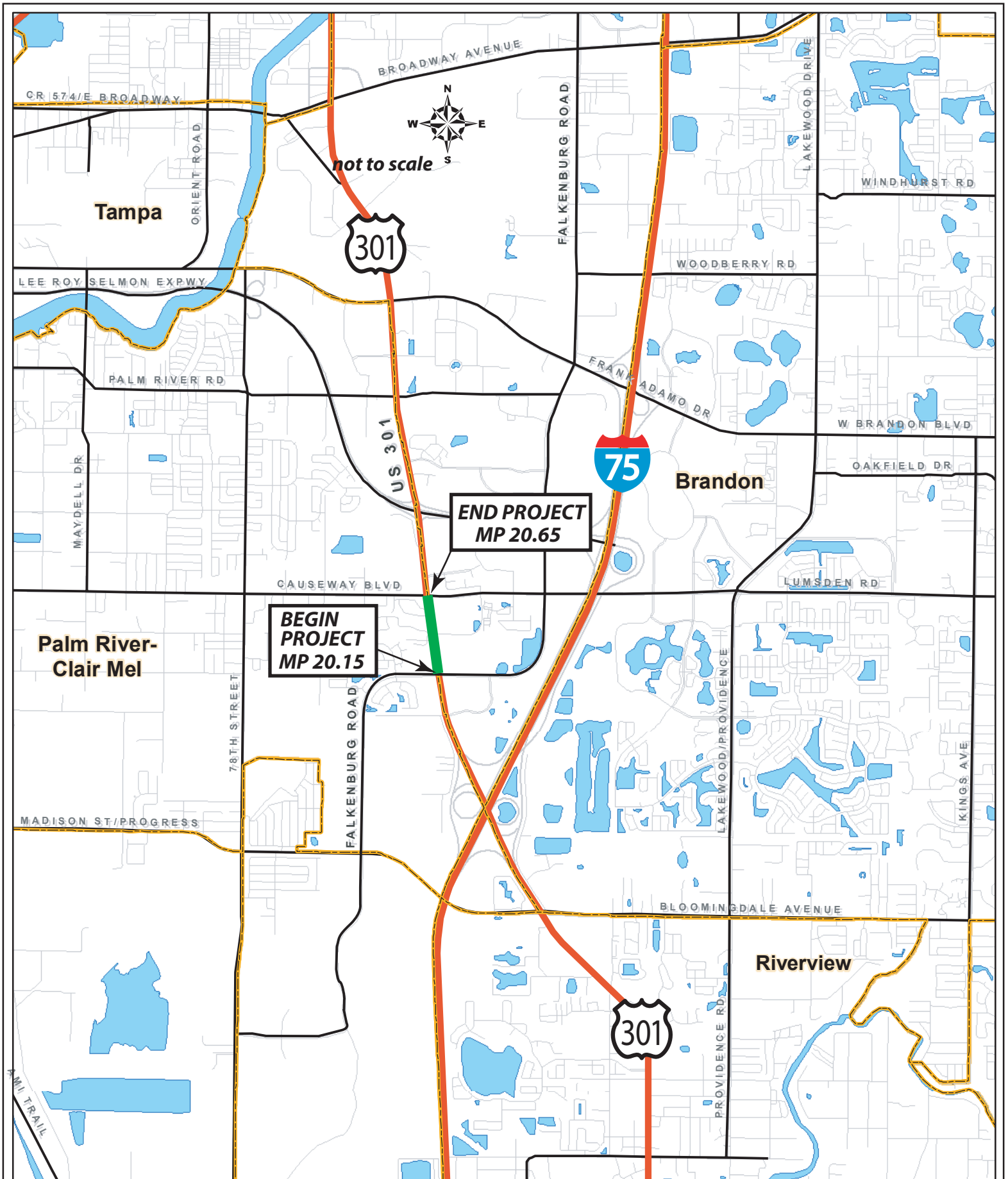
The purpose of this PER is to document the findings of the engineering evaluation for the improvements to US Highway 301 in Hillsborough County, Florida from Falkenburg Road to Causeway Boulevard as part of the PD&E Study. This report presents the engineering data and analysis needed to define the project improvements. The report also documents the existing physical features of the roadway and the existing environmental characteristics of the project corridor. The report defines the need for improvement, including the analysis of existing and projected traffic conditions establishing the requirements for the project improvements. The results of the analysis are summarized, and the analysis of the alternatives is documented. An alternative evaluation matrix, which compares the relative strengths and weaknesses of the No-Build Alternative and Build Alternatives developed for this study, is included in *Section 8.0*. This matrix helps identify the recommended alternative and perform a preliminary design analysis of the conceptual plans, including the evaluation of social, economic, and environmental impacts, as well as transportation needs. The conceptual design plans are included in *Appendix A*.

This report will serve as the document of record to move this project forward and to support decisions as the project advances through design and construction. This PD&E Study was conducted in accordance with FDOT guidelines and related federal, state, and local government requirements. Other supporting documents were prepared for this PD&E Study and include the following: Cultural Resource Assessment Survey (CRAS), SEIR, Environmental Technical Compendium, Pond Siting Report, Traffic Technical Memorandum (TTM), Air Quality Report and Noise Study Report.

2.2 Project Description

US Highway 301 is a principal arterial roadway that begins in Sarasota County, proceeds in a northeasterly direction, and exits the state of Florida northeast of the City of Jacksonville. Within the study area, US Highway 301 is a north-south 4-lane divided roadway within a wide R/W that varies from 200 feet to 249 feet (see *Figure 2*).

The Build Alternative increases the roadway from 4 lanes to 6 lanes by adding lanes to the outside of the existing lanes. The No-Build Alternative was also evaluated and was an alternative throughout the Public Hearing process.



US 301 Project Development and Environment (PD&E) Study
 From Falkenburg Road to Causeway Boulevard
 Hillsborough County, Florida

WPI SEG. No.
 421140-6

Figure 2
 Project Location Map

The recommended typical section for the Build Alternative consists of six 12-foot travel lanes, three lanes in each direction, a 41-foot grass median, 12-foot outside shoulders (5 feet of which is paved) and 5-foot sidewalks will be added near the right-of-way (R/W) line from Falkenburg Road to Wes Kearney Way, thereby making the sidewalks continuous on both sides of the road for the length of the project. The existing 8-foot wide inside shoulders, 4 feet of which are paved, will be retained. The existing roadside swales will be re-graded for stormwater. The R/W width varies from 200 to 249 feet.

3.0 NEED FOR IMPROVEMENT

3.1 Area Needs

3.1.1 System Linkage

The improvements to US Highway 301 are consistent with the Hillsborough County Metropolitan Planning Organization (MPO) 2030 Long Range Transportation Plan (LRTP). US Highway 301 is an important link in the north-south roadway transportation system, and increasing the facility from 4 to 6 lanes will enhance operation and improve safety. The improvements will also benefit emergency evacuation.

3.1.2 Transportation Demand

The improvements will increase the number of lanes on US Highway 301 consistent with sections to the north and south which are already 6 lanes. The improvements are not anticipated to create additional transportation demand on US Highway 301.

3.1.3 Federal, State, or Local Government Authority

The project is consistent with the approved local governments' comprehensive plans required under Chapter 163, F.S. The improvements have been found consistent with the local governments' comprehensive plans through DEP's review of the Work Program pursuant to Section 339.135(4) (f), F.S. As previously stated, the project is also consistent with the Hillsborough County MPO's gubernatorially approved Transportation Improvement Program (TIP) for fiscal years 2006/2007 – 2010/2011.

3.1.4 Social Demands or Economic Developments

The project improvements widen US Highway 301 from 4 to 6 lanes. Currently US Highway 301 is 6 lanes to the north and south of the project. This will eliminate the current "bottleneck" and permit a continuous 6-lane roadway through the area. This improvement will benefit the community by enhancing traffic operations.

3.1.5 Modal Interrelationships

While the automobile continues to be the vehicle of choice for the area's transportation system, Hillsborough County has recognized the need to promote alternative modes of transportation to accommodate the area's growth. As the roadway network becomes more congested, the need to develop public transit in the county and to update the bicycle transportation systems will be evaluated after the improvements have been constructed. No transit routes currently use US Highway 301. However, Route 618 is a Hillsborough Area Regional Transit (HART) route. Approximately one mile north of the project, Route 618 crosses US Highway 301 at Brandon Boulevard. It also connects the Park-N-Ride lots at J.C. Handley Park, Culbreath-Bloomindale, and Fish Hawk Fellowship Church with downtown Tampa.

3.2 **Project Corridor Needs**

3.2.1 Capacity Availability

A *Traffic Technical Memorandum* prepared for this project was completed by Kimley-Horn and Associates, Inc. (KHA) in August 2008. The year 2030 traffic volume projections were prepared by KHA. *Table 1* provides the existing 2007 and 2030 design year Average Annual Daily Traffic (AADT) volume information for the proposed project. Based upon the Florida Department of Transportation Generalized Level of Service Tables (*Table 4-1*), the existing LOS D capacity for US Highway 301 is 35,700 daily vehicles for a four-lane divided roadway section. Based upon the FDOT LOS Tables, US Highway 301 will have a LOS D capacity of 53,500 in the year 2030, with the anticipated 2030 AADT exceeding the LOS D capacity.

| US 301 From Causeway Boulevard to Falkenburg Road | AADT | LOS D Capacity* |
|---|--------|-----------------|
| Year 2008 | 36,960 | 35,700 |
| Year 2030 | 59,700 | 53,500 |

3.2.2 Safety

The improvements to US Highway 301 will help relieve congestion and should have a positive effect on a reduction in the number of crashes along the corridor. The project will also increase the outside paved shoulder width from 4 feet to 5 feet, which can accommodate bicycles. This will provide an area for bicycles and remove them from the roadway, which will enhance bicycle safety.

3.2.3 Structural

No bridges exist or will be needed because of the improvements.

4.0 EXISTING CONDITIONS

4.1 Existing Roadway Characteristics

4.1.1 Functional Classification

The functional classification of US Highway 301 is a principal arterial.

4.1.2 Typical Section

Existing US Highway 301, within the study area is a 4-lane divided rural roadway from Falkenburg Road to Causeway Boulevard (see *Photos 1, 2, and 3*).



Photo 2 – Entrance to Pavilion subdivision



Photo 1 – US Highway 301 looking north at Falkenburg Road

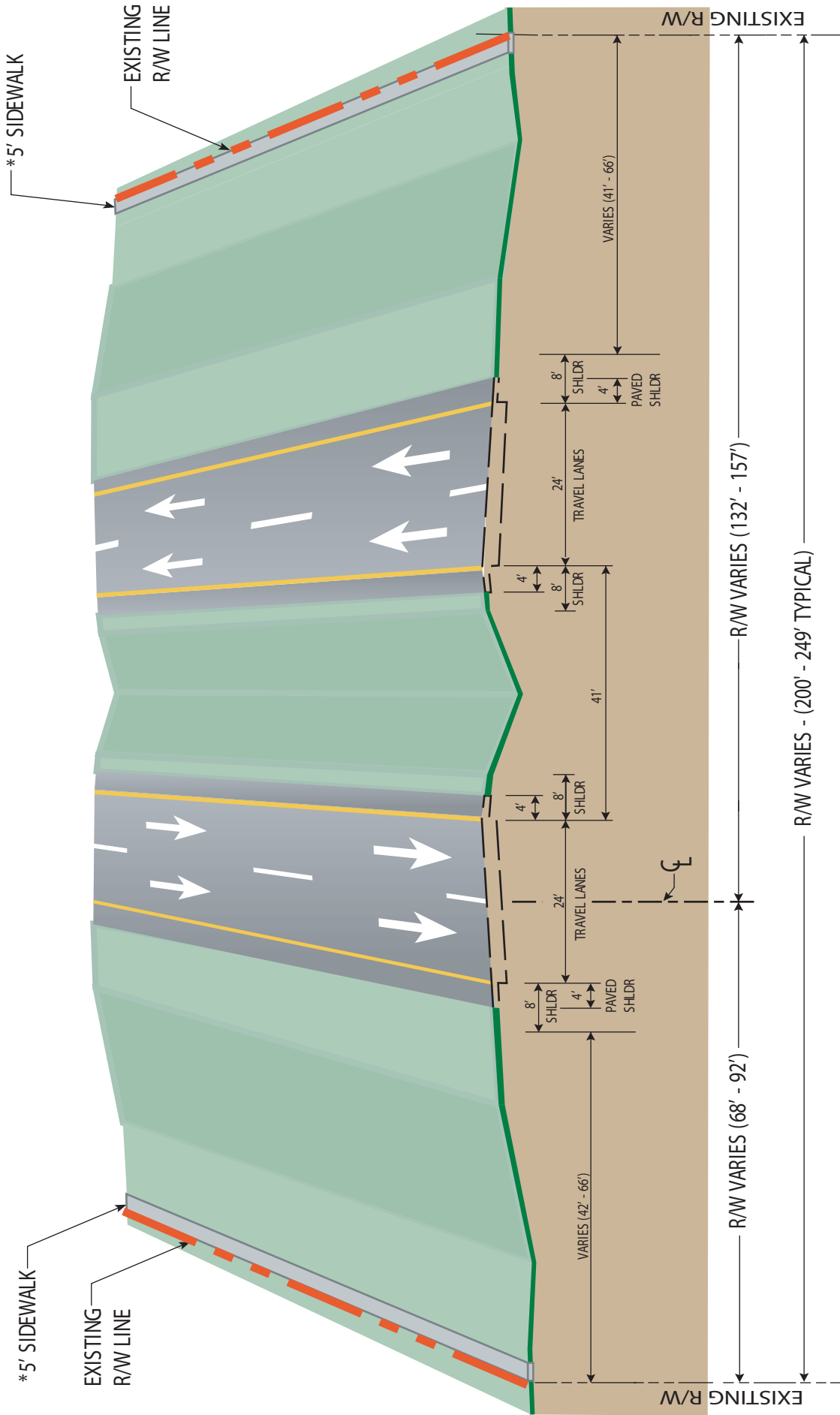
Figure 3 shows the existing typical section, which consists of four 12-foot lanes (two lanes in each direction), a 41-foot-wide grass median, and large grass swales to the outside varying in width from 41 feet to 66 feet within an existing R/W that varies in width from 200 feet to 249 feet. Eight-foot-wide shoulders, 4 feet of which are paved, are provided to the inside and outside of each roadway. Five-foot sidewalks are located near the R/W line from Wes Kearney Way to Causeway Boulevard.



Photo 3 – US Highway 301 looking south

4.1.3 Pedestrian and Bicycle Facilities

The improvements will add five-foot sidewalks from Falkenburg Road to Wes Kearney Way. Sidewalks will be continuous on both sides of the road from Wes Kearney Way to Causeway Boulevard. Twelve-foot wide outside shoulders, five feet of which is paved, will be added throughout to accommodate bicycles. Pedestrian and bicycle accommodations will be improved or provided with the recommended Build Alternative.



* Existing sidewalk is from
Wes Kearney Way to Causeway Blvd.

**EXISTING TYPICAL SECTION (4 TO 6 LANES)
US 301 (SR 43)
FROM FALKENBURG RD TO CAUSEWAY BLVD
WPI Seg. No. 421140-6**

FIGURE 3

4.1.4 Right-of-Way

The existing R/W along US Highway 301 within the project limits varies. The R/W widths along the roadway are the following (see Concept Plans in *Appendix A*):

- From Falkenburg Road (Station 1063+50) to Wes Kearney Way (Station 1076+00) R/W = 249 feet.
- From Wes Kearney Way (Station 1076+00) to Causeway Boulevard (Station 1088+50) R/W = 200 feet.

4.1.5 Horizontal Alignment

The horizontal alignment of existing US Highway 301 from Falkenburg Road is a tangent section with no deflections and no horizontal curves.

4.1.6 Vertical Alignment

The area where existing US Highway 301 is located is very flat with original ground elevations ranging from elevation 31.0 feet to 35.0 feet. The existing vertical geometry of the roadway is a few feet above original ground, and existing grades on the roadway vary from two percent to three percent.

4.1.7 Drainage

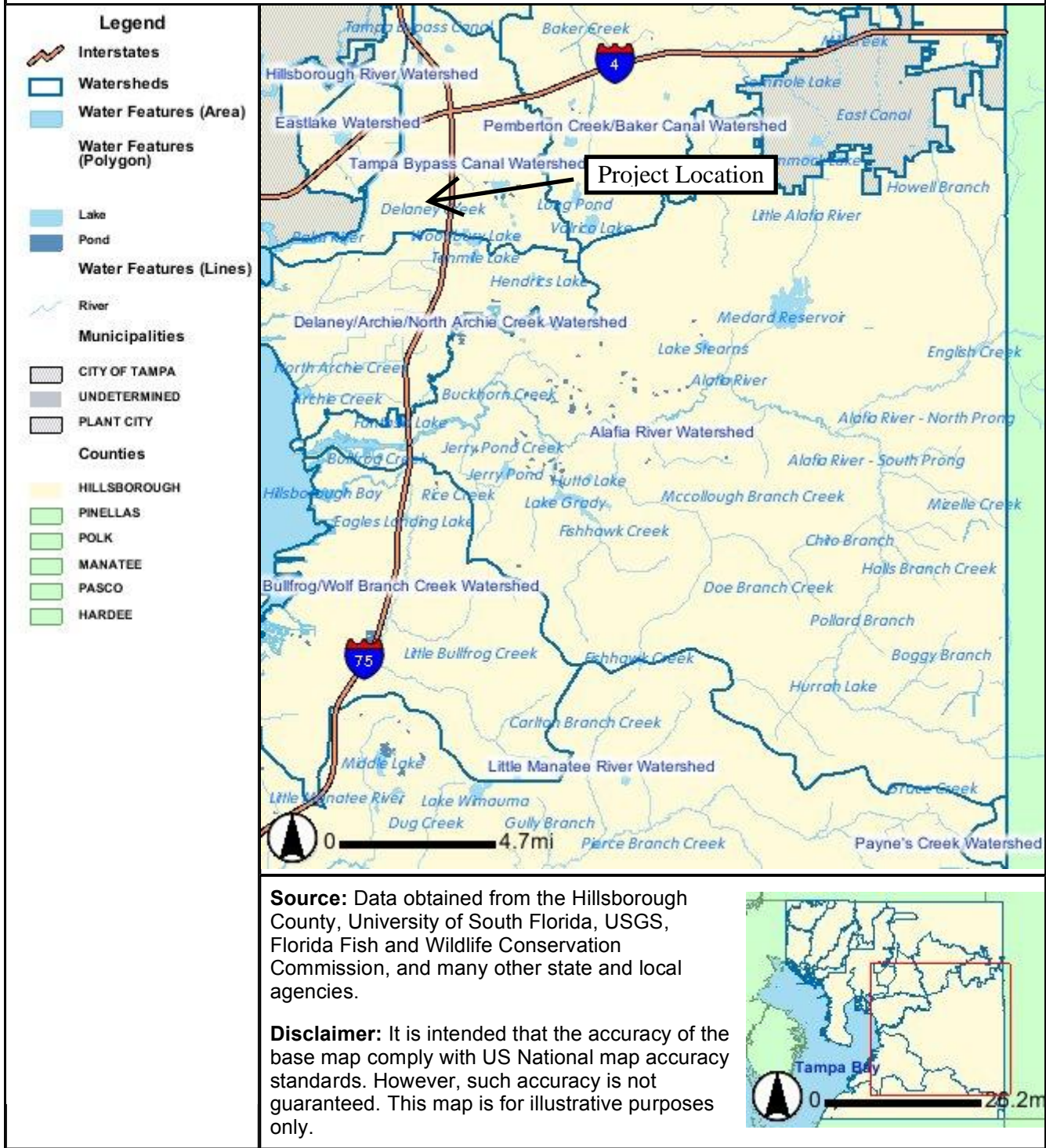
4.1.7.1 Surface Water

The US Highway 301 project lies entirely within the Alafia River Basin (see *Figure 4*). The project corridor lies entirely within the Delaney Creek Basin according to Hillsborough County and Florida Department of Environmental Protection (FDEP) (see *Figure 5*).

Existing drainage patterns were identified using the most current contour information available through the United States Geologic Service (USGS) Quadrangle Maps (see *Figure 6*) and the SWFWMD one-foot Contour Aerials (see *Appendix B*). The date for the SWFWMD one-foot aerial contour map is August 1986. Due to the dated nature of these source documents, a field review was performed to more accurately determine the current field conditions.

According to the online (09/25/06) State of Florida F.A.C., Chapters 62-302.400 and 700, there are no surface waters requiring special water quality criteria within or along the project corridor. There are no issued ERP/stormwater permits for this section of US Highway 301.

Hillsborough County Water Atlas



NOTE:
This information is preliminary and subject to change until the final design is approved.

Figure 4
US 301 Falkenburg Road to Causeway Blvd.
WPI Seg. No. 421140-6

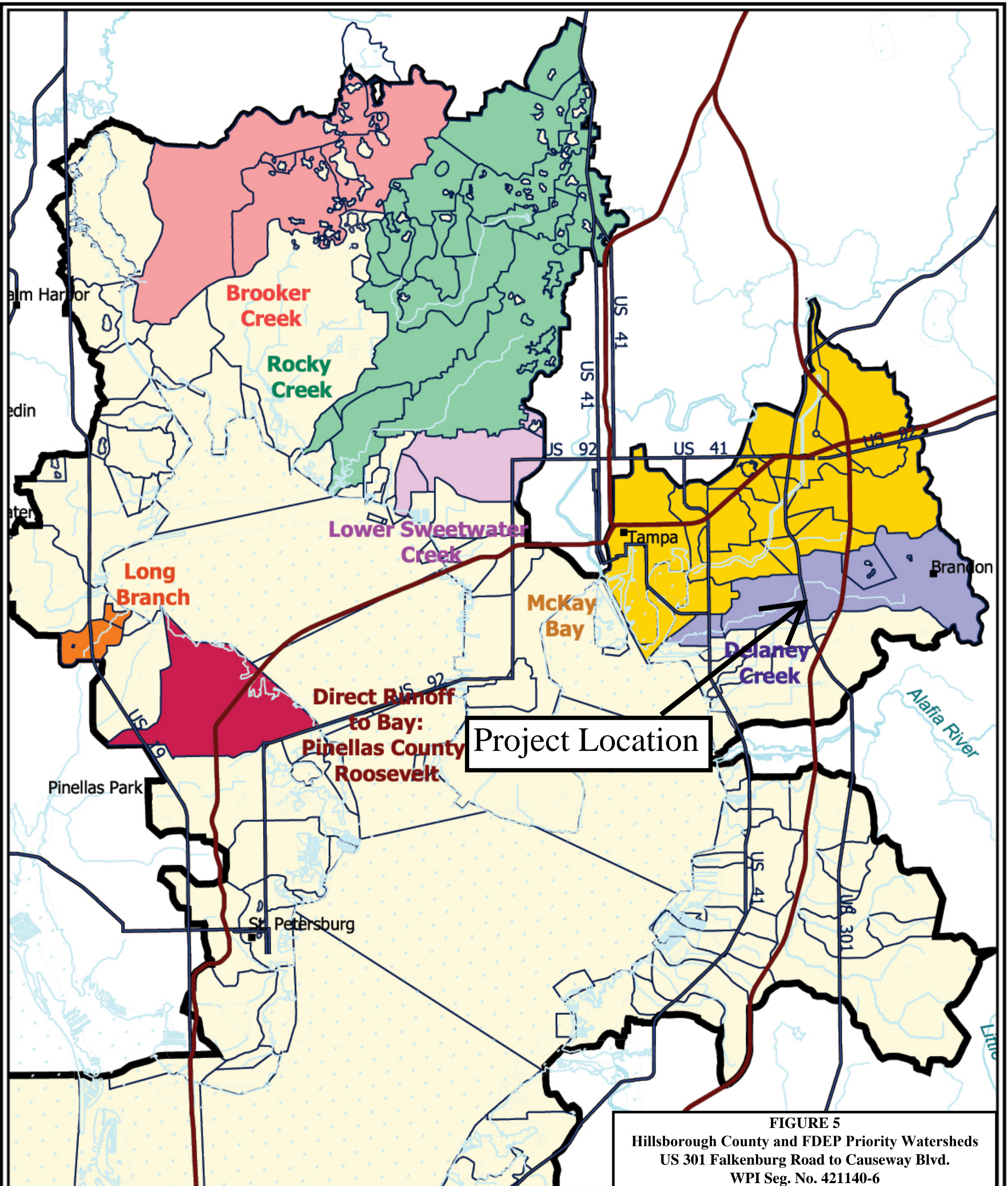


FIGURE 5
Hillsborough County and FDEP Priority Watersheds
US 301 Falkenburg Road to Causeway Blvd.
WPI Seg. No. 421140-6

Tampa Bay Basin - Group 1
Priority Watersheds

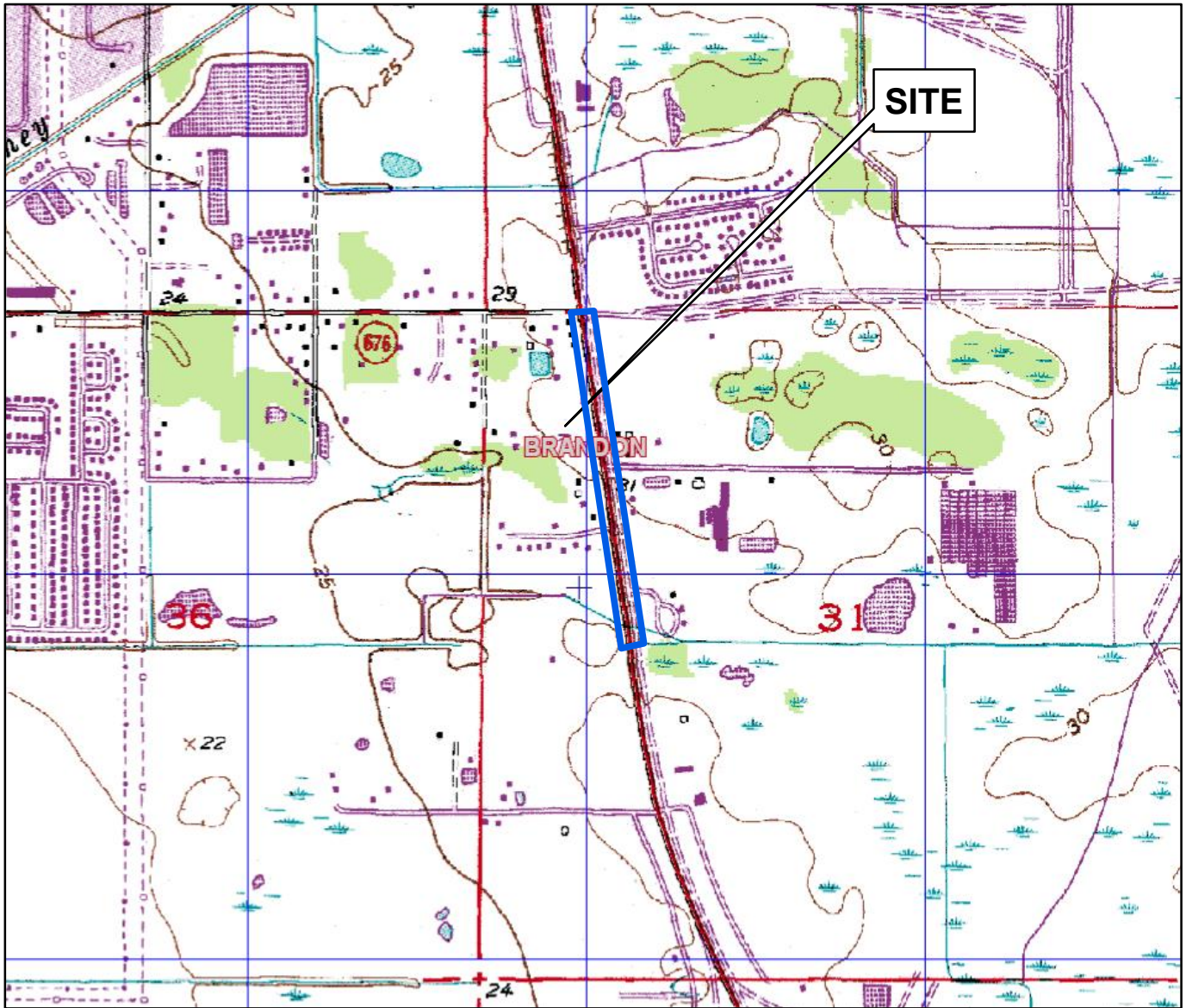


Map prepared June 25, 2003 by the Bureau of Watershed Management, Division of Water Resource Management. This map is a representation of ground conditions and is not intended for delineations or analysis of the features shown. For more information or copies, contact Hollie Brandt at (850) 245-8839, or hollie.brandt@dep.state.fl.us Location: bdpwk01 E:\atlas\group1\tampa_bay

Legend

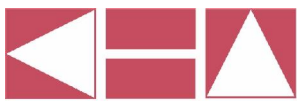
- Cities
- Interstates
- FDOT US Routes
- Major Rivers (lines)
- Water Bodies
- Tampa Bay Basin Boundary
- Tampa WBID Boundaries

- Priority Watersheds**
- Rocky Creek System
 - Delaney Creek Basin
 - Lower Sweetwater Creek Basin
 - Direct Runoff to Bay: Roosevelt Basin
 - Long Branch Basin
 - McKay Bay System
 - Brooker Creek Basin



Source: 3-D TopoQuads. 1990 DeLorme Yarmouth ME 04096. Source Data: USGS.

Section 31, Township 29 S, Range 20 E



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and Associates, Inc.**

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1987 USGS QUADRANGLE MAP

**US 301
FALKENBURG ROAD TO CAUSEWAY BLVD.
WPI SEG. NO. 421140-6**

SCALE:
1:4,164

PROJ. NO.:
048805007

DATE:
October 2006

FIGURE:
6

According to the SWFWMD aerial, there is one existing outfall point within this section of roadway located approximately at Station 1073+00. This segment of roadway currently appears to outfall directly into Delaney Creek. Another outfall exists at Falkenburg Road consisting of the roadway drainage network that flows to the west.

4.1.7.2 Groundwater

Review of existing SWFWMD permit information revealed that the seasonal high water (SHW) of the proposed pond site should be at elevation 29.1 feet NGVD. This is based upon SWFWMD permits issued on adjacent properties (ERP # 49000324.003 and 49000324.005). According to the SWFWMD aerial (*Appendix B*), the existing ground in this area is an elevation of 31 feet NGVD.

4.1.8 Geotechnical Data

According to the United States Department of Agriculture (USDA), SCS Hillsborough County Soil survey, the prevalent soils are Malabar fine sand, Myakka fine sand, Ona fine sand, and Smyrna fine sand. *Figure 7* shows the Hillsborough County USDA SCS Soils Map for the US Highway 301 Project.

The following are the definitions of those soils identified within the US Highway 301 project corridor:

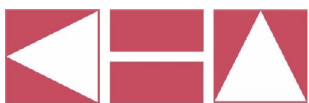
- Malabar fine sand (27) – This soil is nearly level and poorly drained. It is in low-lying sloughs and shallow depressions on the flatwoods. The slope is 0 to 2 percent. Typically, this soil has a surface layer of dark gray fine sand about 4 inches thick. The subsurface layer, to a depth of about 12 inches, is light brownish gray fine sand. In most years, a seasonal high water table fluctuates from the soil surface to a depth of about 10 inches for 2 to 6 months. Permeability is rapid in the surface and subsurface layers, slow in the subsoil, and moderately rapid or rapid in the substratum. The available water capacity is very low or low. The depressions are subject to shallow flooding during heavy rains. The hydrologic soil group (HSG) for this soil is B/D.



Sources: Aerial Express. 2003 AE, LLC. 2003 GDT, Inc.
 Southwest Florida Water Management District. GIS Data.
 USDA/SCS Soil Survey of Hillsborough County, Florida. May 1989.

LEGEND

- 27 = Malabar fine sand, 0 to 2 percent slope
- 29 = Myakka fine sand, 0 to 2 percent slope
- 33 = Ona fine sand, 0 to 2 percent slope
- 52 = Smyrna fine sand, 0 to 2 percent slope



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USDA/SCS SOILS MAP

**US 301
FALKENBURG ROAD TO CAUSEWAY BLVD.
WPI SEG. NO. 421140-6**

| | | | |
|-------------------|-------------------------|-----------------------|--------------|
| SCALE: 1:8,000 | PROJ. NO.: 048805007 | DATE: October 2006 | FIGURE: 7 |
|-------------------|-------------------------|-----------------------|--------------|

- Myakka fine sand (29) – This soil is nearly level and poorly drained. It is on broad plains on the flatwoods. The slope is 0 to 2 percent. Typically, this soil has a surface layer of very dark gray fine sand about 5 inches thick. The subsurface layer, to a depth of about 20 inches, is gray fine sand. In most years, a seasonal high water table fluctuates from the soil surface to a depth of 10 inches for 1 to 4 months and recedes to a depth of 40 inches during prolonged dry periods. Permeability is rapid in the surface and subsurface layers, moderate or moderately rapid in the subsoil and rapid in the substratum. The available water capacity is low. The HSG for this soil is B/D.
- Ona fine sand (33) – This soil is nearly level and poorly drained. It is on broad plains on the flatwoods. The slope is 0 to 2 percent. Typically, this soil has a surface layer of very dark gray fine sand about 4 inches thick. The upper part of the subsoil, to a depth of about 8 inches, is black fine sand. The lower part, to a depth of about 22 inches, is a very dark brown fine sand. In most years, a seasonal high water table fluctuates from the soil surface to a depth of 10 inches for more than 2 months and recedes to a depth of 10 to 40 inches for 6 months or more. Permeability is rapid in the surface layer, moderate or moderately rapid in the subsoil, and rapid in the substratum. The available water capacity is low or moderate. The HSG for this soil is B/D.
- Smyrna fine sand (52) – This soil is nearly level and poorly drained. It is on broad, low-lying, convex swells on the flatwoods. The slope is 0 to 2 percent. Typically, the soil has a surface layer of very dark gray fine sand about 4 inches thick. The subsurface layer, to a depth of about 12 inches, is gray fine sand. In most years, a seasonal high water table fluctuates from the soil surface to a depth of 10 inches for more than 2 months and recedes to a depth of 10 to 40 inches for 6 months or more. Permeability is rapid in the surface and subsurface layers, moderate or moderately rapid in the subsoil, and rapid in the substratum. The available water capacity is low. The HSG for this soil is B/D.

4.1.9 Crash Data

Crash data was obtained from the FDOT's Crash Analysis Reporting Program (CAR) for 2001 through 2005. Crash data for the proposed project along US 301 was reported between mileposts 20.100 and 20.700. Raw crash data provided by FDOT can be found in the *Appendix H*.

The crash data collected along U.S. 301 can be summarized statistically based on the number of crashes, the frequency of crashes, the crash rate, the critical crash rate, and the safety ratio. Crash statistics for the roadway segment of US 301 between Falkenburg Road and Causeway Boulevard are summarized below:

- Length (*miles*) = 0.52

- Number of crashes = 294
- Frequency (*per year*) = 59
- Crash Rate (*per million vehicle miles*) = 8.38
- Critical Crash Rate (*millions of vehicle miles*) = 9.14
- Safety Ratio = 0.92

In addition the crash data can be summarized by the type of crashes, fatalities, number of injuries, weather conditions, and location of crashes. From 2001 through 2005, 294 crashes were reported, and of those 294 crashes, 139 crashes resulted in 244 injuries and 0 fatalities; all other crashes were described as property damage as shown in *Table 2*.

| Year | Fatal Crash Statistics | | | Injury Crash Statistics | | Property Damage Only | Total | | |
|-------|------------------------|------------|----------|-------------------------|----------|----------------------|---------|------------|----------|
| | Crashes | Fatalities | Injuries | Crashes | Injuries | Crashes | Crashes | Fatalities | Injuries |
| 2001 | 0 | 0 | 0 | 24 | 51 | 22 | 46 | 0 | 51 |
| 2002 | 0 | 0 | 0 | 21 | 36 | 26 | 47 | 0 | 36 |
| 2003 | 0 | 0 | 0 | 29 | 56 | 24 | 53 | 0 | 56 |
| 2004 | 0 | 0 | 0 | 27 | 42 | 33 | 60 | 0 | 42 |
| 2005 | 0 | 0 | 0 | 38 | 59 | 50 | 88 | 0 | 59 |
| Total | 0 | 0 | 0 | 139 | 244 | 155 | 294 | 0 | 244 |

The 294 crashes reported consisted of 139 (47 percent) rear-end collisions, 72 (24 percent) angle crashes, 28 (9 percent) crashes involving a left turn, 19 (6 percent) sideswipes, and the remaining 14 percent were described as other crashes. Forty-five percent of the vehicles involved in crashes were moving straight ahead and 30 percent were moving slowly, stopped, or stalled. *Table 3* summarizes the causes of crashes per harmful event.

Most of the crashes observed occurred in close proximity to a signalized intersection; 75 percent occurred at an intersection or were influenced by an intersection. Sixty percent of crashes involved a traffic signal while approximately 25 percent of crashes involved no traffic control. The remaining 15 percent of crashes were controlled by some type of speed sign or no sign at all. Road conditions at the time of crash were either unknown or without defect and, in nearly all cases, the road was described as straight. Roads were dry approximately 75 percent of the time, conditions were generally clear, and 66 percent of all crashes occurred in the daytime.

| Number | Percent | Category/Description |
|---------------|----------------|--|
| 139 | 7.27 | Collision with moving vehicle in transit rear-end |
| 8 | 2.72 | Collision with moving vehicle in transit head-on |
| 72 | 24.48 | Collision with moving vehicle in transit angle |
| 28 | 9.52 | Collision with moving vehicle in transit left turn |
| 5 | 1.7 | Collision with moving vehicle in transit right turn |
| 19 | 6.46 | Collision with moving vehicle in transit sideswipe |
| 1 | 0.34 | Collision with moving vehicle in transit backed into |
| 3 | 1.02 | Collision with moving vehicle on roadway |
| 1 | 0.34 | Collision with pedestrian |
| 1 | 0.34 | Collision with moped |
| 1 | 0.34 | Moving vehicle hit sign/sign post |
| 3 | 1.02 | Moving vehicle hit utility pole/light pole |
| 2 | 0.68 | Collision with moveable object on road |
| 2 | 0.68 | Overtuned |
| 1 | 0.34 | Tractor/trailer jack-knifed |
| 8 | 2.72 | All other |

In most cases, the contributing cause of the accident was unknown as shown in *Table 4*. However, careless driving was the most frequently cited cause of crashes. Additional contributing factors included failure to yield R/W, disregarded traffic signal, and improper lane change.

| 1st | 2nd | 3rd | Description |
|-----------------------|-----------------------|-----------------------|-------------------------------|
| 1 | 615 | 632 | Unknown/not coded |
| 344 | 0 | 0 | No improper driving action |
| 135 | 1 | 0 | Careless driving |
| 55 | 1 | 1 | Failed to yield right-of-way |
| 1 | 0 | 0 | Improper backing |
| 19 | 2 | 0 | Improper lane change |
| 11 | 1 | 1 | Improper turn |
| 2 | 2 | 0 | Alcohol-under influence |
| 0 | 0 | 0 | Drugs-under influence |
| 0 | 0 | 0 | Alcohol/drugs-under influence |
| 15 | 2 | 0 | Followed too closely |
| 20 | 5 | 0 | Disregarded traffic signal |

| 1st | 2nd | 3rd | Description |
|-----------------------|-----------------------|-----------------------|----------------------------------|
| 0 | 2 | 1 | Exceeded safe speed limit |
| 0 | 0 | 0 | Disregarded stop sign |
| 4 | 1 | 0 | Failed to maintain equip/vehicle |
| 1 | 0 | 1 | Improper passing |
| 0 | 0 | 0 | Drove left of center |
| 0 | 0 | 0 | Exceeded stated speed limit |
| 0 | 0 | 0 | Obstructing traffic |
| 1 | 0 | 0 | Improper load |
| 0 | 0 | 0 | Disregarded other traffic |
| 1 | 0 | 0 | Driving wrong side/way |
| 0 | 0 | 0 | Fleeing police |
| 0 | 0 | 0 | Vehicle modified |
| 1 | 4 | 0 | Driver distraction |
| 30 | 0 | 1 | All other |

4.1.10 Intersections and Signalization

Two signalized intersections exist. The first is at the beginning of the project at US Highway 301 and Falkenburg Road. The second is at the end of the project at US Highway 301 and Causeway Boulevard. Only one non-signalized intersection with Wes Kearney Way and US Highway 301 is within the project limits.

There is one portable traffic-monitoring site (PTMS) within the project limits. PTMS #10-5259 is located at milepost 20.49.

4.1.11 Lighting

Roadway lighting exists within the project limits. The existing light poles are aluminum cobrahead in opposite side configuration with approximately 15-foot truss bracket arms. The mounting height is approximately 40 to 45 feet.

4.1.12 Utilities

Existing Utilities

Major utility companies along the corridor were contacted to provide information regarding their facilities within the project area. Listed below are those companies that provided contact information and plans showing their utilities.

| Utility Company | Name | Address | City/State/Zip | Phone |
|--|-------------------------|---|---------------------------|--------------|
| AT&T Comm – North | Ms. Nancy Spence | 2315 Salem Rd. 1 st Floor-Aid | Conyers, GA 30013 | 770-918-5424 |
| Bright House Networks | Mr. Barry Beatty | 2728 S. Falkenburg Rd. | Riverview, FL 33569 | 813-436-2163 |
| Verizon Florida, Inc. | Ms. Pam Cote | 146 Orange Pl. | Maitland, FL 32751 | 407-539-0644 |
| Hillsborough County Traffic Service | Mr. Mike Renberg | 8420 Sable Industrial Blvd. | Tampa, FL 33619 | 813-744-5670 |
| Hillsborough County Water Resource Service | Mr. Marcelino Diaz, III | 601 E. Kennedy Blvd. | Tampa, FL 33602 | 813-272-5081 |
| Broadwing | Mr. Dean Taylor | 1122 S. Capital of Texas Hwy. | Austin, TX 78746 | 512-742-1430 |
| Tampa Water Dept. | Mr. Chris Barquin | 306 East Jackson Street Mail Code 5E | Tampa, FL 33602 | 813-274-8678 |
| Tampa Electric | Ms. Arlene Brown | P.O. Box 111 | Tampa, FL 33601 | 813-275-3057 |
| Tampa Bay Water | Mr. Rick Menzies | 2535 Landmark Dr. Suite 211 | Clearwater, FL 33761-3930 | 813-996-7009 |

Utility owners provided the following information regarding existing or proposed utilities within the corridor.

AT&T Comm-North

Three 2-inch PVC pipes carrying fiber optic cable run parallel to the west side of US Highway 301 between the R/W line and the existing edge of pavement.

Bright House Networks

This utility has an overhead communications line that runs parallel to the south side of Falkenburg Road on shared TECO poles. Two communications lines run adjacent to US Highway 301 with the east line mounted overhead and the west side buried.

Verizon Florida, Inc.

Buried telephone lines run parallel to US Highway 301 on both sides of the roadway.

Hillsborough County Traffic Service

This utility has two fiber optic lines buried along the east side of US Highway 301 for the length of the project and one crossing US Highway 301 at the Falkenburg Road intersection. Two signalized intersections are powered by facilities running the length of the project on the east and west sides of US Highway 301.

Hillsborough County Water Resource Service

Eight-inch, 12-inch, and 24-inch water mains cross US Highway 301 at the Causeway Boulevard intersection. Near this area, the 8-inch water main along with a 12-inch sanitary sewer force main run north along US Highway 301 on both sides of the roadway.

Broadwing

This utility includes a high-density polyethylene pipe carrying fiber optic cable. The two 1.9-inch conduits parallel the right travel lane in the northeast corner of Causeway Boulevard and US Highway 301.

Tampa Water Department

A 16-inch ductile iron pipe (DIP) is carried in a 10 foot easement just outside of the R/W line on the west side of US Highway 301 to south of Causeway Boulevard. The water line then moves inside the R/W and is carried in a 36-inch DIP to the north. On the east side of US Highway 301, a 12-inch DIP is carried in a 10 foot easement just outside of the R/W and then heads east along the north side of Falkenburg Road. Water main crossings occur at Stations 1056+42 and 1087+67. Both are enclosed in 24-inch steel casings.

Tampa Electric

Thirteen kV overhead electric lines run adjacent to the R/W lines on the east side for the project limits. This line goes underground at the three intersections of US Highway 301 with Falkenburg Road, Wes Kearney Way, and Causeway Boulevard. These overhead lines are adjacent to the east road R/W line.

Tampa Bay Water

A 72-inch raw water main in a 96-inch casing crosses US Highway 301 just south of Falkenburg Road at Station 1058+50.

Railroad

There are no existing railroad facilities in the project area.

4.1.13 Pavement Conditions

The existing pavement along US Highway 301 within the project limits is in good condition.

4.2 Existing Bridges

There are no bridges within the project limits.

4.3 Environmental Characteristics

4.3.1 Land Use Data

4.3.1.1 Existing Land Use

Existing land use within the project area was determined from the interpretation of 1 inch = 200 feet scale aerial photography and supplemented by field reconnaissance. The land use within the project limits is primarily residential and commercial. Widening of US Highway 301 is not anticipated to alter existing land use patterns with the project area because all improvements will occur within the existing R/W. Additionally, a majority of the project area is built out. The project is consistent with the Adopted 2015 Future Land Use Map of unincorporated Hillsborough County. Refer to *Figures 8* and *9* for existing land use maps.

4.3.1.2 Future Land Use

The future land use in the area consists of Planned Development (PD), Interstate Planned Development (IPD-3), Commercial Neighborhood (CN), Commercial General (CG), and Commercial Intensive (CI).

4.3.2 Community Services

Community services include schools, school districts, religious institutions, medical facilities, parks and recreational areas, libraries, community centers, social service agencies, daycare centers, emergency services, elderly or special needs housing and senior centers. One facility was identified within the project area:

- 1) New Life Family Worship Center
3205 US Highway 301

4.3.3 Historic Sites/Districts

A Cultural Resource Assessment Survey (CRAS) was conducted by Janus Research for the proposed roadway improvements. The survey identified cultural resources occurring within the project Area of Potential Effect (APE) and to assess their eligibility for listing in the National Register of Historic Places (NRHP). This CRAS was conducted in accordance with the procedures contained in 36 CFR Part 800. No NRHP-eligible or NRHP-listed cultural resources were identified within the project APE. The CRAS was submitted to the State Historic Preservation Officer (SHPO) for concurrence. In a letter from SHPO, dated March 26, 2007, the agency found that no historic properties will be affected by the project.

Hillsborough County ZONING DISTRICTS

As of November 6, 2006

| Zoning Districts | |
|-------------------------------------|---|
| Agricultural | Agricultural |
| A | Agricultural, Rural |
| AR | Agricultural, Single-Family Estate - 1 RU/2.5Ac |
| AS-0.4 | Agricultural, Single-Family - 1 RU/1Ac |
| AS-1 | Agricultural, Single-Family - 1 RU/1Ac |
| ASC-1 | Agricultural, Single-Family - 1 RU/1Ac |
| AI | Agricultural, Industrial |
| AM | Agricultural, Mining |
| Commercial/Office/Industrial | |
| OC | Office Residential |
| BPO | Business, Professional Office |
| CO | Commercial, Neighborhood |
| CG | Commercial, General |
| CI | Commercial, Intensive |
| M | Manufacturing |
| Community-Based Plans | |
| BMS | Brandon Main Street - 7 Districts |
| CPV | Crusus Park Village - 43 Districts |
| UCA | University Community Area - 4 Districts |
| Planned Development | |
| PD | Planned Development |
| IPD-1 | Intrastate Planned Development |
| IPD-2 | Intrastate Planned Development |
| IPD-3 | Intrastate Planned Development |
| Special Public Interest | |
| SPH-HC | Historic and Cultural Conservation |
| SPH-AP-1 | Alport |
| SPH-AP-2 | Alport |
| SPH-AP-3 | Alport |
| SPH-AP-4 | Alport |
| SPH-AP-5 | Alport |
| SPH-AP-V | Alport |
| SPH-UC-1 | University Community |
| SPH-UC-2 | University Community |
| SPH-UC-3 | University Community |
| Residential | |
| RSC-2 | Single-Family Convert-1 - 2 U/1Ac |
| RSC-3 | Single-Family Convert-1 - 3 U/1Ac |
| RSC-4 | Single-Family Convert-1 - 4 U/1Ac |
| RSC-6 | Single-Family Convert-1 - 6 U/1Ac |
| RSC-8 | Single-Family Convert-1 - 8 U/1Ac |
| RSC-9 | Single-Family Convert-1 - 9 U/1Ac |
| RDC-6 | Duplex Convert-1 - 6 U/1Ac |
| RDC-12 | Duplex Convert-1 - 12 U/1Ac |
| RMC-6 | Multi-Family Convert-1 - 6 U/1Ac |
| RMC-9 | Multi-Family Convert-1 - 9 U/1Ac |
| RMC-12 | Multi-Family Convert-1 - 12 U/1Ac |
| RMC-16 | Multi-Family Convert-1 - 16 U/1Ac |
| RMC-20 | Multi-Family Convert-1 - 20 U/1Ac |
| RSB | Residential - Show Business |
| Zoning Overlay Districts | |
| MH | Mobile Homes |
| MH SB | Mobile Homes and Show Business |
| SB | Show Business |
| TND | Traditional Neighborhood Development |
| R-BPO | Restricted Business Professional Office |
| Seminole Indian Nation | |
| Not part of County Zoning | |

Note: Some Zoning Districts have additional Restrictions placed on them. Though not shown on this map, through other media they would be indicated with (R) following the Zoning Code.

For detailed zoning and development restrictions see our Website: <http://www.hillsborough.gov/planning>. Click on the Zoning link, then below that, click the link for Land Development Code.

Scale: 0 to 5 Miles

Legend: Lid Access Hwy, Surface Hwy, Railroads, Jurisdiction Boundaries, Section Lines

Not part of County Zoning

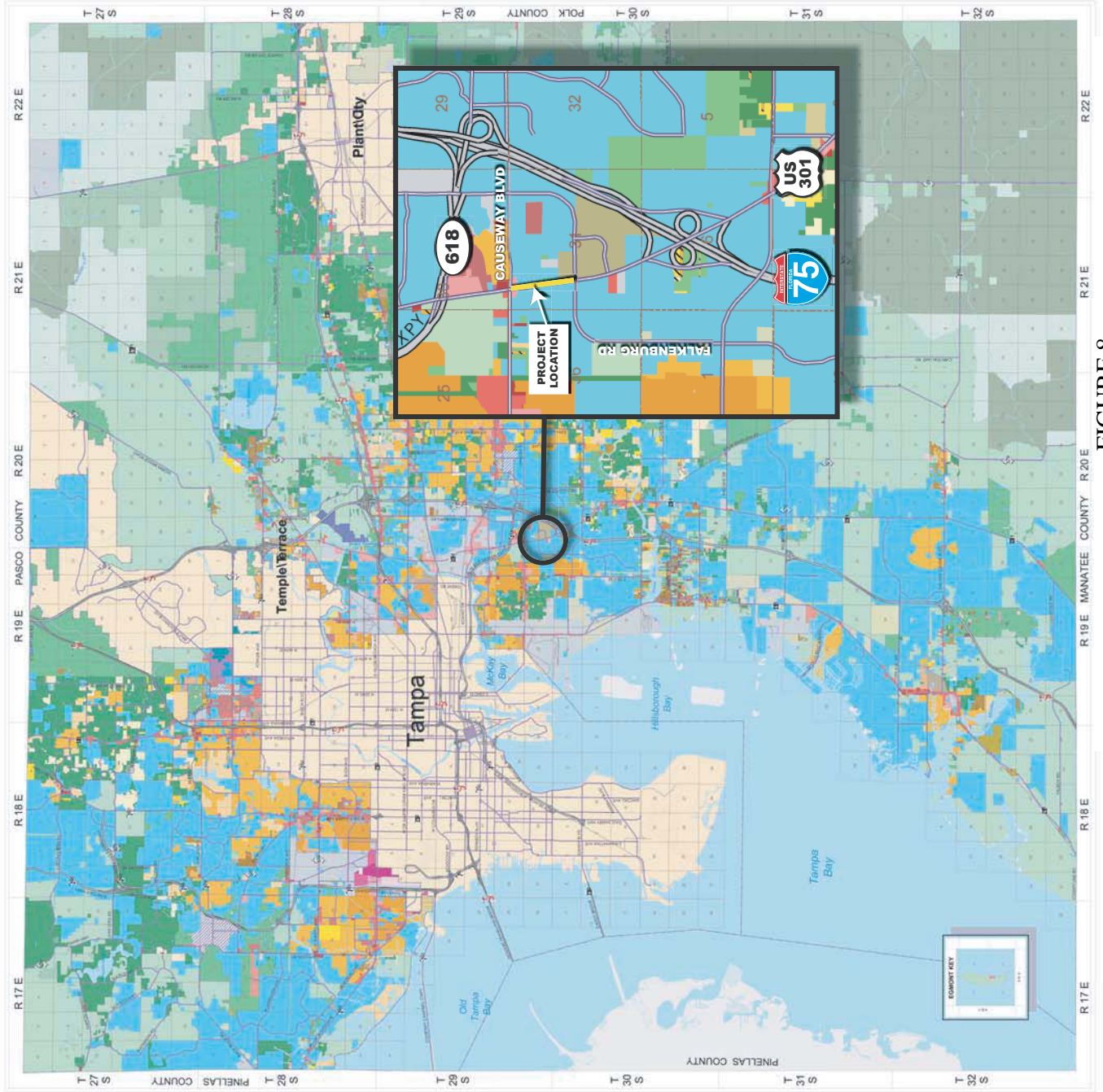


FIGURE 8
HILLSBOROUGH COUNTY LAND USE MAP
US 301 FALKENBURG ROAD TO CAUSEWAY BLVD.
WPI SEG. NO. 421140-6

HILLSBOROUGH COUNTY ZONING



- PD** Zoning District Designation
- Zoning District
- Designated Historic Resource
- Significant Wildlife Habitat
- Surface Water Protection Area
- Wellhead Protection Areas**
- Zone 1
- Zone 2
- Potable Water Well Buffer

29-20-31

FIGURE 9

PROJECT AREA LAND USE MAP
 US 301 FALKENBURG ROAD TO CAUSEWAY BLVD.
 WPI SEG. NO. 421140-6



Planning & Growth Management Department
Administrative Services Division

N. T. S.



Zoning: February 24, 2006
 Aerial Photography: January, 2004

4.3.4 Archaeological Sites

A CRAS, conducted in accordance with the procedures contained in 36 CFR Part 800 including background research and a field survey, was performed for the project. No archaeological sites or properties were identified, nor are any expected to be encountered during subsequent project development. The CRAS was submitted to SHPO for concurrence. In a letter from SHPO, dated March 26, 2007, the agency found that no archaeological resources will be affected by the proposed project.

4.3.5 Natural and Biological Features

4.3.5.1 Wetlands

A Wetlands Evaluation was prepared for the proposed project and is included in the *Final Environmental Technical Compendium* (August 2008). The wetlands and other surface waters in the proposed project area were identified through the following means:

- Review of the United States Department of Agriculture/Natural Resources Conservation Service (USDA/NRCS) Soil Survey of Hillsborough County, Florida (1989), to identify hydric soils within the proposed project area
- Review of *Hydric Soils of Florida Handbook* (Florida Association of Environmental Soil Scientists, 2001)
- Interpretation of 1 inch = 200 feet scale aerial photographs to identify wetlands and other surface water features in the proposed project area
- Review of the National Wetlands Inventory (NWI) Map, a GIS-based resource that is available online through the United States Fish and Wildlife Service (USFWS)
- Field reconnaissance conducted on September 14, 2006 to verify the presence or absence of wetlands and other surface waters within, and adjacent to, the proposed project R/W
- Review of files at the Hillsborough County Environmental Protection Commission (EPC)

Two wetlands were observed adjacent to the east of project. They are located south of Wes Kearney Boulevard and north of Falkenburg Road. One wetland is located on an undeveloped parcel; the other is located in front of a 7-Eleven gas station. As discussed below, these wetlands were claimed by EPC and were identified as “E” and “O” See *Figure 6*. Vegetation in this area consists of primrose willow (*Ludwigia peruviana*), cattail (*Typha sp.*), Carolina willow (*Salix sp.*), red maple (*Acer rubrum*) and dollar weed (*Hydrocotyle umbellata*). According to the USDA/NRCS Soil Survey of Hillsborough County Area, Florida (1989), the soil type in this area is Smyrna fine sand, 0 to 2 percent slope. This soil is generally not considered hydric.

The files at the EPC were reviewed for information on previously documented wetlands within and adjacent to the project area. One wetland jurisdictional determination (JD) was identified for folio number 0723030102. This parcel is located at the northeast corner of US Highway 301 and Falkenburg Road. Two wetlands, “E” and “O” were identified adjacent to US Highway 301. The JD found is dated August 12, 1997 and has expired; however, based on field reconnaissance, it is

unlikely that the limits of the wetlands on the adjacent side have changed relative to the US Highway 301 R/W.

Roadside swales were observed during site reconnaissance. These swales were directly adjacent to both wetlands “E” and “O” referenced above. It appears that these swales were excavated through wetlands “E” and “O” and are hydrologically connected. Therefore, it is likely that the Southwest Florida Water Management District (SWFWMD), EPC, and the United States Army Corps of Engineers (USACE) will claim these swales as jurisdictional wetlands and will likely require compensatory mitigation if impacts are proposed. It appears that approximately 0.1 acres of impacts to these swales will occur. A summary of these features is provided in *Table 5*.

| Table 5 Summary of Wetlands and Other Surface Waters | | | | | |
|--|---------------------|--------------------------------|-------------------------|-------------------------------|--|
| Site No. | FLUCFCS Code | Cowardin Classification | Station No. | Hydrologic Contiguity* | Comments |
| WETLANDS | | | | | |
| E | 641 | PEM1Jx | 1065-1070 | 1 | Adjacent wetland |
| O | 641 | PEMIJx | 1065-1070 | 1 | Adjacent wetland |
| Swale-1 | 641 | PEM1Jx | 1065-1070 | 1 | This is a roadside swale |
| OTHER SURFACE WATERS | | | | | |
| 1 | 534 | N/A | 1080 (approximately) | 1 | This surface water management pond is part of a multi-family residential development adjacent to the site. |
| *Hydrologic contiguity as defined in the FDOT PD&E Manual, Part 2, Chapter 18 (page 18-5): Perched or isolated from a regional surface water drainage system, including flats and depressions. | | | | | |

4.3.5.2 Wildlife and Habitat

An Endangered Species Biological Assessment was prepared for the proposed project and is included in the *Final Environmental Technical Compendium* (August 2008). The Advanced Notification was submitted to the USFWS and the Florida Fish and Wildlife Conservation Commission (FWC) on December 6, 2006.

Florida Natural Areas Inventory (FNAI)

The FNAI recorded several element occurrences of wading birds, the American alligator (*Alligator mississippiensis*), gopher tortoises (*Gopherus polyphemus*), and eastern indigo snakes (*Drymarchon couperi*) more than two miles from the proposed project area.

Critical Wildlife Habitat

A review of online databases indicated the project area is not in designated critical habitat for federally listed species.

Field Reviews

Field reviews of the project corridor were also conducted on September 14, 2006. During the field reconnaissance, no listed species were observed within the project area.

Table 6 describes which listed animals may potentially be found in the vicinity of the proposed project area based on our assessment of the habitat. The results of the Endangered Species Biological Assessment indicated that adverse impacts to protected species are anticipated to be low as a result of the proposed roadway improvements to US Highway 301. The quality of the habitat is low and the area is generally surrounded by development. Most of the species that could potentially occur within the project area are wading birds that commonly forage in roadside swales. These roadside swales will likely be claimed as jurisdictional wetlands by the regulatory agencies. It is anticipated that any mitigation required for impacts to the swales will be sufficient to offset any potential loss of foraging habitat.

| Table 6 Listed Animal Species Potentially Found in Proposed Project Area | | | |
|---|----------------------------------|-----------------------|---------------------|
| Common Name | Scientific Name | Federal Status | State Status |
| Wood Stork | <i>Mycteria americana</i> | E | E |
| Little Blue Heron | <i>Egretta caerulea</i> | N | SSC |
| White Ibis | <i>Eudocimus albus</i> | N | SSC |
| Sandhill Crane | <i>Grus canadensis pratensis</i> | N | T |

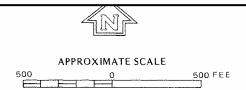
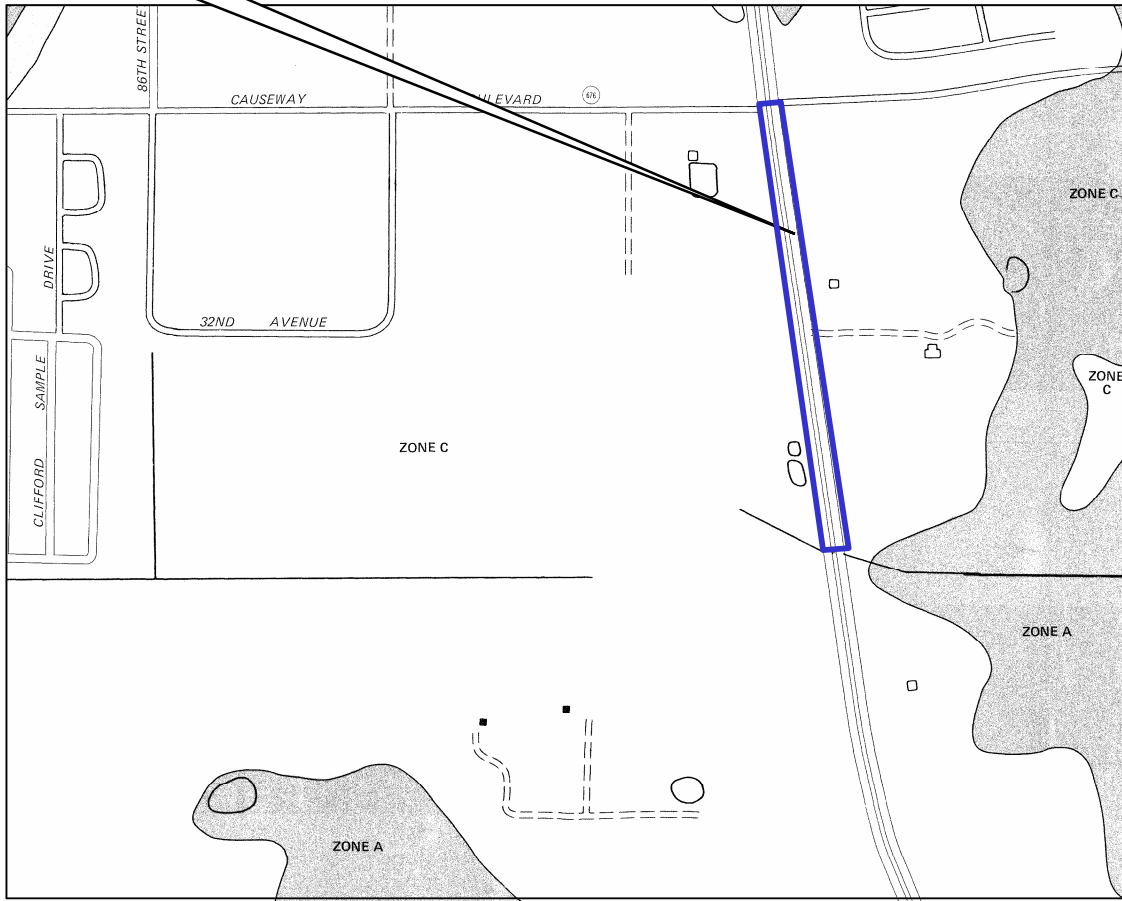
Notes: E = Endangered, T = Threatened, SSC = Species of Special Concern, N = Not Listed

4.3.5.3 Floodplain

The Flood Insurance Rate Maps (FIRM) for Hillsborough County (Community Panel Number 120112 038E, dated August 15, 1989) was reviewed to evaluate impacts to floodplains. A FEMA Firmette (FIRM) Map for the project corridor has been included as *Figure 10*.

The entire project corridor is within FEMA designated Flood Zone C. Flood Zone C denotes areas of minimal flooding. Therefore, the project will not result in impacts to the FEMA designated 100-year floodplain.

Site



NATIONAL FLOOD INSURANCE PROGRAM


FIRM
FLOOD INSURANCE RATE MAP

HILLSBOROUGH COUNTY, FLORIDA
(UNINCORPORATED AREAS)

PANEL 386 OF 825
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
120112 0386 E

MAP REVISED:
AUGUST 15, 1989



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using i-MAT Online. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

LEGEND

Zone C – Areas of Minimal Flooding.



FEMA FLOOD INSURANCE RATE MAPS

US 301 Falkenburg Road to Causeway Blvd.
WPI Seg. No. 421140-6
Hillsborough County



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| | | | |
|--------------------|-------------------------|-----------------------|---------------|
| SCALE: As Shown | PROJ. NO.: 048805007 | DATE: October 2006 | FIGURE: 10 |
|--------------------|-------------------------|-----------------------|---------------|

4.3.5.4 Outstanding Florida Waters/Aquatic Preserves

There are no Outstanding Florida Waters (OFW) within the project study area and stormwater will not be discharged to an OFW.

4.3.6 Potential Contamination Sites

A contamination screening evaluation of the project was conducted. The following methodology was used for this evaluation.

- A search of the files available through the Hillsborough County EPC, the US Environmental Protection Agency (EPA), and the Florida Department of Environmental Protection (FDEP). The Hillsborough County EPC maintains a database of contaminated locations and files their office. The EPA Envirofacts system supplies online information concerning hazardous waste and National Priority List (NPL), Superfund sites. The FDEP provides online viewing of site-specific contamination files (OCULUS database) and files at their Tampa office.
- A review of information generated by Environmental FirstSearch (EFS), which includes a search of the following state and federal databases: NPL; Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS); Resource Conservation and Recovery Act (RCRA), Treatment Storage and Disposal facility (RCRA TSD); RCRA generator list (RCRA GEN); Information System (RCRIS); Emergency Response Notification System (ERNS); State Landfill (SWF/LF); Delisted NPL Sites; Facility Index System/Facility Identification Initiative Program Summary Report (FINDS); Underground Storage Tanks (UST); Petroleum Contamination Detail Report (PCT01); Stationary Tank Inventory Facility/Owner/Tank Report (STI02); Leaking Underground Storage Tank Incident Reports (LUST); Florida Cattle Dip Vats; and Dry Cleaners.
- A review of historical aerial photographs of the project area at the Hillsborough County Surveying Department. Photographs from the following years were available: 1966, 1972, 1979, 1985, 1985, 1991, 1994, 1997, 2000, 2002 and 2004. All of the photographs of the project area were reviewed. The photographs from these years provided an effective summary of the development within the project area.
- Visual reconnaissance was performed on September 14, 2006 to identify sites or areas with indications of past or present contaminant storage, use, generation, or disposal. Potential sites were visually examined to the extent of available access for evidence of possible contaminant presence.
- Determining the contamination potential for each property within the project limits.

A Contamination Screening Evaluation Report was prepared for the proposed project and was included in the *Final Environmental Technical Compendium* (August 2008). A total of five potential contamination sites were identified along the project corridor with risk evaluation ratings ranging from **low risk** to **medium risk**. A summary of the risk assessments for the proposed project is presented in *Table 7*.

| Table 7 Potential Contamination Sites | | | | | |
|--|---|----------------|--------------------------------------|---------------|-------------|
| Facility | Address/Location | FDEP ID | Approx. Distance From Roadway | Status | Risk |
| (Shell) Radiant Food Store # 250 | 2829 South Us Hwy. 301 | 298624832 | Adjacent | In Service | Medium |
| Circle K # 7494 | 2820 South US Hwy. 301 | 298840559 | Adjacent | In Service | Medium |
| Pavilions | Location Unknown | 299200283 | Adjacent | Closed | Low |
| Shell | Formerly Located At 2620 US Hwy. 301 | 298625032 | Adjacent | Closed | Low |
| 7-11 | 3603 South US Hwy. 301 | 299803172 | Adjacent | In Service | Medium |

If construction activities are to occur in an area with contamination concerns, then a site assessment would be performed to the degree necessary during final design to determine levels of contamination and evaluate clean-up options and associated costs. Excavation and/or dewatering for installation of underground structures or utilities in the vicinity of contaminated sites could potentially encounter or exacerbate contamination conditions. Investigations should not be limited to areas of roadway expansion but should also include the drainage areas located adjacent to the roadway.

Resolution of problems regarding contamination will be coordinated with appropriate regulatory agencies and action will be taken by Hillsborough County where applicable. Further coordination with the regulatory agencies, and possibly field surveys involving monitoring wells, soil borings and other site-specific methods, can identify potential contamination issues so that avoidance, minimization, and remediation measures can be taken.

Procedures specifying the contractor's responsibilities in regard to encountering petroleum-contaminated soil and/or groundwater are set forth in *FDOT's Standard Specifications for Road and Bridge Construction*. Special provisions to the aforementioned standard specifications may be necessary if the presence of contamination is confirmed, which could impact construction.

4.3.7 Farmlands

In accordance with the Farmland Protection Policy Act of 1984, the study-involved coordination with the USDA/NRCS has occurred. There are no farmlands within the project area.

5.0 DESIGN CONTROLS AND STANDARDS

5.1 Design Publications

Table 8 summarizes the major design criteria for the project. All criteria are subject to change and only current criteria will be used during the final design phase. Design and construction criteria for the proposed improvements will adhere to FDOT standards for the design of such roadways and will comply with the recommended standard practices as set forth in the following documents:

- FDOT Project Development and Environment Manual
- FDOT Plans Preparation Manual, Volumes I and II, English, January 2006 (revised January 2008)
- Florida Bicycle Facilities Planning and Design Manual (revised April 2000)
- FDOT Soils and Foundations Handbook (2006)
- FDOT Structures Design Guidelines (LRFD, July 2006)
- FDOT CADD Manual, January 2003
- FDOT CADD Production Criteria Handbook, May 2003 (revised 2007)
- FDOT Manual on Uniform Traffic Studies 2000 (revised 2003)
- FDOT Standard Specifications for Road and Bridge Construction (2007 ed.)
- FDOT Utility Accommodations Manual 1999 (revised August 2004)
- FDOT Design Standards (January 2008) (English)
- FDOT Drainage Manual (2006)
- FDOT Flexible Pavement Design Manual (2005)
- AASHTO A Policy on Geometric Design of Highways and Streets (2004)
- FDOT Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways (Florida Greenbook) (2005)
- Federal Highway Administration-Manual on Uniform Traffic Control Devices (2003)
- Transportation Research Board Highway Capacity Manual
- Florida's Quality/Level of Service Handbook 2002 (revised January 2003)
- US Department of Agriculture/Natural Resource Conservation Service (USDA/NRCS) Soil Survey of Hillsborough County, Florida, 1989
- FDOT-Florida Land Use, Cover and Forms Classification System (FLUCFCS, 1999)
- USFWS Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979)
- Maintenance of Traffic DOT Topic No. 625-010-010-a

| Table 8 Design Criteria Matrix US Highway 301 | | |
|--|---|---|
| Design Element | Criteria For Rural Section 55 MPH D.S. | Source |
| Cross Section | | |
| Lane Widths | 12 ft. | (1) Table 2.1.1 |
| Bicycle Accommodation | 5 ft. On shoulder | (1) Table 2.1.2 |
| Clear Zone | 30 ft. | (2) Index 700 |
| Median Width | 40 ft. | (1) Table 2.2.1 |
| Cross Slope Inside Lanes Outside Lanes (3 or more lanes) Outside Shoulder | 0.02 0.03 0.06 | (1) Figure 2.1.1 |
| Shoulder Width (high volume) | <u>Outside</u> 12 ft. 5 ft. Paved | <u>Inside</u> 12 ft. 4 ft. Paved |
| Shoulder Slope (outside) | 0.06 | (1) Table 2.3.2 |
| Sidewalk | 5 ft. | (2) Index 310 |
| Border Width | 40 ft. | (1) Table 2.5.1 (1) Table 2.5.2 |
| Posted Speed | 50 MPH | Per FDOT |
| Horizontal Alignment | | |
| Minimum Curve Radius | 955 ft. | (1) Table 2.9.1 |
| Maximum Deflection (no curve) | 0° 45" | (1) Table 2.8.1a |
| Maximum Superelevation | 0.10 | (1) Table 2.9.1 |
| Vertical Alignment | | |
| Maximum Grade | 6% | (1) Table 2.6.1 |
| Base Clearance Above Design High Water (3) | 1 ft. | (1) Table 2.6.3 |
| Minimum Stopping Sight Distance | 495 ft. | (1) Table 2.7.1 |
| Vertical Curve Length (ft.) | L=350 crest L=250 sag | (1) Table 2.8.5 (1) Table 2.8.6 |
| Notes: (1) Plans Preparation Manual, Vol. 1, 2008, FDOT (2) Index – Roadway and Traffic Design Standards, 2008, FDOT (3) Base course elevation will be set 1 foot above the 10-year, 3-day storm event | | |

6.0 TRAFFIC

The purpose of this section is to summarize the existing geometric and operational conditions along the US Highway 301 corridor between Falkenburg Road and Causeway Boulevard. The determination of current traffic operations along US Highway 301 provides a baseline condition to assess the need for improvements to the roadway. Hillsborough County and the FDOT have provided the data contained in this section.

The project is located in Hillsborough County, Florida. The location of the project is illustrated in *Figure 11*. The project is anticipated to involve the widening of US Highway 301 from the existing four-lane section to a six-lane section between Falkenburg Road and Causeway Boulevard. This roadway improvement will increase the capacity of US Highway 301 for the planned and approved developments in southern Hillsborough County. Additionally, the project will provide Hillsborough County with a consistent roadway cross section that will match the existing cross sections of US Highway 301 south of Falkenburg Road and north of Causeway Boulevard.

The project is expected to alleviate some conflicts between truck traffic and new residential traffic by the addition of travel lanes. US Highway 301 is considered a commercial truck route and the addition of the residential traffic would further decrease the existing LOS.

6.1 Existing Traffic Conditions

Traffic analyses conducted for 2007 existing conditions were based upon Average Annual Daily Traffic (AADT) volumes, 72-hour approach and departure machine counts and intersection turning movement counts. Existing and future conditions were analyzed to determine operational LOS. For analysis purposes, US Highway 301 is classified as a four-lane urban divided arterial.

6.2 Multimodal Transportation Systems Considerations

The existing typical section for US Highway 301 in the study area does not include accommodations for bicycles. Sidewalks are only provided for a portion of the project. The existing typical section is shown in *Figure 3*. The build alternative adds five-foot sidewalks where they currently do not exist and 12-foot shoulders, five feet of which are paved. The five feet paved shoulder will be able to accommodate bicycles.



NOT TO SCALE

- Legend**
- Study Roadway Segment
 - Turning Movement Count Location
 - Machine Tube Count Location

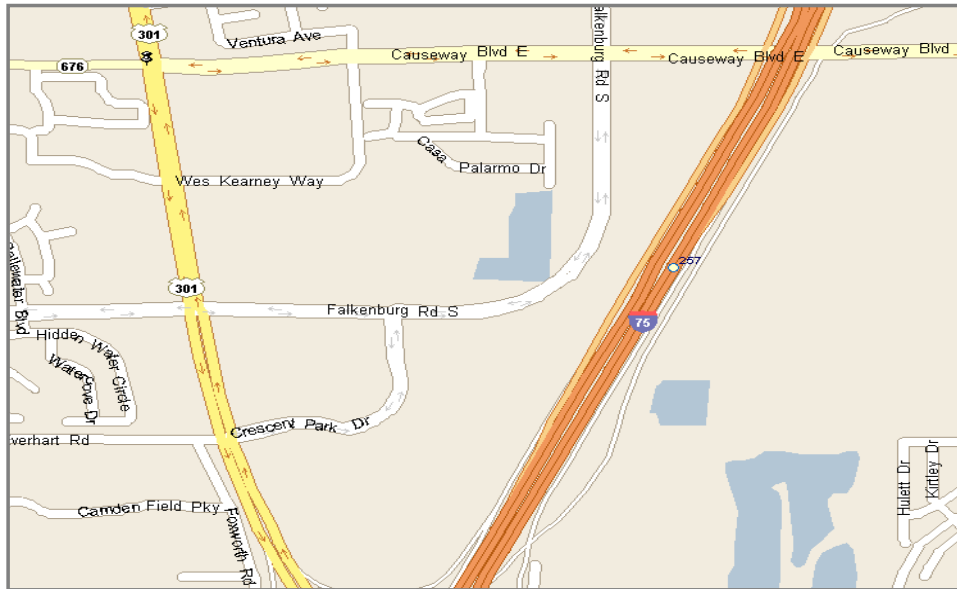


Figure 11
Study Roadway Segment
U.S. 301 PER: Falkenburg Road to Causeway Boulevard
Hillsborough County, Florida

6.3 Traffic Analysis Assumptions

6.3.1 Existing K, D, and T, Factors

The existing K_{30} and D_{30} factors and a T_{24} -factor or truck percentage were determined based upon an average value of the K_{30} , D_{30} and T_{24} factors presented in the FDOT FTI data CD for the previous three years (2006, 2005 and 2004). The average K_{30} , D_{30} and T_{24} factors were within the minimum and maximum acceptable factors in the Project Traffic Forecasting Handbook. The existing design factors are presented below:

K_{30} – factor: 9.24%

D_{30} – factor: 55.06%

T_{24} – factor: 8.90%

A.m. and p.m. design hour directional volumes and existing 2007 roadway AADT volumes are shown in *Figures 12 and 13*, respectively. Directional volumes are typically reversed between the a.m. and p.m. design hours and are shown in *Table 9* and *Table 10*, respectively, along the US Highway 301 study corridor.

Table 9 2007 Existing A.M. Design Hour Traffic Volume Characteristics

| Roadway | From | To | AADT* | A.M. Design-Hour Two-way Volume | Daily Trucks | A.M. Peak Hour Directional | | | |
|---------|-----------------|--------------------|--------|---------------------------------|--------------|----------------------------|-----------|----------------------|--------------------------|
| | | | | | | NB Volume | SB Volume | Peak -To-Daily Ratio | Directional Distribution |
| US 301 | Falkenburg Road | Causeway Boulevard | 36,961 | 3,415 | 8.90% | 1,880 | 1,535 | 9.24% | 55.06% |

*2006 FDOT count station #105259, grown to 2007 volumes.

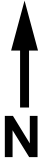
Table 10 2007 Existing P.M. Design Hour Traffic Volume Characteristics

| Roadway | From | To | AADT* | P.M. Design-Hour Two-way Volume | Daily Trucks | P.M. Peak Hour Directional | | | |
|---------|-----------------|--------------------|--------|---------------------------------|--------------|----------------------------|-----------|----------------------|--------------------------|
| | | | | | | NB Volume | SB Volume | Peak -To-Daily Ratio | Directional Distribution |
| US 301 | Falkenburg Road | Causeway Boulevard | 36,961 | 3,415 | 8.90% | 1,535 | 1,880 | 9.24% | 55.06% |



*2006 FDOT count station #105259, grown to 2007 volumes.

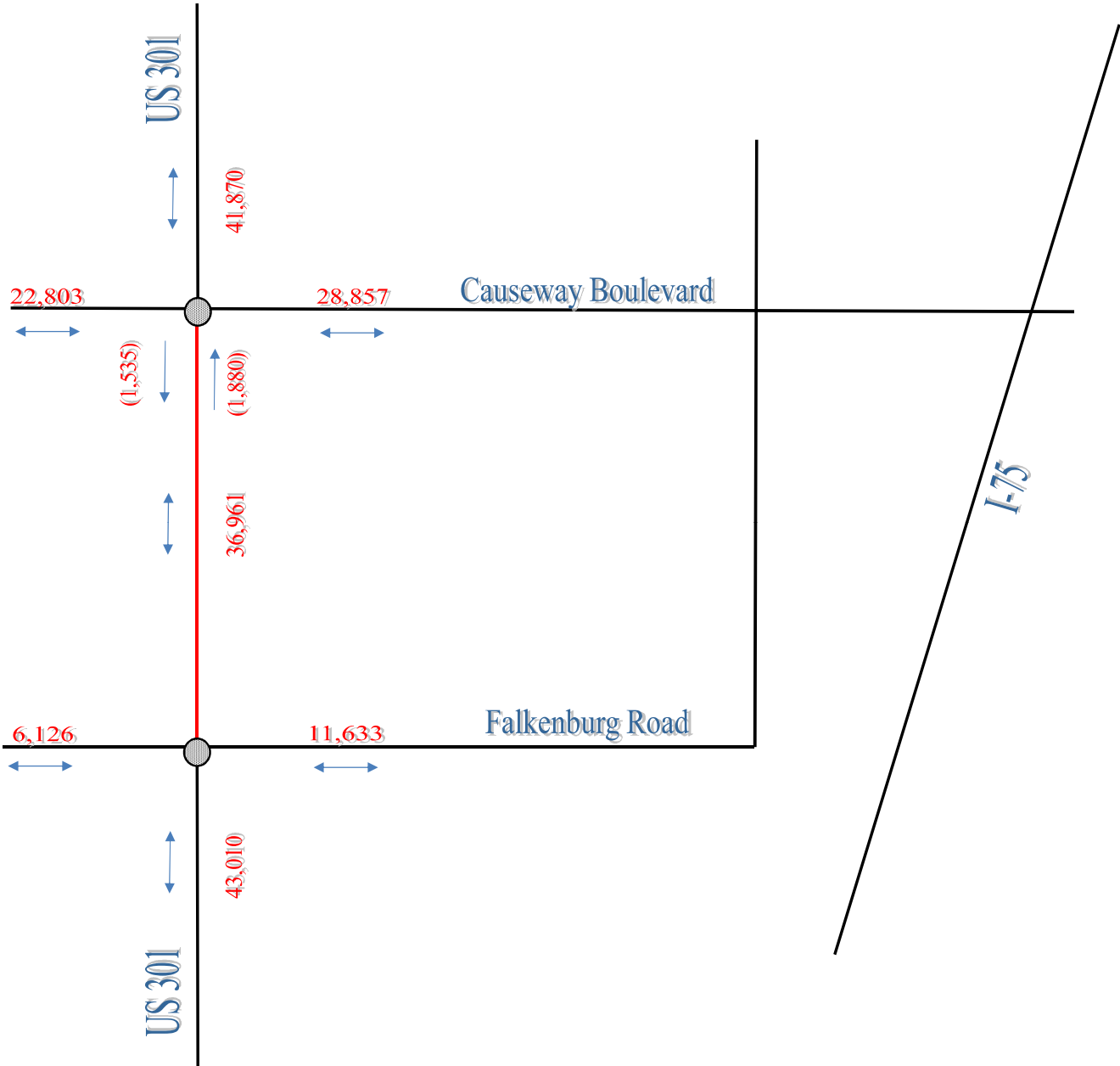
6.3.2 Intersection Levels of Service

Existing 2007 a.m. and p.m. design hour traffic volumes were determined by applying the traffic factors (K_{30} , D_{30}) to the AADT volumes for the approaches of US Highway 301, Falkenburg Road, and Causeway Boulevard in conjunction with the turning percentages obtained from the a.m. and p.m. peak-hour turning movement counts. Existing a.m. and p.m. design hour volumes at the study locations are shown in *Figures 14 and 15*, respectively.



NOT TO SCALE

- Legend**
-  Study Roadway
 -  Study Intersection
 - xxxx AADT
 - (xxxx) A.M. Directional Volume





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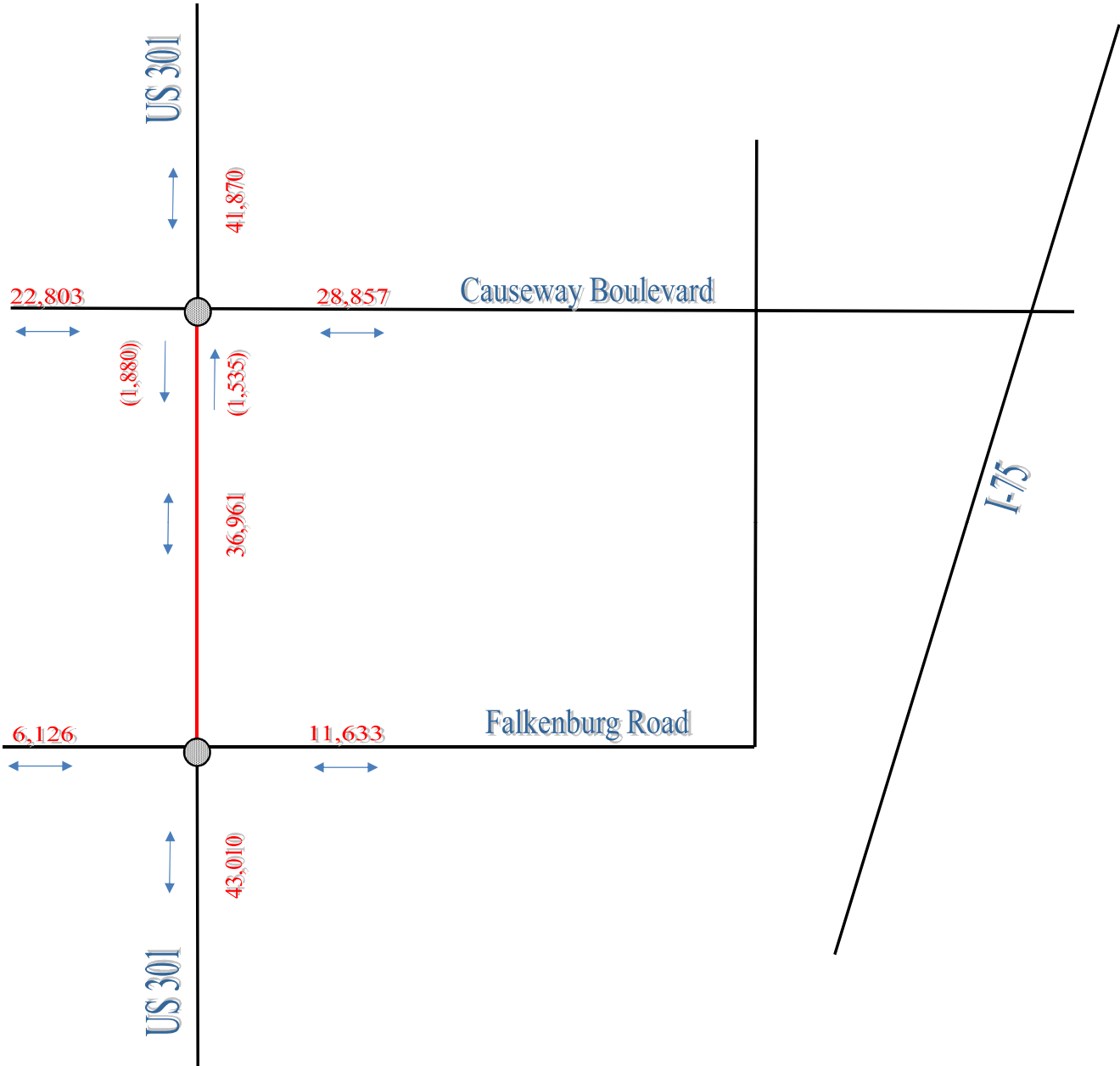
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Figure 12
Existing AADT & A.M. Design Hour Directional Volumes
U.S. 301 PER: Falkenburg Road to Causeway Boulevard
Hillsborough County, Florida



NOT TO SCALE

- Legend**
-  Study Roadway
 -  Study Intersection
 - xxxx AADT
 - (xxxx) P.M. Directional Volume





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Figure 13
Existing AADT & P.M. Design Hour Directional Volumes
U.S. 301 PER: Falkenburg Road to Causeway Boulevard
Hillsborough County, Florida



Legend

-  Study Roadway
-  Study Intersection

NOT TO SCALE

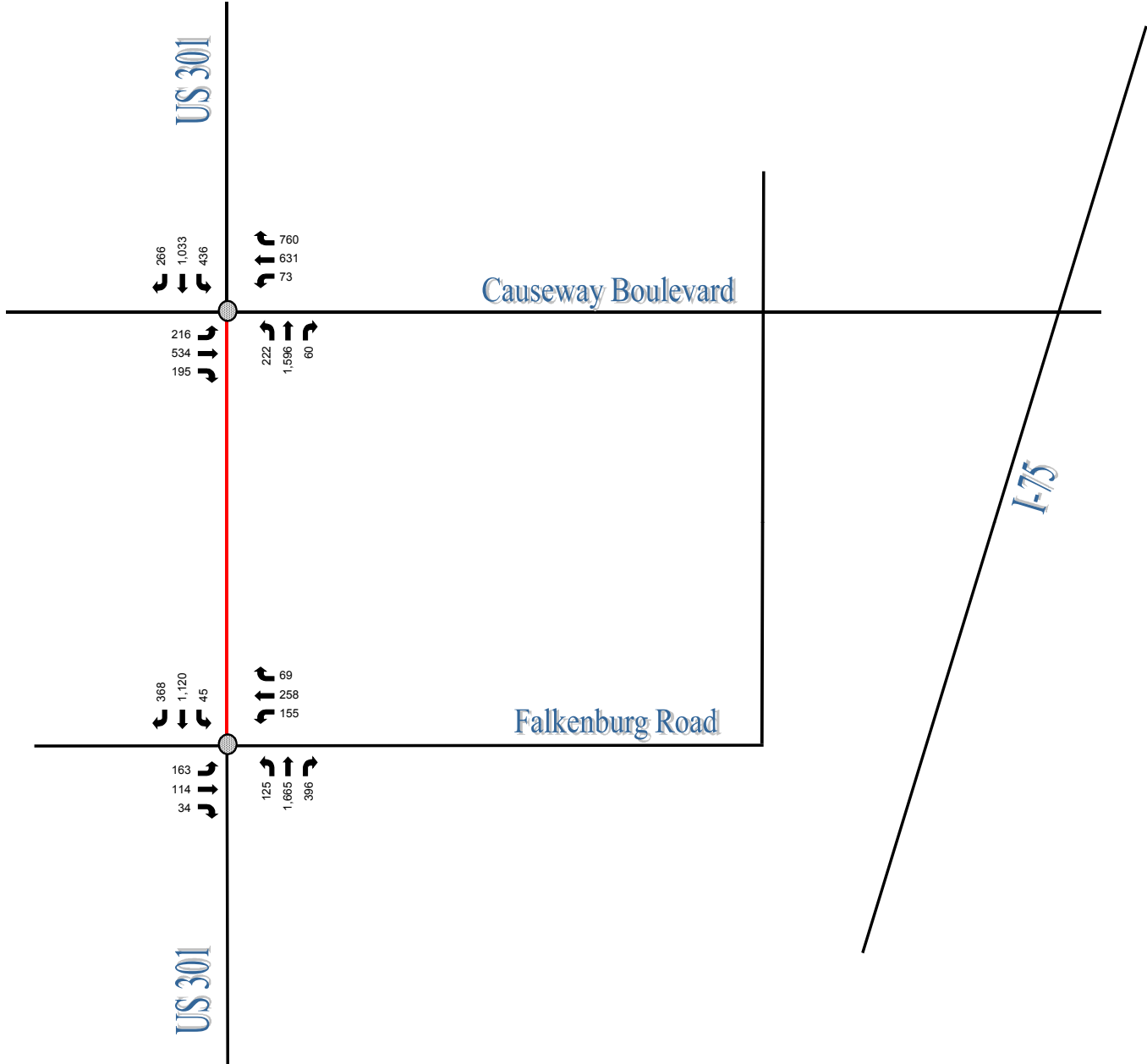


Figure 14
 Existing A.M. Design Hour Intersection Turning Movement Volumes
 U.S. 301 PER: Falkenburg Road to Causeway Boulevard
 Hillsborough County, Florida



NOT TO SCALE

Legend
 — Study Roadway
 ○ Study Intersection

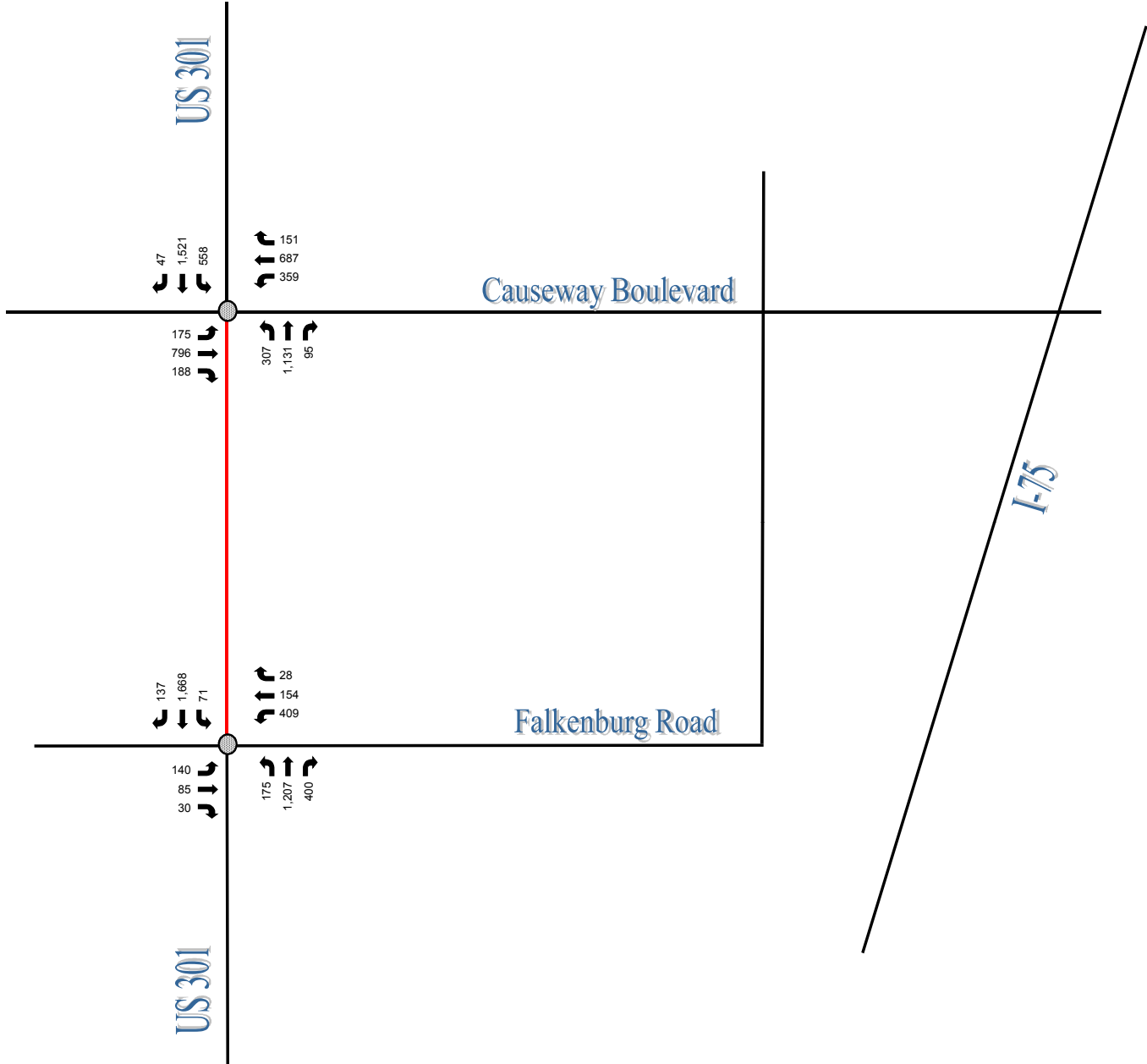


Figure 15
 Existing P.M. Design Hour Intersection Turning Movement Volumes
 U.S. 301 PER: Falkenburg Road to Causeway Boulevard
 Hillsborough County, Florida

6.3.3 Future K, D, and T Factors

The projected 2030 design year traffic characteristics for the a.m. and p.m. design hours are detailed in *Table 11* and *Table 12* respectively. Area-wide K₃₀ and D₃₀ factors and a T₂₄-factor or truck percentage were determined based upon an average value of the K₃₀, D₃₀ and T₂₄ factors presented in the FDOT FTI data CD for the previous three years (2006, 2005 and 2004). The future design factors are presented below:



- K₃₀ – factor: 9.24%
- D₃₀ – factor: 55.06%
- T₂₄ – factor: 8.90%

Future AADT volumes and two-way a.m. and p.m. design hour directional volumes for the design year 2030 conditions are shown in *Figures 16* and *17*, respectively.

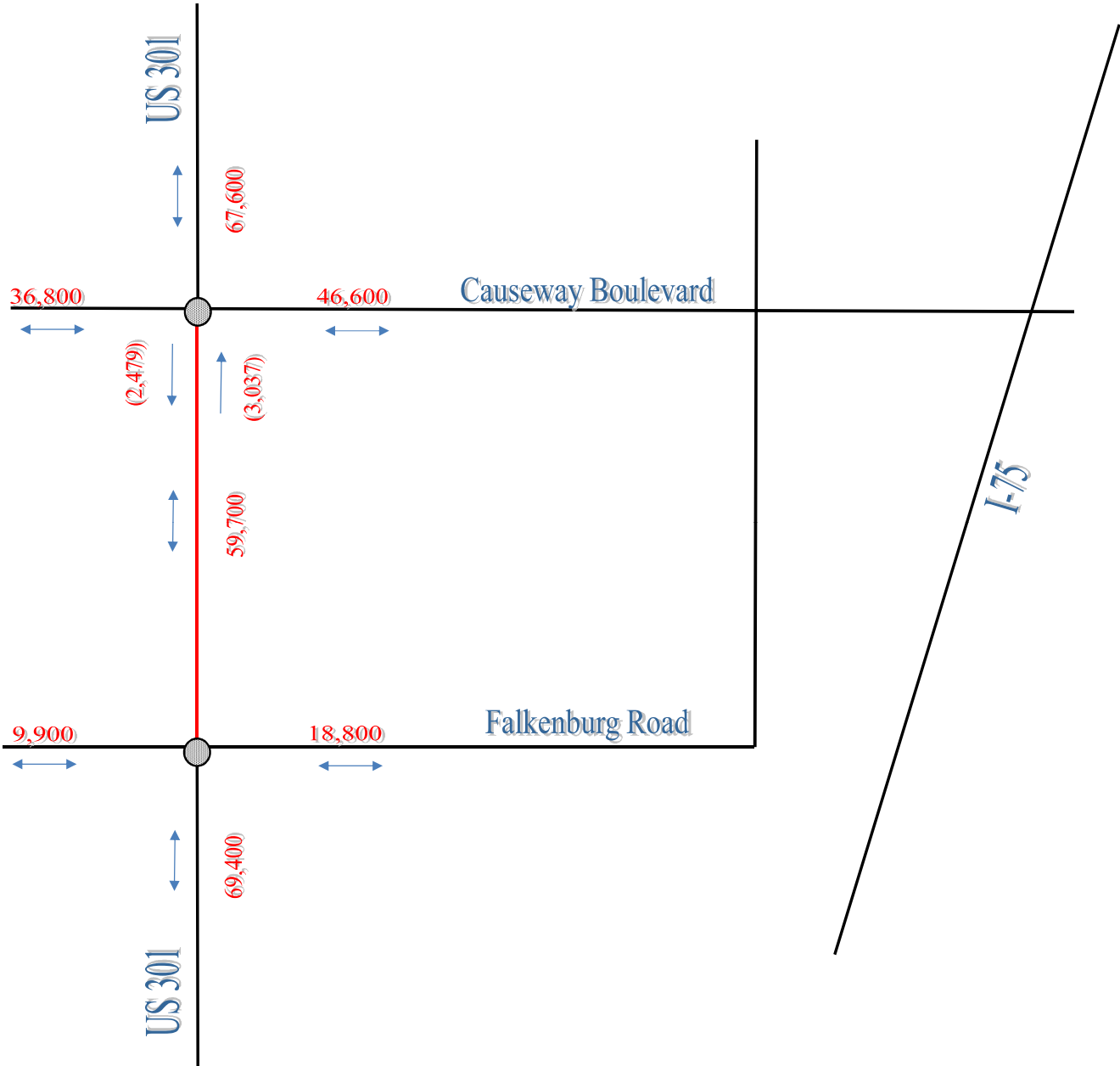
| Table 11 2030 A.M. Design Hour Traffic Volume Characteristics | | | | | | | | | |
|--|-----------------|--------------------|--------|---------------------------------|--------------|----------------------------|-----------|-------------------------|--------------------------|
| Roadway | From | To | AADT | A.M. Design Hour Two-way Volume | Daily Trucks | A.M. Peak Hour Directional | | | |
| | | | | | | NB Volume | SB Volume | Peak - to - Daily Ratio | Directional Distribution |
| US 301 | Falkenburg Road | Causeway Boulevard | 59,700 | 5,516 | 8.90% | 3,037 | 2,479 | 9.24% | 55.06% |

| Table 12 2030 P.M. Design Hour Traffic Volume Characteristics | | | | | | | | | |
|--|-----------------|--------------------|--------|---------------------------------|--------------|----------------------------|-----------|-------------------------|--------------------------|
| Roadway | From | To | AADT | P.M. Design Hour Two-way Volume | Daily Trucks | P.M. Peak Hour Directional | | | |
| | | | | | | NB Volume | SB Volume | Peak - to - Daily Ratio | Directional Distribution |
| US 301 | Falkenburg Road | Causeway Boulevard | 59,700 | 5,516 | 8.90% | 2,479 | 3,037 | 9.24% | 55.06% |



- Legend**
-  Study Roadway
 -  Study Intersection
 - xxxx AADT
 - (xxxx) A.M. Directional Volume

NOT TO SCALE



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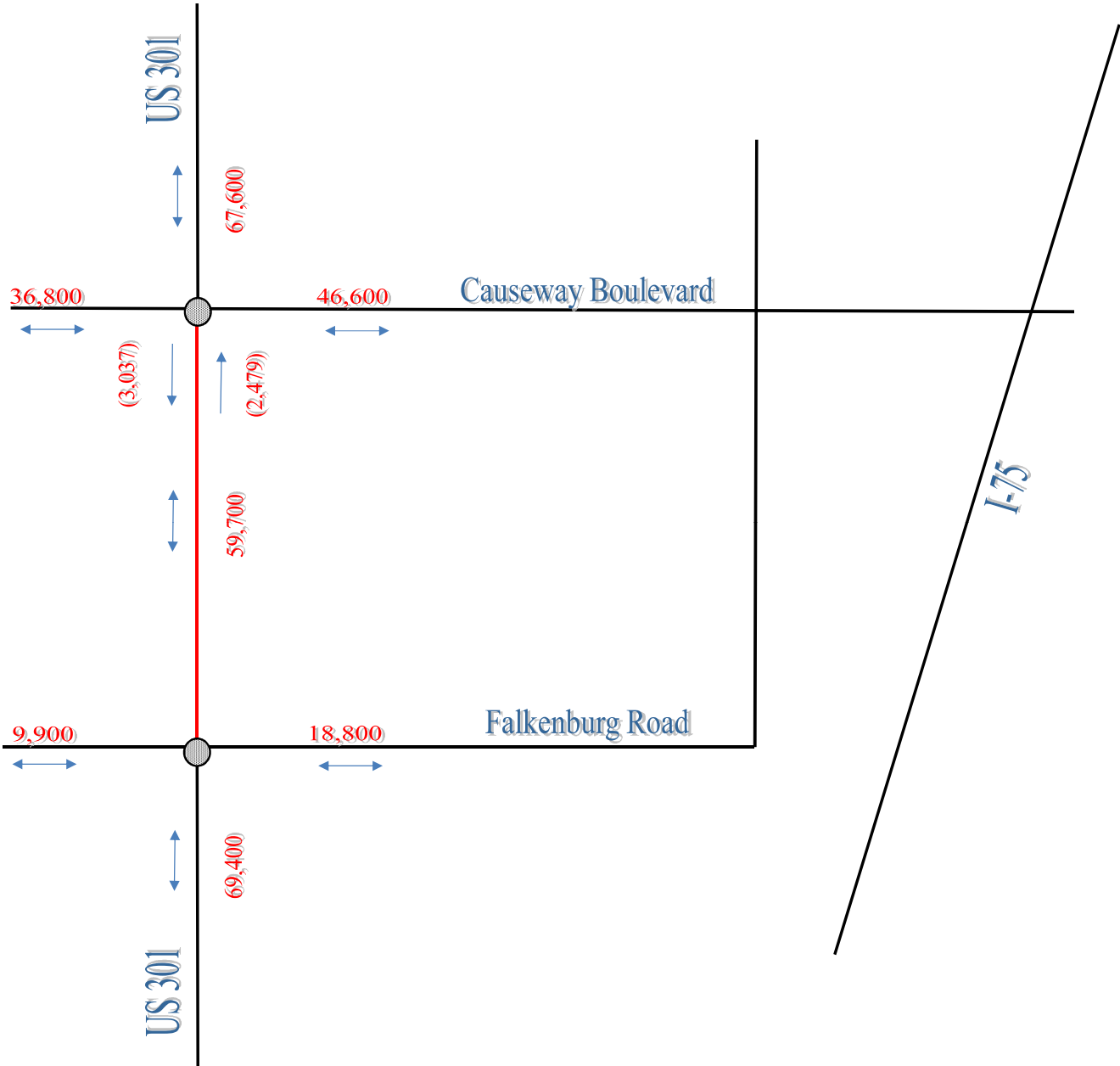
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Figure 16
2030 Design Year AADT & A.M. Directional Volumes
U.S. 301 PER: Falkenburg Road to Causeway Boulevard
Hillsborough County, Florida



- Legend**
- Study Roadway
 - Study Intersection
 - xxxx AADT
 - (xxxx) P.M Directional Volume

NOT TO SCALE



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Figure 17
2030 Design Year AADT & P.M. Directional Volumes
U.S. 301 PER: Falkenburg Road to Causeway Boulevard
Hillsborough County, Florida

6.4 Level of Service

6.4.1 Existing Level of Service

6.4.1.1 Existing Link Level of Service

The existing link levels of service analyses were performed using the methodologies found in the *Highway Capacity Manual (HCM)* using *Synchro™ Version 6*, for arterials. Link levels of service were determined for a.m. and p.m. design hour volumes. The existing a.m. and p.m. design hour link levels of service are shown in *Tables 13 and 14*.

| | U.S. 301 Cross Street | Signal Delay (s) | Travel Time (s) | Arterial Speed (mph) | Arterial LOS |
|------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|-------------------------|
| Northbound | Falkenburg Road | 53.6 | 80.6 | 12.1 | F |
| | Causeway Boulevard | 47.2 | 85.9 | 22.5 | D |
| | Total | 100.8 | 166.5 | 17.5 | E |
| Southbound | Causeway Boulevard | 56.1 | 96.6 | 19.3 | E |
| | Falkenburg Road | 29.4 | 68.1 | 28.4 | C |
| | Total | 85.5 | 164.7 | 23.1 | D |

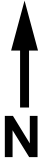
| | U.S. 301 Cross Street | Signal Delay (s) | Travel Time (s) | Arterial Speed (mph) | Arterial LOS |
|------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|-------------------------|
| Northbound | Falkenburg Road | 26.0 | 51.0 | 17.6 | E |
| | Causeway Boulevard | 50.0 | 88.7 | 21.8 | D |
| | Total | 76.0 | 139.7 | 20.3 | E |
| Southbound | Causeway Boulevard | 90.5 | 131.3 | 14.4 | F |
| | Falkenburg Road | 53.9 | 92.6 | 20.9 | E |
| | Total | 144.4 | 223.9 | 17.1 | E |

6.4.1.2 Existing Intersection Level of Service

The intersection analyses for 2007 existing a.m. and p.m. design hour conditions were completed using the signalized intersection methodologies found in the *Highway Capacity Manual (HCM)* using *Synchro™ Version 6*. The existing signal timings were obtained from Hillsborough County staff for the existing conditions analysis. Recently completed intersection improvements at the intersection of U.S. 301 & Falkenburg Road (additional northbound and eastbound left-turn lanes, for a total of two each) have been included in the existing intersection analysis. The existing a.m. and p.m. design hour intersection analyses are summarized in *Tables 15 and 16*, respectively. Existing 2007 intersection and link levels of service are shown in *Figures 18 and 19*.

| Table 15 2007 Existing A.M. Design Hour Intersection Conditions | | | | | | |
|--|---------------------------|-------------------------|-----------------|-----------|-----------|-----------|
| Intersection | Intersection Delay | Intersection LOS | Approach | | | |
| | | | NB | SB | EB | WB |
| US 301 & Falkenburg Road | 47.3 | D | D | C | E | E |
| US 301 & Causeway Boulevard | 80.8 | F | D | F | D | F |

| Table 16 2007 Existing P.M. Design Hour Intersection Conditions | | | | | | |
|--|---------------------------|-------------------------|-----------------|-----------|-----------|-----------|
| Intersection | Intersection Delay | Intersection LOS | Approach | | | |
| | | | NB | SB | EB | WB |
| US 301 & Falkenburg Road | 50.8 | D | C | D | E | F |
| US 301 & Causeway Boulevard | 108.3 | F | F | F | F | F |



NOT TO SCALE

Legend
 — Study Roadway
 ○ Study Intersection

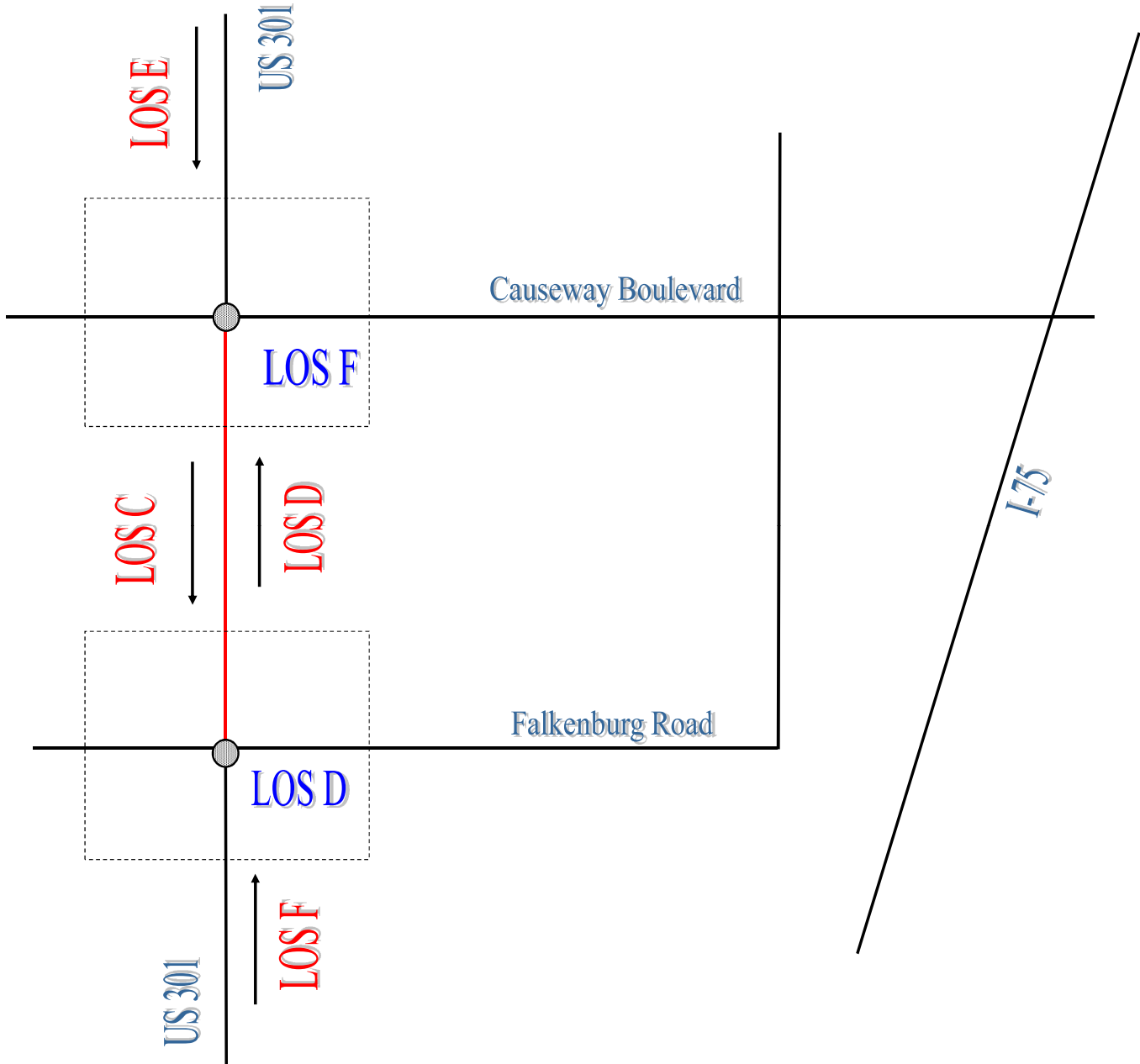


Figure 18
 Existing 2007 A.M. Design Hour
 Intersection Level of Service & Link Level of Service
 U.S. 301 PER: Falkenburg Road to Causeway Boulevard
 Hillsborough County, Florida

Legend
 — Study Roadway
 ○ Study Intersection



NOT TO SCALE

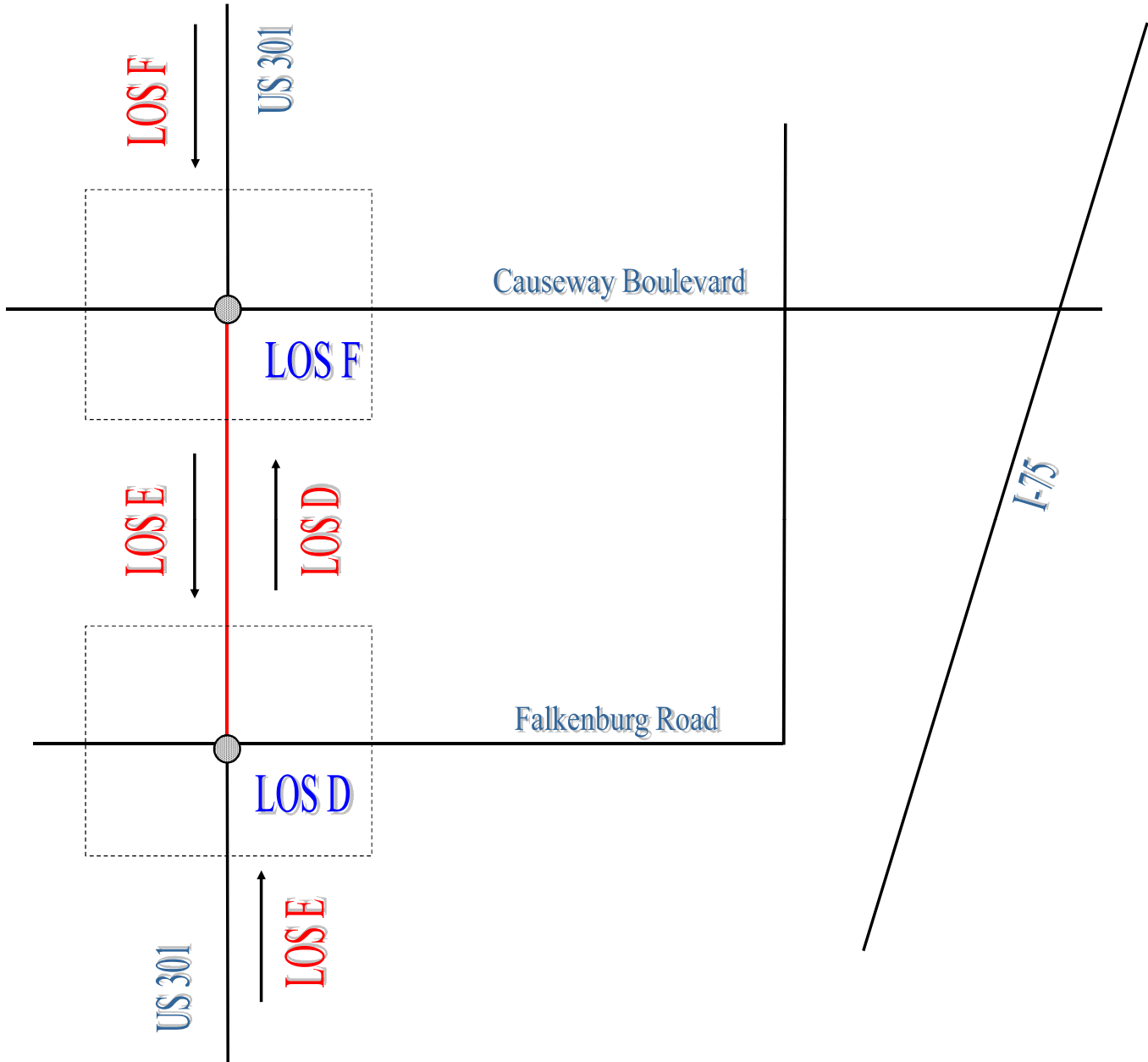


Figure 19
 Existing 2007 P.M. Design Hour
 Intersection Level of Service & Link Level of Service
 U.S. 301 PER: Falkenburg Road to Causeway Boulevard
 Hillsborough County, Florida

6.4.2 Future Level of Service

6.4.2.1 Future Year Improvements

As part of this analysis, future roadway and intersection improvements were used for the study intersections. The year 2030 future lane geometry is shown in *Figure 13*. Improvements included (FDOT Item # 255599-1) in the future conditions analysis of the intersection of US 301 & Causeway Boulevard were the following:

1. Additional southbound to eastbound left-turn lane
2. Additional eastbound to northbound left-turn lane
3. Additional eastbound to southbound right-turn lane
4. Additional northbound to westbound left-turn lane
5. Additional westbound to southbound left-turn lane
6. Additional westbound receiving lane (existing westbound through lane drops west of U.S. 301)

6.4.2.2 Link Level of Service

The design year link level of service analysis was performed using the methodologies found in the *Highway Capacity Manual (HCM)* using *Synchro™ Version 6*. The results of the design year 2030 a.m. and p.m. design hour link levels of service are detailed in *Tables 17* and *18*, respectively. As indicated, the study roadway is expected to operate below LOS D in year 2030 future. The addition of the proposed third northbound and southbound through lane will improve traffic conditions over the no-build alternative.

| Table 17 2030 A.M. Design Hour Link Levels of Service Build Alternative | | | | | |
|--|----------------------------------|-----------------------------|----------------------------|---------------------------------|-------------------------|
| | U.S. 301 Cross Street | Signal Delay (s) | Travel Time (s) | Arterial Speed (mph) | Arterial LOS |
| Northbound | Falkenburg Road | 59.4 | 86.6 | 11.3 | F |
| | Causeway Boulevard | 207.7 | 246.4 | 7.9 | F |
| | Total | 267.1 | 333.0 | 8.8 | F |
| Southbound | Causeway Boulevard | 81.6 | 122.1 | 15.3 | F |
| | Falkenburg Road | 31.3 | 70.0 | 27.7 | C |
| | Total | 112.9 | 192.1 | 19.8 | E |

| | U.S. 301 Cross Street | Signal Delay (s) | Travel Time (s) | Arterial Speed (mph) | Arterial LOS |
|------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|-------------------------|
| Northbound | Falkenburg Road | 25.9 | 53.4 | 18.5 | E |
| | Causeway Boulevard | 397.9 | 436.6 | 4.4 | F |
| | Total | 423.8 | 490.0 | 6.0 | F |
| Southbound | Causeway Boulevard | 163.6 | 201.5 | 9.4 | F |
| | Falkenburg Road | 48.0 | 86.7 | 22.3 | D |
| | Total | 211.6 | 288.2 | 13.3 | F |

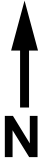
6.4.2.3 Intersection Level of Service

The intersection analyses for the 2030 design hour traffic conditions were completed using the signalized intersection methodologies found in the HCM using *Synchro Version 6*.



Under design year 2030 a.m. and p.m. design hour traffic conditions, the intersections of US Highway 301 and Causeway Boulevard and US Highway 301 and Falkenburg Road are both expected to operate below the accepted LOS D performance standard. Intersection analyses results are shown in *Tables 19* and *20*. Design year intersection level of service analysis for a.m. and p.m. design hours are illustrated in *Figures 20* and *21*, respectively.

| Intersection | Intersection Delay (sec) | Intersection LOS | Approach LOS | | | |
|-----------------------------|-------------------------------------|-----------------------------|---------------------|-----------|-----------|-----------|
| | | | NB | SB | EB | WB |
| US 301 & Falkenburg Road | 58.9 | E | D | D | E | F |
| US 301 & Causeway Boulevard | 203.8 | F | F | F | E | F |

| Intersection | Intersection Delay (sec) | Intersection LOS | Approach LOS | | | |
|-----------------------------|-------------------------------------|-----------------------------|---------------------|-----------|-----------|-----------|
| | | | NB | SB | EB | WB |
| US 301 & Falkenburg Road | 68.4 | E | C | D | E | F |
| US 301 & Causeway Boulevard | 223.2 | F | F | F | F | F |



Legend

-  Study Roadway
-  Study Intersection

NOT TO SCALE

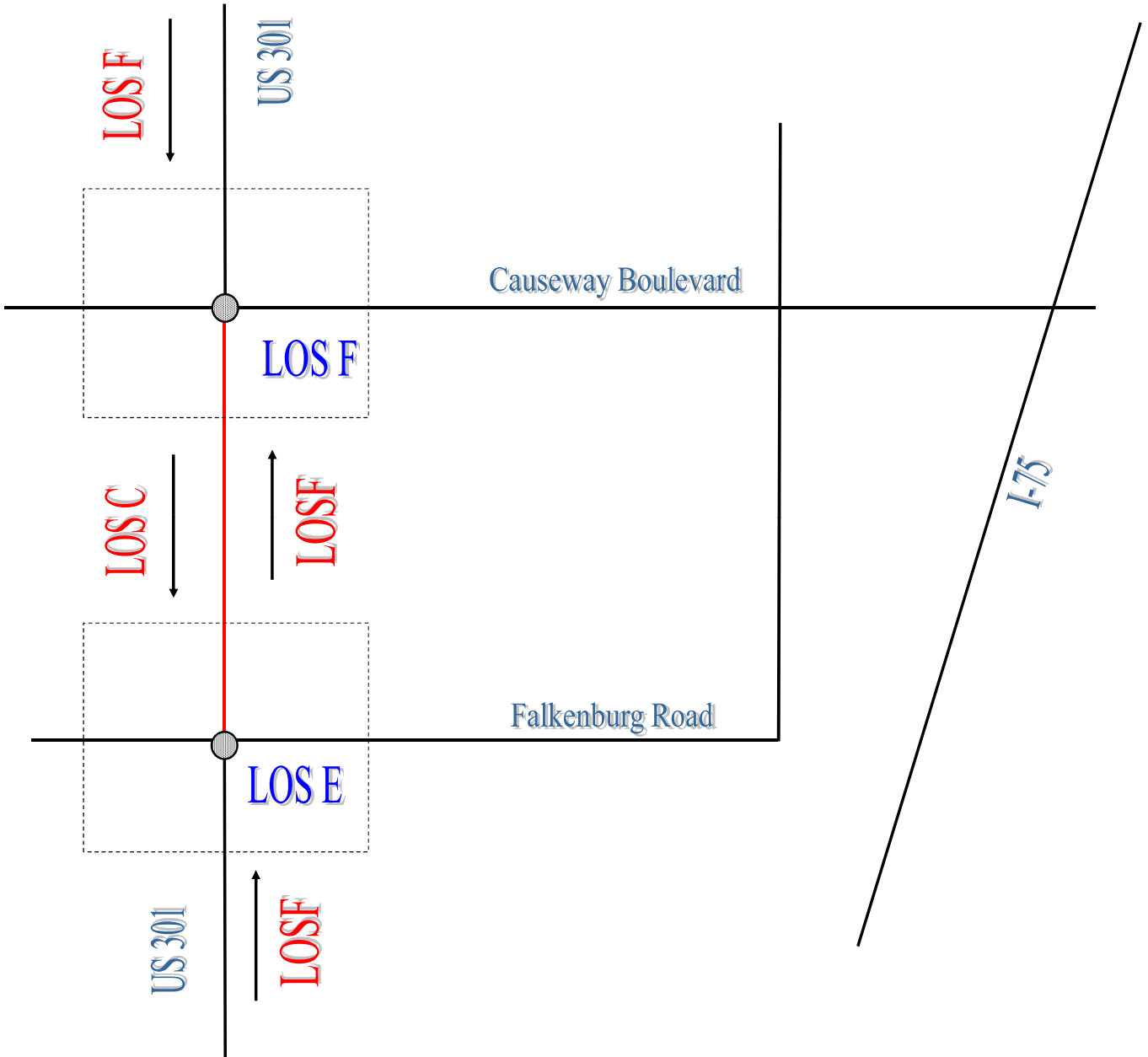


Figure 20
Future 2030 A.M. Design Hour Build Alternative
Intersection Level of Service & Link Level of Service
U.S. 301 PER: Falkenburg Road to Causeway Boulevard
Hillsborough County, Florida





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Legend

-  Study Roadway
-  Study Intersection

NOT TO SCALE

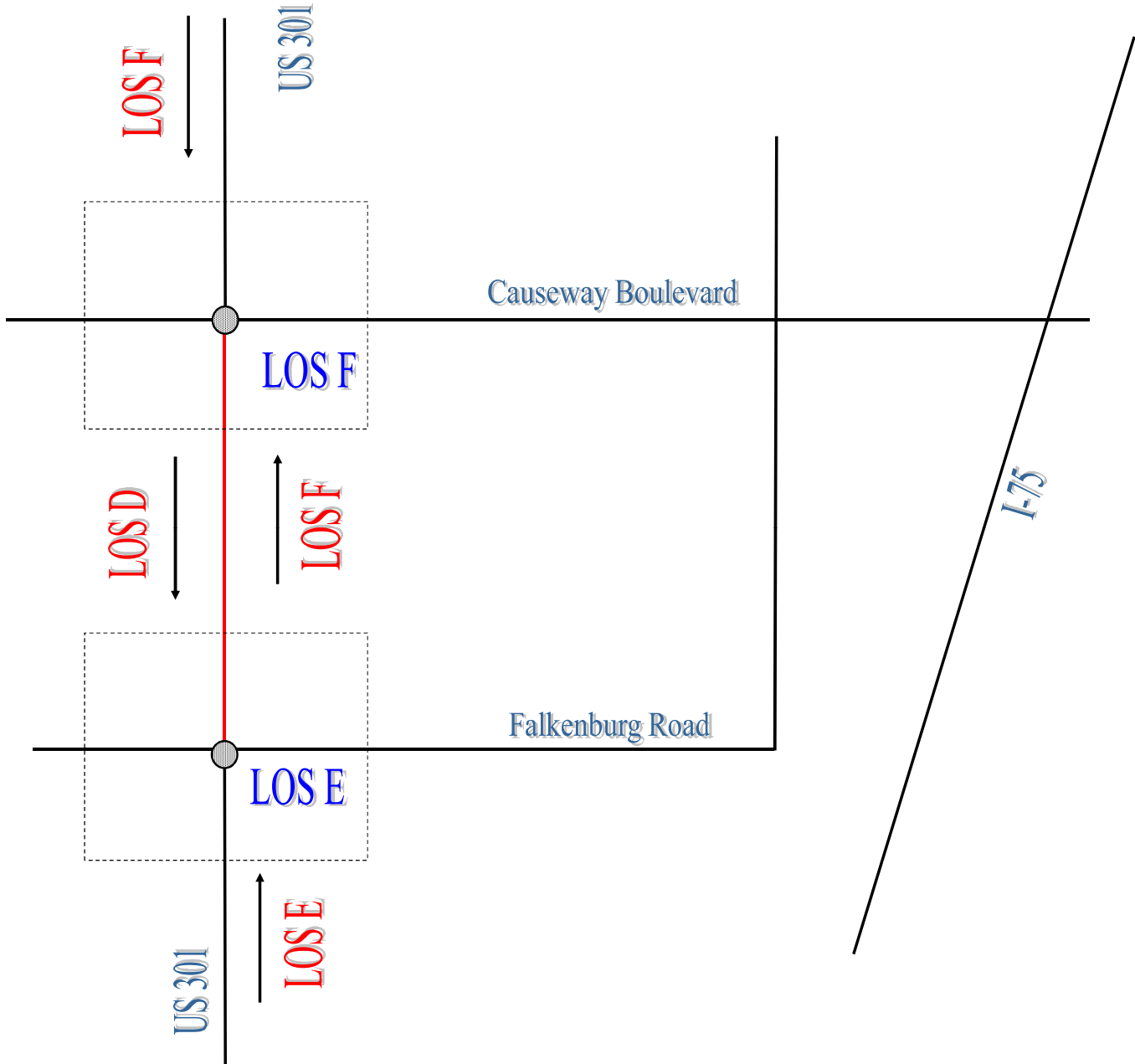


Figure 21
 Future 2030 P.M. Design Hour Build Alternative
 Intersection Level of Service & Link Level of Service
 U.S. 301 PER: Falkenburg Road to Causeway Boulevard
 Hillsborough County, Florida

6.5 Recommended Design Hour Intersection Improvements

The intersection analysis for the 2030 design hours resulted in overall intersection LOS below the LOS D standard. Based upon the results of the intersection analysis the improvements listed below, by intersection, are required for the intersections to operate at the accepted LOS D standard during the 2030 design hour. The revised a.m. and p.m. design hour levels of service are contained in *Tables 21 and 22*, respectively.

US 301 & Falkenburg Road:

1. One additional northbound and southbound through lane (for a total of eight on US 301)

US 301 & Causeway Boulevard:

1. One additional eastbound to northbound left-turn lane (for a total of three)
2. One additional eastbound to southbound right-turn lane (for a total of two)
3. One additional westbound to southbound left-turn lane (for a total of three)
4. Two additional westbound to northbound right-turn lane (for a total of three)
5. One additional northbound to westbound left-turn lane (for a total of three)
6. One additional northbound and southbound through lane (for a total of four on US 301)
7. Two additional eastbound and westbound through lanes (for a total of four on Causeway Boulevard)

It is anticipated that the signal timings at both intersections will be required to be adjusted in the future to accommodate changes in the traffic patterns and in the intersection geometries. In addition, the right-turn phasing was changed to provide protected plus overlap phasing to the eastbound and westbound dual right-turn lanes and overlap phasing to the northbound and southbound right-turn lanes. The existing 140 second cycle length was assumed to remain in place in the future analysis.

| Table 21 2030 A.M. Design Hour Intersection Conditions with Traffic Mandated Improvements | | | | | | |
|--|---------------------------------|-------------------------|---------------------|-----------|-----------|-----------|
| Intersection | Intersection Delay (sec) | Intersection LOS | Approach LOS | | | |
| | | | NB | SB | EB | WB |
| US 301 & Falkenburg Road | 33.4 | C | C | B | E | E |
| US 301 & Causeway Boulevard | 44.1 | D | C | D | D | E |

Table 22 2030 P.M. Design Hour Intersection Conditions with Traffic Mandated Improvements

| Intersection | Intersection Delay (sec) | Intersection LOS | Approach LOS | | | |
|-----------------------------|--------------------------|------------------|--------------|----|----|----|
| | | | NB | SB | EB | WB |
| US 301 & Falkenburg Road | 40.7 | D | D | C | E | E |
| US 301 & Causeway Boulevard | 53.6 | D | C | E | E | E |

6.6 Turn Lane Length Analysis

In addition to the intersection LOS analysis, turn lane length analyses were performed for the signalized study area intersections utilizing the red time formula. The required total turn lane lengths for the year 2030 Design Hour volumes and the improvements listed in Section 6.5 are shown in *Table 23*.

Table 23 Turn Lane Calculations for 2030 Conditions

| Location | # of Turn Lanes | Design-Hour Volume | Storage Length (feet) | Deceleration Distance (feet) | Total Length (feet) |
|--|-----------------|--------------------|-----------------------|------------------------------|---------------------|
| US 301 & Falkenburg Road | | | | | |
| Eastbound left-turn | 2 | 263 | 250 | 290 | 540 |
| Eastbound right-turn | 1 | 55 | 125 | 290 | 415 |
| Westbound left-turn | 2 | 661 | 550 | 290 | 840 |
| Northbound left-turn | 2 | 282 | 275 | 350 | 625/750* |
| Northbound right-turn | 1 | 646 | 775 | 350 | 1,125 |
| Southbound left-turn | 1 | 115 | 225 | 350 | 575 |
| Southbound right-turn | 1 | 595 | 675 | 350 | 1,025 |
| US 301 & Causeway Boulevard | | | | | |
| Eastbound left-turn | 3 | 348 | 225 | 290 | 515 |
| Eastbound right-turn | 2 | 315 | 200 | 290 | 490 |
| Westbound left-turn | 3 | 581 | 375 | 290 | 665 |
| Westbound right-turn | 3 | 1,228 | 575 | 290 | 865 |
| Northbound left-turn | 3 | 496 | 325 | 350 | 675/850* |
| Northbound right-turn | 1 | 154 | 175 | 350 | 525 /850* |
| Southbound left-turn | 3 | 901 | 525 | 350 | 875 |
| Southbound right-turn | 1 | 429 | 475 | 350 | 825 |

*Length required due to through movement queue lengths.

In addition to the turn length analysis, a review of the through movement queue lengths was completed to determine if any of the through movements at the intersections are anticipated to

block (starve) the proposed turn lanes. The results indicated that the northbound left-turn lane at the US 301 & Falkenburg Road intersection would need to be lengthened to avoid being blocked by the through movement queue lengths. It is anticipated that a total turn lane length of 750 feet would be required for the northbound left-turn lane. Also, the northbound left and right-turn lanes at the intersection of US 301 & Causeway Boulevard need to be approximately 850 feet in length to avoid being blocked by the northbound through movement.

The length of the segment of US 301 between Falkenburg Road and Crescent Park Drive, the next roadway to the south, is approximately 1,350 feet. The total turn lane length for the northbound right-turn lane at the intersection of US 301 & Falkenburg is anticipated to be 1,125 feet in total length, therefore it is anticipated that the full length of the turn lane will be accommodated between the two study intersections on US 301.

6.7 Design Year (No-Build) Link Level of Service

The design year no-build link level of service was determined for the US 301 study roadway segment by applying the design year AADT two-way volumes to the existing roadway geometry. Based upon the results of the existing conditions roadway analysis, it is anticipated that the roadway segment of US 301 between Falkenburg Road and Causeway Boulevard will operate below the LOS D standard with the addition of the future conditions daily traffic volumes under no-build conditions. The results for a.m. and p.m. design hours are shown in *Tables 24 and 25*, respectively. These results are consistent with the analysis and are the driving force for the improvements contained in the build alternative.

| | U.S. 301 Cross Street | Signal Delay (s) | Travel Time (s) | Arterial Speed (mph) | Arterial LOS |
|-------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|-------------------------|
| Northbound | Falkenburg Road | 252.0 | 279.0 | 3.5 | F |
| | Causeway Boulevard | 231.7 | 270.4 | 7.2 | F |
| | Total | 483.7 | 549.4 | 5.3 | F |
| Southbound | Causeway Boulevard | 282.7 | 323.2 | 5.8 | F |
| | Falkenburg Road | 50.9 | 89.6 | 21.6 | D |
| | Total | 333.6 | 412.8 | 9.2 | F |

| | U.S. 301 Cross Street | Signal Delay (s) | Travel Time (s) | Arterial Speed (mph) | Arterial LOS |
|-------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|-------------------------|
| Northbound | Falkenburg Road | 75.2 | 100.2 | 9.0 | F |
| | Causeway Boulevard | 645.7 | 684.4 | 2.8 | F |
| | Total | 720.9 | 784.6 | 3.6 | F |
| Southbound | Causeway Boulevard | 405.0 | 445.8 | 4.2 | F |
| | Falkenburg Road | 252.9 | 291.6 | 6.6 | F |
| | Total | 657.9 | 737.4 | 5.2 | F |

7.0 CORRIDOR ANALYSIS

US Highway 301 is a major part of the regional transportation network. Due to the nature of the future improvements for US Highway 301, no additional improvements or alternative corridors were considered.

8.0 ALTERNATIVE ALIGNMENT ANALYSIS

8.1 No-Build Alternative

The No-Build Alternative will not provide any additional roadway improvements within the study area, leaving the existing facility unchanged from its present configuration. The combination of the lack of improvements and steadily increasing traffic will result in increased congestion, longer travel times, and the possibility of higher accident rates on the existing road system. Additionally, the No-Build Alternative is not consistent with the 2025 LRTP for the Hillsborough County MPO.

The No-Build Alternative has the following advantages: no roadway construction or utility costs; no traffic disruptions due to construction; no environmental impacts; and no engineering costs. This alternative was retained as a viable alternative through the Public Hearing Phase.

8.2 Transportation System Management Alternative

The Transportation System Management (TSM) alternative includes those types of activities designed to maximize the use of the existing transportation system. A TSM project is a limited construction alternative that would use minor improvements to enhance capacity. These strategies include increased mass transit usage, lane-use restrictions for high-occupancy vehicles, reverse lane operation for high-occupancy vehicles, intersection widening, signalization improvements, and provisions for bicyclists and pedestrians. The advantage of this alternative is the limited expenditure of funds to relieve congestion problems and minimal environmental

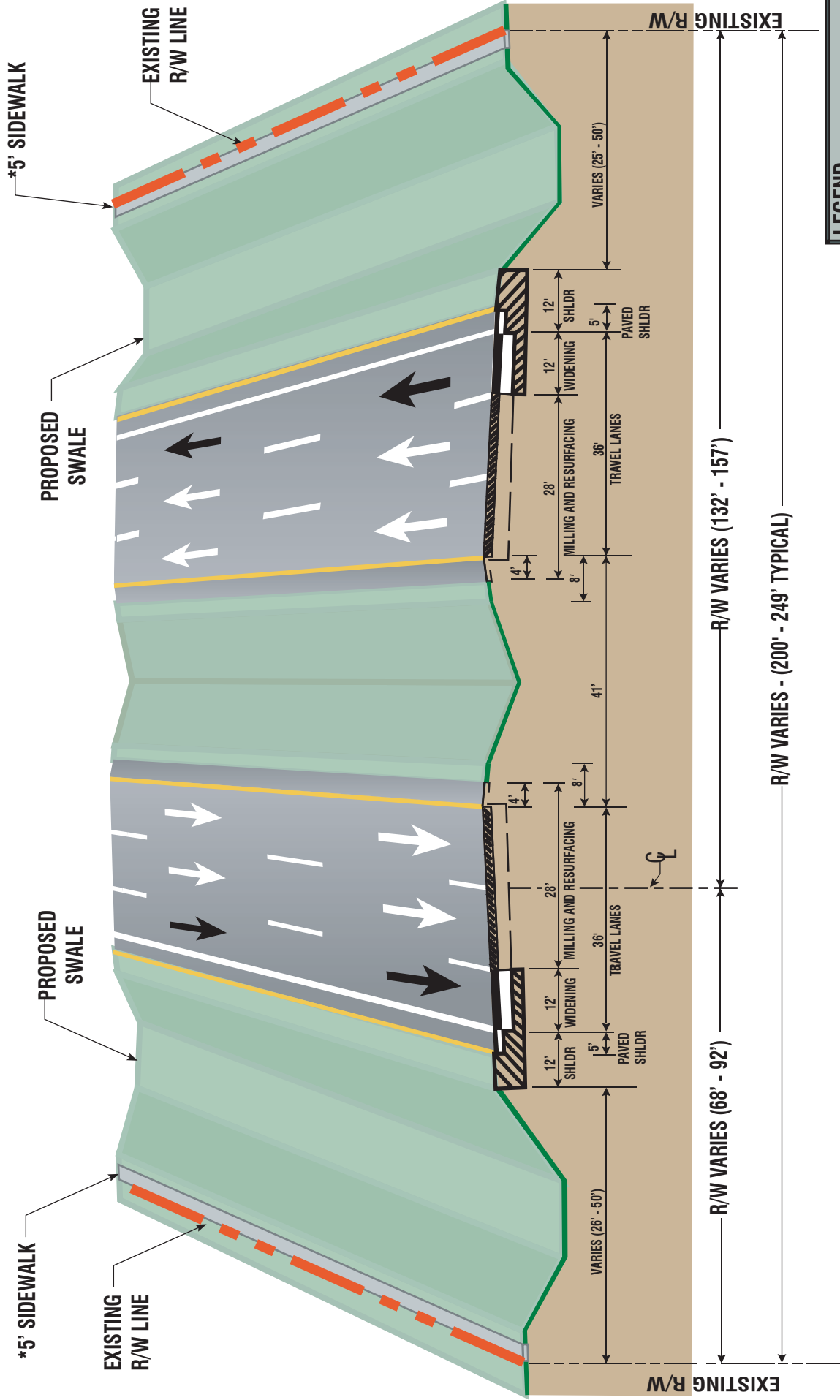
impacts. While some increased efficiency might be realized through minor improvements, the overall goal of providing increased capacity would not be realized through the TSM alternative. Therefore, this was not retained as a viable alternative.

8.3 Build Alternatives

The proposed typical section (see *Figure 22*) adds one lane in each direction to US Highway 301 to widen the facility from 4 lanes to 6 lanes. The existing 41-foot grass median with 8-foot shoulders, 4 feet of which are paved, will remain. New 12-foot-wide shoulders, 5 feet of which are paved, will be added to the outside. Five-foot sidewalks will be added near the R/W line from Falkenburg Road to Wes Kearney Way. The existing swales will be re-graded to accommodate stormwater requirements. Existing drainage structures will be modified as required to accommodate the widening.

The following are the advantages of the Build Alternative:

- Consistent with the Hillsborough County 2025 LRTP.
- Provides two additional lanes, one in each direction, which will increase the capacity of the roadway.
- Twelve-foot shoulders, 5 feet of which are paved, are added to the outside and can accommodate bicycles.
- Five-foot sidewalks are added to both sides of the road from Falkenburg Road to Wes Kearney Way for pedestrian mobility.
- No adverse environmental impacts have been identified.
- No R/W acquisition is required.
- There could be a possible reduction in crashes.
- The roadway will be a continuous 6-lane section.
- The stormwater treatment facilities will be upgraded.



* Proposed sidewalk from Falkenburg Rd. to Wes Kearney Way

**PROPOSED TYPICAL SECTION (4 TO 6 LANES)
US 301 (SR 43)**

WPI Seg. No. 421140-6

FROM FALKENBURG RD TO CAUSEWAY BLVD

Figure 22

8.4 Operational Analysis (Not Required)

8.5 Evaluation Matrix

A qualitative analysis was conducted to determine the advantages and disadvantages of the No-Build and Build Alternatives. Each alternative was evaluated in relation to engineering, socio-economic, and environmental criteria, as well as various cost factors. The comparative Alternative Evaluation Matrix is presented in *Table 26*.

8.6 Recommended Alternative

The recommended alternative is the Build Alternative that widens US Highway 301 to 6 lanes with three 12-foot lanes in each direction, 5-foot paved outside shoulders (4-foot paved inside shoulders), 41-foot median and 5-foot sidewalks on each side.

Table 26 Evaluation Matrix

| EVALUATION CATEGORY | Alternative | |
|---|---|--|
| | No Build | Build |
| Project Length | 4 | 0.75 miles |
| Number of Lanes Required | 4 | 6 |
| ENGINEERING | | |
| Functional Relationship with Transportation Network | Does not meet the objectives of the Hillsborough County MPO 2025 Long Range Transportation Plan (LRTP). | Meets Hillsborough County MPO 2025 LRTP. |
| Traffic Operation | This alternative does not enhance the local transportation system. | Widening US 301 from 4 to 6 lanes will increase capacity and enhance traffic operations. |
| Vehicle Safety | With increased traffic on US 301, the potential for increased accidents is higher. | Increasing the number of lanes from 4 to 6 will increase capacity and should improve vehicle safety. |
| Pedestrian/Bicycle Facilities | No bicycle facilities exist and a sidewalk exists only from Wes Kearney Way to Causeway Boulevard. | Twelve-foot shoulders, five feet of which is paved, can accommodate bicycles. Five-foot sidewalks will be added from Falkenburg Road to Wes Kearney Way. |
| Evacuation | No Improvement. | The increase in capacity will enhance vehicle evacuation from the area. |
| SOCIO-ECONOMIC | | |
| Potential Relocations of Businesses or Residential | No relocations. | No relocations. |
| Right-of-Way Acquisition (acres) | 0 | 0 |
| Community Services/Features | No Change. | No change. |
| Impact to Parks/Recreation Areas | None. | None. |
| ENVIRONMENTAL | | |
| Wetlands | 0 Acres | Minor impacts to wetlands will occur (approximately 0.1 acres). |
| Potential Threatened & Endangered Species Involvement | No Change | Low |
| Number of Potential Contaminated Sites | No Change. | 2 – Low 3 – Medium |
| Noise Sensitive Sites | 0 | 1 |
| Floodplains | 0 | 0 |
| Farmlands | No Change. | No change. |
| Cultural/Historical | No Change. | No change. |
| Potential to Encounter Archaeological Sites | None. | None. |
| COST | | |
| Right-of-Way | \$ 0 | \$ 0 |
| Construction | \$ 0 | * \$ 3, 941, 496 |
| TOTAL PROJECT COST | \$ 0 | \$ 3, 941, 496 |
| TOTAL | \$ 0 | \$ 3, 941, 496 |

* See Appendix D for Long Range Estimate

9.0 PRELIMINARY DESIGN ANALYSIS

This section presents an analysis of the preferred alternative, which is the Recommended Alternative, for the project. The preferred alternative includes the construction of a 6 lane divided roadway with improvements to drainage, signalization and includes the addition of bicycle lanes and sidewalks.

9.1 Design Traffic Volumes

The forecasted traffic volumes and analysis results reported in the *Traffic Technical Memorandum* (August 2008) are based upon an examination of the no-build alternative and the build alternative. This report serves as an evaluation of the traffic impacts related to the US Highway 301 roadway improvements. Results of the traffic operations analysis of the no-build alternative have been documented as a means of forming a baseline to compare the proposed build alternative.

Future design year 2030 results indicate that the study roadway and intersections will operate at an unacceptable LOS under build and no-build conditions. However, the addition of the proposed third northbound and southbound through lane will improve traffic conditions over the no-build alternative. Therefore, it is recommended that US Highway 301 be widened to six lanes between Falkenburg Road and Causeway Boulevard.

The year 2030 future recommended intersection geometry are listed by intersection below. With the addition of the following improvements the study area intersections are anticipated to operate at acceptable LOS during the 2030 scenario, as detailed in this report.

US 301 & Falkenburg Road:

1. One additional northbound and southbound through lane (for a total of eight on US 301)

US 301 & Causeway Boulevard:

1. One additional eastbound to northbound left-turn lane (for a total of three)
2. One additional eastbound to southbound right-turn lane (for a total of two)
3. One additional westbound to southbound left-turn lane (for a total of three)
4. Two additional westbound to northbound right-turn lane (for a total of three)
5. One additional northbound to westbound left-turn lane (for a total of three)
6. One additional northbound and southbound through lane (for a total of four on US 301)
7. Two additional eastbound and westbound through lanes (for a total of four on Causeway Boulevard)

9.2 Typical Sections

The recommended typical section widens US Highway 301 to 6 travel lanes (3 lanes in each direction), by widening one lane to the outside. The median shoulders will remain 8 feet wide, (4

feet of which are paved), and 12 feet shoulders (5 feet of which are paved) will be added to the outside. The outside swales will be re-graded to provide for stormwater treatment. The existing 5-foot sidewalk near the R/W line will be retained, and a new 5-foot sidewalk will be added between Falkenburg Road and Wes Kearney Way (see *Figure 23*).

9.3 Intersection Concepts and Signal Analysis

Signalization exists at the following roadways intersecting US Highway 301:

- Falkenburg Road
- Causeway Boulevard

These signals are recommended to be upgraded due to the widening of US Highway 301.

9.4 Alignment and Right-of-Way Needs

No additional R/W will be required.

9.5 Relocations

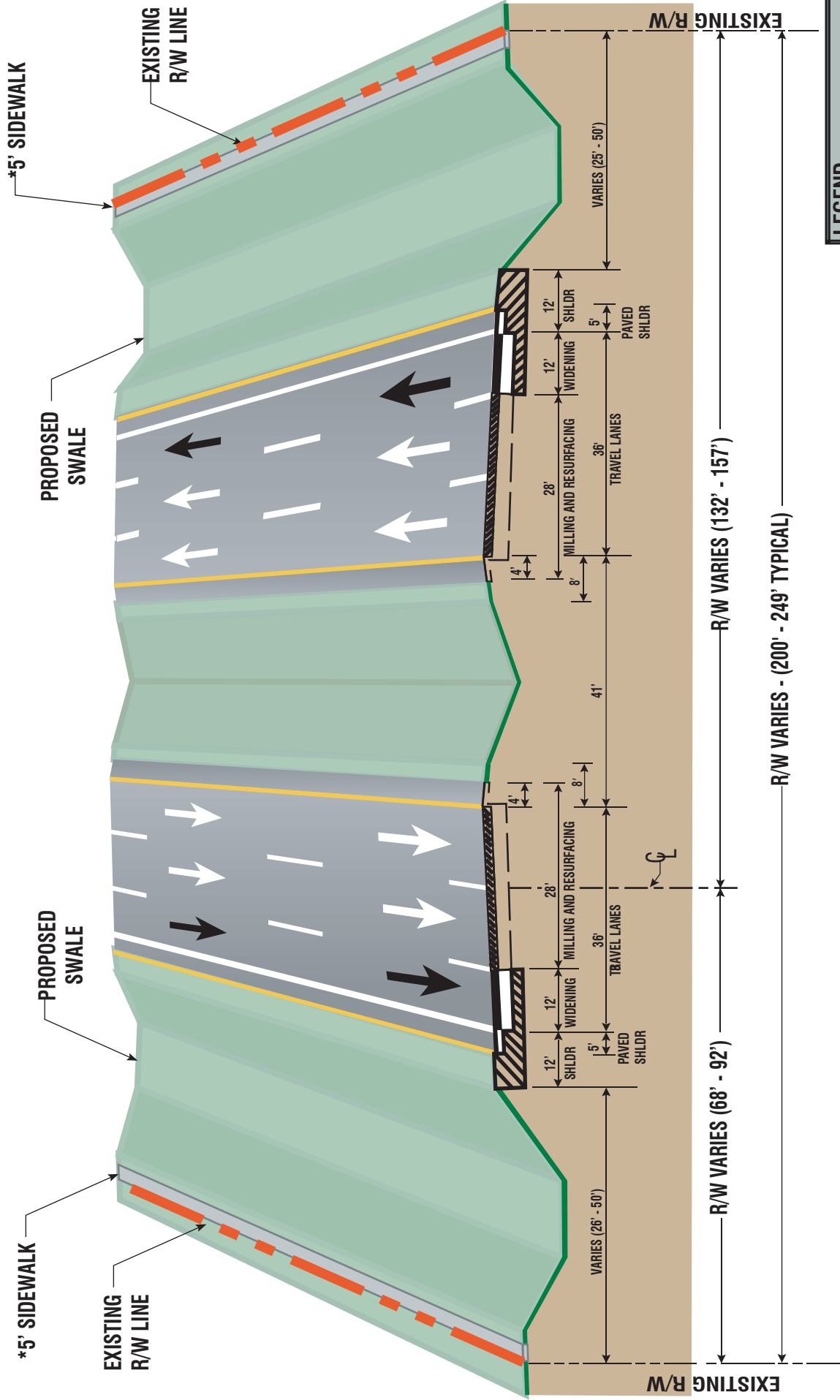
No relocations are required to widen US Highway 301 or to make any intersection improvements.

9.6 Right-of-Way Costs

No R/W cost estimate is necessary since no R/W is needed for widening US Highway 301.

9.7 Construction Cost

The anticipated cost to construct the Recommended Alternative is \$3.9 million. A summary of the construction costs is shown in *Appendix D*.



* Proposed sidewalk from Falkenburg Rd. to Wes Kearney Way

**RECOMMENDED TYPICAL SECTION (4 TO 6 LANES)
US 301 (SR 43)**

FROM FALKENBURG RD TO CAUSEWAY BLVD

LEGEND

 EXISTING ROADWAY
 PROPOSED ROADWAY

9.8 Preliminary Engineering Costs

The estimated preliminary engineering cost for the Recommended Alternative is \$543,000.

9.9 Recycling and Salvageable Materials

Some existing asphalt pavement and roadway base course must be removed to widen US Highway 301 and this material may be able to be reused. However, additional evaluation will be necessary to determine composition, age of the asphalt, and quality of the base course prior to its use.

9.10 User Benefits

The following user benefits will be realized with the implementation of the Recommended Alternative:

- Roadway laneage will increase from 4 to 6 lanes and will accommodate projected traffic volume increases.
- Outside shoulders will be widened to 12 feet, 5 feet of which are paved, which can accommodate bicycles.
- Sidewalks will be provided between Falkenburg Road and Wes Kearney Way, which allows for continuous sidewalks for the entire project.
- Stormwater quality treatment will be provided to meet SWFWMD requirements.

9.11 Pedestrian and Bicycle Facilities

Pedestrian and bicycle facilities will be provided with the Recommended Alternative. Currently, sidewalks are provided for only a portion of the project. A sidewalk will be added from Falkenburg Road to Wes Kearney Way, which allows for continuous sidewalks for the entire project. For both sides of the road, 5-foot outside shoulders will be used to accommodate bicycles.

9.12 Safety

Although the number of accidents reported over the last five years is less than the statewide average for similar facilities, safety will improve with the implementation of the Recommended Alternative. Bicycle lanes will be provided that will enhance safety for bicyclists.

The design of safety-related features has been incorporated into every aspect of design in this project. Some of the design aspects that have been considered are:

- Effective clear zone widths have been factored into the typical sections.
- Adequate provisions for pedestrian sidewalks and bicycle facilities have been incorporated.

- Lane tapers, deceleration, and storage lengths have been designed for turn lanes per FDOT standards. Adequate provisions for vertical and horizontal sight distances have been incorporated into the design.

9.13 Economic and Community Development

Increasing US Highway 301 from an existing 4 lane to a 6 lane will help accommodate future traffic growth to the design year of 2030. This is consistent with the Hillsborough County LRTP. Widening US Highway 301 is also consistent with the County's growth management objectives and will assist in maintaining the economic development of the region. As growth occurs in the area, the community is expected to become more urbanized and its transportation demands of the residents will increase. Planned growth of this corridor, which has direct access to I-75, is essential to providing successful economic growth to the area and County as a whole.

9.14 Environmental Impacts

9.14.1 Land Use

The project is not anticipated to change land use patterns nor affect future development along the project corridor.

9.14.2 Cultural Features and Community Services

No cultural features will be affected as a result of the Recommended Alternative. Community services will not be permanently impacted, however, they may be temporarily affected during construction. This effect is expected to be minor delays of traffic during construction and the resulting delays to services.

9.14.3 Natural and Biological Impacts

Two wetlands have been identified adjacent to the project (see *Section 4.3.5.1 Wetlands*). These wetlands are not anticipated to be impacted as a result of implementing the Recommended Alternative.

An Endangered Species Biological Assessment Report was prepared and no adverse effects are anticipated as a result of implementing the Recommended Alternative.

9.14.4 Physical Impacts

The physical impacts resulting from the implementation of the Recommended Alternative are anticipated to be:

- Decline in air quality, construction noise, and disturbance to the natural ground; all temporary, caused by construction activities

- Increase in noise because vehicles will be closer to adjacent receptors with the widening of US Highway 301; the Noise Study Report indicated the noise impacts were found to be minor, and no sound barrier walls are required.
- Construction may occur near known areas of contamination; no drainage storage or exfiltration is recommended in these areas; any existing contamination plumes are not expected to be exacerbated.

9.15 Utility impacts

As listed in *Section 4.1.12 Utilities* of this report, there are several utilities located in the project area that intersect or run parallel to US Highway 301. Utility companies were contacted and requested to submit design plans of their existing and planned facilities along the project area. Preliminary locations of the utilities have been included into the Concept Plans in *Appendix A*. Continual coordination with the affected companies will take place during the design phase to minimize impacts. Once coordination with the utility companies is complete, the final location of the utilities will be incorporated into the final design stages of the project. The following utilities may be impacted by the implementation of the Recommended Alternative:

- AT&T fiber optic cable west of US Highway 301 within the existing R/W.
- Bright House Network overhead communication lines on the east side of US Highway 301 and a buried cable on the west side, both within the existing R/W.
- Verizon buried telephone lines on both sides of US Highway 301 within the existing R/W.
- Hillsborough County Traffic fiber optic interconnect buried cable along the east side of US Highway 301 at Falkenburg Road.
- Hillsborough County 8-, 12- and 24-inch water mains cross US Highway 301 at the Causeway Boulevard intersection, and an 8-inch water main and 12-inch sanitary sewer force main located along the side of US Highway 301.
- Broadwing Company has a high-density fiber optic cable crossing US Highway 301 at Causeway Boulevard.
- Tampa Water Department has a 10-foot easement adjacent to the wide US Highway 301 R/W that contains several water lines. They are not anticipated to be impacted.
- Tampa Electric as an overhead 13 KV line adjacent to the east R/W line of US Highway 301 that should not be impacted. This line is underground and crosses Falkenburg Road, Wes Kearney Way and Causeway Boulevard near US Highway 301. This underground line may be impacted as a result of the Recommended Alternative.
- Tampa Bay Water has a 72-inch raw water main within a 96-inch casing that crosses US Highway 301 south of Falkenburg Road. Every effort will be made in the design phase to avoid impacting the facility.

9.16 Traffic control plan

The construction of the improvements to US Highway 301 proposed to be done in the following three phases:

Phase 1

All existing lanes will be milled and resurfaced excluding friction course.

Phase 2

Remove outside shoulders and widen the roadway for the new lanes and construct new outside 12-foot shoulders, 4 feet of which are paved. Friction course on the new roadway will be added in Phase 3.

Phase 3

Friction course and pavement markings will be placed.

9.17 Results of Public Involvement Program

The Public Hearing was held on January 8, 2008, at the East Tampa Christian Church, Tampa, Florida. The hearing was held from 5:00 p.m. to 7:00 p.m. and a formal Public Hearing PowerPoint presentation started at 6:00 p.m. County officials and staff presided over the Public Hearing. The FDOT and its consultant were present to assist the public. The Public Hearing provided an opportunity for the public to express their input regarding the project. The formal presentation included a summary of the need for the facility, and relative merits of the preferred alternative based on its level of traffic service and socio-economic impacts. A total of 16 persons registered as having attended the Hearing including County and FDOT staff.

Following the presentation, a comment and question period took place. During this time, no one made verbal comments for the record. Two people submitted written comments at the Public Hearing and no additional comments were received within the ten (10) day response period following the Public Hearing. One comment requested the maps on display. The other was from the Miccosukee Tribe requesting a Cultural Resource Assessment Survey be performed on the project.

9.18 Value Engineering

Value Engineering was not included as part of this project.

9.19 Drainage

The Build Alternative will use a dry retention swale option that entails setting the swale bottom a minimum of one (1) foot above the seasonal high water table (SHWT), based on site specific water table information. The front slope would be set to 1:4 inside the clear zone and 1:3 outside the clear zone. The slope beyond the swale to the sidewalk will be at 1:2 and 1:2 to tie to existing ground. The west side adjacent to the Pavillion Development, from Falkenburg Road to the first driveway north will have to be raised to match future Pavillion grades. The proposed grade is estimated to be 31.0 feet based on permit plans on file at Southwest Florida Water Management District (SWFWMD). Sidewalks will be located at the right-of-way on both sides of the project

where there are currently no sidewalks. The raised area along the Pavillion side will be allowed by the property owner. This will allow the fill slope to encroach onto the Pavillion property as the Pavillion property develops. The swales will retain the required volume and overflow to the outfall. Recovery of the required volume will need to be demonstrated either by percolation or through a bleeder device such as an orifice. The bleeder can be set no lower than the SHWT elevation.

All stormwater permitting requirements will be provided within the roadway swales, and will be contained within existing roadway R/W.

9.20 Bridge Analysis

No bridge structures exist or are required for this project.

9.21 Special Features

No special features are included as part of this project at this time.

9.22 Access Management

US Highway 301 is currently classified as a Class 3 roadway for the entire study area. For this classification, full median openings are allowed every half mile (2,640 feet). A variation was approved to provide a full median opening at Wes Kearney Way. *Table 27* lists the existing and recommended median openings. The Concept Plans (see *Appendix A*) show proposed median openings and driveway connections.

| Approx. Sta. | Median Opening | Spacing (ft) | Existing Opening Type | Recommended Opening Type | Comments |
|---------------------|-----------------------|---------------------|------------------------------|---------------------------------|---|
| 1063+00 | Falkenburg Rd. | | Signal | Signal | |
| | | 1350 | | | |
| 1076+50 | Wes Kearney Way | | Full | Full | *Variation granted for this opening on May 15, 2002 |
| | | 1325 | | | |
| 1089+00 | Causeway Blvd. | | Signal | Signal | |

9.23 Aesthetics and Landscaping

No landscaping or aesthetic features were included as part of this project.

Appendix A

Concept Plans

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

CONCEPT PLANS

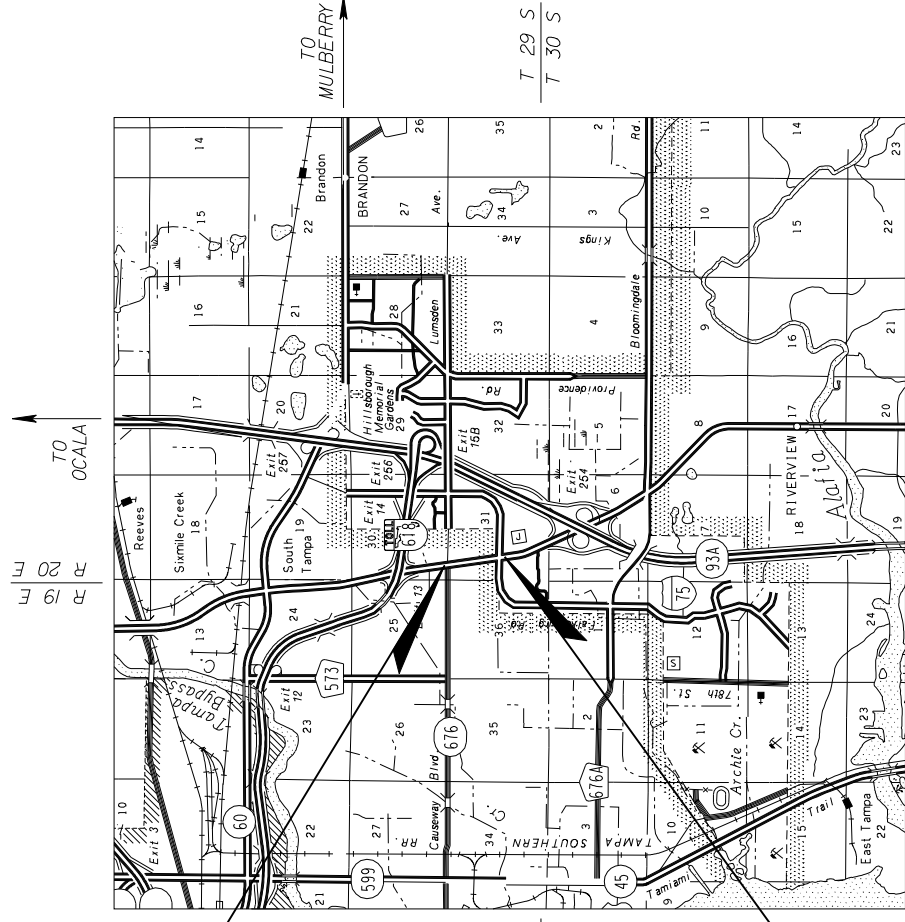
WPI SEGMENT NO. 421140-6
HILLSBOROUGH COUNTY (10010)
STATE ROAD NO. 43 (US 301)
FROM FALKENBURG ROAD TO CAUSEWAY BOULEVARD

A DETAILED INDEX APPEARS ON THE
KEY SHEET OF EACH COMPONENT

INDEX OF ROADWAY PLANS

| SHEET NO. | SHEET DESCRIPTION |
|-----------|-------------------|
| 1 | KEY SHEET |
| 2 | TYPICAL SECTIONS |
| 3 - 6 | CONCEPT PLAN |

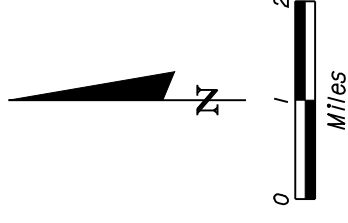
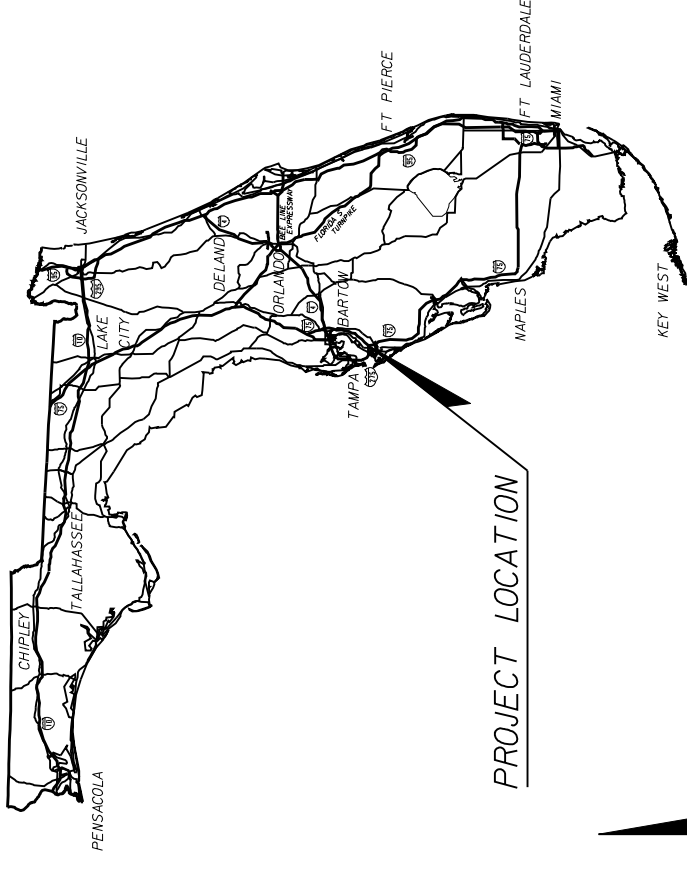
END PROJECT
STA 1095+51.00



BEGIN PROJECT
STA 1055+99.02

PROJECT LENGTH IS BASED ON \varnothing OF SURVEY

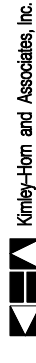
| LENGTH OF PROJECT | | |
|-------------------------|-------------|-------|
| | LINEAR FEET | MILES |
| ROADWAY | 3951.98 | 0.748 |
| BRIDGES | 0 | 0 |
| NET LENGTH OF PROJECT | 3951.98 | 0.748 |
| EXCEPTIONS | 0 | 0 |
| GROSS LENGTH OF PROJECT | 3951.98 | 0.748 |



ROADWAY SHOP DRAWINGS
TO BE SUBMITTED TO:

KIMLEY-HORN AND ASSOCIATES, INC.
MARWAN H. MUFLEH, P.E.
4431 EMBARCADERO DRIVE
WEST PALM BEACH, FLORIDA 33407
PHONE: (561) 845-0665
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PLANS PREPARED BY:



KIMLEY - HORN AND ASSOCIATES, INC
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VENDOR NO. VF-560-885-615-001
CERTIFICATE OF AUTHORIZATION NO. 696

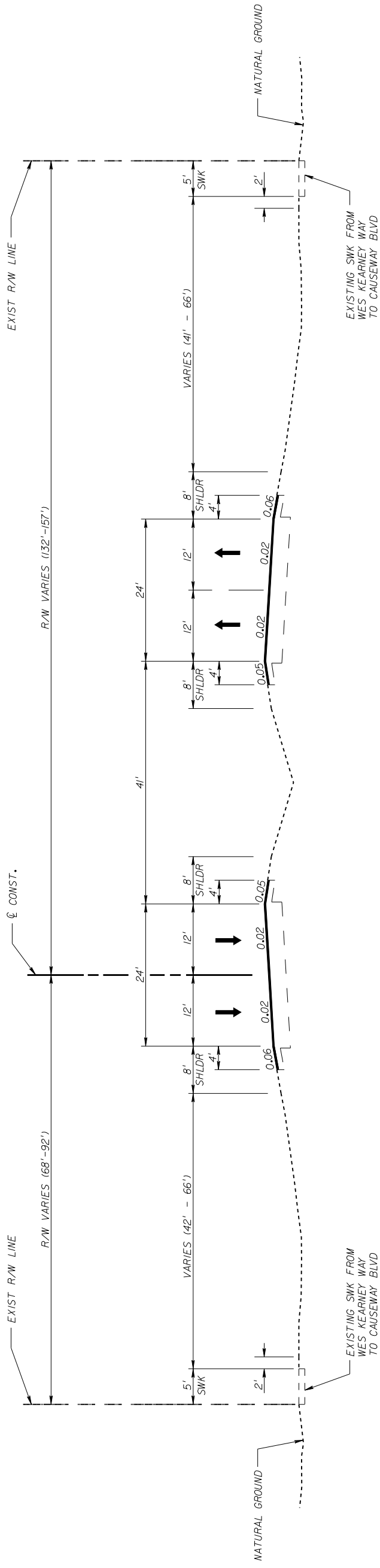
NOTE: THE SCALE OF THESE PLANS MAY
HAVE CHANGED DUE TO REPRODUCTION.

| KEY SHEET REVISIONS | |
|---------------------|-------------|
| DATE | DESCRIPTION |
| | |
| | |

ROADWAY PLANS
ENGINEER OF RECORD: MARWAN H. MUFLEH, P.E.

P.E. NO.: 45329

| | | | |
|-------------|----|-----------|---|
| FISCAL YEAR | 08 | SHEET NO. | 1 |
|-------------|----|-----------|---|

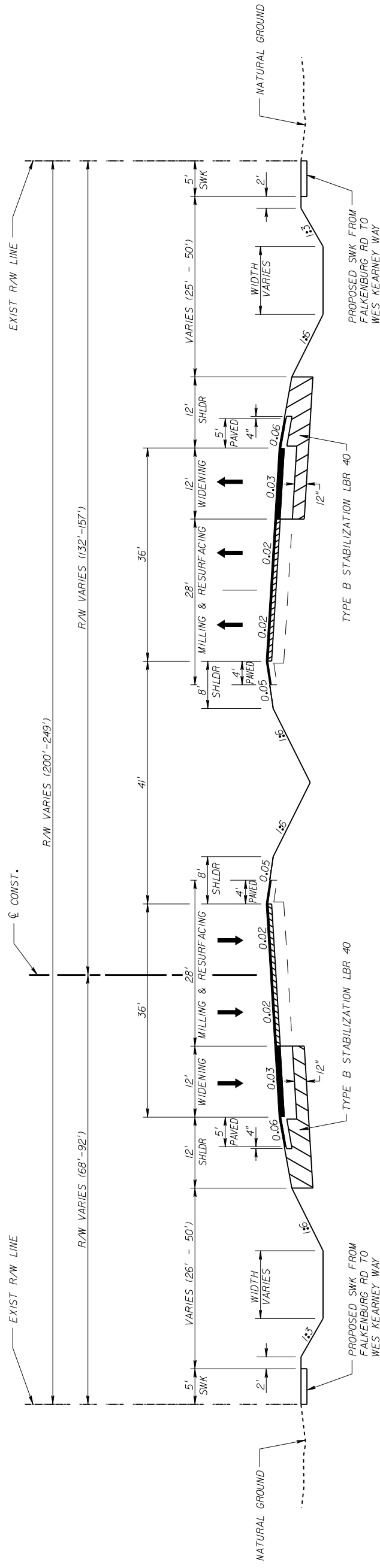


EXISTING TYPICAL SECTION

US 301 (SR 43)

FROM FALKENBURG RD TO CAUSEWAY BLVD

DESIGN SPEED = 55 MPH
POSTED SPEED = 50 MPH



PROPOSED TYPICAL SECTION

US 301 (SR 43)

FROM FALKENBURG RD TO CAUSEWAY BLVD

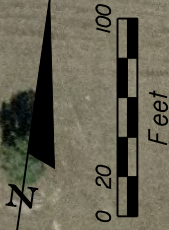
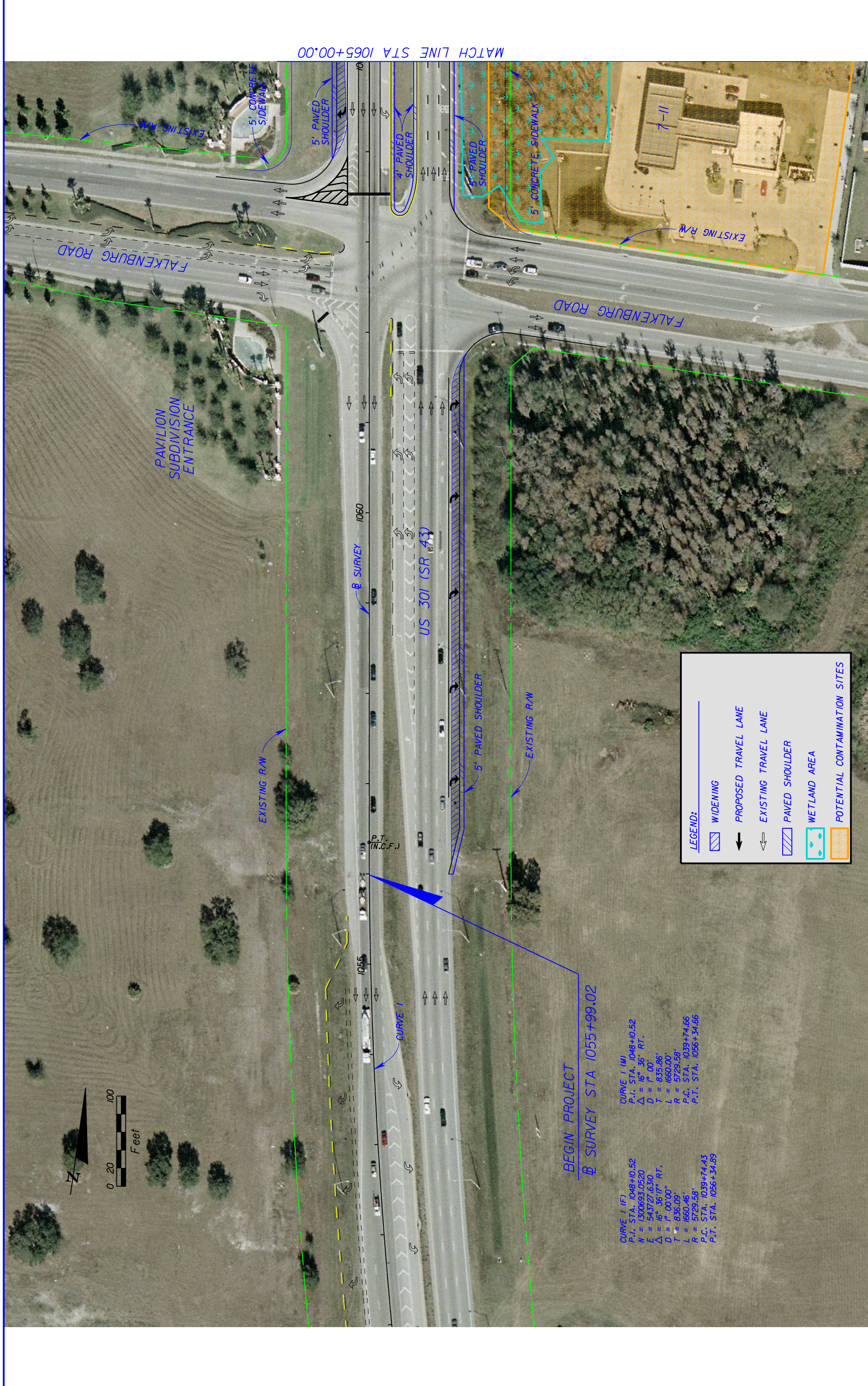
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POSTED SPEED = 50 MPH

| REVISIONS | | DATE | BY | DESCRIPTION |
|-----------|--|------|----|-------------|
| | | | | |

Kimley-Horn and Associates, Inc.
 Certificate of Authorization No. 696
 Marwan Mufleh, P.E.
 P.E. License No. 45329
 4431 Embarrasero Drive
 West Palm Beach, Florida 33407

| | | | |
|-------------------------|--------------|-------------------------------------|--|
| STATE OF FLORIDA | | DEPARTMENT OF TRANSPORTATION | |
| ROAD NO. | COUNTY | WPI SEGMENT NO. | |
| 43 | HILLSBOROUGH | 421140-6 | |

| | |
|-------------------------|---|
| TYPICAL SECTIONS | |
| SHEET NO. | 2 |



MATCH LINE STA 1065+00.00

CURVE 1 (F)
 P.I. STA. 1048+10.52
 H = 1300693.0520
 E = 543727.6310
 $\Delta = 16^\circ 36' 17''$ RT.
 D = 836.09'
 T = 836.09'
 L = 1660.46'
 R = 5729.58'
 P.C. STA. 1039+74.43
 P.T. STA. 1056+34.89

CURVE 1 (M)
 P.I. STA. 1048+10.52
 $\Delta = 16^\circ 36' 17''$ RT.
 D = 836.09'
 T = 836.09'
 L = 1660.00'
 R = 5729.58'
 P.C. STA. 1039+74.66
 P.T. STA. 1056+34.66

BEGIN PROJECT
 @ SURVEY STA 1055+99.02

LEGEND:

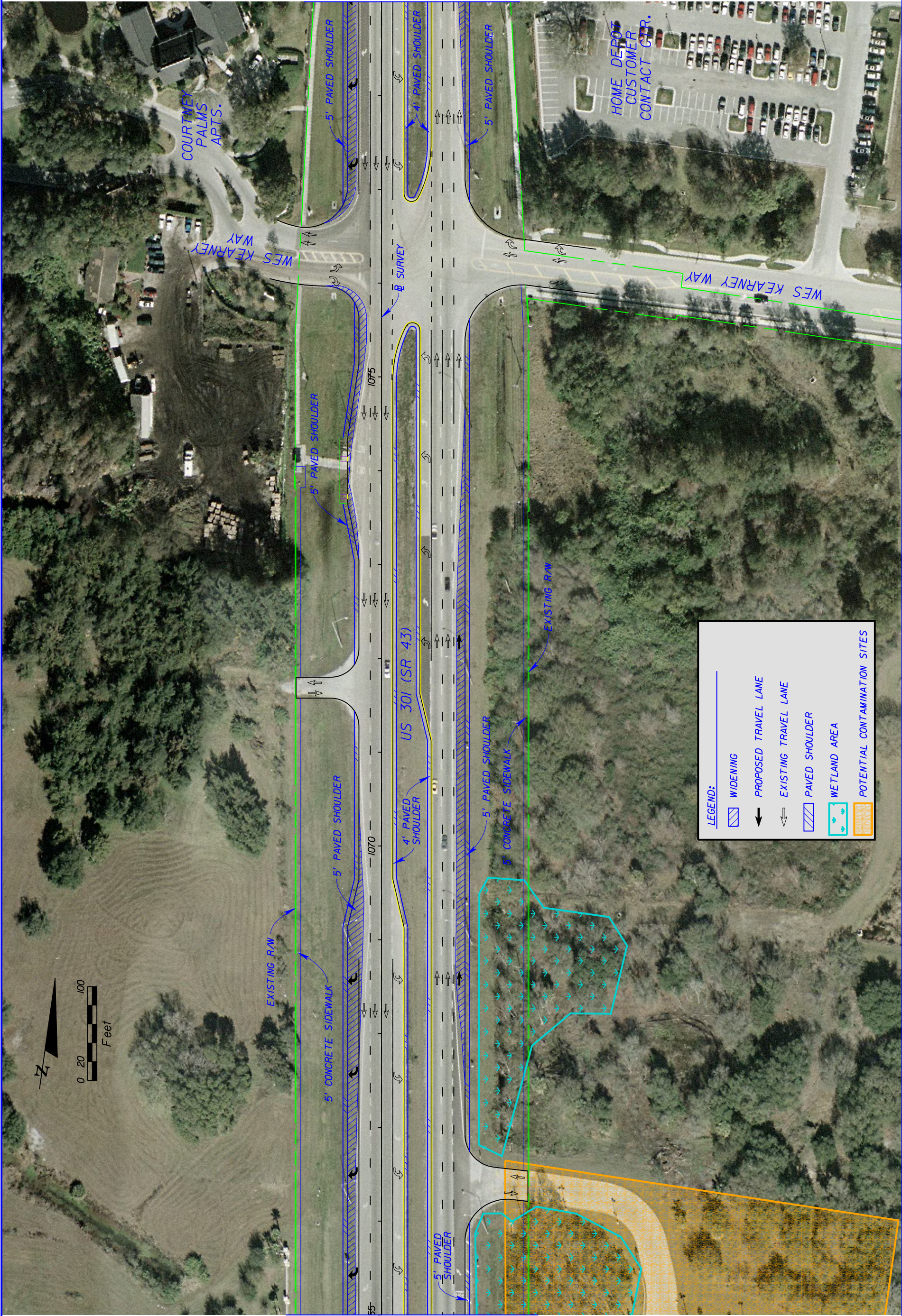
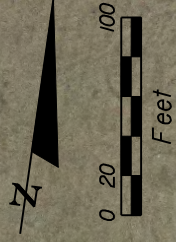
- WIDENING
- PROPOSED TRAVEL LANE
- EXISTING TRAVEL LANE
- PAVED SHOULDER
- WETLAND AREA
- POTENTIAL CONTAMINATION SITES

| REVISIONS | | DATE | BY | DESCRIPTION |
|-----------|--|------|----|-------------|
| | | | | |

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 P.E. License No. 45329
 4431 Embarradero Drive
 West Palm Beach, Florida 33407

| | |
|------------------------------|-----------------|
| STATE OF FLORIDA | |
| DEPARTMENT OF TRANSPORTATION | |
| ROAD NO. | WPI SEGMENT NO. |
| 43 | 421140-6 |
| COUNTY | |
| HILLSBOROUGH | |

| | |
|--------------|---|
| CONCEPT PLAN | |
| SHEET NO. | 3 |



MATCH LINE STA 1065+00.00

MATCH LINE STA 1079+00.00

LEGEND:

- WIDENING
- PROPOSED TRAVEL LANE
- EXISTING TRAVEL LANE
- PAVED SHOULDER
- WETLAND AREA
- POTENTIAL CONTAMINATION SITES

| REVISIONS | | DATE | BY | DESCRIPTION |
|-----------|--|------|----|-------------|
| | | | | |

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 Certificate of Authorization No. 696
 Marwan Mufleh, P.E.
 P.E. License No. 45329
 4431 Embarras Drive
 West Palm Beach, Florida 33407

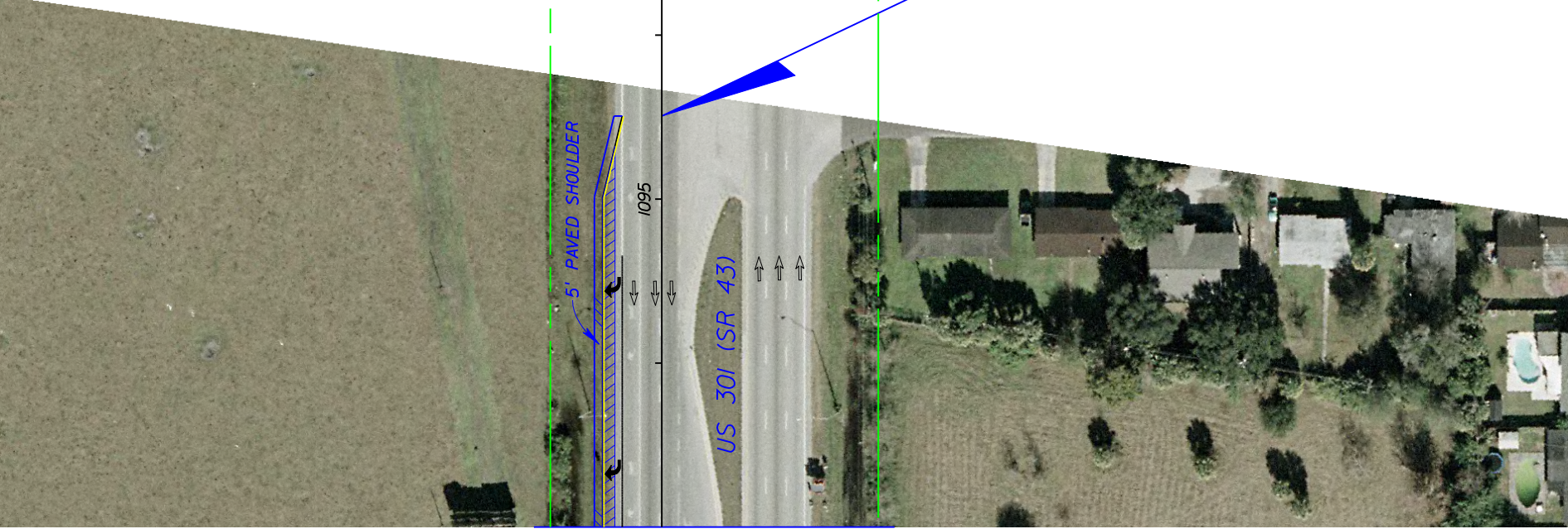
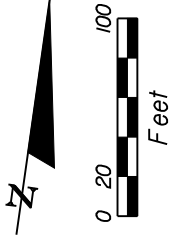
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|-------------------------------------|-----------------|
| STATE OF FLORIDA | |
| DEPARTMENT OF TRANSPORTATION | |
| ROAD NO. | WPI SEGMENT NO. |
| 43 | 421140-6 |
| COUNTY | |
| HILLSBOROUGH | |

| | |
|---------------------|---|
| CONCEPT PLAN | |
| SHEET NO. | 4 |

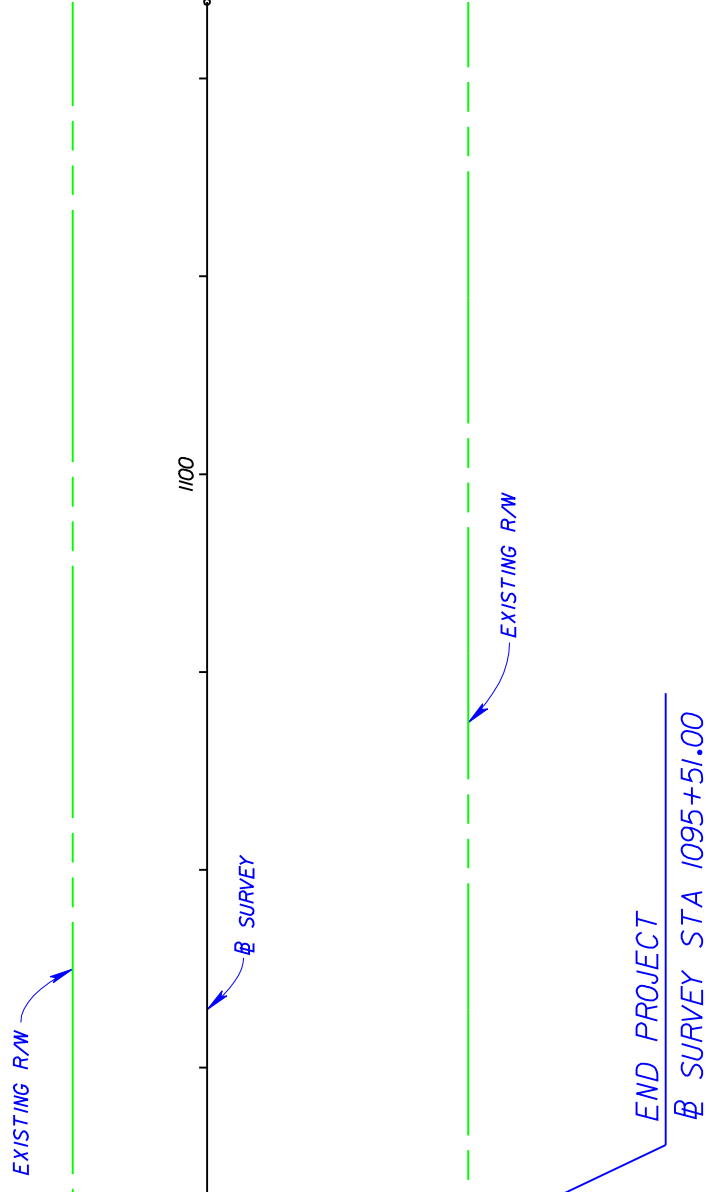


| REVISIONS | | DESCRIPTION | |
|-----------|----|-------------|----|
| DATE | BY | DATE | BY |
| | | | |

| | | | |
|--|--------------|--|---------------------|
| Kimley-Horn and Associates, Inc. Certificate of Authorization No. 696 Marwan Mufleh, P.E. P.E. License No. 45329 4431 Embarcadero Drive West Palm Beach, Florida 33407 | | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | CONCEPT PLAN |
| ROAD NO. | COUNTY | WPI SEGMENT NO. | SHEET NO. |
| 43 | HILLSBOROUGH | 421140-6 | 5 |



MATCH LINE STA 1093+00.00



LEGEND:

- WIDENING
- PROPOSED TRAVEL LANE
- EXISTING TRAVEL LANE
- PAVED SHOULDER
- WETLAND AREA
- POTENTIAL CONTAMINATION SITES

| REVISIONS | | | |
|-----------|----|-------------|-------------|
| DATE | BY | DESCRIPTION | DESCRIPTION |
| | | | |

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 West Palm Beach, Florida 33407

| | | |
|------------------------------|--------------|-----------------|
| STATE OF FLORIDA | | |
| DEPARTMENT OF TRANSPORTATION | | |
| ROAD NO. | COUNTY | WPI SEGMENT NO. |
| 43 | HILLSBOROUGH | 421140-6 |

| | | |
|---------------------|--|-----------|
| CONCEPT PLAN | | SHEET NO. |
| CONCEPT PLAN | | 6 |

Appendix B

SWFWMD Contour Map

COMPILED BY PHOTOGRAMMETRIC METHODS
 BY
ABRAMS
 SURVEYING ENGINEERS OF FLORIDA
 817 N. W. 11TH AVENUE
 MIAMI, FLORIDA 33136
 LEGEND
 HORIZONTAL CONTROL U.S.C & G.S.
 FLORIDA STATE DEPT OF TRANSPORTATION
 TRAVERSE STATIONS
 VERTICAL CONTROLS
 SECTION CORNERS
 CONTOURS
 DEPRESSION CONTOURS
 SPOT ELEVATIONS



NOTE
 ACCURACY: THIS MAP WAS PREPARED USING THE BEST AVAILABLE DATA AND METHODS. THE USER SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE DATA AND METHODS USED IN THE PREPARATION OF THIS MAP.
 SCALE: 1" = 200' CONTOUR INTERVAL: 1'
 DATE OF MAPPING: PHOTOGRAPHY: AUGUST 1988
 DATE OF MAPPING: PHOTOGRAPHY: AUGUST 1988
 SOUTHWEST FLORIDA
 WATER MANAGEMENT DISTRICT
 ALAFIA RIVER BASIN
 ARCHIE CREEK

FLORIDA STATE DEPT OF TRANSPORTATION
 TRAVERSE STATIONS
 VERTICAL CONTROLS
 SECTION CORNERS
 CONTOURS
 DEPRESSION CONTOURS
 SPOT ELEVATIONS



CAUSEWAY BOULEVARD

FALKENBURG ROAD

US 301

END PROJECT

BEGIN PROJECT

THIS MAP WAS PREPARED USING THE BEST AVAILABLE DATA AND METHODS. THE USER SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE DATA AND METHODS USED IN THE PREPARATION OF THIS MAP.
 SCALE: 1" = 200' CONTOUR INTERVAL: 1'
 DATE OF MAPPING: PHOTOGRAPHY: AUGUST 1988
 DATE OF MAPPING: PHOTOGRAPHY: AUGUST 1988

Appendix C

Responses from USFWS and FNAI



1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-224-8207
fax 850-681-9364
www.fnai.org

December 4, 2006

Alicia A. Deochan
Kimley-Horn and Associates, Inc.
10117 Princess Palm Avenue, Suite 300
Tampa, FL 33610-8300

Dear Ms. Deochan:

Thank you for your request for information from the Florida Natural Areas Inventory (FNAI). We have compiled the following information for your project area.

Project: US301 SEIR, KHA Project No. 048805007
Date Received: November 27, 2006
Location: Township 29 S, Range 20 E, Section 31
Hillsborough County

Element Occurrences

A search of our maps and database indicates that currently we have several Element Occurrences mapped within the vicinity of the study area (see enclosed map and element occurrence table). Please be advised that a lack of element occurrences in the FNAI database is not a sufficient indication of the absence of rare or endangered species on a site.

The Element Occurrences data layer includes occurrences of rare species and natural communities. The map legend indicates that some element occurrences occur in the general vicinity of the label point. This may be due to lack of precision of the source data, or an element that occurs over an extended area (such as a wide ranging species or large natural community). For animals and plants, Element Occurrences generally refer to more than a casual sighting; they usually indicate a viable population of the species. Note that some element occurrences represent historically documented observations which may no longer be extant.

Likely and Potential Rare Species

In addition to documented occurrences, other rare species and natural communities may be identified on or near the site based on habitat models and species range models (see enclosed Biodiversity Matrix Report). These species should be taken into consideration in field surveys, land management, and impact avoidance and mitigation.

FNAI habitat models indicate areas, which based on landcover type, offer suitable habitat for one or more rare species that is known to occur in the vicinity. Habitat models have been developed for approximately 300 of the most rare species tracked by the Inventory, including all federally listed species.



Florida Resources
and Environmental
Analysis Center

Institute of Science
and Public Affairs

The Florida State University

Tracking Florida's Biodiversity

FNAI species range models indicate areas that are within the known or predicted range of a species, based on climate variables, soils, vegetation, and/or slope. Species range models have been developed for approximately 340 species, including all federally listed species.

The FNAI Biodiversity Matrix Geodatabase compiles Documented, Likely, and Potential species and natural communities for each square mile Matrix Unit statewide.

The Inventory always recommends that professionals familiar with Florida's flora and fauna should conduct a site-specific survey to determine the current presence or absence of rare, threatened, or endangered species.

Please visit www.fnai.org/trackinglist.cfm for county or statewide element occurrence distributions and links to more element information.

The database maintained by the Florida Natural Areas Inventory is the single most comprehensive source of information available on the locations of rare species and other significant ecological resources. However, the data are not always based on comprehensive or site-specific field surveys. Therefore, this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. Inventory data are designed for the purposes of conservation planning and scientific research, and are not intended for use as the primary criteria for regulatory decisions.

Information provided by this database may not be published without prior written notification to the Florida Natural Areas Inventory, and the Inventory must be credited as an information source in these publications. FNAI data may not be resold for profit.

Thank you for your use of FNAI services. If I can be of further assistance, please give me a call at (850) 224-8207.

Sincerely,

Jason A. Griffin

Jason A. Griffin
Data Services Coordinator

encl



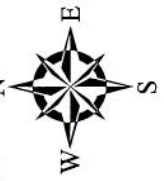
1018 Thomasville Road
 Suite 200-C
 Tallahassee, FL 32303
 (850) 224-8207
 (850) 681-9364 Fax
 www.fnai.org

- Element Occurrences**
- Animals
 - Plants
 - Communities
 - Other
 - Data Sensitive
 - ⊕ Point Indicates General Vicinity of Element

U.S. Fish & Wildlife Service
 Scrub Jay Survey 1992-96

- Conservation Lands**
- Federal
 - State
 - Local
 - Private
 - State Aquatic Preserves
- Land Acquisition Projects**
- Florida Forever
 - Board of Trustees Projects

- FNAI Rare Species Habitat**
- FNAI Biodiversity Matrix Square Mile Units
- County Boundary**
- Interstate
 - Turnpike
 - Major Highway
 - Local Road
 - Water



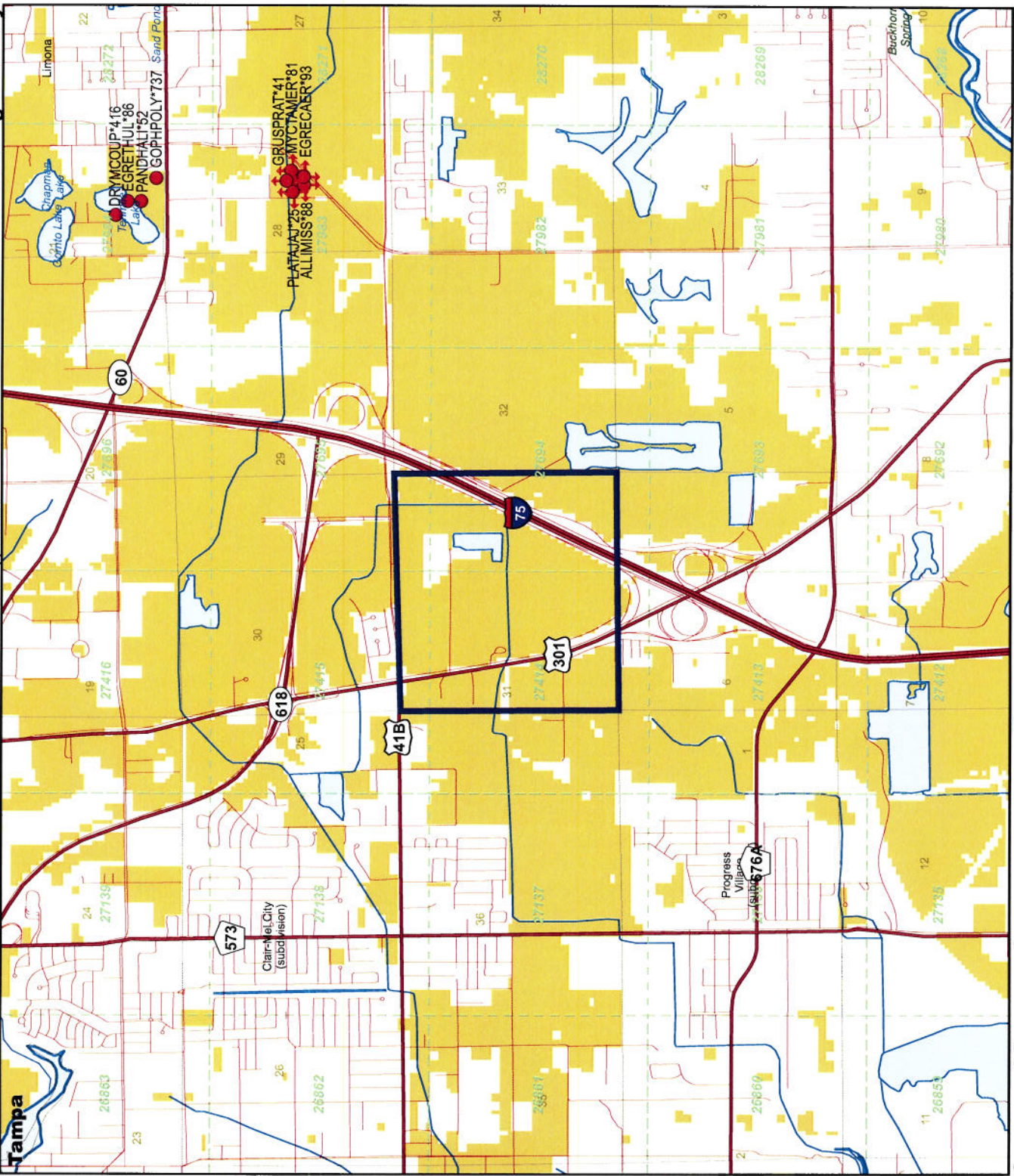
NOTE
 Map should not be interpreted without accompanying documents.

T29 S / R20 E / S31

Tampa

Site boundaries are approximate.

Hillsborough County



Map produced by JAG
 Map Date: 04 DEC 2006



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(850) 681-9364 Fax
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Florida Natural Areas Inventory

ELEMENT OCCURRENCES DOCUMENTED ON OR NEAR PROJECT SITE



| Map Label | Scientific Name | Common Name | Global State | | | Observation Date | Description | EO Comments | |
|--------------|-----------------------------------|------------------------|--------------|--------|-----------------|------------------|-------------|---|---|
| | | | Rank | Status | Federal Listing | | | | |
| GRUSPRAT*41 | <i>Grus canadensis pratensis</i> | Florida Sandhill Crane | G5T2T3 | S2S3 | N | LT | 1991-06 | No general description given | ADULTS AND YOUNG OBSERVED. INDIVIDUALS HAVE BEEN KILLED ON SR-60. |
| EGRECAER*93 | <i>Egretta caerulea</i> | Little Blue Heron | G5 | S4 | N | LS | 1991-06 | No general description given | +/- 90 ANIMALS FORAGING OVER 3 LAKES. |
| PLATAJAJ*25 | <i>Platalea ajaja</i> | Roseate Spoonbill | G5 | S2 | N | LS | 1991 | No general description given | 1-6 INDIVIDUALS OBSERVED, VARYING WITH YEAR. |
| ALLIMISS*88 | <i>Alligator mississippiensis</i> | American Alligator | G5 | S4 | SAT | LS | 1991-06 | No general description given | ADULTS AND YOUNG OBSERVED. |
| MYCTAMER*81 | <i>Mycteria americana</i> | Wood Stork | G4 | S2 | LE | LE | 1991-06 | No general description given | 1-50+ INDIVIDUALS DEPENDING ON THE YEAR. |
| PANDHALI*52 | <i>Pandion haliaetus</i> | Osprey | G5 | S3S4 | N | LS* | 1991-07 | LAKE AND MESIC HAMMOCK. | 2 BIRDS OBSERVED FEEDING IN AREA FROM 1989-1991. |
| EGRETHUL*86 | <i>Egretta thula</i> | Snowy Egret | G5 | S3 | N | LS | 1991-07 | WETLAND LAKE SHORE. | 4 TO 22+ BIRDS ROOST IN WILLOWS AT EDGE OF POND IN WINTER MONTHS (8 MONTHS +/-). |
| DRYMCOU*416 | <i>Drymarchon couperi</i> | Eastern Indigo Snake | G3 | S3 | LT | LT | 1987 | No general description given | 1 INDIVIDUAL OBSERVED. NEST AT FOOT OF HALF FALLEN LIVE OAK NEAR LAKE SHORE. |
| GOPHPOLY*737 | <i>Gopherus polyphemus</i> | Gopher Tortoise | G3 | S3 | N | LS | 1991-08 | SCRUBBY OAK COMMUNITY GRADING TO MESIC FLATWOODS. | +/- 6 BURROWS OBSERVED, EST. 2-10 INDIVIDUALS. FEEDING AND NESTING OBSERVED. OBSERVED ON SITE SINCE THE 1940'S. |



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Natural Areas
INVENTORY

Florida Natural Areas Inventory

Biodiversity Matrix Report



| Scientific Name | Common Name | Global Rank | State Rank | Federal Status | State Listing |
|--|------------------------------|-------------|------------|----------------|---------------|
| Matrix Unit ID: 27414 | | | | | |
| Likely | | | | | |
| <i>Drymarchon couperi</i> | Eastern Indigo Snake | G3 | S3 | LT | LT |
| <i>Grus canadensis pratensis</i> | Florida Sandhill Crane | G5T2T3 | S2S3 | N | LT |
| <i>Mycteria americana</i> | Wood Stork | G4 | S2 | LE | LE |
| Matrix Unit ID: 27415 | | | | | |
| Likely | | | | | |
| <i>Drymarchon couperi</i> | Eastern Indigo Snake | G3 | S3 | LT | LT |
| <i>Grus canadensis pratensis</i> | Florida Sandhill Crane | G5T2T3 | S2S3 | N | LT |
| <i>Mycteria americana</i> | Wood Stork | G4 | S2 | LE | LE |
| Matrix Unit ID: 27694 | | | | | |
| Likely | | | | | |
| <i>Drymarchon couperi</i> | Eastern Indigo Snake | G3 | S3 | LT | LT |
| <i>Grus canadensis pratensis</i> | Florida Sandhill Crane | G5T2T3 | S2S3 | N | LT |
| <i>Mycteria americana</i> | Wood Stork | G4 | S2 | LE | LE |
| Matrix Unit ID: 27695 | | | | | |
| Likely | | | | | |
| <i>Ajaia ajaja</i> | Roseate Spoonbill | G5 | S2 | N | LS |
| <i>Alligator mississippiensis</i> | American Alligator | G5 | S4 | SAT | LS |
| <i>Drymarchon couperi</i> | Eastern Indigo Snake | G3 | S3 | LT | LT |
| <i>Egretta caerulea</i> | Little Blue Heron | G5 | S4 | N | LS |
| <i>Grus canadensis pratensis</i> | Florida Sandhill Crane | G5T2T3 | S2S3 | N | LT |
| <i>Mycteria americana</i> | Wood Stork | G4 | S2 | LE | LE |
| Potential from any/all selected units | | | | | |
| <i>Aimophila aestivalis</i> | Bachman's Sparrow | G3 | S3 | N | N |
| <i>Athene cunicularia floridana</i> | Florida Burrowing Owl | G4T3 | S3 | N | LS |
| <i>Calopogon multiflorus</i> | Many-flowered Grass-pink | G2G3 | S2S3 | N | LE |
| <i>Centrosema arenicola</i> | Sand Butterfly Pea | G2Q | S2 | N | LE |
| <i>Chrysopsis floridana</i> | Florida Golden Aster | G1 | S1 | LE | LE |
| <i>Eumops floridanus</i> | Florida bonneted bat | G1 | S1 | N | LE |
| <i>Gopherus polyphemus</i> | Gopher Tortoise | G3 | S3 | N | LS |
| <i>Lechea cernua</i> | Nodding Pinweed | G3 | S3 | N | LT |
| <i>Linum carteri</i> var. <i>smallii</i> | Carter's Large-flowered Flax | G2T2 | S2 | N | LE |
| <i>Litsea aestivalis</i> | Pondspice | G3 | S2 | N | LE |
| <i>Matelea floridana</i> | Florida Spiny-pod | G2 | S2 | N | LE |
| Mesic flatwoods | | G4 | S4 | N | N |
| <i>Mustela frenata peninsulæ</i> | Florida Long-tailed Weasel | G5T3 | S3 | N | N |
| <i>Nemastylis floridana</i> | Celestial Lily | G2 | S2 | N | LE |
| <i>Nolina atopocarpa</i> | Florida Beargrass | G3 | S3 | N | LT |
| <i>Panicum abscissum</i> | Cutthroat Grass | G3 | S3 | N | LE |
| <i>Pituophis melanoleucus mugitus</i> | Florida Pine Snake | G4T3? | S3 | N | LS |
| <i>Platanthera integra</i> | Yellow Fringeless Orchid | G3G4 | S3 | N | LE |

Definitions: Documented - Rare species and natural communities documented on or near this site.

Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.

Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.

Potential - This site lies within the known or predicted range of the species listed.



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FLORIDA
Natural Areas
INVENTORY

Florida Natural Areas Inventory

Biodiversity Matrix Report



| Scientific Name | Common Name | Global Rank | State Rank | Federal Status | State Listing |
|----------------------------------|------------------------|--------------------|-------------------|-----------------------|----------------------|
| <i>Peromyscus floridanus</i> | Florida Mouse | G3 | S3 | N | LS |
| <i>Pteroglossaspis ecristata</i> | Giant Orchid | G2G3 | S2 | N | LT |
| <i>Rana capito</i> | Gopher Frog | G3 | S3 | N | LS |
| <i>Sciurus niger shermani</i> | Sherman's Fox Squirrel | G5T3 | S3 | N | LS |
| <i>Stilosoma extenuatum</i> | Short-tailed Snake | G3 | S3 | N | LT |

Definitions: Documented - Rare species and natural communities documented on or near this site.
Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.
Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.
Potential - This site lies within the known or predicted range of the species listed.

GLOBAL AND STATE RANKS

Florida Natural Areas Inventory (FNAI) defines an **element** as any rare or exemplary component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature. FNAI assigns two ranks to each element found in Florida: the **global rank**, which is based on an element's worldwide status, and the **state rank**, which is based on the status of the element within Florida. Element ranks are based on many factors, including estimated number of occurrences, estimated abundance (for species and populations) or area (for natural communities), estimated number of adequately protected occurrences, range, threats, and ecological fragility.

GLOBAL RANK DEFINITIONS

- G1** Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- G2** Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- G3** Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- G4** Apparently secure globally (may be rare in parts of range).
- G5** Demonstrably secure globally.
- G#?** Tentative rank (e.g., G2?)
- G#G#** Range of rank; insufficient data to assign specific global rank (e.g., G2G3)
- G#T#** Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1)
- G#Q** Rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q)
- G#T#Q** Same as above, but validity as subspecies or variety is questioned.
- GH** Of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)
- GNA** Ranking is not applicable because element is not a suitable target for conservation (e.g. as for hybrid species)
- GNR** Not yet ranked (temporary)
- GNRTNR** Neither the full species nor the taxonomic subgroup has yet been ranked (temporary)
- GX** Believed to be extinct throughout range
- GXC** Extirpated from the wild but still known from captivity/cultivation
- GU** Unrankable. Due to lack of information, no rank or range can be assigned (e.g., GUT2).

STATE RANK DEFINITIONS

Definition parallels global element rank: substitute "S" for "G" in above global ranks, and "in Florida" for "globally" in above global rank definitions.

**FEDERAL AND STATE LEGAL STATUSES
PROVIDED BY FNAI FOR INFORMATION ONLY.**

For official definitions and lists of protected species, consult the relevant state or federal agency.

FEDERAL LEGAL STATUS

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida populations and that federal status may differ elsewhere.

- LE** Listed as Endangered Species in the List of Endangered and Threatened Wildlife and Plants under the provisions of the Endangered Species Act. Defined as any species which is in danger of extinction throughout all or a significant portion of its range.
- LE,XN** An experimental population of a species otherwise Listed as an Endangered Species in the List of Endangered and Threatened Wildlife and Plants.
- PE** Proposed for addition to the List of Endangered and Threatened Wildlife and Plants as Endangered Species.
- LT** Listed as Threatened Species. Defined as any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.
- LT,PDL** Species currently listed threatened but has been proposed for delisting.
- PT** Proposed for listing as Threatened Species.
- C** Candidate Species for addition to the list of Endangered and Threatened Wildlife and Plants, Category 1. Taxa for which the USFWS currently has substantial information on hand or in possession to support the biological appropriateness of proposing to list the species as endangered or threatened.
- PS** Partial listing status (species is listed for only a portion of its geographic range).
- SAT** Threatened due to similarity of appearance to a threatened species.
- SC** Species of concern. Species is not currently listed but is of management concern to USFWS.
- N** Not currently listed, nor currently being considered for addition to the List of endangered and Threatened Wildlife and Plants.

FLORIDA LEGAL STATUSES

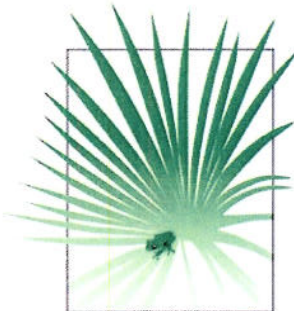
Animals: Definitions derived from “Florida’s Endangered Species and Species of Special Concern, Official Lists” published by Florida Fish and Wildlife Conservation Commission, 1 August 1997, and subsequent updates.

Animals (Florida Fish and Wildlife Conservation Commission- FFWCC)

- LE** Listed as Endangered Species by the FGFWFC. Defined as a species, subspecies, or isolated population which is so rare or depleted in number or so restricted in range of habitat due to any man-made or natural factors that it is in immediate danger of extinction or extirpation from the state, or which may attain such a status within the immediate future.
- LT** Listed as Threatened Species by the FGFWFC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future. LT* (for Florida black bear) indicates that LT status does not apply in Baker and Columbia counties and in the Apalachicola National Forest.
- LS** Listed as Species of Special Concern by the FGFWFC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species. LS* indicates that a species has LS status only in selected portions of its range in Florida.
- N** Not currently listed, nor currently being considered for listing.

Plants: Definitions derived from Sections 581.011 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, 5B-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505.

- LE** Listed as Endangered Plants in the Preservation of Native Flora of Florida Act. Defined as species of plants native to the state that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue, and includes all species determined to be endangered or threatened pursuant to the Federal Endangered Species Act of 1973, as amended.
- PE** Proposed by the FDACS for listing as Endangered Plants.
- LT** Listed as Threatened Plants in the Preservation of Native Flora of Florida Act. Defined as species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in such number as to cause them to be endangered. LT* indicates that a species has LT status only in selected portions of its range in Florida.
- PT** Proposed by the FDACS for listing as Threatened Plants.
- CE** Listed as a Commercially Exploited Plant in the Preservation of Native Flora of Florida Act. Defined as species native to state which are subject to being removed in significant numbers from native habitats in the state and sold or transported for sale.
- PC** Proposed by the FDACS for listing as Commercially Exploited Plants.
- (LT)** Listed threatened as a member of a larger group but not specifically listed by species name.
- N** Not currently listed, nor currently being considered for listing.



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FLORIDA
Natural Areas
INVENTORY

Appendix D

Long Range Estimate (LRE)

Date: 12/19/2006 8:48:45 AM

FDOT Long Range Estimating System - Production
R4: Project Details Composite Report
By Component

Project: HWY301-1-22-01**Letting Date:** 01/2099**Description:** US 301 PD&E STUDY FROM FALKENBURG RD TO CAUSEWAY
BLVD**District:** 07 **County:** 10 HILLSBOROUGH**Project Manager:** KIRK BOGEN**Version 1-P Project Grand Total****\$3,941,496.14****Description:** US 301 PD&E STUDY FROM FALKENBURG RD TO CAUSEWAY
BLVD

EARTHWORK COMPONENT

Pay Items

| Pay Item | Description | Total Unit Quantity | Weighted Avg. Unit Price | Total Amount |
|----------------------------------|---------------------|--------------------------------|---|---------------------|
| 110-1-1 | CLEARING & GRUBBING | 11.81 AC | \$61,278.87 | \$723,703.45 |
| Earthwork Component Total | | | | \$723,703.45 |

ROADWAY COMPONENT

Pay Items

| Pay Item | Description | Total Unit Quantity | Weighted Avg. Unit Price | Total Amount |
|-----------------|---|--------------------------------|---|---------------------|
| 160-4 | STABILIZATION TYPE B | 23,151.74 SY | \$9.06 | \$209,754.76 |
| 285-709 | BASE OPTIONAL (BASE GROUP 09) | 4,411.22 SY | \$41.73 | \$184,080.21 |
| 706-3 | RETRO-REFLECTIVE PAVEMENT MARKERS | 548.00 EA | \$5.00 | \$2,740.00 |
| 710-21 | TRAFFIC STRIPE SKIP (WHITE/BLACK) | 6.50 GM | \$482.51 | \$3,136.32 |
| 327-70-1 | MILLING EXIST ASPH PAVT (1" AVG DEPTH) | 22,865.92 SY | \$7.61 | \$174,009.65 |
| 334-1-13 | SUPERPAVE ASPH CONC (TRAFFIC C) | 3,191.22 TN | \$114.33 | \$364,852.18 |
| 337-7-5 | ASPH CONC FC(INC BIT/RUBBER) (FC-5) | 1,078.51 TN | \$139.33 | \$150,268.80 |
| 710-23-61 | TRAFFIC STRIPE SOLID (WHITE/BLACK) (6") | 6.50 NM | \$959.13 | \$6,234.35 |

Roadway Component Total

\$1,095,076.26

SHOULDER COMPONENT**Pay Items**

| Pay Item | Description | Total Unit Quantity | Weighted Avg. Unit Price | Total Amount |
|---------------------------------|---|--------------------------------|---|---------------------|
| 104-4 | MOWING | 2.76 AC | \$231.72 | \$639.55 |
| 285-704 | BASE OPTIONAL (BASE GROUP 04) | 5,078.14 SY | \$167.84 | \$852,315.02 |
| 570-2 | SEED & MULCH | 49,857.23 SY | \$0.49 | \$24,430.04 |
| 570-3 | SEED GRASS (PERMANENT TYPE) | 618.06 LB | \$3.64 | \$2,249.74 |
| 570-4 | MULCH MATERIAL | 41.20 TN | \$170.00 | \$7,004.00 |
| 575-1 | SODDING | 2,543.83 SY | \$3.36 | \$8,547.27 |
| 104-13-1 | SILT FENCE STAKED (TYPE III) | 4,000.00 LF | \$1.24 | \$4,960.00 |
| 327-70-1 | MILLING EXIST ASPH PAVT (1" AVG DEPTH) | 3,810.99 SY | \$7.61 | \$29,001.63 |
| 334-1-13 | SUPERPAVE ASPH CONC (TRAFFIC C) | 262.01 TN | \$114.33 | \$29,955.60 |
| 337-7-5 | ASPH CONC FC(INC BIT/RUBBER) (FC-5) | 25.15 TN | \$139.33 | \$3,504.15 |
| Shoulder Component Total | | | | \$962,607.00 |

MEDIAN COMPONENT**Pay Items**

| Pay Item | Description | Total Unit Quantity | Weighted Avg. Unit Price | Total Amount |
|-------------------------------|--------------------------------|--------------------------------|---|---------------------|
| 570-2 | SEED & MULCH | 5,078.14 SY | \$0.49 | \$2,488.29 |
| 570-3 | SEED GRASS (PERMANENT TYPE) | 62.95 LB | \$3.64 | \$229.14 |
| 570-4 | MULCH MATERIAL | 4.20 TN | \$170.00 | \$714.00 |
| 575-1 | SODDING | 2,543.83 SY | \$3.36 | \$8,547.27 |
| Median Component Total | | | | \$11,978.70 |

DRAINAGE COMPONENT**Pay Items**

| Pay Item | Description | Total Unit Quantity | Weighted Avg. Unit Price | Total Amount |
|-----------------|--------------------|--------------------------------|---|---------------------|
| 120-1 | EXCAVATION REGULAR | 1,613.00 CY | \$39.44 | \$63,616.72 |

| | | | | |
|---------------------------------|---|-------------|-------------|---------------------|
| 575-1 | SODDING | 2,991.65 SY | \$3.36 | \$10,051.94 |
| 110-1-1 | CLEARING & GRUBBING | 0.50 AC | \$61,278.88 | \$30,639.44 |
| 400-2-2 | CONC CLASS II (ENDWALLS) | 32.62 CY | \$1,500.00 | \$48,930.00 |
| 425-1-541 | INLETS (DT BOT) (TYPE D) (<10') | 1.00 EA | \$6,858.80 | \$6,858.80 |
| 425-2-71 | MANHOLES (J-7) (<10') | 1.00 EA | \$7,636.79 | \$7,636.79 |
| 430-171-140 | PIPE CULV(OPT MATL) (ROUND)(42"SS) | 56.00 LF | \$170.36 | \$9,540.16 |
| 430-171-142 | PIPE CULV(OPT MATL) (ROUND)(54"SS) | 200.00 LF | \$359.52 | \$71,904.00 |
| 430-172-138 | PIPE CULV(OPT MATL) (ROUND)(36"CD) | 64.00 LF | \$412.50 | \$26,400.00 |
| 430-174-129 | PIPE CULV(OPT MATL) (ROUND)(24"SD) | 656.00 LF | \$107.89 | \$70,775.84 |
| 430-984-129 | MITERED END SECT (OPTIONAL RD) (24" SD) | 33.00 EA | \$1,776.00 | \$58,608.00 |
| 550-10-220 | FENCING, TYPE B(5.1-6.0) STANDARD | 600.00 LF | \$13.00 | \$7,800.00 |
| 550-60-234 | GATE (TYPE B) SLIDING/CANT(18.1-20' OPEN) | 1.00 EA | \$2,200.00 | \$2,200.00 |
| Drainage Component Total | | | | \$414,961.69 |

SIGNING COMPONENT

| Pay Items | | | | |
|--------------------------------|---|--------------------------------|---|---------------------|
| Pay Item | Description | Total Unit Quantity | Weighted Avg. Unit Price | Total Amount |
| 700-40-1 | SIGN SINGLE POST (LESS THAN 12) | 2.00 AS | \$287.45 | \$574.90 |
| 700-40-2 | SIGN SINGLE POST (12 - 25) | 10.00 AS | \$661.32 | \$6,613.20 |
| 700-46-11 | SGN EXISTING (REMOVE) (SINGLE POST) | 5.00 AS | \$18.03 | \$90.15 |
| 700-46-21 | SGN EXISTING (RELOCATE) (SINGLE POST) | 2.00 AS | \$253.58 | \$507.16 |
| Signing Component Total | | | | \$7,785.41 |

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FDOT Long Range Estimating System - Production
R4: Project Details Composite Report
By Component

Project: HWY301-1-22-01**Letting Date:** 01/2099**Description:** US 301 PD&E STUDY FROM FALKENBURG RD TO CAUSEWAY
BLVD**District:** 07 **County:** 10 HILLSBOROUGH**Project Manager:** KIRK BOGEN**Version 1-P Project Grand Total****\$3,941,496.14****Description:** US 301 PD&E STUDY FROM FALKENBURG RD TO CAUSEWAY
BLVD**Project Sequences Subtotal****\$3,216,112.51**

| | | | |
|-------|------------------------|---------|--------------|
| 102-1 | MAINTENANCE OF TRAFFIC | 10.00 % | \$321,611.25 |
| 101-1 | MOBILIZATION | 10.00 % | \$353,772.38 |

Project Sequences Total**\$3,891,496.14**

| | | |
|------------------|--------|--------|
| Project Unknowns | 0.00 % | \$0.00 |
|------------------|--------|--------|

Non-Bid Components:

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---------------------------------|-------------------------------------|----------|------|-------------|--------------------|
| 999-25 | INITIAL CONTINGENCY (DO NOT BID) | 1.00 | LS | \$50,000.00 | \$50,000.00 |
| Project Non-Bid Subtotal | | | | | \$50,000.00 |

Version 1-P Project Grand Total**\$3,941,496.14**