



Final Overpass Road Route Study

From Old Pasco Road to
Fort King Road
Pasco County

Prepared for:
Pasco County Engineering
Services Department

Work Order Number C6463.00
Work Order Number C6463.20

URS

URS Corporation Southern
7650 West Courtney Campbell Causeway
Tampa, Florida 33607-1462


March 2005

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EXECUTIVE SUMMARY

Based on land use and projected growth, the Pasco County Metropolitan Planning Organization (MPO) has identified the need for a new east-west road between Old Pasco Road to Ft. King Road that followed the right-of-way of the existing Overpass Road on the west and connected to the proposed Kossick Road extension on the east. Since this growth is expected to significantly affect the mobility in the area, it was determined that a corridor route study was needed to assist the County in reaching a decision based on project need, location, conceptual design, potential impacts, and estimated cost for any needed improvements.

The Overpass Road Route Study has been conducted to evaluate the capacity and safety improvement alternatives from Old Pasco Road to Fort King Road in Zephyrhills, a distance of 8.1 miles, in east-central Pasco County. This route study was developed to satisfy criteria set forth in the Florida Department of Transportation (FDOT) Project Development and Environmental (PD&E) Guidelines and the National Environmental Policy Act (NEPA) of 1966, and the Pasco County Standard right-of-way requirements established in the *Pasco County Standard Roadway Typical Sections for Collector and Arterial Roadways*. Consequently, a no build and three build alternatives have been considered.

The study addresses the following major topics:

- **Long Range Planning**
- **Safety**
- **Property and Social Impacts**
- **Environmental Impacts, and**
- **Cost**

STUDY RESULTS

TYPICAL SECTION

One typical roadway section has been developed for Overpass Road. The typical roadway section is based on the Pasco County Board of County Commissioners (BOCC) June 29, 2004 resolution adopting the Pasco County Standard Roadway Typical Sections for Collector and Arterial Roadways. As a result, the Pasco County staff directed the use of a single four lane urban typical section utilizing 166 ft of ROW for the entire length of the project based on the BOCC adopted standards. The proposed typical section will provide for improvements to six lanes when future conditions dictate without requiring additional ROW.

ALTERNATIVE ALIGNMENTS

Two alternatives, O-1, O-2, as well as a no build concept were initially studied. Alternatives O-1 and O-2, were developed to address the long-range planning and safety needs and to minimize the social, environmental, and economic impacts. The build alternatives were developed to address these five criteria, plus comments received from the public and other pertinent factors. The alternatives were presented at a public workshop on October 28, 2004.

Both alternatives followed the existing Overpass Road right-of-way from Old Pasco Road to Boyette Road and began a new alignment east of Boyette Road along the north end of the recently approved Palm Cove subdivision, southeastward across the Epperson property to Curley Road. The alternatives alignments then passed through the COMAS Trust property with Alternative O-1 located south of O-2, which ran east along the boundary between COMAS Trust and Kirkland Ranch to Handcart Road. Alternative O-1 intersected Handcart Road to the south of Alternative O-2. Alternatives O-1 and O-2 turned northeast joining Fairview Heights Road at Hackamore Road. From this point Alternatives O-1 and O-2 followed the Fairview Heights Road ROW to the point where it turns south. At this point both alternatives followed the same new alignment eastward, intersecting Ft King Road at a point opposite the Kossick Road Extension.

Based on the public comment received in opposition to both proposed alternatives at the first public workshop, a new alternative, O-3, was developed to eliminate, as much as possible, impacting the residents south of Fairview Heights Road east of Handcart Road. Alternative O-3 followed the same alignment as Alternatives O-2 to approximately 5000 feet west of Handcart Road. At this point, Alternative O-3 turns northeast across the southeast corner of Kirkland Ranch property before curving east to intersect Handcart Road at the west end of Fairview Heights Road. Alternative O-3 then followed the Fairview Heights ROW, or slightly north, to the point where Fairview Heights Road turned south. From this point Alternative O-3 followed the same new alignment as Alternatives O-1 and O-2.

Alternative O-3 was presented at the second public workshop on March 3, 2005 along with Alternative O-2, which was preferred to Alternative O-1 at the first workshop.

LONG-RANGE PLANNING

The results of the study found that traffic projections, based on the Tampa Bay Regional Transportation Analysis (RTA), for 2025 extrapolated to 2030 identified the need for a four-lane facility to service traffic volumes of 23,600 to 36,000 vehicles/day.

Based on land use and projected growth, the Pasco County Metropolitan Planning Organization (MPO) has identified the need to develop a new east-west corridor along Overpass Road from Old Pasco Road to Fort King Road. The rural nature of Wesley Chapel is quickly becoming more urban. The number of dwelling units within the Wesley Chapel area is expected to grow to over 21,500 with a projected population of over 60,000 by 2030. In addition, employment is expected to grow to over 8,000 jobs within this area. Bordering the Overpass Road corridor are four approved or proposed Developments of Regional Impact (DRIs) and Master Planned Unit

Developments (MPUDs) scheduled for build-out prior to 2025. These include Epperson (3,905 dwelling units), COMAS Trust (1,999 dwelling units), Palm Cove (790 dwelling units), and T&G Groves (598 Dwelling units). Furthermore, there are approximately 700,000 sq ft of retail and office space planned for these same developments. Additionally there are another 10,000 dwelling units existing or planned for 12 DRIs/Sub DRIs within a 5-mile radius of the Curley Road North corridor. In the future, Overpass Road is planned as a major east-west corridor bisecting nearly continuous residential development between Old Pasco Road and Fort King Road.

The improvements proposed in this study will address the long range planning objectives of Pasco County by providing sufficient capacity to serve the projected increase in vehicular traffic by the end of year 2030. The results of the study found that traffic projections, based on the Tampa Bay Regional Transportation Analysis (RTA), for 2025 extrapolated to 2030 identified the need for a four-lane facility with exclusive left-turn lanes at intersections with Old Pasco Road, Boyette Road, Curley Road, Handcart Road and Ft. King Road to service traffic volumes of 23,000 to 36,000 vehicles/day. The No-Build Alternative will result in extremely congested traffic conditions due to the increased population and job growth expected within the study area.

SAFETY

Alternatives O-1, O-2, and O-3 and the four-lane divided urban typical section were developed to provide a safer environment for the projected increase in the number of vehicles as well as for cyclists, pedestrians, and improved response time for emergency vehicles. Primary safety features developed to facilitate improved safety include a median to separate opposing traffic, signalization of major intersections, left turn lanes at secondary intersections, designated bicycle lanes, sidewalks, a multi-use trail, separation of sidewalks from traffic on the two bridge spans by a concrete barrier, improved emergency response time, and flood control amenities.

PROPERTY IMPACTS

Alternatives O-1, O-2, and O-3 were developed to take advantage of the existing roadway ROW where available, as well as to utilize land dedicated by the developers of Palm Cove, Epperson, Kirkland Preserve, and COMAS Trust. Use of the existing alignment and ROW was maximized to the greatest extent possible in order to minimize the amount of additional ROW required and to reduce the effects to residents and parcel owners located adjacent to the project. Quantifiable impact criteria used to analyze property impacts included:

- Additional ROW requirements;
- Number of parcels affected;
- Numbers of potential residential relocations; and
- Number of business relocations.

A comparative analysis of the quantitative property impacts is discussed in the Basis of Recommendation Section.

Alternatives O-1, O-2, and O-3 were also developed to minimize social impacts. The study found that there were no impacts to community Services (Churches, Schools, & Services), potential historic structures, archeological sites, or to parks, preserves, and refuges.

ENVIRONMENTAL IMPACTS

Alternatives O-1, O-2, and O-3 were developed to minimize the effects on the natural and physical environment. Based on the quantifiable criteria used to analyze environmental impacts the study found that:

- Minimal wetlands would be affected;
- Minimal floodplains would be affected;
- The potential for endangered species involvement was low; and
- Potential contamination sites were identified within the study area. Therefore, it is recommended that testing for contaminants be performed during the design phase of the proposed project.

COSTS

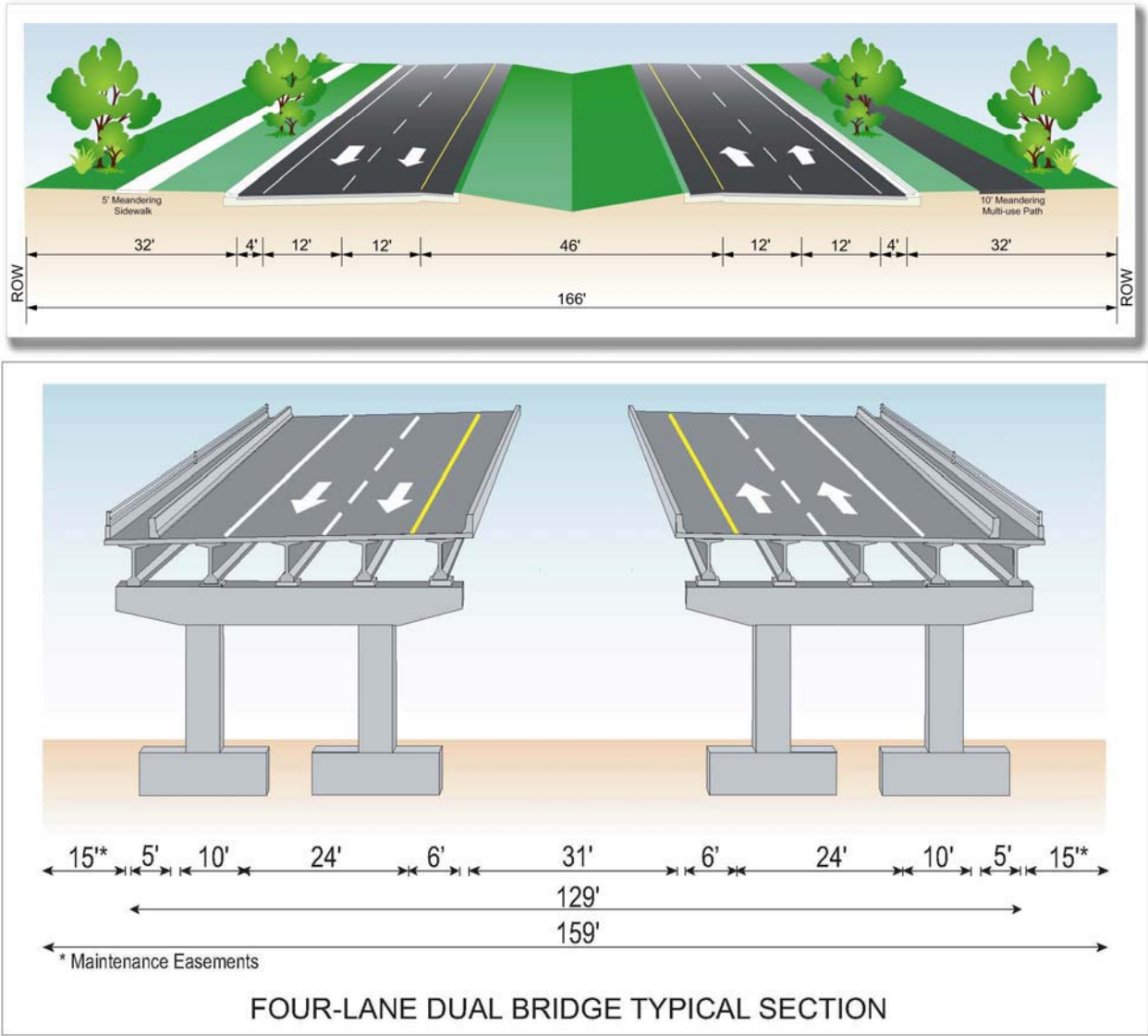
Costs for Alternatives O-1, O-2, and O-3 were developed for the proposed four-lane urban typical section that includes designated bicycle lanes, a sidewalk, a multi-use path, and a landscaped buffer built within a minimum 166 ft of ROW and a dual span bridge over I-75 with each span having two travel lanes, shoulders, and barrier separated sidewalks. Quantitative criteria used to analyze cost include the:

- Estimated cost of right-of-way for the roadway, storm water retention areas, and floodplain compensation;
- Estimated costs to mitigate affected wetlands; and
- Estimated cost for project design and construction.

RECOMMENDED ALIGNMENT AND TYPICAL SECTION

Based on the five factors evaluated in this study and comments received from two Public workshops, Alternative Alignment O-3, having a four-lane urban typical section, is recommended for design and construction (see Section 7, Alternative Concepts). This typical section, Figure ES-1 consist of two 12-ft travel lanes in each direction separated by a 46-ft wide landscaped median that will provide for expansion to six lanes if a future need develops. Four-foot wide bicycle lanes are included within the paved shoulder. A five-foot wide sidewalk and ten-foot wide multi-use path, which will meander through 32-ft wide landscaped borders and utility zones, are also included.

**FIGURE ES-1
URBAN TYPICAL SECTION
FROM OLD PASCO ROAD TO FT. KING ROAD**



BASIS OF RECOMMENDATION

Alternative O-3 is recommended for approval based on the following evaluation factors:

- **Long Range Planning** objectives of the Pasco County Comprehensive Plan and 2025 Long Range transportation Plan will be met by extending Overpass Road as a four-lane east-west roadway to Ft. King Road. This new east-west corridor will provide sufficient capacity to serve the projected increase in population and vehicular traffic through the year 2030 and allow room for further capacity increases, if a need is determined, to be constructed within the proposed ROW.

- **Safety** will be enhanced by providing four travel lanes separated by a wide median, improved roadway geometry, single protected left turns at major intersections and median cuts with left turn lanes at other intersections, paved shoulders wide enough to accommodate bicycles, sidewalks and multi-use trail for pedestrians and cyclists, underground drainage that eliminates open drainage ditches, flood control amenities, and improved emergency response.
- Minimizes **Property and Social Impacts** as well as potential residential and business relocations. Alternative O-3 has 41 affected parcels and 6 potential relocations compared to 41 affected parcels and 6 potential relocations for Alternative O-1 and 47 affected parcels and 8 potential relocations for Alternative O-2.
- Minimizes **Environmental Impacts** to wetlands, floodplains, and endangered species. The potential wetland impacts for Alternative O-3 are 12 acres compared to 14.25 acres for Alternative O-1 and 6.52 acres for Alternative O-2. Although the potential wetland impacts for Alternative O-3 are higher than for Alternative O-2, the overall impact is small for a corridor of over 8 miles in length. The habitat of the woodstork, a state and federally listed endangered species would be affected by all three alternatives, but it is unlikely to be adversely affected. Finally, two potential contamination sites were identified that affect all three alternatives.
- Minimizes overall **Costs** by using the exiting alignment ROW of Overpass Road and Fairview Heights Road as much as possible as well as developer dedicated ROW to reduce acquisition costs and costs associated with wetland mitigation. The overall cost of Alternative O-3 is \$ 63.4 million compared to \$68.0 million for Alternative O-1, and \$64.4 million for Alternative O-2. Right-of-way costs for Alternative O-3 (\$3.3 million) are 43 percent less than for Alternative O-1 (\$5.8 million), and nearly 50 percent less than for Alternative O-2 (\$6.5 million). Wetland mitigation costs for Alternative O-3 (\$5.4 million) are 14 percent less than for Alternative O-1 (\$6.3 million) but, are 46 percent higher than for Alternative O-2 (\$2.9 million). The estimated roadway engineering and construction costs for Alternative O-3 are \$300,000 less than for Alternative O-2 and \$1.5 million less than for Alternative O-1.

PUBLIC COMMENTS

Eleven comments (Appendix G) were received after the first Public workshop held on October 28, 2004. Five of the comments were in complete opposition to both Alternatives O-1 and O-2. All came from residents who lived east of Handcart Road. There were two comments in favor of Alternative O-2. One from a resident west of Handcart Road and one from the attorney for Kirkland Ranch that restated a willingness to share the dedication of ROW with COMAS Trust. The primary reasons for opposition were acquisition of ROW and probable relocation as well as the effect on the rural nature of the area.

A second Public workshop was held on March 3, 2005. A total of seven written comments were received by mail, facsimile, and e-mail during the 10-day comment period. Two comments, from the same address, favored Alternative O-2 because they would rather have their property acquired for ROW than live adjacent to a "four-lane highway." Four of remaining comments received all favored Alternative O-3 and one did not favor or oppose any of the alternatives but had questions on access and the cost of relocating existing residences and utilities. One was opposed to Alternative O-3 because there was a proposed retention pond located on his property.

Section 1.0

INTRODUCTION

Pasco County is conducting a Route Study for environmental evaluation and assessment of improvements to Overpass Road from Old Pasco Road to Boyette Road and proposed alternative alignments from Boyette Road to Fort King Road, a distance of approximately 8 miles. The study addresses the use of the existing right-of-way (ROW) and examines the acquisition of additional ROW to connect the existing roadway to Fort King Road to improve safety, provide for increased traffic, and use by bicycles and pedestrians.

The study addresses the following five factors:

- Long-Range Planning;
- Safety;
- Property Impacts;
- Environmental Impacts; and
- Cost.

The report includes recommendations for a four-lane urban typical section from Old Pasco Road to Fort King Road comprising 166 ft ROW that includes turn lanes where appropriate, connections to side streets, paved shoulders, a sidewalk, a multi-use trail, curb and gutter, stormwater drains, and drainage sites. On June 29, 2004, the Pasco County Board of County commissioners (BOCC) approved a resolution adopting the Pasco County Standard Roadway Typical Sections for Collector and Arterial Roadways. As a result, the Pasco County staff directed the use of a single four lane urban typical section utilizing 166 ft of ROW for the entire length of the project based on the BOCC adopted standards. The proposed typical section will allow for improvements to six lanes when future conditions dictate without requiring additional ROW. The report also includes conceptual intersection layouts for Old Pasco Road, Boyette Road, Curley Road, Handcart Road, and Fort King Road.

Two Build Alignments, O-2 and O-3 are discussed in detail in Section 6.0 of this report. Alignment O-1 is not recommended as a build alternative due to receipt of public comments, wetland impacts and overall cost. Included are recommendations for a four-lane urban typical section of 166 feet (ft) based on the *Pasco County Standard Roadway Typical Sections For Collector and Arterial Roadways*. The alignments follow the existing right-of-way from Old Pasco Road to Boyette Road, new ROW under construction by the developer of Palm Cove, and expected dedicated ROW from the east of Palm Cove to west of Handcart Road. The expected dedicated alignment is associated with planned residential development by the Palm Cove, Epperson, and COMAS Trust developers. The roadway continues on new alignment to Fairview Heights Road following the existing alignment to the south turn in Fairview Heights Road. From this point the roadway continues on a new alignment connecting to Kossick Road at Fort King Road. Also included are conceptual intersection layouts for Old Pasco Road, Boyette Road, Curley Road, Handcart Road, and Fort King Road and connections to side streets.

Other proposed improvements include turn lanes, sidewalks, a multi-use trail, landscape buffers and drainage sites. Comparison of the Build Alternatives and the No-Build Concept is based on a variety of parameters using a matrix format, which identifies the potential effects that each alternative has on the community.

1.1 PURPOSE AND NEED

The purpose of this Route Study is to provide documented social, economic, environmental, engineering, and safety analyses that will assist the County in reaching a decision on the proposed improvements within the Overpass Road corridor from Old Pasco Road to Fort King Road by 2030. It documents the need for the project and presents the procedures used to develop and evaluate the No-Build Concept and the three proposed Alternative Alignments.

Based on long range planning and projected growth, the Pasco County Metropolitan Planning Organization (MPO) has identified within the 2025 Long Range Transportation Plan the need to improve the existing segment of Overpass Road to a four-lane facility from Old Pasco Road to Boyette Road and to extend Overpass Road from Boyette Road to Fort King Road as a four-lane facility. Eastern Pasco County is growing at a rapid pace. Within close proximity to the project corridor are four Developments of Regional Impact (DRIs) and several Master Planned Unit Developments (MPUDs). These developments will result in the construction of over 21,500 residential units with a projected population of over 60,000 in an area from S.R. 54 to S.R. 52 between Old Pasco Road and Fort King Road. In addition, over 700,000 square feet (sq ft) of retail and office space is projected for this same area.

1.2 PROJECT DESCRIPTION

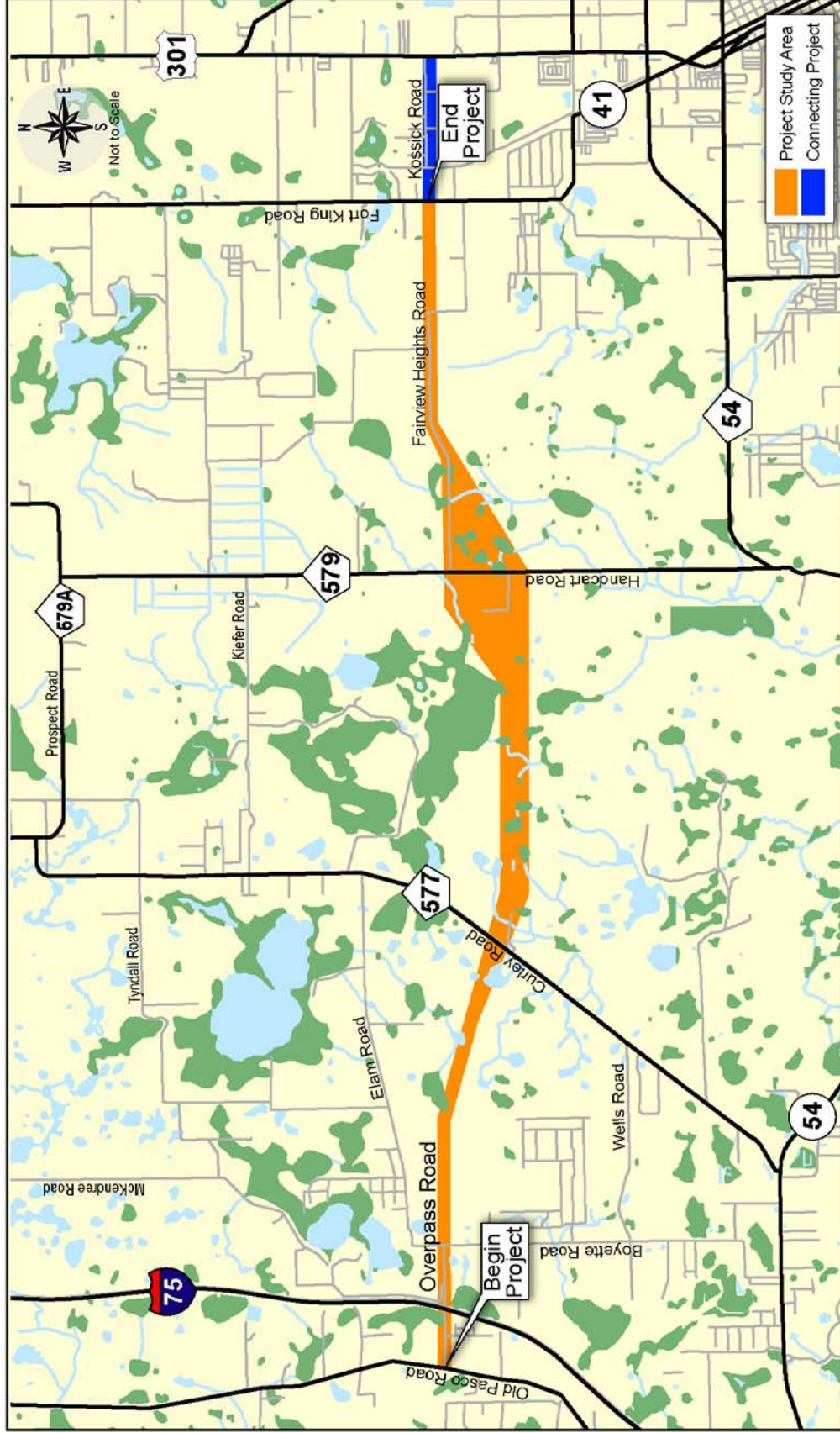
Overpass Road is an east-west corridor that extends from Old Pasco Road to Boyette Road (Figure 1-1). From Boyette Road, the corridor is proposed to continue eastward on new alignment to Handcart Road. East of Handcart Road, the corridor incorporates portions of the Fairview Heights Road ROW before continuing eastward as new alignment to Fort King Road. The new alignment will tie in with Kossick Road and eventually Otis Allen Road, which will form a continuous east-west roadway from Chancey Road (C.R. 535) to Old Pasco Road. The proposed new alignments incorporate, as much as possible, existing east-west roads and proposed roads expected to be built as part of approved development. The total length of the project varies from 8.02 miles for Alternatives O-2 and O-3 to 8.23 miles for Alternative O-1. This study area is contained within Sections 25, 26, 27, 28, 29, 32, 33, 34, 35, and 36 of Township 25 South, Range 20 East; and Sections 27, 28, 29, 30, 31, 32, 33, and 34 of Township 25 South, Range 21 East.

1.3 COORDINATION WITH OTHER PROJECTS

This project was coordinated with the developers of Palm Cove, COMAS Trust and Epperson Properties and is consistent with their proposed development plans. The project was also coordinated with the Kossick Road project, which will connect to Overpass Road at Fort King

Road; the planned Old Pasco Road improvements; and the Pasco County Parks Department, which is developing a regional park at the southwest corner of Overpass Road and Boyette Road.

FIGURE 1-1
OVERPASS ROAD CORRIDOR PROJECT LOCATION MAP



Section 2.0

EXISTING ROADWAY CONDITIONS

2.1 EXISTING ROADWAY CHARACTERISTICS

2.1.1 TYPICAL SECTIONS

Within the project area, Overpass Road is an unpaved rural typical section from Old Pasco Road to the I-75 Overpass Bridge and along the segment of Fairview Heights Road that will be incorporated into the proposed Overpass Road. As part of the Palm Cove development, the developer has paved Overpass Road from east of the I-75 Bridge to Boyette Road and has constructed two paved lanes as part of the Overpass Road extension.

2.1.2 PEDESTRIAN AND BICYCLE FACILITIES

There are currently no pedestrian or bicycle facilities located along Overpass Road, Fairview Heights Road, or along the proposed new alignments.

2.1.3 RIGHT-OF-WAY

The existing Overpass Road extends from Old Pasco Road to Boyette Road, a distance of 0.85 miles and passes over I-75. There is no interchange with I-75. The existing ROW varies from 50 to 60 ft.

2.1.4 DRAINAGE

The existing conditions within the study area were evaluated to address a preliminary drainage design associated with the proposed improvements. The information collected (presented in detail in Appendix A) is to help satisfy preliminary proposed design for pond sizes, culverts, existing hydrology, 100-year floodplain impacts, and water quality for the study area.

In general, the project is located in a rural area. Both alternative alignments propose Overpass Road to be constructed through existing undeveloped parcels, which have been approved or proposed for development. Existing drainage patterns show contributions to wetlands and low-lying areas from sheetflow over grassed areas and small streams.

2.1.5 FLOODPLAINS

The following Flood Insurance Rate Map (FIRM) for unincorporated areas of Pasco County, published by the Federal Emergency Management Agency (FEMA), was reviewed to determine the location of the floodplains within the project area.

- Community - Panel Number: 120230 0275 D Pasco County, Florida, September 30, 1992

This map shows that the study area is within Zone X. These areas are determined to be outside the 100-year and 500-year floodplain; therefore, there are no floodplain impacts within this project corridor.

2.1.6 SOIL DATA

Pasco County is characterized by discontinuous highlands in the form of ridges separated by broad valleys. The ridges are above the static level of the water in the aquifer, but the valleys are below it. Broad shallow lakes are common in the valley floors, and smaller, deep lakes are on the ridges. Based on physiography, the route study is located in the Brooksville Ridge, which extends from Hernando County to about the area of Zephyrhills, between S.R. 581 on the west and U.S. 301 on the east. The elevations in this area range from 70 to 300 ft above sea level. Most of the surface is covered by a few feet of sand with the thickest deposits located near the western side of the ridge. Other areas consist of poorly drained to well-drained, sandy to clayey soils. Vegetation is mostly turkey oak and longleaf pine in the west and pine and hardwoods elsewhere. Much of the area has been cleared for crops and pasture.

The soils within the Overpass Road study area were reviewed in the United States Department of Agriculture Soil Conservation Service (USDA SCS) *Soil Survey of Pasco County, Florida*. Soil types were identified from Maps 37 and 38. Table 2-1 depicts the various soil types found in the study area, their hydrologic group, permeability, and high water table depth. The soil type is predominately a variety of fine sands. The soil is gently sloping and well drained in most of the study area. Permeability ranges from moderate to very rapid in the surface and subsurface layers. Soils shown in Table 2-1 are generally organized in a west to east fashion, with Millhopper and Smyrna Fine Sand in the western portions of the project and Cassia and Arrendondo Fine Sand in the east. Pomona Fine Sand and Sparr Fine Sand were found generally throughout the region.

**TABLE 2-1
SOIL DATA**

Soil Type Name (Number)	Hydrologic Group	Permeability	High Water Table Depth (ft)
Millhopper fine sand, 0 to 5% slopes (69)	A	Rapid	3.5 - 6.0
Smyrna fine sand (21)	A/D	Rapid	0 - 1.0
Pomona fine sand (2)	B/D	Moderate	0 - 1.0
Chobee Soils; Frequently flooded	B/D	Moderate to Very Slow	0 - 1.0
Sparr fine sand, 0 to 5% slopes (7)	C	Rapid	1.5 - 3.5
Kendrick fine sand, 0 to 5% slopes (45)	A	Rapid/ Moderate	>6.0
Cassia fine sand, 0 to 5% slopes (46)	C	Rapid/Moderate	1.5 - 3.5
Arredondo fine sand, 0 to 5% slopes (43)	A	Rapid	>6.0

Source: Soil Survey of Pasco County.

2.1.7 TRAFFIC

2.1.7.1 2003 Traffic Counts

Traffic count data was collected in the vicinity of the Overpass Road corridor (Appendix B). In addition to counts at the Old Pasco Road/Overpass Road intersection, data was collected for the roadways/intersections most expected to be affected by the proposed changes to Overpass Road.

Two-day, twenty-four hour bi-directional traffic counts were obtained in November 2003, at the following locations:

- Old Pasco Road just north of SR 54, and
- Old Pasco Road just south of SR 52.

Peak hour turning movement counts were obtained at the following intersections:

- Old Pasco Road and SR 54,
- Old Pasco Road and SR 52, and
- Old Pasco Road and Overpass Road.

The peak hour turning movement counts were conducted from 7:00 a.m. to 9:00 a.m. and from 4:00 p.m. to 6:00 p.m. The peak hours were identified as taking place between approximately 7:00 a.m. to 8:00 a.m. for the morning peak period and from 5:00 p.m. to 6:00 p.m. for the evening peak period. All counts were adjusted by a corresponding factor (0.99 to 1.04) to reflect peak season traffic conditions in the study area. The Pasco Countywide Seasonal Adjustment Factors (SF) were obtained from the Florida Department of Transportation's (FDOT) 2002 *Florida Traffic Information CD*. Figure 2-1 shows the seasonally adjusted existing a.m. peak hour and p.m. peak hour traffic volumes in the Overpass Road vicinity.

2.1.7.2 Existing Conditions Capacity Analysis

Tables 2-2 and 2-3 provide a summary of existing traffic conditions at the intersections in the Overpass Road vicinity. The analysis was performed using the Highway Capacity Software (HCS) (HCS, 2000) for unsignalized intersections at Old Pasco Road/S.R. 52 and Old Pasco Road/Overpass Road and HCS 2000 for signalized intersections at Old Pasco Road/S.R. 54. Results of the capacity analysis indicate that all intersections currently operate at acceptable levels of service (i.e., LOS D or better) in both the a.m. and p.m. peak hours.

**TABLE 2-2
EXISTING UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS
IN THE VICINITY OF OVERPASS ROAD**

Intersection	Approach	Movement	AM Peak Hour			PM Peak Hour		
			Volume (veh/hour)	V/C Ratio	Level of Service	Volume (veh/hour)	V/C Ratio	Level of Service
Old Pasco Road and S.R. 52	Westbound	Left/Through	10	0.01	A	11	0.01	A
	Northbound	Left/Right	24	0.06	B	35	0.07	B
Old Pasco Road and Overpass Road	Westbound	Left/Through/Right	85	0.05	A	101	0.06	A
	Northbound	Through/Right	110	0.12	A	130	0.14	A
	Southbound	Left/Through	39	0.06	B	42	0.07	B

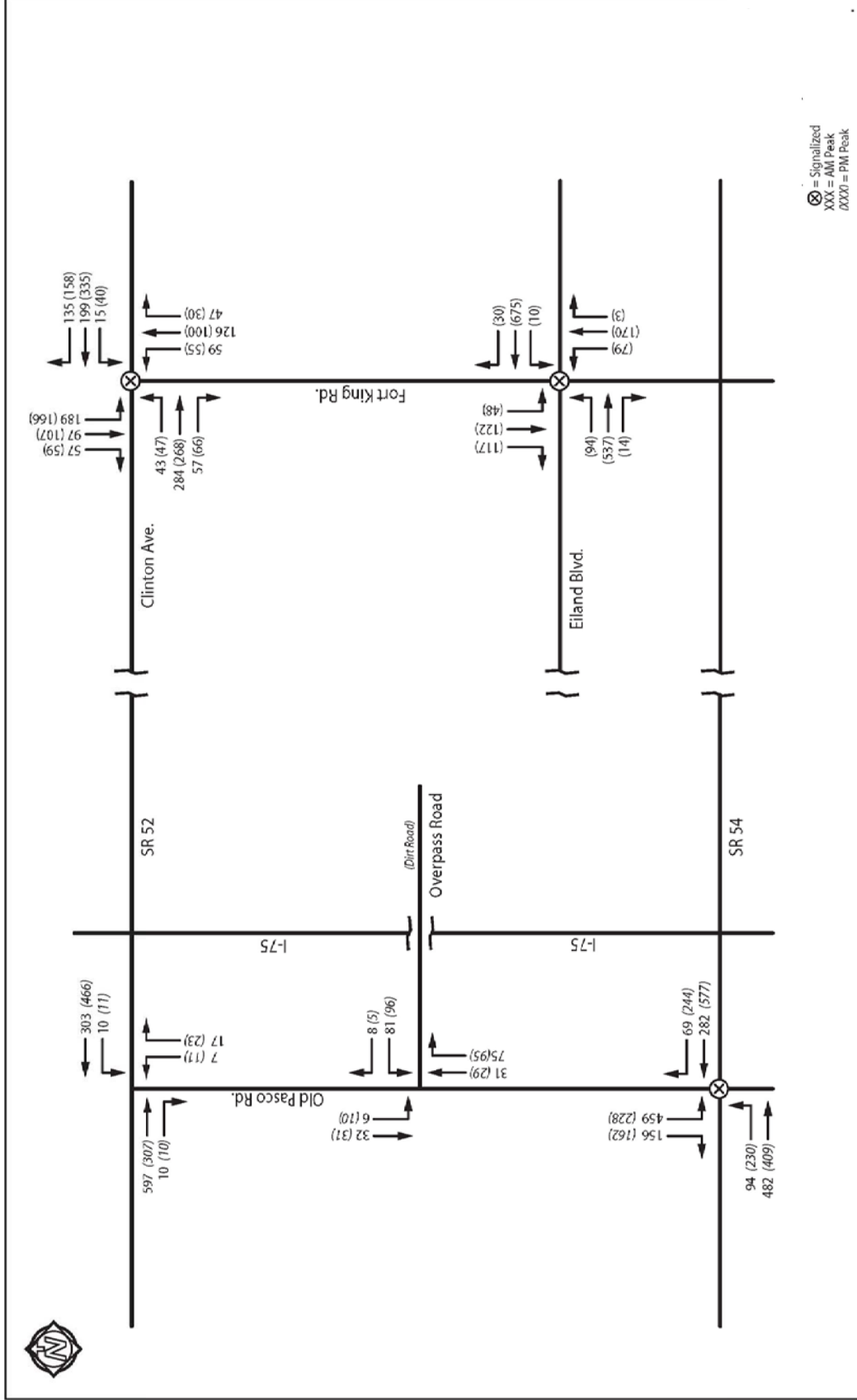


FIGURE 2-1
 EXISTING PEAK HOUR TRAFFIC COUNTS
 IN THE OVERPASS ROAD VICINITY

Final Overpass Road Route Study

**TABLE 2-3
EXISTING SIGNALIZED INTERSECTIONS LEVELS OF SERVICE
IN THE VICINITY OF OVERPASS ROAD**

Intersection	Approach	Lane Group	AM Peak Hour		PM Peak Hour	
			Average Delay (sec/veh)	Level of Service	Average Delay (sec/veh)	Level of Service
Old Pasco Road and S.R. 54	Eastbound	Left	29.1	C	41.7	D
		Through	13.5	B	8.4	A
		Overall	16.0	B	20.4	C
	Westbound	Through	44.6	D	39.0	D
		Right	9.9	A	6.7	A
		Overall	40.1	D	32.4	C
	Southbound	Left	51.6	D	41.6	D
		Right	6.4	A	14.3	B
		Overall	44.9	D	34.8	C
	Overall			32.3	C	28.2

2.1.8 EXISTING CRASH DATA

Existing crash data were obtained from the Pasco County Traffic Operations Division for 2000, 2001, and 2002 in the Overpass Road study area, from Wells Road to Fort King Road. The existing corridor segment terminates just east of Boyette Road. Therefore, the crash data provided does not include the proposed extension to Fort King Road. Table 2-4 provides information on the number of crashes, the number of vehicles involved in the crashes, the number of injuries, and the number of fatalities. The table also provides a three-year total. As Table 2-4 indicates, six crashes have occurred over the three-year period. Out of these six crashes, four of the crashes (years 2000 and 2002) involved six vehicles and resulted in five injuries and zero fatalities.

**TABLE 2-4
NUMBER OF CRASHES AND CRASH CONSEQUENCES BY YEAR**

Year	Crashes	Vehicles	Injuries	Fatalities
2000	3	5	4	0
2001	2	N/A	1	0
2002	1	1	0	0
3-Year Total	6	6	5	0

Number of vehicles per crash was not provided in the 2001 Pasco County Traffic Crash Facts Report.

Table 2-5 provides a summary of the crash frequency by individual intersection location in the Overpass Road study area.

**TABLE 2-5
FREQUENCY OF CRASHES BY LOCATION**

Location	Number of Occurrences
Overpass Road/Old Pasco Road	5
Overpass Road/Blair Drive	1
Total	6

The accident history in the study area is typical of minor facilities. Given the accident history provided, no significant safety problems for the existing Overpass Road corridor have been identified. The proposed roadway and extension will be designed and constructed using the latest American Association of State Highway and Transportation Officials (AASHTO) and county design standards, with sufficient horizontal sight distance, design speed, and adequate turning radii as to provide a safer traveling facility for all vehicles involved.

2.1.9 INTERSECTIONS AND SIGNALIZATION

There are no signalized intersections along existing Overpass Road from Old Pasco Road to Boyette Road. There are also no signalized intersections from Handcart Road to Fort King Road along existing Fairview Heights Road.

2.1.10 RAILROAD CROSSINGS

There are no railroads located within the study area.

2.1.11 UTILITIES

Preliminary investigation has revealed that the following utility companies have or propose facilities within the project limits:

- Pasco County Public Utilities,
- Peoples Gas Tampa,
- Shaw Communications,
- Verizon Communications,
- Withlacoochee Electric Cooperative, and
- Florida Power.

2.1.12 PAVEMENT CONDITIONS

Overpass Road is an unpaved facility from Old Pasco Road to the I-75 Overpass Road Bridge. Two lanes of the proposed four-lane urban paved segment along the existing alignment east of the I-75 Overpass Road Bridge and the new alignment dedicated within the Palm Cove development, have been constructed. The segment of Fairview Heights Road located within the study corridor is also unpaved.

Section 2.0

EXISTING ROADWAY CONDITIONS

2.1 EXISTING ROADWAY CHARACTERISTICS

2.1.1 TYPICAL SECTIONS

Within the project area, Overpass Road is an unpaved rural typical section from Old Pasco Road to the I-75 Overpass Bridge and along the segment of Fairview Heights Road that will be incorporated into the proposed Overpass Road. As part of the Palm Cove development, the developer has paved Overpass Road from east of the I-75 Bridge to Boyette Road and has constructed two paved lanes as part of the Overpass Road extension.

2.1.2 PEDESTRIAN AND BICYCLE FACILITIES

There are currently no pedestrian or bicycle facilities located along Overpass Road, Fairview Heights Road, or along the proposed new alignments.

2.1.3 RIGHT-OF-WAY

The existing Overpass Road extends from Old Pasco Road to Boyette Road, a distance of 0.85 miles and passes over I-75. There is no interchange with I-75. The existing ROW varies from 50 to 60 ft.

2.1.4 DRAINAGE

The existing conditions within the study area were evaluated to address a preliminary drainage design associated with the proposed improvements. The information collected (presented in detail in Appendix A) is to help satisfy preliminary proposed design for pond sizes, culverts, existing hydrology, 100-year floodplain impacts, and water quality for the study area.

In general, the project is located in a rural area. Both alternative alignments propose Overpass Road to be constructed through existing undeveloped parcels, which have been approved or proposed for development. Existing drainage patterns show contributions to wetlands and low-lying areas from sheetflow over grassed areas and small streams.

2.1.5 FLOODPLAINS

The following Flood Insurance Rate Map (FIRM) for unincorporated areas of Pasco County, published by the Federal Emergency Management Agency (FEMA), was reviewed to determine the location of the floodplains within the project area.

- Community - Panel Number: 120230 0275 D Pasco County, Florida, September 30, 1992

This map shows that the study area is within Zone X. These areas are determined to be outside the 100-year and 500-year floodplain; therefore, there are no floodplain impacts within this project corridor.

2.1.6 SOIL DATA

Pasco County is characterized by discontinuous highlands in the form of ridges separated by broad valleys. The ridges are above the static level of the water in the aquifer, but the valleys are below it. Broad shallow lakes are common in the valley floors, and smaller, deep lakes are on the ridges. Based on physiography, the route study is located in the Brooksville Ridge, which extends from Hernando County to about the area of Zephyrhills, between S.R. 581 on the west and U.S. 301 on the east. The elevations in this area range from 70 to 300 ft above sea level. Most of the surface is covered by a few feet of sand with the thickest deposits located near the western side of the ridge. Other areas consist of poorly drained to well-drained, sandy to clayey soils. Vegetation is mostly turkey oak and longleaf pine in the west and pine and hardwoods elsewhere. Much of the area has been cleared for crops and pasture.

The soils within the Overpass Road study area were reviewed in the United States Department of Agriculture Soil Conservation Service (USDA SCS) *Soil Survey of Pasco County, Florida*. Soil types were identified from Maps 37 and 38. Table 2-1 depicts the various soil types found in the study area, their hydrologic group, permeability, and high water table depth. The soil type is predominately a variety of fine sands. The soil is gently sloping and well drained in most of the study area. Permeability ranges from moderate to very rapid in the surface and subsurface layers. Soils shown in Table 2-1 are generally organized in a west to east fashion, with Millhopper and Smyrna Fine Sand in the western portions of the project and Cassia and Arrendondo Fine Sand in the east. Pomona Fine Sand and Sparr Fine Sand were found generally throughout the region.

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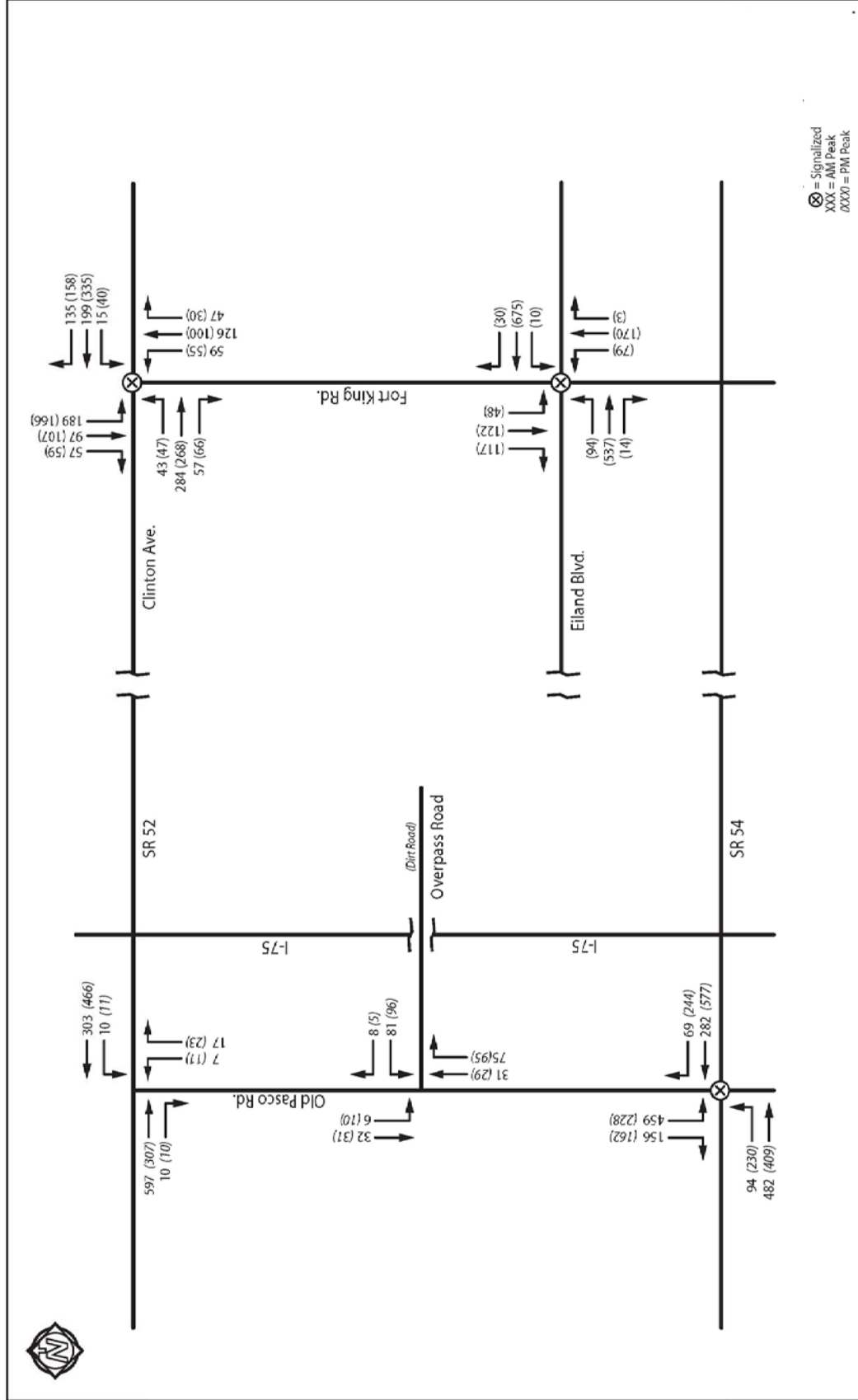


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Final Overpass Road Route Study

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2.1.8 EXISTING CRASH DATA

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2.1.9 INTERSECTIONS AND SIGNALIZATION

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2.1.10 RAILROAD CROSSINGS

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2.1.11 UTILITIES

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- Peoples Gas Tampa,
- Shaw Communications,
- Verizon Communications,
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- Florida Power.

2.1.12 PAVEMENT CONDITIONS

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Section 3.0

ENVIRONMENTAL ANALYSIS

3.1 ENVIRONMENTAL CHARACTERISTICS

3.1.1 LAND USE DATA

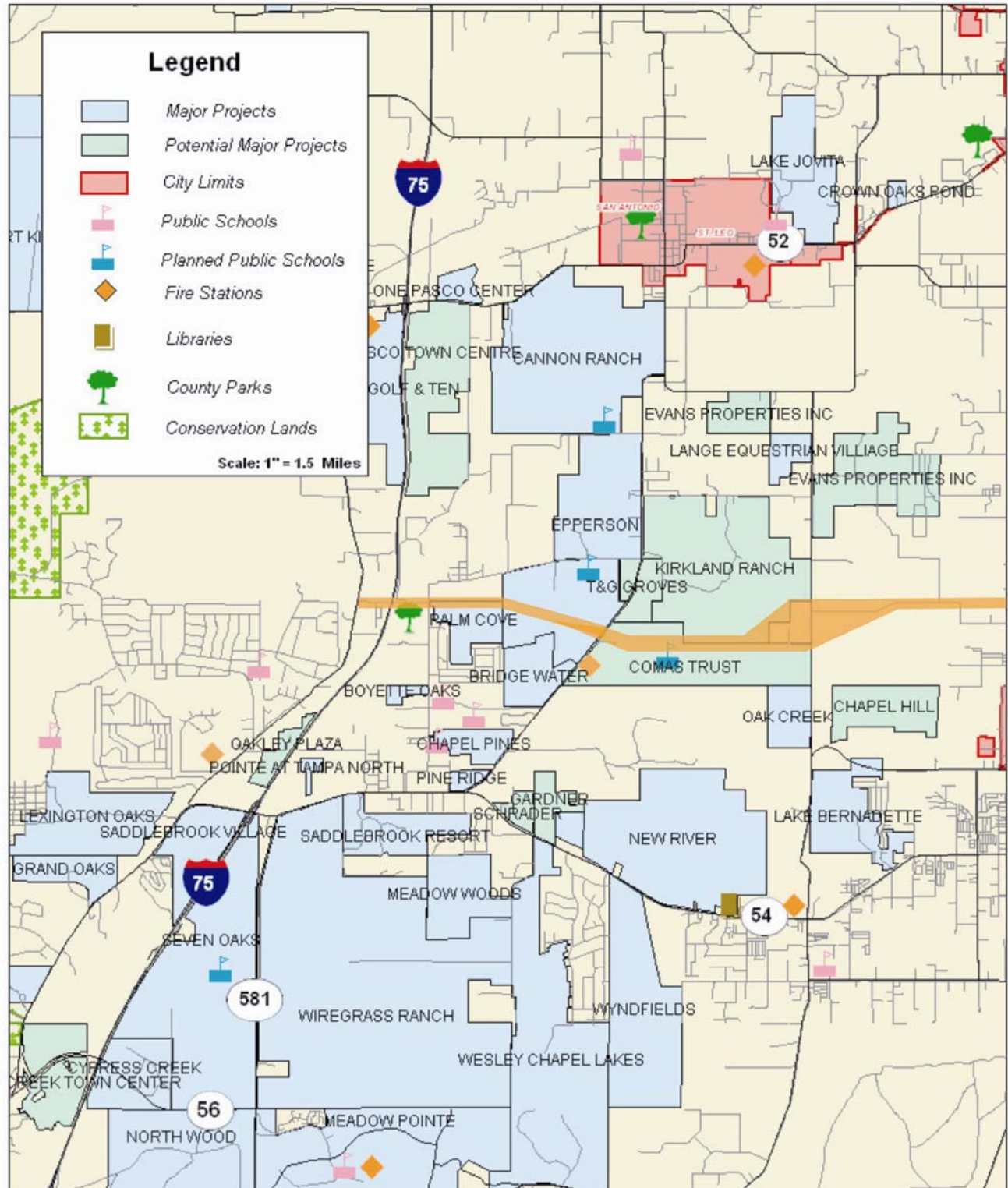
3.1.1.1 Existing Land Use

The existing land use along existing Overpass Road between Old Pasco Road and Boyette Road is generally characterized by large citrus groves except for single-family residences located on the south side of the corridor between Old Pasco Road and I-75. Between Boyette Road and Curley Road, residential development is occurring. From Curley Road to Handcart Road, the corridor passes through mostly vacant agricultural land that is primarily pasture with some citrus mixed in. The corridor then passes along an area dominated by newer single-family residences and vacant land that has been subdivided into large residential parcels along the existing Fairview Heights Road. The north side of the corridor is primarily vacant pasture and wetlands with citrus groves extending from west of Artifact Road to Fort King Road. There is a small family cemetery located south of the proposed alignment and north of Fairview Heights Road, approximately 0.5 miles from the end of the project corridor.

3.1.1.2 Future Land Use

Bordering the project corridor are four approved Developments of Regional Impact (DRI) and Master Planned Unit Developments (MPUD) scheduled for build-out prior to 2025 (Figure 3-1). These include Cannon Ranch (5,596 dwelling units), COMAS Trust (1,999 dwelling units), Bridgewater (760 dwelling units), Oak Creek (550 dwelling units) and Palm Cove (790 dwelling units). Additionally, there is approximately 700,000 sq ft of retail and office space planned for these same developments. Dwelling unit and population projections for 2025 were updated in 2004 based on the 2000 Census data and the recently approved development within the study area. The area between S.R. 52 and S.R. 54 from Old Pasco Road to Handcart Road were estimated at 21,500 dwelling units with a population in excess of 60,000. In addition, employment within this area in 2025 is expected to exceed 8,000 jobs. Currently, there are three proposed large developments in the initial planning stages adjacent to the corridor, Epperson (3,905 dwelling units), T&G Groves (598 dwelling units), and Chapel Hill (690 dwelling units). Kirkland Ranch is also expected to be approved for development, but buildout figures are not available at this time.

**FIGURE 3-1
CURLEY/OVERPASS AREA
PASCO COUNTY, FLORIDA**



3.1.2 NATURAL ENVIRONMENT AND WILDLIFE

An assessment of the Overpass Road project study area was conducted to review and quantify the existing habitat types located within the project study area (Appendix C). Information collected was used to determine and quantify impacts to wetlands, uplands, and threatened and endangered species resulting from proposed improvements to Overpass Road.

3.1.2.1 Existing Vegetative Communities

In order to determine the types and approximated boundaries of upland and wetland vegetative communities within the project study area, the following documents were reviewed:

- U.S. Geological Survey (USGS) 7.5 minute San Antonio and Dade City quadrangle maps (1997);
- Aerial photos (1 inch = 1000 feet) 1999;
- USDA, Natural Resource Conservation Service, Pasco County Soil Surveys 1982;
- Florida Association of Professional Soil Classifiers, Hydric Soils of Florida Handbook (Carlisle 1990);
- FDOT, Florida Land Use, Cover and Forms of Classification System (FLUCFCS), second edition (1999); and
- *Classification of Wetlands and Deepwater Habitats of the United States*, U.S. Fish and Wildlife Service (USFWS), 1979.

All areas within the project study area were classified using FLUCFCS (FDOT, 1999). In addition to FLUCFCS, USFWS' *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin, *et. al.* 1979) was used to classify wetland community types.

In October 2003, URS environmental scientists familiar with Florida natural communities conducted a field assessment of the project study area in order to verify upland and wetland community boundaries. Based on in-house and field reviews, a total of eight uplands, five wetlands, and one surface water community types were found within the project study area. Each of these habitats is described below and acreages of each within each project alternative are presented in Table 3-1.

Upland Communities

Upland communities are generally located at higher elevations than lowlands and are usually not saturated by surface or ground water for extended periods of time. Descriptions of eight upland habitat types found within the project study area are provided in the Environmental Technical Memorandum (Appendix C), and the acreage of each type within each project alternative is provided in Table 3-1.

Wetland Communities

Wetlands are areas saturated by surface or ground water at a sufficient frequency or duration to support a prevalence of vegetation adapted for life in saturated soil conditions. Five wetland community types are present within the project study area and are described in the Environmental Technical Memorandum (Appendix C). The acreage of each wetland type within each project alternative is provided in Table 3-1.

Other Surface Waters

Other surface waters are manmade wetland habitats constructed in non-hydric soil types. A description of the one other surface water present in the project study area is provided in the Environmental Technical Memorandum (Appendix C). The acreages of other surface waters within each project alternative are presented in Table 3-1.

3.1.2.2 Potential for Protected Species

The potential for state- and federally-listed species occurring within the project study area was assessed by review of species accounts and agency listings of species known to occur or potentially occur within one mile of the project study area and wood stork roosting/nesting areas known to occur within 18.6 miles of the project study area. The Florida Natural Areas Inventory (FNAI) and USFWS were contacted for information on listed and rare species occurrences and the Florida Fish and Wildlife Conservation Commission (FFWCC) online bald eagle's nest locator database was searched to determine if bald eagles' nests are present within one mile of the project study area.

The state- and federally-listed plant and animal species with the potential to occur within the project study area are presented in Table 3-2 and discussed below.

TABLE 3-1
VEGETATIVE COMMUNITIES WITHIN THE PROJECT STUDY AREA

FLUCFCS Code ¹	Upland Habitat	USFWS Classification ²	Description ¹	Acreage Within Project Alternatives																	
				Alignment Section			O-1			O-2			O-3								
				A	B	C	Urban	Urban	Urban	A	B	C	Urban	Urban	Urban	A	B	C	Urban	Urban	Urban
				Urban	Urban	Urban	Urban	Urban	Urban	Urban	Urban	Urban	Urban	Urban	Urban	Urban	Urban	Urban	Urban	Urban	Urban
			Residential, Low Density, Fixed Single-Family Units	0	0	0	9.03	0	0	9.03	0	0	0	0	0	0	0	0	0	10.72	
190		Not Applicable	Open Land	5.80	0	0	5.73	0	0	5.73	0	0	0	0	0	0	0	0	0	0	
211		Not Applicable	Improved Pastures	7.68	36.66	0	12.86	9.04	35.67	14.22	8.31	24.49	15								
221		Not Applicable	Citrus Groves	5.79	0	0	17.77	5.62	0	18.08	5.12	3.25	16.5								
321		Not Applicable	Palmetto Prairies	0	0	0	0	0	0	0	0	0	2.11								
434		Not Applicable	Hardwood-Conifer Mixed	0	0	0	0	0	0	5.23			5.23							5.23	
440		Not Applicable	Tree Plantations	16.97	0	0	0	17.05	0	0	18.86	0	0	0						0	
814		Not Applicable	Roads and Highways	0	0	0	0	0	0	0	0	0	0	0						0	
Total Acres Within each Alternative							112.56			121.36			115.49								
Wetlands																					
616		Palustrine, Emergent Wetland, Persistent, Seasonally Flooded (PEMIC)	Inland Ponds and Sloughs	4.06	0	0	0	0	0	0	0	0	0	0						0	
617		Palustrine, Forest Wetland, Broad-leaved Deciduous, Seasonally Flooded (PFOIF)	Mixed Wetland Hardwoods	0	3.17	0	4.05	0.05	0.91	1.21	0	4.58	3.18								
621		Palustrine, Forest Wetland, Needle-leaved Deciduous, Seasonally Flooded (PFO2H)	Cypress	0	0	0	0	0	0	0	0	0	0							0	
641		Palustrine, Emergent Wetland, Persistent, Seasonally Flooded (PEMIC)	Freshwater Marshes	0	0	0	0	0	0	0	0	0	0							0	
643		Palustrine, Emergent Wetland, Persistent, Seasonally Flooded (PEMIC)	Wet Prairie	0.37	1.89	0	0.66	3.55	0.79	0	3.53	0.73	0							0	
Section Total				4.44	5.06	4.71	4.71	5.06	4.71	1.21	1.70	1.21	3.18								
Total Acres Within each Alternative							14.21			6.51			12.02								
Other Open Waters																					
510		Riverine Intermittent-Aquatic Bed, Intermittently Exposed (R4AB3G)	Streams and Waterways	0.25	.30	0	0	0.25	0.30	0.0	0.25	1.28	0							0	
Total Acres Within each Alternative							0.55			.55			1.53								

¹ FDOT. Florida Land Use, Cover and Forms Classification System. Third edition. 1999. 91pp.

² Cowardin, Lewis M., V. Carter, F.C. Golet, and E.T. LaRoc. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. FWS/OBS-79/31. USFWS. 131pp.

TABLE 3-2
STATE- AND FEDERALLY-LISTED SPECIES
POTENTIALLY OCCURRING WITHIN THE PROJECT STUDY AREA¹

Species	Common Name	Habitat	State Status ²	Federal Status ³	Potential for Occurrence ⁴
Plants					
<i>Asplenium auritum</i>	auricled spleenwort	Wetland hammocks, cypress swamps.	Endangered		Low
<i>Blechnum occidentale</i>	sinkhole fern	Pine flatwoods.	Endangered		Low
<i>Cheiroglossa palmata</i>	hand fern	Hydric hammock, cypress.	Endangered		Low
<i>Glandularia tampensis</i>	Tampa vervain	Live oak, pine flatwoods with palmetto understory.	Endangered		Low
<i>Litsea aestivalis</i>	pondspice	Edges of baygalls, flatwood ponds, cypress domes.	Endangered		Low
<i>Nemastylis floridana</i>	celestial lily	Wet flatwoods, prairies, marshes, cabbage palm hammock edges.	Endangered		Low
Amphibians					
<i>Rana capito</i>	gopher frog	Dry sandy uplands, sandhill, scrub that includes isolated wetlands or large ponds.	Special Concern		Medium
Reptiles					
<i>Alligator mississippiensis</i>	American alligator	Permanent bodies of freshwater, including marshes, swamps, lakes.	Special Concern	Threatened	Low
<i>Drymarchon corais couperi</i>	eastern indigo snake	Scrub and sandhill to wet prairies and mangrove swamps.	Threatened	Threatened	Medium
<i>Gopherus polyphemus</i>	gopher tortoise	Dry uplands, sandhills, scrub, xeric oak hammock, dry pine flatwoods.	Special Concern		High
<i>Pituophis melanoleucus mugitus</i>	Florida pine snake	Open canopies and dry sandy soil.	Special Concern		Medium
<i>Stilosoma extenuatum</i>	short-tailed snake	Dry uplands, sandhills, xeric hammocks, and sand pine scrub.	Threatened		Low
Birds					
<i>Egretta caerulea</i>	little blue heron	Shallow freshwater, brackish, and saltwater habitats.	Special Concern		High
<i>Egretta thula</i>	snowy egret	Nests in woody shrubs, mangroves, and willows found in wetlands. Forages in seasonally and permanently flooded wetlands.	Special Concern		Low
<i>Egretta tricolor</i>	tricolored heron	Nest in mangrove or willow thickets. Forages in permanently or seasonally flooded wetlands.	Special Concern		Low
<i>Eudocimus albus</i>	white ibis	Freshwater and brackish marshes, forested wetlands, wet prairies, inundated fields, and man-made ditches.	Special Concern		Low
<i>Falco sparverius paulus</i>	southeastern American kestrel	Open pine habitats, woodland edges, prairies, and pastures.	Threatened		Low
<i>Haliaeetus leucocephalus</i>	bald eagle	Nests in tall trees. Forages near bodies of water.	Threatened	Threatened	Low
<i>Mycteria americana</i>	wood stork	Nests in inundated forested wetlands. Forages in freshwater marshes, swamps, flooded pastures.	Endangered	Endangered	High
Mammals					
<i>Podomys floridanus</i>	Florida mouse	Xeric uplands with sandy soils.	Special Concern		Low
<i>Sciurus niger shermani</i>	Sherman's fox squirrel	Sandhills, pine flatwoods, pastures.	Special Concern		Low
<i>Ursus americanus floridanus</i>	Florida black bear	Forested communities, including wetlands.	Threatened		Low

¹ As reported by FNAI *Species and Natural Community Summary for Pasco County*. <http://www.fnai.org>. 2003.

² Plant species listed by the Florida Department of Agriculture pursuant to Chapter 5B-40, FAC. Animal species listed by the FFWCC pursuant to Rules 39-27.003, 39-27.004, and 39-27.005 F.A.C.

³ As listed by the USFWS in 50 CFR 17.

⁴ Ratings are low, medium, and high, based on field observations and FNAI elemental occurrences. Ratings based on suitable habitat as follows: **Low** – Suitable habitat present in project study area but no record of occurrence within one mile of project study area and species not observed on site; **Medium** – Suitable habitat present in project study area and historical record of occurrence within one mile of project study area; and **High** – Suitable habitat present in project study area and species observed on site or known to currently exist within one mile of the project study area.

A total of 11 state- and federally-listed plant species occur or have historically occurred within Pasco County. While no protected plant species were observed during field review, 6 plant species have the potential to occur in the project study area. Sinkhole fern (*Blechnum occidentale*) and Tampa vervain (*Glandularia tampensis*) both occur in pine flatwoods. Auricled spleenwort (*Asplenium auritum*), hand fern (*Cheiroglossa palmata*), pondspice (*Litsea aestivalis*), and celestial lily (*Nemastylis floridana*) require more hydric soil conditions, growing naturally in cypress swamps, wet flatwoods, and prairies. The FNAI did not report any occurrences of these species within one mile of the project study area.

Sixty state- and federally-listed animal species occur or have historically occurred within Pasco County. Seventeen protected species have the potential to occur in the project study area, and although none of the protected species were observed during the field review, active gopher tortoise burrows were discovered. The commensal species of the gopher tortoise are the gopher frog (*Rana capito*), Florida mouse (*Podomys floridanus*), and eastern indigo snake (*Drymarchon corais couperi*). These species along with the short-tailed snake (*Stilosoma extenuatum*), southeastern American kestrel (*Falco sparverius paulus*), bald eagle (*Haliaeetus leucocephalus*), Sherman's fox squirrel (*Sciurus niger shermani*), and the Florida black bear (*Ursus americanus floridanus*) inhabit dry upland areas. These species naturally inhabit pine flatwoods, prairies, scrub, and sandhill areas. Species that prefer more hydric communities, inhabiting forested wetlands, wet prairies, and marshes, are the American alligator (*Alligator mississippiensis*), little blue heron (*Egretta caerulea*), snowy egret (*Egretta thula*), tricolored heron (*Egretta tricolor*), white ibis (*Eudocimus albus*), and wood stork (*Mycteria americana*). The eastern indigo snake and the Florida sandhill crane (*Grus canadensis pratensis*) inhabit communities ranging from sandhill to wet prairies. The FNAI database reported occurrences of the little blue heron and the wood stork in or near the project study area.

As stated previously, active gopher tortoise burrows were observed within the project study area. The gopher frog, Florida pine snake, and eastern indigo snake utilize gopher tortoise burrows for shelter; therefore, the presence of the gopher tortoise increases the potential for presences of these three state- and/or federally-listed animal species. A total of 37.3 ac of gopher tortoise habitat exists at the northeast corner of the Overpass Road/Old Pasco Road intersection.

The FFWCC online bald eagle nest locator was utilized to determine if bald eagles' nests occur within one mile of the project study area. Based on available data, the nearest bald eagle's nest is 1.44 miles northeast of the project study area.

The FNAI database search revealed the presence of seven wood stork breeding colonies within an 18.6-mile radius of the project study area. The wood stork is a state- and federally-listed endangered species with a defined core foraging area within an 18.6-mile radius of breeding colonies. A location map of the seven wood stork rookeries is included in Appendix C.

No designate "critical habitat" occurs within the project study area according to the FNAI database and field assessments.

3.1.2.3 *Protected Species*

Areas of preferred foraging habitat for several protected bird species are present within the Overpass Road project study area. While small foraging areas utilized by these species may be affected by this project, projected impacts are not likely to adversely affect any of these species. No permanent impacts to nesting areas or rookeries will occur as a result of the proposed project and large areas of existing foraging habitat will remain in the vicinity of the project study area. Some bird species may be affected, but are not likely to be adversely affected by the proposed project.

Numerous gopher tortoise burrows were observed during field review of the project study area and as a result, this species was given a high probability of occurrence. Impacts to the gopher tortoises and their habitats will require permitting through the FFWCC. Commensal species, which include the gopher frog, eastern indigo snake, and Florida mouse, have a medium probability of occurrence due to the presence of active gopher tortoise burrows and available habitat within the project study area. The moderate probability of occurrence of the eastern indigo snake may require consultation with USFWS and precautions to be taken during construction.

As stated previously, the project study area is located within the defined core foraging area for seven wood stork breeding colonies. While wetlands impacted by the proposed project may be utilized by wood storks for feeding, large areas of foraging habitat exist outside of the project study area. In addition, wetlands impacted by the proposed project will be mitigated, thereby replacing lost foraging habitat. As a result, the wood stork may be affected, but is not likely to be adversely affected by the proposed project.

3.1.2.4 *Impacts to Natural Areas*

The improvements proposed in the project alternatives will affect existing wetlands with Alternative O-1 affecting 14.21 ac, Alternative O-2 affecting 6.51 ac, and Alternative O-3 affecting 12.02 ac. Table 3-1 provides a breakdown of the impacted wetlands by type and project segment.

Mitigation

Pursuant to federal and state wetland regulations, wetland functions and values lost as a result of the improvements to Overpass Road will be mitigated through the creation of new, restoration of historic, and/or enhancement of existing wetlands. As a result of this mitigation, no long-term or adverse effects resulting from the loss of the functions and values associated with impacted wetlands are anticipated. In addition, mitigation for wetlands will ensure that impacts to wetlands resulting from improvements to Overpass Road will not adversely affect public health, safety, or welfare.

Potential Permit Requirements

Potential environmental impacts resulting from the construction of the proposed project include wetland, water quality, and protected species impacts. From review of the project study area and project alternatives, the following list of issues will need to be addressed during the design and permitting phase of the project:

- Wetland impacts resulting from the construction of the proposed project;
- Water quality impacts resulting from the construction and operation of the proposed project;
- Water quantity impacts resulting from a change in land use type;
- Protected species impacts resulting from habitat loss; and
- Presence or absence of archaeological and historic resources.

With respect to these impacts, the U.S. Army Corps of Engineers (USACE) and Southwest Florida Water Management District (SWFWMD) regulate wetlands and impacts to wetlands within the project study area. SWFWMD also regulates impacts to water quality and quantity during both the construction and operation phases of projects. USFWS, U.S. Environmental Protection Agency (USEPA), and FFWCC review and comment on wetland permit applications. In addition, the Florida Department of Environmental Protection (FDEP) regulates stormwater discharge from construction sites greater than one acre in size.

Permits that may be required for this job include:

<u>Permit</u>	<u>Issuing Agency</u>
Environmental Resource Permit (ERP)	SWFWMD
Section 404 Dredge and Fill Permit	USACE
National Pollution Discharge Elimination System (NPDES) Permit	FDEP
Incidental Take Permit for Gopher Tortoises	FFWCC

SWFWMD requires an ERP when construction of a project results in creation of a new, or modification to an existing, surface water management system or if the construction of the project results in impacts to waters of the state or isolated wetlands. In addition, the USACE requires a 404 Dredge and Fill Permit if a project results in impacts to waters of the United States.

An NPDES permit is required for discharge of stormwater from construction activities that will result from the clearing of one or more acres of land. The NPDES permit requires development of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP identifies potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharges from the site and outlines methods to minimize impacts to the quality of stormwater discharging from a project site.

An incidental take permit from FFWCC will be required due to the presence of gopher tortoises. Gopher tortoises are listed as a species of special concern by the State of Florida, and as a result, it is illegal to take, harm, or harass them without first obtaining a permit from the FFWCC. Incidental take permits are issued by the FFWCC for activities that may disturb or kill tortoises. As part of the incidental take permit requirements, purchase of an appropriate number of mitigation credits in an existing mitigation bank will be required to offset tortoise habitat lost due to construction of this project. Mitigation credits are based on acreage of tortoise habitat lost and the density of the tortoise population.

3.1.3 CULTURAL RESOURCES

A Cultural Resource Assessment Survey (CRAS) (Appendix D) was performed in order to determine if any significant or potentially significant cultural resources, including archeological sites and historic resources (historic buildings, structures, and districts), are associated with the Overpass Road study corridor. Known or potentially significant cultural resources are defined as those properties either listed or potentially eligible for listing in the National Register of Historic Places (NRHP). Study methods included a review of available data, including Florida Master Site File (FMSF) records, NRHP listings, USDA Soil Survey and USGS quadrangle maps, and relevant cultural assessment reports and other documents. A field reconnaissance was also conducted for the purpose of identifying any potentially significant resources, as well as to “ground truth” the archeological site location predictive model. The broad corridor study area measures 500 ft to both sides of the existing roadway and proposed alternative alignments.

3.1.3.1 Results of the Background and Field Research

A check of the NRHP listings indicated that no significant (NRHP-listed or eligible) archeological sites or historic structures are located within the Overpass Road study corridor. Similarly, a check of the FMSF indicated an absence of archeological sites and historic structures along or adjacent to the existing roadway and proposed alternative alignments. Seventeen archaeological sites (8PA44, Ippolito; 8PA215, Gates; 8PA444, DBD; 8PA462, Little Mermaid; 8PA463, Wildcat Groves; 8PA464 Millhopper Coral; 8PA465, Treatment Plant; 8PA467, 4 Stones East; 8PA619, Holton Cemetery; 8PA623, Golden Grove; 8PA625, Quail Run RV; 8PA1127, Sheba's Place; 8PA1319, Windmill; 8PA1320, Calf Slobber; 8PA1321, Trip Grass; 8PA1322, Pig Leg; 8PA1334, Little Coral Run Quarry; and 8PA1335, Big Coral Run Quarry) and one historic cemetery (Appendix D, Table 1 and Figures 3 and 4) were previously recorded within approximately one mile of the corridor study area. These are mostly lithic and artifact scatter-type sites which have been evaluated as not potentially eligible for listing in the NRHP.

In general, comparative archeological site location data for Pasco County indicate a pattern of site distribution favoring the better drained terrain proximate to rivers, creeks, ponds, freshwater marshes, lakes, and other wetland features. Upland sites well removed from potable water are rare. In the pine flatwoods, sites tend to occur on slightly higher land; particularly small sandy ridges of somewhat poorly drained soil adjacent to wetland features. Scattered wetland features and a mosaic of soil types, ranging from very poorly to moderately well drained, characterize the corridor study area. Given the known patterns of aboriginal (precontact period) settlement, scattered segments along all proposed alternatives, as well as the existing ROW, are considered to have a high to moderate potential for archaeological site occurrence (Appendix D, Figures 2 and 4 and Photos 1 and 2). In general, these areas are characterized by relatively elevated and better-drained land proximate to a freshwater feature.

Historical research, which included an examination of 19th century federal surveyor's plats and field notes, as well as tract book entries, indicated a moderate potential for historic period archaeological sites associated with three former roads (Appendix D, Figure 4). The 1846 plat of Township 25 South, Range 21 East, surveyed by Benjamin F. Whitner, depicts three road segments. The first, labeled "road leading by Toadchoaka to Chocachatree" (State of Florida, *Field Notes* 1879:149), roughly follows present-day Handcart Road. Intersecting this road is an unnamed branch, which runs diagonally through Sections 33 and 28 (Appendix D, Figure 4). In addition, the "road from Tampa to Fort King" is depicted following, in part, today's Fort King Road along the eastern boundary of Section 33, and then paralleling Fort King Road a short distance to the west (Appendix D, Figure 4). The areas where these historic roads cross Alternatives O-1, O-2, and O-3 are marked as archeological probability zones in Appendix D, Figure 4. Sites, if found, are expected to be evidenced by historic refuse. No homesteads, battle sites, or Indian camps are anticipated, given the information contained in the historical documents examined.

According to tract book entries, most of the land within the corridor study area was purchased by Hamilton Disston, on September 30, 1881, or the Florida Central and Peninsular Railroad in 1893 (State of Florida, *Tract Book*, Volume 17:146-147; Volume 18:121-122). Disston was a noteworthy land speculator who made no improvements to this land.

Examination of the USGS Dade City quadrangle map indicated the potential for two structures built in or before 1960, as well as the historic Smith Cemetery. The two structures are located along existing Fairview Heights Road in Section 28; the cemetery is situated approximately 500 ft south of a segment of proposed ROW between Fairview Heights Road and Fort King Road (Appendix D, Figure 4; Photo 3). The Smith Cemetery was established by James C. Smith in 1885 as a burying ground for the Smith family and their descendents (Horgan et al. 1992:200). The first burial at the one-acre cemetery dates to 1886. No potential historic structures were identified along any of the proposed alternative alignments.

Field reconnaissance indicated that small portions of each proposed alternatives, O-1, O-2, and O-3, as well as a few areas along the existing ROW, might have potential for archeological site occurrence. Sites, if present, are anticipated to be small lithic or artifact scatters, as well as areas of historic (late 19th century) refuse (Appendix D, Figures 3 and 4). Of the two potential historic structures depicted on the Dade City quadrangle map, only one is still extant. This ca. 1953 Masonry Vernacular style residence, located at 36221 Fairview Heights Road (Appendix D, Figure 4; Photo 4), is a common type for the area, and thus, does not appear to meet eligibility criteria for listing in the NRHP. The Smith Cemetery is also located within the corridor study area, but will not be affected by the proposed project.

3.1.3.2 Conclusions

Background research indicates an absence of recorded archaeological sites and historic structures within the corridor study area. The likelihood for as yet unrecorded archaeological sites is considered high to moderate for selected portions of all proposed alignments, as well as existing and proposed ROW. One unrecorded historic structure and one historic cemetery are located within the Overpass Road corridor study area. Based upon existing information, neither appears to meet the criteria of eligibility for listing in the NRHP. Thus, archaeological sites and historic resources, which are listed, determined eligible, or considered potentially eligible for listing in the NRHP will not be an issue for this transportation improvement project.

3.2 **PHYSICAL ENVIRONMENT**

3.2.1 **POTENTIALLY CONTAMINATED SITE SURVEY**

A Contamination Screening Evaluation (Appendix E) was performed to evaluate the likelihood of environmental contamination present upon, below, or in the immediate vicinity of the Overpass Road Route Study corridor.

In order to identify and evaluate sites containing hazardous materials, petroleum products, or other sources of potential environmental contamination, the following tasks were conducted:

- Reviewed computer database lists (see Contamination Screening Evaluation located in Appendix E for lists reviewed) provided by Environmental Data Management, Inc. (EDM) to determine whether sites listed in the USEPA or FDEP records were present within the specified search radii;
- Evaluated historical aerial photography of the project corridor taken in 1966, 1974, 1985, 1991, 1995, and 2003 for Pasco County;
- Conducted a physical review of available regulatory documents located at the Pasco County Health Department and the southwest district office of the FDEP; and
- Conducted a visual survey within the study area in order to help verify the location of the identified sites and to evaluate any previously unrecorded sites focusing on storage tanks and hazardous material use.

Each of the sites identified as a result of these tasks was assigned a degree of risk for potential contamination impact: NO, LOW, MEDIUM, or HIGH. These ratings are based on the criteria outlined in Part 2, Chapter 22 of the FDOT *Project Development and Environmental Guidelines*.

A total of two sites located during this survey have been identified as having the potential for contamination impacts to the ROWs for the Overpass Road study corridor. Of these sites, both have been ranked as having MEDIUM potential for contamination (Table 3-3).

The findings of this analysis are based on preliminary information only and are not intended to replace more detailed studies such as individual environmental site assessments and subsurface soil/groundwater investigations. Rather, this survey is intended as a preliminary guide for identifying potential contamination along the Overpass Road Study Corridor. Other technical studies may be required to determine the existence of site contamination prior to right-of-way acquisition, or utility relocation. It should be noted that potential contamination sites may extend beyond those identified in this preliminary analysis because of limited historical and regulatory information (especially regarding agricultural sites and old cattle dip vats), illegal dumping practices, and the lack of compliance with FDEP stationary tank registration and hazardous waste generator programs. Finally, the identification of a site in this report does not necessarily indicate that the site contains environmental contamination, but only that there is the potential for environmental contamination.

TABLE 3-3
SUMMARY OF SITES

Site No	Site Name/ Description/ Address	Facility ID	Comments	Concern	Location (Estimate)	Ranking
1	Neukom Properties a.k.a. Smith Groves Fairview Heights Road Zephyrhills, FL 34283	8631695 TANKS	Agricultural facility - Open Two 1,000 gallon diesel ASTs, Removed 06/96 One 1,000 gallon fuel oil UST in service One 1,000 gallon diesel UST in service	Oil Diesel Pesticides Herbicides Metals	Complete Take	MEDIUM
6	Lake George, Inc. Elam Road & Highway 577 Dade City, FL 33525	8630222 TANKS	Closed agricultural facility Former barrow area? One 2,000 and one 1,000 gallon AST removed 06/88	Diesel	Adjacent North	MEDIUM

AST = Aboveground Storage Tank
DNR = Discharge Notification Report
CU = Cleanup or Cleanup Status
SRCR = Site Rehabilitation Complete Report
RCRA = Resource Conservation and Recovery Act
TANK = Storage Tank
NPA = No Further Action
ATRP = Abandoned Tank Restoration Program
UST = Underground Storage Tank
LUST = Leaking Underground Storage Tank
EDI = Early Detection Incentive
RA = Remedial Action

3.2.2 NOISE ANALYSIS

The purpose of a noise analysis is to identify and evaluate the noise sensitive sites and potential noise impacts associated with the proposed improvements. A noise analysis was not conducted as part of this study. In the event the proposed alignment is approved, a noise analysis may be conducted as part of the design phase of the project.

Section 4.0

LONG-RANGE PLANNING

4.1 LAND USE

4.1.1 FUTURE LAND USE

According to the *Pasco County Comprehensive Plan*, dated October 2000 (latest revision, June 2002) and the corresponding 2015 Future Land Use Map (as revised), the area along the project corridor is planned as residential-3 (3 units/acre [ac]) from Old Pasco Road to I-75. Continuing eastward for approximately 1.5 miles, the planned land use changes to a mixture of residential-3 and residential-1 (1 unit/ac) changing to agricultural uses for the next 1.5 miles to Curley Road. The corridor then changes to residential-1 for the next 2.5 miles to Handcart Road. For the next 1.5 miles, the land use along the south side of the corridor is planned as residential-1 while the north side is planned as agricultural. The final mile to Fort King Road is planned as agricultural-residential with some residential-1 on south side for the last 0.5 mile.

4.1.2 FUTURE DEVELOPMENTS

The rural nature of the Wesley Chapel Community is rapidly becoming more urban. The area between S.R 54 and S.R. 52 from Old Pasco Road to Fort King Road is conservatively projected to grow to over 21,500 residential units with a projected population of over 60,000 by 2030. The area to be serviced by this new east-west corridor contains five approved DRIs and MPUDs in addition to seven developments under construction and five proposed new developments. Existing, approved, and proposed DRIs and MPUDs are shown in Table 4-1. Where available, the total number of dwelling units planned at build-out are provided.

**TABLE 4-1
EXISTING, APPROVED, AND PROPOSED DRIs AND MPUDs**

Development	Dwelling Units	Status
Aberdeen Lakes	180	Under Construction
Bridgewater	760	Under Construction
Boyette Oaks	79	Approved
Chapel Hill	NA	Proposed
Chapel Pines	690	Under Construction
Canon Ranch	5,596	Approved
Watergrass	1,999	Proposed
T&G Groves	598	Proposed
Epperson*	3,905	Proposed
Evans Properties	NA	Proposed
Kirkland Preserve	NA	Proposed
Lake Bernadette	1,331	Under Construction
Lang Equestrian Village	37	Approved
New River*	4,800	Under Construction
Oak Creek	550	Under Construction
Palm Cove	790	Under Construction
Parkview-Serino	110	Approved
Pine Ridge/54 Fork	129	Under Construction

*=DRI

Sources: Pasco County DRI/MPUD Map, 4/7/2004. Heidt & Associates, Inc. map, *Curley Road Study Area Proposed Network*, 4/12/2004.

The Epperson DRI is in the initial stages of development planning and two other large tracts (Kirkland Preserve and T&G Groves) bordering the corridor are also likely to seek development approval.

Additionally, there is approximately 700,000 sq ft of retail and office space planned for these same developments. Furthermore, there are another 10,000 dwelling units existing or planned for 12 DRIs/sub-DRI within 5 miles of the existing and proposed Overpass Road corridor.

A new regional park planned for the southwest corner of Overpass Road and Boyette Road will also contribute to increased traffic congestion within the corridor. Based on the long-range traffic projections described in Section 4-2 and the overall projected population growth of the surrounding area, the Pasco County MPO has identified a need to extend Overpass Road eastward as a 4-lane facility from Old Pasco Road to Fort King Road in the 2025 Long Range Transportation Plan.

4.2 TRAFFIC PROJECTIONS

4.2.1 TRAFFIC FORECASTS

Future traffic volumes were obtained by utilizing the Tampa Bay Regional Planning Model (TBRPM 4.0). A validated base-year 1999 TBRPM model was used to determine growth in traffic volumes between existing and future year traffic conditions. Traffic projections were then obtained for the year 2025 and extrapolated to the design year 2030, using a growth factor determined from the model. The procedure used in the development of future conditions is detailed in a technical memorandum submitted to Pasco County in October 2003 and provided in Appendix B. Special attention was taken to ensure that all DRIs and other future sub-DRI projects planned in the study area were properly included in the model projections. Some of these developments are discussed in further detail in Section 3.1.1.2 of this report. The revised 2025 TBRPM network also includes the addition of a full interchange with I-75 at Overpass Road as well as the proposed Overpass Road extension east to Fort King Road. In addition, Clinton Road is extended west to S.R. 52, through the Cannon Ranch development. Table 4-2 shows the 2025 TBRPM forecast Annual Average Daily Traffic (AADT) volumes and the derived 2030 AADT volumes.

**TABLE 4-2
TBRPM MODEL FORECAST AADT VOLUMES**

Roadway Link	AADT	
	2025	2030
Overpass Road from Old Pasco Road to I-75*	21,500	24,300
Overpass Road from I-75 to Boyette Road*	33,500	36,000
Overpass Extension from Boyette Road to Curley Road	22,000	26,200
Overpass Extension from Curley Road to Handcart Road	21,400	24,300
Overpass Extension from Handcart Road to Fort King Road	21,200	23,600

* The 2030 traffic projections include an interchange at I-75 and Overpass Road.

Future year intersection approach/departure volumes at all intersections were developed by applying a K-factor of 9.6 percent and a D-factor of approximately 60 percent. Daily turning movement volumes generated by the TBRPM model and the existing peak hour turning movement percentages were used as a guide for developing future year peak turning movement patterns. Future year turning movement volumes were then developed for a design hour peak period. The peak hour (a.m. or p.m.) volumes were developed from the reciprocal movements of the design hour traffic. Figure 4-1 shows the future a.m. and p.m. peak hour traffic volumes.

4.2.2 *YEAR 2030 CAPACITY ANALYSIS*

Analysis was performed for the year 2030 to assess future traffic operations at the existing intersections (Old Pasco Road and Boyette Road), as well as the proposed extension intersections at Curley Road, Handcart Road, and Fort King Road. Previous Route Studies conducted for Pasco County along Boyette Road and Curley Road include the intersections with Overpass Road. Because the same traffic projections were used for all three studies, these intersections assumed the same geometry proposed in the previous two studies. In addition, preliminary analysis and proposed geometric configurations indicate that all five intersections will need to be under signalized control in order to operate at acceptable levels of service (LOS). Table 4-3 summarizes the results of the signalized intersection analysis along the Overpass Road corridor. All intersections are expected to operate at acceptable overall LOS (i.e., LOS D or better) in the future, provided the recommended geometry is in place.

The 2000 Highway Capacity Software (HCS) arterial analysis was used to determine the future LOS along the Overpass Road corridor. Table 4-4 shows the projected LOS based on arterial direction (eastbound/westbound). As is seen in the table, all segments of Overpass Road and its proposed extensions are expected to operate at acceptable LOS (LOS B) in the future.

4.2.3 *TRAFFIC ANALYSIS SUMMARY*

The results of the traffic analysis for the year 2030 indicate that widening the existing segment of Overpass Road to four lanes, as well as adding the proposed four-lane extension to Fort King Road (with exclusive turn lanes at key intersections) is expected to provide sufficient capacity to the Overpass Road corridor. Figure 4-2 illustrates the anticipated ultimate lane geometrics required (including turn lanes) throughout the study corridor.

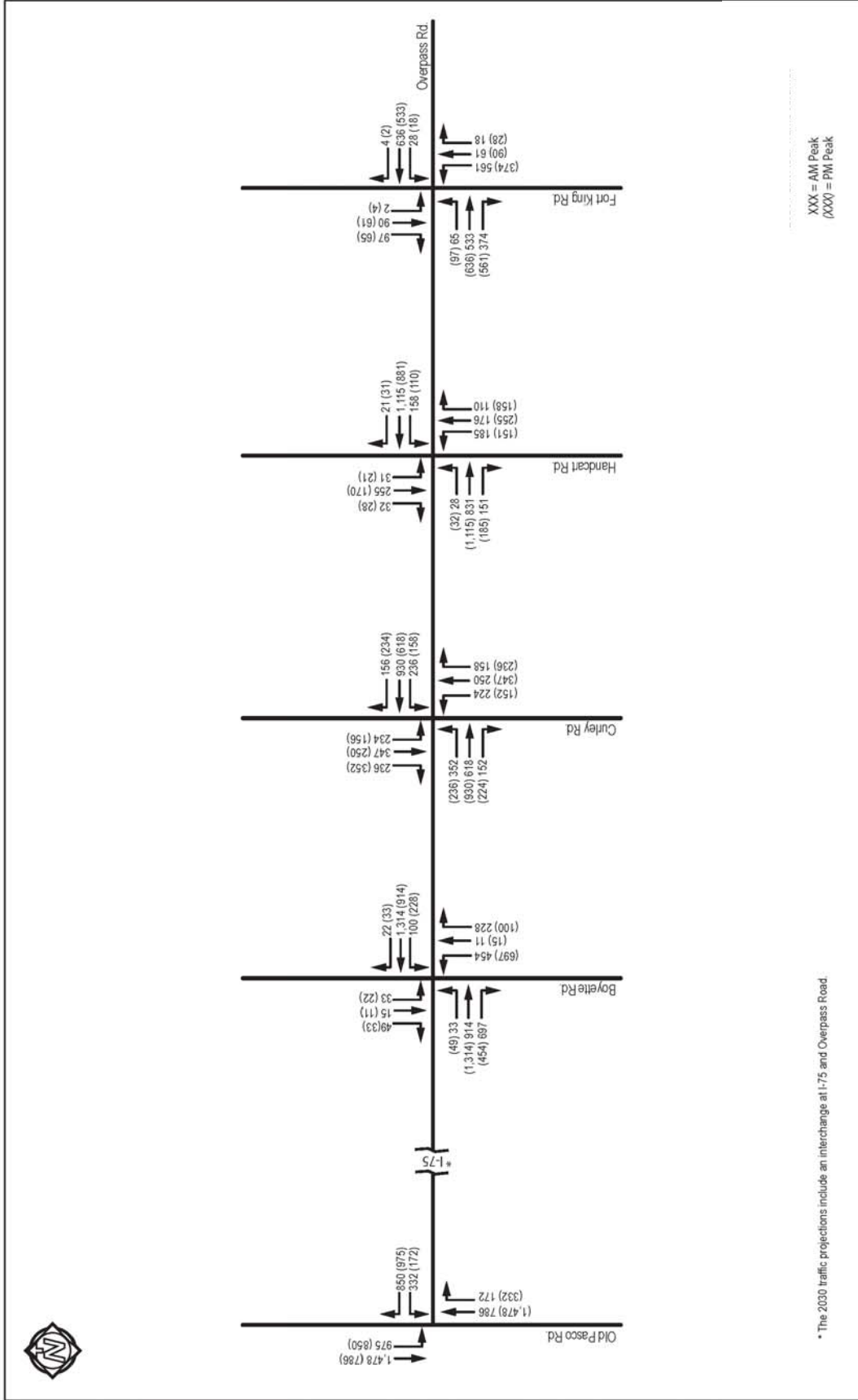


FIGURE 4-1
 2030 PEAK HOUR TRAFFIC VOLUMES

Final Overpass Road Route Study

**TABLE 4-3
DESIGN YEAR (2030) SIGNALIZED INTERSECTION LEVELS OF SERVICE**

Intersection	Approach	Lane Group	AM Peak Hour		PM Peak Hour	
			Average Delay (sec/veh)	Level of Service	Average Delay (sec/veh)	Level of Service
Overpass Road and Old Pasco Road	Westbound	Left	54.6	D	38.2	D
		Right	13.9	B	17.3	B
		Overall	25.3	C	20.4	C
	Northbound	Through	33.7	C	44.0	D
		Right	10.9	B	10.6	B
		Overall	29.6	C	37.9	D
	Southbound	Left	51.0	D	51.1	D
		Through	9.2	A	8.0	A
		Overall	25.8	C	30.4	C
	Overall			26.5	C	30.9
Overpass Road and Boyette Road	Eastbound	Left	24.4	C	15.9	B
		Through	30.0	C	54.0	D
		Right	10.3	B	8.9	A
		Overall	21.5	C	41.7	D
	Westbound	Left	19.3	B	49.5	D
		Through/Right	52.9	D	31.8	C
		Overall	50.6	D	35.2	D
	Northbound	Left	39.4	D	72.3	E
		Left/Through	37.4	D	50.8	D
		Right	30.4	C	25.2	C
		Overall	35.8	D	57.7	E
	Southbound	Left	51.2	D	52.6	D
		Through/Right	53.8	D	54.8	D
		Overall	52.9	D	54.1	D
	Overall			35.7	D	43.3
Overpass Extension and Curley Road	Eastbound	Left	95.7	F	18.4	B
		Through	33.2	C	34.6	C
		Right	16.8	B	16.1	B
		Overall	50.6	D	28.9	C
	Westbound	Left	18.8	B	20.8	C
		Through	42.0	D	29.0	C
		Right	16.9	B	16.2	B
		Overall	34.9	C	24.8	C
	Northbound	Left	29.8	C	26.7	C
		Through	39.2	D	39.7	D
		Right	21.7	C	25.3	C
		Overall	31.5	C	32.4	C
	Southbound	Left	28.6	C	27.3	C
		Through	40.6	D	38.3	D
		Right	23.2	C	28.7	C
Overall		32.1	C	31.6	C	
Overall			38.3	D	29.0	C

TABLE 4-3 (Continued)
DESIGN YEAR (2030) SIGNALIZED INTERSECTION LEVELS OF SERVICE

Intersection	Approach	Lane Group	AM Peak Hour		PM Peak Hour	
			Average Delay (sec/veh)	Level of Service	Average Delay (sec/veh)	Level of Service
Overpass Extension and Handcart Road	Eastbound	Left	41.9	D	42.1	D
		Through	33.3	C	52.3	D
		Right	11.7	B	12.1	B
		Overall	30.3	C	46.4	D
	Westbound	Left	53.3	D	45.4	D
		Through	52.3	D	33.3	C
		Right	10.6	B	10.7	B
		Overall	51.7	D	34.0	C
	Northbound	Left	46.7	D	42.9	D
		Through	42.3	D	55.0	D
		Right	24.2	C	25.2	C
		Overall	39.7	D	43.4	D
	Southbound	Left	38.5	D	38.2	D
		Through	55.0	D	42.3	D
		Right	22.8	C	22.7	C
		Overall	50.1	D	39.4	D
Overall			42.8	D	41.5	D
Overpass Road and Fort King Extension	Eastbound	Left	50.7	D	53.4	D
		Through	32.0	C	33.5	C
		Right	8.7	A	10.7	B
		Overall	24.2	C	25.1	C
	Westbound	Left	48.9	D	48.4	D
		Through/Right	33.6	C	32.0	C
		Overall	34.2	C	32.6	C
	Northbound	Left	45.2	D	25.6	C
		Through	50.3	D	52.0	D
		Right	33.5	C	33.7	C
		Overall	45.4	D	30.9	C
	Southbound	Left	18.8	B	18.9	B
		Through	52.0	D	50.3	D
		Right	35.6	D	34.7	C
		Overall	43.3	D	41.6	D
	Overall			33.9	C	28.8

TABLE 4-4
DESIGN YEAR (2030) ARTERIAL LEVELS OF SERVICE

Roadway Link	Direction	Level of Service	
		AM Peak Hour	PM Peak Hour
Overpass Road from Old Pasco Road to Fort King Road	Eastbound	B	B
	Westbound	B	B

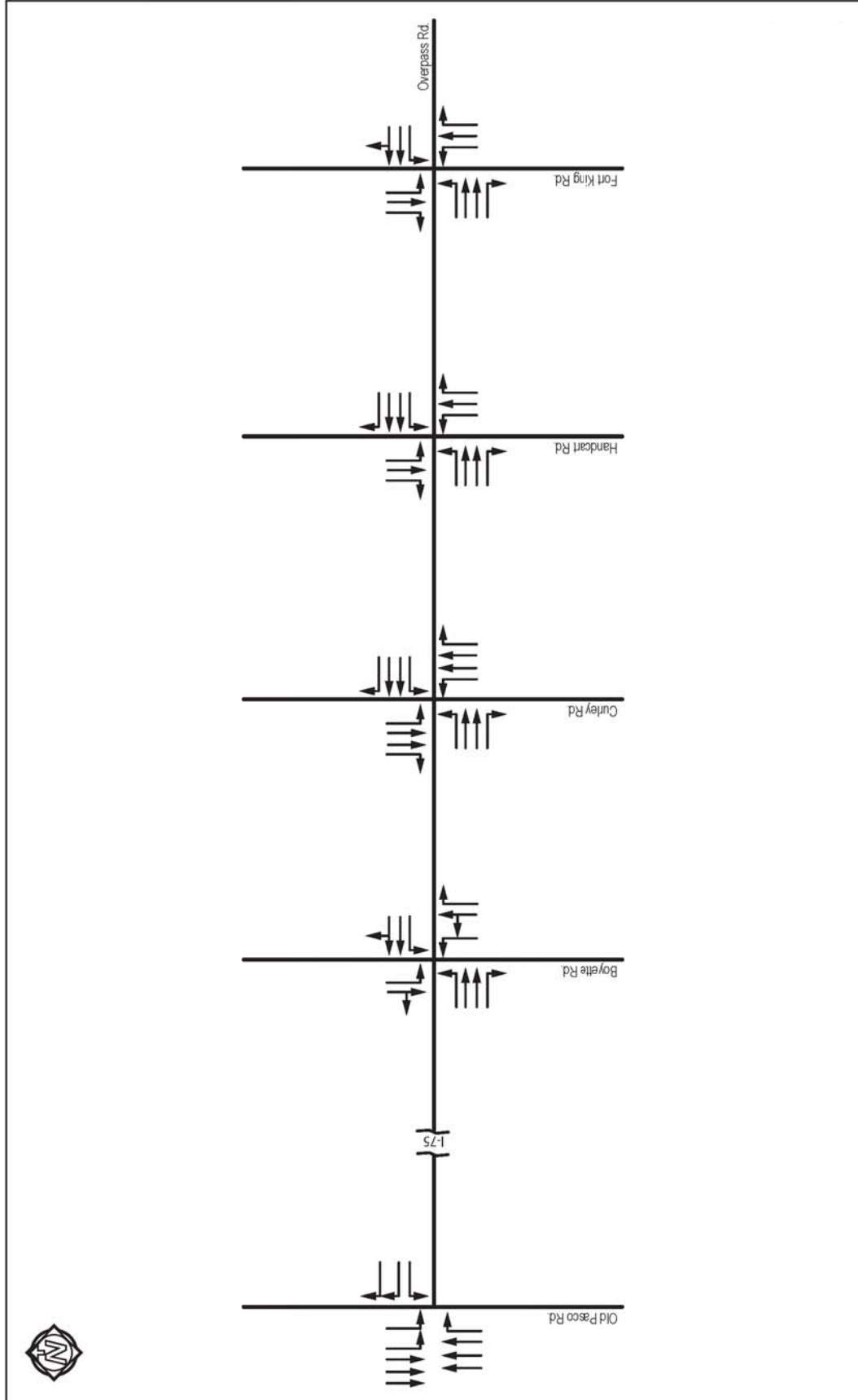


FIGURE 4-2
2030 RECOMMENDED GEOMETRY -
OVERPASS ROAD EXTENSION

Final Overpass Road Route Study

Section 5.0

SAFETY/DESIGN CRITERIA

5.1 SAFETY IMPROVEMENTS

Rapid planned development in eastern Pasco County, along with the construction of three new schools along Wells Road, have contributed to a significant increase of traffic in the area from S.R. 54 and S.R. 52 between Old Pasco Road and Fort King Road, especially during peak hours.

The proposed roadway and extension will be designed and constructed using the *Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways (Florida Greenbook)*, with sufficient horizontal sight distance, design speed, and adequate turning radii as to provide a safer traveling facility for all vehicles involved. The proposed improvements may include all or some of the following improvements that will provide a safe environment for vehicles, pedestrians, and bicyclists and contribute to a reduction of emergency response time:

- A four-lane facility that will accommodate future development capacity demands while maintaining an adequate the LOS;
- Traffic signals, when warranted, at Old Pasco Road, Boyette Road, Curley Road, Handcart Road, and Fort King Road;
- Exclusive left-turn and right-turn lanes at signalized intersections;
- A 46-ft wide median from Old Pasco Road to Fort King Road, to separate opposing traffic;
- Median cuts with left-turn holding lanes will provide a place for vehicles to turn into non-signalized intersections without blocking through lanes;
- Paved shoulders to accommodate bicycles and provide emergency parking for disabled vehicles and an alternate path for vehicles during avoidance and other emergency maneuvers;
- Improved emergency response time;
- A sidewalk and multi-use path to provide a safe environment for pedestrians and bicyclists; and
- Construction of flood plain compensation sites will prevent flooding as a result of roadway construction

5.2 DESIGN CRITERIA

The *Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways (Florida Greenbook)* was consulted in developing design criteria for this project. Table 5-1 presents the design criteria applicable to this project.

**TABLE 5-1
ROADWAY DESIGN CRITERIA**

Design Element		Value	Documentation Manual of Uniform Minimum Standard	
General	Type of Facility	Urban		
	Functional Classification	Collector	Comprehensive Plan	
	Design Speed	45 mph		
Typical Section	Lane Width	Standard	12 ft	
		Minimum	11 ft	Table 3-7
	Median Width - Minimum		15.5 ft	Table 3-11
	Shoulder Width	Full Width Outside	N/A	
		Paved Width Outside	N/A	
		Full Width Inside	N/A	
		Paved Width Inside	N/A	
	Sidewalk Width		5 ft	Section 3 (C.7.d)
Clear Zone		4 ft	Table 3-12	
Horizontal	Maximum Curvature	8°15'		
	Maximum Rate of Super-elevation	0.05	Figure 3-2 (C.4.b)	
	Minimum Stopping Sight Distance	325 ft	Table 3-6	
Vertical	Maximum Grade	6.5%	Table 3-4	
	Maximum Change in Grade without Vertical Curve	0.70	Table 3-5	
	K Value for Crest Curves	80	Table 3-6	
	K Value for Sag Curves	70	Table 3-6	

Section 6.0

ALTERNATIVE ANALYSIS

6.1 NO-BUILD CONCEPT

The No-Build Concept consists of postponing improvements on Overpass Road beyond the Design Year 2030. This involves not constructing the proposed improvements. Certain advantages would be associated with the implementation of the No-Build Concept, including:

- No new construction costs,
- No disruption to the existing land uses due to construction activities,
- No disruption to traffic due to construction activities,
- No ROW acquisitions or relocations, and
- No disturbance to natural resources.

The disadvantages of the No-Build Concept include:

- Reduction in future LOS on adjacent facilities due to increased congestion as new residential subdivisions build out,
- Reduction in emergency response time,
- No sidewalks/multi-use paths to accommodate pedestrian and bicyclists,
- Inconsistency with Pasco County Comprehensive Plan and the LRTP, and
- Increased roadway maintenance costs on adjacent facilities.

Additionally, postponement of the project may jeopardize its future economic feasibility due to the current escalation of construction and ROW costs. However, the No-Build Concept will remain a viable consideration throughout this study.

6.2 BUILD ALTERNATIVES

Certain advantages and disadvantages are associated with the Build Alternatives. The advantages associated with the Build Alignments are:

- Improvement in future LOS by creating an alternate east-west facility through an area of projected residential growth;
- The use of expected dedicated ROW through approved new developments located between Boyette Road and Handcart Road;
- Relief of congestion on S.R. 54 and S.R. 52;
- Improved emergency service response time;
- Improved intersection LOS

- A facility design that provides a safe operating environment for vehicles, pedestrians, and bicyclists;
- Sidewalks/multi-purpose paths to accommodate pedestrians and bicyclists; and
- Consistency with Pasco County Comprehensive Plan and LRTP.

The disadvantages associated with the Build Alternatives include:

- Design, ROW, mitigation, and construction costs;
- ROW acquisition and residential relocation;
- Temporary disruption to traffic during construction; and
- Minimal effects to the environment.

To effectively develop and evaluate all viable improvement options, the following three-step process was applied:

- Step One: Project segments were developed based on the existing land use patterns and logical termini for future construction segments.
- Step Two: The typical section was established based on design criteria, the findings of the traffic analysis, and the *Pasco County Standard Roadway Typical Sections For Collector and Arterial Roadways*, approved by resolution of the Pasco County Board of County commissioners on June 29, 2004.
- Step Three: Three proposed alternatives were developed based on the typical section established in Step Two.

The following sections describe the project segments, typical sections, and the alignments developed for the project.

6.2.1 PROJECT SEGMENTS

To effectively assess and compare the effects to Overpass Road, the project was divided into three segments on the basis of existing land use patterns and typical sections. The three segments are:

- Segment A: From Old Pasco Road to Curley Road.
- Segment B: From Curley Road to Handcart Road.
- Segment C: From Handcart Road to Fort King Road.

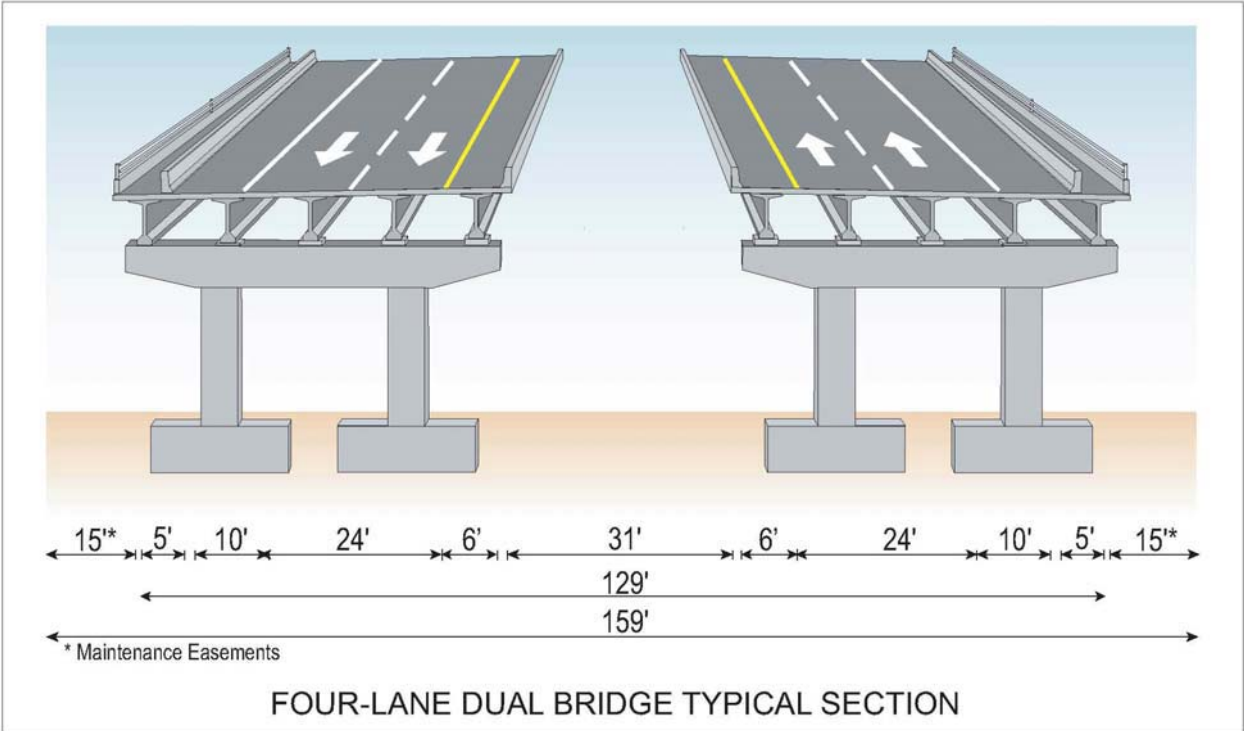
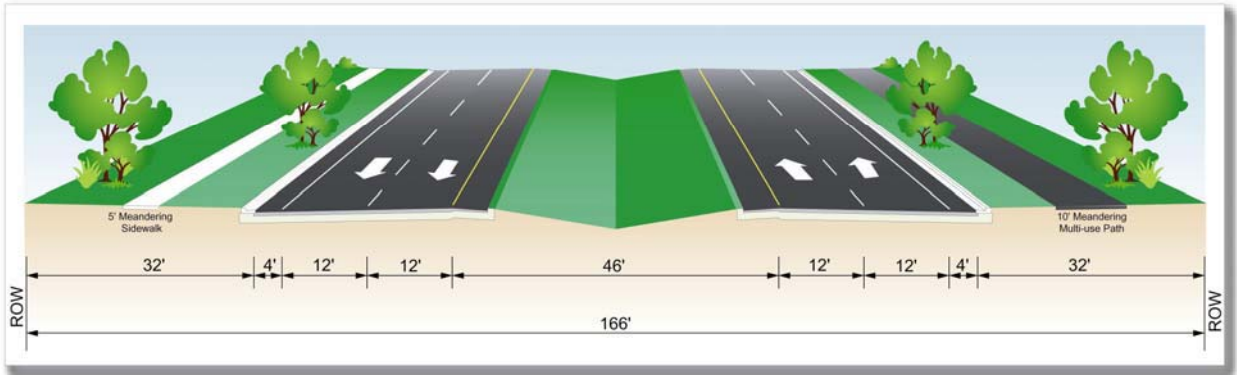
6.2.2 TYPICAL SECTION EVALUATION

A single typical section was established for Overpass Road based on the *Pasco County Standard Roadway Typical Sections For Collector and Arterial Roadways*. A four-lane urban typical section is proposed for the entire length of the project.

6.2.2.1 Urban Typical Section

An urban typical section is proposed as depicted in Figure 6-1. It consists of two 12 ft travel lanes and a 4 ft shoulder in either direction that will accommodate bicycles, a 46 ft depressed landscaped median, and a 5 ft sidewalk on the north side of the roadway and a 10 ft multi-use trail on the south side, both located within 32 ft wide landscaped borders. The proposed design speed for this typical section is 45 miles per hour (mph). This typical section will be constructed within approximately 166 ft of ROW. A new bridge structure will be required to cross I-75 in Segment A. The proposed bridge typical section for the bridge is also shown in Figure 6-1 below.

FIGURE 6-1
URBAN TYPICAL SECTION
FROM OLD PASCO ROAD TO FORT KING ROAD



6.2.3 PROPOSED ALTERNATIVES

All of the proposed alternatives follow the existing Alignment from Old Pasco Road to Boyette Road (see Figure 6-2) with two variations. Alternative O-1 was aligned to the north, maintaining the south ROW line west of I-75. Alternative O-2 was aligned to the south maintaining the north side ROW line. Alternative O-3 was developed subsequent to the first public workshop in response to comments received from the residents affected by Alternatives O-1 and O-2. Alternative O-3 is aligned to the north side maintaining the south side ROW line. Subsequent to the start of this route study, the developer of Palm Cove began construction on Overpass Road on dedicated ROW on the north side of the development. The location of this new two-lane segment dictates the alignment from Boyette Road to the east side of the Palm Cove development.

6.2.3.1 Alternative O-1

From Boyette Road, Overpass Road is extended east along a new alignment that includes a new two-lane segment through Palm Cove (Station 55+00 to 100+00.) transitioning southeast (Station 96+00 to 115+00) from Boyette Road to Curley Road at Station 167+00, 5,800 ft northeast of Wells Road. From Curley Road, the new alignment continues southeast transitioning (Station 185+00 to 200+00) eastward to Station 304+00. From Station 304+00 to 324+00, the alignment transitions northeast to Station 355+00. From Station 355+00 to 375+00, the alignment transitions east and follows the north side of the existing alignment of Fairview Heights Road to Station 392+00. Overpass Road continues east on new alignment to Fort King Road (Station 444+00) (see Figure 6-2).

6.2.3.2 Alternative O-2

From Boyette Road, Overpass Road is extended east along a new alignment that includes a new two-lane segment through Palm Cove (Station 55+00 to 100+00) transitioning southeast (Station 100+00 to 115+00) from Boyette Road to Curley Road at Station 167+00, 6,400 ft northeast of Wells Road. From Curley Road, the new alignment continues southeast transitioning (Station 192+00 to 208+00) east centered along the parcel boundary between Watergrass (COMAS Trust) and Kirkland Ranch to Station 304+00 after crossing Handcart Road. The alignment transitions (Station 304+00 to 314+00) northeast to Station 350+00. The alignment then transitions (Station 350+00 to 366+00) east and follows the north side of the existing Fairview Heights Road ROW to Station 395+00. From Station 395+00 to Fort King Road (Station 436+00), Overpass Road follows a new eastward alignment (see Figure 6-2).

6.2.3.3 Alternative O-3

From Boyette Road, Overpass Road is extended east along a new alignment that includes a new two-lane segment through Palm Cove (Station 55+00 to 100+00.) transitioning southeast (Station 100+00 to 115+00) from Boyette Road to Curley Road at Station 167+00, 5,800 ft northeast of Wells Road. From Curley Road, the new alignment continues southeast transitioning (Station 192+00 to 217+00) east along the parcel boundary between Watergrass (COMAS Trust) and Kirkland Ranch. With 66 feet of ROW north of the boundary and 100 feet to the south to Station 237+00. The Alignment transitions (Station 237+00 to 265+00) northeast and intersects with Handcart Road at Station 300+00. East of Handcart Road, the alignment joins Fairview Heights Road on the south side. The alignment transitions (Handcart Road to Station 312+00) to the

north side of Fairview Heights Road, and follows the eastward alignment to Station 330+00. The alignment transitions Northeast to the north side of Fairview Heights Road, crossing back over Fairview Heights Road at Hackamore Road, continuing along the south side of Fairview Heights Road to Station 358+00. From Station 358+00 to Station 370+00 the alignment transitions back to east and follows Fairview Heights, maintaining the existing south ROW line to Station 395+00 (where Fairview Heights turns south). From Station 395+00, the alignment continues east on new alignment to Station 417+00 where it transitions southeast to intersect with the Kosick Road Extension at Fort King Road (Station 433+68) (Figure 6-2).

6.3 ALTERNATIVE EVALUATION

In order to develop the data, uncontrolled aerial photography of the corridor was overlaid with the proposed ROW requirements for each alternative. The relocation, social, and environmental criteria were quantified and an estimated project cost was calculated for each segment of the project alignments based on the ROW requirements and proposed improvements. A brief description of the quantifiable criteria is presented below.

6.3.1 POTENTIAL BUSINESS RELOCATIONS

Based on the proposed alignment and typical sections for the Build Alternatives, one business relocation is anticipated for all three alternative alignments.

6.3.2 POTENTIAL RESIDENTIAL RELOCATIONS

Potential residential relocations are the number of residences that exist within the proposed ROW that will have to be relocated if one of the Build Alternatives is implemented.

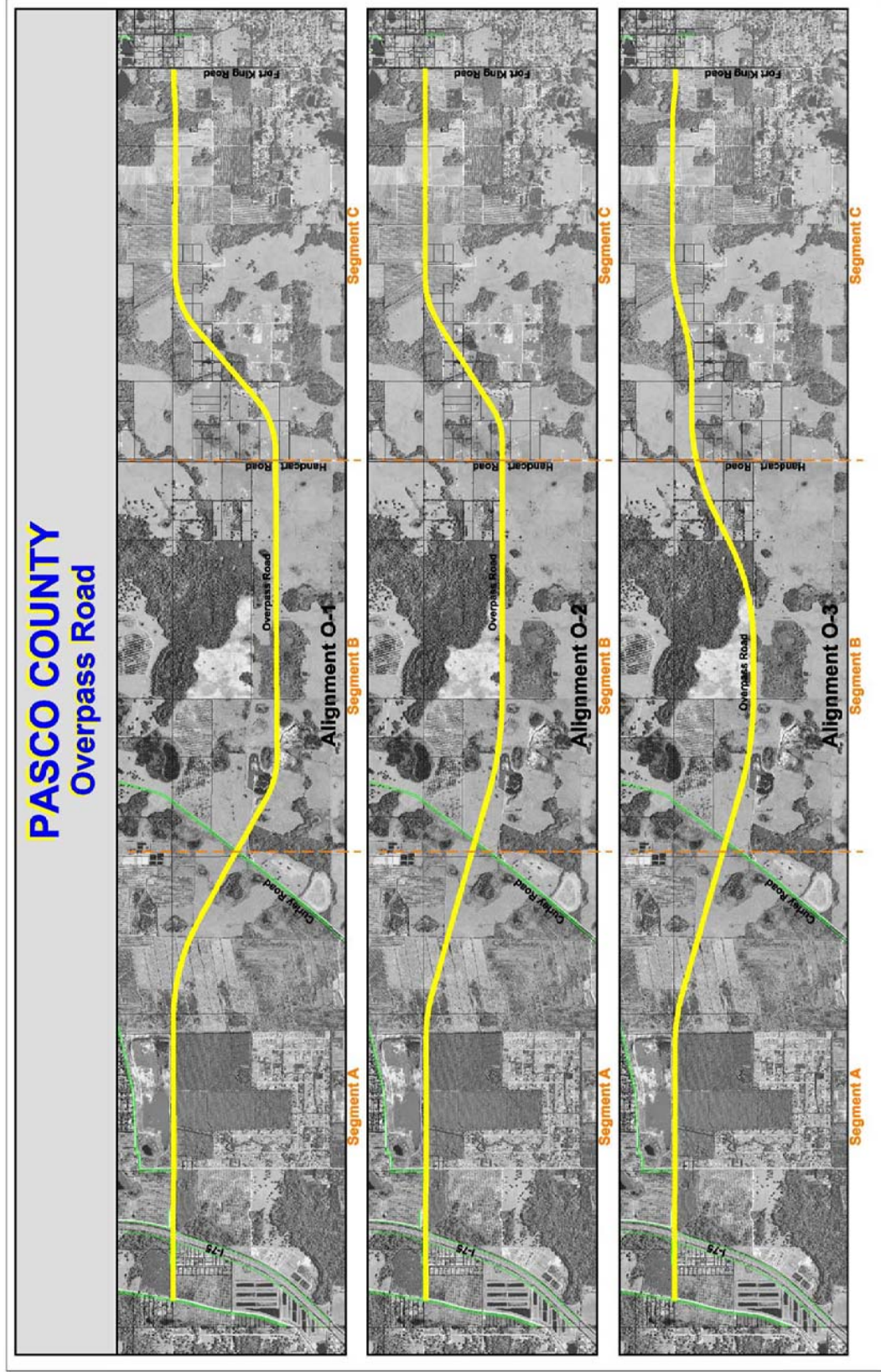
6.3.2.1 Alternative O-1

Based on the proposed Alternative O-1, a total of six residential relocations may be required. One residence is located in Segment A between Old Pasco Road and I-75. The remaining five potential relocations are located in Segment C east of Handcart Road. All but one are located south of Fairview Heights Road. The remaining potential relocation is on the north side of Smith Cemetery Road.

6.3.2.2 Alternative O-2

Based on the proposed Alignment O-2, a total of eight potential residential relocations may be required. One residence is located in Segment A between Old Pasco Road and I-75. The remaining potential residential relocations are located in Segment C east of Handcart Road. Of these potential relocations, five residences are located south of Fairview Heights Road and one is located on the north side and one is south of a new alignment that extends Overpass Road east of the north-south segment of Fairview Heights Road.

FIGURE 6-2
ALIGNMENT ALTERNATIVES



6.3.2.3 Alternative O-3

Based on the proposed Alternative O-3, a total of six potential relocations may be required. One residence is located in Segment A between old Pasco Road and I-75. The remaining four potential relocations are located in Segment C.

6.3.3 NATURAL ENVIRONMENT EFFECTS

6.3.3.1 Alternative O-1

Alternative O-1 would affect approximately 14.25 ac of wetlands. This alignment has the greatest wetland impact of the three proposed alternatives. Of this total, 4.44 ac are located in Segment A, 5.10 ac are located in Segment B, and 4.71 ac are located in Segment C. The ROW required for mitigation due to this alignment is estimated to be 35.63 ac. There are no floodplains affected by this alignment. The Wood Stork, a state and federally endangered species, may be affected, but is unlikely to be adversely affected by this alternative. .

6.3.3.2 Alternative O-2

Alternative O-2 would affect approximately 6.52 ac of wetlands. This alignment has the smallest wetlands impact of the two Build Alignments. Of this total, 3.61 ac are located in Segment A, 1.70 ac are located in Segment B, and 1.21 ac is located in Segment C. The ROW required for mitigation due to this alignment is estimated to be 16.28 ac. There are no floodplains affected by this alignment. The Wood Stork, a state and federally endangered species, may be affected, but is unlikely to be adversely affected by this alternative.

6.3.3.3 Alternative O-3

Alternative O-3 would affect approximately 12.0 acres of wetlands. Of this total, 3.5 acres are located in Segment A, 5.3 acres are located in Segment B, and 3.2 acres are located in Segment C. The ROW required to mitigate the impacted wetlands is estimated to be 30 acres. There are no floodplains affected by this alignment. The Wood Stork, a state and federally endangered species, may be affected, but is unlikely to be adversely affected by this alternative.

6.3.4 POTENTIAL CONTAMINATION SITES

The two potential contamination sites identified are located in Segments A and C at locations that are common to both of the proposed alignments. Both sites are ranked as having MEDIUM potential for contamination.

6.4 OTHER ALTERNATIVE CONSIDERATIONS

As part of the preliminary alternative alignment analysis it was recognized that avoidance of wetlands located west of the proposed intersection of Fort King Road at Station 413+00 through 431+00 needed to be performed. Consequently, three alternative alignments beginning at Station 397+00 were developed.

Three additional curve alternative concepts were considered. All of the curve alternatives were located in the eastern portion of Segment C. They were based on an eastward continuation of Alternative O-2 from the intersection with Handcart Road that intersected with the south offset

of Fairview Heights Road located west of Fort King Road. The alignments continued on the existing Fairview Heights Road ROW before turning north and east to intersect with Fort King Road at the west end of the Kossick Road Extension project. The purpose of investigating these alternative concepts was to avoid, what was thought to be, a large wetland area as defined by the *Florida Land Use, Cover and Forms Classification System (FLUCCS)*. The results of this effort provided unsuitable roadway geometry.

While identifying the ownership of parcels with potential ROW impacts as part of the above analysis, it was noted that the *National Wetlands Inventory (NWI)* database, used by the Pasco County Property Appraiser to determine land use, defined wetland boundaries that were considerably different than the FLUCCS wetland boundaries. Additionally, it was noted that the slope of the land proposed for Alternatives O-1 and O-2 would generally not indicate a wetlands location. Based on this information a field review was conducted to determine the actual extent of the wetlands and determine which database more appropriately represented the actual field conditions. The field inspection noted that the wetlands shown within the proposed alignments did not exist as shown on the FLUCCS and that the NWI maps were more representative of the actual conditions. As a result of the analysis and the field investigation of the wetlands in the area, these three alternative concepts were eliminated and the original proposed alignments were used in this study.

Section 7.0
ALTERNATIVE CONCEPTS

Section 8.0

ESTIMATED PROJECT COSTS

8.1 RIGHT-OF-WAY COSTS

ROW acquisition will be required to build the proposed improvements and construct stormwater drainage ponds and wetland mitigation areas (see Appendix F). The cost of ROW acquisition is related to both the number of parcels affected and the amount of acreage required.

The estimated ROW costs for the proposed improvements were calculated using the most current appraised value of each affected parcel as determined by the Pasco County Property Appraiser. A value per acre for each of the parcels was calculated and multiplied by the amount of acreage to be acquired. The result was multiplied by a factor of 3.0 to determine the final estimated acquisition cost for each affected parcel. The costs were then summed for each segment to reach the total estimated costs for the ROW of the project for each Build Alignment. If, due to the proposed alignment, it was necessary to acquire an entire affected parcel, the entire parcel acreage was used to calculate the acquisition cost. The ROW costs for each segment (see Section 6.2.1) and the totals for Alternatives O-1, O-2 and O-3 are discussed below, and are summarized in Tables 8-1A, 8-1B and 8-1C, and the Evaluation Matrix (Section 10, Table 10-1).

**TABLE 8-1A
ALTERNATIVE O-1 ROW COSTS**

SEGMENT	ROW ACRES	ROW COST (\$)	ROW COST (\$X 3.0)	POND ROW ACRES	POND ROW COST (\$)	POND ROW COST (\$X 3.0)
A	50.67	450,403	1,351,209	6.02	49,176	147,528
B	53.41	267,337	802,012	6.07	29,610	88,830
C	71.21	1,038,478	3,115,435	6.43	71,571	214,713
Total	175.29	1,756,219	5,268,656	18.52	150,357	451,072

**TABLE 8-1B
ALTERNATIVE O-2 ROW COSTS**

SEGMENT	ROW ACRES	ROW COST (\$)	ROW COST (\$X 3.0)	POND ROW ACRES	POND ROW COST (\$)	POND ROW COST (\$X 3.0)
A	52.85	461,608	1,384,825	6.02	49,176	147,528
B	50.05	239,017	717,051	4.89	21,755	65,264
C	63.65	1,331,341	3,994,024	6.10	80,376	241,127
Total	166.55	2,031,967	6,095,900	17.01	151,306	453,919

**TABLE 8-1C
ALTERNATIVE O-3 ROW COSTS**

SEGMENT	ROW ACRES	ROW COST (\$)	ROW COST (\$X 3.0)	POND ROW ACRES	POND ROW COST (\$)	POND ROW COST (\$X 3.0)
A	50.67	399,936	1,199,807	6.07	43,979	131,937
B	51.71	267,071	801,214	5.07	25,658	76,973
C	49.93	322,782	968,347	6.39	47,969	143,908
Total	152.31	989,790	2,969,369	17.53	117,606	352,819

Any additional ROW required for side street tie-ins and other access is expected to be minimal and will be determined during the project design phase. The potential for temporary construction easements is also expected to be minimal and will be determined during the design phase.

8.1.1 ALTERNATIVE O-1

The additional ROW required for Alternative O-1 is estimated to be 193.31 acres and would affect a total of 41 parcels. Of these, 175.29 acres are for roadway ROW and 18.52 acres are for stormwater ponds. The total estimated cost for roadway and pond ROW for Alternative O-1 is \$5.7 million.

8.1.2 ALTERNATIVE O-2

The additional ROW required for Alternative O-2 is estimated to be 183.56 acres and would affect a total of 46 parcels. Of these, 166.55 are for roadway ROW and 17.01 are for stormwater ponds. The total estimated cost for roadway and pond ROW for Alternative O-2 is \$6.5 million.

8.1.3 ALTERNATIVE O-3

The additional ROW required for Alternative O-3 is estimated to be 162.12 acres and would affect a total of 41 parcels. Of the new ROW required, 152.31 acres are for the roadway ROW and 14.81 acres are for stormwater ponds. The total estimated cost for roadway and pond ROW for Alternative O-3 is \$3.3 million.

8.2 ESTIMATED CONSTRUCTION COSTS

The estimated construction costs shown in Tables 8-2A, 8-2B and 8-2C were calculated using the URS Engineering Cost Estimate for a four-lane divided urban typical section, with sidewalks and multi-use path, from Old Pasco Road to Fort King Road (Appendix F). The costs include constructing a new dual span bridge over I-75 approximately midway between Old Pasco Road and Boyette Road. The existing structure will be used for maintenance of traffic while the new bridge is being constructed. The new bridge will then be used for maintenance of traffic while the existing bridge structure is reconstructed. Traffic signal costs were included for the existing

intersections at Old Pasco Road and Boyette Road and new intersections at Curley Road, Handcart Road, and Fort King Road. Although developers are anticipated to pay for the traffic signals at Curley Road and Handcart Road, they are included here for planning purposes. The construction costs include 15 percent for MOT, 10 percent for mobilization, and 25 percent for contingencies. The engineering (final design) cost and construction engineering and inspection costs were each calculated as a percentage (15 percent) of construction cost and added to the Construction Cost Estimate to reach the final total cost for the project. The 25 percent contingency amount should cover minor improvements to side streets as identified during final design.

TABLE 8-2A
SUMMARY OF ESTIMATED CONSTRUCTION COSTS FOR ALTERNATIVE O-1
FROM OLD PASCO ROAD TO FORT KING ROAD

TYPICAL SECTION ALTERNATIVE SEGMENT	Urban 4-Lane Divided w/Sidewalk and Multiuse Path			
	A	B	C	TOTAL
Segment Length (ft)	15,708	13,473	14,297	43,478
Mainline	\$13,812,685	\$11,893,674	\$12,661,007	\$38,367,366
Multi-use Path	\$667,721	\$574,982	\$612,077	\$1,854,780
Bridge	\$1,999,000	\$0	\$0	\$1,999,000
Intersections				
Old Pasco Road	\$168,000	\$0	\$0	\$168,000
McKendree Road	\$86,000	\$0	\$0	\$86,000
Boyette Road	\$489,000	\$0	\$0	\$489,000
Curley Road	\$0	\$602,000	\$0	\$602,000
Handcart Road	\$0	\$461,000	\$0	\$461,000
Hackamore Road	\$0	\$0	\$239,000	\$239,000
Artifact Road	\$0	\$0	\$69,000	\$69,000
Fairview Heights Road	\$0	\$0	\$79,000	\$79,000
Fort King Road	\$0	\$0	\$217,000	\$217,000
Total	\$17,222,406	\$13,531,656	\$13,877,084	\$44,631,146
Design (15% Construction)	\$2,583,361	\$2,029,748	\$2,081,563	\$6,694,672
CEI (10% Construction)	\$1,722,241	\$1,353,166	\$1,387,708	\$4,463,115
Total	\$4,305,602	\$3,382,914	\$3,469,271	\$11,157,787
TOTAL COSTS	\$21,528,008	\$16,914,570	\$17,346,355	\$55,788,933

TABLE 8-2B
SUMMARY OF ESTIMATED CONSTRUCTION COSTS FOR ALTERNATIVE O-2
FROM OLD PASCO ROAD TO FORT KING ROAD

TYPICAL SECTION ALTERNATIVE SEGMENT	Urban 4-Lane Divided w/Sidewalk and Multiuse Path			
	A	B	C	TOTAL
Segment Length (ft)	15,439	13,274	13,938	42,651
Mainline	\$13,873,218	\$11,248,555	\$12,373,411	\$37,495,184
Multi-use Path	\$673,283	\$545,905	\$600,495	\$1,819,683
Bridge	\$1,999,000	\$0	\$0	\$1,999,000
Intersections				
Old Pasco Road	\$168,000	\$0	\$0	\$168,000
McKendree Road	\$86,000	\$0	\$0	\$86,000
Boyette Road	\$489,000	\$0	\$0	\$489,000
Curley Road	\$0	\$602,000	\$0	\$602,000
Handcart Road	\$0	\$461,000	\$0	\$461,000
Hackamore Road	\$0	\$0	\$239,000	\$239,000
Artifact Road	\$0	\$0	\$69,000	\$69,000
Fairview Heights Road	\$0	\$0	\$79,000	\$79,000
Fort King Road	\$0	\$0	\$217,000	\$217,000
Total	\$17,288,501	\$12,857,460	\$13,577,906	\$43,723,867
Design (15% Construction)	\$2,593,275	\$1,928,619	\$2,036,686	\$6,558,580
CEI (10% Construction)	\$1,728,850	\$1,285,746	\$1,357,791	\$4,372,387
Total	\$4,322,125	\$3,214,365	\$3,394,477	\$10,930,967
TOTAL COSTS	\$21,610,626	\$16,071,825	\$16,972,383	\$54,654,834

TABLE 8-2C
SUMMARY OF ESTIMATED CONSTRUCTION COSTS FOR ALTERNATIVE O-3
FROM OLD PASCO ROAD TO FORT KING ROAD

TYPICAL SECTION ALTERNATIVE SEGMENT	Urban 4-Lane Divided w/Sidewalk and Multiuse Path			
	A	B	C	TOTAL
Segment Length (ft)	15,443	13,625	13,301	42,369
Mainline	\$13,877,000	\$11,546,000	\$11,808,000	\$37,231,000
Multi-use Path	\$673,457	\$560,340	\$573,051	\$1,806,848
Bridge	\$1,999,000	\$0	\$0	\$1,999,000
Intersections				
Old Pasco Road	\$168,000	\$0	\$0	\$168,000
McKendree Road	\$86,000	\$0	\$0	\$86,000
Boyette Road	\$489,000	\$0	\$0	\$489,000
Curley Road	\$0	\$602,000	\$0	\$602,000
Handcart Road	\$0	\$461,000	\$0	\$461,000
Hackamore Road	\$0	\$0	\$239,000	\$239,000
Artifact Road	\$0	\$0	\$69,000	\$69,000
Fairview Heights Road	\$0	\$0	\$79,000	\$79,000
Fort King Road	\$0	\$0	\$217,000	\$217,000
Total	\$17,292,457	\$13,169,340	\$12,985,051	\$43,446,848
Design (15% Construction)	\$2,593,869	\$1,975,401	\$1,947,758	\$6,517,027
CEI (10% Construction)	\$1,729,246	\$1,316,934	\$1,298,505	\$4,344,685
Total	\$4,323,114	\$3,292,335	\$3,246,263	\$10,861,712
TOTAL COSTS	\$21,615,571	\$16,461,675	\$16,231,314	\$54,308,560

8.2.1 ESTIMATED WETLAND MITIGATION COSTS

Wetland mitigation costs (see Appendix F) include both the costs to construct the mitigation associated with the impacted wetlands and the acquisition cost to purchase additional ROW for the mitigation construction. Mitigation construction was estimated to be \$85,000 per affected acre and the mitigation ROW was calculated at a ratio of 2.5 acres of mitigation for every impacted acre of wetlands (2.5:1). The ROW costs were calculated the same as the acquisition cost for the alignment ROW. The overall mitigation cost is the sum of the mitigation construction cost (\$85,000 x number of affected acres) and ROW costs (acquisition cost per acre x number of affected acres x 3.0). Table 8-3A, 8-3B, and 8-3C depict the cost associated with wetland impacts for each of the build alternatives.

**TABLE 8-3A
ESTIMATED WETLANDS MITIGATION COSTS FOR ALTERNATIVE 0-1**

ALIGNMENT 0-1				
Segment	A	B	C	TOTAL
Typical Section	Urban 4-Lane Divided	Urban 4-Lane Divided	Urban 4-Lane Divided	
Required ROW (Width--Ft)	166	166	166	
Affected Wetlands (Acres)	4.44	5.10	4.71	14.25
Mitigation Construction (\$85,000/affected Acre)	\$377,400	\$433,500	\$400,350	\$1,211,250
Design (15% Construction)	\$56,610	\$65,025	\$60,053	\$181,688
CEI (10% Construction)	\$37,740	\$43,350	\$40,035	\$121,125
Mitigation ROW Required (Ratio 2.5:1 Acres)	11.10	12.75	11.78	35.63
Mitigation ROW Costs (ROW x \$48,000/Ac x 3.0)	\$1,598,400	\$1,836,000	\$1,695,600	\$5,130,000
Total Cost for Mitigation	\$2,070,150	\$2,377,875	\$2,196,038	\$6,644,063

**TABLE 8-3B
ESTIMATED WETLANDS MITIGATION COSTS FOR ALTERNATIVE 0-2**

ALIGNMENT 0-2				
Segment	A	B	C	TOTAL
Typical Section	Urban 4-Lane Divided	Urban 4-Lane Divided	Urban 4-Lane Divided	
Required ROW (Width--Ft)	166	166	166	
Affected Wetlands (Acres)	3.61	1.70	1.21	6.52
Mitigation Construction (\$85,000/affected Acre)	\$306,850	\$144,500	\$102,850	\$554,200
Design (15% Construction)	\$46,028	\$21,675	\$15,428	\$83,130
CEI (10% Construction)	\$30,685	\$14,450	\$10,285	\$55,420
Mitigation ROW Required (Ratio 2.5:1 Acres)	9.03	4.25	3.03	16.30
Mitigation ROW Costs (ROW x \$48,000/Ac x 3.0)	\$1,299,600	\$612,000	\$435,600	\$2,347,200
Total Cost for Mitigation	\$1,683,163	\$792,625	\$564,163	\$3,039,950

**TABLE 8-3C
ESTIMATED WETLANDS MITIGATION COSTS FOR ALTERNATIVE 0-3**

ALIGNMENT 0-3				
Segment	A	B	C	TOTAL
Typical Section	Urban 4-Lane Divided	Urban 4-Lane Divided	Urban 4-Lane Divided	
Required ROW (Width--Ft)	166	166	166	
Affected Wetlands (Acres)	3.53	5.31	3.18	12.02
Mitigation Construction (\$85,000/affected Acre)	\$300,050	\$451,350	\$270,300	\$1,021,700
Design (15% Construction)	\$45,008	\$67,703	\$40,545	\$153,255
CEI (10% Construction)	\$30,005	\$45,135	\$27,030	\$102,170
Mitigation ROW Required (Ratio 2.5:1 Acres)	8.83	13.28	7.95	30.05
Mitigation ROW Costs (ROW x \$48,000/Ac x 3.0)	\$1,270,800	\$1,911,600	\$1,144,800	\$4,327,200
Total Cost for Mitigation	\$1,645,863	\$2,475,788	\$1,482,675	\$5,604,325

Section 9.0

PUBLIC INVOLVEMENT

9.1 PUBLIC MEETING SUMMARY

To be completed after the public workshop.

9.1.1 PUBLIC WORKSHOP OVERVIEW

A Public Information Workshop was held on October 28, 2004 from 5:30 p.m. to 7:30 p.m. at the Pasco County Public Library, New River Branch, 34043 S.R. 54, Zephyrhills, Florida. The Public Information Workshop was held to allow interested persons the opportunity to review the concepts and express their comments concerning the proposed alignments and the social, economic, and environmental effects of the proposed improvements.

Invitational letters were mailed to 54 property owners and other interested persons. Property owners affected by any of the proposed alternatives were included on the mailing list. In addition, a display advertisement inviting all interested persons to the workshop was published in the Tampa Tribune-Pasco Edition on October 7 and October 21, 2004. Copies of the invitation letter and display advertisement are included in Appendix G, Public Involvement.

A total of 63 persons signed the attendance sheets at the Workshop. Copies of the attendance sheets are included in Appendix G.

At the workshop, alignment concept displays, analysis matrix, and project information were available for public viewing. Pasco County representatives and their consultants were available to answer questions and receive comments. A project handout was provided to all attendees and a copy is included in Appendix G.

From the oral comments received by Pasco County representatives and the consultants present, the general consensus appeared that there was no support for either of the two alternative alignments presented in Segment C, which was east of Handcart Road. This was primarily due to the potential loss of residences that have been built in recent years. Recommendations from the meeting included trying to use Fairview Heights Road from Handcart Road to where it turns south before continuing on the new alignment to the end of project. Other comments included taking most of the right-of-way from the north side of the road in this area.

One land owner to the west of Handcart Road preferred alignment O-2 because it provided better access to his property which he is considering subdividing into a small platted subdivision of approximately 117 homes. Alignment O-1 is too far south into the COMAS Trust property and his only access would be via an existing county maintained road on the north side of the COMAS Trust property. He showed the Pasco County representatives and consultants a development plan map by Heidt and Associates that included an alignment that ran through his property before connecting to Fairview Heights Road at Handcart Road.

He also provided a letter of his concerns to the consultant, which was included in the tabulation of written comments below.

Also during the workshop, the landowner of the large parcel along the north side of Fairview Heights Road from Handcart Road to Ft King Road stated that he had spoken with the County Administrator regarding the dedication of property along the north side of Fairview Heights Road. He stated plans to subdivide a portion of his property into one-acre lots.

9.1.2 WRITTEN COMMENTS

A total of 11 written comments were received by mail, facsimile, and e-mail during the 10-day comment period. One letter was received from the attorney representing the Kirkland Ranch property that favored alignment O-2 because it splits the difference between the COMAS Trust property and the Kirkland Ranch property thus providing access to both. The letter stated that with over 1,700 acres of land, the Kirkland Ranch has the flexibility to include access from both Curley Road and the new Overpass Road. Table 9-1 below shows a breakdown of the written responses received.

**TABLE 9-1
COMMENTS RECEIVED
FIRST PUBLIC WORKSHOP**

Category of Comment	Total
Favor	3 (O-2)
Oppose	5 (Both)
Affects Rural Lifestyle	
Affects Rural Lifestyle	3
R/W Acquisition/Residential Relocation	2
Environmental Concerns	2
Alignment/Access	3
Cost	3
Other	7

9.1.3 SECOND PUBLIC WORKSHOP OVERVIEW

A second Public Information Workshop was held on March 3, 2005 from 5:30 p.m. to 7:30 p.m. at the Pasco County Public Library, New River Branch, 34043 S.R. 54, Zephyrhills, Florida. The Public Information Workshop was held to allow interested persons the opportunity to review the revised concepts and express their comments concerning the proposed alignments and the social, economic, and environmental effects of the proposed improvements.

Invitational letters were mailed to 80 property owners and other interested persons. Property owners affected by any of the proposed alternatives were included on the mailing list. In addition, a display advertisement inviting all interested persons to the workshop was published in the Tampa Tribune-Pasco Edition on February 10 and February 24, 2005. Copies of the invitation letter and display advertisement are included in Appendix G, Public Involvement.

A total of 63 persons signed the attendance sheets at the Workshop. Copies of the attendance sheets are included in Appendix G.

At the workshop, alignment concept displays, analysis matrix, and project information for proposed Alternatives O-2 and O-3 were available for public viewing. Pasco County representatives and their consultants were available to answer questions and receive comments. A project handout was provided to all attendees and a copy is included in Appendix G.

Based on the oral comments received during the workshop there was positive support for Alternative O-3, which closely followed Fairview Heights Road in the segment east of Handcart Road. This alternative eliminated impacts to most of the residences identified on Alternatives O-1 and O-2. The residential impacts were a major concern at the first public workshop, which resulted in the development of Alternative O-3. There were still some concerns from residents that would be adjacent to the roadway regarding access and the fact that "their" country road would now be a heavily traveled highway.

9.1.4 WRITTEN COMMENTS

A total of seven written comments were received by mail, facsimile, and e-mail during the 10-day comment period. Two comments, from the same address, favored Alternative O-2 because they would rather have their property acquired for ROW than live adjacent to a "four-lane highway." Four of remaining comments received all favored Alternative O-3 and one did not favor or oppose any of the alternatives but had questions on access and the cost of relocating existing residences and utilities. One was opposed to Alternative O-3 because there was a large retention pond located on his property.

Table 9-2 below shows a breakdown of the written responses received.

**TABLE 9-2
COMMENTS RECEIVED
SECOND PUBLIC WORKSHOP**

Category of Comment	Total	
	O-2	O-3
Alternative		
Favor	1	4
Oppose		1
Affects Rural Lifestyle		
R/W Acquisition/Residential Relocation	2	
Environmental Concerns		
Alignment/Access	1	
Cost	1	
Other	1	

Section 10.0

EVALUATION MATRIX AND RECOMMENDATION

10.1 EVALUATION MATRIX

Evaluation Matrix, Table 10-1, summarizes the relocation, social, and environmental impacts previously described as well as the total estimated cost to build the proposed improvements.

10.2 RECOMMENDATION

10.2.1 RECOMMENDED TYPICAL SECTIONS

A four-lane urban typical section is recommended for this project (Figure 10-1) from Old Pasco Road to Fort King Road. It consists of two 12-ft travel lanes in each direction separated by a 46 ft wide landscaped median that will provide for expansion to six lanes if a future need develops. Four-foot wide bicycle lanes are included within the paved shoulder and a five-foot wide sidewalk and eight-foot wide multi-use path, which will meander through 32 ft wide landscaped borders and utility zone are also included.

In addition, a dual span bridge is recommended spanning I-75 (Figure 10-1). It consists of two 12-ft wide travel lanes on each span, 10-ft wide outside shoulders and 6-ft wide inside shoulders, and 5-ft wide sidewalks separated from traffic by a concrete barrier. The spans will be 31 ft apart, which will accommodate inside expansion to a total of three lanes on each span if a future need develops.

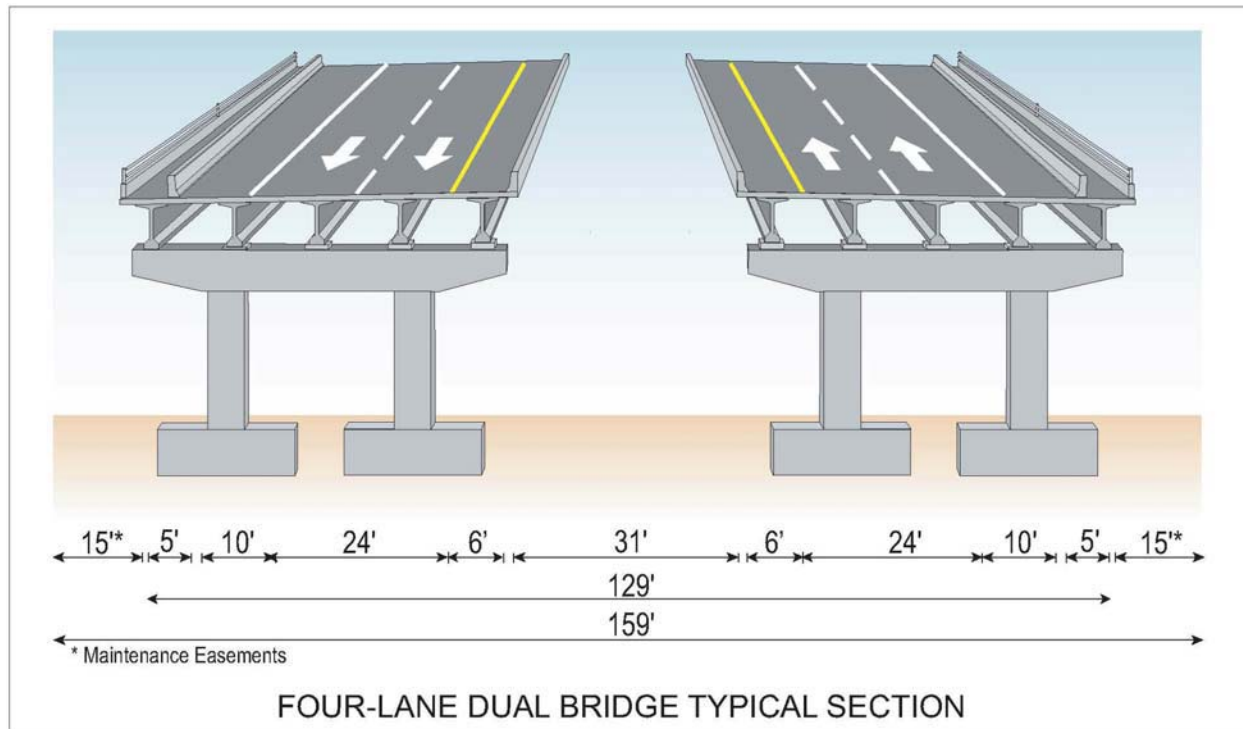
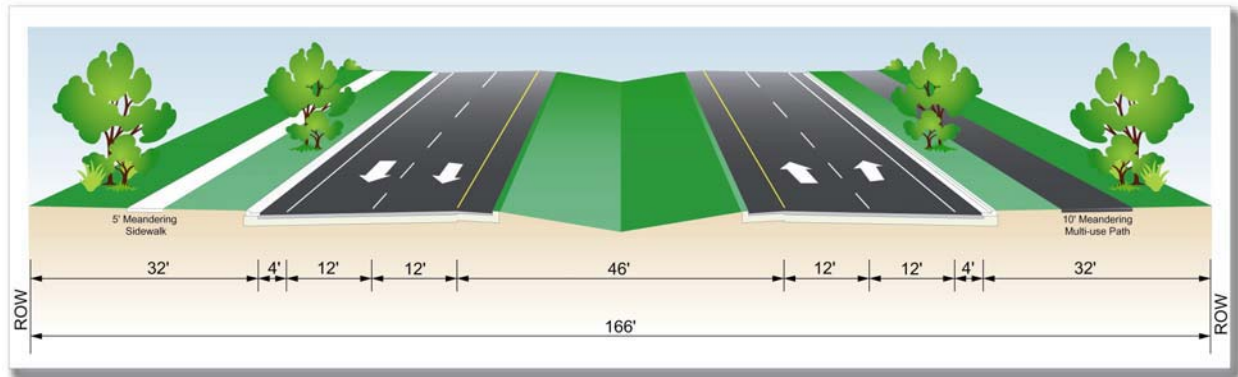
10.2.2 RECOMMENDED ALIGNMENT

Alignment Alternative O-3 is recommended for construction. This alternative utilizes the existing ROW of both Overpass and Fairview Heights Roads to the maximum extent possible in order to reduce impacts to residents and reduce ROW acquisition costs for the project. The recommended alternative follows Overpass Road from Old Pasco Road to Boyette Road and requires acquisition of additional ROW from the north side. From Boyette Road to Handcart Road the recommended alternative follows new alignment that will utilize ROW dedicated from the developers of adjacent properties. From Handcart Road the recommended alternative follows the existing Fairview Heights Road with the majority of new ROW acquisition to the north side. From the point where Fairview Heights Road turns south to Fort King Road, the recommended alternative continues eastward on new alignment that will require the acquisition of new ROW.

TABLE 10-1
EVALUATION MATRIX

EVALUATION FACTORS	ALTERNATIVE O-1				ALTERNATIVE O-2				ALTERNATIVE O-3			
	4-Lane Urban Typical Section			Total	4-Lane Urban Typical Section			Total	4-Lane Urban Typical Section			Total
	Segment A	Segment B	Segment C		Segment A	Segment B	Segment C		Segment A	Segment B	Segment C	
ROW AND POTENTIAL RELOCATIONS												
Number of Affected Parcels	17	4	20	41	17	8	21	46	14	8	19	41
Approximate ROW Requirements (acres)	50.67	53.41	71.21	175.29	52.85	50.05	63.65	166.55	50.67	51.71	49.93	152.31
Pond ROW Requirements (acres)	6.02	6.07	6.43	18.52	6.02	4.89	6.10	17.01	6.07	5.07	6.39	17.53
Potential Business Relocations	0	0	1	1	0	0	1	1	0	0	1	1
Potential Residential Relocations	1	0	5	6	1	0	7	8	1	0	5	6
SOCIAL EFFECTS												
Community Impacts (churches, schools, and services)	0	0	0	0	0	0	0	0	0	0	0	0
Potential Historic Structures	0	0	0	0	0	0	0	0	0	0	0	0
Archaeological Sites	0	0	0	0	0	0	0	0	0	0	0	0
Parks/Preserves/Refuges	1	0	0	1	1	0	0	1	1	0	0	1
NATURAL/PHYSICAL ENVIRONMENT EFFECTS												
Wetlands (acres)	4.44	5.10	4.71	14.25	3.61	1.70	1.21	6.52	3.53	5.31	3.18	12.0
Mitigation ROW Required (acres)	11.1	12.75	11.78	35.63	9.0	4.3	3.0	16.3	8.8	13.3	8.0	30.0
Floodplain (acres)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0
Potential T&E Species Involvement (N/L/M/H)	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Potential Contamination Sites	1	0	1	2	1	0	1	2	1	0	1	2
ESTIMATED PROJECT COSTS (Millions of Dollars)												
Construction Costs	17.2	13.5	13.9	44.6	17.3	12.9	13.6	43.8	17.3	13.2	13.0	43.5
Wetland Mitigation Construction Cost	0.4	0.4	0.4	1.2	0.3	0.1	0.1	0.6	0.3	0.5	0.3	1.1
Design 15% (Road & Wetland Mitigation)*	2.6	2.1	2.2	6.8	2.6	2.0	2.1	6.7	2.6	2.1	2.0	6.7
CEI 10% (Road & Wetland Mitigation)*	1.7	1.4	1.4	4.5	1.8	1.3	1.4	4.5	1.8	1.4	1.3	4.5
Road ROW Costs	1.4	0.8	3.1	5.3	1.4	0.7	4.0	6.1	1.2	0.8	1.0	3.0
Pond ROW Costs	0.2	0.1	0.2	0.5	0.1	0.1	0.2	0.4	0.1	0.1	0.1	0.3
Wetlands Mitigation ROW Costs	1.6	1.8	1.7	5.1	1.3	0.6	0.4	2.3	1.3	1.9	1.1	4.3
TOTAL ALIGNMENT COST	25.1	20.1	22.9	68.0	24.5	17.7	21.8	64.4	24.6	20.0	18.8	63.4
Segment A – Old Pasco Road to Curley Road; Segment B – Curley Road to Handcart Road; Segment C – Handcart Road to Fort King Road *Based on total of Construction Costs and Wetland Mitigation Construction Costs												

**FIGURE 10-1
URBAN TYPICAL SECTION
FROM OLD PASCO ROAD TO FORT KING ROAD**



10.3 BASIS OF RECOMMENDATION

10.3.1 LONG RANGE PLANNING

Alternative O-3 satisfies the Long Range Planning objectives of the *Pasco County Comprehensive Plan* and *Long Range Transportation Plan* by providing a new east-west corridor in eastern Pasco County. The recommended alternative provides sufficient level of service to serve the projected increase in population and vehicular traffic through the year 2030 and allows room for further capacity increases, if a need is determined, to be constructed within the proposed ROW.

10.3.2 SAFETY

The four-lane divided urban typical section will provide the following improvements that will make the road safer for vehicles, cyclists, and pedestrians and contribute to a reduction to emergency vehicle response time:

- Two travel lanes in each direction separated by a wide median will reduce the potential for head-on crashes;
- Improved roadway geometry;
- Signal protected left turn lanes at Old Pasco Road, Boyette Road, Curley Road, handcart Road, and Fort King Road;
- Median cuts with left turn holding lanes will allow the traffic to flow while providing a place for vehicles to turn into non-signalized intersections;
- Paved shoulders that will accommodate bicycles;
- Continuous sidewalk and multi-use trail to make the corridor safe for pedestrians and cyclists.
- Dual span bridge with sidewalks separated from travel lanes by concrete barriers;
- Improved response time in emergencies due to reduced congestion, additional travel lanes, and hard shoulders to allow vehicles to safely yield to emergency vehicles;
- Underground storm water drainage system that eliminates ditches on both sides of roadway;
- Construction of flood plain compensation sites will prevent flooding as a result of the roadway improvements; and
- A 45 MPH design speed throughout the corridor.

10.3.3 PROPERTY IMPACTS

- **Affected Parcels:** Alternative O-3 has 41 affected parcels (169.84 ac) compared to 41 for Alternative O-1 (193.81 ac) and 46 for Alternative O-2 (183.56 ac).
- **Potential Relocations:** Alternative O-3 has 6 potential residential relocations compared to 6 for Alternative O-1 and 8 for Alternative O-2.

10.3.4 ENVIRONMENTAL IMPACTS

- **Floodplain and Wetland Impacts:** Wetland impacts for Alternative O-3 are 12 acres compared to 14.25 acres for Alternative O-1 and 6.52 acres for Alternative O-2. Although the wetlands impacts for Alternative O-3 is nearly double that of Alternative O-2, the overall impact is small for a corridor of over 8 miles.
- **Endangered Species:** The Wood Stork, a state and federally listed endangered species, may be affected by all three alternatives, but it is unlikely to be adversely affected.
- **Contamination Site Impacts:** The number and location of potential contamination sites is the same for all three alternatives.

10.3.5 COSTS

- The overall cost of Alternative O-3 is \$ 63.4 million compared to \$68.0 million for Alternative O-1 and \$64.4 million for Alternative O-2.
- Right-of-way costs for Alternative O-3 (\$3.3 million) are approximately 43 percent less than Alternative O-1 (\$5.8 million) and nearly 50 percent less than Alternative O-2 (\$6.5 million).
- Wetland mitigation costs for O-3 (\$5.4 million) are 14 percent less than that for Alternative O-1 (\$6.3 million). However, they are 46 percent higher than for O-2 (\$2.9 million).
- The estimated roadway engineering and construction costs for Alternative O-3 are \$1.1 million less than Alternative O-1 and \$300,000 less than Alternative O-2.

10.3.6 PUBLIC COMMENTS

Eleven comments were received from after the first Public Workshop held on October 28, 2004. There were three citizens in favor of Alternative O-2 and five citizens opposed to both Alternatives O-1 and O-2. One letter was received from the attorney representing the Kirkland Ranch property that favored alignment O-2 because it splits the difference between the COMAS Trust property and the Kirkland Ranch property thus providing access to both. The letter stated that with over 1,700 acres of land, the Kirkland Ranch has the flexibility to include access from both Curley Road and the new Overpass Road. Areas of concern were evenly split among rural lifestyle, ROW acquisition and relocation, environmental concerns, roadway alignment and access, and costs.

A second Public Workshop was held on March 3, 2005. At this workshop a new alternative alignment, O-3, was presented along with Alternative O-2. Alternative O-1 was not presented since it was the least favorable from the first workshop. A total of seven comments were received after the second workshop. Four were in favor of Alternative O-3, two (from the same residence) were in favor of Alternative O-2, and one was opposed to Alternative O-3. Most

agreed that Alternative O-3, which utilized Fairview Heights Road, would have the least impact on local residents. County staff and consultants received similar positive comments, regarding Alternative O-3, during the workshop.

Section 11.0

REFERENCES

1. *Tampa Bay Region Hurricane Evacuation Plan*; Tampa Bay Regional Planning Council; St. Petersburg, Florida; 1984 update.
2. *Tampa Bay Region Hurricane Study*; Tampa Bay Regional Planning Council; St. Petersburg, Florida; 1988.
3. *Pasco County Metropolitan Planning Organization (MPO) 2020 Long Range Transportation Plan*; Pasco County.
4. *Pasco County Comprehensive Plan*; Pasco County Board of County Commissioners, Pasco County Planning Commission, Pasco County Administrator and Florida Land Design & Engineering, Inc.; Pasco County, Florida; Amended April 1995.
5. *National Register of Historic Places*; Division of Archives, History and Records Management; Tallahassee, Florida.
6. *Florida Department of Transportation Florida Land Use, Cover and Forms Classification System*; 1985.
7. *U.S. Fish and Wildlife Service Classification of Wetlands and Other Deepwater Habitats of the United States*; 1979.
8. *Technical Publications REG-001, Wetland Rapid Assessment Procedure*; South Florida Water Management District; September 1999.
9. *Project Development and Environment Manual*; Florida Department of Transportation; Tallahassee, Florida; August 1996.
10. *Florida Department of Transportation's Plans Preparation Manual*; Florida Department of Transportation; Tallahassee, Florida; January 2000.