Final Preliminary Engineering Memo

S.R. 50 PD&E Study Reevaluation

From U.S. 19 (S.R. 55) to the east intersection of
S.R. 50 / S.R. 50A [along the Brooksville Bypass]

Hernando County, Florida

WPI No: 407951 1
FAP No: 300-1(7)

Florida Department of Transportation
District 7

November 2003

FINAL PRELIMINARY ENGINEERING MEMO

Florida Department of Transportation
Project Development and Environment (PD&E) Reevaluation Study

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Submitted to:

Florida Department of Transportation - District 7
Tampa, Florida

Submitted by:

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TABLE OF CONTENTS

SECTION PAGE

TABLE OF CONTENTS i

APPENDICES iv

LIST OF TABLES v

LIST OF FIGURES vi

1.0 SUMMARY 1

1.1 Recommendations 1

1.2 Commitments 3

1.3 References 3

2.0 INTRODUCTION 4

2.1 Purpose 4

2.2 Project Description 5

3.0 NEED FOR IMPROVEMENT 6

3.1 Deficiencies 6

3.2 Safety 8

3.3 Consistency with Transportation Plans 8

3.4 Social/Economic Demands 9

3.5 References 10

4.0 EXISTING CONDITIONS 11

4.1 Existing Roadway Characteristics 11

4.1.1 Functional Classification 11

4.1.2 Typical Sections 11

4.1.3 Pedestrian and Bicycle Facilities 12

4.1.4 Right-of-Way 13

4.1.5 Horizontal Alignment 14

4.1.6 Vertical Alignment 15

4.1.7 Drainage 17

4.1.7.1 Soils Information 17

4.1.7.2 Base Floodplains 17

4.1.7.3 Regulated Floodways 17

4.1.7.4 Drainage Patterns 17

4.1.7.5 Drainage Problems 19
4.1.8 Geotechnical Data 19
4.1.9 Crash Data 22
4.1.10 Intersections and Signalization 25
4.1.11 Lighting 25
4.1.12 Utilities 25
4.1.13 Pavement Conditions 28
4.1.14 Railroad Crossings 28
4.1.15 Posted Speed Limits 29
4.2 Existing Bridge 29
4.3 Environmental Characteristics 29
4.3.1 Land Use Data 29
4.3.1.1 Existing Land Use 29
4.3.1.2 Future Land Use 30
4.3.2 Cultural Features and Community Services 31
4.3.2.1 Cultural Features 31
4.3.2.2 Community Facilities 31
4.3.3 Natural and Biological Features 34
4.3.3.1 Wetland Identification and Delineation 34
4.3.3.2 Threatened and Endangered Species 34
4.3.4 Potential Contamination and Hazardous Material 34
4.4 References 38

5.0 DESIGN CONTROLS AND STANDARDS 39
5.1 References 40

6.0 TRAFFIC 41
6.1 Existing Traffic Conditions 41
6.2 Multimodal Transportation System Considerations 42
6.2.1 Bus Service 42
6.2.2 Railroads 43
6.2.3 Airports and Seaports 43
6.3 Traffic Analysis Assumptions 43
6.4 Existing Traffic Volumes 43
6.5 Traffic Volume Projections 44
6.6 Level of Service 44
6.7 References 48

7.0 CORRIDOR ANALYSIS 49

8.0 ALTERNATIVE ALIGNMENT ANALYSIS 50

8.1 No-Build Alternative 50

8.2 Transportation System Management 51

8.3 Study Alternatives 51

8.3.1 Classification and Design Speed 51

8.3.2 Typical Sections 52

8.3.3 Horizontal Alignment 54

8.3.4 Vertical Alignment 54

8.3.5 Alternative Alignments 55

8.3.6 Environmental Considerations 55

8.3.7 Drainage 57

8.3.8 Construction and Engineering Costs 59

8.3.9 Right-of-Way and Relocation Considerations 59

8.4 Evaluation Matrix 60

8.5 Recommended Alternative 61

8.6 References 62

9.0 PRELIMINARY DESIGN ANALYSIS 63

9.1 Design Traffic Volumes 63

9.2 Design Alternatives 63

9.3 Typical Sections 63

9.4 Intersection Concepts and Signal Analysis 63

9.5 Alignment and Right-of-way Needs 64

9.6 Relocations 64

9.7 Right-of-way Costs 64

9.8 Construction Costs 64

9.9 Preliminary Engineering and Construction Engineering Costs 65

9.10 Recycling of Salvageable Materials 65

9.11 User Benefits 65

9.12 Pedestrian and Bicycle Facilities 65

9.13 Safety 66

9.14 Economic and Community Development 66

9.15 Environmental Impacts 66

9.15.1 Land Use Data 66

9.15.2 Community Cohesion 66

9.15.3 Wetland Impact and Mitigation 67
9.15.4 Threatened and Endangered Species 67
9.15.5 Historic Sites/Districts and Archaeological Sites 67
9.15.6 Potential Hazardous Materials and Petroleum Products Contaminated Sites 68
9.15.7 Noise Impacts 69
9.15.8 Air Quality Impacts 69
9.15.9 Water Quality Impacts 70
9.15.10 Aquatic Preserves 70
9.16 Utility Impacts 70
9.17 Traffic Control Plan 71
9.18 Results of Public Involvement Program 71
9.18.1 Kick-off Meeting 71
9.18.2 Advance Notification 72
9.18.3 Public Hearing 72
9.18.4 Other Meetings 72
9.19 Value Engineering 73
9.20 Drainage 73
9.21 Structures 73
9.22 Street Lighting 73
9.23 Access Management 74
9.24 Aesthetics and Landscaping 74
9.25 References 75

APPENDICES

A Conceptual Plans for the Recommended Alternative

LIST OF TABLES

TABLE NO.		PAGE
2-1	Project Segments	5
3-1	Existing (2002) Level of Service	7
4-1	Existing Typical Section Data	12
4-2	Existing Signalized Intersection Data	13
4-3	Summary of Existing Right-of-Way Widths	14
4-4	Existing Horizontal Alignment Characteristics	14
4-5	Existing Vertical Alignment Characteristics	16
4-6	Summary of Box Culverts	18
4-7	Summary of Soil Information	21
4-8	Crash Summary for Roadway Segments along S.R. 50	23-24
4-9	Crash Summary for Roadway Segments along S.R. 50 [along the Brooksville Bypass]	24
4-10	Existing Utilities	26-27
4-11	Summary of Existing Pavement Conditions	28
4-12	Summary of Community Facilities	33
4-13	List of Potentially Contaminated Sites and Risk Ratings	36-37
5-1	Summary of Design Standards' Criteria	39
6-1	Recommended Traffic Factors	42
6-2	Future HCS Level of Service Summary	46-47
8-1	Drainage Basin Characteristics	58
8-2	Summary of Proposed Pond Site Characteristics	59
8-3	Evaluation Matrix for the Recommended Alternative	60
9-1	Utility Relocation Costs	70

LIST OF FIGURES

FIGURE NO.		FOLLOWS PAGE
1-1	Project Location Map	1
4-1	Existing 4-Lane Rural Typical Section	11
4-2	Existing 4-Lane Urban Typical Section	11
4-3	Existing 4-Lane Rural Typical Section	11
4-4	Existing 4-Lane Rural Typical Section	11
4-5	Existing 4-Lane Suburban Typical Section	11
4-6	Existing 4-Lane Rural Typical Section	11
4-7	Floodplains Map	17
4-8	Drainage Basins	18
4-9(A-C)	Soils Map	20
4-10(A-F)	Existing Lane Geometry	25
4-11	Existing Land Use	29
4-12	Future Land Use	30
4-13	Planned Developments	30
4-14	Community Facilities	32
4-15	Potential Contamination Sites	35
6-1(A-C)	Existing Daily Traffic Volumes	44
6-2(A-C)	Existing Traffic-Turning Movement Volumes	44
6-3(A-C)	Projected Daily Traffic Volumes	44
6-4(A-C)	Design Hour Volumes	44
8-1	Proposed 6-Lane Rural Roadway Typical Section	54
8-2	Proposed 6-Lane Suburban Roadway Typical Section	54
8-3	Proposed 6-Lane Urban Roadway Typical Section	54
8-4	Proposed 6-Lane Urban Roadway Typical Section	54
8-5	Proposed 6-Lane Rural Roadway Typical Section	54
8-6	Proposed 6-Lane Suburban Roadway Typical Section	54
8-7	Proposed 6-Lane Urban Roadway Typical Section	54
8-8	Proposed 6-Lane Urban Roadway Typical Section	54
8-9	Proposed 6-Lane Urban Roadway Typical Section	54
8-10	Proposed 6-Lane Suburban Roadway Typical Section	54
8-11	Recommended 6-Lane Rural Roadway Typical Section	62
8-12	Recommended 6-Lane Urban Roadway Typical Section	62
8-13	Recommended 6-Lane Modified Urban Roadway Typical Section	62
8-14	Recommended 6-Lane Urban Roadway Typical Section	62

8-15 Recommended 6-Lane Modified Urban Roadway Typical Section 62
9-1(A-C) Recommended Lane Geometry 64

1.0 SUMMARY

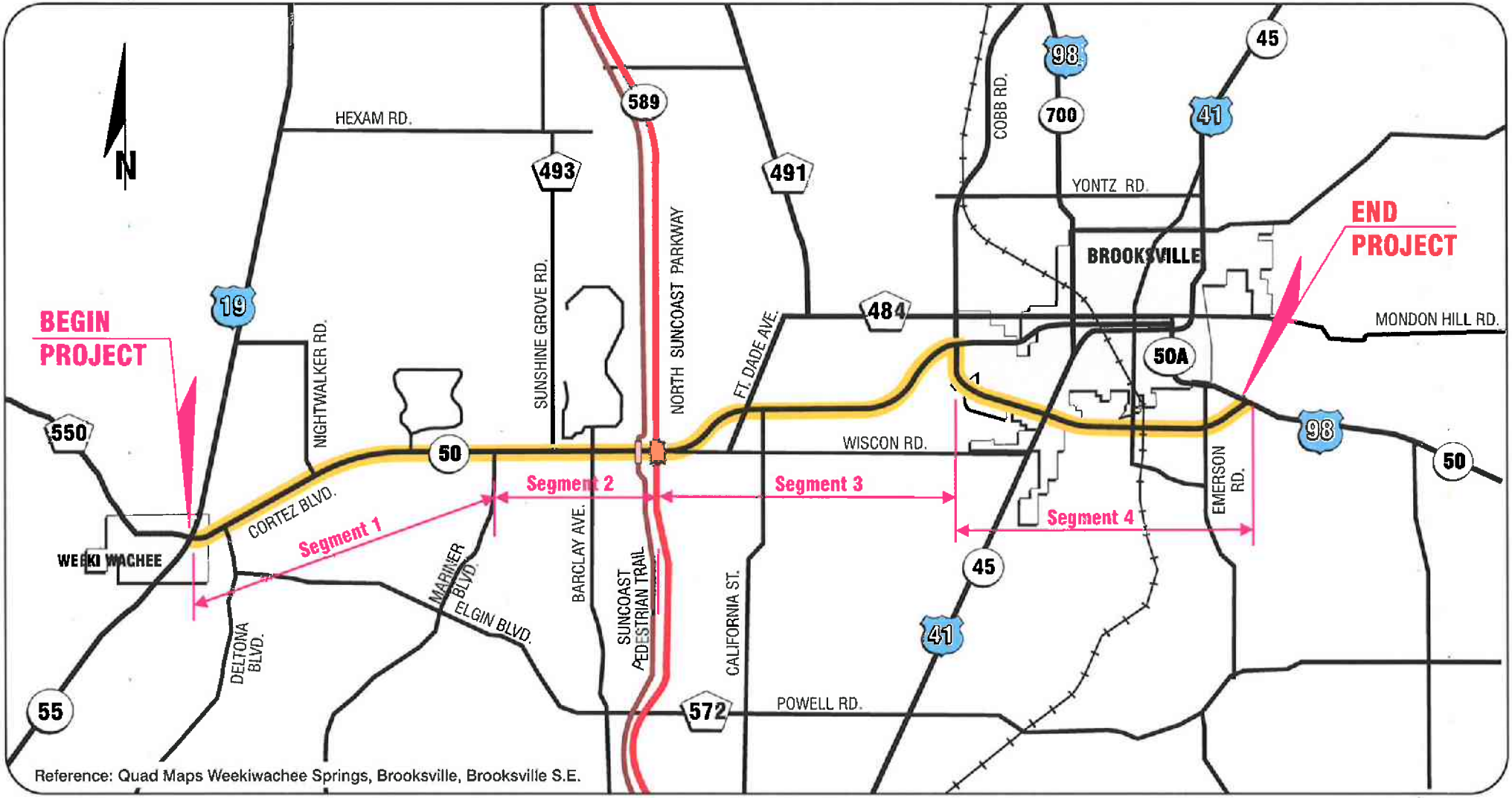
This project involves the reevaluation of the previous PD&E Study that was performed for the project, which is documentation of any changes that may have occurred since the previous study was completed. The previous PD&E Study being reevaluated is S.R. 50 from U.S. 19 (S.R. 55) to the eastern intersection of S.R. 50/S.R. 50A [1]. This project involves widening S.R. 50 (Cortez Boulevard), from the existing 4-lane typical section to a 6-lane typical section, from U.S. 19 (S.R. 55) to the east intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass]. The length of the project is approximately 13.7 miles. The widening of S.R. 50 from U.S. 19 to the west intersection of S.R. 50/S.R. 50A is proposed to be widened to the outside; whereas the remainder of the project, from the west intersection of S.R. 50/S.R. 50A to the east intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass], is proposed to be widened to the inside. Figure 1-1, Project Location Map, illustrates the limits of the project area in relation to the local roadway network.

The Hernando County Metropolitan Planning Organization's (MPO's) *2025 Long Range Transportation Plan (LRTP)* [2] identifies the need for the proposed improvements to portions of the S.R. 50 project corridor. It should be noted that the *2025 LRTP* is included as an appendix within Hernando County's *Comprehensive Plan* [3]. In addition, portions of the project corridor are included in the Florida Department of Transportation's (FDOT) *5-Year Tentative Work Program* [4] for capacity improvements. The previous PD&E Study that was approved in March 1990 (S.R. 50, from U.S. 19 to the eastern intersection of S.R. 50/S.R. 50A) recommended widening the existing 2-lane typical section to a 4-lane typical section for S.R. 50, which is the current condition within the project corridor.

1.1 Recommendations

The alignment for the entire project corridor is primarily within the existing right-of-way. Specifically, alternative alignments were not necessary along S.R. 50, because the previous PD&E Study established the need for S.R. 50 from U.S. 19 (S.R. 55) to the eastern intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass] to be initially widened to the existing 4-lane typical section and expandable to a 6-lane typical section. It should be noted that the recommendations of the previous PD&E Study were approved by FHWA on 3/22/90.

The alignment for the section of the project corridor from west of the west S.R. 50/S.R. 50A intersection to east of the west S.R. 50/S.R. 50A intersection [along the Brooksville Bypass] is limited by the existing urban typical section as well as the development and right-of-way constraints within this section of the project corridor. In addition, the portion of the project corridor from east of the west S.R. 50/S.R. 50A intersection to the east S.R. 50/S.R. 50A intersection [along the Brooksville Bypass] will be widened strictly to the inside per the previous PD&E Study.



LEGEND

- Project Study Limits
- Major Interchange
- Railroad

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

PROJECT LOCATION MAP

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 1-1

There are five existing concrete box culverts (CBC) under S.R. 50 within the limits of the project. With the proposed roadway widening, it is anticipated that the final design would require some of the existing cross drains to be extended or replaced.

It is anticipated that minor modifications will be required along the side streets to accommodate the additional lanes along S.R. 50. Right-of-way acquisition will be required for right-turn lanes at unsignalized and signalized intersections as well as for storm water treatment facilities.

The S.R. 50 Reevaluation project corridor was divided into four segments for analysis purposes based on existing land use, projected traffic volumes, and roadway characteristics. The recommended typical sections are as follows:

- 6-Lane Rural Typical Section: From U.S. 19 (S.R. 55) to west of the western intersection of S.R. 50/S.R. 50A

  The recommended typical section for this portion of S.R. 50 is a 6-lane rural section (65 mph design speed) with 12-foot lanes, 10-foot shoulders (5-foot paved), and 40-foot depressed median within 200 feet of existing right-of-way. It also includes a 12-foot shared use path and a 5-foot sidewalk on the south and north sides of the roadway, respectively.

- 6-Lane Urban Typical Section: From west of the western intersection of S.R. 50/S.R. 50A to east of the western intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass] and west of Candlelight Boulevard to east of Ray Browning Road [along the Brooksville Bypass]

  A 6-lane urban typical section (50 mph design speed) is recommended for these sections of S.R. 50 with 12-foot lanes, 4-foot outside bicycle lanes with curb and gutters, 5-foot sidewalks and a 22-foot raised median that requires a minimum of 126 feet of proposed right-of-way.

- 6-Lane Modified Urban Typical Section: From east of the western intersection of S.R. 50/S.R. 50A to west of Candlelight Boulevard [along the Brooksville Bypass] and east of Ray Browning Road to the eastern intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass]

  The recommended typical section for these sections of S.R. 50 is a 6-lane modified urban typical section (50 mph design speed) with 12-foot lanes, 10-foot outside shoulders (5-foot paved with no curb and gutters), 5-foot sidewalks and 22-foot raised median within the existing right-of-way.

Additional recommendations are as follows:

- Early utility coordination.

The following recommendations should be considered during the design phase:

- Reducing the proposed right-of-way in certain areas of the project, including the southeast quadrant of the Suncoast Parkway interchange and along the Rick Matthews Buick dealership near Sta. 815+00, should be evaluated. A possible approach is to apply storm sewers to reduce drainage ditch requirements, and then move the sidewalks closer to the roadway. The effect on clearzones and other clearance and safety requirements needs to be included in this evaluation.

- Coordination should be performed with the new Brooksville Hospital to determine if a shared pond can be planned on their site (Sta. 273+00, near the southeast quadrant of the S.R. 50 and Lykes Dublin Road intersection). It should be noted that the PD&E Study's Pond Siting Report evaluated a separate pond for S.R. 50 along this portion of the corridor, which was referred to as Basin J in the report.

1.2 Commitments

Although the previous PD&E Study did not include any specifically stated commitments, the following commitment was made during the PD&E Study Reevaluation for consideration in the design phase(s) of this project:

- The placement of the bicycle lanes will be further evaluated during the design phase and a shared use path may be considered at that time along S.R. 50 [Brooksville Bypass].

1.3 References

1. Final Preliminary Engineering Report - S.R. 50 U.S. 19 to the eastern intersection of S.R. 50/S.R. 50A; Reynolds, Smith and Hills Architects-Engineers-Planners, Inc.; Florida; May 1988.

2. 2025 Long Range Transportation Plan; Hernando County Metropolitan Planning Organization; Hernando County, Florida; 2001.

3. Hernando County Comprehensive Plan; Hernando County Planning Department; Hernando County, Florida; Amended December 21, 1999.

4. 5-Year Tentative Work Program (Fiscal Years July 1, 2003 through June 30, 2008); Florida Department of Transportation District Seven; Tampa, Florida; February 10, 2003.

2.0 INTRODUCTION

The Florida Department of Transportation (FDOT) is conducting a Project Development and Environment (PD&E) Study Reevaluation, which evaluates capacity improvement options along S.R. 50 (Cortez Boulevard) in Hernando County, Florida. The proposed project involves widening S.R. 50 from the existing 4-lane typical section to a 6-lane typical section from U.S. 19 to the east intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass], a distance of approximately 13.7 miles. The widening of the segment of S.R. 50 from U.S. 19 (S.R. 55) to the west intersection of S.R. 50/S.R. 50A is proposed to be widened to the outside; whereas the remainder of the project, from the west intersection of S.R. 50/S.R. 50A to the east intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass], is proposed to be widened to the inside.

2.1 Purpose

The purpose of this PD&E Study Reevaluation is to review the previous PD&E Study that was performed for the project and document any changes that have occurred since the Federal Highway Administration's (FHWA) approval on 3/22/90. The previous PD&E Study being reevaluated is S.R. 50 from U.S. 19 (S.R. 55) to the eastern intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass]. This PD&E Study Reevaluation includes analyses to determine the type, conceptual design, and location of improvements for accommodating present and future traffic demands, social and economic demands, and conformance to present plans and policies in a safe and efficient manner. This Reevaluation also satisfies the requirements of the National Environmental Policy Act (NEPA) and all other applicable Federal requirements in order to receive federal funding for the design, right-of-way acquisition and construction of the project.

Improvements to this section of S.R. 50 are needed because the existing roadway will not be capable of providing an adequate Level of Service (LOS) based on the demands of the future traffic projections. Hernando County MPO's *2025 LRTP* includes the widening of S.R. 50 from U.S. 19 (S.R. 55) to the east intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass], which is also included in an appendix of Hernando County's *Comprehensive Plan*. In addition, portions of the project corridor are included in the FDOT's *5-Year Tentative Work Program* for capacity improvements.

2.2 Project Description

S.R. 50 is an east/west principal arterial facility. This Study Reevaluation examines the section of S.R. 50 from U.S. 19 (S.R. 55) to the east intersection of S.R. 50/S.R. 50A [along the Brookville Bypass], a distance of approximately 13.7 miles (see Figure 1-1). The majority of the project is located within an unincorporated area of Hernando County; however, portions extend through the City of Weeki Wachee and the City of Brooksville. The project is located in Section 36 of Township 22 South, Range 17 East; Sections 25 through 36 of Township 22 South, Range 18 East; Sections 20, and 25 through 30 of Township 22 South, Range 19 East; and Sections 1 and 2 of Township 23 South, Range 17 East.

Land use along the corridor is generally urbanized and suburban in nature with undeveloped tracts interspersed. The existing land use along S.R. 50 is predominantly commercial with areas of residential use as well as isolated areas of medical, institutional and recreational uses. The proposed project is consistent with future land use plans.

S.R. 50, which is part of the Florida Intrastate Highway System (FIHS), is typically a 4-lane divided roadway with 12-foot travel lanes, which was constructed according to the original Type II Categorical Exclusions approved in 1988 and 1990. The existing posted speed limit along S.R. 50 varies between 45 miles per hour (mph) and 55 mph.

The S.R. 50 project corridor is divided into four segments for analysis purposes based on existing land use, projected traffic volumes, and roadway characteristics (refer to Table 2-1).

Table 2-1: Project Segments

Segment	Limits	Length (Miles)
1	U.S. 19 (S.R. 55) to Mariner Boulevard (C.R. 587)	3.88
2	Mariner Boulevard (C.R. 587) to the Suncoast Parkway	2.02
3	Suncoast Parkway to the west S.R. 50/S.R. 50A intersection	4.00
4	West S.R. 50/S.R. 50A intersection to the east S.R. 50/ S.R. 50A intersection [along the Brooksville Bypass]	3.84

3.0 NEED FOR IMPROVEMENT

3.1 Deficiencies

As part of the *S.R. 50 PD&E Traffic Report* [3], a LOS analysis was conducted for the Study corridor to determine the existing and design year (2025) operating conditions at each intersection and segment. Refer to Table 3-1 for a summary of the existing (2002) level of service. Currently, the existing LOS varies from A to F for different segments along S.R. 50. However, it is anticipated that without improvements along S.R. 50, the overall LOS will continue to decrease, which would result in the majority of the segments from U.S. 19 (S.R. 55) to the east intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass] being deficient by the design year (2025). With improvements along S.R. 50, all segments along S.R. 50 are expected to operate with an acceptable LOS. Refer to Section 6.6 of this report for a discussion of the projected LOS for the design year (2025).

Based on the results of this analysis, 14 of the 19 intersections are operating at LOS C or better at the present time. Currently, the intersections of S.R. 50 at Deltona Boulevard and the west intersection of S.R. 50/S.R. 50A are operating at LOS D, the intersection of S.R. 50 and Mariner Boulevard is currently operating at LOS E, and the intersection of S.R. 50 and U.S. 41 (S.R. 45) is currently operating at LOS F. It is anticipated that by 2025, eight intersections will be deficient, operating below LOS C, if improvements are not constructed along the project. However, if the Study improvements are implemented, the LOS will improve.

Table 3-1: Existing (2002) Level of Service

Intersections	Existing Year 2002	
	LOS (AM)	LOS (PM)
S.R. 50 at U.S. 19 (S.R. 55)	C	C
S.R. 50 at Deltona Boulevard	D	D
S.R. 50 at Oak Hill Hospital	B	B
S.R. 50 at High Point Boulevard/Community Boulevard	B	B
S.R. 50 at Mariner Boulevard (C.R. 587)	E	E
S.R. 50 at Sunshine Grove Road/Twin Dolphin Drive	C	C
S.R. 50 at Brookridge Central Boulevard/Barclay Avenue	C	C
S.R. 50 at Northbound Suncoast Parkway Ramps (S.R. 589)	A	A
S.R. 50 at Southbound Suncoast Parkway Ramps (S.R. 589)	A	A
S.R. 50 at Wiscon Road	B	B
S.R. 50 at Winter Street	B	B
S.R. 50 at Fort Dade Avenue	D	D
S.R. 50 at California Street	B	B
S.R. 50 at West Intersection of S.R. 50/S.R. 50A	D	D
S.R. 50 [along the Brooksville Bypass] at Buck Hope Road	B	B
S.R. 50 [along the Brooksville Bypass] at U.S. 41 (S.R. 45)	F	F
S.R. 50 [along the Brooksville Bypass] at Main Street/Mitchell Road	B	B
S.R. 50 [along the Brooksville Bypass] at Emerson Road	B	C
S.R. 50 [along the Brooksville Bypass] at East Intersection of S.R. 50/S.R. 50A	B	B
Segments Eastbound	**Existing Year 2002**	
	LOS (AM)	**LOS (PM)**
West of U.S. 19 (S.R. 55)	D	D
S.R. 50, U.S. 19 (S.R. 55) to Deltona Boulevard	D	D
S.R. 50, Deltona Boulevard to Oak Hill Hospital	A	A
S.R. 50, Oak Hill Hospital to High Point Boulevard/Community Boulevard	C	C
S.R. 50, High Point Boulevard/Community Boulevard to Mariner Boulevard (C.R. 587)	B	B
S.R. 50, Mariner Boulevard (C.R. 587) to Sunshine Grove Road/Twin Dolphin Drive	B	A
S.R. 50, Sunshine Grove Road/Twin Dolphin Drive to Brookridge Central Boulevard/Barlcay Avenue	C	C
S.R. 50, Brookridge Central Boulevard/Barclay Avenue to Northbound/Southbound Suncoast Parkway Ramps (S.R. 589)	A	A
S.R. 50, Northbound/Southbound Suncoast Parkway Ramps (S.R. 589) to Wiscon Road	C	C
S.R. 50, Wiscon Road to Winter Street	C	C
S.R. 50, Winter Street to Fort Dade Avenue	B	B
S.R. 50, Fort Dade Avenue to California Street	B	B
S.R. 50, California Street to West Intersection of S.R. 50/S.R. 50A	B	B
S.R. 50 [along the Brooksville Bypass], West Intersection of S.R. 50/S.R. 50A to Buck Hope Road	A	A
S.R. 50 [along the Brooksville Bypass], Buck Hope Road to U.S. 41 (S.R. 45)	F	F
S.R. 50 [along the Brooksville Bypass], U.S. 41 (S.R. 45) to Main Street/Mitchell Road	A	A
S.R. 50 [along the Brooksville Bypass], Main Street/Mitchell Road to Emerson Road	B	B
S.R. 50 [along the Brooksville Bypass], Emerson Road to East Intersection of S.R. 50/S.R. 50A	B	B
Segments Westbound	**Existing Year 2002**	
	LOS (AM)	**LOS (PM)**
East of the East Intersection of S.R. 50/S.R. 50A	C	C
S.R. 50 [along the Brooksville Bypass], East Intersection of S.R. 50/S.R. 50A to Emerson Road	B	B
S.R. 50 [along the Brooksville Bypass], Emerson Road to Main Street/Mitchell Road	A	A
S.R. 50 [along the Brooksville Bypass], Main Street/Mitchell Road to U.S. 41 (S.R. 45)	D	D
S.R. 50 [along the Brooksville Bypass], U.S. 41 (S.R. 45) to Buck Hope Road	C	C
S.R. 50 [along the Brooksville Bypass], Buck Hope Road to West Intersection of S.R. 50/S.R. 50A	B	B
S.R. 50, West Intersection of S.R. 50/S.R. 50A to California Street	A	A
S.R. 50, California Street to Fort Dade Avenue	A	A
S.R. 50, Fort Dade Avenue to Winter Street	A	A
S.R. 50, Winter Street to Wiscon Road	C	B
S.R. 50, Wiscon Road to Northbound/Southbound Suncoast Parkway Ramps (S.R. 589)	C	B
S.R. 50, Northbound/Southbound Suncoast Parkway Ramps (S.R. 589) to Brookridge Central Boulevard/Barclay Avenue	B	C
S.R. 50, Brookridge Central Boulevard/Barclay Avenue to Sunshine Grove Road/Twin Dolphin Drive	C	C
S.R. 50, Sunshine Grove Road/Twin Dolphin Drive to Mariner Boulevard (C.R. 587)	C	D
S.R. 50, Mariner Boulevard (C.R. 587) to High Point Boulevard/Community Boulevard	A	A
S.R. 50, High Point Boulevard/Community Boulevard to Oak Hill Hospital	C	C
S.R. 50, Oak Hill Hospital to Deltona Boulevard	A	A
S.R. 50, Deltona Boulevard to U.S. 19 (S.R. 55)	D	D

3.2 Safety

The crash records for S.R. 50 and S.R. 50 [along the Brooksville Bypass] were reviewed and are presented in Section 4.1.9 of this report, which indicate that a total of 585 crashes occurred during the 5-year period between 1995 and 1999. Of the 585 crashes, 14 (2% of the five-year total) resulted in fatalities, and serious injuries occurred in 423 (72% of the five-year total).

Rear end crashes, normally found in congested areas, were the most frequent crash types with 240, or 41% of the total crashes over the five-year period. Most of the crashes are concentrated at the following five intersections along S.R. 50: Deltona Boulevard, High Point Boulevard/Community Boulevard, Mariner Boulevard (C.R. 587), Sunshine Grove Road/Twin Dolphin Drive, and Breckenridge Central Boulevard/Barclay Avenue.

The crashes within the Study area could be attributed to a combination of the following factors:

- Roadway congestion
- High traveling speed
- High percentage of heavy trucks
- Insufficient left-turn lane storage length
- Inadequate traffic signal clearance intervals
- Uninterrupted main line flow that inhibits side street flow

The anticipated growth for the Study area will increase the traffic demand for S.R. 50. As the traffic volumes continue to increase on S.R. 50, the number of crashes can be expected to increase. Improvements that are being considered as part of this PD&E Study Reevaluation include widening the existing roadway (additional through and turn lanes), providing safer access points, and providing adequate and separate pedestrian and bicyclist facilities. In addition, improvements to signalization, and signing and pavement marking along the project corridor will enhance safety. These improvements will greatly enhance the corridor's safety and reduce the potential for crashes.

3.3 Consistency with Transportation Plans

The Hernando County Metropolitan Planning Organization's *2025 LRTP* [4] includes proposed improvements for portions of the Study corridor, and identifies transportation issues and concerns for current and future needs. The LRTP recommends widening S.R. 50 from U.S. 19 (S.R. 55) to the east intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass] by providing two additional through lanes to the existing four-lane divided section.

The *Traffic Report* performed for this project recommends widening S.R. 50 from the existing 4-lane section to a 6-lane section for the entire project corridor, from U.S. 19 (S.R. 55) to the east intersection of S.R. 50/S.R. 50A [along the

Brooksville Bypass]. This would improve the roadway in order to meet the LOS standards set by FDOT.

3.4 Social/Economic Demands

Hernando County is a progressively developing county. A significant population growth began in the 1970's and continues today. During this time period, the population experienced a 161.5% and 127.4% increase from 1970 to 1980 and 1980 to 1990, respectively. According to the data collected by the U.S. Census Bureau, summarized in *Florida Statistical Abstract 2001* [5], Hernando County will continue to grow over the next twenty years. Therefore, it is anticipated that the travel demand within the Study corridor will continue to increase in the future.

S.R. 50 extends through central Hernando County, Florida. It extends from U.S. 19 (S.R. 55) in the City of Weeki Wachee eastward across the state to U.S. 1 (Washington Avenue South) in Titusville. Therefore, S.R. 50 is a vital link in the region's roadway network and directly affects the capability for future development in this area of Hernando County. In the vicinity of the Study corridor, S.R. 50 traverses both commercial and residential areas.

Based on both historic and future population projections from the U.S. Census Bureau, it is anticipated that the population growth rate for Hernando County will exceed the overall growth rate for the state of Florida. From 1990 to 2000, the population of Hernando County increased by 29.4% whereas the population for the state of Florida increased by 23.5%. Due to the expected continued growth of Hernando County, it is essential that access and an acceptable LOS along S.R. 50 be maintained in order for economic and community development to continue.

3.5 References

1. Florida's Level of Service Standards and Guidelines Manual for Planning; Florida Department of Transportation; Tallahassee, Florida; 1995.

2. 2000 Highway Capacity Manual; Transportation Research Board – National Research Council; Washington, D.C.; 2000.

3. S.R. 50 PD&E Traffic Report; Gannett Fleming; Tampa, Florida; March 2003.

4. 2025 Long Range Transportation Plan; Hernando County Metropolitan Planning Organization; Hernando County, Florida; 2001.

5. Florida Statistical Abstract 2001; Bureau of Economic and Business Research – Warrington College of Business Administration (University of Florida); Gainesville, Florida; 2001.

4.0 EXISTING CONDITIONS

This section documents the engineering and environmental data collected during the PD&E Study Reevaluation. Data was collected and has been grouped into the roadway and environmental categories to provide a description of the existing conditions.

4.1 Existing Roadway Characteristics

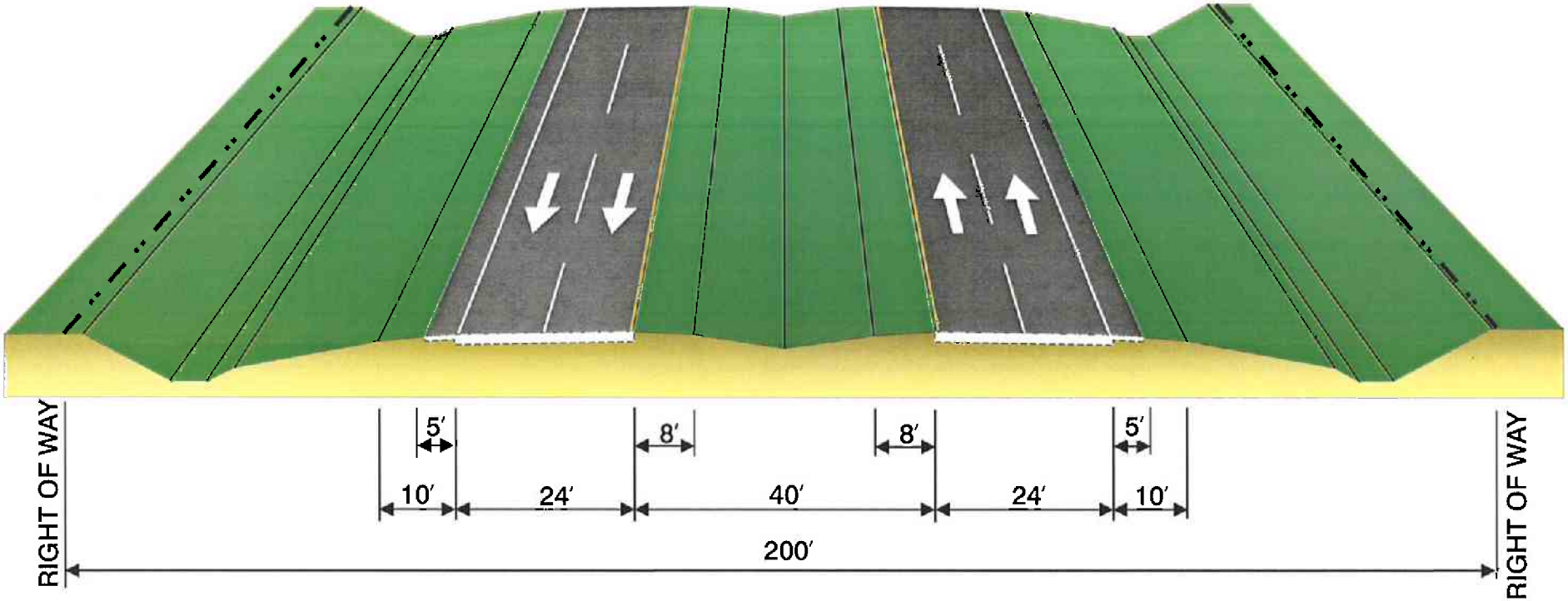
4.1.1 Functional Classification

The sections of S.R. 50 from U.S. 19 (S.R. 55) to west of Grove Road, and from the west intersection of S.R. 50/S.R. 50A to the east intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass], are classified as an urban principal arterial. The portion of S.R. 50 from west of Grove Road to the west intersection of S.R. 50/S.R. 50A is classified as a rural principal arterial. It should also be noted that the portion of S.R. 50 within the Study corridor is designated as a FIHS facility. The existing posted speed limit along S.R. 50 varies between 45 mph and 55 mph from U.S. 19 (S.R. 55) to the west intersection of S.R. 50/S.R. 50A and 50 mph from the west intersection of S.R. 50/S.R. 50A to the east intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass].

The portion of S.R. 50 from U.S. 19 (S.R. 55) to Cobb Road (C.R. 485) is a designated evacuation route that continues eastward along S.R. 50A (W. Jefferson Street). S.R. 50 also serves as an important access road to additional designated evacuation routes within the vicinity of the Study corridor, such as Suncoast Parkway, Broad St. (U.S. 41), Ponce de Leon (U.S. 98), and I-75.

4.1.2 Typical Sections

Throughout the project limits, the S.R. 50 corridor consists of several variations of a 4-lane typical section. Refer to Table 4-1 for a summary of the existing typical section information. As illustrated in Figure 4-1, S.R. 50 has a 4-lane rural typical section from U.S. 19 (S.R. 55) to west of the west intersection of S.R. 50/S.R. 50A that changes to a 4-lane urban typical section (Figure 4-2). The 4-lane urban typical section is retained for the portion of the project corridor from east of the west intersection of S.R. 50/S.R. 50A to west of Clinton Blvd. [along the Brooksville Bypass]. The remaining portion of S.R. 50 [along the Brooksville Bypass] within the Study corridor has a 4-lane rural typical section to the east intersection of S.R. 50/S.R. 50A (refer to Figures 4-3, 4-4 and 4-6), with the exception of the portion of S.R. 50 from west of Candlelight Boulevard to east of Ray Browning Road, which has a 4-lane suburban typical section (Figure 4-5).



U.S. 19 to WEST of the WESTERN INTERSECTION S.R. 50 / S.R. 50A

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

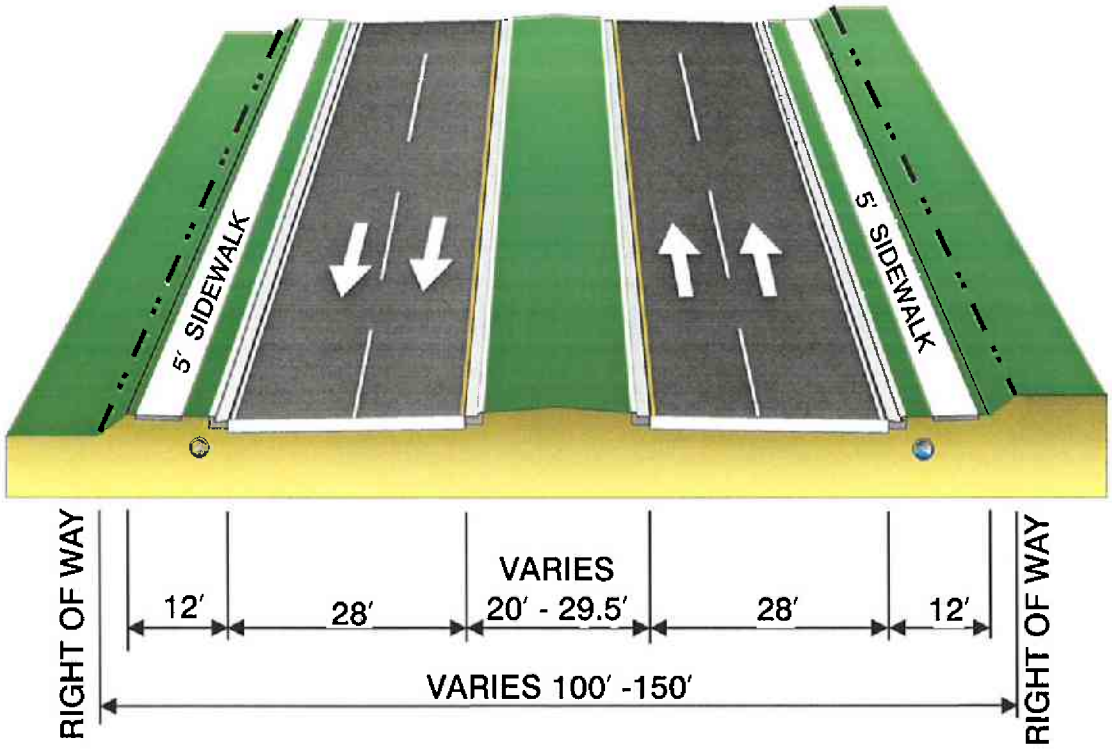
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

EXISTING ROADWAY TYPICAL SECTION

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 4-1



WEST of the WESTERN INTERSECTION S.R. 50 / 50A to EAST of the WESTERN INTERSECTION S.R. 50 / 50A [along the BROOKSVILLE BYPASS]

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

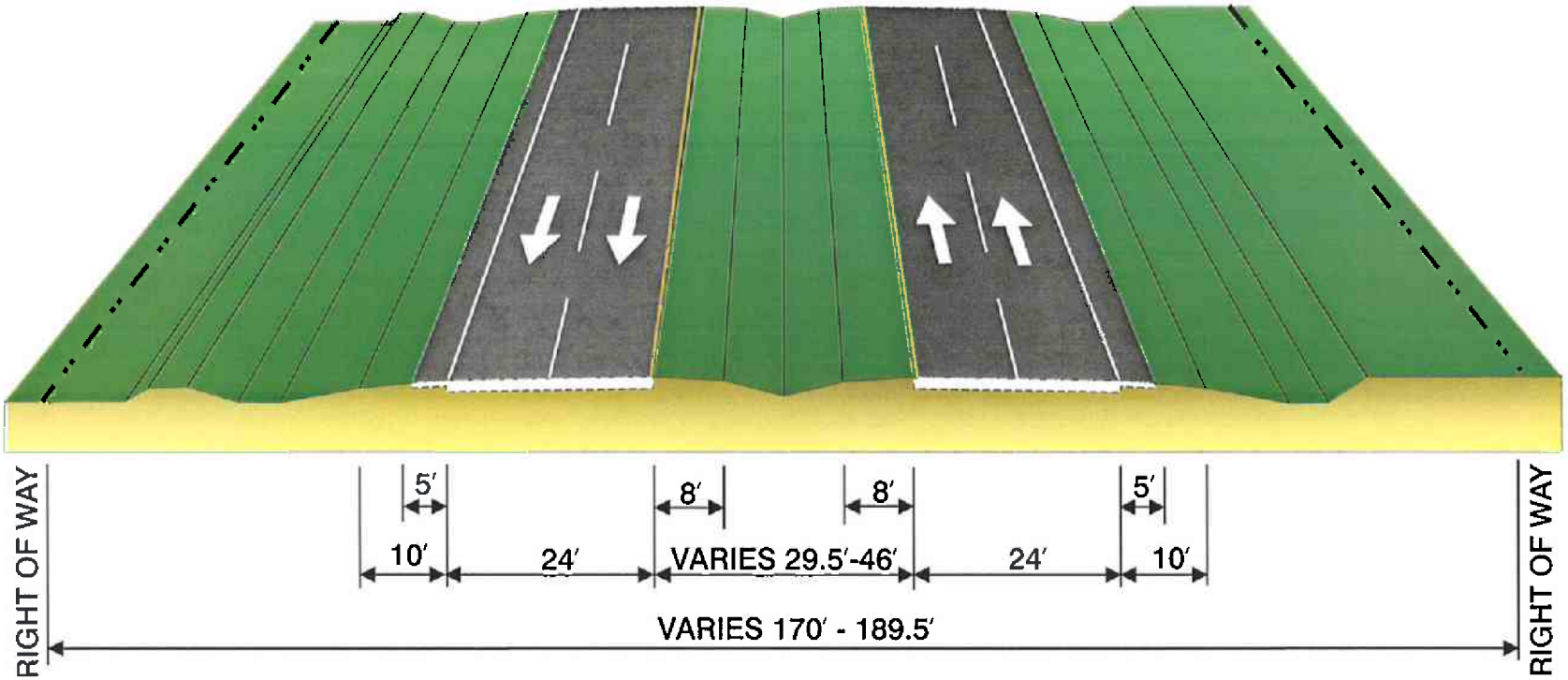
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of S.R. 50 / 50A [along the Brooksville Bypass] Hernando County, Florida

EXISTING ROADWAY TYPICAL SECTION

WPI SEG. NO: 4079511
FAP NO: 300 - 1[illegible]

FIGURE 4-2



EAST of the WESTERN INTERSECTION S.R. 50 / 50A to WEST of CLINTON BLVD.
[along the BROOKSVILLE BYPASS]

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

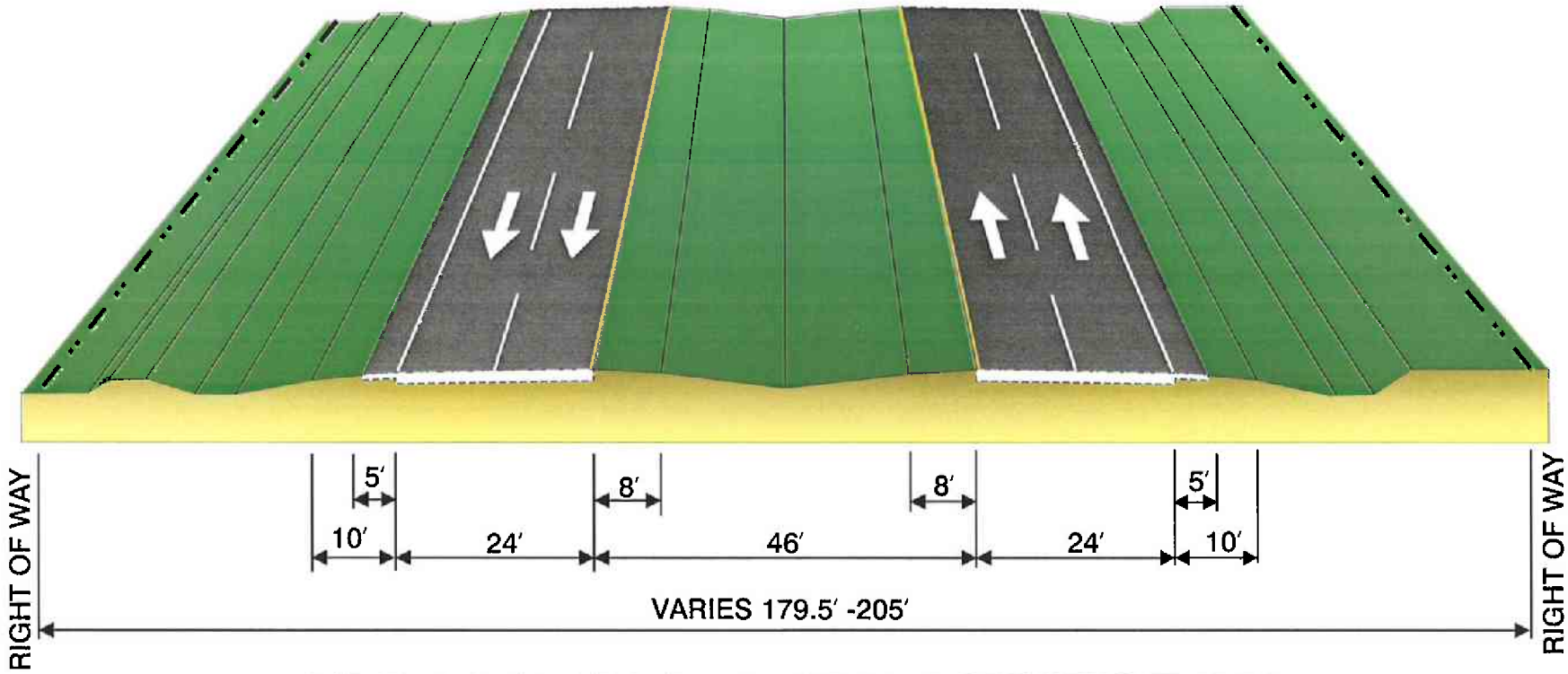
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

EXISTING ROADWAY TYPICAL SECTION

WPI SEG. NO: 407951 1
FAP NO: 300 - 1 (7)

FIGURE 4-3



WEST of CLINTON BLVD. to WEST of CANDLELIGHT BLVD.
[along the BROOKSVILLE BYPASS]

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

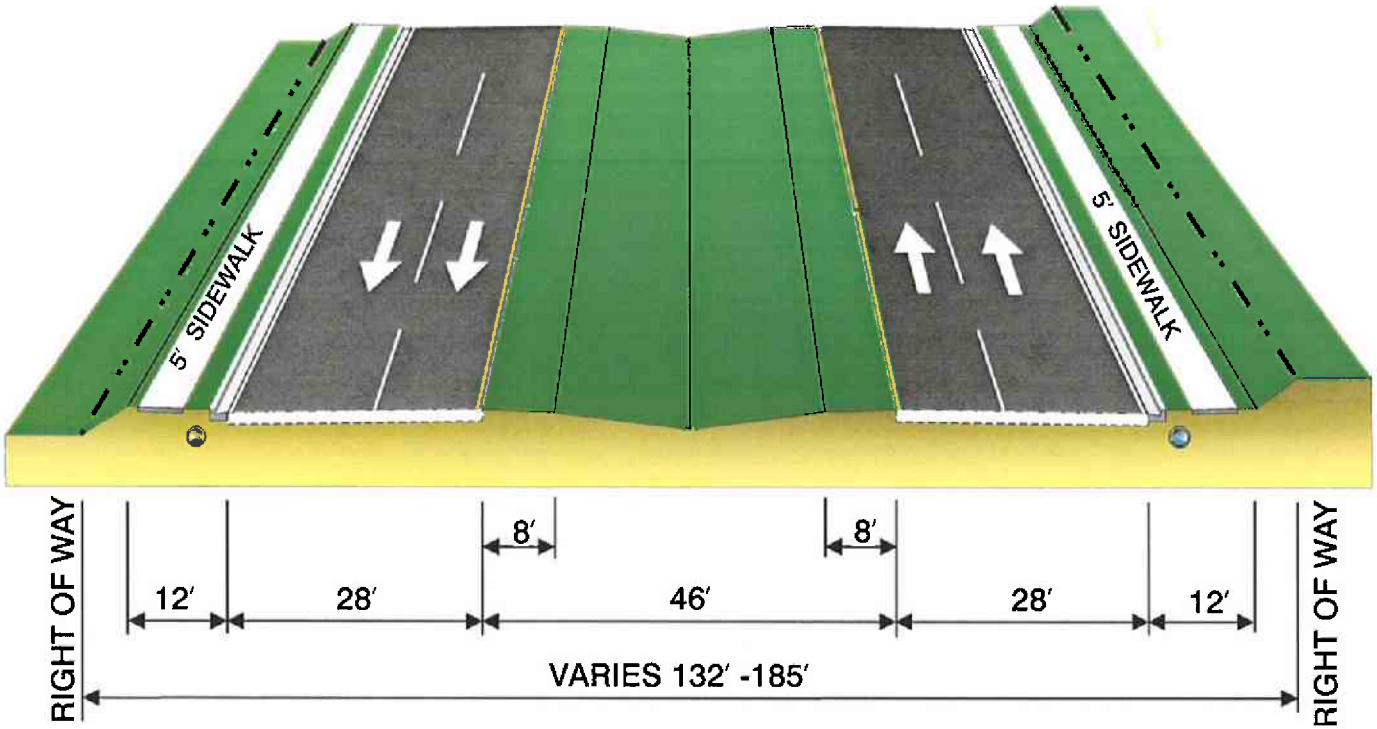
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

EXISTING ROADWAY TYPICAL SECTION

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 4-4



WEST of CANDLELIGHT BLVD. to EAST of RAY BROWNING RD.
[along the BROOKSVILLE BYPASS]

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

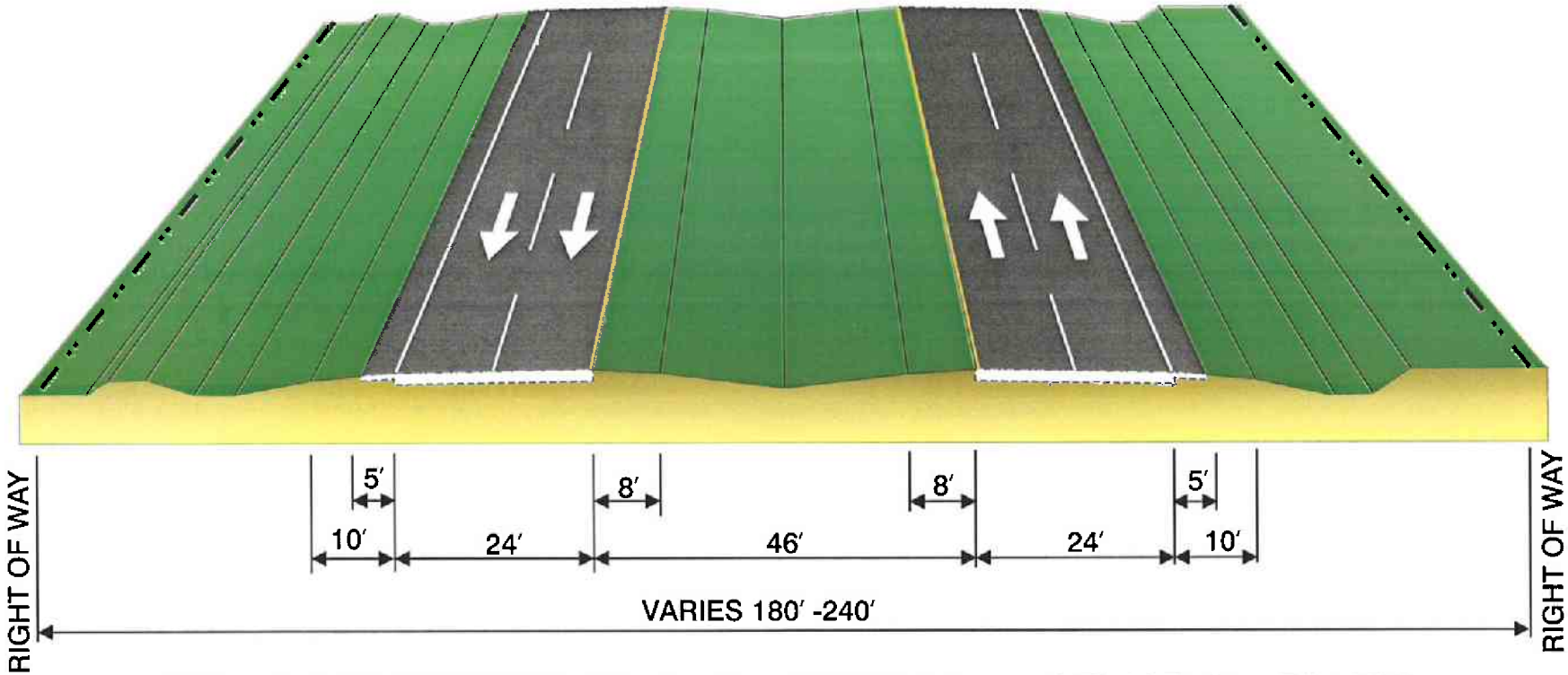
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

EXISTING ROADWAY TYPICAL SECTION

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 4-5



EAST of RAY BROWNING RD. to the EASTERN INTERSECTION S.R. 50 / 50A
[along the BROOKSVILLE BYPASS]

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

EXISTING ROADWAY TYPICAL SECTION

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 4-6

Table 4-1: Existing Typical Section Data

From	To	Number & Width of Lanes (Feet)	Median Type & Width (Feet)	Type of Curb & Gutter or Gutter	Shoulder Type & Width (Feet)
U.S. 19 (S.R. 55)	West of the west S.R. 50/ S.R.50A Intersection	4(12.0')	Grass (40.0')	N/A	Total (10.0') Paved (5.0')
West of the west S.R. 50/S.R. 50A Intersection	East of the west S.R. 50/S.R. 50A Intersection [along the Brooksvilie Bypass]	4(12.0') & 2(4.0') bicycle lanes	Grass (20.0' – 29.5')	Type E (Inside) Type F (Outside)	N/A
East of the west S.R. 50/S.R. 50A Intersection	West of Clinton Blvd. [along the Brooksville Bypass]	4 (12.0')	Grass (29.5' – 46.0')	N/A	Total (10.0') Paved (5.0')
West of Clinton Blvd.	West of Candlelight Blvd. [along the Brooksville Bypass]	4(12.0')	Grass (46.0')	N/A	Total (10.0') Paved (5.0')
West of Candlelight Blvd.	East of Ray Browning Rd. [along the Brooksville Bypass]	4(12.0') & 2(4.0') bicycle lanes	Grass (46.0')	N/A (Inside) Type F (Outside)	N/A
East of Ray Browning Rd.	East Intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass]	4(12.0')	Grass (46.0')	N/A	Total (10.0') Paved (5.0')

4.1.3 Pedestrian and Bicycle Facilities

The existing pedestrian facilities in the Study area are limited. Sidewalks are provided along S.R. 50 at the following locations:

- South side of the west leg of the S.R. 50/S.R. 50A intersection from approximately 671 feet west of the intersection, which extends to the west side of the south leg of the S.R. 50/S.R. 50A intersection for a distance of approximately 358 feet

- East side of the south leg of the S.R. 50/S.R. 50A intersection for a distance of approximately 358 feet

- North and South side of S.R. 50 from approximately 519 feet west of Candlelight Boulevard to 681 feet east of Ray Browning Road [along the Brooksville Bypass]

The majority of the sidewalk within the Study corridor is 5 feet in width (with a 1-foot utility strip); however, there are isolated locations where a 6-foot sidewalk (without a utility strip) is provided. Sidewalks are also provided along five of the side streets, and one side street only has curb cut ramps. Mariner Boulevard has sidewalk along both sides of the south leg of the intersection, and curb-cut ramps are located on all four corners of the intersection. Cobb Road, S.R. 50A (W. Jefferson Street) and Buck Hope Road have sidewalks along both sides of the roadway. Sidewalks are present along both sides of the north and south legs of the Broad Street (U.S. 41) intersection. Hernando County's *Comprehensive Plan* [1] identifies that sidewalks are planned along both sides of S.R. 50 [along the Brooksville Bypass] from the west intersection of S.R. 50/S.R. 50A to Mitchell Road/Main Street (C.R. 445) by the Year 2015.

There are continuous, existing bicycle facilities provided along the S.R. 50 corridor via paved shoulders or designated bicycle lanes that were constructed as part of the widening of S.R. 50 from a 2-lane typical

section to the existing 4-lane typical section. The existing bicycle facilities are identified within Hernando County's *Comprehensive Plan* [1]. In addition, the Suncoast Trail (a pedestrian and bicycle recreational trail) crosses S.R. 50 approximately 600 feet west of the Suncoast Parkway.

Table 4-2 shows the signalized intersections within the Study corridor that provide crosswalks and/or pedestrian pushbuttons.

Table 4-2: Existing Signalized Intersection Data

Cross Street	Crosswalk	Pedestrian Push Button
S.R. 50		
U.S. 19 (S.R. 55)	None	None
Deltona Blvd.	None	None
Oak Hill Hospital Rd.	None	None
Highpoint Blvd.	None	None
Mariner Blvd.	All Four Approaches	All Four Approaches
Twin Dolphin Dr./ Sunshine Grove Rd.	None	None
Barclay Ave./ Brookridge Central	East and South Leg of the Intersection	SW, SE and NE Quadrants
Southbound Suncoast Parkway Ramp (S.R. 589)	None	None
Northbound Suncoast Parkway Ramp (S.R. 589)	None	None
Winter St.	None	None
S.R. 50A (West)	All Four Approaches	All Four Approaches
S.R. 50 [along the Brooksville Bypass]		
Emerson Rd.	None	None
Buck Hope Rd.	South Leg	SW and SE Quadrants
Broad St. (U.S. 41)	All Four Approaches	All Four Approaches
Mitchell Rd./Main St.	All Four Approaches	All Four Approaches
S.R. 50A (East)	None	None

4.1.4 Right-of-Way

The existing right-of-way along S.R. 50 from U.S. 19 (S.R. 55) to the east intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass] ranges from 100 feet to 240 feet. The existing right-of-way width information was obtained from as-built construction plans and right-of-way maps for S.R. 50. Table 4-3 summarizes the existing right-of-way widths along the Study corridor, which are also shown on the conceptual plans contained in Appendix A.

Table 4-3: Summary of Existing Right-of-Way Widths

Roadway Segment	Right-of-Way Width (Feet)
S.R. 50	
U.S. 19 (S.R. 55) to Nunn Blvd.	200.0
Nunn Blvd. to Colorado St.	200.0 to 260.4
Colorado St. to Shannon Rd.	215.0
Shannon Rd. to Mobley Rd.	205.0 to 250.0
Mobley Rd. to the west intersection of S.R. 50/S.R. 50A	112.5 to 250.0
S.R. 50 [along the Brooksville Bypass]	
West intersection of S.R. 50/S.R. 50A to Clinton Blvd.	120.3 to 190.0
Clinton Blvd. to Horse Lake Rd.	158.6 to 190.0
Horse Lake Rd. to Candlelight Blvd.	132.0 to 185.0
Candlelight Blvd. to Buck Hope Rd.	137.0 to 142.0
Buck Hope Rd. to Broad St. (U.S. 41)	135.0 to 182.0
Broad St. (U.S. 41) to June Ave.	140.0 to 163.7
June Ave. to Ray Browning Rd.	135.0 to 163.6
Ray Browning Rd. to Hale Ave.	164.0 to 180.0
Hale Ave. to Mitchell Rd.	185.0 to 210.0
Mitchell Rd. to Oxley Rd.	183.5 to 200.0
Oxley Rd. to Emerson Rd.	200.0 to 225.0
Emerson Rd. to the east intersection of S.R. 50/S.R. 50A	140.0 to 230.0

4.1.5 Horizontal Alignment

Table 4-4 summarizes the existing horizontal alignment characteristics for S.R. 50 based on information obtained from as-built construction plans.

As illustrated in Table 4-4, the existing alignment of S.R. 50 within the Study corridor is primarily tangent along its length, but also contains 11 horizontal curves.

Table 4-4: Existing Horizontal Alignment Characteristics

Approximate Milepost	Location	Degree and Direction of Deflection	Degree of Curvature
S.R. 50			
0.101	534.6 feet east of U.S. 19 (S.R. 55)	49°49'00" (Lt.)	02°56'52"
2.187	362.4 feet west of Hunt Ln.	28°58'00" (Rt.)	00°30'00"
6.207	1134.3 feet east of Wiscon Rd. (C.R. 570)	44°28'00" (Lt.)	01°57'52"
6.835	609.3 feet east of B.W. Stevenson Rd.	45°00'00" (Rt.)	02°02'13"
8.813	3991.0 feet east of Lykes Dublin Rd.	50°02'32" (Lt.)	02°00'00"
9.791	540.6 feet west of S.R. 50A (West)	50°55'39" (Rt.)	02°12'30"
S.R. 50 [along the Brooksville Bypass]			
0.525	705.6 feet east of Clinton Blvd.	72°04'25.60" (Lt.)	03°00'00"
1.689	514.4 feet west of June Ave.	01°36'20.84" (Lt.)	00°45'00.15"
2.002	86.8 feet east of Sabra Dr.	17°54'00.01" (Lt.)	02°00'00"
3.286	24.4 feet east of Emerson Rd.	36°58'44" (Lt.)	01°58'45"
3.645	1006.8 feet west of S.R. 50A (East)	07°42'19.01" (Lt.)	2°00'00"

4.1.6 Vertical Alignment

The as-built construction plans were utilized to compile the existing vertical alignment information presented in Table 4-5, which is broken down into two sections:

- S.R. 50, from U.S. 19 to the west S.R. 50/S.R. 50A intersection
- S.R. 50 [along the Brooksville Bypass]

The approximate elevations for the existing roadway vary from a low elevation of 23.4± National Geodetic Vertical Datum (NGVD, 1929) just east of the S.R. 50 and U.S. 19 (S.R. 55) to a high elevation of 147.0± just west of Hale Avenue/Hope Hill Road. Note that the higher elevations are located within the eastern section of S.R. 50 [along the Brooksville Bypass].

As provided in Table 4-5, portions of S.R. 50 currently provide grades equal to or less than the minimum standard grade of 0.3 percent (*Plans Preparation Manual – English, January 2003)* [2]. In addition, stopping sight distance deficiencies might exist at the locations where high elevations are present. The existence of deficiencies will be verified during the design phase and modifications to the roadway geometry will be implemented to provide the standard stopping sight distance, if required.

Table 4-5: Existing Vertical Alignment Characteristics

Approximate Milepost	Location	Approximate Point Elevation (Feet)	Grade to Next Point
S.R. 50			
0.075	395.1 feet east of U.S. 19/S.R. 55	24.5	-0.5%
0.121	640.0 feet east of U.S. 19/S.R. 55	23.4	+0.7%
0.519	298.9 feet east of Deltona Blvd.	38.6	-0.6%
0.721	120.2 feet west of Ovenbird Dr.	31.9	0.0%
0.939	18.4 feet east of Seahorse Ave.	31.9	+0.7%
1.172	97.8 feet east of Oregon Jay Dr.	40.0	-1.0%
1.387	51.2 feet east of Nightwalker Rd./July Ave.	29.2	0.0%
2.445	178.4 feet west of the Oak Hill Hospital Entrance	29.2	+1.5%
3.043	800.0 feet east of Highpoint Blvd./Community Blvd.	76.1	0.0%
3.357	1,190.9 feet west of Weeping Willow St.	76.1	+0.5%
4.112	836.4 feet west of Chamboro St.	96.6	-0.9%
4.341	376.1 feet east of Chamboro St.	86.0	0.0%
4.507	439.5 feet west of Sunshine Grove Rd.	86.0	+1.2%
4.706	610.5 feet east of Sunshine Grove Rd.	98.7	-0.9%
5.482	605.1 feet west of Grove Rd.	61.2	0.0%
5.780	965.0 feet east of Grove Rd.	61.2	+0.6%
6.423	981.1 feet east of Winter St.	81.5	-0.7%
6.587	700.0 feet west of B.W. Stevenson Rd.	75.1	+0.6%
7.734	206.3 feet west of Colorado St.	108.3	-0.9%
8.038	102.9 feet west of Lykes Dublin Rd.	93.2	+0.3%
8.303	1,297.1 feet east of Lykes Dublin Rd.	97.2	-0.5%
8.606	2,898.0 feet east of Lykes Dublin Rd.	89.0	+0.2%
8.874	2,960.2 feet west of Mobley Rd.	91.5	-0.3%
9.367	360.2 feet west of Mobley Rd.	84.0	+0.1%
9.670	1,239.8 feet east of Mobley Rd.	85.3	+0.3%
9.774	627.1 feet west of S.R. 50A (West)	87.0	-0.8%
9.822	377.1 feet west of S.R. 50A (West)	84.9	+0.7%
9.892	6.0 feet west of S.R. 50A (West)	87.3	----
S.R. 50 [along the Brooksville Bypass]			
0.044	232.6 feet south of S.R. 50A (West)	83.7	+0.6%
0.124	561.0 feet north of Donto Rd.	86.2	-0.4%
0.323	357.7 feet east of Clinton Blvd.	82.4	+0.1%
0.516	657.7 feet east of Clinton Blvd.	82.8	-2.2%
0.533	240.0 feet east of Horse Lake Rd.	80.8	+0.1%
0.688	580.0 feet east of Horse Lake Rd.	81.7	-0.2%
0.818	1361.0 feet west of Candlelight Blvd.	80.6	+0.3%
1.055	111.0 feet west of Candlelight Blvd.	83.9	-0.4%
1.209	740.0 feet west of Buck Hope Rd.	80.3	+0.6%
1.589	1,038.2 feet west of June Ave.	91.9	+1.9%
2.142	570.9 feet west of Hale Ave./Hope Hill Rd.	147.0	-1.0%
2.694	930.3 feet east of Mitchell Rd./Main St.	118.0	-0.4%
3.125	821.3 feet west of Emerson Rd.	108.0	-0.5%
3.338	298.7 feet east of Emerson Rd.	102.2	-0.2%
3.529	1,618.7 feet west of S.R. 50A (East)	99.9	-0.4%
3.639	1,038.7 feet west of S.R. 50A (East)	102.1	+0.4%
3.793	224.7 feet west of S.R. 50A (East)	99.2	----

4.1.7 Drainage

4.1.7.1 Soils Information

The United States Department of Agriculture Soil Conservation Service's (SCS) *Soil Survey of Hernando County, Florida* [3] was reviewed to identify the soil types within the Study corridor. In general, soils are sandy or sandy over loamy and/or clayey material and range from very poorly drained to excessively drained in areas that are nearly level to strongly sloping. In addition, there are areas within the Study corridor in the vicinity of the Suncoast Parkway that are characterized by shallow plastic soils. More information regarding the soil types and characteristics is provided in Section 4.1.8.

4.1.7.2 Base Floodplains

The National Flood Insurance Program (NFIP), through the Federal Emergency Management Agency (FEMA), has established the 100-year base floodplain limits for Hernando County, which include the boundaries shown in the Flood Insurance Rate Maps (FIRM) referenced below for the S.R. 50 Study area. The FIRMs for the Study area include Community Panel Numbers 120110 0140 B, 120110 0150 B, 120110 0175 B and 120110 0190 B (dated April 17, 1984) and 120333 0001 C (dated September 18, 1986), which are illustrated in Figure 4-7.

Portions of the proposed roadway widening will encroach upon the 100-year base floodplain. The Southwest Florida Water Management District (SWFWMD) Environmental Resource Permit (ERP) Information Manual (Section 4.4, 10/96 version) states that no net encroachment into the floodplain, up to that encompassed by the 100-year event, which will adversely effect either conveyance, storage, water quality or adjacent lands will be allowed and the required compensating storage shall be equivalently provided. Floodplain-compensatory storage will be provided as required by the SWFWMD.

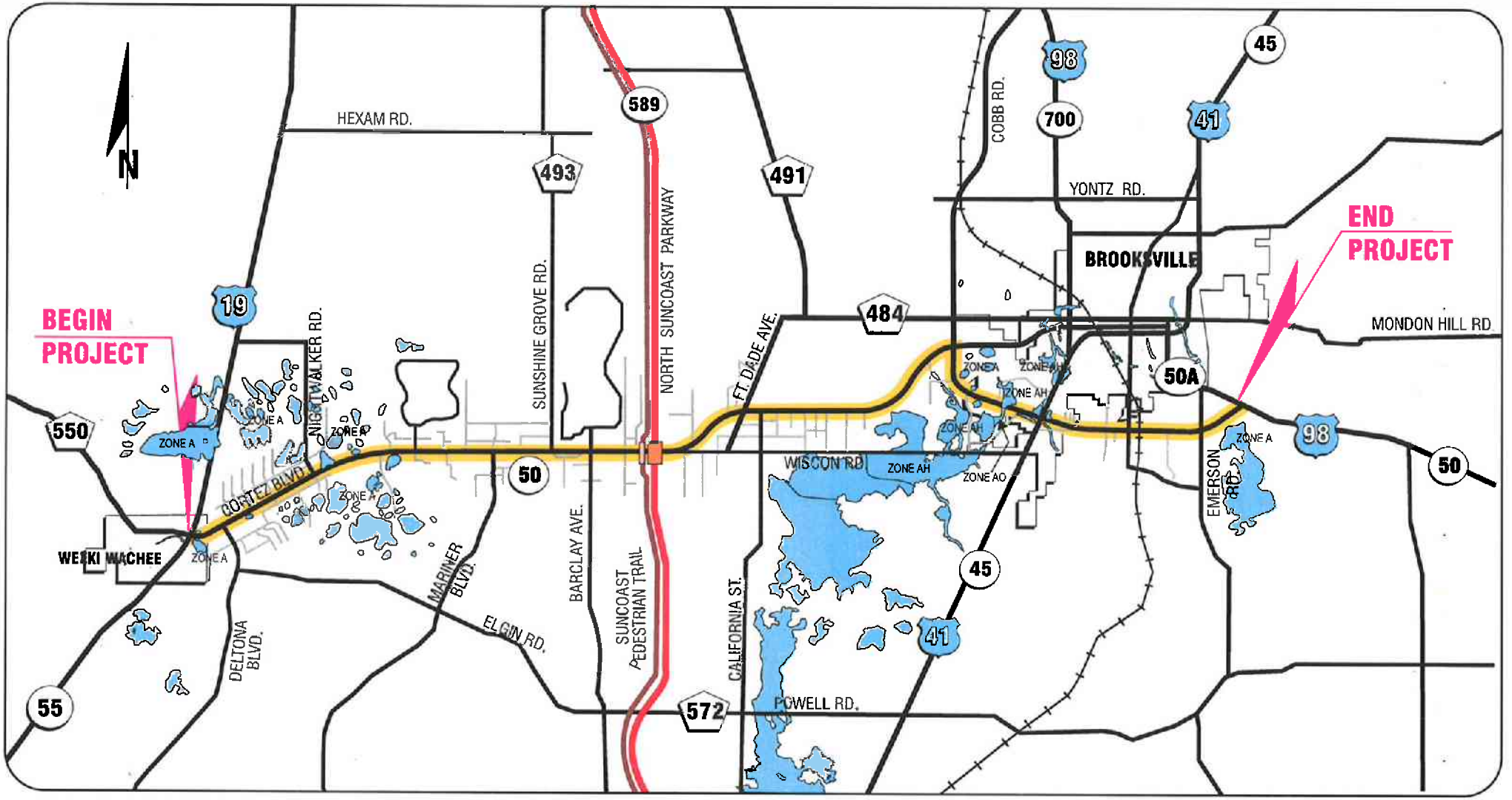
4.1.7.3 Regulated Floodways

According to the FEMA flood boundary and floodway maps, regulated floodways do not exist within the Study limits.

4.1.7.4 Drainage Patterns

The existing drainage patterns, sub-basin and basin boundaries were determined based on the existing FDOT construction plans, USGS quadrangle and SWFWMD maps.

The project has been delineated into thirteen basins, A through M, which are described in detail within the project's *Pond Siting*



LEGEND

- Project Study Limits
- Major Interchange
- Railroad
- 100yr. Floodplains

Reference: FEMA Maps Panel Numbers 1201110 0140 B, 120413, 120110 0150 B, 120110 0175 B, 120333 0001 C and 120110 0190 B

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

FLOODPLAINS MAP

WPI SEG. NO: 407951 1
FAP NO: 300 - 1 (7)

FIGURE 4-7

Report. These basins contain numerous sub-basins that were utilized for the current hydrologic evaluation. The overall drainage area contributing to S.R. 50 is shown on the Drainage Map in Figure 4-8. Within the immediate vicinity of S.R. 50, wetlands are very sparse and predominantly consist of isolated depressions. The overland flow eventually is conveyed to these depressions. Most of the storm water runoff travels from north to south through commercial, residential, woods and open land. Drainage along the project corridor is accomplished with a combination of roadside ditches, cross drains, and side drainpipes that are located under driveways and roadways. These basins along the corridor are considered to be closed basins and some are located within the Peck Sink Watershed near the west intersection of S.R. 50/S.R. 50A.

Seven existing concrete box culverts (CBC) were identified along S.R. 50 based on the results of project field reviews, which are summarized in Table 4-6.

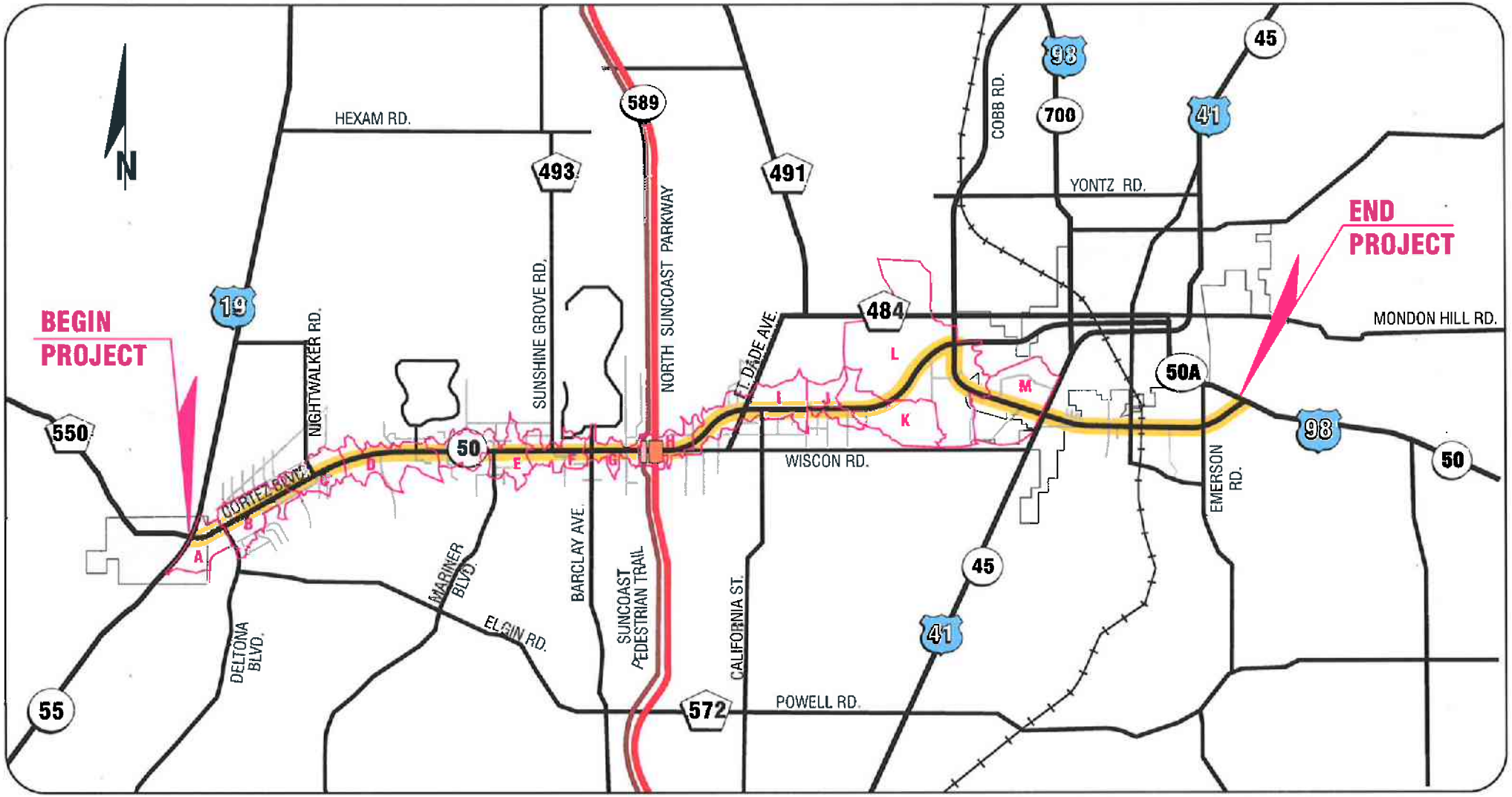
On-site and off-site sub-basin areas that affect the conveyance of runoff from the S.R. 50 right-of-way between U.S. 19 (S.R. 55) and U.S. 41 were determined for the purpose of estimating the proposed storm water management facility needs for each sub-basin.

Based on interpretation of limited data and in concurrence with the previously approved FDOT Reports from the previous PD&E Study, it is anticipated that dry detention will be used in the design of the required storm water management facilities for basins A, B, C, D, E, F, G, H and I. A wet detention/retention facility may be warranted for basins J, K, L and M due to soils and groundwater conditions. These basins discharge into isolated/ depressional areas (closed basins). Discharge is accomplished through percolation into the ground and evapo-transpiration.

Table 4-6: Summary of Box Culverts

Structure	Location	No. of Cells	Length	Cell Opening	
				Height	Width
S.R. 50, from U.S. 19 to the west S.R. 50/S.R. 50A intersection					
Bridge No. 080065, S.R. 50 over Tyler Drain	M.P. 8.150	2	168' (Perpendicular to the roadway centerline), 233' (along the culvert)	6'0"	9'0"
Bridge No. 080037, S.R. 50 over Horse Lake Overflow	M.P. 9.428	4	172' (Headwall to headwall distance)	7'0"	8'9"
S.R. 50 [along the Brooksville Bypass]					
Box Culvert	M.P. 0.508	1	172'6" (Headwall to headwall distance)	6'0"	8'0"
Bridge No. 080006, S.R. 50 over Horse Lake Creek	M.P. 1.153	3	124' (Perpendicular to the roadway), 136' (Headwall to headwall distance)	7'0"	8'0"
Box Culvert	M.P. 1.402	2	130' (Perpendicular to the roadway), 156' (Headwall to headwall distance)	4'0"	8'0"
Box Culvert	Sta. 373+70	2	255'(Perpendicular to the roadway)	6'0"	8'0"
Box Culvert	M.P. 3.266	1	Unknown	5'0"	7'0"

GRAPHICS: JOBS / PD&E / DIST 7 / SR 50 / REPORTS / PER / PER.CDR / FIG 4-8 / 05-09-03



LEGEND

- Project Study Limits
- Major Interchange
- Railroad
- Drainage Basin Boundary

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

DRAINAGE BASINS

WPI SEG. NO: 407951 1
FAP NO: 300 - 1 [illegible]

FIGURE 4-8

4.1.7.5 Drainage Problems

Based on the results of the data collection and field reconnaissance, the existing drainage systems within the project limits appear to function adequately with the only flooding problems located along S.R. 50 Brooksville Bypass from the west intersection of S.R. 50/S.R. 50A to U.S. 41 [along the Brooksville Bypass], which are a result of clayey soils with a perched water table. In addition, the City of Brooksville as well as the FDOT Maintenance Office indicated there are known flooding problems due to clayey soils and the development of low areas near the west intersection of S.R. 50/S.R. 50A.

4.1.8 Geotechnical Data

The soils within the limits of the Study corridor can be categorized according to the USDA SCS's *Soil Survey of Hernando County, Florida.* The predominant soil map units located within the Study corridor and the corresponding characteristics are summarized in Table 4-7. Figure 4-9A through 4-9C illustrates the location of each of the soil map units. A brief description of the soils within the Study corridor follows; however, for a more detailed description of the soils refer to the *Preliminary Geotechnical Report* [4].

The majority of the Study corridor is underlain by select soils, such as American Association of State Highway and Transportation Officials (AASHTO) classified soils as A-3 and A-2-4. There are areas within the Study corridor that are underlain by shallow plastic soils (A-2-6, A-4, A-6 and A-7). These areas are in Section 30, R19E, T22S, on either side of the Suncoast Parkway that cross S.R. 50 for approximately 1,700 feet, as well as several areas on S.R. 50 [along the Brooksville Bypass] for approximately 7,000 feet.

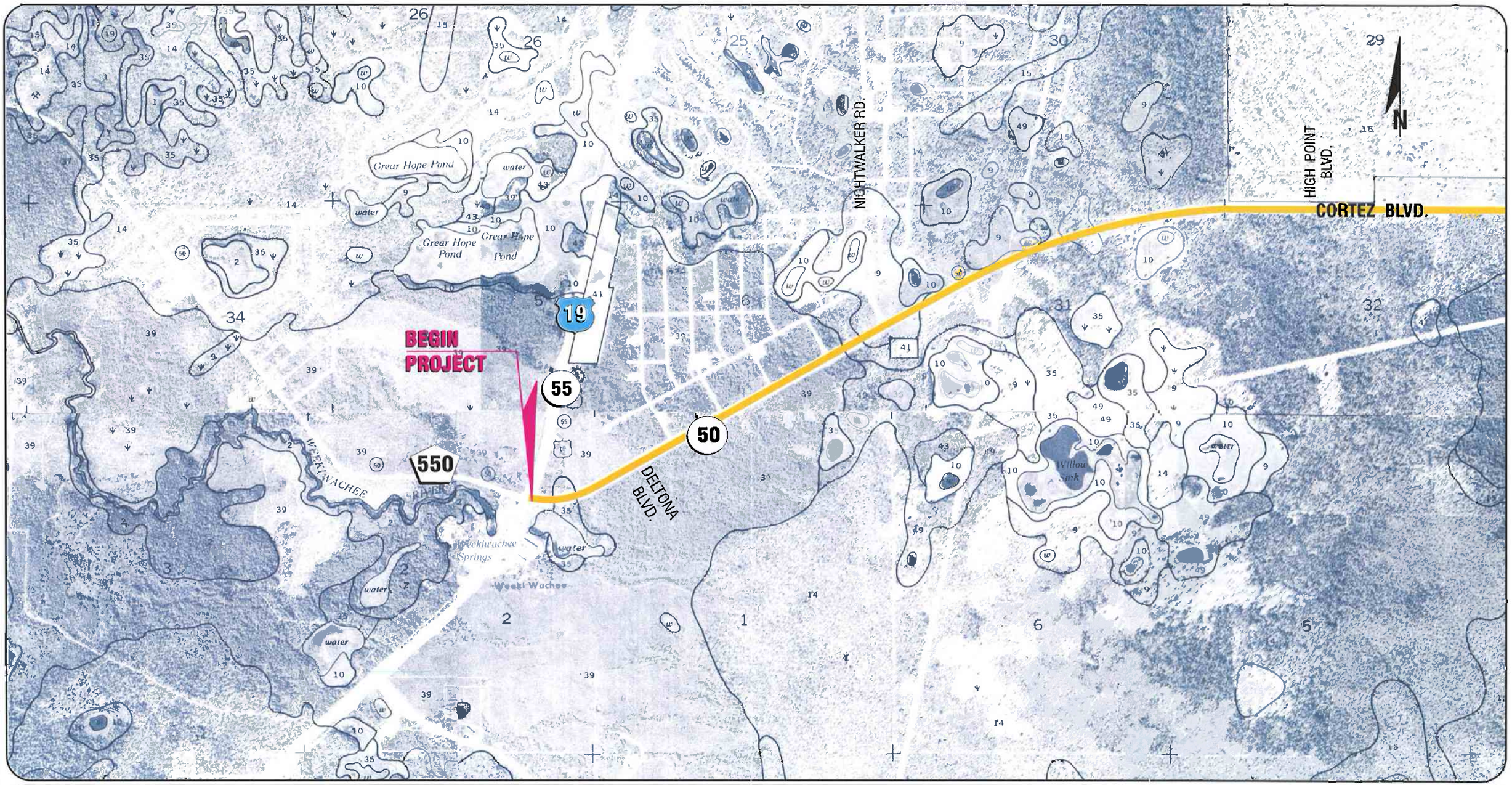
The area within the Study corridor has groundwater levels greater than 6 feet below the existing grades. However, in the areas where plastic soils are present, a perched groundwater table can be expected immediately after storm events. Also, in areas with lower elevations, the groundwater levels can be expected to be near the existing ground surface.

The surficial geologic material within the Study area consists of sporadic relic dune sand and the residual elements of the Hawthorne Group, with parts of the project having undifferentiated sands and clays. Most of these surficial soils are relatively unconsolidated sands and sandy clays. The thin and somewhat absent Hawthorne soils may consist of fine to medium grained unconsolidated quartz sand, silt, clay and limestone.

In some areas, the Ocala limestone is present at or very close to ground surface. This limestone has experienced significant dissolution and the creation of an intricate cavernous system. Problems in the development of sinkholes are related to the size and depth of the limestone and these

underground cavities. The upper surface of this limestone is highly irregular.

S.R. 50 crosses areas of West Central Florida that have a known history for the formation of sinkholes. The potential for sinkhole activity is based on the recorded documentation of the formation of sinkholes and the geology of the area.



FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

PD&E STUDY REEVALUATION

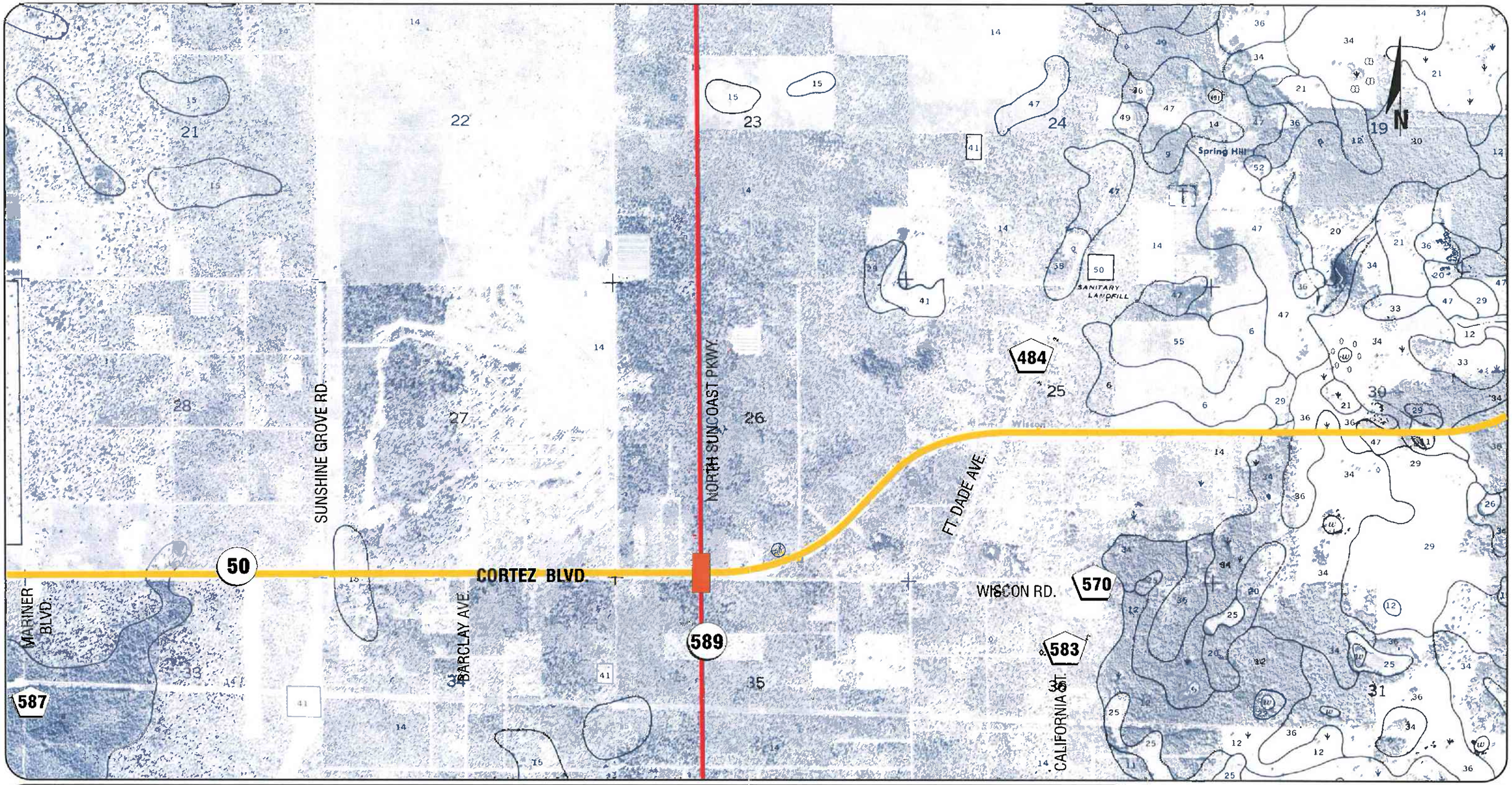
From U.S. 19 (S.R. 55) to the East Intersection of S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

SOILS MAP

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 4-9-A

GRAPHICS JOB: PD&E DIST 7 SR 50 REPORTS FEB PLR SOILS 4.COR FIG 4-9-A 06/30/03



FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

PD&E STUDY REEVALUATION

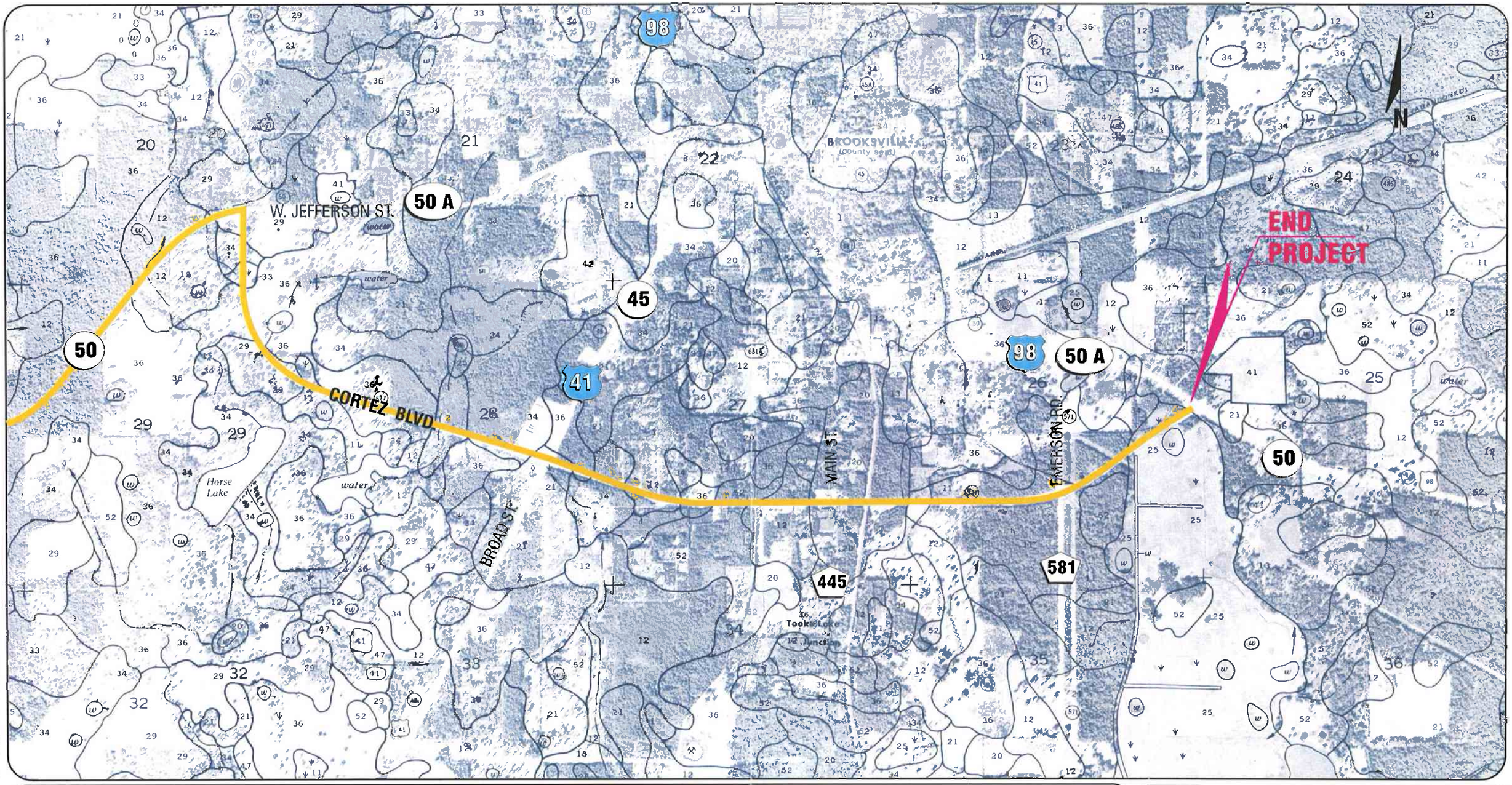
From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

SOILS MAP

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 4-9-B

GRAPHICS JOBS PD&E WEST SR50 REPORTS FEA PER SOILS-LCDR FIG 4-9-B 06-30-03



FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

SOILS MAP

WPI SEG. NO. 4079511
FAP NO. 300 - 1 (7)

FIGURE 4-9-C

GRAPHICS JOBS PD&E DISTRICT WIDE REPORTS FIG PER SOILS-4.CDR FIG 4-9-C 06/19/03

Table 4-7: Summary of Soil Information

HERNANDO COUNTY USDA SOIL SURVEY							
		Soil Classification			Seasonal High Water Table		
USDA Map Unit	Depth (Inches)	USCS	AASHTO	Permeability (Inch/Hour)	Depth (Feet)	Kind	Month
Astatula (8)	0 – 85	SP, SP-SM	A-3	>20.0	>6.0	----	----
Basinger (9)	0 – 80	SP, SP-SM	A-3, A-2-4	>20.0	0 – 1.0	Apparent	June – November
Blichton (11 & 12)	0 – 28 28 – 34 34 – 63 63 – 75	SP-SM, SM SC SC SC, CL, CH	A-2-4, A-3 A-2-4, A-2-6 A-6 A-6, A-7	6.0 – 20.0 2.0 – 6.0 0.6 – 2.0 0.2 – 0.6	0 – 1.0	Apparent	June – September
Candler (14 & 15)	0 – 48 48 – 80	SP, SP-SM SP-SM	A-3 A-3, A-2-4	>20.0 6.0 – 20.0	>6.0	----	----
Flemington (20 & 21)	0 – 5 5 – 36 36 – 66 66 – 81	SM SC, CH, CL CH, MH, CL CH, MH	A-2-4 A-7 A-7 A-7	2.0 – 20.0 <0.06 <0.06 <0.06	0 – 2.5	Perched	June – September
Floridana Variant (25)	0 – 8 8 – 22 22 – 42 42 – 59 59 – 80	SM SM SC SM SC, CL, CH	A-2-4 A-2-4 A-2-4, A-2-6, A-4, A-6 A-2-4, A-2-6, A-4 A-4, A-6, A-7	6.0 – 20.0 6.0 – 20.0 0.6 – 6.0 2.0 – 6.0 0.06 – 0.2	+2.0 – 1.0	Apparent	June – February
Kendrick (29)	0 – 28 28 – 34 34 – 63 63 – 80	SP-SM SC, SM-SC SC SC, SM-SC	A-3, A-2-4 A-2-6, A-2-4 A-2-6, A-6 A-2-6, A-2-4	6.0 – 20.0 0.6 – 2.0 0.6 – 2.0 0.6 – 2.0	>6.0	----	----
Micanopy (33 & 34)	0 – 18 18 – 25 25 – 62	SM, SP-SM SC CH	A-2-4 A-2-6, A-6, A-7 A-7	6.0 – 20.0 0.6 – 2.0 0.06 – 0.2	1.5 – 2.5	Perched	July – November
Myakka (35)	0 – 23 23 – 37 37 – 80	SP-SP-SM SM, SP-SM SP, SP-SM	A-3 A-3, A-2-4 A-3	6.0 – 20.0 0.6 – 6.0 6.0 – 20.0	0 – 1.0	Apparent	June – February
Nobleton (36)	0 – 33 33 – 37 37 – 60 60 – 80	SP-SM, SM SC SC, CL, CH, SC SM, SM-SC, SC	A-2-4 A-2-6, A-6 A-6, A-7 A-2-6, A-6 A-2-4, A-2-6, A-6	6.0 – 20.0 0.2 – 2.0 0.2 – 0.6 0.2 – 2.0 0.2 – 6.0	1.5 – 3.5	Perched	July – October
Paola (39)	0 – 26 26 – 99	SP SP	A-3 A-3	>20.0 >20.0	>6.0	----	----
Sparr (47)	0 – 61 61 – 64 64 – 80	SP-SM SM, SC-SM SC, SM-SC	A-3, A-2-4 A-2-4 A-2-4, A-2-6, A-4, A-6	6.0 – 20.0 0.6 – 2.0 0.6 – 2.0	1.5 – 3.5	Perched	July – October
Wacreshula (52)	0 – 8 8 – 24 24 – 31 31 – 38 38 – 80	SP-SM SP-SM SP-SM, SM SP-SM,SM SM, SM-SC, SC	A-3, A-2-4 A-3, A-2-4 A-3, A-2-4 A-3, A-2-4 A-2-4, A-2-6, A-4, A-6	6.0 – 20.0 6.0 – 20.0 0.6 – 6.0 6.0 – 20.0 0.6 – 6.0	0 – 1.0	Apparent	June – February

4.1.9 Crash Data

In order to evaluate the safety of traffic operations within the Study corridor, the annual crash data for the years 1995 through 1999 were obtained from FDOT District Seven. During the five-year period, a total of 585 crashes were reported. Fourteen of these crashes (2% of the five-year total) resulted in fatalities. In addition, 72% of the five-year crash total consisted of serious injury crashes. There were only 10 DUI crashes during the five-year Study period, which represents only 2% of the total crashes.

Rear end crashes were the most frequent crash type within the Study corridor, which resulted in a total of 240 crashes or 41% of all crashes over the five-year study period. Crashes related to intersection operations included 91 right-angle crashes and 106 left-turn crashes that comprise 16% and 18% of the total crashes for the five-year study period, respectively.

The majority of the crashes are concentrated at the following five intersections along S.R. 50: Deltona Boulevard, High Point Boulevard/ Community Boulevard, Mariner Boulevard (C.R. 587), Sunshine Grove Road/Twin Dolphin Drive, and Breckenridge Central Boulevard/Barclay Avenue. In most cases, crashes seemed to predominantly involve westbound traffic. It is quite possible that the visibility of westbound traffic is affected during sunset, making it hard to see the yellow and red signal indications. This is not unusual in Florida, especially on roads like S.R. 50 that run almost due east and west. Signal visibility is not as severe a problem during sunrise hours.

The safety ratios were also calculated for segments located along the Study corridor. The safety ratio calculations are based on the methodology outlines in the Highway Safety Improvement Program Guideline prepared by FDOT. All of the safety ratios determined for the Study corridor were below 1.000, which indicates that the specific segment experiences vehicle collisions below the statewide average for similar facilities.

Tables 4-8 and 4-9 are summaries of the crash data at the locations analyzed. The information in these tables include collision type, crash severity (fatal, injury and property damage), time of day and prevailing pavement conditions. Total economic loss was approximately $106.0 million for the five-year period, which equates to an average economic loss of approximately $21.2 million per year.

Table 4-8: Crash Summary for Roadway Segments along S.R. 50

Intersection	U.S. 19 (S.R. 55) to Deltona Blvd.						Deltona Blvd. to High Point Blvd./ Community Blvd.						High Point Blvd./Community Blvd. to Mariner Blvd.						Mariner Blvd. to Sunshine Grove Rd./ Twin Dolphin Dr.					
Collision Type	1995	1996	1997	1998	1999	Total	1995	1996	1997	1998	1999	Total	1995	1996	1997	1998	1999	Total	1995	1996	1997	1998	1999	Total
Rear End	5	2	3	2	5	17	5	4	2	7	2	20	4	6	5	6	3	24	9	11	3	7	6	36
Left Turn	8	3	7	5	4	27	1	7	1	2	1	12	3	5	2	2	2	14	0	0	0	2	1	3
Angle	1	2	6	2	4	15	1	0	4	1	5	11	1	1	1	2	0	5	1	3	1	2	0	7
Sideswipe	0	0	0	2	0	2	0	2	3	1	0	6	0	2	1	1	1	5	1	1	2	2	3	9
Right Turn	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	1	0	0	0	1	0	1
Ped./Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Fixed Object	0	0	1	2	1	4	0	2	0	1	0	3	0	1	0	2	1	4	1	2	0	1	0	4
Overturn	1	0	0	1	1	3	2	0	0	0	1	3	0	0	0	1	0	1	0	1	0	0	1	2
Head On	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Other	0	0	1	0	0	1	0	0	0	1	0	1	0	0	0	0	1	1	0	1	0	0	1	2
Fatal	0	0	0	1	0	1	0	1	0	0	0	1	1	0	0	0	1	2	0	1	0	0	0	1
Injury	12	4	15	10	13	54	8	11	9	11	8	47	7	9	6	12	6	40	5	16	6	9	8	44
Property Damage	3	3	4	3	2	15	2	3	1	2	1	9	0	7	3	2	2	14	7	2	1	6	4	20
Day	14	5	13	10	10	52	9	10	10	12	9	50	7	16	8	12	5	48	9	11	5	7	7	39
Night	1	2	6	4	5	18	1	5	0	1	0	7	1	0	1	2	4	8	3	8	2	8	5	26
Wet	1	3	4	2	3	13	3	5	1	4	2	15	2	1	2	4	0	9	2	7	1	2	3	15
Dry	14	4	15	12	12	57	7	10	9	9	7	42	6	15	7	10	9	47	10	12	6	13	9	50

Intersection	Sunshine Grove Rd./Twin Dolphin Dr. to Brookridge Blvd./Barclay Ave.						Brookridge Blvd./Barclay Ave. to Northbound/ Southbound Suncoast Parkway Ramps						Northbound/Southbound Suncoast Parkway Ramps to Wiscon Rd.						Wiscon Rd. to Winter St.					
Collision Type	1995	1996	1997	1998	1999	Total	1995	1996	1997	1998	1999	Total	1995	1996	1997	1998	1999	Total	1995	1996	1997	1998	1999	Total
Rear End	8	7	4	10	3	32	7	9	5	6	4	31	1	2	1	1	1	6	1	1	2	2	1	7
Left Turn	0	0	0	0	0	0	1	2	1	1	0	5	2	4	0	0	2	8	0	1	0	0	0	1
Angle	0	0	0	0	0	0	1	2	1	2	3	9	3	1	0	1	0	5	1	0	2	1	0	4
Sideswipe	0	0	1	0	1	2	0	1	1	0	0	2	0	0	0	0	1	1	0	0	0	0	0	0
Right Turn	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Ped./Bike	0	0	0	0	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Fixed Object	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	1	0	3	0	0	0	0	0	0
Overturn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Head On	0	1	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	1	1	1	0	1	0	0	2	0	0	1	0	0	1	0	0	0	0	0	0
Fatal	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Injury	7	4	4	8	4	27	9	14	6	8	5	42	4	7	3	2	3	19	2	2	5	2	1	12
Property Damage	1	4	1	2	2	10	2	3	3	2	1	11	2	0	1	1	1	5	0	0	0	1	0	1
Day	7	8	5	10	5	35	9	14	9	9	5	46	6	7	3	1	3	20	2	2	5	3	1	13
Night	1	0	0	0	1	2	2	3	0	1	2	8	0	0	1	2	1	4	0	0	0	0	0	0
Wet	4	5	3	3	1	16	2	5	2	2	0	11	0	2	1	0	0	3	0	1	0	0	0	1
Dry	4	3	2	7	5	21	9	12	7	8	7	43	6	5	3	3	4	21	2	1	5	3	1	12

Table 4-8: Crash Summary for Roadway Segments along S.R. 50 (Continued)

Intersection	Winter St. to Fort Dade Ave.						Fort Dade Ave. to California St.						California St. to the west intersection of S.R. 50/S.R. 50A					
Collision Type	1995	1996	1997	1998	1999	Total	1995	1996	1997	1998	1999	Total	1995	1996	1997	1998	1999	Total
Rear End	1	0	2	1	1	5	0	0	0	0	1	1	4	1	4	6	2	17
Left Turn	1	1	1	0	2	5	0	0	0	0	0	0	3	1	3	1	2	10
Angle	2	0	0	2	1	5	0	0	0	0	0	0	3	1	1	3	1	9
Sideswipe	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	4	0	8
Right Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped./Bike	0	0	1	0	1	2	0	0	0	0	0	0	0	0	1	1	0	2
Fixed Object	0	0	0	0	2	2	0	0	0	0	0	0	1	1	3	1	1	7
Overturn	0	1	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	2
Head On	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	5	0	6
Other	0	0	0	1	1	2	0	0	0	1	0	1	0	0	1	1	0	2
Fatal	0	1	1	0	0	2	0	0	0	0	0	0	1	0	1	0	0	2
Injury	4	1	2	4	7	18	0	0	0	1	1	1	12	5	9	18	3	47
Property Damage	0	0	1	0	1	2	0	0	0	0	0	0	1	0	5	3	3	12
Day	3	1	2	3	6	15	0	0	0	1	0	1	9	4	11	17	2	43
Night	1	1	2	1	2	7	0	0	0	0	1	1	5	1	4	4	4	18
Wet	0	1	1	0	1	3	0	0	0	0	1	1	2	1	3	4	0	10
Dry	4	1	3	4	7	19	0	0	0	1	0	1	12	4	12	17	6	51

Table 4-9: Crash Summary for Roadway Segments along S.R. 50 [along the Brooksville Bypass]

Intersection	West intersection of S.R. 50/S.R. 50A to U.S. 41/Broad St.						U.S. 41/Broad St. to Main St./Mitchell Rd.						Main St./Mitchell Rd. to Emerson Rd.						Emerson Rd. to the east intersection of S.R. 50/S.R. 50A					
Collision Type	1995	1996	1997	1998	1999	Total	1995	1996	1997	1998	1999	Total	1995	1996	1997	1998	1999	Total	1995	1996	1997	1998	1999	Total
Rear End	4	1	3	4	2	14	2	3	1	6	2	14	3	0	1	3	0	7	2	1	4	6	0	13
Left Turn	1	1	6	2	0	10	0	2	2	2	0	6	0	0	0	2	2	4	2	3	0	0	0	5
Angle	2	1	1	3	0	7	1	3	2	2	1	9	0	0	0	1	2	3	0	1	1	2	0	4
Sideswipe	1	0	0	0	0	1	0	0	0	1	0	1	1	0	0	0	1	2	1	0	1	0	0	2
Right Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped./Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fixed Object	0	2	0	0	1	3	0	2	3	0	1	6	0	1	0	1	0	2	0	2	0	0	1	3
Overturn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Head On	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	1	0	1	1	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
Fatal	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
Injury	9	3	8	5	2	27	3	6	6	9	2	26	4	1	1	3	4	13	4	2	5	7	0	18
Property Damage	1	2	2	5	2	12	0	4	2	2	2	10	0	0	0	4	1	5	1	4	2	1	1	9
Day	8	3	9	10	2	32	3	9	7	7	3	29	2	1	1	7	2	13	4	3	6	7	0	20
Night	2	2	2	0	2	8	0	1	1	4	1	7	2	0	0	0	3	5	1	5	1	1	1	9
Wet	1	0	5	3	2	11	1	0	1	0	0	2	3	0	0	6	0	9	0	2	1	0	1	4
Dry	9	5	6	7	2	29	2	10	7	11	4	34	1	1	1	1	5	9	5	6	6	8	0	25

4.1.10 Intersections and Signalization

The locations of the existing signalized intersections along S.R. 50 within the project limits were presented earlier in Table 4-2. All other intersections feature unsignalized stop control for the side streets. The existing lane geometry of the intersections along the project are illustrated schematically in Figures 4-10A through 4-10F.

Hernando County maintains all of the traffic signals along S.R. 50 from U.S. 19 (S.R. 55) to the east intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass].

4.1.11 Lighting

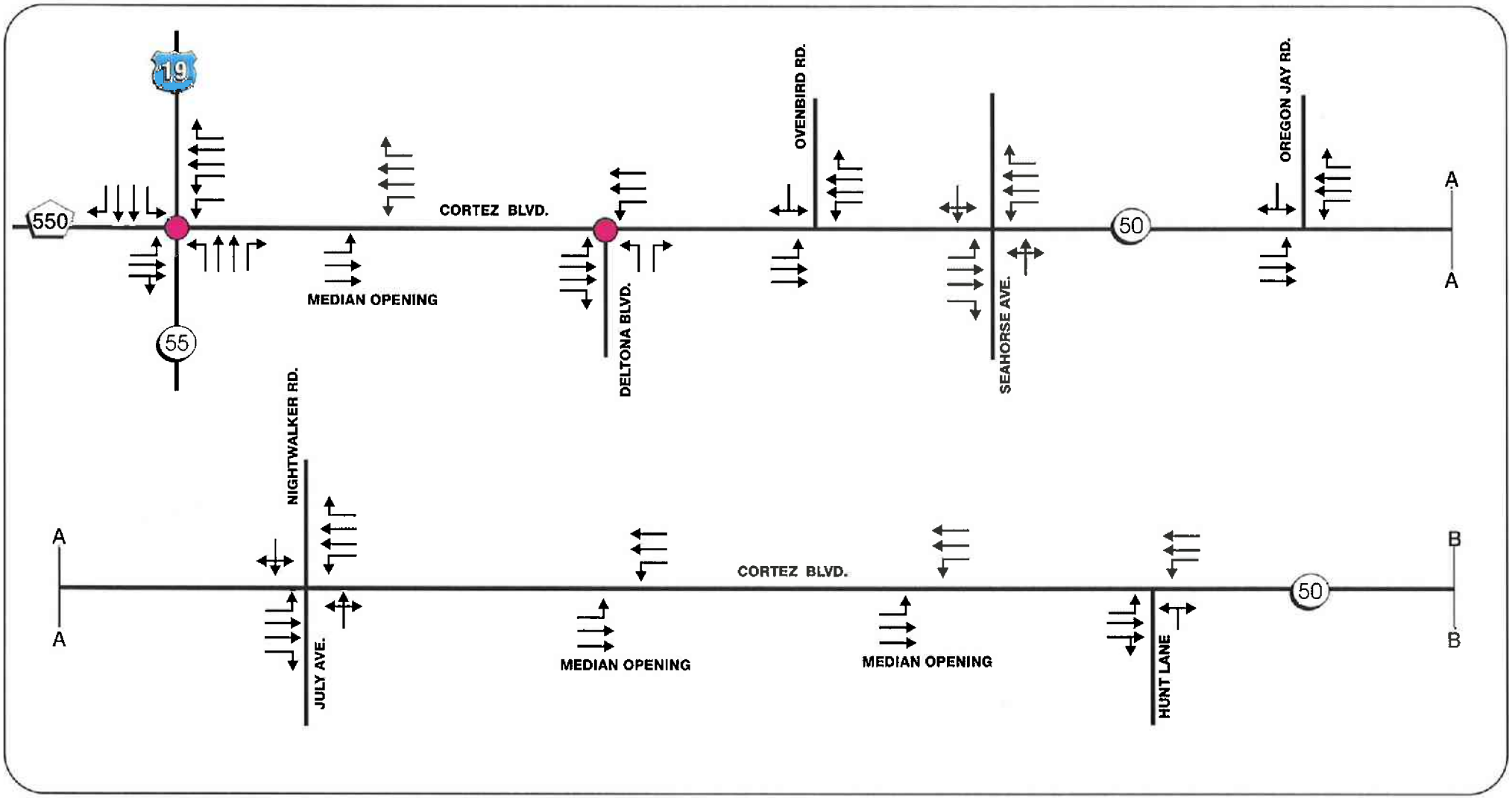
Overhead street lighting is provided along S.R. 50 from U.S. 19 (S.R. 55) to the east intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass] at a few isolated intersections. At the intersection of S.R. 50 and U.S. 19 (S.R. 55), overhead street lighting is provided along both sides of all four legs of the intersection with the exception of the north side of the west leg. Overhead street lighting is provided on both sides of all four legs of the west intersection of S.R. 50/S.R. 50A. In addition, the east intersection of S.R. 50/S.R. 50A has overhead street lighting along all of the legs with the exception of the north leg (Jasmine Drive). Additional lighting encountered along S.R. 50 is overhead lighting associated with private or commercial properties (service provided by either Withlacochee River Electric Co-operative or Florida Power Corporation).

4.1.12 Utilities

The type, location and ownership of the existing utilities within the Study corridor are included in Table 4-10. This utility information is based on information obtained during field reviews as well as information provided by the utility companies. (It should be noted that Time Warner Cable did not respond.)

In addition to the utility companies listed in Table 4-9, several other utility companies were contacted who specified they did not have utilities within the Study area. These utility companies are as follows: AT&T, Galaxy Cablevision, MCI WorldCom and U.S. Sprint.

As shown in Table 4-10, utilities are prevalent throughout the Study area and are located within and directly adjacent to the S.R. 50 right-of-way. The utility owners identified in Table 4-10 propose no major additional facilities. Refer to the Utility Assessment Package for a detailed description of the existing utilities within the project corridor.



LEGEND

Lane Geometry

Signalized Intersection

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

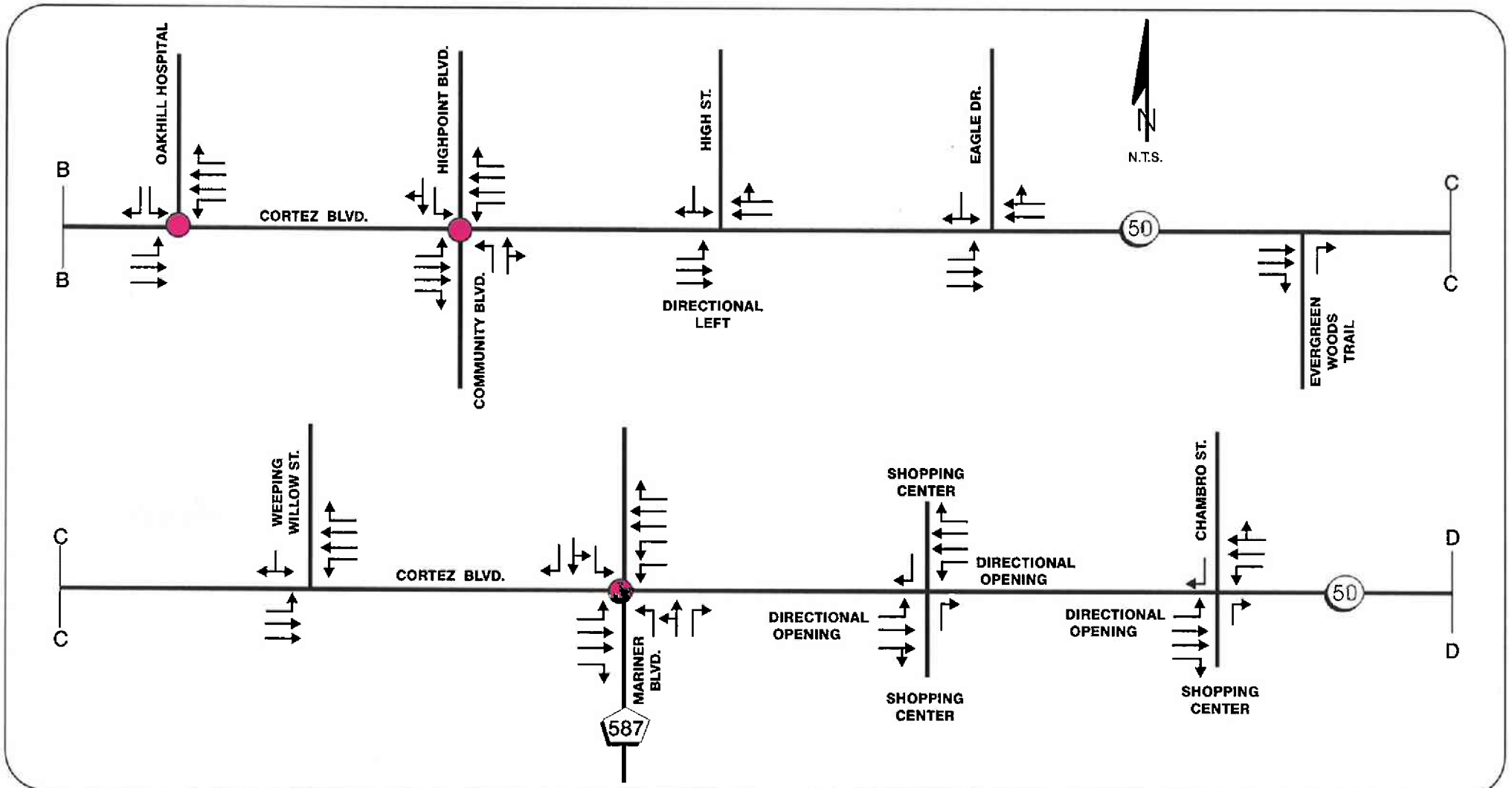
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

EXISTING LANE GEOMETRY

WPI SEG. NO: 407951 1
FAP NO: 300 - 1 (7)

FIGURE 4-10-A



LEGEND

Lane Geometry

Signalized Intersection

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

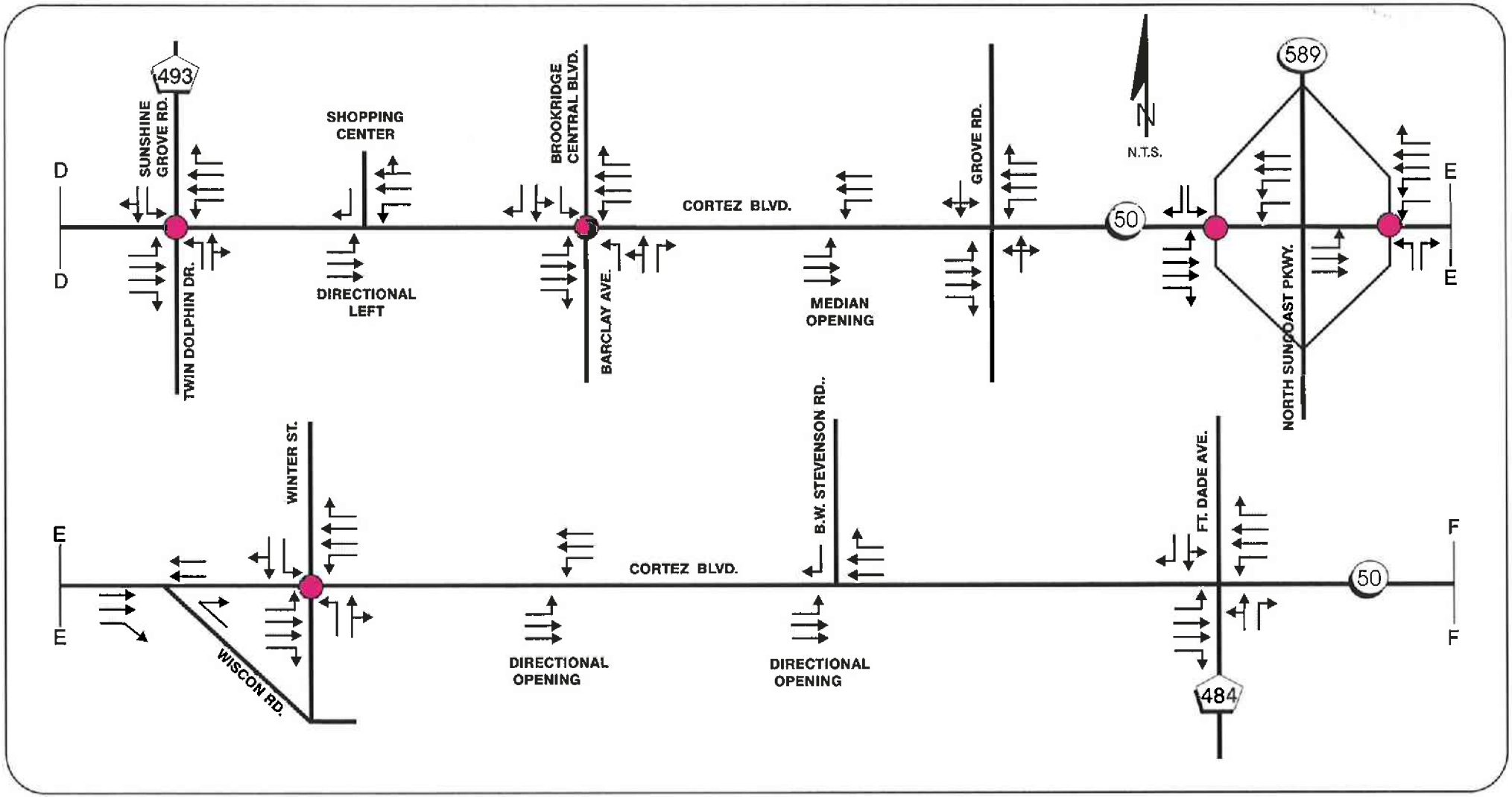
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

EXISTING LANE GEOMETRY

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 4-10-B



LEGEND

Lane Geometry

Signalized Intersection

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

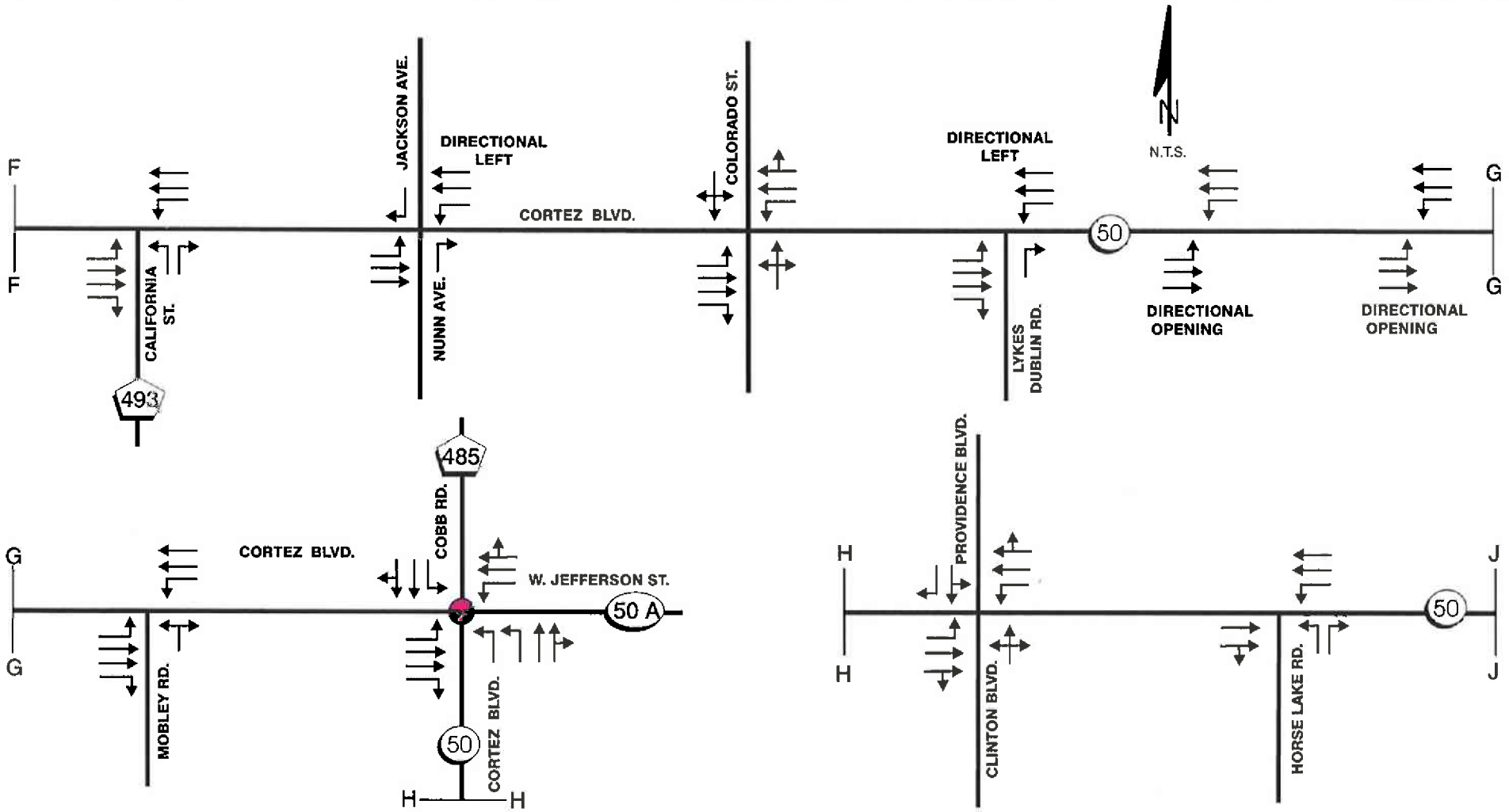
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

EXISTING LANE GEOMETRY

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 4-10-C



LEGEND

Lane Geometry

Signalized Intersection

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

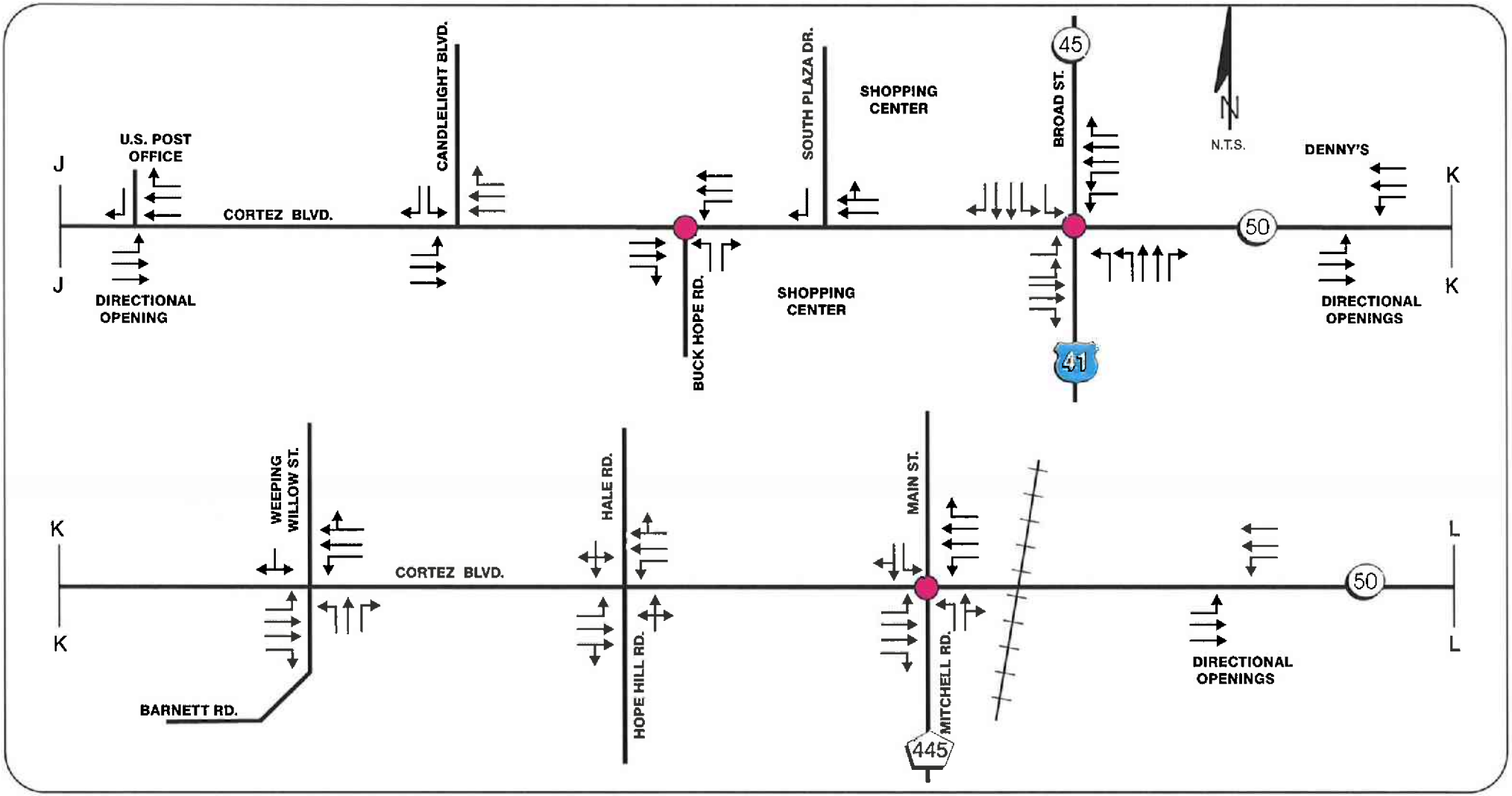
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

EXISTING LANE GEOMETRY

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 4-10-D



LEGEND

Lane Geometry

Signalized Intersection

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

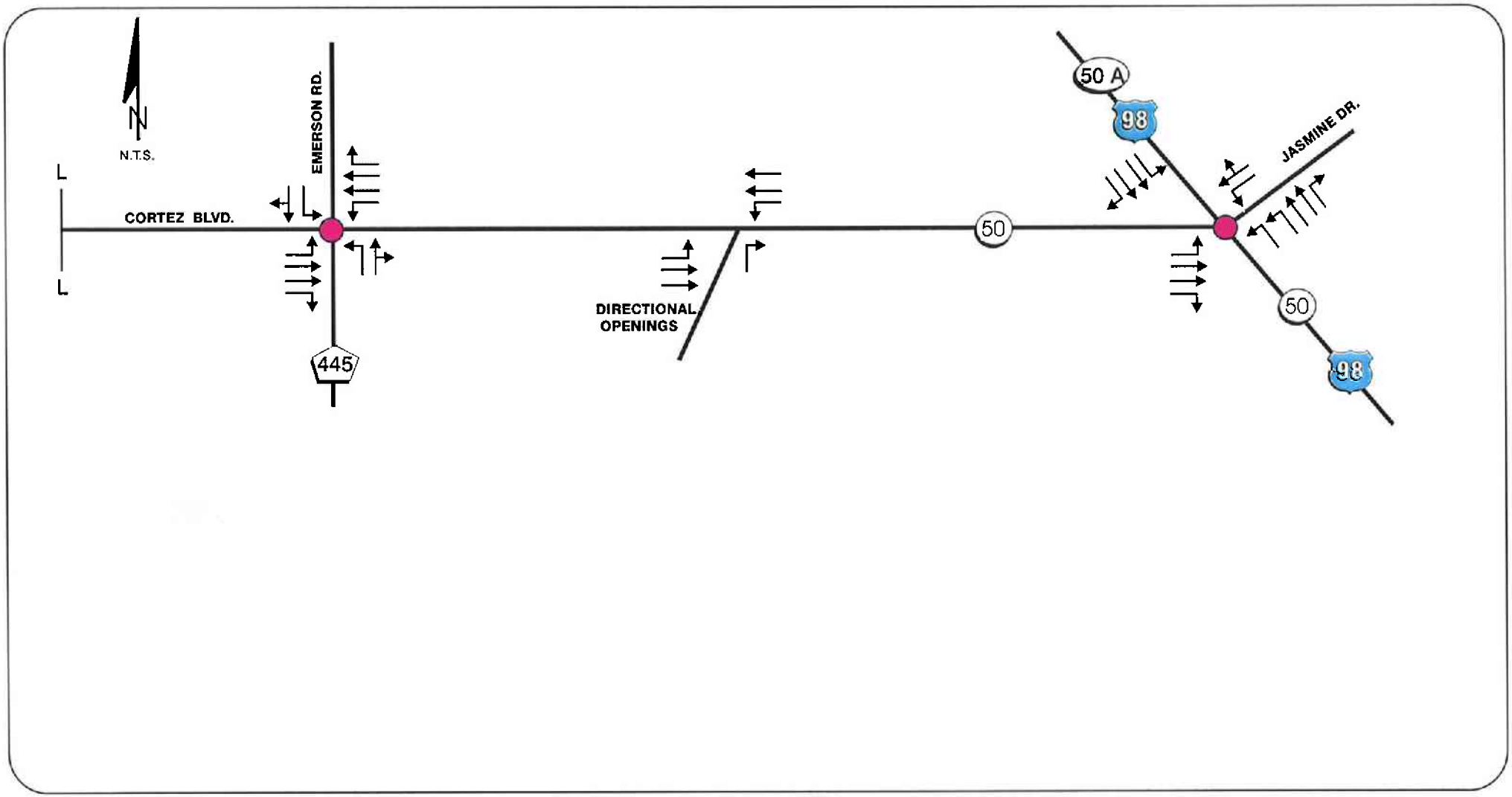
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

EXISTING LANE GEOMETRY

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 4-10-E



LEGEND

Lane Geometry

Signalized Intersection

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

EXISTING LANE GEOMETRY

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 4-10-F

Table 4-10: Existing Utilities

Utility Owner	Utility Type	Aerial (A) Buried (B)	Side	Approximate Location
Bell South Telecommunications	Fiber Optic and Copper Cables	A/B	North/South	Detailed Information Not Available
City of Brooksville Sewer	16-inch Sanitary Force main	B	East	Cobb Rd. (C.R. 485) – Extends from northeast corner of the west S.R. 50/S.R. 50A intersection northward
	12-inch Sanitary Force main	B	North	S.R. 50A (W. Jefferson Ave.) – Extends from the northeast corner of the west S.R. 50/S.R. 50A intersection eastward
	12-inch Sanitary Force main	B	North	S.R. 50 [along the Brooksville Bypass] – Northeast corner of the west S.R. 50/S.R. 50A intersection to the City of Brooksville Substation (approximately 1700 feet west of U.S. 41 (Broad St.))
	16-inch Sanitary Force main	B	North	S.R. 50 [along the Brooksville Bypass] – 1700 feet west of U.S. 41 (Broad St.) to 2700 feet east of Mitchell Rd./Main St. (C.R. 445), which turns and continues northward
	8-inch Sanitary Sewer	B	North	S.R. 50 [along the Brooksville Bypass] – Extends from 1700 feet west of U.S. 41 (Broad St.) to Sabra Dr.
	8-inch Sanitary Sewer	B	West	June Ave. – Extends north of S.R. 50 [along the Brooksville Bypass]
	8-inch Sanitary Sewer	B	West	Don Jr. Ave. – Extends north of S.R. 50 [along the Brooksville Bypass]
	8-inch Sanitary Sewer	B	East	Arnold Ave. – Extends north of S.R. 50 [along the Brooksville Bypass]
	8-inch Sanitary Sewer	B	West	Sabra Ave. – Extends north of S.R. 50 [along the Brooksville Bypass]
	6-inch Sanitary Force main	B	North	S.R. 50 [along the Brooksville Bypass] – 2700 feet east of Mitchell Rd./Main St. (C.R. 445) to 200 feet west of Emerson Road (C.R. 581)
	(2) 6-inch Sanitary Force main	B	West	Main St. (C.R. 445) – Extends from the northwest corner of the intersection northward
	6-inch Sanitary Force main	B	North/South	S.R. 50 [along the Brooksville Bypass] – Extends from the northwest to the southwest corner of Emerson Rd. (C.R. 581) and extends approximately 200 feet eastward
	6-inch Sanitary Force main	B	West	Emerson Rd. (C.R. 581) – Extends from the southwest corner of the intersection southward
City of Brooksville Water	6-inch Water main	B	North	Lee Ave. – Extends from the east side of Cobb Rd. (C.R. 485) eastward
	12-inch Water main	B	East	Cobb Rd. – Extends from the northeast corner of the west S.R. 50/S.R. 50A intersection northward
	12-inch Water main	B	North	S.R. 50A (W. Jefferson Ave.) – Extends from the northeast corner of the S.R. 50/S.R. 50A intersection eastward
	12-inch Water main	B	South	S.R. 50 [along the Brooksville Bypass] – Extends from 300 feet east of the S.R. 50/S.R. 50A intersection to 1200 feet east of Horse Lake Rd.
	12-inch Water main	B	North	Whitfield Ave. – Extends from the west side of S.R. 50 [along the Brooksville Bypass] eastward
	8-inch Water main	B	South	Clinton Blvd. – Extends from the southeast corner of S.R. 50 [along the Brooksville Bypass] westward
	12-inch Water main	B	North	Clinton Blvd. – Extends from the west side of S.R. 50 [along the Brooksville Bypass] eastward for approximately 300 feet
	12-inch Water main	B	North	S.R. 50 [along the Brooksville Bypass] – 1150 feet east of Horse Lake Rd. eastward for approximately 1350 feet
	12-inch Water main	B	South	S.R. 50 [along the Brooksville Bypass] – Extends from 1900 feet east of Horse Lake Rd. to 300 feet east of Candlelight Blvd.
	6-inch Water main	B	East	Candlelight Blvd. – Extends from the south side of S.R. 50 [along the Brooksville Bypass] northward
	12-inch Water main		North/South	S.R. 50 [along the Brooksville Bypass] – At 300 feet east of Candlelight Blvd. crosses from the south to the north side of S.R. 50 [along the Brooksville Bypass] that proceeds to the northeast corner of Broad St. (U.S. 41)
	8-inch Water main	B	South	S.R. 50 [along the Brooksville Bypass] – Extends from 500 feet east of Candlelight Blvd. to the southeast corner of Buck Hope Rd.
	8-inch Water main	B	East	Buck Hope Rd. – Extends from the southeast corner of the intersection southward
	12-inch Water main	B	West	Broad St. (U.S. 41) – Proceeds from the northwest corner of the S.R. 50 [along the Brooksville Bypass] intersection northward
	10-inch Water main	B	East	Broad St. (U.S. 41) – Extends from the northeast corner of the S.R. 50 [along the Brooksville Bypass] intersection northward
	10-inch Water main	B	North	S.R. 50 [along the Brooksville Bypass] – Extends from the northeast corner of Broad St. (U.S. 41) for approximately 475 feet
	12-inch Water main	B	South	S.R. 50 [along the Brooksville Bypass] – 500 feet east of Broad St. (U.S. 41) to the southwest corner of the east S.R. 50/S.R. 50A intersection
	8-inch Water main	B	North	S.R. 50 [along the Brooksville Bypass] – Extends from 200 feet west of June Ave. eastward for approximately 250 feet
	6-inch Water main	B	East	June Ave. – Extends from the northeast corner of S.R. 50 [along the Brooksville Bypass] northward
	6-inch Water main	B	East	Don Jr. Ave. – Extends from the northeast corner of S.R. 50 [along the Brooksville Bypass] northward
	12-inch Water main	B	North	Barnett Rd. – Extends from S.R. 50 [along the Brooksville Bypass] westward
	14-inch Water main	B	West	Hope Hill Rd. – Extends from the southwest corner of S.R. 50 [along the Brooksville Bypass] southward
	6-inch Water main	B	East	Main St. (C.R. 445) – Extends from the northeast corner of S.R. 50 [along the Brooksville Bypass] northward
	6-inch Water main	B	West	Mitchell Rd. (C.R. 445) – Extends from the southwest corner of S.R. 50 [along the Brooksville Bypass] southward
	10-inch Water main	B	West	Emerson Rd. (C.R. 581) – Extends from the southwest corner of S.R. 50 [along the Brooksville Bypass] southward
	12-inch Water main	B	West/East	S.R. 50 (U.S. 98) – Crosses from the west to the east side of the roadway and proceeds eastward
	6-inch Water main	B	West/East	S.R. 50A (Jefferson St.) – Crosses from the west to the east side of the roadway and proceeds southward to Jasmine Dr.
	6-inch Water main	B	North	Jasmine Dr. – Proceeds from the northwest corner of the east S.R. 50/S.R. 50A intersection eastward
Constel Cable	Cable	A	North/South	S.R. 50 – extends from U.S. 19 (S.R. 55) to California St.
	Cable	A/B	North/South	S.R. 50 – extends from Barclay Ave. to Sunshine Grove Rd.
Florida Power and Light Corporation	115 KV (Transmission Crossing)	A	South/North	S.R. 50 – 2120 feet east of Nightwalker Rd./July Ave.
	115, 230 and 500 KV (Transmission Crossing)	A	South/North	S.R. 50 – Intersection of Twin Dolphin Dr./Sunshine Grove Rd.
	7.2KV (Distribution)	A	South	S.R. 50 – 3350 feet east of Lykes Dublin Rd. to 2200 feet west of the west S.R. 50/S.R. 50A intersection
	12.47 KV (Distribution)	A	South	S.R. 50 – 2200 feet west of the west S.R. 50/S.R. 50A intersection to west of the east S.R. 50/S.R. 50A intersection [along the Brooksville Bypass]
	12.47 KV (Distribution)	A	South	Cobb Rd. (C.R. 485)/S.R. 50 [along the Brooksville Bypass] – 500 feet north of the west S.R. 50/S.R. 50A intersection to 550 feet west of Broad St. (U.S. 41)
	12.47 KV (Distribution)	A	North	S.R. 50 [along the Brooksville Bypass] – 550 feet west of Broad St. (U.S. 41) to 100 feet west of Broad St. (U.S. 41)
	12.47 KV (Distribution)	A	West	Broad St. (U.S. 41) – North of S.R. 50 [along the Brooksville Bypass]
	12.47 KV (Distribution)	B	West	Broad St. (U.S. 41) – North of S.R. 50 [along the Brooksville Bypass] to south of S.R. 50 [along the Brooksville Bypass]
	12.47 KV (Distribution)	A	West	Broad St. (U.S. 41) – South of S.R. 50 [along the Brooksville Bypass]
	12.47 KV (Distribution)	B	South	S.R. 50 [along the Brooksville Bypass] – Extends from the northwest corner of Broad St. (U.S. 41) for approximately 100 feet
	12.47 KV (Distribution)	A	South	S.R. 50 [along the Brooksville Bypass] – 100 feet east of Broad St. (U.S. 41) to 150 feet east of Emerson Rd. (C.R. 581)
	7.2 KV (Distribution)	A	West	Arnold Ave. – North of S.R. 50 [along the Brooksville Bypass]
	7.2 KV (Distribution)	A	West	Hope Hill Rd./Hale Ave. – Northwest corner of Hale Ave. to South of S.R. 50 [along the Brooksville Bypass]
	7.2 KV (Distribution)	A	East	Mitchell Rd./Main St. (C.R. 445) – Extends South and North of S.R. 50 [along the Brooksville Bypass]
	7.2 KV (Distribution)	A	West	Oxley Rd. – Extends South and North of S.R. 50 [along the Brooksville Bypass]

Table 4-10: Existing Utilities (Continued)

Utility Owner	Utility Type	Aerial (A) Buried (B)	Side	Approximate Location
Florida Water Services	12.47 KV (Distribution)	A	East	Emerson Rd. (C.R. 581) – 150 feet east of the southeast corner of Emerson Rd. (C.R. 581) to North of S.R. 50 [along the Brooksville Bypass]
	6-inch Water main	B	South	S.R. 50 – extends from the southwest corner of Deltona Blvd. westward for approximately 590 feet
	8-inch Water main	B	West	Deltona Blvd. – South of S.R. 50
	8-inch Water main	B	South	S.R. 50 – extends underneath Deltona Blvd. from the southwest to the southeast corner of the intersection
Hernando County Sewer	10-inch Sanitary Force main	B	West	U.S. 19 (S.R. 55) – south of S.R. 50 to 550 feet north of S.R. 50
	8-inch Sanitary Force main	B	West	U.S. 19 (S.R. 55) – 700 feet south of S.R. 50 to 1150 feet north of S.R. 50
	8-inch Sanitary Force main	B	South	S.R. 50 – 700 feet south of S.R. 50 along U.S. 19 (S.R. 55) to east side of Deltona Blvd.
	6-inch Sanitary Force main	B	South/North	S.R. 50 – extends from 370 feet west to 370 feet east of Eagle Dr.
	8-inch Sanitary Force main	B	North	S.R. 50 – west side of Weeping Willow St., extends for approximately 370 feet
	8-inch Sanitary Force main	B	North	S.R. 50 – east side of Mariner Blvd. (C.R. 587) to 250 feet west of Chamboro St.
	4-inch Sanitary Force main	B	South	S.R. 50 – east side of Barclay Ave. (Brookridge Central Blvd.) to west side of Grove Rd.
	6-inch Sanitary Force main	B	North	S.R. 50 – east side of Grove Rd. to west side of Summer St.
	6-inch Sanitary Force main	B	North	S.R. 50 – east side of Winter St., extends for approximately 1550 feet
	8-inch Sanitary Force main	B	North	S.R. 50 – extends from 1300 feet east of Winter St. for approximately 250 feet
	4-inch Sanitary Force main	B	South	S.R. 50 [along the Brooksville Bypass] – 200 feet west of Clinton Blvd. to 850 feet west of Buck Hope Rd.
Hernando County Water	12-inch Water main	B	South	C.R. 550 – west of U.S. 19 (S.R. 55) to U.S. 19 (S.R. 55) and S.R. 50 intersection
	10-inch Water main	B	West	U.S. 19 (S.R. 55) – south of S.R. 50 to U.S. 19 (S.R. 55) and S.R. 50 intersection
	20-inch Water main	B	South	S.R. 50 – south of S.R. 50 along U.S. 19 (S.R. 55) to 650 feet east of July Ave. (Nightwalker Rd.)
	12-inch Water main	B	North	S.R. 50 – north of S.R. 50 along U.S. 19 (S.R. 55) to west side of Blackbird Ave.
	10-inch Water main	B	North	S.R. 50 – west side of Blackbird Ave. to 2150 feet west of Hunt Ln.
	14-inch Water main	B	South	S.R. 50 – 650 feet east of July Ave. (Nightwalker Rd.) to 1770 feet west of Hunt Ln.
	12-inch Water main	B	North	S.R. 50 – 650 feet east of July Ave. (Nightwalker Rd.) to 2200 feet west of Hunt Ln.
	12-inch Water main	B	North	S.R. 50 – 650 feet east of July Ave. (Nightwalker Rd.) to Summer St.
	14-inch Water main	B	North	S.R. 50 – 1770 feet west of Hunt Ln. to west side of High Point Blvd. (Community Blvd.)
	8-inch Water main	B	South	S.R. 50 – west side of High Point Blvd. (Community Blvd.) to 650 feet west of Evergreen Woods Trail
	10-inch Water main	B	South	S.R. 50 – 550 feet west of Barclay Ave. (Brookridge Central Blvd.) to west side of Grove Rd.
	12-inch Water main	B	South	S.R. 50 – west side of Grove Rd. to west side of Wiscon Rd. (C.R. 570)
	12-inch Water main	B	North	S.R. 50 – east side of Winter St. to 950 feet west of B.W. Stevenson Rd.
	8-inch Water main	B	South	S.R. 50 – 230 feet east of Winter St., extends for approximately 225 feet
TECO/Peoples Gas	4-inch and/or 6-inch Natural Gas Mains	B	South	S.R. 50 – south of S.R. 50 along U.S. 19 (S.R. 55) to the west side of Wiscon Rd. (C.R. 570)
	4-inch and/or 6-inch Natural Gas Mains	B	East	Mariner Blvd. (C.R. 587) – extends from 570 feet south of S.R. 50 to 240 feet north of S.R. 50
	4-inch and/or 6-inch Natural Gas Mains	B	West	Barclay Ave. (Brookridge Central Blvd.) – extends approximately 430 feet south of S.R. 50
	4-inch and/or 6-inch Natural Gas Mains	B	South	Wiscon Rd. (C.R. 570) – extends from S.R. 50 eastward
	4-inch and/or 6-inch Natural Gas Mains	B	North	Barnett Rd. – extends from west of Broad St. (U.S. 41) to S.R. 50
	4-inch and/or 6-inch Natural Gas Mains	B	South	S.R. 50 – extends from the east side of Broad St. (U.S. 41) eastward for approximately 830 feet
	4-inch and/or 6-inch Natural Gas Mains	B	East	Arnold Ave. – extends eastward from Barnett Rd. northward for approximately 420 feet
	4-inch and/or 6-inch Natural Gas Mains	B	South	S.R. 50 – east side of Barnett Rd. to 300 feet east of Mitchell Rd./Main St. (C.R. 445)
Time Warner Cable	Co-ax. and Fiber Optic	A/B	North/South	Detailed Information Not Available
Withlacresoochee River Electric Co-operative	15 KV (Distribution)	A	South/North	S.R. 50 – U.S. 19 (S.R. 55) to Suncoast Pedestrian Trail
	115 KV (Transmission)	A	South/North	S.R. 50 – U.S. 19 (S.R. 55) to approximately 2000 feet east of Nightwalker Rd./ July Ave.
	15 KV (Distribution)	B	South/North	S.R. 50 – At Suncoast Pedestrian Trail and Suncoast Parkway (S.R. 589)
	15 KV (Distribution)	A	South/North	S.R. 50 – Between Suncoast Pedestrian Trail and Suncoast Parkway (S.R. 589)
	15KV (Distribution)	A	South/North	S.R. 50 – Suncoast Parkway (S.R. 589) to east of Lykes Dublin Rd.

4.1.13 Pavement Conditions

The pavement condition ratings for the existing roadway pavement within the project limits were determined utilizing the FDOT Pavement Management Office's *All System Pavement Condition Forecast Report* (printed July 2, 2002). The results of this report for the 2002 conditions are summarized in Table 4-11. The existing pavement conditions were verified during a field reconnaissance.

Each section of pavement is rated for cracking, ride and rutting based on a scale of zero to ten with zero being the worst and ten being the best. A rating of 6.4 or less in any rating is considered deficient pavement. As shown in Table 4-11, the existing pavement within the Study area is in good to excellent condition.

Table 4-11: Summary of Existing Pavement Conditions

Segment		Rating		
Limits	Length (miles)	Cracking	Ride	Rutting
S.R. 50				
U.S. 19 (S.R. 55) (MP 0.000) to West of Oakado Street (MP 5.700)	5.700	9.5	8.4	9.0
West of Oakado Street (MP 5.700) to West of Winter Street (MP 6.155)	0.455	10.0	8.4	10.0
West of Winter Street (MP 6.155) to West of Nunn Blvd. (MP 7.730)	1.575	10.0	9.0	9.0
West of Nunn Blvd. (MP 7.730) to the West Intersection of S.R. 50/ S.R. 50A (MP 9.893)	2.163	10.0	8.9	9.0
S.R. 50 [along the Brooksville Bypass]				
West Intersection of S.R. 50/ S.R. 50A (MP 0.000) to East Intersection of S.R. 50/S.R. 50A (MP 3.836)	3.836	*	*	*

*Note: Ratings were not available because this section of S.R. 50 [along the Brooksville Bypass] was recently reconstructed by the FDOT as part of FPN: 254805-1-52-01.

4.1.14 Railroad Crossings

A CSX Transportation System railroad grade crossing currently exists along S.R. 50. This railroad crossing is located approximately 600 feet east of Main Street (C.R. 445).

The crossing was improved as part of the recent 4-lane widening of the S.R. 50 [along the Brooksville Bypass], which has the following characteristics:

National Grade Crossing Number (NGCN): 624906G

Railroad Milepost (RRMP): SR-799.12

Type of Crossing Surface/Condition: Concrete/Good

Number of Tracks: One

Traffic Control Equipment:	Cantilever arms and flashing lights with gates
Number/Type of Train (Per Day):	Two/Freight

4.1.15 Posted Speed Limits

From the beginning of the Study at U.S. 19 (S.R. 55) for a length of approximately 1,200 feet, the posted speed limit is 45 mph where it becomes 55 mph and is retained until the west intersection of S.R. 50/S.R. 50A. The remainder of the Study corridor from the west intersection of S.R. 50/S.R. 50A to the east intersection of S.R. 50/ S.R. 50A [along the Brooksville Bypass] has a posted speed limit of 50 mph.

4.2 Existing Bridge

There are no roadway bridges within the limits of the project. However, there are three concrete box culverts along the project corridor that are classified as bridges because the overall width of the culvert opening is greater than 20 feet. A description of these culverts as well as the other culverts along the project corridor was previously provided in Table 4-6.

4.3 Environmental Characteristics

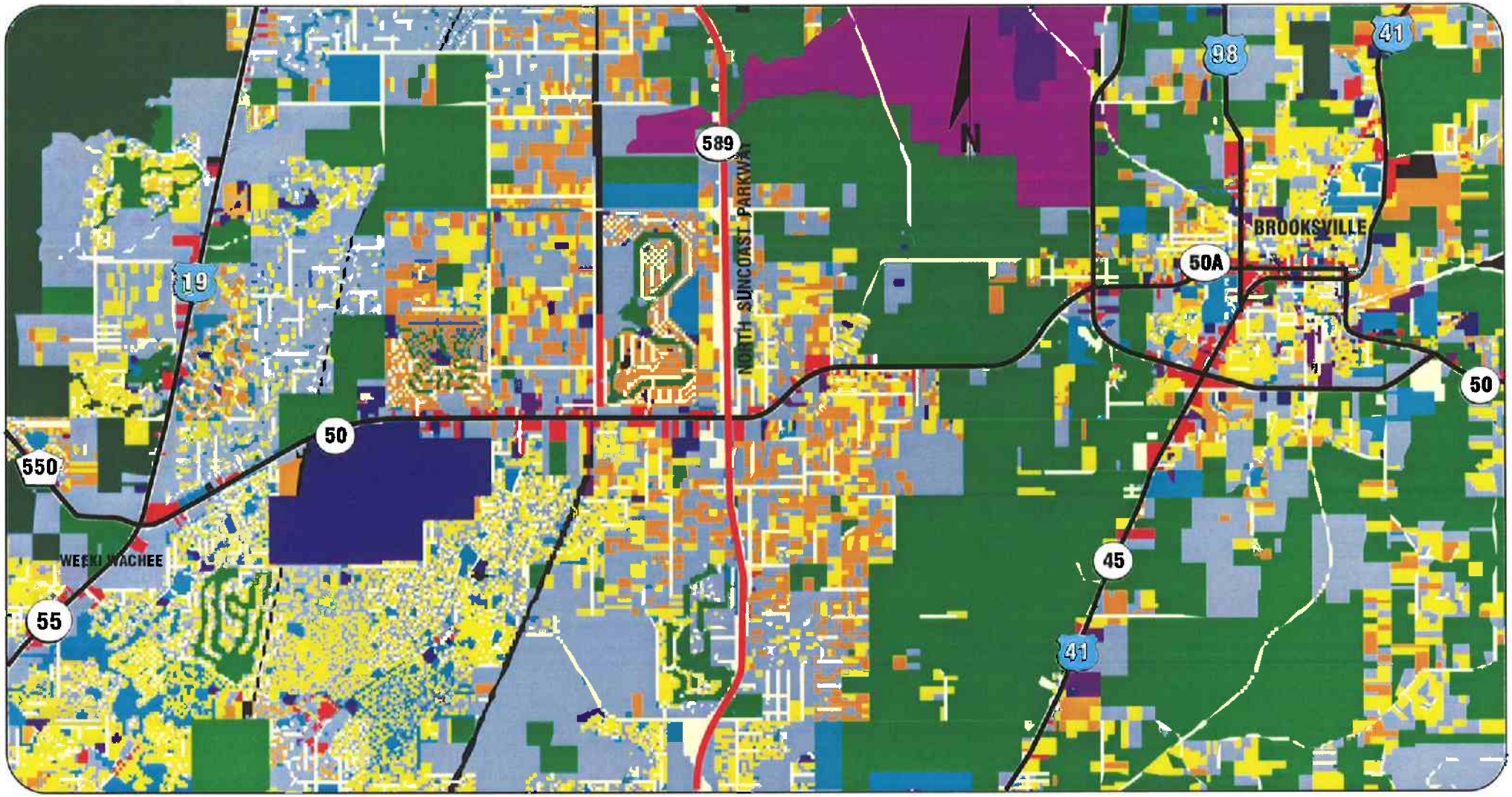
4.3.1 Land Use Data

4.3.1.1 Existing Land Use

Generally, the existing land uses adjacent to the S.R. 50 corridor consist of commercial, residential, medical, institutional and recreational uses, which can be characterized as generally urbanized and suburban in nature with undeveloped tracts interspersed. The existing land use within the project corridor is depicted in Figure 4-11. S.R. 50 within the project corridor can be divided into two sections based on the existing roadway network as follows: U.S. 19 (S.R. 55) to the western intersection of S.R. 50/S.R. 50A and the western intersection of S.R. 50/S.R. 50A to the eastern intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass]. Below is a description of the existing land use within each section.

The existing land uses along S.R. 50 from U.S. 19 (S.R. 55) to the western intersection of S.R. 50/S.R. 50A are predominantly commercial with residential land uses located behind the commercial frontage as well as isolated areas of medical, institutional and recreational uses. Commercial uses include medium scale shopping centers, service stations, restaurants, motels, financial institutions, and miscellaneous retail establishments. Residential uses include both single-family residences/subdivisions and mobile home parks. The medical land uses within the Study corridor consist of medical

GRAPHICS\ JOBS\ PD&E\ DIST 7\ SR 50\ REPORTS\ PER\ PER.CDR\ FIG 4-11.CDR\ 05-09-03



LEGEND

- Agriculture
- Commercial
- Conservation
- Education
- Mining
- Mobile Home
- Private Institutional
- Publically Owned
- Recreational
- Right of Way
- Single Family
- Utilities
- Vacant
- Water / DRA
- Industrial
- Multi-Family

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

EXISTING LAND USE MAP

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 4-11

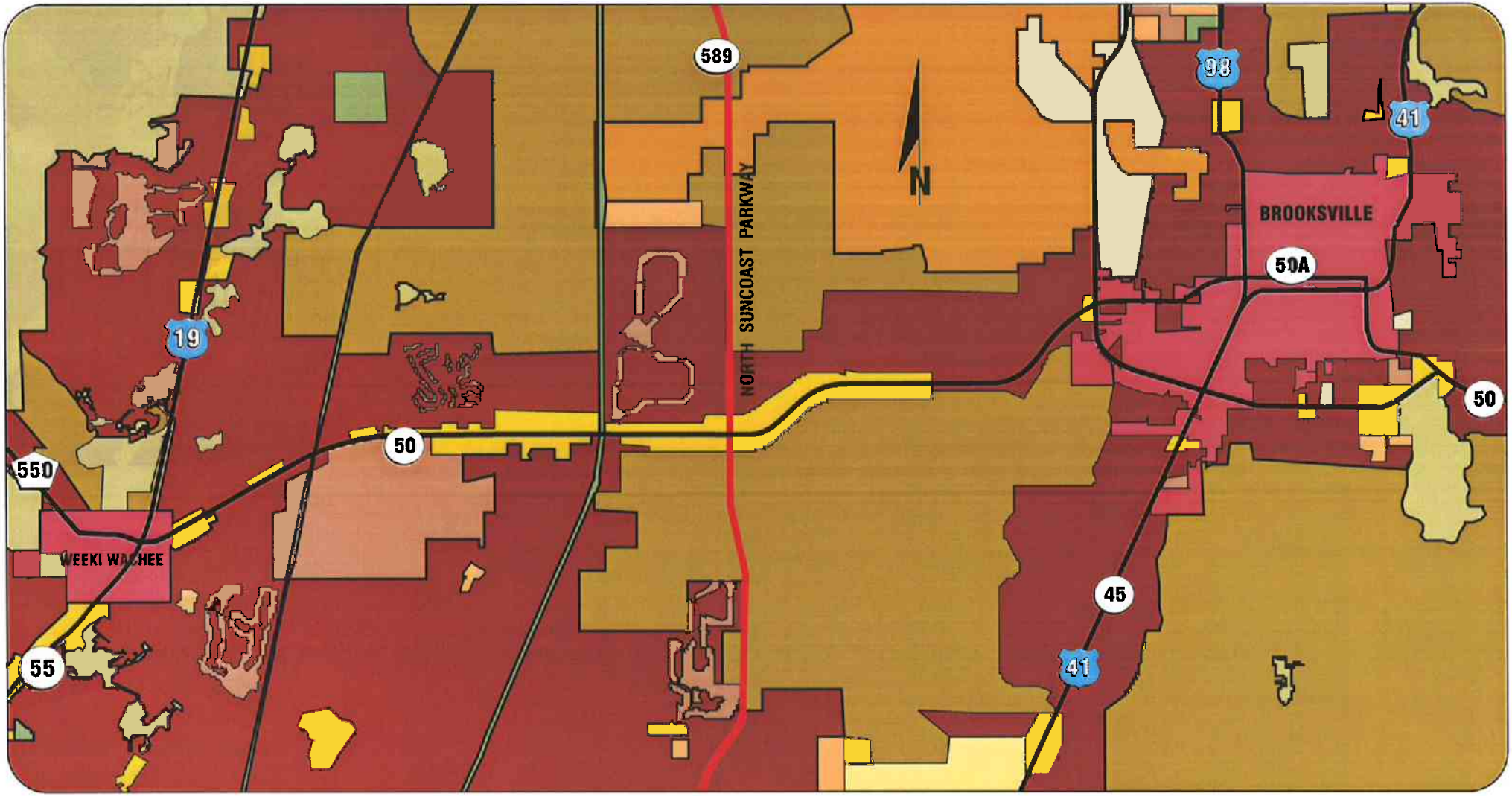
offices/complexes and hospitals (Oak Hill Hospital and Springbrook Hospital). Institutional land uses include the Hernando County Public Library (West Side), Hernando County Fire & Rescue Station #12 and two churches. The Weeki Wachee tourist attraction, Sand Hill Scout Reservation and Suncoast Pedestrian Trail are recreational land uses within the Study corridor. Vacant land exists throughout this section of the Study corridor with the majority located along the eastern bounds of this section.

The existing land uses along the remainder of the Study corridor, S.R. 50 from the western intersection of S.R. 50/S.R. 50A to the eastern intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass], is primarily commercial with isolated areas of residential and institutional uses as well as vacant land. Medium scale shopping centers, miscellaneous retail establishments, restaurants, and financial institutions are the types of commercial development within this area. The residential land uses are primarily single-family residences that border the commercial frontage. The institutional uses are comprised of the Hernando County Sheriff's Office, U.S. Post Office, Hernando County Utility Department and two churches. Similar to S.R. 50, the vacant land along this portion of the Study corridor occurs throughout this section of roadway with the majority occurring at the eastern end. Although vacant land exists within the Study corridor, developments are planned for some of these areas.

4.3.1.2 Future Land Use

Hernando County has developed the Hernando County Comprehensive Plan Map to provide guidance for future land use planning. The designated land uses along the S.R. 50 project corridor indicate that future land uses will follow the established trends of the existing land uses in the Study area as shown in Figure 4-12. Future land use designations of existing vacant parcels will consist primarily of commercial development with residential development both behind the commercial development and adjacent to the S.R. 50 corridor.

Although there are no requests for a Development of Regional Impact (DRI) within the Study corridor, it should be noted that 11 parcels have applied for and been granted rezoning. Nine of these parcels are located adjacent to S.R. 50 or S.R. 50 [along the Brooksville Bypass], and the two remaining parcels are located in proximity to S.R. 50 or S.R. 50 [along the Brooksville Bypass]. In general, these developments are proposed on vacant land or require modification to existing structures to provide additional services. The locations of these developments are identified in Figure 4-13.



LEGEND

- City
- Commercial
- Conservation
- Education
- Industrial
- Mining
- Plan Development
- Public Facilities
- Recreation
- Residential
- Rural

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

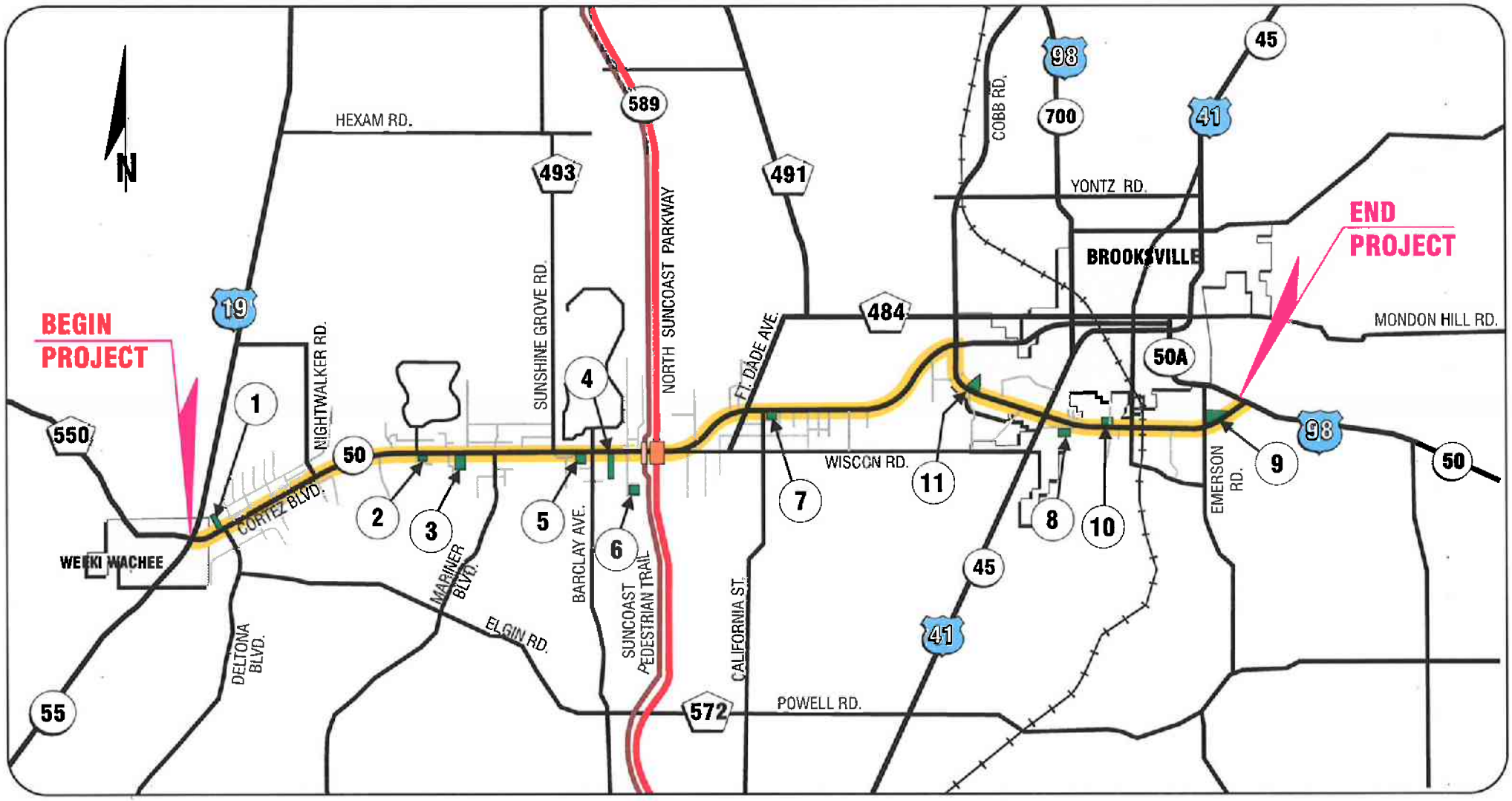
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

FUTURE LAND USE MAP

WPI SEG. NO: 407951 1
FAP NO: 300 - 1 (7)

FIGURE 4-12



LEGEND

- Project Study Limits
- Major Interchange
- Railroad
- Development Areas

1	H-02-14
2	H-01-59
3	SE-01-12
4	H-02-16
5	H-01-47
6	SE-02-05
7	H-01-35
8	H-02-15
9	H-01-46
10	Davis Property
11	Smith & Company

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

PLANNED DEVELOPMENTS

WPI SEG. NO: 407951 1
FAP NO: 300 - 1 (7)

FIGURE 4-13

4.3.2 Cultural Features and Community Services

4.3.2.1 Cultural Features

A cultural resource assessment survey (CRAS) update was undertaken for this Study Reevaluation in order to comply with Section 106 of the National Historic Preservation Act of 1966 (Public Law 89-655), as amended, and the implementing regulations 36 CFR 800 (revised May 1999), as well as the provisions contained in the revised Chapter 267, Florida Statutes.

Archaeological background research, including a review of the Florida Master Site File (FMSF) and the National Register of Historic Places (NRHP), indicated that five previously recorded archaeological sites (8HE237, 8HE238, 8HE239, 8HE241 and 8HE270) are located within the area of potential effect (APE). Of these, the Colorado Site (8HE241) was determined eligible for listing in the NRHP. The results of historical research suggested a low potential for historic period archaeological sites. As a result of field survey for the roadway, two archaeological sites (8HE490 and 8HE491) were newly identified, and the boundary of previously recorded site 8HE241A was expanded. Neither the newly recorded sites, nor the expanded portion of 8HE241A are considered potentially eligible for listing in the NRHP. In addition, the CRAS of the proposed pond sites resulted in the discovery and evaluation of one new archaeological site (8HE365) within proposed Pond A, and two archaeological occurrences (AOs) within Pond I-South and Pond J, respectively. The latter is probably associated with 8HE241C. Neither 8HE365 nor the two AOs discovered within the two proposed pond sites are considered potentially NRHP-eligible.

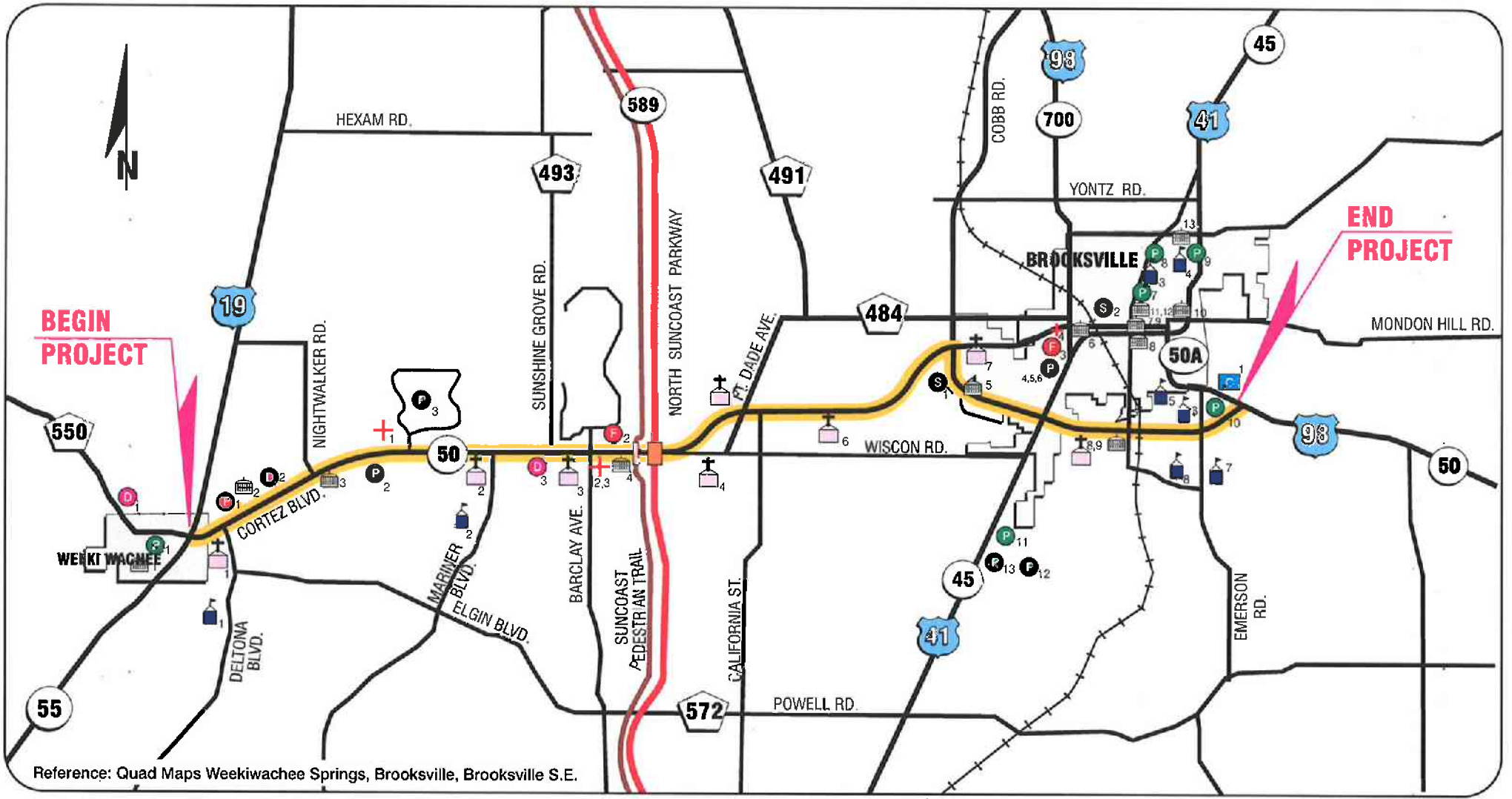
Historical background research, including a review of the FMSF and NRHP, indicated that one historic resource, the Weeki Wachee Spring Mermaid Theatre (8HE391) was recorded previously within the APE by Janus Research during their survey of a segment of U.S. 19 (S.R. 55), which was not considered potentially eligible for listing in the NRHP. Field survey for the roadway resulted in the identification and evaluation of two historic resources (8HE494 and 8HE495). Neither is considered potentially NRHP-eligible. No historic resources were located within or adjacent to the proposed ponds.

4.3.2.2 Community Facilities

Community facilities provide a focal point for adjacent neighborhoods and communities, as well as serving the needs of surrounding areas. For the purpose of this Study, community facilities include churches and other religious institutions, parks and recreation areas, other neighborhood gathering places, fire stations, police stations, public and private schools, day cares, medical and emergency treatment facilities, cemeteries, and public buildings and facilities.

Information for mapping the community facilities in the vicinity of the Study corridor was based on literature review and field reconnaissance. Table 4-12 and Figure 4-14 provide a listing as well as the location of the community facilities, respectively.

There are nine religious facilities located within or in close proximity to the Study corridor. Four of these churches are located adjacent to the S.R. 50 corridor: Landmark Baptist Church, Iglesia/Cristiana/Arca Evangelica, "Exciting" Brooksville Assembly of God and St. Anthony Catholic Church. The Study area is located within the Hernando County public school district. There are eight primary schools within the Study area, of which six are public and two are private. Generally, bus service is not provided to students living within two miles of the school that they attend. While none of these public schools are located adjacent to S.R. 50, their service boundaries extend into the corridor. Therefore, there are several bus stops located along the S.R. 50 corridor to serve these schools.



LEGEND

- Project Study Limits
- Major Interchange
- Railroad
- Schools
- Church
- Medical Facilities
- Public Facilities
- Parks
- Fire Stations
- Cemetery
- Sherriff
- Day Care Facilities

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

COMMUNITY FACILITIES

WPI SEG. NO: 407951 1
FAP NO: 300 - 1 (7)

FIGURE 4-14

Table 4-12: Summary of Community Facilities

Symbol	Name	Location
Schools		
1	Fox Hill Middle School	Fox Chapel Ln. – West of Deltona Blvd.
2	Spring Hill Elementary School	Roble Ave. – West of Mariner Blvd.
3	Brooksville Primary School	North Ave. – East of C.R. 445 (Howell Ave.)
4	Hernando High School	Bell Ave. - West of U.S. 41
5	R.R. Moton Early Intervention Center	School St. – West of S.R. 50 (U.S. 98)
6	Opportunity School	Emerson Rd. – North of S.R. 50 (Cortez Blvd.)
7	Hernando Christian Academy	Emerson Rd. – South of S.R. 50 (Cortez Blvd.)
8	Moton Elementary School	Emerson Rd. – South of S.R. 50 (Cortez Blvd.)
Churches		
1	The Church at Spring Hill	Deltona Blvd. – South of S.R. 50 (Cortez Blvd.)
2	Mariner United Methodist Church	Mariner Blvd. – South of S.R. 50 (Cortez Blvd.)
3	Landmark Baptist Church	S.R. 50 (Cortez Blvd.)
4	New Hope Baptist Church	Wiscon Rd. – South of S.R. 50 (Cortez Blvd.)
5	Iglesia/Cristiana/Arca Evangelica	S.R. 50 (Cortez Blvd.)
6	Christian Fellowship Church	Lykes Dublin Rd. – South of S.R. 50
7	Grace Tabernacle Independent Baptist Church	S.R. 50A (W. Jefferson St.) – East of S.R. 50 (Cortez Blvd.)
8	"Exciting" Brooksville Assembly of God	S.R. 50 (Cortez Blvd.)
9	St. Anthony Catholic Church	S.R. 50 (Cortez Blvd.)
Medical Facility		
1	Oak Hill Regional Hospital	S.R. 50 (Cortez Blvd.)
2	Spring Hill Regional Hospital	Grove Rd. – South of S.R. 50 (Cortez Blvd.)
3	Pinebrook Regional Medical Center	S.R. 50 (Cortez Blvd.)
4	Brooksville Regional Hospital	South Ponce De Leon Blvd. – West of U.S. 41 (Broad St.)
Public Facilities		
1	City Hall (Weeki Wachee)	U.S. 19 (S.R. 55) – South of S.R. 50 (Cortez Blvd.)
2	Hernando County Library (Westside)	S.R. 50 (Cortez Blvd.)
3	American Legion Post #186	S.R. 50 (Cortez Blvd.)
4	Brooksville Elks Lodge BPOE #2582	S.R. 50 (Cortez Blvd.)
5	United States Post Office	S.R. 50 (Cortez Blvd.)
6	Hernando County Health Department	South Main St. – South of S.R. 50A (W. Jefferson St.)
7	Hernando County Courthouse	North Main St. – South of S.R. 50A (W. Jefferson St.)
8	City Hall (Brooksville)	South Main St. – South of S.R. 50A (W. Jefferson St.)
9	Hernando County Government Complex	Broad St. – South of S.R. 50A (W. Jefferson St.)
10	Hernando County History Museum	Museum Ct. – North of S.R. 50A (W. Jefferson St.)
11	Memorial Library	Ft. Dade Ave. – North of S.R. 50A (W. Jefferson St.)
12	Greater Hernando County Chamber of Commerce	Ft. Dade Ave. – North of S.R. 50A (W. Jefferson St.)
13	Hernando County School Board	University Dr. – West of U.S. 41 (Broad St.)
Parks and Recreational Areas		
1	Weeki Wachee Springs Attraction	C.R. 550 – West of S.R. 50 (Cortez Blvd.)
2	Sand Hill Scout Reservation	S.R. 50 (Cortez Blvd.)
3	High Point Golf Club	Club House Road – North of S.R. 50 (Cortez Blvd.)
4	Tom Warn Park	Darby Lane – South of S.R. 50A (W. Jefferson St.)
5	The Quarry Golf Course "Bud"	John Gary Grubbs Blvd. – West of U.S. 41 (Broad St.)
6	McKethan Park	John Gary Grubbs Blvd. – West of U.S. 41 (Broad St.)
7	Hernando Park	North Main St. – North of S.R. 50A (W. Jefferson St.)
8	Emerson Field	North Main St. – North of S.R. 50A (W. Jefferson St.)
9	Leopard Stadium	Kelly St. – West of U.S. 41 (Broad St.)
10	Kennedy Park	Kennedy Blvd. – South of S.R. 50A (E. Jefferson St.)
11	McKethan Civic Auditorium	U.S. 41 (Broad St.) – South of S.R. 50 (Cortez Blvd.)
12	Lonnie C. Coburn Park	U.S. 41 (Broad St.) – South of S.R. 50 (Cortez Blvd.)
13	Hernando County Fairgrounds	U.S. 41 (Broad St.) – South of S.R. 50 (Cortez Blvd.)
Fire Department		
1	High Point Volunteer Fire Department	Baltic St. – North of S.R. 50 (Cortez Blvd.)
2	Hernando County Fire/Rescue Station #12	S.R. 50 (Cortez Blvd.)
3	Hernando County Fire Department	S.R. 50A (W. Jefferson St.)
Sheriff's Department		
1	Hernando County Sheriff's Office	Clinton Blvd. – South of S.R. 50 (Cortez Blvd.)
2	Hernando County Sheriff's Department	Ft. Dade Ave. – North of S.R. 50A (W. Jefferson St.)
Day Care Facilities		
1	Kid's Corner Day Care	C.R. 550 (Cortez Blvd.)
2	Great Beginning II Preschool & Daycare	S.R. 50 (Cortez Blvd.)
3	Bright Beginning Preschool	S.R. 50 (Cortez Blvd.)
Cemetery		
1	Brooksville Cemetery	Olmes Road – North of S.R. 50 (U.S. 98)

4.3.3 Natural and Biological Features

4.3.3.1 Wetland Identification and Delineation

Field surveys were conducted during May 2003, which quantified the potential wetland impacts by the recommended mainline improvements.

Due to the conceptual nature of the design and the scale of the aerials, wetland boundaries adjacent to the Study corridor were not delineated on the plan sheets. However, there are very few wetlands along the corridor. With the possible exception of culvert extensions, no wetland involvement is anticipated. There is a small isolated wetland on the north side of the roadway near the west intersection of S.R. 50/S.R. 50A. It is adjacent to the proposed right-of-way along the north side of S.R. 50, east of Morningside Drive. It appears from the aerials that this wetland lies outside of the proposed right-of-way.

4.3.3.2 Threatened and Endangered Species

Pursuant to Section 7(c) of the Endangered Species Act of 1973, as amended, the Study area was evaluated for potential occurrence of threatened and endangered species. Field reconnaissance was conducted during May 2003 to determine any involvement with listed species.

No federally protected threatened or endangered species were observed along the Study corridor. Two state listed "Species of Special Concern" occur within the project limits. The Gopherus polyphemus (gopher tortoise) and the Sciurus niger shermani (Sherman's fox squirrel) are species that were encountered during the field survey events. Active gopher tortoise burrows were observed along the mainline in the northeast quadrants of Twin Dolphin Drive/Sunshine Grove Road and Fort Dade Avenue (C.R. 484). In addition, active gopher tortoise burrows were observed in stormwater pond basins C, E north, E south, F south and G.

Coordination with the Florida Fish and Wildlife Conservation Commission will need to be initiated during the final design/ permitting phase.

4.3.4 Potential Contamination and Hazardous Material

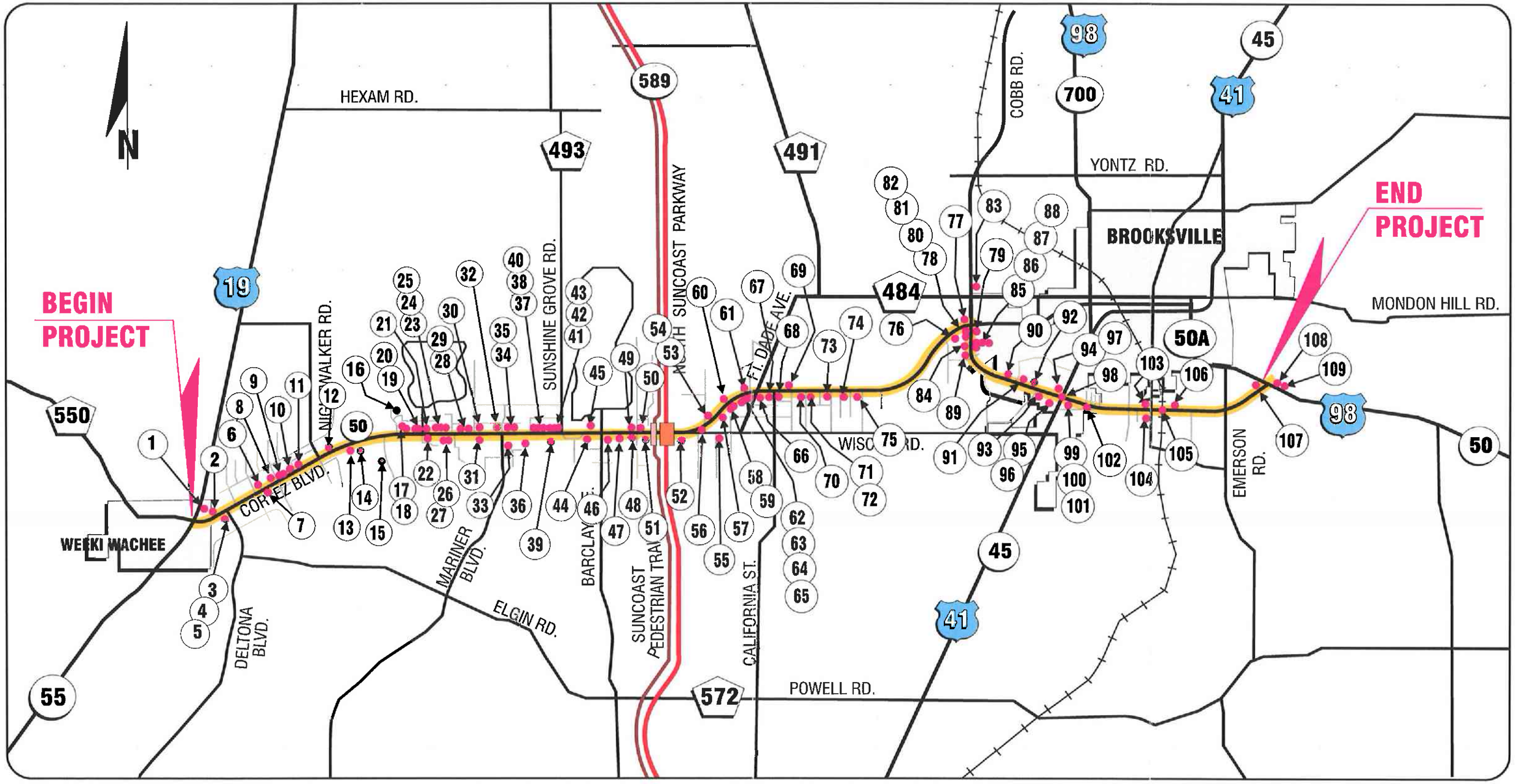
A *Final Contamination Screening Evaluation Report*[5] has been prepared pursuant to the Federal Highway Administration's (FHWA) Technical Advisory T 6440.8A, dated October 30, 1987, and in accordance with the PD&E Manual, Part 2, Chapter 22, dated February 8, 1994. A summary of the preliminary findings of this evaluation follows.

The first phase of the hazardous materials and petroleum evaluation of properties along the project corridor consisted of data collection. As part

of the data collection effort, a review of the current and historical aerial photographs (1966, 1979, 1984, 1988 and 2001) was conducted. A regulatory review of federal and state environmental records was also conducted, which included information compiled by the United State Environmental Protection Agency (USEPA), the Florida Department of Environmental Protection (FDEP) and the Hernando County Environmental Health Department. In addition, site visits that included interviews with site personnel, property owners, long-time residents and local officials were conducted in April 2003.

During the contamination screening evaluation of the S.R. 50 corridor, 111 sites within the project corridor were idenitifed as having the potential for contamination impacts to the proposed project. Of the 111 potentially contaminated sites within or adjacent to the recommended alignment, 5 are no risk sites, 80 are low risk sites, 19 are associated with petroleum storage tanks and/or hazardous materials/hazardous waste and are ranked as medium, due to the propensity of fuel underground storage tanks (UST's) to leak, and 7 are high risk that are associated with contamination currently present and/or poor waste management practices. It must be noted that the list of these sites is not all-inclusive; contamination may be encountered anywhere along the Study length of S.R. 50. Figure 4-15 shows the approximate location of the potentially contaminated sites, and Table 4-13 provides a breakdown of sites and contamination type.

In order to confirm or refute possible contamination involvement, it is recommended that a Level II Contamination Assessment be conducted for the recommended alignment prior to construction, if additional right-of-way is required. This assessment should focus on the rated sites within the project corridor that will be directly impacted by construction of the improvements. The Level II Contamination Assessment should include field sampling and quantitative analysis of soils and groundwater.



LEGEND

- Project Study Limits
- Major Interchange
- Railroad
- Potential Contamination Site
- (3) Potential Contamination Site Number

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

POTENTIAL CONTAMINATION SITES

WPI SEG. NO.: 407 951 - 1 - 22 - 01
FAP NO.: 300 - 1 (7)

FIGURE 4-15

Table 4-13: List of Potentially Contaminated Sites and Risk Ratings

Site ID.	Site No.	Property Description	Property Address	Storage Tanks	Distance From ROW (Feet)	Contamination Concern	Contamination Evaluation
1-P/HM/HW-M	1	Mobil Gas Station	6200 Commercial Way	Yes	300	Petroleum/HM/HW	Medium
2-P/HM/HW-L	2	Pronto Cleaners	8 Brook Plaza	Yes	75	Petroleum	Low
3-HM/HW-L	3	Diamond Brite	6205 Deltona Blvd., Suite G	No	200	HM/HW	Low
4-HM/HW-L	4	All Clear Pool Supplies, Inc.	6205 Deltona Blvd., Suite H	No	200	HM/HW	Low
5-P/HM/HW-L	5	Circle K #7485	6227 Deltona Blvd.	Yes	75	Petroleum/HM/HW	Low
6-HM/HW-L	6	Hernando County Fire Station #12	6335 Ovenbird Rd.	No	150	HM/HW	Low
7-HM/HW-L	7	Cortez Medical Plaza	10000 Cortez Blvd.	No	175	HM/HW	Low
8-P-H	8	Withlocoochee River Electric Co-Op.	10005 Cortez Blvd.	Yes	200	Petroleum	High
9-HM/HW-L	9	Good Sheppard Walk-In Clinic and J&M Plaza	10071 Cortez Blvd.	No	100	HM/HW	Low
10-HM/HW-L	10	Scott Paint	10163 Cortez Blvd.	No	100	HM/HW	Low
11-HM/HW-L	11	Family Medical Center	10200 Cortez Blvd.	No	75	HM/HW	Low
12-HM/HW-L	12	Hernando County Utilities Department – Water Plant	12330 Cortez Blvd.	No	50	HM/HW	Low
13-HM/HW-L	13	Withlacoochee River Electric Co-Op. Substation	10400 Cortez Blvd.	No	300	HM/HW	Low
14-HM/HW-L	14	Florida Power & Light Corp. – Weeki Wachee Substation	11010 Cortez Blvd.	No	200	HM/HW	Low
15-P-L	15	Sand Hill Scout Reservation	11210 Cortez Blvd.	Yes	800	Petroleum	Low
16-P/HM/HW-M	16	Columbia Regional Medical (Oak Hill)	11375 Cortez Blvd.	Yes	800	Petroleum/HM/HW	Medium
17-HM/HW-L	17	Good Sheppard Images	11463 Cortez Blvd.	No	300	HM/HW	Low
18-HM/HW-L	18	Gulf Coast Medical Center	11479 Cortez Blvd.	No	100	HM/HW	Low
19-HM/HW-L	19	Oakview Medical Center	12001 Cortez Blvd.	No	150	HM/HW	Low
20-HM/HW-L	20	Summit Imaging	12037 Cortez Blvd.	No	100	HM/HW	Low
21-HM/HW-L	21	High Point Coin Laundry	12081 Cortez Blvd.	Yes	75	HM/HW	Low
22-HM/HW-L	22	Community Medical Plaza	12112 Cortez Blvd.	No	100	HM/HW	Low
23-P/HM/HW-L	23	National Transmission of Spring Hill	12153 Cortez Blvd.	No	100	Petroleum/HM/HW	Low
24-P/HM/HW-L	24	Quick Lube	12155 Cortez Blvd.	No	125	Petroleum/HM/HW	Low
25-P/HM/HW-L	25	Tire Kingdom	12161 Cortez Blvd.	No	150	Petroleum/HM/HW	Low
26-HM/HW-L	26	Hernando Endoscopy & Surgery Center	12180 Cortez Blvd.	No	100	HM/HW	Low
27-HM/HW-L	27	Hernando Medical Park	12161 Cortez Blvd.	No	75	HM/HW	Low
28-HM/HW-L	28	Life South Community Blood Center	12395 Cortez Blvd.	No	150	HM/HW	Low
29-HM/HW-L	29	Auto Zone Discount Auto Parts	12495 Cortez Blvd.	No	125	HM/HW	Low
30-P-L	30	Arby's Restaurant	12915 Cortez Blvd.	Removed	100	Petroleum	Low
31-HM/HW-L	31	Florida Medical Center/Endoscopy & Surgery Center	12900 Cortez Blvd.	No	100	HM/HW	Low
32-HM/HW-L	32	Walgreens	13086 Cortez Blvd.	No	75	HM/HW	Low
33-HM/HW-L	33	Touch of Quality Cleaner	13076 Cortez Blvd.	No	350	HM/HW	Low
34-P/HM/HW-M	34	Circle K #7486	13077 Cortez Blvd.	Yes	50	Petroleum/HM/HW	Medium
35-P/HM/HW-L	35	Southdown Inc.	13083 Cortez Blvd.	Removed	Unknown	Petroleum/HM/HW	Low
36-P/HM/HW-L	36	Wal Mart Super Center	13300 Cortez Blvd.	Yes	500	Petroleum/HM/HW	Low
37-P/HM/HW-L	37	Bridgestone	13251 Cortez Blvd.	Not Available	150	Petroleum/HM/HW	Low
38-HM/HW-L	38	Mural Mania	13325 Cortez Blvd.	No	150	HM/HW	Low
39-P-M	39	Citgo Beverage Depot & Deli (Former Sunshine Gas N Go)	13390 Cortez Blvd.	No	75	Petroleum	Medium
40-P/HM/HW-L	40	Johnson Motors	13357 Cortez Blvd.	No	100	Petroleum/HM/HW	Low
41-P/HM/HW-L	41	Ice Cold Air	13399 Cortez Blvd.	No	75	Petroleum/HM/HW	Low
42-P/HM/HW-L	42	Sun Runner Automotive	1319 Cortez Blvd.	No	75	Petroleum/HM/HW	Low
43-HM/HW-L	43	Discount Auto Parts	13427 Cortez Blvd.	No	75	HM/HW	Low
44-P/HM/HW-L	44	Precision Auto (Former Ridge Point Homes Inc.)	14140 Cortez Blvd.	Removed	Unknown	Petroleum/HM/HW	Low
45-HM/HW-L	45	Register Chevrolet Oldsmobile	14181 Cortez Blvd.	No	200	HM/HW	Low
46-P-H	46	Speedway #0178	7170 Barclay Ave.	Yes	75	Petroleum	High
47-P/HM/HW-L	47	Plaza Chrysler Plymouth Dodge	14358 Cortez Blvd.	Removed	150	Petroleum/HM/HW	Low
48-HM/HW-L	48	Springbrook Hospital	14540 Cortez Blvd.	No	200	HM/HW	Low
49-HM/HW-L	49	Pasco/Hernando Oncology	14529 Cortez Blvd.	No	200	HM/HW	Low
50-HM/HW-L	50	Hernando Heart Clinic	14555 Cortez Blvd.	No	100	HM/HW	Low
51-P-L	51	Pinecrest Funeral Chapel	15010 Cortez Blvd.	No	100	Petroleum	Low
52-P/HM/HW-H	52	Wes Harris Buick-Pontiac	15164 Cortez Blvd.	Removed	150	Petroleum/HM/HW	High
53-P/HM/HW-L	53	Jim Peyton Motors	15225 Cortez Blvd.	Removed	Unknown	Petroleum/HM/HW	Low
54-HM/HW-L	54	Hernando Today	15299 Cortez Blvd.	No	75	HM/HW	Low
55-P-L	55	Hernando County – Utility Site	15400 Wiscon Rd.	Yes	300	Petroleum	Low
56-P-M	56	Citgo/7-Eleven Food Store #32859	15310 Cortez Blvd.	Yes	75	Petroleum	Medium
57-P-M	57	White's Septic Tank Service Inc./ USE 8626680	15430 Cortez Blvd.	Removed	100	Petroleum	Medium
58-HM/HW-L	58	Gator Phillips Printing	15476 Cortez Blvd.	No	75	HM/HW	Low
59-P/HM/HW-L	59	Advance Auto	15476 Cortez Blvd.	No	150	Petroleum/HM/HW	Low
60-P/HM/HW-H	60	Save On Nursery	15491 Cortez Blvd.	Yes	25	Petroleum/HM/HW	High
61-P/HM/HW-L	61	Anthony's Precision Automotive	15521 Cortez Blvd.	No	150	Petroleum/HM/HW	Low
62-P/HM/HW-L	62	A+ Automotive/Gomez Property/ Fast Lane Automotive	15536 Cortez Blvd.	No	150	Petroleum/HM/HW	Low
63-P/HM/HW-H	63	Clark New/Used Cars & RV Sales & Service	16076 Cortez Blvd.	Yes	100	Petroleum/HM/HW	High

Table 4-13: List of Potentially Contaminated Sites and Risk Ratings (Continued)

Site ID.	Site No.	Property Description	Property Address	Storage Tanks	Distance From ROW (Feet)	Contamination Concern	Contamination Evaluation
64-P/HM/HW-L	64	Passy Auto Repair	16090 Cortez Blvd.	No	75	Petroleum/HM/HW	Low
65-P-M	65	Coastal Max Mart (Former Cortez Station)	16128 Cortez Blvd.	Yes	50	Petroleum	Medium
66-HM/HW-L	66	Liquidated Merchandise (Former Piston Ring Supply)	16176 Cortez Blvd.	No	100	HM/HW	Low
67-P/HM/HW-L	67	American Sport Cars	16264 Cortez Blvd.	No	100	Petroleum/HM/HW	Low
68-P/HM/HW-L	68	John Bost Automotive	16288 Cortez Blvd.	No	100	Petroleum/HM/HW	Low
69-HM/HW-L	69	Becks Termite & Pest Control	16339 Cortez Blvd.	No	150	HM/HW	Low
70-P/HM/HW-L	70	Complete Automotive Care	16378 Cortez Blvd.	No	75	Petroleum/HM/HW	Low
71-P/HM/HW-L	71	Brooksville Transmission	16402 Cortez Blvd.	No	150	HM/HW	Low
72-HM/HW-L	72	Armco Radiator Repair (Former Brothers 111 Carburetors)	16414 Cortez Blvd.	No	50	HM/HW	Low
73-P/HM/HW-L	73	Master Auto Air	16450 Cortez Blvd.	No	100	Petroleum/HM/HW	Low
74-P/HM/HW-L	74	A-1 Mower	17022 Cortez Blvd.	No	150	Petroleum/HM/HW	Low
75-HM/HW-L	75	M&M Kwick Printing	17166 Cortez Blvd.	No	75	HM/HW	Low
76-P/HM/HW-L	76	Quality Auto Repair (Former Hernando Auto Electric Inc.)	18610 Cortez Blvd.	No	75	Petroleum/HM/HW	Low
77-P/HM/HW-M	77	Hess #09405	18635 Cortez Blvd.	Yes	75	Petroleum/HM/HW	Medium
78-P-H	78	Dieter's Auto & Truck Sales (Former Presto Food Store #17)	18860 Cortez Blvd.	Removed	25	Petroleum	High
79-P-L	79	Hardee's Restaurant (Former Paff-Deason Co.)	18700 Cortez Blvd.	Removed	75	Petroleum	Low
80-P-L	80	Hernando Oil	18748 Cortez Blvd.	Yes	100	Petroleum	Low
81-P/HM/HW-M	81	Highland Body Shop	18760 Cortez Blvd.	No	100	Petroleum/HM/HW	Medium
82-P/HM/HW-M	82	By Pass Garage	18768 Cortez Blvd.	No	100	Petroleum/HM/HW	Medium
83-P-M	83	Shop & Save (Circle K)	9020 Cobb Ave.	Yes	75	Petroleum	Medium
84-P/HM/HW-H	84	Commercial Carrier Corp.	18820 Cortez Blvd.	Yes	200	Petroleum/HM/HW	High
85-P/HM/HW-L	85	Quick Fix Tire	18825 Cortez Blvd.	No	75	Petroleum/HM/HW	Low
86-P-M	86	Donto Construction Corp.	18839 Cortez Blvd.	Removed	800	Petroleum	Medium
87-P-M	87	Whetstone Oil Corp. Inc.	18839 Cortez Blvd.	Yes	800	Petroleum	Medium
88-P-L	88	Revenaughs Service Center	18845 Cortez Blvd.	Yes	100	Petroleum	Low
89-P-M	89	Hernando County – Sheriff's Department	18900 Cortez Blvd.	Yes	200	Petroleum	Medium
90-HM/HW-L	90	Palm Pool & Patio (Closed)	19201 Melendez Rd.	No	100	HM/HW	Low
91-P/HM/HW-M	91	Cumberland Farms #1054	19275 Melendez Rd.	Yes	75	Petroleum/HM/HW	Medium
92-N	92	City of Brooksville Pumping Station	No Physical Address	No	50	None	No
93-HM/HW-L	93	K Mart #7513 (Closed)	19388 Cortez Blvd.	No	400	HM/HW	Low
94-P/HM/HW-L	94	Auto Zone Discount Auto Parts	1274 Broad St.	No	125	Petroleum/HM/HW	Low
95-HM/HW-L	95	Florida Dry Cleaning (Former AA Laundromat)	19434 Cortez Blvd.	No	300	HM/HW	Low
96-HM/HW-L	96	Walgreens #1623	19450 Cortez Blvd.	No	500	HM/HW	Low
97-HM/HW-M	97	Imperial Cleaners (Former Touch of Quality Cleaners)	1224 South Broad St.	Removed	500	HM/HW	Medium
98-P-L	98	Montgomery Truck Lines	U.S. 41 & S.R. 50	No	0	Petroleum	Low
99-P/HM/HW-L	99	Big Lots (Former K Mart #9702)	20020 Cortez Blvd.	Removed	500	Petroleum/HM/HW	Low
100-P/HM/HW-L	100	NAPA Auto Parts	20060 Cortez Blvd.	No	500	Petroleum/HM/HW	Low
101-HM/HW-L	101	Porter Paints	20070 Cortez Blvd.	No	500	HM/HW	Low
102-P/HM/HW-M	102	Texaco No. 242031365/ Star Enterprises (Closed)	20200 Cortez Blvd.	Removed	25	Petroleum/HM/HW	Medium
103-N	103	Ranch Hands Feed Depot	21029 Cortez Blvd.	No	50	None	No
104-N	104	Hernando County Utility Department	21030 Cortez Blvd.	No	50	None	No
105-P/HM/HW-L	105	Seaboard Rail Line	S.R. 50, East of C.R. 445	No	0	Petroleum/HM/HW	Low
106-N	106	Turbine Solutions	21125 Cortez Blvd.	No	150	None	No
107-P-M	107	Hess #09403 (Former Pick Kwick Food Store #137)	22186 Cortez Blvd.	Yes	50	Petroleum	Medium
108-P/HM/HW-M	108	Widow's Oil Thrift Store (Former Liberty Auto Sales)	22255 Cortez Blvd.	Removed	75	Petroleum/HM/HW	Medium
109-P/HM/HW-L	109	Dave's Repairs	Hwy. 518 & Hwy 50 West	No	100	Petroleum/HM/HW	Low
110-N	110	Grubbs Construction	1115 Main Street South	Yes	660	Petroleum	No
111-N	111	Labor Finder	Unknown	No	150	Asbestos	No

Footnotes:
NA = Not Available
HM/HW = Hazardous Material/Hazardous Waste
ROW = Right-of-way
110 and 111 = Sites located outside the range of the aerial photographs of the project corridor.

4.4 References

1. Hernando County Comprehensive Plan; Hernando County Planning Department; Hernando County, Florida; Amended December 11, 2002.

2. Plans Preparation Manual-English; Florida Department of Transportation Roadway Design Office; Tallahassee, Florida; January 2003.

3. Soil Survey of Hernando County, Florida; United States Department of Agriculture Soil Conservation Service and the University of Florida Soil Science Department; Florida; July 1977.

4. Preliminary Geotechnical Report; Professional Service Industries, Inc.; Tampa, Florida; July 2003.

5. Final Contamination Screening Evaluation Report; Arcadis G&M, Inc.; Tampa, Florida; October 2003.

5.0 DESIGN CONTROLS AND STANDARDS

The design criteria applicable to the development of design alternatives for this project include those necessary to develop roadway typical sections, horizontal and vertical alignments and clearances, within the established AASHTO, FHWA and FDOT design criteria. Table 5-1 summarizes the criteria utilized to develop both the urban and rural typical sections for this project. These standards are based on the Florida Department of Transportation's *Plans Preparation Manual – English* [1] unless otherwise specified.

Table 5-1: Summary of Design Standards' Criteria

Functional Classification		
Urban Principal Arterial	From U.S. 19 (S.R. 55) to west of Grove Road and West Intersection of S.R. 50/S.R. 50A to East Intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass]	
Rural Principal Arterial	From west of Grove Road to the West Intersection of S.R. 50/S.R. 50A	
Access Management Classification		
3 (Restrictive)		
Design Speed		
Urban and Modified Urban Typical Sections		50 mph
Rural Typical Section		65 mph
Roadway Elements	**Urban and Modified Urban Typical Sections**	**Rural Typical Section**
Through Lane Width	12 ft.	12 ft.
Bike Lane Width	4 ft.	5 ft.
Median Width (Desirable/Minimum)	40 ft./22 ft.	40 ft.
Shoulder Width (Paved/Total)	N/A	5 ft./10 ft.
Sidewalk Width	5 ft. (2 ft. Buffer) or 6 ft. (Without Buffer)	5 ft.
Horizontal Alignment		
Minimum Radius	881 ft. ($D_{max.}$ = 6°30'00")	1,361 ft. ($D_{max.}$ = 4°15'00")
Border Width (With Bike Lane/ Without Bike Lane)	12 ft./14 ft.	40 ft.
Maximum Superelevation	0.05	0.10
Maximum Deflection (Without a Curve)	1°00'00"	0°45'00"
Minimum Horizontal Curve Length	750 ft. (No Less Than 400 ft.)	975 ft. (No Less Than 400 ft.)
Minimum Radius for Curves (Without Superelevation)	2,865 ft. ($D_{min.}$ = 2°00'00")	22,918 ft. ($D_{min.}$ = 0°15'00")
Vertical Alignment		
Minimum Curve Length (Sag)	200 ft.	350 ft.
Minimum "K" Value (Sag)	96	157
Minimum Curve Length (Crest)	300 ft.	450 ft.
Minimum "K" Value (Crest)	136	313
Maximum Grade	6.0%	3.0%
Maximum Change in Grade Without Vertical Curve	0.6%	0.4%
Minimum Grade	0.3%	0.0%
Sight Distance		
Stopping – Minimum	425 ft.	645 ft.

5.1 References

1. Plans Preparation Manual-English; Florida Department of Transportation Roadway Design Office; Tallahassee, Florida; January 2003.

6.0 TRAFFIC

The *S.R. 50 PD&E Traffic Report* [1] provides the existing traffic volumes and traffic characteristics for the Study corridor as well as the methodology utilized to develop the opening year (2005) and design year (2025) traffic demand. In addition, the traffic projections derived in the *Traffic Report* [1] were used as the basis for determining the need for the project and the basis for determining the type of facility, number of lanes required and geometric requirements at intersections. Included in the following sections are summaries of the pertinent traffic elements from the *Traffic Report* [1].

6.1 Existing Traffic Conditions

In order to determine the current LOS along the Study corridor, traffic counts were conducted at specified intersections along S.R. 50. Eighteen intersections were analyzed within the Study area:

- S.R. 50 at U.S. 19 (S.R. 55)
- S.R. 50 at Deltona Boulevard
- S.R. 50 at Oak Hill Hospital
- S.R. 50 at High Point Boulevard/Community Boulevard
- S.R. 50 at Mariner Boulevard (C.R. 587)
- S.R. 50 at Sunshine Grove Road/Twin Dolphin Drive
- S.R. 50 at Brookridge Central Boulevard/Barclay Avenue
- S.R. 50 at Northbound/Southbound Suncoast Parkway Ramps (S.R. 589)
- S.R. 50 at Wiscon Road (C.R. 570)
- S.R. 50 at Winter Street
- S.R. 50 at Fort Dade Avenue (C.R. 484)
- S.R. 50 at California Street
- S.R. 50 at Cobb Road (C.R. 485)
- S.R. 50 [along the Brooksville Bypass] at Buck Hope Road
- S.R. 50 [along the Brooksville Bypass] at U.S. 41/S.R. 45 (Broad Street)
- S.R. 50 [along the Brooksville Bypass] at Main Street/Mitchell Road (C.R. 445)
- S.R. 50 [along the Brooksville Bypass] at Emerson Road (C.R. 581)
- S.R. 50 [along the Brooksville Bypass] at S.R. 50A (Jefferson Street)

Wiscon Road, Fort Dade Avenue and California Street are unsignalized intersections that were analyzed. These intersections are two-way stop sign controlled.

A dual-phase traffic count collection was conducted within the Study area during the period from April 2, 2002 through May 16, 2002. The first phase of the traffic count collection consisted of 3-day (Tuesday through Thursday), 24-hour vehicle counts, which were recorded in 15-minute intervals by direction. The Department and Turnpike District provided additional traffic counts for the Suncoast Parkway that were collected between February 4, 2002 and February 10, 2002. It should

be noted that the Suncoast Parkway opened in late 2001 and traffic patterns in the vicinity of the parkway will take several years to become established.

The second phase of the traffic count collection included manual turning movement counts and 24-hour machine traffic counts at all intersection approaches. Eleven-hour turning movement counts were conducted from 7:00 a.m. to 6:00 p.m. at all of the intersections previously identified with the exception of the counts at the intersections of Oak Hill Hospital and Buck Hope Road. These two intersections included the highest volume hours as determined from the 3-day, 24-hour vehicle counts. Instead of being collected during the 3-day, 24-hour machine count phase, the truck volumes and the number of pedestrians and bicyclists were manually counted during these hours at all study intersections. The intersection turning movement counts were summarized by 15-minute time increments and hourly totals.

In addition, eight-hour turning movement counts at the intersections of Oak Hill Hospital and Buck Hope Road at S.R. 50 (Cortez Boulevard) were collected by the FDOT on September 3, 2002.

The historic FDOT project traffic factors were analyzed to develop the recommended K, D, and T factors. These factors were then utilized to define the traffic characteristics used in the design hour traffic LOS analyses, which are summarized below in Table 6-1.

Table 6-1: Recommended Traffic Factors

Facility	K_{30}	D_{30}	T_{Daily}	DHT	PHF*
S.R. 50 (Between U.S. 19 and U.S. 41)	9.62%	53.00%	5.00%	2.50%	0.95
S.R. 50 (Between U.S. 41 and S.R. 50A)	9.62%	53.00%	14.00%	7.00%	0.95
C.R. 485	9.62%	53.00%	34.00%	17.00%	0.95
U.S. 41	9.62%	53.00%	8.00%	4.00%	0.95
S.R. 50A	9.62%	53.00%	19.00%	9.50%	0.95
All Others	9.62%	53.00%	3.00%	1.50%	0.95

*FDOT recommended default value

Section 3.1 of this report provides a brief discussion of the existing levels of service within the Study corridor, and the specific LOS information is tabulated in Table 3-1.

6.2 Multimodal Transportation System Considerations

The project is located in an area with both urban and rural characteristics. The automobile is the predominant mode of travel. Descriptions of other alternative modes of travel follow.

6.2.1 Bus Service

Due to the cooperative efforts of the Hernando County Metropolitan Planning Organization, Hernando County, the City of Brooksville, the Florida Department of Transportation, the Federal Transit Administration and the Mid-Florida Community Services, THE Bus – The Hernando Express began providing a fixed route transit service to Hernando County

on October 28, 2002, on weekdays from 7:00 a.m. and ending at 4:47 p.m. THE Bus provides service in Spring Hill and Brooksville via three designated routes, with additional areas in the future. It should be noted that the routes are predetermined; however, the stops are random.

The Spring Hill Circulator, Routes 1 and 2, provide identical service in two different directions, clockwise and counter-clockwise within the area of Spring Hill along Mariner Boulevard, Northcliffe Boulevard, Deltona Boulevard, Spring Hill Drive, U.S. 19 (S.R. 55) and S.R. 50. These two routes include three waypoints, which include a transfer station on S.R. 50 at the Bealls Shopping Center (east of Mariner Boulevard), Weeki Wachee Attraction and Oak Hill Hospital. The Brooksville Shuttle, Route 3, provides service along S.R. 50 and S.R. 50 [along the Brooksville Bypass] to Downtown Brooksville via Broad Street, Martin Luther King Jr. Boulevard, Main Street, Jefferson Street, U.S. 41 and Howell Avenue with two waypoints along S.R. 50 at the Bealls Shopping Center (east of Mariner Boulevard) and the Brooksville Wal-Mart Supercenter.

Paratransit service within Hernando County is provided by *TransHernando* (a service of Mid-Florida Community Services), which is intended to be utilized by individuals who cannot use accessible fixed route transportation. The paratransit service is comparable to the fixed route system in terms of coverage, level of service and times of operation.

6.2.2 Railroads

There is an existing railroad line belonging to CSX Transportation System located within the project limits. The railroad line crosses S.R. 50 [along the Brooksville Bypass], approximately 600 feet east of Main Street (C.R. 445). This line consists of one main track that carries two freight trains daily and does not provide public transportation services. Warning devices include cantilever arms and flashing lights with gates.

6.2.3 Airports and Seaports

There are no airports or seaports directly accessed by S.R. 50.

6.3 Traffic Analysis Assumptions

The existing (2002) AADT volumes were calculated by averaging the 3-day traffic counts and applying the current (2001) FDOT seasonal factor and axle adjustment factors. The seasonal adjustment factor varied by count location, since the counts were not all collected during the same week. The axle adjustment factor was 0.93 for all counts, except for those counts collected at the Suncoast Parkway ramps, U.S. 41, Winter Street and Wiscon Road where 0.98 was applied.

6.4 Existing Traffic Volumes

Traffic volume counts were taken along the project corridor and the results indicate that the typical weekday traffic volumes along S.R. 50 range from 7,700 vehicles to 33,000 vehicles, which is dependent upon the count location. The existing daily traffic volumes and existing turning movement volumes for S.R. 50

are illustrated in Figures 6-1A through 6-1C and Figures 6-2A through 6-2C, respectively. These traffic volumes were obtained utilizing the methodology discussed in Section 6.1.

6.5 Traffic Volume Projections

Figures 6-3A through 6-3C illustrate the daily traffic projections through the design year (2025), based on the methodology described in Section 6.3.

Future turning movement volumes were developed for each intersection in the Study area for the Opening Year (2005) and Design Year (2025) conditions. Turning movement volumes were derived by applying the turning movement split of the Existing Year (2002) turning movement volumes to the Opening Year (2005) and Design Year (2025) volumes. The design hour volumes are illustrated in Figures 6-4A through 6-4C.

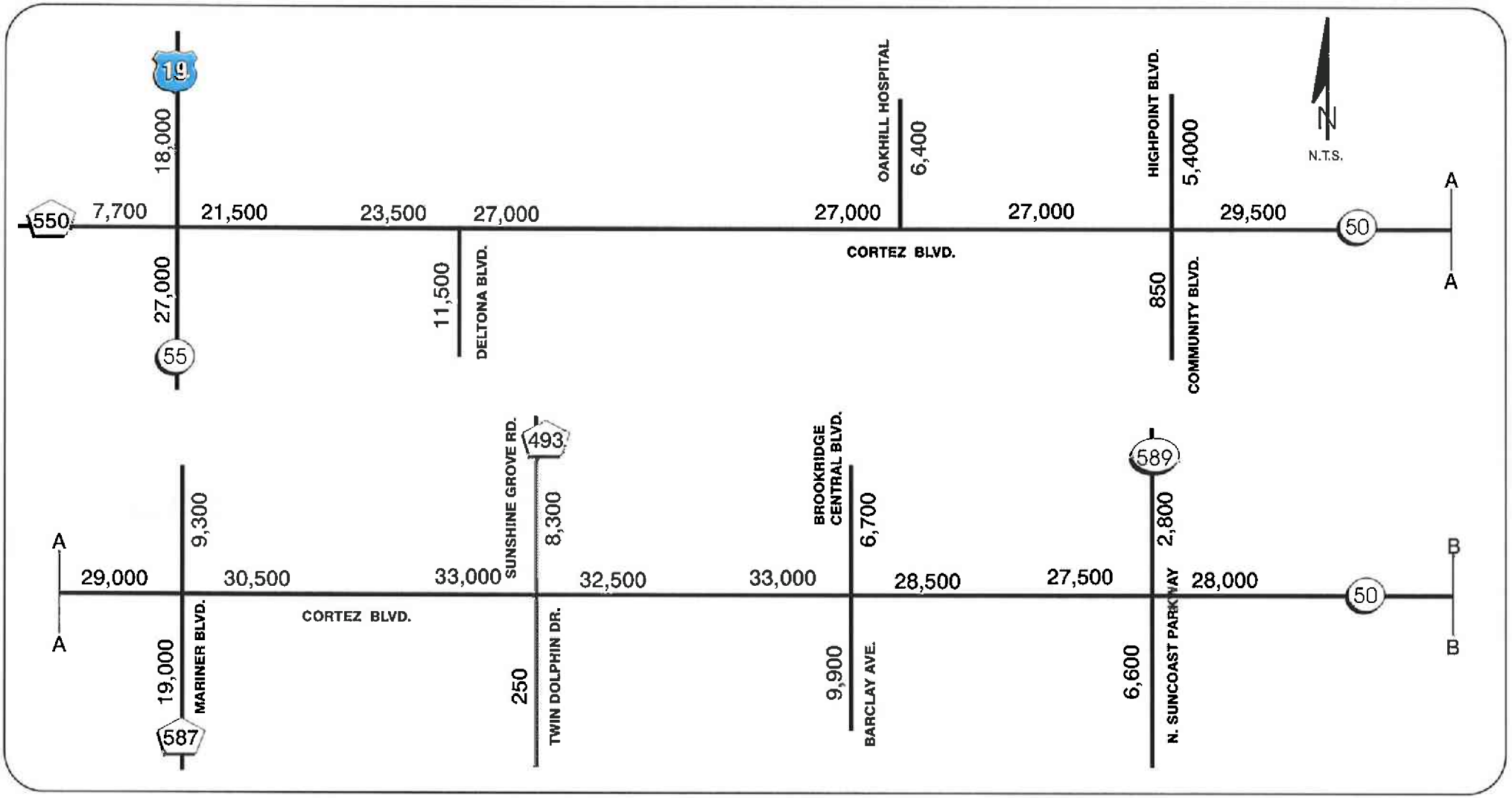
6.6 Level of Service

As previously discussed in Section 3.1, the FDOT has adopted a LOS standard of "C" or better for all State owned and maintained roadways within non-urbanizes areas, which is compulsory for FIHS facilities such as S.R. 50. However, the LOS standard for intersections and turning movements were set at the *Highway Capacity Manual* [2] standard for acceptable LOS, which is "D" or better.

The capacity analysis was conducted utilizing the latest version of the Highway Capacity Software (HCS 2000, version 4.1c) under the guidelines of the 2000 Highway Capacity Manual (HCM). Analyses were performed for signalized intersections, unsignalized intersections and arterial through movements within the project corridor for both the Build and No Build alternatives for the opening year (2005) and design year (2025). Signalized intersections were analyzed using the Signals module of HCS 2000. A summary of the LOS analyses for these conditions is presented in Table 6-2 and briefly described below. A detailed analysis is presented in the Study's *Traffic Report.*

In the Opening Year (2005) for the No Build alternative, all of the signalized intersections operate at LOS D or better during both the AM and PM peak hour periods with the exception of the intersection of S.R. 50 and Mariner Boulevard (C.R. 587). All of the unsignalized intersections operate at LOS D or better for the Opening Year (2005) No Build alternative. The overall project corridor under the Opening Year (2005) No Build alternative will operate at a LOS B; however, a number of individual segment links along S.R. 50 operate at unacceptable conditions (LOS D or worse).

All signalized intersections will operate at LOS D or better during both the AM and PM peak hour in the Opening Year (2005) for the Build alternative. It should be noted that the current HCM and HCS procedures do not provide methods to analyze unsignalized intersections along six-lane (three through lanes on the major street) roads, the unsignalized intersections were evaluated as either right-in/out (California Street and Wiscon Road) or as signalized (Fort Dade Avenue) depending on the traffic and operation considerations. Under the Opening Year (2005) Build alternative, the overall project will operate at LOS B; however, a



LEGEND

7,650 Annual Average Daily Traffic (AADT)

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

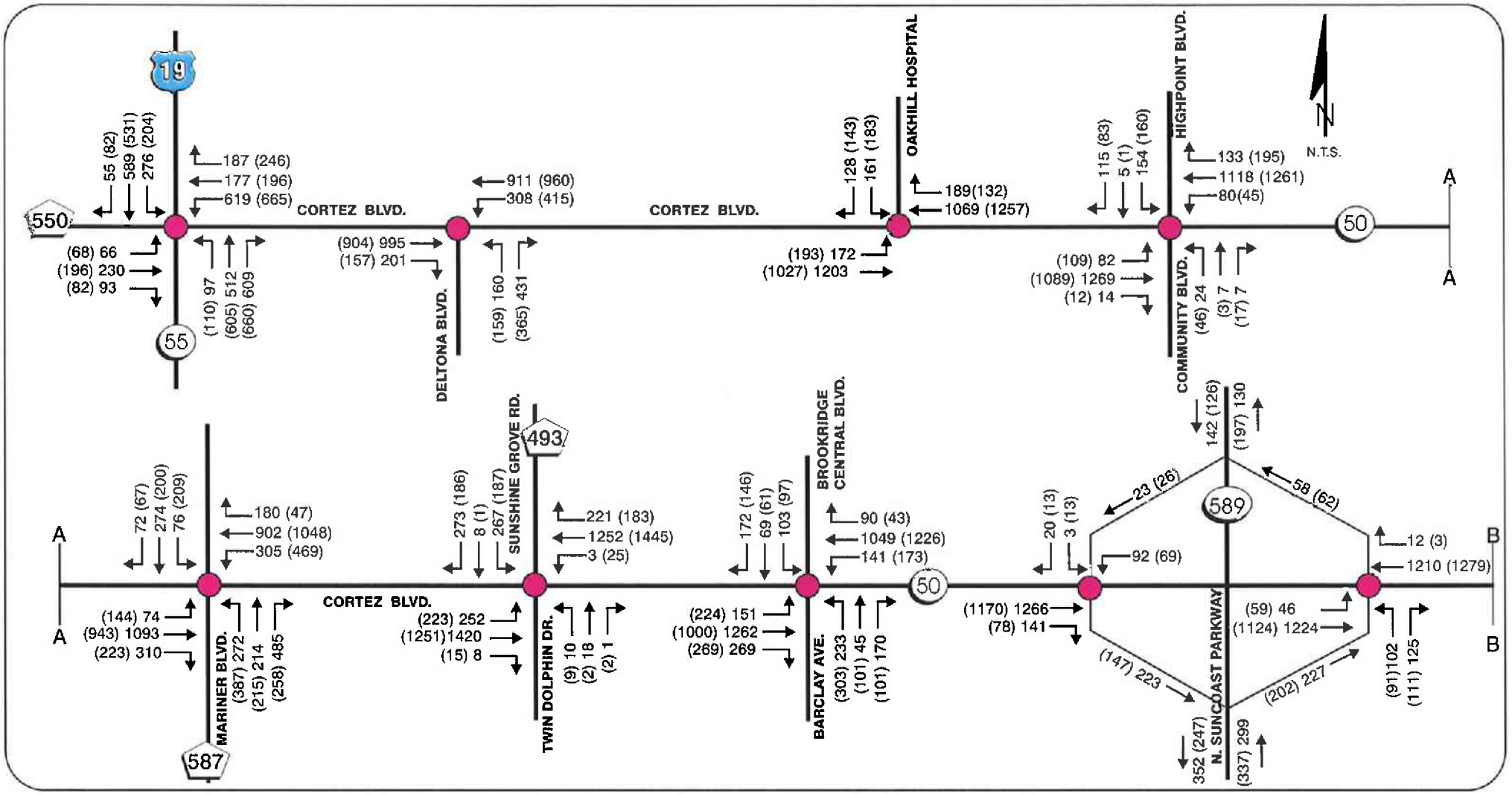
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

EXISTING DAILY TRAFFIC VOLUMES

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 6-1-A



LEGEND

233(334) A.M. (P.M.)

→ Traffic Direction

Signalized Intersection

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

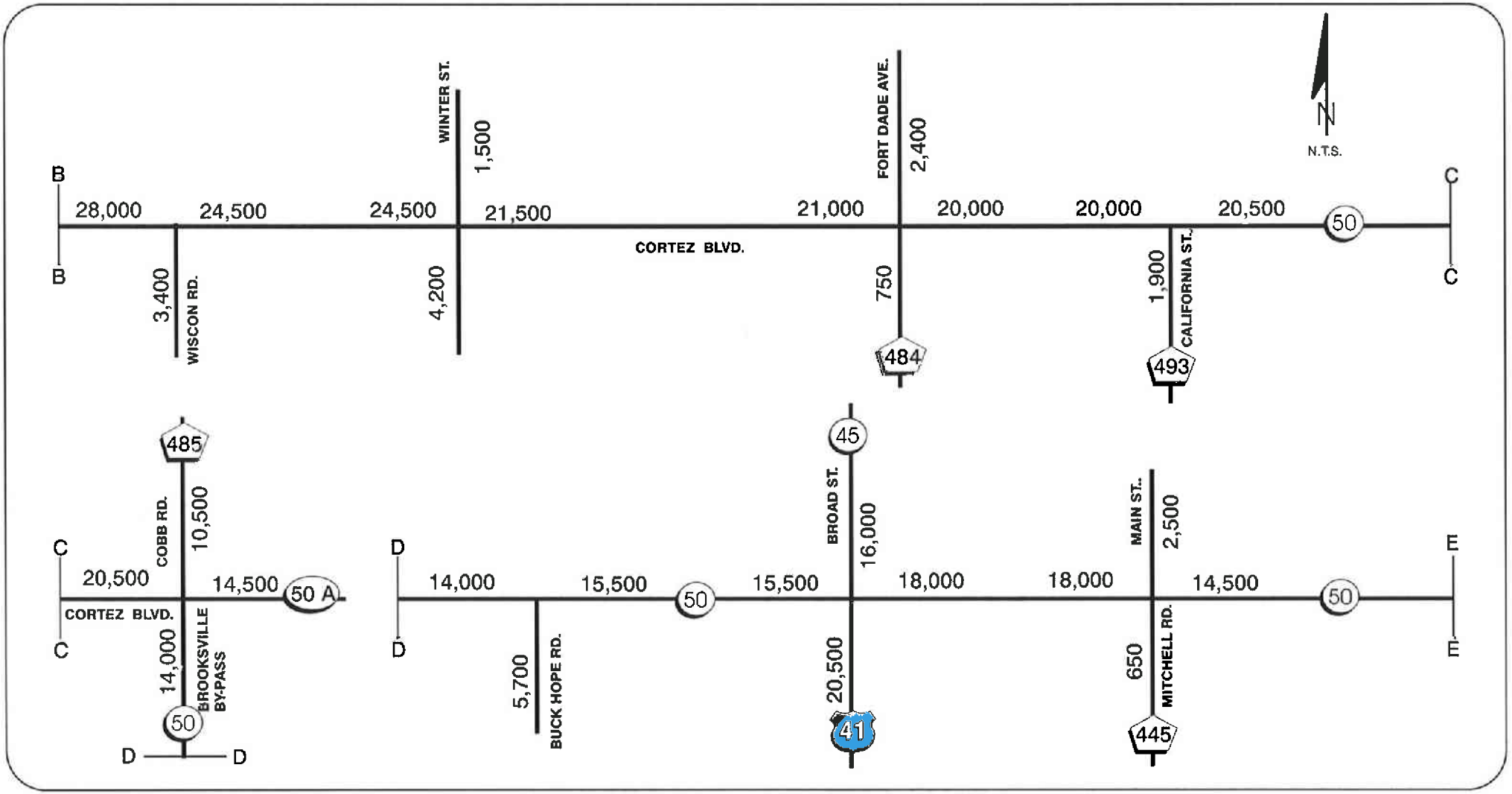
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

EXISTING TRAFFIC - TURNING MOVEMENT VOLUMES

WPI SEG. NO: 4079511
FAP NO: 300-1(7)

FIGURE 6-2-A



LEGEND

7,650 Annual Average Daily Traffic (AADT)

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

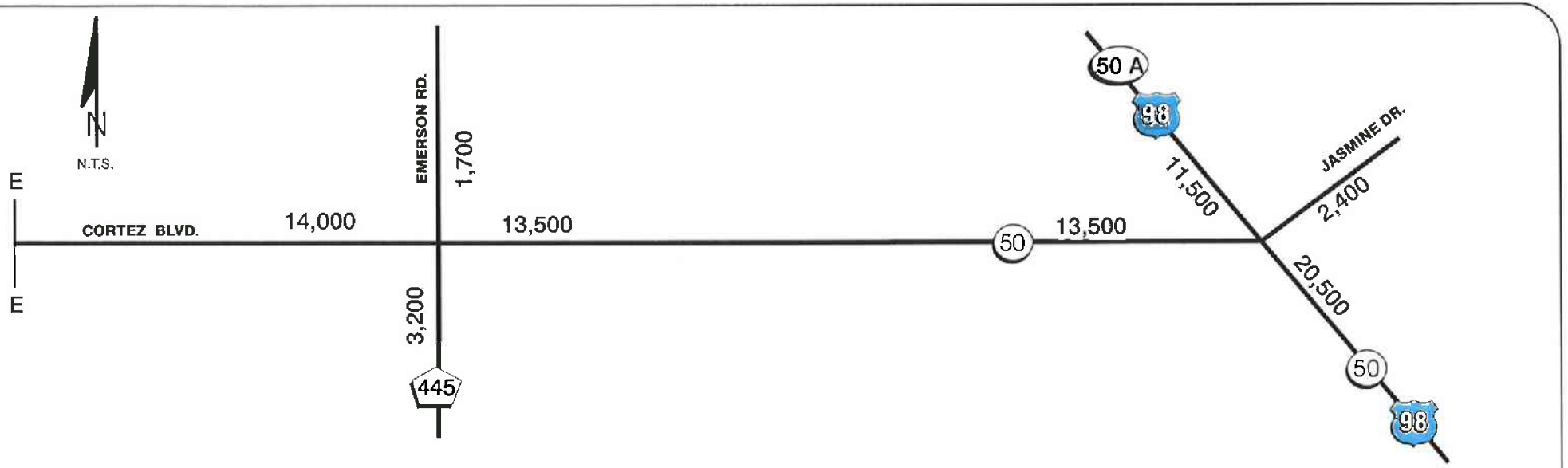
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

EXISTING DAILY TRAFFIC VOLUMES

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 6-1-B



LEGEND

7,650 Annual Average Daily Traffic (AADT)

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

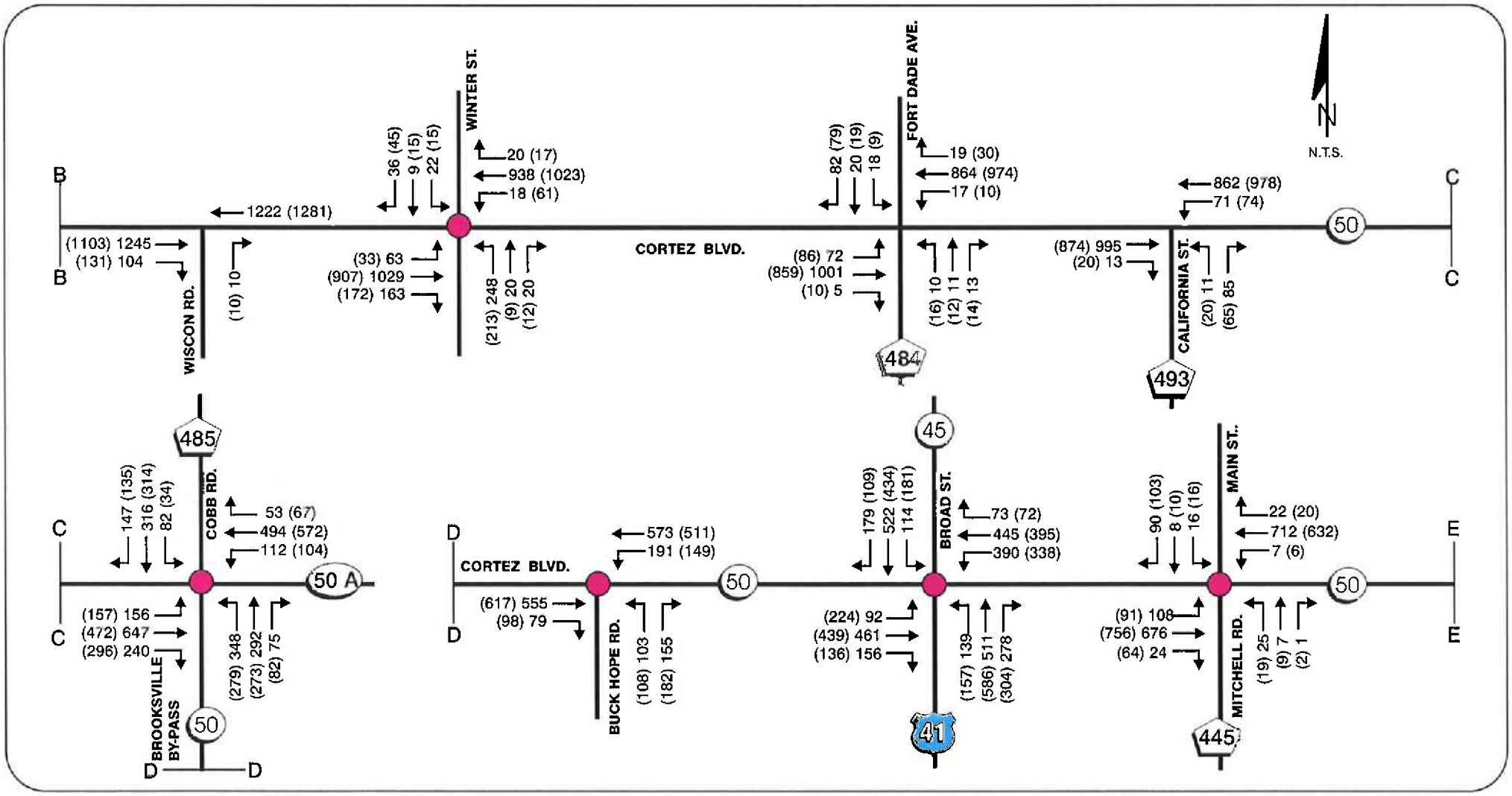
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

EXISTING DAILY TRAFFIC VOLUMES

WPI SEG. NO: 407951 1
FAP NO: 300 - 1 [illegible]

FIGURE 6-1-C



LEGEND

233(334) A.M. (P.M.)

→ Traffic Direction

Signalized Intersection

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

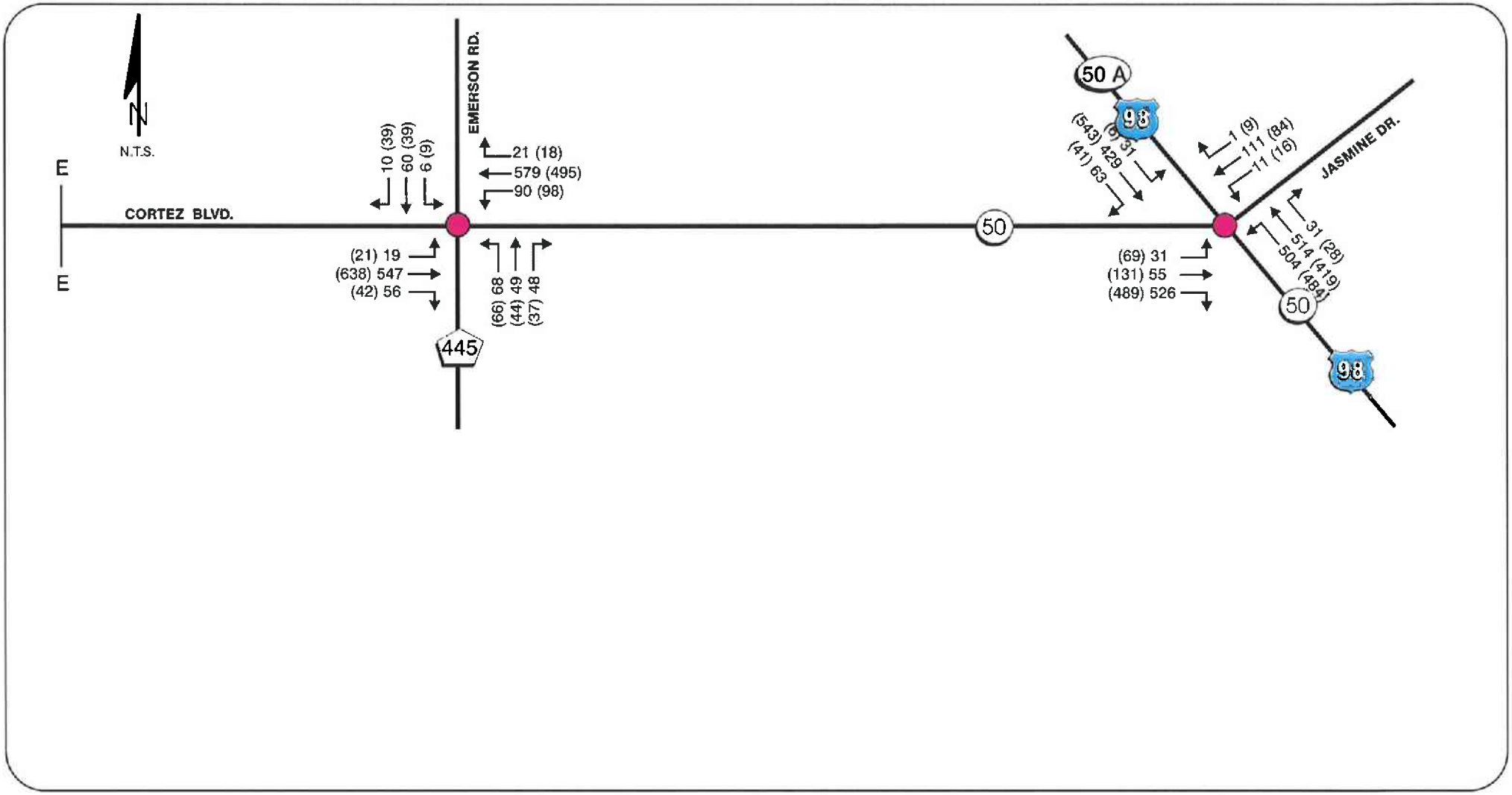
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

EXISTING TRAFFIC - TURNING MOVEMENT VOLUMES

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 6-2-B



LEGEND

233(334) A.M. (P.M.)

→ Traffic Direction

Signalized Intersection

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

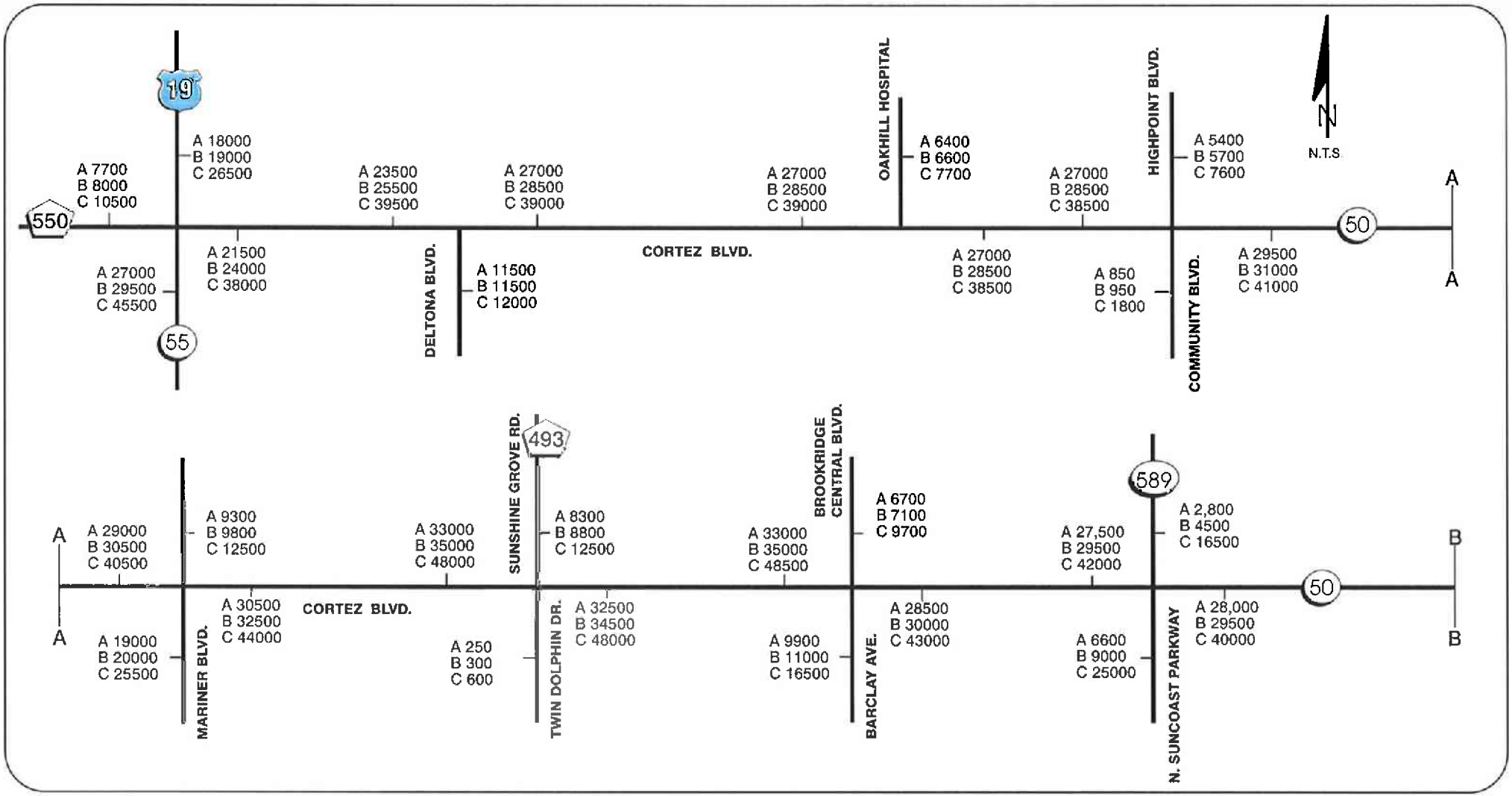
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

EXISTING TRAFFIC - TURNING MOVEMENT VOLUMES

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 6-2-C



LEGEND

A 2002 AADT
B 2005 AADT
C 2025 AADT

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

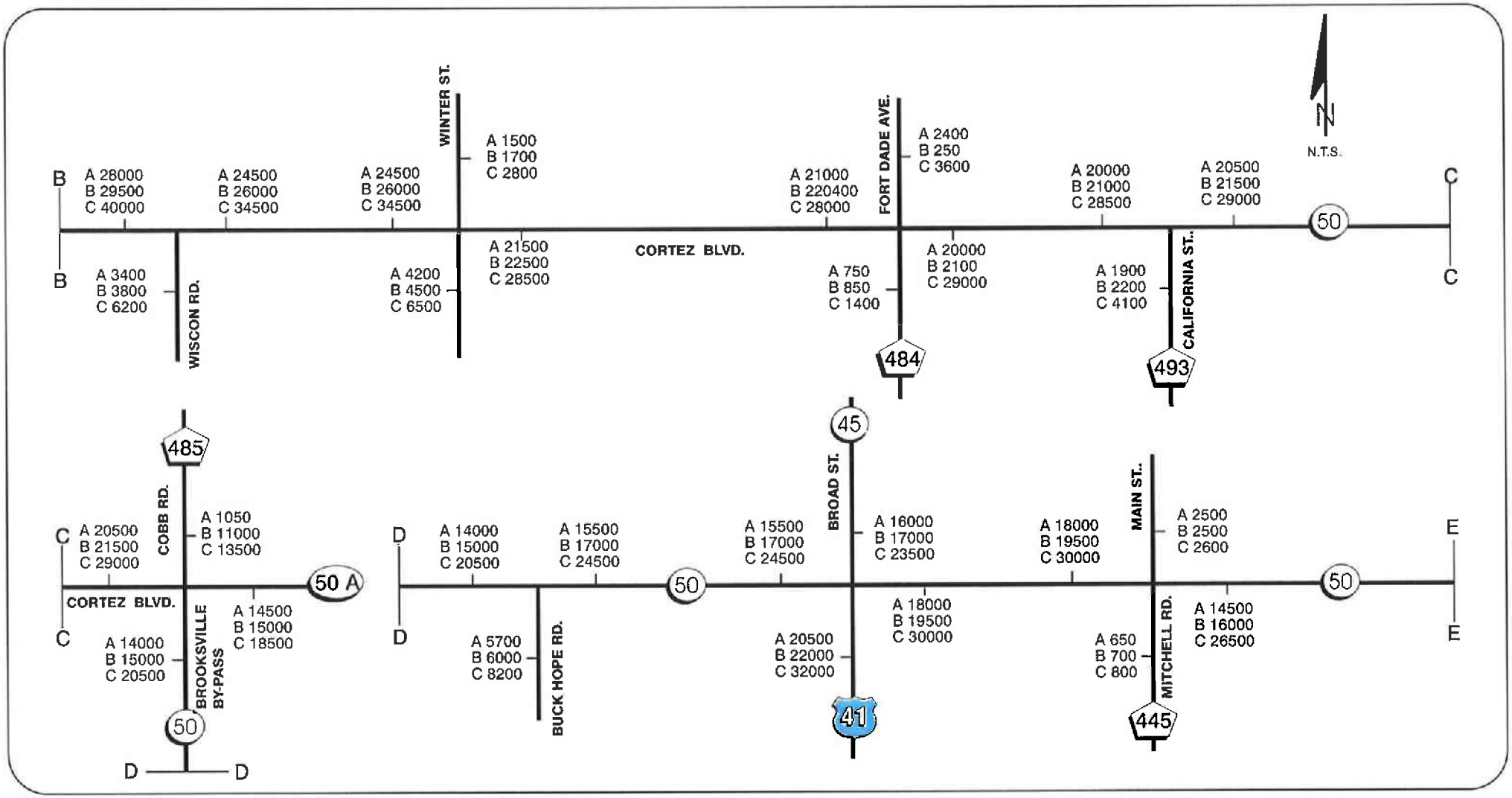
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

PROJECTED DAILY TRAFFIC VOLUMES

WPI SEG. NO: 407951 1
FAP NO: 300 - 1 [7]

FIGURE 6-3-A



LEGEND

A	2002 AADT
B	2005 AADT
C	2025 AADT

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

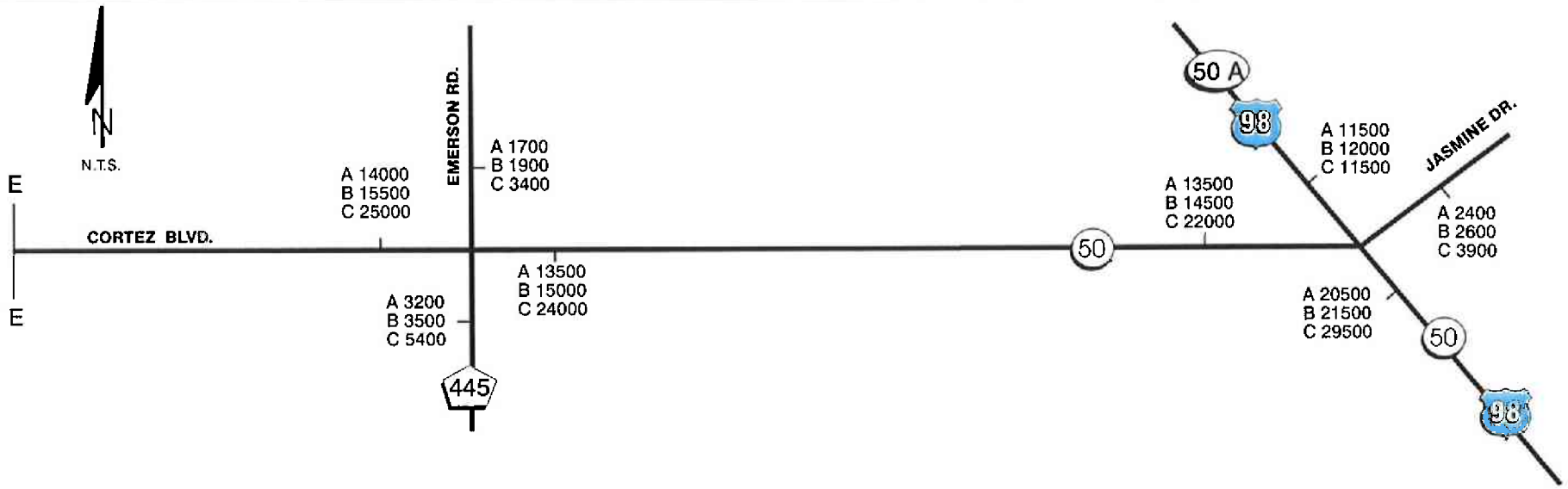
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

PROJECTED DAILY TRAFFIC VOLUMES

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 6-3-B



LEGEND

A	2002 AADT
B	2005 AADT
C	2025 AADT

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

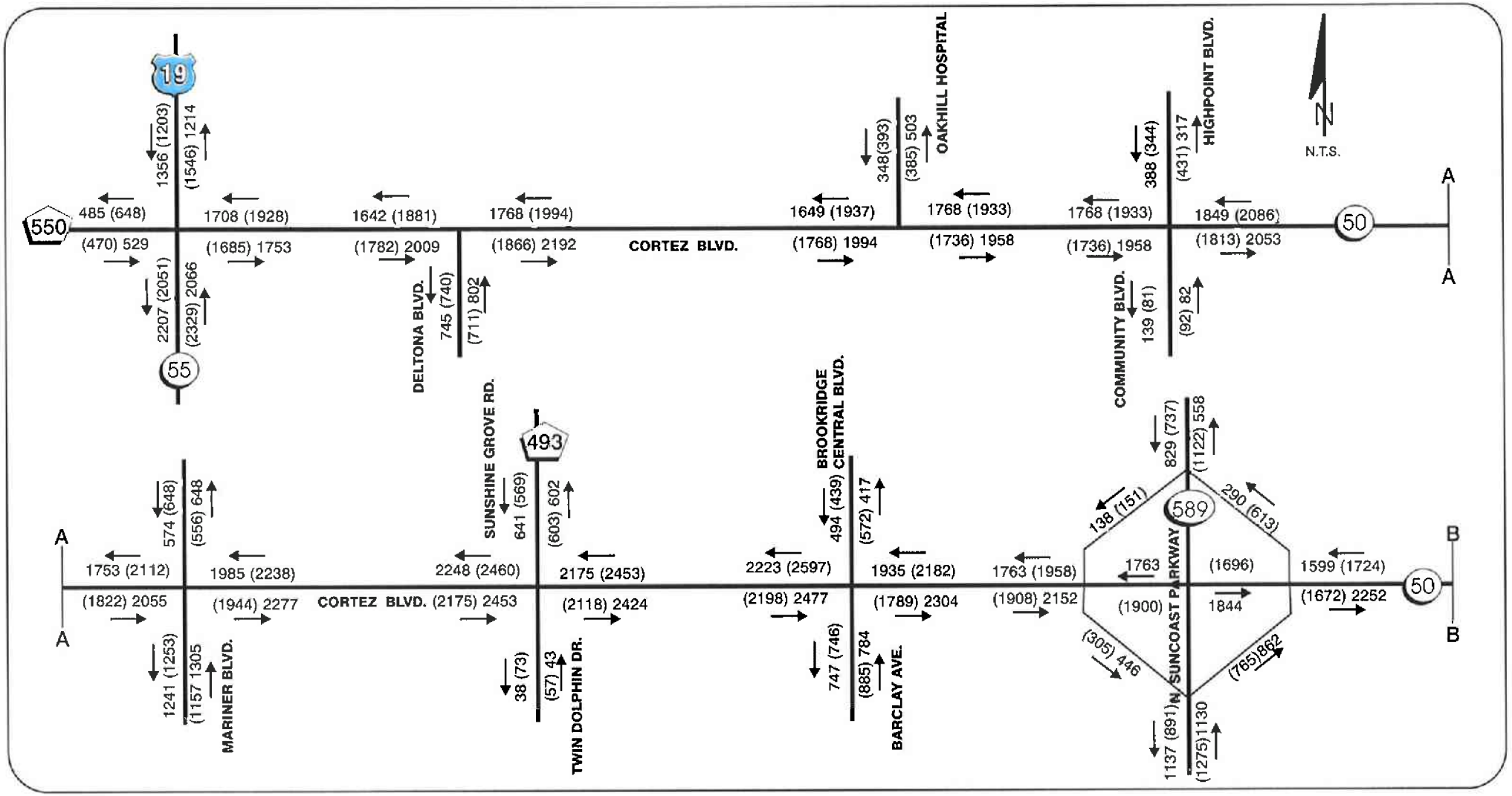
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

PROJECTED DAILY TRAFFIC VOLUMES

WPI SEG. NO: 407951 1
FAP NO: 300 - 1 (7)

FIGURE 6-3-C



LEGEND

233(334) A.M. (P.M.) Design Year 2025

→ Traffic Direction

Signalized Intersection

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

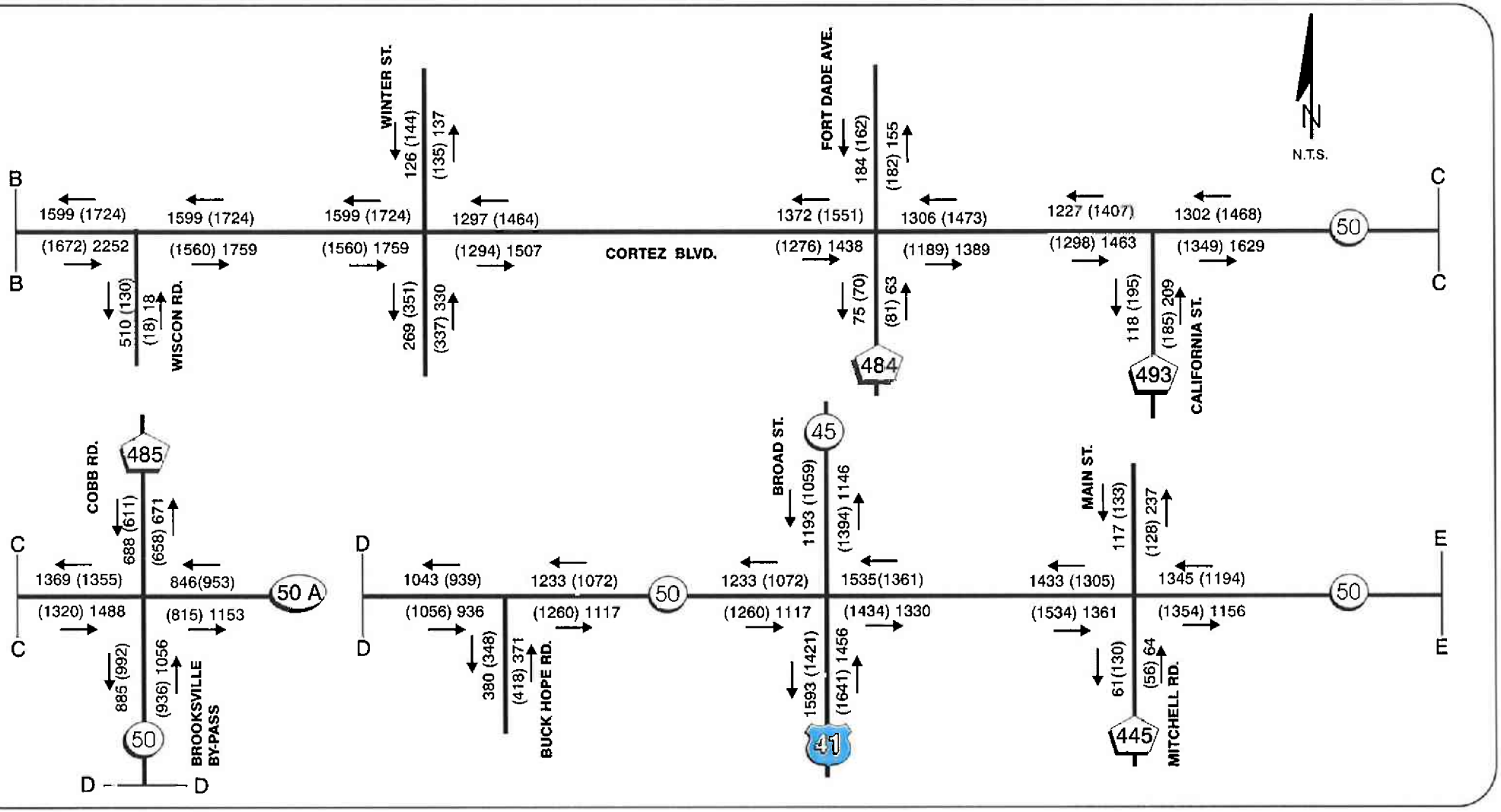
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

DESIGN HOUR VOLUMES

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 6-4-A



LEGEND

233(334) A.M. (P.M.) Design Year 2025

→ Traffic Direction

● Signalized Intersection

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

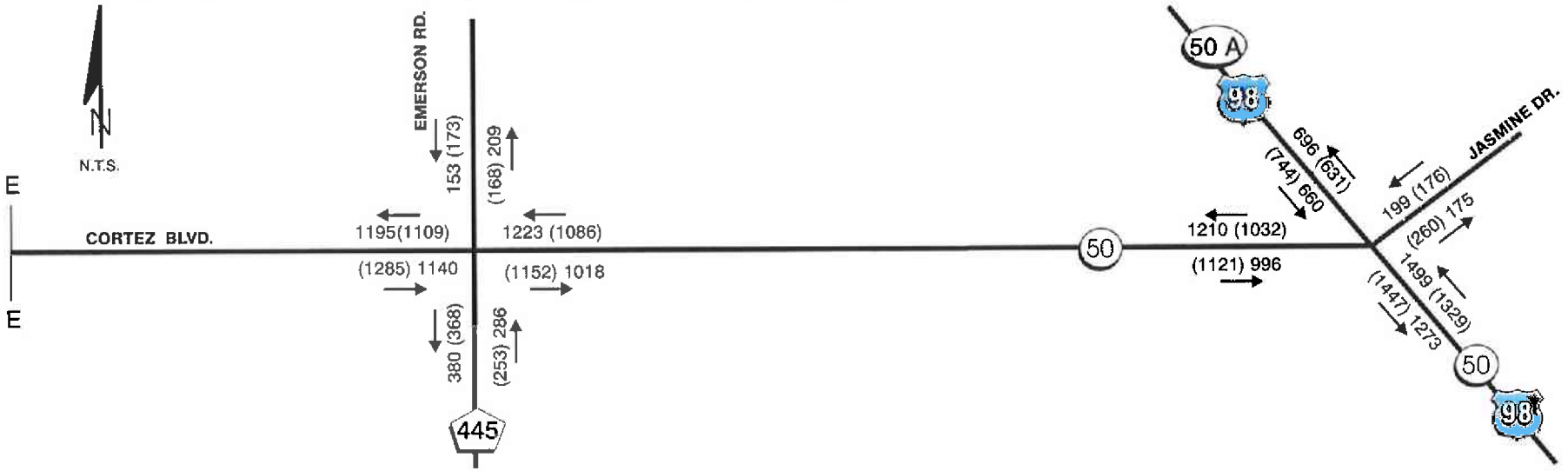
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

DESIGN HOUR VOLUMES

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 6-4-B



LEGEND

233(334) A.M. (P.M.) Design Year 2025

→ Traffic Direction

● Signalized Intersection

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

DESIGN HOUR VOLUMES

WPI SEG. NO: 407951 1
FAP NO: 300 - 1 (7)

FIGURE 6-4-C

number of individual segments will operate at unacceptable conditions (LOS D or worse).

As shown in Table 6-2, seven intersections and five intersections will operate at over-capacity conditions (LOS E or F) for the AM and PM peak hour for the Design Year (2025) for the No Build Alternative, respectively. The only unsignalized intersection that fails (operates at LOS E or F) during the AM and PM peak periods for the Design Year (2025) No Build alternative is Fort Dade Avenue. The overall arterial LOS for S.R. 50 from U.S. 19 (S.R. 55) to the western intersection of S.R. 50/S.R. 50A is LOS D with nearly all of the segments operating unacceptably. Whereas the overall LOS for the portion of S.R. 50 [along the Brooksville Bypass] is LOS B; however, two segments along this portion of S.R. 50 will operate at an unacceptable level.

Three intersections will operate with over-capacity conditions in the AM peak period of the Design Year (2025) for the Build alternative, and two intersections will operate with over-capacity conditions for the PM peak period for the Design Year (2025). The improvements included in the Build alternative for the Design Year (2025) will significantly improve the overall operations along S.R. 50 from U.S. 19 (S.R. 55) to the west intersection of S.R. 50/S.R. 50A; however, three segments will continue to operate at over-capacity (LOS E or F) conditions during the AM, PM or both peak periods.

Table 6-2: Future HCS Level of Service Summary

Intersections	Opening Year (2005)				Design Year (2025)			
	No-Build		Build		No-Build		Build	
	LOS (AM)	LOS (PM)	LOS (AM)	LOS (PM)	LOS (AM)	LOS (PM)	LOS (AM)	LOS (PM)
S.R. 50 at U.S. 19 (S.R. 55)	C	C	D	C	F	E	E	D
S.R. 50 at Deltona Boulevard	D	C	D	C	F	D	E	C
S.R. 50 at Oak Hill Hospital	B	B	B	B	B	C	B	B
S.R. 50 at High Point Boulevard/Community Boulevard	B	B	B	B	C	C	B	B
S.R. 50 at Mariner Boulevard (C.R. 587)	E	E	D	D	F	F	E	E
S.R. 50 at Sunshine Grove Road/Twin Dolphin Drive	C	C	B	B	E	E	C	C
S.R. 50 at Brookridge Central Boulevard/Barclay Avenue	C	C	B	C	F	F	D	E
S.R. 50 at Northbound Suncoast Parkway Ramps (S.R. 589)	A	A	A	A	A	A	B	A
S.R. 50 at Southbound Suncoast Parkway Ramps (S.R. 589)	A	A	A	A	C	C	B	C
S.R. 50 at Wiscon Road	B	B	C	C	N/A	N/A	N/A	N/A
S.R. 50 at Winter Street	B	B	B	B	C	C	B	B
S.R. 50 at Fort Dade Avenue	D	D	F	F	N/A	N/A	N/A	N/A
S.R. 50 at California Street	C	B	D	C	N/A	N/A	N/A	N/A
S.R. 50 at the west intersection of S.R. 50/S.R. 50A	D	D	C	D	E	D	D	D
S.R. 50 [along the Brooksville Bypass] at Buck Hope Road	A	A	A	A	B	B	A	B
S.R. 50 [along the Brooksville Bypass] at U.S. 41 (S.R. 45)	C	C	C	C	D	E	D	D
S.R. 50 [along the Brooksville Bypass] at Main Street/Mitchell Road	B	B	A	A	B	B	B	A
S.R. 50 [along the Brooksville Bypass] at Emerson Road	B	B	B	B	C	C	B	B
S.R. 50 [along the Brooksville Bypass] at the east intersection of S.R. 50/S.R. 50A	C	C	C	C	E	D	C	C
Segments Eastbound	**Opening Year (2005)**				**Design Year (2025)**			
	No-Build		Build		No-Build		Build	
	LOS (AM)	LOS (PM)	LOS (AM)	LOS (PM)	LOS (AM)	LOS (PM)	LOS (AM)	LOS (PM)
West of U.S. 19 (S.R. 55)	D	D	D	D	F	F	F	E
U.S. 19 (S.R. 55) to Deltona Boulevard	D	D	D	D	F	E	D	D
Deltona Boulevard to Oak Hill Hospital	A	A	A	A	A	A	A	A
Oak Hill Hospital to High Point Boulevard/Community Boulevard	C	C	C	B	D	C	C	C
High Point Boulevard/Community Boulevard to Mariner Boulevard (C.R. 587)	D	C	B	B	E	E	C	D
Mariner Boulevard (C.R. 587) to Sunshine Grove Road/Twin Dolphin Drive	B	A	A	A	B	B	B	B
Sunshine Grove Road/Twin Dolphin Drive to Brookridge Central Boulevard/ Barclay Avenue	C	C	C	C	F	E	E	D
Brookridge Central Boulevard/Barclay Avenue to Northbound/Southbound Suncoast Parkway Ramps (S.R. 589)	B	A	A	A	B	B	B	B
Northbound/Southbound Suncoast Parkway Ramps (S.R. 589) to Wiscon Road	C	C	C	C	D	D	C	D
Wiscon Road to Winter Street	C	C	C	C	D	D	C	D
Winter Street to Fort Dade Avenue	B	A	B	A	B	B	B	B
Fort Dade Avenue to California Street	B	A	B	A	B	B	B	B
California Street to the west intersection of S.R. 50/S.R. 50A	A	A	B	A	B	B	B	B
West intersection of S.R. 50/S.R. 50A to Buck Hope Road [along the Brooksville Bypass]	A	A	A	A	A	A	A	A
Buck Hope Road to U.S. 41 (S.R. 45) [along the Brooksville Bypass]	F	F	F	F	F	F	F	F
U.S. 41 (S.R. 45) to Main Street/Mitchell Road [along the Brooksville Bypass]	A	A	A	A	A	A	A	A
Main Street/Mitchell Road to Emerson Road [along the Brooksville Bypass]	B	B	B	B	B	B	B	B
Emerson Road to the east intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass]	B	C	B	C	C	C	C	C

Table 6-2: Future HCS Level of Service Summary (Continued)

Segments Westbound	Opening Year (2005)				Design Year (2025)			
	No-Build		Build		No-Build		Build	
	LOS (AM)	LOS (PM)	LOS (AM)	LOS (PM)	LOS (AM)	LOS (PM)	LOS (AM)	LOS (PM)
East of the east intersection of S.R. 50/S.R. 50A	C	C	C	C	C	D	C	D
East intersection of S.R. 50/S.R. 50A to Emerson Road [along the Brooksville Bypass]	B	B	B	B	C	B	B	B
Emerson Road to Main Street/Mitchell Road [along the Brooksville Bypass]	A	A	A	A	A	A	A	A
Main Street/Mitchell Road to U.S. 41 (S.R. 45) [along the Brooksville Bypass]	A	B	A	B	B	B	B	B
U.S. 41 (S.R. 45) to Buck Hope Road [along the Brooksville Bypass]	C	C	C	C	C	C	C	C
Buck Hope Road to the west intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass]	A	A	B	B	B	B	B	B
West intersection of S.R. 50/S.R. 50A to California Street	A	A	A	A	A	A	A	A
California Street to Fort Dade Avenue	A	A	A	A	A	A	A	A
Fort Dade Avenue to Winter Street	A	A	A	A	A	A	A	A
Winter Street to Wiscon Road	C	C	C	C	D	E	C	D
Wiscon Road to Northbound/Southbound Suncoast Parkway Ramps (S.R. 589)	C	C	C	C	D	E	C	D
Northbound/Southbound Suncoast Parkway Ramps (S.R. 589) to Brookridge Central Boulevard/Barclay Avenue	B	C	B	C	D	F	C	F
Brookridge Central Boulevard/Barclay Avenue to Sunshine Grove Road/Twin Dolphin Drive	C	C	C	C	E	F	C	C
Sunshine Grove Road/Twin Dolphin Drive to Mariner Boulevard (C.R. 587)	C	D	C	C	C	D	C	C
Mariner Boulevard (C.R. 587) to High Point Boulevard/Community Boulevard	A	A	A	A	A	B	A	A
High Point Boulevard/Community Boulevard to Oak Hill Hospital	C	C	C	C	C	C	C	C
Oak Hill Hospital to Deltona Boulevard	A	A	A	A	A	A	A	A
Deltona Boulevard to U.S. 19 (S.R. 55)	D	D	D	D	D	D	D	D

6.7 References

1. S.R. 50 PD&E Traffic Report; Gannett Fleming; Tampa, Florida; March 2003.

2. 2000 Highway Capacity Manual; Transportation Research Board – National Research Council; Washington, D.C.; 2000.

7.0 CORRIDOR ANALYSIS

The previous PD&E Study established the need for S.R. 50 from U.S. 19 (S.R. 55) to the eastern intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass] to be initially widened to the existing 4-lane typical section and expandable to a 6-lane typical section. It should be noted that the recommendations of the previous PD&E Study were approved by FHWA on 3/22/90. The Study alternatives for this Study Reevaluation are mainly in the form of alternative typical sections within the existing corridor, rather than alternative locations, corridors or alignments, which were previously established as part of the previous PD&E Study. Therefore, a corridor analysis is not required for this Reevaluation.

8.0 ALTERNATIVE ALIGNMENT ANALYSIS

Based on the previous PD&E Study, the need for S.R. 50 to be widened to the existing 4-lane typical section and expandable to a 6-lane typical section has already been established. The Study alternatives for this reevaluation are mainly in the form of alternative typical sections within the existing corridor, rather than alternative locations, corridors or alignments. In order to develop the alternatives; engineering, environmental, and economic factors must be taken into consideration. In addition, the alternatives need to meet the needs of the traveling public. These needs include roadway capacity and reduction of congestion, access to adjacent properties and businesses, public safety, transit, and non-motorized modes (pedestrians and bicyclists). Historical and archaeological structures and sites, as well as potentially contaminated sites are also evaluated in order to minimize environmental effects. Access control techniques are utilized to promote safe and efficient operations. These criteria have a direct bearing on the selection of the recommended alternative.

Included in the following sections are the roadway and structure concepts developed for S.R. 50 from U.S. 19 (S.R. 55) to the east intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass]. The No-Build alternative will remain a viable alternative for the duration of the Study.

8.1 No-Build Alternative

The No-Build Alternative proposes no roadway improvements within the Study limits other than routine maintenance. This alternative has both advantages and disadvantages, which are summarized below:

Advantages

1. No Design, right-of-way and construction costs.
2. No Right-of-way acquisition and relocations.
3. No disruption to traffic during construction activities.
4. No disruption to existing land uses due to construction activities.
5. No environmental effects.

Disadvantages

1. Unacceptable levels of service on the existing roadway network.
2. Increased traffic congestion causing increased road user costs due to travel delay.
3. Deterioration of the safety due to increased traffic congestion.
4. Increase in carbon monoxide and other air pollutants due to increased traffic congestion.
5. Deterioration of emergency service response time.
6. Increased roadway maintenance costs.

8.2 Transportation System Management

The purpose of a Transportation System Management (TSM) alternative, which consists of low cost capital improvements that maximize the efficiency of the present system, was also considered for this project and consists of:

- Upgrading the existing facility by means of improving areas that experience a high accident rate
- Implementing median access management
- Improving the intersection and signalization elements
- Improving the existing signing and pavement markings
- Providing roadway lighting

TSM is normally applied for small increases in capacity by low expenditures in public funds, such as changing traffic signal operation or extending the storage lengths of turn lanes. However, TSM will not provide enough benefits for this project to obtain an acceptable level-of-service.

It should be noted that according to Hernando County's *Comprehensive Plan*, there are no interim improvements planned for S.R. 50. However, there are capacity improvements planned for side streets along the project corridor in 2003/2004 and 2004/2005, which are as follows:

- Sunshine Grove Road from S.R. 50 to Ken Austin Parkway
- Jasmine Road from S.R. 50 to Mondon Hill Road

8.3 Study Alternatives

The following sub-sections explain the considerations and criteria utilized to develop the build alternatives, which were compared with the no-build and TSM alternatives. The Study alternatives for this project are in the form of alternative typical sections within the existing corridor, rather than alternative locations, corridors or alignments. Based on the previous PD&E Study, the need for S.R. 50 to be initially widened to the existing 4-lane typical section and expandable to a 6-lane typical section was established. This Study developed ten alternative typical sections for the S.R. 50 project corridor along a centered alignment that are to be evaluated based upon their associated environmental and engineering effects.

8.3.1 Classification and Design Speed

S.R. 50 shall retain its current functional classifications, which were previously discussed in Section 4.1.1.

The posted speed limit within the project corridor varies between 45 and 55 mph. The design speeds for alternative typical sections were developed to be consistent with both the existing and future land uses as well as driver expectancy. Therefore, the design speed for the rural typical sections will be 65 mph, and a design speed of 50 mph will be utilized to develop the urban and modified urban typical sections, which will allow for the existing posted speeds to be maintained. These functional classifications and design speeds will maximize the capacity of the roadway while maintaining the compatibility with the adjacent land uses.

8.3.2 Typical Sections

As mentioned at the beginning of Section 8.3, alternative 6-lane typical sections were developed that contained the Department's standard desirable dimensions. The following typical sections are described according to portions of the project corridor, which are defined below and illustrated in Figures 8-1 through 8-10.

U.S. 19 to west of the west intersection of S.R. 50/S.R. 50A

6-Lane Rural Typical Section

- Three 12-foot travel lanes in each direction
- 40.0-foot depressed median
- 10-foot outside shoulder in each direction with 5-foot paved that serves as an undesignated bicycle lane
- 5-foot sidewalk in each direction
- Open drainage system (inside and outside)
- Involves widening to the outside of the existing typical section

6-Lane Suburban Typical Section

- Three 12-foot travel lanes in each direction
- 22.0-foot raised median
- 4-foot paved inside shoulder in each direction
- 10-foot outside shoulder in each direction with 5-foot paved that serves as an undesignated bicycle lane
- 5-foot sidewalk in each direction
- Open drainage system (outside)
- Involves reconstruction of the existing roadway

6-Lane Urban Typical Section

- Three 12-foot travel lanes in each direction
- 30.0-foot raised median
- 4-foot bicycle lane in each direction
- 5-foot sidewalk in each direction
- Closed drainage system
- Involves reconstruction of the existing roadway

West of the west intersection of S.R. 50/S.R. 50A to west of Clinton Boulevard [along the Brooksville Bypass]

6-Lane Urban Typical Section

- Three 12-foot travel lanes in each direction
- 20.0-foot raised median
- 4-foot bicycle lane in each direction
- 5-foot sidewalk in each direction
- Closed drainage system
- Involves widening to the outside

West of Clinton Boulevard to West of Candlelight Boulevard [along the Brooksville Bypass]

6-Lane Rural Typical Section

- Three 12-foot travel lanes in each direction
- 40.0-foot depressed median
- 10-foot outside shoulder in each direction with 5-foot paved that serves as an undesignated bicycle lane
- 5-foot sidewalk in each direction and 5-foot paved shoulder serves as undesignated bicycle lane
- Open drainage system (inside and outside)
- Involves widening to the outside of the existing typical section

6-Lane Suburban Typical Section

- Three 12-foot travel lanes in each direction
- 22.0-foot raised median
- 4-foot paved inside shoulder in each direction
- 10-foot outside shoulder in each direction with 5-foot paved that serves as an undesignated bicycle lane
- 5-foot sidewalk in each direction
- Open drainage system (outside)
- Involves widening to the inside and outside of the existing typical section

6-Lane Urban Typical Section

- Three 12-foot travel lanes in each direction
- 22.0-foot raised median
- 4-foot bicycle lane in each direction
- 5-foot sidewalk in each direction
- Closed drainage system
- Involves reconstruction of the existing typical section

West of Candlelight Boulevard to East of Ray Browning Road [along the Brooksville Bypass]

6-Lane Urban Typical Section

- Three 12-foot travel lanes in each direction
- 22.0-foot raised median
- 4-foot bicycle lane in each direction
- 5-foot sidewalk in each direction
- Closed drainage system
- Involves widening to the inside of the existing typical section

6-Lane Urban Typical Section

- Three 12-foot travel lanes in each direction
- 22.0-foot raised median
- 4-foot bicycle lane in each direction
- 5-foot sidewalk in each direction
- Closed drainage system
- Involves widening to the inside and outside of the existing typical section

East of Ray Browning Road to the east intersection of S.R. 50/ S.R. 50A [along the Brooksville Bypass]

6-Lane Suburban Typical Section

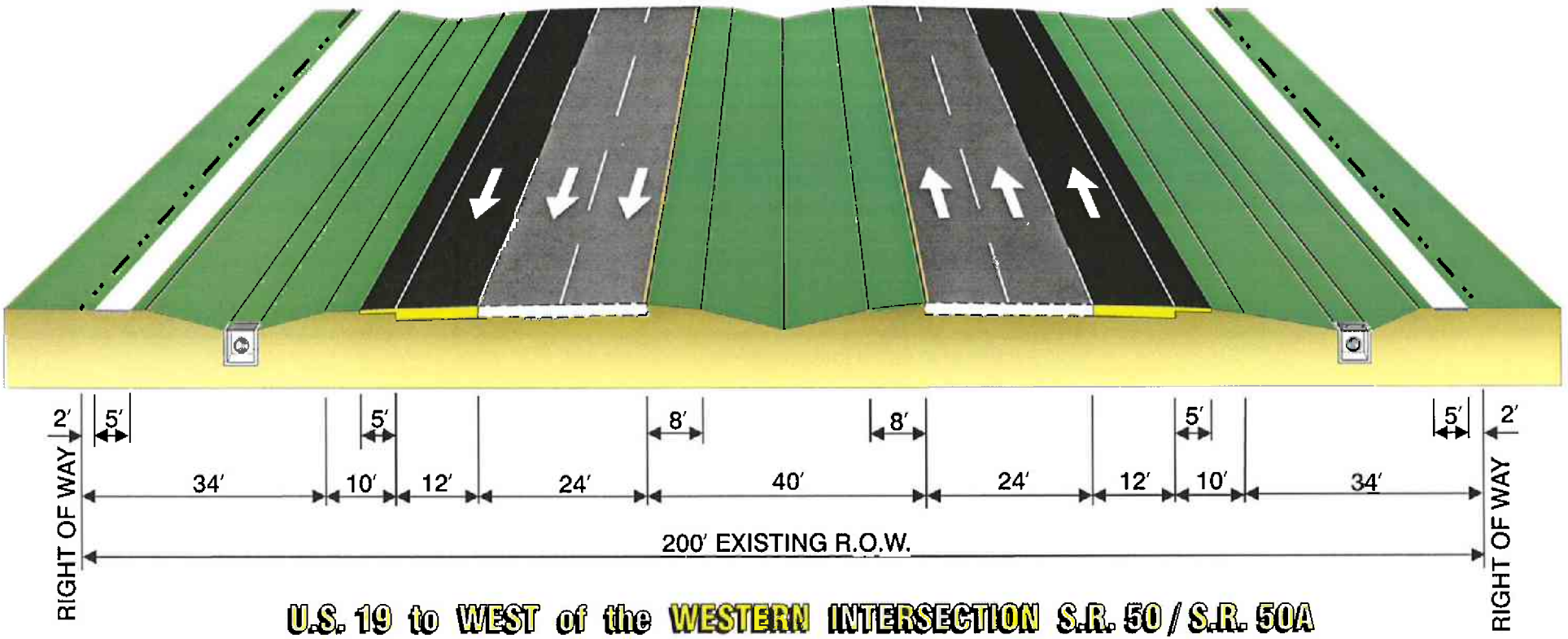
- Three 12-foot travel lanes in each direction
- 22.0-foot raised median
- 10-foot outside shoulder in each direction with 5-foot paved that serves as an undesignated bicycle lane
- 5-foot sidewalk in each direction
- Open drainage system (outside)
- Involves widening to the inside and outside of the existing typical section

8.3.3 Horizontal Alignment

The horizontal alignment criteria utilized for this Study will be based on the existing roadway alignment in order to preserve the existing right-of-way to the greatest extent possible in conjunction with the horizontal alignment criteria previously discussed in Section 5.0.

8.3.4 Vertical Alignment

The vertical alignment will maximize the use of the existing roadway grade while providing changes as necessary to accommodate vertical alignment parameters such as sight distance.



U.S. 19 to WEST of the WESTERN INTERSECTION S.R. 50 / S.R. 50A

(Design Speed = 65 mph)

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

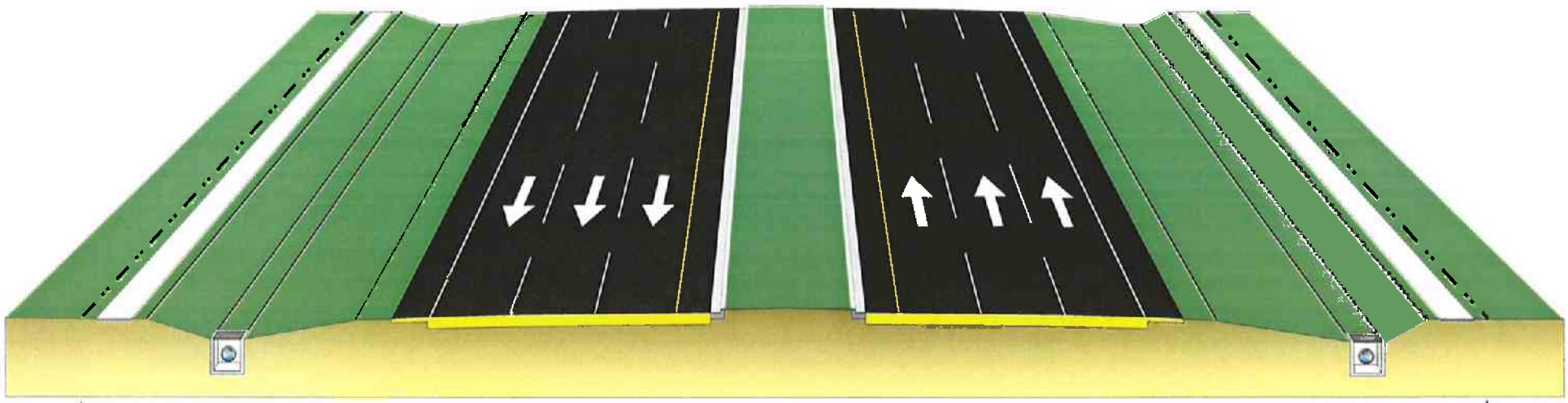
PD&E STUDY REEVALUATION

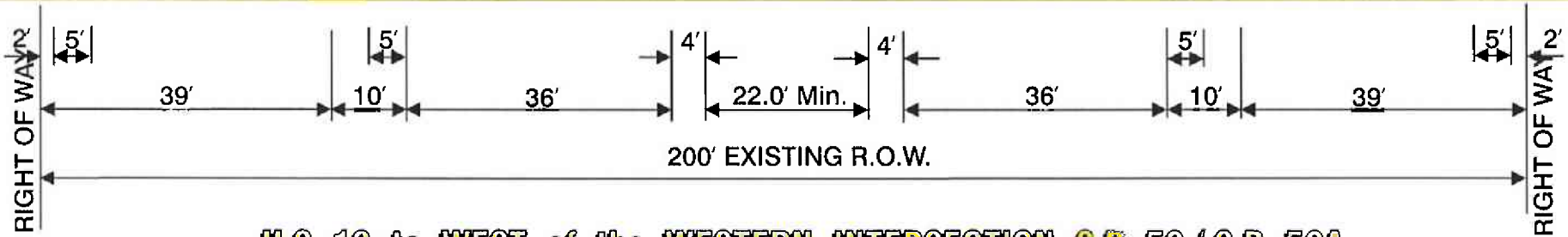
From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

PROPOSED 6 - LANE RURAL ROADWAY TYPICAL SECTION

WPI SEG. NO: 407951 1
FAP NO: 300 - 1 (7)

FIGURE 8-1





U.S. 19 to WEST of the WESTERN INTERSECTION S.R. 50 / S.R. 50A

(Design Speed = 65 mph)

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

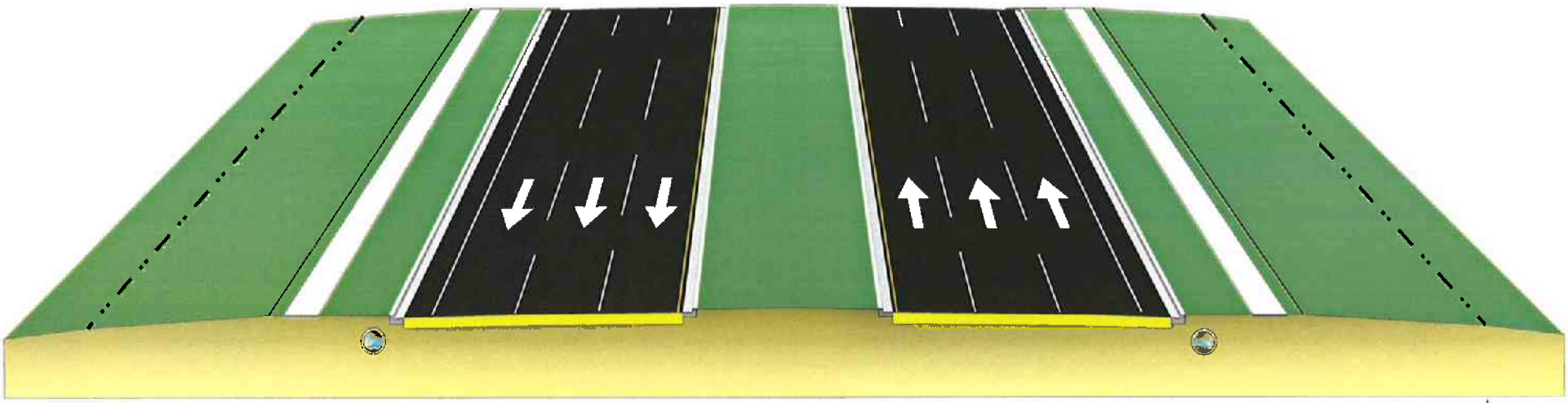
PD&E STUDY REEVALUATION

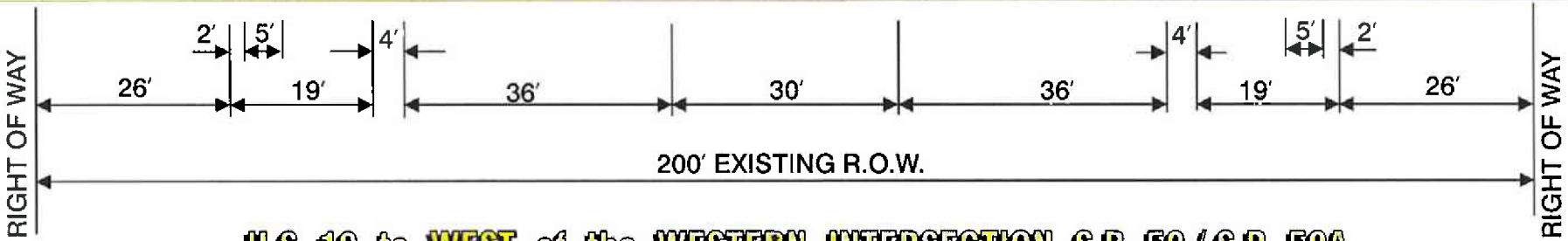
From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

PROPOSED 6 - LANE SUBURBAN ROADWAY TYPICAL SECTION

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 8-2





U.S. 19 to WEST of the WESTERN INTERSECTION S.R. 50 / S.R. 50A

(Design Speed = 50 mph)

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

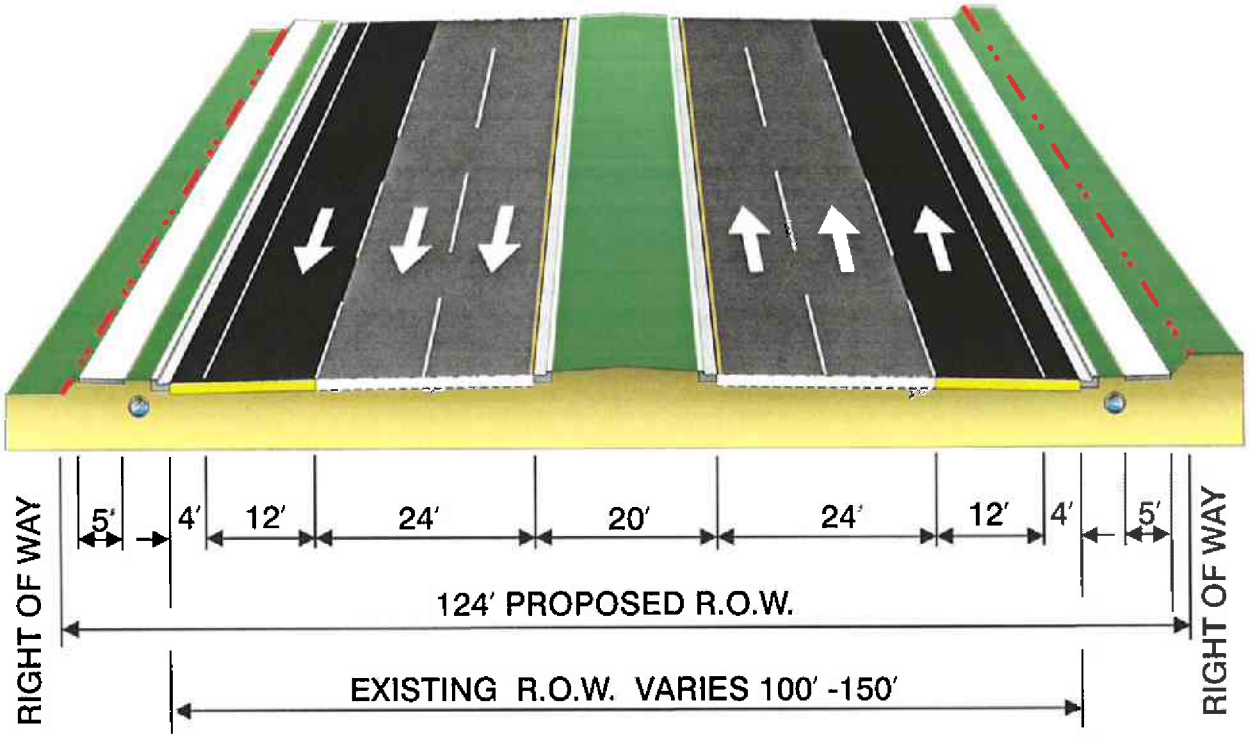
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

PROPOSED 6 - LANE URBAN ROADWAY TYPICAL SECTION

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 8-3



WEST of the WESTERN INTERSECTION S.R. 50 / 50A to WEST of CLINTON BLVD.
[along the BROOKSVILLE BYPASS]

(Design Speed = 50 mph)

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

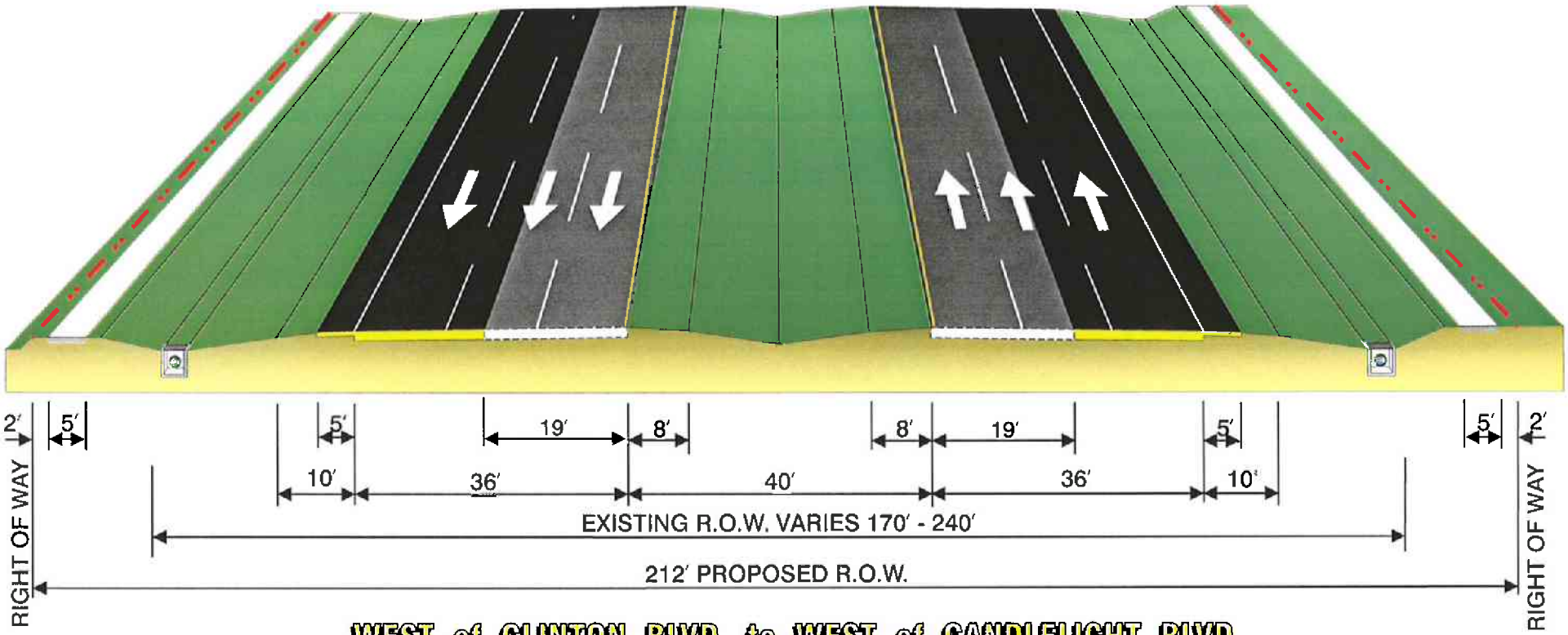
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

PROPOSED 6 - LANE URBAN ROADWAY TYPICAL SECTION

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 8-4



WEST of CLINTON BLVD. to WEST of CANDLELIGHT BLVD.
[along the BROOKSVILLE BYPASS]

(Design Speed = 65 mph)

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

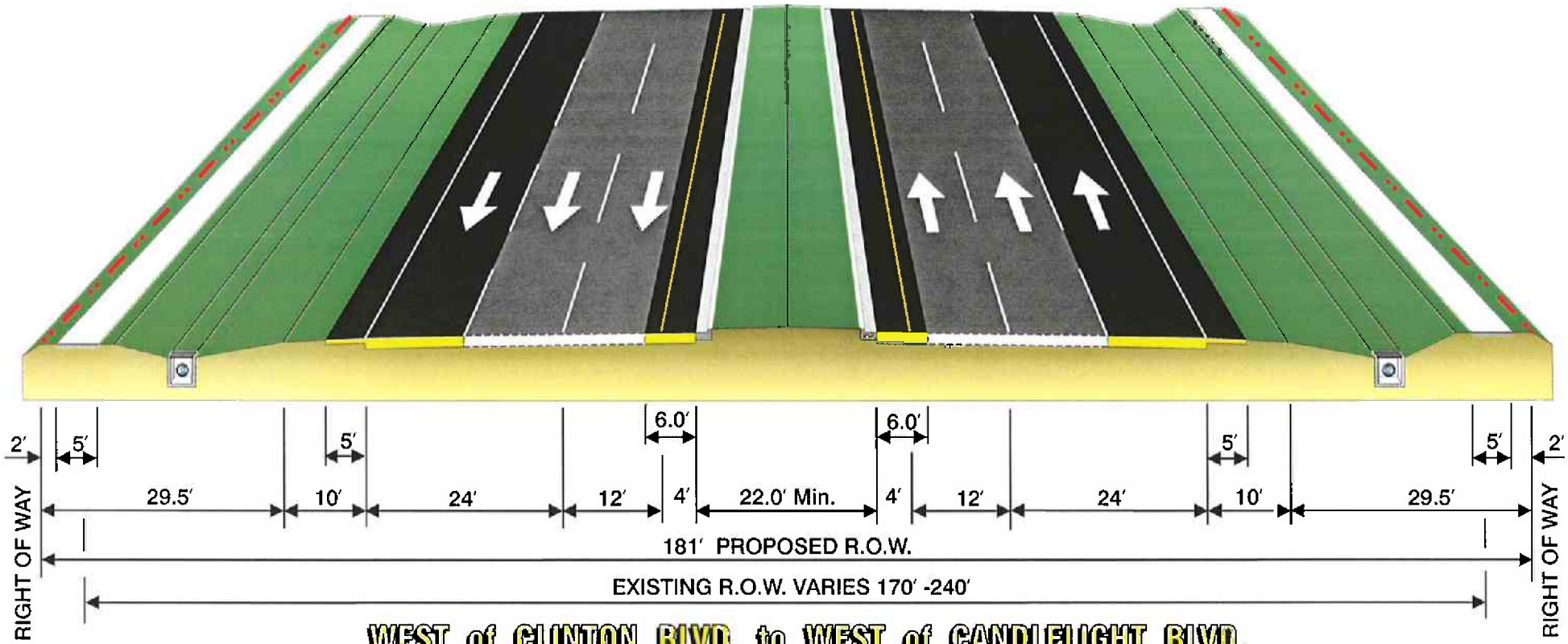
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

PROPOSED 6 - LANE RURAL ROADWAY TYPICAL SECTION

WPI SEG. NO: 407951 1
FAP NO: 300 - 1 (7)

FIGURE 8-5



WEST of CLINTON BLVD. to WEST of CANDLELIGHT BLVD.
[along the BROOKSVILLE BYPASS]
(Design Speed = 50 mph)

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

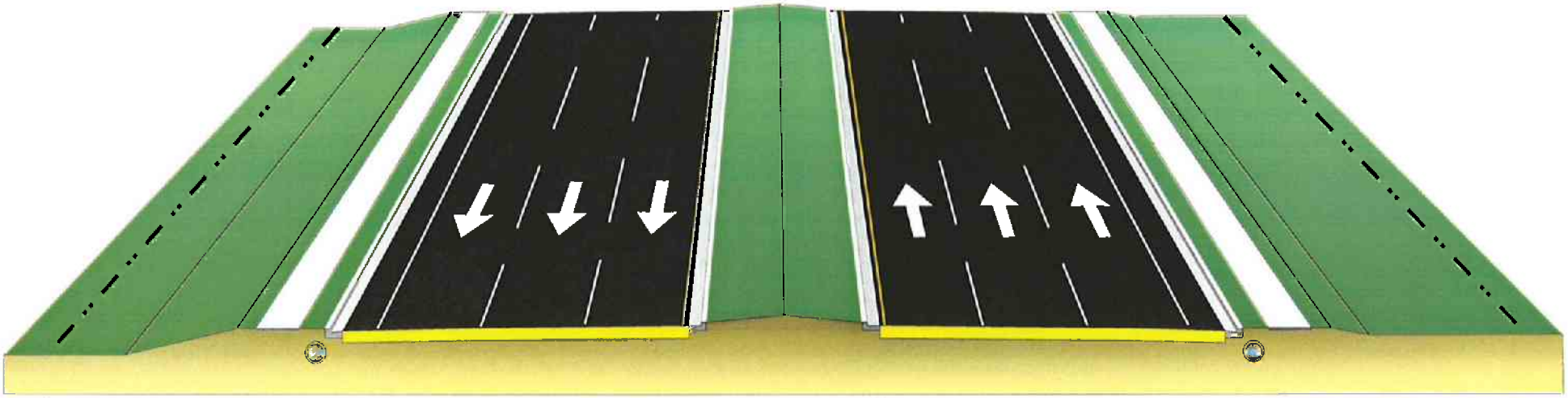
PD&E STUDY REEVALUATION

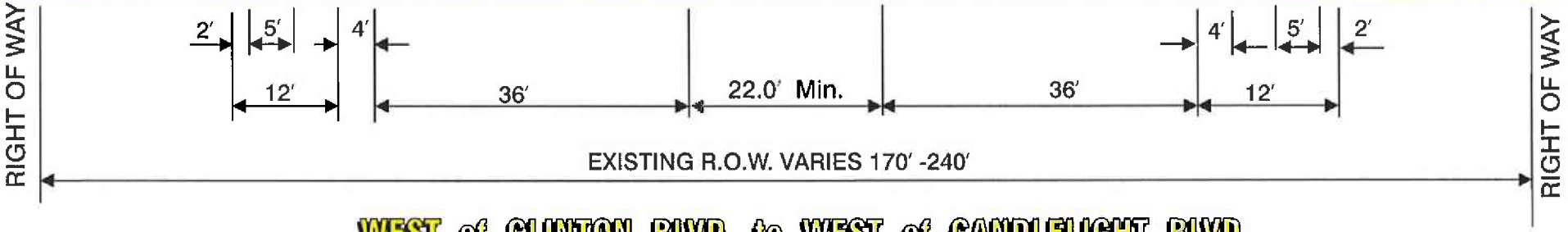
From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

PROPOSED 6 - LANE SUBURBAN ROADWAY TYPICAL SECTION

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 8-6





WEST of CLINTON BLVD. to WEST of CANDLELIGHT BLVD.
[along the BROOKSVILLE BYPASS]

(Design Speed = 50 mph)

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

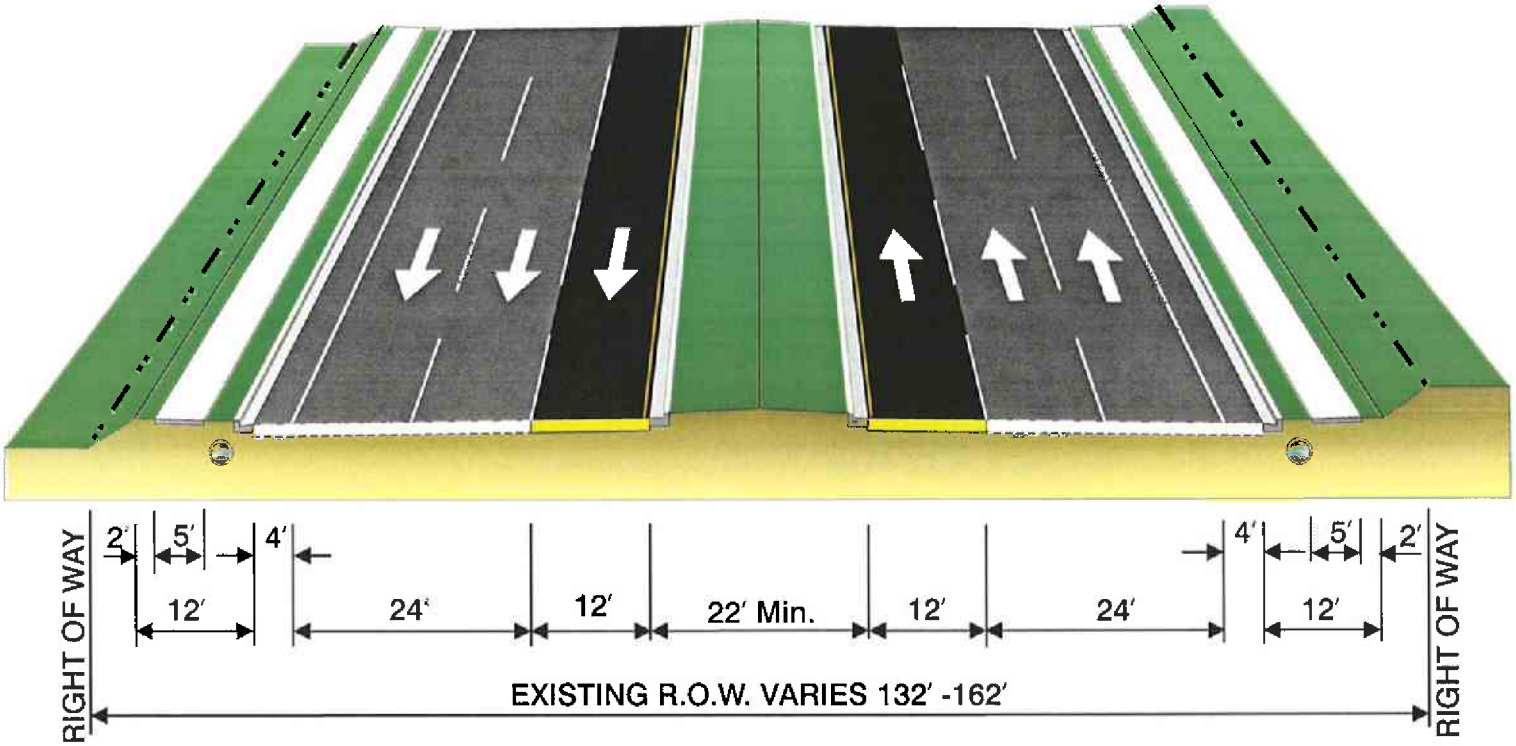
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

PROPOSED 6 - LANE URBAN ROADWAY TYPICAL SECTION

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 8-7



WEST of CANDLELIGHT BLVD. to EAST of RAY BROWNING RD.
[along the BROOKSVILLE BYPASS]

(Design Speed = 50 mph)

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

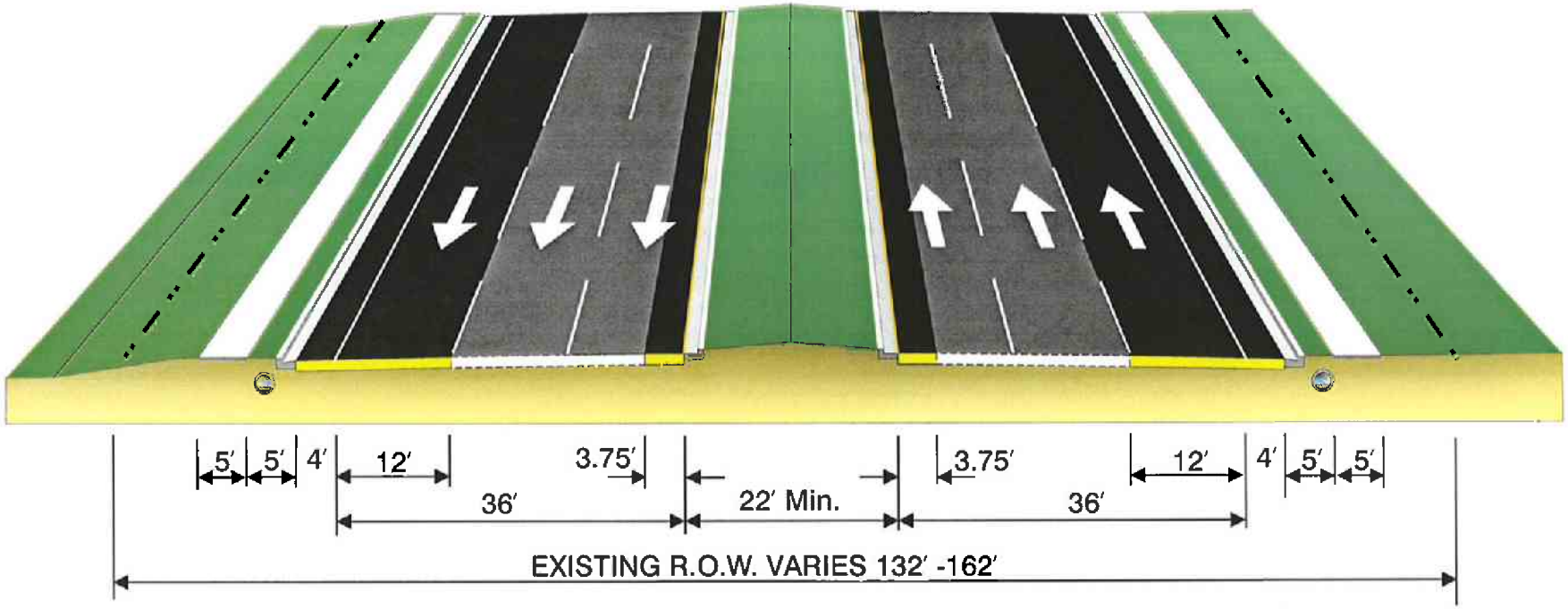
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

PROPOSED 6 - LANE URBAN ROADWAY TYPICAL SECTION

WPI SEG. NO: 407951 1
FAP NO: 300 - 1 (7)

FIGURE 8-8



WEST of CANDLELIGHT BLVD. to EAST of RAY BROWNING RD.
[along the BROOKSVILLE BYPASS]

(Design Speed = 50 mph)

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

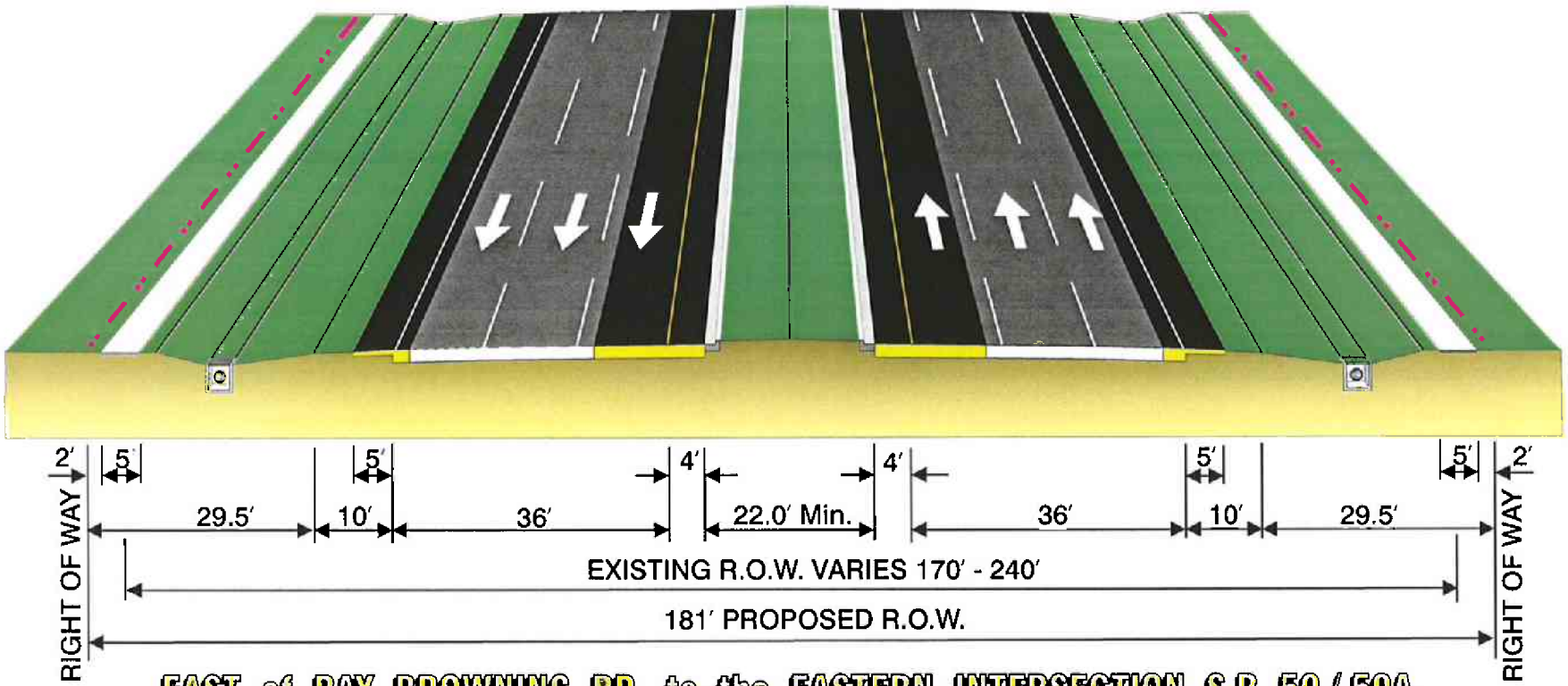
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

PROPOSED 6 - LANE URBAN ROADWAY TYPICAL SECTION

WPI SEG. NO: 4079511
FAP NO: 300 - 1[illegible]

FIGURE 8-9



EAST of RAY BROWNING RD. to the EASTERN INTERSECTION S.R. 50 / 50A
[along the BROOKSVILLE BYPASS]

(Design Speed = 50 mph)

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

PROPOSED 6 - LANE SUBURBAN ROADWAY TYPICAL SECTION

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 8-10

8.3.5 Alternative Alignments

The alignment for the entire project corridor is primarily within the existing right-of-way.

Specifically, alternative alignments were not necessary along S.R. 50, because the previous PD&E Study developed the existing alignment to accommodate future widening to a 6-lane typical section. The alignment for the section of the project corridor from west of the west S.R. 50/S.R. 50A intersection to east of the west S.R. 50/S.R. 50A intersection [along the Brooksville Bypass] is limited by the existing urban typical section as well as the development and right-of-way constraints within this section of the project corridor. In addition, the portion of the project corridor from east of the west S.R. 50/S.R. 50A intersection to the east S.R. 50/S.R. 50A intersection [along the Brooksville Bypass] could be widened to both the inside and outside as depicted in Figures 8-5 through 8-10, or widened strictly to the inside per the previous PD&E Study.

8.3.6 Environmental Considerations

A preliminary geotechnical investigation was performed and it was determined that the majority of the Study corridor is underlain by select soils, such as American Association of State Highway and Transportation Officials (AASHTO) classified soils as A-3 and A-2-4. There are areas within the Study corridor that are underlain by shallow plastic soils (A-2-6, A-4, A-6 and A-7). The surficial geologic material within the Study area consists of sporadic relic dune sand and the residual elements of the Hawthorne Group of formations, with parts of the project containing undifferentiated sands and clays. Most of these surficial soils are relatively unconsolidated sands and sandy clays. The thin and somewhat absent Hawthorne soils may consist of fine to medium grained unconsolidated quartz sand, silt, clay and limestone. S.R. 50 crosses areas of West Central Florida that have a known history for the formation of sinkholes. The potential for sinkhole activity is based on the recorded documentation of the formation of sinkholes and the geology of the area.

A cultural resource assessment survey (CRAS), including background research and a field survey, was conducted for this project. As a result of the assessment, five previously recorded archaeological sites (8HE237, 8HE238, 8HE239, 8HE241 and 8HE270) and two additional archaeological sites (8HE490 and 8HE491) were identified within the project's APE, and the boundary of previously recorded site 8HE241A was expanded. In addition, the CRAS of the proposed pond sites resulted in the discovery and evaluation of one new archaeological site (8HE365) within proposed Pond A, and two AOs within Pond I-South and Pond J, respectively. The latter is probably associated with 8HE241C. Of these sites, the Colorado Site (8HE241) was determined to be the only site eligible for listing in the NRHP.

A review of relevant site locational information for environmentally similar areas within Hernando County and the surrounding region indicated a generally moderate to low probability for the occurrence of prehistoric (precontact) sites within the project APE. The background research also indicated that sites, if present, would most likely be small lithic or artifact scatters. The results of historical research suggested a low potential for historic period archaeological sites.

The Weeki Wachee Spring Mermaid Theatre (8HE391) was recorded previously within the APE by Janus Research, which was not considered potentially eligible for listing in the NRHP. Field survey for the roadway resulted in the identification and evaluation of two historic resources (8HE494 and 8HE495). Neither is considered potentially NRHP-eligible. No historic resources were located within or adjacent to the proposed ponds.

Seventy-eight noise sensitive sites were identified and analyzed to determine their potential to be affected by traffic-related noise with the proposed improvements. Sixty-three sites were single-family residential properties. Two sites were multifamily units (representing a total of eight dwellings). Five sites were evaluated at the Comfort Inn Hotel and pool. Two sites were evaluated for the Exciting Brooksville Assembly of God and the St. Anthony Catholic Church. Interior traffic noise levels were evaluated for the hotel and the churches.

Based on the results of the analysis, exterior traffic noise levels for the existing condition are predicted to range from 52.9 to 66.6 decibels (dBA). Four sites experience existing traffic noise levels that approach, meet or exceed the Noise Abatement Criteria (NAC). The predicted traffic noise levels in the future (2025) without the proposed improvements (no-build) are predicted to range from 52.9 to 68.8 dBA with four sites predicted to experience traffic noise levels that approach, meet or exceed the NAC. Finally, in the future (2025) with the proposed improvements (build), exterior traffic noise levels are predicted to range from 55.9 to 68.9 dBA. Five sites are predicted to experience traffic noise levels that could approach, meet or exceed the FHWA's NAC with the build alternative. The interior noise levels did not exceed the NAC for any of the scenarios.

Noise abatement measures were evaluated at two locations where a total of five sites are predicted to experience traffic noise approaching, meeting or exceeding the NAC with the proposed improvements at S.R. 50. The measures were traffic management, alternative roadway alignments, property acquisition, and noise barriers. Although feasible, traffic management, alternative roadway alignments, and property acquisition were determined to be unreasonable methods to reduce the predicted traffic noise impacts for the affected sites.

Noise barriers were determined to be unreasonable abatement measure for both locations. The ability of a noise barrier to provide the required insertion loss was affected by the distance of the sites from the roadway

and/or restrictions on the physical length of a barrier due to required property access (driveways) and intersecting roadways.

In accordance with Executive Order 11990, project impacts to wetlands were analyzed. Since there are very few wetlands along the project corridor, it is anticipated that implementation of the recommended alternative will have no wetland involvement with the exception of the potential culvert extensions.

No federally protected threatened or endangered species were observed along the Study corridor. Two state listed "Species of Special Concern" occur within the project limits. The Gopherus polyphemus (gopher tortoise) and the Sciurus niger shermani (Sherman's fox squirrel) are species that were encountered during the field survey events. Active gopher tortoise burrows were observed along the mainline in the northeast quadrants of Twin Dolphin Drive/Sunshine Grove Road and Fort Dade Avenue (C.R. 484). In addition, active gopher tortoise burrows were observed in stormwater pond basins C, E north, E south, F south and G. Coordination with the Florida Fish and Wildlife Conservation Commission will need to be initiated during the final design/ permitting phase.

A hazardous material assessment was conducted for this project, which revealed the existence of 111 potential sites along the corridor. During the contamination screening evaluation of the S.R. 50 corridor, 111 sites within the project corridor were idenitifed as having the potential for contamination impacts to the proposed project. Of the 111 potentially contaminated sites within or adjacent to the recommended alignment, 5 are no risk sites, 80 are low risk sites, 19 are associated with petroleum storage tanks and/or hazardous materials/hazardous waste and are ranked as medium, due to the propensity of fuel underground storage tanks (UST's) to leak, and 7 are high risk that are associated with contamination currently present and/or poor waste management practices. It must be noted that the list of these sites is not all-inclusive; contamination may be encountered anywhere along the Study length of S.R. 50.

In order to confirm or refute possible contamination involvement, it is recommended that a Level II Contamination Assessment be conducted for the recommended alignment prior to construction, if additional right-of-way is required. This assessment should focus on the rated sites within the project corridor that will be directly impacted by construction of the improvements. The Level II Contamination Assessment should include field sampling and quantitative analysis of soils and groundwater.

8.3.7 Drainage

Drainage along the project corridor is accomplished with a combination of roadside ditches, cross drains and side drain pipes that are located under driveways and roadways. The basins along the corridor are considered to be closed basins and some are located within the Peck Sink

Watershed near S.R. 50 and Cobb Road. The existing drainage systems within the project limits appear to function adequately with the only reported flooding problems located along the S.R. 50 Bypass to U.S. 41. These problems are a result of clayey soils being present and a perched water table. The City of Brooksville and the FDOT Maintenance Office have both indicated there are known flooding problems in low areas near the S.R. 50 and Cobb Road intersection area.

There are five existing concrete box culverts (CBC) under S.R. 50 within the limits of the project, and a Culvert Analysis Report will be prepared in the design phase of this project. With the proposed roadway widening, it is anticipated that the final design may call for some existing cross drains to be extended or replaced.

It is anticipated that dry detention will be used in the design of the required stormwater management facilities for basins A through I, as identified in the Study's *Pond Siting Report* [2]. A wet detention/retention facility may be warranted for basins J, K, L and M due to soils and groundwater conditions. These basins discharge into isolated/ depressional areas (closed basins). Recovery is accomplished through percolation into the ground and evapo-transpiration.

Table 8-1 provides the approximate pre-construction and post-construction pavement areas, roadway basin areas, and required attenuation volumes for each of the basins.

Table 8-1: Drainage Basin Characteristics

Pond Site Identification	Basin Limits (Station)	Roadway Basin Area (Acres)	Pavement Area (Acres)		Pond Volume Requirement (Acre-Feet)
			Pre-Const.	Post-Const.	
A	500+00 to 523+90	102.60	5.60	9.24	4.61
B	523+90 to 560+60	116.00	4.80	11.83	8.62
C	560+60 to 589+60	98.10	4.40	10.22	7.52
D	589+60 to 666+00	248.70	9.10	22.23	16.97
E North	666+00 to 728+50	85.5	4.40	9.64	6.53
E South	666+00 to 728+50	109.8	3.40	8.70	6.39
F North	728+50 to 762+50	69.4	2.80	5.17	2.89
F South	728+50 to 762+50	60.7	2.90	5.47	3.10
G	762+50 to 803+00	97.40	7.30	12.89	6.67
H	803+00 to 829+50	62.80	6.94	10.11	3.81
I North	829+50 to 910+00	172.40	6.70	12.25	7.23
I South	829+50 to 910+00	102.70	6.00	13.29	8.93
J	249+00 to 278+00	123.10	3.40	9.11	6.58
K	278+00 to 308+00	291.80	3.20	8.70	6.34
L	308+00 to 360+00	977.30	8.70	16.34	8.79
East of Cobb Rd.	360+00 to 373+40	N/A	3.70	7.51	4.39

The *Pond Siting Report* [2] also contains the drainage design calculations and the pond sites for all of the basins. Table 8-2 summarizes the proposed pond sites and corresponding areas. It should be noted that

ponds were not designed for Segment 4 because the existing ponds along S.R. 50 [along the Brooksville Bypass] were sized and designed to handle the ultimate 6-lane build-out condition based on the previous PD&E Study.

Table 8-2: Summary of Proposed Pond Site Characteristics

Pond Site Identification	Segment No.	Required Top of Pond Area (Acres)	Pond Volume Requirement (Acre-Feet)	Right-of-way Acquisition Required Acres
A	1	3.30	4.61	3.30
B	1	6.44	8.62	6.44
C	1	4.63	7.52	4.63
D	1	11.41	16.97	11.41
E North	1	4.60	6.53	4.60
E South	1	3.87	6.39	4.35
F North	2	2.23	2.89	2.23
F South	2	2.53	3.10	2.53
G	2	8.33	6.67	8.33
H	2	*	3.81	*
I North	3	4.39	7.23	4.47
I South	3	5.20	8.93	5.30
J	3	2.33	6.58	2.33
K	3	1.74	6.34	1.74
L	3	2.81	8.79	2.81
East of Cobb Rd.	3	1.71	4.39	1.71

*Basin H is included in the Basin G alternative.

8.3.8 Construction and Engineering Costs

Since construction costs were not developed for the alternative typical sections as previously discussed, refer to Section 9.8 for the estimated construction cost for the recommended alternative. The estimated construction costs are based on the Long Range Estimate system (LRE).

8.3.9 Right-of-Way and Relocation Considerations

As shown in Table 8-3, the right-of-way acquisition costs for the proposed project are $57.12 million. These costs include right-of-way acquisition for roadway improvements and stormwater treatment facilities. The Department utilized 2003 dollars to calculate the right-of-way costs for the project.

The construction of the proposed project will have minimal effect on the local community and property owners with respect to relocations. It is anticipated that there will be 10 relocations (one business and nine residential) within Segment 1, no relocations within Segment 2, five relocations (three businesses and two residential) within Segment 3, and one relocation (one business) within Segment 4.

8.4 Evaluation Matrix

Table 8-3 identifies the costs associated with the recommended alternative that were presented at the Public Hearing.

Table 8-3: Evaluation Matrix for the Recommended Alternative

Evaluation Factors	S.R. 50 From U.S. 19 to the west S.R. 50/S.R. 50A intersection			S.R. 50 [along the Brooksville Bypass]	
	Segment 1	Segment 2	Segment 3	Segment 4	Total
Potential Relocations					
Business	0	0	2	1	3
Residential	9	0	2	0	11
Non-Profit Organization	0	0	1	0	1
Noise Effects					
Sites exceeding the 66 dBA Isopleth	0	1	0	4	5
Cultural Resources					
Historic Structures	No Involvement				
Archaeological Sites	2	0	2	4	8
Parks [Section 4(f)]	No Involvement				
Natural/Physical Environmental Effects					
Wetlands (acres)	0	0	0	0	0
Floodplain encroachments (acres)	0	0	0	0.04	0.04
Potential Threatened & Endangered Species	No Involvement				
Potential Contamination Sites (Medium/High)	2/1	2/1	4/4	11/1	19/7
Project Estimated Costs (Million $)					
ROW Acquisition Cost [1]	21.93	13.03	19.50	2.66	57.12
Engineering Cost [3]	1.33	0.69	1.37	1.26	4.65
Construction Cost [2]	8.84	4.62	9.16	8.41	31.03
Construction Engineering and Inspection Cost [3]	1.33	0.69	1.37	1.26	4.65
Total Cost	**33.43**	**19.03**	**31.40**	**13.59**	**97.45**

1. Estimate completed on June 2003; estimate includes storm water ponds.
2. Estimate completed on July 2003.
3. Estimated as 15% of construction cost.

8.5 Recommended Alternative

The recommended "Build" Alternative was based on the result of engineering analyses in regard to social and environmental effects. The following is an explanation of the rationale behind the selection of the recommended alternative typical sections.

A project meeting was held at FDOT District Seven on November 25, 2002, which enabled the selection and modification of the recommended alternative typical sections from the proposed typical sections that were presented. The following comments were received:

- Provide a shared use path on either the north or south side of the roadway, which is dependent upon the side of the roadway that would benefit the largest number of pedestrian users.
- Rural typical section should be designed to 65 mph unless the design criteria cannot be meet.
- Maintain the urban typical section for the portion of S.R. 50 just west and east of the west S.R. 50/S.R. 50A intersection due to right-of-way constraints (part of Segment 1 and 2).
- Provide either an urban or a modified urban typical section for Segment 4 (dependent upon the presence of curb and gutter to the outside), with widening to the inside with curb and gutter while maintaining the existing drainage system to the outside.

Additional reviews of the recommended typical sections were conducted by Hernando County and FDOT Roadway Design Department. The only comment their reviews generated was to provide, in addition to the 12-foot shared use path on the south side of S.R. 50, a 5-foot sidewalk on the north side of the roadway.

The recommended typical sections for the widening of S.R. 50 from U.S. 19 (S.R. 55) to the east intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass] consists of five typical sections, which are illustrated in Figures 8-11 through 8-15. Additional right-of-way is required for the recommended typical sections to provide right-turn lanes at unsignalized and signalized intersections.

The proposed improvements for the portion of the project between U.S. 19 (S.R. 55) and west of the west intersection of S.R. 50/S.R. 50A is a 6-lane rural typical section (65 mph design speed) within the 200 feet of existing right-of-way. It also includes a 12-foot shared used path and 5-foot sidewalk on the south and north side of the roadway, respectively.

A 6-lane urban typical section (50 mph design speed) is recommended for the section of S.R. 50 that is immediately west and east of the west intersection of S.R. 50/S.R. 50A. This typical section includes a 5-foot sidewalk and a 4-foot bicycle lane on both the north and south side of the roadway, which requires a 126-foot right-of-way width. The placement of the bicycle lanes will be further evaluated during the design phase and a shared use path may be considered at that time.

The recommended typical section for the portion of S.R. 50 from east of the west intersection of S.R. 50/S.R. 50A to west of Candlelight Boulevard [along the Brooksville Bypass] is a 6-lane modified urban typical section with a 50 mph design speed within the existing right-of-way (170 feet to 205 feet). This typical section provides curb and gutter within the median while maintaining the existing open drainage system to the outside, and also provides a 5-foot sidewalk on both the north and south side of the roadway. The placement of the bicycle lanes will be further evaluated during the design phase and a shared use path may be considered at that time.

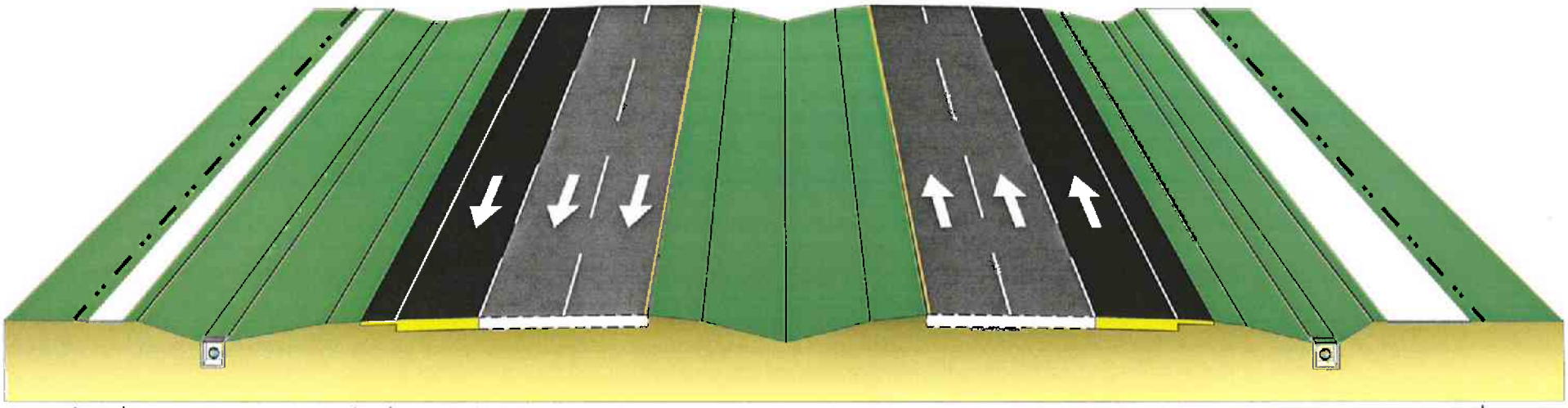
A 6-lane urban typical section is recommended for S.R. 50 [along the Brooksville Bypass] from west of Candlelight Boulevard to east of Ray Browning Road (50 mph design speed), which will provide curb and gutter in the median. This typical section will maintain the existing closed drainage system to the outside within the existing right-of-way (varies between 132 feet and 185 feet). The placement of the bicycle lanes will be further evaluated during the design phase and a shared use path may be considered at that time.

Similarly, a 6-lane modified urban typical section (50 mph design speed) is recommended for the remaining portion of the project from east of Ray Browning Road to the east intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass] within the existing right-of-way (varies 180 feet to 240 feet). This typical section provides curb and gutter within the median while maintaining the existing open drainage system to the outside as well as 5-foot sidewalk along both sides of the roadway. The placement of the bicycle lanes will be further evaluated during the design phase and a shared use path may be considered at that time.

8.6 References

1. Plans Preparation Manual-English; Florida Department of Transportation Roadway Design Office; Tallahassee, Florida; January 2003.

2. Pond Siting Report: Ayres Associates; Tampa, Florida; May 2003.



U.S. 19 to WEST of the WESTERN INTERSECTION S.R. 50 / S.R. 50A

(Design Speed = 65 mph)

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

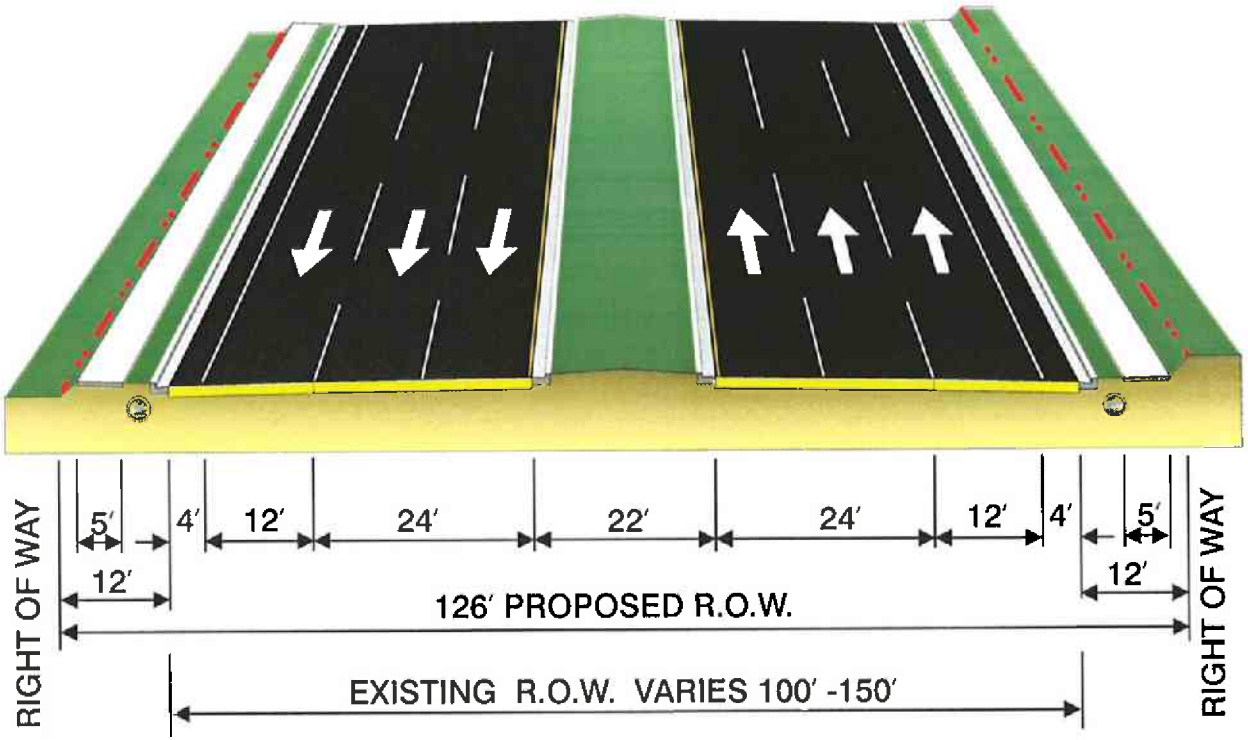
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

RECOMMENDED 6 - LANE RURAL ROADWAY TYPICAL SECTION

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 8-11



WEST of the WESTERN INTERSECTION S.R. 50 / 50A to EAST of the WESTERN INTERSECTION S.R. 50 / 50A [along the BROOKSVILLE BYPASS]

(Design Speed = 50 mph)

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

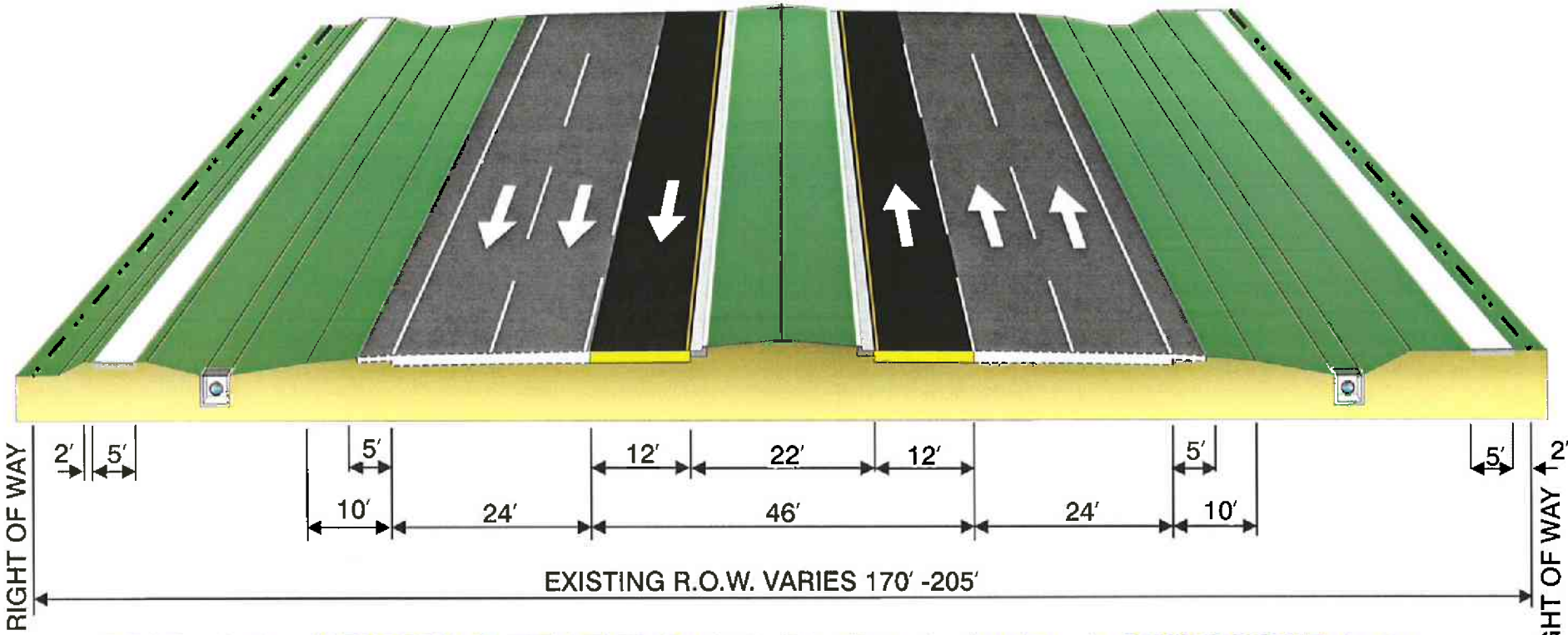
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

RECOMMENDED 6 - LANE URBAN ROADWAY TYPICAL SECTION

WPI SEG. NO: 4079511
FAP NO: 300 - 1[illegible]

FIGURE 8-12



EAST of the WESTERN INTERSECTION S.R. 50 / 50A to WEST of CANDLELIGHT BLVD.
[along the BROOKSVILLE BYPASS]

(Design Speed = 50 mph)

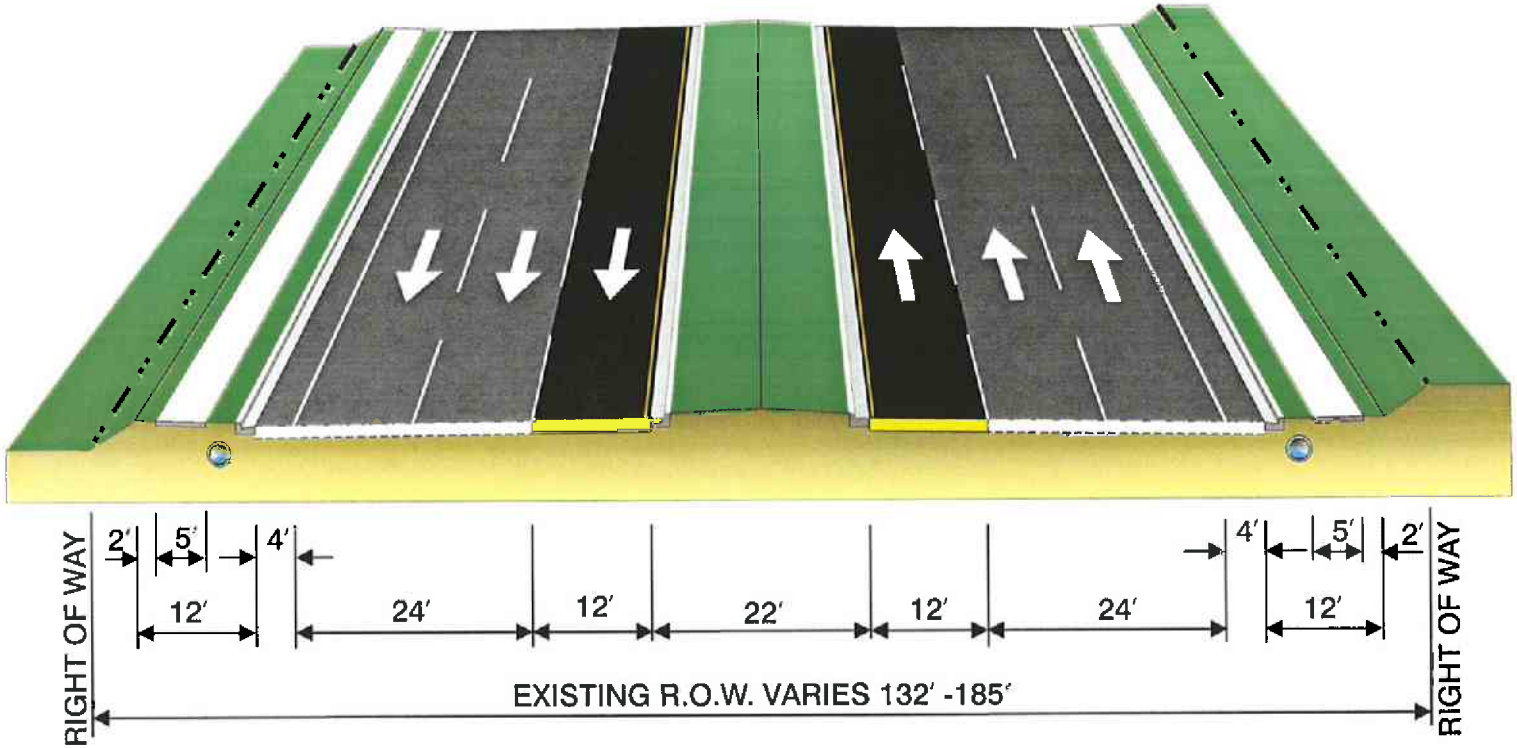
FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)
PD&E STUDY REEVALUATION
From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

RECOMMENDED 6 - LANE MODIFIED URBAN ROADWAY TYPICAL SECTION

WPI SEG. NO: 407951 1
FAP NO: 300 - 1 (7)

FIGURE 8-13



WEST of CANDLELIGHT BLVD. to EAST of RAY BROWNING RD.
[along the BROOKSVILLE BYPASS]

(Design Speed = 50 mph)

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

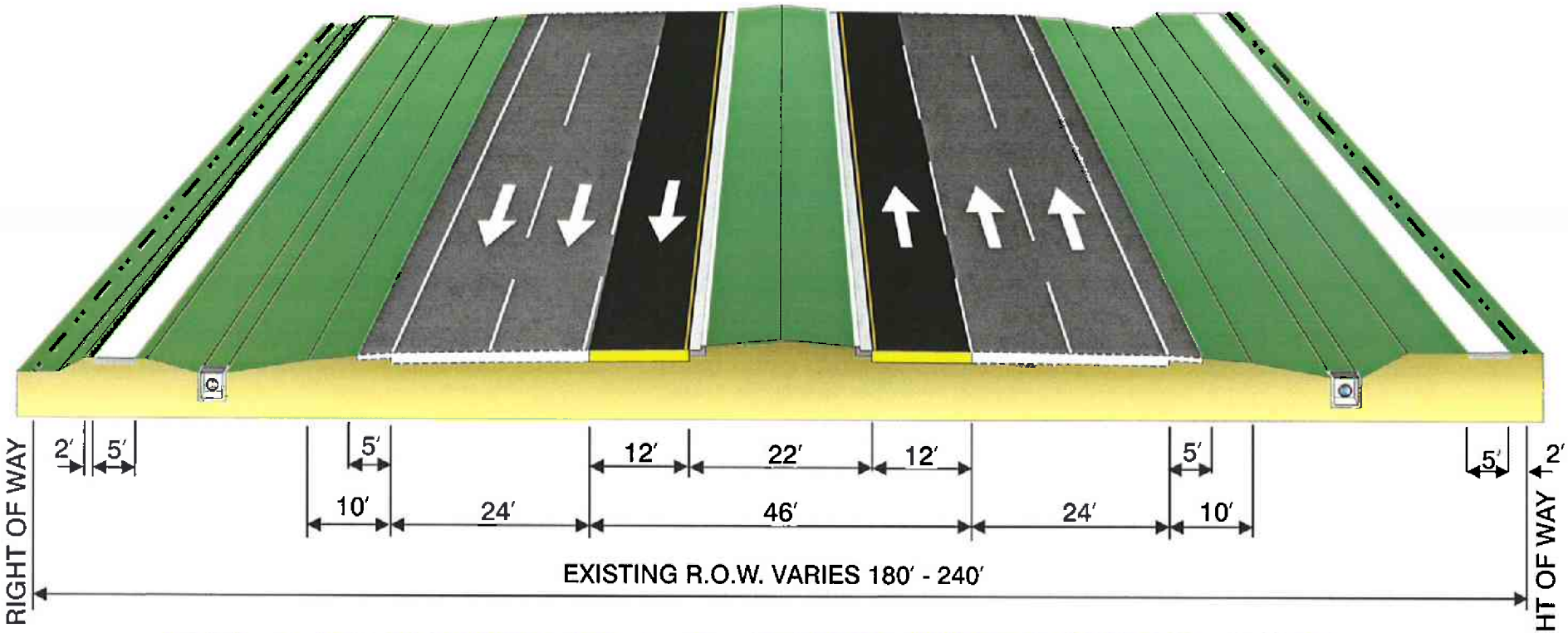
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

RECOMMENDED 6 - LANE URBAN ROADWAY TYPICAL SECTION

WPI SEG. NO: 407951 1
FAP NO: 300 - 1 (7)

FIGURE 8-14



EAST of RAY BROWNING RD. to the EASTERN INTERSECTION S.R. 50 / 50A
[along the BROOKSVILLE BYPASS]

(Design Speed = 50 mph)

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

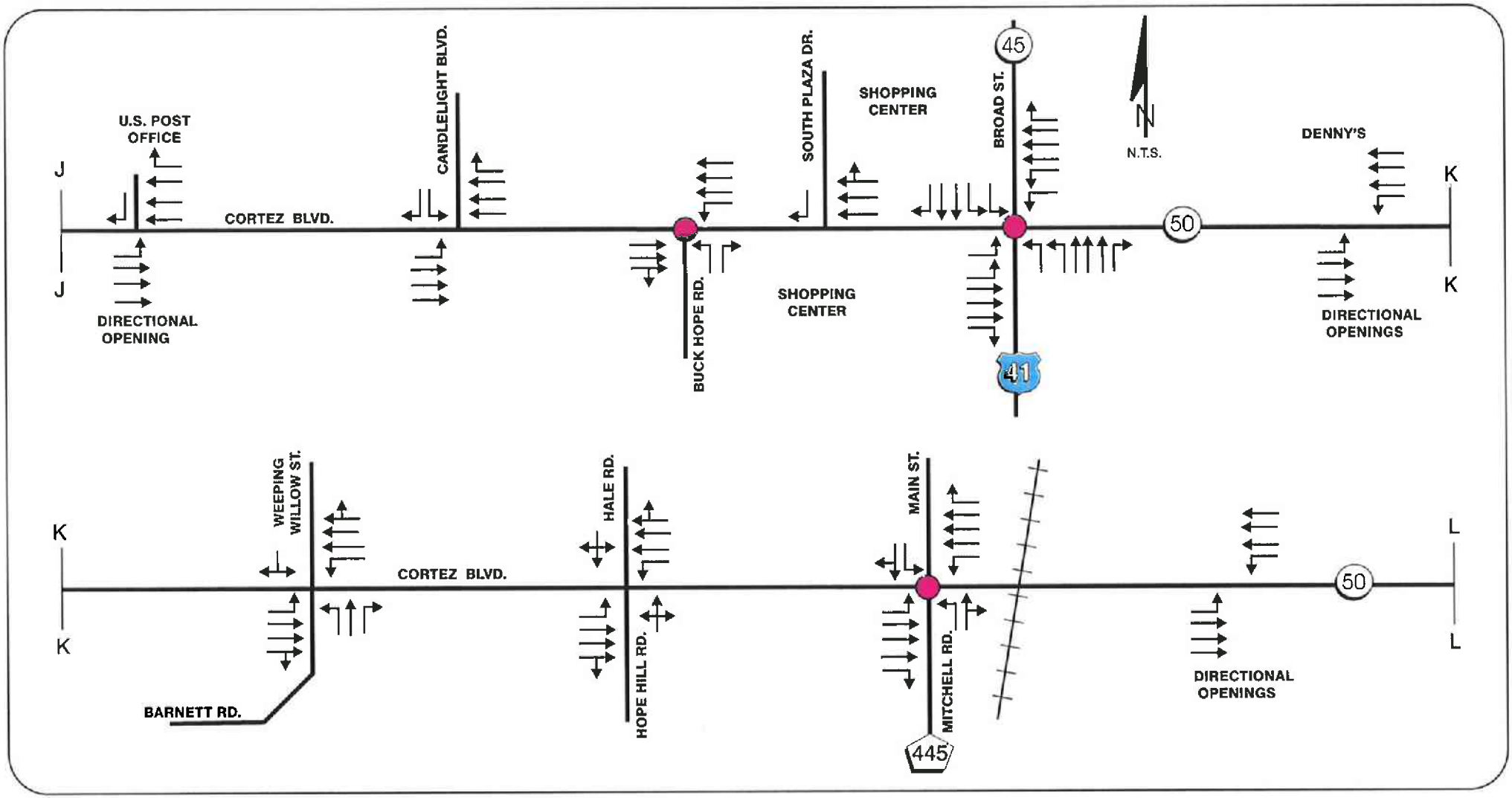
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

RECOMMENDED 6 - LANE MODIFIED URBAN ROADWAY TYPICAL SECTION

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 8-15



LEGEND

Lane Geometry

Signalized Intersection

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

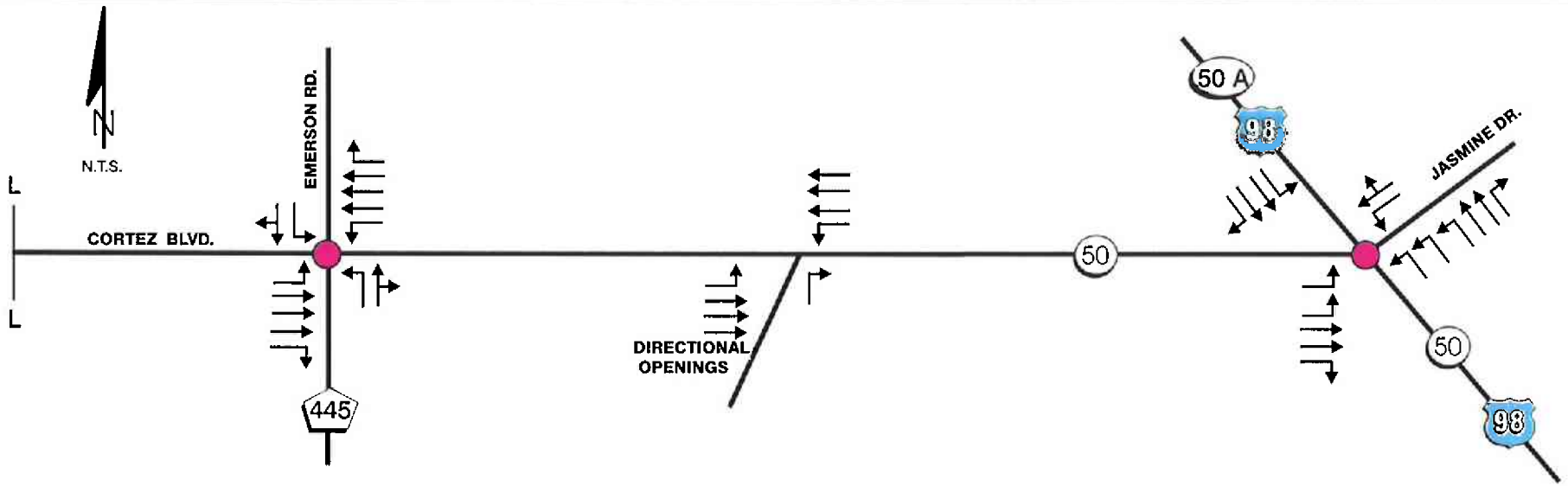
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

RECOMMENDED LANE GEOMETRY

WPI SEG. NO: 407951 1
FAP NO: 300 - 1 (7)

FIGURE 9-1-E



LEGEND

Lane Geometry

Signalized Intersection

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

RECOMMENDED LANE GEOMETRY

WPI SEG. NO: 4079511
FAP NO: 300 - 1 [illegible]

FIGURE 9-1-F

9.0 PRELIMINARY DESIGN ANALYSIS

9.1 Design Traffic Volumes

The recommended daily traffic volume projections (design year 2025) and design hour volumes were presented previously in Figures 6-3 and 6-4 of this report, respectively. Background information concerning the traffic analyses that produced these volumes is provided in Section 6.3, Traffic Analysis Assumptions, and also in the separate *S.R. 50 PD&E Traffic Report* [1].

9.2 Design Alternatives

The design alternatives for the various segments of this Study were previously discussed in Section 8.3 of this report, and the recommended alternative is described in Section 8.5 of this report.

9.3 Typical Sections

The recommended typical sections for each segment of the project were previously discussed in Section 8.4 and illustrated in Figures 8-11 through 8-15.

9.4 Intersection Concepts and Signal Analysis

The recommended intersection lane geometry is based on either the design year (2025) or optimum design lane geometry. The following is a summary of basis for the lane geometry at each signalized intersection:

Design Year (2025)

- U.S. 19/S.R. 55
- Mariner Boulevard (C.R. 587)
- Twin Dolphin Drive/Sunshine Grove Road
- Barclay Avenue/Brookridge Central Boulevard
- Broad Street (U.S. 41)

Optimum Design

- Suncoast Parkway (S.R. 589)
- West intersection of S.R. 50/S.R. 50A
- East intersection of S.R. 50/S.R. 50A

The lane geometry for the remainder of the signalized intersections within the project corridor will be based on the design year (2025) because the design year (2025) and the optimum design are identical. It should be noted that the rational for the lane geometry is to meet the optimum design alternative as long as it does not require additional right-of-way; otherwise, the design year (2025) shall be constructed. The signal phasing and timings will be analyzed during the

design phase of this project for each of the signalized intersections within the project corridor. The recommended lane geometry is shown in Figures 9-1A - 9-1F.

9.5 Alignment and Right-of-Way Needs

Appendix A includes the plan sheets with aerial photography that illustrate the recommended alternative for the project and the anticipated right-of-way needs. As shown in Figures 8-11 through 8-15, the recommended roadway improvements are primarily accommodated within the existing right-of-way; however, right-of-way is required within isolated locations along the project corridor. A total of approximately 6.22-acres of right-of-way will need to be acquired in order to build the recommended alternative for S.R. 50. The proposed alignment avoided to the maximum extent possible disruption to community services by minimizing impacts to churches, day cares and established land uses.

9.6 Relocations

The construction of the proposed project will have minimal effect on the local community and property owners with respect to relocations. It is anticipated that there will be 10 relocations (one business and nine residential) within Segment 1, no relocations within Segment 2, five relocations (three businesses and two residential) within Segment 3, and one relocation (one business) within Segment 4.

In order to minimize the unavoidable effects of right-of-way acquisition and displacement of people, the FDOT will carry out a right-of-way and relocation program in accordance with Florida Statute 339.09 and the Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970 (Public Law 91-646 as amended by Public Law 100-17).

A *Conceptual Stage Relocation Report* was prepared for this Study to address the business and residence relocations.

9.7 Right-of-way Costs

Table 8-3 summarizes the right-of-way costs for the project corridor by segment.

9.8 Construction Costs

The estimated construction costs by project segment are summarized in Table 8-3. These costs were calculated with the use of the Department's Long Range Estimate (LRE) method, and include the cost for constructing stormwater retention/detention ponds. The estimated total construction cost is approximately 31.03 million dollars.

9.9 Preliminary Engineering and Construction Engineering Costs

The costs of engineering (final design), and construction engineering and inspection were each estimated as approximately 15 percent of the 31.03 million-dollar construction cost. These two efforts are expected to cost approximately a total of 9.30 million dollars.

9.10 Recycling of Salvageable Materials

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

9.11 User Benefits

The public will realize numerous benefits after the recommended alternative is constructed as compared to the existing roadway. User benefits are defined as the cost reductions and other advantages that accrue to highway motor vehicle users through the use of a particular transportation facility as compared with the use of another. The recommended improvements will provide user benefits to the extent that it will reduce delay (energy savings) and vehicle operating expenses as well as some reduction in accident costs. Reduced response times for emergency services are also expected. The increase in roadway capacity will also increase vehicle-running speeds and thereby reduce travel times. Bicyclists and pedestrians will be able to share this facility with motorists safely and efficiently. Access to schools and community facilities, as well as the numerous commercial establishments and residences, will be maintained. The creation of a motorist-friendly facility will contribute to the economic growth of the area adjacent to the project.

9.12 Pedestrian and Bicycle Facilities

As illustrated in Figures 8-11 through 8-15, the proposed typical section will provide a 5-foot sidewalk and a 12-foot shared use path along the north and south side of S.R. 50, respectively. A 5-foot sidewalk will be provided along both the north and south side of S.R. 50 [along the Brooksville Bypass]. In addition, a 5-foot wide paved shoulder will be provided for the majority of the project corridor with the exception of two segments from west of the west intersection S.R. 50/S.R. 50A to east of the west intersection S.R. 50/S.R. 50A and west of Candlelight Boulevard to east of Ray Browning Road, which provide a 4-foot bicycle lane. Other facilities such as crosswalks and public sidewalk curb ramps at intersections will be designed to meet the Americans with Disabilities Act (ADA).

9.13 Safety

The proposed improvements will offer provisions for a safe and efficient transportation facility. The increased roadway capacity is expected to result in less congestion; therefore, reducing the probability of accidents. The 4-foot wide bicycle lane or 5-foot paved shoulder will allow experienced bicyclists to share the roadway with motor vehicles while observing the rules of the road. The placement of separate sidewalks/shared use paths will enable safe pedestrian and inexperienced bicyclists access throughout the project corridor. Crosswalks, pedestrian signal flashers and other safety provisions will be included at signalized intersections.

The design and alignment of the roadway will meet applicable safety standards (refer to Section 5.0 for the project's design criteria). Adherence to the design speed as it applies to establishing and setting minimum values on critical roadway design features will be closely followed. Roadway design elements including curvature, sight distance, width and clearance will meet the applicable minimum roadway design standards. The Access Control guidelines, to promote safe and sufficient operation will also be applied.

9.14 Economic and Community Development

As previously discussed in Section 3.3, the Hernando County MPO's *2025 LRTP* [2] includes proposed improvements for the Study corridor. These plans were developed after thorough evaluation of the future population and development growth in the region of the project. The proposed S.R. 50 improvements, developed through the process discussed in Section 8, respond to and accommodate the future year (2025) traffic demand.

9.15 Environmental Impacts

9.15.1 Land Use Data

The existing and future land uses in the vicinity of the project were previously identified in Figures 4-7 and 4-8. As discussed in Section 4.3.1 of this report the proposed improvements of S.R. 50 are consistent with Hernando County MPO's *2025 LRTP*, which would not adversely affect existing or future land uses within the corridor.

9.15.2 Community Cohesion

Since the project proposes improvements to an existing roadway no splitting or isolation of neighborhoods or other community areas will occur. The project will not isolate any ethnic group or neighborhood, separate residences from community facilities or substantially change travel patterns. The project is not anticipated to adversely affect elderly persons, handicapped individuals, transit-dependent individuals, and low income or minority populations. The project improvements are therefore expected to have minimal effects on community cohesiveness. The

community quality of life may be improved with the added safety features such as bicycle lanes and sidewalks along the project corridor.

This project has been developed in accordance with the Civil Rights Act of 1964, as amended by the Civil Rights Act of 1968.

9.15.3 Wetland Impact and Mitigation

In accordance with Executive Order 11990, project impacts to wetlands were analyzed. Since there are very few wetlands along the project corridor, it is anticipated that implementation of the recommended alternative will have no wetland involvement with the exception of the potential culvert extensions.

9.15.4 Threatened and Endangered Species

Pursuant to Section 7(c) of the Endangered Species Act of 1973, as amended, the Study area was evaluated for potential occurrence of threatened and endangered species. Field reconnaissance was conducted during May 2003 to determine any involvement with listed species.

No federally protected threatened or endangered species were observed along the Study corridor. Two state listed "Species of Special Concern" occur within the project limits. The Gopherus polyphemus (gopher tortoise) and the Sciurus niger shermani (Sherman's fox squirrel) are species that were encountered during the field survey events. Active gopher tortoise burrows were observed along the mainline in the northeast quadrants of Twin Dolphin Drive/Sunshine Grove Road and Fort Dade Avenue (C.R. 484). In addition, active gopher tortoise burrows were observed in stormwater pond basins C, E north, E south, F south and G.

Coordination with the Florida Fish and Wildlife Conservation Commission will need to be initiated during the final design/ permitting phase.

9.15.5 Historic Sites/Districts and Archaeological Sites

A cultural resource assessment survey (CRAS), including background research and a field survey, was conducted for this project. As a result of the assessment, five previously recorded archaeological sites (8HE237, 8HE238, 8HE239, 8HE241 and 8HE270) and two additional archaeological sites (8HE490 and 8HE491) were identified within the project's APE, and the boundary of previously recorded site 8HE241A was expanded. In addition, CRAS of the proposed pond sites resulted in the discovery and evaluation of one new archaeological site (8HE365) within proposed Pond A, and two AOs within Pond I-South and Pond J, respectively. The latter is probably associated with 8HE241C. Of these sites, the Colorado Site (8HE241) was determined to be the only site eligible for listing in the NRHP.

A review of relevant site locational information for environmentally similar areas within Hernando County and the surrounding region indicated a generally moderate to low probability for the occurrence of prehistoric (precontact) sites within the project APE. The background research also indicated that sites, if present, would most likely be small lithic or artifact scatters. The results of historical research suggested a low potential for historic period archaeological sites.

The Weeki Wachee Spring Mermaid Theatre (8HE391) was recorded previously within the APE by Janus Research, which was not considered potentially eligible for listing in the NRHP. Field survey for the roadway resulted in the identification and evaluation of two historic resources (8HE494 and 8HE495). Neither is considered potentially NRHP-eligible. No historic resources were located within or adjacent to the proposed ponds.

The State Historic Preservation Officer's (SHPO) review concurred that the proposed developmental plans will have no effect on properties of historical or archaeological value, and neither the historical or archaeological sites identified are considered potentially eligible for listing on the NRHP. In addition, "8HE391, the Weeki Wachee Spring Mermaid Theatre and Main Spring, constructed in 1959 is a significant historic tourist attraction. However, due to the non-historic modifications and the site hitherto not completing 50 years of age, it is recommended that the property be re-evaluated for its NRHP-eligibility in 2009." SHPO concurred.

9.15.6 Potential Hazardous Materials and Petroleum Products Contaminated Sites

A *Final Contamination Screening Evaluation Report* (CSER)[3], which was conducted in April 2003, revealed the existence of 111 potential sites along the corridor. As a result of the evaluation and rating process, 5 are no risk sites, 80 were low risk sites, 19 are associated with petroleum storage tanks and/or hazardous materials/hazardous waste and are ranked as medium due to the propensity of fuel underground storage tanks (UST's) to leak, and 7 are high risk that are associated with contamination that is currently present and/or poor waste management practices. It must be noted that the list of these sites is not all-inclusive; contamination may be encountered anywhere along the Study length of S.R. 50.

In order to confirm or refute possible contamination involvement, it is recommended that a Level II Contamination Assessment be conducted for the recommended alignment prior to construction, if additional right-of-way is required. This assessment should focus on the rated sites within the project corridor that will be directly impacted by construction of the improvements. The Level II Contamination Assessment should include field sampling and quantitative analysis of soils and groundwater.

9.15.7 Noise Impacts

Seventy-eight noise sensitive sites were identified and analyzed to determine their potential to be affected by traffic-related noise with the proposed improvements. Sixty-three sites were single-family residential properties. Two sites were multifamily units (representing a total of eight dwellings). Five sites were evaluated at the Comfort Inn Hotel and pool. Two sites were evaluated for the Exciting Brooksville Assembly of God and the St. Anthony Catholic Church. Interior traffic noise levels were evaluated for the hotel and the churches.

Based on the results of the analysis, exterior traffic noise levels for the existing condition are predicted to range from 52.9 to 66.6 decibels (dBA). Four sites experience existing traffic noise levels that approach, meet or exceed the Noise Abatement Criteria (NAC). The predicted traffic noise levels in the future (2025) without the proposed improvements (no-build) are predicted to range from 52.9 to 68.8 dBA with four sites predicted to experience traffic noise levels that approach, meet or exceed the NAC. Finally, in the future (2025) with the proposed improvements (build), exterior traffic noise levels are predicted to range from 55.9 to 68.9 dBA. Five sites are predicted to experience traffic noise levels that could approach, meet or exceed the FHWA's NAC with the build alternative. The interior noise levels did not exceed the NAC for any of the scenarios.

Noise abatement measures were evaluated at two locations where a total of five sites are predicted to experience traffic noise approaching, meeting or exceeding the NAC with the proposed improvements at S.R. 50. The measures were traffic management, alternative roadway alignments, property acquisition, and noise barriers. Although feasible, traffic management, alternative roadway alignments, and property acquisition were determined to be unreasonable methods to reduce the predicted traffic noise impacts for the affected sites.

Noise barriers were determined to be unreasonable abatement measure for both locations. The ability of a noise barrier to provide the required insertion loss was affected by the distance of the sites from the roadway and/or restrictions on the physical length of a barrier due to required property access (driveways) and intersecting roadways.

9.15.8 Air Quality Impacts

The project alternatives were subjected to a Screening Test that makes various conservative worst-case assumptions related to site conditions, meteorology and traffic. The Screening Test, COSCREEN 98 (revised August 2000) uses the worst-case assumptions in the MOBILE emission model and CALINE 3 model to produce estimates of one-hour and eight-hour carbon monoxide (CO) at air quality sensitive locations adjacent to the project. The one-hour and eight-hour estimates can be directly

compared to the one and eight-hour National Ambient Air Quality Standards (NAAQS) for CO that are 35 ppm and 9 ppm, respectively.

The roadway intersections with the highest total volume and the lowest departure speeds were analyzed for the Build and No-Build scenarios for both the opening year (2005) and the design year (2025).

Estimates of CO were predicted for the sensitive receptor located closest to the improved roadway for each worst-case scenario intersection. Notably, the worst-case CO one and eight-hour levels are not predicted to meet or exceed the one or eight-hour NAAQS for the pollutant with either the No-Build or Build alternatives. As such, the project "passes" the Screening Test.

All state and local agencies were provided with an opportunity to comment on this project. There were no adverse comments regarding air quality. The project is in an area that has been designated as attainment for all the air quality standards under the criteria provided in the Clean Air Act Amendments of 1990. Therefore, conformity does not apply.

9.15.9 Water Quality Impacts

The storm water facility design will include, at a minimum, the water quality requirements for water quality impacts as required by SWFWMD in rules 40D-4, 40D-40, and 40D-400 of the Florida Administrative Code. Therefore, no further mitigation for water quality impacts will be needed.

9.15.10 Aquatic Preserves

There are no Aquatic Preserves within the project corridor.

9.16 Utility Impacts

Utility companies, facilities and locations are discussed in Section 4.1.12 and summarized in Table 4-9 of this report. The utility relocation costs that were provided by the utility companies are summarized in Table 9-1, which are not reimbursable by the FDOT.

It should be noted that utilities within the roadway right-of-way are normally relocated at the utility owner's expense, and that many of the estimated relocations used for cost information can be minimized or avoided in the design process of the project.

Table 9-1: Utility Relocation Costs

Utility Company	Cost of Utility Relocation
Florida Power and Light Corporation (Distribution)	$513,850.00
Florida Water Services	$80,000.00
TECO (Peoples Gas)*	$0.00

*Note: Based on the utility information provided by TECO (Peoples Gas), it is interpretated in this Study that their natural gas lines are located in the vicinity of the 12-foot shared use path and will not require relocation.

9.17 Traffic Control Plan

The maintenance of traffic and sequence of construction will be planned and scheduled so as to minimize traffic delays through the project. Signs will be used as appropriate to provide pertinent information to the traveling public. The local news media will be notified in advance of construction related activities that could excessively inconvenience the community so that motorists can plan travel routes in advance.

S.R. 50 provides access to numerous residences and businesses along the project corridor. Due to its importance, S.R. 50 should remain functional throughout the duration of the construction activities. Access to all businesses and residences will be maintained to the extent practical through controlled construction scheduling. The contractor will be required to maintain the existing number of lanes of traffic in each direction at all times. Lane closures, if necessary, should only occur during off peak hours.

The following conceptual construction sequence will help maintain traffic operations along the S.R. 50:

- Relocate existing utilities within the right-of-way.
- Construct temporary pavement as necessary.
- Construct storm water ponds.
- Construct either the ultimate westbound or eastbound lanes (sidewalks, curb and gutter, travel lanes, etc.) while maintaining the existing traffic on a combination of the existing pavement and adjacent, temporary pavement.
- Temporarily operate two-way traffic on the completed ultimate westbound or eastbound lanes, while constructing the remaining ultimate travel lanes.
- Shift westbound and eastbound traffic to their respective, completed roadways.

9.18 Results of Public Involvement Program

9.18.1 Kick-off Meeting

On July 29, 2002, local public officials and local government staff from Hernando County; regional, state and federal officials; and government agencies were invited to attend the public kick-off meeting at the Hernando County Government Center in downtown Brooksville. The

purpose of this meeting was to introduce the project and to obtain comments regarding issues and concerns.

9.18.2 Advance Notification

An Advance Notification (AN) package was prepared in accordance with Part I, Chapter 2, of the FDOT PD&E Manual and transmitted to the Florida State Clearinghouse Department of Community Affairs. The Florida State Clearinghouse, pursuant to Presidential Executive Order 12372, Gubernatorial Executive Order 95-359, Section 216.212, Florida Statutes, the Coastal Zone Management Act, 16 U.S.C. 1451-1464, as amended, and the National Environmental Policy Act, 42 U.S.C. 4321, 4331-4335, 4341-4347, as amended, has coordinated a review of the S.R. 50 project. Several agencies responded with comments, including the Department of Environmental Protection (DEP), the Florida Department of State (DOS) – Division of Historical Resources, Withlacoochee Regional Planning Council and SWFWMD.

Generally, the comments indicated either consistency with applicable requirements, a request for further coordination during the project's final engineering design phase, or no anticipated impacts.

9.18.3 Public Hearing

A Public Hearing was held for this project on August 21, 2003, which was extended as a workshop to September 18, 2003, for any property owners that didn't attend the hearing (the same information was presented).

9.18.4 Other Meetings

Coordination and consultation were accomplished through a series of meetings and correspondence over the course of the Study to ensure all appropriate parties were apprised of the project status and provided ample opportunity to submit comments.

Meetings were held throughout the course of the Study to the governing transportation body in Hernando County. These meetings were held to provide updates on project development milestones. The following meetings were held:

December 2002 – Hernando County Personnel (Dennis Dix and Charles Mixson)

April 21, 2003 – Hernando County Personnel (Charles Mixson, Larry Jennings, Tom Lott, Gregg Sutton, Chris Weert and Dennis Dix)

July 29, 2003 – Hernando County Personnel (Dennis Dix) and Hernando County Metropolitan Planning Organization (Hugh Pascoe)

July 31, 2003 – Hernando County Personnel (Gregg Sutton) and Consultant Personnel (Larry Fluty – TBE)

In addition, the Hernando County's MPO was periodically updated regarding the status of this Study by the Government Liaison.

9.19 Value Engineering

A Value Engineering Study was conducted for this project; however, no recommendations were provided at the time this Study's documentation was finalized.

9.20 Drainage

The preliminary evaluation of the storm water attenuation system requirements for the recommended alternative was previously discussed in Section 8.3.7 and summarized in Tables 8-1 and 8-2. These requirements were applied in the Study's *Pond Siting Report* [4], which initially developed an average of two alternative pond sites per drainage sub-basin as well as one alternative for each overall basin. The basin alternative was selected as the recommended alternative, which is included in the exhibits within Appendix A.

9.21 Structures

As mentioned previously in Section 4.2, there are no roadway bridges within the project corridor. However, there are three CBCs within the project corridor that are classified as bridges because the overall width of the culvert opening is greater than 20 feet, which are as follows:

- Bridge No. 080065, S.R. 50 over Tylers Drain
- Bridge No. 080037, S.R. 50 over Horse Lake Overflow
- Bridge No. 080006, S.R. 50 over Horse Lake Creek

Since S.R. 50 will be widened to the outside in the vicinity of Bridge No. 080065 and 080037, it is anticipated that the existing CBCs will require widening to accommodate the recommended 6-lane rural typical section within this area. On the other hand, since widening will occur to the inside on S.R. 50 [along the Brooksville Bypass] it is anticipated that widening of Bridge No. 080006 will not be required.

9.22 Street Lighting

Overhead street lighting is provided along S.R. 50 from U.S. 19 (S.R. 55) to the east intersection of S.R. 50/S.R. 50A [along the Brooksville Bypass] at a few isolated intersections, which was previously discussed in Section 4.1.11. Otherwise, the additional lighting that would be encountered for this portion of S.R. 50 is overhead lighting associated with private or commercial properties (service provided by Withlacoochee River Electric Co-operative and Florida

Power Corporation). If any of the existing overhead lighting is disturbed along the project corridor due to construction, it should be restored.

Upon review of accident data and other roadway characteristics, it does not appear that adding roadway lighting is warranted along the Study corridor at this time. However, this should be further evaluated in the upcoming design phases.

9.23 Access Management

The Access Management guidelines (Florida Administrative Rule 14-97) will be applied to this project. As previously identified in Section 5.0, S.R. 50 has an access classification of 3, which accommodates restrictive facility design features. Restrictive medians prevent vehicles from crossing due to curbs, grass or other barriers.

Class 3 facilities can provide directional median openings every 1320 feet or more. The spacing of full median openings is 2,640 feet or more. In addition, the minimum traffic signal spacing for Class 3 facilities is 2,640 feet.

Initially, the access management approach for this project consisted of meeting the existing median opening configurations and identifying if additional median openings could be provided in certain areas along the project corridor. Based on this approach, a median opening layout was prepared for this project and presented to the District's Access Management Committee on March 6, 2003 to obtain their recommendations. The median layouts were modified in accordance with their recommendations, and an additional meeting was held with the District's Access Management Committee on May 15, 2003. In this second meeting, Hernando County's requests for median modifications were reviewed and discussed, and additional minor modifications were made to the median layout.

9.24 Aesthetics and Landscaping

Although the existing landscaping is minimal, Hernando County and the City of Brooksville have been contacted regarding the interest to install any unique streetscape that may evolve in the project area (e.g. textured pavement, ornamental street lights, and wide sidewalks with planters, landscaping etc.), which would be maintained by their agency.

Neither agency has expressed an interest in having any unique streetscape installed for their maintenance. Specifically, Hernando County indicated that they do not have the resources to maintain any unique streetscape within the project corridor. The City of Brooksville's Streetscaping Master Plan does not include any future streetscaping plans for the portion of S.R. 50 within the city limits. Furthermore, this portion of S.R. 50 is not designated as a tree protection zone.

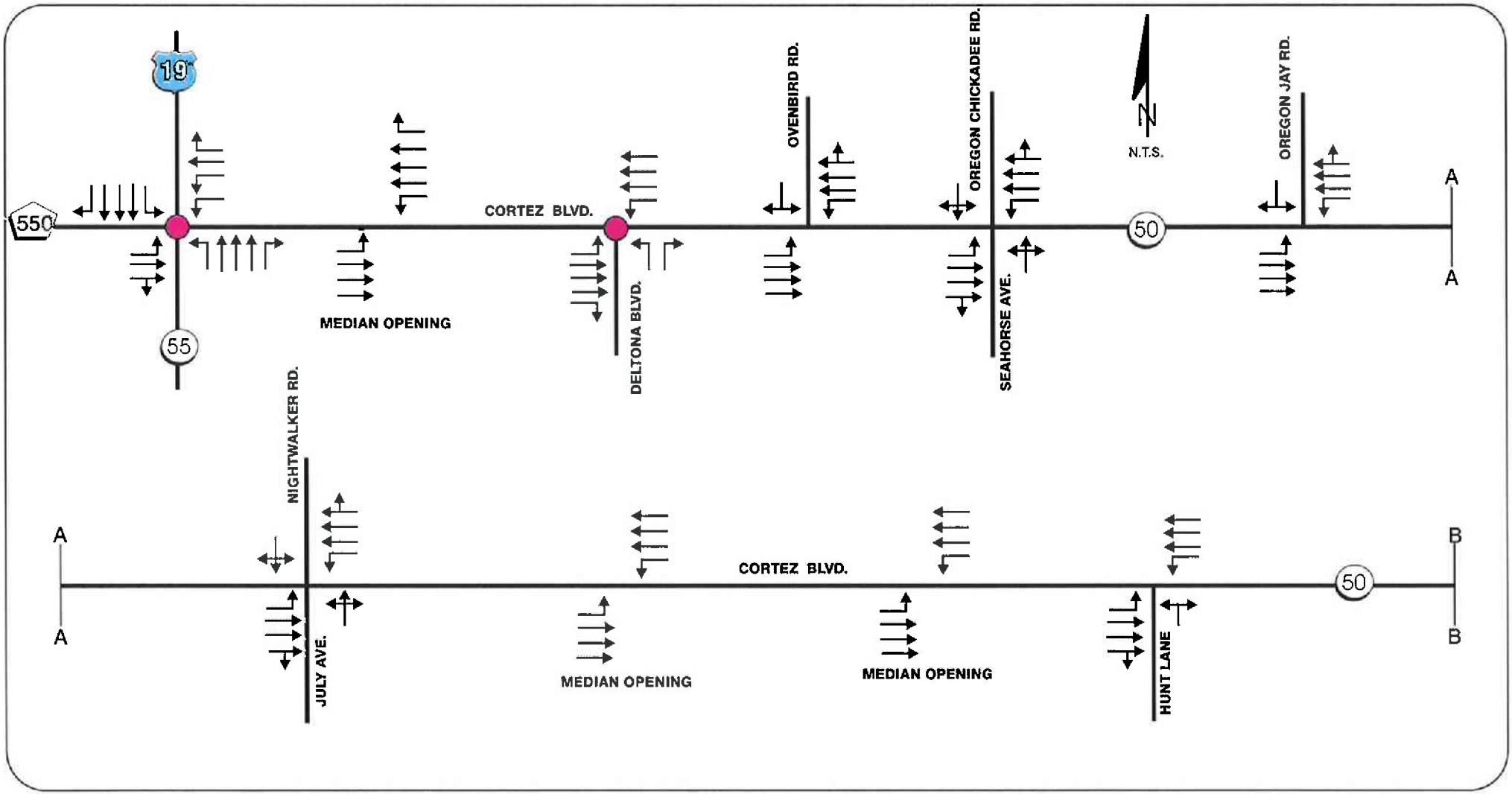
9.25 References

1. S.R. 50 PD&E Traffic Report; Gannett Fleming; Tampa, Florida; March 2003.

2. 2025 Long Range Transportation Plan; Hernando County Metropolitan Planning Organization; Hernando County, Florida; 2001.

3. Final Contamination Screening Evaluation Report; Arcadis G&M, Inc.; Tampa, Florida; October 2003.

4. Pond Siting Report: Ayres Associates; Tampa, Florida; May 2003.



LEGEND

Lane Geometry

Signalized Intersection

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

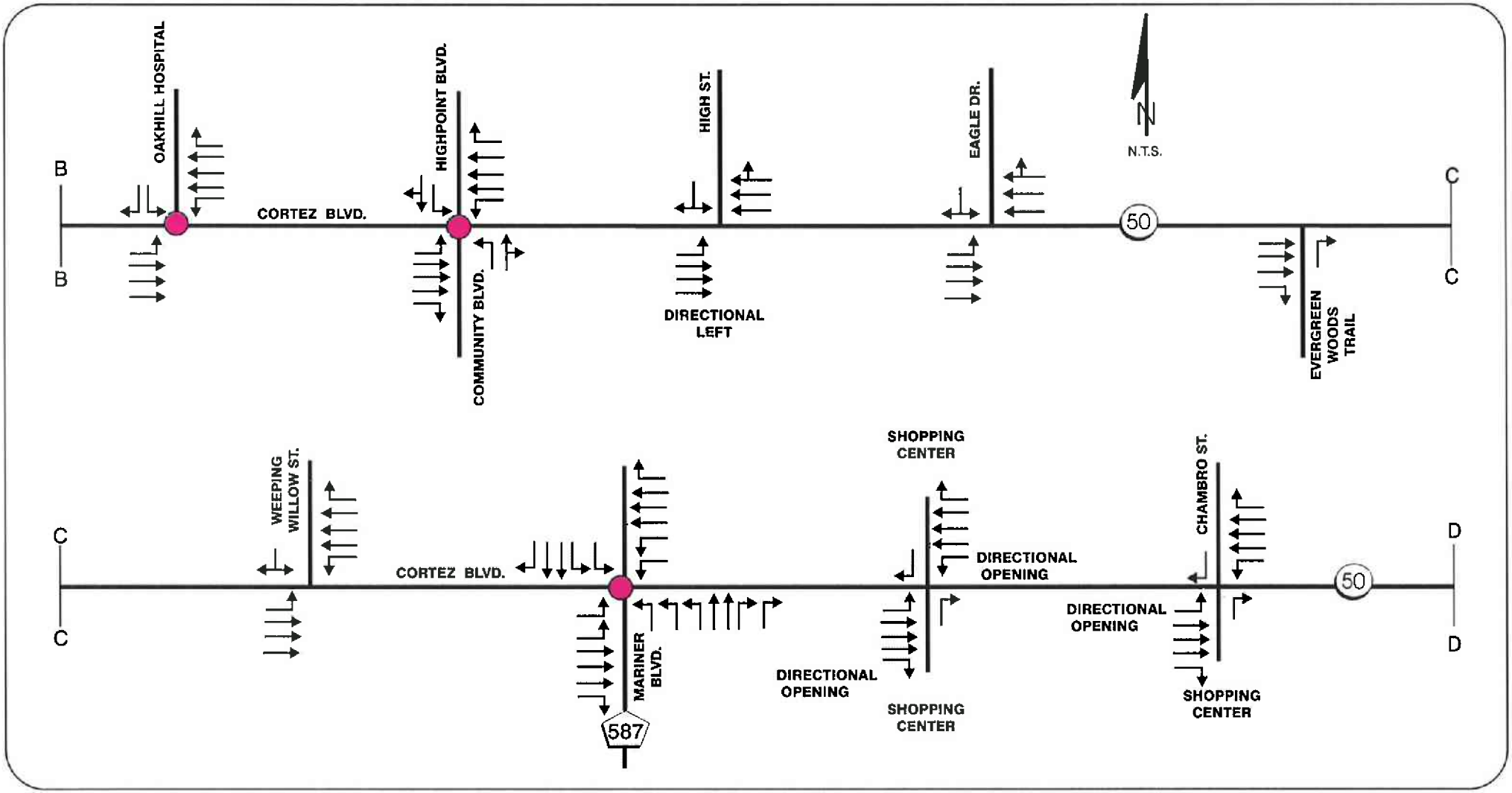
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

RECOMMENDED LANE GEOMETRY

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 9-1-A



LEGEND

Lane Geometry

Signalized Intersection

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

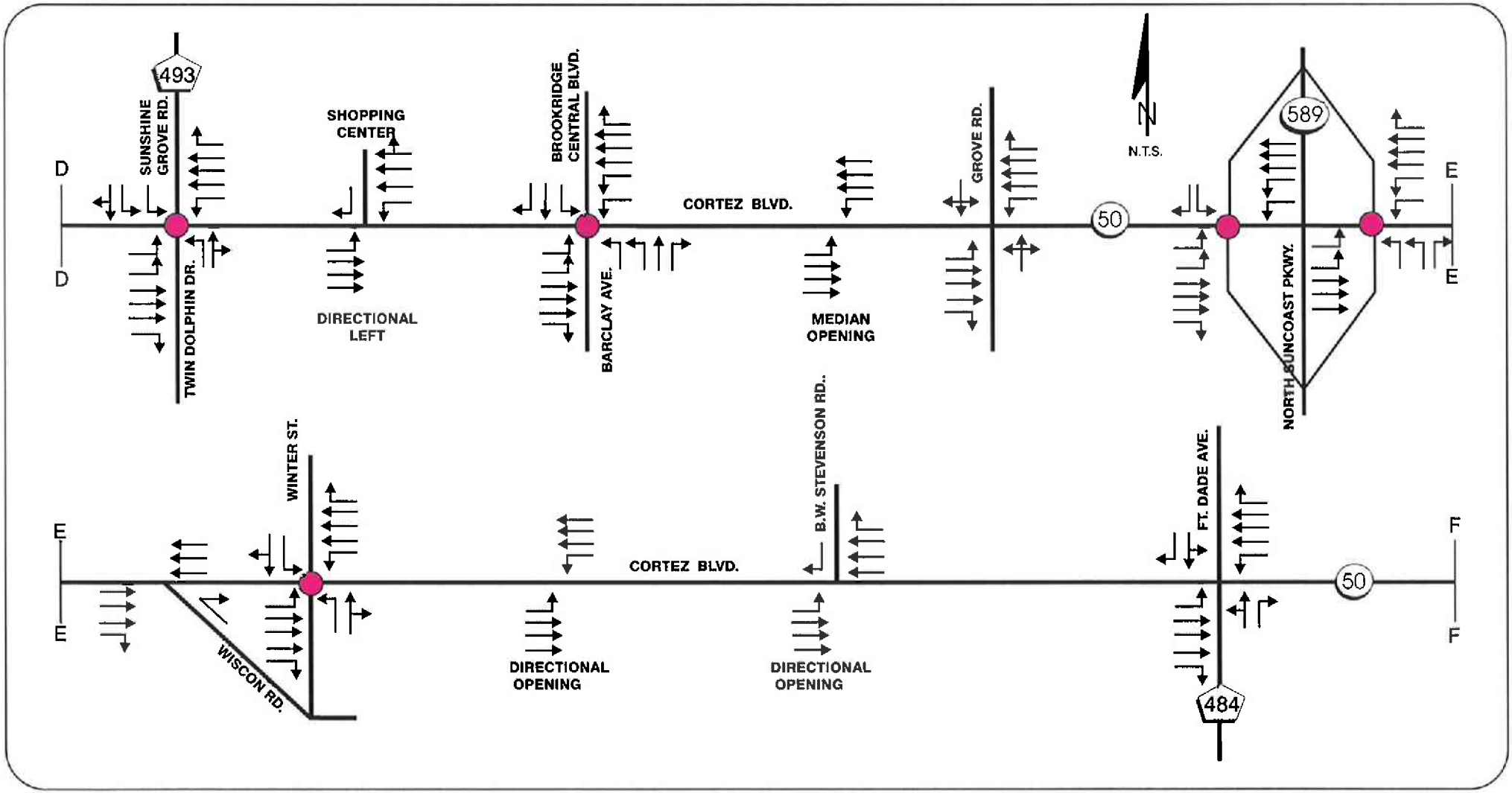
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

RECOMMENDED LANE GEOMETRY

WPI SEG. NO: 407951 1
FAP NO: 300 - 1 (7)

FIGURE 9-1-B



LEGEND

Lane Geometry

Signalized Intersection

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

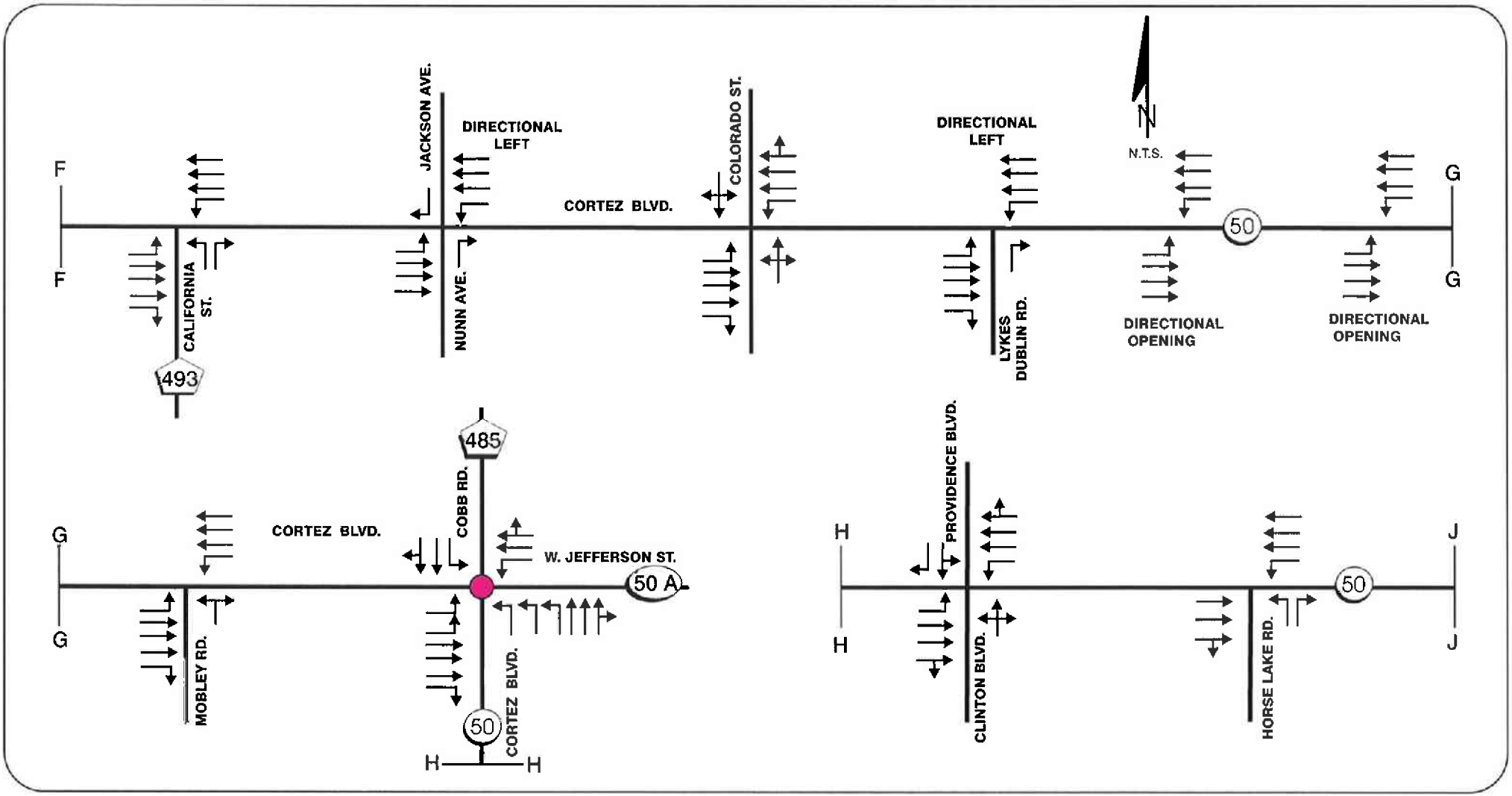
PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of
S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

RECOMMENDED LANE GEOMETRY

WPI SEG. NO: 407951 1
FAP NO: 300 - 1 (7)

FIGURE 9-1-C



LEGEND

Lane Geometry

Signalized Intersection

FLORIDA DEPARTMENT OF TRANSPORTATION

S.R. 50 (CORTEZ BLVD.)

PD&E STUDY REEVALUATION

From U.S. 19 (S.R. 55) to the East Intersection of S.R. 50 / 50A [along the Brooksville Bypass]
Hernando County, Florida

RECOMMENDED LANE GEOMETRY

WPI SEG. NO: 4079511
FAP NO: 300 - 1 (7)

FIGURE 9-1-D

Appendix A

Conceptual Plans for the Recommended Alternative

1" = 200'

HARDEES

MOBIL

BANK OF AMERICA

WEEKI WACHEE VILLAGE

COMFORT INN

H&R BLOCK FINANCIAL SERVICES

VACANT

WEEKI WACHEE SPRINGS

ECKERD

POND SITE BASIN A

C.R. 550 (CORTEZ BLVD.)

S.R. 50 (CORTEZ BLVD.)

U.S. 19/S.R. 55 (COMMERCIAL WAY)

1540

1535

505

510

515

520

525

495

PC STA. = 496+33.33
PT STA. = 512+92.06

PI STA. = 505+19.09
Delta = 49° 45' 41" (LT)
D = 3° 00' 00"
T = 885.76
L = 1,658.73
R = 1,909.86
PC STA. = 496+33.33
PT STA. = 512+92.06

PI STA. = 1525+38.30
Delta = 35° 23' 31" (LT)
D = 1° 00' 00"
T = 1,828.40
L = 3,535.19
R = 5,729.58
PC STA. = 1507+10.20
PT STA. = 1542+49.39

LEGEND

- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED EDGE OF PAVEMENT
- PROPOSED SIDEWALK/SHARED USE PATH
- PROPERTY LINE
- 100 YEAR FLOODPLAIN BOUNDARY
- POTENTIAL POND SITE
- B-1 POTENTIAL BUSINESS RELOCATION
- R-1 POTENTIAL RESIDENTIAL RELOCATION
- C POTENTIAL CONTAMINATION SITE
- EXISTING TRAFFIC SIGNAL

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

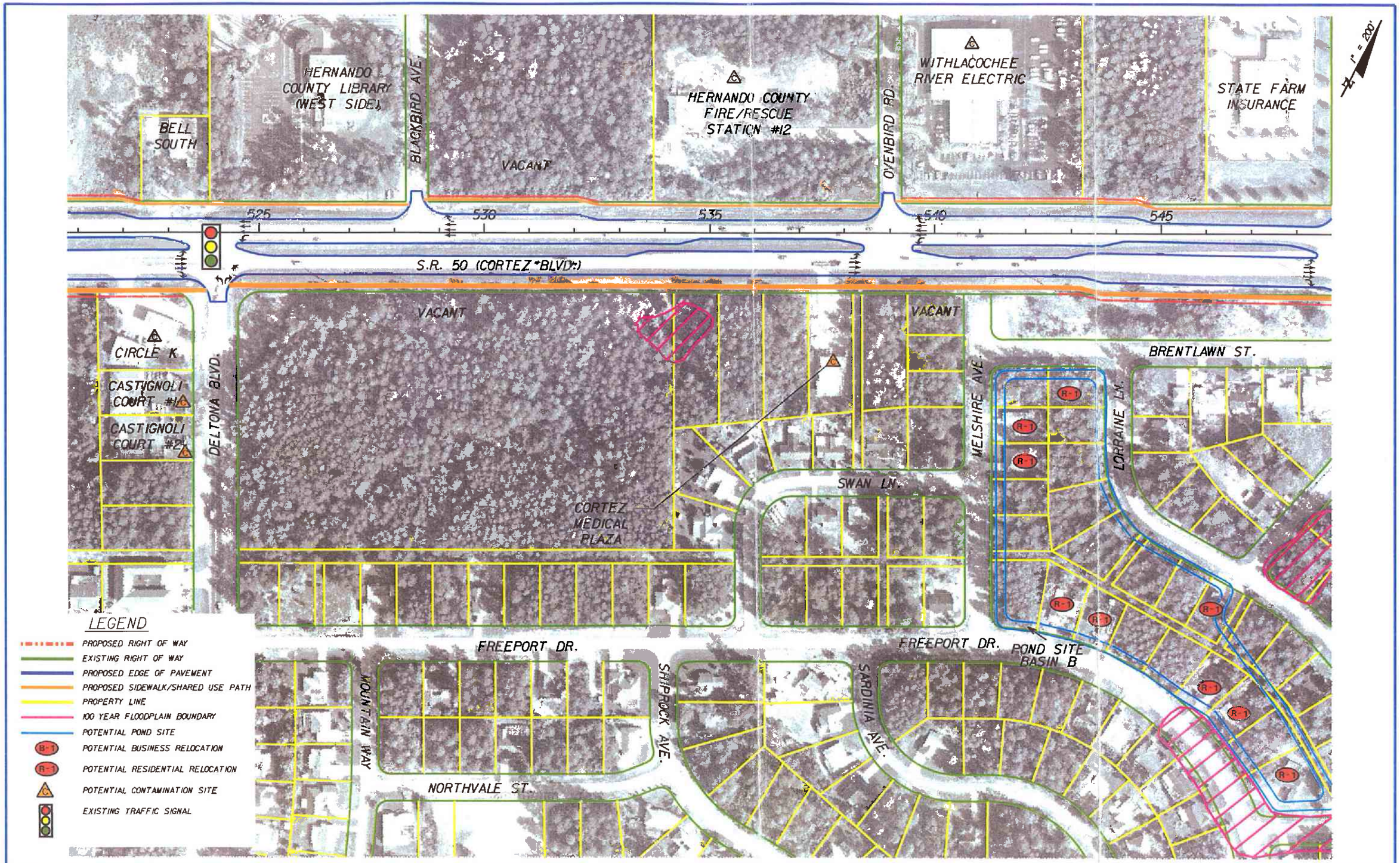
AYRES ASSOCIATES
8875 Hidden River Parkway
Suite 200
Tampa, Florida 33637
(813) 978-8688
BR #4356
Engineer of Record: Daniel Patrick Kelly, P.E.
P.E. License Number: 37294

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 50	HERNANDO	407951-1-22-01

S.R. 50 PD&E REEVALUATION

SHEET NO.
1 OF 29



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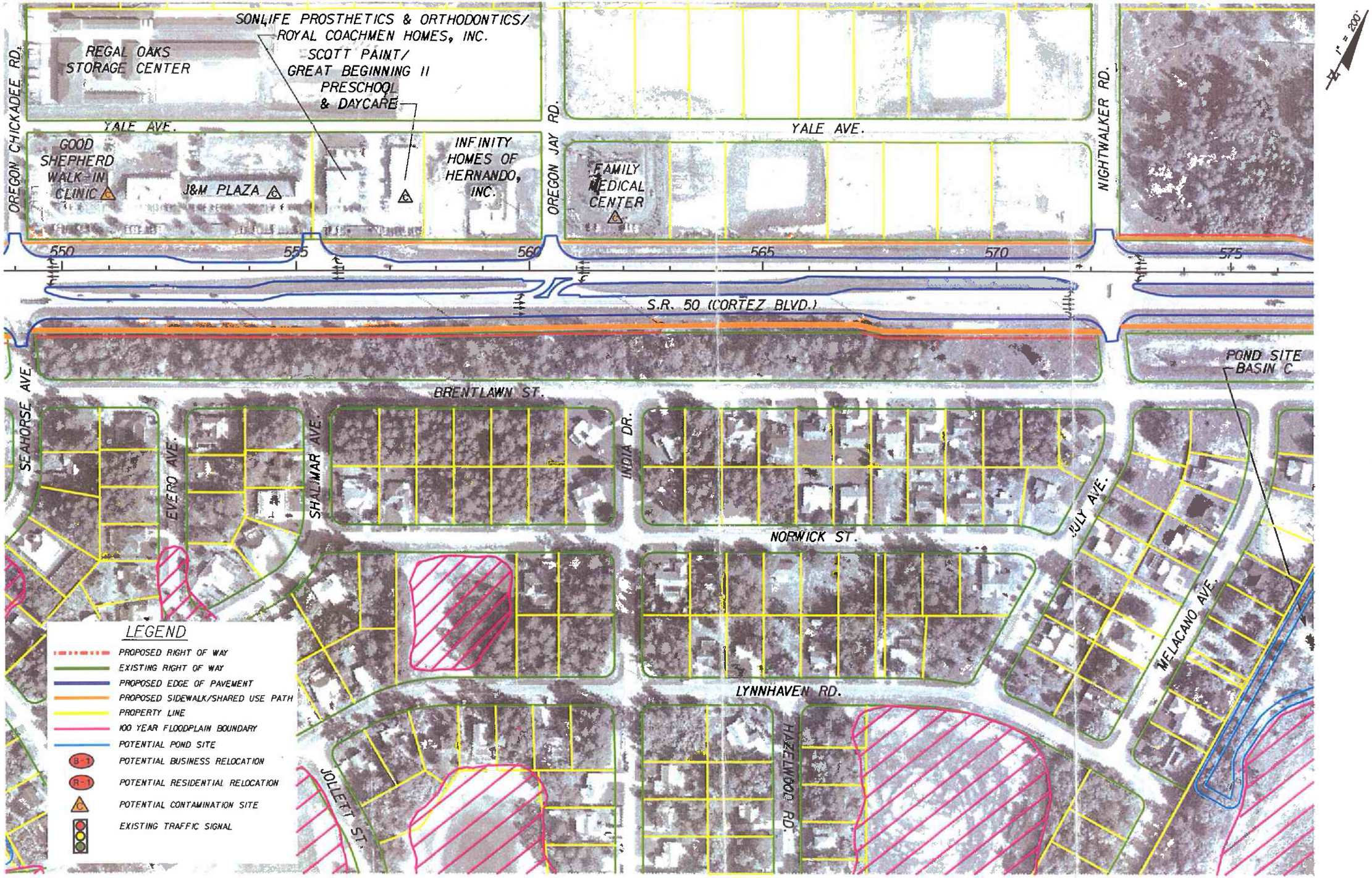
S.R. 50 PD&E REEVALUATION

SHEET NO. 2 OF 29



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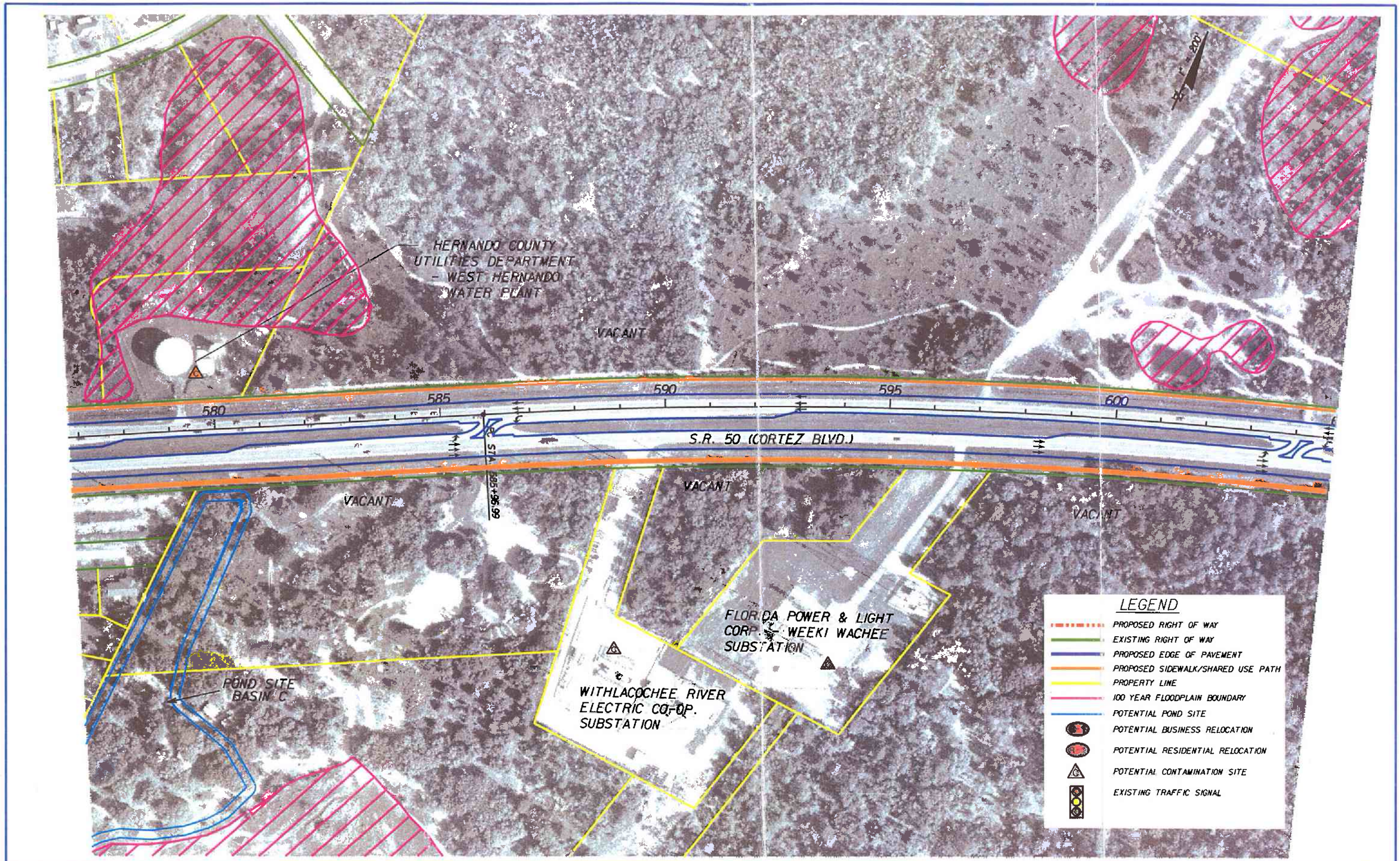
S.R. 50 PD&E REEVALUATION



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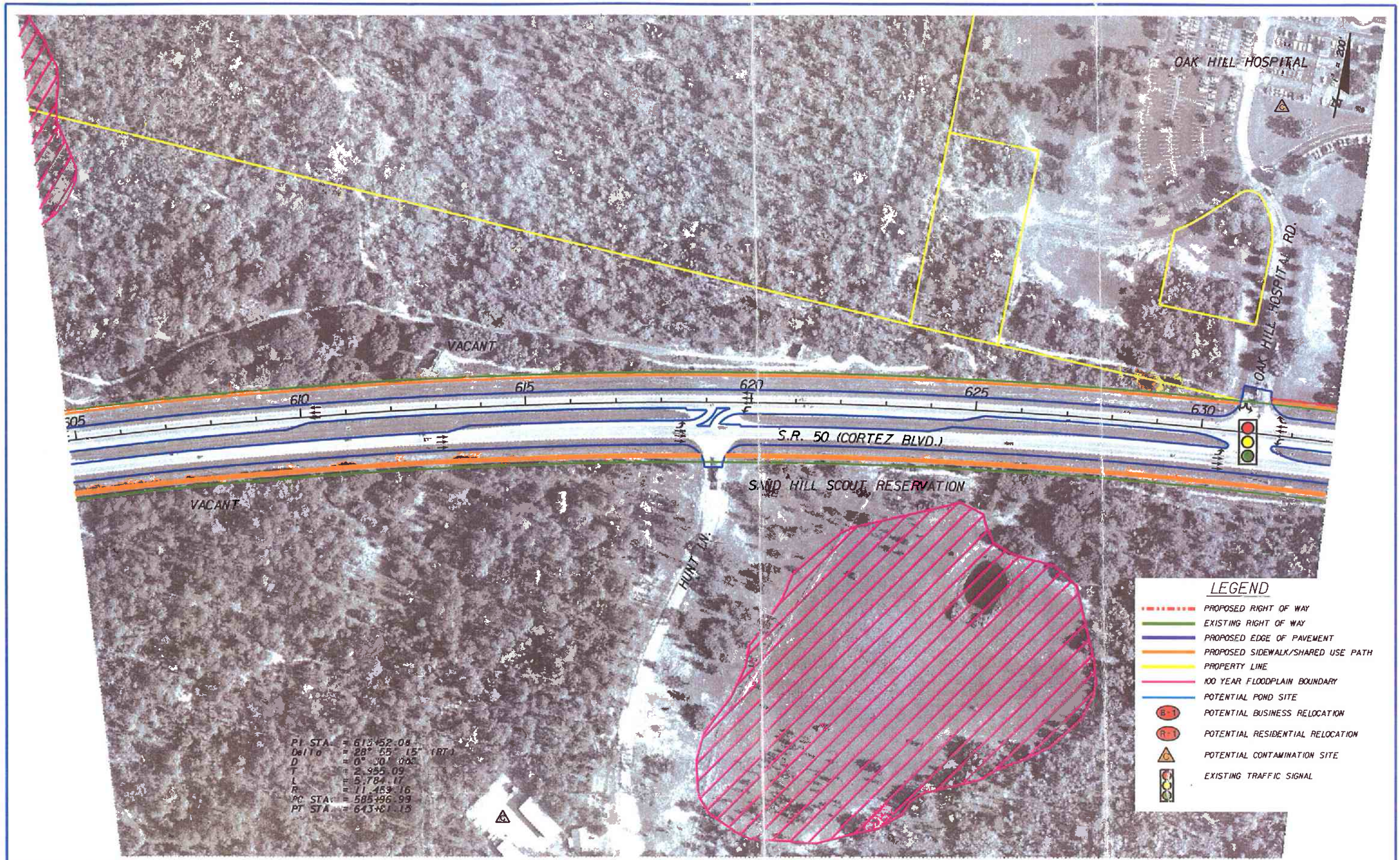
S.R. 50 PD&E REEVALUATION

SHEET NO. 4 OF 29



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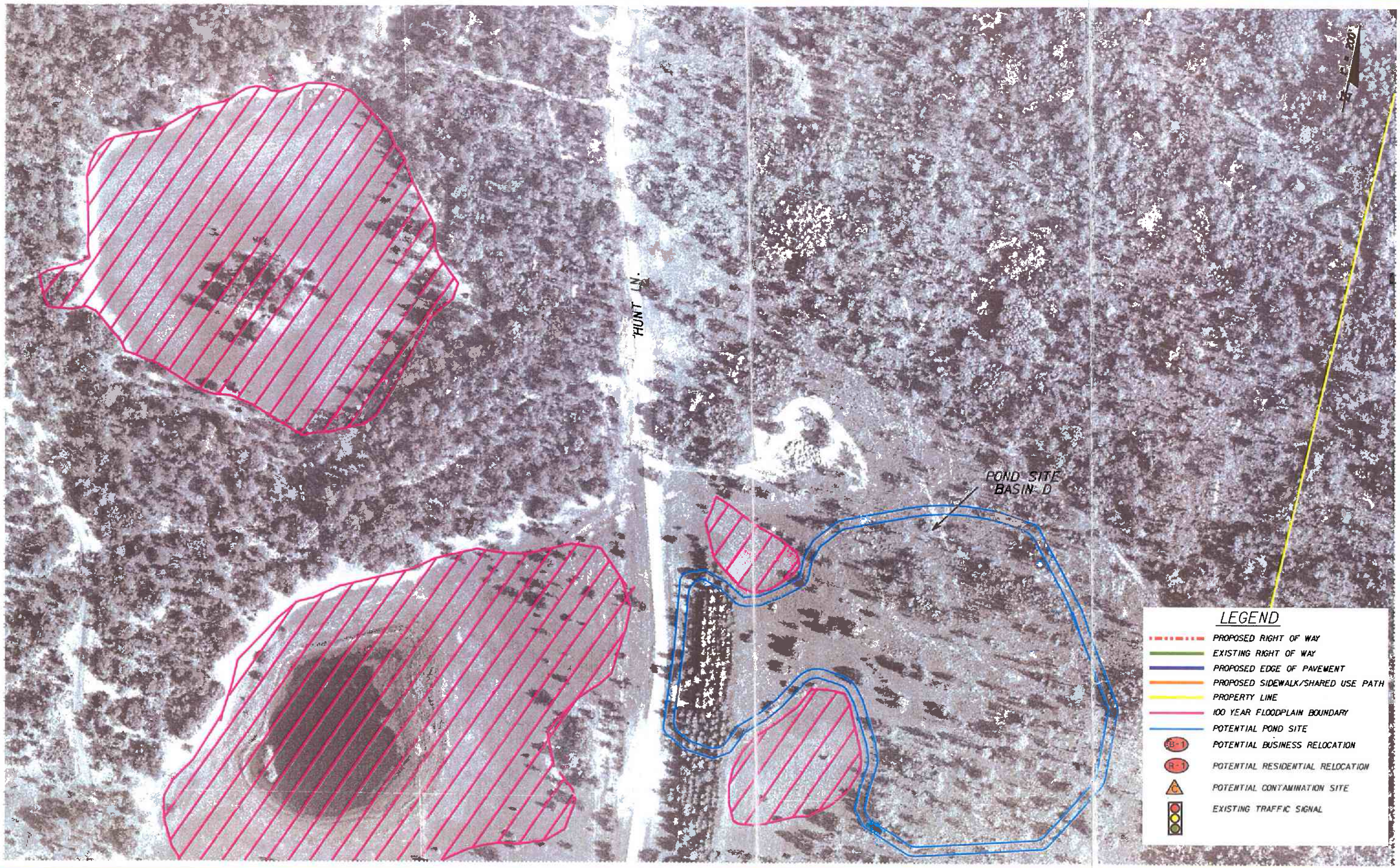

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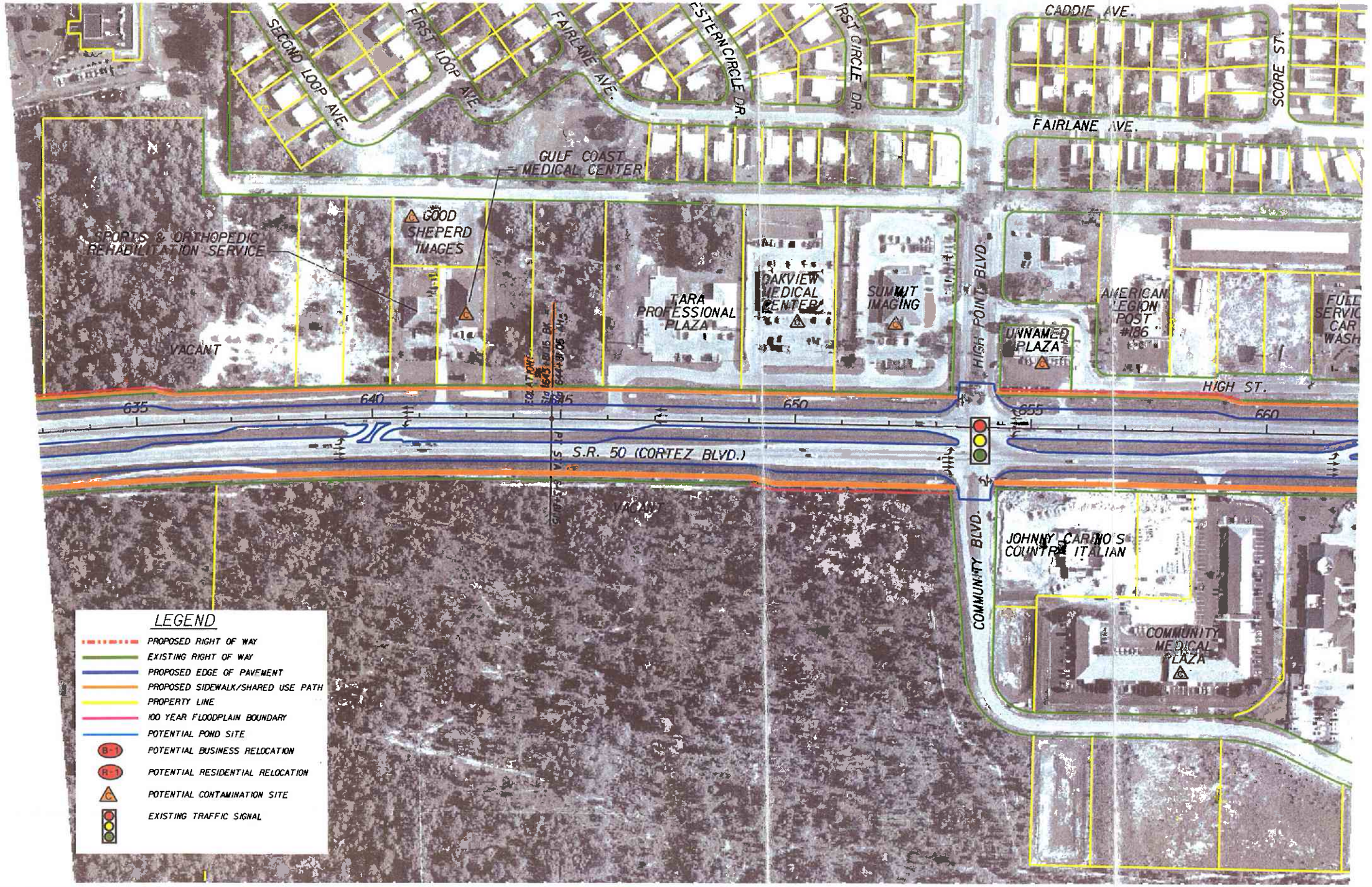

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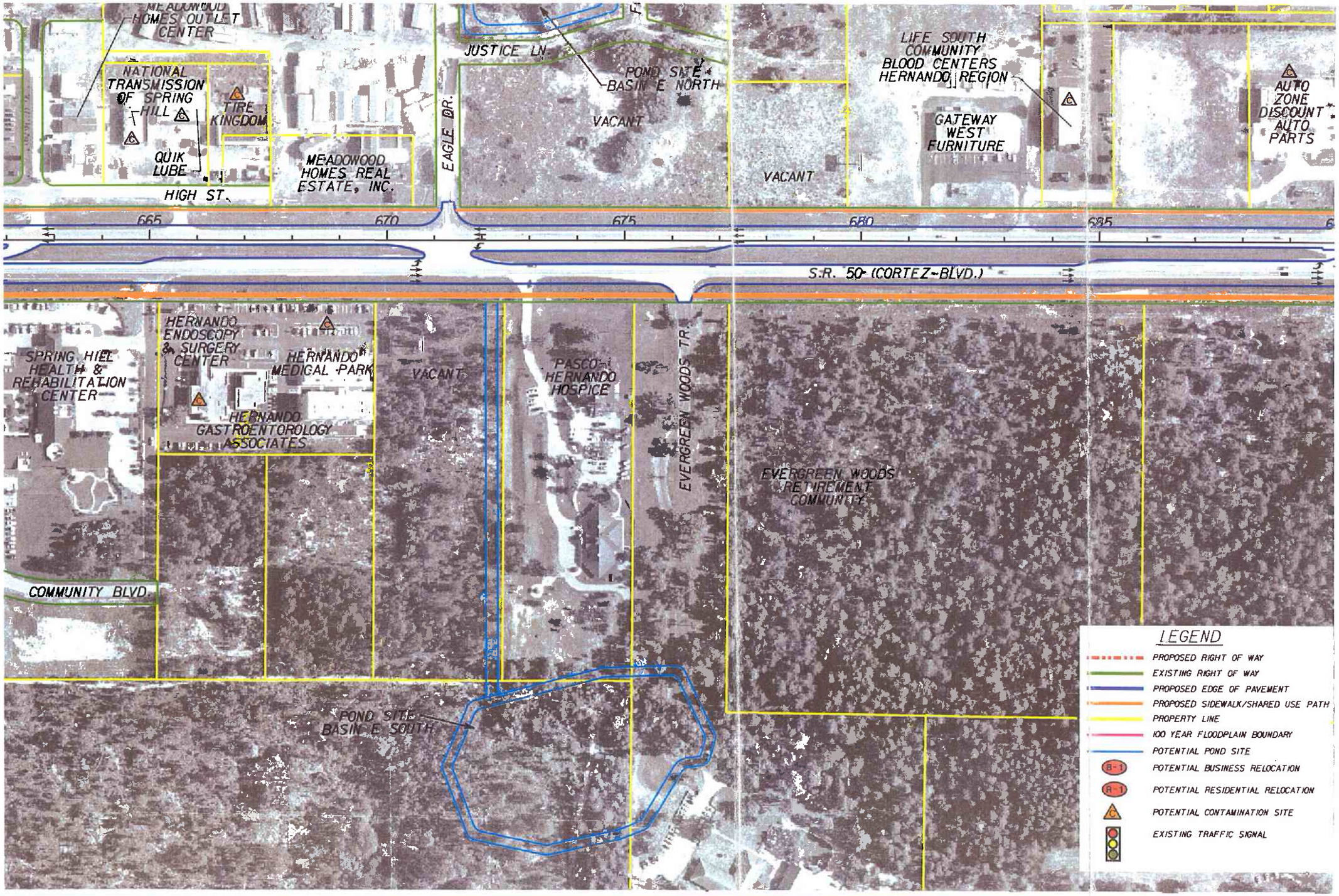

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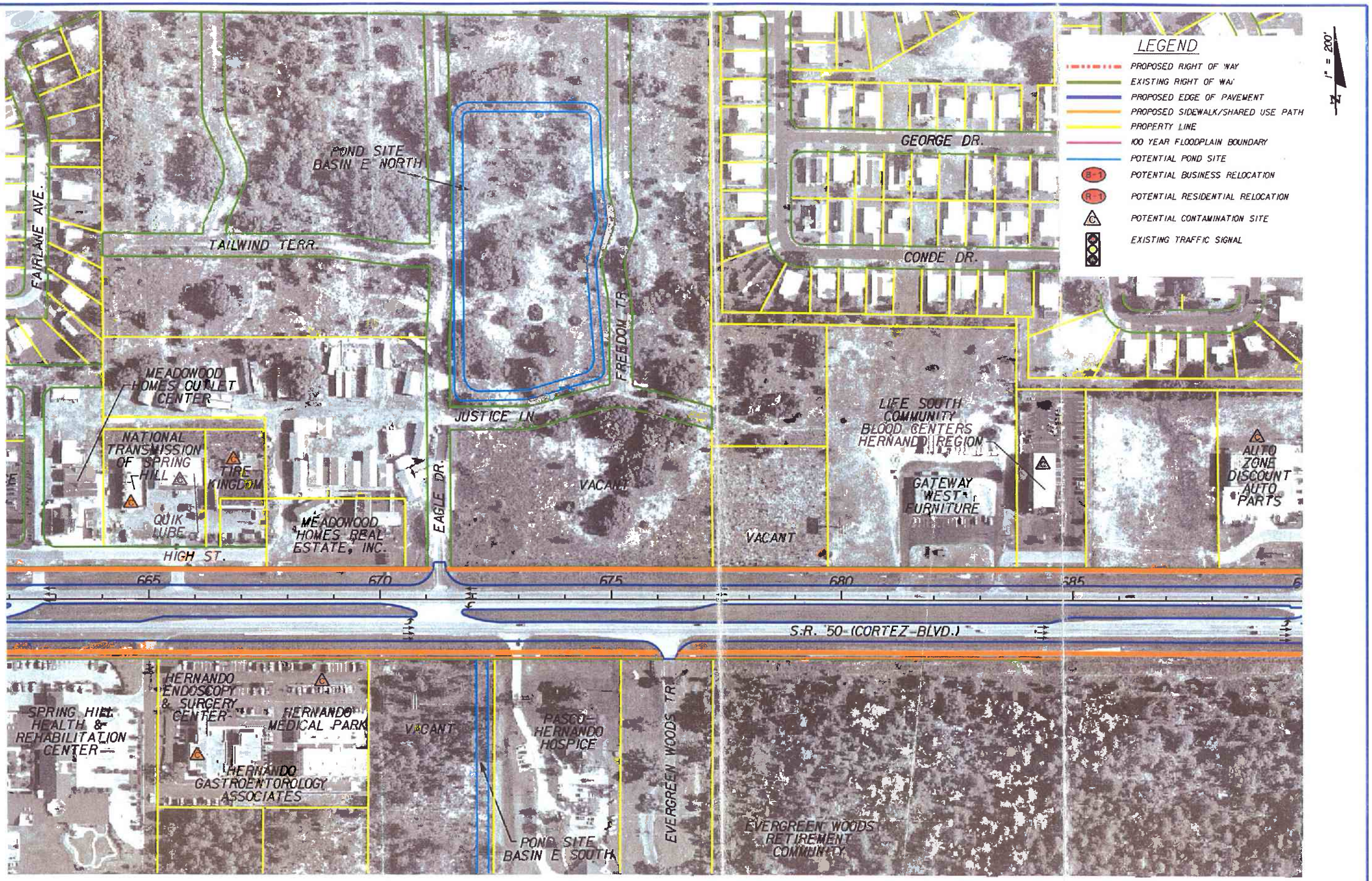
S.R. 50 PD&E REEVALUATION

SHEET NO. 7 OF 29



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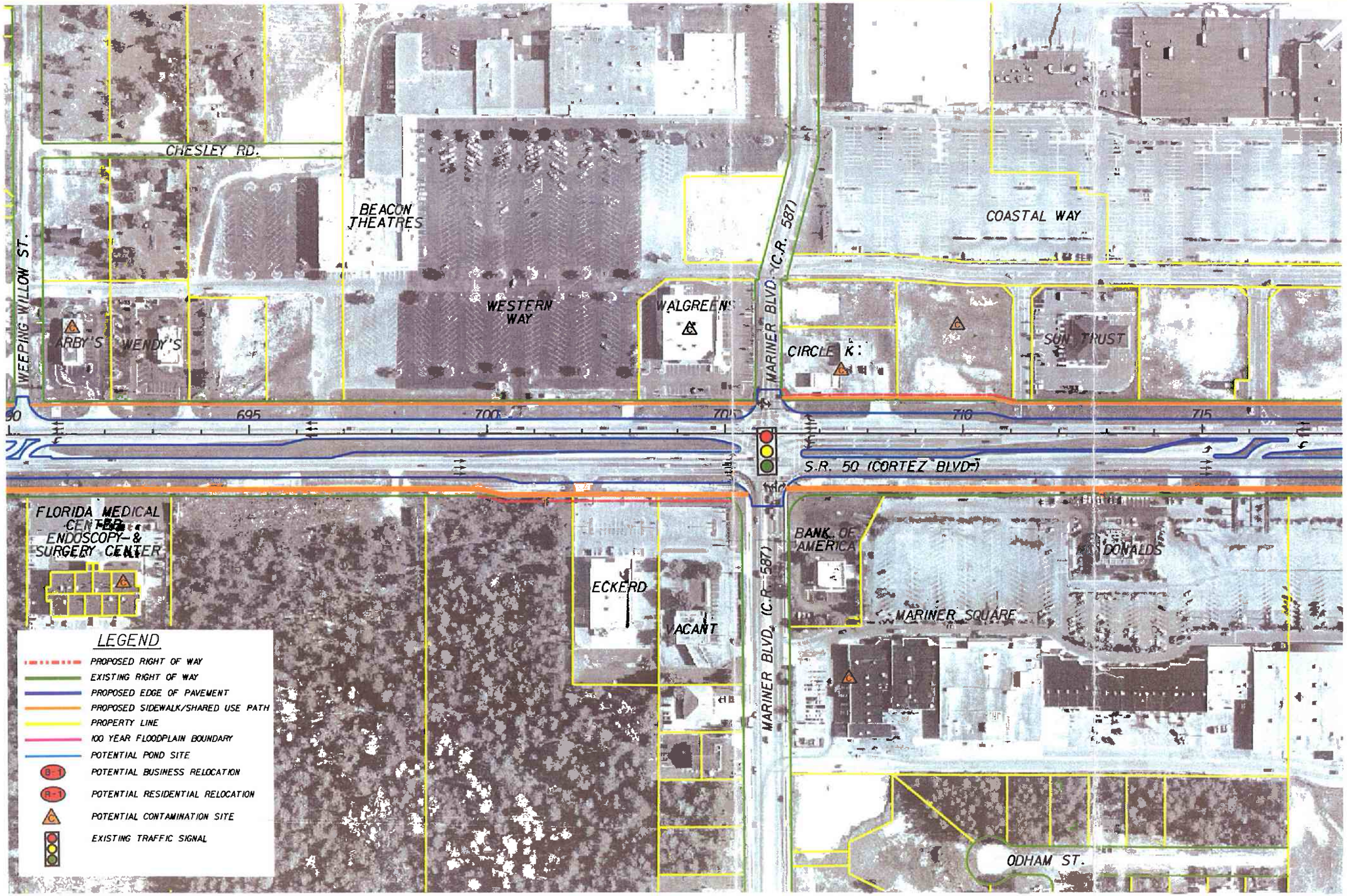
S.R. 50 PD&E REEVALUATION

SHEET NO. 7A OF 29



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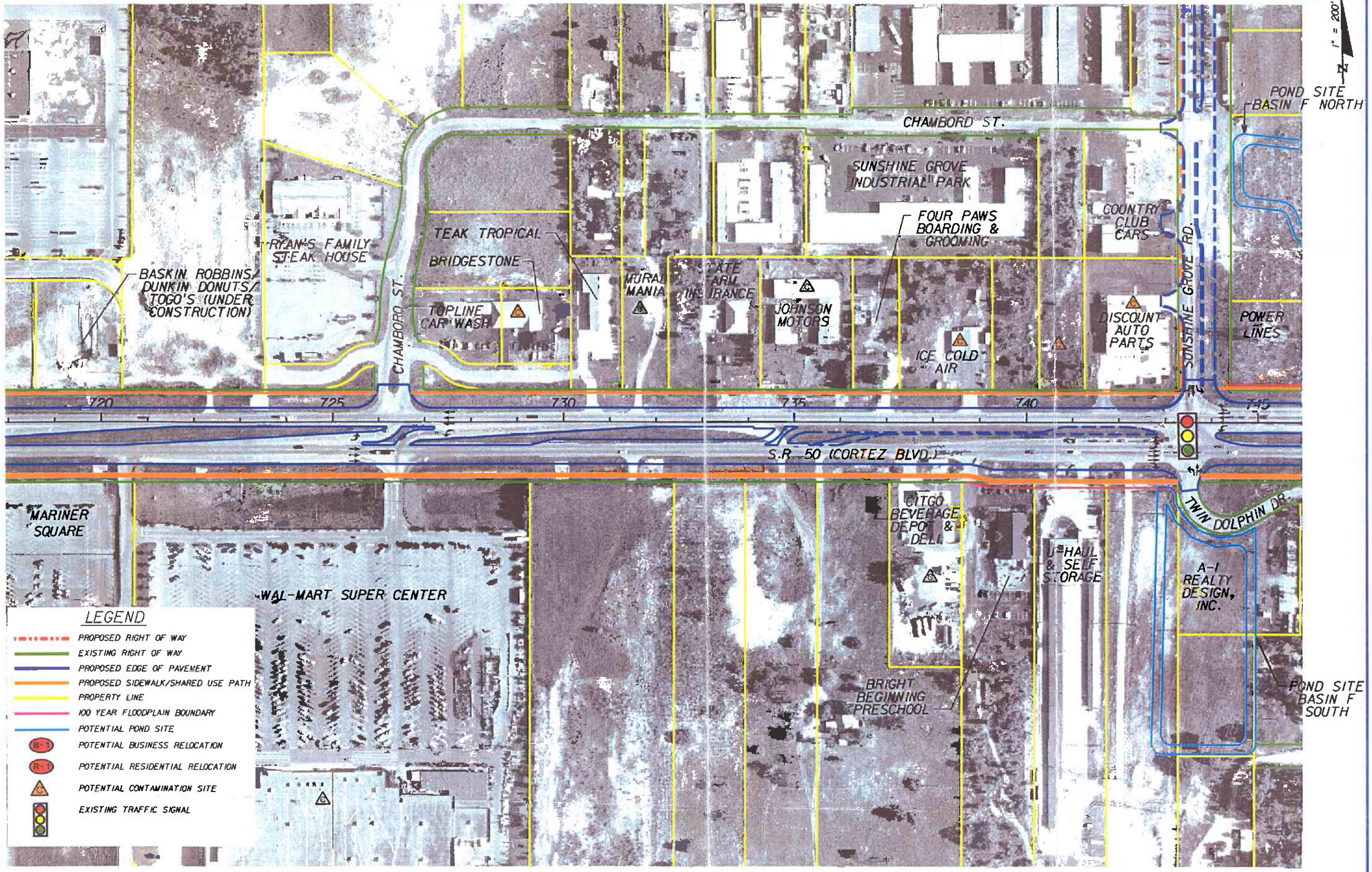

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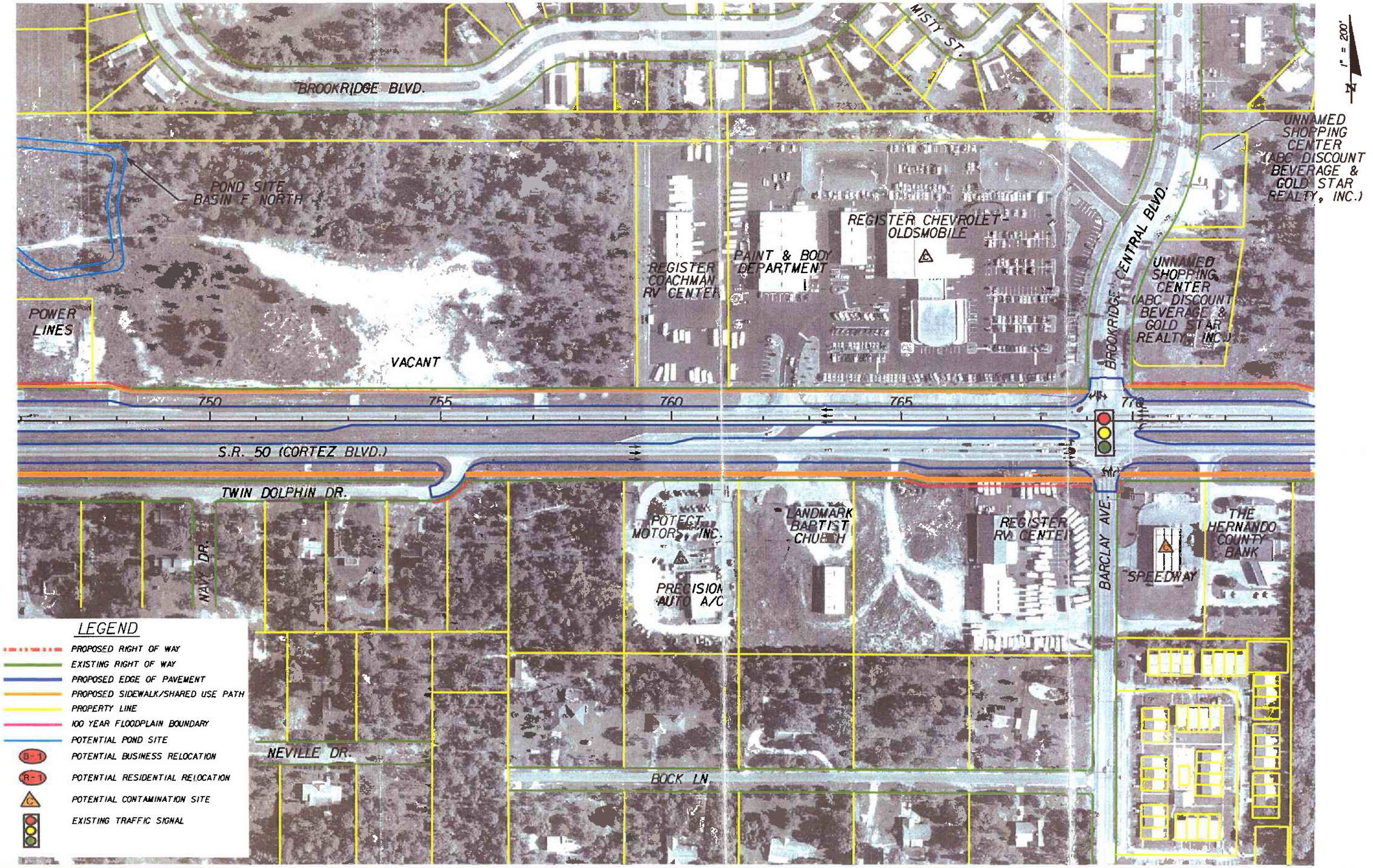
SHEET NO.
9 OF 29



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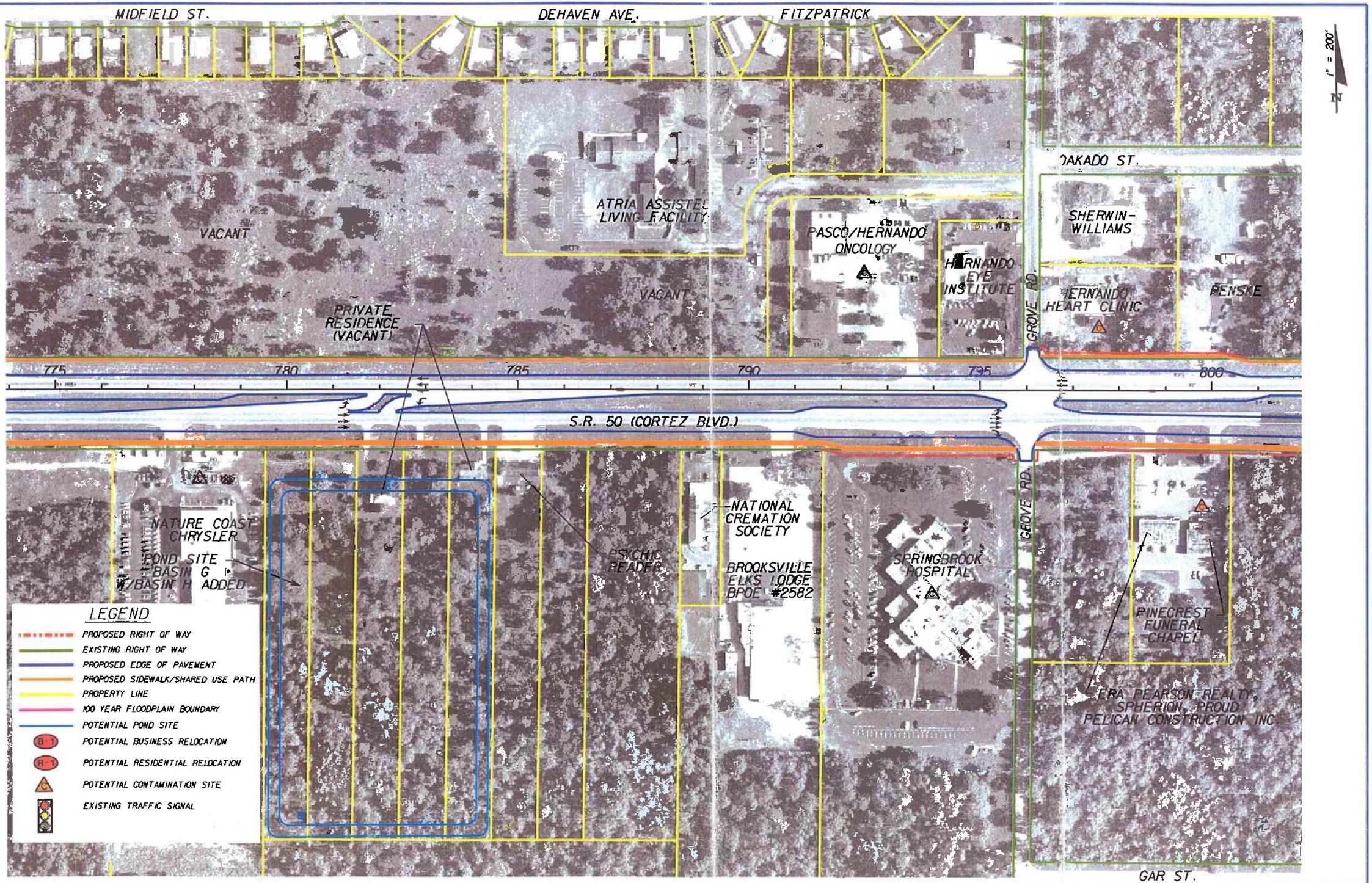
S.R. 50 PD&E REEVALUATION

SHEET NO. 10 OF 29



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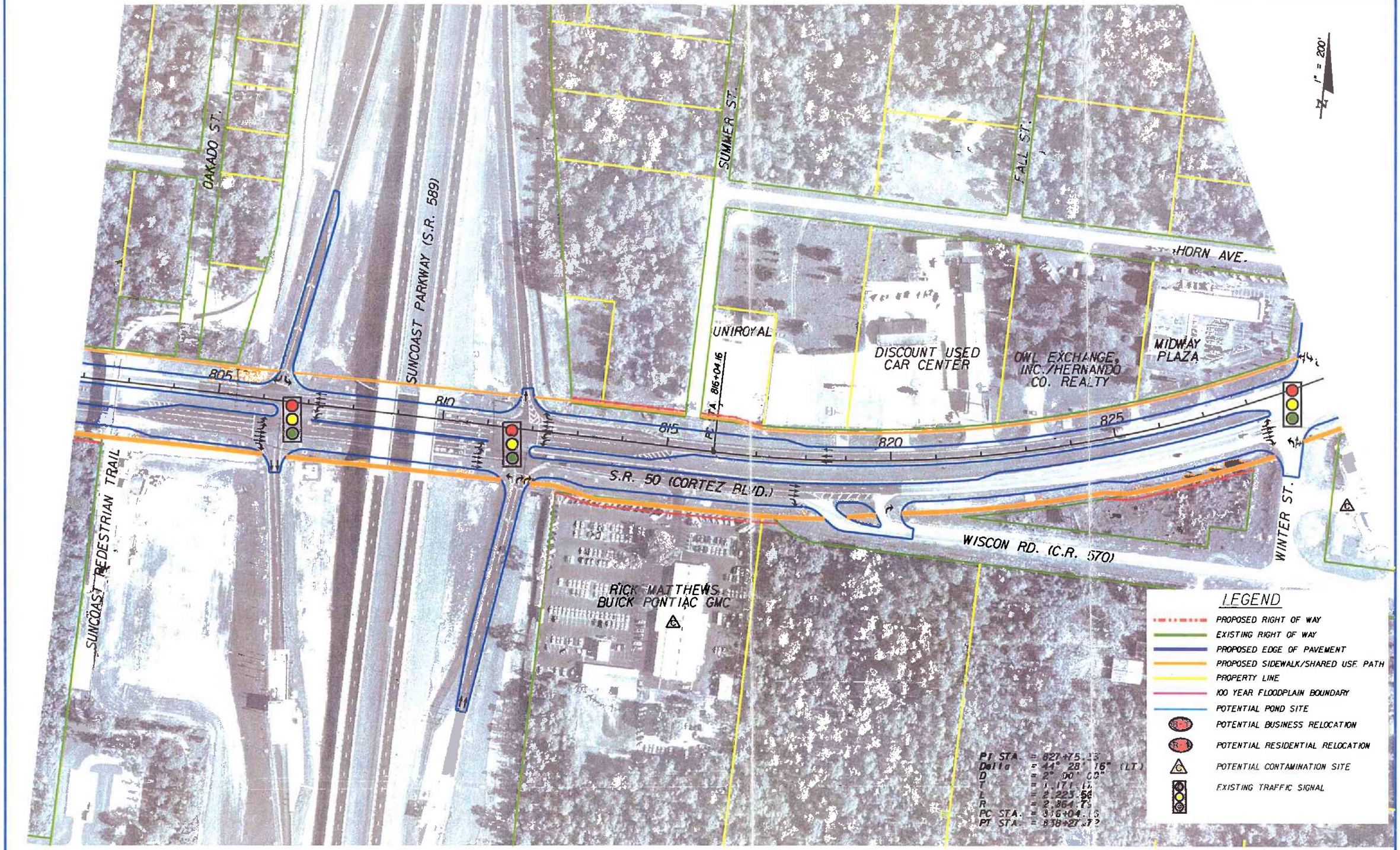
S.R. 50	HERNANDO	407951-1-22-01

S.R. 50 PD&E REEVALUATION



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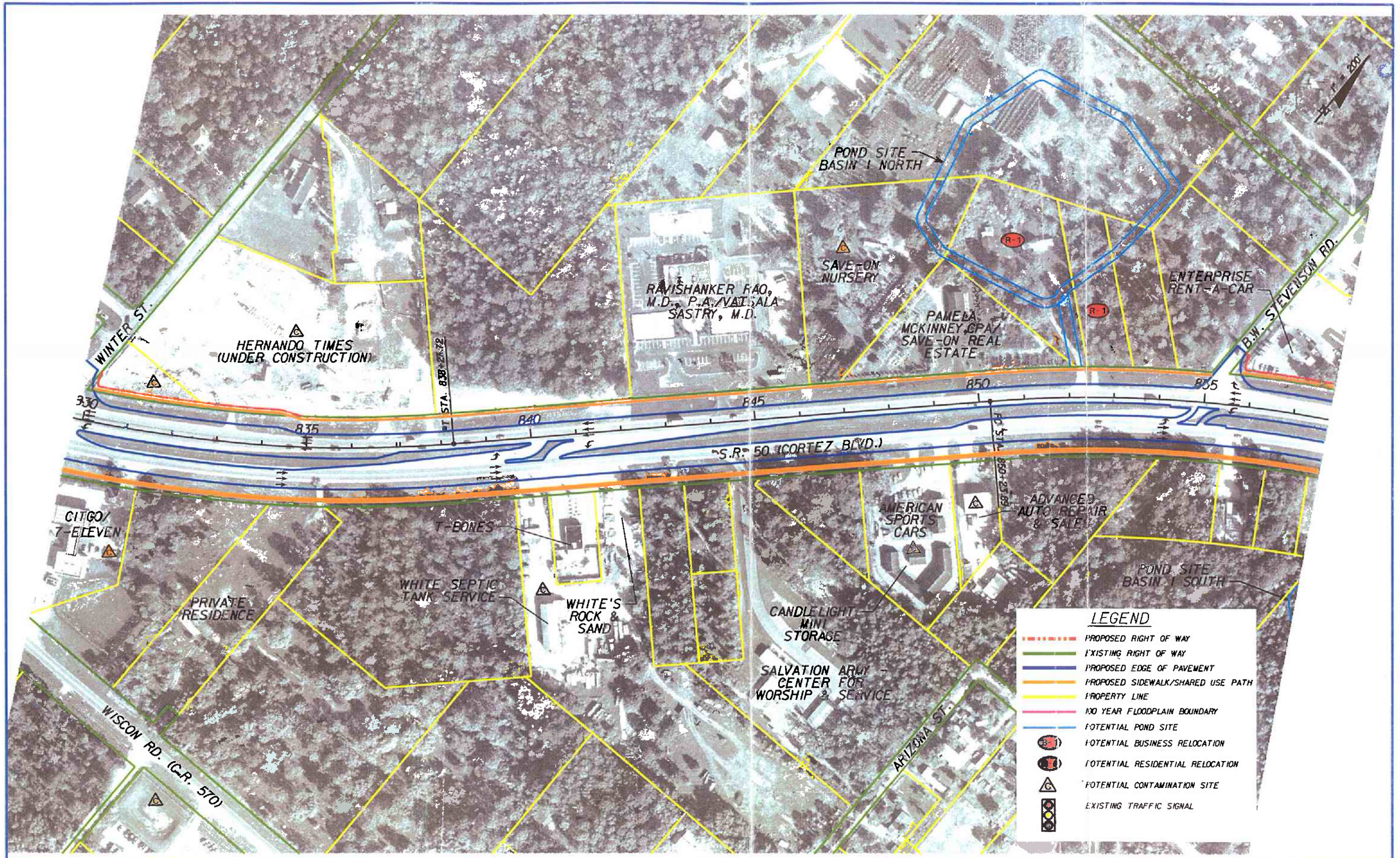
S.R. 50 PD&E REEVALUATION



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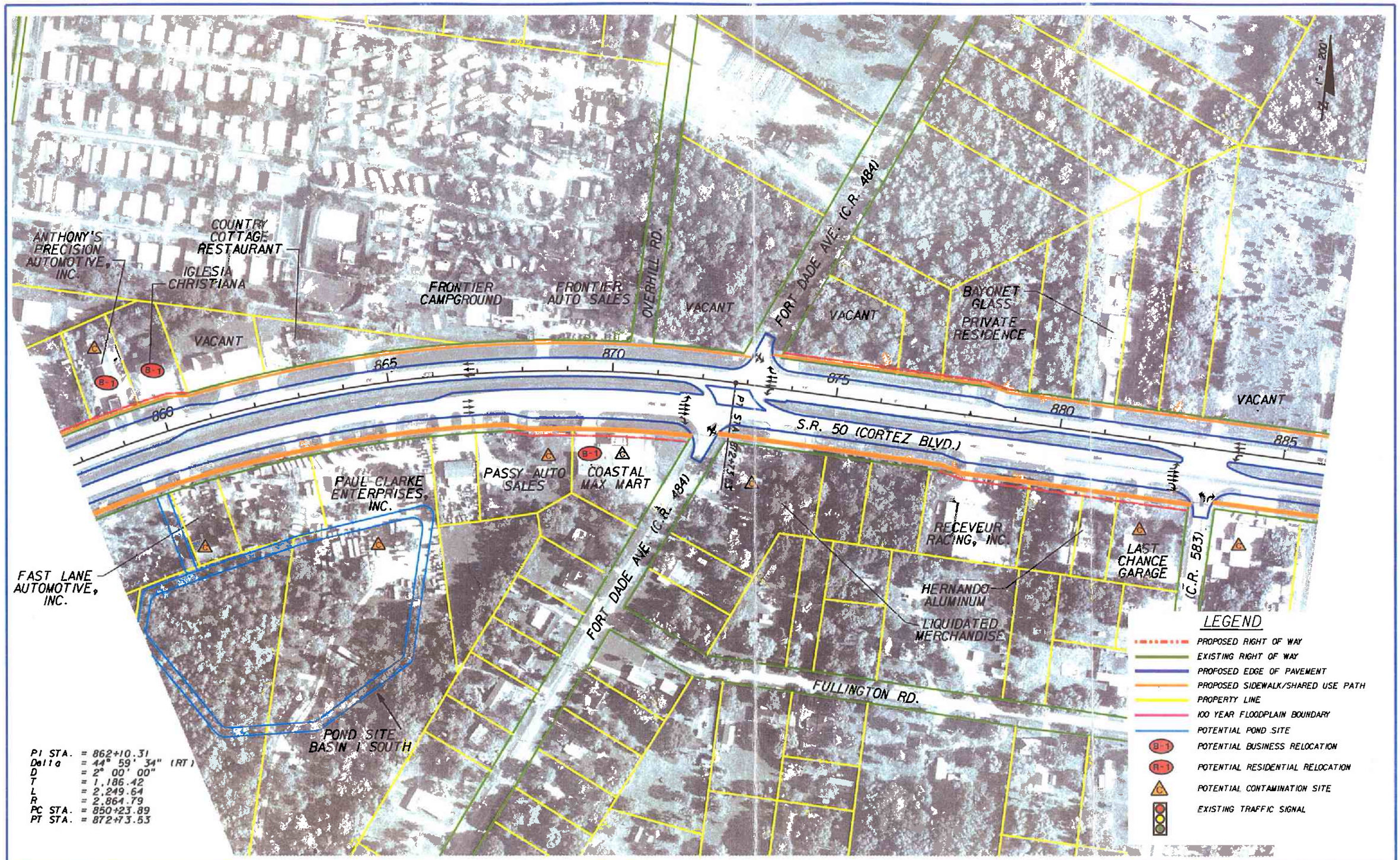
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 50	HERNANDO	407951-1-22-01

S.R. 50 PD&E REEVALUATION

SHEET NO. 13 OF 29



PI STA. = 862+10.31
Delta = 44° 59' 34" (RT)
D = 2° 00' 00"
T = 1,186.42
L = 2,249.64
R = 2,864.79
PC STA. = 850+23.89
PT STA. = 872+73.53

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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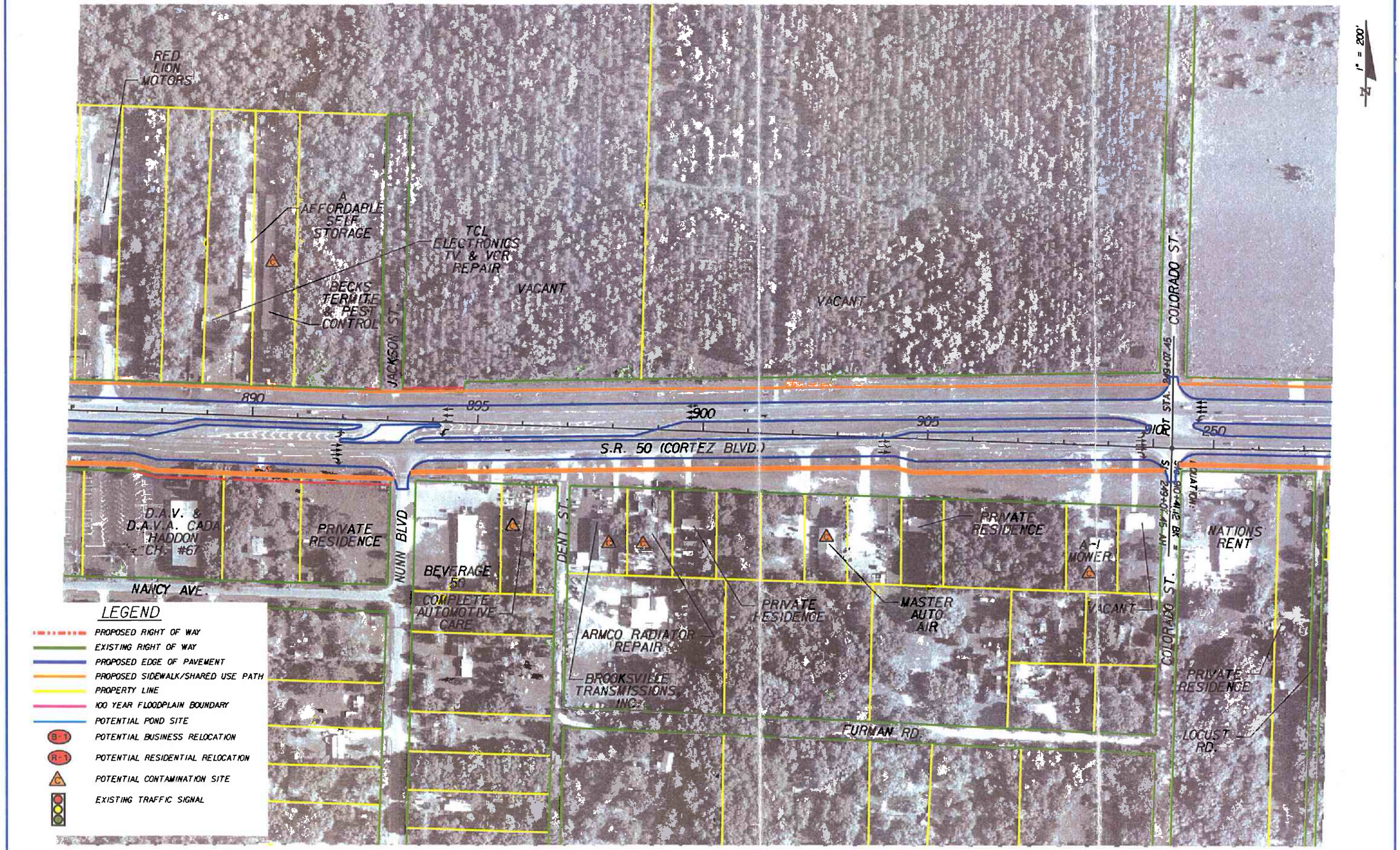
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 50	HERNANDO	407951-1-22-01

S.R. 50 PD&E REEVALUATION



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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 50	HERNANDO	407951-1-22-01

S.R. 50 PD&E REEVALUATION

SHEET NO. 15 OF 29

1" = 200'

BARNETT'S PRODUCE & DELI

OFF YOUR ROCKER CLOSE OUT CENTER

VACANT

S.R. 50 (CORTEZ BLVD.)

255 260 265 270 275 280

LIMERICK RD.

SHANNON RD.

M&M KWIK PRINTING

LYKES DUBLIN RD.

PROPOSED SITE FOR NEW BROOKSVILLE HOSPITAL (EXISTING VACANT)

POND SITE BASIN J

LEGEND

- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED EDGE OF PAVEMENT
- PROPOSED SIDEWALK/SHARED USE PATH
- PROPERTY LINE
- 100 YEAR FLOODPLAIN BOUNDARY
- POTENTIAL POND SITE
- POTENTIAL BUSINESS RELOCATION
- POTENTIAL RESIDENTIAL RELOCATION
- POTENTIAL CONTAMINATION SITE
- EXISTING TRAFFIC SIGNAL

REVISIONS					
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 50	HERNANDO	407951-1-22-01

S.R. 50 PD&E REEVALUATION

SHEET NO. 16 OF 29

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 50	HERNANDO	407951-1-22-01

S.R. 50 PD&E REEVALUATION

SHEET NO. 17 OF 29

REVISIONS					
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 50	HERNANDO	407951-1-22-01

S.R. 50 PD&E REEVALUATION

SHEET NO. 18 OF 29

1" = 200'

JACKSON AVE.
LEE AVE.
HILLCREST DR.
HERNANDO CO. REALTORS ASSOC.
MORNINGSIDE DR.
VACANT
HESS
COBB RD. (C.R. 485)
VACANT
S.R. 50A (W. JEFFERSON AVE.)
350
345
355
S.R. 50 (CORTEZ BLVD.)
MOUNTAIN PARK PLAZA
PRIVATE RESIDENCE
VACANT
DIETER'S AUTO & TRUCK SALES
B-1
C
PI STA. 354+39.66
HARDEE'S
VACANT
MOBLEY RD.
MORNINGSIDE DR.
BY PASS PLAZA
GRACE TABERNACLE INDEPENDENT BAPTIST CHURCH
WHITFIELD AVE
POND SITE NE OF COBB RD INTERSECTION
TSC TRACTOR SUPPLY
S.R. 50 (CORTEZ BLVD.)
605
210

LEGEND

- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED EDGE OF PAVEMENT
- PROPOSED SIDEWALK/SHARED USE PATH
- PROPERTY LINE
- 100 YEAR FLOODPLAIN BOUNDARY
- POTENTIAL POND SITE
- B-1 POTENTIAL BUSINESS RELOCATION
- R-1 POTENTIAL RESIDENTIAL RELOCATION
- C POTENTIAL CONTAMINATION SITE
- EXISTING TRAFFIC SIGNAL

PI STA. = 354+39.66
Delta = 50° 55' 19" (RT)
D = 2° 00' 00"
T = 1,364.04
L = 2,546.09
R = 2,864.79
PC STA. = 340+75.62
PT STA. = 366+21.72

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

AYRES ASSOCIATES
8875 Hidden River Parkway
Suite 200
Tampa, Florida 33637
(813) 978-8688
BR #4356
Engineer of Record: Daniel Patrick Kelly, P.E.
P.E. License Number: 37294

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 50	HERNANDO	407951-1-22-01

S.R. 50 PD&E REEVALUATION

PRIVATE RESIDENCE
HERNANDO CO. REALTORS ASSOC.
S.R. 50A (W. JEFFERSON AVE.)
VACANT
POND SITE NE OF COBB RD INTERSECTION
VACANT
VACANT
VACANT
VACANT
HESS
S.R. 50 (CORTEZ BLVD.)
COBB RD. (C.R. 485)
365
370
POT STA. 365+42.91
POT STA. 200+00.00
POT STA. 365+42.91
HARDEE'S
GRACE TABERNACLE INDEPENDENT BAPTIST CHURCH
SIMS FURNITURE
WTS
VACANT
DIETER'S AUTO & TRUCK SALES
MOUNTAIN PARK PLAZA
WHITFIELD AVE.
INDUSTRIAL ELECTRIC SERVICES
TSC TRACTOR SUPPLY
BY PASS PLAZA
205

LEGEND

- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED EDGE OF PAVEMENT
- PROPOSED SIDEWALK/SHARED USE PATH
- PROPERTY LINE
- 100 YEAR FLOODPLAIN BOUNDARY
- POTENTIAL POND SITE
- POTENTIAL BUSINESS RELOCATION
- POTENTIAL RESIDENTIAL RELOCATION
- POTENTIAL CONTAMINATION SITE
- EXISTING TRAFFIC SIGNAL

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 50	HERNANDO	407951-1-22-01

S.R. 50 PD&E REEVALUATION

REVISIONS					
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P.E. License Number: 37294

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 50	HERNANDO	407951-1-22-01

S.R. 50 PD&E REEVALUATION

SHEET NO. 21 OF 29

S.R. 50A
(W. JEFFERSON AVE.)

WHETSTONE OIL CORP. INC.

DONTO CONSTRUCTION CORP.

STA. 366+21.72

POND SITE NE OF COBB RD. INTERSECTION

GRACE TABERNACLE INDEPENDENT BAPTIST CHURCH

TSC TRACTOR SUPPLY

PEST ENVIRONMENTAL SERVICES; TRI CO COMMUNICATIONS; LEWIS WATKINS STUDIO; BROOKSVILLE WELDING CO.

BLAISE DR.

UNNAMED PLAZA

HARDEE'S

WHITFIELD AV

365

PROJ. STA. 200+00.00

200

369

QUICK FIX TIRE, INC.

REVENAUGH'S SERVICE CENTER

PROVIDENCE BLVD.

SUNCOAST SCHOOLS FEDERAL CREDIT UNION

CLINTON BLVD.

205

210

215

220

225

BADCOCK HOME FURNISHING CENTERS

DIETER'S AUTO & TRUCK SALES

B-1

50 (CORTEZ BLVD.)

S.R. 50 (CORTEZ BLVD.)

BY PASS PLAZA

MOUNTAIN PARK PLAZA

CCC COMMERCIAL CARRIER CORPS.

VACANT

HERNANDO COUNTY SHERIFF'S OFFICE

CLINTON BLVD.

PRIVATE RESIDENCE

PI STA. = 364+39.66
Delta = 50° 55' 13" (RT)
D = 2° 00' 00"
T = 1,364.04
L = 2,546.09
R = 2,864.79
PC STA. = 340+75.62
PT STA. = 366+21.72

PI STA. = 227+48.63
Delta = 79° 04' 36" (LT)
D = 5° 00' 00"
T = 1,389.55
L = 2,402.56
R = 1,909.86
PC STA. = 213+53.08
PT STA. = 237+55.64

LEGEND

- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED EDGE OF PAVEMENT
- PROPOSED SIDEWALK/SHARED USE PATH
- PROPERTY LINE
- 100 YEAR FLOODPLAIN BOUNDARY
- POTENTIAL POND SITE
- POTENTIAL BUSINESS RELOCATION
- POTENTIAL RESIDENTIAL RELOCATION
- POTENTIAL CONTAMINATION SITE
- EXISTING TRAFFIC SIGNAL

REVISIONS

DATE	BY	DESCRIPTION

AYRES ASSOCIATES
8875 Hidden River Parkway
Suite 200
Tampa, Florida 33637
(813) 978-8688
BR #4356
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P.E. License Number: 37294

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 50	HERNANDO	40795I-1-22-01

S.R. 50 PD&E REEVALUATION

SHEET NO. 22 OF 29

1" = 200'

UNITED STATES POST OFFICE

KILLINGSWORTH INSURANCE PLAZA

VACANT

VACANT

VACANT

VACANT

VACANT

PI STA. 237+53.64

230 235 240 245 250 255

S.R. 50 (CORTEZ BLVD.)

FORSE LAKE RD.

LEGEND

- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED EDGE OF PAVEMENT
- PROPOSED SIDEWALK/SHARED USE PATH
- PROPERTY LINE
- 100 YEAR FLOODPLAIN BOUNDARY
- POTENTIAL POND SITE
- POTENTIAL BUSINESS RELOCATION
- POTENTIAL RESIDENTIAL RELOCATION
- POTENTIAL CONTAMINATION SITE
- EXISTING TRAFFIC SIGNAL

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

AYRES ASSOCIATES
8875 Hidden River Parkway
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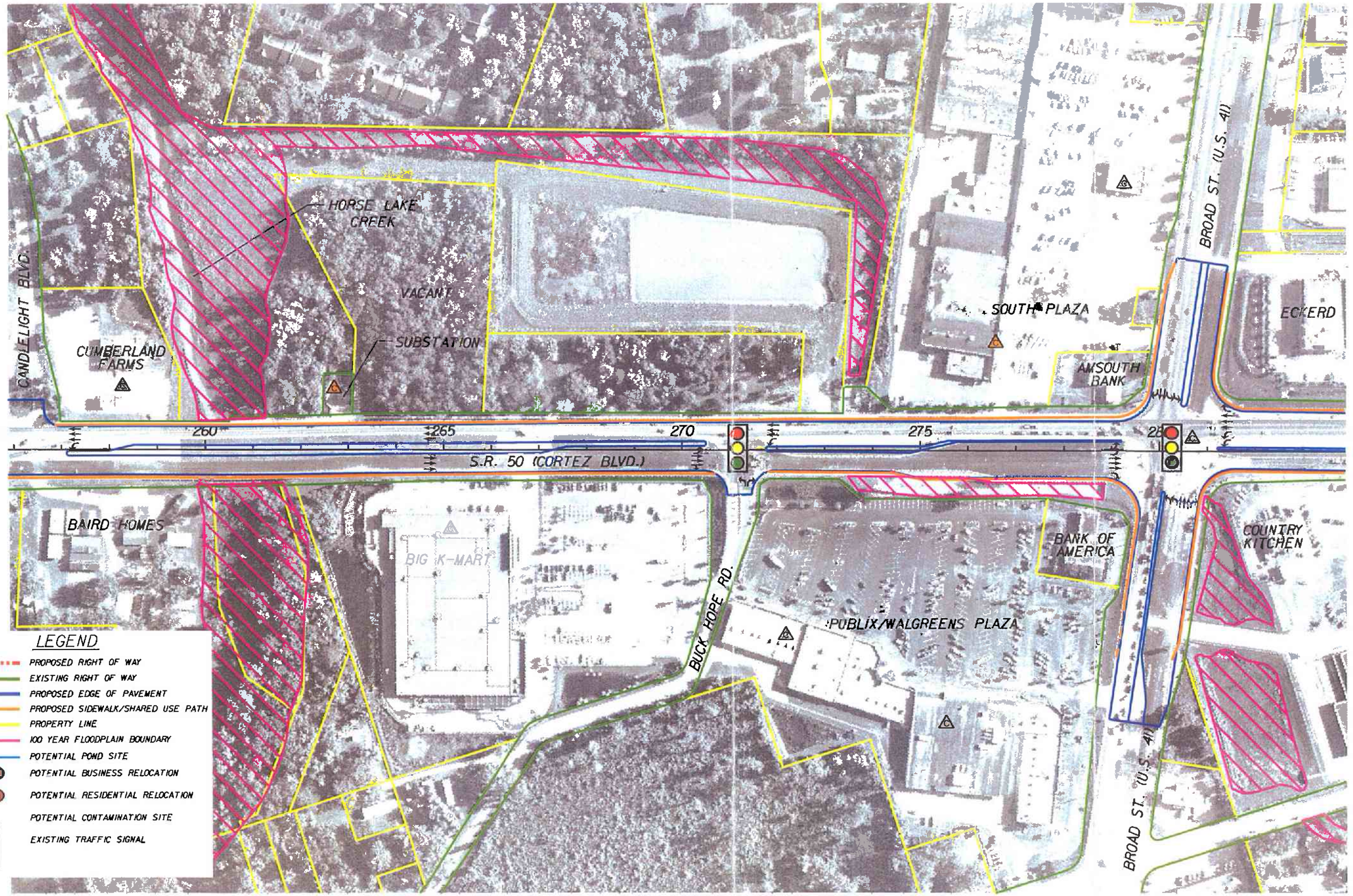
Tampa, Florida 33637
(813) 978-8688
BR #4356
Engineer of Record: Daniel Patrick Kelly, P.E.
P.E. License Number: 37294

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 50	HERNANDO	407951-1-22-01

S.R. 50 PD&E REEVALUATION

SHEET NO.
23 OF 29



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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 50	HERNANDO	407951-1-22-01

S.R. 50 PD&E REEVALUATION

SHEET NO. 24 OF 29

1" = 200'

PRIVATE RESIDENCE

VACANT

DENNY'S

JUNE AVE

DON JR. AVE

JBA OFFICE CENTER

ARNOLD AVE

SIERRA DR

VACANT

285 290 295 300 305 310

S.R. 50 (CORTEZ BLVD.)

APPLEBEE'S

CROSSROADS PLAZA

TEXACO

SOUTH SQUARE

BARNETT RD.

VACANT

RAY BROWNING RD.

VACANT

WINDY WAY

PI STA. = 304+17.17
Delta = 17° 53' 56" (LT)
D = 3° 00' 00"
T = 300.76
L = 596.63
R = 1909.86
PC STA. = 301+16.40
PT STA. = 307+13.03

LEGEND

- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED EDGE OF PAVEMENT
- PROPOSED SIDEWALK/SHARED USE PATH
- PROPERTY LINE
- 100 YEAR FLOODPLAIN BOUNDARY
- POTENTIAL POND SITE
- B-1 POTENTIAL BUSINESS RELOCATION
- R-1 POTENTIAL RESIDENTIAL RELOCATION
- C POTENTIAL CONTAMINATION SITE
- EXISTING TRAFFIC SIGNAL

REVISIONS					
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Tampa, Florida 33637
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EB #4356
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P.E. License Number: 37294

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 50	HERNANDO	407951-1-22-01

S.R. 50 PD&E REEVALUATION

1" = 200'

PRIVATE RESIDENCE

HALE AVE.

VACANT

RANCH HANDS FEED DEPOT

MAIN ST. (C.R. 445)

VACANT

315 320 325 330 335

S.R. 50 (CORTEZ BLVD.)

EXCITING BROOKSVILLE ASSEMBLY OF GOD

HOPE HILL RD.

ST. ANTHONY CATHOLIC CHURCH

HARVEST LN.

HERNANDO COUNTY UTILITY DEPARTMENT

MITCHELL RD. (C.R. 445)

VACANT

SCL R/R

NINA LN.

RIDGEWOOD AVE.

LEGEND

- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY
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- PROPERTY LINE
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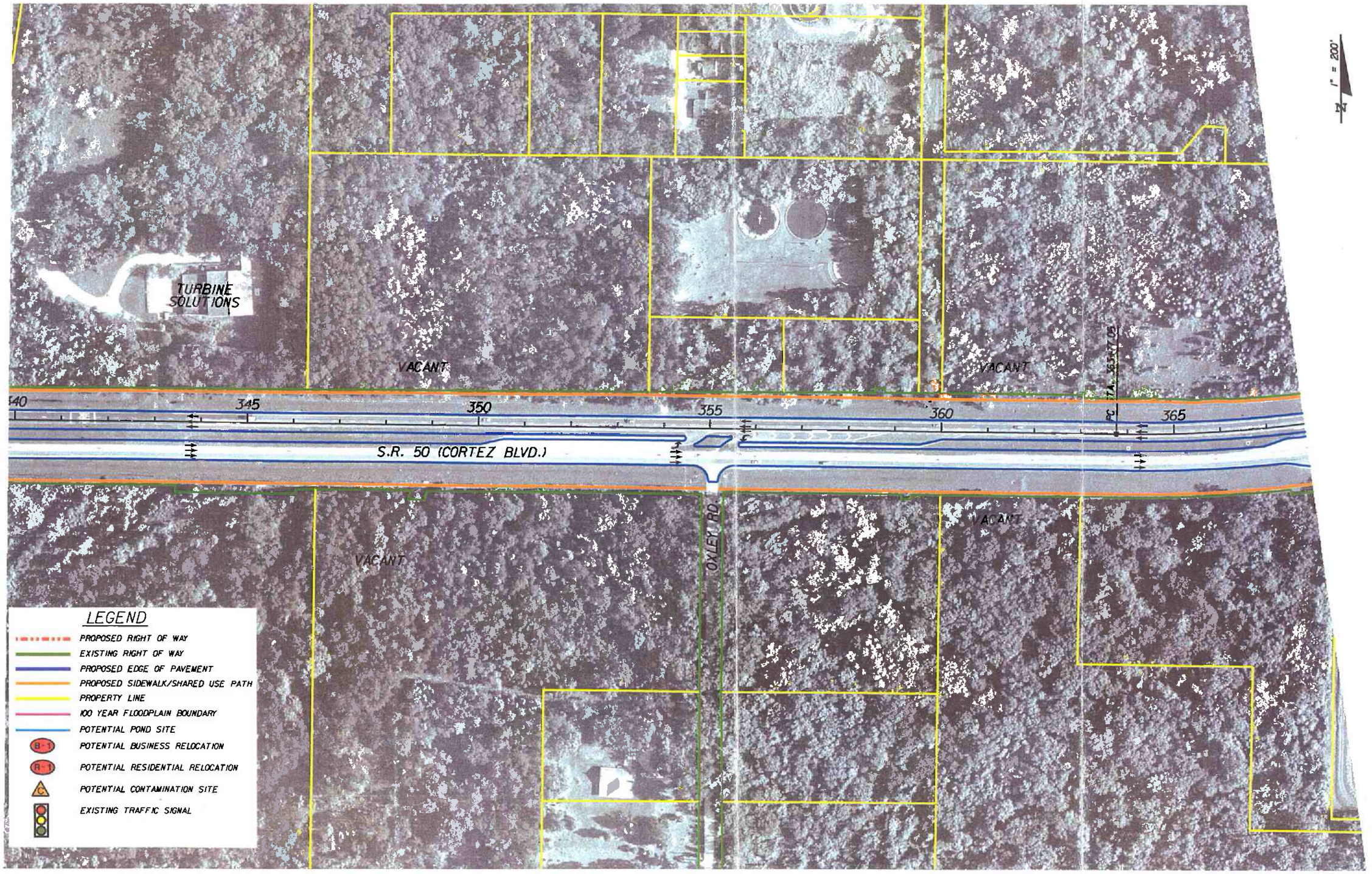
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 50	HERNANDO	407951-1-22-01

S.R. 50 PD&E REEVALUATION

SHEET NO. 26 OF 29



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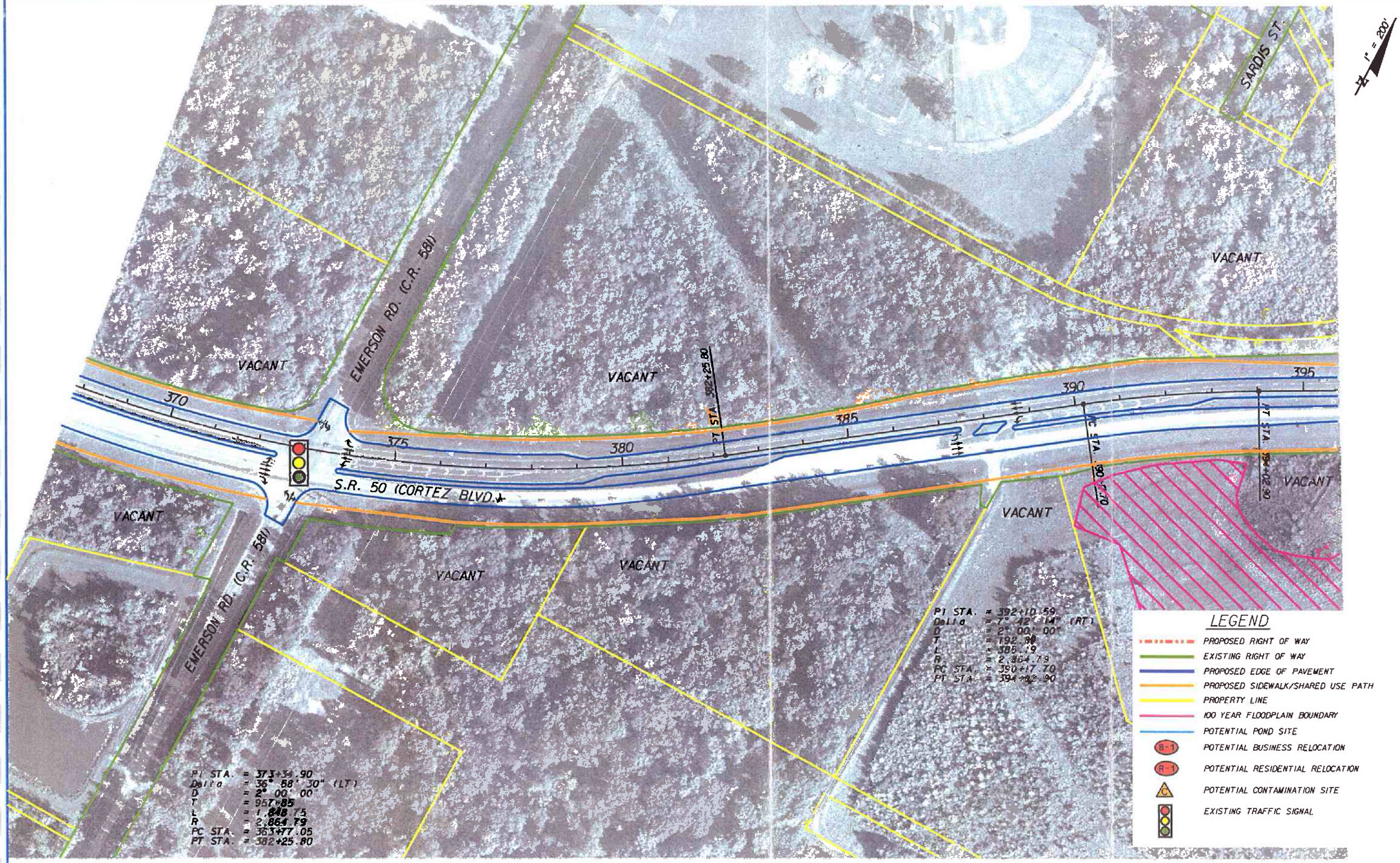
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 50	HERNANDO	407951-1-22-01

S.R. 50 PD&E REEVALUATION



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STATE OF FLORIDA
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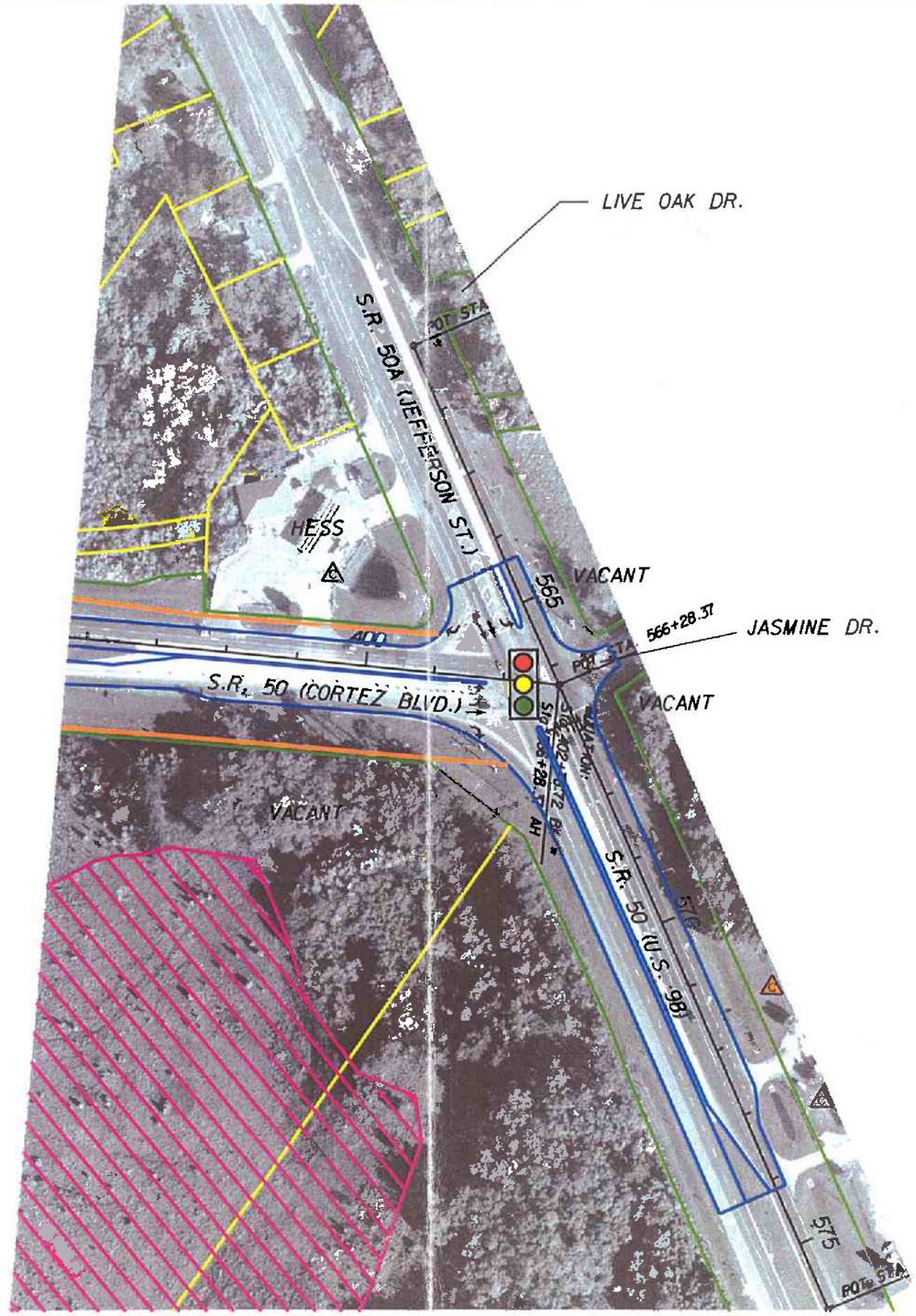
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 50	HERNANDO	407951-1-22-01

S.R. 50 PD&E REEVALUATION



LEGEND

- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED EDGE OF PAVEMENT
- PROPOSED SIDEWALK/SHARED USE PATH
- PROPERTY LINE
- 100 YEAR FLOODPLAIN BOUNDARY
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 50	HERNANDO	407951-1-22-01

S.R. 50 PD&E REEVALUATION

SHEET NO. 29 OF 29