FINAL LOCATION HYDRAULIC REPORT

SR 600 (US 92) Project Development & Environment (PD&E) Study Re-evaluation

From East of I-4 to East of County Line Road
Hillsborough County, Florida

FDOT
District Seven

Work Program Item Segment #: 435749-1
Federal Aid Project Number: MAF-212-1(34)
May 2017

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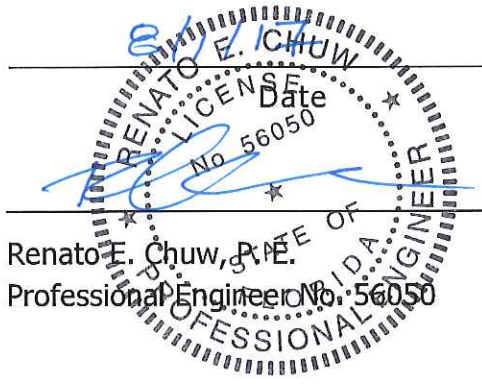
The Florida Department of Transportation, District Seven, conducted a Project Development and Environment Study Re-evaluation for the proposed widening of State Road 600 (US 92) from east of Interstate 4 to east of County Line Road in Hillsborough County, Florida. The total project length is approximately 18.1 miles. The environmental document that was reevaluated is a Type 2 Categorical Exclusion (Approved by the FHWA on March 24, 1994).

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated December 14, 2016 and executed by the Federal Highway Administration and FDOT.



Date

Renato E. Chuw, P.E.
Professional Engineer No. 56050

Any reference contained herein to the Project Development & Environment Manual is referring to the 2016 revision.

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EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT), District Seven conducted a Project Development and Environment (PD&E) Study Re-evaluation for the proposed widening of SR 600 (US 92) from east of Interstate 4 (I-4) to east of County Line Road in Hillsborough County, Florida. The original PD&E Study was completed in 1994. Due to a change in design standards and existing conditions, the project's PD&E Study was re-evaluated.

The purpose of this Final Location Hydraulic Report is to address base floodplain encroachments resulting from the roadway improvements evaluated in the PD&E Study Re-evaluation. In accordance with Executive Order 11988 "Floodplain Management", USDOT Order 5650.2, "Floodplain Management Protection", and Federal-Aid Policy Guide 23 CFR 650A, floodplains must be protected. The intent of these regulations is to avoid or minimize highway encroachments within the 100-year (base) floodplains and to avoid supporting land use development incompatible with floodplain values.

The majority of the project is designated Zone 'X' which means those areas have a 0.2% probability of flooding every year (500-year floodplain). Some parts (mostly streams and waterbodies crossing) are in the Zone 'AE' which have a 1% probability of flooding every year (100-year floodplain), and where predicted flood water elevations have been established. Please refer to Section 4.6 for discussion.

In conclusion, the following statement summarizes the results of the findings:

"***Replacement drainage structures for this project are limited to hydraulically equivalent structures. The limitations to the hydraulic equivalency being proposed are basically due to restrictions imposed by the geometrics of design, existing development, cost feasibility, or practicability. An alternative encroachment location is not considered in this category since it defeats the project purpose or is economically unfeasible. Since flooding conditions in the project area are inherent in the topography or are a result of other outside contributing sources, and there is no practical alternative to totally eradicate flood impacts or even reduce them in any significant amount, existing flooding will continue, but not be increased. The proposed structure will be hydraulically equivalent to or greater than the existing structure, and backwater surface elevations are not expected to increase. As a result, the project will not affect existing flood heights or floodplain limits. This project will not result in any new or increased adverse environmental impacts. There will be no significant change in the potential for interruption or termination of emergency service or emergency evacuation routes. Therefore, it has been determined that this encroachment is not significant.***"

SECTION 1 INTRODUCTION

The Florida Department of Transportation (FDOT), District Seven conducted a Project Development and Environment (PD&E) Study Re-evaluation for the proposed widening of SR 600 (US 92) from east of Interstate 4 (I-4) to east of County Line Road in Hillsborough County, Florida. US 92 is an east-west roadway and is classified as an urban other principal arterial facility. Within the project limits, US 92 runs parallel to I-4. Part of the project is located within Plant City while the remainder of the project is in unincorporated Hillsborough County. From Garden Lane to Thonotosassa Road, US 92 is a two-lane rural roadway. From Thonotosassa Road to Mobley Street, US 92 consists of two eastbound travel lanes and two westbound travel lanes. East of Park Road, US 92 is again a two-lane roadway. Pease refer to **Exhibits 2A, 2B, 2C and 2D (Appendix 1)** for existing typical sections.

Eleven evaluation segments have been developed based on similarities in existing roadway characteristics, land use, the location of I-75, and the location of the one-way-pair in Plant City. The total project length is approximately 18.1 miles. The **Project Location Map** is shown in **Exhibit 1, Appendix 1**. The project site is within Township 28 South, Range 20 East; Township 28 South, Range 21 East; Township 28 South, Range 22 East and Township 29 South, Range 20 East. A reproduction of the **United States Geological Survey (USGS) Quadrangle Maps** for the project vicinity is shown in **Exhibit 3, Appendix 1**. There are three (3) major confining watersheds- Tampa Bay, Hillsborough River and Alafia River which are further divided into 14 sub-basins, each with its own Water Body Identification (WBID) number (**Exhibit 8, Appendix 1**).

The purpose of this Final Location Hydraulic Report is to address base floodplain encroachments resulting from the proposed roadway improvements evaluated in the PD&E Study Re-evaluation. In accordance with Executive Order 11988 "Floodplain Management", USDOT Order 5650.2, "Floodplain Management Protection", and Federal-Aid Policy Guide 23 CFR 650A, floodplains must be protected. The intent of these regulations is to avoid or minimize highway encroachments within the 100-year (base) floodplains and to avoid supporting land use development incompatible with floodplain values. All exhibits for this report are included in **Appendix 1**. A summary of the Floodplain Impacts are included in Section 4.6, and calculations provided in the Final Stormwater Management Facility Report (Technical Memo) under Appendix C. Other supporting information and data is included in the remaining appendices. Please note that the vertical datum used for this project is NAVD 88, unless otherwise specified.

SECTION 2 PROJECT DESCRIPTION

Throughout the project limits, US 92 currently displays a number of different typical sections. As shown in **Exhibit 2A (Appendix 1)**, from the start of the project at Garden Lane to Thonotosassa Road, US 92 is generally a two-lane roadway with 12-foot-wide lanes, grass

shoulders, and drainage ditches. From Thonotosassa Road to Mobley Street **(Exhibit 2B)**, the roadway is in transition and consists of two 12-foot-wide eastbound lanes and two 12-foot-wide westbound lanes, of which the outside westbound lane transitions to a right turn at Thonotosassa Road.

Exhibits 2C and 2D (Appendix 1) present the existing typical sections of US 92 from east of downtown Plant City to County Line Road. From North Gordon Street to Park Road, an approximately 0.5-mile-long segment, US 92 is a four-lane divided roadway with a 18-foot-wide grassed median and concrete curb and gutters. Sidewalks are provided along this segment. The through travel lanes are 12.0 feet wide. East of Park Road to County Line Road, US 92 becomes a rural facility with two 12-foot-wide lanes and with grass shoulders and drainage ditches on both sides. This segment is approximately 3 miles long.

From Garden Lane to Falkenburg Road, the preferred improvement consisted of a six-lane urban facility with a 22-foot median within 122 feet of right-of-way and with a 45 miles per hour (mph) design speed.

From Falkenburg Road to Kingsway Road, from Forbes Road to Mobley Street, and from Park Road to County Line Road, the preferred improvement consisted of a four-lane urban facility with a 46-foot median allowing for future expansion to six lanes within 122 feet of right-of-way and a 45 mph design speed.

From Kingsway Road to Forbes Road, the preferred improvement consisted of a four-lane rural facility with a 46-foot median within 198 feet of right-of-way and a 60 mph design speed.

Between Mobley Street and Park Road, the existing alignment and typical section of the one-way pair system (No-Build) was recommended with the exception that the section of Baker Street between Mobley Street and Whitehall Street be converted to an urban section.

This PD&E Study Re-evaluation divided the project in eleven segments and each of the proposed typical sections are described below:

Segment 1 from east of I-4 (Garden Lane) to west of CR 579 (Mango Road):

From Garden Lane to west of I-75 and from just east of I-75 to west of Mango Road, the preferred typical section is a suburban roadway with two 11-foot travel lanes and a seven-foot buffered bike lane in each direction. The travel lanes are separated by a 44-foot median with eight-foot inside shoulders. Type F curb and gutter is used along the outside lanes and curb inlets collect stormwater runoff which is then conveyed to stormwater retention ponds. A 17-foot border is provided along both sides of the roadway and accommodates five-foot sidewalks and a five-foot additional width to provide for slope embankment connection to the existing grade at the edge of the road right-way. This typical section requires a minimum of

136 feet of right-of-way and complies with the FDOT minimum design speed of 45 mph. The preferred typical section for Segment 1 is shown in **Exhibit 2E, Appendix 1**.

From just west of I-75 to just east of I-75, the preferred typical section is constrained by the piers for I-75. The preferred typical section under I-75 is an urban roadway with two 11-foot travel lanes and a seven-foot buffered bike lane in each direction. The travel lanes are separated by a 40.5-foot median with eight-foot inside shoulders. Pier protection barrier is located between the bike lanes and the piers and six-foot sidewalks are located behind the piers on both sides of the roadway. Inlets collect stormwater runoff which is then conveyed to stormwater retention ponds. This typical section complies with the FDOT minimum design speed of 45 mph. This recommended typical section is shown in **Exhibit 2F, Appendix 1**.

The preferred alignment for Segment 1 from Garden Lane to west of Mango Road follows the preferred alignment from the original PD&E Study. From Garden Lane to Falkenburg Road, the preferred alignment is a north alignment with right-of-way to be acquired from the north side of the roadway. From Falkenburg Road to just west of Mango Road, the alignment shifts to a south alignment with right-of-way to be acquired from the south side of the roadway.

Segment 2 from west of CR 579 (Mango Road) to east of CR 579:

The preferred typical section for this segment is the same as for the major portion of Segment 1 and is shown in **Exhibit 2E, Appendix 1**.

The preferred alignment from the original PD&E Study alignment in this segment was a centered alignment. The preferred alignment for Segment 2 from west of Mango Road to east Mango Road is the north alignment. This alignment was selected to minimize impacts to the Seffner Christian Academy in the southwest quadrant of the US 92 and Mango Road intersection and to minimize impacts to the Hardees Restaurant in the southeast quadrant of the intersection. The alignment is a south alignment adjacent to Segment 1. Then it transitions to the north side of US 92 through the intersection, and then transitions to a south alignment at the beginning of Segment 3.

Segment 3 from east of CR 579 to North Parsons Avenue:

The preferred typical section for this segment is the same as for the major portion of Segment 1 and is shown in **Exhibit 2E, Appendix 1**.

The preferred alignment for Segment 3 from east of Mango Road to North Parsons Avenue follows the preferred alignment from the original PD&E Study and is a south alignment.

Segment 4 from North Parsons Avenue to east of Crow Wing Drive:

The preferred typical section for this segment is the same as for the major portion of Segment 1 and is shown in **Exhibit 2E, Appendix 1**.

The preferred alignment for Segment 4 follows the preferred alignment from the original PD&E Study and is a north alignment.

Segment 5 from east of Crow Wing Drive to Castlewood Road:

The preferred typical section for this segment is a high speed suburban roadway with two 12-foot travel lanes and a seven-foot buffered bike lane in each direction. The travel lanes are separated by a 54-foot median with eight-foot inside shoulders. Type E curb and gutter is used along the outside lanes and curb inlets collect stormwater runoff which is then conveyed to stormwater retention ponds. A 29-foot border is provided along both sides of the roadway and accommodates five-foot sidewalks on both sides of the road. This typical section requires a minimum of 160 feet of right-of-way and complies with the FDOT minimum design speed of 50 mph. The preferred typical section for Segment 5 is shown in **Exhibit 2G, Appendix 1**.

The preferred alignment for Segment 5 from east of Crow Wing Drive to Castlewood Road follows the preferred alignment from the original PD&E Study and is a north alignment.

Segment 6 from Castlewood Road to west of Gallagher Road:

The preferred typical section for this segment is the same as for Segment 5 and is shown in **Exhibit 2G, Appendix 1**.

The preferred alignment from the original PD&E Study alignment in this segment was a north alignment. The preferred alignment for Segment 6 from Castlewood Road to west of Gallagher Road is the south alignment. The south alignment was selected because the estimated total estimated cost estimate is less than the north alignment, and it eliminates impacts to Driscoll's of Florida. It also minimizes impacts to the newly constructed Independence Academy stormwater treatment facilities. The Hess and Marathon gas stations on the south side of the roadway are now impacted.

Segment 7 from west of Gallagher Road to Lynn Oaks Circle:

The preferred typical section for Segment 7 is the same as for Segment 5 and is shown in **Exhibit 2G, Appendix 1**.

The preferred alignment for Segment 7 from west of Gallagher Road to Lynn Oaks Circle follows the preferred alignment from the original PD&E Study and is a south alignment.

Segment 8 from Lynn Oaks Circle to east of Bethlehem Road:

The preferred typical section for Segment 8 is the same as for Segment 5 and is shown in **Exhibit 2G, Appendix 1**.

The preferred alignment for Segment 8 from Lynn Oaks Circle to east of Bethlehem Road follows the preferred alignment from the original PD&E Study and is a centered alignment.

Segment 9 from east of Bethlehem Road to Mobley Street:

The preferred typical section for the portion of Segment 9 from east of Bethlehem Road to Edwards Street is the same as for Segment 5 and is shown in **Exhibit 2G, Appendix 1**.

The preferred typical section for the portion of Segment 9 from Edwards Street to Mobley Street is an urban roadway with two 11-foot travel lanes and a seven-foot buffered bike lane in each direction. The travel lanes are separated by a 22-foot median. Type E curb and gutter is along the inside and Type F curb and gutter is used along the outside lanes. Curb inlets collect stormwater runoff which is then conveyed to stormwater retention ponds. A minimum 12-foot border is provided along both sides of the roadway and accommodates five-foot sidewalks on both sides of the road. This typical section requires a minimum of 114 feet of right-of-way and complies with the FDOT minimum design speed of 45 mph. The recommended typical section for Segment 9 from Edwards Street to Mobley Street is shown in **Exhibit 2H, Appendix 1**.

The preferred alignment for Segment 9 from east of Bethlehem Road to Woodrow Wilson follows the preferred alignment from the original PD&E Study and is a south alignment from east of Bethlehem Road to Turkey Creek Road and then it transitions to a north alignment from Turkey Creek Road to Woodrow Wilson Street. From Woodrow Wilson Street to Mobley Street, the preferred alignment is a centered alignment due to geometric constraints at the Thonotosassa Road intersection and the Baker Street (US 92) intersection.

Segment 10 from Mobley Street to west of Park Road:

The preferred alternative for this segment from the original PD&E Study is No-Build with the exception that the section of Baker Street between Mobley Street and Whitehall Street be converted from a rural to urban roadway in order to provide sidewalks. Improvements have been completed in this section of the roadway which meet the intent of the original PD&E Study recommendation for this segment of the project. Therefore, the preferred alternative for this segment is the No-Build Alternative.

Segment 11 from west of Park Road to east of County Line Road:

The preferred typical section for Segment 11 is Typical Section 5. It consists of two 12-foot travel lanes, a five-foot sidewalk, and a seven-foot buffered bike lane in each direction separated by a 40-foot median with eight-foot inside shoulders. The design speed is 50 mph and the typical section is shown in **Exhibit 2I, Appendix 1**. A 24-foot border and a 24-foot clear zone are provided along both sides of the roadway. This four-lane typical section requires a minimum of 136 feet of right-of-way. A design variation would be required for border width. The typical section complies with clear zone criteria so no design variation or exception would be required for clear zone.

The preferred alignment for Segment 11 from Park Road to County Line Road follows the preferred alignment from the original PD&E Study and is a north alignment.

SECTION 3 DATA COLLECTION

The design team collected and reviewed data from the following sources:

- FDOT Drainage Manual, January 2016
- FDOT Drainage Handbook – Hydrology, February 2012
- FDOT PD&E Manual, 2008
- Southwest Florida Water Management District Environmental Resource Permit (ERP) Information Manual, 2014
- US 92 (SR 600) – Final Preliminary Engineering Report, F.A. Project No. MAF-212-1(34), February 1994
- Federal Emergency Management Agency (FEMA), Panel Nos. 12057C0240H, 12057C0245H, 12057C0385H, 12057C0263H, 12057C0264H, 12057C0268H, 12057C0269H, 12057C0288H, and 12057C0290H for Hillsborough County, Florida dated August 28, 2008, and 12057C0380J dated September 27, 2013
- U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soil Survey of Hillsborough County, Florida, 1989
- USDA NRCS Soil Survey Geographic (SSURGO) Database from SWFWMD, 2010
- Land Boundary Information System (LABINS) Quadrangle Maps
- 5-foot contours from Hillsborough County, 2010
- Hillsborough County Property Appraiser's Website (GIS parcel lines), 2013
- FDOT Straight Line Diagrams (SLD's) of Road Inventory for SR 600
- Field Reconnaissance (October 2015)

SECTION 4 EXISTING DRAINAGE CONDITIONS

4.1 Drainage Patterns

In the existing condition, the runoff from Pickron Street to Garden Lane is conveyed via roadside swales westward to the Tampa Bypass Canal, and eventually outfalls to Tampa Bay. The runoff from Pickron Street to Peach Avenue is conveyed through a combination of storm sewer and roadside swales to Kennedy Hill Creek which outlets to the Tampa Bypass Canal, and eventually outfalls to Tampa Bay.

The runoff from the area from Peach Avenue to the east of Taylor Road drains via roadside ditches to a concrete box culvert (CD-02; 24") west of Pine Street and flows south to a depressional area surrounding Mango Lake.

The runoff from east of Taylor Road to Lynn Oaks Circle is conveyed via roadside ditches to Baker Creek which drains north to Lake Thonotosassa. The runoff from the area east of Lynn Oaks Circle to Forbes Road drains via roadside ditches to Pemberton Creek which flows north and outfalls to Lake Thonotosassa. The runoff from the area from Forbes Road to Whitehurst Road/Walter Drive is conveyed via roadside swales to Spartman Branch, which is a tributary of Pemberton Creek. Pemberton Creek flows northwest to Lake Thonotosassa.

West of Whitehurst/Walter Drive to Woodrow Wilson Street, the runoff drains to a box culvert (CD-15; 6'x4') that crosses US 92 at milepost 18.579, and eventually combines with the West Side Canal north of US 92. From Woodrow Wilson Street to North Wheeler Street, the runoff drains east to the West Side Canal which feeds a tributary of Pemberton Creek.

The runoff from the area between North Wheeler Street and Park Road drains to the East Side Canal. The runoff from Park Road to east of Wilder Road drains north through two box culverts located at mileposts 21.663 (CD-16; 5'x2') and 21.963 (CD-17; 5'x2') and continues until joining with the East Side Canal north of US 92.

From east of Wilder Road to west of Thrasher Road the runoff drains south through a box culvert at milepost 22.931 (CD-19; 5'x3') and continues to English Creek. From west of Thrasher Road to east of Wiggins Road the runoff drains through a box culvert located at milepost 23.384 (CD-20; 6'x4') and continues to English Creek.

From east of Wiggins Road to beyond the eastern project terminus at the Hillsborough/Polk County line the runoff drains north through a box culvert located at milepost 24.214 (CD-21; 4'x2').

4.2 Topography & Hydrologic Features

The topography of the project area is steep and elevations range from a high of 150 feet to a low of 10 feet NAVD 88. Please refer to USGS Quadrangle Map, **Exhibit 3, in Appendix 1**. There are twenty one (21) existing cross drains and four (4) existing bridge culverts within the project limits allowing for conveyance of offsite and onsite runoff to the Alafia and Hillsborough rivers. The size and geometry of all cross drains and bridges have been verified from the FDOT SLD's, 1-foot LiDAR contours, as well as field survey. Please refer to **Table 1** for a Summary of Existing Cross Drains and Bridges. **Appendix 2** contains descriptions for all cross drains within the project limits, field photos and notes.

Table 1 – Summary of Existing Cross Drains and Bridges

Structure Number	FDOT Milepost*	Stations	Description
CD-01	7.791	177 + 95.44	Single 6'X4' CBC
Bridge-01 (#100024)	8.531	216 + 00.00	Length 42′
CD-02	9.629	274 + 55.28	Single 24" RCP
CD-03	10.470	319 + 53.45	Single 24" RCP
CD-04	11.034	348 + 55.36	Single 30" RCP
CD-05	11.344	364 + 74.56	Single 2′X2′ CBC
Bridge-02 (#100025)	12.055	403 + 00.00	Length 47′
CD-06	12.628	431 + 49.73	Single 48" RCP
CD-07	13.558	481 + 89.85	Single 6'X4' CBC
CD-08	14.093	510 + 22.30	Single 24" RCP
CD-09	14.169	514 + 42.37	Single 3'X3' CBC
Bridge-03 (#100097)	15.012	558 + 50.00	Length 26′
CD-10	15.387	578 + 24.48	Single 2'X2' CBC
CD-11	15.956	607 + 50.42	Single 24" RCP
CD-12	16.363	628 + 94.33	Single 36" RCP
Bridge-04 (#100098)	16.623	643 + 50.00	Length 26′
CD-13	17.016	664 + 33.35	Single 4'X2' CBC
CD-14	17.719	700 + 50.28	Single 36" RCP
CD-15	18.579	746 + 18.99	Single 6'X4' CBC
CD-16	21.663	1032 + 53.17	Single 5'X2' CBC
CD-17	21.963	1048 + 11.69	Single 5'X2' CBC
CD-18	22.505	1077 + 03.12	Single 5'X3' CBC
CD-19	22.931	1099 + 06.20	Single 5'X3' CBC
CD-20	23.384	1123 + 04.72	Double 6'X4' CBC
CD-21	24.214	1166 + 96.05	Single 4'X2' CBC

* Mileposts have been adjusted based on field survey

4.3 Existing Bridge Study

All of the bridge culverts along this project were constructed in 1930 and reconstructed in 1943. Information gathered from the Bridge Inspection Reports, was used to provide some of the parameters as summarized in **Table 2**.

Table 2 – Existing Bridge Data

	Bridge No. 100024	Bridge No. 100025	Bridge No. 100097	Bridge No. 100098
Year Constructed	1930	1930	1930	1930
Year Reconstructed	1943	1943	1943	1943
Structure Name	US-92/SR-600 over KENNEDY HILL CREEK	US-92/SR-600 over BAKER CREEK BRANCH	US-92/SR-600 over PEMBERTON CREEK	US-92/SR-600 over PEMBERTON CREEK SLOUGH
Approximate Location	0.9 MI EAST OF I-75	1.4 MI E of KINGSWAY RD	1.4 MI WEST OF FORBES RD	0.2MI EAST OF FORBES RD
Owner/Maintenance Agency	FDOT	FDOT	FDOT	FDOT
Bridge Length	42.0 feet	47.0 feet	26.0 feet	26.0 feet
Deck Type	Concrete Cast-in-Place	Concrete Cast-in-Place	Concrete Cast-in-Place	Concrete Cast-in-Place

4.4 Soils Data and Geotechnical Investigations

The Soil Survey of Hillsborough County, Florida, published by the USDA NRCS (dated 1989) has been reviewed for the project vicinity. USDA SSURGO was also obtained from SWFWMD to create a soils map in the project area using GIS ArcMap. The soil survey map for the project vicinity is illustrated in **Exhibit 4A & 4B of Appendix 1**.

The soils encountered along the project limits are mostly Hydrological Soil Group (HSG) A and A/D with B, C and D also encountered throughout the project. Group A soils have low runoff potential and high infiltration rates even when thoroughly wetted. They consist chiefly of deep, well to excessively drained sand or gravel and have a high rate of water transmission.

Group B soils have a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C soils have low infiltration rates when thoroughly wetted and consist chiefly of soils with a layer that impedes downward movement of water and soils with moderately fine to fine texture.

Group D soils have high runoff potential. They have very low infiltration rates when thoroughly wetted and consist chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with a claypan or clay layer at or near the surface, and shallow soils over nearly impervious material. These soils have a very low rate of water transmission.

According to the Soil Survey, there are thirty four (34) different soil types located along the project limits. **Table 3** – USDA NRCS Soil Survey Information summarizes and lists the soil types and relevant information. The ground water depth varies from 0 – 1' to greater than 6' along the project.

Table 3 – USDA NRCS Soil Survey Information

Soil No.	Hillsborough County	HSG	Seasonal High Ground Water Table	
	USDA Soil Name		Depth* (feet)	Months
2	Adamsville Fine Sand	A/D	2.0 - 3.5	Jun-Nov
3	Archbold Fine Sand	A	3.5 - 6.0	Jun-Nov
4	Arents	A	2.2	---
5	Basinger, Holopaw, and Samsula Soils	A/D	+2 - 1.0	Jan-Dec
7	Chandler Fine Sand	A	> 6.0	---
8	Chandler Fine Sand	A	> 6.0	---
10	Chobee Loamy Fine Sand	C/D	0 - 1.0	Jun-Feb
11	Chobee Muck	C/D	+2 - 1.0	Jun-Dec
14	Eaton Mucky Sand	C/D	+2 - 1.0	Jun-Feb
15	Felda Fine Sand	A/D	0 - 1.0	Jul-Mar
17	Floridana Fine Sand	C/D	0 - 1.0	Jun-Feb
18	Fort Meade Loamy Fine Sand	A	> 6.0	---
19	Gainesville Loamy Fine Sand	A	> 6.0	---
21	Immokalee Fine Sand	B/D	0 - 1.0	Jun-Nov
23	Kendrick Fine Sand	A	> 6.0	---
25	Lake Fine Sand	A	> 6.0	---
26	Lochloosa-Micanopy Fine Sand	C	2.5 -5.0	Jul-Oct
27	Malabar Fine Sand	A/D	0 - 1.0	Jun-Nov
29	Myakka Fine Sand	A/D	0 - 1.0	Jun-Nov
32	Myakka-Urban Complex	A/D	0 - 1.0	Jun-Nov
33	Ona Fine Sand	B/D	0 - 1.0	Jun-Nov
35	Orlando Fine Sand	A	> 6.0	---

Soil No.	Hillsborough County	HSG	Seasonal High Ground Water Table	
	USDA Soil Name		Depth* (feet)	Months
37	Paisley Fine Sand	C/D	+2 - 1.0	Jun-Feb
41	Pomello Fine Sand	A	2.0 - 3.5	Jul-Nov
43	Quartzipsamments	A	> 6.0	---
46	St. Johns Fine Sand	B/D	0 - 1.0	Jun-Apr
47	Seffner Fine Sand	A/D	1.5 - 3.5	Jun-Nov
51	Haplaquents	D	0	---
52	Smyrna Fine Sand	A/D	0 - 1.0	Jul-Oct
53	Taveres-Milhopper Fine Sand	A	3.5 - 6.0	Jun-Dec
57	Wabasso Fine Sand	C/D	0 - 1.0	Jun-Oct
59	Windor Fine Sand	C/D	0 - 1.0	Jun-Dec
60	Windor Fine Sand	C/D	0 - 1.0	Jun-Dec
61	Zolfo Fine Sand	A	2.0 -3.5	Jun-Nov

*Seasonal High Groundwater Table: Depth is referenced below existing grade, except where indicated as "+".

4.5 Environmental Characteristics

4.5.1 Land Use Data

Existing land uses along US 92 within the study area vary significantly between Garden Lane and County Line Road (**Exhibit 5, Appendix 1**). The area from Garden Lane to Taylor Road comprises a mix of land uses and is nearly completely developed. Residential uses include single-family residences and mobile homes. Commercial uses include highway retail, service stations and motels. In addition, there are a number of offices and some industrial land uses such as salvage yards. The area also includes Armwood High School.

Between Taylor Road and Turkey Creek Road, US 92 becomes more rural with open fields, citrus groves and rural residential housing. There are scattered commercial uses including motels, tractor sales and service stations. Between Turkey Creek Road and Plant City, a transition to more urban uses, including multifamily residential uses, begins. The landmark Parksdale Farms and Tomlin Jr. High are located within this area. In addition, a large high-quality wetland, Pemberton Slough, is located on both sides of US 92.

Plant City is predominantly developed for single-family residential uses. The development pattern for Plant City was influenced by both the railroad, in the early days, and the agricultural economy throughout the past and present. Diversification in the economy has redirected growth to the south and southeast. The downtown still remains the office and financial center although commercial uses are moving south. There is a significant amount of vacant land within the city limits that is not expected to be developed because of environmental constraints.

From downtown Plant City and to the east, CSX railroad runs contiguous to US 92. Land uses within vary and include industrial and manufacturing uses, mobile home parks and vacant land. Highway commercial uses and scattered agricultural uses also exist east of the project's terminus at County Line Road.

4.5.2 Cultural Features

A separate Cultural Resource Assessment Survey (CRAS) has been prepared in conjunction with the undertaking of the PD&E Study Re-evaluation. Information regarding cultural features can be found within the CRAS.

4.5.3 Natural and Biological Features

A separate Final Natural Resources Evaluation (NRE) has been prepared in conjunction with the undertaking of the PD&E Study Re-evaluation. Information regarding natural and biological features can be found within the NRE.

4.6 Floodplains/Floodways

According to The FEMA, the relevant FIRM panel numbers are 12057C0240H, 12057C0245H, 12057C0385H, 12057C0263H, 12057C0264H, 12057C0268H, 12057C0269H, 12057C0288H, and 12057C0290H for Hillsborough County, Florida dated August 28, 2008, and 12057C0380J dated September 27, 2013. The majority of the project is designated Zone 'X' which means those areas have a 0.2% probability of flooding every year (500-year floodplain). Some parts (mostly streams and waterbodies crossing) are in the Zone 'AE' which have a 1% probability of flooding every year (100-year floodplain), and where predicted flood water elevations have been established. Please refer to **Exhibit 7, Appendix 1** for the FEMA Flood Zones Maps and **Appendix 3** for FEMA FIRM.

General comments relating to floodplains include the fact that any development within the 100-year floodplain has the potential for placing citizens and property at risk of flooding and producing changes in floodplain elevations and plan view extent. Development, such as roadways, housing developments, strip malls, and other commercial facilities, within floodplains increases the potential for flooding by limiting flood storage capacity and exposing people and property to flood hazards. Development also reduces vegetated buffers that protect water quality and destroys important habitats for fish and wildlife. The area surrounding the proposed roadway widening project has and will continue to experience growth.

Whenever it is determined that the proposed project will involve a regulatory floodway, the District Drainage Engineer, or designee, will work with local agencies and FEMA, as required, to ensure the project is developed consistent with local floodway plans and floodplain management programs. A "No-Rise" certification will be required for any anticipated impacts to regulatory floodways and will be obtained during the design phase of this project. There is one regulatory

floodway underneath bridge #100025 and another one along the Spartman Branch stream (Bridge #100098).

Any floodplain impacts will be mitigated for with offsite floodplain compensation sites, or cut ditch sections on a cup for cup basis. From the available data, approximate Floodplain Compensation (FPC) Areas have been calculated (**Table 4**). Within the Project Limits and Right-of-Way, sixteen (16) segments have been identified which are impacted by the 100-year floodplain (Zone AE).

Length and width are measured using the alignment chain and typical sections respectively. Depth of impact has been calculated from the difference between the floodplain elevation and existing ground elevation or seasonal high water table (SHWT) elevation depending on the type of soil. It was concluded that the project will impact approximately 57.33 ac of floodplain area based on the most conservative roadway alternative. Please refer to the Final Stormwater Management Facility Report (Technical Memo), **Appendix C**, for detailed floodplain calculations.

Table 4 – Summary of Floodplain Compensation (FPC) Sites

FPC	Station	-	Station	Total Length of Impact (ft)	(Avg.) 100-yr Flood Elevation (ft)	Impact Volume (Ac-Ft)	FPC Area* (Ac)
FPC-1A	168+04.88	-	185+71.88	1,767	25.50	1.29	1.29
FPC-1B	174+77.12	-	184+00.00	923	23.40	0.06	0.06
FPC-2	362+31.19	-	367+95.97	565	40.00	8.18	8.18
FPC-3	381+00.00	-	393+00.00	1,200	46.30	2.30	2.30
FPC-4	393+47.34	-	414+25.22	2,078	44.00	1.45	1.45
FPC-5	418+00.00	-	443+66.59	2,567	47.00 to 57.00	3.76	3.76
FPC-6	443+86.96	-	460+86.08	1,699	57.00	1.41	1.41
FPC-7	481+87.52	-	482+20.94	33	64.00	0.01	0.01
FPC-8	507+64.54	-	509+82.28	218	68.00	0.72	0.72
FPC-9	550+58.09	-	560+00.00	942	83.00	6.52	6.52
FPC-10	601+50.35	-	613+00.00	1,150	91.40	1.44	1.44
FPC-11	624+22.39	-	629+86.70	564	95.00	5.30	5.30
FPC-12	639+41.41	-	652+08.61	1,267	97.00	8.09	8.09
FPC-14	738+41.80	-	756+65.44	1,824	111.35	16.80	16.80
						TOTAL	**57.33**

*The areas are based on 1-ft depth for compensation.

**Impacts to floodplain areas associated with FPC 13 & 15 do not require R/W acquisition due to the minor encroachment. Those impacts are planned to be compensated for within the FDOT R/W.

4.6.1 Flooding History and Maintenance Concern

The FDOT District 7 Maintenance office was contacted to discuss any flooding history and maintenance concerns. Based on our coordination with the maintenance office, there have been flooding issues during every summer at East 702 Reynolds/Baker US 92, East 11730 US 92, East 11309 US 92, East 10604 Black Dairy Road, and East 9715 US 92 (**Appendix 4: Correspondence**).

A Drainage Complaint Investigation Report was conducted by ICON for the Department in December 2015; Hillsborough County reported flooding complaints from several property owners along the south side of US 92, between Darby Lake Street and Baker Creek. The proposed typical section in this segment follows the recommendation by ICON with an enclosed storm sewer system and replacement of the existing boardwalk with sidewalk. Please refer to **Appendix 4** for further information.

SECTION 5 PROPOSED CONDITIONS

The project does not directly outfall to any Outstanding Florida Water (OFW). The Florida Department of Environmental Protection (FDEP) list of impaired water bodies has been reviewed and it has been identified that Sixmile Creek (WBID 1536B) and Mango Drain (WBID 1576) are impaired for nutrients. Nutrient loading calculations have been performed as part of the Final Stormwater Management Facility Report (Technical Memo). Because of the karstic nature in some areas of the project, shallow SMFs will be considered as well as avoidance of any existing wells or contaminated sites.

The stormwater runoff from the project limits will be collected and conveyed in roadside ditches or closed drainage systems to the proposed offsite wet detention and dry retention SMFs. The SMFs will discharge at or near the same cross drains that carry the roadway runoff in the existing condition. The water quality treatment and water quantity attenuation will be achieved through the construction of offsite wet detention and dry retention SMFs, which will require the acquisition of additional right-of-way. Please refer to the Final Stormwater Management Facility Report, which was prepared in conjunction with the undertaking of the PD&E Study Re-evaluation, for detailed information.

5.1 Longitudinal & Transverse Floodplain Impacts

This project will impact the 100-year floodplain in three (3) different ways;

1. Longitudinal impacts resulting from filling the floodplain areas associated with proposed roadway widening within the Project Limits, isolated wetlands, wetland systems, and depressional areas.

2. Transverse impacts resulting from the extension and replacement of the existing cross drain culverts.

3. Transverse impacts resulting from widening of the bridge.

The longitudinal impacts cannot be avoided since the floodplains associated with the water bodies extend in both north and south direction. The floodplain impact area was quantified based on the FEMA 100-year base flood elevation estimated as described in **Section 4.6** and the existing ground elevations from 1-foot contours from LiDAR. To be conservative, it was assumed that any filling from the proposed roadway outside of the existing roadway was quantified as floodplain impacts.

The transverse impacts resulting from the extension or replacement of the culverts will be analyzed in the design phase. To minimize upstream impacts, FDOT design criteria for a conveyance system (e.g. culvert) allow no significant increase in flood stages at the upstream end of the structures. During the final design phase of the project, every necessary action should be taken to minimize upstream impacts.

During the design phase, each cross drain should be analyzed for existing and proposed conditions with more defined data and they should be designed to ensure no conflicts with the proposed roadway and no significant increase in headwater elevation. Also, a more detailed inspection of the cross drains will be necessary to verify their structural integrity and assess the need for complete reconstruction. Based on the available data for this planning phase, there are no indications that any of the existing cross drains will require upsizing.

5.2 Project Classification

The floodplain is located in a low density, non-urbanized area, and the encroachments area is classified as "minimal". Minimal encroachments on a floodplain occur when there is a floodplain involvement, but the impacts on human life, transportation facilities, and natural and beneficial floodplain values are not significant and can be resolved with minimal efforts. Normally, these minimal efforts to address the impacts will consist of applying the Department's drainage design standards and following the Water Management District's procedures to achieve results that will not increase or significantly change the flood elevations and/or limits.

5.3 Risk Evaluation

There is no change in flood "Risk" associated with this project. The encroachments will not have a significant potential for interruption or termination of transportation facilities needed for emergency vehicles or used as an evacuation route. In addition, no significant adverse impacts on natural and beneficial floodplain values are anticipated and no significant impacts to highway users are expected.

5.4 PD&E Manual Requirements with Minimal Encroachment

Chapter 24 Floodplains of the FDOT's PD&E Manual, Part 2, defines four categories of encroachments as they pertain to base floodplain involvement; significant, minimal, none and no involvement, and also lists the report criteria corresponding to these encroachment categories. The FDOT has different requirements based on the category of the encroachment. The proposed widening project was determined to have minimal encroachments and as a result the requirements for this category are listed as follows:

1. The history of flooding of the existing facilities and/or measures to minimize any impacts due to the proposed project improvements.

   There have been flooding issues during the summer times at East 702 Reynolds/Baker US 92, East 11730 US 92, East 11309 US 92, East 10604 Black Dairy Road and East 9715 US 92. The flooding conditions in the project are inherent in the topography or are a result of other outside contributing sources and are expected to be continued, but not increased. The proposed structures and stormwater management improvements will be designed to ensure existing flood heights and floodplain limits are not affected.

2. Determination of whether the encroachment is longitudinal or transverse, and if it is a longitudinal encroachment an evaluation and discussion of practicable avoidance alternatives.

   With the increase in the number of travel lanes proposed, there will be longitudinal and transverse impacts to the floodplain. Longitudinal impacts will be minimized by utilizing the maximum allowable roadway embankment slope.

   The transverse floodplain impacts from the project occur due to the extension or replacement of the existing cross drains and widening of the bridge structures. The impacts at the bridge structures are not analyzed during this study and will need to be addressed during the design phase.

   The existing roadway bisects the floodplain. There are no economically feasible avoidance alternatives.

3. The practicability of avoidance alternatives and/or measures to minimize impacts.

   This project will take every effort to minimize the floodplain impacts resulting from the roadway fill. The maximum allowable roadway embankment slope will be used within the floodplain area to minimize the floodplain impacts.

4. Impact of the proposed improvements on emergency services and evacuation.

   The proposed drainage structures (to be analyzed in the design phase) will perform hydraulically in a manner equal to or greater than the existing condition, and backwater surface elevations are not expected to increase. As a result, there will be no significant change in flood risk, and there will not be a significant change in the potential for interruption or termination of emergency service or in emergency evacuation routes.

5. Impacts of the proposed improvement on the base flood, likelihood of flood risk, overtopping, location of overtopping, backwater, etc.

   The proposed cross drains will perform hydraulically in a manner equal to or greater than the existing condition, and backwater surface elevations are not expected to increase. As a result, there will be no significant change in flood risk or overtopping.

6. Determination of the impact of the proposed improvements on regulatory floodways, if any, and documentation of coordination with FEMA and local agencies to determine the project's consistency with the regulatory floodway.

   A FEMA "No Rise" Certification for each regulatory floodway will be obtained during the design phase.

7. The impacts on natural and beneficial floodplain values, and measures to restore and preserve these values (this information may also be addressed as part of the wetland impact evaluation and recommendations).

   Addressed as part of the wetland impact evaluation.

8. Consistency of the proposed improvements with the local floodplain development plan or the land use elements in the Comprehensive Plan, and the potential impacts of encouraging development within the 100 year base floodplain.

   The project will remain consistent with local floodplain development plans. The project will not support base floodplain development that is incompatible with existing floodplain management programs.

9. A map showing project, location and impacted floodplains. Provide copies of all applicable FIRM maps should be included within the final LHR report appendix.

   *See **Exhibit 1 & Exhibit 7** in **Appendix 1.***

10. Results of any and all project risk assessments performed.

    The proposed drainage structures (to be analyzed in the design phase) will perform hydraulically in a manner equal to or greater than the existing condition, and backwater surface elevations are not expected to increase. As a result, there will be no significant change in flood risk.

SECTION 6 CONCLUSIONS AND RECOMMENDATIONS

The modifications to drainage structures included in the project will result in an insignificant change in their capacity to carry floodwater. This change will cause minimal increases in flood heights and flood limits. Replacement drainage structures for this project are limited to hydraulically equivalent structures. The limitations to the hydraulic equivalency being proposed are basically due to restrictions imposed by the geometrics of design, existing development, cost feasibility, or practicability. An alternative encroachment location is not considered in this category since it defeats the project purpose or is economically unfeasible. Since flooding conditions in the project area are inherent in the topography or are a result of other outside contributing sources, and there is no practical alternative to totally eradicate flood impacts or even reduce them in any significant amount, existing flooding will continue, but not be increased. The proposed structure will be hydraulically equivalent to or greater than the existing structure, and backwater surface elevations are not expected to increase. As a result, the project will not affect existing flood heights or floodplain limits. This project will not result in any new or increased adverse environmental impacts. There will be no significant change in the potential for interruption or termination of emergency service or emergency evacuation routes. Therefore, it has been determined that this encroachment is not significant.

Appendix 1

Exhibits

Exhibit 1 – Project Location Map

Exhibit 2A-2I – Typical Sections

Exhibit 3 – USGS Quadrangle Map

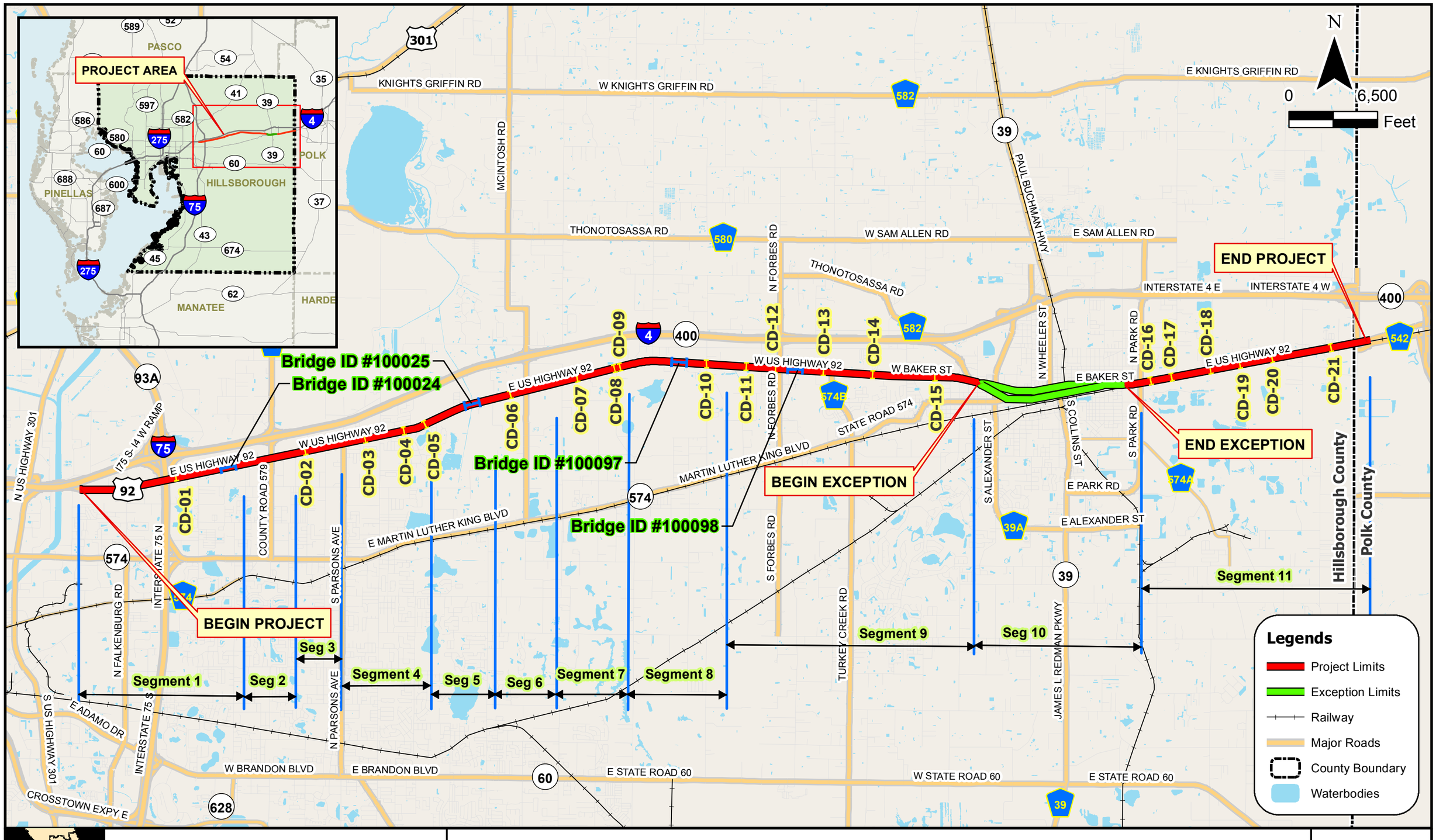
Exhibit 4A & 4B – NRCS Soils Map

Exhibit 5 – Existing Land Use Map

Exhibit 6 – Future Land Use Map

Exhibit 7 – FEMA Map

Exhibit 8 – WBID Map



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District 7

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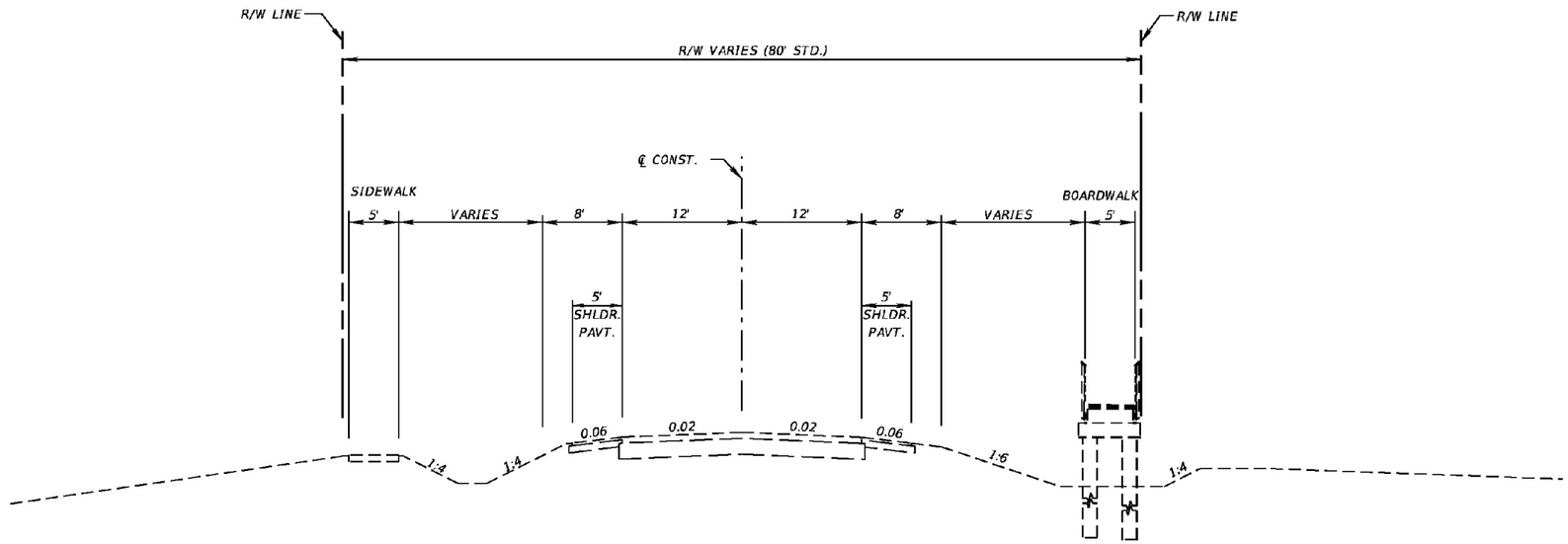
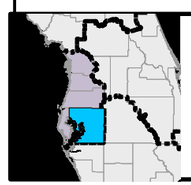
PROJECT LOCATION MAP

EXHIBIT 1



US 92 FROM GARDEN LANE TO THONOTOSASSA ROAD
EXISTING 2 LANE RURAL WITH SIDEWALK OR BOARDWALK
DESIGN SPEED = 45 MPH



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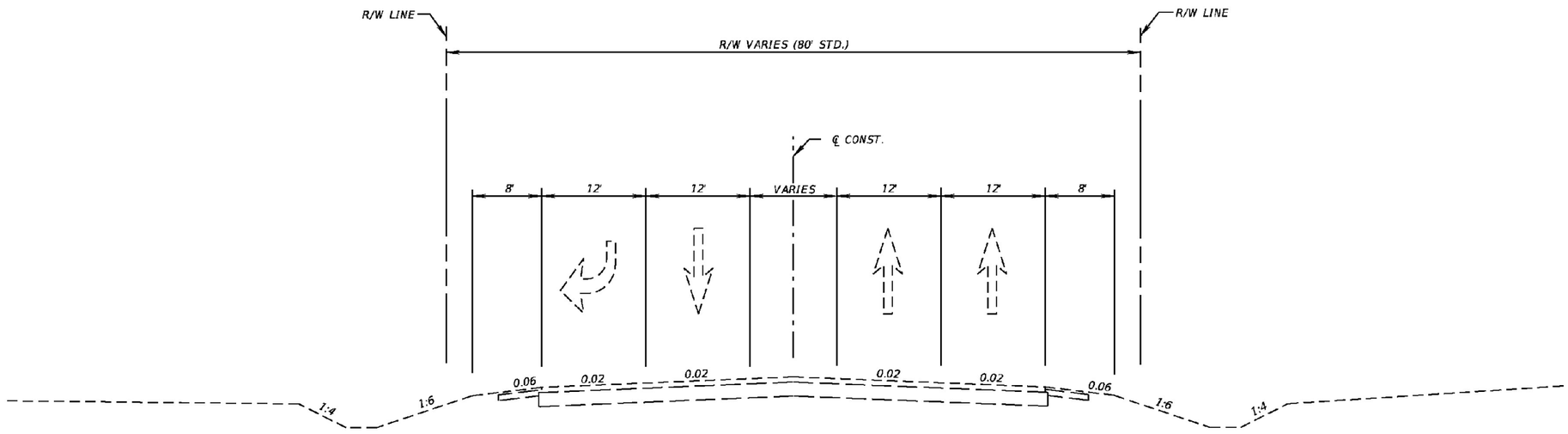
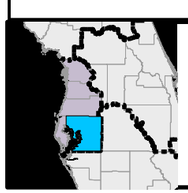
TYPICAL SECTION
EXISTING TWO LANE RURAL
GARDEN LANE TO THONOTOSASSA ROAD

Figure
2A



FROM EAST OF THONOTOSASSA ROAD TO MOBLEY STREET
EXISTING 4 LANE RURAL
DESIGN SPEED = 45 MPH



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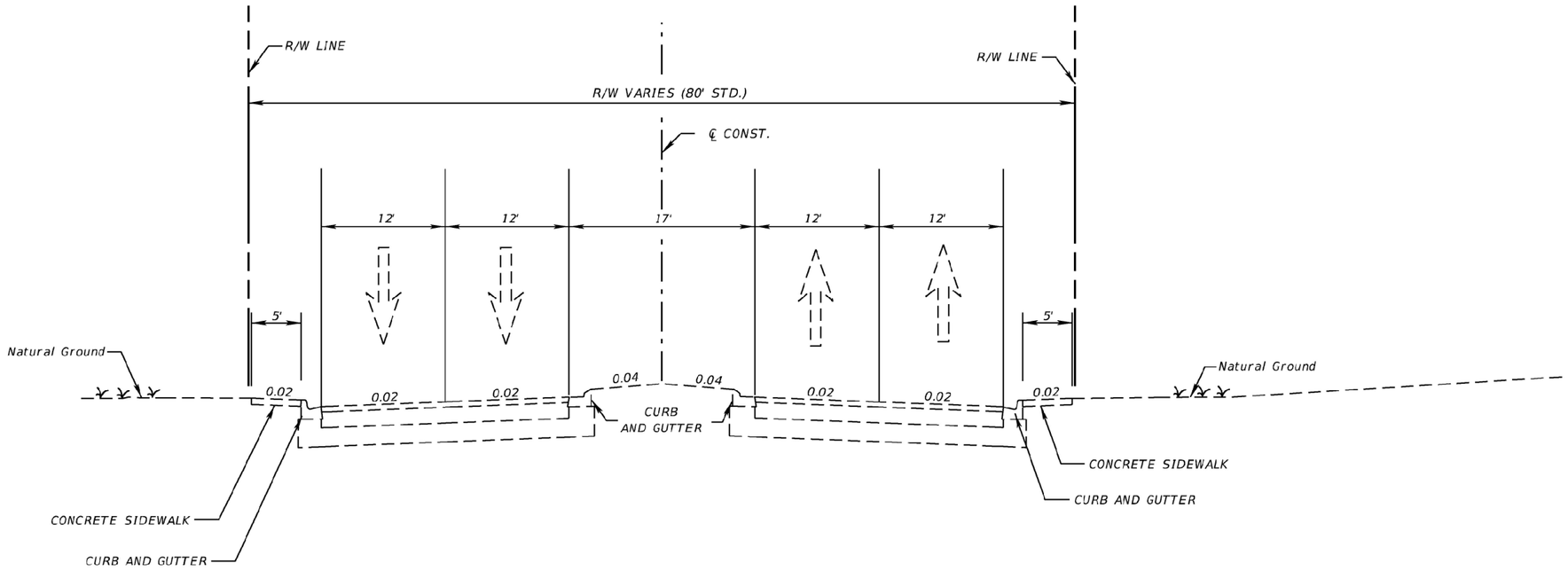
TYPICAL SECTION
EXISTING FOUR LANE RURAL
THONOTOSASSA ROAD TO MOBLEY STREET

Figure
2B



US 92 FROM NORTH GORDON STREET TO PARK ROAD
EXISTING 4 LANE URBAN
DESIGN SPEED = 45 MPH

Florida Department of Transportation
District 7

US 92 PD&E Study Re-evaluation

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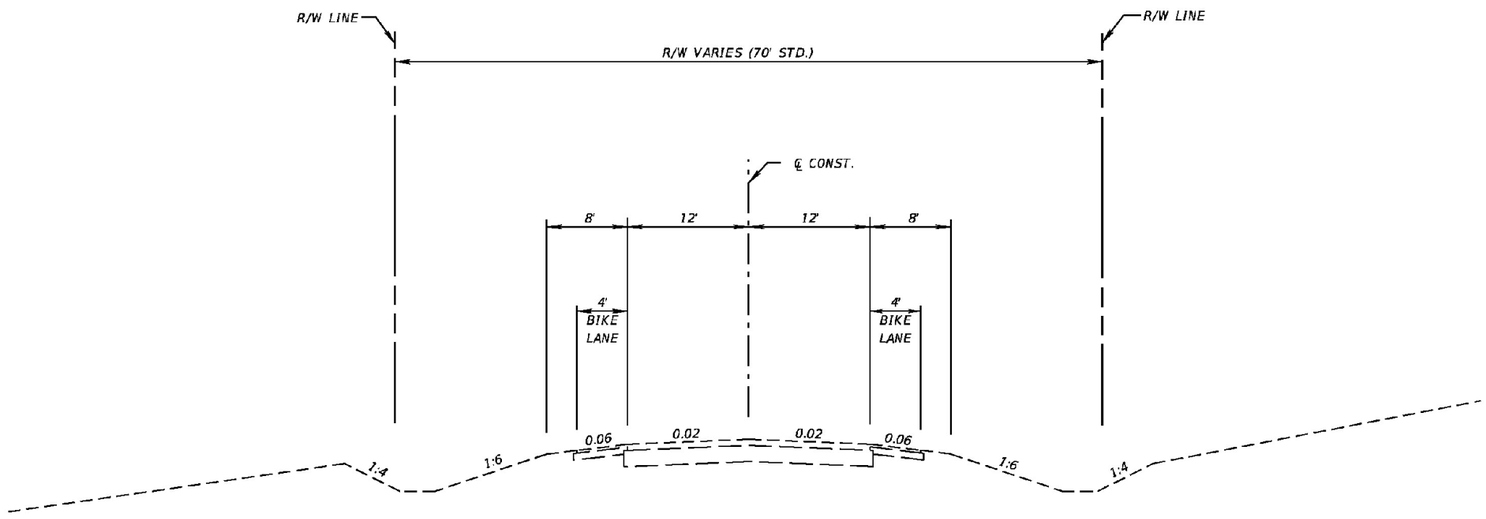
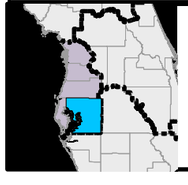
TYPICAL SECTION
EXISTING FOUR LANE URBAN
US 92 FROM NORTH GORDON STREET TO PARK ROAD

Figure

2C



US 92 EAST OF PARK ROAD TO EAST OF COUNTY LINE ROAD
EXISTING 2 LANE RURAL
DESIGN SPEED = 45 MPH



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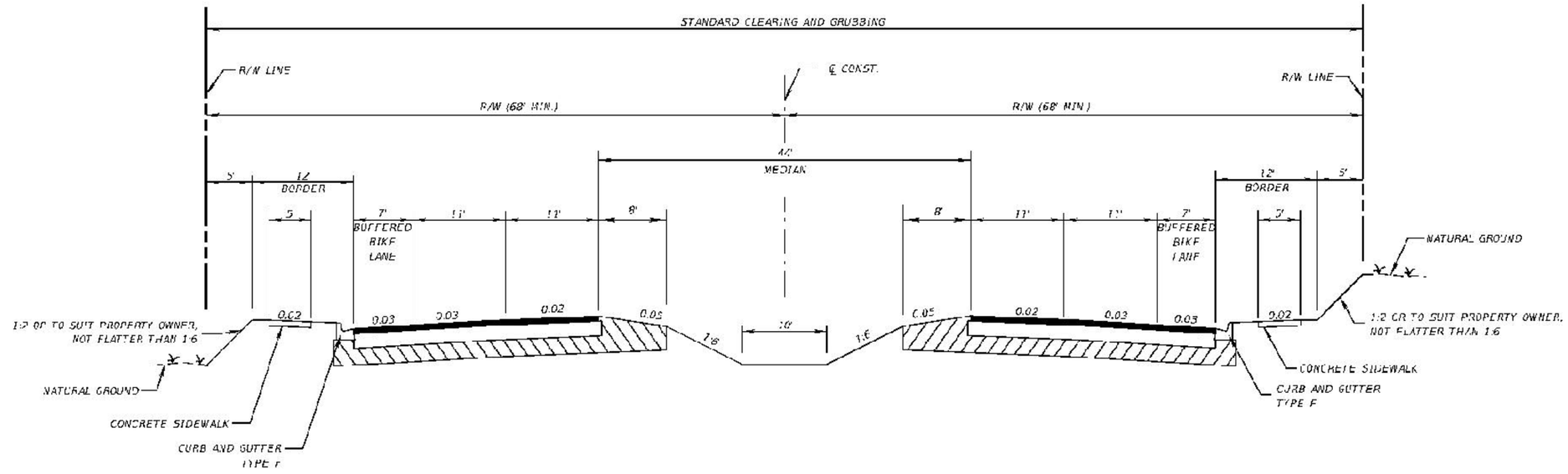
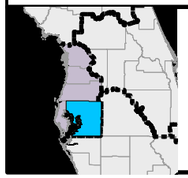
TYPICAL SECTION
EXISTING TWO LANE RURAL
US 92 EAST OF PARK RD TO EAST OF COUNTY LINE ROAD

Figure
2D



FROM EAST OF GARDEN LANE TO WEST OF I-75 - SEGMENT 1
FROM WEST OF CR 579 TO EAST OF CR 579 - SEGMENT 2
FROM EAST OF CR 579 TO NORTH PARSONS AVENUE - SEGMENT 3
FROM NORTH PARSONS AVENUE TO EAST OF CROW WING DRIVE - SEGMENT 4
DESIGN SPEED = 45 MPH



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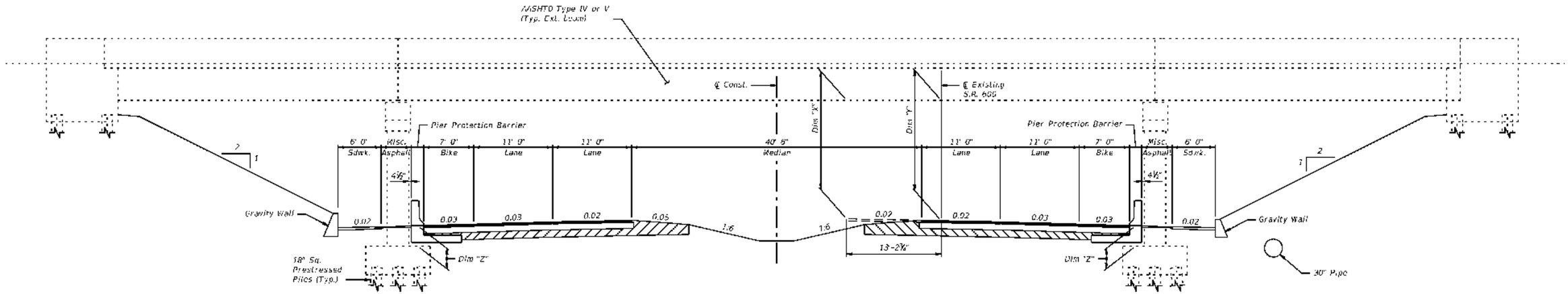
TYPICAL SECTION 1
PROPOSED FOUR LANE 45 MPH DESIGN SPEED
TYPICAL SECTION

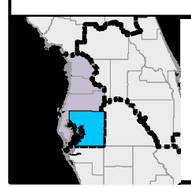
Figure
2E



UNDER I-75 BRIDGE
FROM WEST OF I-75 TO EAST OF I-75 - SEGMENT 1
DESIGN SPEED = 45 MPH

BRIDGE DATA TABLE

BRIDGE NO.	DIM "X" (ft.)	DIM "Y" (ft.)	DIM "Z" (ft.) PIER 2	DIM "Z" (ft.) PIER 3
100414	10.275	18.500	4.135	3.135
100415	19.069	19.333	2.552	2.552
100422	17.573	17.938	2.745	2.245
100424	16.038	16.302	3.438	3.438



Florida Department of Transportation
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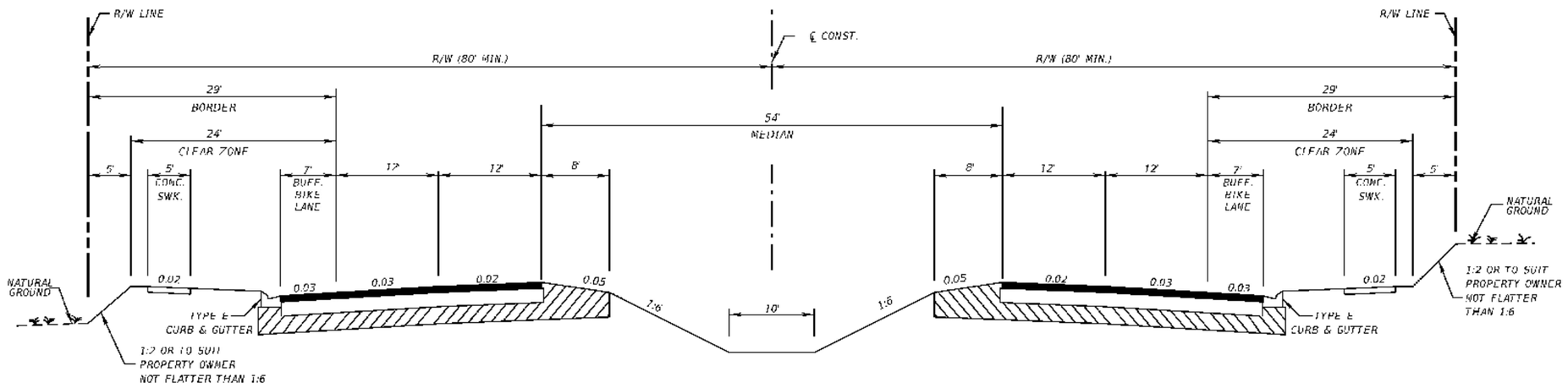
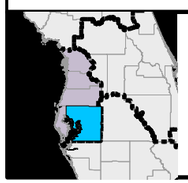
TYPICAL SECTION 2
PROPOSED FOUR LANE 45 MPH DESIGN SPEED
TYPICAL SECTION UNDER I-75

Figure

2F



FROM EAST OF CROW WING DRIVE TO CASTLEWOOD ROAD - SEGMENT 5
FROM CASTLEWOOD ROAD TO WEST OF GALLAGHER ROAD - SEGMENT 6
FROM WEST OF GALLAGHER ROAD TO LYNN OAKS CIRCLE - SEGMENT 7
FROM LYNN OAKS CIRCLE TO EAST OF BETHLEHEM ROAD - SEGMENT 8
FROM EAST OF BETHLEHEM ROAD TO EDWARDS STREET - SEGMENT 9
DESIGN SPEED = 50 MPH



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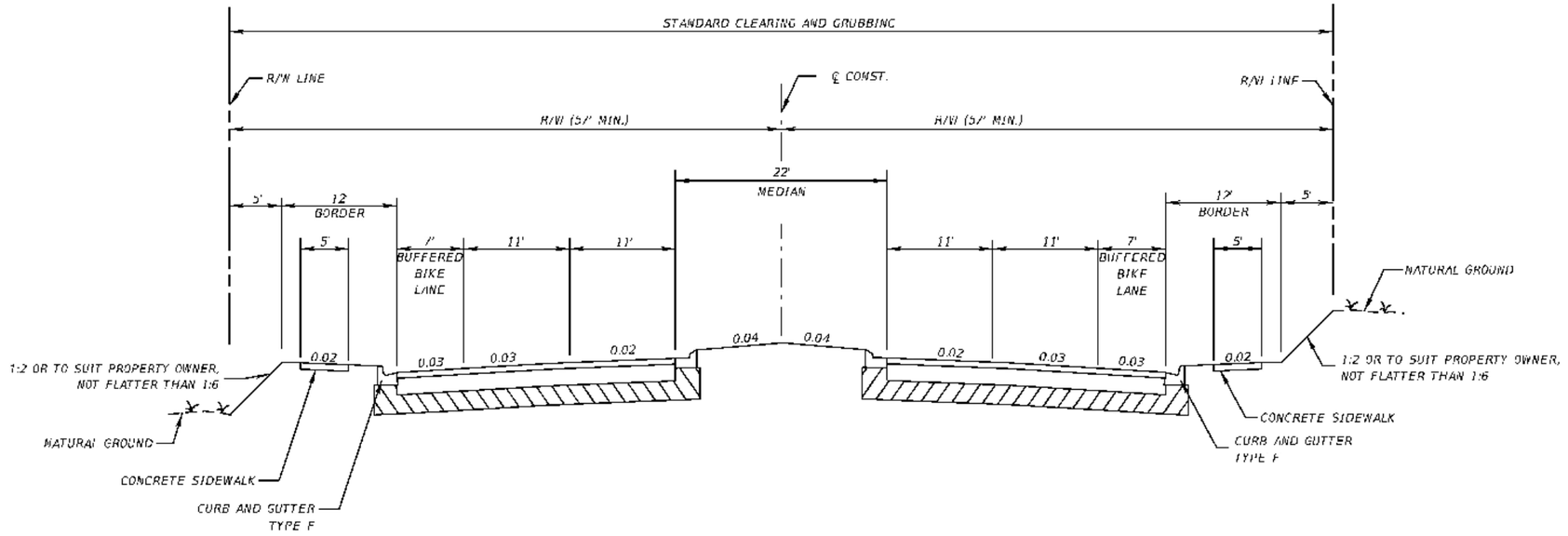
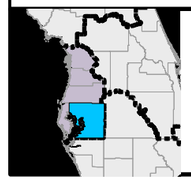
TYPICAL SECTION 3
PROPOSED FOUR LANE 50 MPH DESIGN SPEED
TYPICAL SECTION

Figure
2G



FROM EDWARDS STREET TO MOBLEY STREET - SEGMENT 9
DESIGN SPEED = 45 MPH



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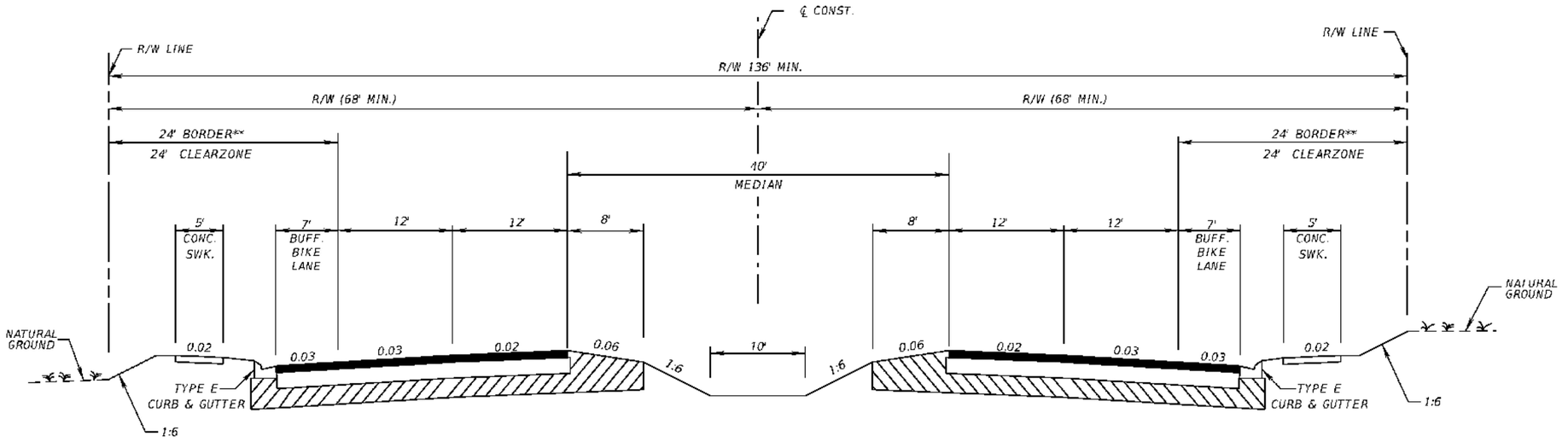
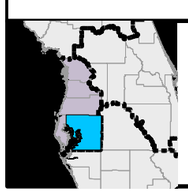
TYPICAL SECTION 4
PROPOSED FOUR LANE 45 MPH DESIGN SPEED
EDWARDS STREET TO MOBLEY STREET

Figure
2H



FROM PARK ROAD TO COUNTY LINE ROAD - SEGMENT 11
DESIGN SPEED = 50 MPH



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TYPICAL SECTION 5
PROPOSED FOUR LANE 50 MPH DESIGN SPEED
PARK ROAD TO COUNTY LINE ROAD

Figure
2I

N

0 6,500 Feet

BEGIN PROJECT

BEGIN EXCEPTION

END PROJECT

END EXCEPTION

Legends

- Project Limits
- Exception Limits

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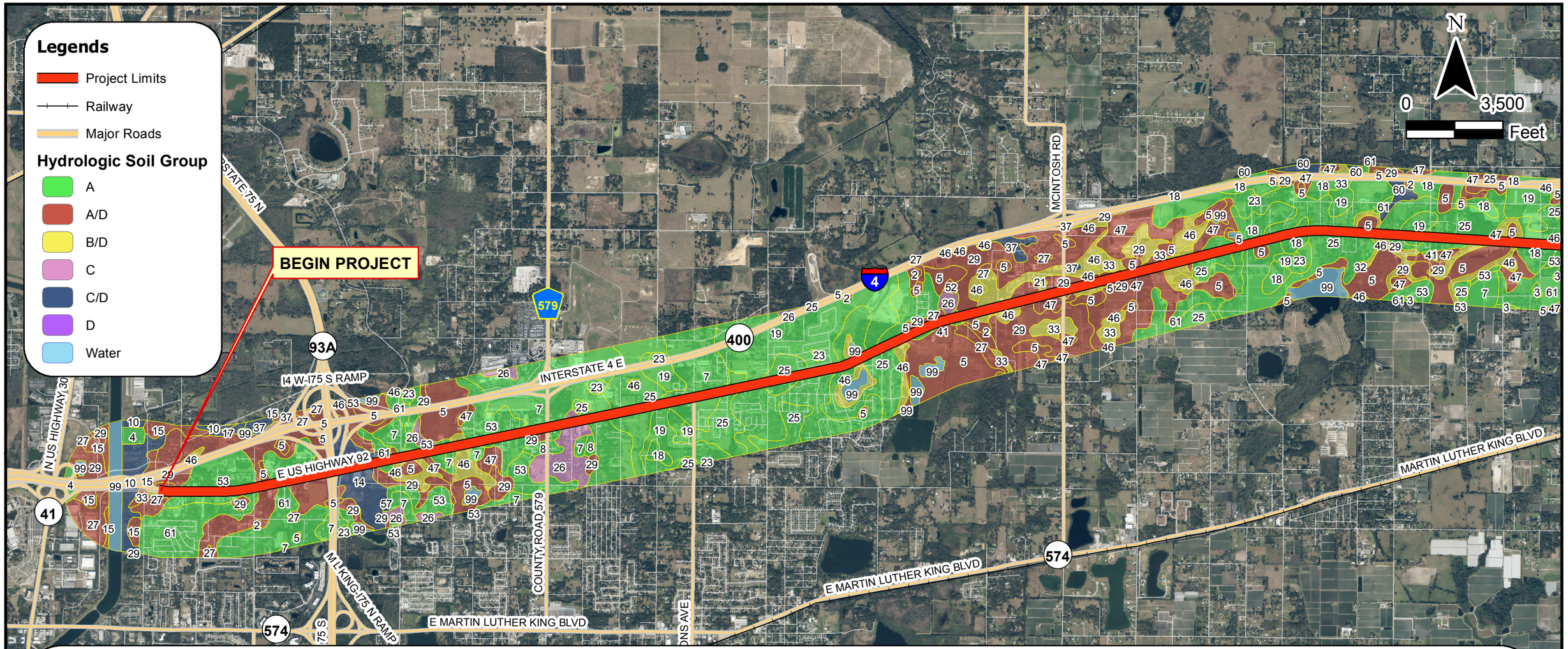
USGS QUADRANGLE MAP

EXHIBIT 3



Soil Names

Hillsborough County

- 2: Adamsville Fine Sand, 0 to 2 Percent Slopes
- 3: Archbold Fine Sand
- 4: Arents, Nearly Level
- 5: Basinger, Holopaw, and Samsula Soils, Depressional
- 7: Chandler Fine Sand, 0 to 5 Percent Slopes
- 8: Chandler Fine Sand, 5 to 12 Percent Slopes
- 10: Chobee Loamy Fine Sand
- 11: Chobee Muck
- 14: Eaton Mucky Sand, Depressional
- 15: Felda Fine Sand
- 17: Floridana Fine Sand
- 18: Fort Meade Loamy Fine Sand, 0 to 5 Percent Slopes
- 19: Gainesville Loamy Fine Sand, 0 to 5 Percent Slopes
- 21: Immokalee Fine Sand
- 23: Kendrick Fine Sand, 2 to 5 Percent Slopes
- 25: Lake Fine Sand, 0 to 5 Percent Slopes
- 26: Lochloosa-Micanopy Fine Sand, 0 to 5 Percent Slopes
- 27: Malabar Fine Sand
- 29: Myakka Fine Sand, 0 to 2 Percent Slopes
- 32: Myakka-Urban Complex
- 33: Ona Fine Sand
- 35: Orlando Fine Sand, 0 to 5 Percent Slopes
- 37: Paisley Fine Sand, Depressional
- 41: Pomello Fine Sand, 0 to 5 Percent Slopes
- 43: Quartzipsamments, Nearly Level
- 46: St. Johns Fine Sand
- 47: Seffner Fine Sand
- 51: Haplaquents, Clayey
- 52: Smyrna Fine Sand, 0 to 2 Percent Slopes
- 53: Taveres-Milhopper Fine Sand, 0 to 5 Percent Slopes
- 57: Wabasso Fine Sand
- 59: Windor Fine Sand
- 60: Windor Fine Sand, Frequently Flooded
- 61: Zolfo Fine Sand
- 99: Water

Polk County

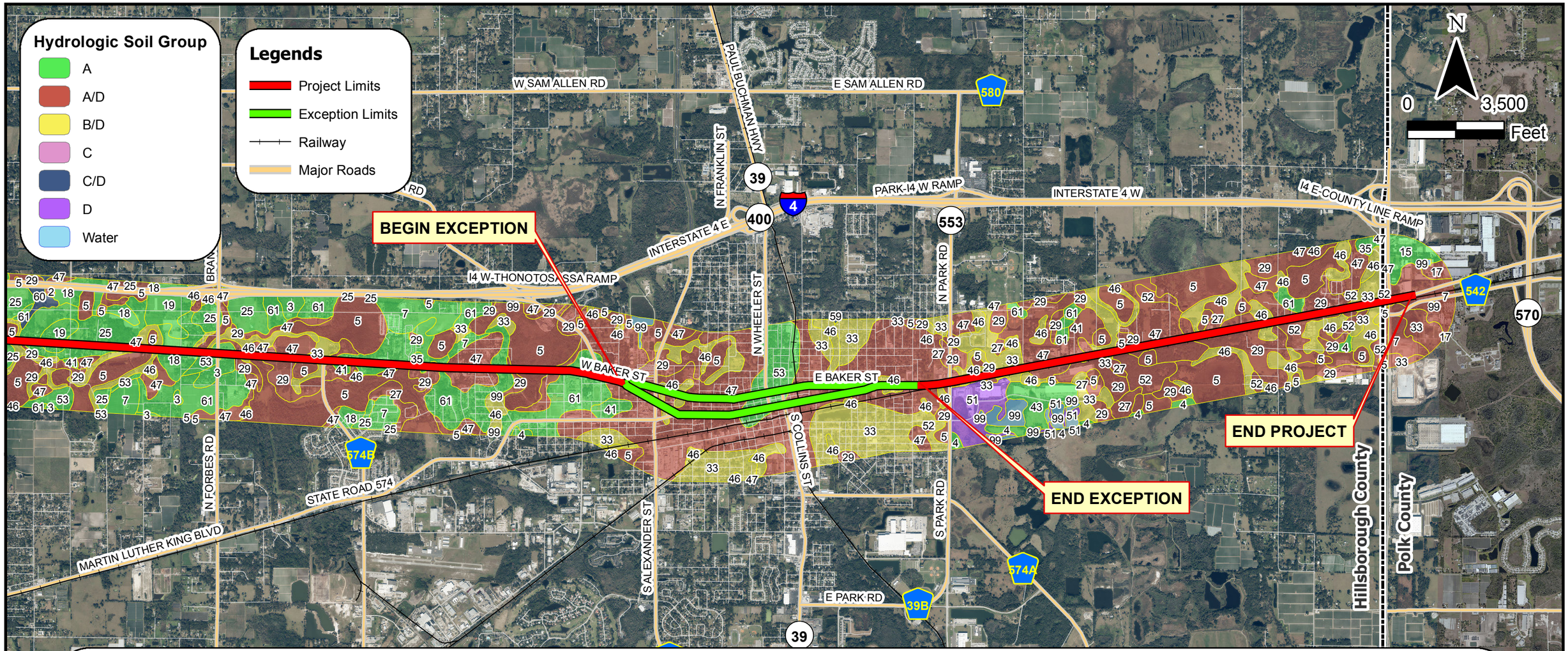
- 7: Pomona Fine Sand
- 15: Tavares Fine Sand, 0 to 5 Percent Slopes
- 17: Smyrna and Myakka Fine Sands
- 33: Holopaw Fine Sand, Depressional
- 99: Water

Florida Department of Transportation
District 7

SR 600 (US 92) PD&E Study Re-Evaluation
from East of I-4 to County Line Road
Hillsborough County, Florida
Work Program Item Segment No.: 435749-1

NCRS SOILS MAP

EXHIBIT 4A



Soil Names

Hillsborough County

2: Adamsville Fine Sand, 0 to 2 Percent Slopes
3: Archbold Fine Sand
4: Arents, Nearly Level
5: Basinger, Holopaw, and Samsula Soils, Depressional
7: Chandler Fine Sand, 0 to 5 Percent Slopes
8: Chandler Fine Sand, 5 to 12 Percent Slopes
10: Chobee Loamy Fine Sand
11: Chobee Muck
14: Eaton Mucky Sand, Depressional
15: Felda Fine Sand
17: Floridana Fine Sand
18: Fort Meade Loamy Fine Sand, 0 to 5 Percent Slopes
19: Gainesville Loamy Fine Sand, 0 to 5 Percent Slopes
21: Immokalee Fine Sand
23: Kendrick Fine Sand, 2 to 5 Percent Slopes
25: Lake Fine Sand, 0 to 5 Percent Slopes
26: Lochloosa-Micanopy Fine Sand, 0 to 5 Percent Slopes
27: Malabar Fine Sand
29: Myakka Fine Sand, 0 to 2 Percent Slopes
32: Myakka-Urban Complex
33: Ona Fine Sand
35: Orlando Fine Sand, 0 to 5 Percent Slopes
37: Paisley Fine Sand, Depressional
41: Pomello Fine Sand, 0 to 5 Percent Slopes
43: Quartzipsamments, Nearly Level
46: St. Johns Fine Sand
47: Seffner Fine Sand
51: Haplaquents, Clayey
52: Smyrna Fine Sand, 0 to 2 Percent Slopes
53: Taveres-Milhopper Fine Sand, 0 to 5 Percent Slopes
57: Wabasso Fine Sand
59: Windor Fine Sand
60: Windor Fine Sand, Frequently Flooded
61: Zolfo Fine Sand
99: Water

Polk County

7: Pomona Fine Sand
15: Tavares Fine Sand, 0 to 5 Percent Slopes
17: Smyrna and Myakka Fine Sands
33: Holopaw Fine Sand, Depressional
99: Water

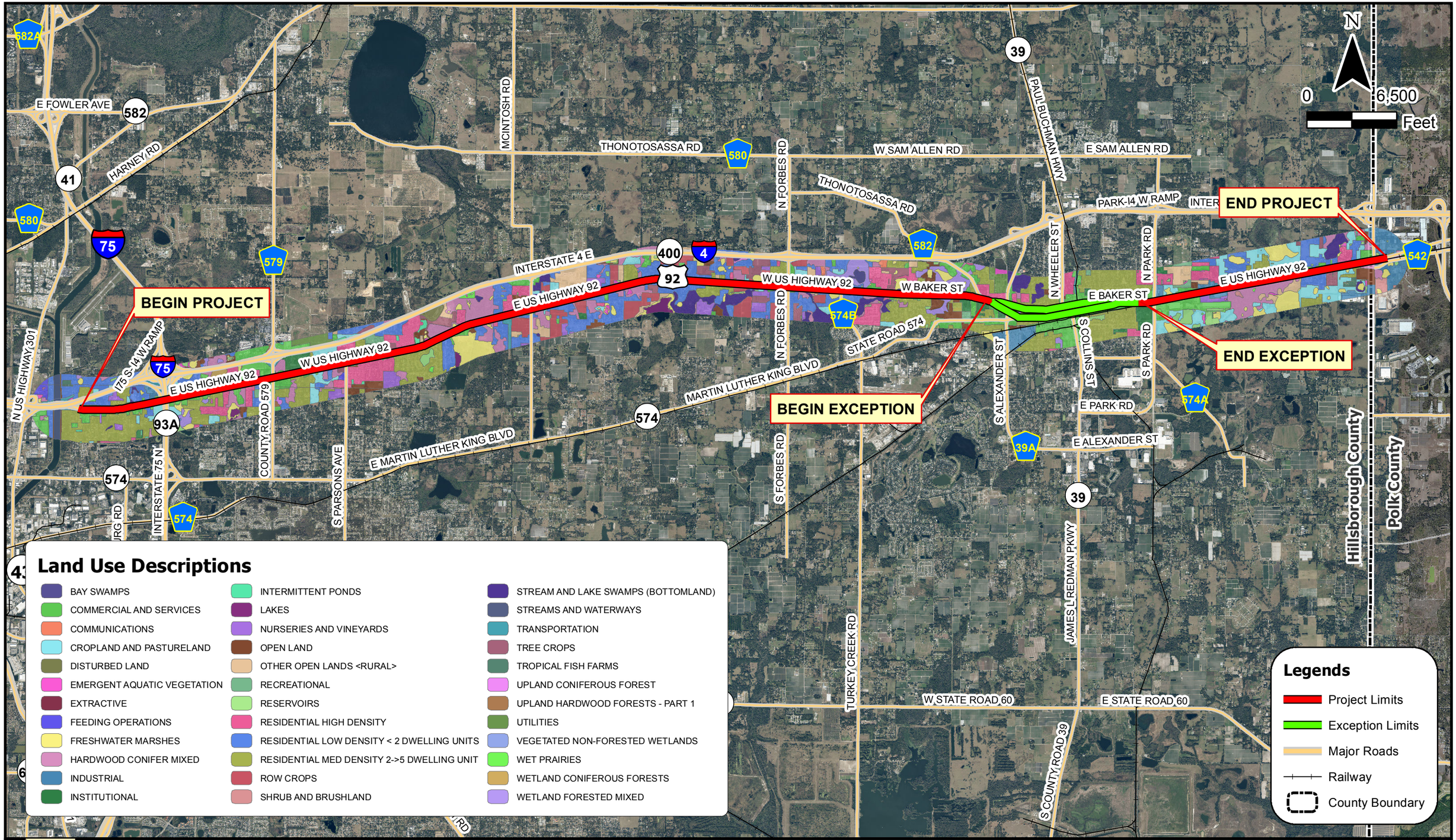
Florida Department of Transportation
District 7

SR 600 (US 92) PD&E Study Re-Evaluation

from East of I-4 to County Line Road
Hillsborough County, Florida
Work Program Item Segment No.: 435749-1

NCRS SOILS MAP

EXHIBIT 4B

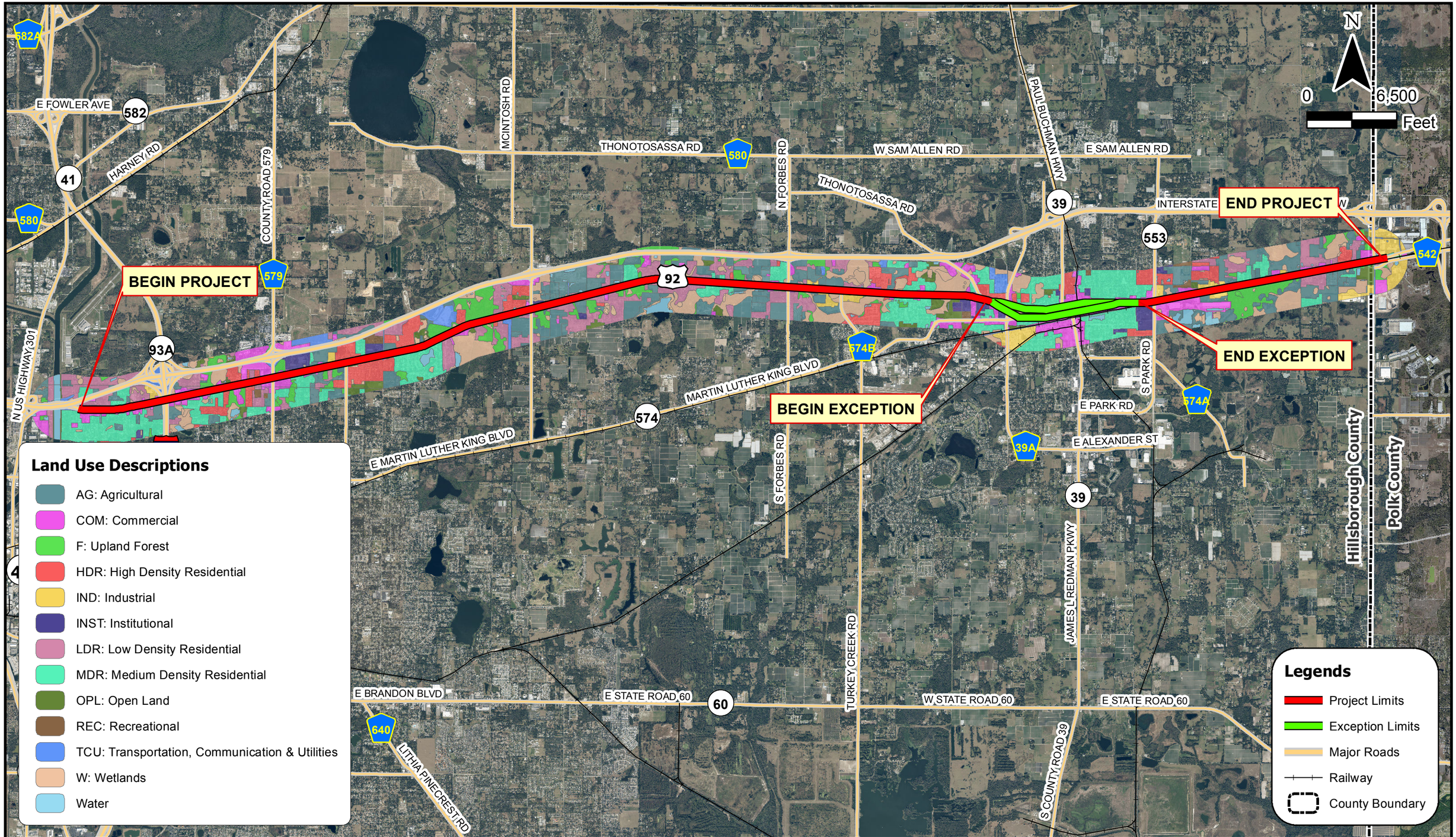


Florida Department of Transportation
District 7

SR 600 (US 92) PD&E Study Re-Evaluation
from East of I-4 to County Line Road
Hillsborough County, Florida
Work Program Item Segment No.: 435749-1

EXISTING LAND USE MAP

EXHIBIT 5

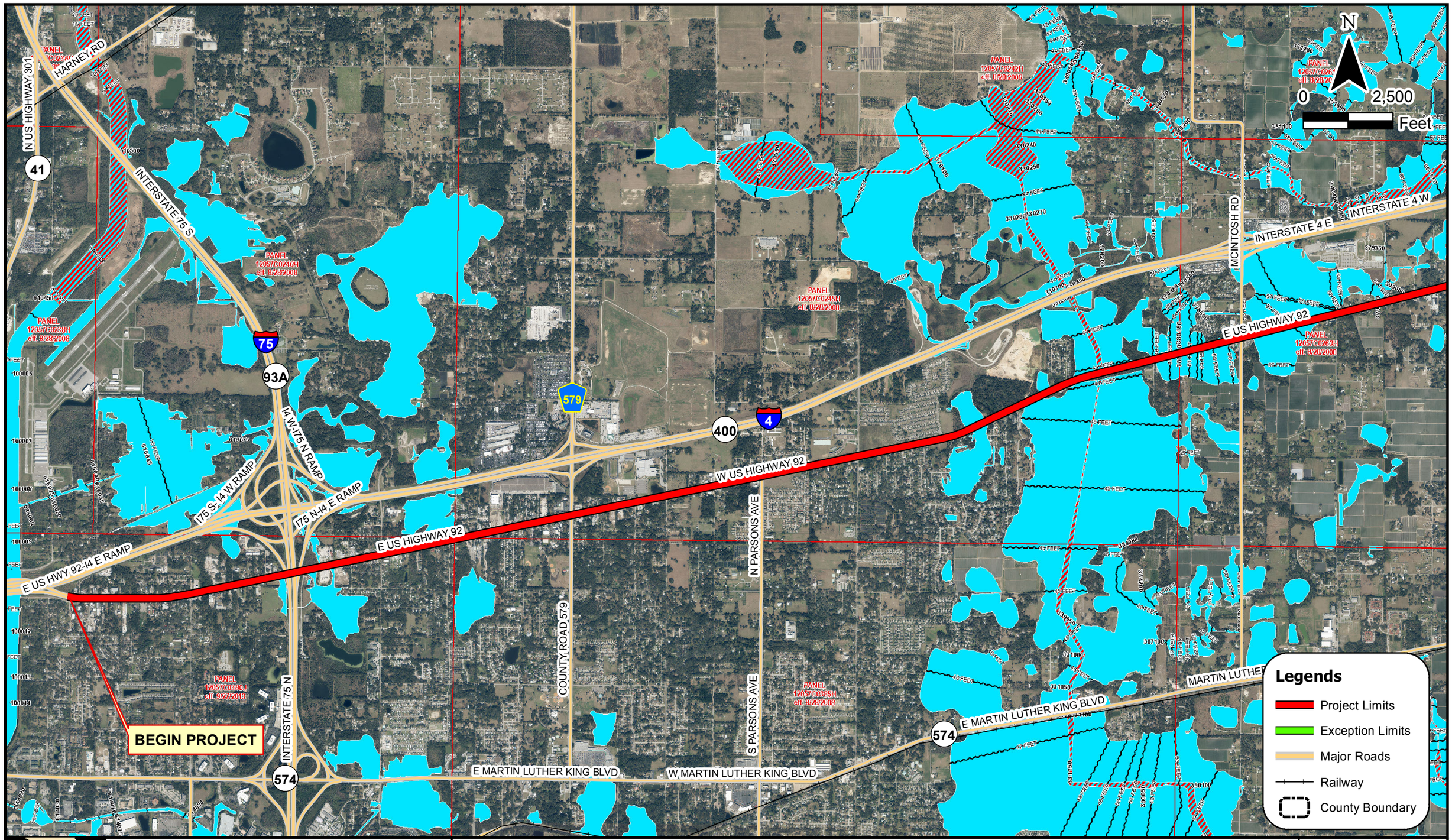


Florida Department of Transportation
District 7

SR 600 (US 92) PD&E Study Re-Evaluation
from East of I-4 to County Line Road
Hillsborough County, Florida
Work Program Item Segment No.: 435749-1

FUTURE LAND USE MAP

EXHIBIT 6



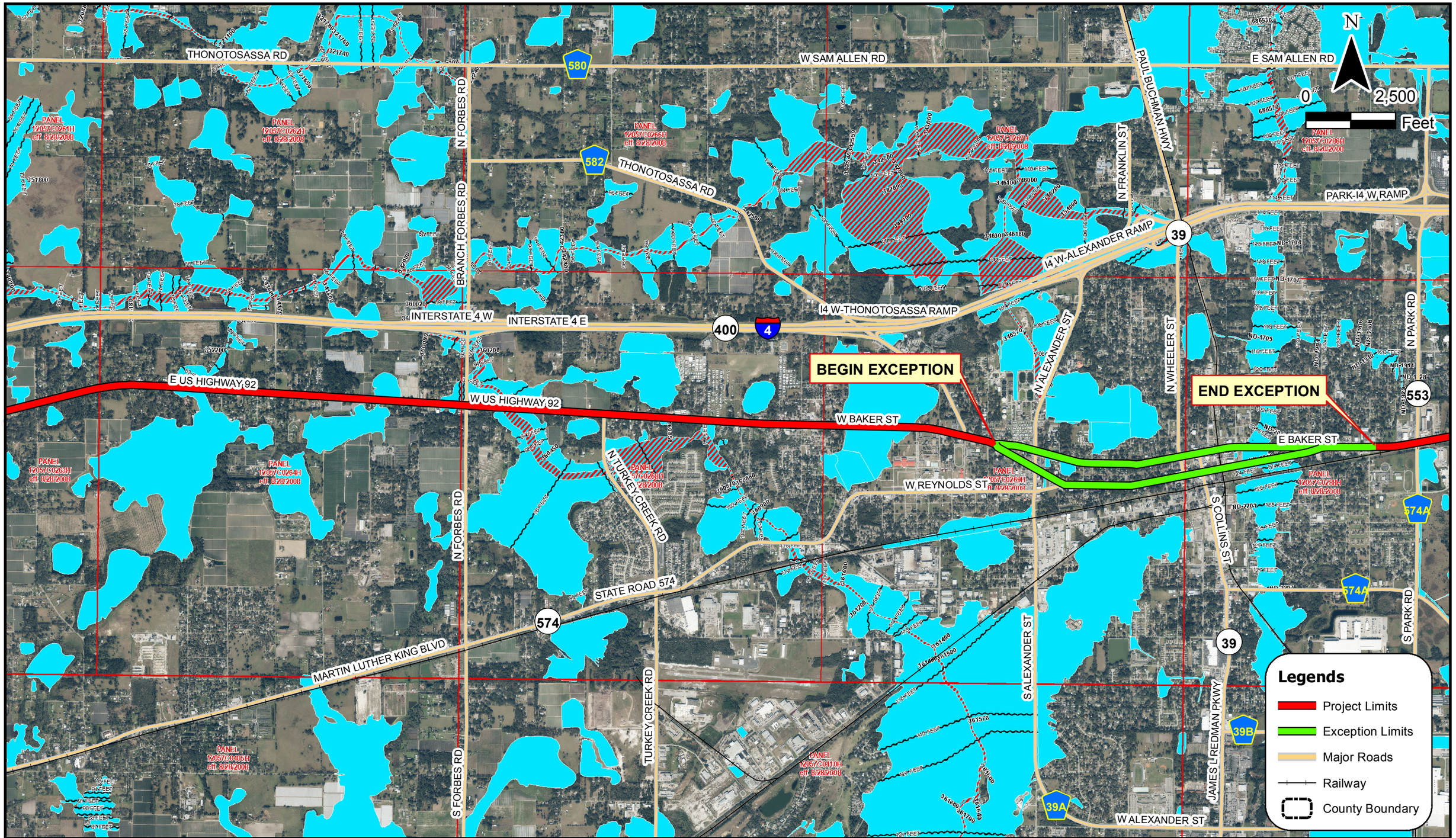
Florida Department of Transportation
District 7

SR 600 (US 92) PD&E Study Re-Evaluation

from East of I-4 to County Line Road
Hillsborough County, Florida
Work Program Item Segment No.: 435749-1

FEMA MAP

EXHIBIT 7 (1 OF 3)



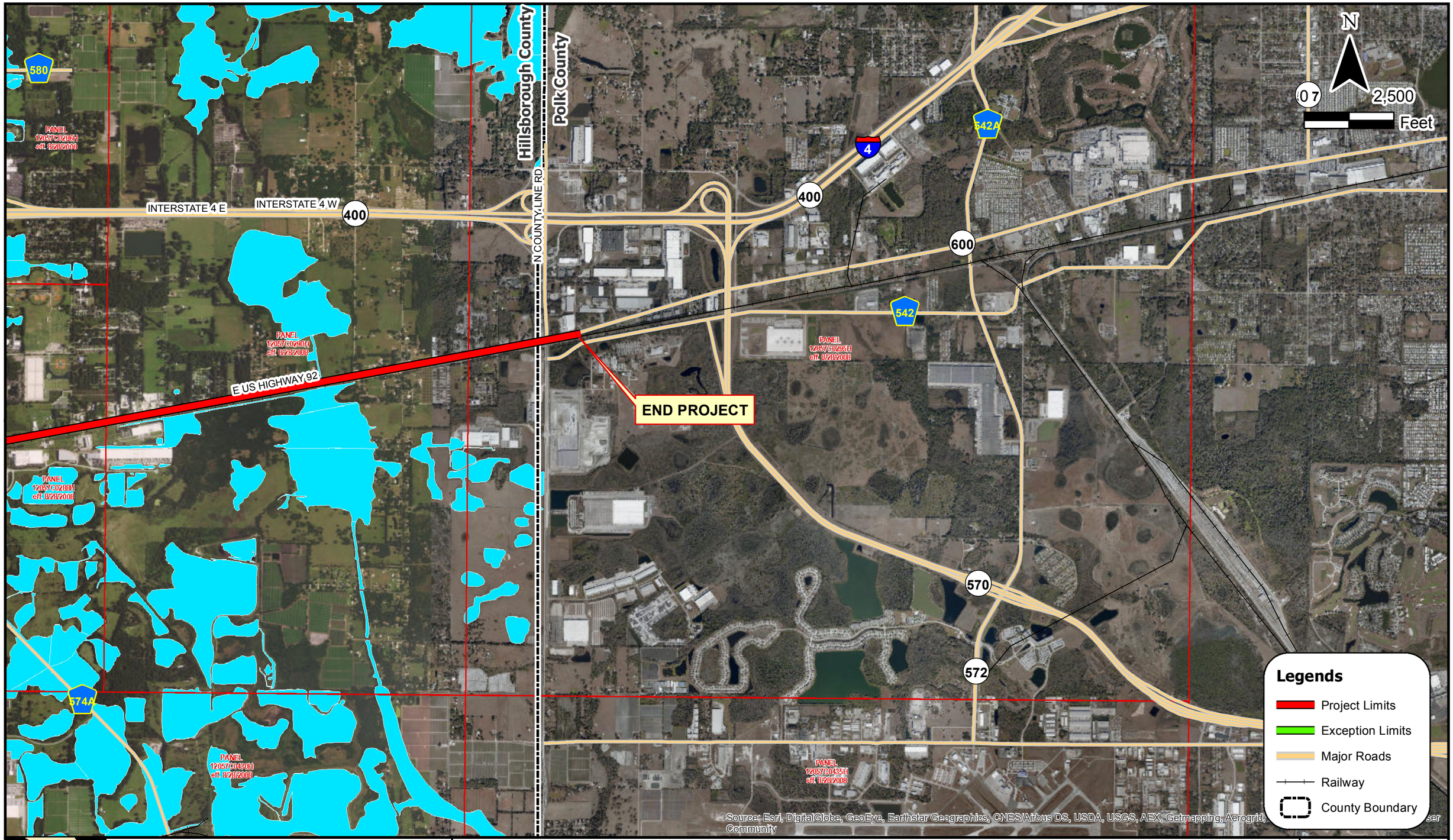
Florida Department of Transportation
District 7

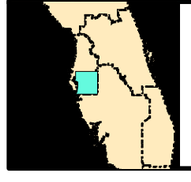
SR 600 (US 92) PD&E Study Re-Evaluation

from East of I-4 to County Line Road
Hillsborough County, Florida
Work Program Item Segment No.: 435749-1

FEMA MAP

EXHIBIT 7 (2 OF 3)





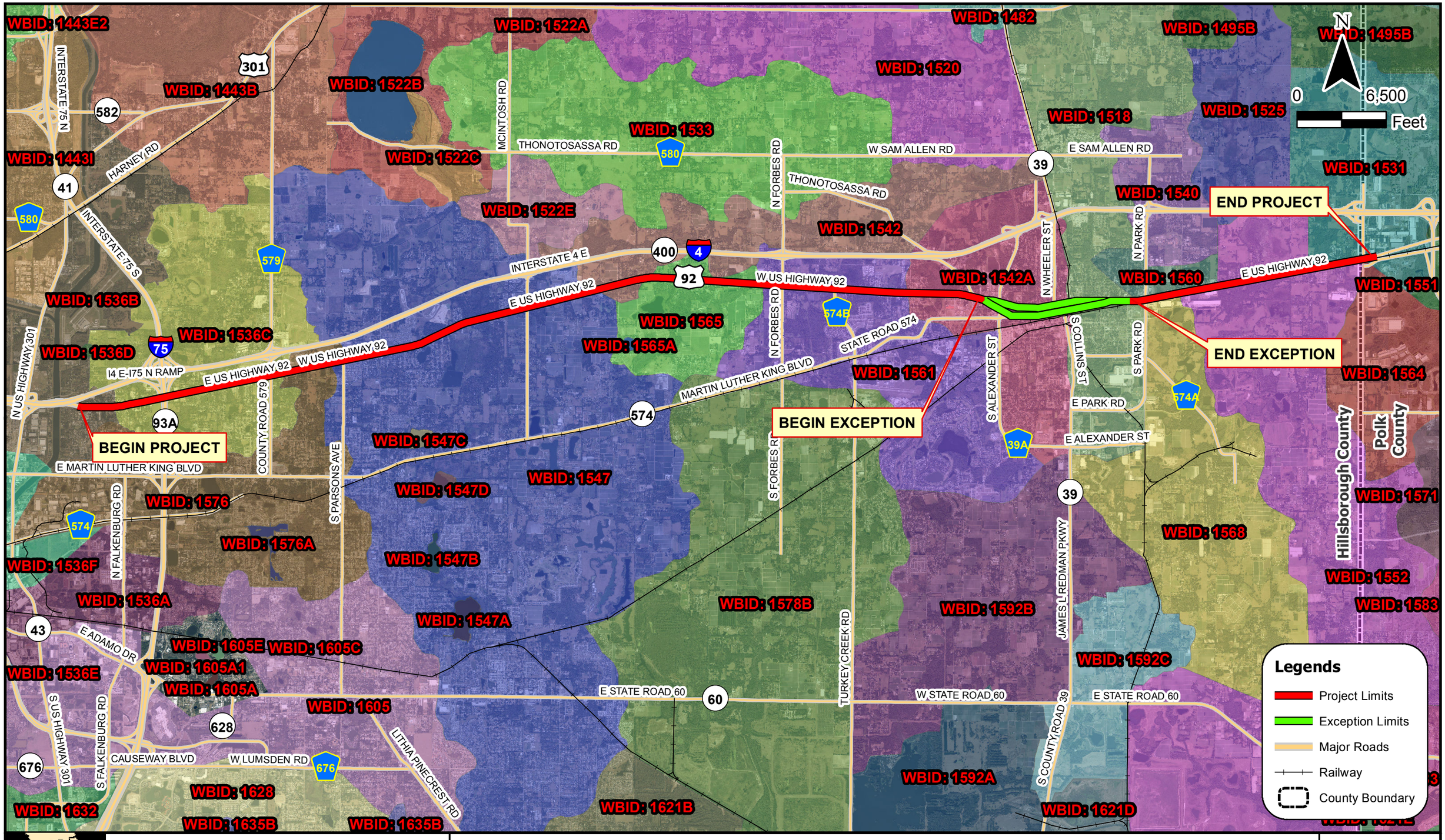
FDOT

Florida Department of Transportation
District 7

SR 600 (US 92) PD&E Study Re-Evaluation
from East of I-4 to County Line Road
Hillsborough County, Florida
Work Program Item Segment No.: 435749-1

FEMA MAP

EXHIBIT 7 (3 OF 3)



FDOT

Florida Department of Transportation
District 7

SR 600 (US 92) PD&E Study Re-Evaluation

from East of I-4 to County Line Road
Hillsborough County, Florida
Work Program Item Segment No.: 435749-1

WBID MAP

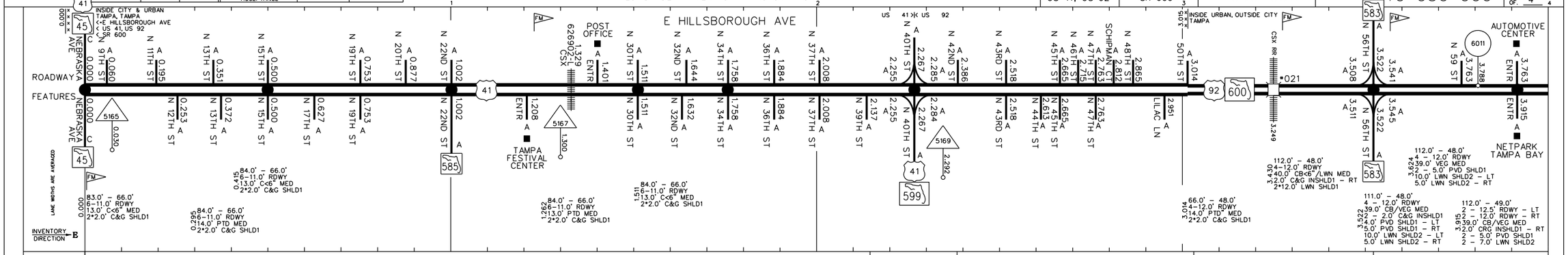
EXHIBIT 8

STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

FLORIDA DEPARTMENT OF TRANSPORTATION

	5 YR INV	SLD REV	INTERIM REVISIONS BMP	EMP	INV	SLD REV
DATE	03/04/2010	04/27/2010	3.532	4.772		09/06/2013
BY	MEI/JM-KA	MEI/KA	CONSTRUCTION			FTE/KA
			ACCEPTANCE			

INT. or US ROUTE NO	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO.	OF.
US 41, US 92	SR 600	HILLSBOROUGH	7	10 030 000	1	4



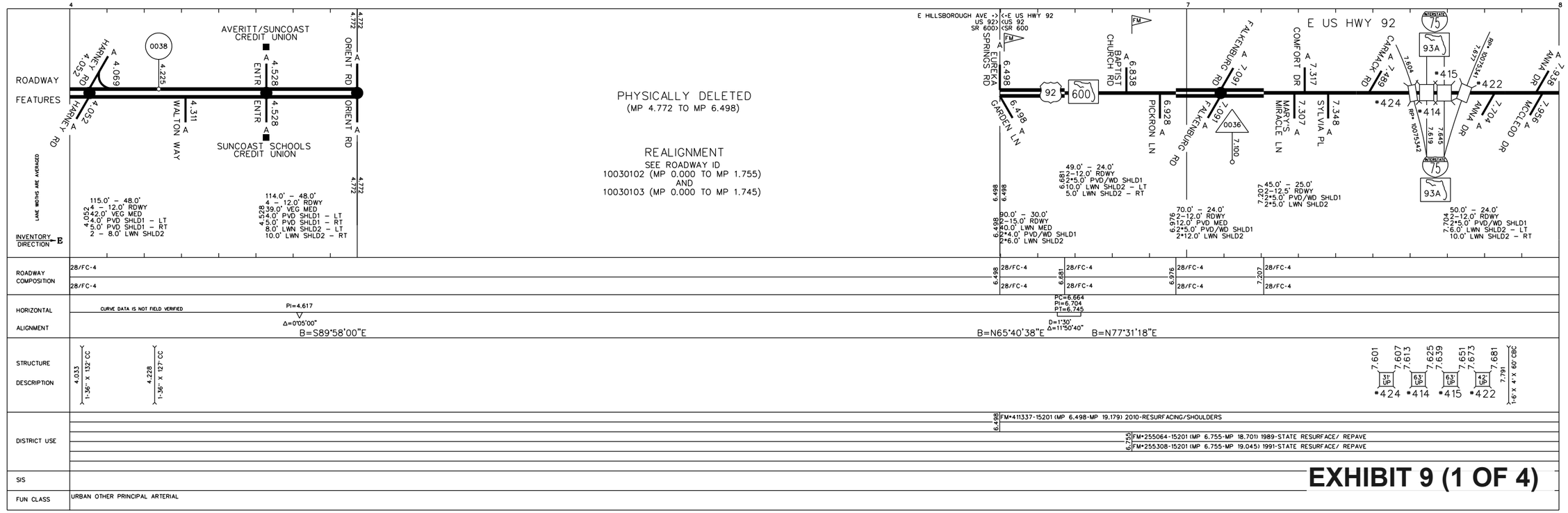


EXHIBIT 9 (1 OF 4)

STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

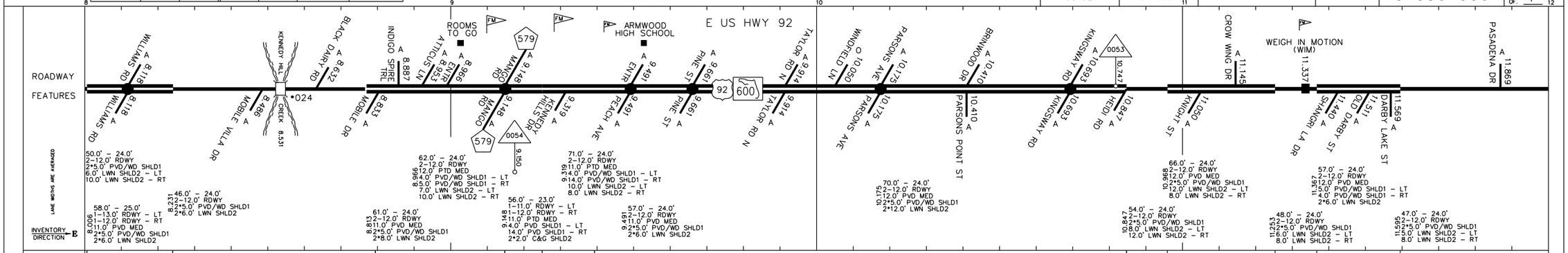
FLORIDA DEPARTMENT OF TRANSPORTATION

	5 YR INV	SLD REV
DATE	03/04/2010	04/27/2010
BY	MEI/JM-KA	MEI/KA

INTERIM REVISIONS

BMP	EMP	INV	SLD REV
11.337	11.337	1/06/2012	1/09/2012
NEW CONSTRUCTION		MEI/MR-AK-MCS	MEI/MR

INT. or US ROUTE NO	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO.	OF.
US 92	SR 600	HILLSBOROUGH	7	10 030 000	2	4



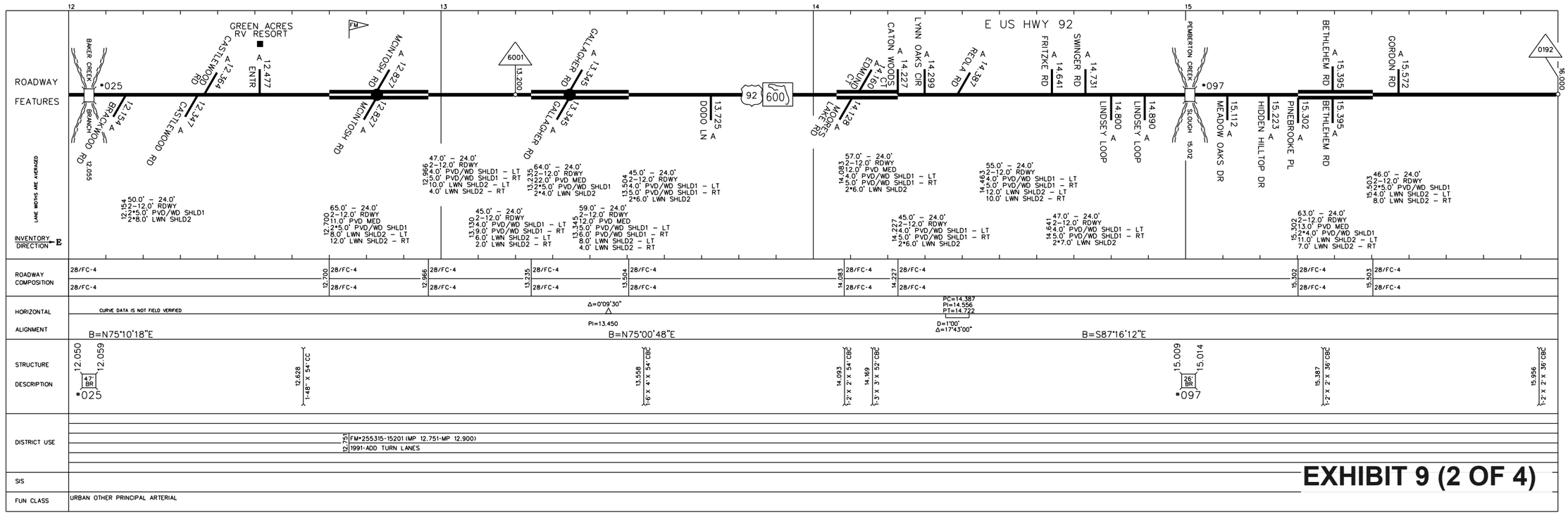


EXHIBIT 9 (2 OF 4)

STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

FLORIDA DEPARTMENT OF TRANSPORTATION

	5 YR INV	SLD REV
DATE	03/04/2010	04/27/2010
BY	MEI/JM-KA	MEI/KA

INTERIM REVISIONS

BMP	EMP	INV	SLD REV
6.498	19.179	10/20/2010	11/29/2010
20.424	20.686	09/30/2010	MEI/KA
		MEI/JM-MCS	

INT. or US ROUTE NO	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO. / OF.
US 92	SR 39, SR 600	HILLSBOROUGH	7	10 030 000	3 / 4

16 17 18 19 20 21

ROADWAY FEATURES

LANE WIDTHS ARE AVERAGED

INVENTORY DIRECTION E

E US HWY 92

E US HWY 92 >|<- W BAKER ST

ROGERS RD A 16.156 — TANNER RD 16.156 A

BRANCH FORBES RD A 16.408 — N FORBES RD 16.408 A

WHITELAW RD 16.541 A

PEMBERTON CREEK 16.623 *098

0080 16.945

HAGGARD RD 16.915 A

TURKEY CREEK RD N 17.135 A — TURKEY CREEK 17.135 A

92 600

FLETCHER LN A 17.571

ROBINSON ORNAGE PARK A 17.720 ENTR

17.936 INSIDE CITY & URBAN PLANT CITY, TAMPA

ENTERPRISE ST A 18.061

WHITEHURST RD A 18.180 — WALTER DR 18.180 A

SEMINOLE LAKE BLVD 18.253 A

SUGAR CREEK DR 17.863 A

RITTER ST 18.672 A

EDWARDS ST 18.787 A

N WOODROW WILSON ST A 18.912 — WILSON ST 18.912 A

46.0' - 24.0'
2-12.0' RDWY
2•5.0' PVD/WD SHLD1
4.0' LWN SHLD2 - LT
8.0' LWN SHLD2 - RT

66.0' - 24.0' (16.291)
2-12.0' RDWY
12.0' PVD MED
2•5.0' PVD/WD SHLD1
2•10.0' LWN SHLD2

48.0' - 24.0' (16.541)
2-12.0' RDWY
2•5.0' PVD/WD SHLD1
6.0' LWN SHLD2 - LT
8.0' LWN SHLD2 - RT

61.0' - 24.0' (17.088)
2-12.0' RDWY
13.0' PVD MED
2•5.0' PVD/WD SHLD1
6.0' LWN SHLD2 - LT
8.0' LWN SHLD2 - RT

44.0' - 24.0' (17.239)
2-12.0' RDWY
2•4.0' PVD/WD SHLD1
2•6.0' LWN SHLD2

60.0' - 24.0' (17.794)
2-12.0' RDWY
12.0' PVD MED
2•4.0' PVD/WD SHLD1
6.0' LWN SHLD2 - LT
10.0' LWN SHLD2 - RT

50.0' - 24.0' (17.980)
2-12.0' RDWY
2•4.0' PVD/WD SHLD1
6.0' LWN SHLD2 - LT
12.0' LWN SHLD2 - RT

69.0' - 24.0' (18.081)
2-12.0' RDWY
13.0' PVD MED
2•4.0' PVD/WD SHLD1
2•12.0' LWN SHLD2

44.0' - 24.0' (18.261)
2-12.0' RDWY
2•4.0' PVD/WD SHLD1
2•6.0' LWN SHLD2

62.0' - 24.0' (18.734)
2-12.0' RDWY
12.0' PVD MED
2•4.0' PVD/WD SHLD1
12.0' LWN SHLD2 - LT
6.0' LWN SHLD2 - RT

ROADWAY COMPOSITION

28/FC-4 throughout, with breaks at 16.291, 16.541, 17.088, 17.239, 17.794, 17.980, 18.081, 18.261, 18.734

HORIZONTAL ALIGNMENT

CURVE DATA IS NOT FIELD VERIFIED

Δ=2°50'00" D=0°17' PC=18.099 PI=18.194 PT=18.288

PC=18.808 PI=18.866 PT=18.925 D=2°00' Δ=12°19'00"

B=N89°53'48"E B=S77°47'12"E

STRUCTURE DESCRIPTION

16.363 30.69' X 36'-1"

16.920 29.25' 26' BR *098

17.096 280.56' X 27'-4"

17.727 30.57' X 36'-1"

18.579 280.56' X 4' X 6'-1"

DISTRICT USE

16.274 FM*255488-15201 (MP 16.274-MP 16.504) 1997-INTERSECTION (MAJOR)

18.305 FM*255350-15201 (MP 18.105-MP 18.305) 1998-ADD TURN LANES

18.962 FM*255628-15201 (MP 18.962-MP 19.162) 1997-INTERSECTION (MAJOR)

18.436 FM*255439-15201 (MP 18.436-MP 20.271) 1977-STATE RESURFACE/ REPAVE

18.718 FM*255641-15201 (MP 18.718-MP 18.918) 1997-ADD LEFT TURN LANES

SIS

FUN CLASS: URBAN OTHER PRINCIPAL ARTERIAL

US 92 >|< US 92
SR 600 >|< SR 600

566 FM — THONOTOSASSA RD A 19.046 — LEMON ST 19.046 A

600 FM — W BAKER ST ->|<- THONOTOSASSA RD

N MOBLEY ST A 19.174 — N MOBLEY ST 19.174 A

BAKER ST A 19.174 — RUSK A 19.194

N LAKEWOOD ST A 19.244

N PLANT AVE A 19.318 — N PLANT AVE 19.318 A

ALEXANDER ST 19.425 — ALEXANDER ST 19.460 A

5015 19.425

5016 19.486

OAK AVE A 19.460 — OAK AVE 19.460 A 19.430 A

DORT ST N A 19.606 — ACACIA DR 19.548 A

574 FM — W REYNOLDS ST A 19.622 — W REYNOLDS ST 19.673 A

ONE WAY (19.174 - 20.219)

THONOTOSASSA RD ->|<- W REYNOLDS ST

CAREY ST A 19.735 — CAREY ST 19.735 A

N DAVIS ST B 19.864 — PEARL ST 19.815 A

92 5022 19.925 600

N FRANKLIN ST A 20.016 — N FRANKLIN ST 20.016 A

N HOWARD ST B 20.066 — N HOWARD ST 20.066 A

N DANIELS ST B 20.117 — N DANIELS ST 20.117 A

N WALKER ST B 20.168 — N WALKER ST 20.168 A

N THOMAS ST A 20.219 — N THOMAS ST 20.219 A

SR 600 ->|<- SR 39
SR 600 >|<- SR 39

ONE WAY (20.219 - 20.481)

W REYNOLDS ST ->|<- REYNOLDS ST
SR 39 ->|<- SR 600

REYNOLDS ST ->|<- E REYNOLDS ST

39 — WHEELER ST A 20.270 — WHEELER ST 20.270 A

N EVERS ST B 20.323 — N EVERS ST 20.323 B

5011 20.271 20.300

39 — COLLINS ST A 20.373 — COLLINS ST 20.373 A

PALMER ST B 20.424 — PALMER ST 20.424 B

CSX 622441-F 20.478

N MICHIGAN AVE A 20.549

LAKE ST A 20.593

ONE WAY (20.481 - 21.000)

N PENNSYLVANIA AVE A 20.686

N KNIGHT ST A 20.758

N JOHNSON ST B 20.821

N MERRIN ST B 20.884

N WAGNELL ST B 20.948 — WAGNELL ST 20.948 A

5042 21.000

5029 19.032

51.0' - 35.0' (19.046)
4-12.0' RDWY - LT
2-11.5' RDWY - RT
12.0' PVD MED
2•2.0' C&G SHLD1

28.0' - 24.0' (19.174)
2-12.0' RDWY
2•2.0' C&G SHLD1

92.0' - 46.0' (19.194)
4-11.5' RDWY
12.0' PVD MED
2•5.0' PVD SHLD1
2•12.0' LWN SHLD2

STATIONING EXCEPTION
See Roadway ID 10090000
MP 14.767 TO MP 15.444

24.0' - 24.0' (19.611)
2-12.0' RDWY
2•0.0' RC SHLD1

32.0' - 24.0' (20.016)
2-12.0' RDWY
8.0' PVD SHLD1 - LT
0.0' RC SHLD1 - RT
0.0' RC SHLD2 - LT

34.0' - 20.0' (20.219)
2-10.0' RDWY
2•7.0' PVD SHLD1
2•0.0' RC SHLD2

22.0' - 22.0' (20.478)
2-11.0' RDWY
2•0.0' RC SHLD1

26.0' - 22.0' (20.948)
2-11.0' RDWY
2•2.0' C&G SHLD1

ROADWAY COMPOSITION

28/FC-4 throughout, with breaks at 19.046, 19.174, 20.424, 20.686

HORIZONTAL ALIGNMENT

CURVE DATA IS NOT FIELD VERIFIED

Δ=16°50'54" PI=19.185 B=S60°56'18"E

Δ=0°07'57" PI=19.474 B=S60°48'21"E

Δ=29°08'01" PI=19.648 B=S89°56'22"E

Δ=11°14'57" D=9°15' PC=19.994 PI=20.005 PT=20.017 B=N78°48'41"E

Δ=14°09'27" D=15°55' PC=20.952 PI=20.961 PT=20.969 B=N64°39'14"E

STRUCTURE DESCRIPTION

19.654 30' CBC 1'-10" X 5'

20.625 280.12' X 5' X 8'

DISTRICT USE

19.045 FM*255557-15201 (MP 19.045-MP 24.593) 1997-FEDERAL AID RESURFACE/ REPAVE

19.191 FM*255615-15201 (MP 19.191-MP 24.593) 2001-FEDERAL AID RESURFACE/ REPAVE

20.424 FM*406554-25201 (MP 20.424-MP 20.686) 2010-RAILROAD CROSSING

20.376 FM*255464-15201 (MP 20.376-MP 20.576) 1998-RAILROAD CROSSING

SIS

FUN CLASS: URBAN OTHER PRINCIPAL ARTERIAL

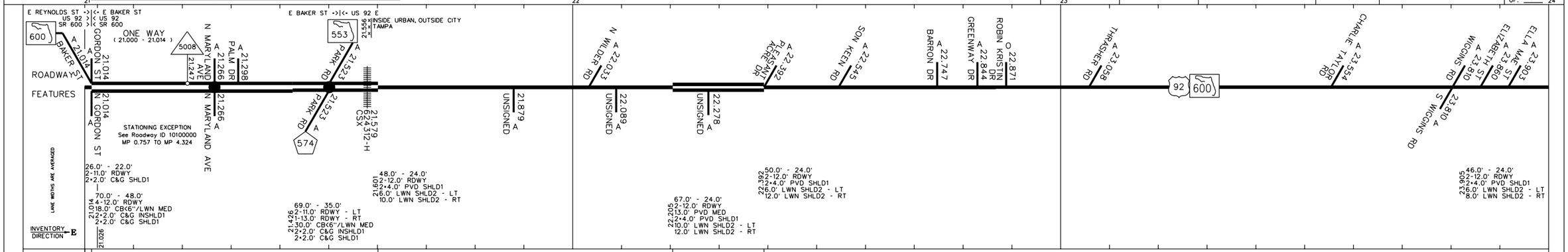
EXHIBIT 9 (3 OF 4)

STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

FLORIDA DEPARTMENT OF TRANSPORTATION

	5 YR INV	SLD REV	INTERIM REVISIONS BMP	EMP	INV	SLD REV
DATE	03/04/2010	04/27/2010				
BY	MEI/JM-KA	MEI/KA				

INT. or US ROUTE NO	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO. / OF.
US 92	SR 600	HILLSBOROUGH	7	10 030 000	4 / 4



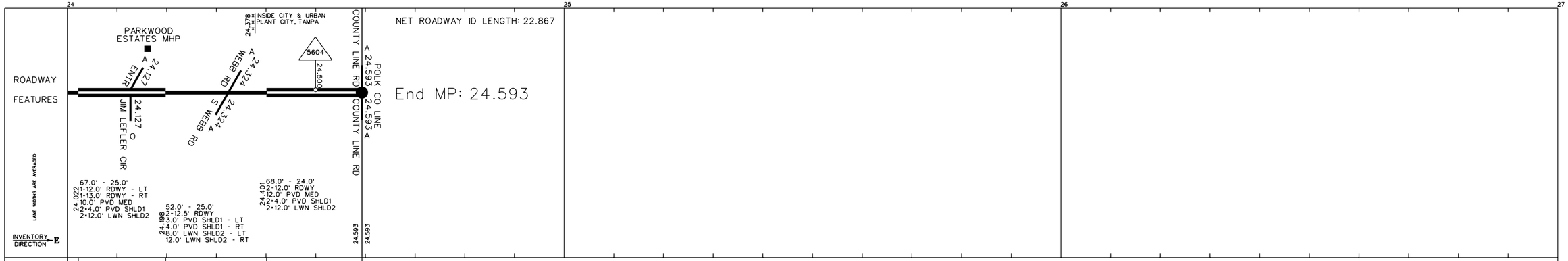


EXHIBIT 9 (4 OF 4)

Appendix 2

Cross Drain Pictures, Review Checklist and FDOT SLD

		
CD - 01	**CD - 02**	**CD - 03**
		
CD - 04	**CD - 05**	**CD - 06**

		
CD - 07	**CD - 08**	**CD - 09**
		
CD - 10	**CD - 11**	**CD - 12**

		
CD - 13	**CD - 14**	**CD - 15**
		
CD - 16	**CD - 17**	**CD - 18**

		
CD - 19	**CD - 20**	**CD - 21**

CROSS/SIDE DRAIN FIELD REVIEW NOTES

FPID: 435749-1-22-01 SR 600
DATE: October 22, 2015 DESCRIPTION US 92 PD&E Study Re-Evaluation
ATTENDEES: Mirta Laos & Kamrul Islam

STRUCT. NO.	DESCRIPTION			# OF BARRELS	SIZE	MATERIAL	CULVERT SILTATION	CONDITION OF ENDWALL/CULVERT	SCOUR	SIGNS OF HIGHWATER	CHANNEL DESCRIPTION	ROADWAY ISSUES	PHOTO		
	LOCATION	SIDE	STR. TYPE				NOTE USE PROBE TO DETERMINE DEPTH OF SILT	NOTE CRACKING, SPALLING, DETERIORATION	MEASURE DEPTH OF SCOUR HOLE	MEASURE HEIGHT OF WATER STAIN ABOVE CULVERT INVERT	(WET, DRY, VEGETATION, DEBRIS, EROSION, SOIL, ETC.)	NOTE DEPRESSIONS, CRACKING, CURB ISSUES, ETC.	NUMBER	DIRECTION	NOTES
CD-01	177 + 95.44 (MP 7.791)	☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☐ 24" ☐ 30" ☐ 36" ☑ OTHER 6' x 4'	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☐ NO SILT ☑ OTHER SILT	☑ GOOD CONDITION ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☑ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☐ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☑ OTHER VEGETATION	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	
CD-02	274 + 55.28 (MP 9.629)	☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☑ 24" ☐ 30" ☐ 36" ☐ OTHER	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☐ NO SILT ☑ OTHER SILT	☑ GOOD CONDITION ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☑ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☐ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☑ OTHER VEGETATION	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	
CD-03	319 + 53.45 (MP 10.47)	☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☑ 24" ☐ 30" ☐ 36" ☐ OTHER	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☐ NO SILT ☑ OTHER SILT (2")	☑ GOOD CONDITION ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☑ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☑ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☐ OTHER	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	
CD-04	348 + 55.36 (MP 11.034)	☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☐ 24" ☑ 30" ☐ 36" ☐ OTHER	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☐ NO SILT ☑ OTHER SILT (1")	☑ GOOD CONDITION ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☑ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☑ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☐ OTHER	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	
CD-05	364 + 74.56 (MP 11.344)	☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☐ 24" ☐ 30" ☐ 36" ☑ OTHER 2' x 2'	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☐ NO SILT ☐ OTHER	☐ GOOD CONDITION ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☐ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☑ OTHER VEGETATION	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	

CROSS/SIDE DRAIN FIELD REVIEW NOTES

FPID: 435749-1-22-01 SR 600
DATE: October 22, 2015 DESCRIPTION US 92 PD&E Study Re-Evaluation
ATTENDEES: Mirta Laos & Kamrul Islam

STRUCT. NO.	DESCRIPTION			# OF BARRELS	SIZE	MATERIAL	CULVERT SILTATION	CONDITION OF ENDWALL/CULVERT	SCOUR	SIGNS OF HIGHWATER	CHANNEL DESCRIPTION	ROADWAY ISSUES	PHOTO		
	LOCATION	SIDE	STR. TYPE				NOTE USE PROBE TO DETERMINE DEPTH OF SILT	NOTE CRACKING, SPALLING, DETERIORATION	MEASURE DEPTH OF SCOUR HOLE	MEASURE HEIGHT OF WATER STAIN ABOVE CULVERT INVERT	(WET, DRY, VEGETATION, DEBRIS, EROSION, SOIL, ETC.)	NOTE DEPRESSIONS, CRACKING, CURB ISSUES, ETC.	NUMBER	DIRECTION	NOTES
CD-06	431 + 49.73 (MP 12.628)	☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☐ 24" ☐ 30" ☐ 36" ☑ OTHER 48"	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☐ NO SILT ☑ OTHER SILT	☐ GOOD CONDITION ☐ VERY LIGHT ☐ LIGHT ☑ MODERATE ☐ SEVERE	☐ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☐ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☑ OTHER VEGETATION	☐ DEPRESSION ☑ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	
CD-07	481 + 89.85 (MP 13.558)	☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☐ 24" ☐ 30" ☐ 36" ☑ OTHER 6' x 4'	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☐ NO SILT ☑ OTHER SILT	☐ GOOD CONDITION ☐ VERY LIGHT ☐ LIGHT ☑ MODERATE ☐ SEVERE	☑ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☐ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☑ OTHER VEGETATION	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	
CD-08	510 + 22.30 (MP 14.093)	☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☑ 24" ☐ 30" ☐ 36" ☐ OTHER	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☐ NO SILT ☑ OTHER SILT	☑ GOOD CONDITION ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☑ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☐ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☑ OTHER VEGETATION	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	
CD-09	514 + 42.37 (MP 14.169)	☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☐ 24" ☐ 30" ☐ 36" ☑ OTHER 3' x 3'	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☐ NO SILT ☑ OTHER SILT	☐ GOOD CONDITION ☐ VERY LIGHT ☐ LIGHT ☑ MODERATE ☐ SEVERE	☑ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☑ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☐ OTHER VEGETATION	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	
CD-10	578 + 24.48 (MP 15.387)	☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☐ 24" ☐ 30" ☐ 36" ☑ OTHER 2' x 2'	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☐ NO SILT ☑ OTHER SILT	☐ GOOD CONDITION ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☐ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☑ OTHER VEGETATION	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	

CROSS/SIDE DRAIN FIELD REVIEW NOTES

FPID: 435749-1-22-01 SR 600
DATE: October 22, 2015 DESCRIPTION US 92 PD&E Study Re-Evaluation
ATTENDEES: Mirta Laos & Kamrul Islam

STRUCT. NO.	DESCRIPTION			# OF BARRELS	SIZE	MATERIAL	CULVERT SILTATION	CONDITION OF ENDWALL/CULVERT	SCOUR	SIGNS OF HIGHWATER	CHANNEL DESCRIPTION	ROADWAY ISSUES	PHOTO		
	LOCATION	SIDE	STR. TYPE				NOTE USE PROBE TO DETERMINE DEPTH OF SILT	NOTE CRACKING, SPALLING, DETERIORATION	MEASURE DEPTH OF SCOUR HOLE	MEASURE HEIGHT OF WATER STAIN ABOVE CULVERT INVERT	(WET, DRY, VEGETATION, DEBRIS, EROSION, SOIL, ETC.)	NOTE DEPRESSIONS, CRACKING, CURB ISSUES, ETC.	NUMBER	DIRECTION	NOTES
CD-11	607 + 50.42 (MP 15.956)	☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☑ 24" ☐ 30" ☐ 36" ☐ OTHER	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☐ NO SILT ☑ OTHER SILT	☐ GOOD CONDITION ☐ VERY LIGHT ☐ LIGHT ☑ MODERATE ☐ SEVERE	☑ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☐ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☑ OTHER VEGETATION	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	
CD-12	628 + 94.33 (MP 16.363)	☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☐ 24" ☐ 30" ☑ 36" ☐ OTHER	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☐ NO SILT ☑ OTHER SILT	☐ GOOD CONDITION ☐ VERY LIGHT ☐ LIGHT ☑ MODERATE ☐ SEVERE	☐ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☐ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☑ OTHER VEGETATION	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	
CD-13	664 + 33.35 (MP 17.016)	☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☐ 24" ☐ 30" ☐ 36" ☑ OTHER 4' x 2'	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☐ NO SILT ☑ OTHER SILT	☐ GOOD CONDITION ☐ VERY LIGHT ☐ LIGHT ☑ MODERATE ☐ SEVERE	☐ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☐ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☑ OTHER VEGETATION	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	
CD-14	700 + 50.28 (MP 17.719)	☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☐ 24" ☐ 30" ☑ 36" ☐ OTHER	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☐ NO SILT ☑ OTHER SILT	☐ GOOD CONDITION ☐ VERY LIGHT ☐ LIGHT ☑ MODERATE ☐ SEVERE	☐ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☑ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☐ OTHER	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	
CD-15	746 + 18.99 (MP 18.579)	☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☐ 24" ☐ 30" ☐ 36" ☑ OTHER 6' x 4'	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☐ NO SILT ☑ OTHER SILT	☐ GOOD CONDITION ☐ VERY LIGHT ☑ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☐ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☑ OTHER VEGETATION	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	

CROSS/SIDE DRAIN FIELD REVIEW NOTES

FPID: 435749-1-22-01 SR 600
DATE: October 22, 2015 DESCRIPTION US 92 PD&E Study Re-Evaluation
ATTENDEES: Mirta Laos & Kamrul Islam

STRUCT. NO.	DESCRIPTION			# OF BARRELS	SIZE	MATERIAL	CULVERT SILTATION	CONDITION OF ENDWALL/CULVERT	SCOUR	SIGNS OF HIGHWATER	CHANNEL DESCRIPTION	ROADWAY ISSUES	PHOTO		
	LOCATION	SIDE	STR. TYPE				NOTE USE PROBE TO DETERMINE DEPTH OF SILT	NOTE CRACKING, SPALLING, DETERIORATION	MEASURE DEPTH OF SCOUR HOLE	MEASURE HEIGHT OF WATER STAIN ABOVE CULVERT INVERT	(WET, DRY, VEGETATION, DEBRIS, EROSION, SOIL, ETC.)	NOTE DEPRESSIONS, CRACKING, CURB ISSUES, ETC.	NUMBER	DIRECTION	NOTES
CD-16	1032 + 53.17 (MP 21.663)	☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☐ 24" ☐ 30" ☐ 36" ☑ OTHER 5' x 2'	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☐ NO SILT ☑ OTHER SILT	☐ GOOD CONDITION ☐ VERY LIGHT ☑ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☐ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☑ OTHER VEGETATION	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	
CD-17	1048 + 11.69 (MP 21.963)	☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☐ 24" ☐ 30" ☐ 36" ☑ OTHER 5' x 2'	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☐ NO SILT ☑ OTHER SILT	☐ GOOD CONDITION ☐ VERY LIGHT ☐ LIGHT ☑ MODERATE ☐ SEVERE	☐ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☐ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☑ OTHER VEGETATION	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	
CD-18	1077 + 03.12 (MP 22.505)	☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☐ 24" ☐ 30" ☐ 36" ☑ OTHER 5' x 3'	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☑ NO SILT ☐ OTHER	☑ GOOD CONDITION ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☑ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☑ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☐ OTHER	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	
CD-19	1099 + 06.20 (MP 22.931)	☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☐ 24" ☐ 30" ☐ 36" ☑ OTHER 5' x 3'	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☑ NO SILT ☐ OTHER	☑ GOOD CONDITION ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☑ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☑ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☐ OTHER	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	
CD-20	1123 + 04.72 (MP 23.384)	☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☐ 1 ☑ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☐ 24" ☐ 30" ☐ 36" ☑ OTHER 6' x 4'	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☐ NO SILT ☑ OTHER SILT	☐ GOOD CONDITION ☐ VERY LIGHT ☑ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☐ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☑ OTHER VEGETATION	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	

CROSS/SIDE DRAIN FIELD REVIEW NOTES

FPID: 435749-1-22-01 SR 600
DATE: October 22, 2015 DESCRIPTION US 92 PD&E Study Re-Evaluation
ATTENDEES: Mirta Laos & Kamrul Islam

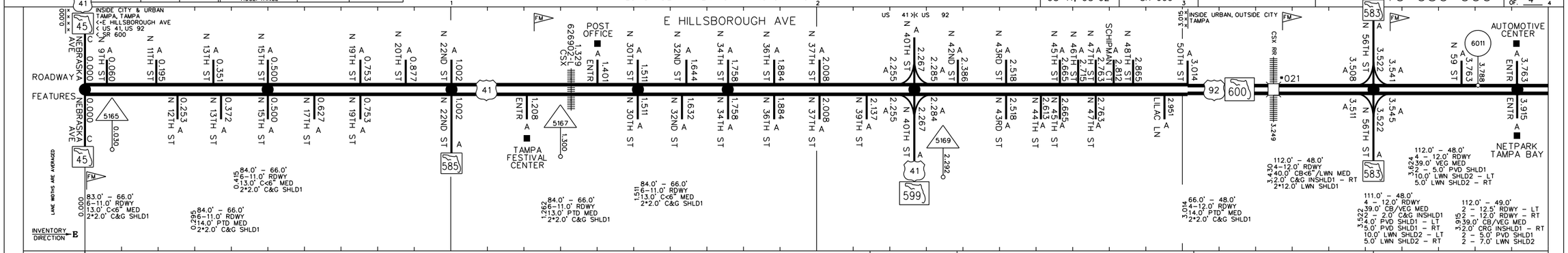
STRUCT. NO.	DESCRIPTION			# OF BARRELS	SIZE	MATERIAL	CULVERT SILTATION	CONDITION OF ENDWALL/CULVERT	SCOUR	SIGNS OF HIGHWATER	CHANNEL DESCRIPTION	ROADWAY ISSUES	PHOTO		
	LOCATION	SIDE	STR. TYPE				NOTE USE PROBE TO DETERMINE DEPTH OF SILT	NOTE CRACKING, SPALLING, DETERIORATION	MEASURE DEPTH OF SCOUR HOLE	MEASURE HEIGHT OF WATER STAIN ABOVE CULVERT INVERT	(WET, DRY, VEGETATION, DEBRIS, EROSION, SOIL, ETC.)	NOTE DEPRESSIONS, CRACKING, CURB ISSUES, ETC.	NUMBER	DIRECTION	NOTES
CD-21	1166 + 96.05 (MP 24.214)	☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☐ 24" ☐ 30" ☐ 36" ☑ OTHER 8' x 2'	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☐ NO SILT ☑ OTHER SILT	☐ GOOD CONDITION ☐ VERY LIGHT ☐ LIGHT ☑ MODERATE ☐ SEVERE	☐ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☐ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☑ OTHER VEGETATION	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	
		☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☑ 24" ☐ 30" ☐ 36" ☐ OTHER	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☐ NO SILT ☑ OTHER SILT	☑ GOOD CONDITION ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☑ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☐ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☑ OTHER VEGETATION	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	
		☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☑ 24" ☐ 30" ☐ 36" ☐ OTHER	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☐ NO SILT ☑ OTHER SILT (2")	☑ GOOD CONDITION ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☑ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☑ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☐ OTHER	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	
		☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☐ 24" ☑ 30" ☐ 36" ☐ OTHER	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☐ NO SILT ☑ OTHER SILT (1")	☑ GOOD CONDITION ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☑ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☑ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☐ OTHER	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	
		☐ LT ☐ RT	☐ INLET ☐ MH ☑ HW ☐ MES ☐ EW ☐ OTHER	☑ 1 ☐ 2 ☐ 3 ☐ 4	☐ 15" ☐ 18" ☐ 24" ☐ 30" ☐ 36" ☐ OTHER 2' x 2'	☑ RCP ☐ CMP ☐ SRAP ☐ OTHER	☐ NO SILT ☐ OTHER	☐ GOOD CONDITION ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO SCOUR ☐ VERY LIGHT ☐ LIGHT ☐ MODERATE ☐ SEVERE	☐ NO HIGHWATER ☐ OTHER	☐ MAINTENANCE ☐ DESILT ONLY ☐ EROSION ☐ RE-ESTABLISH DITCH L=_____ ☑ OTHER VEGETATION	☐ DEPRESSION ☐ CRACKING ☐ CURB TRANS. ☐ OTHER	_____ _____ _____	☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W ☐N ☐S ☐E ☐W	

STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

FLORIDA DEPARTMENT OF TRANSPORTATION

	5 YR INV	SLD REV	INTERIM REVISIONS BMP	EMP	INV	SLD REV
DATE	03/04/2010	04/27/2010	3.532	4.772		09/06/2013
BY	MEI/JM-KA	MEI/KA	CONSTRUCTION			FTE/KA
			ACCEPTANCE			

INT. or US ROUTE NO	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO.	OF.
US 41, US 92	SR 600	HILLSBOROUGH	7	10 030 000	1	4



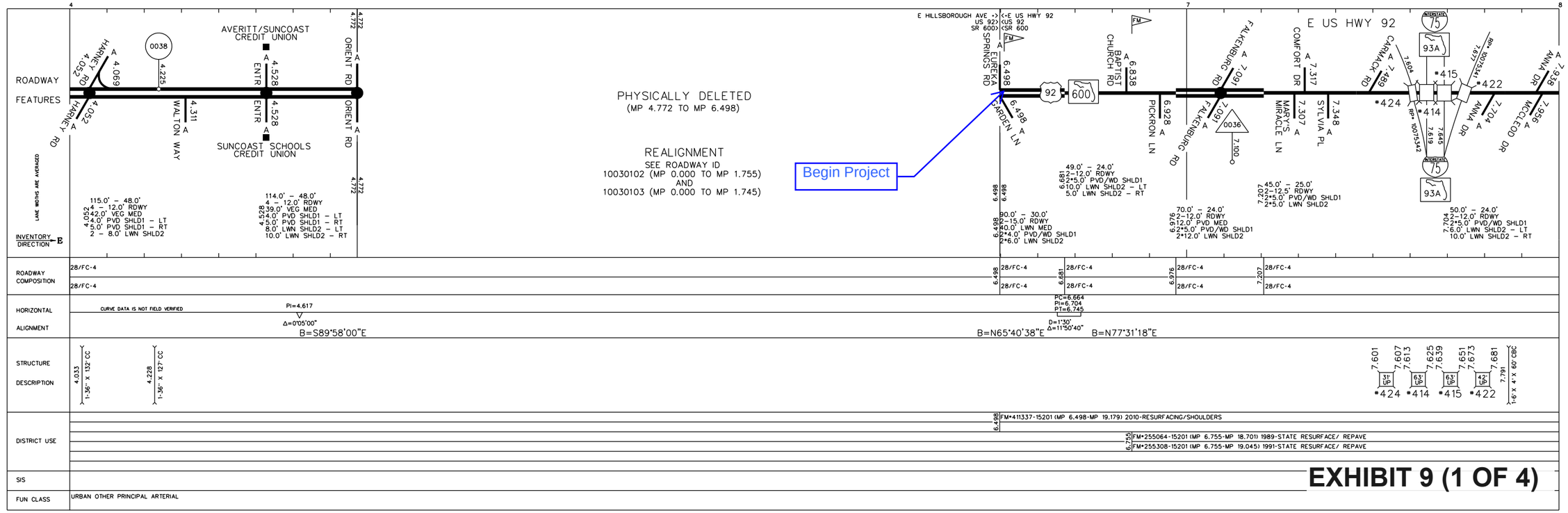


EXHIBIT 9 (1 OF 4)

STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

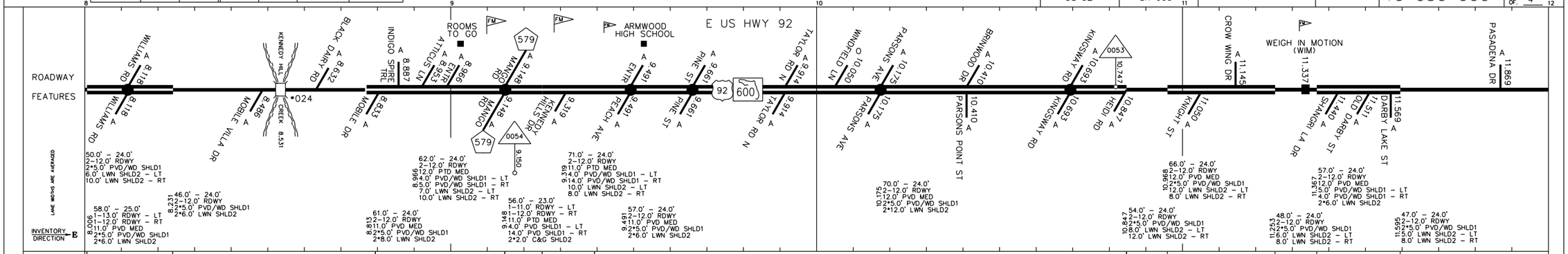
FLORIDA DEPARTMENT OF TRANSPORTATION

	5 YR INV	SLD REV
DATE	03/04/2010	04/27/2010
BY	MEI/JM-KA	MEI/KA

INTERIM REVISIONS

BMP	EMP	INV	SLD REV
11.337	11.337	1/06/2012	1/09/2012
NEW CONSTRUCTION		MEI/MR-AK-MCS	MEI/MR

INT. or US ROUTE NO	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO.	OF.
US 92	SR 600	HILLSBOROUGH	7	10 030 000	2	4



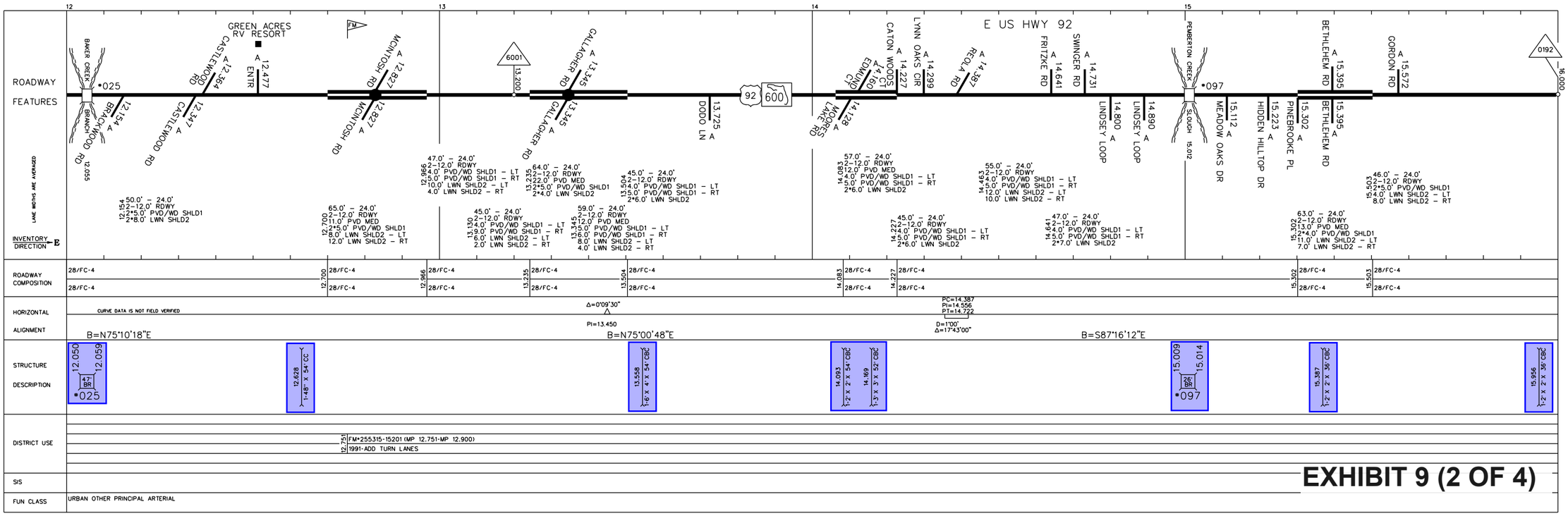


EXHIBIT 9 (2 OF 4)

STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

FLORIDA DEPARTMENT OF TRANSPORTATION

	5 YR INV	SLD REV
DATE	03/04/2010	04/27/2010
BY	MEI/JM-KA	MEI/KA

INTERIM REVISIONS			
BMP	EMP	INV	SLD REV
6.498	19.179	10/20/2010	11/29/2010
20.424	20.686	09/30/2010	MEI/KA
		MEI/JM-MCS	

INT. or US ROUTE NO	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO. / OF.
US 92	SR 39, SR 600	HILLSBOROUGH	7	10 030 000	NO. 3 / OF. 4

16 17 18 19 20 21

ROADWAY FEATURES

INVENTORY DIRECTION E

LANE WIDTHS ARE AVERAGED

E US HWY 92

E US HWY 92 >|<- W BAKER ST

ROGERS RD A 16.156 — TANNER RD 16.156 A

BRANCH FORBES RD A 16.408 — N FORBES RD 16.408 A

WHITELAW RD 16.541 A

PEMBERTON CREEK 16.623

•098

0080 16.945

HAGGARD RD 16.915 A

TURKEY CREEK RD N 17.135 A — TURKEY CREEK 17.135 A

92 600

FLETCHER LN A 17.571

ROBINSON ORNAGE PARK A 17.720 ENTR

17.956 INSIDE CITY & URBAN PLANT CITY, TAMPA

ENTERPRISE ST A 18.061

WHITEHURST RD A 18.180 — WALTER DR 18.180 A

SEMINOLE LAKE BLVD 18.253 A

RITTER ST 18.672 A

EDWARDS ST 18.787 A

N WOODROW WILSON ST A 18.912 — N WOODROW WILSON ST 18.912 A

46.0' - 24.0'
2-12.0' RDWY
2•5.0' PVD/WD SHLD1
4.0' LWN SHLD2 - LT
8.0' LWN SHLD2 - RT

66.0' - 24.0' (16.291)
2-12.0' RDWY
12.0' PVD MED
2•5.0' PVD/WD SHLD1
2•10.0' LWN SHLD2

48.0' - 24.0' (16.541)
2-12.0' RDWY
2•5.0' PVD/WD SHLD1
6.0' LWN SHLD2 - LT
8.0' LWN SHLD2 - RT

44.0' - 24.0' (17.239)
2-12.0' RDWY
2•4.0' PVD/WD SHLD1
2•6.0' LWN SHLD2

61.0' - 24.0' (17.088)
2-12.0' RDWY
13.0' PVD MED
2•5.0' PVD/WD SHLD1
6.0' LWN SHLD2 - LT
8.0' LWN SHLD2 - RT

60.0' - 24.0' (17.794)
2-12.0' RDWY
12.0' PVD MED
2•4.0' PVD/WD SHLD1
6.0' LWN SHLD2 - LT
10.0' LWN SHLD2 - RT

50.0' - 24.0' (17.980)
2-12.0' RDWY
2•4.0' PVD/WD SHLD1
6.0' LWN SHLD2 - LT
12.0' LWN SHLD2 - RT

69.0' - 24.0' (18.081)
2-12.0' RDWY
13.0' PVD MED
2•4.0' PVD/WD SHLD1
2•12.0' LWN SHLD2

44.0' - 24.0' (18.321)
2-12.0' RDWY
2•4.0' PVD/WD SHLD1
2•6.0' LWN SHLD2

62.0' - 24.0' (18.734)
2-12.0' RDWY
12.0' PVD MED
2•4.0' PVD/WD SHLD1
12.0' LWN SHLD2 - LT
6.0' LWN SHLD2 - RT

ROADWAY COMPOSITION: 28/FC-4 throughout (16.291, 16.541, 17.088, 17.239, 17.794, 17.980, 18.081, 18.321, 18.734)

HORIZONTAL ALIGNMENT

CURVE DATA IS NOT FIELD VERIFIED

Δ=2°50'00"
D=017'
PC=18.099
PI=18.194
PT=18.288

B=N89°53'48"E

PC=18.808
PI=18.866
PT=18.925
D=2°00'
Δ=12°19'00"

B=S77°47'12"E

STRUCTURE DESCRIPTION

16.363 — 30.0' CBC — 1-36"

16.620 — 16.625 — 26 BR — •098

16.961 — 30.0' CBC — 2 X 4'-0" X 4'-1"

17.727 — 30.0' CBC — 1-36"

18.579 — 30.0' CBC — 4 X 4'-0" X 6'-1"

DISTRICT USE

16.274 FM•255488-15201 (MP 16.274-MP 16.504)
1997-INTERSECTION (MAJOR)

18.305 FM•255350-15201 (MP 18.105-MP 18.305)
1998-ADD TURN LANES

18.962 FM•255628-15201 (MP 18.962-MP 19.162) 1997-INTERSECTION (MAJOR)

18.436 FM•255439-15201 (MP 18.436-MP 20.271)
1977-STATE RESURFACE/ REPAVE

18.718 FM•255641-15201 (MP 18.718-MP 18.918)
1997-ADD LEFT TURN LANES

SIS

FUN CLASS: URBAN OTHER PRINCIPAL ARTERIAL

US 92 >|< US 92
SR 600 >|< SR 600

566 — THONOTOSASSA RD A 19.046 — LEMON ST 19.046 A

600 — N MOBLEY ST A 19.174 — W BAKER ST A 19.174 — N MOBLEY ST A 19.174

N LAKEWOOD ST A 19.244

N PLANT AVE A 19.318 — N PLANT AVE 19.318 A

ALEXANDER ST 19.460 A — ALEXANDER ST A 19.460

5015 19.425 — 5016 19.486

OAK AVE A 19.604 — OAK AVE 19.604 A

DORT ST N A 19.606 — ACACIA DR 19.548 A

W REYNOLDS ST A 19.622 — W REYNOLDS ST A 19.673

ONE WAY (19.174 - 20.219)

THONOTOSASSA RD >|<- W REYNOLDS ST

CAREY ST A 19.735 — CAREY ST 19.735 A

PEARL ST 19.815 A

N DAVIS ST B 19.864 — N DAVIS ST 19.864 A

92 5022 19.925 600

574

5029 19.032

STATIONING EXCEPTION
See Roadway ID 10090000
MP 14.767 TO MP 15.444

51.0' - 35.0' (19.046)
2-12.0' RDWY - LT
2-11.5' RDWY - RT
12.0' PVD MED
2•2.0' C&G SHLD1

28.0' - 24.0' (19.174)
2-12.0' RDWY
2•2.0' C&G SHLD1

92.0' - 46.0' (19.219)
4-11.5' RDWY
12.0' PVD MED
2•5.0' PVD SHLD1
2•12.0' LWN SHLD2

24.0' - 24.0' (19.631)
2-12.0' RDWY
2•0.0' RC SHLD1

SR 600 >|<- SR 39
SR 600 >|<- SR 600

ONE WAY (20.219 - 20.481)

W REYNOLDS ST >|<- REYNOLDS ST
SR 39 >|<- SR 600

REYNOLDS ST >|<- E REYNOLDS ST

N FRANKLIN ST A 20.016 — N FRANKLIN ST 20.016 A

N HOWARD ST B 20.066 — N HOWARD ST 20.066 A

N DANIELS ST B 20.117 — N DANIELS ST 20.117 A

N WALKER ST B 20.168 — N WALKER ST 20.168 A

N THOMAS ST 20.219 — N THOMAS ST 20.219 A

WHEELER ST A 20.270 — WHEELER ST 20.270 A

N EVERS ST B 20.323 — N EVERS ST 20.323 B

39 — COLLINS ST A 20.373 — COLLINS ST 20.373 A — 39

PALMER ST B 20.424 — PALMER ST 20.424 B

CSX 622441-F 20.478

N MICHIGAN AVE A 20.549

LAKE ST A 20.593

N PENNSYLVANIA AVE A 20.686

N KNIGHT ST A 20.758

N JOHNSON ST B 20.821

N MERRIN ST B 20.884

N WARNELL ST B 20.948 — N WARNELL ST 20.948 A

5042 21.000

5011 20.271 20.300

32.0' - 24.0' (20.016)
2-12.0' RDWY
8.0' PVD SHLD1 - LT
0.0' RC SHLD1 - RT
0.0' RC SHLD2 - LT

34.0' - 20.0' (20.219)
2-10.0' RDWY
2•7.0' PVD SHLD1
2•0.0' RC SHLD2

22.0' - 22.0' (20.478)
2-11.0' RDWY
2•0.0' RC SHLD1

26.0' - 22.0' (20.948)
2-11.0' RDWY
2•2.0' C&G SHLD1

ROADWAY COMPOSITION: 28/FC-4 throughout (19.046, 19.174, 20.424, 20.686)

HORIZONTAL ALIGNMENT

CURVE DATA IS NOT FIELD VERIFIED

Δ=16°50'54"
PI=19.185
B=S60°56'18"E

Δ=0°07'57"
PI=19.474
B=S60°48'21"E

Δ=29°08'01"
PI=19.648
B=S89°56'22"E

Δ=11°14'57"
D=915'
PC=19.994
PI=20.005
PT=20.017
B=N78°48'41"E

Δ=14°09'27"
D=15'55
PC=20.952
PI=20.961
PT=20.969
B=N64°39'14"E

STRUCTURE DESCRIPTION

19.654 — 30' CBC — 1-10" X 5'-0"

20.625 — 30.0' CBC — 5 X 12'-5" X 5'-8"

DISTRICT USE

19.045 FM•255557-15201
(MP 19.045-MP 24.593)1997-FEDERAL AID RESURFACE/ REPAVE

19.191 FM•255615-15201 (MP 19.191-MP 24.593)
2001-FEDERAL AID RESURFACE/ REPAVE

20.424 FM•406554-25201 (MP 20.424-MP 20.686)
2010-RAILROAD CROSSING

20.376 FM•255464-15201 (MP 20.376-MP 20.576)
1998-RAILROAD CROSSING

SIS

FUN CLASS: URBAN OTHER PRINCIPAL ARTERIAL

EXHIBIT 9 (3 OF 4)

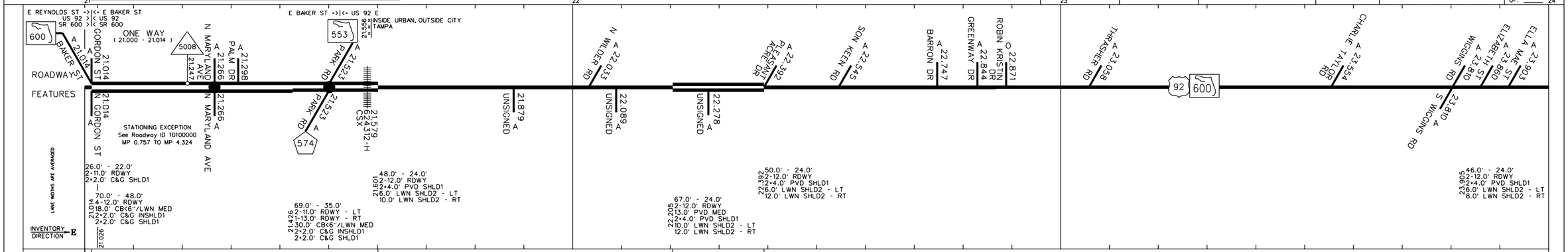
STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

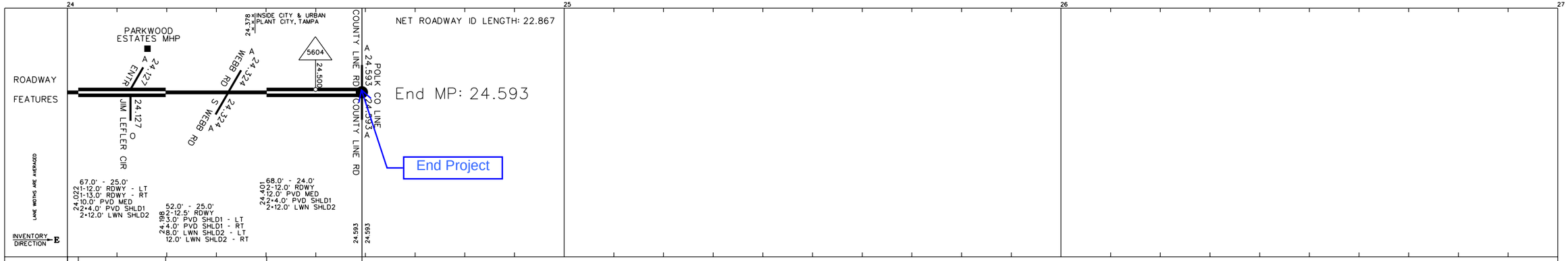
FLORIDA DEPARTMENT OF TRANSPORTATION

	5 YR INV	SLD REV	INTERIM REVISIONS BMP	EMP	INV	SLD REV
DATE	03/04/2010	04/27/2010				
BY	MEI/JM-KA	MEI/KA				

INT. or US ROUTE NO	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO. / OF.
US 92	SR 600	HILLSBOROUGH	7	10 030 000	4 / 4

21 22 23 24





24 25 26 27

EXHIBIT 9 (4 OF 4)

Appendix 3

FEMA Flood Insurance Rate Map (FIRM)

NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 29 SOUTH, RANGE 19 EAST AND TOWNSHIP 29 SOUTH, RANGE 20 EAST.

545000 FT

550000 FT

555000 FT

JOINS PANEL 0240

82°18'45.0"

MAP SCALE 1" = 1000'

500 0 1000 2000 FEET

METE

TAMPA BYPASS CANAL

BEGIN PROJECT

ZONE AE

ZONE A

ZONE AE (EL 21.3)

ZONE AE (EL 24.2)

ZONE AE (EL 23.4)

ZONE AE (EL 23.0)

ZONE AE (EL 35.3)

ZONE AE (EL 35.3)

ZONE AE (EL 36.3)

ZONE AE (EL 33.5)

ZONE AE (EL 31.8)

ZONE AE (EL 30.5)

ZONE AE (EL 20.0)

ZONE AE

ZONE A

AG7240

AG7241

31

32

33

06

05

04

09

WILKINS RD

EUREKA SPRINGS RD

HINES RD

BAPTIST CHURCH RD

PICKRON LN

E WILDER AVE

CARMACK RD

MARYS MIRAGE LN

SYLVIA PL

TANNER RD

ERIC SLANE LN

ANNA DR

HILL ST

TANNER RD

WILLANA CT

MCLEOD DR

E OLD HILLSBOROUGH AVE

MOBILE VILLA DR

ROSS ST

LEE ST

ROYAL OAK DR

LEHMAN RD

CLAYMORE DR

CLAY PIT RD

LIMERICK DR

MR DS PL

SYCAMORE LN

WILLOW LN

OAK LN

ELM LN

MAGNOLIA LN

ORANGE LN

CHERRY LN

BIRCH LN

PALMETTO TER

SPRUCE TER

STEPHANIE LN

LEANNE DR

BRYAN RD

ESTEVEZ LN

WILLIAMS RD

E DR MLK BLVD-I-75-N RAMP

PARADISE DR

LINDA PL

E ELLICOTT ST

MICHAEL LN

VICTORIA LN

TIFFANY TER

WILKINSON WAY

POLAK DR

VALDA LN

CARL LE ROUX PL ST

ASHBURN LAKE DR

SQUARE DR

DOUGLAS OAKS CIR

EDEN DR

NEW VILLAGE DR

GREEN PALM LN

ANN ARBOR DR

CLEWIS AVE

SIX MILE CREEK RD

ELLEN AVE

BRYAN RD

HIGHLAND MANOR DR

PARK OAKS BLVD

LEE ELLIS CT

SABAL PARK DR

WATSON RD

CRAGMONT DR

SHERWICK DR

KEY THATCH DR

WARING DR

MCLANE DR

Tampa Bypass Canal Tributary 1

PRINCESS PALM AVE

BLVD

1% ANNUAL CHANCE FLOOD DISCHARGE CONTAINED IN CULVERT

1% ANNUAL CHANCE FLOOD DISCHARGE CONTAINED IN CULVERT

614020 614025 614030 614070 614075 614090 614100 614115 614120 614130 614140 614175

PEACH PALM AVE

RIGA DR

QUEEN PALM DR

CITIBANK CENTER HWY

Tampa Bay Bypass Canal Tributary 1 North Branch

RIVER INTERNATIONAL DR

VALLEY TREE DR

BLACK SWAN CT

HIBISCUS AVE

PALM AVE

100010

100011

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0380J

FIRM

FLOOD INSURANCE RATE MAP

HILLSBOROUGH COUNTY, FLORIDA

AND INCORPORATED AREAS

PANEL 380 OF 801

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

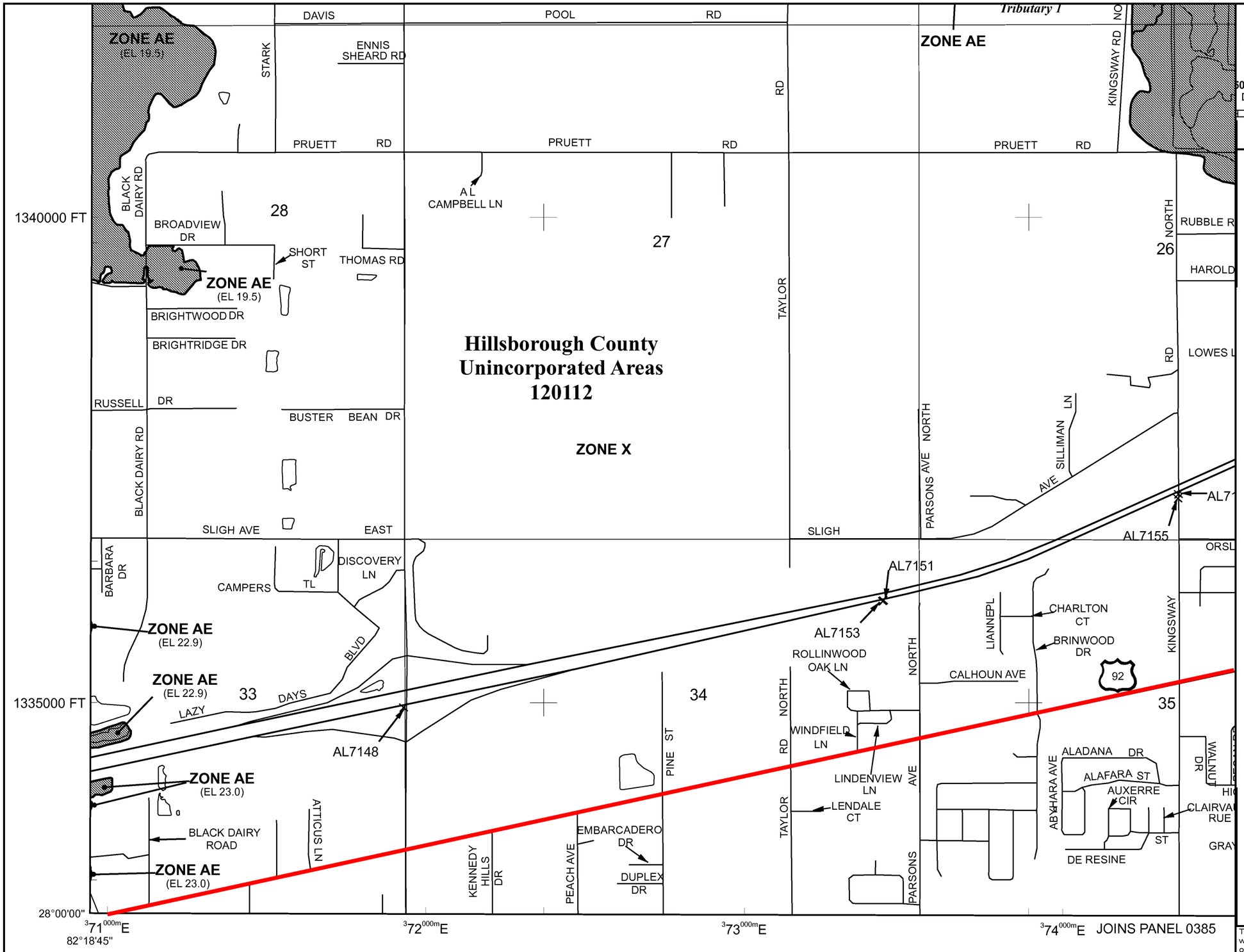
COMMUNITY	NUMBER	PANEL	SUFFIX
HILLSBOROUGH COUNTY	120112	0380	J

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
12057C0380J

MAP REVISED
SEPTEMBER 27, 2013

Federal Emergency Management Agency



NFIP

PANEL 0245H

FIRM

FLOOD INSURANCE RATE MAP

HILLSBOROUGH COUNTY, FLORIDA
AND INCORPORATED AREAS

PANEL 245 OF 801

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HILLSBOROUGH COUNTY	120112	0245	H

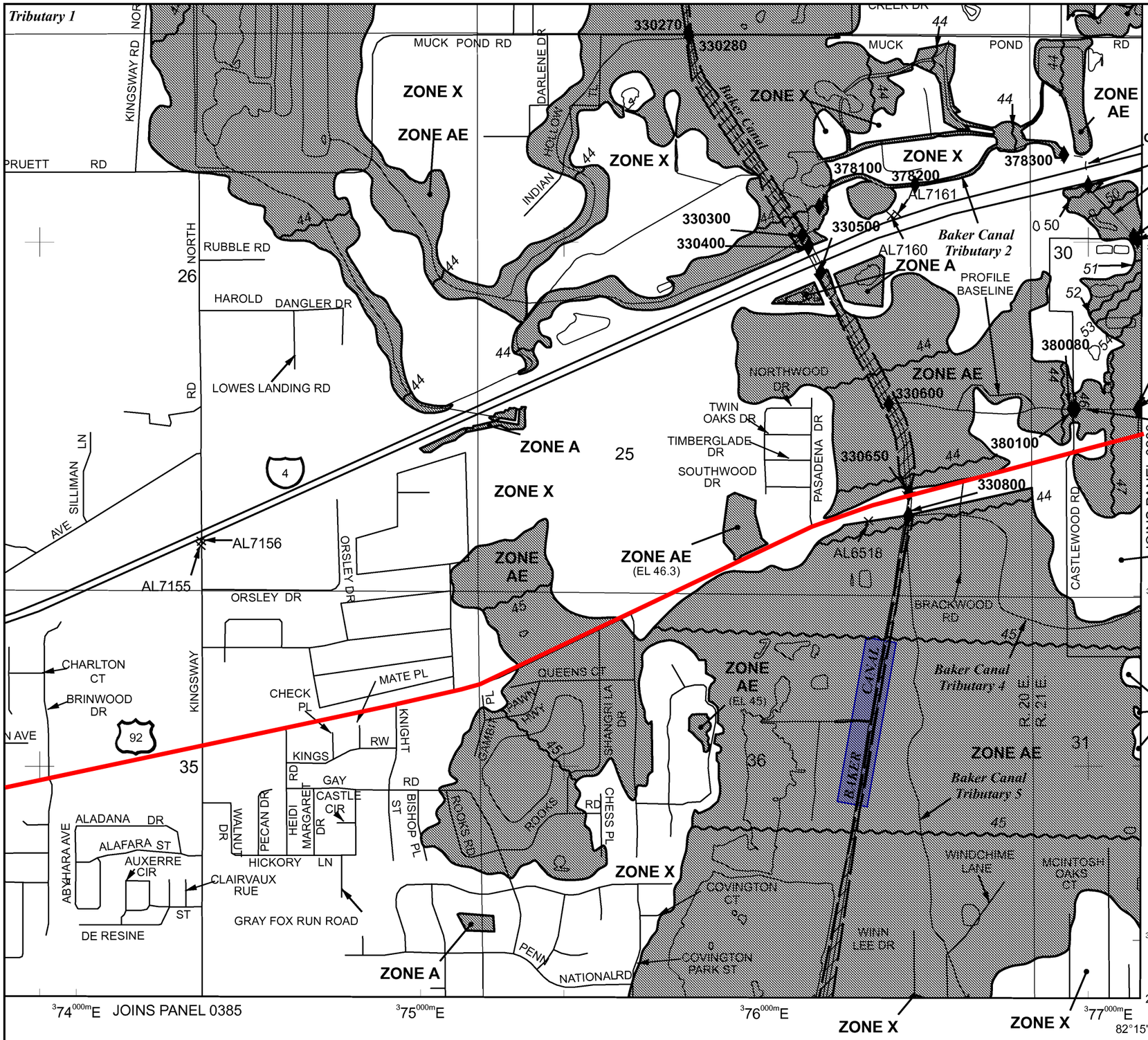
NATIONAL FLOOD INSURANCE PROGRAM

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
12057C0245H

EFFECTIVE DATE
AUGUST 28, 2008

Federal Emergency Management Agency



MAP SCALE 1" = 1000'

500 0 1000 2000 FEET

METER

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0245H

FIRM

FLOOD INSURANCE RATE MAP

HILLSBOROUGH COUNTY, FLORIDA
AND INCORPORATED AREAS

PANEL 245 OF 801

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HILLSBOROUGH COUNTY	120112	0245	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
12057C0245H

EFFECTIVE DATE
AUGUST 28, 2008

Federal Emergency Management Agency

onal Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000

FEET

METER

MUCK POND RD

MCINTOS

SH

SWEET N SAS

GORE RD

57

58

59

60

ZONE AE

58

ZONE A

LIMIT OF DETAILED STUDY

37

AL7164

AL7162

GALLAGHER RD

ZONE AE

AL6526

NEWSOME RD

MCINTOSH RD

PRIVATE ROAD

ZONE AE

(EL 51)

CASTLEWOOD ROAD

51

1340000 FT

ZONE X

30

379080

62

64

ZONE X

379040

378880

378900

379000

378970

379980

378870

58

57

92

378600

56

55

Baker Canal Tributary 2

378680

56

378800

1% ANNUAL CHANCE FLOOD DISCHARGE CONTAINED IN CULVERT

AIR STREAM AV

AIR STREAM AV

92

AL6527

JOINS PANEL 0245

380280

380200

380300

380380

ZONE AE

LIMIT OF DETAILED STUDY

57

Baker Canal Tributary 3

51

51

RD

Hillsborough County
Unincorporated Areas
120112

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0263H

FIRM

FLOOD INSURANCE RATE MAP

HILLSBOROUGH COUNTY, FLORIDA
AND INCORPORATED AREAS

PANEL 263 OF 801

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HILLSBOROUGH COUNTY	120112	0263	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
12057C0263H

EFFECTIVE DATE
AUGUST 28, 2008

Federal Emergency Management Agency

onal Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000

FEET

METER

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0263H

FIRM

FLOOD INSURANCE RATE MAP

HILLSBOROUGH COUNTY, FLORIDA
AND INCORPORATED AREAS

PANEL 263 OF 801

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HILLSBOROUGH COUNTY	120112	0263	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
12057C0263H

EFFECTIVE DATE
AUGUST 28, 2008

Federal Emergency Management Agency

Pemberton Creek

SWIFT CREEK CIRCLE

ZONE AE

AL7167 AL7168

340900 340550 340500

ZONE A

LYNN OAKS CR

REOLA RD

EDMUND CT

CATON WOODS CT

LYNN OAKS CR

GALLAGHER RD

LIMIT OF DETAILED STUDY

379350

ZONE AE

ZONE A

ZONE A

ZONE A

ZONE AE

379080

ZONE X

379040

379000

379980

1% ANNUAL CHANCE FLOOD DISCHARGE CONTAINED IN CULVERT

ZONE AE (EL 66.6)

MOORES LAKE RD

GODINS LN

29

28

$31^{\circ}00'00''N$

ZONE A

AUSBURN LN

CHURCH POND PL

ZONE AE (EL 83.3)

ZONE A

JOINS PANEL 0264

Hillsborough County Unincorporated Areas 120112

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

onal Flood Insurance Program at 1-800-638-6620.

82°13'07.5"
28°01'52.5"

590000 FT

JOINS PANEL 0262

MAP SCALE 1" = 500'

250 0 500 1000

FEET

METER

ZONE X

ZONE AE

341180

FRITZKE RD

Pemberton Creek

ZONE AE

341600

DORMAN ROCK PLACE

ZONE X

341680

341400

341700

PRIVA

341200

ZONE X

HARVEY TEW RD

21

AL7169

AL7171

1% ANUAL CHANCE FLOOD DISCHARGE
CONTAINED IN CULVERT

352100

ZONE AE

AL7175

ZONE X

352180

GLEN HARWELL RD

GLEN HARWELL RD

352200

1% ANUAL CHANCE FLOOD DISCHARGE
CONTAINED IN CULVERT

Pemberton Creek Tributary 1

FRITZKE RD

SWINGER RD

ZONE AE

EMERALD GLEN DR

GORDON RD

ZONE X

352250

LINDSEY LP

LINDSEY LP

ZONE X

MEADOW OAKS DR

PINEBROOKE PL

LAWNWOOD PL

ZONE X

LINDSEY LP

MEADOW OAKS DR

LAWNCREST PL

LARK DR

1340000 FT

28

ZONE AE
(EL 83.3)

NFIP

PANEL 0264H

FIRM

FLOOD INSURANCE RATE MAP

HILLSBOROUGH COUNTY, FLORIDA
AND INCORPORATED AREAS

PANEL 264 OF 801

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HILLSBOROUGH COUNTY	120112	0264	H

NATIONAL FLOOD INSURANCE PROGRAM

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
12057C0264H

EFFECTIVE DATE
AUGUST 28, 2008

Federal Emergency Management Agency

onal Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000 FEET

METER

ZONE X

PRIVATE ROAD

341800

LEO CLEMONS LANE

ZONE AE

SINOPOLI RD

PRIVATE ROAD

Spartman Branch

342100

Pemberton Creek

342180

89

88

1% ANUAL CHANCE FLOOD DISCHARGE CONTAINED IN CULVERT

360010

$^{31}01^{000m}$N

341680

341700

HARVEY TEW RD

360020

HARVEY TEW RD

ZONE X

ZONE AE

ZONE AE (EL 90)

80

79

22

ZONE A

ZONE X

90

360070

NE AE

CULVERT

AL7175

ONE AE

ZONE AE (EL 85.0)

91

ZONE AE (EL 93)

1% ANUAL CHANCE FLOOD DISCHARGE CONTAINED IN CULVERT

360080

Spartman Branch

GLEN HARWELL RD

GLEN HARWELL RD

ZONE AE

FLOOD DISCHARGE ERT

ROGERS RD

KEENE DR

Hillsborough County
Unincorporated Areas
120112

EMERALD GLEN DR

GORDON RD

CINDY KAY DR

95

PAMELA SUE CR

ZONE AE

ZONE X

ZONE A

92

PINEBROOKE PL

LAWNWOOD PL

LAWNCREST PL

ZONE AE (EL 91.4)

27

$^{31}00^{000m}$N

RUBY WOODS TL

TANNER RD

WARD RD

NFIP

PANEL 0264H

FIRM

FLOOD INSURANCE RATE MAP

HILLSBOROUGH COUNTY, FLORIDA
AND INCORPORATED AREAS

PANEL 264 OF 801

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HILLSBOROUGH COUNTY	120112	0264	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
12057C0264H

EFFECTIVE DATE
AUGUST 28, 2008

Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM

onal Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000

FEET

METER

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0268H

FIRM

FLOOD INSURANCE RATE MAP

HILLSBOROUGH COUNTY, FLORIDA
AND INCORPORATED AREAS

PANEL 268 OF 801

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HILLSBOROUGH COUNTY	120112	0268	H
PLANT CITY, CITY OF	120113	0268	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
12057C0268H

EFFECTIVE DATE
AUGUST 28, 2008

Federal Emergency Management Agency

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

Hillsborough County
Unincorporated Areas
120112

ZONE AE
ZONE AE (EL 90)
ZONE AE (EL 90)
ZONE X
ZONE X
ZONE X
ZONE AE (EL 95)
ZONE AE
ZONE AE (EL 101.0)
ZONE AE (EL 99.1)
ZONE AE (EL 99.1)
ZONE AE (EL 97.5)
ZONE X
ZONE X
ZONE A

AL7178
AL7179
360100
360150
360200
360300
360380
360400
360450
360500

BRANCH FORBES ROAD
JOE SANCHEZ RD
BEAUCHAMP RD
BEAUCHAMP RD
HAWK GRIFFIN RD
FORBES RD
BRANCH
Spartman Branch
WHITELAW RD
LYNCH PL
C P KEEN RD
HAGGARD RD
HAGGARD RD
TURKEY CREEK RD N
FEL 0264
RY CR

1340000 FT

22 23 27 26 89 92 93 94 95 96 97 98
4 92

120113

onal Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000

FEET

METER

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0268H

FIRM

FLOOD INSURANCE RATE MAP

HILLSBOROUGH COUNTY, FLORIDA
AND INCORPORATED AREAS

PANEL 268 OF 801

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HILLSBOROUGH COUNTY	120112	0268	H
PLANT CITY, CITY OF	120113	0268	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
12057C0268H

EFFECTIVE DATE
AUGUST 28, 2008

Federal Emergency Management Agency

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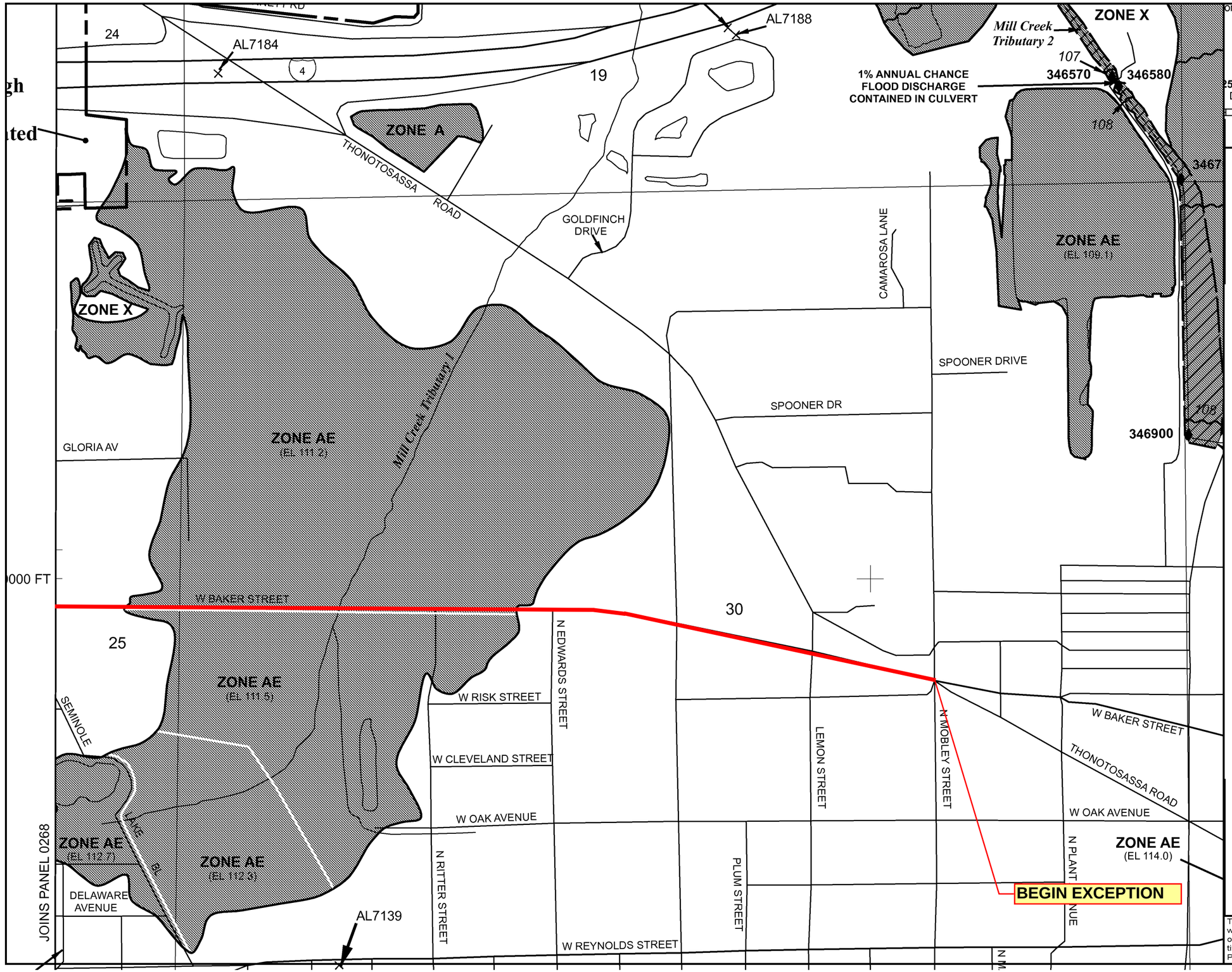


onal Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000 FEET

METER

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0269H

FIRM

FLOOD INSURANCE RATE MAP

HILLSBOROUGH COUNTY, FLORIDA
AND INCORPORATED AREAS

PANEL 269 OF 801

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HILLSBOROUGH COUNTY	120112	0269	H
PLANT CITY, CITY OF	120113	0269	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
12057C0269H

EFFECTIVE DATE
AUGUST 28, 2008

Federal Emergency Management Agency

onal Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000

FEET

METER

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0269H

FIRM

FLOOD INSURANCE RATE MAP

HILLSBOROUGH COUNTY, FLORIDA
AND INCORPORATED AREAS

PANEL 269 OF 801

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HILLSBOROUGH COUNTY	120112	0269	H
PLANT CITY, CITY OF	120113	0269	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

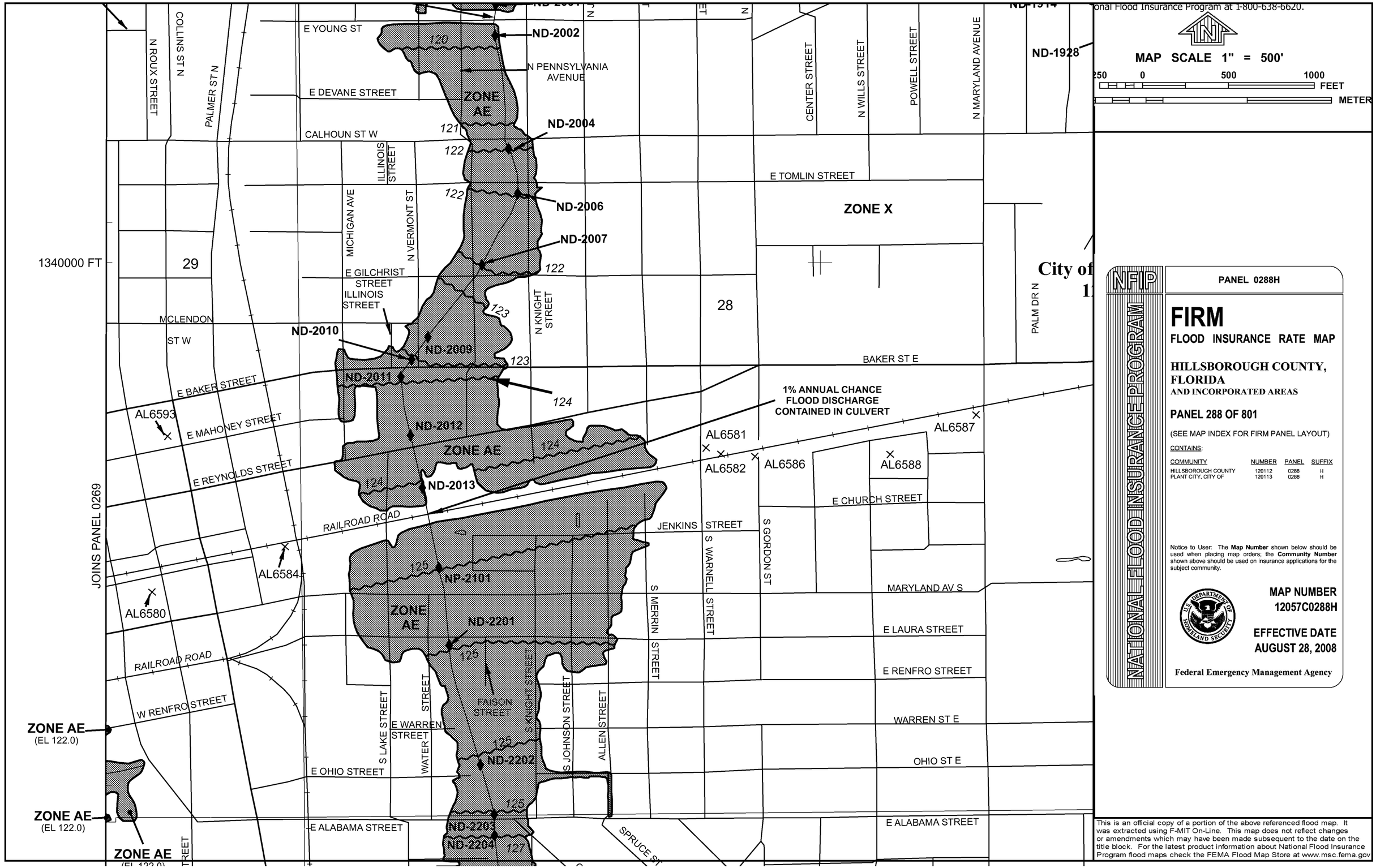
MAP NUMBER
12057C0269H

EFFECTIVE DATE
AUGUST 28, 2008

Federal Emergency Management Agency

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

ZONE AE (EL 109.1)
ZONE AE (EL 109.3)
ZONE AE (EL 112.0)
ZONE AE (EL 110.0)
ZONE AE (EL 109.9)
ZONE AE (EL 112.0)
ZONE AE (EL 112.1)
ZONE AE (EL 114.0)
ZONE X
AL7138
346900
LIMIT OF DETAILED STUDY
JOINS PANEL 0288
ZONE
CAMAROSA LANE
SPOONER DRIVE
FERRELL ST N
N BURTON ST
TEVER ST W
W SAUNDERS STREET
W DEVANE STREET
WHEELER ST N
SUNSET ROAD
SYLVAN LANE
WHITEHALL STREET
RAY DRIVE
FRANKLIN ST N
N THOMAS STREET
W DAMON STREET
VICTORIA ST
CHIPMAN STREET
W HERRING STREET
N DORT STREET
W RISK STREET
N DAVIS STREET
SIOUX STREET
W MCLENDON STREET
EVERS N ST N
N MOBLEY STREET
W BAKER STREET
THONOTOSASSA ROAD
W OAK AVENUE
N PLANT AVENUE
CAREY ST
N HOWARD STREET
N DANIELS STREET
N WALKER STREET
W MAHONEY STREET
ACACIA DRIVE
W REYNOLDS STREET
W GRANFIELD AVENUE
FIG STREET
N MAGNOLIA STREET
NOSLEDA ST
RAILROAD ROAD
S DANIELS ST
W MARTIN LUTHER KING BOULEVARD
W INGRAM STREET



onal Flood Insurance Program at 1-800-638-6620.

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

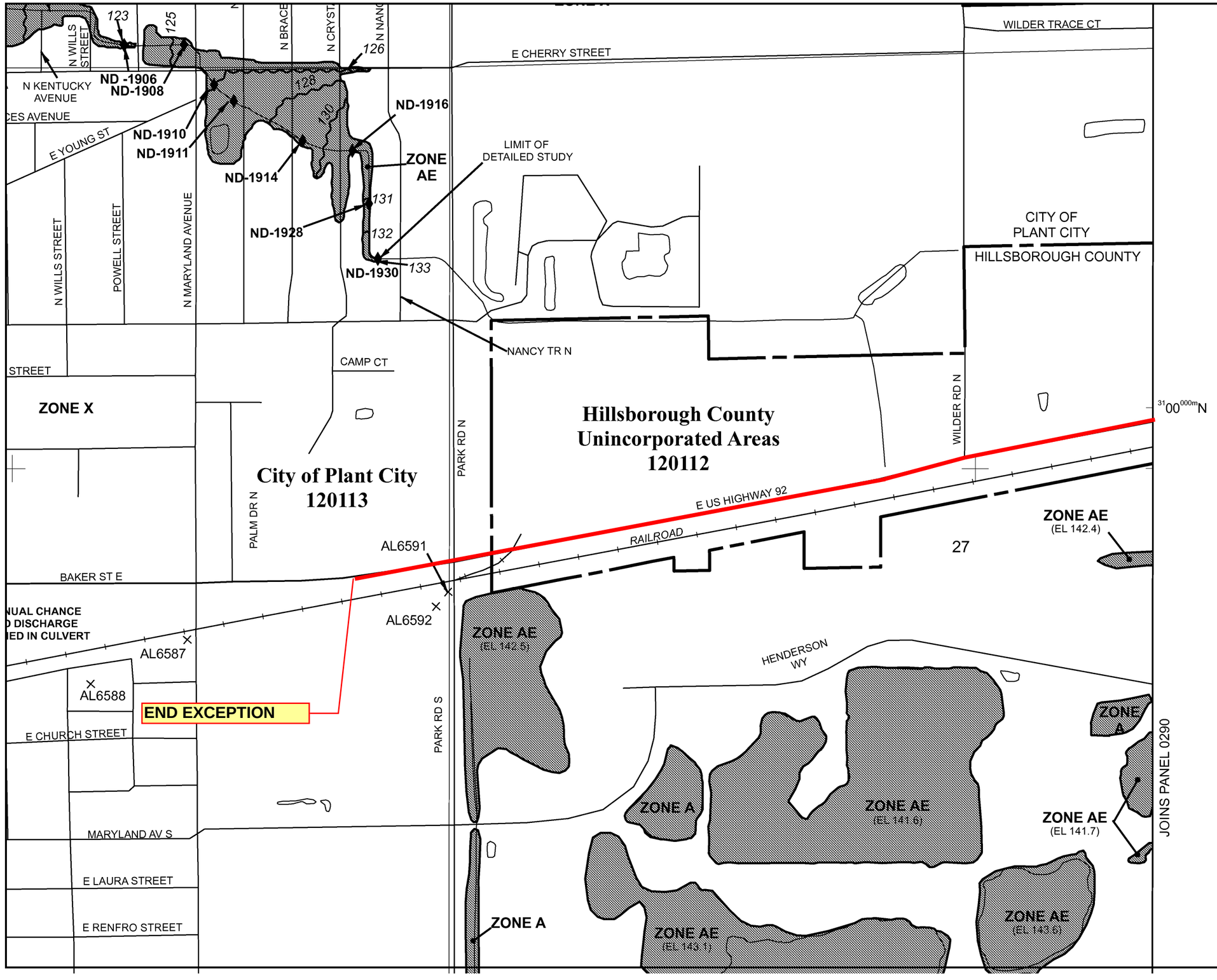
onal Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000

FEET

METER



NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0288H

FIRM

FLOOD INSURANCE RATE MAP

HILLSBOROUGH COUNTY, FLORIDA
AND INCORPORATED AREAS

PANEL 288 OF 801

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

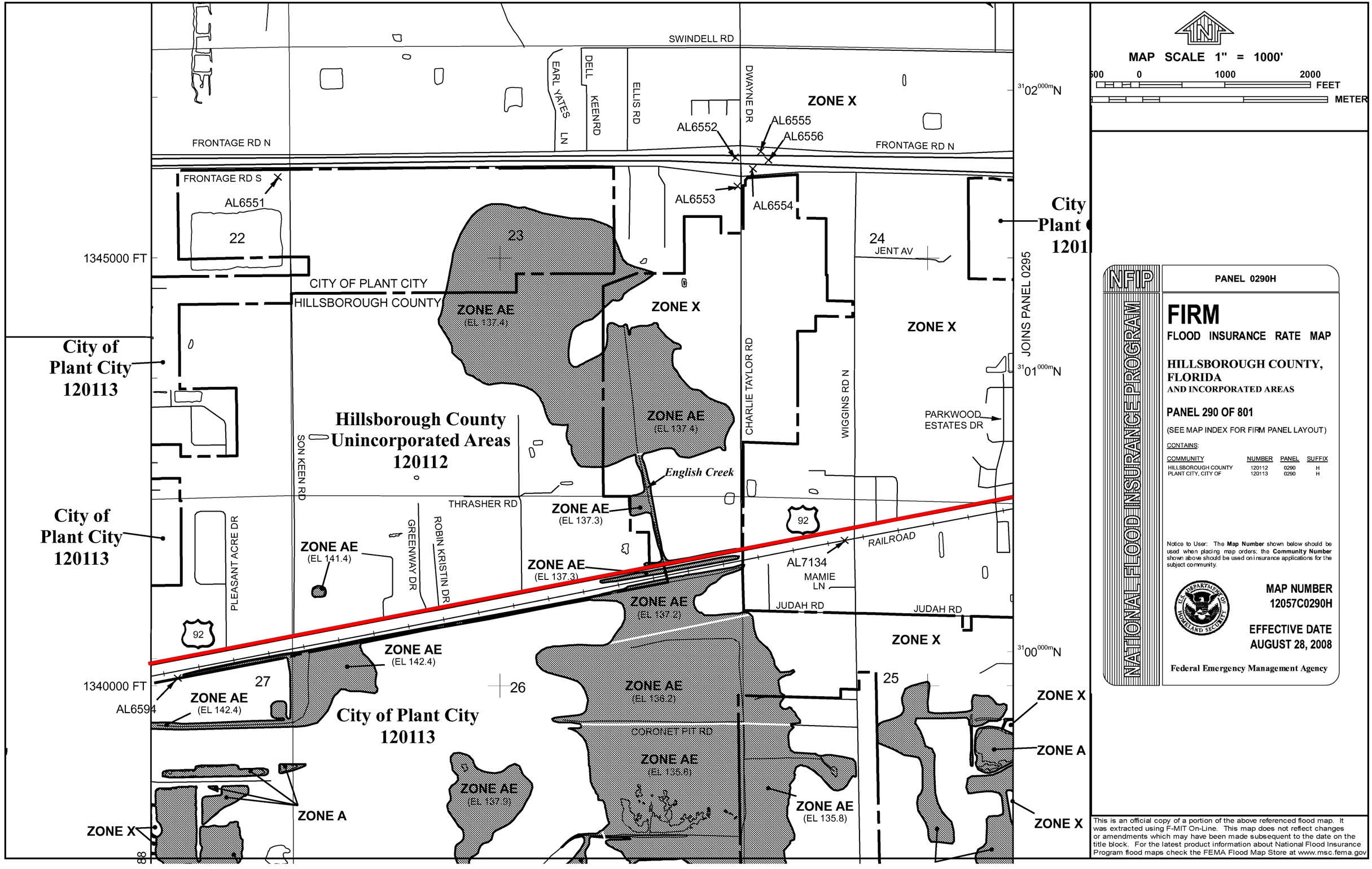
COMMUNITY	NUMBER	PANEL	SUFFIX
HILLSBOROUGH COUNTY	120112	0288	H
PLANT CITY, CITY OF	120113	0288	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
12057C0288H

EFFECTIVE DATE
AUGUST 28, 2008

Federal Emergency Management Agency



MAP SCALE 1" = 1000'

500 0 1000 2000 FEET

METER

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0290H

FIRM

FLOOD INSURANCE RATE MAP

HILLSBOROUGH COUNTY, FLORIDA
AND INCORPORATED AREAS

PANEL 290 OF 801

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

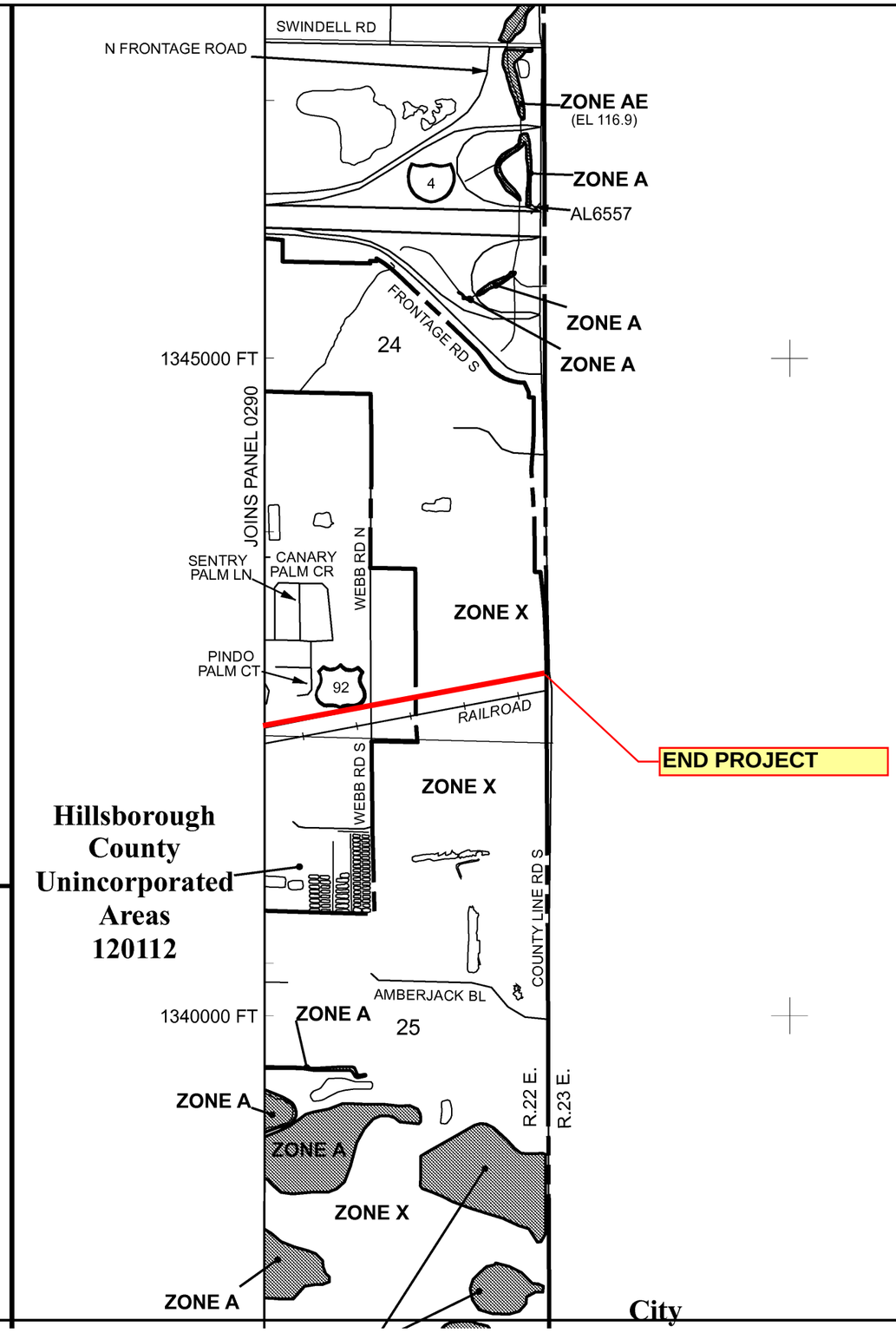
COMMUNITY	NUMBER	PANEL	SUFFIX
HILLSBOROUGH COUNTY	120112	0290	H
PLANT CITY, CITY OF	120113	0290	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
12057C0290H

EFFECTIVE DATE
AUGUST 28, 2008

Federal Emergency Management Agency



MAP SCALE 1" = 1000'

500 0 1000 2000 FEET

METER

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0295H

FIRM

FLOOD INSURANCE RATE MAP

HILLSBOROUGH COUNTY, FLORIDA
AND INCORPORATED AREAS

PANEL 295 OF 801

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HILLSBOROUGH COUNTY	120112	0295	H
PLANT CITY, CITY OF	120113	0295	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
12057C0295H

EFFECTIVE DATE
AUGUST 28, 2008

Federal Emergency Management Agency

Appendix 4

Correspondence

Kamrul Islam

From: Mirta Laos
Sent: Monday, October 05, 2015 9:49 AM
To: Kamrul Islam; Renato Chuw
Subject: FW: SR 600 (US 92) From East of I-4 to County Line Road

FYI…

From: Mostyn, Jessica [mailto:Jessica.Mostyn@dep.state.fl.us]
Sent: Monday, October 05, 2015 9:18 AM
To: Mirta Laos <mlaos@inwoodinc.com>
Cc: ODonnell, Kevin <Kevin.ODonnell@dep.state.fl.us>; Wiwi, Robert <Robert.Wiwi@dep.state.fl.us>
Subject: RE: SR 600 (US 92) From East of I-4 to County Line Road

Good Morning Mirta,

I divided the WBIDs into which Group basin they are in because the Group 1 Cycle 3 assessments have been adopted by the Secretary and the Group 2 Cycle 3 assessments *will be* adopted by the Secretary in December. We are not proposing that the bold WBIDs, 1542A and 1561 are impaired for TN and TP at this time.

WBID	Group 1 Cycle 3 Impairments on the Verified List
1536B (Six Mile Creek)	Dissolved Oxygen, Dissolved Oxygen (BOD) Nutrients (Chlorophyll-a)
1536C (Tampa Bypass Canal)	Dissolved Oxygen, Fecal Coliform
1576 (Mango Drain)	Dissolved Oxygen (BOD), Fecal Coliform, Nutrients (Chlorophyll-a)

WBID	Group 2 Cycle 3 Impairments on the Verified List (assessments will be finalized in December)
1518 (East Canal)	Fecal Coliform (Dissolved Oxygen is being delisted into category 4d Study List, Nutrients (Chlorophyll-a) is being delisted into category 2 Not Impaired)
1531 Wiggins Prairie Drain	No impairments
1542 (Pemberton Creek)	Fecal Coliform
1542A (Mill Creek)	No impairments (Fecal Coliform is being delisted into category 4a TMDL Complete; Dissolved Oxygen and Nutrients (Chlorophyll-a) are being delisted into category 2 Not Impaired)
1547 (Seffner Canal)	Dissolved Oxygen, Fecal Coliform
1552 (English Creek)	No impairments (Fecal Coliform is being delisted into category 4a TMDL Complete)

1561 (Spartman Branch)	No impairments (Dissolved Oxygen is being delisted into category 4c Natural Condition and Nutrients (Chlorophyll a) is being delisted into category 2 Not Impaired)
1565 (Moore Lake Drain)	Fecal Coliform

Please let me know if you have any additional questions,
Jessica

From: Mirta Laos [mailto:mlaos@inwoodinc.com]
Sent: Monday, October 05, 2015 8:29 AM
To: Mostyn, Jessica; ODonnell, Kevin
Subject: RE: SR 600 (US 92) From East of I-4 to County Line Road

Thank you so much; I appreciate your time.
Mirta

From: Mostyn, Jessica [mailto:Jessica.Mostyn@dep.state.fl.us]
Sent: Friday, October 02, 2015 3:50 PM
To: ODonnell, Kevin <Kevin.ODonnell@dep.state.fl.us>; Mirta Laos <mlaos@inwoodinc.com>
Subject: RE: SR 600 (US 92) From East of I-4 to County Line Road

Mirta,
We'll need to get back to you on these WBIDs first thing Monday.
Jessica

From: ODonnell, Kevin
Sent: Friday, October 02, 2015 11:18 AM
To: Mirta Laos; Mostyn, Jessica
Subject: RE: SR 600 (US 92) From East of I-4 to County Line Road

Hi Mirta,

We would be glad to provide you an update on the impairment status. There are quite a few WBIDs here to review, but we should be able to provide you the information today or early next week.

Jess,
Could you or Robert pull this information together for Mirta?

Thanks,
Kevin

From: Mirta Laos [mailto:mlaos@inwoodinc.com]
Sent: Friday, October 02, 2015 10:19 AM
To: ODonnell, Kevin
Subject: SR 600 (US 92) From East of I-4 to County Line Road

Good morning Kevin,

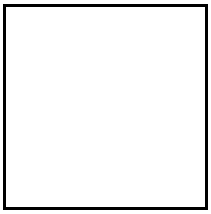
I am working on the US 92 PD&E Study, and would like verification on the following WBID's below:

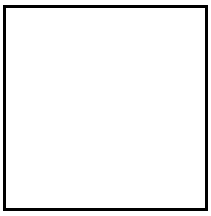
- 1518 (East Canal)
- 1531 Wiggins Prairie Drain
- 1536B (Six Mile Creek)
- 1536C (Tampa Bypass Canal)
- 1542 (Pemberton Creek)
- **1542A (Mill Creek)**
- 1547 (Seffner Canal)
- 1552 (English Creek)
- **1561 (Spartman Branch)**
- 1565 (Moore Lake Drain)
- 1576 (Mango Drain)

I have checked the WBID's and the two in bold seem to be impaired for TN, and TP. If you could please verify this information, I would really appreciate it.

Thank you, and have a wonderful weekend.

Mirta Laos, P.E.
PROJECT ENGINEER
INWOOD CONSULTING ENGINEERS
3000 Dovera Dr., Suite 200, Oviedo, FL 32765
P: 407-971-8850





Kamrul Islam

From: Frick, Chad <Chad.Frick@dot.state.fl.us>
Sent: Tuesday, October 27, 2015 10:11 AM
To: Kamrul Islam
Cc: Mirta Laos; Hunt, Harvey; Leipski, Andrew J; Montjoy, Anita W
Subject: RE: US 92 PD&E Study; FPID 435749-1-22-01; From East of I-4 to County Line Road

Importance: High

Hello Mr. Islam,

I researched some recent flooding issues on US 92 in the following issues:

East 702 Reynolds/Baker US 92

East 11730 US 92

East 11309 US 92

East 10604 Black Dairy Road

East 9715 US 92

We all had issues in the summer months where runoff, flooding, private property flooding & driveway capacity had some issues. Please contact Andrew Leipski, Ron Gibson or myself if you need to look at these and/or data base issues for maintenance concerns. Thank you for the information!

Respectfully,

Chad Frick

Centennial FDOT 1915★2015

Florida Department of Transportation
Tampa Operations- M/S 7-1250
Maintenance Project Manager I
2820 Leslie Road
Tampa, FL 33619
(813) 612-3200 x 3253
chad.frick@dot.state.fl.us

From: Kamrul Islam [mailto:kislam@inwoodinc.com]
Sent: Friday, October 16, 2015 8:58 AM
To: Hunt, Harvey
Cc: Mirta Laos; Leipski, Andrew J; Frick, Chad
Subject: US 92 PD&E Study; FPID 435749-1-22-01; From East of I-4 to County Line Road

Good Morning Mr. Hunt,

We are working on the US 92 PD&E Study from East of I-4 to County Line Road, and wanted to discuss with you if there was any history of flooding or any other information available regarding maintenance concerns.

Please let me know when it would be a good time to contact you to discuss. Any written information over the email will also help us a lot.

We appreciate your support with this matter.

Sincerely,
Kamrul Islam, EI
ENGINEERING INTERN

INWOOD CONSULTING ENGINEERS
3000 Dovera Dr., Suite 200, Oviedo, FL 32765
P: 407-971-8850 x6595
F: 407-971-8955
inwoodinc.com