Gibsonton Drive
From Fern Hill Drive to US 301
Project Development & Environment (PD&E) Study

Draft
Preliminary Engineering Report

Work Program Item Segment No. 450438-1
ETDM Project No. 14493
Hillsborough County, Florida

Florida Department of Transportation
District Seven

In Coordination with:

Hillsborough County Florida

January 2024

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 May 26, 2022, and executed by the Federal Highway Administration and FDOT.

PROFESSIONAL ENGINEER CERTIFICATION
PRELIMINARY ENGINEERING REPORT

Project: **Gibsonton Drive, from Fern Hill Drive to US 301**

ETDM Number: 14493

Financial Project ID: 450438-1-22-01

Prepared for:

Florida Department of Transportation
District Seven

In Coordination with:

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This *Preliminary Engineering Report* contains engineering information that fulfills the purpose and need for the Gibsonton Drive Project Development & Environment Study from Fern Hill Drive to US 301 in Hillsborough County, Florida. I acknowledge that the procedures and references used to develop the results contained in this report are standard to the professional practice of transportation engineering as applied through professional judgment and experience.

I hereby certify that I am a registered professional engineer in the State of Florida practicing with American Consulting Engineers of Florida, LLC, and that I have prepared or approved the evaluation, findings, opinions, conclusions, or technical advice for this project.

This item has been digitally signed and sealed by Jeffrey S. Novotny on the date adjacent to the seal.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

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Jeffrey S. Novotny, P.E.
Florida PE #51083

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List of Acronyms

AADT	Annual Average Daily Traffic
ACF	Axle Correction Factor
ACP	Asbestos Cement Pipe
C3C	Context Classification C3C (Suburban Commercial)
CA	Controller Assembly
CARS	Crash Analysis Reporting System
CATV	Cable Television
CC	Concrete Culvert
CCM	Context Classification Memo
CFR	Code of Federal Regulations
CE	Categorical Exclusion
CIP	Capital Improvement Plan
CRAS	Cultural Resource Assessment Survey
CZ	Clear zone
DCIA	Directly Connected Impervious Area
DDHV	Directional Design Hour Volume
DDI	Diverging Diamond Interchange
D-Factor	Directional Design Factor
DHT	Design Hour Trucks
DHW	Design High Water
ELA	Environmental Look Around
EPA	U.S. Environmental Protection Agency
ERP	Environmental Resource Permit
ETAT	Environmental Technical Advisory Team
ETDM	Efficient Transportation Decision Making
FDEP	Florida Department of Environmental Protection
FDM	FDOT Design Manual
FDOT	Florida Department of Transportation (also “Department”)
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FM	Force Main
FPC	Floodplain Compensation
FT	Feet
FTO	Florida Transportation Online
FWC	Florida Fish and Wildlife Conservation Commission
FY	Fiscal Year
GIS	Geographic Information System
HART	Hillsborough Area Regional Transit
IMR	Interchange Modification Report
ITS	Intelligent Transportation System
I-75	Interstate 75
LHM	Location Hydraulics Memorandum
LOS	Level of Service

LRE	Long Range Estimates
LRTP	Long Range Transportation Plan
MEV	Million Entering Vehicles
MPH	Miles per Hour
MVMT	Million Vehicle Miles Traveled
NAVD	North American Vertical Datum
NCHRP	National Cooperative Highway Research Program
NEPA	National Environmental Policy Act of 1969
NRCS	Natural Resources Conservation Service
NRE	Natural Resources Evaluation
OEM	Office of Environmental Management
OFW	Outstanding Florida Water
PD&E	Project Development and Environment
PIP	Public Involvement Plan
PSR	Pond Siting Report
PTAR	Project Traffic Analysis Report
PVC	Poly Vinyl Chloride
RC	Reverse Crown
RCP	Reinforced Concrete Pipe
ROW	Right-of-Way
SF	Seasonal Factor
SHWT	Seasonal High Water Table
SIS	Strategic Intermodal System
SMF	Stormwater Management Facility(ies)
SUE	Subsurface Utility Engineering
SWFWMD	Southwest Florida Water Management District
T-Factor	Daily Truck Factor
TBRPM	Tampa Bay Regional Planning Model
TCA	Teleport Communications of America, LLC
TDP	Transit Development Plan
TIP	Transportation Improvement Plan
TMDL	Total Maximum Daily Load
TPO	Transportation Planning Organization
TSM&O	Transportation System Management and Operations
UAP	Utility Assessment Package
US 301	U.S. Highway 301
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish and Wildlife Service
WBID	Water Body Identification
WM	Water Main
WPI	Work Program Item

SECTION 1 PROJECT SUMMARY

The Florida Department of Transportation (FDOT) District Seven, in coordination with Hillsborough County, is conducting a Project Development and Environment (PD&E) study along Gibsonton Drive from Fern Hill Drive to U.S. Highway 301 (US 301), in Hillsborough County. The objective of the PD&E study is to assist FDOT Office of Environmental Management (OEM) in reaching a decision on the type, location, and conceptual design of the necessary improvements for the widening of Gibsonton Dr. This study documents the need for the improvements as well as the procedures utilized to develop and evaluate various improvements, including elements such as proposed typical sections, preliminary roadway alignments, and intersection enhancements.

The PD&E study satisfies all applicable requirements, including the National Environmental Policy Act (NEPA), to qualify for federal-aid funding of subsequent development phases (design, right-of-way acquisition, and construction). This project was screened through the FDOT's Efficient Transportation Decision Making (ETDM) process as ETDM Project No. 14493. The *ETDM Programming Screen Summary Report* was published on October 27, 2022, containing comments from the Environmental Technical Advisory Team (ETAT) on the project's effects on various natural, physical, and social resources. A *Type 2 Categorical Exclusion* (*CE*) is the class of action for this PD&E study.

1.1 PROJECT DESCRIPTION

The project consists of widening Gibsonton Drive from Fern Hill Drive to U.S. Highway 301 (US 301) in Hillsborough County, a distance of approximately 0.95 miles. Improvements will also include a wide sidewalk to accommodate bicycles and pedestrians. The project includes the evaluation of stormwater management facilities (SMF) and floodplain compensation sites (FPC). The project traverses the unincorporated census designated place of Riverview and provides access to I-75 for the communities of Riverview, Boyette, Fish Hawk and Lithia.

Within the project limits, Gibsonton Drive is a four-lane, divided roadway with paved shoulders and 5-foot (ft) sidewalks along both sides of the road. There are some gaps in the sidewalk on the south side (eastbound direction) of the road. Gibsonton Drive is functionally classified by Hillsborough County as an arterial with an existing posted speed limit of 45 miles per hour (mph). A project location map is provided in **Figure 1-1**.

1.2 PURPOSE AND NEED

1.2.1 Purpose

The purpose of this project is to address future roadway capacity issues as well as improve safety conditions on Gibsonton Drive, which is an important east-west connection between Interstate 75 (I-75) and US 301.

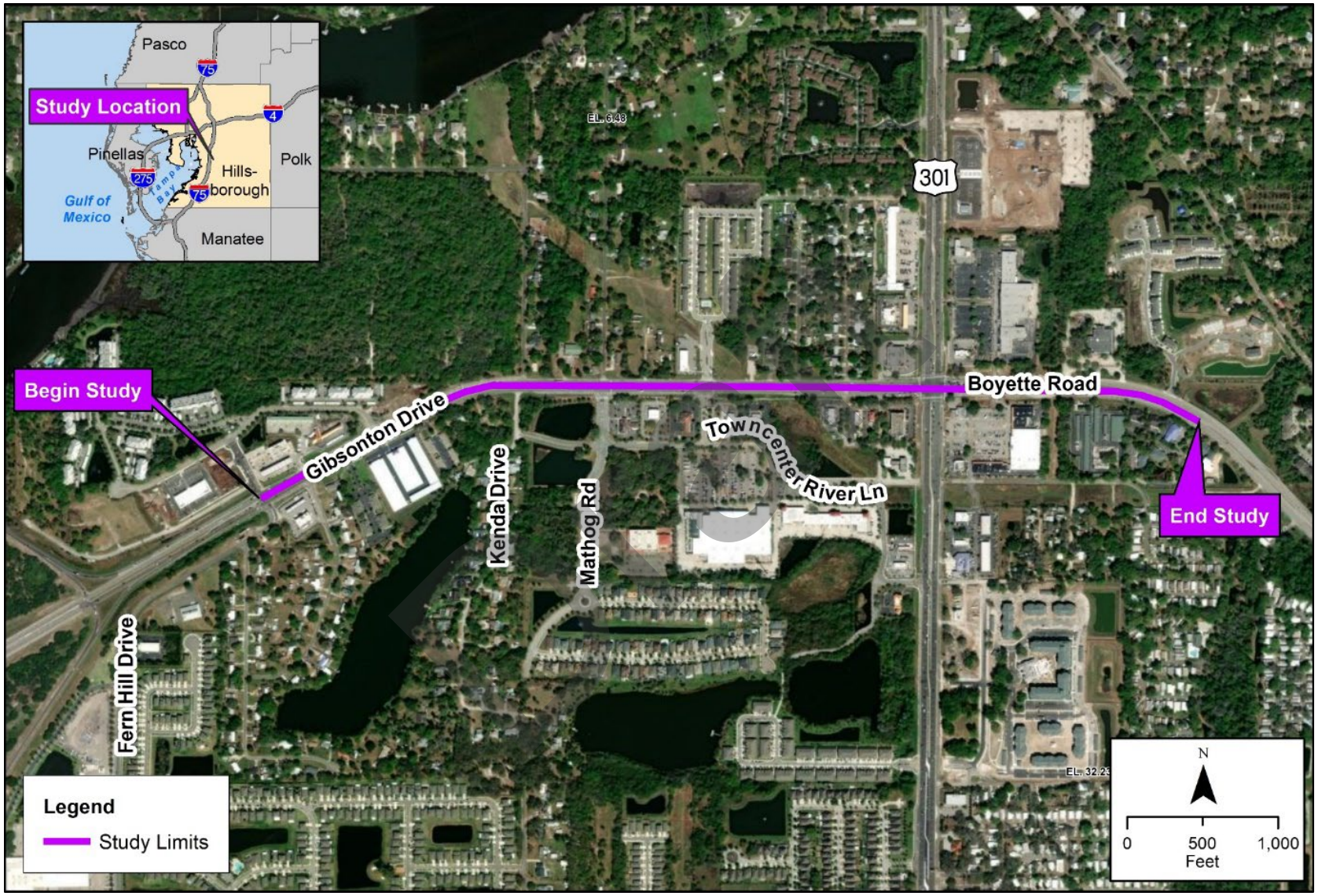


Figure 1-1 Project Location Map

1.2.2 Need

This project is needed to accommodate traffic volumes for the future year (2045) and to accommodate projected traffic flows from the proposed reconstruction of the I-75/Gibsonton Drive interchange. Additionally, this segment experiences high crash rates that are higher than the statewide average for similar facilities.

1.2.3 Project Status

This project is listed as a candidate for funding in the Hillsborough Transportation Planning Organization (TPO) Fiscal Year (FY) 2023/2024-2027/2028 Transportation Improvement Program (TIP). Funding for the PD&E study has been requested and an application for Federal funding has been submitted. The project is also listed in the Cost Feasible Plan of the Hillsborough County TPO's 2045 Long Range Transportation Plan (LRTP).

1.2.4 Roadway Capacity

Within the project limits, Gibsonton Drive operates at Level of Service (LOS) F and fails to meet target LOS D, based on 2022 traffic counts. The Gibsonton Drive segment west of Fern Hill Drive is currently not six lanes; however, with the addition of the I-75/Gibsonton Drive interchange improvements, Gibsonton Drive will be widened to six lanes between I-75 and Fern Hill Drive. The segment directly to the east of the project limits is six lanes, thus creating a bottleneck. This segment is projected to continue to operate deficiently in the year 2045 at LOS F with no capacity improvements. This analysis is based on the Generalized Service Volume Tables from the FDOT 2023 Multimodal Quality/Level of Service Handbook for a context classification suburban commercial (C3C) facility and utilizes traffic forecasts from the Tampa Bay Regional Planning Model (TBRPM).

1.2.5 Safety

Crash data was collected a five-year period including the years 2018 - 2022, and are summarized in **Table 1-1**. This segment suffered a high number of crashes considering its short length (less than one (1) mile). This is reflected in the high crash rates summarized in **Table 1-2** and **Table 1-3**. The calculated crash rates for the segments and intersections are higher than the statewide average rate for similar state facilities except at a short segment between Mathog Road and the Park Place Avenue/Alafia Trace Boulevard intersection, and at the Park Place Avenue/Alafia Trace Boulevard intersection.

Table 1-1 Gibsonton Drive Number of Crashes for 2018-2022

Limits	2018	2019	2020*	2021	2022	Total
Gibsonton Drive from Fern Hill Drive to US 301	220	239	153	136	162	910

Source: Signal 4 Analytics

**Crashes in 2020 are substantially less than those in 2019 due to COVID*

Table 1-2 Crash Rates for Segments

Segment		Crashes	Length (mi)	2022 AADT	Crash Rate (MVMT)	Statewide Average	Above Statewide Average?
From	To						
Fern Hill Dr	Mathog Rd	95	0.33	45,800	3.444	1.747	Yes
Mathog Rd	Park Place Ave	4	0.03	44,000	1.660	1.747	No
Park Place Ave	US 301	27	0.14	45,600	2.317	1.747	Yes

Note: Crashes reported to occur within intersection turn lanes were extracted out of the segments.

Table 1-3 Crash Rates for Intersections

Intersection	Crashes	Entering Volume	Crash Rate (MEV)	Statewide Average	Above Statewide Average?
Fern Hill Dr	159	57,750	1.509	0.526	Yes
Mathog Rd	68	45,200	0.824	0.526	Yes
Park Place Avenue/Alafia Trace Blvd	3	47,500	0.035	0.526	No
US 301	554	99,800	3.042	0.744	Yes

1.3 COMMITMENTS

Project commitments will be finalized and included following the public hearing.

1.4 ALTERNATIVES ANALYSIS SUMMARY

1.4.1 Other Adjacent Projects

Hillsborough County Capital Improvement Plan (CIP) No. 69600311 has proposed improvements to Gibsonton Drive at Fern Hill Drive. It is currently under construction and is scheduled to be completed in Mid-2025.

Under Work Program Item (WPI) Segment No. 437650-2 a proposed improvement to Gibsonton Drive at I-75 includes a Diverging Diamond Interchange (DDI) currently in design. Construction is not presently funded in the FDOT's five-year work program. This project is listed as a candidate for funding in the Hillsborough TPO 2023/2024-2027/2028 TIP.

The Gibsonton Drive PD&E project connects to the proposed DDI at Fern Hill Drive.

1.4.2 Alternatives Considered

The study is considering one project Build Alternative to satisfy the purpose and need while also considering the No-Build (or no-action) Alternative.

A single Build Alternative includes widening Gibsonton Drive from four-lanes to a six-lane divided urban facility. In coordination with Hillsborough County, various elements of the typical section were evaluated including bicycle and pedestrian accommodations and lane widths. Horizontal alignments for widening the existing roadway were optimized to utilize the existing right of way (ROW) and minimize additional ROW as well as other impacts. The Build Alternative is being analyzed based on forecast traffic volumes and the enhancements it provides to mobility and safety within the corridor.

1.5 ALTERNATIVES ANALYSIS

A no-build alternative where no improvements are made other than routine maintenance remains viable through the alternatives analysis. Through coordination with Hillsborough County, several alternative typical sections for widening Gibsonton Drive from four-lanes to six-lane were evaluated. The target speed of 45 miles per hour, consistent with the posted speed of 45 miles per hour was selected. Hillsborough County identifies Gibsonton Drive with a context classification of C3C (suburban commercial). Differences included lane widths (12-ft vs 11-ft wide lanes), bicycle and pedestrian accommodations including use of bicycle lanes, standard sidewalk width, wide sidewalk width or shared use paths. The typical section also includes curb and gutter on both sides of the road to replace the existing 4-ft shoulder to minimize the need for additional right of way. An initial typical section was developed with four additional options. The County staff provided input that resulted in the preferred alternative of two 11-ft lanes and one 12-ft lane in each direction, the 12-ft lane to help accommodate the truck traffic between I-75 and US 301. A 10-ft wide sidewalk separated from the curb line by several feet was determined acceptable in lieu of bike lanes and a standard sidewalk width due to the higher roadway speeds (45 mph) and volume of traffic to provide better protection for bicyclists than the bike lanes. The shared use path required a larger footprint and greater ROW requirements and more potential relocations and environmental impacts. The overall cost of the build alternative with design, ROW acquisition, wetland mitigation, construction engineering & inspection and construction is approximately $38.3 million.

1.6 DESCRIPTION OF PREFERRED ALTERNATIVE

The Preferred Alternative includes widening the existing four-lane divided urban arterial from Fern Hill Drive to US 301 to a six-lane divided urban arterial with a 22-ft median. There will be two 11-ft and one 12-ft travel lanes with curb and gutter and a 10-ft wide sidewalk on both sides of Gibsonton Drive from Fern Hill Drive to US 301. East of US 301 on Boyette Road in the westbound direction, a second left turn lane with a 6-ft wide concrete traffic separator will be constructed and the existing dual right turn lanes will be extended for additional storage capacity. The existing sidewalk on the north side of Boyette Road will be removed and replaced with a 10-ft sidewalk from US 301 to an existing Hillsborough Area Regional Transit (HART) bus stop. Horizontal widening alignments were adjusted to minimize ROW requirements, impacts and costs. Intersection improvements are included along Gibsonton Drive at the US 301 intersection. The Preferred Alternative includes construction of one off-site SMF and one off-site FPC site. Up to 30 feet of additional ROW is required along the north side of the roadway between Hagadorn Road and US 301 and up to 7 feet of additional ROW is needed

on the south side of Gibsonton Drive approaching the US 301 intersection. Additional ROW is proposed for the off-site SMF and off-site FPC sites which are located adjacent to Gibsonton Drive. Full or partial acquisition of 20 parcels (approximately 4.2 acres) are involved with the ROW for the roadway widening and the SMF and FPC sites.

The Preferred Alternative meets the purpose and need of the project by providing additional capacity through the six-lane section which also provides lane continuity of the existing roadway to the east of the project and the reconstruction of the I-75 interchange project which is presently under design by FDOT. Operational improvements at the US 301 intersection will reduce congestion and provide less delay than the no-build alternative. Median modifications at two unsignalized intersections will reduce vehicle conflicts at those locations. The alignment of the eastbound lanes through the US 301 will be adjusted to remove an existing offset (nearly a full-lane width), reducing the potential for vehicle maneuvering through the intersection.

The conceptual plans for the preferred alternative are shown in **Appendix A** and the proposed typical section is shown on **Figure 1-2** and also on **Figure 5-6** under **Section 5** of this report. The year of construction is not been funded to date.

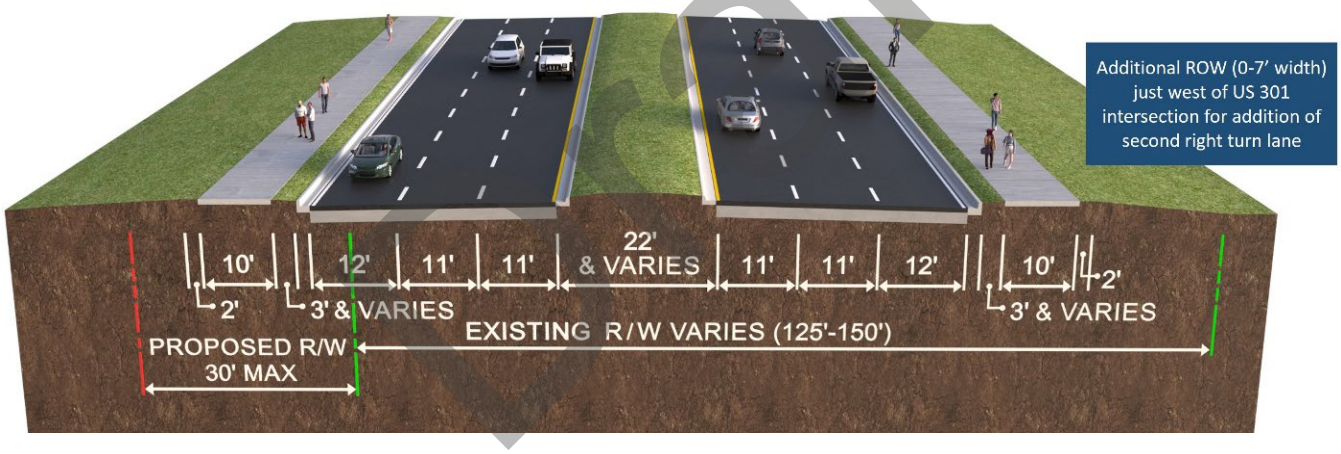


Figure 1-2 Gibsonton Drive Preferred Alternative Typical Section

1.7 LIST OF TECHNICAL DOCUMENTS

Public Involvement Items

- *Public Involvement Plan (October 2022)*
- *Public Hearing Scrapbook (will be prepared after Public Hearing)*
- *Public Hearing Transcript (will be prepared after Public Hearing)*
- *Comments and Coordination Report (which includes Public Hearing Transcript) (will be prepared after Public Hearing)*

Engineering Items

- *This Preliminary Engineering Report*
- *Project Traffic Analysis Report (September 2023)*
- *Pond Siting Report (January 2024)*
- *Typical Section Package (November 2023)*
- *Utility Assessment Package (January 2024)*

Environmental Items

- *ETDM Programming Screen Summary Report (October 2022)*
- *Natural Resource Evaluation Report (January 2024)*
- *Section 4(f) Technical Memorandum (December 2023)*
- *Noise Study Report (January 2024)*
- *Location Hydraulics Technical Memorandum (January 2024)*
- *Water Quality Impact Evaluation (August 2023)*
- *Contamination Screening Evaluation Report (January 2024)*
- *Conceptual Stage Relocation Plan (January 2024)*
- *Cultural Resource Assessment Survey (December 2023)*
- *Type 2 Categorical Exclusion (January 2024)*

SECTION 2 EXISTING CONDITIONS

Gibsonton Drive is maintained and under the jurisdiction of Hillsborough County. Gibsonton Drive is part of an overall 11.5-mile roadway corridor that spans from US 41 on the west to US 301, then becomes named Boyette Road east to Bell Shoals Road, then becomes named Fish Hawk Boulevard where it ends at Lithia Pinecrest Road. The 0.95-mile study segment from Fern Hill Drive to US 301 serves as a roadway link between the I-75 interchange to the west and US 301 to the east.

Earlier planning studies prepared in advance of this project include *a Vision Zero Corridor Report* prepared by Hillsborough County in January 2021 identified potential short-term, mid-term and long-term improvement within the corridor for consideration to be included in this project. Some of the short-term improvements identified have been incorporated as an existing condition. FDOT prepared *I-75 (SR 93A) at Gibsonton Drive Interchange Modification Report (IMR)* for improvements to the I-75 interchange at Gibsonton Drive which was approved in January 2023. The improvements identified in the IMR are shown as the no-build condition for the design year 2045. Both the *Vision Zero Corridor Report* and IMR are included in the project file.

2.1 TYPICAL SECTION

Gibsonton Drive from Fern Hill Drive to US 301 is a 4-lane divided facility with 12-ft travel lanes and 4-ft paved shoulders. The raised median width is 22-ft wide. At the US 301 intersection and east of US 301, curb and gutter is located on the outside of the existing pavement. The existing ROW along the project corridor varies from 125 feet to 150 feet wide. There are 5-foot sidewalks within the project corridor with the exception of two gaps along the south side west of Kenda Drive. The existing roadway typical section is provided in **Figure 2-1**.

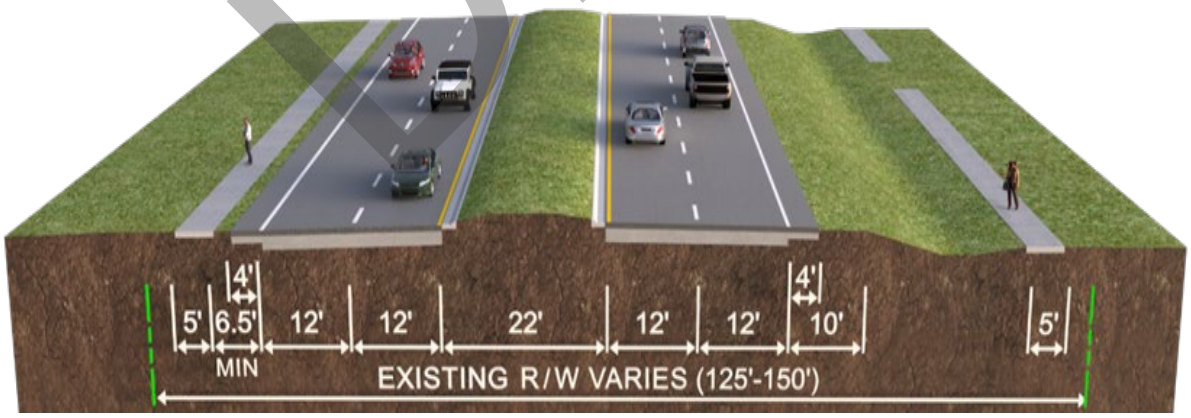


Figure 2-1 Existing Roadway Typical Section

2.2 ROADWAY CLASSIFICATIONS

2.2.1 Roadway Classifications

Gibsonton Drive, throughout the corridor, is functionally classified by Hillsborough County as an Urban Minor Arterial. The Roadway Classification map is included in **Appendix B**.

The Federal Highway Administration (FHWA) urban boundary map for this area is shown in **Figure 2-2**. A Vision Zero Corridor Study conducted in January 2021 indicates Gibsonton Drive is located within the Urban Service Area for Hillsborough County.

Gibsonton Drive is classified as an emergency evacuation route by Hillsborough County Emergency Management Departments (Refer to **Figure 2-3)**. Gibsonton Drive is not on the state's Strategic Intermodal System (SIS).

2.2.2 Context Classifications

The existing highway is classified as context classification **C3C (suburban commercial)** within the study limits. The Hillsborough County Context Classification map is included in **Appendix B**.

2.3 ACCESS MANAGEMENT CLASSIFICATIONS

Hillsborough County does not currently provide access management classifications for their roadways.

2.4 RIGHT OF WAY

The existing ROW varies in width throughout the study area from 125 ft to generally 150 ft wide west of US 301 and up to 202 ft wide east of US 301. The concept plans (refer to **Appendix A**) show the existing ROW throughout the project limits with a green line and label the total existing ROW width.

2.5 EXISTING AND FUTURE LAND USE

The existing land use map for Hillsborough County within the project area are shown on **Figure 2-4**. The existing land use is predominantly comprised of light/heavy commercial and single family/mobile homes adjacent to the corridor along with smaller areas of public space and heavy commercial.

The future land use map for Hillsborough County within the project area are shown on **Figure 2-5**. Like the existing land use, the future land use is also anticipated to remain predominantly comprised of neighborhood mixed use, conservation and office/commercial.

2.6 PAVEMENT CONDITIONS

A pavement condition survey is not available from Hillsborough County for Gibsonton Drive.

2.7 EXISTING DESIGN AND POSTED SPEED

The existing posted speed and design speed along Gibsonton Drive is 45 mph.

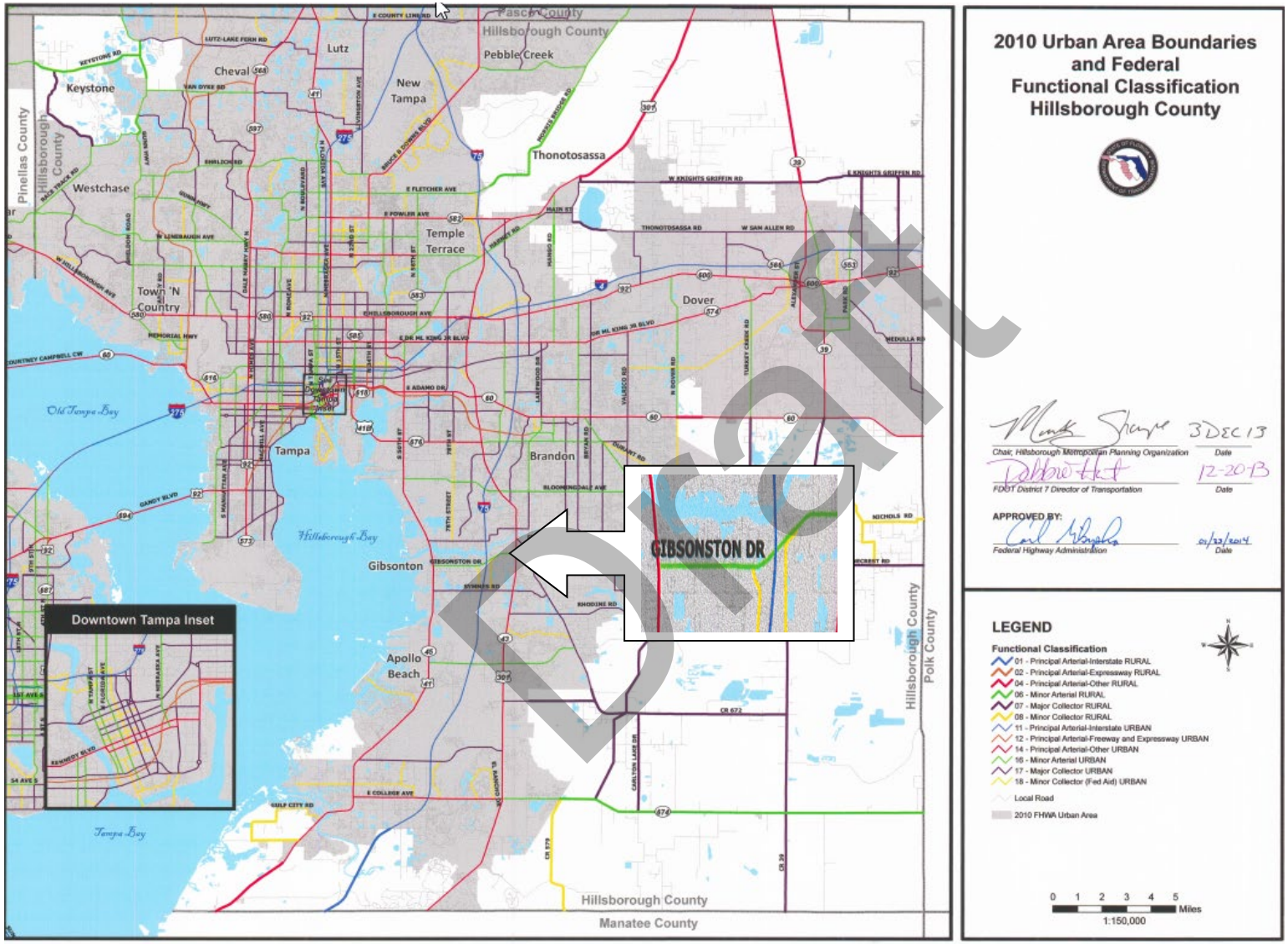


Figure 2-2 FHWA Urban Area Boundary Map

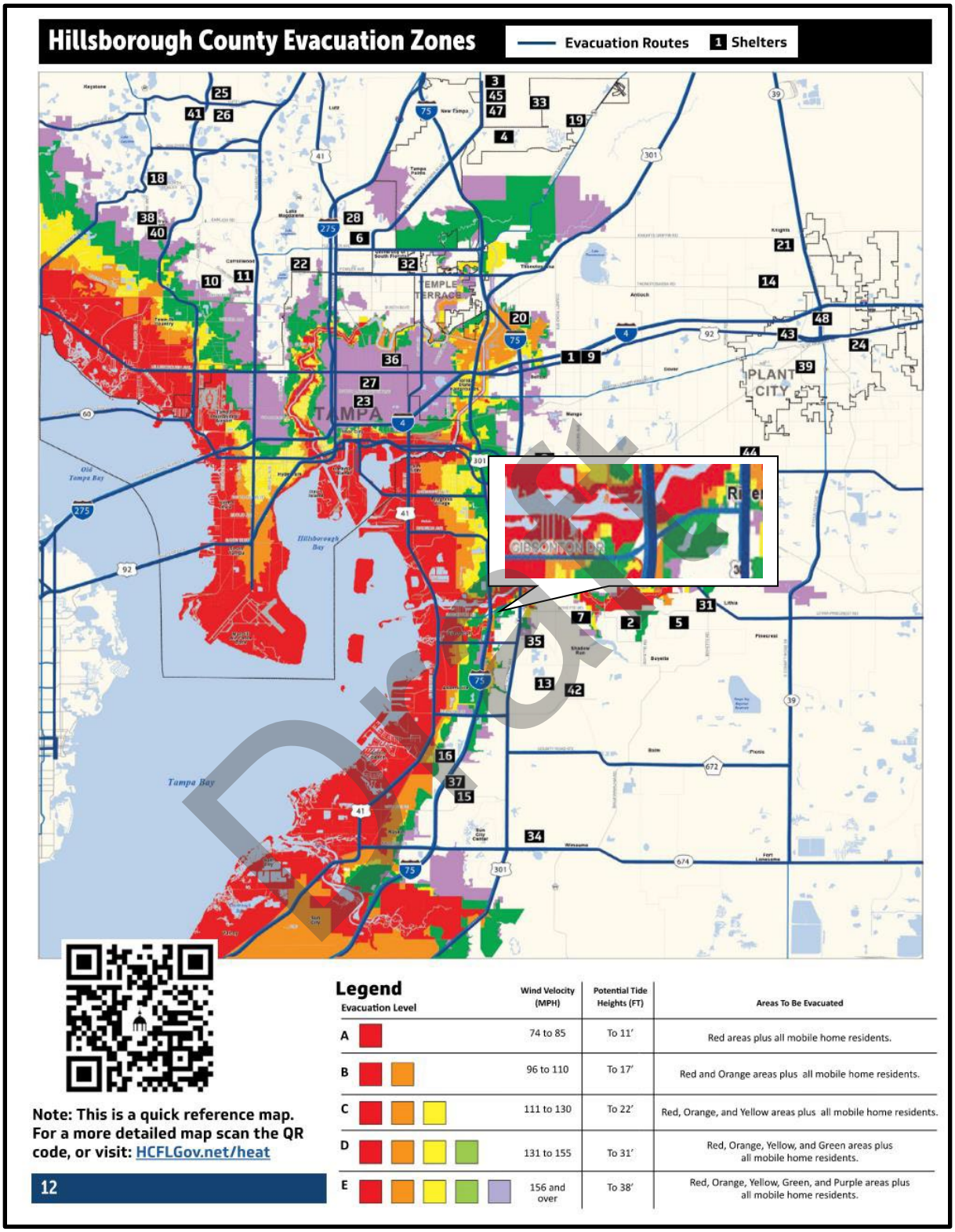


Figure 2-3 Emergency Evacuation Routes

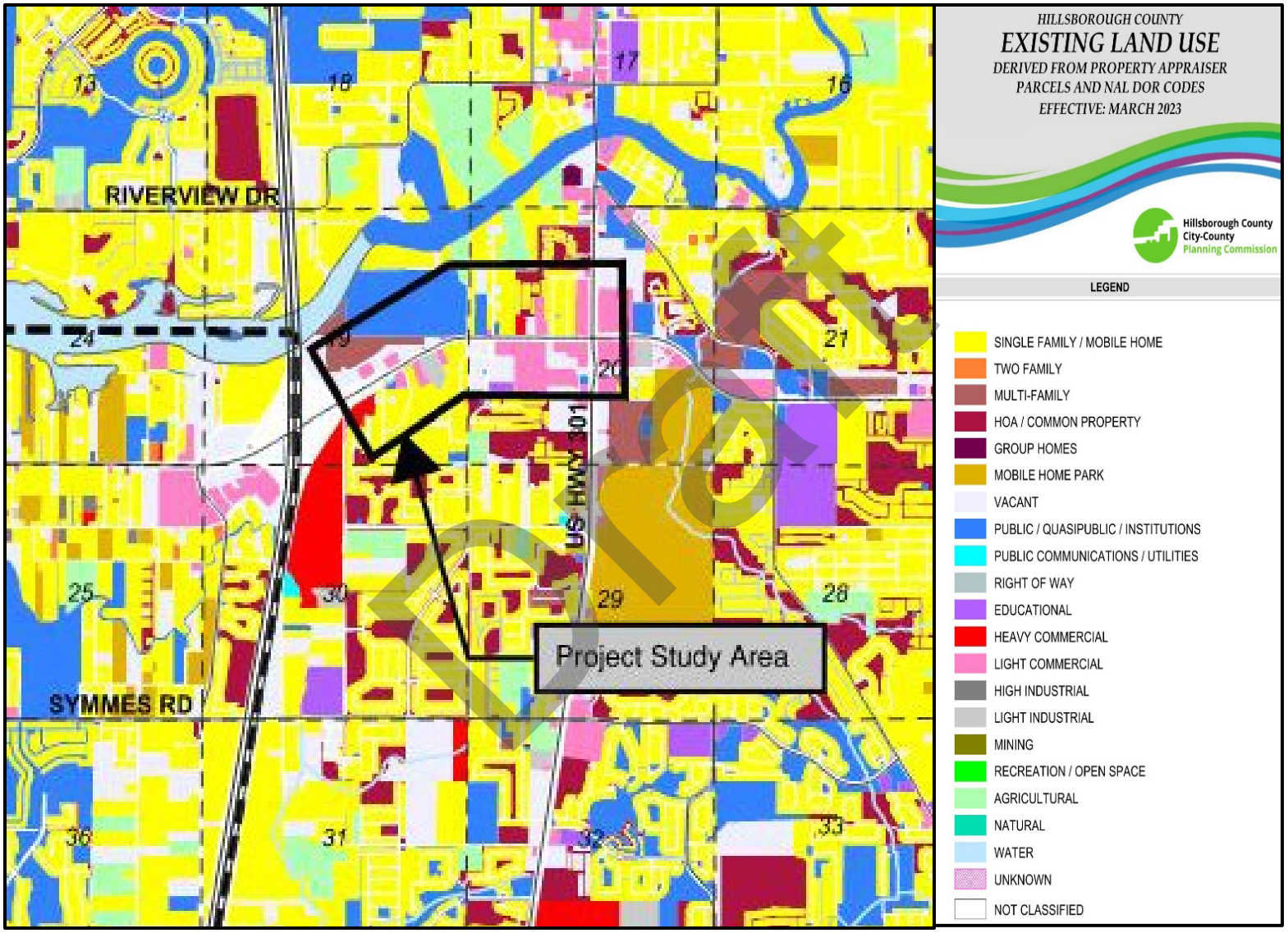


Figure 2-4 Existing Land Use Map

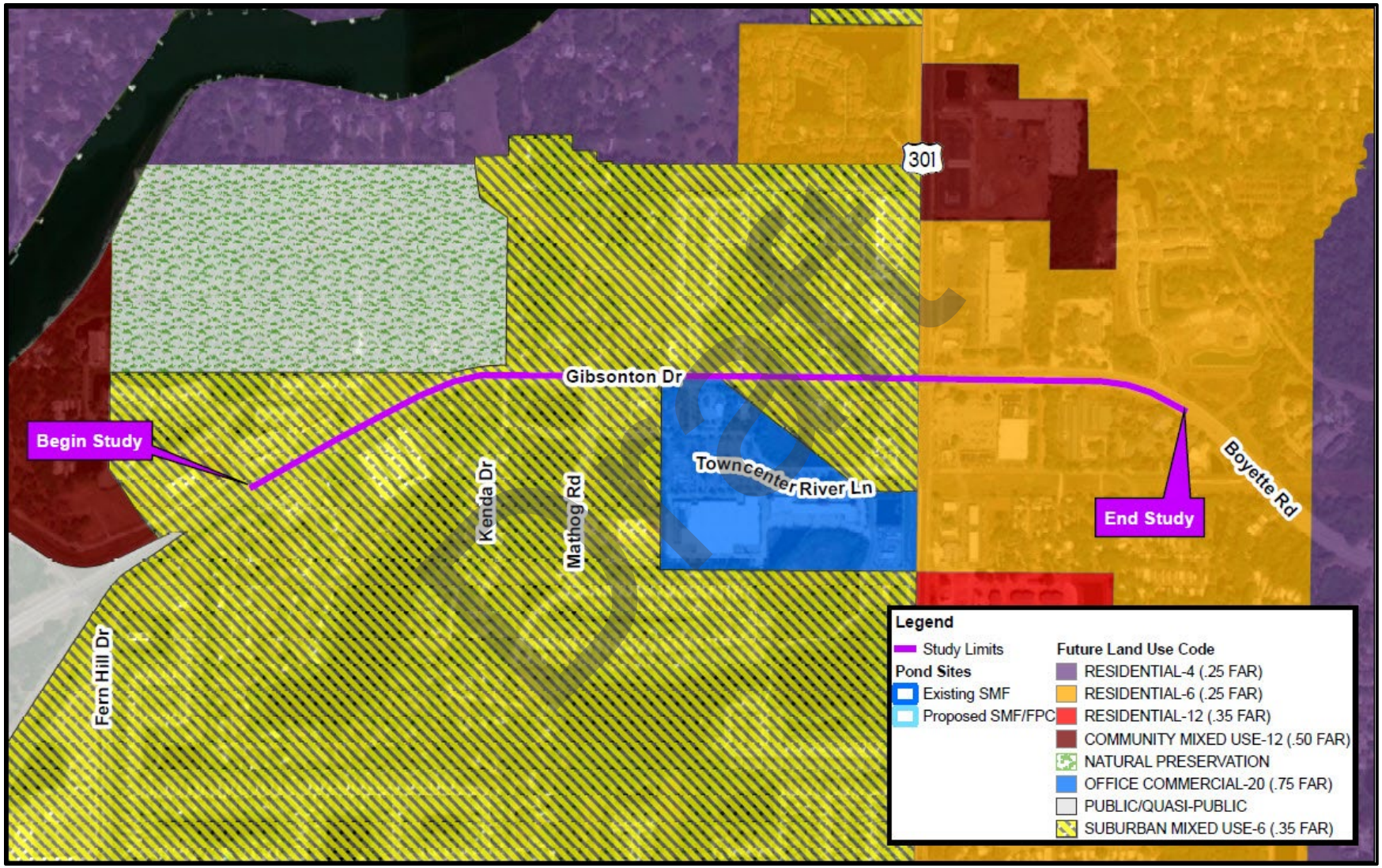


Figure 2-5 Future Land Use Map

2.8 HORIZONTAL ALIGNMENT

The existing horizontal alignment for Gibsonton Drive was obtained from as-built plans, baseline survey data obtained from Hillsborough County specialized services unit and FDOT's survey section. There are two station equations within the project limits. The first occurs at station 79+54.00 Back/779+54.00 Ahead prior to the horizontal curve #1 and the second is at the intersection of US 301 where station 819+08.63 (Gibsonton Dr.) Back/100+00.00 (Boyette Road) Ahead. **Table 2-1** summarizes the two existing horizontal curves within the study limits. The existing curves meets design standards for up to 45 mph design speed with reverse crown (RC) superelevation.

Table 2-1 Existing Horizontal Curves

Curve #	Curve Direction	Point of Inter-section (PI) Location	Degree of Curve	Curve Length (Ft)	Est. Design Speed (MPH)	Meet Criteria?
1	Right	788+83.89	5° 00'	607.82	45	Yes, RC
2	Right	116+80.02	4° 00'	1,158.87	45	Yes, RC

2.9 VERTICAL ALIGNMENT

The existing plans do not provide information on vertical alignment throughout the project limits. During the future design phase, when funded, survey data will be collected where the vertical alignment may be determined and evaluated.

2.10 MULTI-MODAL FACILITIES

2.10.1 Pedestrian and Bicycle Facilities

The existing sidewalk on the north side of Gibsonton Drive from the beginning of the project to US 301 is generally 5 ft wide. On the south side, the existing sidewalk is also 5 ft in width with the exception between Fern Hill Drive and Kenda Drive where there are two gaps of approximately 200-ft and 750-ft in the sidewalk. Approximately 240-ft of the sidewalk on the south side east of Kenda Drive is accommodated with wooden boardwalk.

The paved shoulder throughout the project is not marked as a bicycle lane and currently bike lane keyholes do not exist where right turn lanes exist. Hillsborough County's Existing and Proposed Trails & Shared Use Path Map (refer to **Figure 2-6**) shows an existing trail running along the east side US 301 from Gibsonton Drive south to CR 672. Currently there are no future plans for a Shared Use Path along Gibsonton Drive.

2.10.2 Transit Facilities

HART operates Route 31 which runs outside the project limits north from South County along US 41, turns east on Gibsonton Drive to US 301 with a Park-n-Ride stop located in Riverview Oaks Plaza, continues north along US 301 outside the project limits to Westfield Brandon Mall transit center.

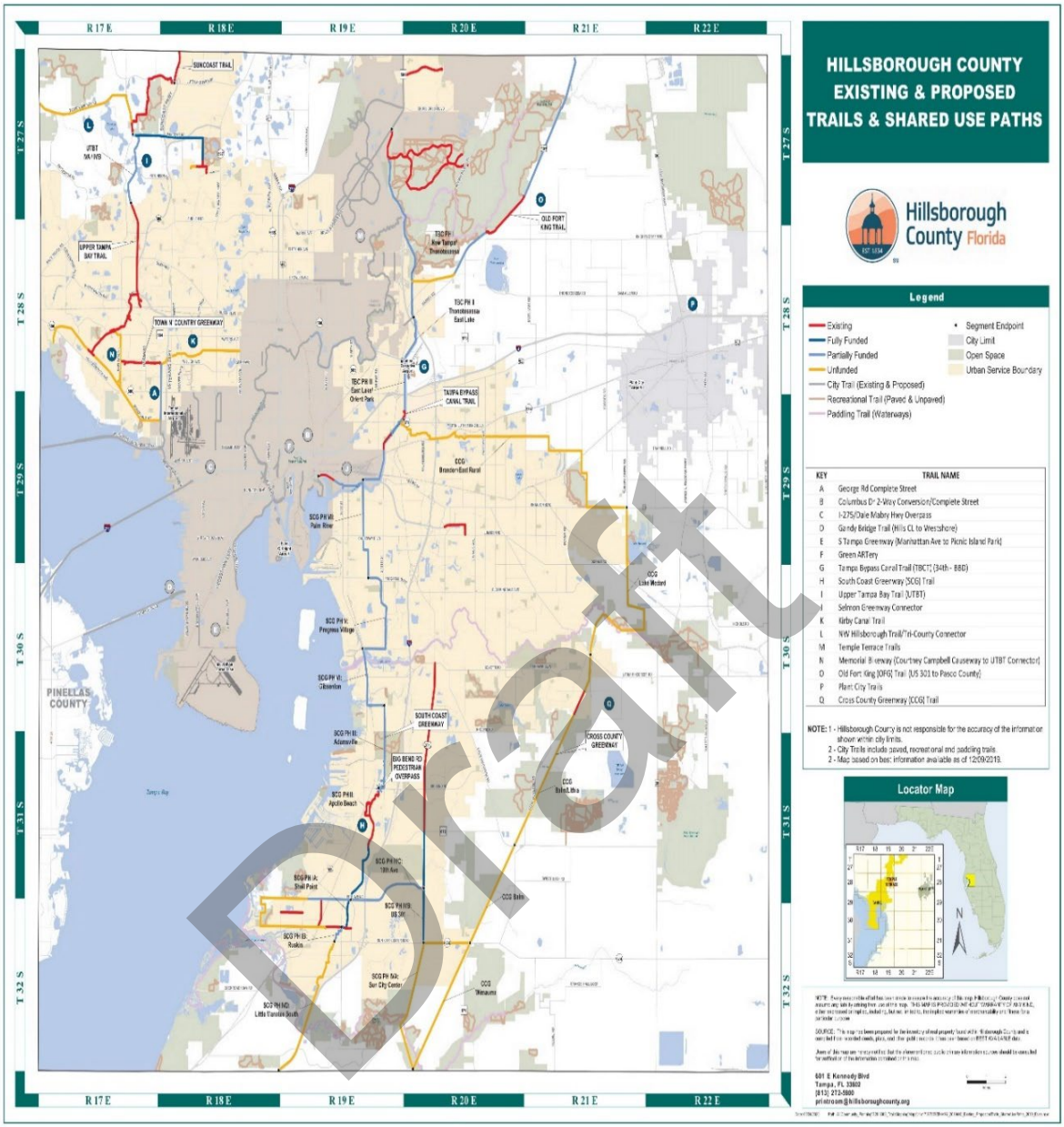


Figure 2-6 Hillsborough County Existing and Proposed Trails and Shared Use Path Map

As of December 2023, Route 31 runs weekdays on 60-minute frequencies from South County to Westfield Brandon Mall between the times of 5:26am and 10:00pm and from Westfield Brandon Mall to South County between the times of 6:10am and 8:12pm. The FY 2030 HART Action Plan lists increasing weekday frequency to 30 minutes and adding weekend service with a frequency of 60 minutes. According to the 2018 HART Transit Development Plan (TDP), there were 78,511 annual passenger trips in year 2017 on Route 31. There are several existing bus stops in both directions of Gibsonton Drive from Fern Hill Drive to US 301. The existing bus stops are shown on the Concept Plans in **Appendix A**. The HART transit route is shown in **Figure 2-7**

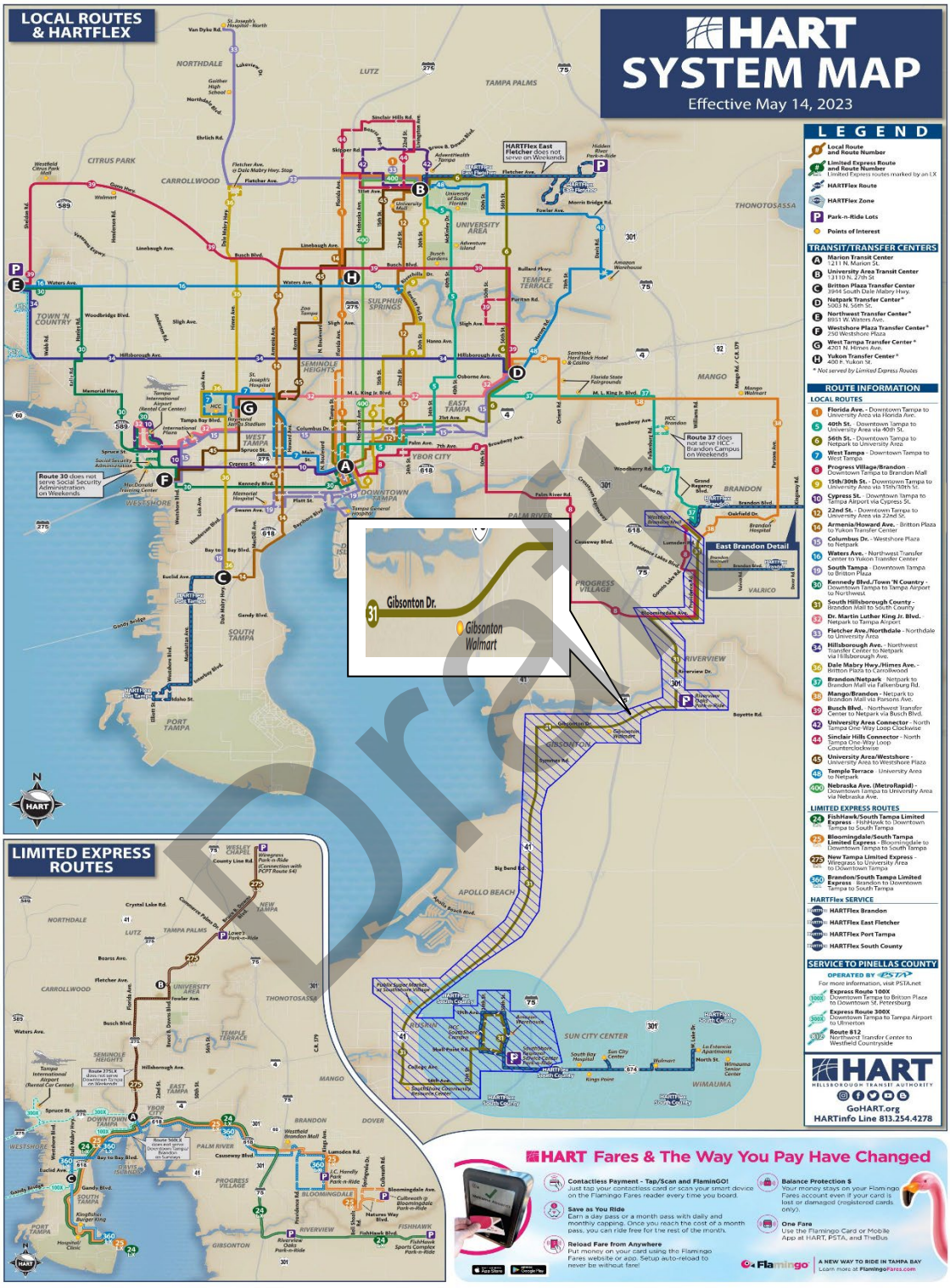


Figure 2-7 Hillsborough Area Regional Transit Route 31

2.11 INTERSECTIONS

The primary intersections within the limits of this project with median openings are at Fern Hill Dr, Kenda Drive/Hagadorn Road (stop controlled), Mathog Road, Park Place Ave, Oakridge Avenue (stop controlled), and US 301. Only signalized intersections within the study area were evaluated for operational analysis. **Figure 2-8** shows the lane configuration at the signalized intersections. There are existing single and dual turn lanes on Gibsonton Drive at the study intersections as listed in **Table 2-3**, as there exists turn lanes on the side street intersection approaches.

Table 2-2 Existing Turn Lanes on Gibsonton Drive at Study Intersections

Cross Street/Side Street	Directional Approach of Left Turn Lane(s)	Directional Approach of Right Turn Lane(s)
Fern Hill Drive	Eastbound & Westbound	Eastbound
*Kenda Drive/Hagadorn Road	Eastbound & Westbound	None
Mathog Road	Eastbound & Westbound	Eastbound
Park Place Avenue/Alafia Trace Boulevard	Eastbound & Westbound	Eastbound
*Oakridge Avenue	Eastbound & Westbound U-turn	None
US 301	Eastbound (Dual) & Westbound	Eastbound & Westbound (Dual)

* denotes intersection is not signalized (side street is stop-controlled)

2.12 PHYSICAL OR OPERATIONAL RESTRICTIONS

Other than several transit bus stops and a boardwalk along the south side of Gibsonton Drive east of Kenda Drive, there are no physical or operational restrictions such as multimodal use lanes, parking, fixed objects, barriers within the clear zone.

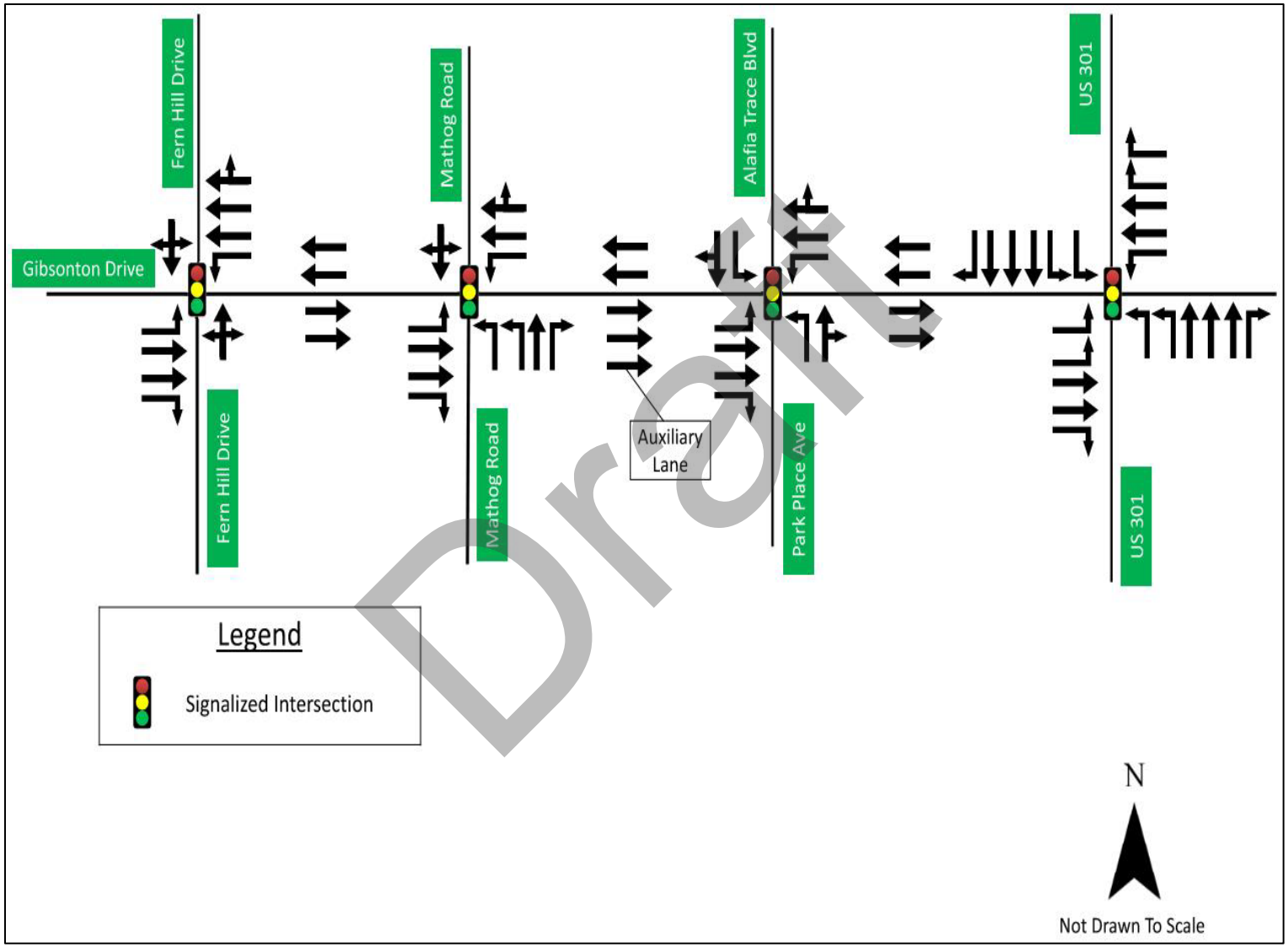


Figure 2-8 Existing Lanes at Gibsonton Drive Signalized Intersections

2.13 EXISTING MEDIAN OPENINGS

Gibsonton Drive is a divided roadway from Fern Hill Drive to US 301. Existing side streets and median opening types and locations are summarized in **Table 2-4.**

Table 2-3 Inventory of Existing Side Streets and Median Openings

No.	Nearest Cross Road	Approximate Baseline Station	Existing Access	Existing Distance from Previous Opening (Ft)
		Gibsonton Drive		
-	Fern Hill Drive	73+00	FULL	-
1	Barnwood Drive	76+20	RI-RO	320
2	Water Works Lane	79+20	RI-RO	300
3	Alafia Preserve Avenue	782+60	BI-DIR	230
4	Park Place Avenue (Private Road)	785+00	RI-RO	340
5	Kenda Drive/Hagadorn Road	792+00	FULL	700
6	Mathog Road	797+60	FULL	560
7	Park Place Avenue	804+50	FULL	690
8	Oakridge Avenue	810+50	FULL	600
9	Pineridge Avenue	813+90	RI-RO	340
10	US 301	100+40	FULL	550

Notes: RI-RO denotes right-in, right-out; BI-DIR denotes bi-directional median opening; and FULL denotes full median opening

2.14 TRAFFIC DATA AND OPERATIONAL ANALYSIS

The information in this section has been extracted from the project's *Project Traffic Analysis Report (PTAR).*

2.14.1 Existing Year Traffic Volumes and Traffic Factors

Data collection for this study consisted of data provided from FDOT Florida Transportation Online (FTO) website, traffic counts, site visits and a desktop review of aerials. Traffic data is included in Appendix B of the *PTAR*. Traffic factors for this study were developed using several data sources including existing traffic counts, historic information provided on FTO (2017 - 2021) and recommended traffic factors from other adjacent studies for consistency purposes. The study area is located within the Urban Area Boundary; therefore, a design hour factor or standard K factor of 9.0 was used consistently through the study for both existing and future operational analysis.

The Directional Design factor (D-factor) for Gibsonton Drive and the side streets within the study area were calculated from the collected October 2022 traffic counts and compared to the adjacent *I-75 IMR* and historic FTO data for consistency purposes. From the traffic count information, the D-factor

varied on Gibsonton Drive east of US 301 (Boyette Road), Fern Hill Drive and US 301 so separate D-Factors are provided for these roadway segments.

The daily Truck factor (T-factor) for Gibsonton Drive was calculated from the collected classification traffic count data and checked against historic FTO data (2017 – 2021) and adjacent study traffic factors. The T-factor for US 301 was averaged from FTO historic data (collected traffic counts did not include vehicle classification for US 301 and side streets). Minor side street truck factors were obtained from recommended values provided in the *FDOT 2019 Project Traffic Forecasting Handbook*. The Design Hour Truck (DHT) factor was calculated by dividing the T-factor in half.

The design traffic factors that were utilized for the study area are summarized in **Table 2-5.**

Table 2-4 Recommended Traffic Factors

Roadway	K (%)	D (%)	T24 (%)	DHT (%)
Gibsonton Drive (west of Fern Hill Drive to US 301)	9.0	52.5	8.0	4.0
Boyette Road (east of US 301)	9.0	59.0	8.0	4.0
US 301	9.0	60.0	5.0	3.0
Fern Hill Drive	9.0	57.0	4.0	2.0
Side streets (Mathog Rd, Alafia Trace Blvd/Park Place Ave)	9.0	52.5	4.0	2.0

Existing traffic counts for the study were collected the week of October 10, 2022, and used in the development of the Existing Year (2022) demand volumes for this study. Three-day traffic counts were averaged for each roadway segment and a seasonal factor (SF) and axle correction factor (ACF) was applied to calculate Existing Year (2022) Annual Average Daily Traffic (AADT) volumes. The ACF was not applied to the classification count between Fern Hill Drive and Mathog Road.

The Existing Year (2022) AADTs are shown in **Figure 2-9** and the peak hour direction design hour volumes (DDHVs) are shown in **Figure 2-10**. DDHVs were calculated by multiplying AADT volumes by the study K-factor and D-factors. AM and PM peak hour turning volumes were calculated by multiplying DDHVs by turning movement percentages from the existing intersection counts.

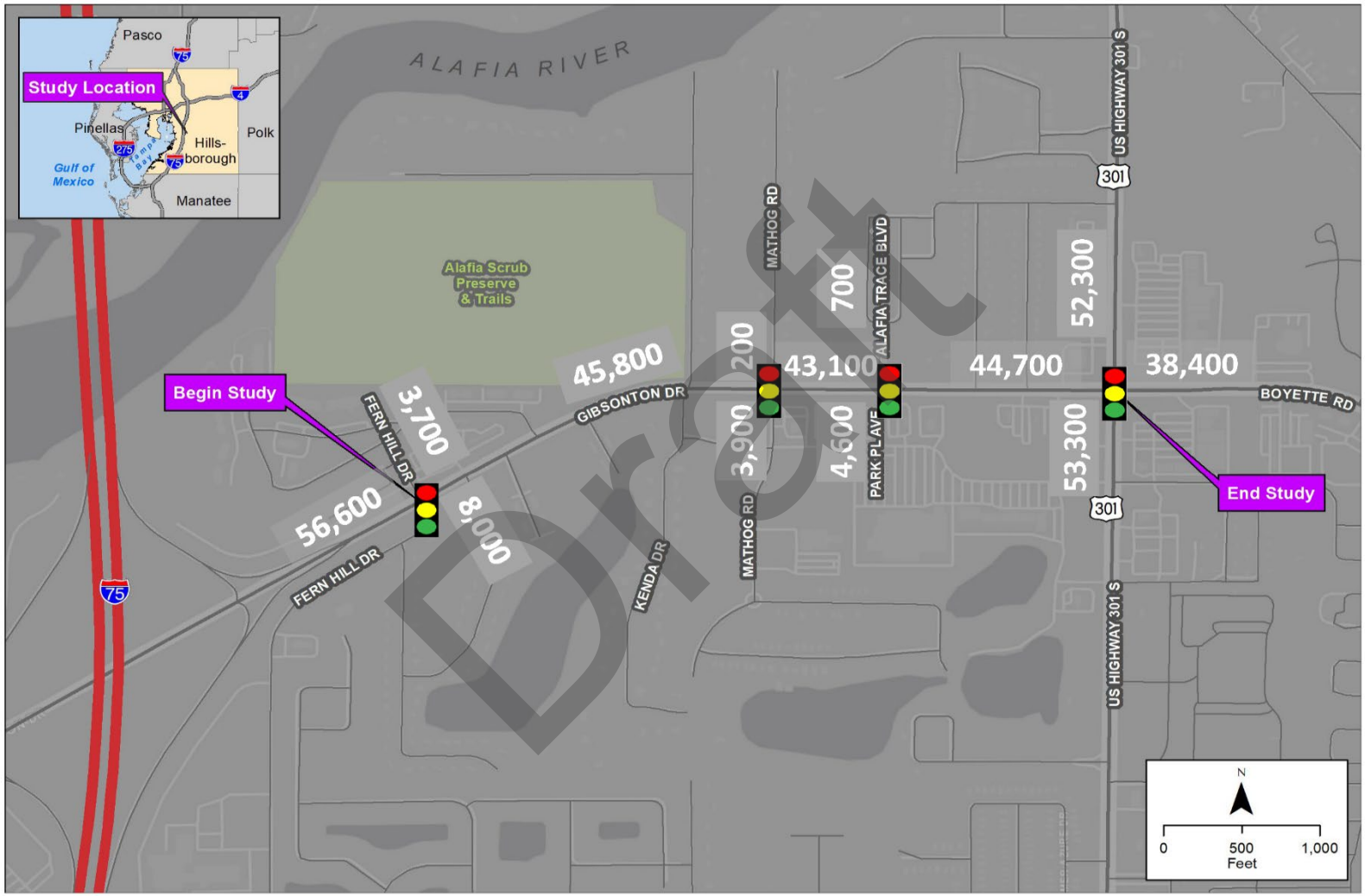


Figure 2-9 Existing Year 2022 AADT's

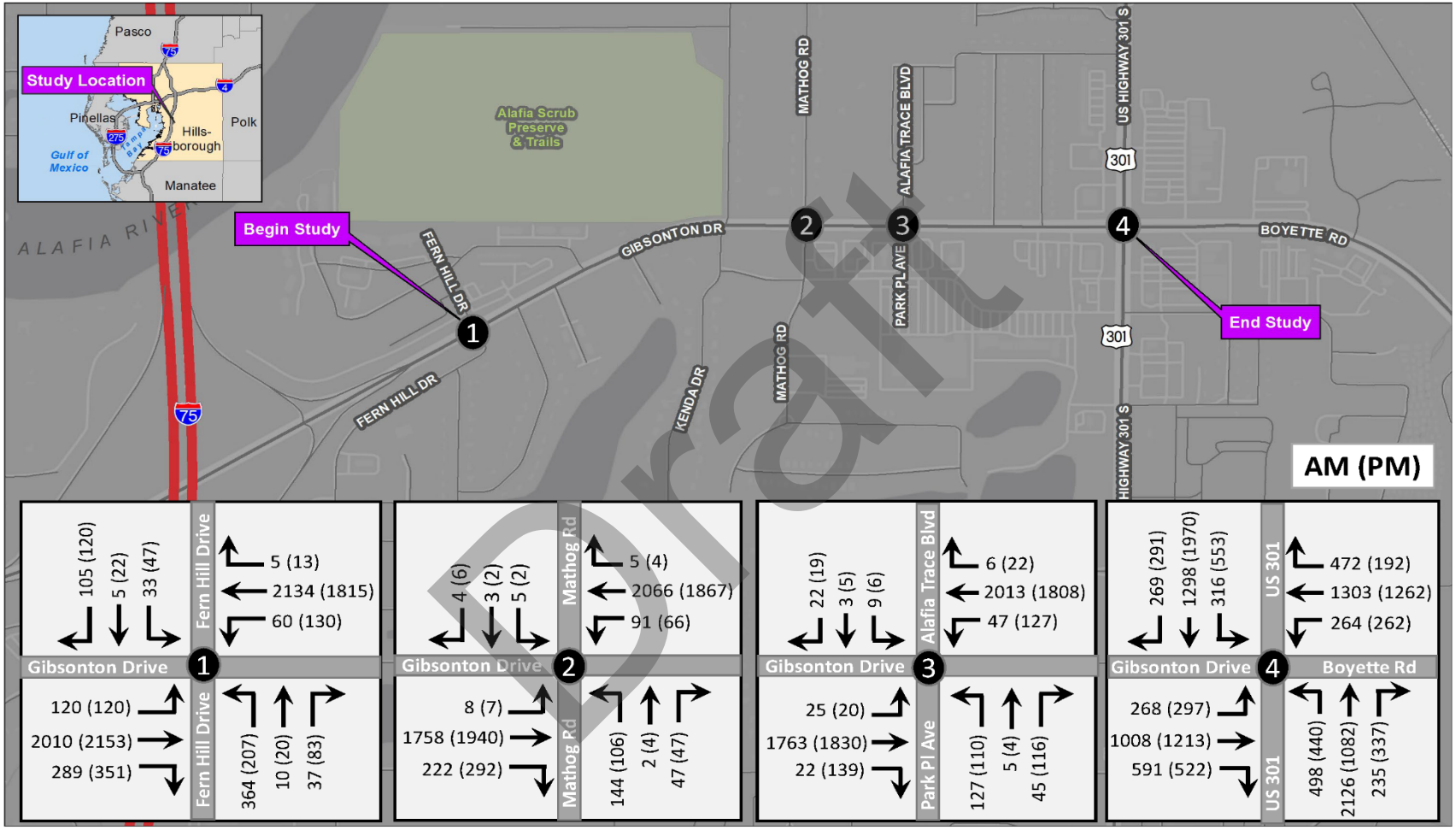


Figure 2-10 Existing Year 2022 DDHV's

2.14.2 Existing Year (2022) Operational Analysis

Existing Year (2022) operational analysis was completed for the study corridor using the existing lane geometry shown in **Figure 2-8** and the demand volumes shown in **Figure 2-10**. For the four (4) signalized intersections within the study area, existing signal phasing/timing information obtained from Hillsborough County was utilized in the analysis. A target LOS of D is established for the study area. Arterial LOS results for the Existing Year (2022) AM and PM peak period are shown in **Table 2-6** and **Table 2-7,** respectively.

Table 2-5 Existing Year (2022) Arterial LOS Results- AM Peak Period

Segments	Flow Speed (mph)	Running Time (s)	Signal Delay (s)	Travel Time (s)	Distance (mi)	Arterial Speed (mph)	Arterial LOS
Gibsonton Drive - Eastbound							
W/of Fern Hill - Fern Hill Dr	45	28.0	50.0	78.0	0.27	12.4	F
Fern Hill Dr - Mathog Rd	45	41.6	23.1	64.7	0.46	25.4	C
Mathog Rd - Park Pl Ave	45	14.2	3.8	18.0	0.13	26.1	C
Park Pl Ave - US 301	45	28.1	196.5	224.6	0.28	4.5	F
Total		**111.9**	**273.4**	**385.3**	**1.14**	**10.7**	F
Gibsonton Drive - Westbound							
E/of US 301 - US 301	45	42.3	149.1	191.4	0.53	9.9	F
US 301 - Alafia Trace Blvd	45	28.1	48.1	76.2	0.28	13.4	E
Alafia Trace Blvd - Mathog Rd	45	14.2	3.3	17.5	0.13	26.8	C
Mathog Rd - Fern Hill Dr	45	41.6	14.9	56.5	0.46	29.1	B
Total		**126.2**	**215.4**	**341.6**	**1.40**	**14.8**	E

Red text: LOS is worse than target LOS D.

Table 2-6 Existing Year (2022) Arterial LOS Results- PM Peak Period

Cross Street	Flow Speed (mph)	Running Time (s)	Signal Delay (s)	Travel Time (s)	Distance (mi)	Arterial Speed (mph)	Arterial LOS
Gibsonton Drive - Eastbound							
W/of Fern Hill - Fern Hill Dr	45	28.0	56.4	84.4	0.27	11.5	F
Fern Hill Dr - Mathog Rd	45	41.6	1.6	43.2	0.46	38.1	A
Mathog Rd - Park Pl Ave	45	14.2	4.4	18.6	0.13	25.2	C
Park Pl Ave - US 301	45	28.1	181.9	210.0	0.28	4.9	F
Total		**111.9**	**244.3**	**356.2**	**1.14**	**11.5**	F
Gibsonton Drive - Westbound							
E/of US 301 - US 301	45	42.3	180.5	222.8	0.53	8.5	F
US 301 - Alafia Trace Blvd	45	28.1	6.8	34.9	0.28	29.2	B
Alafia Trace Blvd - Mathog Rd	45	14.2	1.8	16.0	0.13	29.3	B
Mathog Rd - Fern Hill Dr	45	41.6	29.9	71.5	0.46	23.0	C
Total		**126.2**	**219.0**	**345.2**	**1.40**	**14.6**	E

Red text: LOS is worse than target LOS D.

Table 2-8 shows the delay and LOS for the existing conditions during the AM and PM peak hours for the signalized intersections. The results show that the Fern Hill Drive intersection and the US 301 intersection do not meet the LOS target D during both AM and PM peak hours of the Existing Year (2022) conditions. The northbound and southbound approaches are LOS F at the Fern Hill Drive, Mathog Road and Park Place Avenue/Alafia Trace Boulevard intersections for both the AM and PM peak periods. At the US 301 intersection, all the intersection approaches are reported to operate at LOS F for both the AM and PM peak periods.

Table 2-7 Existing Year (2022) Intersection Delay and LOS Results

Intersection	Approach	Movement	AM Peak Hour				PM Peak Hour			
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Fern Hill Drive	Eastbound	EB Left	54.7	D	38.7	D	18.4	B	41.7	D
		EB Thru	40.9	D			47.0	D		
		EB Right	16.7	B			16.8	B		
	Westbound	WB Left	61.3	E	27.5	C	99.6	F	22.3	C
		WB Thru-Right	26.1	C			16.6	B		
		WB Right	27.5	C			17.3	B		
	Northbound	NB Left-Thru-Right	326.7	F	326.7	F	434.1	F	434.1	F
	Southbound	SB Left-Thru-Right	68.7	E	68.7	E	89.2	F	89.2	F
	Fern Hill Drive Intersection		**Overall**		**57.7**	**E**	**Overall**		**59.9**	**E**
Mathog Road	Eastbound	EB Left	4.8	A	12.2	B	4.0	A	12.0	B
		EB Thru	12.2	B			12.1	B		
		EB Right	0.0	A			0.0	A		
	Westbound	WB Left	15.2	B	2.6	A	16.8	B	2.2	A
		WB Thru	2.1	A			1.7	A		
		WB Right	2.0	A			1.6	A		
	Northbound	NB Left	104.9	F	104.1	F	112.3	F	113.8	F
		NB Thru	93.8	F			101.4	F		
		NB Right	101.9	F			118.1	F		
	Southbound	SB Left-Thru-Right	111.3	F	111.3	F	118.2	F	118.2	F
	Mathog Road Intersection		**Overall**		**11.7**	**B**	**Overall**		**11.5**	**B**
Park Place Avenue/ Alafia Trace Blvd	Eastbound	EB Left	19.1	B	13.5	B	10.0	B	10.8	B
		EB Thru	13.5	B			11.2	B		
		EB Right	6.0	A			5.2	A		
	Westbound	WB Left	14.5	B	14.4	B	26.0	C	10.5	B
		WB Thru	14.4	B			9.4	A		
		WB Right	14.4	B			9.4	A		
	Northbound	NB Left	101.2	F	96.5	F	134.5	F	135.9	F
		NB Thru-Right	84.5	F			137.1	F		
	Southbound	SB Left	87.3	F	83.9	F	108.7	F	95.8	F
		SB Thru-right	82.7	F			92.8	F		
	Alafia Trace Blvd Intersection		**Overall**		**18.1**	**B**	**Overall**		**18.1**	**B**
US 301	Eastbound	EB Left	143.3	F	146.7	F	103.0	F	137.6	F
		EB Thru	186.4	F			178.6	F		
		EB Right	80.3	F			61.8	E		
	Westbound	WB Left	114.5	F	125.0	F	271.2	F	172.2	F
		WB Thru	157.3	F			173.3	F		
		WB Right	41.8	D			30.1	C		
	Northbound	NB Left	98.4	F	152.2	F	168.9	F	96.5	F
		NB Thru	178.4	F			79.7	E		
		NB Right	28.9	C			55.8	E		
	Southbound	SB Left	148.4	F	91.8	F	110.9	F	154.9	F
		SB Thru	85.8	F			183.3	F		
		SB Right	53.8	D			45.6	D		
	US 301 Intersection		**Overall**		**131.4**	**F**	**Overall**		**141.3**	**F**

Red text: LOS is worse than target LOS D.

2.15 MANAGED LANES

There are no managed lanes nor toll lanes with in the corridor.

2.16 CRASH DATA AND SAFETY ANALYSIS

The following was excerpted from the *PTAR* which contains additional information related to crash data. A five (5) year historic crash analysis was completed for the years 2018 to 2022. Crash Data for the five year anlaysis period was provided from FDOT Crash Analysis Reporting System (CARS) on-line for Gibsonton Drive.

The five-year crash analysis (2018–2022) for Gibsonton Drive in Hillsborough County within the project limits documented 910 total reported crashes with an average of 182 crashes per year. A crash summary for the five-year analysis period is shown in **Table 2-9**.

Table 2-8 Crash Summary for Gibsonton Dr.

Crash Type	Year					Total
	2018	2019	2020	2021	2022	
No. of Fatal Crashes	1	1	0	0	0	2
No. of Serious Injury Crashes	17	4	9	4	4	38
No. of Injury Crashes	61	74	48	34	25	242
No. of Property Damage Only Crashes	141	160	96	98	133	628
Total Crashes	***220***	***239***	***153***	***136***	***162***	***910***
Wet weather crashes	28	23	11	13	19	94
Night-time crashes	12	12	3	5	1	33

There were two (2) fatal crashes reported for Gibsonton Drive during the five-year analysis period. One (1) of the fatal crashes occurred at the Park Place Avenue (2018) and one (1) fatal crash was reported to occur at Mathog Road (2019). Both were reported as left turn crashes.

The average percentage of wet weather and dark crashes for the five-year period is 10.3% and 3.6%, respectively. The number of wet crashes does not exceed the statewide average of 15% from data as published on page 33 in the Florida Highway Safety and Motor Vehicles *Traffic Crash Facts Annual Report 2020*. The number of dark crashes does not exceed the statewide average of 26% from data as published on page 34 in the Florida Highway Safety and Motor Vehicles *Traffic Crash Facts Annual Report 2020*. Thirty-three (33) dark crashes were reported within the project limits (3.6% of total crashes)

Overall, for the project corridor, rear end crashes are the most predominate crash type with a percentage of 47% of the overall crashes for the five-year period along Gibsonton Drive as shown in **Table 2-10**. The second most predominate crash type reported was same direction sideswipe crashes.

Table 2-9 Crash Type Summary for Gibsonton Dr.

Crash Type	Year					Total	Percentage*
	2018	2019	2020	2021	2022		
Cargo/Equipment Loss or Shift	**0**	**1**	**0**	**0**	**1**	**2**	**0.2%**
Ditch	**0**	**2**	**1**	**0**	**0**	**3**	**0.3%**
Fire/Explosion	**0**	**2**	**1**	**0**	**0**	**3**	**0.3%**
Backed Into	**4**	**3**	**0**	**1**	**1**	**9**	**1.0%**
Head On	**3**	**1**	**3**	**1**	**1**	**9**	**1.0%**
Hitting an object	**2**	**5**	**3**	**2**	**2**	**14**	**1.5%**
Concrete Traffic Barrier	0	1	0	0	0	1	0.1%
Curb	0	0	0	1	0	1	0.1%
Fence	0	0	0	0	1	1	0.1%
Other Fixed Object	0	2	1	0	1	4	0.4%
Other Non-Fixed Object	0	0	0	0	0	0	0.0%
Other Post, Poke or support	1	0	0	1	0	2	0.2%
Traffic Sign Support	0	2	0	0	0	2	0.2%
Tree (standing)	1	0	0	0	0	1	0.1%
Utility Pole/Light Support	0	0	2	0	0	2	0.2%
Left Turn	**28**	**33**	**20**	**11**	**9**	**101**	**11.1%**
Opposing Sideswipe	**0**	**1**	**0**	**0**	**2**	**3**	**0.3%**
Other	**12**	**4**	**4**	**9**	**4**	**33**	**3.6%**
Parked Vehicle	**1**	**0**	**1**	**1**	**0**	**3**	**0.3%**
Rear End	**101**	**123**	**72**	**65**	**68**	**429**	**47.1%**
Right Turn	**26**	**19**	**10**	**14**	**17**	**86**	**9.5%**
Same Direction Sideswipe	**30**	**32**	**24**	**27**	**45**	**158**	**17.4%**
Single Vehicle	**0**	**1**	**0**	**0**	**0**	**1**	**0.1%**
Unknown	**7**	**6**	**5**	**5**	**5**	**28**	**3.1%**
Other Non-Collision	**1**	**0**	**1**	**0**	**0**	**2**	**0.2%**
Overturn/Rollover	**1**	**2**	**3**	**0**	**1**	**7**	**0.8%**
Parked Motor Vehicle	**2**	**0**	**2**	**0**	**3**	**7**	**0.8%**
Bike	**2**	**1**	**1**	**0**	**2**	**6**	**0.7%**
Pedestrian	**0**	**2**	**2**	**0**	**1**	**5**	**0.5%**
Work Zone/Maintenance Equipment	**0**	**1**	**0**	**0**	**0**	**1**	**0.1%**
Total	**220**	**239**	**153**	**136**	**162**	**910**	**100%**

* Individual percentages were rounded to the nearest 0.1%.

Crash data provided from CARS included crash location by distance in feet from nearest intersection. Utilizing these data, a crash frequency histogram was used to determine high-crash locations along Gibsonton Drive where crashes frequently occurred. Crash data heat map showing where crashes occur along Gibsonton Drive study corridor is shown in **Figure 2-11**. This data shows that the US 301 intersection had the highest number of crashes (554 crashes), and Fern Hill Drive intersection had the second highest number of crashes (159 crashes) within the study area.

Figure 2-11 Crash Data Heat Map (2018-2022)

Analyzing the data further of the 910 total crashes reported for the five-year period, 429 crashes were reported as rear end crashes and 158 crashes were reported as a same direction sideswipe crashes. Two fatal crashes occurred on Gibsonton Drive, one at the Park Place Avenue intersection (2018) occurring in clear, nighttime conditions and another one at Mathog Road intersection (2019) occurring in cloudy, daytime conditions. The 2018 fatal crash was a left turn type and documented as a westbound vehicle turning left failed to yield right-of-way colliding with a westbound vehicle. The 2019 left turn crash involving a fatality was documented as an eastbound vehicle being operated in a careless or negligent manner.

Segment crash rates for the Gibsonton Drive study corridor were developed using the five-year crash data (2018-2022) and AADT for 2022 provided from FTO. Crash rates for the study area were calculated in million vehicle miles traveled (MVMT) for segments and million entering vehicles (MEV) for intersections. The following equations were used to develop the crash rates for this study:

$$Crash\ Rate\ for\ Segment = \frac{Total\ Number\ of\ Crashes\ x\ 1{,}000{,}000}{AADT\ x\ 365x\ Number\ of\ Years\ x\ Length\ of\ Roadway\ Segment}$$

$$Crash\ Rate\ for\ Intersection = \frac{Total\ Number\ of\ Crashes\ x\ 1{,}000{,}000}{Total\ Intersection\ Entering\ Volume\ Per\ Day\ x\ Number\ of\ Years\ x\ 365}$$

The *Florida Average Crash Rate for Suburban Segments Crash Rates Per Million Vehicle Miles* for 4-5 Lanes Two-way divided raised median is 1.747. The Fern Hill Drive to Mathog Road segment is higher than this statewide average for similar roadway facilities. The Mathog Road to Park Place Avenue segment is lower than the statewide average for a similar type of roadway. Park Place Avenue to US 301 segment is higher than the statewide average. The first segment is nearly 2.0 times higher than the statewide average; the second segment is lower than the statewide average and the third segment exceeds this statewide average crash rate 1.3 times. The crash rates calculated for the Gibsonton Drive study are shown in **Table 2-11** and **Table 2-12.**

Table 2-10 Crash Rates for Segments

Segment		Crashes	Length (mi)	2022 AADT	Crash Rate (MVMT)	Statewide Average	Above Statewide Average?
From	To						
Fern Hill Dr	Mathog Rd	95	0.33	45,800	3.444	1.747	**Yes**
Mathog Rd	Park Place Ave	4	0.03	44,000	1.660	1.747	No
Park Place Ave	US 301	27	0.14	45,600	2.317	1.747	**Yes**

Note: Crashes reported to occur within intersection turn lanes were extracted out of the segments.

Table 2-11 Crash Rates for Intersections

Intersection	Crashes	Entering Volume	Crash Rate (MEV)	Statewide Average	Above Statewide Average?
Fern Hill Dr	159	57,750	1.509	0.526	**Yes**
Mathog Rd	68	45,200	0.824	0.526	**Yes**
Park Place Ave	3	47,500	0.035	0.526	No
US 301	554	99,800	3.042	0.744	**Yes**

2.17 RAILROADS

There are no existing railroads within the project limits.

2.18 DRAINAGE AND FLOODPLAINS

A *Pond Siting Report (PSR)* was prepared for this project, and it outlines the existing and proposed drainage conditions.

In the existing condition, all runoff from the project area ultimately outfalls to the Alafia River. Runoff along the north side of Gibsonton Drive up to Alafia Preserve Avenue is conveyed west toward I-75

via two existing ponds that outfall to an open drainage system with side drains. Runoff along the south side of Gibsonton Drive up to Park Place Avenue is conveyed via a combination of an open and closed drainage systems into a roadside ditch near the I-75 northbound off-ramp. The roadside ditch drains to a double 42" RCP cross drain, which runs underneath Gibsonton Drive and flows north. There are offsite properties that also drain towards Gibsonton Drive. Maps showing the existing drainage basins and patterns are shown on Appendix A of the *PSR*.

This project is within the Alafia River watershed, associated with water body ID (WBID) No. 1621G. This waterbody is impaired for this Dissolve Oxygen and has been placed in category 4a because there is an Florida Department of Environmental Protection (FDEP) Adopted – Environmental Protection Agency (EPA) Approved Dissolved Oxygen and Nutrient Total maximum daily load (TMDL). This project is not located within any Outstanding Florida Waters (OFW)..

The *PSR* provides additional details and characteristics of each drainage basin. See **Table 2-13** for cross drain.

Table 2-12 Existing Cross Drains

Cross Drain Number	Station	Description	Number of Barrels	Length (ft)	Apparent Flow Direction
CD-1	94+30	42" RCP	2	118	S to N

Source: Pond Siting Report
Note: CD denotes cross drain and RCP denotes round concrete pipe

Floodplains

A *Location Hydraulics Memorandum (LHM)* was prepared for this project detailing floodplain involvement. The project is located within Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel 12057C0502J for Hillsborough County dated October 7, 2021, identifies the flood zone information.

Per the FIRM panel, a small portion of the existing roadway near Kenda Drive/Hagadorn Road lies within Flood Zone A. The Hillsborough County Stormwater Management Model (HCSWMM) for the Alafia River Watershed, dated March 31, 2020, identifies additional floodplains within the project area. Per the County watershed model, the permitted linear ponds and several segments of the existing ditch between Fern Hill Drive and US 301 are designated Flood Zone AE, with several portions of the existing roadway located within the inundation boundary. The Hillsborough County HCSWMM is shown in **Figure 2-12** and the FEMA floodplain map is shown in **Figure 2-13**. The project's drainage design will be consistent with local FEMA, FDOT, and Southwest Florida Water Management District (SWFWMD) design guidelines, which state that no net encroachment up to that, encompassed by the 100-year event, will be allowed, and that compensating storage shall be equivalently provided. Therefore, no significant changes in base flood elevations or limits will occur.

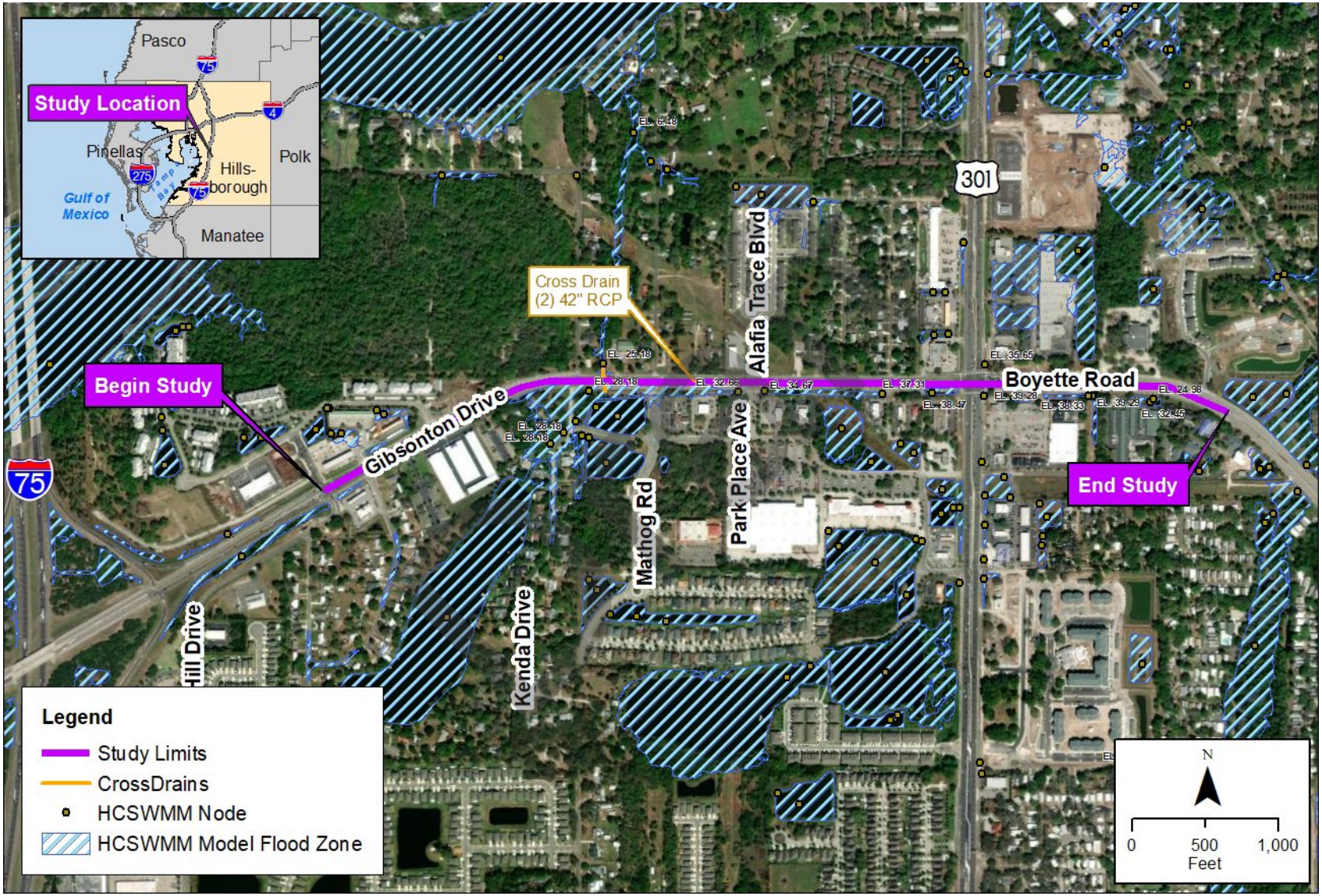


Figure 2-12 Hillsborough County Stormwater Management Model Map

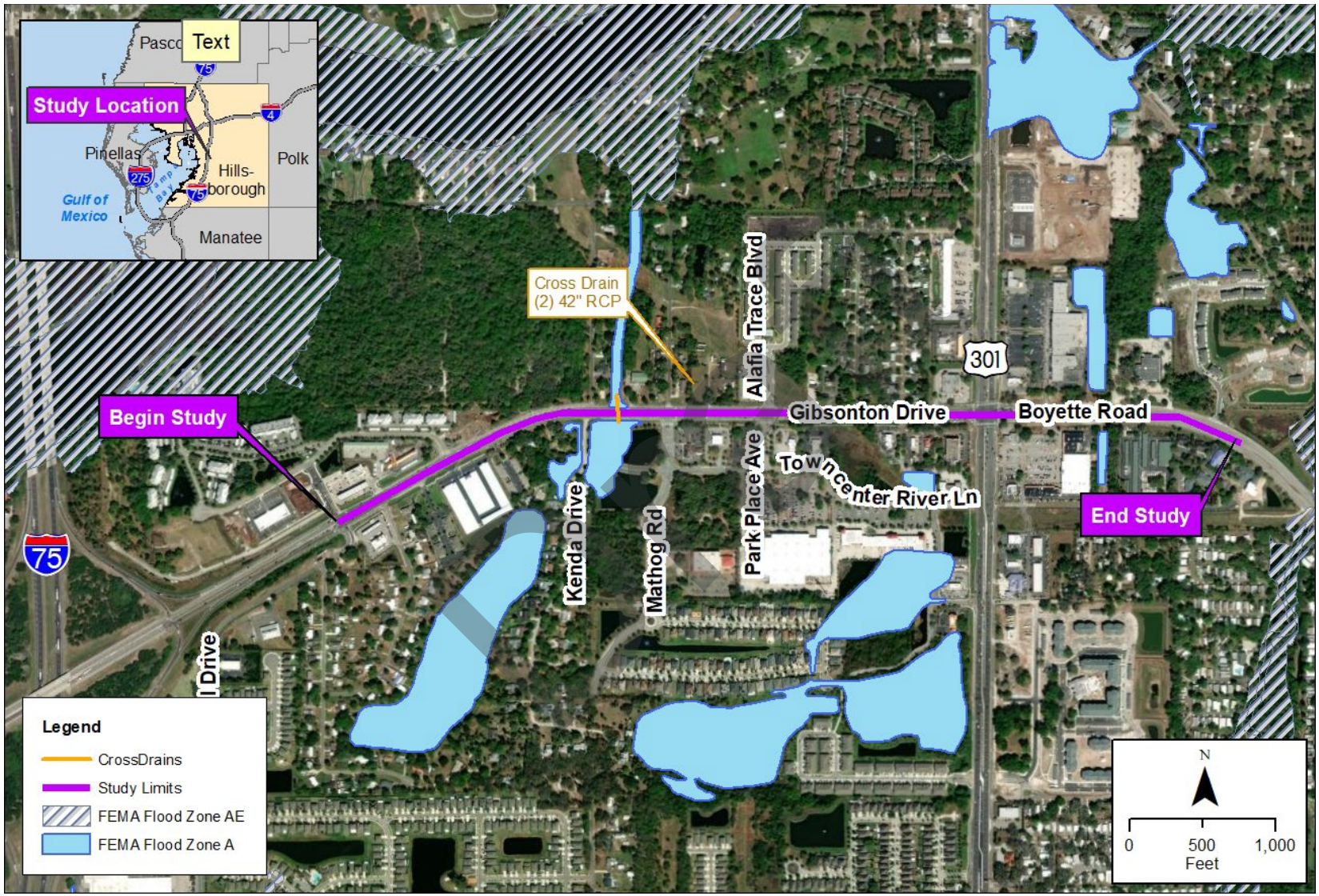


Figure 2-13 FEMA Floodplain Map

Drainage-Related Maintenance Issues

No drainage-related maintenance nor flooding concerns along Gibsonton Drive were documented by Hillsborough County Maintenance staff.

2.19 LIGHTING

There is no existing roadway lighting along Gibsonton Drive within the project limits. There is some intersection lighting at the Park Place Avenue and US 301 intersections.

2.20 UTILITIES

A *Utility Assessment Package Report (UAP)* was prepared for this project, a summary is provided of existing utilities within the project area. There are numerous utilities throughout the study corridor, as shown in **Table 2-14**, based on a One-Call design ticket on August 2, 2023. Each utility owner on the list was contacted and asked to verify ownership or operation of any facilities, existing or proposed, within the project area.

Table 2-13 Existing Utilities

Utility Agency	Type of Facilities
AT&T	TBD
FRONTIER COMMUNICATIONS	Cable
HILLSBOROUGH COUNTY TRAFFIC SERVICE UNIT	Cable, Fiber Optic, Video Traffic Sensors
HILLSBOROUGH COUNTY WATER RESOURCE SERVICES	Force Main, Water Main, Fire Hydrants
KINDER MORGAN/CENTRAL FLORIDA PIPELINE	Ethanol & Petroleum Pipeline
SPECTRUM SUNSHINE STATE, LLC. CHARTER -TIME WARNER CABLE	Cable
TAMPA BAY WATER	Transmission Water Main
TAMPA ELECTRIC COMPANY	TBD (Electric Power)
TECO PEOPLE GAS - TAMPA	Gas
TRANSCORE FDOT D7 / ITS	Fiber Optic Cable
UNITI FIBER, LLC	Fiber Optic Cable
ZAYO GROUP (Formerly LIGHTWAVE, LLC)	Fiber Optic Cable

AT&T

Teleport Communications America, LLC (TCA) an affiliate of AT&T Corp., said that TCA has no facilities within project limits.

Frontier Communications

Frontier cabinet and underground Cable TV (CATV), communication lines were observed, at the beginning of the project on the north side of Gibsonton Drive, and east of Kenda Drive, on the south side.

Hillsborough County Traffic Service Unit

Hillsborough County Traffic maintains utilities within the proposed study area. They include Controller Assembly (CA); Traffic System Box, Cabinet, and Poles; 2" underground fiber cable and 4" underground & aerial copper cable; Cable Terminal; and Video Traffic Sensors.

Hillsborough County Water Resource Services

Hillsborough County Water Resource Services existing facilities include:

- 2", 4" & 6" poly vinyl chloride (PVC) force main (FM).
- 4", 6" Schedule-40 PVC water main (WM),
- 2", 4", 6", 8", 10", 18" & 20" ductile iron pipe (DIP) WM
- 6", 12", 18" & 24" asbestos cement pipe (ACP) WM
- 1", 2" & 24" high density polyethylene (HDPE) WM

The UAP provides details for the locations of the County Water Resources facilities.

Kinder Morgan / Central Florida Pipeline

Kinder Morgan submitted a markup showing the location of their existing pipeline (Ethanol & Petroleum Pipeline). The line runs diagonally between Alafia Trace Boulevard. and Oak Ridge Avenue.

Spectrum Sunshine State, LLC (Formerly Charter-Time Warner Cable)

Spectrum Sunshine State submitted markups showing the location of their CATV Cable. Their overhead CATV runs on TECO poles, generally on the north side of Gibsonton Drive. At certain locations they cross over Gibsonton Drive to the south side.

Tampa Bay Water

Tampa Bay Water has a 72" welded steel transmission main that runs through the area around the intersection of Alafia Trace and Gibsonton Dr., Tampa Bay Water also has easements in that area as well.

Tampa Electric Company

TECO maintains overhead electric poles and a 13.2 kilovolt distribution lines along the north side of Gibsonton Drive and several 7.6 and 13.2 kilovolt crossings as well as a crossing of 230 kilovolt transmission lines across Gibsonton Drive just east of the Park Place intersection.

TECO Peoples Gas (Tampa)

TECO Peoples Gas submitted markups of their existing gas lines along the corridor. Generally, their gas line runs parallel to Gibsonton Drive, along the south side. It crosses Gibsonton Drive between Branwood Drive & Water Works Lane; just east of US 301; and at US 301

Transcore FDOT D7/ITS

TransCore (TransCore is Traffic Ops. Maintenance contractor) submitted markups of their fiber along the corridor. FDOT existing fiber starts just east of Hagadorn Drive on the north side of Gibsonton Drive, runs eastwards and crosses over to the south side at Mathog Road, where it continues eastwards and crosses back over to the north side and continues to the end at US 301 and then crosses back to the south side of Gibsonton Drive.

Uniti Fiber, LLC

Uniti Fiber submitted markups of their existing fiber along the corridor. Existing fiber transmission runs throughout the study corridor area along the south side of Gibsonton Drive

Zayo Group (Formerly Lightwave LLC)

Zayo Group submitted markups of their existing fiber along the corridor. There seems to be no fiber transmission along the project limits. The markups show underground placements east of I-75 and at US 301 running eastwards.

2.21 SOILS AND GEOTECHNICAL DATA

The Natural Resources Conservation Service (NRCS) Soil Survey of Hillsborough County (1989) and geographic information system (GIS) data indicate that there are multiple soil types that exist within and adjacent to the study area. The dominant soil types and their soil map unit identification numbers are as follows: Myakka fine sand, 0 to 2 percent slopes (29); Candler fine sand, 0 to 5 percent slopes (7); Pomello fine sand, 0 to 5 percent slopes (41); Basinger, Holopaw, and Samsula soils, depressional (5); winder fine sand, frequently flooded (60) and Zolfo fine sand, 0 to 2 percent slopes (61). Soils within a 500-foot buffer from the centerline of Gibsonton Drive were evaluated. Acreages and percentages of soil types within the study buffer can be found in **Table 2-15.** A detailed soils map is shown on **Figure 2-14**.

Table 2-14 Existing Soils Data (NRCS)

Map Unit Symbol	Description	Acreage (Approx. 500' from Centerline)	Percent Cover
5	Basinger, Holopaw, and Samsula soils (depressional) - *hydric*	6.4	3.9%
7	Candler fine sand (0-5% slopes)	33.6	20.3%
29	Myakka fine sand (0-2% slopes)	103.8	62.6%
41	Pomello fine sand (0-5% slopes)	16.5	9.9%
60	Winder fine sand, frequently flooded	3.6	2.2%
61	Zolfo fine sand, (0-2% slopes)	1.9	1.1%
	TOTAL	**165.8**	**100%**

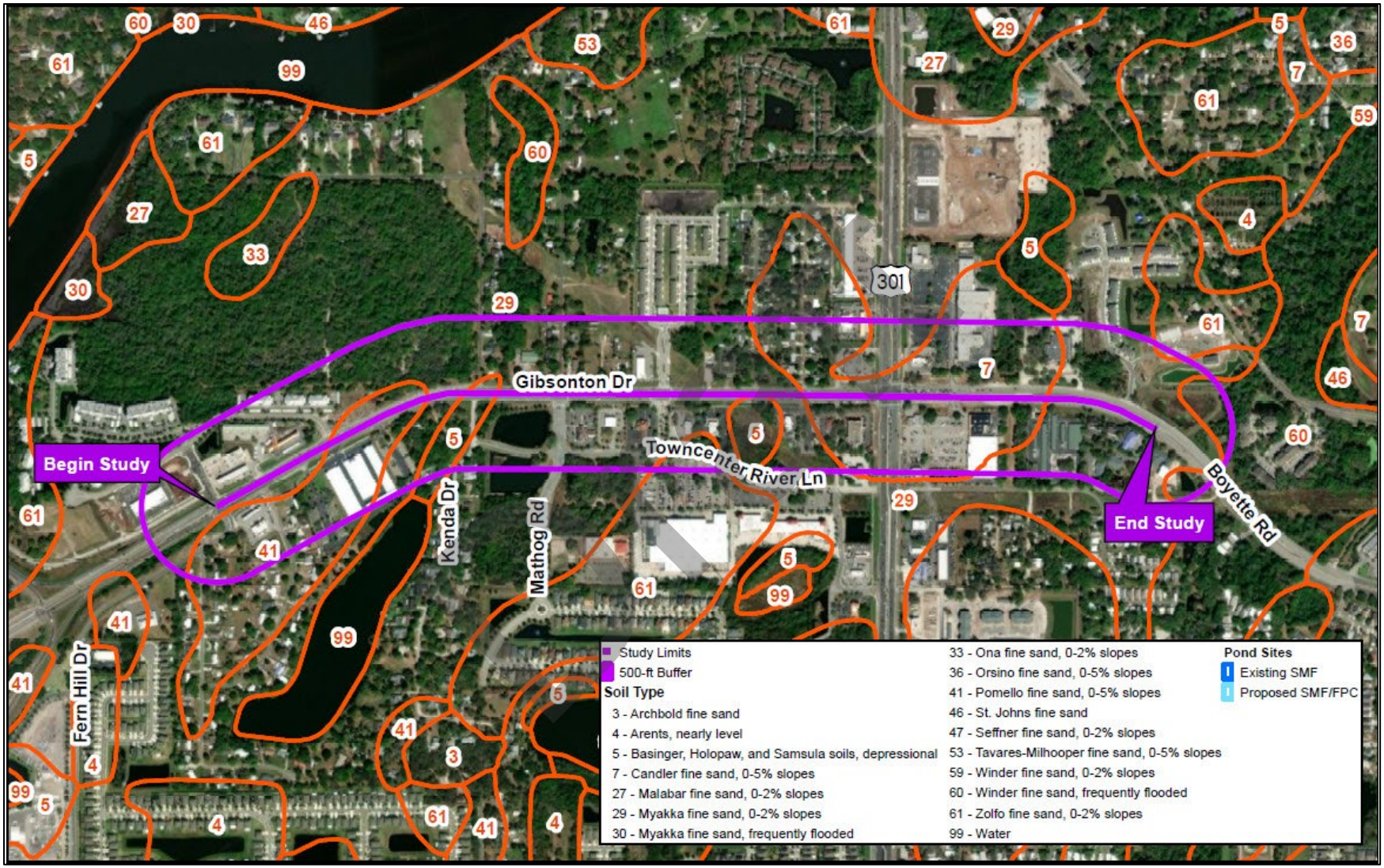


Figure 2-14 Existing Soils Map

A brief description of dominant soil types is provided below:

Myakka fine sand, 0 to 5 percent slopes (29) – This soil is nearly level to gently sloping on poorly drained soils. This soil has a moderately to high available water capacity in the upper six inches. The water table is below a depth of 6 to 18 inches. Natural vegetation consists of longleaf pine and slash pine. The understory includes gallberry, running oak, saw palmetto, pineland threeawn and wax myrtle.

Candler fine sand, 0 to 5 percent slopes (7) – This soil is nearly level to gently sloping on excessively drained soils. This soil has very low available water capacity in the upper 48 inches and low available water capacity below that depth. The water table is below a depth of 80 inches. Native vegetation consists of bluejack, post, and turkey oaks; scattered longleaf and slash pines; and a sparse understory of indiangrass, chalky bluestem, pineland three-awn, panicum, and annual forbs.

Pomello fine sand, 0 to 5 percent slopes (41) – This soil is nearly level to gently sloping and moderately well drained and occurs on low ridges on the flatwoods. The soil has a very low available water capacity. The water table exists between 40 to 60 inches, except during seasonally high water with the water table depth at 24 to 40 inches. In most areas, Pomello soil is used for native pastures, citrus crops or for homesite/urban development. The natural vegetation consists of longleaf pine, sand pine, and slash pine. The understory includes creeping bluestem, lopsided Indiangrass, running oak, saw palmetto, and pineland threeawn.

Basinger Holopaw, and Samsula soils, depressional (*Hydric)* (5) – This soil is nearly level and very poorly drained. These soils exist in swamps and depressions on the flatwoods. Characteristically, these soils are frequently ponded for very long periods. In most years, these undrained soils are pounded for about six months. The natural vegetation consists of cypress, with an understory includes bluestem, maidencane, panicum, Jamaica sawgrass, and cutgrass.

Winder fine sand, frequently flooded (60) – This soil is nearly level and poorly drained. These soils exist on floodplains and become flooded for long periods of time after intense rain. In most years, a seasonal high-water table fluctuates from the soil surface to a depth of about 10 inches for 2 to 6 months. Permeability is rapid in the surface and subsurface layers, slow or very slow in the subsoil, and rapid in the substratum. The available water capacity is moderate. In most areas, this Winder soil has been left idle in natural vegetation, but has been observed in pasture use. The natural vegetation consists of Coastal Plain willow, red maple, cabbage palm, and sweetgum.

Zolfo fine sand, 0 to 2 percent slopes (61) – This soil is nearly level and somewhat poorly drained. Zolfo fine soil exists on broad, low ridges on the flatwoods. In most years, a seasonal high-water table is at a depth of 24 to 40 inches for more than 2 to 6 months and recedes to a depth of 60 inches during prolonged dry periods. Permeability is frequent from the surface to subsurface and moderate in the subsoil. The natural vegetation consists of live oak, turkey oak, longleaf pine, and slash pine. The understory includes broomsedge, bluestem, lopsided Indiangrass, saw palmetto, and pineland threeawn.

2.22 AESTHETIC FEATURES

There are no scenic views, vistas on or near the project. There are no aesthetic features within the project limits.

2.23 TRAFFIC SIGNS

There is an existing cantilever digital message sign (#10S967), which provides traffic information related to I-75, located along the north side of Gibsonton Drive located approximately 1,400 feet east of the Fern Hill Drive intersection. All other roadway signs are standard signs located along the roadway or mounted to traffic signal mast arms.

2.24 NOISE BARRIERS AND PERIMETER WALLS

There are no existing noise barriers nor perimeter walls along the corridor.

2.25 INTELLIGENT TRANSPORTATION SYSTEM

There is an Intelligent Transportation System (ITS) facility within the project limits. An overhead message board is located on westbound Gibsonton Drive between Alafia Preserve Avenue and Kenda Drive. The ITS infrastructure begins at an existing cabinet near the overhead message board and proceeds east to US 301. It connects the traffic signals at Mathog Road, Park Place Avenue/Alafia Trace Boulevard and US 301 to an existing ITS near I-75.

2.26 EXISTING BRIDGES AND STRUCTURES

There are no existing bridges nor bridge culverts within the corridor. There is an existing 200-ft long wooden boardwalk which connects the existing sidewalk along the south side of Gibsonton east of Kenda Drive.

2.27 ENVIRONMENTAL CHARACTERISTICS

Existing environmental characteristics are documented in the following reports for this PD&E Study:

- *Natural Resource Evaluation Report*
- *Noise Study Report*
- *Location Hydraulics Memorandum*
- *Water Quality Impact Evaluation Checklist*
- *Contamination Screening Evaluation Report*
- *Conceptual Stage Relocation Plan*
- *Section 4(f) Technical Memorandum*
- *Cultural Resource Assessment Survey*

SECTION 3 FUTURE CONDITIONS

The information in this section has been extracted from the project's *Project Traffic Analysis Report (PTAR).*

3.1 FUTURE TRAFFIC PROJECTIONS

From the travel demand model provided by the Department, the Opening Year (2025) and Design Year (2045) AADTs were developed by applying the calculated growth rates from the TBRPM V9.3 model forecasts, and National Cooperative Highway Research Program (NCHRP) ratio and difference smoothing methods. Build and No-Build traffic volumes were forecasted to be the same. Forecasted future year AADT volumes were developed using Existing Year (2022) AADT volumes, recommended study growth rates and a linear growth rate equation.

Opening year (2025) AADT volumes were calculated using linear interpolation between Existing Year (2022) and Design Year (2045) AADT volumes. The AADT volumes for Opening Year (2025) are shown in **Figure 3-1**. The AADT volumes for Design Year (2045) are shown in **Figure 3-2.**

DDHVs were determined by multiplying AADT volumes by the study K-Factor and D-Factors. The future year AM and PM peak hour turning movement volumes at study intersections were calculated from the segment DDHVs and turning movement percentages calculated from the October 2022 traffic counts. The forecasted year 2025 and 2045 turning movement volumes are shown in **Figures 3-3** and **3-4**. Turning movement volumes were exactly balanced in both the eastbound and westbound directions between the intersections of Mathog Road and Park Place Avenue/Alafia Trace Boulevard due to the lack of side streets and driveways between those side streets. There are driveways and minor side streets between Fern Hill Drive and Mathog Road, and between Park Place Avenue/Alafia Trace Boulevard and US 301 intersections, so traffic is not exactly balanced between those intersections.

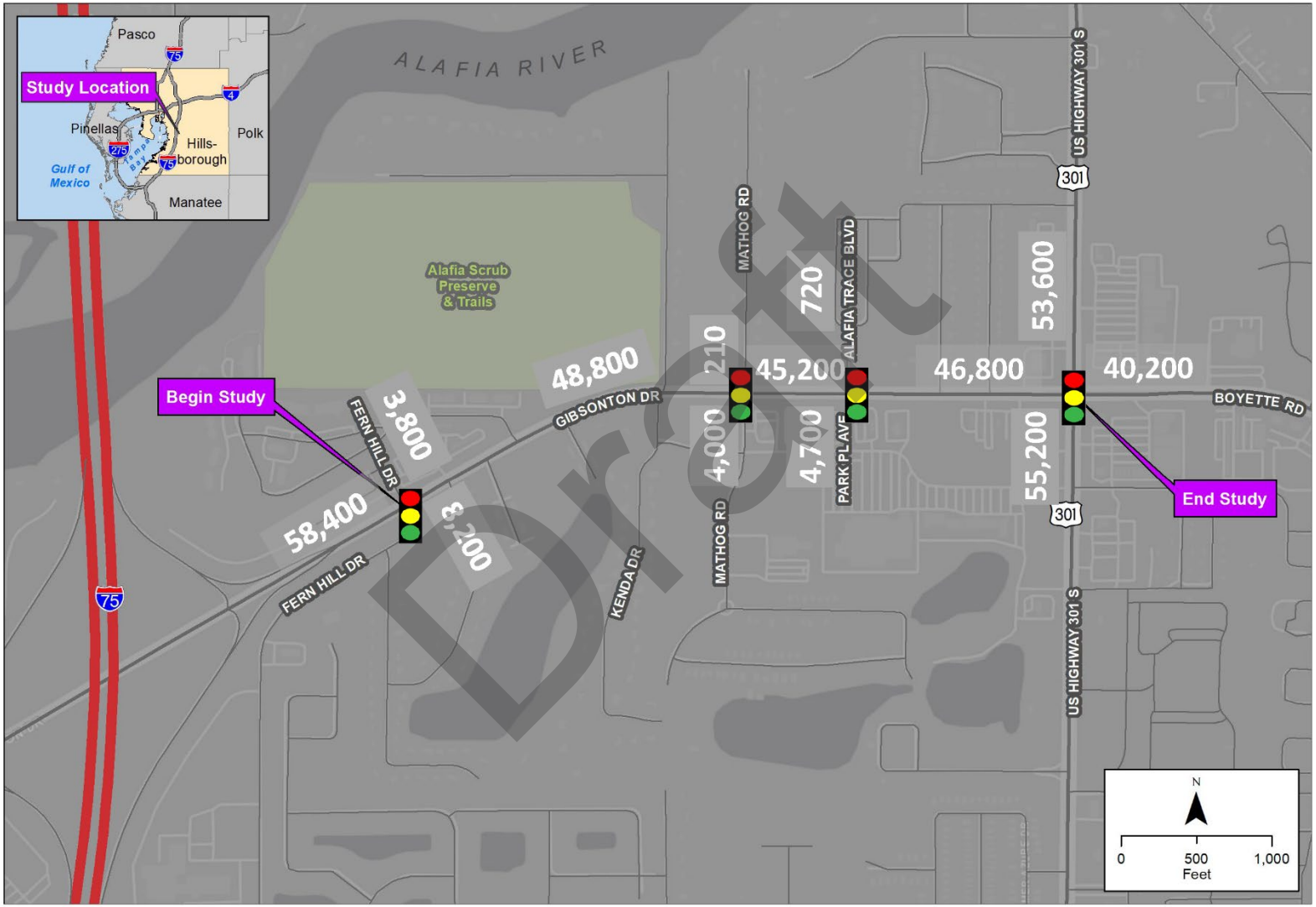


Figure 3-1 Opening Year (2025) AADT Volumes

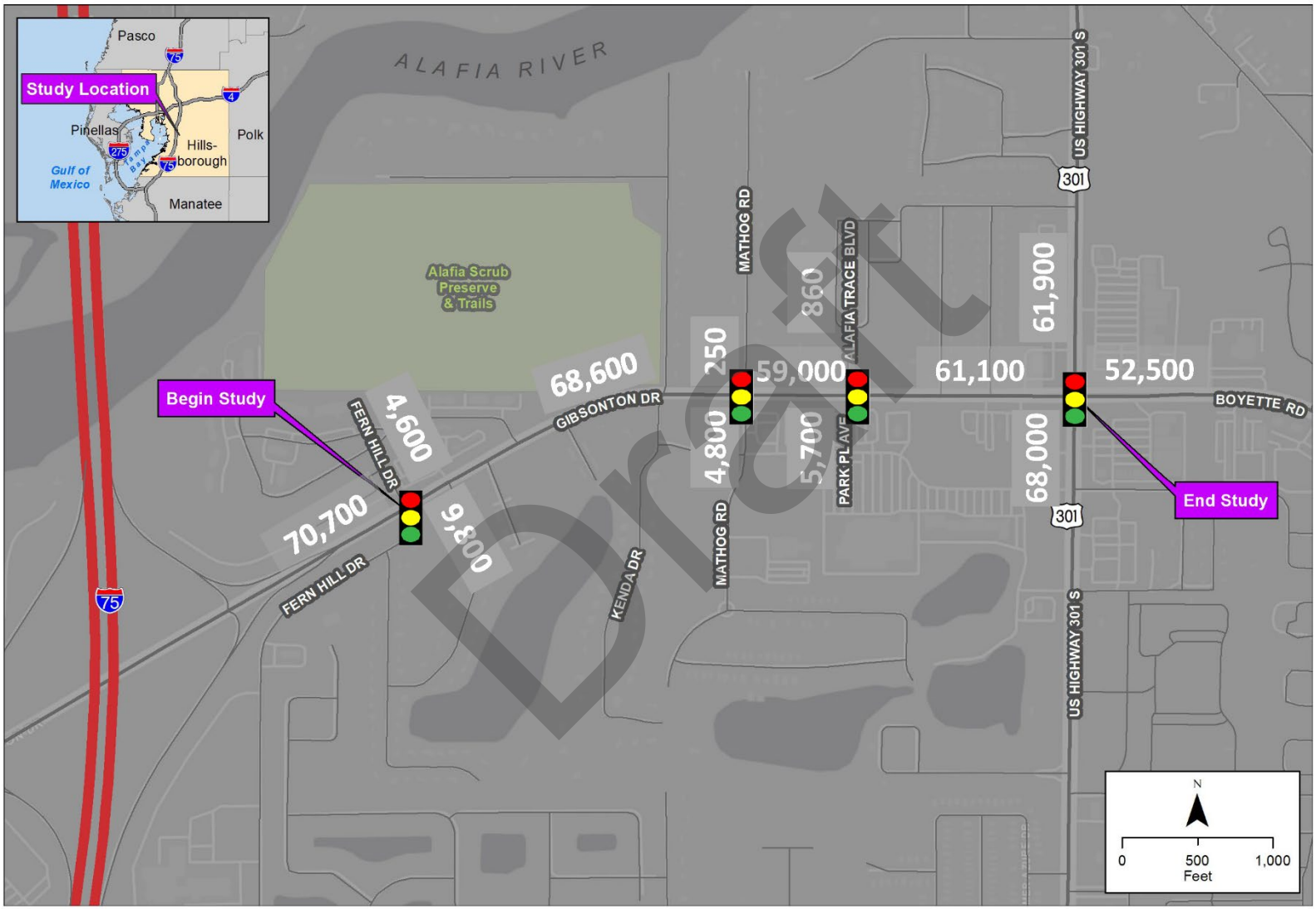


Figure 3-2 Design Year (2045) AADT Volumes

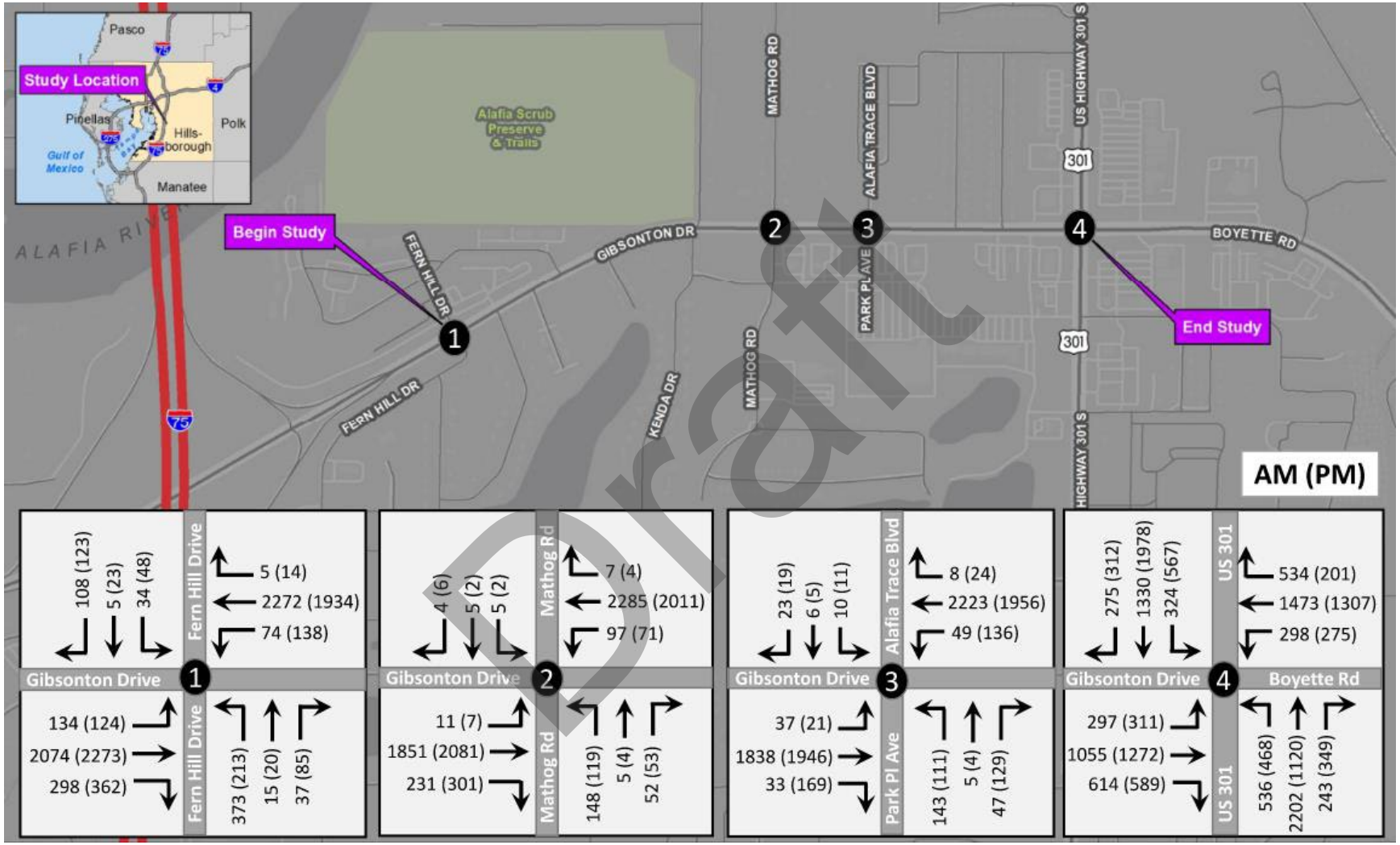


Figure 3-3 Opening Year (2025) DDHVs

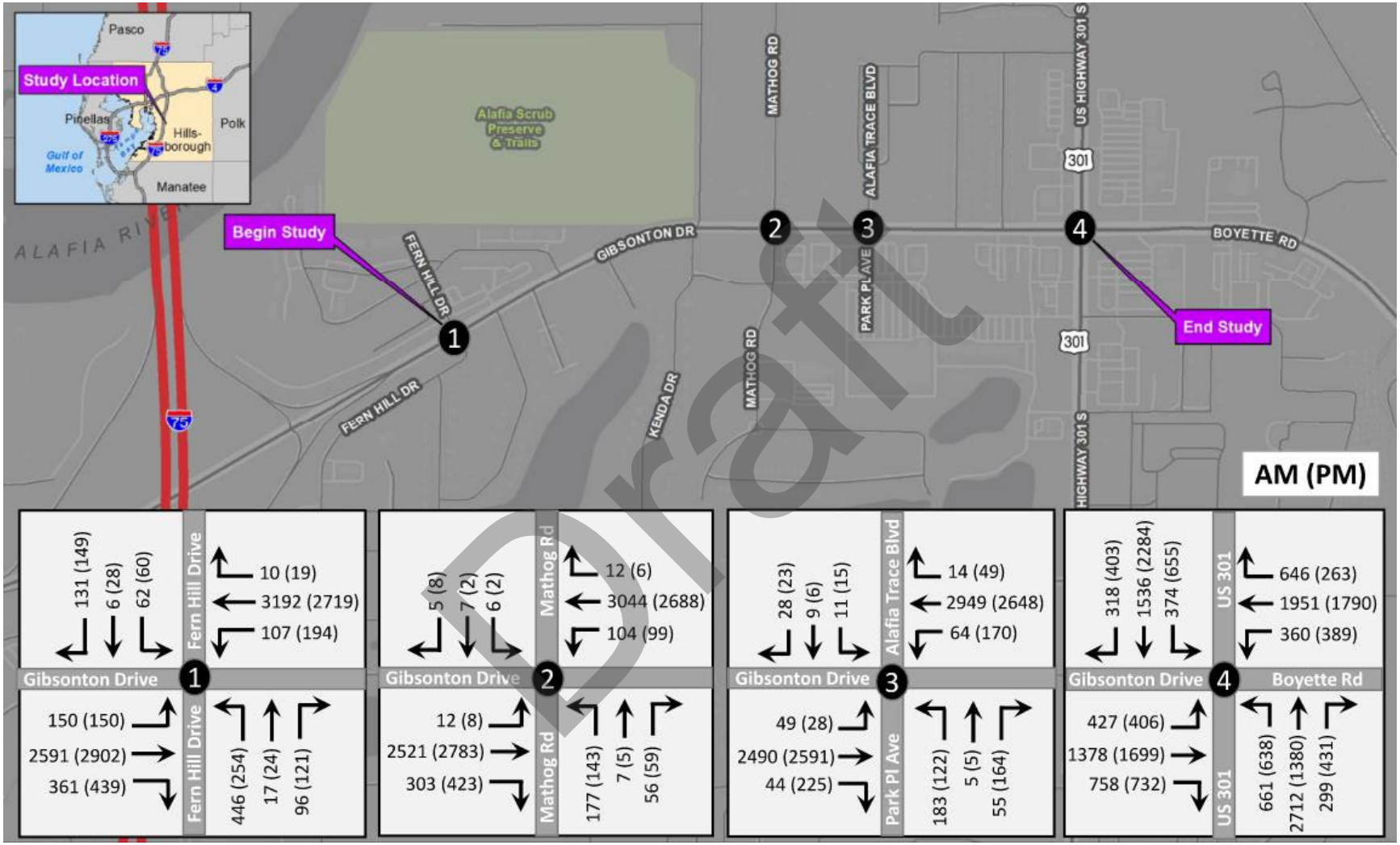


Figure 3-4 Design Year (2045) DDHVs

3.2 THE NO-BUILD ALTERNATIVE LANE GEOMETRY

The No-Build Alternative consists of the same geometry of the existing condition for all the intersections, except at the intersection at Fern Hill Drive. Changes from the Existing Year (2022) geometric conditions for this intersection are based on the intersection Capital Improvement Program project managed by Hillsborough County (CIP No.: 69600311). The committed project consists of enhancing the intersection geometry at Gibsonton Drive and Fern Hill Drive and is planned to be completed before 2025. The proposed improvements include the widening of Fern Hill Drive to provide three (3) exclusive northbound left turn lanes, one (1) northbound thru lane and one (1) exclusive right turn lane at the south leg of the intersection. It also includes dual westbound to southbound left turn lanes. The north leg of the intersection is also modified to accomodate one (1) southbound left turn lane, one (1) thru lane and one (1) right turn lane. The No-Build Alternative geometry for Opening Year (2025) is shown in **Figure 3-5**.

The *Gibsonton Drive IMR* (WPI Segment No.: 437650-2) improvements are planned to be constructed after Opening Year (2025) and before Design Year (2045). Hence, the Design Year (2045) No-Build Alternative includes the IMR proposed improvements. The proposed IMR improvements at the Fern Hill Drive intersection included in the Design Year (2045) No-Build Alternative include:

- Northbound Approach: same as Opening Year (2025)
- Southbound Approach: same as Opening Year (2025)
- Westbound Approach: modified to include one (1) westbound left turn lane, three (3) thru lanes and two (2) westbound auxiliary lanes that feed into the entrance ramp to northbound I-75 , the outermost auxiliary lane also serves as a shared thru-right turn lane.
- Eastbound Approach: an additional thru lane

The No-Build Alternative geometry for Design Year (2045) is shown in **Figure 3-6**.

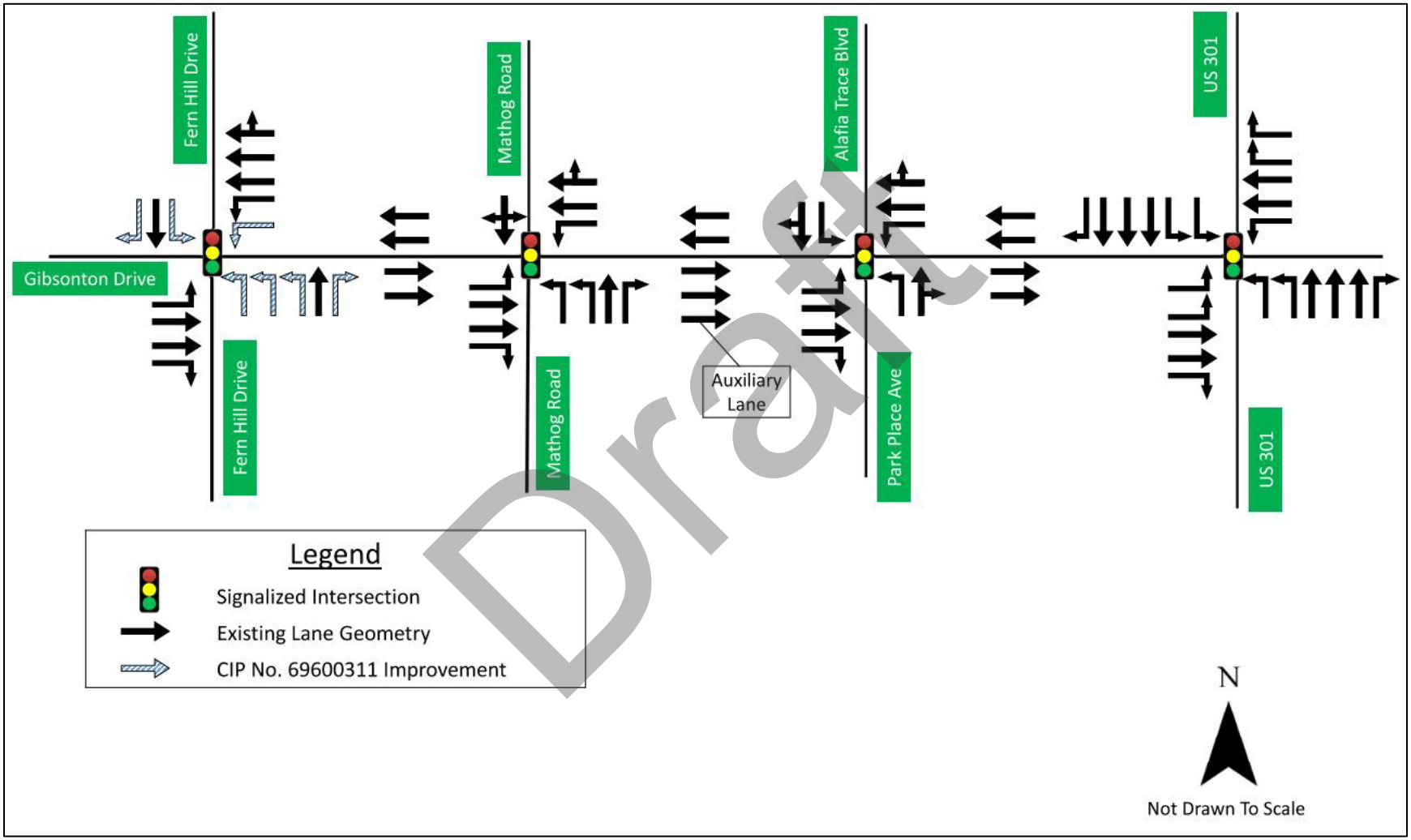


Figure 3-5 Opening Year (2025) No-Build Alternative Lane Geometry and Traffic Control

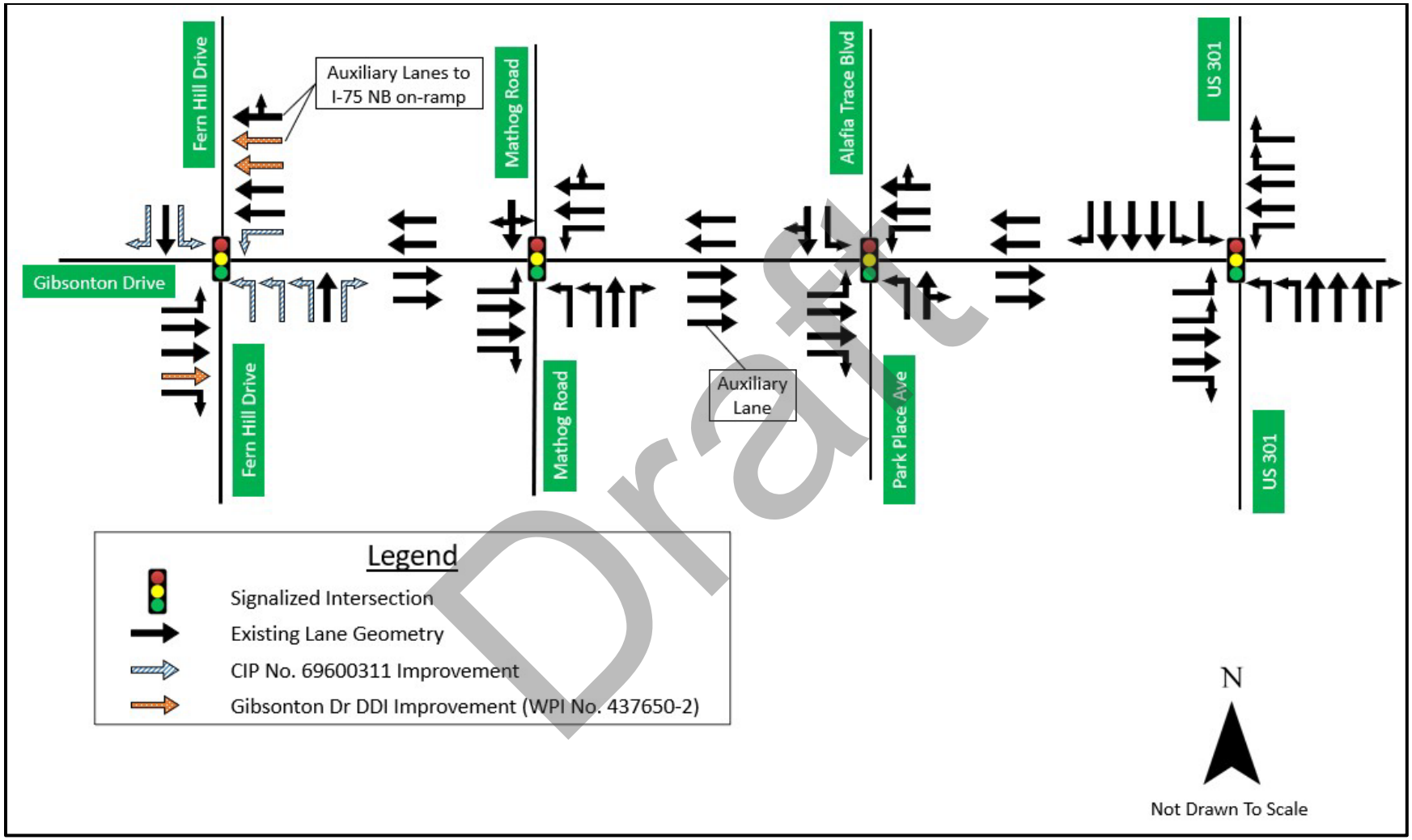


Figure 3-6 Design Year (2045) No-Build Alternative Lane Geometry and Traffic Control

3.3 NO-BUILD ALTERNATIVE OPERATIONAL ANALYSIS

Opening Year (2025) No-Build Analysis

Arterial LOS results for the No-Build Alternative in Opening Year (2025) AM and PM peak periods are shown in **Table 3-1** and **Table 3-2,** respectively. Overall, the Gibsonton Drive arterial is forecasted to operate at either LOS E or LOS F in both the eastbound and westbound direction for the No-Build Alternative in Opening Year (2025) in the AM and PM peak periods.

Table 3-1 No-Build Opening Year (2025) Arterial LOS Results - AM Peak Period

Segments	Flow Speed (mph)	Running Time (s)	Signal Delay (s)	Travel Time (s)	Distance (mi)	Arterial Speed (mph)	Arterial LOS
Gibsonton Drive - Eastbound							
W/of Fern Hill - Fern Hill Dr	45	28.1	32.1	60.2	0.27	16.2	E
Fern Hill Dr - Mathog Rd	45	41.6	5.0	46.6	0.46	35.3	A
Mathog Rd - Park Pl Ave	45	14.2	1.9	16.1	0.13	29.1	B
Park Pl Ave - US 301	45	28.1	153.2	181.3	0.28	5.6	F
Total		**112.0**	**192.2**	**304.2**	**1.14**	**13.5**	**E**
Gibsonton Drive - Westbound							
E/of US 301 - US 301	45	42.3	217.2	259.5	0.53	7.3	F
US 301 - Alafia Trace Blvd	45	28.1	10.9	39.0	0.28	26.2	C
Alafia Trace Blvd - Mathog Rd	45	14.2	9.6	23.8	0.13	19.7	D
Mathog Rd - Fern Hill Dr	45	41.6	33.1	74.7	0.46	22.0	C
Total		**126.2**	**270.8**	**397.0**	**1.40**	**12.7**	**F**

Red text: LOS is worse than target LOS D.

Table 3-2 No-Build Opening Year (2025) Arterial LOS Results - PM Peak Period

Segments	Flow Speed (mph)	Running Time (s)	Signal Delay (s)	Travel Time (s)	Distance (mi)	Arterial Speed (mph)	Arterial LOS
Gibsonton Drive - Eastbound							
W/of Fern Hill - Fern Hill Dr	45	28.1	36.0	64.1	0.27	15.2	E
Fern Hill Dr - Mathog Rd	45	41.6	5.6	47.2	0.46	34.9	B
Mathog Rd - Park Pl Ave	45	14.2	4.8	19.0	0.13	24.7	C
Park Pl Ave - US 301	45	28.1	199.0	227.1	0.28	4.5	F
Total		**112.0**	**245.4**	**357.4**	**1.14**	**11.5**	**F**
Gibsonton Drive - Westbound							
E/of US 301 - US 301	45	42.3	148.0	190.3	0.53	10.0	F
US 301 - Alafia Trace Blvd	45	28.1	24.6	52.7	0.28	19.4	D
Alafia Trace Blvd - Mathog Rd	45	14.2	4.1	18.3	0.13	25.6	C
Mathog Rd - Fern Hill Dr	45	41.6	11.9	53.5	0.46	30.8	B
Total		**126.2**	**188.6**	**314.8**	**1.40**	**16.0**	**E**

Red text: LOS is worse than target LOS D.

An analysis of the four (4) signalized intersections was performed under Opening Year (2025) No-Build conditions using optimizing signal phasing/timing with all signal cycles the same length. **Table 3-3** shows the delay and LOS results for the AM and PM peak hours in Opening Year (2025) No-Build conditions. The Fern Hill Drive intersection has Hillsborough County CIP# 6960311 improvements implemented in the Opening Year (2025) which contributes to less delay when compared to Existing Year (2022) results. The results show that the US 301 intersection is failing during both the AM and PM peak periods. The other three (3) study intersections are forecasted to meet the LOS target D for the overall intersection but exhibit failing northbound and southbound approaches during both the AM and PM peak periods.

Table 3-3 Intersection Delay and LOS Results – No-Build Opening Year (2025)

Intersection	Approach	Movement	AM Peak Hour				PM Peak Hour			
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Fern Hill Drive	Eastbound	EB Left	97.3	F			108.0	F		
		EB Thru	30.8	C	31.1	C	34.4	C	33.7	C
		EB Right	3.2	A			4.2	A		
	Westbound	WB Left	102.2	F			128.1	F		
		WB Thru-Right	25.7	C	28.8	C	17.2	B	24.9	C
		WB Right	27.7	C			18.1	B		
	Northbound	NB Left	93.5	F			120.0	F		
		NB Thru	58.9	E	89.4	F	73.2	E	106.1	F
		NB Right	60.2	E			78.9	E		
	Southbound	SB Left	82.0	F			96.4	F		
		SB Thru	78.3	E	338.1	F	89.8	F	362.8	F
		SB Right	430.4	F			518.9	F		
	Intersection		**Overall**		**43.0**	**D**	**Overall**		**46.5**	**D**
Mathog Road	Eastbound	EB Left	102.1	F			89.8	F		
		EB Thru	25.1	C	26.6	C	28.7	C	28.9	C
		EB Right	0.0	A			0.0	A		
	Westbound	WB Left	73.9	E			79.8	E		
		WB Thru	3.9	A	6.7	A	2.9	A	5.5	A
		WB Right	3.8	A			2.8	A		
	Northbound	NB Left	106.1	F			106.1	F		
		NB Thru	64.3	E	95.2	F	74.4	E	96.9	F
		NB Right	67.1	E			77.9	E		
	Southbound	SB Left-Thru-Right	79.7	E	79.7	E	89.5	F	89.5	F
	Intersection		**Overall**		**18.8**	**B**	**Overall**		**20.6**	**C**
Park Place Avenue/ Alafia Trace Blvd	Eastbound	EB Left	103.7	F			89.1	F		
		EB Thru	18.8	B	20.3	C	22.8	C	22.4	C
		EB Right	7.9	A			10.0	B		
	Westbound	WB Left	77.2	E			89.2	F		
		WB Thru	18.6	B	19.9	B	15.1	B	19.9	B
		WB Right	18.6	B			15.1	B		
	Northbound	NB Left	95.7	F	88.5	F	95.0	F	100.1	F
		NB Thru-Right	68.2	E			104.3	F		
	Southbound	SB Left	70.6	E	67.8	E	92.9	F	82.1	F
		SB Thru-right	66.8	E			77.0	E		
	Intersection		**Overall**		**23.5**	**C**	**Overall**		**25.9**	**C**
US 301	Eastbound	EB Left	222.3	F			228.8	F		
		EB Thru	168.4	F	140.1	F	224.7	F	186.4	F
		EB Right	51.6	D			81.2	F		
	Westbound	WB Left	240.6	F			268.5	F		
		WB Thru	227.7	F	185.6	F	154.7	F	157.5	F
		WB Right	38.5	D			24.6	C		
	Northbound	NB Left	128.9	F			235.4	F		
		NB Thru	172.3	F	151.4	F	73.3	E	103.4	F
		NB Right	11.6	B			22.7	C		
	Southbound	SB Left	234.6	F			107.9	F		
		SB Thru	75.5	E	98.1	F	166.7	F	139.2	F
		SB Right	46.0	D			21.7	C		
	Intersection		**Overall**		**146.3**	**F**	**Overall**		**146.7**	**F**

Red text: LOS is worse than target LOS D.

Design Year (2045) No-Build Analysis

Arterial LOS results for the No-Build Alternative in Design Year (2045) AM and PM peak period are shown in **Table 3-4** and **Table 3-5,** respectively. Overall, the Gibsonton Drive arterial is forecasted to have a LOS F in both the eastbound and westbound direction for the No-Build Alternative in Design Year (2045) in the AM and PM peak periods.

Table 3-4 No-Build Design Year (2045) Arterial LOS Results - AM Peak Period

Segments	Flow Speed (mph)	Running Time (s)	Signal Delay (s)	Travel Time (s)	Distance (mi)	Arterial Speed (mph)	Arterial LOS
Gibsonton Drive - Eastbound							
W/of Fern Hill - Fern Hill Dr	45	28.1	41.6	69.7	0.27	14.0	E
Fern Hill Dr - Mathog Rd	45	41.6	40.7	82.3	0.46	20.0	D
Mathog Rd - Park Pl Ave	45	14.2	9.9	24.1	0.13	19.5	D
Park Pl Ave - US 301	45	28.1	216.8	244.9	0.28	4.2	F
Total		**112.0**	**309.0**	**421.0**	**1.14**	**9.8**	**F**
Gibsonton Drive - Westbound							
E/of US 301 - US 301	45	42.3	352.0	394.3	0.53	4.8	F
US 301 - Alafia Trace Blvd	45	28.1	100.6	128.7	0.28	7.9	F
Alafia Trace Blvd - Mathog Rd	45	14.2	83.6	97.8	0.13	4.8	F
Mathog Rd - Fern Hill Dr	45	41.6	35.0	76.6	0.46	21.5	D
Total		**126.2**	**571.2**	**697.4**	**1.40**	**7.2**	**F**

Red text: LOS is worse than target LOS D

Table 3-5 No-Build Design Year (2045) Arterial LOS Results - PM Peak Period

Segments	Flow Speed (mph)	Running Time (s)	Signal Delay (s)	Travel Time (s)	Distance (mi)	Arterial Speed (mph)	Arterial LOS
Gibsonton Drive - Eastbound							
W/of Fern Hill - Fern Hill Dr	45	28.1	47.6	75.7	0.27	12.9	F
Fern Hill Dr - Mathog Rd	45	41.6	69.1	110.7	0.46	14.9	E
Mathog Rd - Park Pl Ave	45	14.2	45.4	59.6	0.13	7.9	F
Park Pl Ave - US 301	45	28.1	354.5	382.6	0.28	2.7	F
Total		**112.0**	**516.6**	**628.6**	**1.14**	**6.5**	**F**
Gibsonton Drive - Westbound							
E/of US 301 - US 301	45	42.3	277.3	319.6	0.53	6.0	F
US 301 - Alafia Trace Blvd	45	28.1	36.2	64.3	0.28	15.9	E
Alafia Trace Blvd - Mathog Rd	45	14.2	15.2	29.4	0.13	16.0	E
Mathog Rd - Fern Hill Dr	45	41.6	21.6	63.2	0.46	26.0	C
Total		**126.2**	**350.3**	**476.5**	**1.40**	**10.6**	**F**

Red text: LOS is worse than target LOS D

An analysis of the four signalized intersections was performed under Design Year (2045) No-Build conditions using existing signal phasing/timing.

Table 3-6 shows the delay and LOS results for the study intersections forecasted to occur in the Design Year (2045) with the No-Build Alternative. The Fern Hill Drive intersection is expected to have additional improvements from the *Gibsonton Drive IMR* (WPI Segment No.: 437650-2) implemented which improves delay and LOS at the intersection over the Existing Year (2022) results. At the US 301 intersection the results show failing LOS during both AM and PM peak periods. The Mathog Road intersection is also failing to meet target LOS during the AM peak period, but does meet LOS target D during the PM peak period. The Park Place Avenue intersection is also failing to meet LOS target D during both AM and PM peak periods.

Table 3-7 shows the 95th percentile queue results for the intersection movements. From the queue analysis results, it is reported that the 95th percentile queues at the Fern Hill Drive intersection exceed existing storage capacity for the eastbound right turn movements, northbound left turn, and the southbound left turns. The Mathog Road and Park Place Avenue/Alafia Trace Boulevard intersections also have several movements with reported queues that exceed provided capacity. The reported queues at the US 301 intersection are exceeding the provided capacity for almost all intersection movements.

Table 3-6 Intersection Delay and LOS Results – No-Build Design Year (2045)

Intersection	Approach	Movement	AM Peak Hour				PM Peak Hour			
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Fern Hill Drive	Eastbound	EB Left	123.6	F			123.6	F		
		EB Thru	43.3	D	43.2	D	47.0	D	45.8	D
		EB Right	9.3	A			11.0	B		
	Westbound	WB Left	101.1	F			130.7	F		
		WB Thru-Right	31.5	C	34.4	C	20.6	C	28.1	C
		WB Right	34.2	C			21.9	C		
	Northbound	NB Left	113.1	F			125.5	F		
		NB Thru	70.4	E	105.3	F	81.3	E	112.3	F
		NB Right	75.4	E			90.8	F		
	Southbound	SB Left	104.7	F			113.8	F		
		SB Thru	95.6	F	211.7	F	100.9	F	347.1	F
		SB Right	267.1	F			486.3	F		
	Intersection		**Overall**		**48.6**	**D**	**Overall**		**52.3**	**D**
Mathog Road	Eastbound	EB Left	110.4	F			107.9	F		
		EB Thru	53.6	F	53.9	D	86.6	F	86.6	F
		EB Right	0.0	A			0.0	A		
	Westbound	WB Left	127.2	F			144.1	F		
		WB Thru	69.8	F	72.0	E	10.0	A	14.8	B
		WB Right	70.5	F			10.0	A		
	Northbound	NB Left	225.8	F			192.7	F		
		NB Thru	88.1	F	190.7	F	88.9	F	162.2	F
		NB Right	92.3	F			93.7	F		
	Southbound	SB Left-Thru-Right	115.9	F	105.9	F	105.0	F	105.0	F
	Intersection		**Overall**		**69.2**	**E**	**Overall**		**54.8**	**D**
Park Place Avenue/ Alafia Trace Blvd	Eastbound	EB Left	159.9	F			114.5	F		
		EB Thru	32.1	C	34.1	C	63.4	F	59.6	E
		EB Right	7.0	A			9.7	A		
	Westbound	WB Left	119.7	F			134.4	F		
		WB Thru	88.3	F	89.4	F	24.8	C	31.9	C
		WB Right	89.1	F			26.1	C		
	Northbound	NB Left	219.9	F	187.9	F	181.1	F	234.9	F
		NB Thru-Right	89.9	F			273.6	F		
	Southbound	SB Left	93.7	F	89.3	F	120.9	F	103.5	F
		SB Thru-right	88.0	F			94.2	F		
	Intersection		**Overall**		**69.3**	**E**	**Overall**		**55.2**	**E**
US 301	Eastbound	EB Left	332.7	F			335.5	F		
		EB Thru	238.2	F	219.5	F	391.8	F	312.4	F
		EB Right	121.7	F			115.5	F		
	Westbound	WB Left	397.2	F			402.1	F		
		WB Thru	378.1	F	303.3	F	298.0	F	284.2	F
		WB Right	25.0	C			15.9	B		
	Northbound	NB Left	371.9	F			373.5	F		
		NB Thru	328.5	F	312.6	F	84.4	F	149.3	F
		NB Right	37.0	D			25.1	C		
	Southbound	SB Left	336.0	F			391.2	F		
		SB Thru	107.1	F	138.0	F	319.1	F	298.7	F
		SB Right	54.1	D			32.8	C		
	Intersection		**Overall**		**255.2**	**F**	**Overall**		**266.0**	**F**

Red text: LOS is worse than target LOS D.

Table 3-7 Intersection Queue Length Results – No-Build Design Year (2045)

Intersection	Movement	Available Storage (ft)	95th Percentile Queue (ft)	
			AM Peak	PM Peak
Fern Hill Drive	EB Left	420	316	316
	EB Thru	4650	1293	1534
	EB Right	200	249	293
	WB Left	450	m144	m306
	WB Thru-Right	2300	m652	m465
	NB Left	200	288	#197
	NB Thru	370	49	68
	NB Right	250	60	72
	SB Left	150	#175	#195
	SB Thru	185	28	85
	SB Right	150	82	88
Mathog Road	EB Left	200	m22	m13
	EB Thru	2280	#2274	#2668
	EB Right	350	m0	m0
	WB Left	200	m137	m#165
	WB Thru-Right	520	m#2189	m#2273
	NB Left	170	#261	#213
	NB Thru	290	31	24
	NB Right	200	17	23
	SB Left/Thru/Right	2430	53	35
Park Place Avenue/Alafia Trace Blvd	EB Left	240	m#80	m39
	EB Thru	540	m36	m54
	EB Right	510	m0	m0
	WB Left	305	m75	m189
	WB Thru-Right	1335	m116	m181
	NB Left	140	#528	#370
	NB Thru-Right	300	76	154
	SB Left	200	43	#66
	SB Thru-Right	370	56	48
US 301	EB Left	440	m#466	m#411
	EB Thru	1340	m#1446	m#1818
	EB Right	790	m#708	m#746
	WB Left	330	#1029	#1101
	WB Thru	4170	#2386	#2102
	WB Right	175	322	100
	NB Left	550	#878	#853
	NB Thru	7920	#2181	820
	NB Right	435	272	373
	SB Left	275	#527	#879
	SB Thru	3000	#1008	#1843
	SB Right	800	361	366

- 95th percentile volume exceeds capacity, queue may be longer,
m - Volume for 95th percentile queue is metered by upstream signal,
Red indicates 95th percentile volume exceeds capacity,
Note: Taper lengths were not included in the storage length.

3.4 BUILD ALTERNATIVE

The Build Alternative consists of widening Gibsonton Drive from a 4-lane divided arterial typical section to a 6-lane divided urban facility with a 22-ft median, within the study area. The proposed typical section will consist of three (3) travel lanes in each direction, a 22-ft raised median, curb and gutter, and wide sidewalk.

The Build Alternative also includes the proposed intersection improvements at the Fern Hill Drive intersection and at US 301. At Fern Hill Drive, the Opening Year (2025) Build condition includes the same CIP No.: 69600311 intersection improvements detailed in **Section 3.2** for the No-Build Alternative. The initial Opening Year (2025) Build Alternative geometry is shown in **Figure 3-7.**

For the initial Design Year (2045) Build conditions, the intersection geometry at the Fern Hill Drive intersection is modified to include the improvements recommended in the *Gibsonton Drive IMR*. The northbound and southbound approaches of the intersection configuration remain the same as Opening Year (2025), but an additional eastbound thru lane is provided on the west approach. The east approach is modified to accommodate one (1) westbound left turn lane and five (5) westbound thru lanes including one shared thru-right turn lane. The Design Year (2045) Build Alternative geometry is shown in **Figure 3-8**. No improvements are proposed for any of the side streets.

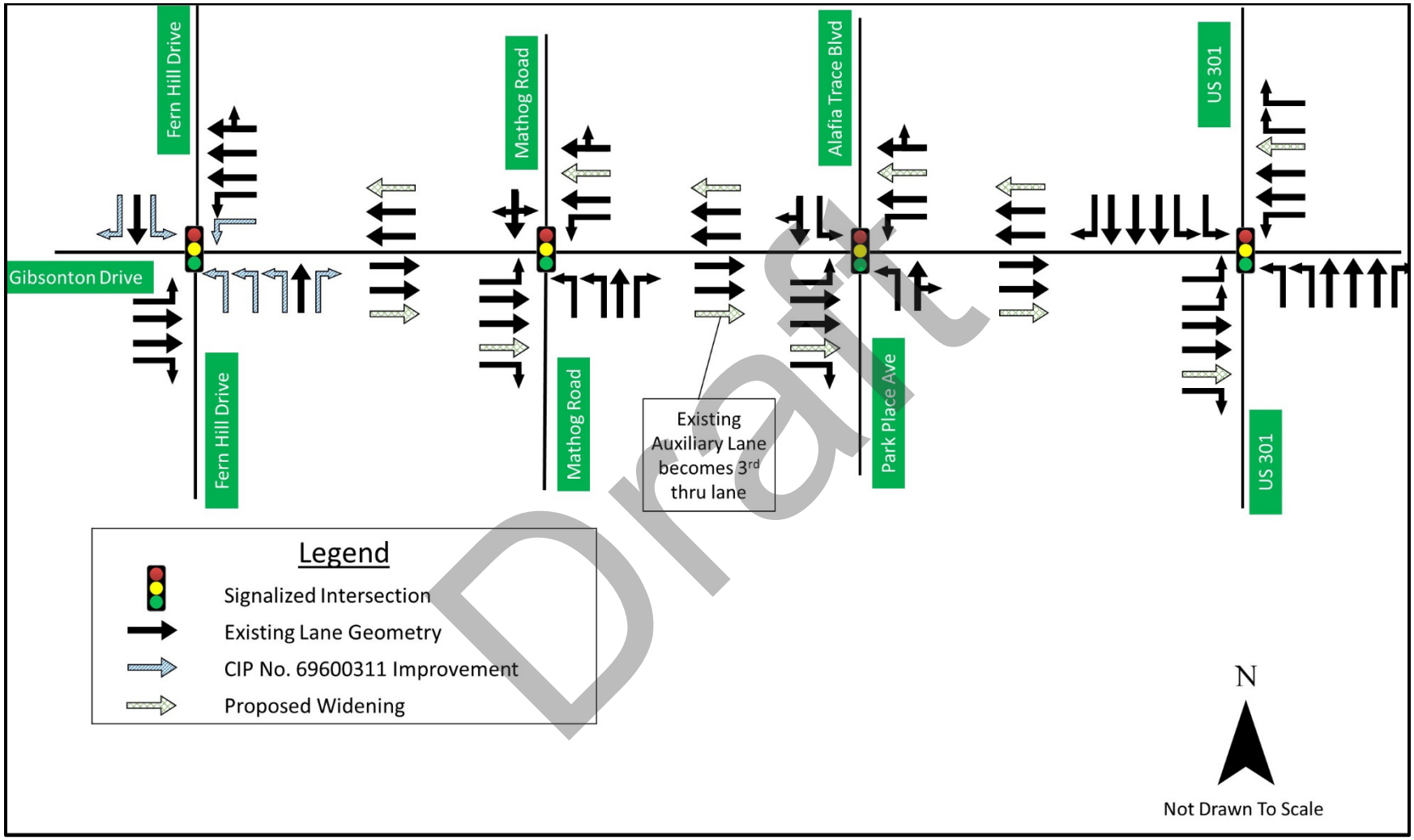


Figure 3-7 Opening Year (2025) Build Alternative Lane Geometry and Traffic Control

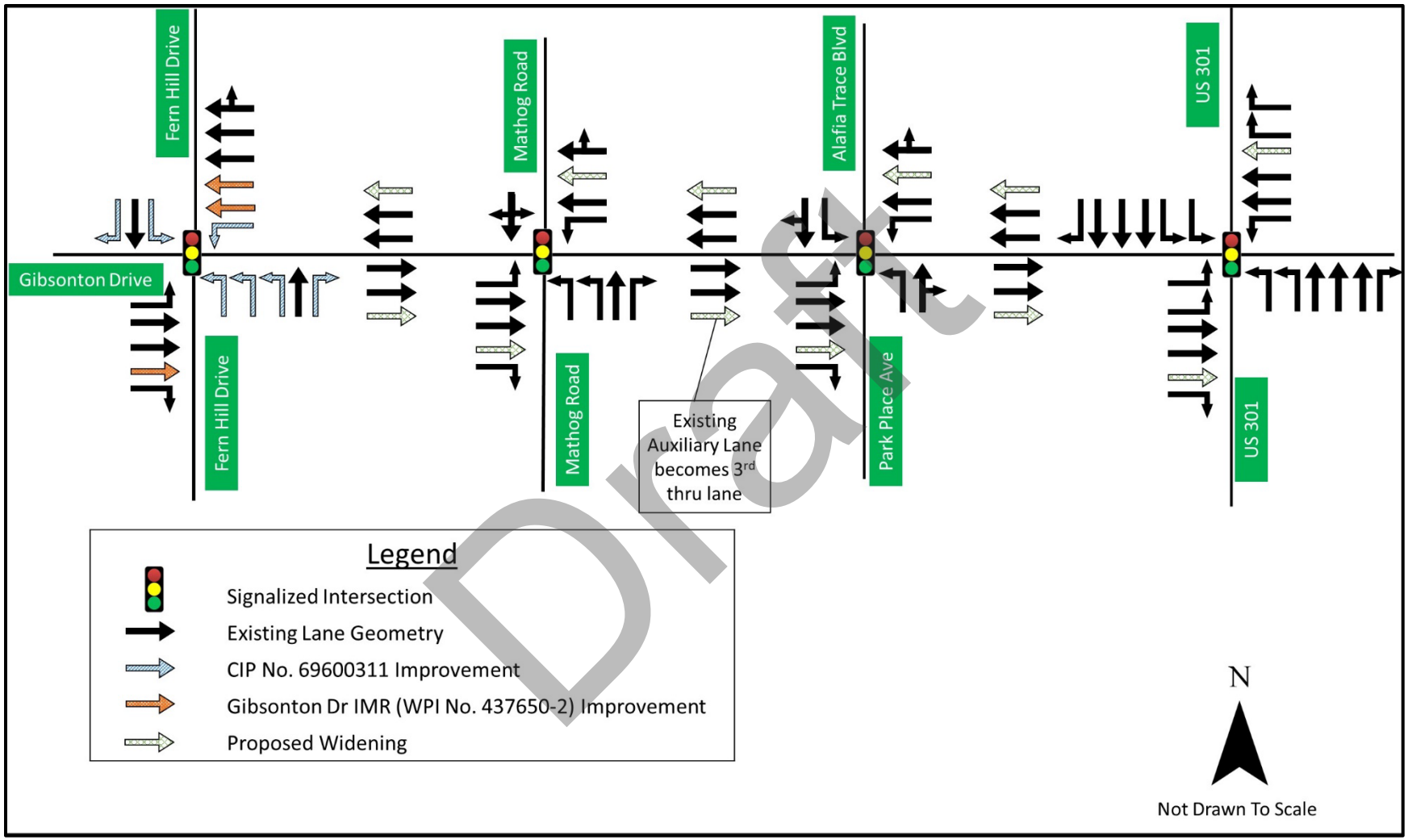


Figure 3-8 Initial Design Year (2045) Build Alternative Lane Geometry and Traffic Control

3.5 BUILD ALTERNATIVE OPERATIONAL ANALYSIS

The Build Alternative traffic operational analysis utilized the proposed lane geometry presented in **Figure 3-7** and **Figure 3-8** for Opening Year (2025) and Design Year (2045), respectively. The analysis also utilized design hour volumes shown in **Figure 3-3** and **Figure 3-4**.

Opening Year (2025) Build Analysis

Arterial LOS results for the Build Alternative in Opening Year (2025) AM and PM peak period are shown in **Table 3-8** and **Table 3-9**, respectively. Overall, the Gibsonton Drive arterial is forecasted to be at LOS E for the Build Alternative in Opening Year (2025) due to failing delay times at the US 301 intersection. Only the westbound direction in the PM peak period meets the LOS target D. Though the results are better than the Existing (2022) Year and No-Build Opening Year (2025) arterial LOS results.

Table 3-8 Build Opening Year (2025) Arterial LOS Results - AM Peak Period

Segments	Flow Speed (mph)	Running Time (s)	Signal Delay (s)	Travel Time (s)	Distance (mi)	Arterial Speed (mph)	Arterial LOS
Gibsonton Drive - Eastbound							
W/of Fern Hill - Fern Hill Dr	45	28.1	32.1	60.2	0.27	16.2	E
Fern Hill Dr - Mathog Rd	45	41.6	2.4	44.0	0.46	37.4	A
Mathog Rd - Park Pl Ave	45	14.2	1.5	15.7	0.13	29.9	B
Park Pl Ave - US 301	45	28.1	116.1	144.2	0.28	7.1	F
Total		**112.0**	**152.1**	**264.1**	**1.14**	**15.6**	**E**
Gibsonton Drive - Westbound							
E/of US 301 - US 301	45	42.3	137.8	180.1	0.53	10.6	F
US 301 - Alafia Trace Blvd	45	28.1	7.5	35.6	0.28	28.7	B
Alafia Trace Blvd - Mathog Rd	45	14.2	10.4	24.6	0.13	19.1	D
Mathog Rd - Fern Hill Dr	45	41.6	30.6	72.2	0.46	22.8	C
Total		**126.2**	**186.3**	**312.5**	**1.40**	**16.1**	**E**

Red text: LOS is worse than target LOS D.

Table 3-9 Build Opening Year (2025) Arterial LOS Results - PM Peak Period

Segments	Flow Speed (mph)	Running Time (s)	Signal Delay (s)	Travel Time (s)	Distance (mi)	Arterial Speed (mph)	Arterial LOS
Gibsonton Drive - Eastbound							
W/of Fern Hill - Fern Hill Dr	45	28.1	36.0	64.1	0.27	15.2	E
Fern Hill Dr - Mathog Rd	45	41.6	1.9	43.5	0.46	37.9	A
Mathog Rd - Park Pl Ave	45	14.2	5.7	19.9	0.13	23.6	C
Park Pl Ave - US 301	45	28.1	152.2	180.3	0.28	5.7	F
Total		**112.0**	**195.8**	**307.8**	**1.14**	**13.3**	**E**
Gibsonton Drive - Westbound							
E/of US 301 - US 301	45	42.3	99.5	141.8	0.53	13.4	E
US 301 - Alafia Trace Blvd	45	28.1	2.8	30.9	0.28	33.0	B
Alafia Trace Blvd - Mathog Rd	45	14.2	1.1	15.3	0.13	30.7	B
Mathog Rd - Fern Hill Dr	45	41.6	4.9	46.5	0.46	35.4	A
Total		**126.2**	**108.3**	**234.5**	**1.40**	**21.5**	**D**

Red text: LOS is worse than target LOS D.

For the Build Alternative analysis all four (4) study intersections were evaluated under signal control with SYNCHRO optimized signal timings.

Table 3-10 shows the delay and LOS results for the Opening Year (2025) Build conditions during the AM and PM peak periods. The US 301 intersection is reported to have failing LOS during both AM and PM peak periods even with the additional eastbound and westbound thru lanes provided in the Build Alternative. All other study intersections meet the overall intersection LOS target D during both AM and PM peak periods. The results are better compared to the Opening Year (2025) No-Build conditions.

Table 3-10 Intersection Delay and LOS Results – Build Opening Year (2025)

Intersection	Approach	Movement	AM Peak Hour				PM Peak Hour			
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Fern Hill Drive	Eastbound	EB Left	97.3	F			108.0	F		
		EB Thru	30.8	C	31.1	C	34.4	C	33.7	C
		EB Right	3.2	A			4.2	A		
	Westbound	WB Left	102.2	F			128.1	F		
		WB Thru	25.7	C	28.8	C	17.2	B	24.9	C
		WB Right	27.7	C			18.1	B		
	Northbound	NB Left	93.5	F			120.0	F		
		NB Thru	58.9	E	89.4	F	73.2	E	106.1	F
		NB Right	60.2	E			78.9	E		
	Southbound	SB Left	82.0	F			96.4	F		
		SB Thru	78.3	E	338.1	F	89.8	F	362.8	F
		SB Right	430.4	F			518.9	F		
	Intersection		**Overall**		**43.0**	**D**	**Overall**		**46.5**	**D**
Mathog Road	Eastbound	EB Left	102.1	F			81.2	F		
		EB Thru	26.0	C	26.5	C	13.2	B	13.4	B
		EB Right	0.0	A			0.0	A		
	Westbound	WB Left	49.2	D			98.1	F		
		WB Thru	0.8	A	3.0	A	0.9	A	4.4	A
		WB Right	1.5	A			1.6	A		
	Northbound	NB Left	85.7	F			96.8	F		
		NB Thru	63.8	E	80.3	F	74.3	E	90.5	F
		NB Right	66.5	E			77.7	E		
	Southbound	SB Left-Thru-Right	79.7	E	79.7	E	89.5	F	89.5	F
	Intersection		**Overall**		**16.6**	**B**	**Overall**		**12.4**	**B**
Park Place Avenue/ Alafia Trace Blvd	Eastbound	EB Left	100.0	F			79.1	E		
		EB Thru	20.8	C	22.2	C	15.7	B	15.9	B
		EB Right	12.7	B			10.4	B		
	Westbound	WB Left	66.7	E			87.7	F		
		WB Thru	12.5	B	13.7	B	15.4	B	20.1	C
		WB Right	12.6	B			15.5	B		
	Northbound	NB Left	78.6	E	75.3	E	88.8	F	90.2	F
		NB Right	65.8	E			91.4	F		
	Southbound	SB Left	68.2	E	65.5	E	92.0	F	81.5	F
		SB Thru-right	64.5	E			76.4	E		
	Intersection		**Overall**		**20.5**	**C**	**Overall**		**22.4**	**C**
US 301	Eastbound	EB Left	156.2	F			140.6	F		
		EB Thru	138.6	F	121.6	F	170.6	F	151.1	F
		EB Right	75.6	F			114.6	F		
	Westbound	WB Left	177.8	F			203.0	F		
		WB Thru	143.5	F	120.0	F	100.5	F	108.4	F
		WB Right	23.2	C			30.9	C		
	Northbound	NB Left	76.9	F			187.7	F		
		NB Thru	121.5	F	105.2	F	62.3	E	84.5	F
		NB Right	21.0	C			17.1	B		
	Southbound	SB Left	165.3	F			96.0	F		
		SB Thru	69.7	E	81.9	F	112.5	F	100.9	F
		SB Right	42.7	D			36.1	D		
	Intersection		**Overall**		**108.9**	**F**	**Overall**		**111.4**	**F**

Red text: LOS is worse than target LOS D.

Design Year (2045) Build Analysis

Arterial LOS results for the initial Build Alternative in Design Year (2045) AM and PM peak period are shown in **Table 3-11** and **Table 3-12,** respectively. Overall, the Gibsonton Drive arterial is forecasted at LOS F for the Build Alternative in Design Year (2045), similar to the No-Build Alternative, however the overall travel time and arterial speeds are improved over the No-Build Alternative. The overall arterial travel time, in the AM peak period, improves by 72.8 seconds in the eastbound direction and 252.6 seconds in the westbound direction. In the PM peak period, the overall arterial travel time improves by 137.2 seconds in the eastbound direction and 138.1 seconds in the westbound direction compared to the No-Build (2045) conditions. Arterial LOS for the Build Alternative is being impacted by delay experienced at the US 301 intersection. Though the arterial speed is better on eastbound direction compared to the Opening Year (2025) Build arterial results. The geometry changes at the Fern Hill Drive intersection in the Design Year (2045) Build alternative improve the traffic flow throughout the corridor.

Table 3-11 Build Design Year (2045) Arterial LOS Results - AM Peak Period

Segments	Flow Speed (mph)	Running Time (s)	Signal Delay (s)	Travel Time (s)	Distance (mi)	Arterial Speed (mph)	Arterial LOS
Gibsonton Drive - Eastbound							
W/of Fern Hill - Fern Hill Dr	45	28.0	40.6	68.6	0.27	14.1	E
Fern Hill Dr - Mathog Rd	45	41.6	6.9	48.5	0.46	34.0	B
Mathog Rd - Park Pl Ave	45	14.2	2.4	16.6	0.13	28.3	B
Park Pl Ave - US 301	45	28.1	186.4	214.5	0.28	4.8	F
Total		**111.9**	**236.3**	**348.2**	**1.14**	**11.8**	**F**
Gibsonton Drive - Westbound							
E/of US 301 - US 301	45	42.3	259.6	301.9	0.53	6.3	F
US 301 - Alafia Trace Blvd	45	28.1	14.4	42.5	0.28	24.0	C
Alafia Trace Blvd - Mathog Rd	45	14.2	3.4	17.6	0.13	26.7	C
Mathog Rd - Fern Hill Dr	45	41.6	41.2	82.8	0.46	19.9	D
Total		**126.2**	**318.6**	**444.8**	**1.40**	**11.3**	**F**

Red text: LOS is worse than target LOS D.

Table 3-12 Build Design Year (2045) Arterial LOS Results - PM Peak Period

Segments	Flow Speed (mph)	Running Time (s)	Signal Delay (s)	Travel Time (s)	Distance (mi)	Arterial Speed (mph)	Arterial LOS
Gibsonton Drive - Eastbound							
W/of Fern Hill - Fern Hill Dr	45	28.0	47.6	75.6	0.27	12.8	F
Fern Hill Dr - Mathog Rd	45	41.6	57.2	98.8	0.46	16.7	E
Mathog Rd - Park Pl Ave	45	14.2	4.2	18.4	0.13	25.5	C
Park Pl Ave - US 301	45	28.1	270.5	298.6	0.28	3.4	F
Total		**111.9**	**379.5**	**491.4**	**1.14**	**8.4**	**F**
Gibsonton Drive - Westbound							
E/of US 301 - US 301	45	42.3	179.3	221.6	0.53	8.6	F
US 301 - Alafia Trace Blvd	45	28.1	8.9	37.0	0.28	27.6	C
Alafia Trace Blvd - Mathog Rd	45	14.2	2.9	17.1	0.13	27.4	C
Mathog Rd - Fern Hill Dr	45	41.6	21.1	62.7	0.46	26.3	C
Total		**126.2**	**212.2**	**338.4**	**1.40**	**14.9**	**E**

Red text: LOS is worse than target LOS D.

An analysis of the four signalized intersections was performed under Design Year (2045) Build conditions using SYNCHRO optimized signal phasing/timing. The US 301 intersection is forecasted to have failing LOS during both AM and PM peak periods due to demand exceeding the capacity of the intersection. All other study intersections meet the overall intersection LOS target D during both AM and PM peak periods.

Due to failing LOS results and long delays at the US 301 intersection for the Design Year (2045), additional improvements along Gibsonton Drive at the US 301 intersection were evaluated in SYNCHRO for the Build Alternative. These additional turn lane improvements were added to help further reduce intersection delay and improve the overall intersection results. The improvements include adding a second eastbound right turn lane and adding a second westbound left turn lane along Gibsonton Drive at the US 301 intersection.

Table 3-13 shows the delay and LOS results for the study intersections forecasted to occur in the Design Year (2045) AM and PM peak periods with the additional turn lane improvements at US 301. The US 301 intersection is still forecasted to have failing LOS during both AM and PM peak periods due to demand exceeding the capacity of the intersection. All other study intersections meet the overall intersection LOS target D during both AM and PM peak periods.

From the results documented in the *PTAR*, it was observed that the overall intersection delay at the US 301 intersection was reduced by 12.7% in the AM peak hour and by 13.6% in the PM peak hour with these additional turn lane improvements over just the widening improvements. The 95th percentile queue lengths were also reduced significantly for those two movements.

Table 3-13 Intersection Delay and LOS Results – Build Design Year (2045)

Intersection	Approach	Movement	AM Peak Hour				PM Peak Hour			
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Fern Hill Drive	Eastbound	EB Left	123.6	F			123.6	F		
		EB Thru	42.1	D	41.7	D	47.0	D	45.2	D
		EB Right	4.7	A			6.7	A		
	Westbound	WB Left	104.0	F			130.7	F		
		WB Thru	31.5	C	34.5	C	20.6	C	28.1	C
		WB Right	34.2	C			21.9	C		
	Northbound	NB Left	113.1	F			125.5	F		
		NB Thru	70.4	E	105.3	F	81.3	F	112.3	F
		NB Right	75.4	F			90.8	F		
	Southbound	SB Left	104.7	F			113.8	F		
		SB Thru	95.6	F	211.7	F	100.9	F	347.1	F
		SB Right	267.1	F			486.3	F		
	Intersection		**Overall**		**48.0**	**D**	**Overall**		**52.0**	**D**
Mathog Road	Eastbound	EB Left	101.3	F			133.1	F		
		EB Thru	29.3	C	29.7	C	30.8	C	31.0	C
		EB Right	0.0	A			0.0	A		
	Westbound	WB Left	76.4	E			78.8	E		
		WB Thru	1.3	A	4.1	A	0.9	A	3.9	A
		WB Right	2.4	A			1.6	A		
	Northbound	NB Left	118.1	F			117.8	F		
		NB Thru	84.7	F	110.3	F	86.7	F	109.5	F
		NB Right	88.5	F			91.0	F		
	Southbound	SB Left-Thru-Right	105.9	F	105.9	F	105.0	F	105.0	F
	Intersection		**Overall**		**19.6**	**B**	**Overall**		**20.9**	**C**
Park Place Avenue/ Alafia Trace Blvd	Eastbound	EB Left	102.6	F			101.3	F		
		EB Thru	28.5	C	29.7	C	36.8	D	36.0	D
		EB Right	13.5	B			19.1	B		
	Westbound	WB Left	95.6	F			86.7	F		
		WB Thru	28.3	C	29.9	C	18.3	B	22.5	C
		WB Right	28.8	C			18.6	B		
	Northbound	NB Left	109.3	F	101.9	F	102.2	F	111.1	F
		NB Right	79.4	E			117.4	F		
	Southbound	SB Left	83.1	F	79.1	E	108.9	F	93.2	F
		SB Thru-right	77.9	E			84.8	F		
	Intersection		**Overall**		**33.2**	**C**	**Overall**		**33.6**	**C**
US 301	Eastbound	EB Left	277.2	F			235.7	F		
		EB Thru	115.8	F	114.8	F	216.1	F	175.1	F
		EB Right	21.6	C			46.4	D		
	Westbound	WB Left	160.1	F			254.9	F		
		WB Thru	283.5	F	213.6	F	262.9	F	234.8	F
		WB Right	32.4	C			13.7	B		
	Northbound	NB Left	153.9	F			262.4	F		
		NB Thru	237.3	F	205.7	F	81.5	F	124.5	F
		NB Right	33.7	C			57.9	E		
	Southbound	SB Left	267.7	F			114.7	F		
		SB Thru	105.6	F	125.2	F	220.0	F	175.2	F
		SB Right	52.1	D			19.6	B		
	Intersection		**Overall**		**171.7**	**F**	**Overall**		177.1	**F**

Red text: LOS is worse than target LOS D.

Table 3-14 shows the 95th percentile queue results for the intersection movements in the Design Year (2045) condition. The queue analysis results show that the westbound left movement at the Fern Hill Drive intersection has a 95th percentile queue volume that exceeds capacity so the queue may be longer than the 471 ft reported in the PM Peak period. Most of the movements at the US 301 intersection are expected to exceed the capacity for the reported 95th percentile queue lengths.

Figure 3-9 shows the proposed lane geometry and signal control for the Design Year (2045) Build Alternative that includes the US 301 intersection turn lane improvements. The additional turn lanes at the US 301 intersection will apply to the Opening Year (2025) Build Alternative. The Concept Plans in **Appendix A** show the lane configurations of the Design Year (2045) Build Alternative with the added turn lane improvements at US 301.

Table 3-14 Intersection Queue Lengths for Build Alternative Design Year (2045)

Intersection	Movement	Available Storage (ft)	95th Percentile Queue (ft)	
			AM Peak	PM Peak
Fern Hill Drive	EB Left	420	316	316
	EB Thru	4650	1278	1534
	EB Right	200	57	119
	WB Left	450	m205	#471
	WB Thru-Right	2300	843	909
	NB Left	200	#288	#197
	NB Thru	370	49	68
	NB Right	250	60	72
	SB Left	150	#175	#195
	SB Thru	185	28	85
	SB Right	150	82	88
Mathog Road	EB Left	200	m22	m12
	EB Thru	2280	647	1600
	EB Right	350	m6	m291
	WB Left	200	m178	m197
	WB Thru-Right	520	187	144
	NB Left	170	187	158
	NB Thru	290	29	23
	NB Right	200	17	22
	SB Left/Thru/Right	2430	53	35
Park Place Avenue/ Alafia Trace Blvd	EB Left	240	m107	m54
	EB Thru	540	15	61
	EB Right	350	m0	m1
	WB Left	305	m86	m227
	WB Thru-Right	1335	m116	m119
	NB Left	140	#398	268
	NB Thru-Right	300	57	92
	SB Left	200	40	54
	SB Thru-Right	370	52	45
US 301	EB Left	440	#570	m#473
	EB Thru	1340	#931	#1162
	EB Right	790	306	391
	WB Left	330	#432	#461
	WB Thru	4170	#1555	#1246
	WB Right	175	363	84
	NB Left	550	#726	#705
	NB Thru	7920	#2043	#760
	NB Right	435	258	438
	SB Left	275	#503	#603
	SB Thru	3000	#1004	#1505
	SB Right	800	353	241

- 95th percentile volume exceeds capacity, queue may be longer,
m - Volume for 95th percentile queue is metered by upstream signal,
Red indicates 95th percentile volume exceeds capacity,
Note: Taper lengths were not included in the storage length.

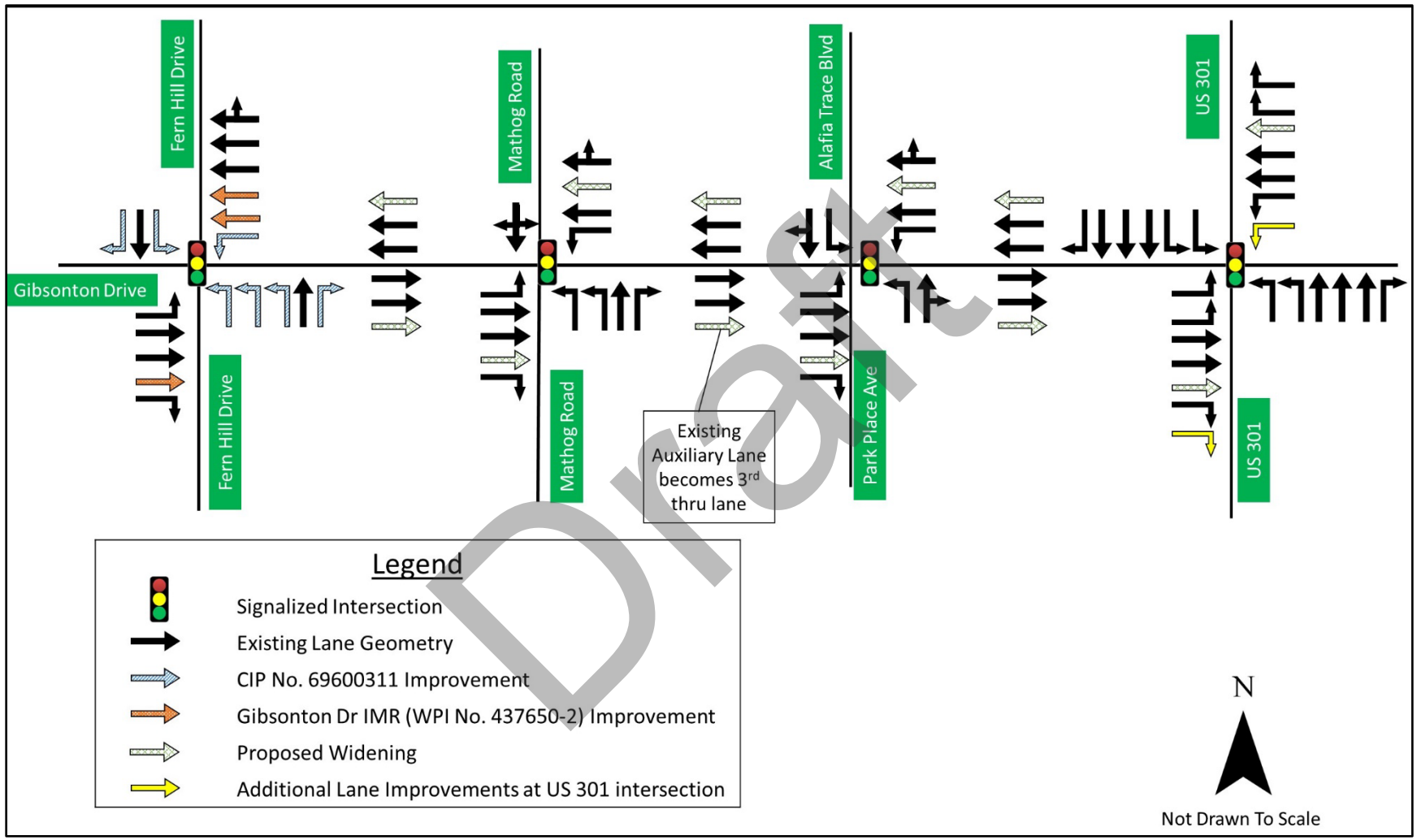


Figure 3-9 Design Year (2045) Build Alternative Lane Geometry with additional US 301 Improvements and Traffic Control

SECTION 4 DESIGN CONTROLS AND CRITERIA

Proposed design controls, standards and criteria are shown below in **Table 4-1.** Although Gibsonton Drive is a County facility, FDOT criteria was used.

Table 4-1 Gibsonton Drive Design Controls and Criteria

DESIGN ELEMENT	4-Lane Rural/Suburban	Source
Functional Classification	Hillsborough County Arterial	Hillsborough County Roadways Functional Classification
Context Classification	Existing: Suburban Commercial C3C Future: Suburban Commercial C3C	Hillsborough County Comprehensive Plan 2021 Context Classification Map
Design Year	2045	PTAR
Design Speed	45 mph (Curb & Gutter)	FDM Table 201.5.1
Design Vehicle	WB-62FL	FDM Section 201.6.2
HORIZONTAL ALIGNMENT		
Maximum Superelevation	0.05	FDM Table 210.9.2
Maximum Curvature	8°15'	FDM Table 210.9.2
Maximum Curvature w/o Superelevation	2°45'	FDM Table 210.9.2
Max. Deflection w/o Horizontal Curve	1° 00' 00"	FDM Section 210.8.1
Minimum Length of Horizontal Curve	675' Desirable; 400' Minimum	FDM Table 210.8.1
Superelevation Rate	1:150	FDM Table 210.9.3
VERTICAL ALIGNMENT		
Maximum Grade	6% (4% when truck volume ≥10%)	FDM Table 210.10.1
Minimum Grade	0.30%	FDM Section 210.10.1
Minimum Distance Between VPI's	250 ft	FDM Section 210.10.1
Min. K Value for Crest Vertical Curves	98 (new); 61 (RRR criteria)	FDM Table 210.10.3
Min. K Value for Sag Vertical Curves	79	FDM Table 210.10.3
Minimum Vertical Curve Length	Crest: 135 ft; Sag: 135 ft	FDM Table 210.10.4
Minimum Stopping Sight Distance	360 ft	FDM Table 210.10.1
Max. Change in Grade w/o Vertical Curve	0.70	FDM Table 210.10.2
Roadway Base Clearance the Base Water Elevation	3 ft	FDM Section 210.10.3
ROADWAY CROSS SECTION		
Lane Widths	11 ft (Inside), 12 ft (Outside)	FDM Section 210.2
Cross Slopes (Roadway)	2% for 2 lanes / 3% for additional lanes	FDM Figure 210.2.1
Median Width (Minimum)	22 ft	FDM Table 210.3.1
Sidewalk widths	6 ft Minimum; 10 ft Maximum	FDM Table 222.2.1
Clear Zone (CZ)	24 ft (New Construction); 14 ft (RRR)	FDM Table 215.2.1
Lateral Offset	30 ft (Outside clear zone)	FDM Table 215.2.2
Front Slopes	1:6 to edge of CZ, then 1:4, 1:3, or 1:2 w guardrail (based on fill height)	FDM Table 215.2.3
Back Slopes	1:4 or 1:3 w std. width trapezoidal ditch & 1:6 front slope	FDM Table 215.2.3
Minimum Border Width	14 ft	FDM Table 210.7.1
Minimum Level of Service (Arterial)	D (inside urban boundary)	FDM Table 201.4.2
SOURCES: FDOT Design Manual (FDM), January 2023; Project Traffic Analysis Report (PTAR);		

Additionally, based on the US 301 Context Classifications of C3C, **Table 4-2** provides the general FDOT design controls**.**

Table 4-2 Context Classification C3C/C3R Design Controls

DESIGN CONTROL	C3C/C3R
Allowable Design Speed Range (mph)	35-55
SIS Minimum Design Speed (mph)	50
Minimum Travel & Auxiliary Lane Width	35 mph: 10 ft 40-45 mph: 11 ft ≥ 50 mph: 12 ft
Two-Way Left Turn Lane	25-35 mph: 11 ft 40 mph: 12 ft
Median Width	Curbed & Flush 25-35 mph: 22 ft 40-45 mph: 22 ft High Speed Curbed 50-55, 30 ft
Sidewalk Width	6

Drainage and Stormwater Management Design Criteria: The design of SMFs for this proposed widening project are governed by rules and criteria set forth by the FDOT, SWFWMD, and FDEP. The specific governing requirements from each agency are outlined in the *PSR* related to:

- FDOT Criteria (water quality, compensatory treatment, water quantity, stormwater management facilities, Environmental Look Around (ELA), nutrient loading analysis)
- SWFWMD Criteria (water quality, overtreatment, off-site compensation, water quantity, floodplain encroachment)

SECTION 5 ALTERNATIVES ANALYSIS

5.1 NO-BUILD/REHABILITATION/REPAIR ALTERNATIVE

Throughout this study process, the No-Build Alternative (no-action) is considered viable. It assumes that no capacity nor operational improvements will be implemented except for routine maintenance on the existing road. The No-Build Alternative remains a viable alternative throughout the study process although it does not satisfy the purpose and need for this project. The following are advantages and disadvantages associated with the No-Build Alternative:

Advantages of the No-Build Alternative:

- No additional right-of-way to be acquired
- No design or construction costs
- No delays to motorists or inconveniences to property owners due to construction
- No impacts to the adjacent natural, physical, and social environment

Disadvantages of the No-Build Alternative:

- No additional pedestrian facilities connected nor bicycle facilities added
- Increased potential for crashes due to higher traffic volumes Increased traffic congestion and user costs associated with increased delays
- Potential for increased emergency vehicle response times
- Potential for increased hurricane evacuation times

5.2 TRANSPORTATION SYSTEM MANAGEMENT AND OPERATIONS

The objective of Transportation System Management & Operations (TSM&O) is to identify strategies that reduce existing traffic congestion and prevent its occurrence in areas that are currently congested. These strategies are designed to modify travel behavior and increase system efficiency without costly infrastructure improvements.

TSM&O options generally include traffic management strategies, traffic signal and intersection improvements, access management, and transit improvements. The project's *PTAR* concluded that the additional traffic capacity required along Gibsonton Drive cannot be provided solely through the implementation of TSM&O improvements. Additional thru lanes were found to be required to improve or meet Design Year acceptable LOS along Gibsonton Drive and for intersections within the study limits.

5.3 MULTIMODAL ALTERNATIVES

As noted in **Section 2.10.2**, HART maintains bus route 31 along Gibsonton Drive. There are no multimodal alternatives identified in Hillsborough County TPO LRTP. Multimodal alternatives

generally include bicycle/pedestrian improvements or enhanced connections to intermodal facilities. Therefore, a multimodal alternative without roadway widening is not considered a viable alternative, however, bicycle/pedestrian improvements will be considered as part of the Build Alternative.

5.4 BUILD ALTERNATIVES

This study evaluated a single Build Alternative. The following steps were utilized to develop and evaluate options in development of the build alternative:

- Base concept plans were prepared using all available data, including county GIS data, as-built plans, FDOT and Hillsborough County ROW maps, and subdivision plats.
- The required number of thru lanes and major intersection geometry was determined based on the traffic analysis summarized in **Section 3.**
- Typical section options were developed based on FDOT's standard design criteria and context classification and coordinated with Hillsborough County staff.
- The typical section was evaluated within the existing roadway elements and existing ROW to minimize impacts on adjacent properties, the need for additional ROW including number of parcels, and avoiding or minimizing impacts.

5.4.1 Typical Roadway Sections and Horizontal Alignments

As noted in **Section 2.4**, the existing ROW varies from 125 to 150 feet throughout the Gibsonton Drive corridor west of US 301 and up to 202 feet wide east of US 301. In most areas the existing ROW is greater than 125 feet in width, the additional width is towards the south. Expanding the existing 4-lane road to 6-lanes will require widening. In general, the addition of one lane in each direction would best be incorporated so the existing lanes could remain in place. This may result in lower costs by retaining the existing roadway base and pavement, drainage cross drains and allow traffic to be maintained most efficiently during construction.

The Gibsonton Drive Context Classification C3C maintains the urban typical sections within the project limits. The design controls for context classification C3C as shown in **Table 4-1** indicate an allowable design speed range or 35-55 mph. The existing posted speed is 45 mph. For consistency along the corridor, as shown in **Table 4-1**, the design speed of 45 mph will be used for typical section or other design elements.

Initial Typical Section Alternatives

Based on the collection of data and base mapping, the initial alternative typical section was developed to show the widening of Gibsonton Drive from four 12-foot lanes to six 12-foot lanes with 5-foot bike lanes. Retaining lanes on the existing roadway allows for maintenance of traffic during construction. **Figure 5-1** shows the development of the initial proposed typical section along Gibsonton Drive for this project.

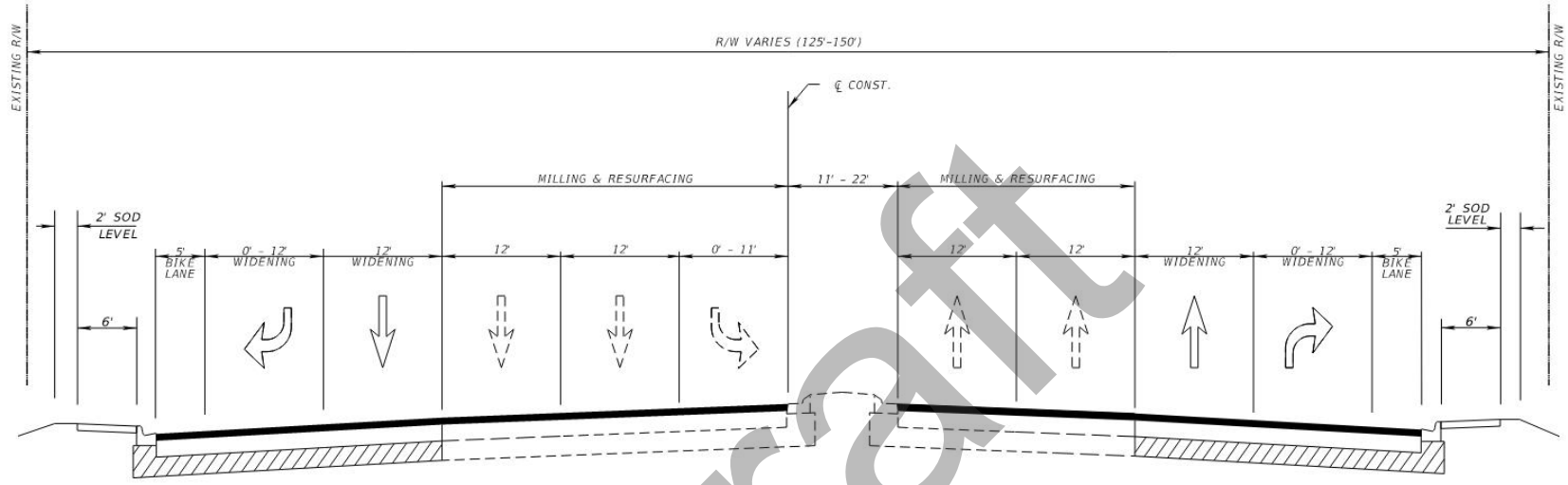


Figure 5-1 Initial Typical Section Alternative Considered

During coordination with Hillsborough County, additional typical section options were developed.

Proposed Typical Section Option One (Figure 5-2): shows a 6-lane divided urban section with a 22-foot raised median and curb/gutter, sidewalks on both sides of the road and 7-foot protected bike lanes (5-foot bike land and 2-foot traffic separator). Additional ROW from 0 to 36 feet may be required on the north side of roadway and 0 to 13 feet may be required on the south side of roadway in the sections where the existing ROW is only 125 feet wide. Milling/Resurfacing of existing lanes and widening is to be constructed allowing for the protected bike lanes and 6-foot concrete sidewalks and minimize impacts to businesses along the south side of the roadway. The shift in alignment allows for construction of any eastbound single or dual right turn lanes to remain within existing ROW. Conveyance of stormwater from the road would need to be collected through incorporation of a storm sewer system.

Proposed Typical Section Option Two (Figure 5-3): shows a 6-lane divided urban section with a 22-foot raised median and curb/gutter, sidewalks on both sides of the roadway. Additional ROW from 0 to 32 feet may be required on the north side of roadway and 0 to 9 feet may be required on the south side of roadway in the sections where the existing ROW is only 125 feet wide. Milling/Resurfacing of existing lanes and widening is to be constructed allowing for 10-foot concrete sidewalks and minimize impacts to businesses along the south side of the roadway. The shift in alignment allows for construction of any eastbound single or dual right turn lanes to remain within existing ROW. Conveyance of stormwater from the road would need to be collected through incorporation of a storm sewer system.

Proposed Typical Section Option Three (Figure 5-4): shows a 6-lane divided urban section with a 22-foot raised median and curb/gutter, sidewalks on both sides of the roadway. Additional ROW from 0 to 35 feet may be required on the north side of roadway and 0 to 12 feet may be required on the south side of roadway in the sections where the existing ROW is only 125 feet wide. Milling/Resurfacing of existing lanes and widening is to be constructed allowing for 10-foot concrete sidewalks with 3-foot green buffer and minimize impacts to businesses along the south side of the roadway. In areas where sufficient ROW is present along the south side of the alignment the 10-foot concrete sidewalk will be placed near the existing ROW line. The shift in alignment allows for construction of any eastbound single or dual right turn lanes to remain within existing ROW. Conveyance of stormwater from the road would need to be collected through incorporation of a storm sewer system.

Proposed Typical Section Option Four (Figure 5-5): shows a 6-lane divided urban section with a 22-foot raised median and curb/gutter and shared use paths along both sides of the roadway. Additional ROW from 0 to 40 feet may be required on the north side of roadway and 0 to 16 feet may would be required on the south side of roadway in the sections where the existing ROW is only 125 feet wide. Milling/Resurfacing of existing lanes and widening is to be constructed allowing for 12-foot shared use path with 5-foot green buffer and minimize impacts to businesses along the south side of the roadway. In areas where sufficient ROW is present along the south side of the alignment the 12-foot shared use path will be placed near existing ROW line. The shift in alignment allows for construction

of any eastbound single or dual right turn lanes to remain within existing ROW. Conveyance of stormwater from the road would need to be collected through incorporation of a storm sewer system.

After coordination with Hillsborough County, it was determined that the proposed typical section **Option Three** minimizes impacts to the existing roadway, keeps the ditch/swale on the south side and the wider sidewalk was preferred on both sides of the road as it can accommodate pedestrians and bicycles within the project limits. The County staff suggested locating the sidewalk as far away from the roadway as possible where no new ROW is being proposed. Along right turn lanes, the sidewalk can be placed against the back of the proposed curb to minimize ROW needs.

Typical Section Options One, Two and Four were dropped from further consideration and **Option Three** was carried forward for further evaluation of alignment alternatives.

Horizontal Alignment Considerations of the Typical Section

Based on using Proposed Typical Section **Option Three** as noted above, an alternative horizontal alignment was considered when widening the new westbound lanes to the north of the existing lanes to potentially minimize traffic impacts during construction. Existing eastbound lanes will remain during the widening of the roadway towards the median.

Pedestrian and Bicycle Accommodations with the Typical Section

Through development of the typical sections as noted above, several options were proposed along both sides of Gibsonton Drive from Fern Hill Drive to US 301 to accommodate pedestrians and bicyclists in the study corridor. It was determined that a 10-foot wide sidewalk would be constructed on both sides of Gibsonton Drive, replacing the existing 5-foot sidewalks within the project study limits. The wider sidewalks will also enhance mobility to existing HART bus stops along Gibsonton Drive.

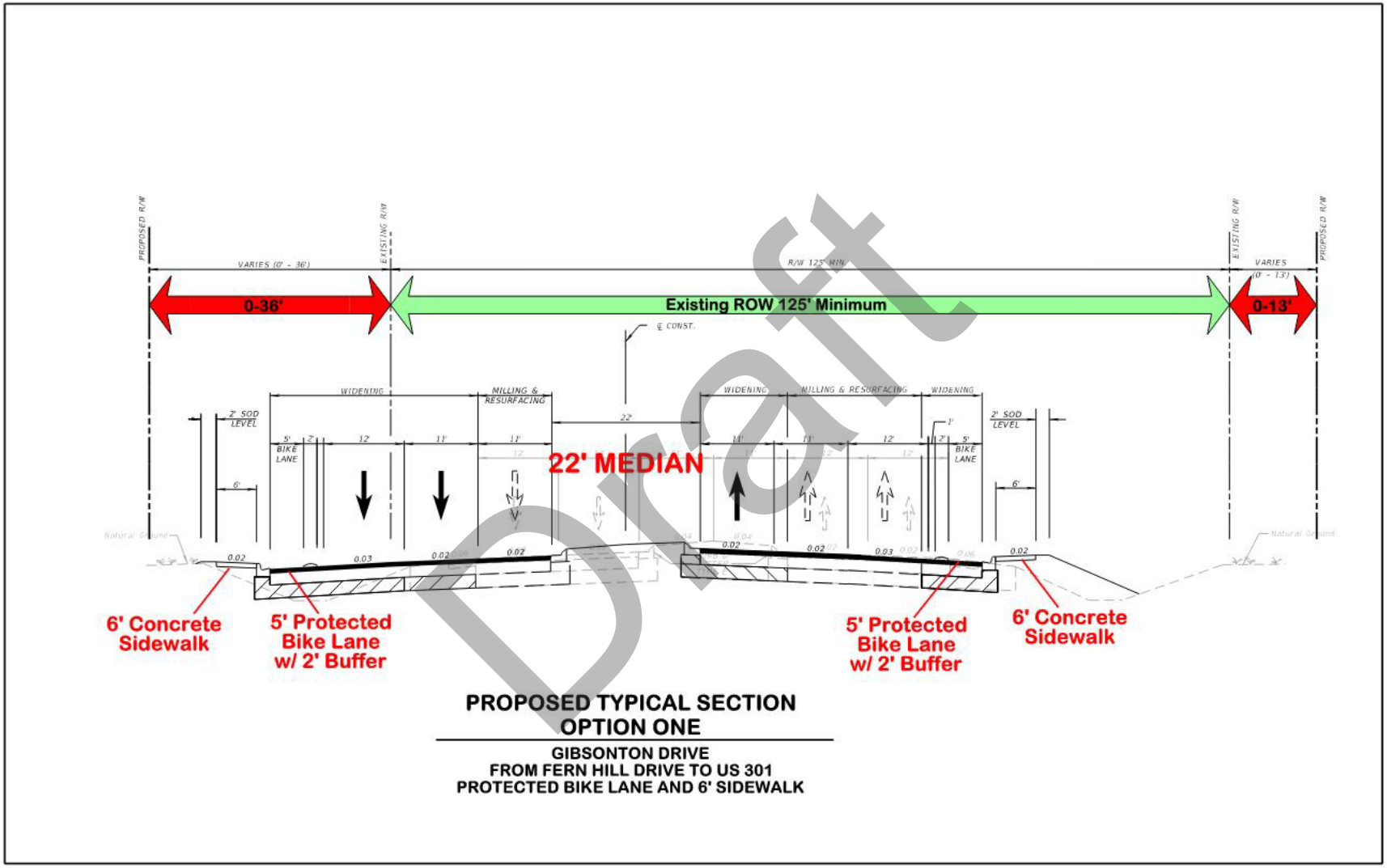


Figure 5-2 Proposed Typical Section Option One Considered

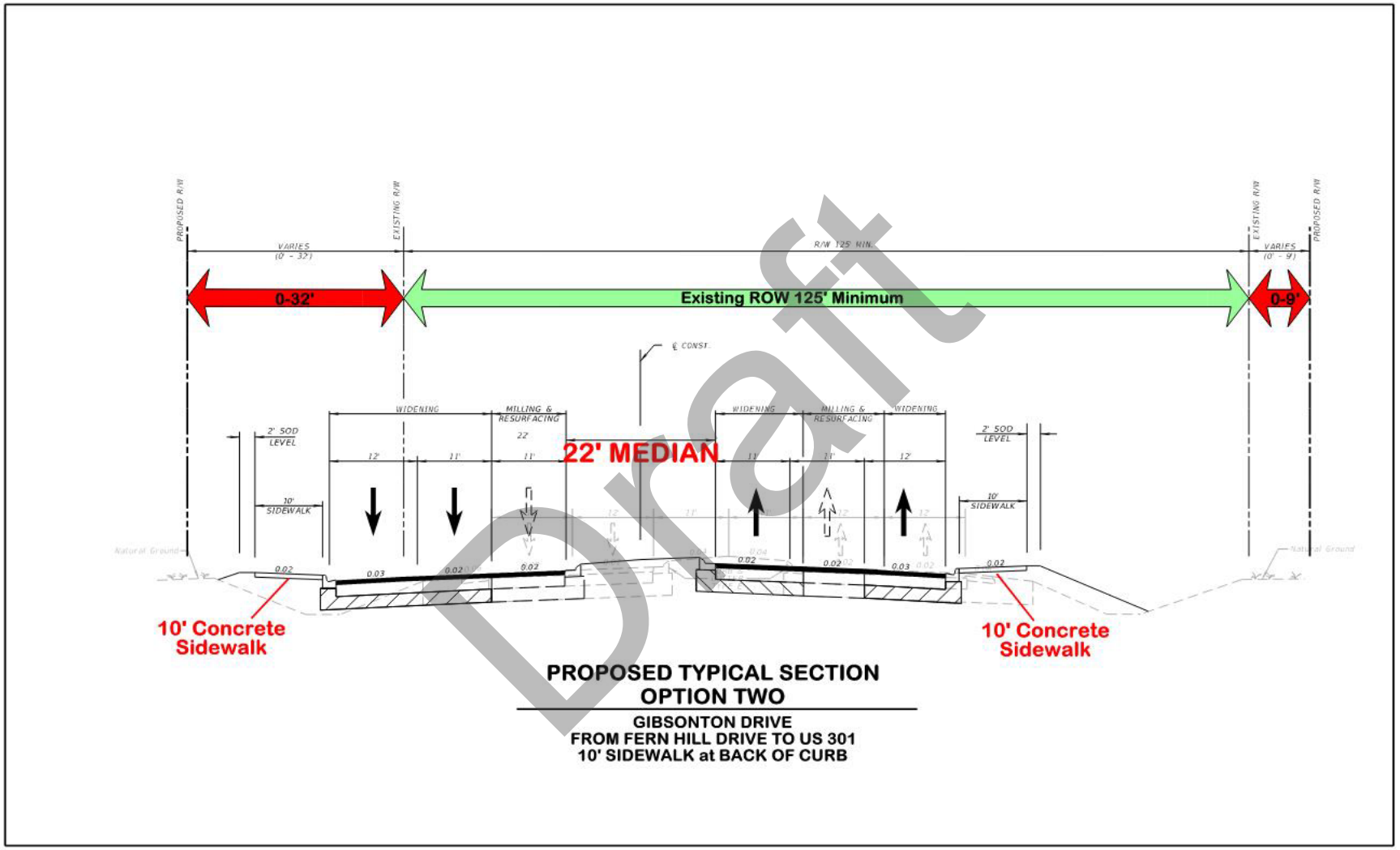


Figure 5-3 Proposed Typical Section Option Two Considered

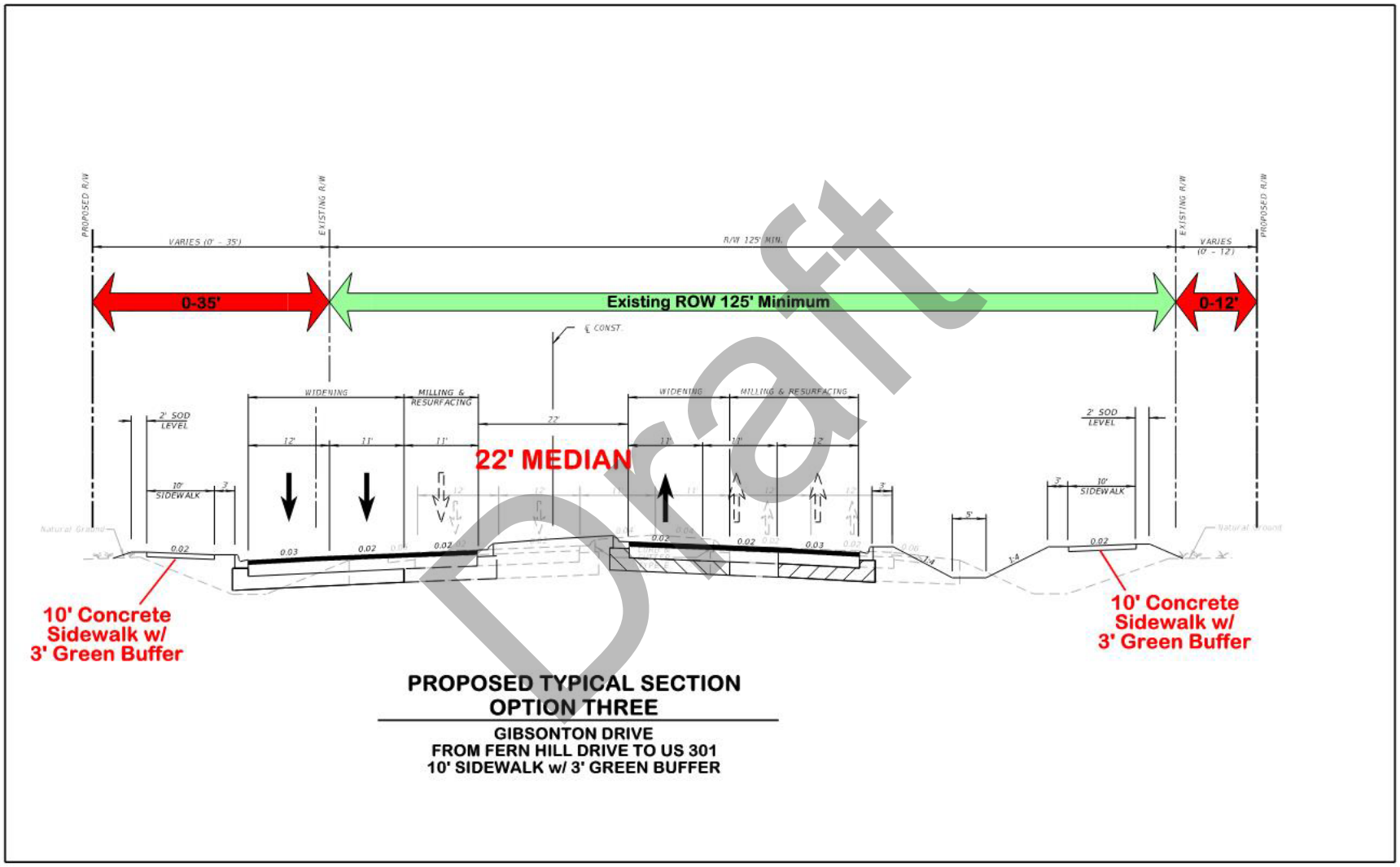


Figure 5-4 Proposed Typical Section Option Three Considered

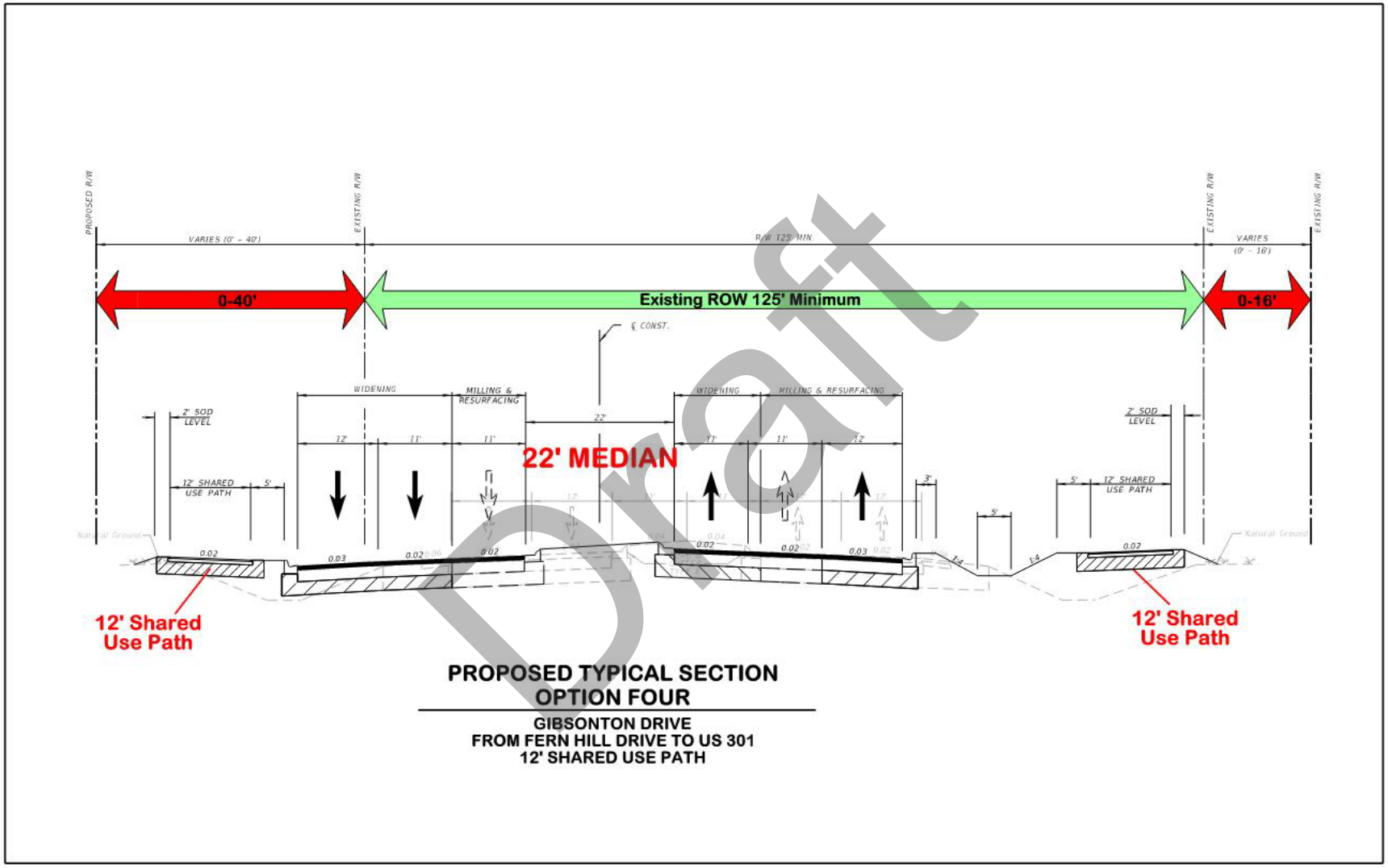


Figure 5-5 Proposed Typical Section Option Four Considered

5.4.2 Preferred Build Typical Section

Based on the evaluation of typical sections noted in **Section 5.4.1**, **Figure 5-6** shows the proposed build typical section for this project. This roadway typical section applies for the limits of the project study area. The existing right of way widths vary along the corridor and with the change in horizontal alignment, the proposed right of way widths also vary. Proposed right of way is required in areas along the north side of Gibsonton Drive for the mainline improvements as well as along portion of the south side of Gibsonton Drive to add a second right turn lane approaching the US 301 intersection. Gravity walls are proposed along the proposed sidewalk in areas to avoid or minimize the proposed right of way needed from adjacent parcels. General areas where gravity wall may be required are shown on the Concept Plans in **Appendix A**.

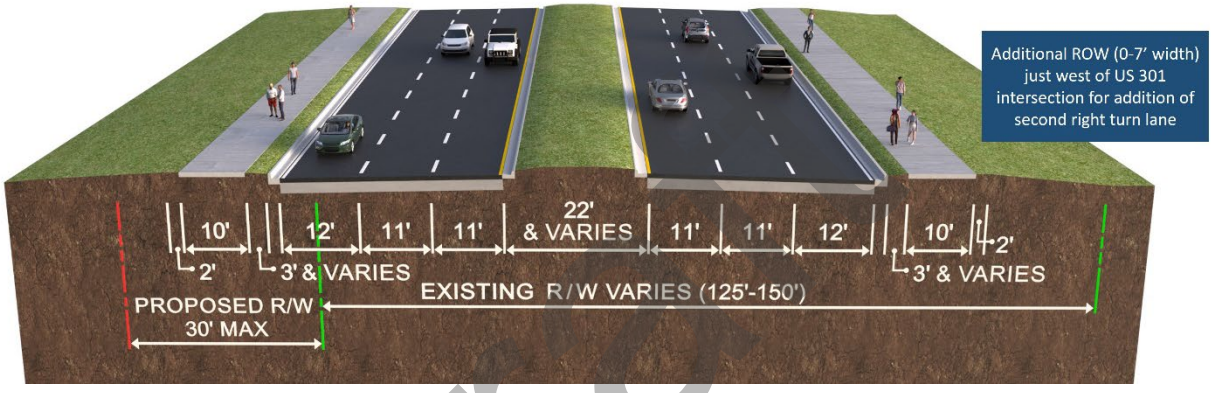


Figure 5-6 Build Alternative Typical Section Looking East

5.4.3 Structure Alternatives

There are no structures in the project study limits.

5.4.4 Changes in Access Management

No changes to the Access Management Classification are expected. All median openings were coordinated with Hillsborough County and are shown on the Concept Plans in **Appendix A.**

5.4.5 Drainage and Floodplain Considerations

5.4.6 Basin Considerations

Conceptual SMF & FPC Maps showing the following SMF and FPC alternatives are provided in **Appendix A** of the *PSR***.**

Basin 1

Basin 1 begins near the beginning of the study limits at station 78+73 and continues to the intersection of Gibsonton Drive and US 301, at station 118+04. The land use of parcels adjacent to Basin 1 consists of a mix of commercial and residential properties.

Runoff from Basin 1 is conveyed via roadside ditches and side drains flowing toward the center of the basin to a cross drain located east of Hagadorn Road. That flow is then conveyed north via ditch to the Alafia River which is tidally influenced.

There is a recently permitted project at the west end of the basin Environmental Resource Permit (ERP 45227.000) which involves improvements at the intersection of Gibsonton Drive and Fern Hill Drive. This Hillsborough County project (CIP No. 6960031) has not been constructed as of date. Two permitted roadside swales would be impacted by the improvements proposed herein. Therefore, the impacted treatment and attenuation is accounted for within the following SMF alternative.

SMF 1B

SMF 1B is located on a 1.67-acre residential parcel at the center of the basin between Park Place Avenue and Kenda Drive, south of Gibsonton Drive. Since this SMF alternative is located near the basin outfall, it is the most hydraulically feasible location. The SHWT is estimated to be 25.84 ft North American Vertical Datum (NAVD) per the permitted plans from a nearby project (ERP 21779.009 – Lowes Riverview Town Centre). Compensatory treatment and attenuation may be utilized to meet criteria. This can be accomplished by ensuring that at least 1000 ft of the proposed 6-lane roadway will drain to the SMF. Since this SMF is near the primary outfall of the basin, additional pipe is not required. The total parcel area required for SMF 1B is 1.47 acres.

Basin 2

Basin 2 begins at the intersection of Gibsonton Drive/Boyette Road and US 301, station 200+00 (118+04 back) and continues beyond the study limits to Balm Riverview Road located at Station 240+80. The land adjacent to Basin 2 consists of a mix of commercial and residential properties.

Basin 2 flows toward the center of the basin to a permitted pond north of Boyette Road (ERP 2166.001 – Pond 1A), which outfalls to Rice Creek and ultimately the Alafia River. For the purposes of this report this permitted pond is referred to as SMF 2.

The proposed improvements within Basin 2 consist of the addition of a turn lane of less than a quarter mile and a sidewalk. These improvements can be considered exempt from permitting. The resulting DHW in SMF 2 is calculated to rise a minimal 0.04 feet.

5.4.7 Floodplain Compensation Site Alternative

Floodplain Compensation Requirements

The improvements proposed within the preferred roadway alternative will require fill to be placed with the floodplain within Basin 1. No encroachments are likely in Basin 2. These encroachments are listed in **Table 5-1**.

Table 5-1 Floodplain Encroachment Summary

Floodplain	Project Floodplain Limits	Base Flood Elev. (ft-NAVD)	Estimated Floodplain Encroachment Area (ac)	Estimated Floodplain Encroachment Volume (ac-ft)
1	87+15 to 91+70 (Right)	28.18	0.254	0.142
2	94+65 to 94+30 (Left)	25.18	0.027	0.007
3	92+12 to 97+12 (Right)	28.18	0.201	0.076
4	98+07 to 102+90 (Right)	32.66	0.205	0.016

Floodplain Considerations

FPC 1A

FPC 1A is located on a 1.54-acre residential parcel between Park Place Avenue and Kenda Drive, south of Gibsonton Drive. This parcel is directly connected to the floodplain associated with the encroachments. The elevations range from 26.5 to 29.3 ft-NAVD. The SHWT is estimated to be 25.84 ft-NAVD per ERP 21779.009. Floodplain compensation may result in the loss of upland area, placing the parcel entirely within the floodplain. Compensation for the floodplain encroachments would be evaluated on a cup-for-cup basis.

5.4.8 Project Segmentation

Based on the relatively short length of the project (less than 1 mile) and the nature of the improvements, it is anticipated that the proposed project would not be segmented by Hillsborough County and the project would be constructed as one project for programming purposes.

5.4.9 Construction and Right of Way Costs

Table 5-2 shows the estimated construction and right of way acquisition costs for the Build Alternative for coordination purposes. The construction costs are based on the FDOT's LRE cost estimating system as of December 2023. The ROW costs are based on estimates prepared as of June and August 2023. The wetlands mitigation cost is based on an estimate of $250,000 per acre of impact.

Table 5-2 Preliminary Estimated Construction and Right of Way Costs

Estimated Costs Present Day Costs in $ Million Rounded up to the Nearest $0.1 million $	Total Project
Construction Cost (Roadway and Drainage)	$2318.5
Right of Way for Gibsonton Drive Roadway Widening	$6.7
Right of Way for Stormwater Pond and Floodplain Compensation Sites	$3.2
Wetlands Mitigation for wetland impacts that are not other surface waters (0.17 acres)	$0.1
Design (10% of construction)	$2.4
Construction Inspection (10% of construction)	$2.4
Total Project Estimated Costs	**$38.3**

5.4.10 Environmental Impact Evaluation of Alternative

Anticipated environmental impacts for implementing the Preferred Build Alternative are documented in detail in technical reports listed in **Section 2.28** and summarized in the *Type 2 CE*. Below is a description of these potential impacts.

Social and Economic Impacts

Social and economic effects are anticipated to be minimal. There are no planned changes to land use nor aesthetics. Economic conditions may be enhanced through enhanced mobility. There is no involvement with farmland resources as defined by 7 Code of Federal Regulations (CFR) Part 658.

Cultural Resource Impacts

As documented in the *Cultural Resources Assessment Survey* (*CRAS*), potential resources were identified within the project area of potential effect, however there were no historic nor archaeological resources that meet the eligibility criteria for inclusion on the National Register of Historic Places, therefore for no historic properties will be affected.

There is one property within the project area that is protected pursuant to *Section 4(f) of the United State Department of Transportation (USDOT) Act of 1966.* The Alafia Scrub Nature Preserve is approximately 79.3 acres. It is located along the north side of Gibsonton Drive to the east of I-75, and abuts the Alafia River on the west/northwest side of the property. A *Section 4(f) Technical Memorandum* provided additional details. **Figure 5-7** shows the location of the Alafia Nature Preserve in relation to this project. There is no direct access to the preserve from Gibsonton Drive. This project will result in no impacts on the Alafia Scrub Nature Preserve. A proposed 10'wide sidewalk will be constructed along the north side of Gibsonton Drive and if necessary, a gravity wall will be constructed to avoid the need for additional right of way. **Figure 5-8** shows the proposed improvements for this project adjacent to the Alafia Scrub Nature Preserve.

There are no properties within the project areas that are protected pursuant to *Section 6(f) of the Land and Water Conservation Fund of 1965*, nor other recreational or protected lands.

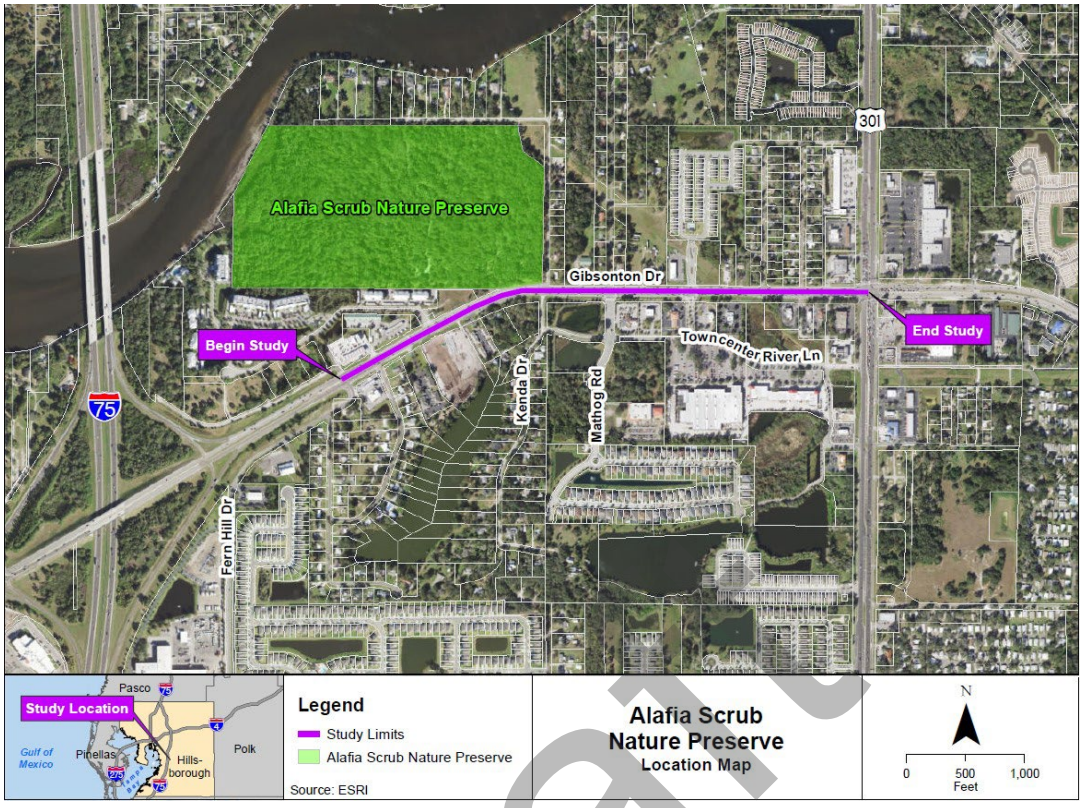


Figure 5-7 Alafia Scrub Nature Preserve

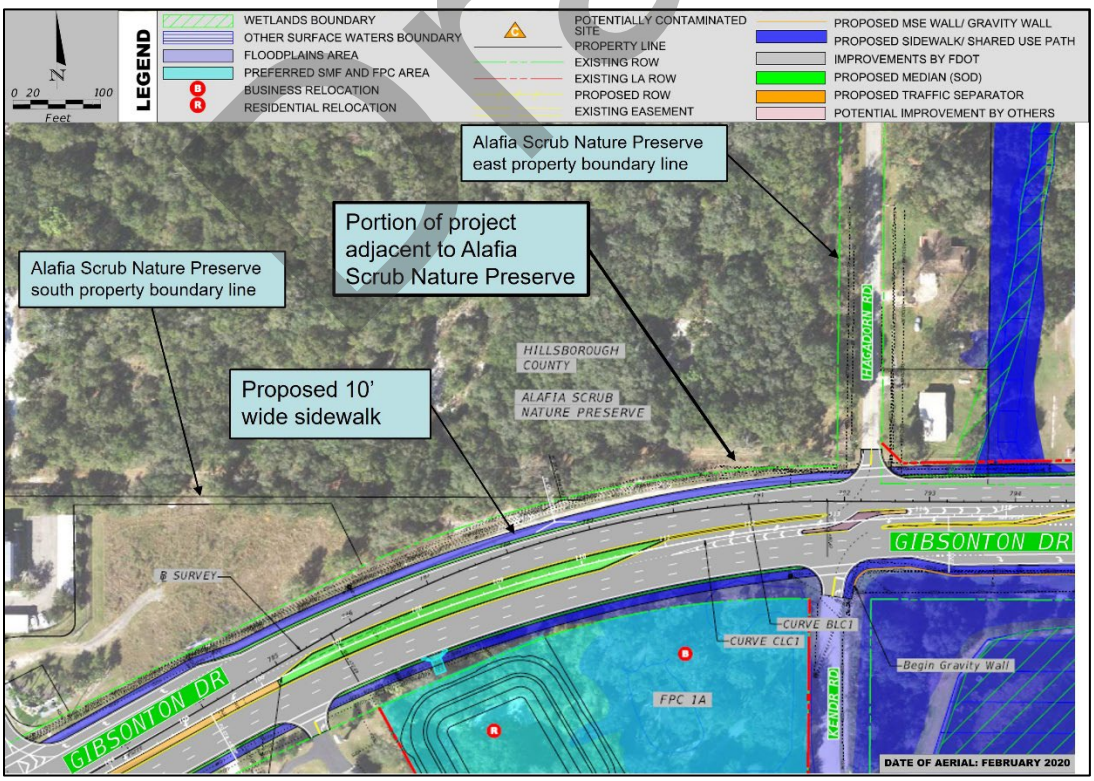


Figure 5-8 Proposed Project Improvements Adjacent to Alafia Scrub Nature Preserve

Natural Resource Impacts

The *Natural Resources Evaluation (NRE)* documented all potential involvement of species and wetlands within the project area. The project will not have significant impacts to natural resources. The project will impact 0.17 acres of wetlands and 0.17 acres of impacts to other surface waters. There are several listed species that may be present, or their habitat may be present, but the effect determination of "may affect, not likely to affect" was made for these species including the following Federal Listed faunal and floral species: eastern indigo snake, eastern black rail, wood stork, Florida golden aster and Britton's beargrass. A "no adverse effect anticipated", "no effect anticipated or "no effect" determination was made for the following Federal and/or State Listed faunal and floral species: gopher tortoise, short-tailed snake, Florida pine snake, Florida grasshopper sparrow, Florida scrub jay, Florida burrowing owl, Rufa red knot, little blue heron, reddish egret, tricolored (Louisiana) heron, southeastern American kestrel, Florida sandhill crane, roseate spoonbill, Audobon's crested caracara, Everglade snail kite, sand butterfly pea, pygmy fringe tree, Scrub pinweed, large-plumed beaksedge, Brooksville bellflower and Florida bonamia.

Physical Environment Impacts

An evaluation of highway traffic noise was documented in the *Noise Study Report*. No noise barriers were found to be cost reasonable or feasible and are not proposed with this project.

This project is not expected to create adverse impacts on air quality because the project area is in attainment for all National Ambient Air Quality Standards and the project is also expected to improve the LOS and reduce delay and congestion on all facilities within the study area.

The *Contamination Screening Evaluation Report* documented the presence of potential contamination sources for the Preferred Alternative including the ELA sites. Out of the 15 sites considered to have potential contamination sources, no sites were rated as high risk, and 6 sites were rated as medium risk which would be recommended for further evaluation during the design phase.

The proposed widening of Gibsonton Drive will have impacts to aerial electric, telephone and cable facilities and underground water, sewer, reclaimed water, and communication including fiber optic. Coordination of utility conflicts and relocations will take place during the design phase of this project.

Construction impacts are anticipated to be minimal. The need for detour routing is minimal and a maintenance of traffic plan will be developed during the final design phase to safely maintain traffic and access to all businesses and residences to the maximum extent possible during construction. Construction activities for the proposed project will have temporary air, noise, water quality, traffic flow, and visual effects for the residents and travelers within the immediate vicinity of the project. These effects will be minimized through the application of the FDOT's *Standard Specifications for Road and Bridge Construction*.

5.5 COMPARATIVE ALTERNATIVES EVALUATION

The evaluation summary matrix comparing the roadway alternatives is shown in **Table 5-4**. This matrix was developed to compare the No-Build Alternative and the Preferred Build Alternative based on preliminary estimates of costs (ROW acquisition, wetland mitigation, engineering, and construction), as well as social and environmental factors. The data for the Build Alternative was developed based on the preferred alternative "footprint" along with base map information collected and prepared for this study. The construction cost estimates was prepared using the Department's LRE program.

Table 5-3 Evaluation Matrix

Evaluation Criteria	No-Build Alternative	Preferred Build Alternative
Potential Business/Residential Impacts		
Number of business relocations[3]	0	1
Number of residential relocations[3]	0	3
Potential ROW Impacts		
Number of affected parcels	0	20[1]
Area of ROW anticipated to be acquired for road widening (acres)	0	0.95
Area of ROW anticipated to be acquired for Stormwater Pond and Floodplain Compensation Site (acres)	0	3.19
Potential Environmental Effects		
Archeological/Historical sites	0	0
Section 4(f) sites identified/impacted	0	1/0
Noise impacted receptors	0	12
Wetlands that are not Other Surface Waters (acres)	0	0.17
Other Surface Waters (acres)	0	0.17
Potential for Federal and/or State Listed Species	None	Low
Petroleum and hazardous material sites (medium/high)	None	0 (High) 6 (Medium)
Estimated Costs[2] (Present Day Costs in $ Millions)		
Design (10% of construction)	$0.0	$2.4
Right of Way for Roadway Widening	$0.0	$6.7
Right of Way for Stormwater Pond & Floodplain Compensation Site	$0.0	$3.2
Wetlands Mitigation	$0.0	$0.1
Construction Inspection (10% of construction)	$0.0	$2.4
Construction of Roadway, Drainage and Ponds	$0.0	$23.5
Total Project Estimated Costs	**$0.0**	**$38.3**

[1] Based on estimated total area for the Gibsonton Drive widening and preferred stormwater ponds and floodplain compensation sites.

[2] Construction cost based on LRE system prepared December 2023.

[3] One business relocation and two residential relocations may also involve landlord businesses

5.6 SELECTION OF THE PREFERRED ALTERNATIVE

The Build Alternative evaluated in **Section 5.4** and compared with the No-Build Alternative in **Section 5.5** has been selected as the Preferred Alternative. A detailed description of the Preferred Alternative is presented in **Section 7** and will be presented at the public hearing in February 2024.

SECTION 6 AGENCY COORDINATION AND PUBLIC INVOLVEMENT

6.1 AGENCY COORDINATION

This project was screened through the FDOT's ETDM process as ETDM Project No. 14493. The *ETDM Programming Screen Summary Report*, located in the project files, was published on February 22, 2021, containing comments from the ETAT on the project's effects on various natural, physical, and social resources. The comments provided input data and the foundation for the environmental impact analysis.

6.1.1 SWFWMD

A pre-application meeting was held with SWFWMD on May 8, 2023, to discuss the project's environmental, water quality, and water quantity considerations. Meeting minutes can be found in Appendix E of the *PSR*.

6.1.2 State Historic Preservation Officer (SHPO)

The CRAS was submitted to the SHPO for review and provided concurrence with findings on December 21, 2023. The concurrence letter is included in the project file.

6.1.3 Tribal Nations

The CRAS was submitted to the following tribal nations in December 2023:

- Miccosukee Tribe of Indians of Florida
- Muscogee (Creek) Nation
- Poarch Band of Creek Indians
- Seminole Nation of Oklahoma
- Seminole Tribe of Florida

No comments from the tribal nations were received as of January 2024.

6.1.4 US Fish & Wildlife Service

6.1.5 Florida Fish and Wildlife Conservation Commission

6.2 PUBLIC INVOLVEMENT

A *Public Involvement Plan* (PIP) was prepared at the onset of this PD&E Study to outline the public outreach efforts planned. A *Comments and Coordination Report* will be prepared after the public hearing. It provides a description of all the public involvement performed for this PD&E study. Below is a summary of pertinent public involvement efforts for this study to date.

Various public involvement activities were conducted during the study:

- A **Project Website** (https://www.fdotd7studies.com/projects/gibsonton-dr-fern-hill-to-us301/) was developed and maintained throughout the study period. This website contained information about the study and served as a clearinghouse of information for the public pertaining the project details. The website also included an opportunity section where the public may submit a comment or request a meeting.
- A **Project Kickoff Newsletter** The newsletter described the PD&E study process, discussed the project purpose, and provided a project schedule with the next steps in the study. The newsletter also included contact information and instructions for those needing special assistance or language support.
- A **Public Hearing Newsletter** The newsletter will be sent to promote the public hearing and to encourage participation and receive public comments. Contact information and instructions for those needing special assistance or language support will be provided.

6.3 PUBLIC HEARING

A Hybrid Public Hearing which involves both an in-person and a virtual component is planned for February 2024. Summary details from the public hearing will be added to this section following the Public Hearing.

SECTION 7 PREFERRED ALTERNATIVE

7.1 TYPICAL SECTION AND DESIGN SPEED

The preferred typical section was shown previously in **Figure 5-6**. The proposed design speed for the urban typical section is 45 mph. A *Typical Section Package* is included as **Appendix C**.

7.2 ACCESS MANAGEMENT

The access management for the Preferred Alternative is described in **Section 5.4.4**. Proposed full and directional median openings are shown on the Concept Plans in **Appendix A**.

7.3 RIGHT OF WAY

The Preferred Alternative will require the acquisition of additional ROW including a combination of partial and full property acquisition. Acquisition from 18 parcels (0.95 acres) is required for the roadway widening of Gibsonton Drive. Acquisition from 2 parcels (3.19 acres) is required for the preferred SMF and FPC sites.

The ROW acquisition for roadway widening and preferred SMF/FPC sites is anticipated to require one (1) business relocation and three (3) residential relocations. Three of these relocations (one business and two residential relocations) may also involve a landlord business. A *Conceptual Stage Relocation Plan* was prepared to further document these relocations and the process for acquiring land needed and relocation process. All locations of proposed ROW are shown in a red line on the Concept Plans in **Appendix A**. All relocations are also shown on the Concept Plans with a red circle surrounding a letter "B" for business relocation and a letter "R" for residential relocation.

7.4 HORIZONTAL AND VERTICAL GEOMETRY

The proposed horizontal alignment is described in **Section 5.4.1.** A proposed profile grade for the vertical alignment will be determined during the future design phase when full survey data is available. Existing vertical curves design standards for a 45-mph design speed will be determined during the design phase when survey data is available. Should the existing vertical alignment not meet design standards, options to remedy would be considered during the future design phase including:

1. Adjust the vertical alignment and reconstruct the pavement in the deficient areas.
2. Request design exceptions or variations.
3. Lower the design speed by using an urban typical section instead.

7.5 POTENTIAL DESIGN VARIATIONS AND EXCEPTIONS

Currently no design variations or exceptions are anticipated for this project. When survey data is collected and the existing vertical geometry is established during the design phase, the need for design exceptions or variations will be reexamined.

7.6 MULTIMODAL ACCOMMODATIONS

The proposed typical section includes 10-foot-wide concrete sidewalks throughout the project limits with accommodation for bicycles and pedestrians included with the Preferred Alternative are described in detail in **Sections 5.4.1** and **5.4.2** and shown on the Concept Plans in **Appendix A**. There are existing pedestrian crosswalks that will be retained at Fern Hill Drive, Mathog Road, Park Place Avenue and US 301 intersections. Concrete islands are proposed in two quadrants of the US 301 intersection to provided added refuge and shorter crossing distances for pedestrians.

Access to all existing HART bus stops described in **Section 2.10.2** will remain. Coordination with HART will continue during the design phase to confirm exact locations of the stops in relation to the proposed improvements.

7.7 INTERSECTION CONCEPTS AND SIGNALIZATION

The proposed intersection lanes at the Gibsonton Drive intersections with Fern Hill Drive, Mathog Rd, Park Place Avenue, and US 301 are shown in **Figure 3-9**. The proposed turn lane queue lengths are shown in **Table 3.14** and where there were no constraints in the length of the turn lanes, the storage length including deceleration was provided for turn lanes which are shown on the Concept Plans in **Appendix A**.

7.8 LIGHTING

Lighting will be evaluated in the design phase.

7.9 STRUCTURES

There are no proposed bridge structures within the project study limits.

7.10 DRAINAGE AND STORMWATER MANAGEMENT

Sections 5.4.6 and **5.4.7** provide details related to stormwater and floodplain compensation requirements for the Preferred Build Alternative. SMF site alternatives that are hydraulically feasible and environmentally permissible based on the best available information were analyzed. These alternatives were then compared based on relocations and community impacts; environmental impacts including wetlands, upland habitat, and protected species involvement; petroleum and hazardous materials contamination; cultural resources; and economic factors including ROW costs. Table 5-1 of the *PSR* summarizes the environmental evaluation and potential impacts of the preferred SMF and FPC site alternatives. All environmental resource categories were given a risk ranking of No or Low based on potential for impacts. A more detailed discussion of drainage and stormwater management is provided in the *PSR*. The proposed SMF and FPC sites are shown on the Concept Plans in **Appendix A**.

7.11 PERMITS

The permits listed in **Table 7-1** are anticipated for this project and will be applied for during the design or construction phase as appropriate:

Table 7-1 Anticipated Permits

Coordinating Agency	Permit
FDEP	404 Permit
	NPDES Permit
Florida Fish & Wildlife Conservation Commission (FWC)	Gopher Tortoise Relocation Permit
SWFWMD	Individual ERP Permit

7.12 TRANSPORTATION MANAGEMENT PLAN

Gibsonton Drive provides access to businesses, residential properties and local side streets along this corridor. Due to its importance, the existing travel lanes should be maintained to the maximum extent possible during construction. Lane closures, if necessary, would occur during night or other off-peak hours.

7.13 CONSTRUCTABILITY

The following conceptual construction sequence will help maintain traffic operations along Gibsonton Drive:

Phase 1

- Relocate existing utilities within the existing or proposed ROW.
- Construct SMF and FPC sites.
- Construct temporary pavement as necessary to maintain existing traffic.

Phase 2

- Construct and/or widen the eastbound or westbound lanes (travel lanes, curb and gutter, drainage and sidewalks) while maintaining existing two-way traffic on a combination of the existing pavement and newly constructed or temporary pavement.
- Maintain the current signals or install temporary ones while transitioning traffic. Where the existing signals include pedestrian crossings, retain them with either the existing or temporary signal heads. Construct the new traffic signal equipment as the work areas allow.
- In alignment transition areas, widen the existing roadway while maintaining existing traffic on a combination of existing pavement and newly constructed or temporary pavement.

Phase 3

- Shift traffic to the newly completed sections of pavement.
- Construct remainder of pavement in transition areas, at intersections including final friction course.
- Remove temporary pavement where applicable and construct medians and turn lanes where applicable.

Phase 4

- Complete the final roadway signing and pavement markings and shift traffic to the final permanent lane configurations. Open all new pedestrian features throughout the project limits.

During all phases of the project:

- Maintain pedestrian and bicycle access during all phases of construction.
- Maintain access to adjacent properties throughout the phasing of construction.

7.14 SPECIAL FEATURES

The placement and maintenance of any landscaping shall comply with the required clear zone and sight distance at intersections. No other provisions or commitments have been made yet regarding special aesthetic features.

7.15 USER BENEFITS

The public will realize benefits after the proposed improvements are constructed. Reduction in travel time, reduced vehicle operating costs, reduced traffic crash related costs and reduced emergency response times are the primary benefits. Bicyclists and pedestrians will be able to share the corridor more safely with motorists. Freight vehicles will be provided safer and more efficient accommodations with the Preferred Alternative.

7.16 RECYCLING AND SALVAGEABLE MATERIALS

During construction of the project, recycling of reusable materials will occur to the greatest extent possible. Where feasible, removal and recycling of the existing pavement and base material for use in the new pavement will be considered. This will reduce the volume of the materials that need to be hauled away and disposed of potentially reducing the cost of purchasing new materials for construction. Other materials such as signs, drainage pipes, etc., will also be salvaged and reused for regular maintenance operations if they are deemed to be in acceptable condition.

7.17 UTILITIES

Existing utilities and potential conflicts are described in **Section 2.21**. A *Utility Assessment Package* has been prepared documenting utility coordination to date and is in the project files. Depending on the horizontal and vertical location and depth of the utilities, construction of the proposed project will likely require adjustments or relocation of some facilities. Cost for utility adjustments is not included in the total estimated project costs presented in **Section 7.18**, since some may be incurred

by the utility owners. Determination of any utility relocation reimbursement costs will be made during the future design phase. Coordination with utility owners will be ongoing throughout the study process.

Several utilities may be located under the existing pavement and would also be under the proposed improvements. The relocation costs could be reduced significantly if these utilities were permitted to remain within the travel way. Approval would be required from both the utility owners and FDOT/County. Impacts to existing utility facilities can also be reduced or eliminated as Subsurface Utility Engineering (SUE) is performed during the design phase at potential conflict locations (drainage facilities, traffic signals). **Section 2.21** provides available information related to the potential for relocation of specific facilities.

7.18 COST ESTIMATES

The preliminary cost estimates for the Preferred (Build) Alternative ($millions, rounded) are included in **Table 7-2**. Construction costs are based on FDOT's LRE cost estimating system prepared in April 2023. These costs include components for earthwork, roadway, shoulder, median, signing/marking, signalization, drainage (including SMF and FPC sites) as well as temporary traffic control, mobilization, and an initial contingency. Estimated costs for gravity walls or retaining walls will be refined in the design phase as field survey is collected to establish needs and wall heights. All costs are preliminary and will be refined as the design phase progresses.

Table 7-2 Estimated Project Costs

Estimated Costs Present Day Costs in $ Million Rounded up to the Nearest $0.1 Million $	Total Project
Design (10% of construction)	$2.4
Right of Way for Gibsonton Drive Roadway Widening	$6.7
Right of Way for Stormwater Ponds and Floodplain Compensation Site	$3.2
Wetlands Mitigation (0.17 acres)	$0.1
Construction Inspection (10% of construction)	$2.4
Construction Costs [1]	$23.5
Total Project Estimated Costs	**$38.3**

[1] *Construction cost based on LRE system prepared December 2023.*

APPENDICES

Appendix A – Conceptual Design Plans
Appendix B – Roadway Classification and Context Classification Maps
Appendix C – Typical Section Package

APPENDIX A

Conceptual Design Plans

STATE OF FLORIDA

DEPARTMENT OF TRANSPORTATION

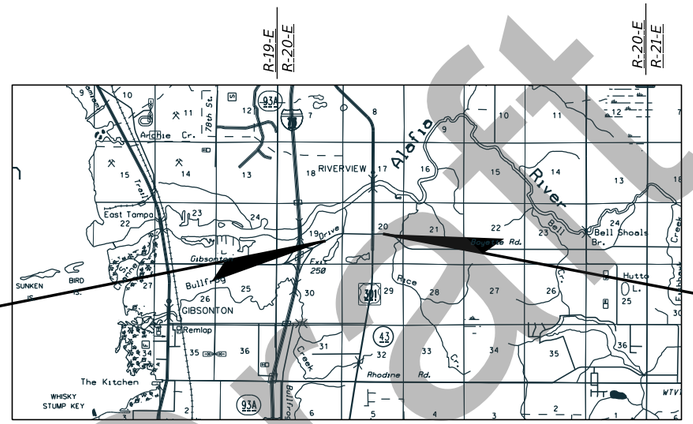
PROJECT DEVELOPMENT AND ENVIRONMENT STUDY CONCEPT PLANS

WPI SEGMENT NO. 450438-1

HILLSBOROUGH COUNTY

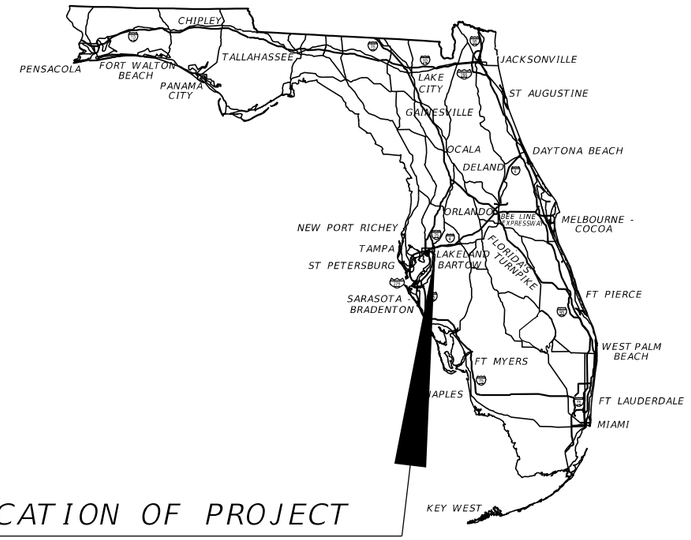
GIBSONTON DRIVE

From west of Fern Hill Drive to East of US 301



BEGIN PROJECT
STA 77+26.71 ℄ SURVEY=
STA 98+26.71 ℄ CONST

END PROJECT
STA 109+87.58 ℄ SURVEY=
STA 150+02.09 ℄ CONST



LOCATION OF PROJECT

A DETAILED INDEX APPEARS ON THE KEY SHEET OF EACH COMPONENT

INDEX OF ROADWAY PLANS

ROADWAY PLANS
ENGINEER OF RECORD:

JEFFREY S. NOVOTNY, P.E., AICP, RSP1
P.E. LICENSE NUMBER 51083
AMERICAN CONSULTING PROFESSIONALS, LLC
2818 CYPRESS RIDGE BLVD., SUITE 200
WESLEY CHAPEL, FLORIDA 33544
ENGINEERING BUSINESS NO.: EB7110

FDOT PROJECT MANAGER:

ASHLEY HENZEL, P.E.

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
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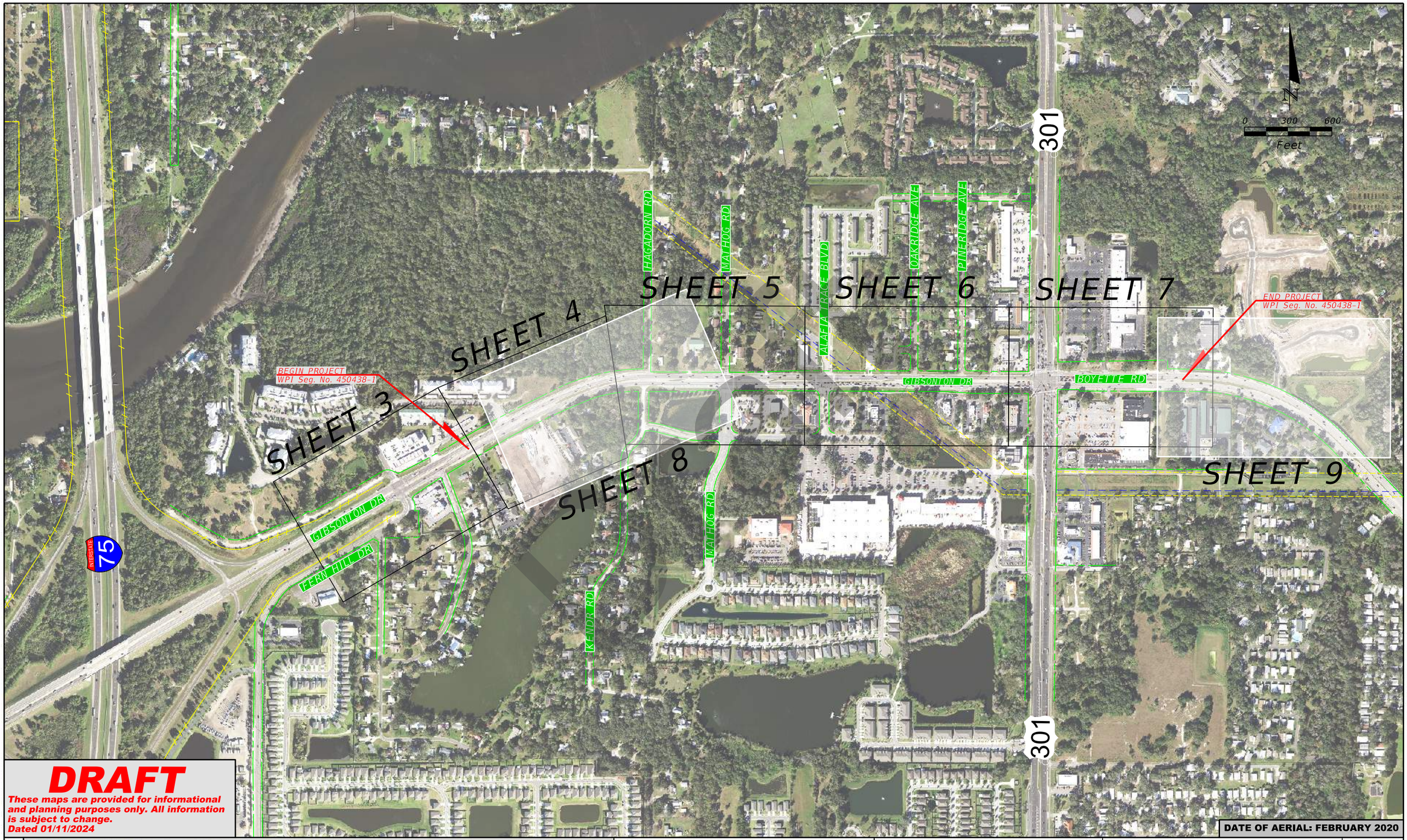

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These maps are provided for informational and planning purposes only. All information is subject to change.
Dated 01/11/2024

DATE OF AERIAL: FEBRUARY 2020

LEGEND

- EASEMENT LINE
- EXISTING ROW
- EXISTING LA ROW
- PLAN SHEET BOUNDARY
- STORMWATER MANAGEMENT FACILITY/FLOODPLAIN COMPENSATION SITE SHEET BOUNDARY

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
	HILLSBOROUGH	450438-1-22-01

American Consulting Professionals, LLC
2818 Cypress Ridge Blvd. Suite 200
Wesley Chapel, Florida 33544
Phone: (813) 435-2600 Fax: (813) 435-2601
Engineering Business No. EB7110
Jeffrey S. Novotny, P.E. No. 51083

GIBSONTON DR PD&E STUDY
From FERN HILL DR to US 301
Preferred Alternative Concept Plan
Sheet Layout Map
WPI No.: 450438-1

SHEET NO. 2

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NOTE:
FPID No. 437650-1 GIBSONTON DR FROM WEST OF I-75 TO EAST OF I-75 DIVERGING DIAMOND INTERCHANGE (DDI) PROPOSED ROADWAY IMPROVEMENTS.

HILLSBOROUGH COUNTY CIP No. 69600311
FERN HILL DR AT GIBSONTON DR
INTERSECTION IMPROVEMENTS.

0 20 100
Feet

STARS & STRIPES COMMERCIAL PARK

RACETRAC

STARS & STRIPES CAR WASH

BUS STOP
HART ROUTE 31

UPPER ALAFIA CT

BEGIN PROJECT
WPI Seg. No. 450438-1

GIBSONTON DR

STA 98+26.71
BEGIN ℄ CONST

N59°48'10"E

MOBIL

BUS STOP
HART ROUTE 31

FERN HILL DR

KENLAKE DR

BRANWOOD DR

BOARD WALK
OF RIVERVIEW

MATCH LINE. SEE SHEET 4

DRAFT

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Dated 01/11/2024

DATE OF AERIAL: FEBRUARY 2020

LEGEND

- WETLANDS BOUNDARY
- OTHER SURFACE WATERS BOUNDARY
- FLOODPLAINS AREA (HILLS. COUNTY STORMWATER MANAGEMENT MODEL)
- PREFERRED SMF AND FPC AREA
- BUSINESS RELOCATION
- RESIDENTIAL RELOCATION
- POTENTIAL CONTAMINATION SITE
- PROPERTY LINE
- EXISTING ROW
- EXISTING LA ROW
- PROPOSED ROW
- EXISTING EASEMENT
- PROPOSED MSE WALL/ GRAVITY WALL
- PROPOSED SIDEWALK
- IMPROVEMENTS
- PROPOSED MEDIAN (SOD)
- PROPOSED TRAFFIC SEPARATOR
- IMPROVEMENT BY COUNTY

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GIBSONTON DR PD&E STUDY
From FERN HILL DR to US 301
Preferred Alternative
Concept Plans
WPI No.: 450438-1

SHEET NO. 3

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THE PRESERVE AT ALAFIA

ALAFIA PRESERVE AVE

HILLSBOROUGH COUNTY

ALAFIA SCRUB NATURE PRESERVE

DERICK DERMATOLOGY AND ALL DENTAL

GIBSONTON DR

PI STA 109+92.27

MATCH LINE. SEE SHEET 3

MATCH LINE. SEE SHEET 5

102 103 104 105 106 107 108 109 110 111

N60°48'10"E

POT STA 100+00.00

PC STA 430.97

℄ CONST

SECURE SPACE SELF STORAGE

PARK PLACE OFFICE

SMF 1B

FPC 1A

R

R

N

0 20 100

Feet

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GIBSONTON DR PD&E STUDY
From FERN HILL DR to US 301
Preferred Alternative
Concept Plans
WPI No.: 450438-1

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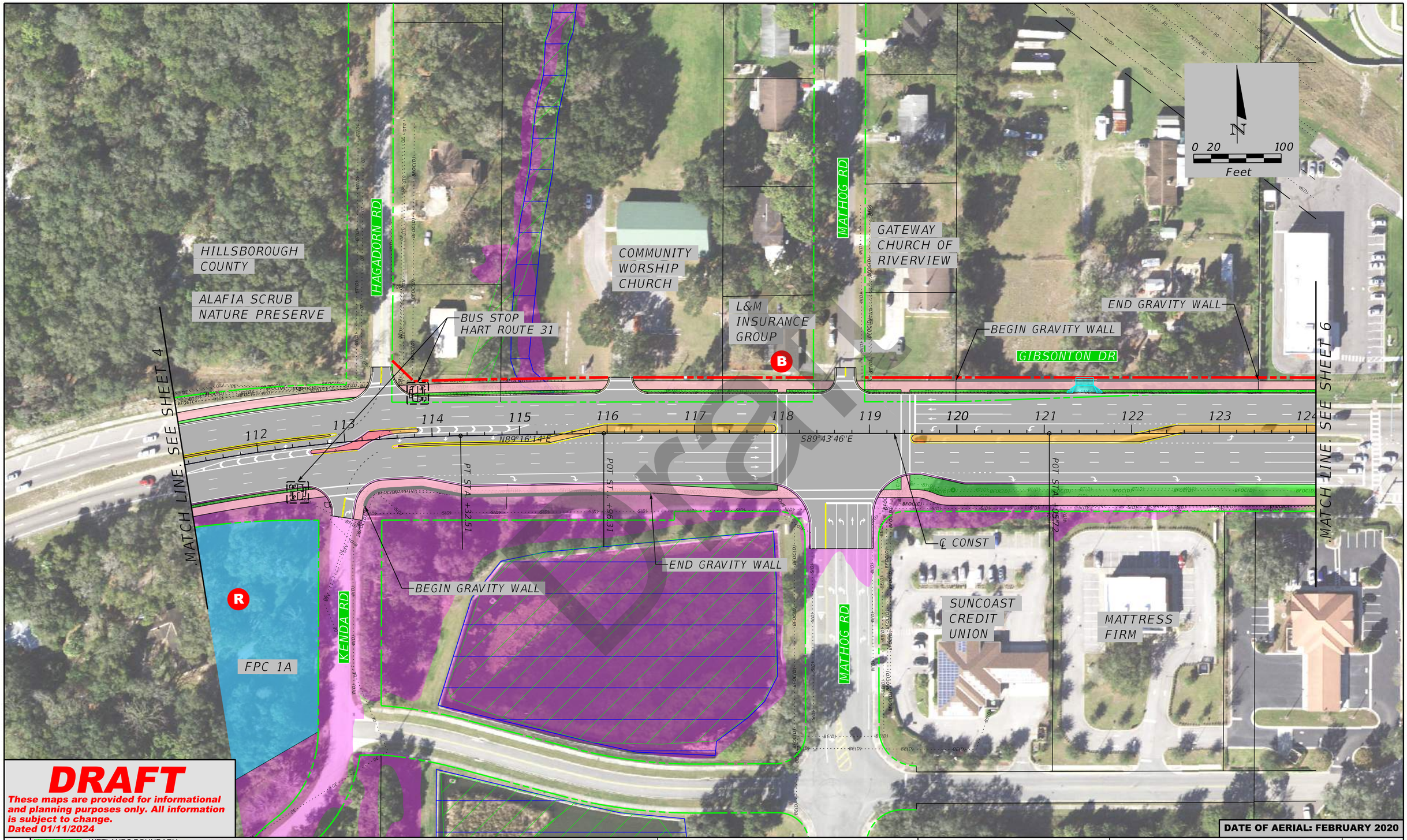

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Dated 01/11/2024

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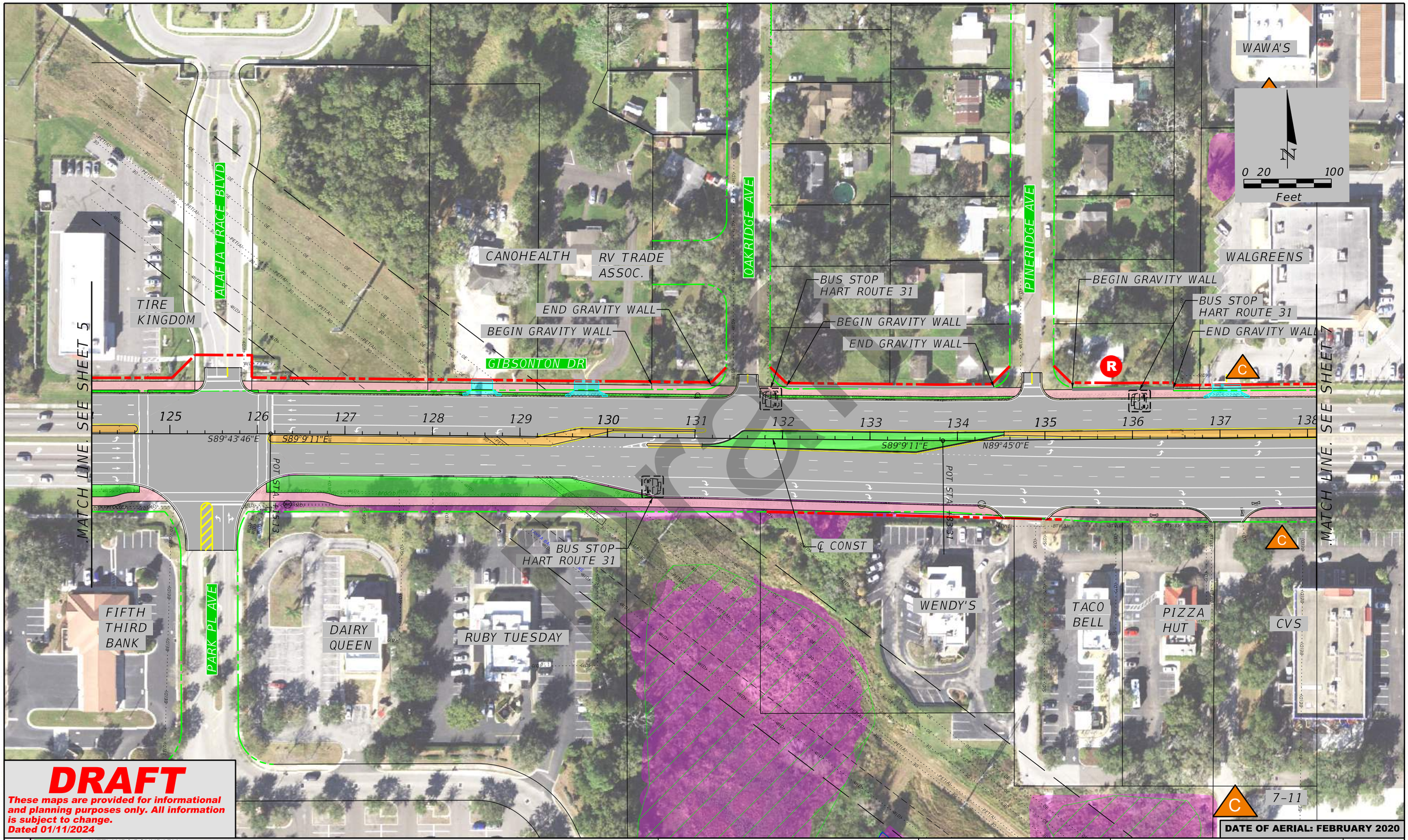

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- PROPOSED SIDEWALK
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GIBSONTON DR PD&E STUDY
From FERN HILL DR to US 301
Preferred Alternative
Concept Plans
WPI No.: 450438-1

SHEET NO. 6

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WAWA'S

B & B CASH
GROCERY STORES, INC

℄ SURVEY US 301

BUS STOP
HART ROUTE 31

BURGER KING

WALGREENS

UNITED STATES
POSTAL SERVICE

BUS STOP
HART ROUTE 24LX

BOYETTE RD

END PROJECT
WPI Seg. No. 450438-1

MATCH LINE. SEE SHEET 6 OF 11

N89°45'0"E

℄ CONST

BANK OF
AMERICA

BUS STOP
HART ROUTE 24LX

STA 150+02.09
END ℄ CONST

CVS

RIVERBAY PLAZA BH LLC

LIFE STORAGE-RIVERVIEW

DATE OF AERIAL: FEBRUARY 2020

LEGEND

- WETLANDS BOUNDARY
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
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GIBSONTON DR PD&E STUDY
From FERN HILL DR to US 301
Preferred Alternative
Concept Plans
WPI No.: 450438-1

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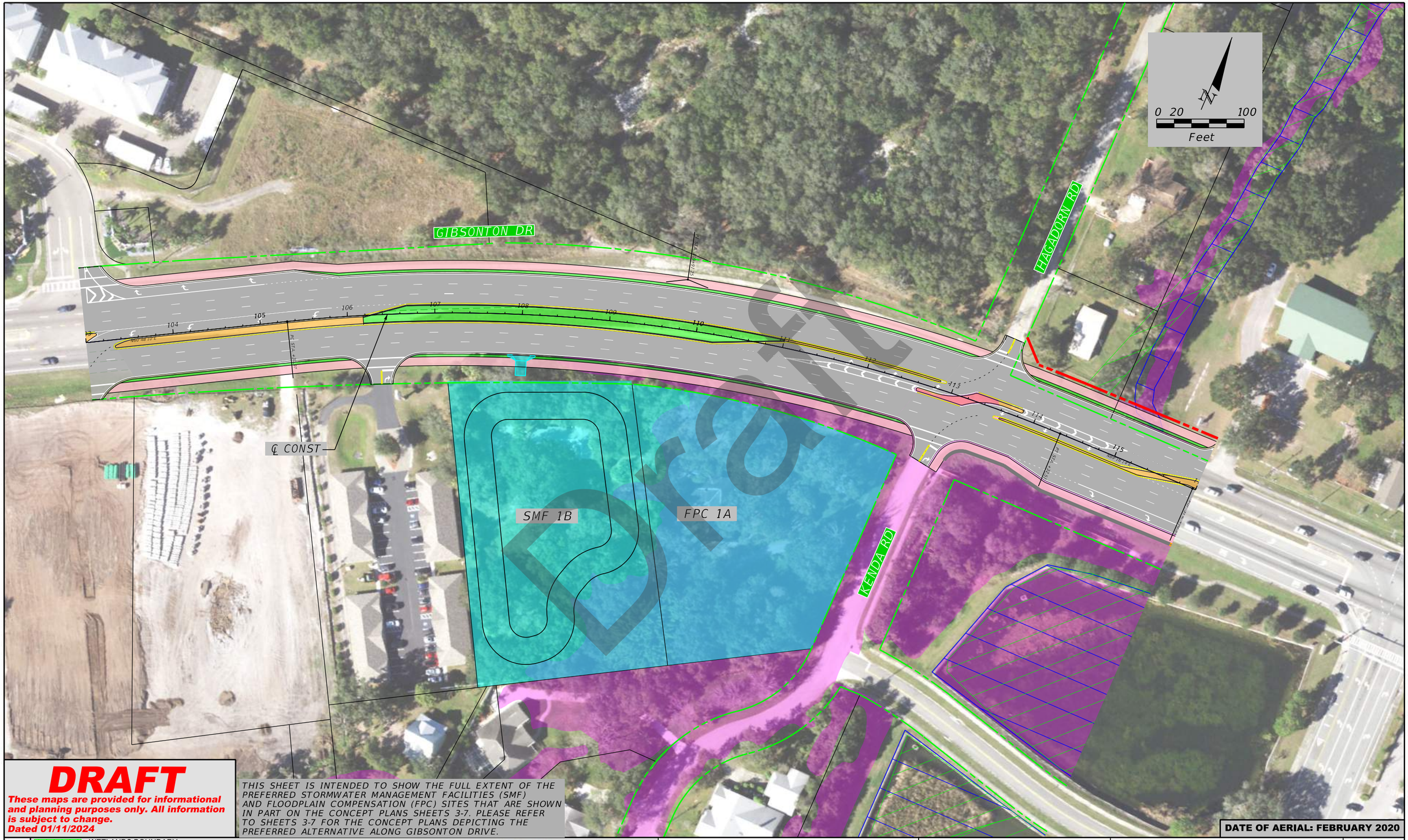

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Dated 01/11/2024

THIS SHEET IS INTENDED TO SHOW THE FULL EXTENT OF THE PREFERRED STORMWATER MANAGEMENT FACILITIES (SMF) AND FLOODPLAIN COMPENSATION (FPC) SITES THAT ARE SHOWN IN PART ON THE CONCEPT PLANS SHEETS 3-7. PLEASE REFER TO SHEETS 3-7 FOR THE CONCEPT PLANS DEPICTING THE PREFERRED ALTERNATIVE ALONG GIBSONTON DRIVE.

DATE OF AERIAL: FEBRUARY 2020

LEGEND

- WETLANDS BOUNDARY
- OTHER SURFACE WATERS BOUNDARY
- FLOODPLAINS AREA (HILLS. COUNTY STORMWATER MANAGEMENT MODEL)
- PREFERRED SMF AND FPC AREA
- BUSINESS RELOCATION (B)
- RESIDENTIAL RELOCATION (R)
- POTENTIAL CONTAMINATION SITE
- PROPERTY LINE
- EXISTING ROW
- EXISTING LA ROW
- PROPOSED ROW
- EXISTING EASEMENT
- PROPOSED MSE WALL/ GRAVITY WALL
- PROPOSED SIDEWALK
- IMPROVEMENTS
- PROPOSED MEDIAN (SOD)
- PROPOSED TRAFFIC SEPARATOR
- IMPROVEMENT BY COUNTY

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
	HILLSBOROUGH	450438-1-22-01

American Consulting Professionals, LLC
2818 Cypress Ridge Blvd, Suite 200
Wesley Chapel, Florida 33544
Phone: (813) 435-2600 Fax: (813) 435-2601
Engineering Business No. EB7110
Jeffrey S. Novotny, P.E. No. 51083

GIBSONTON DR PD&E STUDY
From FERN HILL DR to US 301
Preferred Alternative
Concept Plans
WPI No.: 450438-1

SHEET NO. 8

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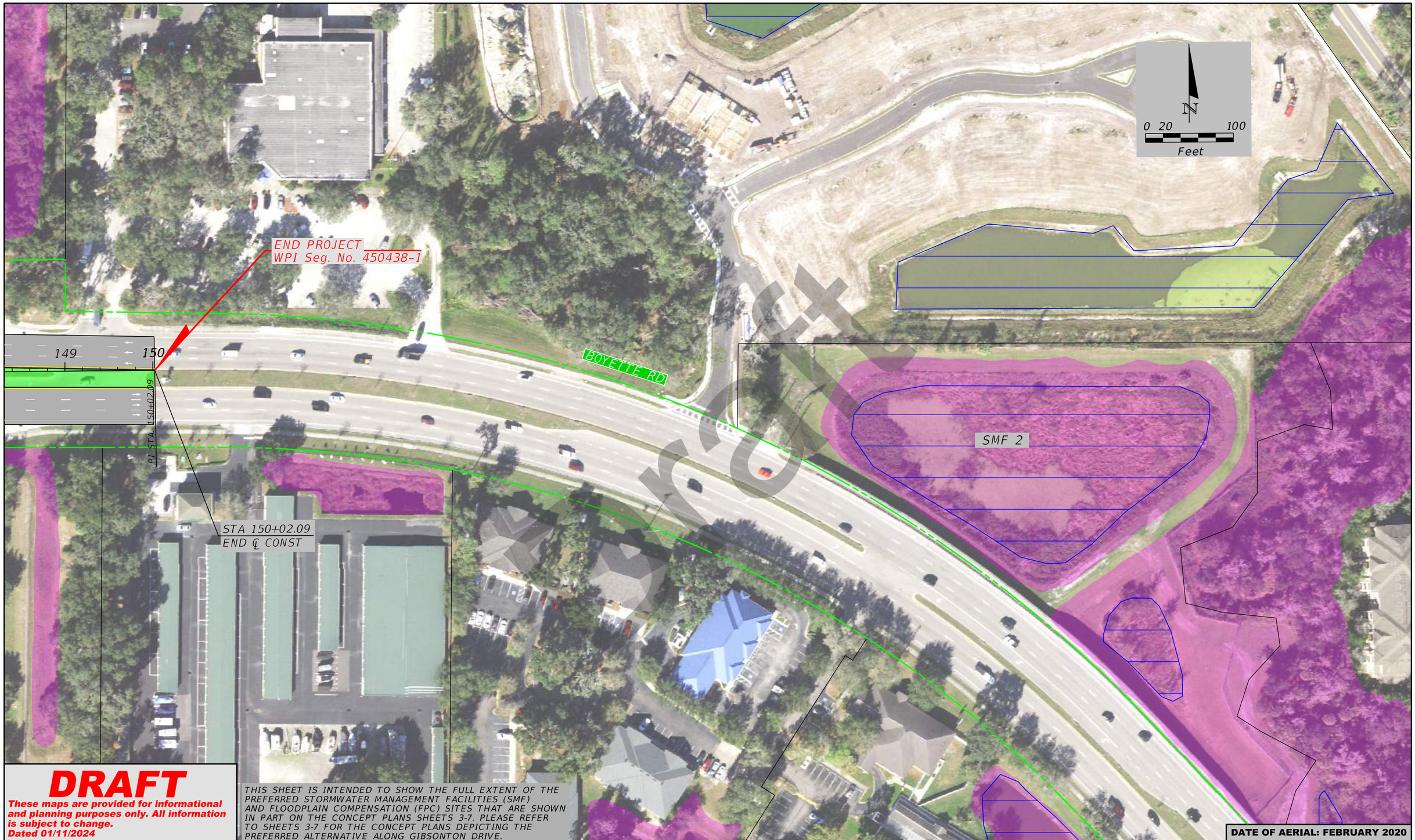

DRAFT

These maps are provided for informational and planning purposes only. All information is subject to change.
Dated 01/11/2024

THIS SHEET IS INTENDED TO SHOW THE FULL EXTENT OF THE PREFERRED STORMWATER MANAGEMENT FACILITIES (SMF) AND FLOODPLAIN COMPENSATION (FPC) SITES THAT ARE SHOWN IN PART ON THE CONCEPT PLANS SHEETS 3-7. PLEASE REFER TO SHEETS 3-7 FOR THE CONCEPT PLANS DEPICTING THE PREFERRED ALTERNATIVE ALONG GIBSONTON DRIVE.

DATE OF AERIAL: FEBRUARY 2020

LEGEND

- WETLANDS BOUNDARY
- OTHER SURFACE WATERS BOUNDARY
- FLOODPLAINS AREA (HILLS. COUNTY STORMWATER MANAGEMENT MODEL)
- PREFERRED SMF AND FPC AREA
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SHEET NO. 9

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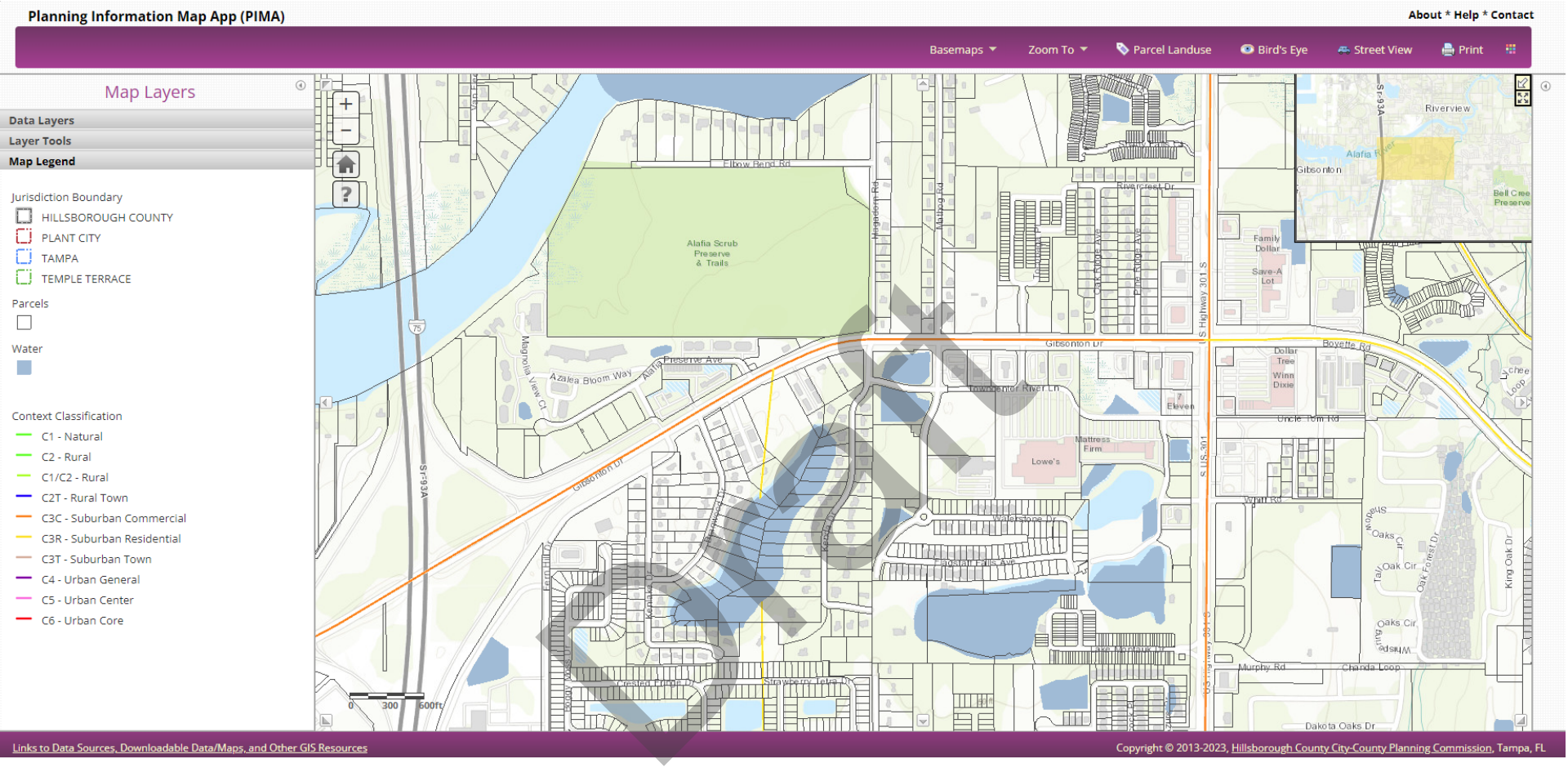
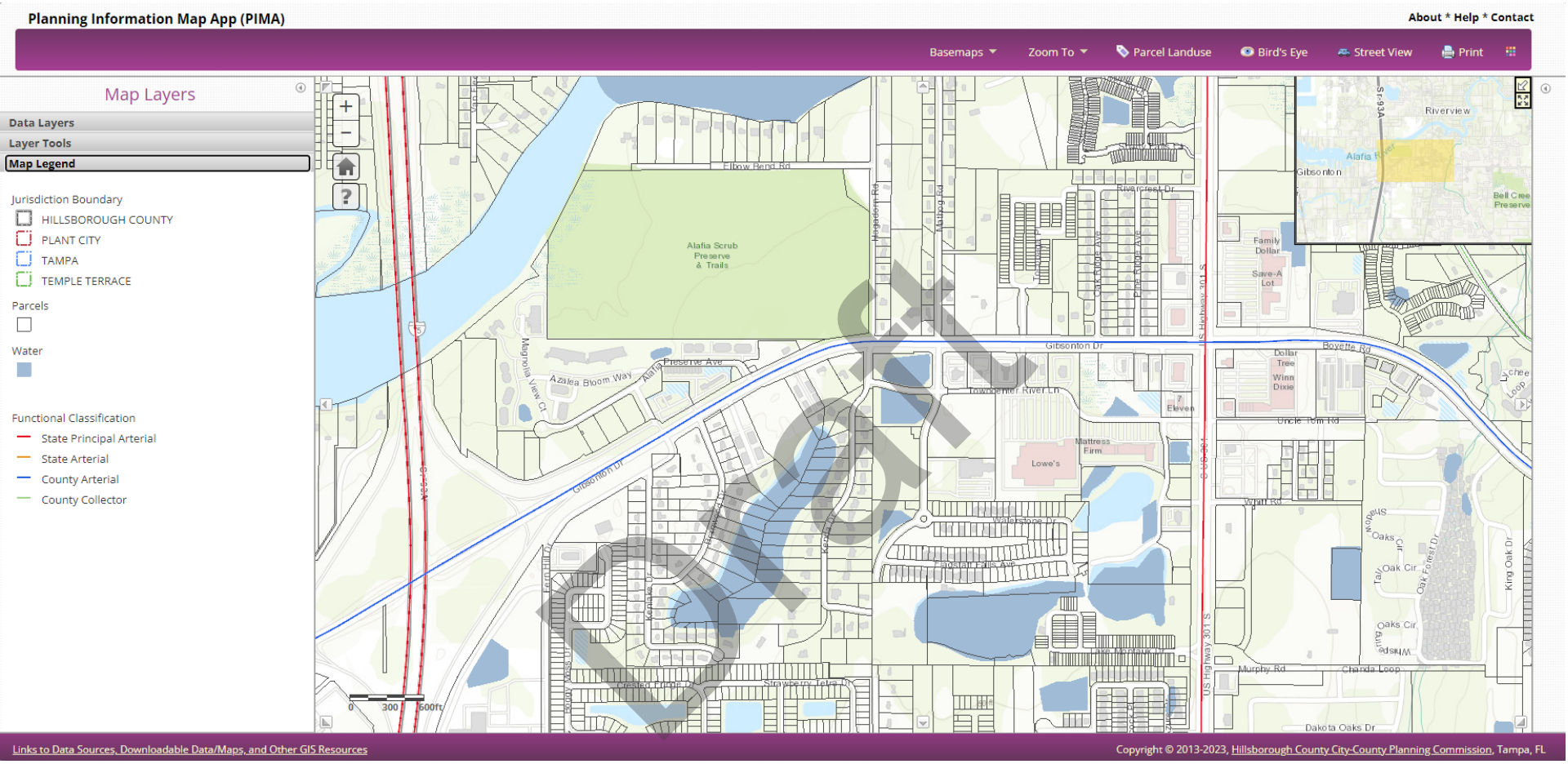
APPENDIX B

Roadway Classification and Context Classification Maps



Hillsborough County Context Classification Map



Hillsborough County Roadway Classification Map

APPENDIX C

Typical Section Package

STATE OF FLORIDA

DEPARTMENT OF TRANSPORTATION

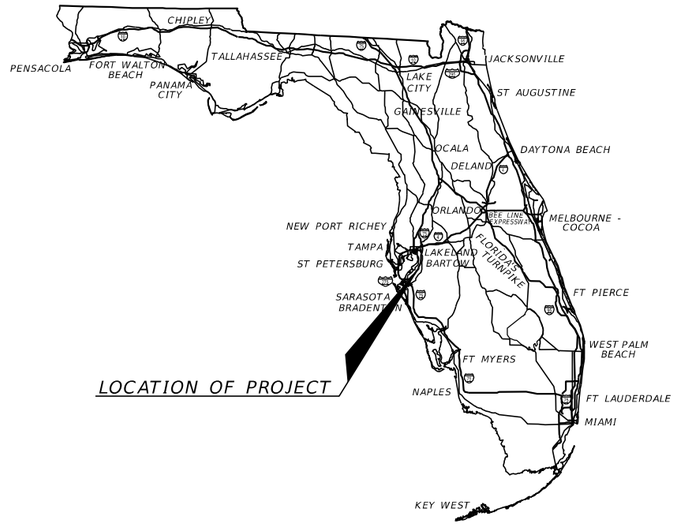
TYPICAL SECTION PACKAGE

FINANCIAL PROJECT ID 450438-1-22-01

HILLSBOROUGH COUNTY

GIBSONTON DRIVE

WIDEN FROM FOUR TO SIX LANES FROM FERN HILL DRIVE TO US 301



PROJECT LOCATION URL:	https://tinyurl.com/63eymr2u
PROJECT LIMITS:	BEGIN MP N/A - END MP N/A
EXCEPTIONS:	NONE
BRIDGE LIMITS:	NONE
RAILROAD CROSSING:	NONE

FDOT DISTRICT DESIGN ENGINEER

CONCURRING WITH:
TYPICAL SECTION ELEMENTS
TARGET SPEED
DESIGN & POSTED SPEEDS

FDOT DISTRICT TRAFFIC OPERATIONS ENGINEER

CONCURRING WITH:
TARGET SPEED
DESIGN & POSTED SPEEDS

FDOT DISTRICT INTERMODAL SYSTEMS DEVELOPMENT MANAGER

CONCURRING WITH:
CONTEXT CLASSIFICATION
TARGET SPEED

FDOT DISTRICT STRUCTURES DESIGN ENGINEER

NOT REQUIRED

CONCURRING WITH:
TYPICAL SECTION ELEMENTS

FHWA TRANSPORTATION ENGINEER

NOT REQUIRED

CONCURRING WITH:
TYPICAL SECTION ELEMENTS

HILLSBOROUGH COUNTY ENGINEER

CONCURRING WITH:
TYPICAL SECTION ELEMENTS

HILLSBOROUGH COUNTY
TECHNICAL SERVICES
DIVISION DIRECTOR

CONCURRING WITH:
TYPICAL SECTION ELEMENTS

NOT USED

CONCURRING WITH:

APPROVED BY:

JEFFREY S. NOVOTNY
LICENSE
No 51083
STATE OF FLORIDA
PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

American Consulting Professionals of Florida, LLC
2818 Cypress Ridge Blvd., Suite 200
Wesley Chapel, Florida 33544
Phone: (813) 435-2600 Fax: (813) 435-2601
Jeffrey S. Novotny, P.E. No. 51083

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

INDEX OF SHEETS

SHEET NO.
1

PROJECT CONTROLS

HILLSBOROUGH COUNTY CONTEXT CLASSIFICATION

(_) C1 & C2 : RURAL

(_) C3R : SUBURBAN RESIDENTIAL

(X) C3C : SUBURBAN COMMERCIAL

(_) C4 : URBAN GENERAL

(_) LOCAL ROAD

HILLSBOROUGH COUNTY FUNCTIONAL CLASSIFICATION

(X) ARTERIAL

(_) COLLECTOR

(_) RESIDENTIAL LOCAL ROAD

(_) COMMERCIAL LOCAL ROAD

HIGHWAY SYSTEM

(_) NATIONAL HIGHWAY SYSTEM

(_) STRATEGIC INTERMODAL SYSTEM

(_) STATE HIGHWAY SYSTEM

(X) OFF-STATE HIGHWAY SYSTEM

ACCESS CLASSIFICATION

(_) 1 - FREEWAY

(_) 2 - RESTRICTIVE w/Service Roads

(_) 3 - RESTRICTIVE w/660 ft. Connection Spacing

(_) 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing

(X) 5 - RESTRICTIVE w/440 ft. Connection Spacing

(_) 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing

(_) 7 - BOTH MEDIAN TYPES

CRITERIA

(X) NEW CONSTRUCTION / RECONSTRUCTION

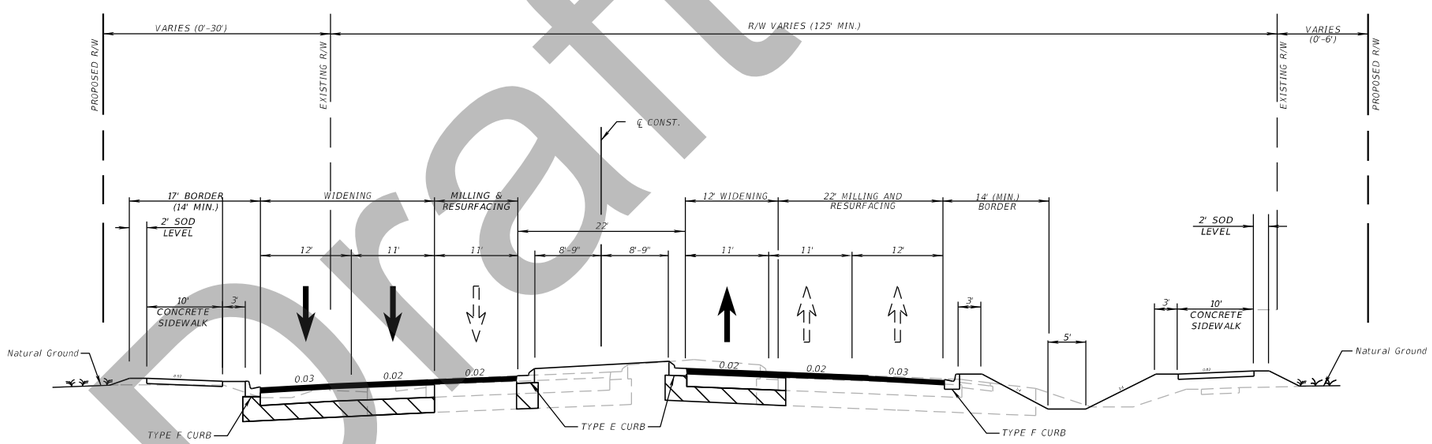
(_) RESURFACING (LA FACILITIES)

(_) RRR (ARTERIALS & COLLECTORS)

POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

NONE

TYPICAL SECTION No. 1



GIBSONTON DRIVE
STA 98+26.71 TO STA 150+02.09
FROM FERN HILL DRIVE TO US 301

TRAFFIC DATA

CURRENT YEAR = 2022 AADT = 45,800

ESTIMATED OPENING YEAR = 2025 AADT = 48,800

ESTIMATED DESIGN YEAR = 2045 AADT = 68,600

K = 9 % D = 52.5% T = 8% (24 HOUR)

DESIGN HOUR T = 4 %

TARGET SPEED = 45 MPH

DESIGN SPEED = 45 MPH

POSTED SPEED = 45 MPH

FINANCIAL PROJECT ID	SHEET NO.
450438-1-22-01	2

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