



Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

CIP #: 6108260

REVISION 1 – December 1, 2021



Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

Professional Engineer Certification

PROJECT DEVELOPMENT AND CORRIDOR STUDY REPORT

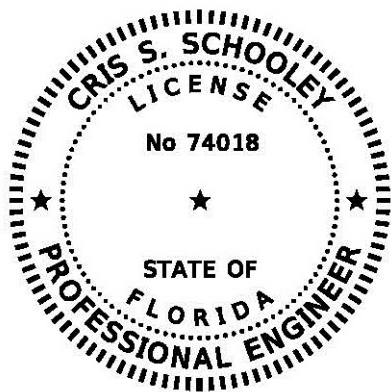
Project: 75th Street West PD&C Study

Limits: From 20th Avenue West to Manatee Avenue

CIP #: 6108260

This report contains preliminary information that fulfills the purpose and need for the 75th Street West Project Development & Corridor Study from 20th Avenue West to Manatee Avenue in Manatee 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 Kimley-Horn and Associates Inc., 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 Cris S. Schooley, P.E. 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.

Executive Summary

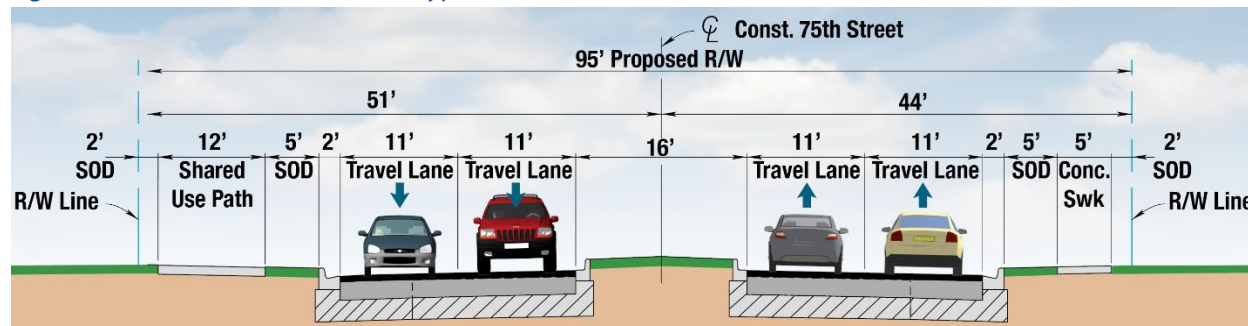
Manatee County conducted a Project Development and Corridor Study to evaluate an approximately 1-mile segment of 75th Street West (75th Street) from approximately 20th Avenue West to Manatee Avenue (SR 64). The project is partially within the City of Bradenton and unincorporated Manatee County, Florida. The purpose of this project is to enhance safety, improve traffic operations, provide multimodal access, and meet future transportation demand. The study evaluated options for widening the existing 2-lane roadway to a 4-lane roadway with bicycle accommodations and sidewalks to provide an enhanced mobility experience for all users. The Manatee County Comprehensive Plan shows 75th Street as a future 4-lane road with 120 feet of right-of-way (ROW).¹

The existing typical section along 75th Street consists of two travel lanes divided by a median, 4-foot paved shoulders, curb and gutter, and sidewalk on both sides. The existing sidewalk has a gap at the southeast corner of the Manatee Avenue intersection, and the 4-foot shoulders do not meet the minimum width for bicycle lanes (5 feet required from face of curb). Although most of the corridor has at least 83 feet of ROW, there are pinch points as narrow as 63 feet.

Based on the engineering and environmental analysis documented in this report, the recommended alternative for 75th Street includes a raised median, two travel lanes in each direction, sidewalk, and a shared use path (Figure 1). The recommended alternative best meets the project purpose with:

- Sidewalks for pedestrians
- Buffer space between the road and sidewalk for pedestrian comfort
- Shared use path for cyclists and future Palma Sola Trail connection
- Raised median for safety
- Additional through lanes for rush hour traffic

Figure 1: Recommended Alternative Typical Section



The recommended alternative requires ROW acquisition from 48 parcels and 4 relocations. The project will require an Environmental Resource Permit for stormwater treatment and a FDOT connection permit for additional discharge to the Manatee Avenue drainage system. There are no properties listed on the National Register of Historic Places within the boundaries of the study. The project has a low risk to encounter contaminated soils during construction. Public involvement was not conducted during this study due to an abbreviated schedule. A public meeting is recommended during the design phase. A separate hydraulic study of the Cedar Hammock Creek is also recommended.

¹ Manatee County. 2017. *Map 5-C, Map 5-D*. PA-17-04/ORD-17-18.

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

CONTENTS

Professional Engineer Certification	2
Executive Summary	3
1.0 Project Summary	8
1.1 Project Description.....	8
1.2 Purpose and Need	8
1.3 Consistency with Other Plans	9
1.4 Related Projects.....	12
2.0 Existing Roadway Conditions.....	13
2.1 Typical Section.....	13
2.2 Right-of-Way.....	13
2.3 Adjacent Land Use.....	14
2.4 Design and Posted Speed Limit.....	17
2.5 Horizontal and Vertical Alignment.....	17
2.6 Multimodal Facilities.....	17
2.7 Intersections	20
2.8 Traffic Data.....	21
2.9 Crash Data.....	22
2.10 Drainage System	24
2.11 Floodplain.....	24
2.12 Soils and Geotechnical Data.....	24
2.13 Lighting.....	28
2.14 Utilities	29
2.15 Signs.....	32
2.16 Structures.....	33
2.17 Existing Maintenance Issues.....	34
3.0 Existing Environmental Conditions	36
3.1 Natural Resources	36
3.1.1 Protected Species and Habitat	36
3.1.2 Wetlands and Other Surface Waters.....	36
3.2 Cultural Resources	38
3.3 Contamination	38
4.0 Alternatives Analysis.....	40
4.1 Design Criteria.....	40
4.2 No-Build Alternative	41
4.3 Initial Alternatives.....	42
4.3.1 Corridor Analysis	42
4.3.2 Typical Section Analysis.....	43
4.3.3 Intersection Control Evaluation.....	45
4.4 Viable Alternatives.....	46
4.4.1 Alternative 1	46
4.4.2 Alternative 2.....	46
4.5 Pond Siting	47
4.6 Alternatives Evaluation.....	51
4.7 Recommended Alternative.....	52
5.0 Details of the Recommended Alternative.....	53

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

5.1	Typical Section	53
5.2	Horizontal and Vertical Geometry	53
5.3	Project Traffic Volumes	54
5.4	Intersection Concepts	54
5.5	Access Management Plan	54
5.6	Bicycle and Pedestrian Accommodations	55
5.7	Right-of-Way Requirements	55
5.8	Lighting	56
5.9	Utilities	56
5.10	Preliminary Drainage Analysis	57
5.11	Floodplain Analysis	58
5.12	Structures	58
5.13	Cost Estimate	59
6.0	Summary of Permits and Mitigation	60
6.1	Stormwater	60
6.2	Natural Resources	60
6.3	Cultural Resources	60
6.4	Potential Contamination	60

FIGURES

Figure 1:	Recommended Alternative Typical Section	3
Figure 2:	75th Street Project Location Map	9
Figure 3:	Vision Network Gaps (Source: Sarasota Manatee MPO)	11
Figure 4:	75th Street Existing Typical Section	13
Figure 5:	Existing Zoning	15
Figure 6:	Future Lane Use	16
Figure 7:	Existing Multimodal Network	18
Figure 8:	Sidewalk Ends on 75th Street (looking north)	19
Figure 9:	Share the Road Sign on 75th Street (looking south)	19
Figure 10:	Traffic Counter along 75th Street (looking east)	21
Figure 11:	Vegetation in Sight Triangle of 9th Avenue West (looking south)	22
Figure 12:	Crash Heat Map	23
Figure 13:	FEMA Flood Zones	25
Figure 14:	Soil Map	26
Figure 15:	Groundwater Seepage along 75th Street (looking north)	27
Figure 16:	Lighting along 75th Street (looking north)	28
Figure 17:	Utilities Within Project Limits	30
Figure 18:	Manatee County Sanitary Lift Station (looking north)	31
Figure 19:	Utility bridge (looking south)	31
Figure 20:	School Crossing Sign (looking north)	32
Figure 21:	No Parking Sign (looking south)	32
Figure 22:	Bridge over Cedar Hammock Creek (looking north)	33
Figure 23:	Smartbox Outfall Control Structure (looking west)	34

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

Figure 24: Broken Sidewalk along 75th Street (looking north)	35
Figure 25: Pavement Damage at Steep Driveway (looking west)	35
Figure 26: Wetlands and Surface Waters.....	37
Figure 27: Potential Contamination Map.....	39
Figure 28: Ideal 4-Lane Divided Roadway Typical Section	43
Figure 29: Boulevard Typical Section (Source: Manatee County)	43
Figure 30: Parkway Urban Typical Section (Source: Manatee County).....	44
Figure 31: 102-foot ROW Typical Section.....	44
Figure 32: 92-foot ROW Typical Section	45
Figure 33: Alternative 1 Typical Section	46
Figure 34: Alternative 2 Typical Section	46
Figure 35: Pond Options	48
Figure 36: Recommended Alternative Typical Section	53
Figure 37: Water Main on Bridge (looking southeast).....	57
Figure 38: Existing Bridge (looking south).....	58

TABLES

Table 1: 75th Street Right-of-Way Widths.....	13
Table 2: Manatee County Minimum Setback Standards	14
Table 3: City of Bradenton Minimum Setback Standards.....	14
Table 4: Future Land Use Codes	17
Table 5: Existing Intersection Features	20
Table 6: Existing Signal Features	20
Table 7: Existing Year (2021) Segment LOS.....	21
Table 8: Existing Year (2021) Intersection LOS	22
Table 9: Basin Summary	24
Table 10: Soils within Area of Interest	27
Table 11: UAO Contacts.....	29
Table 12: Design Criteria	40
Table 13: Bicycle Level of Comfort (Source: Manatee County).....	41
Table 14: Corridor Impact Comparison.....	42
Table 15: Typical Section Analysis Summary	45
Table 16: ICE Results	45
Table 17: Basin 2 Pond Options.....	49
Table 18: Basin 3 Pond Options.....	50
Table 19: Evaluation Matrix.....	51
Table 20: Project Traffic Summary	54
Table 21: Proposed Intersection Features	54
Table 22: Access Management	55
Table 23: Recommended Ponds.....	57
Table 24: Recommended Alternative Construction Cost Estimate	59
Table 25: Recommended Alternative Cost Estimate.....	59

APPENDICES

Appendix A – Recommended Alternative Concept Plans

Appendix B – Design Traffic Memorandum

Appendix C – Natural Resources Assessment Memo

Appendix D – Cultural Resources Memo

Appendix E – Potential Contamination Screening Memo

Appendix F – Drainage Information

1.0 Project Summary

This section describes the project, the purpose and need, and related projects.

1.1 Project Description

Manatee County is conducting a Project Development & Corridor (PD&C) Study to evaluate an approximately 1-mile segment of 75th Street West (75th Street) from approximately 20th Avenue West to Manatee Avenue (SR 64). The project limits are partially within the City of Bradenton and unincorporated Manatee County, Florida as shown in **Figure 2**. The study will evaluate options for widening the existing 2-lane roadway to a 4-lane roadway with a center two-way left-turn lane (TWLTL) or median in addition to providing an enhanced mobility experience for all users.

1.2 Purpose and Need

The purpose of this project is to:

- Enhance safety
- Improve traffic operations
- Enhance multimodal access
- Meet future transportation demand

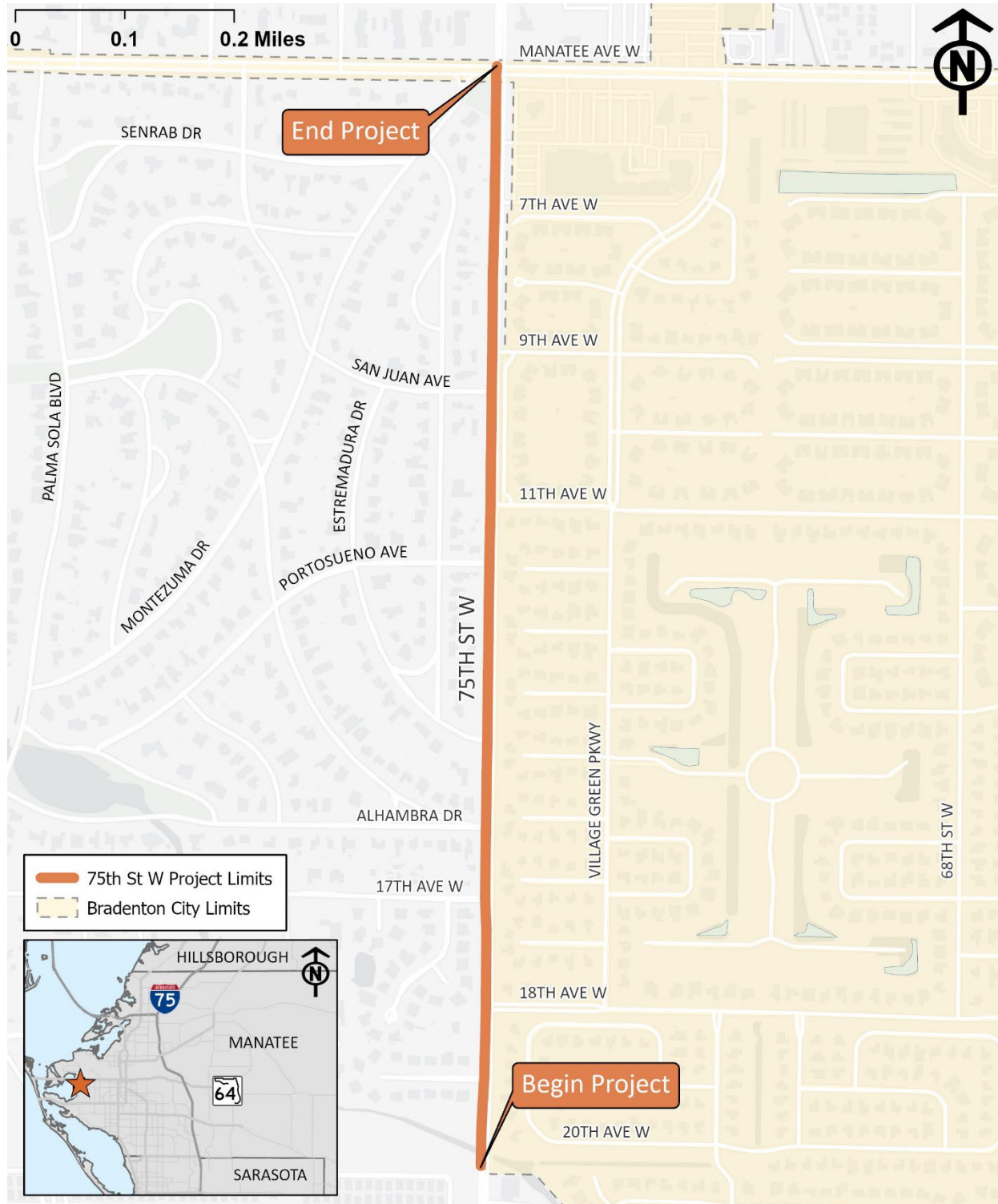
The project is needed because of an increase in travel demand resulting from population growth. This 2-lane segment of 75th Street creates a bottleneck as it connects to four lanes on the south and the north and is a future 4-lane roadway per the Manatee County Comprehensive Plan.² The project limits lack adequate bicycle accommodations because the existing shoulders have only 4 feet from travel lane to face of curb, which does not meet the minimum standard of 5 feet.

² Manatee County. 2009. Map 5-D. PA-17-04 / ORD 17-18

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

Figure 2: 75th Street Project Location Map



1.3 Consistency with Other Plans

The improvements to the corridor should be consistent with local and regional plans guiding future development and the transportation network in the study area. The following planning documents were reviewed for consistency:

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

- Manatee County Comprehensive Plan
- Manatee County Capital Improvement Plan
- Sarasota-Manatee MPO 2045 Long Range Transportation Plan (“Transform 2045”)
- Sarasota-Manatee MPO Active Transportation Plan (2019)
- City of Bradenton Comprehensive Plan

Manatee County Comprehensive Plan

The Manatee County Comprehensive Plan was reviewed to determine how its stated goals, objectives, and policies (GOPs) encourage or require multimodal improvements to the study corridor:

- *Policy 2.9.3.5. Encourage the development of street scape enhancements within the urban area of Manatee County. Enhancements may include but not be limited to, street furniture, decorative lighting, landscaping, and sidewalks on both sides of the street.*
- *Policy 5.4.1.3. Require, where feasible, the inclusion of either:*
 - *A minimum of five-foot paved shoulders on both sides of rural section roadways;*
 - *A minimum of four-foot wide bicycle lanes on both sides of urban section roadways in all roadway improvement projects involving major widening or new construction of roadways shown on the Major Thoroughfare Map required by Policy 5.1.1.1 for use by bicycles; or*
 - *Wherever bicycle lanes are not feasible, alternative routes shall be provided in accordance with the American Association of State Highway and Transportation Officials (AASHTO) guide for the development of bicycle facilities, and the Florida Department of Transportation (FDOT) bicycle facilities planning and design handbook.*
- *Policy 5.4.2.1. Require the inclusion of pedestrianways in all typical urban roadway sections developed pursuant to Policy 5.2.2.1 above. Particular attention shall be given to achieving pedestrian/transit intermodal travel.*
- *Policy 5.6.1.1. Improve public health and safety, active mobility and environmental quality by creating and maintaining an integrated network of multi-modal roadways for users of all ages and abilities through the Complete Street design, where applicable.*
- *Policy 5.6.1.2. Provide streets for walking, bicycling and public- private transportation to enable convenient and active travel as a part of daily activities for all users, where applicable.*
- *Policy 5.6.1.3. Promote infrastructure that facilities crossing of the right-of-way, such as accessible curb ramps, crosswalks, refuge islands and pedestrian signals, where applicable.*
- *Policy 5.6.1.4. Promote complete streets that contribute to the slowing down of traffic, reduce pollution and emissions, improve environmental quality and provides for local economic opportunities, where applicable.*

Manatee County Capital Improvement Plan

Manatee County’s Recommended Capital Improvement Plan (CIP) for Fiscal Years (FY) 2022-2026 includes 75th Street between 20th Avenue West and Manatee Avenue West (CIP number 6108260).

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

The improvements to this segment are to increase capacity and to provide a continuous 4-lane section between Cortez Road and Manatee Avenue. The project also aims to upgrade pedestrian and bicycle facilities, replace and upgrade traffic signals, and add lighting. The requested funding totals \$11,127,518 over four years from FY 2022 to FY 2026.

Sarasota-Manatee MPO 2045 Long Range Transportation Plan (Transform 2045)

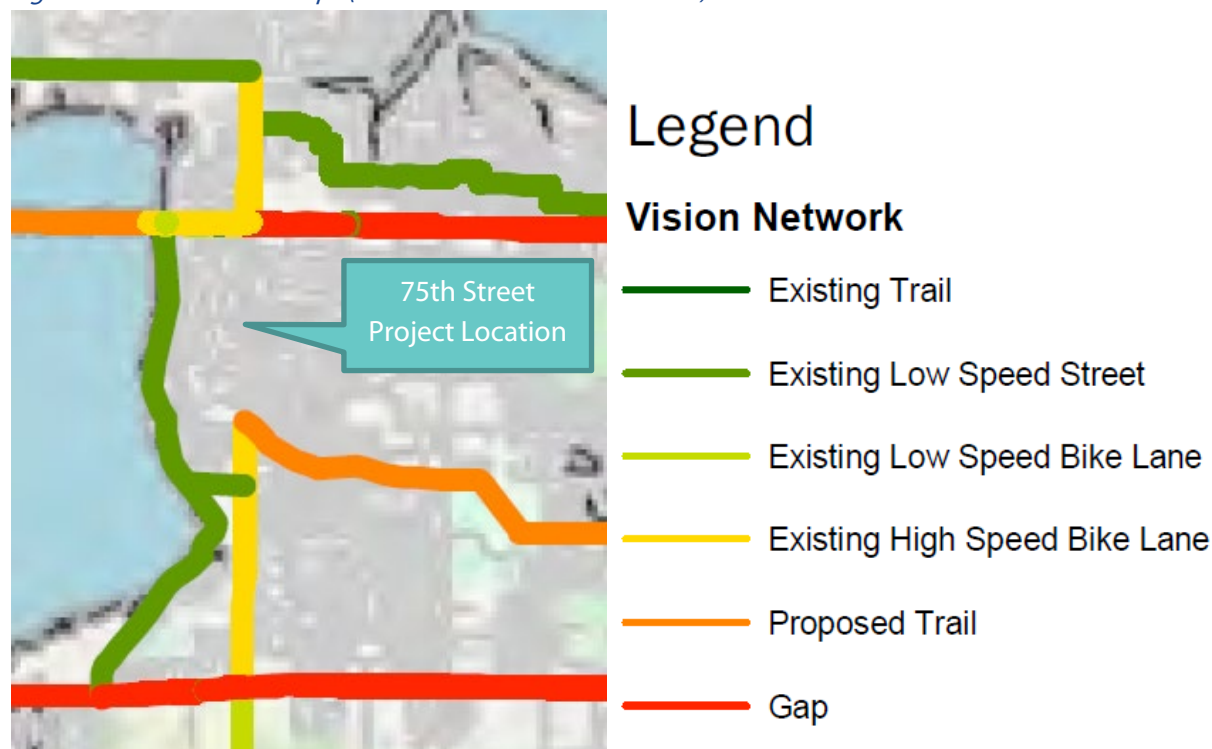
The Sarasota-Manatee MPO's 2045 Long Range Transportation Plan (LRTP) was reviewed to identify any projects related, or adjacent, to the study corridor. This 75th Street project was not listed in the LRTP, but related projects are listed below in Section 1.4.

Sarasota-Manatee MPO Active Transportation Plan (2019)

The Sarasota-Manatee MPO's Active Transportation Plan ('Plan') provides a foundation for the development of a multimodal network of bicycle and pedestrian facilities to connect key destinations, transit services, and the Shared-Use Nonmotorized (SUN) Trail network. This plan was examined to identify references to facility needs or envisioned improvements for the study corridor.

The Plan includes high speed bike lanes on 75th Street from Cortez Road to 18th Avenue in the vision network (**Figure 3**). This leaves the 75th Street project location as a potential gap and limits connectivity to the planned trail along the Cedar Hammock Creek.

Figure 3: Vision Network Gaps (Source: Sarasota Manatee MPO)



City of Bradenton Comprehensive Plan

75th Street serves as a boundary between the City of Bradenton to the east and unincorporated Manatee County to the west. The Future Land Use element of the City's Comprehensive Plan was

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

reviewed to determine how its stated goals, objectives, and policies may support potential improvements to the 75th Street corridor.

- Future Land Use Policy 1.1.1 supports walkable streets and an interconnected street system that prioritizes pedestrians and bicycle features and links neighborhoods to shopping, civic uses, and recreational features.
- Future Land Use Policy 1.14.3 supports multimodal strategies that include improved transit service and/or infrastructure and pedestrian and bicycle facilities.

1.4 Related Projects

The County's adopted FY 2021-2025 CIP identifies a resurfacing project on 75th Street from Manatee Avenue to Cortez Road (CIP number TR02053). The requested funding totals \$2,463,190 in FY 2022 and ending in FY 2023.

The Sarasota-Manatee MPO 2045 Long Range Transportation Plan identifies multiple projects that are either adjacent to, or in the vicinity of, the project limits. These projects were considered during the development of potential improvements on 75th Street.

- Intersection Improvement at 75th Street and SR 684/Cortez Road – Construction Year 2030 (Project ID I10)
- ITS Infrastructure on SR 684 from 75th St. to 14th Street – Construction Year 2030 (Project ID TSMO36)
- SR 64/Manatee Avenue Off Road Shared-Use Path (from 75th Street to 6th Street) – Construction Year 2035 (Project ID MM24)

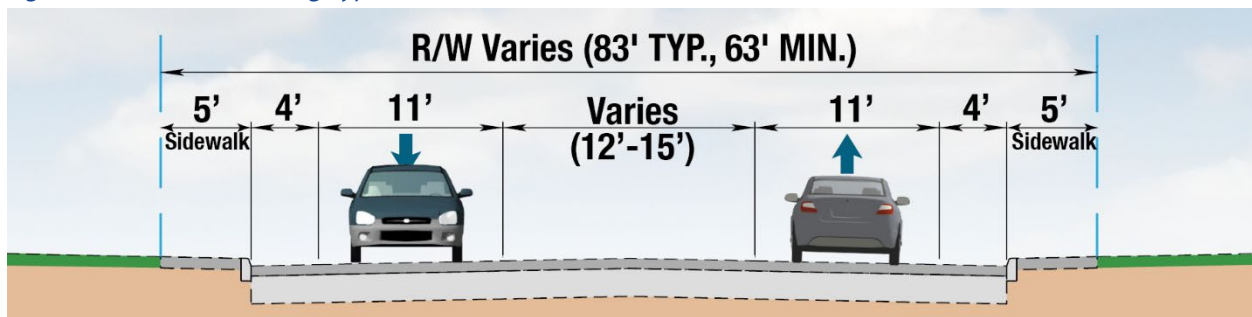
2.0 Existing Roadway Conditions

This section describes the existing roadway characteristics within the project limits based on a review of aerial photography, existing records, and site observations. The constraints, existing deficiencies, and opportunities along the corridor will be considered in the recommended alternative.

2.1 Typical Section

The existing typical section along 75th Street primarily consists of a 15-foot raised median, two 11-foot travel lanes, curb and gutter, 4-foot paved shoulders (undesignated bike lane), and 5-foot sidewalk on both sides (Figure 4). There are intermittent sections of flush median as well. Manatee County is responsible for maintenance of this roadway.

Figure 4: 75th Street Existing Typical Section



2.2 Right-of-Way

Right-of-way (ROW) along 75th Street varies as shown in Table 1. Although the ROW pinches down to as little as 67 feet, most of the corridor has at least 83 feet inclusive of 20 feet that City of Bradenton claims is their ROW along the east side between 18th Avenue and 11th Avenue.

Table 1: 75th Street Right-of-Way Widths

From	To	Min.	Typical	Max.
20th Ave W	18th Ave W	92'	100'	100'
18th Ave W	11th Ave W	80'	83'	100'
11th Ave W	7th Ave W	63'	83'	83'
7th Ave W	Manatee Ave W	83'	83'	83'
OVERALL		63'	83'	100'

75th Street is shown to have a 120-foot ROW reservation on Map 5-C – 2035 Future Traffic Circulation ROW Protection and Reservation in the Manatee County Comprehensive Plan.

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

2.3 Adjacent Land Use

The adjacent land use is primarily suburban single-family residential neighborhoods with some commercial land use at the intersection of 75th Street and Manatee Avenue. **Figure 5** depicts the Manatee County and City of Bradenton zoning for the project limits. The Palma Sola Scenic Highway Park is on the southwest corner of the Manatee Avenue intersection and features a bike rack and benches.³ **Table 2** shows the Manatee County setback standards for Professional - Medium (PR-M) and Residential Single-Family (RSF-4.5). **Table 3** shows setback standards for the parcels in the City of Bradenton Residential (R-1) and Suburban Commercial Corridor (SCC).

Figure 6 depicts the both the Manatee County and City of Bradenton Future Land Use (FLU) designations on both sides of the corridor. The west side of the study corridor is designated as Residential-6 on the Manatee County FLU. The east side of the study corridor includes lands designated as Suburban Commercial Corridor and Low Density Residential on the City of Bradenton's FLU. **Table 4** defines the codes found on the FLU maps.

Table 2: Manatee County Minimum Setback Standards

	PR-M	RSF-4.5
Front Yard	25'	20'/25'*
Side Yard	10'	20'
Rear Yard	15'	20'
Min. Lot Area	10,000 sf	7,000 sf
Land Development Regulations Reference	Section 401.4 – Table 4-8	Section 401.4 – Table 4-5

*Front-loaded carports and garages, detached or attached to a single-family dwelling, require a 25-foot front yard setback.

Table 3: City of Bradenton Minimum Setback Standards

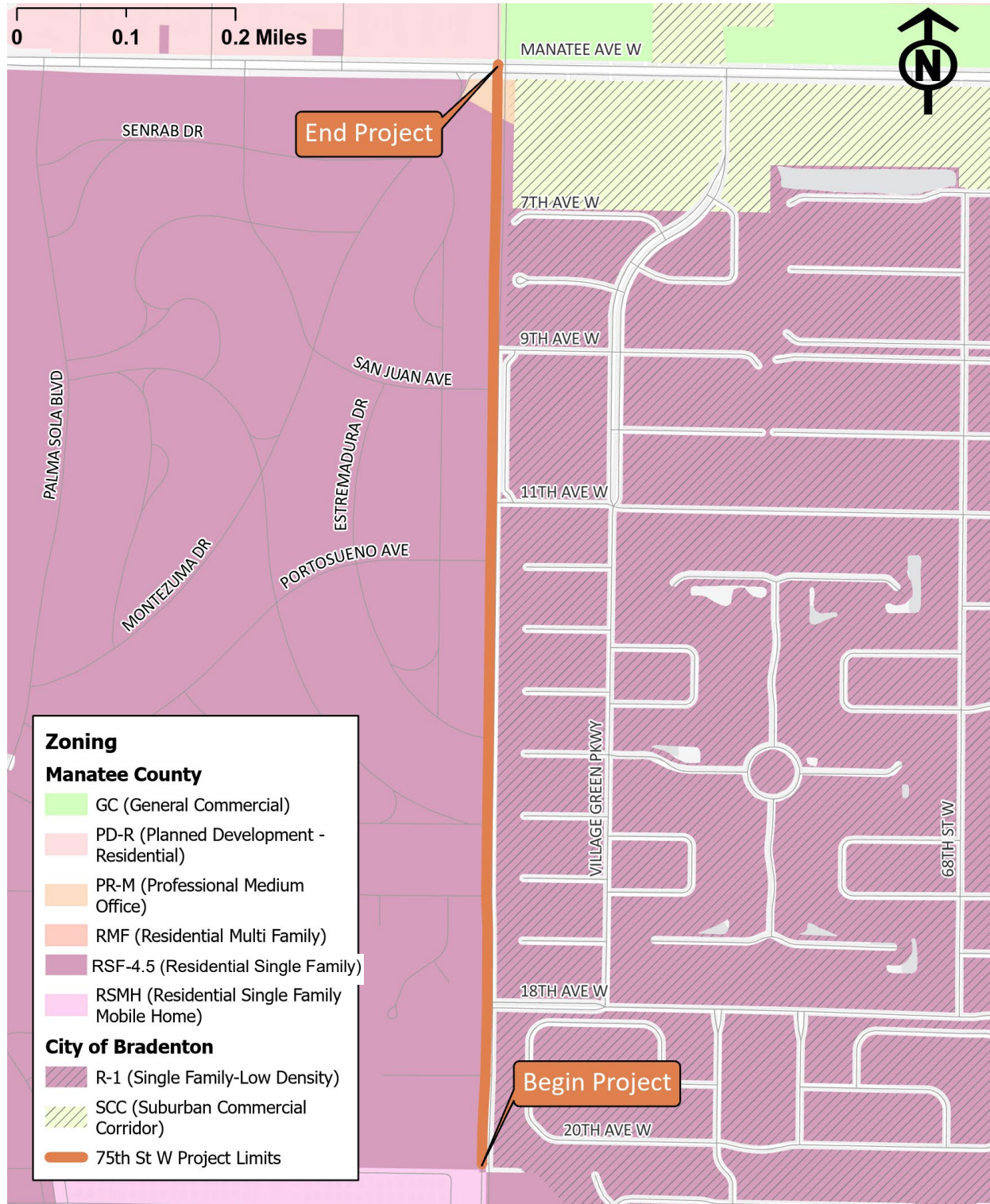
	R-1	Suburban Commercial Corridor
Front Yard	20'	35'
Side Yard	8'	10'
Back Yard	20'	25'
Min. Lot Area	7,200 sf	-
Land Development Regulations Reference	Section 3.2 – Schedule 3.2.2.1	Section 3.2 – Schedule 3.2.2.2

³ Manatee County. 2018. *Palma Sola Scenic Highway Park*. Accessed on Sept. 1, 2021 from https://www.mymanatee.org/departments/parks_natural_resources/parks_preserves_beaches/palma_sola_scenic_park

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

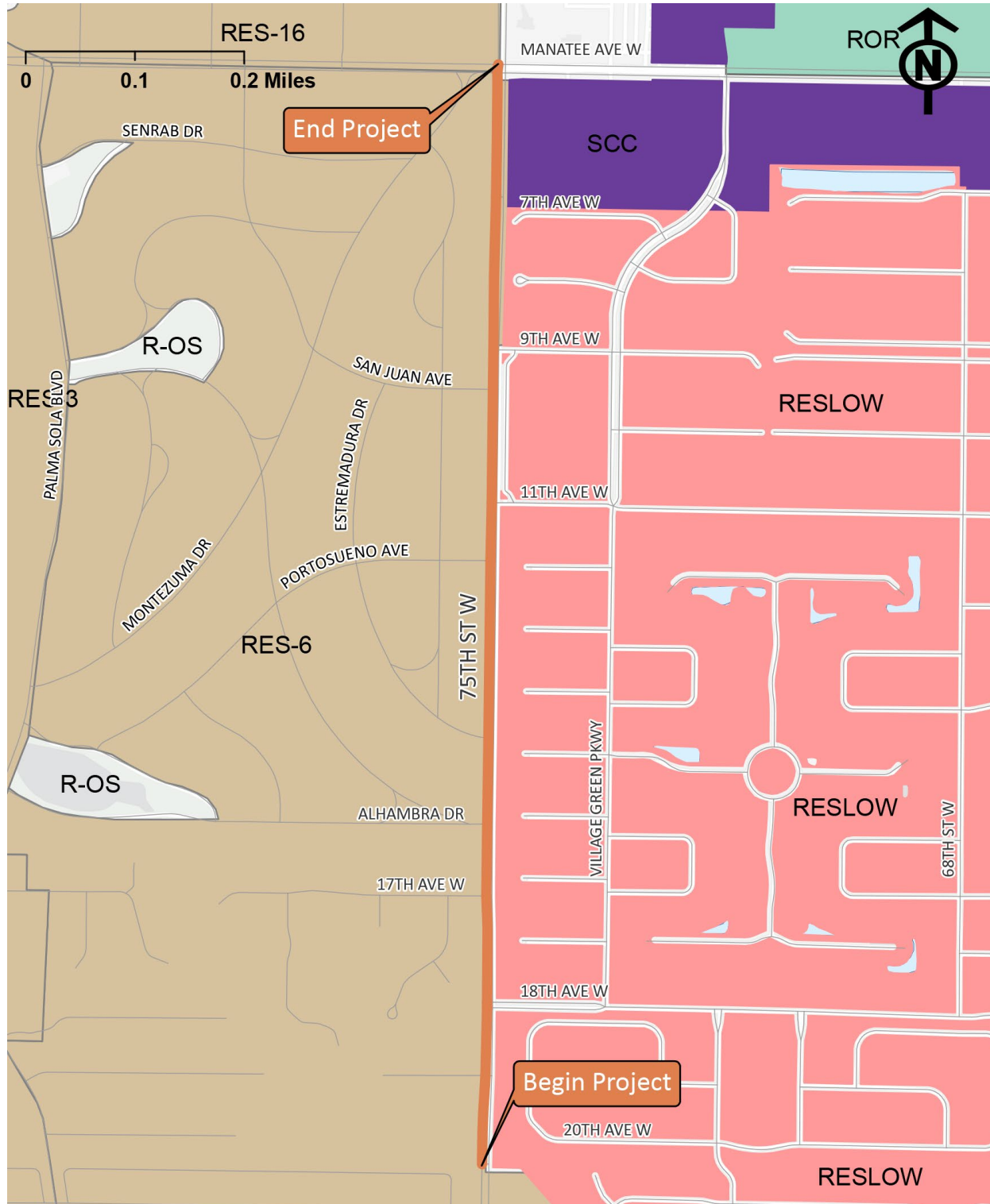
Figure 5: Existing Zoning



Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

Figure 6: Future Lane Use



Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

Table 4: Future Land Use Codes

Code	Future Land Use	Jurisdiction
R/OS	Recreation/Open Space	City of Bradenton
RES-3, RES-6, Res-16	Residential	City of Bradenton
RESLOW	Residential Low	Manatee County
ROR	Retail/Office/Residential	Manatee County
SCC	Suburban Commercial Center	City of Bradenton

2.4 Design and Posted Speed Limit

The existing posted speed limit is 45 MPH from 20th Avenue to 18th Avenue, then 40 MPH from 18th Avenue to Manatee Avenue. The recommended design speed is 40 MPH due to the residential context and narrow ROW.

2.5 Horizontal and Vertical Alignment

The horizontal alignment is generally straight with northerly bearing, minimal deflections, and no horizontal curves within the study limits.

The vertical alignment within the curb and gutter section is generally greater than 0.2%, as evidenced by the lack of silting in existing gutters. The existing vertical alignment will need to be confirmed from survey during the design phase.

2.6 Multimodal Facilities

The existing multimodal facilities are shown on **Figure 7**. The existing 5-foot sidewalks are throughout both sides of the corridor, except when the east sidewalk ends abruptly 600 feet south of Manatee Avenue (**Figure 8**). Although there is a curb ramp at the sidewalk terminus, there is no curb ramp on the other side of the street, so wheelchair users must use the 4-foot paved shoulder.

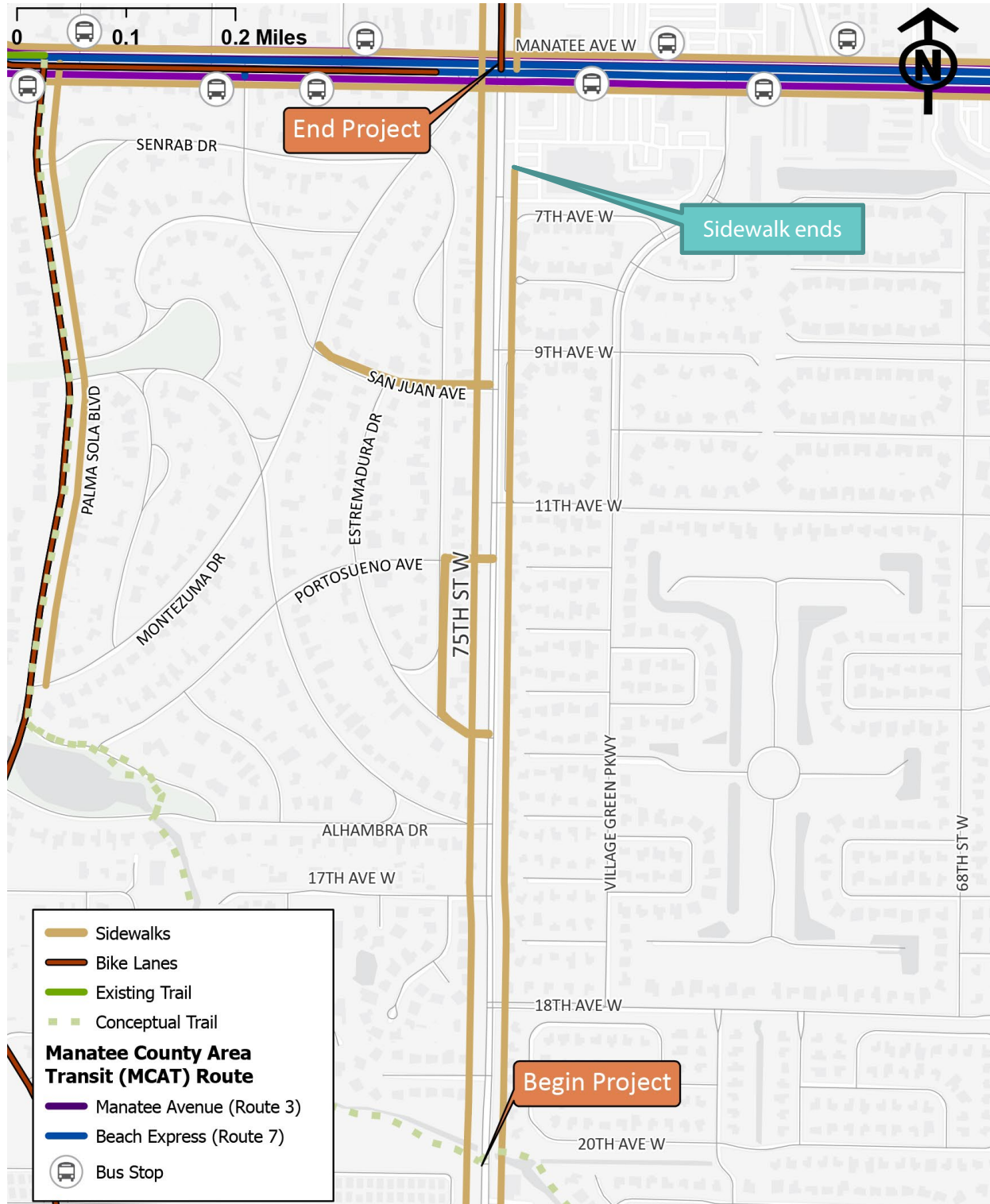
The paved shoulders do not meet the minimum width for a bicycle lane (5-foot required from face of curb) so instead there are "SHARE THE ROAD" signs (**Figure 9**).

75th Street does not have bus stops or bus routes.

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

Figure 7: Existing Multimodal Network



Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

Figure 8: Sidewalk Ends on 75th Street (looking north)



Figure 9: Share the Road Sign on 75th Street (looking south)



Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

2.7 Intersections

The existing intersections are described in **Table 5**. There are ten intersections within the project limits. Two intersections are signalized. The most common intersection deficiency is lack of detectable warnings at the curb ramps. Detectable warning surfaces are needed to meet current Americans with Disabilities Act (ADA) design standards.

Table 5: Existing Intersection Features

75th Street W &	Traffic Control	Left-turn Lanes	Right-turn Lanes	Crosswalks	Remarks
19th Ave Dr	Minor Stop	NB	None	None	
18th Ave W	Signalized	SB, WB	WB	N, E	Mast arm signal with pedestrian signals
17th Ave W	Minor Stop	NB	None	W	
Alhambra Dr	Minor Stop	NB	None	W	
Estremadura Dr	Minor Stop	NB	None	W	Vehicles off tracking radial return
Portosueno Ave	Minor Stop	NB	None	W	
11th Ave W	Minor Stop	SB	None	E	
San Juan Ave	Minor Stop	NB	None	W	
9th Ave W	Minor Stop	SB	None	E	Lack of NB sight distance
Manatee Ave	Signalized	NB, SB, EB, WB	NB, EB, WB	N, S, E, W	Mast arm signal with pedestrian signals

There are two existing signalized intersections with steel mast arms within the project study limits. Additional features for the existing signalized intersections are described in **Table 6**.

Table 6: Existing Signal Features

Side Street Roadway	Existing Structure	Detection Type	Retroreflective Backplates	75th St Left Turn Type	Side Street Left Turn Type	Pedestrian Crossings
Manatee Ave	Mast Arms	Loops	Yes	Protected	Protected	North, South, East & West
18th Ave W	Mast Arms	Loops	Yes	Protected/Permissive	Protected	North & East

A review of the existing signalization as-built plans show that 72-count fiber optic cable runs underground along the east side of 75th Street, from south of 18th Avenue to Manatee Avenue, with 12 count fiber optic cable drops provided to the existing traffic signals. A Microwave Vehicle Detection System (MVDS) assembly is located along 75th Street, just north of 18th Avenue (**Figure 10**).

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

Figure 10: Traffic Counter along 75th Street (looking east)



2.8 Traffic Data

The forecasted Annual Average Daily Traffic (AADT) in 2021 is shown in **Table 7**. 75th Street operates at Level of Service (LOS) F, which is below the LOS D target in the Manatee County Comprehensive Plan.⁴ The latest traffic signal timings and phasing operations were provided by Manatee County and used in the intersection analysis.

Table 7: Existing Year (2021) Segment LOS

Segment		AADT	Adopted Service Volume	LOS
North Limit	South Limit			
Manatee Avenue	20th Avenue W	21,000	16,727	F

Table 8 summarizes the overall intersection LOS, delay, and maximum volume-to-capacity (v/c) for the signalized intersections. See the Design Traffic Memorandum in **Appendix B** for more information.

⁴ Manatee County. 2021. Table 5-1. (PA-21-04) Manatee County Peak Hour Level of Service Standards Right-of-Way Needs / Twenty Year Roadway Requirements. Page 6.

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

Table 8: Existing Year (2021) Intersection LOS

Intersection	Weekday A.M. Peak Hour			Weekday P.M. Peak Hour		
	LOS	Delay (s/veh)	Max v/c	LOS	Delay (s/veh)	Max v/c
Manatee Avenue	E	64.7	0.93 (SBL)	E	74.9	1.02 (SBL)
18th Avenue W	B	15.4	0.77 (NBT/R)	B	16.7	0.80 (WBL/T)

The 75th Street intersection at Manatee Avenue performs at LOS E during the peak hours, and the southbound left-turn movement has volumes that exceed the available capacity during the P.M. peak hour.

The 75th Street intersection with 18th Avenue West performs at LOS B during the peak hours, however the westbound left-turn operates at LOS E in the P.M. peak hour.

2.9 Crash Data

Crash data from the most recent 5-years (2016-2020) was collected from Signal Four analytics. The distribution of crashes within the project limits is proportional to the traffic volumes and potential conflicts.

There is an obstruction to sight distance at the 9th Avenue West intersection (**Figure 11**). However, there does not appear to be a corresponding crash hot spot at that location. Intersection sight distance should be evaluated at all intersections. The most crashes have occurred at the Manatee Avenue intersection, as shown in **Figure 12**.

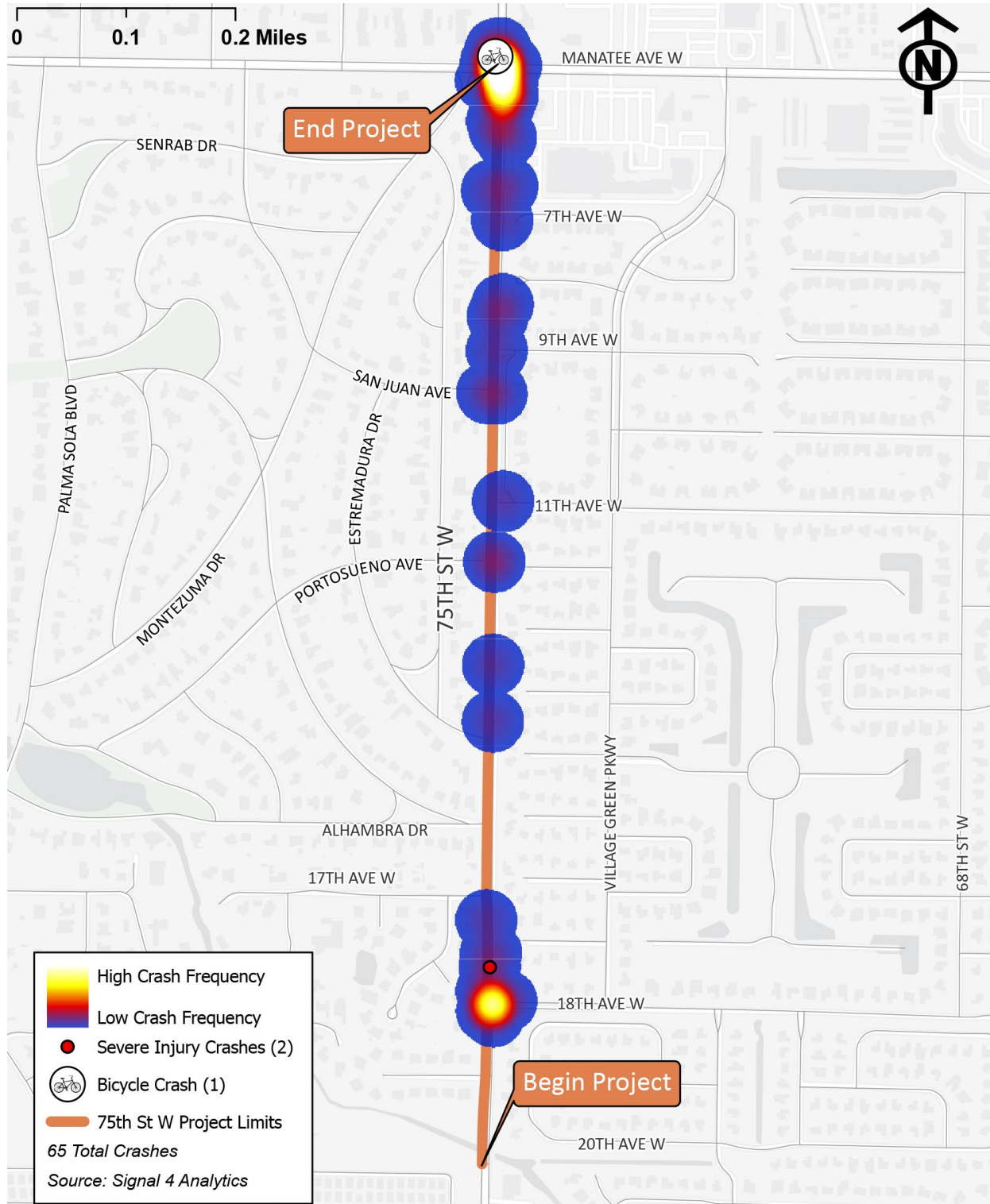
Figure 11: Vegetation in Sight Triangle of 9th Avenue West (looking south)



Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

Figure 12: Crash Heat Map



2.10 Drainage System

The existing drainage system is a closed system, with curb inlets and pipes for conveyance. The project primarily outfalls to Cedar Hammock Creek through an existing stormwater pond at Station 11+00 (LT). This outfall falls within the Sarasota Bay Coastal Watershed (WBID 1885A), which is impaired for bacteria. No additional treatment is required for this watershed. A second outfall discharges to the existing drainage system at Manatee Avenue at the northern portion of the project limits.

The existing pond is permitted under Environmental Resource Permit (ERP) #12088.2 with the Southwest Florida Water Management District (SWFWMD).

The project limits can be divided into three basins, as described in **Table 9**.

Table 9: Basin Summary

	Total Area	Begin Station	End Station	Outfall
Basin 1	0.64			Cedar Hammock Creek
Basin 2	11.30	10+00	54+00	Cedar Hammock Creek
Basin 3	2.39	54+00	62+00	Manatee Ave System

2.11 Floodplain

The project is within the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel 12081C0282F (dated 08/10/2021). The project is primarily within Zone X (Area of Minimal Flood Hazard) as shown in **Figure 13**. Cedar Hammock Creek is considered Zone AE (High Risk with Elevation determined) with Elevation 8. A bridge culvert is located over the Cedar Hammock Creek.

The City of Bradenton Stormwater Facilities Plan was developed to identify projects that could help alleviate street flooding throughout the city.⁵ The Plan shows more flood area for the 100-year event than the FEMA FIRM panels. Based on a review of the GIS, the areas for potential improvements are at the Cedar Hammock Creek, Portosueno Avenue, 11th Avenue West, and 9th Avenue West. It should be noted that the flood model elevations at the Cedar Hammock Creek are significantly higher than the FEMA flood stages. Flood monitoring at this location is recommended to validate the results of this drainage model through a separate hydraulic study.

2.12 Soils and Geotechnical Data

Soils data was collected from the United States Department of Agriculture National Resources Conservation Service (NRCS),⁶ as shown in **Figure 14** and summarized in **Table 10**. Soils in the project limits are mostly sand.

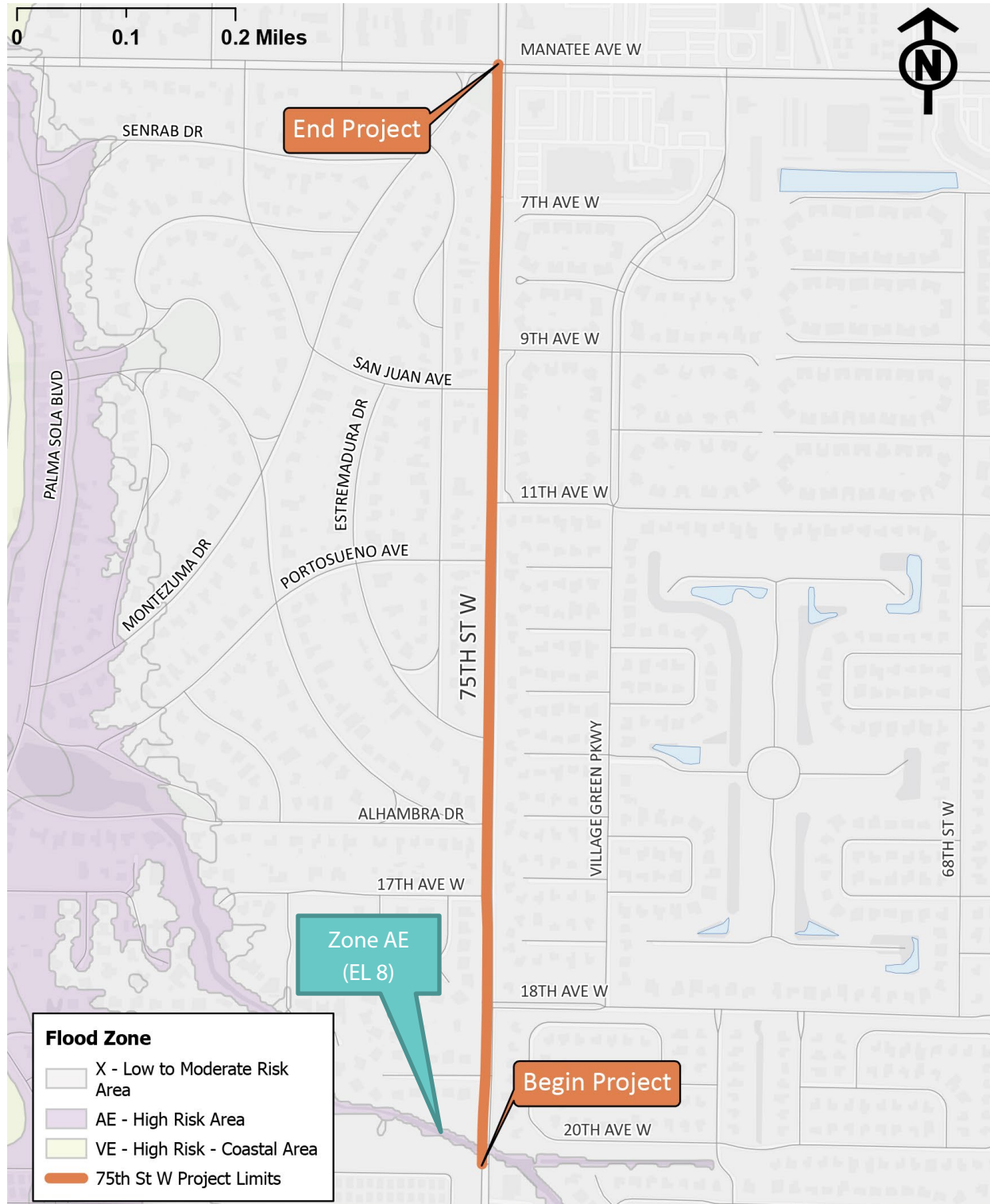
⁵ Boupfa. 2017. *City of Bradenton Stormwater Facilities Plan*. Feb. 2017.

⁶ NRCS. 2020. National Cooperative Soil Survey. Version 17, Jun. 8, 2020. Accessed on Sept. 4, 2021 from <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

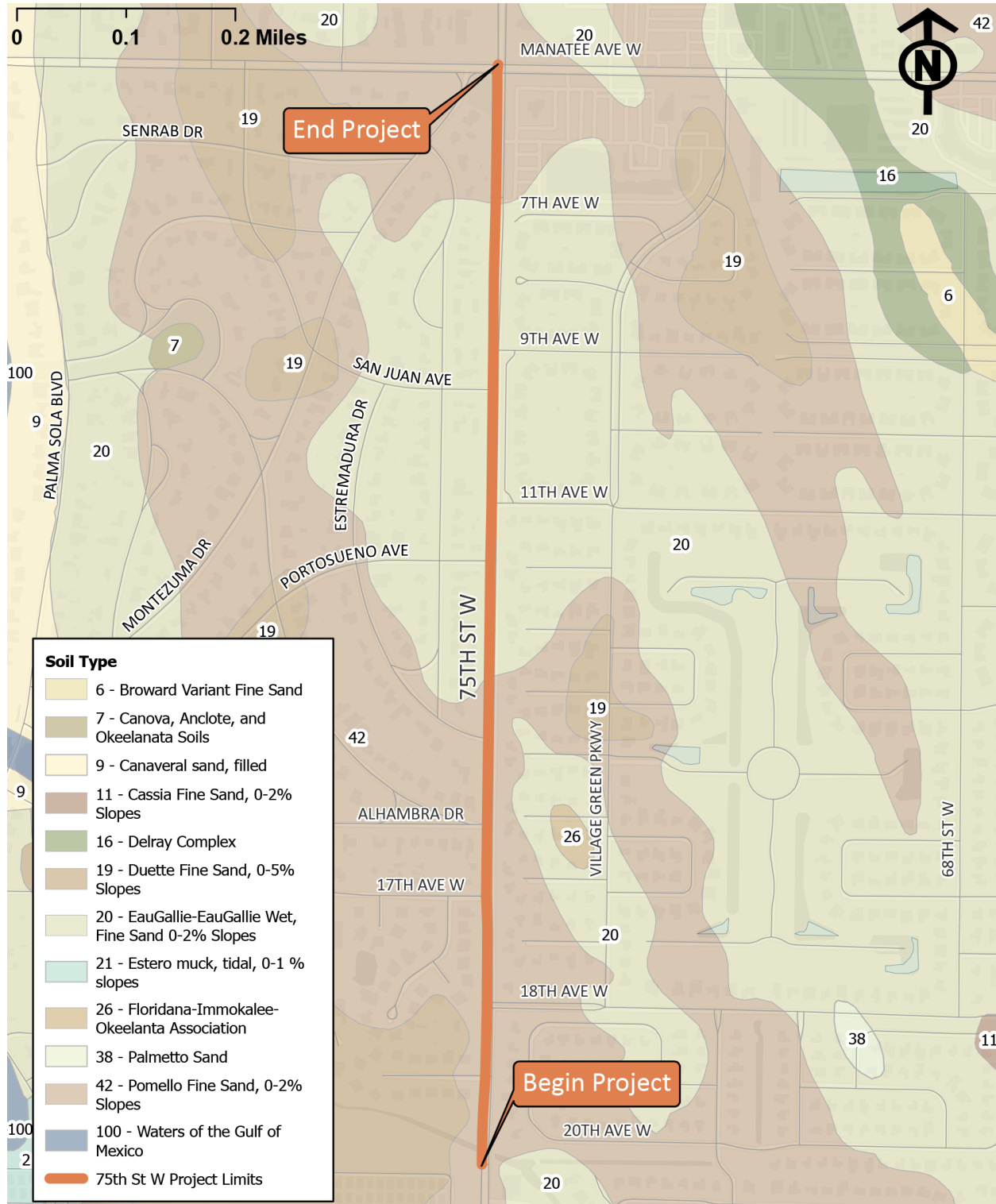
Figure 13: FEMA Flood Zones



Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

Figure 14: Soil Map



Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

Table 10: Soils within Area of Interest

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
19	Duette fine sand, 0 to 5 percent slopes	15.4	7.7%
20	EauGallie-EauGallie wet, fine sand, 0 to 2 percent slopes	88.8	44.4%
26	Floridana-Immokalee-Okeelanta association	1.0	0.5%
42	Pomello fine sand, 0 to 2 percent slopes	95.0	47.5%
Totals for Area of Interest		200.1	100.0%

During the site review on August 11, 2021, there appeared to be groundwater seeping into the gutter along 75th Street between 9th Avenue West and Manatee Avenue (**Figure 15**). This could be coming from the adjacent underground stormwater vault. Geotechnical borings during the design phase are recommended to ascertain the presence of a confining layer and depth to the seasonal high groundwater.

Figure 15: Groundwater Seepage along 75th Street (looking north)



Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

2.13 Lighting

Lighting along the 75th Street corridor consists of freestanding aluminum light poles, luminaires collocated on wooden overhead electric poles (**Figure 16**), and luminaires mounted to traffic signal mast arm uprights. Luminaires on freestanding light poles and on mast arm uprights appear to be powered by underground sources, while luminaires on overhead power poles are powered by overhead electric lines. The freestanding light poles are predominantly located on the west side of the roadway, opposite the overhead lines on the east side of the roadway. Light-Emitting Diode (LED) luminaires are used throughout the corridor.

The majority of the corridor is residential in nature, with a few commercial properties. Existing lighting at signalized intersections along the corridor is documented below:

- 75th Street at 18th Avenue – Two luminaires located on mast arms on the northwest and southeast corners of the intersection.
- 75th Street at Manatee Avenue – Two luminaires located on freestanding aluminum poles on the southeast and southwest corners of the intersection.

Figure 16: Lighting along 75th Street (looking north)



Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

2.14 Utilities

Sunshine 811 was contacted to identify utilities along the corridor. **Table 11** identifies the utility contacts that noted facilities in the study area. The Utility Agencies/Owners (UAOs) were contacted to request the types of facilities and approximate locations.

Table 11: UAO Contacts

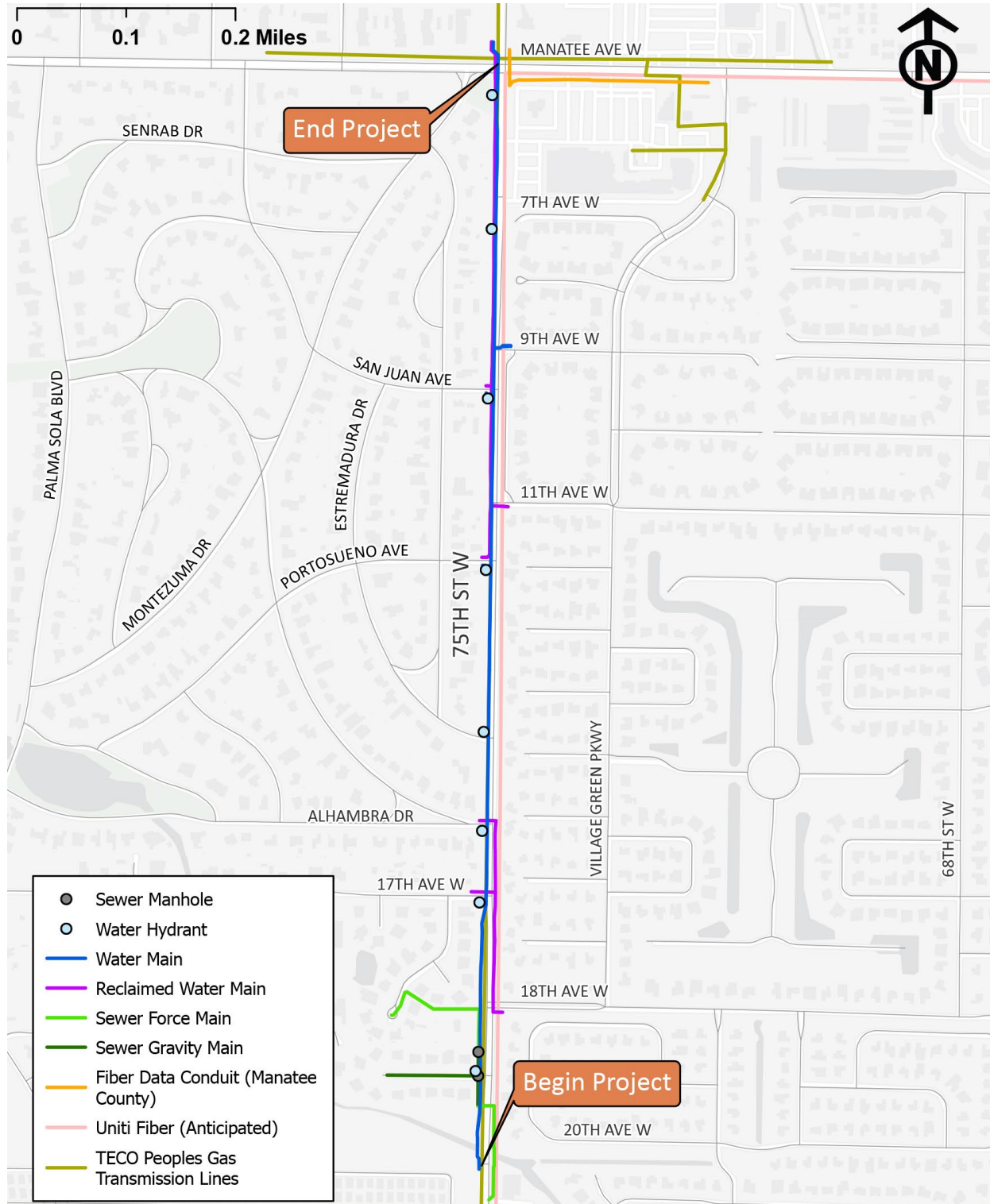
UOA	Utility Type	Contact	Phone Number
Florida Power and Light	Electric	Carey McCoy	941-723-4421
TECO Peoples Gas	Natural Gas	Joan Domning	813-275-3783
City of Bradenton	Sewer	Tom Meador	941-708-6300
City of Bradenton	Water	Tom Meador	941-708-6300
Manatee County	Water	Kathy McMahan	941-792-8811

Figure 17 shows the location of utilities within the study corridor. Since utility providers are not required to respond to a design ticket, this list and figure may not include all utilities within the study area. Overhead electric lines may conflict with roadway widening. A 20-inch water main runs along the west side of 75th Street. A sanitary pump station is located just north of the Cedar Hammock Creek (**Figure 18**). A separate utility bridge runs parallel to the bridge over Cedar Hammock Creek (**Figure 19**). Additional coordination with the UAOs in this corridor is recommended during the design phase of the project.

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

Figure 17: Utilities Within Project Limits



Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

Figure 18: Manatee County Sanitary Lift Station (looking north)



Figure 19: Utility bridge (looking south)



2.15 Signs

There are no overhead or multipost signs within the project limits. A school zone sign is present at the approach to Manatee Avenue (**Figure 20**), and a “No Parking” sign is next to Palma Sola Scenic Highway Park (**Figure 21**). All other signs are typical single-post signs.

Figure 20: School Crossing Sign (looking north)



Figure 21: No Parking Sign (looking south)



2.16 Structures

The bridge over Cedar Hammock Creek (number 134094) was built in 1989. It has a 96.1 sufficiency rating and a 96.68 health index.⁷ According to the Manatee County Senior Bridge Engineer, the structure is a custom channel beam bridge and should be evaluated for widened if needed. The bridge railing is a 41-inch high concrete parapet, which is 1-inch below standard height. The sidewalk width over the bridge is 2-inches below standards, measuring 4-feet, 10-inches from railing to face of curb. The bridge has flared approach end guardrail treatments, as shown in **Figure 22**. The guardrail mounting height is 21-inches above the sidewalk. Although the flared guardrail approach end terminals are not required for shielding traffic railings outside the clear zone, the roadway designer should consider upgrading to FDOT Standard Plan 536-002 Thrie-Beam retrofit to existing bridge railings and 25-inch standard guardrail mounting height.

Figure 22: Bridge over Cedar Hammock Creek (looking north)



⁷ FDOT. 2021. Florida bridge Information, page 175. Accessed on August. 23, 2021 from <https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/maintenance/str/bi/florida-bridge-information-july-2021.pdf>

2.17 Existing Maintenance Issues

Several areas requiring ongoing maintenance were observed and can be addressed with the recommended alternative. A small area of erosion is near the pond smartbox outfall weir and has formed a small sinkhole that is a potential hazard to maintenance personnel (**Figure 23**). This is likely caused by a broken pipe or hole in the wall of the structure.

The broken sidewalk along the west side of 75th Street north of 17th Avenue West, may have been broken by a utility vehicle accessing the nearby utility cabinet (**Figure 24**). Consideration should be given to constructing 6-inch thick concrete sidewalks where maintenance vehicles are likely to access the roadside.

Pavement gouges were observed at the steep driveway on the east side of 75th Street approximately 600-ft south of Manatee Avenue (**Figure 25**). The driveway has a 10% slope, consistent with the FDOT commercial driveway maximum. The construction of an ADA accessible crosswalk will provide a profile transition and reduce the frequency of low clearance vehicles damaging the pavement. Per Manatee County Maintenance, there are also drainage issues in this area.

Figure 23: Smartbox Outfall Control Structure (looking west)



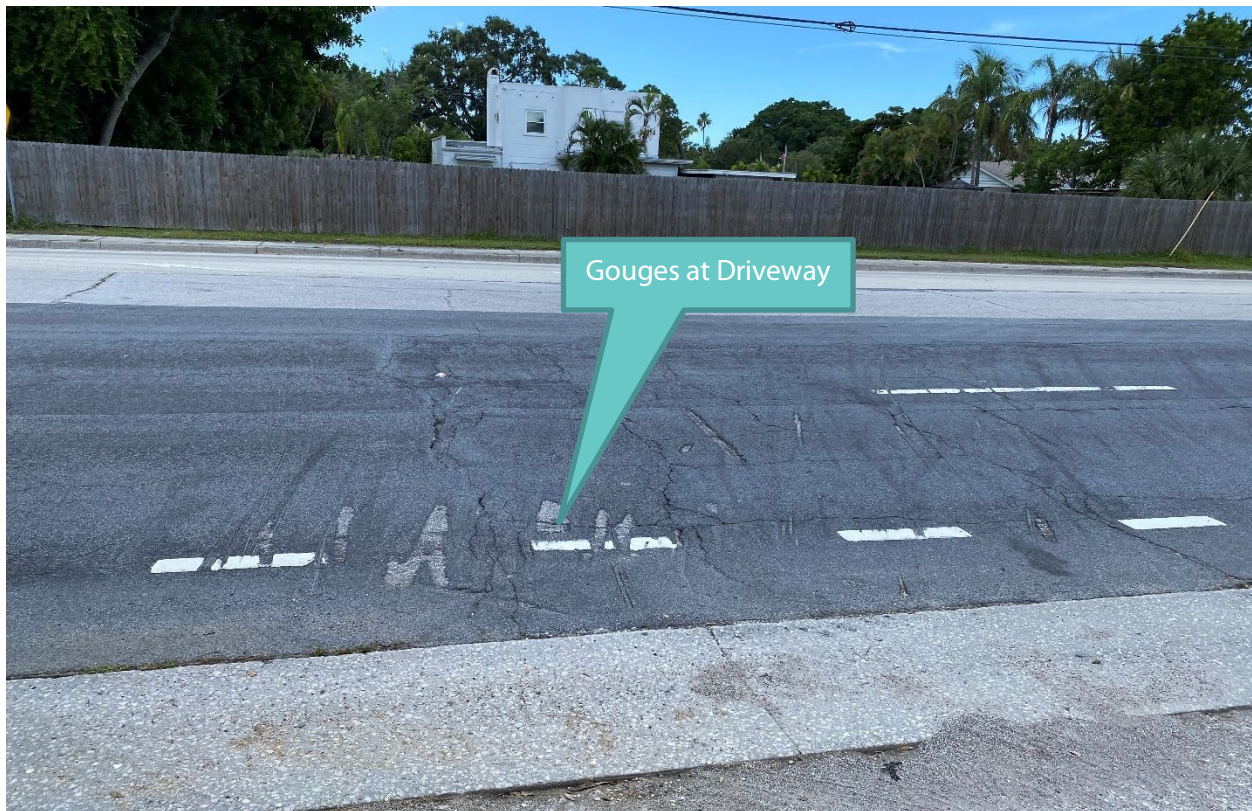
Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

Figure 24: Broken Sidewalk along 75th Street (looking north)



Figure 25: Pavement Damage at Steep Driveway (looking west)



3.0 Existing Environmental Conditions

This PD&C Study considered the existing natural, cultural and physical environments.

3.1 Natural Resources

This section summarizes the Natural Resources Assessment memo in **Appendix C**.

3.1.1 Protected Species and Habitat

The following threatened or endangered species have the potential to occur within the study area:

- Florida scrub jay
- Wood stork
- Bald eagle
- Little blue heron
- Roseate spoonbill
- Tricolored heron
- Eastern indigo snake
- Gopher tortoise

These species have a low likelihood of occurrence within the study area, based on the habitat for that species found and since no species were observed during site reconnaissance.

3.1.2 Wetlands and Other Surface Waters

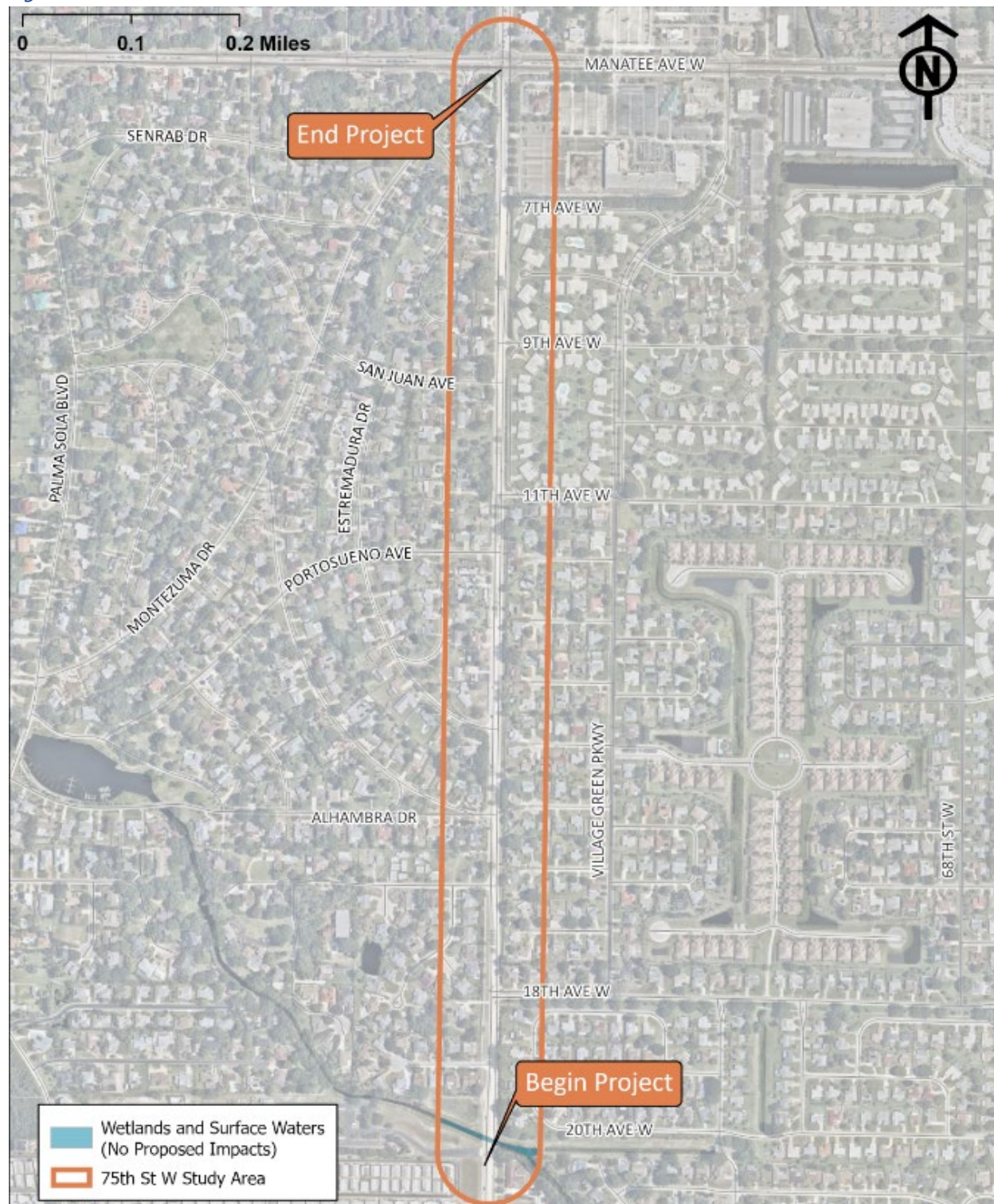
Although the project area is mostly adjacent to developed land, the Cedar Hammock Creek flows east to west through the study area (**Figure 26**).

The project area is located within the service areas of the Long Bar Pointe and Manatee Mitigation Banks. These banks have freshwater herbaceous and forested credits available and are within the South Coastal and Manatee River Drainage Basins. There is no essential fish habitat within the project area.

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

Figure 26: Wetlands and Surface Waters



3.2 Cultural Resources

This section summarizes the Cultural Resources Memo in **Appendix D**. Based on coordination with the State Historic Preservation Office (SHPO), there are no documented resources eligible for listing on the National Register of Historic Places (NRHP) within the Area of Potential Effect (APE) of the 75th Street project.

To account for up to ten years before construction is complete, a search was executed for buildings older than 40 years (those 50 years or older are considered historic). The search resulted in recording 102 structures within the APE. These structures have not been evaluated for NRHP eligibility.

3.3 Contamination

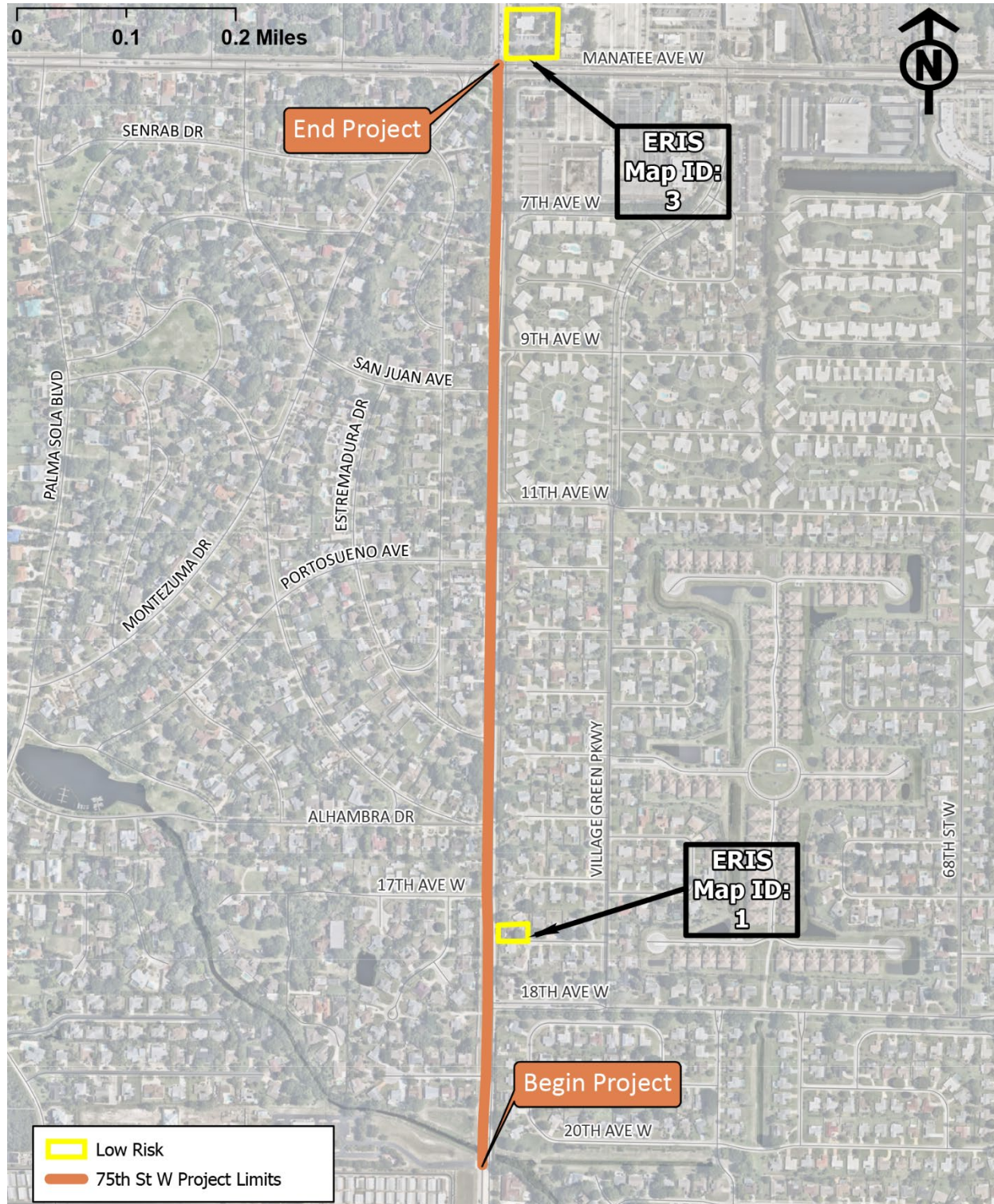
This section summarizes the Potential Contamination Screening Memo in **Appendix E**. Based on a review of available records, there are no documented sites within the study area with a medium or high risk of contamination. Low risk sites are present and shown on **Figure 27**.

- Map ID 1: Chemical spill on 10/25/2008
- Map ID 3: Contaminated facility (K-mart)

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

Figure 27: Potential Contamination Map



Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

4.0 Alternatives Analysis

This section describes the design criteria, alternatives, and alternatives evaluation for the study.

4.1 Design Criteria

The project design criteria are summarized in **Table 12**. The following standards were used: Manatee County Public Works Standards (PWS), Part 3. Highway & Traffic Standards Manual, Amended November 2016; Manatee County Comprehensive Plan, Element 5 - Transportation, Table 5-1 (PA-21-04); Florida Greenbook (FGB), Manual of Uniform Minimum Standards for Design, 2018 Edition; and the FDOT Design Manual (FDM), 2021.

Table 12: Design Criteria

	Design Element	75th Street W	Source
General	Access Management Class	N/A	
	Context	Suburban Neighborhoods	PWS Figure T-15
	Level of Service	D	Table 5-1 (PA-21-04)
	Design Period	20 years	FDOT Project Traffic Forecasting Handbook 2019
	Design Speed	40 mph	PWS Table 1, existing posted
	Design Vehicle	WB-62FL	FGB Chp. 3 C.2
	Roundabout Control Vehicle	WB-62FL	FDM 201.6.1, FDM 213.7
	Functional Classification	Arterial	Table 5-1 (PA-21-04)
	Posted Speed	40 mph	Existing posted
Typical Section	Number of Lanes	4	Table 5-1 (PA-21-04)
	Lane Width	11 ft.	PWS Table 3, FGB Chp. 3 Table 3-20
	Two-Way Left-Turn Lane Width	12 ft. (11 ft. min)	FGB Chp. 3 Table 3-20
	Median Width	18 ft. (15.5 ft. Min)	PWS Table 3, FGB Chp. 3 Table 3-23
	Bicycle Lane Width	7 ft. (5 ft. Min)	PWS Table 3, note e
	Buffer Width	8 ft. (6 ft. Min.)	PWS Table 3
	Clear Zone Width	4 ft.	PWS Detail Sheet 402.1
	Sidewalk Width	5 ft.	PWS Table 3
Horizontal	ROW Width	120 ft.	Table 5-1 (PA-21-04)
	Min. Stopping Sight Distance	305 ft.	FGB Chp. 3 Table 3-4
	Max. Deflection w/o Curve	2°	FGB Chp. 3 C.4.b
	Length of Curve	600 ft. (400 ft. Min)	FGB Chp. 3 Table 3-8
	Max. Curvature (Min. Radius)	10° 45' (533 ft.)	FGB Chp. 3 Table 3-12
Vertical	Max. Superelevation	0.05	FGB Chp. 3 C.4.c.2
	Max. Grade	7%	FGB Chp. 3 Table 3-16
	Max. Change in Grade w/o VC	0.80%	FGB Chp. 3 Table 3-17
	Base Clearance above BCWE	3 ft.	FDM 210.10.3(2)
	Min. Crest Curve K	44	FGB Chp. 3 Table 3-18
	Min. Sag Curve K	64	FGB Chp. 3 Table 3-18
	Vertical Clearance	16.5 ft.	FGB Chp. 3 C.7.j.4.(b)

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

The Bicycle Level of Comfort table is shown in **Table 13**. Based on the speed and traffic volume, it was determined that the ideal bicycle lane width for 75th Street was at least 6 feet wide.

Table 13: Bicycle Level of Comfort (Source: Manatee County)

Configuration without bicycle facilities	AADT <10,000			AADT 10,000 - 15,000			AADT >15,000		
	<30mph	35mph	>40mph	<30mph	35mph	>40mph	<30mph	35mph	>40mph
1 x 1	1.1	1.4	1.7	1.1	1.8	2.1	2.0	2.3	2.6
1 x 1 (with median)	1.1	1.4	1.7	1.5	1.8	2.1	2.0	2.3	2.6
1 x 1 (with dual-left)	1.2	1.8	1.8	1.6	1.8	2.1	2.1	2.5	2.7
2 x 2	1.7	2.1	2.3	2.1	2.5	2.7	2.6	3.0	3.2
2 x 2 (with median)	2.4	2.4	2.7	2.5	2.8	3.1	3.0	3.3	3.6
2 x 2 (with dual left)	2.8	2.7	3.0	2.8	3.1	3.4	3.1	3.6	3.9
3 x 3 or larger	2.7	3.1	3.3	3.1	3.5	3.7	3.5	4.0	4.2

General recommendations	
1.0 - 1.4	No need
1.4 - 1.9	Shared streets ("sharrow") markings
2.0 - 2.4	Dedicated bike lane (4' - 6')
2.5 - 2.9	Dedicated bike lane (6')
3.0 - 3.4	Buffered bike lane (6' +)
3.5 - 3.9	Buffered bike lane with visual barrier
4.0 +	Physically separated shared path (10' +)

75th Street
criteria range

4.2 No-Build Alternative

The No-Build Alternative assumes that 75th Street remains primarily a 2-lane divided roadway. No improvements would be constructed other than routine maintenance. The No-Build Alternative provides a benchmark for comparative purposes with the build alternatives.

The advantages of the No-Build Alternative include:

- No impacts to the natural, physical, social, or cultural environments
- No utility impacts
- No cost for design, ROW acquisition, or construction

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

The disadvantages of the No-Build Alternative are:

- Not consistent with the Manatee County Comprehensive Plan
- Does not enhance pedestrian and bicycle accommodations
- Does not improve safety conditions
- Does not improve vehicular traffic operations

The No-Build Alternative remains a viable alternative throughout the study.

4.3 Initial Alternatives

A corridor analysis was conducted to establish the alignment, and a typical section analysis was conducted to determine the viable typical sections. An Intersection Control Evaluation (ICE) was also performed to compare the traffic signals to roundabouts.

4.3.1 Corridor Analysis

The corridor analysis considered the impacts of widening left (west) only, on center, or right (east) only, utilizing the 120-foot ROW corridor shown on the ROW Protection and Reservation map.⁸ **Table 14** summarizes the results. Widening to the left side impacts a similar number of parcels but results in fewer relocations compared to the widening to the right side. Widening to the left is recommended because fewer relocations are required.

Table 14: Corridor Impact Comparison

	Left Side Widening			Center Widening			Right Side Widening		
	Parcels (no.)	ROW (ac.)	Relocations (no.)	Parcels (no.)	ROW (ac.)	Relocations (no.)	Parcels (no.)	ROW (ac.)	Relocations (no.)
Begin Project to 11th Ave W	29	3.90	22	66	3.94	27	38	4.16	29
11th Ave W to End Project	21	2.58	11	25	2.29	12	4	2.28	20
Total	50	6.49	33	91	6.23	39	42	6.43	49

⁸ Manatee County. 2009. Map 5-C. PA-17-04 / ORD 17-18

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

4.3.2 Typical Section Analysis

The Manatee County Public Works design standards contain several typical sections that were considered. The first typical section considered was the Index 401.2 Typical 4-Lane Divided Roadway.⁹ Through county coordination, the ideal section was determined to have 120 feet of ROW, 18-foot raised median, 12-foot travel lanes, 7-foot bike lanes, 5-foot sidewalks, and an optional 10-foot shared use path, shown in **Figure 28**.

The Boulevard typical section (**Figure 29**) accommodates all users and is more of a complete street concept. Although ideally it would be within in a 120-foot corridor, this typical can be as narrow as 102-feet wide.

Figure 28: Ideal 4-Lane Divided Roadway Typical Section

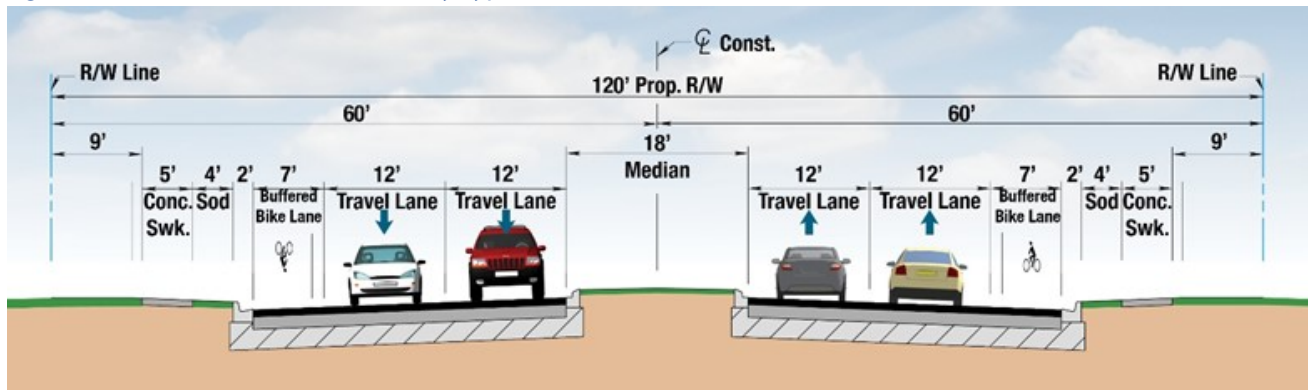
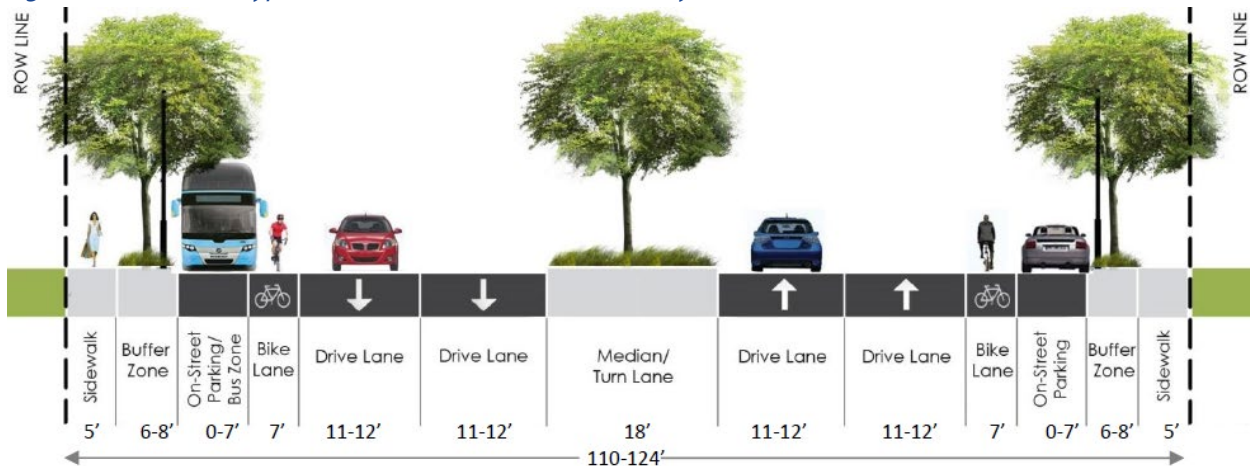


Figure 29: Boulevard Typical Section (Source: Manatee County)



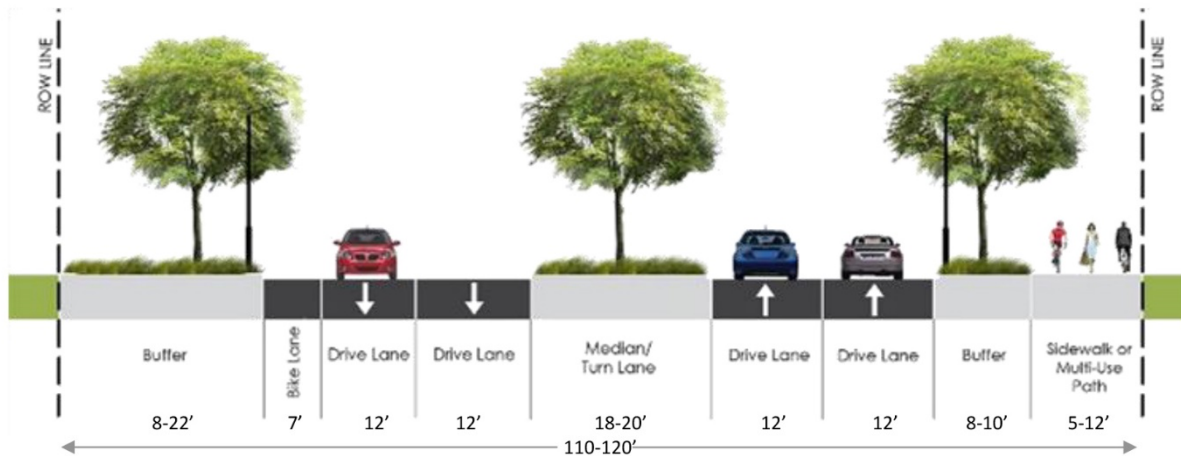
⁹ Manatee County. 2016. *Public Works Standards*. Part 3. Highway & Traffic Standards Manual. 401.2. Pg. T-80.

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

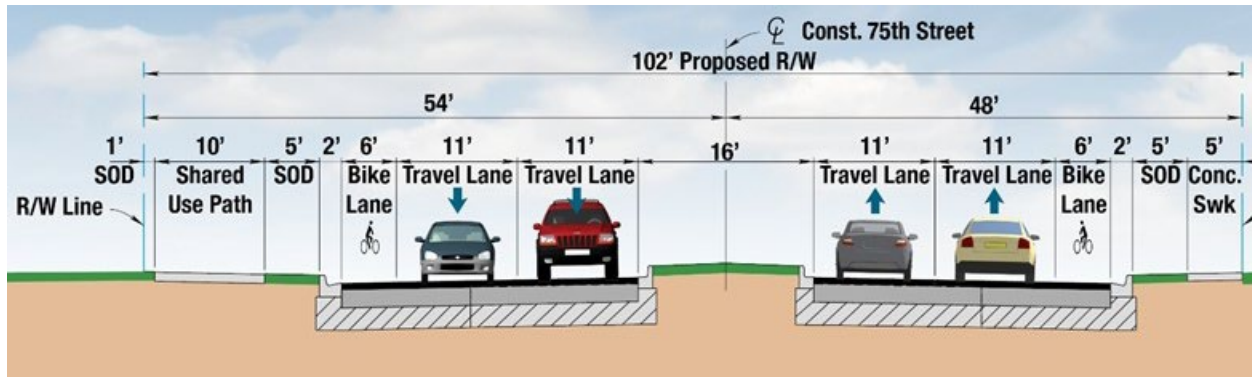
The Parkway typical section (**Figure 30**) is similar to the Boulevard, but with the option of a shared use path on one side of the roadway. The side without a sidewalk would not fit the urban context of 75th Street.

Figure 30: Parkway Urban Typical Section (Source: Manatee County)



The 102-foot ROW typical section (**Figure 31**) was created to incorporate the complete street elements from the above typical sections, the applicable design criteria, and the project specific needs of the corridor. The typical section utilizes a 16-foot raised median, 6-foot buffered bicycle lanes, 5-foot sod buffer between the back of curb and sidewalk, and a 10-foot shared use path on the left side.

Figure 31: 102-foot ROW Typical Section

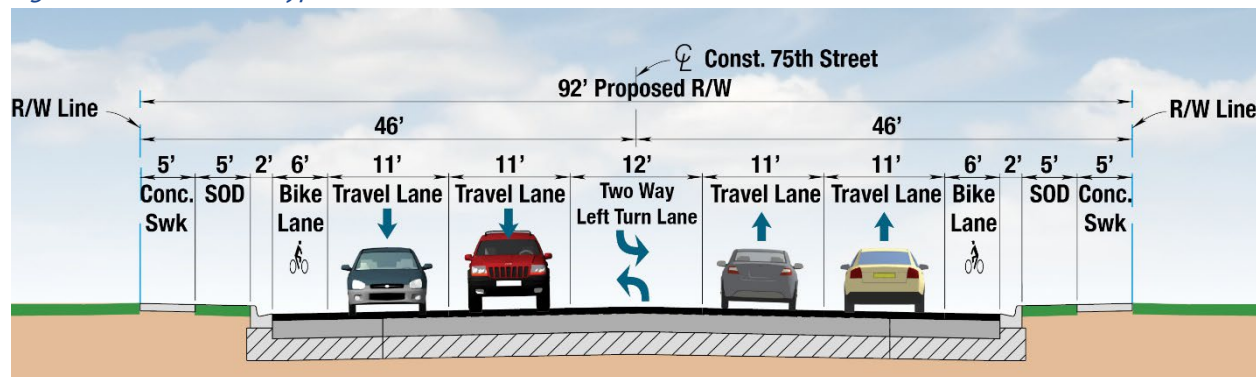


Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

The 92-foot ROW typical section (Figure 32) was created to strike a balance between function and impacts. This section utilizes a 12-foot TWLTL, 6-foot buffered bicycle lanes, 5-foot sod buffer between the back of curb and the sidewalk. Landscape opportunities will be more limited with this concept.

Figure 32: 92-foot ROW Typical Section



A summary of the typical section analysis is shown in Table 15.

Table 15: Typical Section Analysis Summary

Typical section	Pros	Cons	Viable?
Standard 401.2	Utility corridor, wide median	Wide lanes, higher speeds	No
Ideal 4-Lane	Utility corridor, buffered bikes	Wide lanes, wide footprint	No
Boulevard	Complete street	Wide footprint	No
Parkway	Landscape opportunities	Wide lanes, higher speeds	No
102-Foot ROW	Complete street	Restricts access	Yes
92-Foot ROW	Narrow footprint	Limited landscape areas	Yes

4.3.3 Intersection Control Evaluation

An Intersection Control Evaluation (ICE) was conducted to determine the benefit-cost ratio (B/C) by type of control (e.g., signal or roundabout, see Table 16). The traffic signal control is recommended for the intersection with 18th Avenue because the roundabout intersection has high ROW impacts and cost. See the Design Traffic Memorandum (Appendix B) for more information.

Table 16: ICE Results

	Traffic Signal 1 x 1 w/ Signal Improvements			Traffic Signal 2 x 1			Roundabout 2 x 1 (Build)		
	Overall B/C	Delay B/C	Safety B/C	Overall B/C	Delay B/C	Safety B/C	Overall B/C	Delay B/C	Safety B/C
75th St & 18th Ave W	Base Case			27.40	26.33	1.08	12.64	12.38	0.26

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

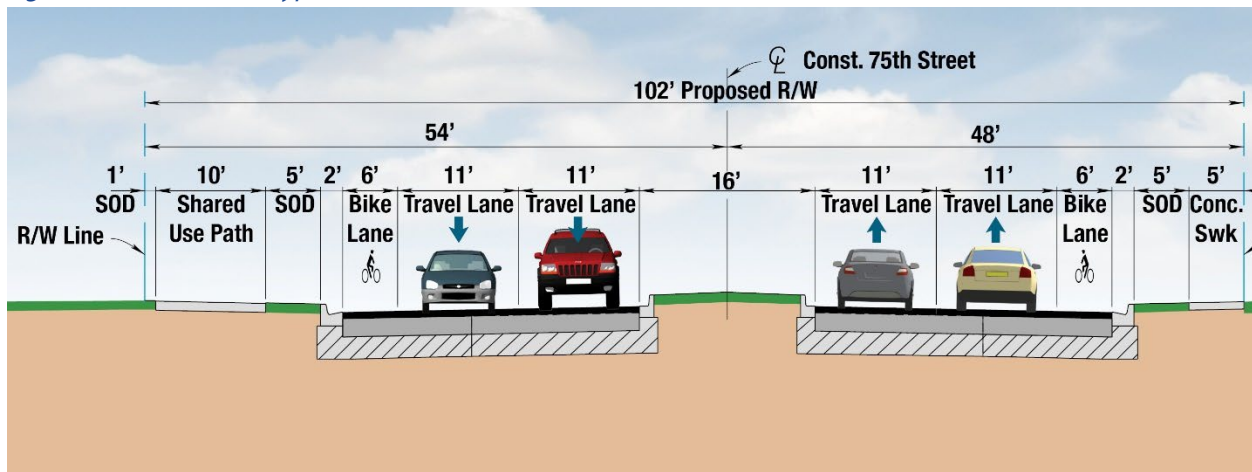
4.4 Viable Alternatives

The viable build alternatives are Alternative 1 and Alternative 2, as described below.

4.4.1 Alternative 1

Alternative 1 utilizes the 102-foot typical section (**Figure 33**) that primarily includes a left-side widening to minimize ROW impacts. This alternative includes a shared use path from the future Palma Sola Trail up to the Palma Sola Scenic Highway Park at Manatee Avenue. Additional ROW is required, and relocations are anticipated.

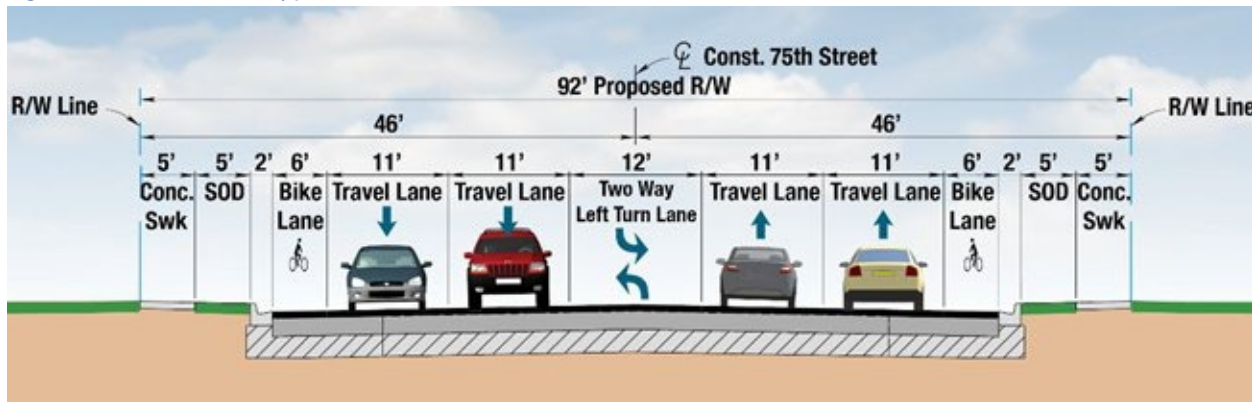
Figure 33: Alternative 1 Typical Section



4.4.2 Alternative 2

Alternative 2 utilizes the 92-foot typical section (**Figure 34**) primarily via left-side widening to minimize ROW impacts. This alternative does not provide a shared use path connection to the future Palma Sola Trail. The private road running parallel to 75th Street from 11th Avenue West to 9th Avenue West can remain, but with one-way operation. Alternative 2 requires less ROW than Alternative 1, but relocations are still anticipated.

Figure 34: Alternative 2 Typical Section



4.5 Pond Siting

Following SWFWMD guidelines for open basins, the critical event to be used is the 25-year-24-hour design storm. In this area of the water management district, the 25-year, 24-hour event constitutes a rainfall depth of 8.90 inches.

The stormwater runoff will be attenuated using the 25-year, 24-hour event by the designed detention facility for open basin discharge. The post-development basin areas include all areas within the proposed ROW. The detention facility includes a treatment volume of one inch over the proposed basin in addition to the attenuation volume. Off-site runoff affected by the proposed roadway design will be diverted to existing condition low points.

Each pond site area was calculated with the following minimal physical criteria:

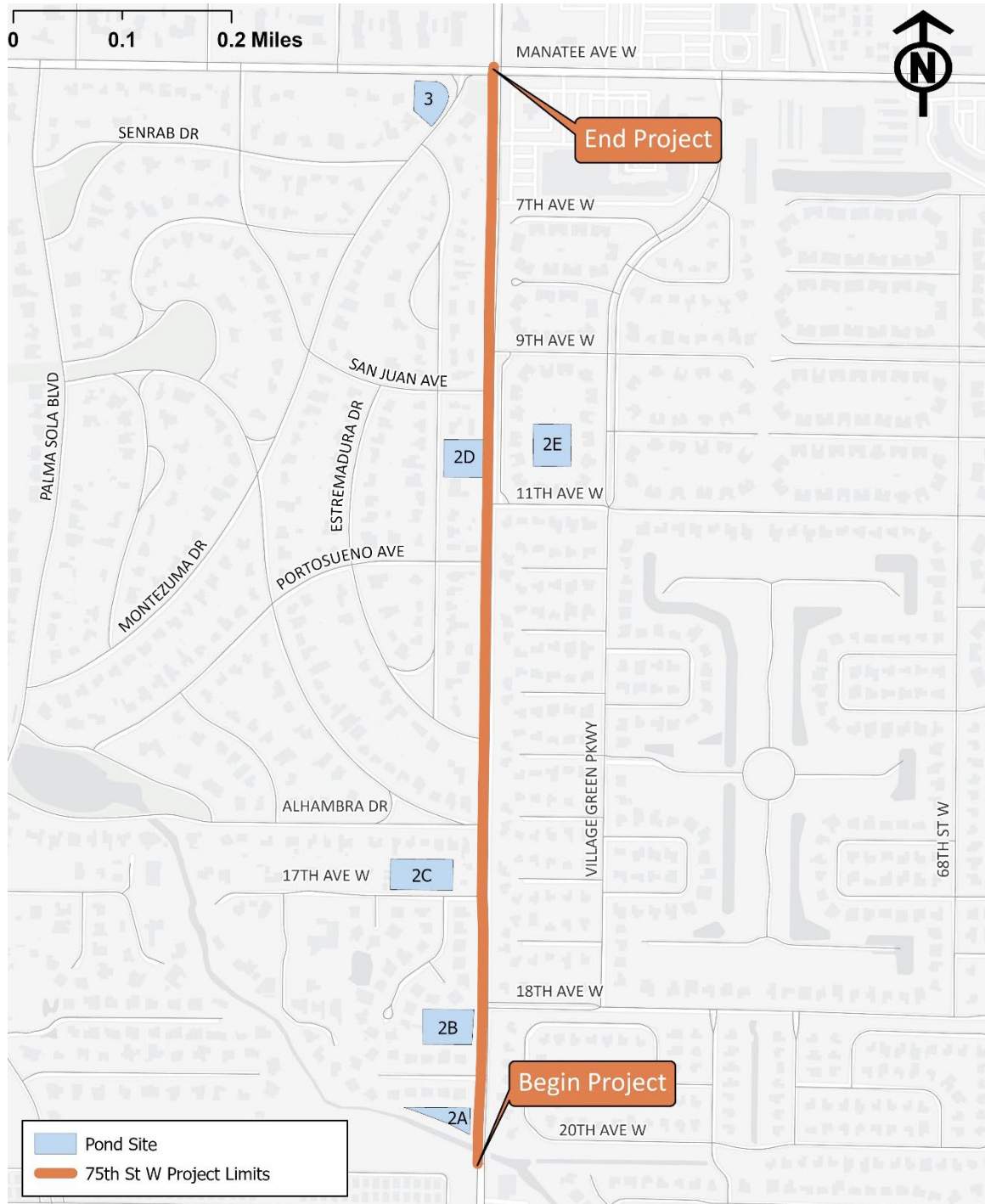
- Existing elevations and the ability of the proposed basin to drain via stormwater conduit
- Interior pond slopes with a slope ratio of 4:1
- Maximum depth of 10 feet
- Minimum 15-foot level maintenance berm
- Area for back slopes and fencing
- Accessible directly from the road right-of-way an access easement

Pond site locations are shown in **Figure 35**.

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

Figure 35: Pond Options



Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

Basin 1

Basin 1 is south of the bridge over Cedar Hammock Creek. Minimal work and minimal modification of the existing drainage system may be needed for this basin. No additional treatment is required.

Basin 2

Basin 2 extends from the bridge over Cedar Hammock Creek to 7th Avenue West. The basin consists of 0.84 miles of roadway. The proposed stormwater system will convey the runoff to a detention facility by curb and gutter and closed conveyance. This basin discharges to a tidally influenced outfall at the Cedar Hammock Creek. There are five pond options for this basin described in **Table 17**.

Table 17: Basin 2 Pond Options

Factors	Sub-Basin STA 10+00 to STA 22+00	Sub-basin STA 22+00 to STA 42+00		Sub-basin STA 42+00 to STA 54+00	
	*Pond 2A	*Pond 2B	Pond 2C	*Pond 2D	Pond 2E
Location (STA)	11+00	16+00	22+00	42+00	45+00
Side	LT	LT	LT	LT	RT
Distance from Corridor	0'	0'	165'	0'	200'
Total Area	0.43AC	0.94 AC	1.04 AC	0.82	0.86
FEMA Flood Zone (Yes/No)	No	No	No	No	No
Hydrologic Soil Group	A	A	A	A/D	A/D
Parcel ID	3909401006	3906100007	3905000000	3894300007, 3894400005, 3894500002	3899421758
Owner	Manatee County	Private Owner	Kington Mobile Home Park	Private Owner	Village Green Condo
Occupied/Vacant	Vacant	Occupied	Occupied	Vacant	Occupied
Land Use	Clubs, Lodges, Union Halls	Single Family Residential	Mobile Home Parks	Vacant Residential Platted	Vacant Residential Platted
Contamination Sites	None	None	None	None	None
Wetland Impacts	No	No	No	No	No
Additional Remarks	Existing pond	-	-	-	-

*Recommended Site

Pond 2A is located south of 19th Avenue Drive on a Manatee County parcel. This alternative modifies an existing wet detention pond to achieve the required treatment volume.

Pond 2B is located north of 19th Avenue Drive on a privately owned parcel. The pond is a wet detention facility and would be the single pond for the sub-basin. This pond is also an option for the first sub-basin if modifications to Pond 2A are not feasible.

Pond 2C is located north of 17th Avenue on a privately owned parcel. The pond would be a wet detention facility and the single pond for the sub-basin.

Pond 2D is located south of San Juan Avenue on three privately owned parcels (one owner). The pond would be a wet detention facility and the single pond for the sub-basin.

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

Pond 2E is located north of 11th Avenue on a privately owned multifamily parcel. The pond would be a wet detention facility and the single pond for the sub-basin. A 30-foot wide, 185-foot long drainage easement is required for this pond option.

The recommended sites for Basin 2 are Pond 2A, Pond 2B, and Pond 2D because of proximity to the corridor.

Basin 3

Basin 3 extends from approximately 7th Avenue West to Manatee Avenue. The basin consists of 0.15 miles of roadway. The proposed stormwater system will convey the runoff by curb and gutter and storm drainpipe to a detention facility. This basin discharges to Manatee Avenue, so a FDOT connection permit is required. There is one pond site alternative for this basin. Alternatives to this pond site include exfiltration trench or a downstream compensatory pond site. A drainage connection through the Palma Sola Scenic Highway Park would be needed.

Pond 3 is located approximately 200 feet west of the intersection of 75th Street and Manatee Avenue. It is located on a vacant privately owned parcel. The pond would be a wet detention facility and the single pond for the basin. Pond 3 is recommended for this basin due to the reduced maintenance requirements compared to an exfiltration pipe system.

Table 18: Basin 3 Pond Options

Factors	*Pond 3
Location (STA)	61+00
Side	LT
Distance from Corridor	200'
Total Area	0.63 AC
FEMA Flood Zone (Yes/No)	No
Hydrologic Soil Group	A/D
Parcel ID	3846600009
Owner	Isbell, June F; Isbell, June F Rev Trust DTD
Occupied/Vacant	Vacant
Land Use	Vacant Residential Platted
Contamination Sites	None
Wetland Impacts	No
Additional Remarks	-

*Recommended Site

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

4.6 Alternatives Evaluation

The project specific evaluation matrix considers the alternatives’ benefits and costs as well as the impacts to the environment and property (see **Table 19**).

Table 19: Evaluation Matrix

	Evaluation Factors	No-Build	Alt. 1 - Median	Alt. 2 - TWLTL
Benefits	Pedestrian Accommodations	Sidewalk gap	Sidewalks	Sidewalks
	Bicycle Accommodations	On-road	Buffered bike lanes and shared use path	Buffered bike lanes
	Traffic	2-lane	4-lane	4-lane
	Safety	No improvement	Improvement	Improvement
Environmental Impacts	Archaeological/Historical Sites (potential)	None	Low	Low
	Parks/Recreational Areas	None	1	1
	Wetlands (acres)	0	0	0
	Surface Waters (acres)	0	0.1	0
	Floodplain (acres)	0	0	0
	Threatened and Endangered Species (potential)	None	Low	Low
	Contamination Sites Ranked High/Medium Risk (number)	0	0	0
Property Impacts	Utilities Relocated	None	Water, electric, sanitary, cable	Water, electric, sanitary, cable
	Right-of-way (acres)	0	4.0	3.2
	Parcels (number)	0	47	41
	Relocations (number)	0	9	3
Cost	Bridge or Culvert Widening	No	Yes	No
	Total Estimated Project Costs* (in present day \$ Millions)	\$0	\$23.4 M	\$17.5 M

*Estimated project costs include engineering, right-of-way, and construction but do not include utility relocations, environmental permits, or contamination remediation.

4.7 Recommended Alternative

Based on the engineering and environmental analysis documented in this report, the recommended alternative for 75th Street includes a raised median, two travel lanes in each direction, sidewalk, and a shared use path. The recommended alternative best meets the project purpose with:

- Sidewalks for pedestrians
- Buffer space between the road and sidewalk for pedestrian comfort
- Shared use path for cyclists and future Palma Sola Trail connection
- Raised median for safety
- Additional through lanes for rush hour traffic

The recommended alternative provides connectivity to the existing sidewalks and a shared-use path that can connect to the future Palma Sola Trail and the future trail along Manatee Avenue. The raised median within project limits will provide speed management, enhanced safety and an opportunity for landscaping. The Recommended Alternative Concept Plans are shown in **Appendix A**.

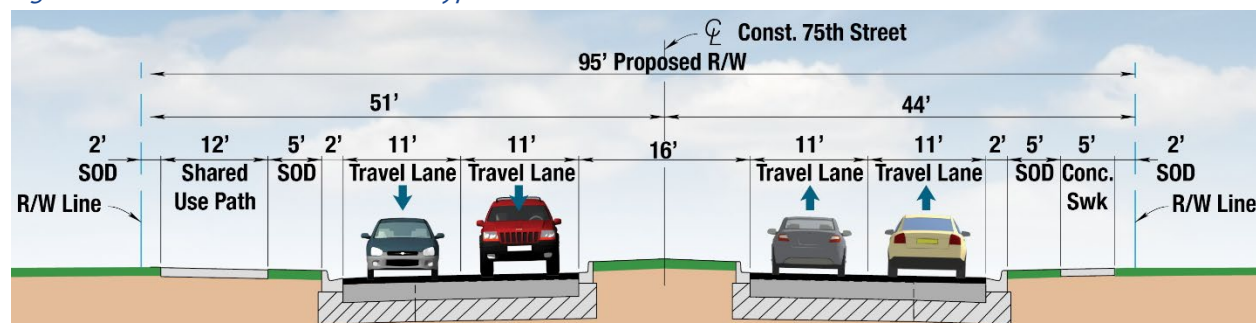
5.0 Details of the Recommended Alternative

This section contains additional details of the recommended alternative.

5.1 Typical Section

The recommended alternative typical section, shown in **Figure 36**, consists of two 11-foot lanes in each direction, 16-foot raised median, 5-foot sod buffers, 5-foot sidewalk, and 12-foot shared use path (trail) on one side. The 2-foot behind the sidewalk/shared use path along both sides is to accommodate utility and light poles. This approach will provide restricted/strategic access management to the adjacent properties without impacting traffic operations, improved safety, and increased opportunity for landscaping.

Figure 36: Recommended Alternative Typical Section



5.2 Horizontal and Vertical Geometry

Generally, the horizontal alignment consists of series of tangents with less than 2-degree deflection angle and no horizontal curvature. The alignment is controlled by the bridge over Cedar Hammock Creek, the existing right of way on the east side, and the tie-in at the Manatee Avenue intersection. The centerline also deflects through the 18th Avenue West intersection as the shared-use path switches from east to west side of the road.

The design consultant should consider Manatee Avenue intersection improvements to improve traffic operations by investigating adding dual northbound and left turn lanes at the intersection.

A minimum of 35-foot curb return radius is proposed at the signalized intersections. A 25-foot minimum curb return radius is proposed at intersections with local roads. For left-turn control radii, 75-foot control radii were used at industrial/commercial locations, and 50-foot control radii were used at residential areas.

To facilitate drainage on a curb and gutter facility, vertical alignment will require a minimum of 0.3% longitudinal slope to be maintained for 250 ft. between high point and lows points. Gravity walls or temporary construction easements may be needed were back-of-sidewalk elevations differ from existing grade.

5.3 Project Traffic Volumes

Table 20 summarizes the AADT volumes as well as the peak hour factor (K), directional (D) factor, and Truck (T) factor for the 75th Street corridor. Traffic volume projections are rounded to the nearest five hundred vehicles per day.

Table 20: Project Traffic Summary

Current Year (2021) AADT	21,000
Opening Year (2025) AADT	22,500
Design Year (2045) AADT	30,500
Standard K	0.09
D Factor	0.52 (NB)
T Daily	2.2%
Design Hour T	1.1%

5.4 Intersection Concepts

The proposed intersection features are shown in **Table 21**. The existing signalized intersection at Manatee Avenue is not anticipated to be impacted by the recommended alternative, however the designer should investigate whether dual lefts are justified for the NB and SB approaches.

The existing signalized intersection at 18th Avenue West will require reconstruction. New signals are recommended to have mast arm supports because the project limits are within the mast arm policy area,¹⁰ west of I-75. The existing underground fiber optic conduit, splice vaults, and pull boxes will need relocated. The replacement of the existing MVDS assembly is also required.

Table 21: Proposed Intersection Features

Side Street Roadway	Impacted by Widening	Future Structure	ROW Needed
Manatee Ave	No	N/A	N/A
18th Ave W	Yes	Mast Arms	Yes (NE, SW)

Features to enhance safety and operations will be considered at the existing signalized intersections. The existing intersection at 18th Avenue West does not provide pedestrian crosswalks on all approaches. A marked crosswalk on the NB approach to 18th Avenue West was not recommended due to County concerns over traffic operations. The designer should evaluate a southbound U-turn at the 18th Avenue West intersection and provide supplemental pavement as needed. The four-section flashing yellow arrow (FYA) and retroreflective backplates on signal heads should be incorporated as best practice.

5.5 Access Management Plan

Existing access to side streets and driveways is recommended to be modified. The proposed median openings follow the FDOT criteria for a Roadway Class 7 as best practice. Median openings are

¹⁰ FDOT. 2009. *Mast Arm Structures Boundary Map*. District 1. Accessed August. 31, 2021 from <https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/traffic/trafficservices/pdfs/d1.pdf>

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

proposed at locations that can provide reasonable and safe access (**Table 22**). The designer should evaluate a modified access management plan with a median opening at 11th Avenue West instead of 9th Avenue West. Connection spacing standards for Roadway Class 7 is recommended for new connections.

Table 22: Access Management

Intersection	Access	Remarks
19th Ave Dr W	Full	Unrestricted median
18th Ave W	Full - Signal	3-leg signal
17th Ave W	NB Directional	
Alhambra Dr	Full	
Estremadura Dr	NB Directional	
Portosueno Ave	Full	
11th Ave W	Right-in Right-out	
San Juan Ave	Right-in Right-out	
9th Ave W	Full	
Shopping Center	Full	Within 10% of standard

Although some intersections are recommended to have more restrictive access treatments, the highly connected street network means that routes are available that will minimize disruption to residents. An existing frontage road (75th Street Parkway) provides access to duplex residences between 11th Avenue West and 9th Avenue West. This frontage road will need to be modified to one-way operation, preferably in the northbound direction so that it does not disorient drivers northbound on 75th Street.

5.6 Bicycle and Pedestrian Accommodations

Bicycle and pedestrian accommodations are recommended, including a 12-foot shared use path with future connections anticipated to the Palma Sola Trail and Manatee Avenue Trail.

The existing northbound bike lane is recommended to terminate at a bike ramp immediately north of the existing bridge to allow cyclists to access the proposed shared use path. The shared use path is proposed to cross from the east to the west side of 75th Street at the 18th Avenue West signalized intersection. The north bound bike lane is recommended to be reintroduced approximately 550-feet south of Manatee Avenue to give on-road cyclists a chance to avoid the queue.

Cyclists traveling southbound will be able to access the shared use path via the curb ramp at the Manatee Avenue intersection. Once the cyclists reach the 18th Avenue West intersection, they will have the option to cross 75th Street to stay on the path or utilize a bike ramp to access the southbound bike lane on the bridge over Cedar Hammock Creek. The existing 5-foot sidewalks will be replaced and the sidewalk gap on the east side, near Manatee Avenue, will be closed. Sidewalk segments and curb ramps will be constructed in compliance with ADA standards.

5.7 Right-of-Way Requirements

The recommended alternative requires additional ROW for most of the 75th Street roadway corridor, for corner clips at intersections, and for stormwater ponds. An additional 3.4 acres of ROW are required

from 48 parcels, and 4 relocations. Properties that would have less than the minimum setback from a building to the proposed ROW line were considered whole takes. Some of the impacted parcels are publicly owned by the County. There may be City of Bradenton-owned ROW along the east side of the roadway. Coordination about ROW ownership should continue during the design phase.

5.8 Lighting

The existing lighting on the west side of the roadway will likely be impacted by the proposed roadway improvements. It is anticipated that some existing LED light fixtures can be relocated but will need to be supplemented by additional light poles throughout. Luminaires will likely need to be placed on both sides of the roadway to meet Florida Greenbook lighting criteria for the new roadway typical section. Using a 268-watt LED ATB2 fixture from Florida Power and Light (FPL)'s LED Lighting Catalog, a spacing of approximately 200 feet is recommended per the Roadway Optimizer tool in AGI32.

House shields are recommended on luminaires in the immediate vicinity of homes to prevent light spillback into windows and private residences. Coordination with FPL and the County on fixture type, pole type, mounting heights and bracket arm lengths will be critical to ensure the lighting system complies with all agency preferences.

The proposed typical section includes a shared use path along the side of the roadway. Pedestrian lighting is recommended along the shared use path if there proves to be a significant number of nighttime bicycle and pedestrian users.

Pedestrian crosswalks at signalized intersections will be properly illuminated for enhanced safety of vulnerable users. Supplemental light poles are needed to ensure that pedestrian crosswalks meet FDOT lighting standards. Older HPS fixtures should be replaced with new LED fixtures.

5.9 Utilities

Utility locations were located by utility records (quality level D) and were not field verified. Verified vertical and horizontal locations are recommended during the design phase to identify or avoid utility conflicts with the proposed design.

Generally, utilities along the existing ROW will remain but conflicts are anticipated where pavement widening is proposed, new drainage structures and storm drain is constructed, or where ROW is being acquired. Anticipated utility relocations include fire hydrants, overhead electric poles, cable/communication cabinets (Figure 24), and the sanitary sewer lift station (Figure 17). The 20-inch water main on the bridge can likely remain (**Figure 37**).

Figure 37: Water Main on Bridge (looking southeast)



5.10 Preliminary Drainage Analysis

The recommended alternative will utilize curb and gutter and a closed drainage system to convey runoff to the recommended stormwater management ponds (Table 23). Portions of the adjacent properties drain towards the 75th Street ROW, so back of sidewalk inlets are anticipated to convey off-site flows and maintain existing drainage patterns. The project area outfalls to the Cedar Hammock Creek.

Table 23: Recommended Ponds

Basin 1	Existing pond
Basin 2	Pond 2A, 2B, and 2D
Basin 3	Pond 3

A geotechnical study and further investigation should be performed in the design phase to determine the depth of groundwater. The existing underdrain system runs along the east curb line from the Cedar Hammock Creek to 9th Avenue West. Underdrain is anticipated from 9th Avenue West to Manatee Avenue to address seepage observed in the field (Figure 15) and to ensure high groundwater does not saturate the roadway base.

5.11 Floodplain Analysis

The only portion of the project within the FEMA floodplain is the Cedar Hammock Creek. Floodplain impacts are not anticipated because the recommended alternative utilizes the existing culvert without widening.

The City of Bradenton Stormwater Facilities Plan was developed to identify projects that could help alleviate street flooding throughout the city.¹¹ The Plan shows more flood area for the 100-year event than the FEMA FIRM panels. Based on a review of the GIS, the areas for potential improvements are at the Cedar Hammock Creek, Portosueno Avenue, 11th Avenue West, and 9th Avenue West. It should be noted that the flood model elevations at the Cedar Hammock Creek are significantly higher than the FEMA flood stages. Flood monitoring at this location is recommended to validate the results of this drainage model through a separate hydraulic study.

5.12 Structures

The Cedar Hammock Creek bridge (No. 134094) does not need to be widened for the recommended alternative. The existing guardrail should be brought up to current standards and the concrete barrier evaluated for structural adequacy (**Figure 38**).

Figure 38: Existing Bridge (looking south)



¹¹ Bougha. 2017. *City of Bradenton Stormwater Facilities Plan*. Feb. 2017.

Project Development and Corridor Study Report

75th Street West – 20th Avenue West to Manatee Avenue

The proposed retaining wall south of the Manatee Avenue intersection will be designed to account for high groundwater and potential hydrostatic pressure due to the presence of an underground stormwater vault (Figure 15).

5.13 Cost Estimate

The estimate of probable project costs was based on limited quantity take-offs from the conceptual plans. FDOT historic unit cost averages were used from Area 10, which includes Manatee County. The construction cost estimate is included in **Table 24**. A high percentage of project unknowns is appropriate at this conceptual stage but will be reduced as the concept is further refined in the design phase.

Table 24: Recommended Alternative Construction Cost Estimate

Item	Cost
Structures	\$ -
Roadway and Drainage	\$ 4,380,260
Signing & Pavement Markings	\$ 48,843
Lighting	\$ 428,592
Signalization	\$ 750,000
Landscape	\$ 1,000,000
MOT (10%)	\$ 660,770
Mobilization (10%)	\$ 726,847
Project Unknowns (50%)	\$ 3,997,656
Initial Contingency	\$ 107,032
Construction Cost Total (2021 Cost)	\$ 12,100,000

The estimated total project costs of the recommended alternative are shown in **Table 25**. Professional Services and ROW costs used in this analysis are approximate. Actual ROW values will be determined during the appraisal phase of the project.

Table 25: Recommended Alternative Cost Estimate

Item	Cost
Professional Services (Engineering, Legal, CEI = 27%)	\$ 3,300,000
Wetland Mitigation	\$ -
ROW costs	\$ 4,000,000
Construction Costs	\$ 12,100,000
Estimated Total Project Costs (2021 Cost)	\$ 19,400,000

6.0 Summary of Permits and Mitigation

This section summarizes the permits and mitigation needed for this project alternative.

6.1 Stormwater

SWFWMD requires an ERP when construction of any project results in the creation of a new or modification of an existing surface water management system or results in impacts to waters of the state. The existing road is permitted under ERP #12088.002. Under current state rules, SWFWMD will require an ERP modification to the existing permit. Pre-application meeting minutes are included in **Appendix F**. A FDOT Drainage Connection Permit is anticipated for the northern portion of the project that discharges to Manatee Avenue. The FDOT permit requires no adverse impacts to the FDOT drainage system along Manatee Avenue.

6.2 Natural Resources

Bridge widening with the recommended alternative is considered an impact to the surface water below. Both the Florida Department of Environmental Protection (FDEP) and SWFWMD regulate impacts to wetlands within the project area. Other agencies, including the United States Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), Environmental Protection Agency (EPA), and the Florida Fish and Wildlife Conservation Commission (FWC), review and comment on wetland permit applications. If needed, wetland mitigation credits are available from the Long Bar Pointe or Manatee Mitigation Banks. Manatee County will need to perform updated wildlife surveys during the design phase to ascertain the involvement, if any, of listed species. If needed, the FWC issues permits for gopher tortoise relocation activities or incidental takes for state protected avian species, while USFWS is the lead agency for eagle nest take permitting or coordination.

6.3 Cultural Resources

Although no individual building within the APE is currently eligible for National Register listing, Palma Sola Park as a community may meet SHPO Criteria for Evaluation due to distinct characteristics of the period.¹² The Village Green neighborhood could also be evaluated but lacks distinct and unique features that would make it an exceptional example of neighborhoods planned in that timeframe. Potential historic properties should be evaluated by an architectural historian during the design phase. The NRHP eligibility finding can then be coordinated with the SHPO for concurrence.

6.4 Potential Contamination

Based on available information, the project site has a low risk to contain contamination. There are no apparent medium or high-risk sites that could affect the recommended alternative. Any dewatering operations must obtain a National Pollutant Discharge Elimination System (NPDES) Generic Permit for Discharge of Groundwater. Dewatering operations in areas identified with contamination issues require treatment of effluent to limits and requirements specified in the NPDES Generic Permit. No further assessment/review for contamination appears warranted.

¹² Florida Dept. of State. 2021. Criteria for Listing. Accessed on Aug. 25, 2021 from <https://dos.myflorida.com/historical/preservation/national-register/criteria-for-listing/>

Appendices

**Appendix A –
Recommended Alternative Concept Plans**

CONCEPT PLANS FOR 75TH STREET WEST

FROM 20TH AVE W TO MANATEE AVE W

MANATEE COUNTY PROJECT # 6108260



PROJECT TEAM:

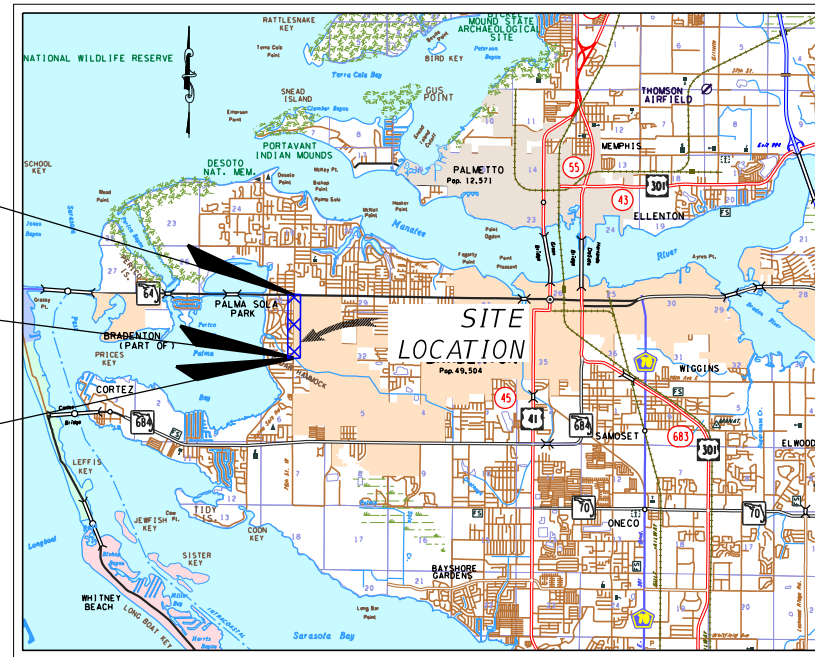
OWNER:
MANATEE COUNTY
1022 26TH AVE. E.
BRADENTON, FL 34206
CONTACT: ERIC SHROYER, P.E.
941-708-7450 ext. 7344

ENGINEER:
KIMLEY-HORN AND ASSOCIATES, INC.
1777 MAIN STREET, SUITE 200
SARASOTA, FL 34226
CONTACT: CRIS S. SCHOOLEY, P.E., AICP
941-379-7600

END PROJECT
☐ CONST. 75TH ST W
STA. 61+60.00

BEGIN PROJECT
☐ CONST. 75TH ST W
STA. 10+20.00

BRIDGE NO. 164094



PROJECT VICINITY MAP

N.T.S.

INDEX OF CONCEPT PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2 - 3	DRAINAGE MAP
4	TYPICAL SECTIONS 75TH STREET WEST
5 - 12	RECOMMENDED ALTERNATIVE

OCTOBER 15, 2021
NOT FOR CONSTRUCTION

PREPARED BY
Kimley»Horn

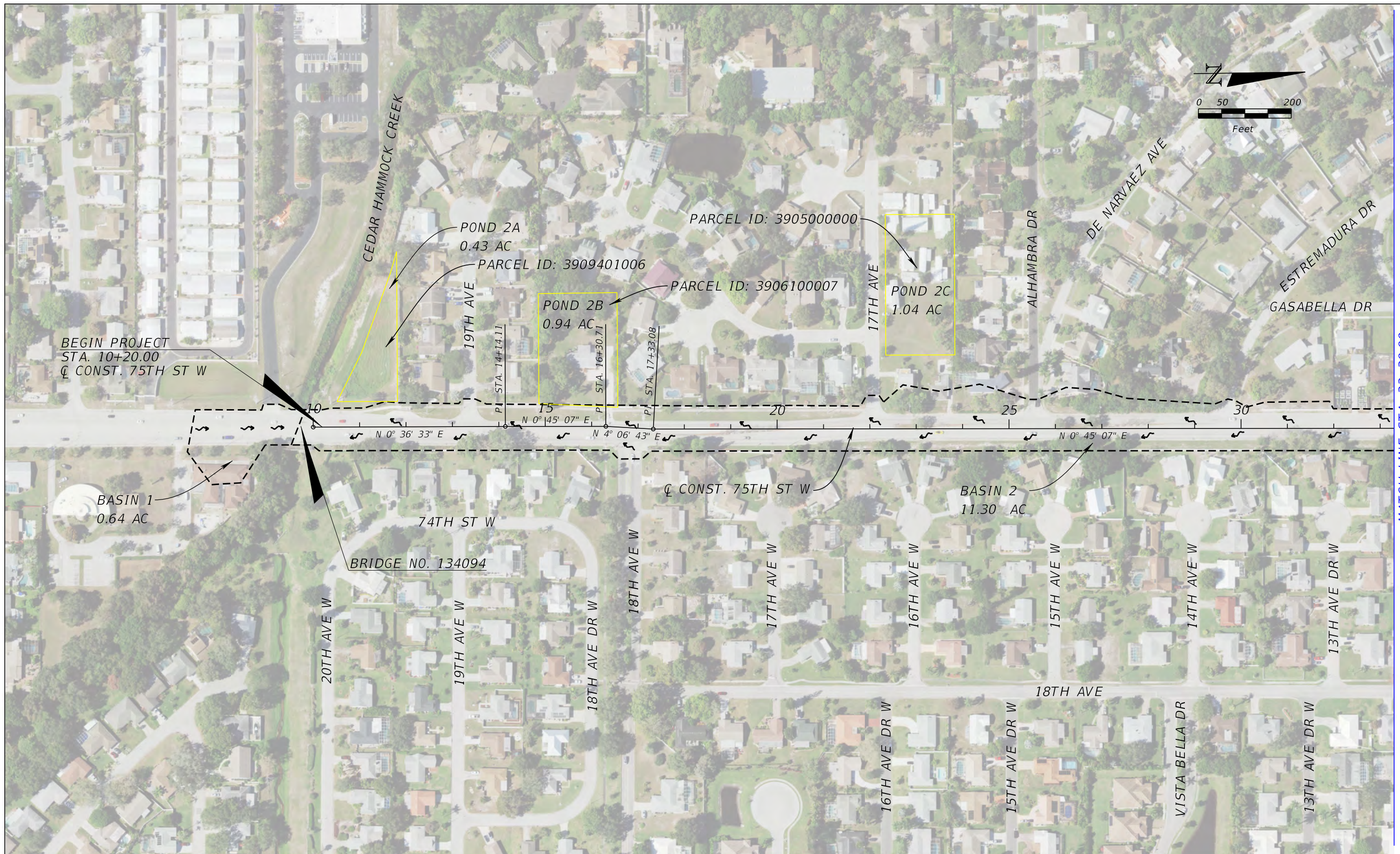
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CRIS SCHOOLEY, P.E.
FLORIDA LICENSE NUMBER:
74018
DATE:

DATE OCTOBER 2021
KHA CIP NO. 6107860
SHEET NUMBER 1



BEGIN PROJECT
STA. 10+20.00
Q CONST. 75TH ST W

MATCH LINE STA. 33+30.00

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KHA PROJECT 148400075
DATE 9/1/2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
CHECKED BY

Manatee County

75TH STREET WEST

MANATEE COUNTY

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74018

DRAINAGE MAP

SHEET NUMBER
2

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75TH STREET WEST

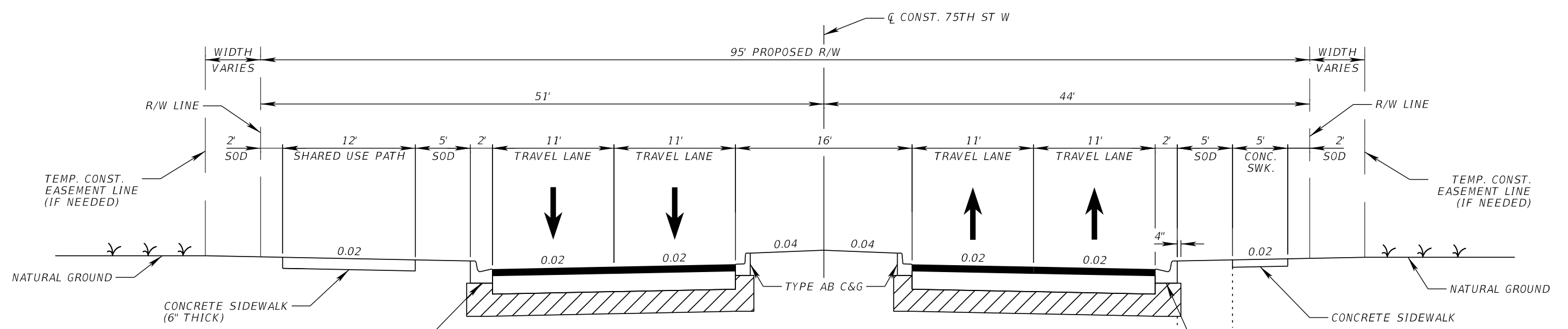
MANATEE COUNTY

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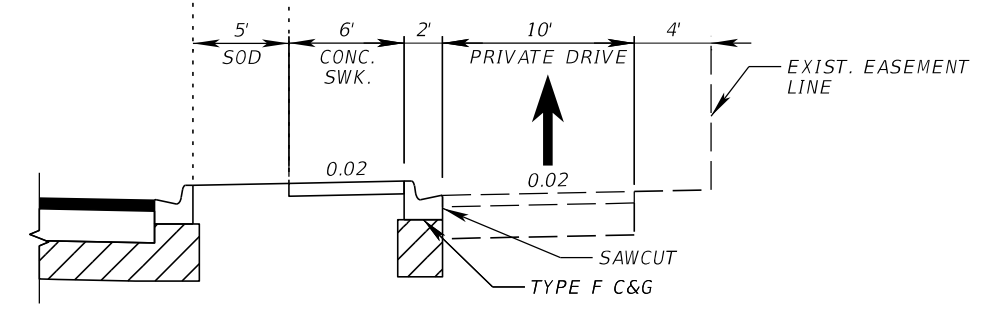
DRAINAGE MAP

SHEET NUMBER
3



TYPICAL SECTION - RECOMMENDED ALTERNATIVE
75TH STREET WEST

FROM 20TH AVE W TO MANATEE AVE W



FROM 11TH AVE W TO 9TH AVE W

DESIGN SPEED = 40 MPH

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TYPICAL SECTIONS
75TH STREET WEST

SHEET NUMBER 4



FULL PARCEL TAKE
DUE TO POND
1816 75TH ST W
BRADENTON FL 34209-4855
PARCEL NO. 3906100007

BEGIN PROJECT
10+20.00
MATCH EXIST.

Q CONST. 75TH ST W

PI STA 14+14.11

MATCH LINE STA. 15+80.00

END BIKE LANE AT BIKE RAMP
CONNECT TO EXIST. SIDEWALK
BEGIN PROPOSED SHARED USE PATH

FUTURE PALMA SOLA
TRAIL (BY OTHERS)

LEGEND	
	PARCEL BOUNDARY
	EXIST. R/W
	PROP. R/W
	EXIST. EASEMENT LINE

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75TH STREET WEST

MANATEE COUNTY

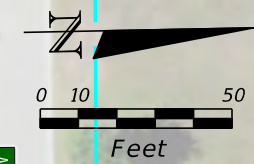
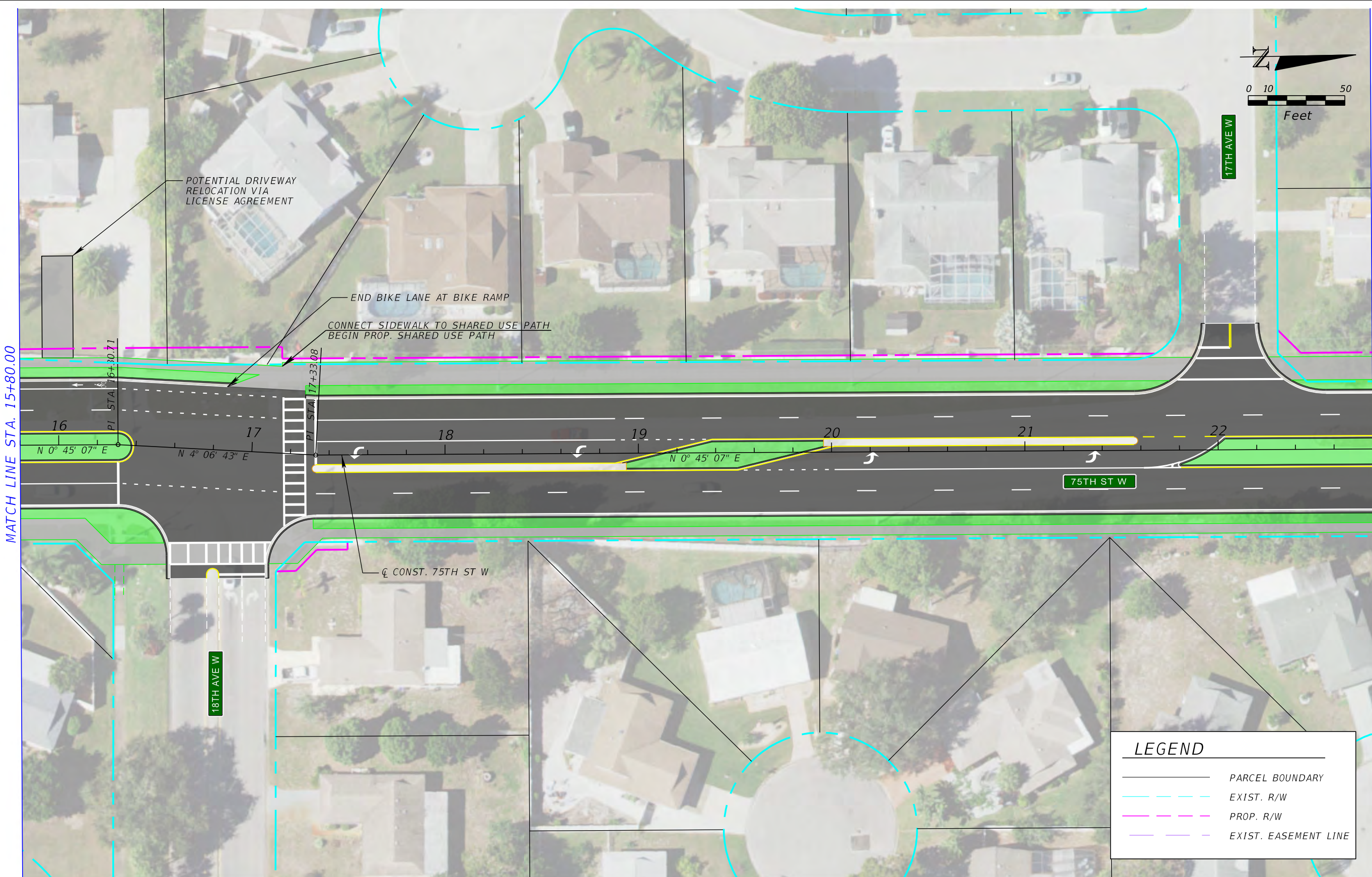
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SHEET NUMBER

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LEGEND	
	PARCEL BOUNDARY
	EXIST. R/W
	PROP. R/W
	EXIST. EASEMENT LINE

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75TH STREET WEST

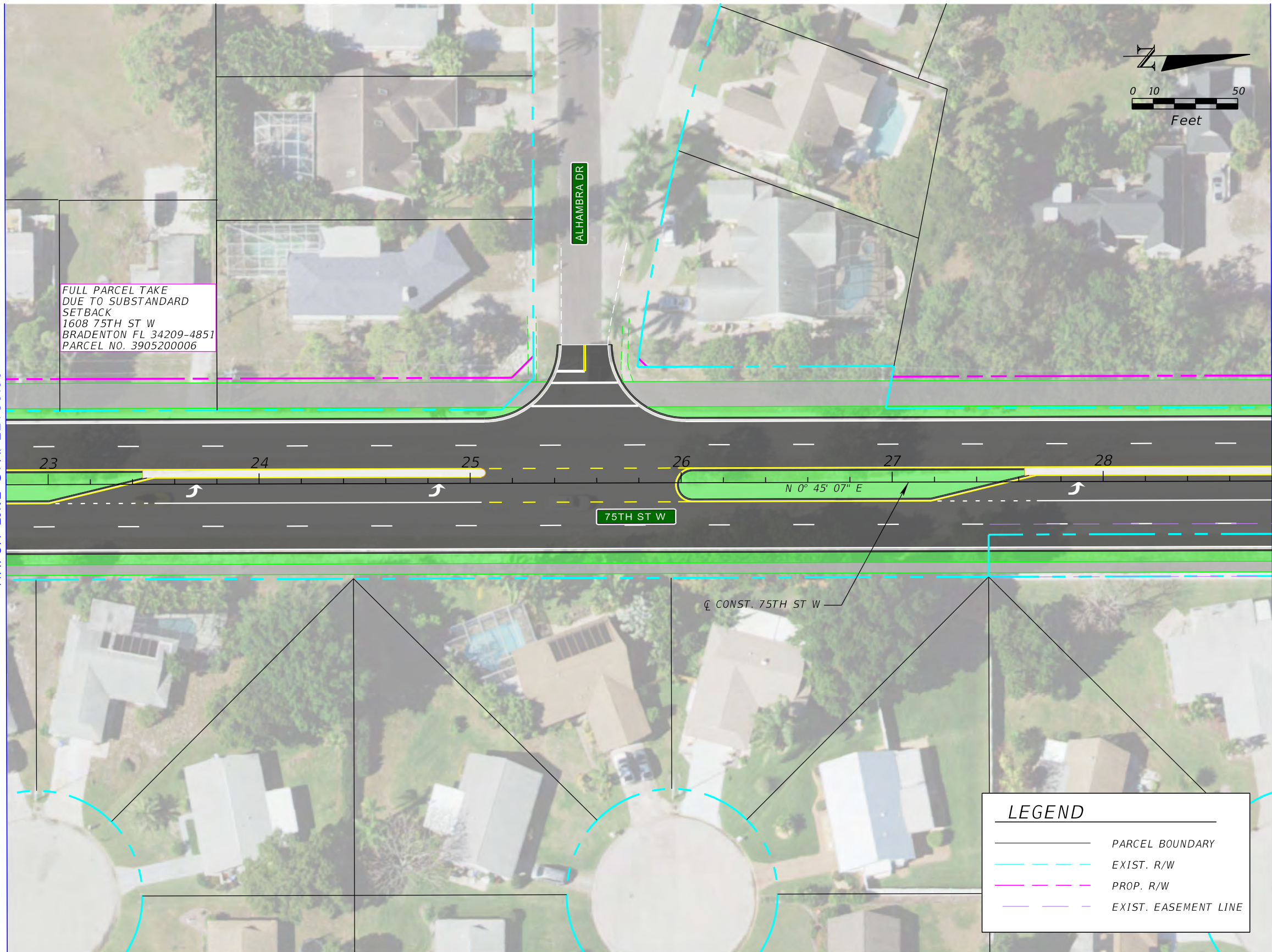
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RECOMMENDED ALTERNATIVE

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MATCH LINE STA. 28+80.00

LEGEND	
	PARCEL BOUNDARY
	EXIST. R/W
	PROP. R/W
	EXIST. EASEMENT LINE

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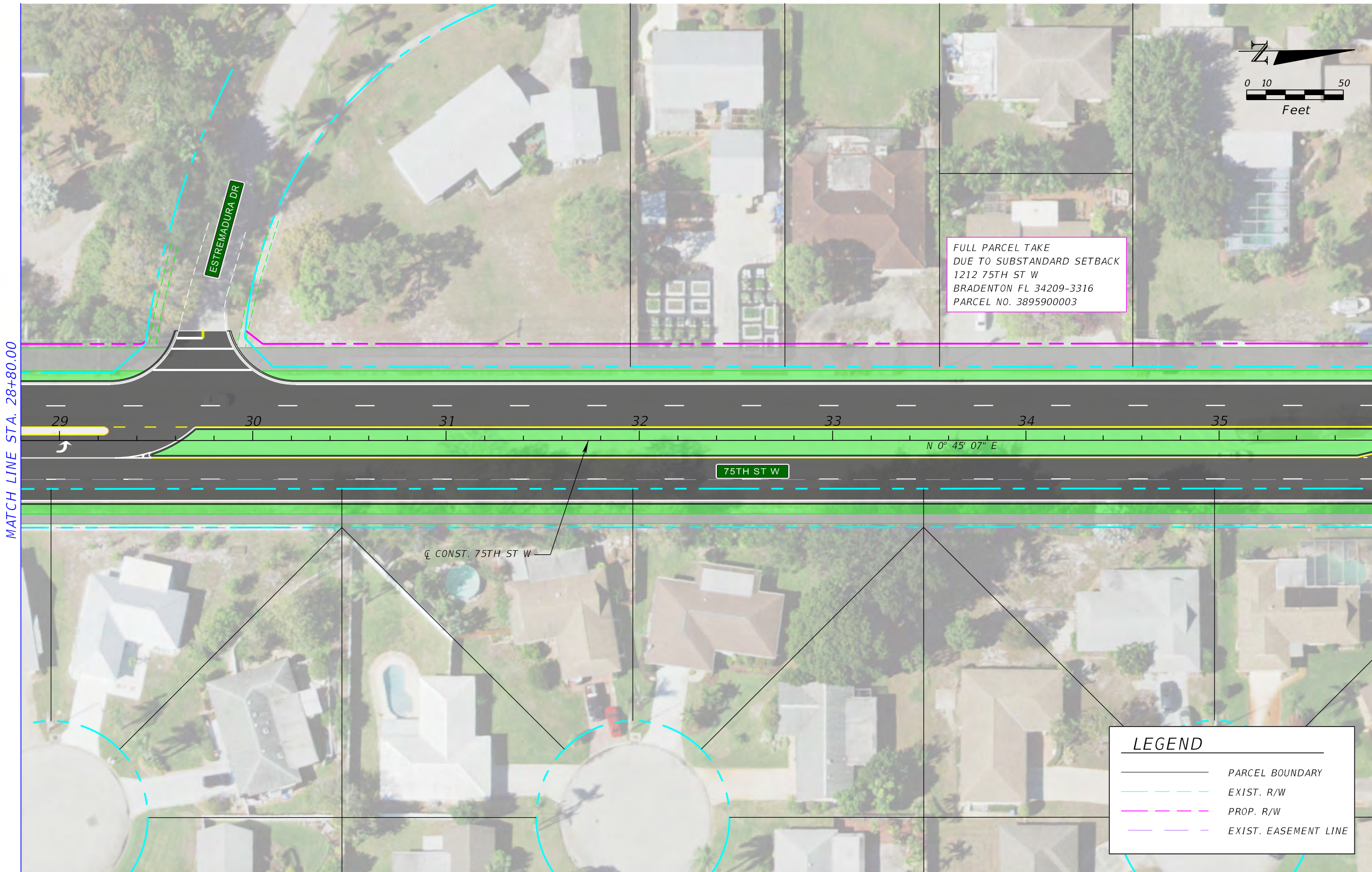
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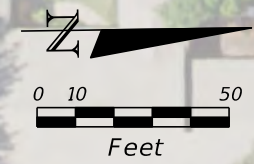
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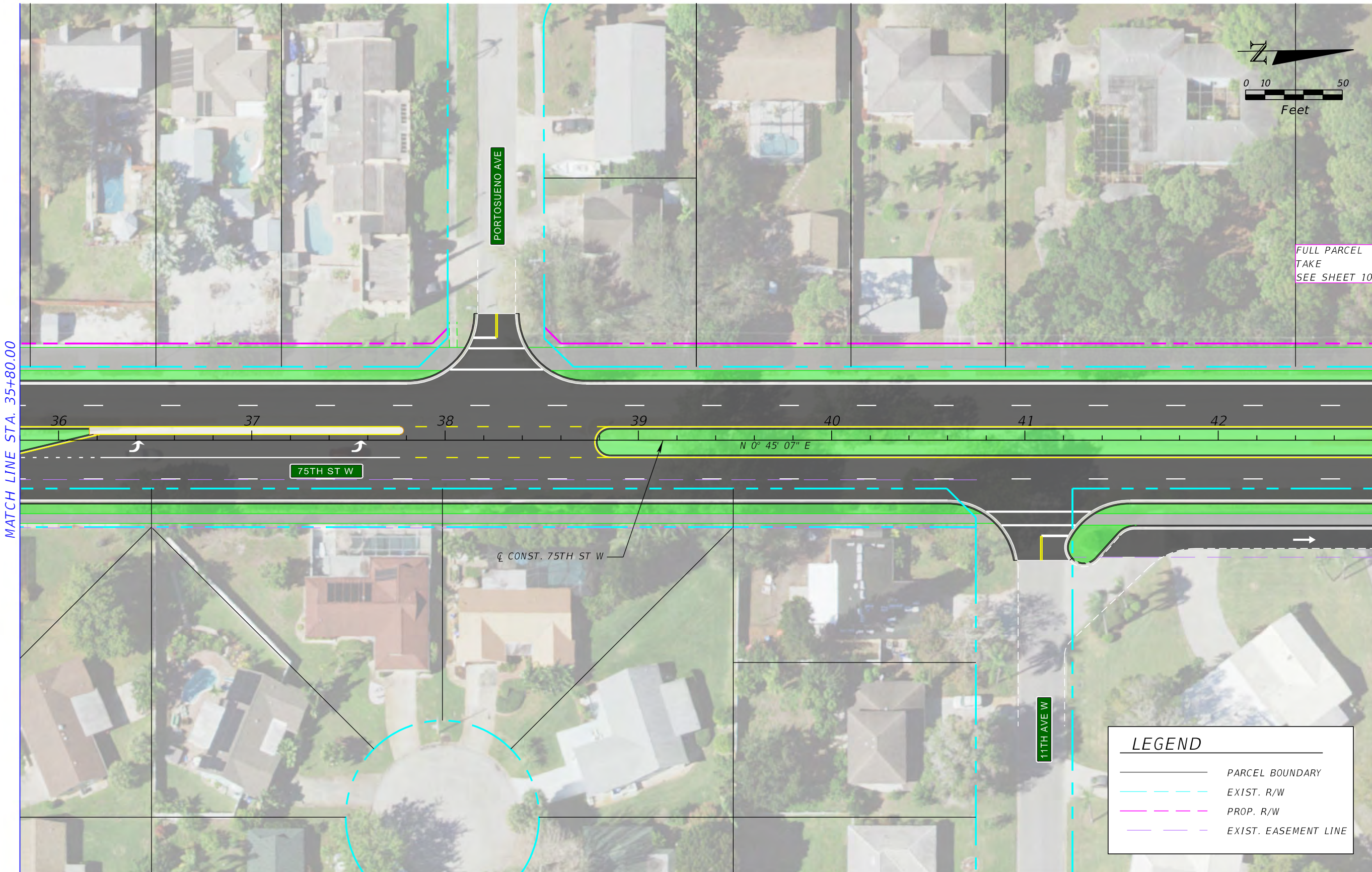
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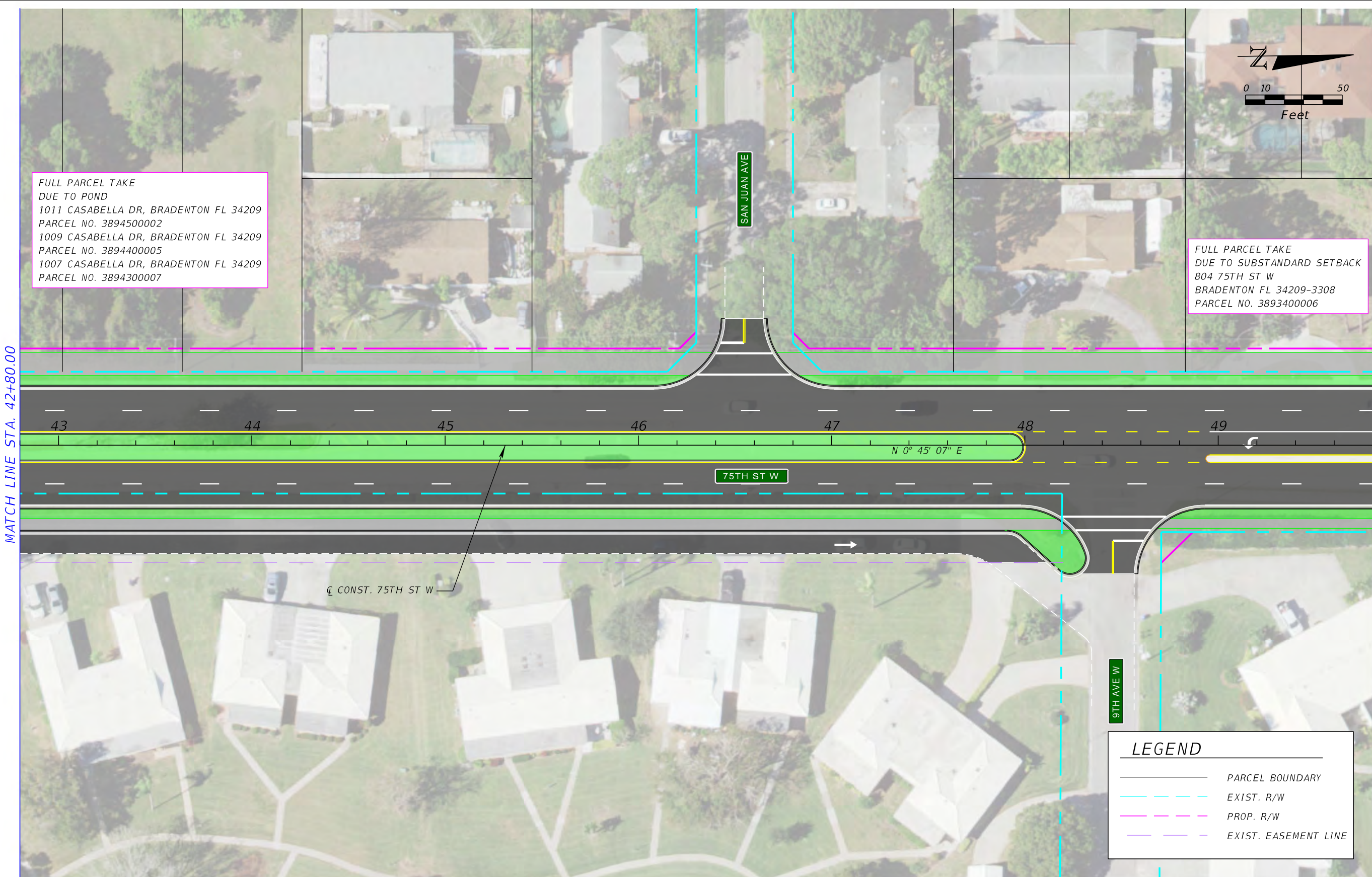
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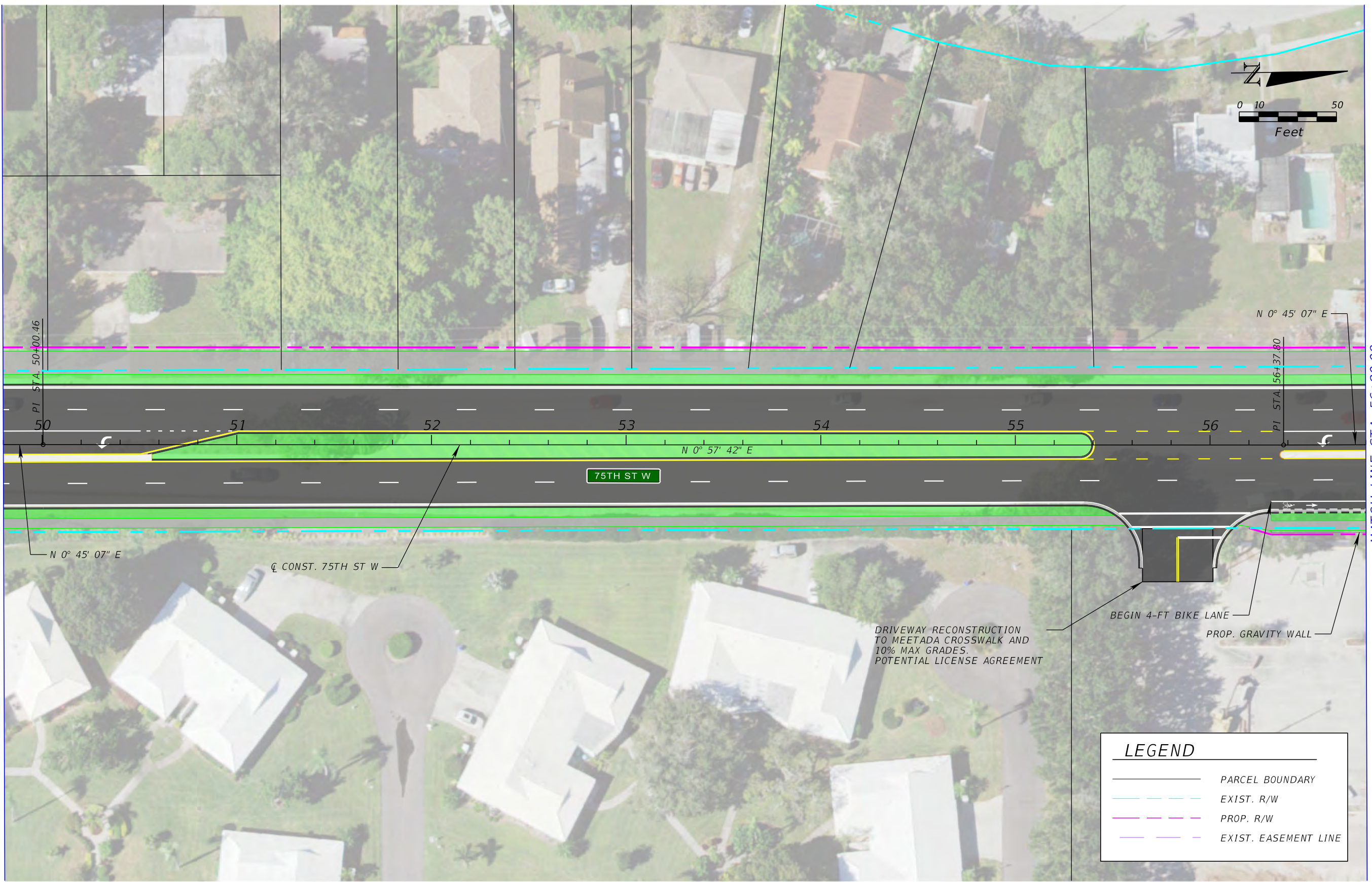
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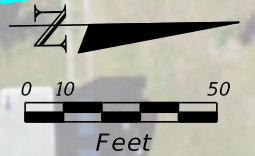
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PI STA. 56+37.80

N 0° 45' 07" E

N 0° 45' 07" E

N 0° 57' 42" E

☉ CONST. 75TH ST W

DRIVEWAY RECONSTRUCTION TO MEET ADA CROSSWALK AND 10% MAX GRADES. POTENTIAL LICENSE AGREEMENT

BEGIN 4-FT BIKE LANE

PROP. GRAVITY WALL

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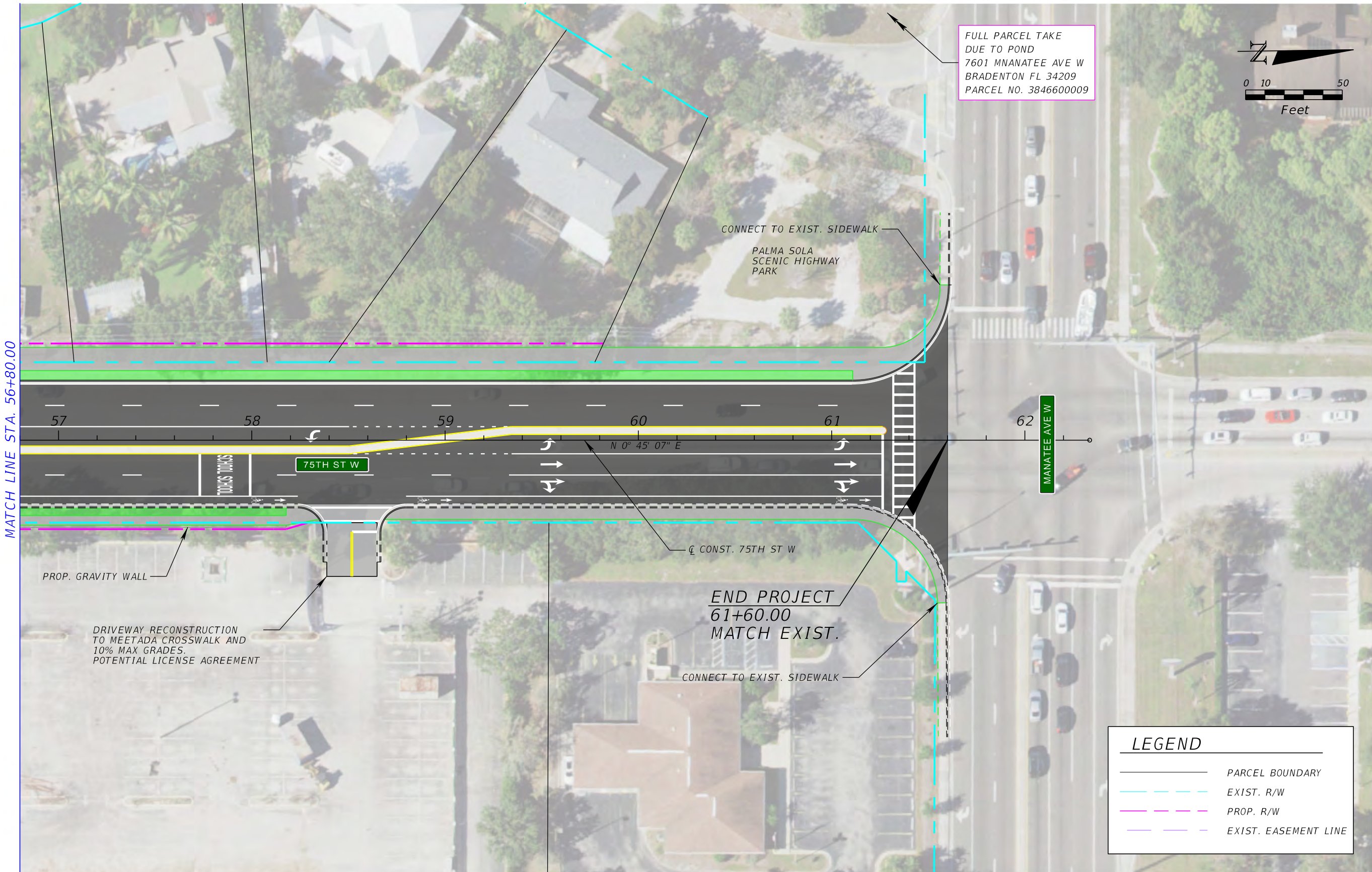
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Appendix B – Design Traffic Memorandum



Design Traffic Memorandum

75th Street West – 20th Avenue West to Manatee Avenue

CIP #: 6108260

REVISION ONE December 1, 2021



Contents

1.0	Introduction	4
1.1	Memo Purpose	4
2.0	Existing Traffic	6
2.1	Corridor Characteristics Roadway Geometry	6
2.2	Existing Segment Analysis	8
3.0	Crash and Safety Analysis.....	11
3.1	Crash Severity	11
3.2	Crash Rate Analysis – Intersections.....	11
3.3	Contributing Factors	14
3.4	Crash Types.....	14
4.0	Future Traffic Forecasting Methodology	15
4.1	Historical Growth.....	15
4.2	BEBR Population Projections.....	15
4.3	Model Growth Rates.....	15
4.4	Applied Growth Rate.....	16
5.0	Future Traffic Projections	17
5.1	Forecasted AADT Volumes	17
5.2	Traffic Factors.....	17
5.3	Design Hour Volume	18
5.4	Design Turning Movement Volumes	18
6.0	Future Traffic Analysis	19
6.1	Future No Build	19
6.2	Intersection Control Evaluation	20
6.3	TSM&O.....	21
	TSM&O Operational Analysis.....	21
6.4	Build	21
	Build Operational Analysis.....	22
7.0	Recommendations	23

Figures

Figure 1: Project Location Map	5
Figure 2: Intersection Configurations.....	7
Figure 3: Crash History, 2016–2020.....	13

Tables

Table 1: Existing AADT Volumes and 2021 Estimates.....	8
Table 2: Existing (2021) Annual Average Daily Segment LOS	8
Table 3: Existing (2021) Intersection LOS and Delay.....	9
Table 4: Performance Measures – Existing (2021) Conditions, 75th Street and Manatee Ave	10
Table 5: Five Year Crash Severity Summary	11

Design Traffic Memorandum

75th Street West – 20th Avenue West to Manatee Avenue

Table 6: Intersection Crash Rates, 2016–2020.....	12
Table 7: High-Crash Intersection Summary.....	12
Table 8: Contributing Factors to Crashes Summary.....	14
Table 9: Crash Summary by Crash Type.....	14
Table 10: BEBR Population Projections - Manatee County.....	15
Table 11: AADT Volume Summary.....	17
Table 12: Calculated K-factors.....	17
Table 13: Calculated D-Factors.....	18
Table 14: Calculated DHT and T-Factor.....	18
Table 15: DHV Summary.....	18
Table 16: No Build Segment LOS.....	19
Table 17: No Build Intersection LOS and Delay.....	19
Table 18: ICE Benefit-Cost Summary.....	21
Table 19: TSM&O Operational Analysis Summary.....	21
Table 20: Build Segment LOS.....	22
Table 21: Build Intersection LOS and Delay.....	22

Attachments

Attachment A: Signal Timing Worksheets

Attachment B: Turning Movement Count Data

Attachment C: Intersection Volume Development Worksheets

Attachment D: Synchro Outputs

Attachment E: Intersection Control Evaluation

1.0 Introduction

Manatee County is conducting a Project Development & Corridor Study to evaluate an approximately 1-mile segment of 75th Street West (75th Street) from approximately 20th Avenue West to Manatee Avenue/State Road (SR) 64 in Manatee County, Florida, adjacent to the City of Bradenton. The project limits and general study area are shown in **Figure 1**. The study will evaluate options for widening the existing 2-lane roadway to a 4-lane roadway with a center two-way left-turn lane (TWLTL) or median in addition to providing an enhanced mobility experience for all users.

As a part of the Project Development and Corridor Study, this Design Traffic Memorandum (DTM) is provided to describe the existing corridor characteristics and existing traffic level of service (LOS) as well as to detail the methodologies employed to forecast future traffic demand, report the results of traffic projections, and evaluate the anticipated performance of the 75th Street corridor in the future. The DTM includes an analysis of the anticipated operational performance of the 75th Street Corridor under future No Build (no improvements to the study corridor) and future Build alternatives for Opening Year 2025 and Design Year 2045.

1.1 Memo Purpose

The purpose of this Design Traffic Memo is to document the existing traffic data, safety evaluation, future traffic analysis, and the recommended intersection control and geometry.

Based on anticipated deficiencies in the No Build alternative, potential corridor improvements are proposed to improve safety and increase capacity along the corridor. A crash analysis was conducted for the roadway and signalized intersections (75th Street at 18th Avenue West and at Manatee Avenue). Operational analyses were conducted for the following scenarios:

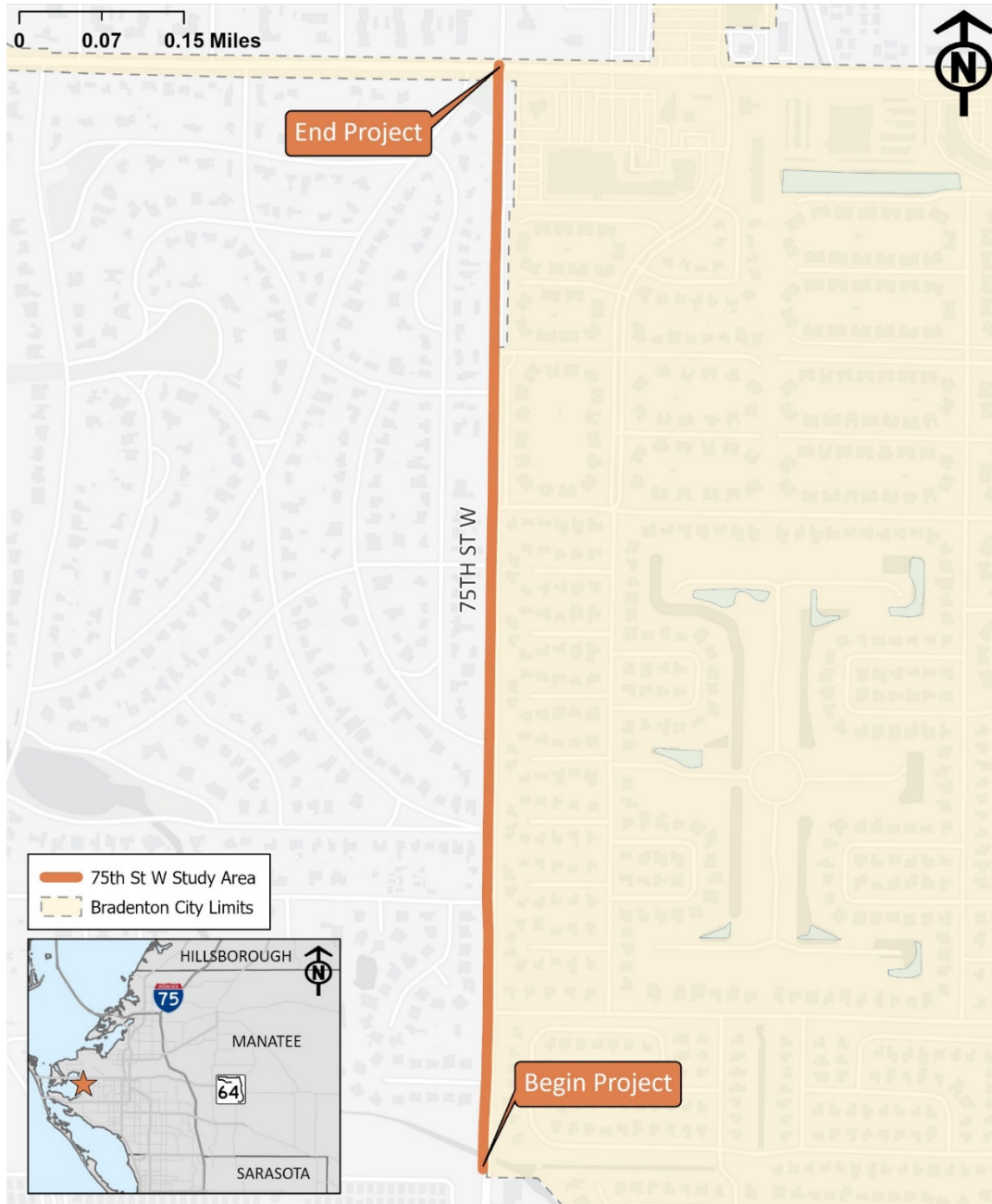
- Existing Conditions (2021): 2021 traffic volumes on the existing roadway network.
- Future No Build (2025): Projected future traffic volumes on the existing roadway network.
- Future Build (2025): Projected future traffic volumes on an improved roadway network.
 - Transportation Systems Management and Operations (TSM&O) Alternative: Intersection improvements, including turn lanes and timing improvements at 75th Street and 18th Avenue West.
 - Build Alternative: Widen the entire 75th Street study corridor to feature two (2) northbound lanes and two (2) southbound lanes with intersection improvements at 75th Street and 18th Avenue West.

Design Traffic Memorandum

75th Street West – 20th Avenue West to Manatee Avenue

- Future No Build (2045): Projected future traffic volumes on the existing roadway network.
- Future Build (2045): Projected future traffic volumes on an improved roadway network.
 - TSM&O Alternative: Intersection improvements at 75th Street and 18th Avenue West.
 - Build Alternative: Widen the entire 75th Street study corridor to feature two (2) northbound lanes and two (2) southbound lanes with intersection improvements at 75th Street and 18th Avenue West.

Figure 1: Project Location Map



2.0 Existing Traffic

2.1 Corridor Characteristics Roadway Geometry

Cross Section Elements

The majority of the 75th Street study corridor features two vehicular travel lanes (one in each direction). The corridor widens to a 4-lane divided facility for approximately 550 feet as it approaches Manatee Avenue. The typical section for the remainder of the study corridor features a raised median with curb and gutter. There are median openings providing access to minor streets and private driveways.

Horizontal and Vertical Elements

The 75th Street study corridor does not feature any significant horizontal or vertical curves within the study limits.

Intersection Configurations

Figure 2 illustrates the existing lane configurations for the two signalized intersections along the 75th Street study corridor. There is no west leg of the 75th Street and 18th Avenue West intersection, though there is a private driveway for a singular residence that is slightly offset, which has access to the signal.

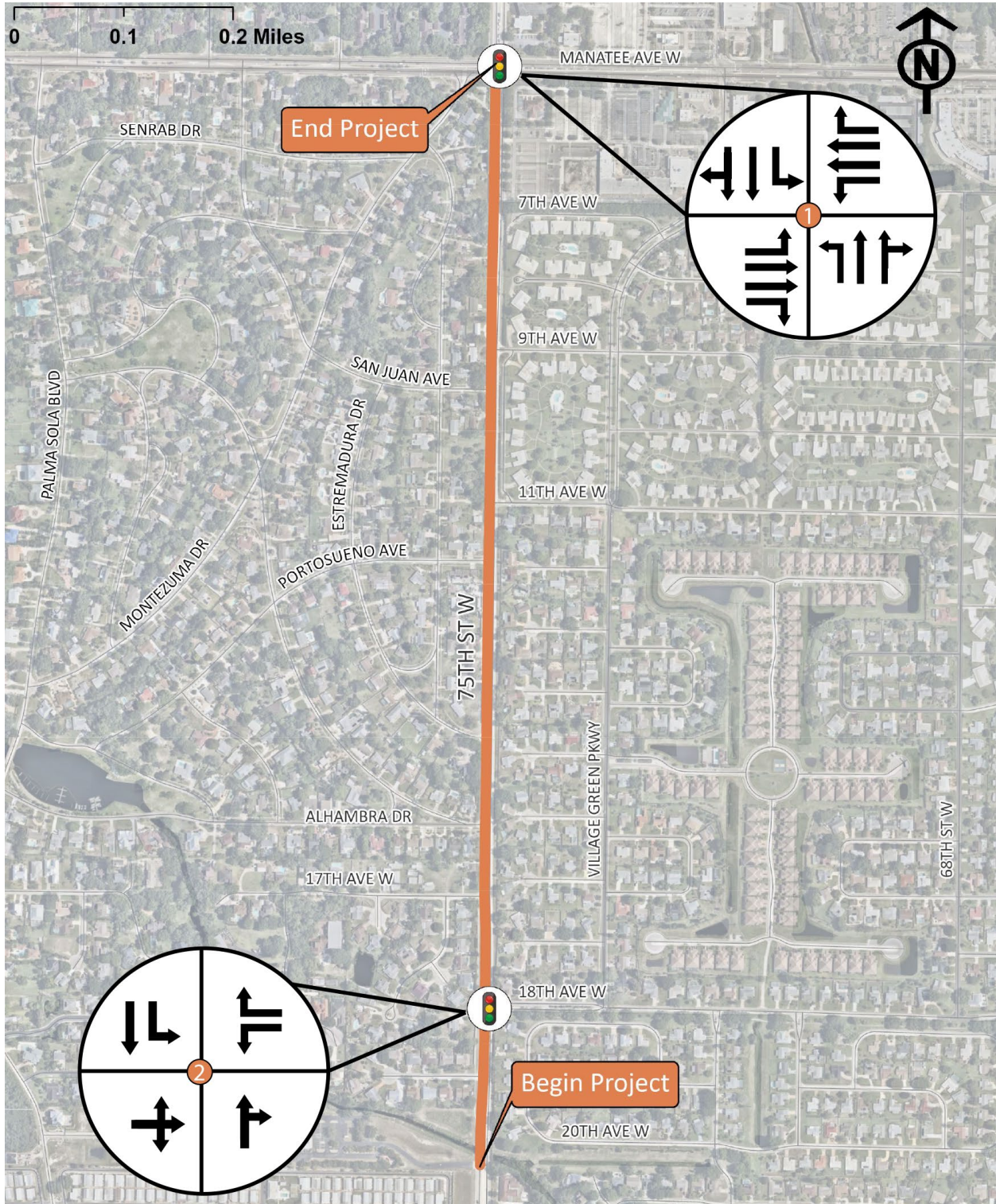
Speed Limit

The posted speed limit along the 75th Street study corridor is 40 mph.

Design Traffic Memorandum

75th Street West – 20th Avenue West to Manatee Avenue

Figure 2: Intersection Configurations



2.2 Existing Segment Analysis

Manatee County LOS Standards

The Manatee County adopted LOS standard for 75th Street is LOS D.

Segment Volumes

Annual Average Daily Traffic (AADT) volumes for the study corridor were gathered from Manatee County's Online Traffic Counts Geographics Information System (GIS) application. A historical growth rate of 2.20%, based on historical AADT volumes, was used to grow 2019 AADT volumes to the existing year (2021) for existing condition analyses. Year 2020 AADT volumes were less than the previous year due to the COVID-19 pandemic causing abnormal traffic patterns on roadways and were therefore disregarded from historical growth calculations. The AADT volumes for 75th Street are summarized in **Table 1**.

Table 1: Existing AADT Volumes and 2021 Estimates

Count Station No.	Location	2019 AADT	2020 AADT	2021 AADT (Estimate)
MCTE 01-28	Bridge #134094	20,253	18,679	21,000

Turning Movement Counts

Historical turning movement counts (TMCs) were provided by Manatee County for the signalized intersections along the 75th Street study corridor. TMC data is provided in **Attachment A**. The data collected was adjusted using seasonal factors from the FDOT 2019 Peak Season Factor Category Report for Manatee County. The application of seasonal factors is illustrated in the volume development worksheets provided in **Attachment B**.

Segment Analysis

The 75th Street study corridor is comprised of one study segment based on Table 5-1 in Manatee County's latest Comprehensive Plan. Segment performance was analyzed using service capacities from the FDOT Quality/ Level of Service (Q/LOS) Handbook (2020).

The LOS results of exiting (2021) daily conditions segment analysis are shown in **Table 2**. The 75th Street corridor exceeds its adopted LOS service volume under existing (2021) daily conditions.

Table 2: Existing (2021) Annual Average Daily Segment LOS

Segment		AADT	Adopted Service Volume	LOS
South Limit	North Limit			
20th Avenue W	Manatee Avenue W	21,000	16,727	F

Intersection Analysis

The *Synchro 11* software package was utilized to evaluate the existing conditions at the signalized intersections on the 75th Street study corridor during the A.M. and P.M. peak hour. The latest traffic signal timings and phasing operations were provided by Manatee County (**Attachment C**) and used in

Design Traffic Memorandum

75th Street West – 20th Avenue West to Manatee Avenue

the analysis. **Table 3** summarizes the overall delay, LOS, and max v/c for the signalized intersections on the 75th Street study corridor. *Synchro* output reports are included in **Attachment D**.

Table 3: Existing (2021) Intersection LOS and Delay

Intersection	Weekday A.M. Peak Hour			Weekday P.M. Peak Hour		
	LOS	Delay (s/veh)	Max v/c	LOS	Delay (s/veh)	Max v/c
18th Avenue W	B	15.4	0.77 (NBT/R)	B	16.7	0.80 (WBL/T)
Manatee Avenue W	E	64.7	0.93 (SBL)	E	74.9	1.02 (SBL)

The 75th Street intersection with 18th Avenue West performs at LOS B under the existing (2021) conditions during the A.M. peak hour and the P.M. peak hour. However, the westbound left-turn movement currently performs at LOS E under P.M. peak hour conditions due to the prioritization of the 75th Street mainline.

The 75th Street intersection with Manatee Avenue has performs at LOS E during the AM and PM peak hour, and the southbound left-turn movement has volumes that exceed the available capacity (volume-to-capacity ratios exceed 1.00) during the P.M. peak hour. A more thorough breakdown of performance measures at the intersection of Manatee Avenue and 75th Street is shown in **Table 4**.

Design Traffic Memorandum

75th Street West – 20th Avenue West to Manatee Avenue

Table 4: Performance Measures – Existing (2021) Conditions, 75th Street and Manatee Ave

	AM Peak Hour				PM Peak Hour			
	Delay (s/veh)	LOS	v/c	95 th Percentile queue (veh)	Delay (s/veh)	LOS	v/c	95 th Percentile queue (veh)
Overall Intersection	64.7	E	-	-	74.9	E	-	-
Eastbound	57.9	E	-	-	72.4	E	-	-
<i>EBL</i>	88.2	F	0.83	4.4	101.5	F	0.84	8.9
<i>EBT</i>	54.0	D	0.56	9.2	68.0	E	0.77	19.3
<i>EBR</i>	51.9	D	0.39	5.6	71.5	E	0.71	16.7
Westbound	51.1	D	-	-	63.0	E	-	-
<i>WBL</i>	84.7	F	0.82	11.5	112.3	F	0.98	26.1
<i>WBT</i>	38.8	D	0.41	7.8	45.6	D	0.55	17.7
<i>WBR</i>	44.9	D	0.58	10.8	48.5	D	0.57	17.2
Northbound	85.6	F	-	-	86.9	F	-	-
<i>NBL</i>	88.2	F	0.91	9.4	86.3	F	0.91	13.9
<i>NBT</i>	82.5	F	0.91	12.8	85.9	F	0.95	24.9
<i>NBT/R</i>	86.8	F	0.92	12.6	88.5	F	0.96	23.4
Southbound	70.0	F	-	-	84.8	F	-	-
<i>SBL</i>	91.4	F	0.93	14.4	127.1	F	1.02	25.7
<i>SBT</i>	57.2	E	0.61	9.3	49.6	D	0.39	10.7
<i>SBT/R</i>	57.4	E	0.62	9.4	49.7	D	0.39	10.9

3.0 Crash and Safety Analysis

Crash data for years 2016 to 2020 were obtained from the University of Florida’s *Signal Four Analytics* web application within the 1.0-mile extent of the 75th Street study corridor. Crash details including crash location, crash type, time of crash, lighting conditions, surface conditions, and other contributing factors were assessed to identify potential high-crash locations and trends.

A total of 64 crashes—including 14 injury crashes and 50 property damage only (PDO) crashes—were reported over the five-year period from January 1, 2016 to December 31, 2020. The annual crash frequency does not appear to follow a discernable trend during the study period. **Figure 3** illustrates the crash locations along the corridor during the five-year analysis period.

3.1 Crash Severity

Crashes resulting in an injury accounted for 22% of crashes during the analysis period. **Table 5** summarizes the crashes that occurred in the study area by severity.

Table 5: Five Year Crash Severity Summary

Crash Severity	Year					Total
	2016	2017	2018	2019	2020	
Injury	3	4	1	3	3	14
Property Damage Only	18	8	6	7	11	50
Total	21	12	7	10	14	64

3.2 Crash Rate Analysis – Intersections

The crash data were also analyzed to determine prominent intersections along the corridor where crashes occurred during the five-year period. The criterion used to define a high crash intersection was an intersection experiencing more than 20 crashes over the analysis period. The limits of the area of influence for each intersection were extended 250 feet in each direction along 75th Street to include crashes that were likely related to the intersection.

Table 6 summarizes the results of the crash rate analysis for signalized intersections. Intersection crash rates are established based on crashes per million entering vehicles (MEV). High crash intersections are denoted in **bold**. Within the study limits, only the intersection of Manatee Avenue and 75th Street exhibited more than 20 crashes during the five-year analysis period.

Design Traffic Memorandum

75th Street West – 20th Avenue West to Manatee Avenue

Table 6: Intersection Crash Rates, 2016–2020

Intersection	Intersection Type		2016	2017	2018	2019	2020	Total
18th Avenue W	Signal	Total Crashes	4	2	2	4	1	13
		Crash Rate	0.48	0.24	0.24	0.48	0.12	0.31
Manatee Avenue W	Signal	Total Crashes	13	8	3	4	10	38
		Crash Rate	0.72	0.38	0.16	0.21	0.51	0.40

Approximately 59% (38 crashes) of all study area crashes occurred at the intersection of 75th Street and Manatee Avenue over the five-year period. This intersection also has a higher average crash rate than the intersection of 75th Street and 18th Avenue West.

The intersection of Manatee Avenue and 75th Street was analyzed further to determine any trends or prominent crash types.

Table 7 summarizes the most common crash types at Manatee Avenue and 75th Street.

Table 7: High-Crash Intersection Summary

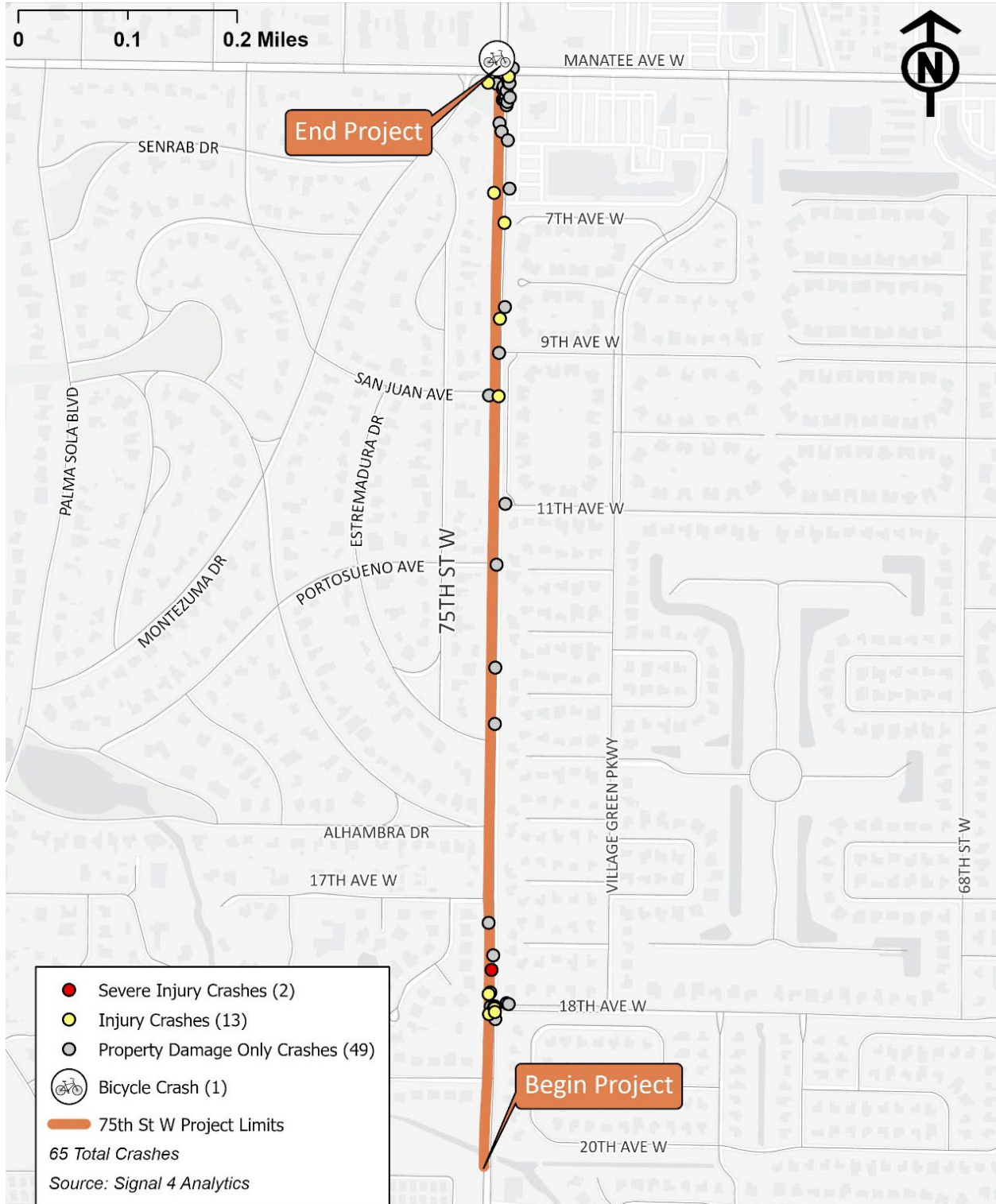
Intersection	Total Crashes	Crash Types			
		Type	Number	Percent of Intersection	Notes
Manatee Avenue	38	Rear End	23	61%	NB/SB = 83% EB/WB = 17%
		Sideswipe	5	13%	NB/SB = 4 Crashes WB = 1 Crash
		Other	10	26%	Angle = 5 Crashes Left Turn = 3 Crashes

Rear end crashes were the most common crash type at approximately 61% of total crashes for the intersection. Almost 83% of rear end crashes at this intersection occurred on the northbound or southbound 75th Street approaches. The second most common crash type at this intersection were sideswipe crashes which accounted for five crashes, of which four occurred on the northbound and southbound approaches.

Design Traffic Memorandum

75th Street West – 20th Avenue West to Manatee Avenue

Figure 3: Crash History, 2016–2020



3.3 Contributing Factors

Contributing factors to the crashes were also analyzed. Crashes that occurred during dark conditions (including dawn and dusk conditions) accounted for 19% of crashes, crashes that occurred on wet surface conditions accounted for 14% of crashes, and alcohol was involved in approximately 5% of crashes. **Table 8** summarizes these contributing factors.

Table 8: Contributing Factors to Crashes Summary

Year	Total Crashes	Dark	Wet	Alcohol
2016	21	3	2	1
2017	12	2	2	0
2018	7	1	1	0
2019	10	3	2	1
2020	14	3	2	1
Total	64	12	9	3
Percent of Total		19%	14%	5%

3.4 Crash Types

Rear end crashes were the most common crash type, accounting for 39 crashes (60.9%) during the analysis period. Sideswipe crashes were the second most common crash type, with 7 crashes (10.9%). Of the crashes resulting in injuries, 57% were rear end crashes and 29% were off road crashes. **Table 9** details the crash data for each year by crash type.

Table 9: Crash Summary by Crash Type

Crash Type	Year					Total	Percentage
	2016	2017	2018	2019	2020		
Rear End	16	5	5	7	6	39	60.9%
Sideswipe	3	0	0	2	2	7	10.9%
Left Turn	2	2	2	0	0	6	9.4%
Off Road	0	1	0	1	3	5	7.8%
Angle	0	2	0	0	1	3	4.7%
Right Turn	0	1	0	0	1	2	3.1%
Bicycle	0	1	0	0	0	1	1.6%
Head On	0	0	0	0	1	1	1.6%

While off road crashes consist of only 8% of the total crashes occurring on 75th Street during the five-year period, off road crashes account for 29% of all injury crashes. Of the five off road crashes that occurred on this study corridor, four resulted in injury. Two of the five crashes were a result of a vehicle traveling southbound on 75th Street and striking the raised median south of San Juan Avenue.

4.0 Future Traffic Forecasting Methodology

This section describes the methodologies employed to forecast future traffic demand.

Consistent with the FDOT *2019 Project Forecasting Handbook*, several tools were utilized to forecast future traffic projections. Historical trends, Manatee County population projections, and travel demand modeling were each reviewed to determine the most appropriate growth rates for forecasting future traffic projections.

4.1 Historical Growth

Historical AADT volumes on 75th Street were utilized to calculate a historical growth rate. Manatee County collects traffic data at one location along the study corridor. Daily traffic volumes were collected each year from 2010 to 2020. Historical AADT volumes for a five-year period (2015–2019) and a ten-year period (2010–2019) were input into the FDOT *Trend* worksheet to calculate trend growth rates through the Design Year (2045). Traffic data from the year 2020 was not used due to COVID-19 causing abnormal traffic patterns throughout the year.

The ten-year historical traffic trend analysis yielded a larger R-squared value than the five-year historical traffic trend analysis, indicating that the ten-year traffic trend analysis growth rate fits the historical data more closely; therefore, the ten-year traffic trend analysis annual growth rate was selected. The ten-year historical traffic trend analysis yielded an average annual growth rate of 2.20% along 75th Street.

4.2 BEBR Population Projections

The University of Florida’s Bureau of Economic and Business Research (BEBR) analyzes the population growth in every county throughout Florida. Annually, BEBR publishes a range of projected county populations for each fifth year from 2025 to 2045. The growth rate implied by the BEBR projections for Manatee County through the Design Year (2045) were considered in determining growth rates for the study corridor.

Table 10 depicts the low, medium, and high population predictions for Manatee County, as well as the associated annual growth rates. For the purposes of this DTM, the BEBR low and high population growth rates are treated as bounds within which the selected growth rate should fall.

Table 10: BEBR Population Projections - Manatee County

2020	Projection	Year					Annual Percentages
		2025	2030	2035	2040	2045	
398,503	Low	401,400	419,000	431,900	442,600	449,600	0.46%
	Medium	437,600	470,000	498,000	522,600	522,600	1.21%
	High	470,200	520,600	566,100	611,400	611,400	1.92%

4.3 Model Growth Rates

The most recently adopted version of the District 1 Regional Planning Model (D1RPM) was utilized to determine model growth rates based on the anticipated future roadway network and planned

developments through the Design Year (2045). Socioeconomic data provided by Manatee County was input into the future year (2045) ZDATA to reflect planned development within the county, and both a No Build (two-lane) and Build (four-lane) scenarios were modeled for the 75th Street study corridor. Model AADT volumes for future year 2045 were compared to those of the model base year (2015) to calculate the implied growth rate of 75th Street.

The average annual growth rate based on the No Build model scenario was 0.86% and the average annual growth rate based on the Build model scenario was 1.57%. The difference in growth rates indicates unmet demand on the 75th Street study corridor when its capacity is constrained in the Design Year (2045) to the existing two-lane capacity.

4.4 Applied Growth Rate

Upon reviewing historical trends, Manatee County population projections, and the travel demand model with and without the widening of the 75th Street study corridor, a growth rate of 1.57% was selected for the forecasting of future traffic demand. The 1.57% growth rate is within the bounds of the BEBR medium and high population growth rates.

5.0 Future Traffic Projections

Estimated future traffic forecasts are used to analyze the performance of the 75th Street study corridor in the Opening Year 2025 and the Design Year 2045.

5.1 Forecasted AADT Volumes

Existing (2021) AADT volumes were grown from 2019 AADT volumes collected by Manatee County Traffic Engineering. Existing (2021) AADT volumes were then used to forecast 2025 and 2045 AADT volume projections.

Table 11 summarizes the existing and future year AADT volumes. These volumes projections are rounded to the nearest 500 vehicles per day.

Table 11: AADT Volume Summary

Limits		2021 AADT	2025 AADT	2045 AADT
South	North			
D1RPM Build Growth Rate: 1.57%				
20th Avenue W	Manatee Avenue W	21,000	22,500	30,500

5.2 Traffic Factors

The standard K factor was applied to the projected AADT to calculate design hour volumes (DHV) per the *FDOT 2019 Project Traffic Forecasting Handbook*.

For comparison, the existing K factor is determined by calculating the proportion of the daily traffic that occurs during the peak hour of the day. Using continuous 24-hour counts, existing K factors for the 75th Street study corridor were calculated and are summarized in **Table 12**. The existing K factor on 75th Street at 18th Avenue W (the only location with both peak hour and 24-hour information available) was found to be relatively consistent with the 9.0 Standard K, indicating that daily traffic volumes on 59th Street West are concentrated during the P.M. peak hour at the expected rate for an urban major collector.

Table 12: Calculated K-factors

Intersecting Street	NB Approach	SB Approach	Combined Approaches
18th Avenue W	8.8%	9.0%	8.5%
Manatee Avenue	N/A	N/A	N/A

N/A: 24-hour traffic counts were not available

The D-factor applied to future volumes is representative of the peak directional distribution of traffic during the peak hour on a given roadway segment. D-factors were calculated for the 75th Street study corridor using the peak hour TMCs and are summarized in **Table 13**.

Table 13: Calculated D-Factors

Design Traffic Memorandum

75th Street West – 20th Avenue West to Manatee Avenue

Intersecting Street	Peak Direction	Calculated D-Factor
18th Avenue West	SB	0.50
Manatee Avenue	NB	0.52

The percentage of trucks using a corridor during the peak hour is the design hour truck (DHT) factor and the percentage of trucks using a corridor during a 24-hour period is the T-factor. DHT factors and T-factors were calculated from the TMC data provided by Manatee County Traffic Engineering. The calculated DHT factors and T-factors at each signalized intersection along the 75th Street study corridor are summarized in **Table 14**.

Table 14: Calculated DHT and T-Factor

Intersecting Street	DHT	T-Factor
18th Avenue W	1.1%	2.2%
Manatee Avenue	1.5%	N/A

5.3 Design Hour Volume

Design Hour Volumes (DHV) are calculated based on the forecasted AADT volumes multiplied by the Standard K factor (0.09). DHVs for the Opening Year 2025 and Design Year 2045 conditions are summarized in **Table 15**. Volumes are rounded to the nearest 100 vehicles per hour.

Table 15: DHV Summary

Limits		2021 DHV	2025 DHV	2045 DHV
South	North			
D1RPM Build Growth Rate: 1.57%				
20th Avenue W	Manatee Avenue W	1,900	2,000	2,700

5.4 Design Turning Movement Volumes

The turning movement counts provided by Manatee County Traffic Engineering were grown to Existing (2021) year turning movement volumes using seasonal factors and the average historical growth rate of 2.20%. The Opening Year (2025) and Design Year (2045) turning movement volumes were then forecasted using the growth rate of 1.57% along 75th Street and 0.46% on the side streets, which lead to areas that are largely built out and therefore are not anticipated to experience as much growth as the mainline. Forecasted turning movement volumes can be viewed in **Attachment B**.

6.0 Future Traffic Analysis

The future traffic analyses were performed with the existing roadway facility (future No Build condition) as a baseline for comparison of corridor improvement alternatives and to illustrate the impact of the anticipated background traffic growth. Corridor improvement alternatives were then evaluated.

The FDOT Generalized Level of Service Tables were used to evaluate the capacity of the roadway and TrafficWare’s *Synchro 11* software was used to evaluate the intersection operations of projected Opening Year 2025 and Design Year 2045 scenarios. Operational analyses were performed for a future No Build, a future two-lane TSM&O alternative with operational improvements, and a future four-lane Build alternative with operational improvements at 75th Street and 18th Avenue.

6.1 Future No Build

For the future No Build alternative, all intersection geometry and timing characteristics were considered consistent with existing conditions. The results of the segment analysis for the Opening Year 2025 and Design Year 2045 No Build alternative of the 75th Street study corridor are shown in **Table 16**. The 75th Street study corridor is expected to operate with LOS F in the Opening Year 2025 and Design Year 2045 if no capacity improvements are implemented. The determination is based on a daily LOS D service volume from the FDOT Q/LOS Handbook of 16,727 vehicles per day for an urban two-lane, interrupted flow, non-state facility with exclusive left-turn lanes.

Table 16: No Build Segment LOS

Segment		Opening Year, 2025		Design Year, 2045	
South Limit	North Limit	AADT	LOS	AADT	LOS
20th Avenue W	Manatee Avenue W	22,500	F	30,500	F

The results of the Synchro intersection analyses for the Opening Year and Design Year No Build alternative are shown in **Table 17**. Synchro output reports for each intersection are included in **Attachment D**.

Table 17: No Build Intersection LOS and Delay

Intersection	Opening Year 2025 Design Hour			Design Year 2045 Peak Hour		
	LOS	Delay (s)	Max v/c	LOS	Delay (s)	Max v/c
18th Avenue W	C	20.0	0.88 (NBT/R)	E	73.3	1.23 (NBT/R)
Manatee Avenue W	E	78.8	1.08 (SBL)	F	130.0	1.48 (SBL)

The intersection of Manatee Avenue and 75th Street is anticipated to perform at LOS E during the design hour in the Opening Year 2025 and perform at LOS F during the design hour in the Design Year 2045 No Build alternative.

Consistent with Existing (2021) conditions, southbound left-turn movement exceeds its capacity in the Opening Year 2025. The westbound left-turn, southbound left-turn, and all northbound movements are expected to exceed their respective capacities in the Design Year 2045.

The intersection of 75th Street and 18th Avenue is anticipated to perform at LOS E during the Design Hour during the Design Year 2045 No Build alternative. The northbound through and northbound right-turn movements are expected to exceed their respective capacities in the Design Year 2045.

6.2 Intersection Control Evaluation

An intersection control evaluation (ICE) was undertaken at the intersection of 75th Street and 18th Avenue. The ICE process considers the safety and delay benefits of various alternative intersection control types for comparison with the existing conditions on the study corridor and provides a mechanism for evaluating the associated benefit-to-cost ratio. The ICE worksheets available from FDOT were utilized to analyze the viability and potential benefit of signalization and intersection geometry improvements at the 75th Street and 18th Avenue intersection.

Four alternatives were compared within the ICE framework: the existing signals as the no build alternative and base scenario case, a signalized intersection with a mainline northbound right-turn lane (TSM&O), a roundabout, and a signalized intersection with two through lanes in each direction and a northbound right-turn lane (Build).

A comparison of the safety and delay benefit-to-cost (B/C) ratios for each alternative is summarized in **Table 18**. Within the ICE framework monetary costs are assigned to aspects such as construction and design, right-of-way acquisition, vehicle delay, and crashes. Benefits are calculated in terms of reduced costs of delay and crashes relative to the base case. Costs are calculated in a similar manner in terms of the difference in design, construction, and right-of-way costs of the alternative as compared to the base case. The B/C ratio is then calculated by comparing the monetary benefits of delay reduction and crash reduction to the cost of construction and right-of-way acquisition of implementing that alternative.

Design Traffic Memorandum

75th Street West – 20th Avenue West to Manatee Avenue

Table 18: ICE Benefit-Cost Summary

Alternative	Delay B/C	Safety B/C	Total B/C
No Build (Signal)	Base	Base	Base
TSM&O (Signal)	15.49	1.08	16.57
Roundabout	12.38	0.26	12.64
Build (Signal)	26.33	1.08	27.40

The improved alternatives would be expected to have high B/C ratios due to significant reductions in delay at the intersection of 75th Street and 18th Avenue West. The Build alternative exhibited the highest B/C ratio of the alternatives considered and the Roundabout alternative exhibited the lowest. The ICE forms and supporting documentation are provided in **Attachment E**.

6.3 TSM&O

The TSM&O alternative consists of operational improvements to address deficiencies without widening the entirety of the corridor. The improvements consist of signal timing modifications and adding a northbound right-turn lane at the intersection of 75th Street and 18th Avenue.

TSM&O Operational Analysis

Operational analysis of this alternative indicated the intersection of 75th Street and 18th Avenue is expected to operate at acceptable LOS with only the northbound through movement exceeding its capacity under Design Year 2045 conditions.

At the intersection of Manatee Avenue and 75th Street, significant capacity improvements along the Manatee Avenue mainline would be required to improve the operations to LOS D or better through Design Year 2045. Since Manatee Avenue is a FDOT roadway, these improvements are considered outside the scope of this Manatee County study. The intersection geometry and signal timings at the intersection of Manatee Avenue and 75th Street are assumed to be consistent with existing condition throughout this analysis. The results of the *Synchro* intersection analyses for the Opening Year and Design Year TSM&O alternative are shown in **Table 19**.

Table 19: TSM&O Operational Analysis Summary

Intersection	Opening Year 2025 Design Hour			Design Year 2045 Design Hour		
	LOS	Delay (s)	Max v/c	LOS	Delay (s)	Max v/c
18th Avenue	B	16.5	0.74 (NBT/R)	C	33.3	1.03 (NBT)
Manatee Avenue	F	80.0	1.08 (SBL)	F	130.0	1.48 (SBL)

Synchro output reports are included in **Attachment D**.

6.4 Build

The Build alternative consists of widening the corridor to a four-lane divided facility and modifying signal timings at the intersection of 75th Street and 18th Avenue.

Design Traffic Memorandum

75th Street West – 20th Avenue West to Manatee Avenue

Build Operational Analysis

The results of the segment analysis are shown in **Table 20**.

Table 20: Build Segment LOS

Segment		Opening Year, 2025		Design Year, 2045	
South Limit	North Limit	AADT	LOS	AADT	LOS
20th Avenue W	Manatee Avenue W	22,500	C	30,500	C

The results of the Synchro intersection analysis for the four-lane alternative are shown in **Table 21**.

Table 21: Build Intersection LOS and Delay

Intersection	Opening Year 2025 Peak Hour			Design Year 2045 Peak Hour		
	LOS	Delay (s)	Max v/c	LOS	Delay (s)	Max v/c
18th Avenue W	B	12.1	0.78 (WBL/T)	B	13.8	0.79 (WBL/T)
Manatee Avenue W	F	81.7	1.08 (SBL)	F	133.5	1.48 (SBL)

Operational analyses of the Build alternative indicated that the intersection of 75th Street with 18th Avenue is expected to operate at an acceptable LOS with no movements exceeding their respective capacities through Design Year 2045.

At the intersection of Manatee Avenue and 75th Street, significant capacity improvements along the Manatee Avenue mainline would be required to improve the operations to LOS D or better through Design Year 2045. Since Manatee Avenue is an FDOT roadway, these improvements are considered outside the scope of this Manatee County study. The intersection geometry and signal timings at the intersection of Manatee Avenue and 75th Street are assumed to be consistent with existing conditions throughout the analysis.

7.0 Recommendations

Due to the congestion on Manatee Avenue, the intersection of Manatee Avenue and 75th Street is anticipated to operate at LOS F under Opening Year 2025 and Design Year 2045 conditions, even if 75th Street is widened. Addressing the intersection congestion would require FDOT to design and construct major capacity improvements to Manatee Avenue, which are beyond the scope of this Manatee County study. All other intersections along 75th Street are anticipated to operate at LOS B or better.

South of Manatee Avenue, future congestion justifies widening the corridor to a four-lane divided facility and modifying the signal timings at the intersection of 75th Street and 18th Avenue. The corridor is anticipated to operate acceptably under the Build alternative.

Attachments

Attachment A: Signal Timing Worksheets

Station : 3034 - 75th St W @ 18th Ave W (Upload File)

Phase [1.1.1]

	1	2 (ST)	3 (ET)	4 (WT)	5 (SL)	6 (NT)	7	8	9	10	11	12	13	14	15	16
Walk	0	0	0	7	0	11	0	0	0	0	0	0	0	0	0	0
Ped Clearance	0	0	0	16	0	16	0	0	0	0	0	0	0	0	0	0
Min Green	0	20	7	7	7	20	0	0	0	0	0	0	0	0	0	0
Gap Ext	0	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0
Max1	0	50	10	25	20	50	0	0	0	0	0	0	0	0	0	0
Max2	0	85	20	20	20	85	0	0	0	0	0	0	0	0	0	0
Yellow Clr	0	5.3	3.4	4.2	4.1	5.3	0	0	0	0	0	0	0	0	0	0
Red Clr	0	2	4.4	2.6	2	2	0	0	0	0	0	0	0	0	0	0
Red Revert	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Flash Entry				ON												
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Rest In Walk						ON										



Phase Option [1.1.2]

	1	2 (ST)	3 (ET)	4 (WT)	5 (SL)	6 (NT)	7	8	9	10	11	12	13	14	15	16
Enable		ON	ON	ON	ON	ON										
Lock Call		ON				ON										
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON				ON										
Sim Gap Enable																
Guar Passage																
Cond Service																
Add Init Calc																

Alternate Phase Program 1, Calls and Redirection [1.1.6.3]

Entry	Call Phases				From	To	From	To	From	To	From	To	Assigned Ph
1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0

Alternate Phase Program 2, Calls and Redirection [1.1.6.3]

Entry	Call Phases				From	To	From	To	From	To	From	To	Assigned Ph
1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0

Alternate Phase Program 1, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1	0	0	0	0	0	0	0	0	0	
2	0	0	0	0	0	0	0	0	0	
3	0	0	0	0	0	0	0	0	0	
4	0	0	0	0	0	0	0	0	0	
5	0	0	0	0	0	0	0	0	0	
6	0	0	0	0	0	0	0	0	0	
7	0	0	0	0	0	0	0	0	0	
8	0	0	0	0	0	0	0	0	0	

Alternate Phase Program 2, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1	0	0	0	0	0	0	0	0	0	
2	0	0	0	0	0	0	0	0	0	
3	0	0	0	0	0	0	0	0	0	
4	0	0	0	0	0	0	0	0	0	
5	0	0	0	0	0	0	0	0	0	
6	0	0	0	0	0	0	0	0	0	
7	0	0	0	0	0	0	0	0	0	
8	0	0	0	0	0	0	0	0	0	

Prepared By

Date Implemented

Reviewed By

Traffic Engineer

Sarasota-Manatee RTMC

Timing Sheet

6/25/2021 2:35:12 PM

Station : 3034 - 75th St W @ 18th Ave W (Upload File)

Unit Parameters [1.2.1]

StartUp Flash	Auto Ped Clear	Red Revert	Local Flash Start	Allow < 3 sec Yel	Allow Skip Yel	MCE Timeout	Enable Run	Start Red Time	Phase Mode	Startup Calls	Diamond Mode	Stop Time Over Preempt	Free Ring Sequence	Clearance Decide	Min Ped Clear Time	RingAlgo				
	OFF	3	OFF	OFF	OFF		ON		QSEQ	OFF	4PH	OFF	1	OFF	OFF					

Comm, General Comm Parameters [6.1]

Station ID	Master Station ID	Fallback time	Allow Pencil	Port	System-Up	Sys-Down	PC/Print	Aux 232
3034								

Port Parameters [6.2]

Comm	Mode	Baud	MsgTime	Duplex	Enable	DialTime	Modem	ModemTime	Tel#1	Tel#2
System Up(P-A)										
System Down(P-B)										
PC/Print(P-2)										

Overlap General Parameters [1.5.1]

Conflict Lock	Lock Inhibit	Program Card	Use Parent	Canadian Fast Flash
OFF	OFF	ON	ALWAYS	

Overlap Program Parameters [1.5.2.1]

Overlap	Included Phases	Modifier Phases	Type	Green	Yellow	Red
Overlap 1			NORMAL		3.5	1.5
Overlap 2			NORMAL		3.5	1.5
Overlap 3			NORMAL		3.5	1.5
Overlap 4			NORMAL		3.5	1.5
Overlap 5			NORMAL		3.5	1.5
Overlap 6			NORMAL		3.5	1.5
Overlap 7			NORMAL		3.5	1.5
Overlap 8			NORMAL		3.5	1.5

Overlap Conflict Parameters+ [1.5.2.2]

Overlap	Conflicting Phases	Conflicting Overlaps	Conflicting Peds
Overlap 1			
Overlap 2			
Overlap 3			
Overlap 4			
Overlap 5			
Overlap 6			
Overlap 7			
Overlap 8			

Detector, Vehicle Parameters 1-16 [5.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Call Phase	2	5	4	4	3	6	0	0	0	0	0	0	0	0	0	0
Switch Phase	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0

Detector, Vehicle Parameters 17-32 [5.1]

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Call Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Sarasota-Manatee RTMC

Timing Sheet

6/25/2021 2:35:12 PM

Station : 3034 - 75th St W @ 18th Ave W (Upload File)

Detector Alternate Program 1, Vehicle Parameters [5.5.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Call Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Channels/SDLC, Assign to Phases [1.3.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
PH/OLP #	1	2	3	4	5	6	7	8	1	2	3	4	2	4	6	8	1	3	5	7				
Type	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OLP	OLP	OLP	OLP	PED	PED	PED	PED	PED	PED	PED	PED	VEH	VEH	VEH	VEH
Flash	RED	YEL	RED	RED	RED	YEL	RED	RED	RED	RED	RED	RED	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Alt Hz																								
Dimming Green																								
Dimming Yellow																								
Dimming Red																								
Dimming Cyc	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Channel/SDLC, Parameters [1.3.3]

TOD Dim Enable	Extra Maps Enable	D Connector Enable	Single BIU Map	IO Mode	Preempt or Ext Output
OFF	DEFAULT				

Channel/SDLC, MMU Map [1.3.5]

MMU-to-Controller Channel Map

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Channel/SDLC, Permissive [1.3.4]

Channel	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1															
2		1		1							1	1			
3															
4			1												
5				1											
6		1		1											
7															
8															
9															
10															
11															
12															
13		1													
14															
15															

Channel/SDLC, Permissive [1.3.7]

SDLC Device	Term/Fac	Detector																MMU	Diag
BIU#	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8			
Dev Present	ON	ON							ON									ON	
Peer to Peer																			

Ring Sequence [1.2.4]

Ring	P1	P2	P3	P4	P5	P6	P7	P8
Ring 1	1	2		3	4	7	8	
Ring 2	5	6						
Ring 3								
Ring 4								

Station : 3034 - 75th St W @ 18th Ave W (Upload File)

Alarms, Enable Events [1.6.1]

Event#	Event Enable
1	ON
2	ON
3	ON
4	ON
5	ON
6	
7	
8	
9	
10	
11	
12	ON
13	ON
14	ON
15	ON
16	ON
17	ON
18	ON
19	ON
20	ON
21	ON
22	ON
23	ON
24	ON
25	ON
26	ON
27	ON
28	
29	ON
30	ON
31	ON
32	
33	
34	
35	
36	
37	
38	
39	
40	
41	
42	
43	
44	
45	
46	
47	ON
48	
49	ON
50	ON
51	ON
52	ON
53	ON
54	ON
55	
56	
57	
58	
59	ON
60	
61	ON
62	
63	
64	

Alarms, Enable Alarms [1.6.4]

Alarm#	Alarm Enable
1	
2	ON
3	ON
4	ON
5	ON
6	
7	
8	
9	
10	
11	
12	ON
13	
14	ON
15	ON
16	ON
17	ON
18	ON
19	ON
20	ON
21	
22	ON
23	ON
24	ON
25	ON
26	
27	
28	
29	
30	ON
31	ON
32	
33	
34	
35	
36	
37	ON
38	
39	
40	
41	
42	
43	
44	
45	
46	
47	
48	
49	
50	
51	
52	
53	
54	
55	
56	
57	
58	
59	ON
60	
61	
62	
63	
64	

Preemption Times[3.1]/Phases[3.2]/Options[3.3]

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash						
Override Higher Preempt	ON					
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green						
Min Walk						
Ped Clear						
Track Green						
Min Dwell						
Max Presence						
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1						
Dwell Cyc Veh 2						
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						
Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1						
Exit 2						
Exit 3						
Exit 4						

Alarms, Parameters [1.4.1]

Auto Flash Parameter

Yellow	Red	Mode	Source
45	10		

Alarms, Parameters [1.6.7]

Preempt Event Enabled	Pattern Event Enabled
OFF	OFF

Alarms, Phases/Overlaps [1.4.2]

Auto Flash	1	2	3	4	5	6	7	8	9	10	11	12
Phases												
Overlaps												

Station : 3034 - 75th St W @ 18th Ave W (Upload File)

Preemption Times+[3.4]/Overlaps+[3.5]/Options+[3.6]

Preempt	1	2	3	4	5	6
Enable						
Type	EMERG	EMERG	EMERG	EMERG	EMERG	EMERG
Skip Track						
Volt Mon Flash						
Coord in Preempt						
Return Max/Min	MAX	MAX	MAX	MAX	MAX	MAX
Extend Dwell						
Pattern						
Output Mode	TS2	TS2	TS2	TS2	TS2	TS2
Track Over 1						
Track Over 2						
Track Over 3						
Track Over 4						
Track Over 5						
Track Over 6						
Track Over 7						
Track Over 8						
Track Over 9						
Track Over 10						
Track Over 11						
Track Over 12						
DwellCyc Over 1						
DwellCyc Over 2						
DwellCyc Over 3						
DwellCyc Over 4						
DwellCyc Over 5						
DwellCyc Over 6						
DwellCyc Over 7						
DwellCyc Over 8						
DwellCyc Over 9						
DwellCyc Over 10						
DwellCyc Over 11						
DwellCyc Over 12						
Ped Clear						
Yellow						
Red						
Return Max						

Coordination, Modes,+ [2.1]

Modes

Operational	Correct	Maximum	Force-Off
	SHRT/LNG	MAX 2	FIXED

Modes+

Mode	Leave Before	Leave After	Recycle	Stop In Walk	External	Auto Reset	Latch Sec Foff	Coord Easy Float	Yield Value	Coord NTCIP Yield Sign	Closed Loop Active	
RESERVED	TIMED	TIMED	P3478_INH	ON	OFF	ON	OFF	OFF	0	+	ON	OFF

Coordination, Pattern 1-16 [2.1]

Pattern	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Cycle Time	100	100	120													
Offset Time	56	69	88													
Split Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Seq Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Offset	endgrm	endgrm	endgrm	endgrm	endgrm	endgrm	endgrm	endgrm	endgrm	endgrm	endgrm	endgrm	endgrm	endgrm	endgrm	endgrm

Coordination, Pattern 17-32 [2.1]

Pattern	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Cycle Time																
Offset Time																
Split Number	17	18	19	20	21	22	23	24								
Seq Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Offset	endgrm	endgrm	endgrm	endgrm	endgrm	endgrm	endgrm	endgrm	endgrm	endgrm	endgrm	endgrm	endgrm	endgrm	endgrm	endgrm

Station : 3034 - 75th St W @ 18th Ave W (Upload File)

Coordination, Splits [2.7.1]

Split Table 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time		63	17	20	15	48										
Mode	NON	MAX	NON	NON	NON	MPX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase		ON														

Split Table 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time		63	17	20	15	48										
Mode	NON	MAX	NON	NON	NON	MPX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase		ON														

Split Table 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time		83	17	20	15	68										
Mode	NON	MAX	NON	NON	NON	MPX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase		ON														

Split Table 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 8	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 9	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 11	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 12	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Sarasota-Manatee RTMC

Timing Sheet

6/25/2021 2:35:12 PM

Station : 3034 - 75th St W @ 18th Ave W (Upload File)

Split Table 13	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 14	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 15	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 17	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 22	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 23	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 25	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 26	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 27	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 28	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 29	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 32	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Sarasota-Manatee RTMC

Timing Sheet

6/25/2021 2:35:12 PM

Station : 3034 - 75th St W @ 18th Ave W (Upload File)

Day Plan Table 7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 8	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 9	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 11	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 12	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Sarasota-Manatee RTMC

Timing Sheet

6/25/2021 2:35:12 PM

Station : 3034 - 75th St W @ 18th Ave W (Upload File)

TB Coor, Action Table [4.5]

Action	Pattern	Aux 1	Aux 2	Aux 3	Special 1	Special 2	Special 3	Special 4	Special 5	Special 6	Special 7	Special 8
1	1				0	0						
2	2				0	0						
3	3				0	0						
4	4				0	0						
5	5				0	0						
6	6				0	0						
7	7				0	0						
8	8				0	0						
9	9				0	0						
10	10				0	0						
11	11				0	0						
12	12				0	0						
13	13				0	0						
14	14				0	0						
15	15				0	0						
16	16				0	0						
17	17				0	0						
18	18				0	0						
19	19				0	0						
20	20				0	0						
21	21				0	0						
22	22				0	0						
23	23				0	0						
24	24				0	0						
25	25				0	0						
26	1				0	0						
27	2				0	0						
28	3				0	0						
29	4				0	0						
30	5				0	0						
31	6				0	0						
32	7				0	0						
33	8				0	0						
34	9				0	0						
35	10				0	0						
36	11				0	0						
37	12				0	0						
38	13				0	0						
39	14				0	0						
40	15				0	0						
41	16				0	0						
42	17				0	0						
43	18				0	0						
44	19				0	0						
45	20				0	0						
46	21				0	0						
47	22				0	0						
48	23				0	0						
49	24				0	0						
50	48				0	0						
51					0	0						
52					0	0						
53					0	0						
54					0	0						
55					0	0						
56					0	0						
57					0	0						
58					0	0						
59					0	0						
60					0	0						
61					0	0						
62					0	0						
63					0	0						
64					0	0						
99	254				0	0						
100	255				0	0						

Station : 4032 - Manatee Ave @ 75th St W (Upload File)

Coordination, Splits [2.7.1]

Split Table 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	24	59	41	36	35	48	31	46								
Mode	NON	MAX	NON	NON	MAX	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	28	62	37	33	39	51	29	41								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	23	63	37	47	40	46	39	45								
Mode	NON	MAX	NON	NON	MAX	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	15	58	25	22	27	46	25	22								
Mode	NON	MAX	NON	NON	MAX	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	15	55	22	18	21	49	22	18								
Mode	NON	MAX	NON	NON	MAX	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	17	73	32	28	27	63	29	31								
Mode	NON	MAX	NON	NON	MAX	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	17	57	18	18	21	53	18	18								
Mode	NON	MAX	NON	NON	MAX	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 8	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 9	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	26	65	28	31	34	57	28	31								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	24	62	31	33	32	54	24	40								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 11	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	24	59	41	36	35	48	31	46								
Mode	NON	MAX	NON	NON	MAX	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 12	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																



Attachment B: Turning Movement Count Data

Intersection Turning Movement Count

75th St W @ 18th Ave W
Manatee County, FL

File Name : 21003-22 thu
Site Code : 21003-22
Start Date : 3/25/2021
Page No : 1

Groups Printed- Automobiles - Trucks - Buses

Start Time	75th St W Southbound				18th Ave W Westbound				75th St W Northbound				Int. Total
	Left	Thru	UtURNS	App. Total	Left	Right	UtURNS	App. Total	Thru	Right	UtURNS	App. Total	
07:00	9	91	0	100	13	5	0	18	84	16	0	100	218
07:15	10	117	0	127	14	9	0	23	95	20	0	115	265
07:30	28	130	0	158	22	8	0	30	156	17	0	173	361
07:45	28	135	0	163	26	20	0	46	179	32	0	211	420
Total	75	473	0	548	75	42	0	117	514	85	0	599	1264
08:00	17	176	0	193	28	14	0	42	199	22	0	221	456
08:15	17	179	0	196	31	11	0	42	185	23	0	208	446
08:30	28	159	0	187	18	12	0	30	159	26	0	185	402
08:45	13	153	0	166	33	7	0	40	183	25	0	208	414
Total	75	667	0	742	110	44	0	154	726	96	0	822	1718
Break													
11:30	12	160	0	172	35	17	0	52	182	22	0	204	428
11:45	5	167	0	172	31	11	0	42	183	26	0	209	423
Total	17	327	0	344	66	28	0	94	365	48	0	413	851
12:00	10	159	0	169	42	8	0	50	158	20	0	178	397
12:15	5	191	0	196	36	16	0	52	150	31	0	181	429
12:30	10	203	0	213	33	20	0	53	162	20	0	182	448
12:45	17	176	0	193	37	7	0	44	159	36	0	195	432
Total	42	729	0	771	148	51	0	199	629	107	0	736	1706
13:00	16	159	0	175	21	12	0	33	173	28	0	201	409
13:15	19	131	0	150	31	7	0	38	153	20	0	173	361
Total	35	290	0	325	52	19	0	71	326	48	0	374	770
Break													
14:30	9	172	0	181	33	14	0	47	167	35	0	202	430
14:45	17	145	0	162	31	16	0	47	184	37	0	221	430
Total	26	317	0	343	64	30	0	94	351	72	0	423	860
15:00	12	184	0	196	23	19	0	42	174	27	0	201	439
15:15	8	186	0	194	38	21	0	59	173	37	0	210	463
15:30	15	219	0	234	52	12	0	64	169	27	0	196	494
15:45	11	168	0	179	43	18	0	61	178	17	0	195	435
Total	46	757	0	803	156	70	0	226	694	108	0	802	1831
16:00	12	149	0	161	41	19	0	60	194	26	0	220	441
16:15	23	199	0	222	32	17	0	49	191	26	0	217	488
16:30	17	200	0	217	32	14	0	46	195	38	0	233	496
16:45	5	173	0	178	41	13	0	54	170	32	0	202	434
Total	57	721	0	778	146	63	0	209	750	122	0	872	1859
17:00	7	193	0	200	40	18	0	58	215	31	1	247	505
17:15	13	187	0	200	34	15	0	49	184	32	0	216	465
17:30	12	192	0	204	27	21	0	48	200	28	0	228	480
17:45	7	183	0	190	37	11	0	48	180	24	0	204	442
Total	39	755	0	794	138	65	0	203	779	115	1	895	1892
18:00	9	156	0	165	32	12	0	44	147	19	0	166	375
18:15	9	142	0	151	33	5	0	38	149	32	0	181	370
Grand Total	430	5334	0	5764	1020	429	0	1449	5430	852	1	6283	13496
Apprch %	7.5	92.5	0		70.4	29.6	0		86.4	13.6	0		
Total %	3.2	39.5	0	42.7	7.6	3.2	0	10.7	40.2	6.3	0	46.6	

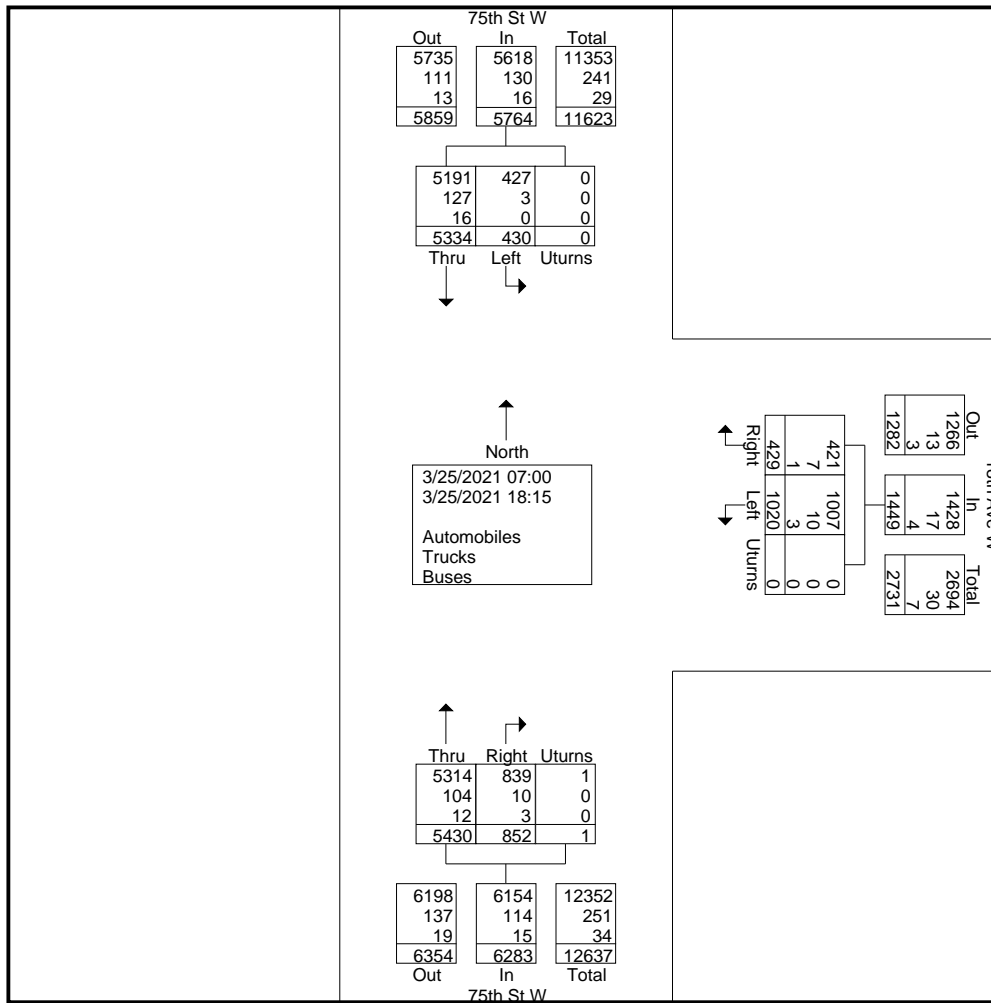
Intersection Turning Movement Count

75th St W @ 18th Ave W
Manatee County, FL

File Name : 21003-22 thu
Site Code : 21003-22
Start Date : 3/25/2021
Page No : 2

Groups Printed- Automobiles - Trucks - Buses

	75th St W Southbound				18th Ave W Westbound				75th St W Northbound				Int. Total
	Left	Thru	UtURNS	App. Total	Left	Right	UtURNS	App. Total	Thru	Right	UtURNS	App. Total	
Automobiles	427	5191	0	5618	1007	421	0	1428	5314	839	1	6154	13200
% Automobiles	99.3	97.3	0	97.5	98.7	98.1	0	98.6	97.9	98.5	100	97.9	97.8
Trucks	3	127	0	130	10	7	0	17	104	10	0	114	261
% Trucks	0.7	2.4	0	2.3	1	1.6	0	1.2	1.9	1.2	0	1.8	1.9
Buses	0	16	0	16	3	1	0	4	12	3	0	15	35
% Buses	0	0.3	0	0.3	0.3	0.2	0	0.3	0.2	0.4	0	0.2	0.3



Intersection Turning Movement Count

75th St W @ 18th Ave W
Manatee County, FL

File Name : 21003-22 thu
Site Code : 21003-22
Start Date : 3/25/2021
Page No : 3

Start Time	75th St W Southbound				18th Ave W Westbound				75th St W Northbound				Int. Total
	Left	Thru	UtURNS	App. Total	Left	Right	UtURNS	App. Total	Thru	Right	UtURNS	App. Total	
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45													
07:45	28	135	0	163	26	20	0	46	179	32	0	211	420
08:00	17	176	0	193	28	14	0	42	199	22	0	221	456
08:15	17	179	0	196	31	11	0	42	185	23	0	208	446
08:30	28	159	0	187	18	12	0	30	159	26	0	185	402
Total Volume	90	649	0	739	103	57	0	160	722	103	0	825	1724
% App. Total	12.2	87.8	0		64.4	35.6	0		87.5	12.5	0		
PHF	.804	.906	.000	.943	.831	.713	.000	.870	.907	.805	.000	.933	.945
Automobiles	90	628	0	718	103	55	0	158	693	101	0	794	1670
% Automobiles	100	96.8	0	97.2	100	96.5	0	98.8	96.0	98.1	0	96.2	96.9
Trucks	0	18	0	18	0	2	0	2	24	2	0	26	46
% Trucks	0	2.8	0	2.4	0	3.5	0	1.3	3.3	1.9	0	3.2	2.7
Buses	0	3	0	3	0	0	0	0	5	0	0	5	8
% Buses	0	0.5	0	0.4	0	0	0	0	0.7	0	0	0.6	0.5

Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00				07:30				07:45			
+0 mins.	17	176	0	193	22	8	0	30	179	32	0	211
+15 mins.	17	179	0	196	26	20	0	46	199	22	0	221
+30 mins.	28	159	0	187	28	14	0	42	185	23	0	208
+45 mins.	13	153	0	166	31	11	0	42	159	26	0	185
Total Volume	75	667	0	742	107	53	0	160	722	103	0	825
% App. Total	10.1	89.9	0		66.9	33.1	0		87.5	12.5	0	
PHF	.670	.932	.000	.946	.863	.663	.000	.870	.907	.805	.000	.933
Automobiles	75	643	0	718	106	52	0	158	693	101	0	794
% Automobiles	100	96.4	0	96.8	99.1	98.1	0	98.8	96	98.1	0	96.2
Trucks	0	22	0	22	1	1	0	2	24	2	0	26
% Trucks	0	3.3	0	3	0.9	1.9	0	1.2	3.3	1.9	0	3.2
Buses	0	2	0	2	0	0	0	0	5	0	0	5
% Buses	0	0.3	0	0.3	0	0	0	0	0.7	0	0	0.6

Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 12:15

12:15	5	191	0	196	36	16	0	52	150	31	0	181	429
12:30	10	203	0	213	33	20	0	53	162	20	0	182	448
12:45	17	176	0	193	37	7	0	44	159	36	0	195	432
13:00	16	159	0	175	21	12	0	33	173	28	0	201	409
Total Volume	48	729	0	777	127	55	0	182	644	115	0	759	1718
% App. Total	6.2	93.8	0		69.8	30.2	0		84.8	15.2	0		
PHF	.706	.898	.000	.912	.858	.688	.000	.858	.931	.799	.000	.944	.959
Automobiles	48	711	0	759	126	52	0	178	624	112	0	736	1673
% Automobiles	100	97.5	0	97.7	99.2	94.5	0	97.8	96.9	97.4	0	97.0	97.4
Trucks	0	17	0	17	0	3	0	3	20	3	0	23	43
% Trucks	0	2.3	0	2.2	0	5.5	0	1.6	3.1	2.6	0	3.0	2.5
Buses	0	1	0	1	1	0	0	1	0	0	0	0	2
% Buses	0	0.1	0	0.1	0.8	0	0	0.5	0	0	0	0	0.1

Intersection Turning Movement Count

75th St W @ 18th Ave W
Manatee County, FL

File Name : 21003-22 thu
Site Code : 21003-22
Start Date : 3/25/2021
Page No : 4

Start Time	75th St W Southbound				18th Ave W Westbound				75th St W Northbound				Int. Total
	Left	Thru	UtURNS	App. Total	Left	Right	UtURNS	App. Total	Thru	Right	UtURNS	App. Total	

Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	12:15				12:00				11:30			
+0 mins.	5	191	0	196	42	8	0	50	182	22	0	204
+15 mins.	10	203	0	213	36	16	0	52	183	26	0	209
+30 mins.	17	176	0	193	33	20	0	53	158	20	0	178
+45 mins.	16	159	0	175	37	7	0	44	150	31	0	181
Total Volume	48	729	0	777	148	51	0	199	673	99	0	772
% App. Total	6.2	93.8	0		74.4	25.6	0		87.2	12.8	0	
PHF	.706	.898	.000	.912	.881	.638	.000	.939	.919	.798	.000	.923
Automobiles	48	711	0	759	146	49	0	195	651	95	0	746
% Automobiles	100	97.5	0	97.7	98.6	96.1	0	98	96.7	96	0	96.6
Trucks	0	17	0	17	1	2	0	3	22	3	0	25
% Trucks	0	2.3	0	2.2	0.7	3.9	0	1.5	3.3	3	0	3.2
Buses	0	1	0	1	1	0	0	1	0	1	0	1
% Buses	0	0.1	0	0.1	0.7	0	0	0.5	0	1	0	0.1

Peak Hour Analysis From 14:00 to 18:15 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 16:15

16:15	23	199	0	222	32	17	0	49	191	26	0	217	488
16:30	17	200	0	217	32	14	0	46	195	38	0	233	496
16:45	5	173	0	178	41	13	0	54	170	32	0	202	434
17:00	7	193	0	200	40	18	0	58	215	31	1	247	505
Total Volume	52	765	0	817	145	62	0	207	771	127	1	899	1923
% App. Total	6.4	93.6	0		70	30	0		85.8	14.1	0.1		
PHF	.565	.956	.000	.920	.884	.861	.000	.892	.897	.836	.250	.910	.952
Automobiles	51	743	0	794	143	62	0	205	764	126	1	891	1890
% Automobiles	98.1	97.1	0	97.2	98.6	100	0	99.0	99.1	99.2	100	99.1	98.3
Trucks	1	17	0	18	2	0	0	2	7	1	0	8	28
% Trucks	1.9	2.2	0	2.2	1.4	0	0	1.0	0.9	0.8	0	0.9	1.5
Buses	0	5	0	5	0	0	0	0	0	0	0	0	5
% Buses	0	0.7	0	0.6	0	0	0	0	0	0	0	0	0.3

Peak Hour Analysis From 14:00 to 18:15 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	16:15				15:15				16:15			
+0 mins.	23	199	0	222	38	21	0	59	191	26	0	217
+15 mins.	17	200	0	217	52	12	0	64	195	38	0	233
+30 mins.	5	173	0	178	43	18	0	61	170	32	0	202
+45 mins.	7	193	0	200	41	19	0	60	215	31	1	247
Total Volume	52	765	0	817	174	70	0	244	771	127	1	899
% App. Total	6.4	93.6	0		71.3	28.7	0		85.8	14.1	0.1	
PHF	.565	.956	.000	.920	.837	.833	.000	.953	.897	.836	.250	.910
Automobiles	51	743	0	794	169	70	0	239	764	126	1	891
% Automobiles	98.1	97.1	0	97.2	97.1	100	0	98	99.1	99.2	100	99.1
Trucks	1	17	0	18	3	0	0	3	7	1	0	8
% Trucks	1.9	2.2	0	2.2	1.7	0	0	1.2	0.9	0.8	0	0.9
Buses	0	5	0	5	2	0	0	2	0	0	0	0
% Buses	0	0.7	0	0.6	1.1	0	0	0.8	0	0	0	0

Intersection Turning Movement Count

75th St W @ 18th Ave W
Manatee County, FL

File Name : 21003-22 thu
Site Code : 21003-22
Start Date : 3/25/2021
Page No : 1

Groups Printed- Trucks - Buses

Start Time	75th St W Southbound				18th Ave W Westbound				75th St W Northbound				Int. Total
	Left	Thru	UtURNS	App. Total	Left	Right	UtURNS	App. Total	Thru	Right	UtURNS	App. Total	
07:00	0	1	0	1	0	0	0	0	0	0	0	0	1
07:15	0	4	0	4	0	1	0	1	1	1	0	2	7
07:30	0	8	0	8	1	0	0	1	4	0	0	4	13
07:45	0	8	0	8	0	0	0	0	11	0	0	11	19
Total	0	21	0	21	1	1	0	2	16	1	0	17	40
08:00	0	4	0	4	0	1	0	1	3	1	0	4	9
08:15	0	4	0	4	0	0	0	0	7	0	0	7	11
08:30	0	5	0	5	0	1	0	1	8	1	0	9	15
08:45	0	11	0	11	0	0	0	0	6	0	0	6	17
Total	0	24	0	24	0	2	0	2	24	2	0	26	52
Break													
11:30	0	1	0	1	0	1	0	1	7	1	0	8	10
11:45	0	4	0	4	0	1	0	1	7	0	0	7	12
Total	0	5	0	5	0	2	0	2	14	1	0	15	22
12:00	1	5	0	6	1	0	0	1	2	1	0	3	10
12:15	0	4	0	4	0	2	0	2	6	2	0	8	14
12:30	0	3	0	3	0	0	0	0	7	0	0	7	10
12:45	0	5	0	5	1	0	0	1	4	0	0	4	10
Total	1	17	0	18	2	2	0	4	19	3	0	22	44
13:00	0	6	0	6	0	1	0	1	3	1	0	4	11
13:15	0	3	0	3	2	0	0	2	1	1	0	2	7
Total	0	9	0	9	2	1	0	3	4	2	0	6	18
Break													
14:30	0	6	0	6	1	0	0	1	2	0	0	2	9
14:45	0	6	0	6	0	0	0	0	3	1	0	4	10
Total	0	12	0	12	1	0	0	1	5	1	0	6	19
15:00	0	10	0	10	0	0	0	0	4	0	0	4	14
15:15	1	7	0	8	1	0	0	1	4	1	0	5	14
15:30	0	6	0	6	3	0	0	3	6	1	0	7	16
15:45	0	2	0	2	1	0	0	1	3	0	0	3	6
Total	1	25	0	26	5	0	0	5	17	2	0	19	50
16:00	0	3	0	3	0	0	0	0	2	0	0	2	5
16:15	1	7	0	8	1	0	0	1	4	0	0	4	13
16:30	0	4	0	4	0	0	0	0	1	1	0	2	6
16:45	0	4	0	4	1	0	0	1	0	0	0	0	5
Total	1	18	0	19	2	0	0	2	7	1	0	8	29
17:00	0	7	0	7	0	0	0	0	2	0	0	2	9
17:15	0	0	0	0	0	0	0	0	1	0	0	1	1
17:30	0	0	0	0	0	0	0	0	3	0	0	3	3
17:45	0	5	0	5	0	0	0	0	1	0	0	1	6
Total	0	12	0	12	0	0	0	0	7	0	0	7	19
Break													
18:15	0	0	0	0	0	0	0	0	3	0	0	3	3
Grand Total	3	143	0	146	13	8	0	21	116	13	0	129	296
Apprch %	2.1	97.9	0		61.9	38.1	0		89.9	10.1	0		
Total %	1	48.3	0	49.3	4.4	2.7	0	7.1	39.2	4.4	0	43.6	
Trucks	3	127	0	130	10	7	0	17	104	10	0	114	261
% Trucks	100	88.8	0	89	76.9	87.5	0	81	89.7	76.9	0	88.4	88.2
Buses	0	16	0	16	3	1	0	4	12	3	0	15	35
% Buses	0	11.2	0	11	23.1	12.5	0	19	10.3	23.1	0	11.6	11.8

Intersection Turning Movement Count

75th St W @ 18th Ave W
Manatee County, FL

File Name : 21003-22 Thu peds
Site Code : 21003-22
Start Date : 3/25/2021
Page No : 1

Groups Printed- Peds - Bikes

Start Time	75th St W Southbound	18th Ave W Westbound	75th St W Northbound	Int. Total
	Peds	Peds	Peds	
07:00	0	0	0	0
07:15	0	0	0	0
07:30	0	0	0	0
07:45	0	0	0	0
Total	0	0	0	0
08:00	0	1	0	1
08:15	0	0	0	0
08:30	0	0	0	0
08:45	1	0	0	1
Total	1	1	0	2
09:00	2	0	0	2
09:15	0	0	0	0
09:30	0	0	0	0
09:45	0	0	0	0
Total	2	0	0	2
10:00	0	0	0	0
10:15	0	0	0	0
10:30	0	0	0	0
10:45	0	0	0	0
Total	0	0	0	0
11:00	0	0	0	0
11:15	0	0	0	0
11:30	0	0	0	0
11:45	0	0	0	0
Total	0	0	0	0
12:00	0	0	0	0
12:15	0	0	0	0
12:30	0	0	0	0
12:45	0	0	0	0
Total	0	0	0	0
13:00	0	0	0	0
13:15	0	0	0	0
13:30	0	0	0	0
13:45	0	0	0	0
Total	0	0	0	0
14:00	0	0	0	0
14:15	0	0	0	0
14:30	0	0	0	0
14:45	0	2	0	2
Total	0	2	0	2
15:00	0	0	0	0
15:15	0	0	0	0
15:30	2	1	0	3
15:45	0	0	0	0
Total	2	1	0	3

Intersection Turning Movement Count

75th St W @ 18th Ave W
Manatee County, FL

File Name : 21003-22 Thu peds
Site Code : 21003-22
Start Date : 3/25/2021
Page No : 2

Groups Printed- Peds - Bikes

Start Time	75th St W Southbound	18th Ave W Westbound	75th St W Northbound	Int. Total
	Peds	Peds	Peds	
16:00	0	0	0	0
16:15	2	0	0	2
16:30	0	0	0	0
16:45	0	1	0	1
Total	2	1	0	3
17:00	1	2	0	3
17:15	1	1	0	2
17:30	1	1	0	2
17:45	0	0	0	0
Total	3	4	0	7
18:00	0	0	0	0
18:15	0	0	0	0
Grand Total	10	9	0	19
Apprch %	100	100	0	
Total %	52.6	47.4	0	
Peds	4	7	0	11
% Peds	40	77.8	0	57.9
Bikes	6	2	0	8
% Bikes	60	22.2	0	42.1

FDOT D1
TWO 11 Manatee Ave W (SR
64)
Manatee Ave (SR 64) & 75th St
W
Weekday TMC

Albeck Gerken, Inc.
1911 N US Hwy 301
Suite 410
Tampa, Florida, United States 33619
(813) 319-3790

Count Name: 605_Manatee Ave
(SR 64) & 75th St W_WD
Site Code: 605
Start Date: 01/10/2017
Page No: 1

Turning Movement Data

Start Time	Manatee Ave (SR 64) Eastbound						Manatee Ave (SR 64) Westbound						75th St W Northbound						75th St W Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00	0	4	74	28	0	106	0	37	76	29	0	142	0	21	18	46	0	85	0	78	58	6	0	142	475
7:15	0	10	86	33	0	129	0	41	81	61	0	183	0	17	36	58	0	111	0	67	55	10	0	132	555
7:30	0	9	98	43	0	150	0	41	92	50	1	183	0	18	37	54	1	109	0	65	95	12	0	172	614
7:45	0	9	84	40	0	133	0	60	77	69	0	206	0	32	82	58	0	172	0	65	106	12	0	183	694
Hourly Total	0	32	342	144	0	518	0	179	326	209	1	714	0	88	173	216	1	477	0	275	314	40	0	629	2338
8:00	0	17	105	32	0	154	1	41	123	74	1	239	0	48	74	45	1	167	0	50	85	15	1	150	710
8:15	0	23	95	26	1	144	0	56	117	73	1	246	0	50	98	42	0	190	0	64	98	16	0	178	758
8:30	0	23	126	45	12	194	1	48	112	55	0	216	0	40	84	33	0	157	0	81	113	12	0	206	773
8:45	0	21	119	37	0	177	2	68	103	80	0	253	0	42	63	48	1	153	0	69	89	16	1	174	757
Hourly Total	0	84	445	140	13	669	4	213	455	282	2	954	0	180	319	168	2	667	0	264	385	59	2	708	2998
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:30	0	17	132	45	0	194	3	51	121	33	0	208	1	59	61	50	0	171	0	80	52	14	2	146	719
11:45	0	32	158	53	0	243	2	71	163	49	0	285	0	44	71	45	0	160	0	64	49	13	2	126	814
Hourly Total	0	49	290	98	0	437	5	122	284	82	0	493	1	103	132	95	0	331	0	144	101	27	4	272	1533
12:00	0	20	106	41	0	167	0	57	156	39	0	252	0	41	58	51	0	150	0	64	58	16	0	138	707
12:15	0	26	184	45	0	255	0	63	155	54	0	272	0	31	63	65	0	159	0	56	54	15	2	125	811
12:30	0	24	107	42	3	173	2	71	154	48	2	275	0	43	61	49	0	153	0	68	57	14	1	139	740
12:45	0	16	131	47	1	194	1	72	144	48	0	265	0	34	70	59	0	163	0	65	48	15	0	128	750
Hourly Total	0	86	528	175	4	789	3	263	609	189	2	1064	0	149	252	224	0	625	0	253	217	60	3	530	3008
13:00	0	12	122	49	1	183	4	77	141	52	0	274	0	36	72	64	0	172	0	56	44	12	1	112	741
13:15	0	20	115	50	0	185	3	58	140	52	0	253	0	50	78	53	0	181	0	60	48	22	0	130	749
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	32	237	99	1	368	7	135	281	104	0	527	0	86	150	117	0	353	0	116	92	34	1	242	1490
14:30	1	22	140	36	1	199	3	66	144	57	0	270	0	48	85	61	0	194	0	54	65	19	0	138	801
14:45	0	31	162	37	1	230	2	71	133	52	2	258	0	36	102	68	0	206	0	55	64	13	2	132	826
Hourly Total	1	53	302	73	2	429	5	137	277	109	2	528	0	84	187	129	0	400	0	109	129	32	2	270	1627
15:00	0	19	141	36	1	196	2	77	165	64	0	308	0	50	101	62	3	213	0	73	95	20	0	188	905
15:15	0	33	207	47	0	287	2	81	142	71	0	296	0	47	99	62	0	208	0	64	85	14	0	163	954
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	52	348	83	1	483	4	158	307	135	0	604	0	97	200	124	3	421	0	137	180	34	0	351	1859
16:00	0	23	155	59	6	237	0	81	151	60	1	292	0	47	82	68	3	197	0	74	96	19	1	189	915
16:15	0	33	143	41	2	217	1	79	151	47	0	278	0	41	74	66	2	181	0	59	71	7	1	137	813
16:30	0	21	113	45	0	179	2	69	126	73	0	270	0	45	94	83	0	222	0	71	60	14	0	145	816
16:45	0	30	137	60	0	227	3	69	119	74	1	265	0	51	116	54	0	221	0	67	66	19	1	152	865
Hourly Total	0	107	548	205	8	860	6	298	547	254	2	1105	0	184	366	271	5	821	0	271	293	59	3	623	3409
17:00	0	21	140	62	0	223	0	77	194	61	1	332	0	51	93	72	0	216	0	69	63	14	0	146	917
17:15	0	17	154	58	0	229	1	77	169	74	0	321	0	39	92	67	0	198	0	72	92	6	1	170	918
17:30	0	17	122	36	0	175	0	80	140	73	0	293	0	36	71	50	0	157	0	53	57	15	0	125	750
17:45	0	16	123	42	0	181	0	79	141	55	0	275	0	37	66	76	0	179	0	62	46	8	1	116	751
Hourly Total	0	71	539	198	0	808	1	313	644	263	1	1221	0	163	322	265	0	750	0	256	258	43	2	557	3336
18:00	0	9	110	39	0	158	1	75	109	45	0	230	0	43	63	69	0	175	0	34	47	10	0	91	654
18:15	0	8	102	42	0	152	0	69	101	39	0	209	0	43	62	64	0	169	0	44	37	5	0	86	616
18:30	0	16	102	24	0	142	1	57	104	46	0	208	0	28	38	51	0	117	0	38	29	5	0	72	539
18:45	0	10	73	30	0	113	0	68	89	41	0	198	0	34	39	47	0	120	0	26	37	1	0	64	495
Hourly Total	0	43	387	135	0	565	2	269	403	171	0	845	0	148	202	231	0	581	0	142	150	21	0	313	2304
Lights	1	594	3819	1306	-	5720	36	2052	4000	1738	-	7826	1	1254	2274	1812	-	5341	0	1915	2076	387	-	4378	23265
% Lights	100.0	97.5	96.3	96.7	-	96.5	97.3	98.3	96.8	96.7	-	97.2	100.0	97.8	98.7	98.5	-	98.4	-	97.4	98.0	94.6	-	97.4	97.3
Other Vehicles	0	15	146	43	-	204	1	35	131	58	-	225	0	28	25	28	-	81	0	52	33	21	-	106	616
% Other Vehicles	0.0	2.5	3.7	3.2	-	3.4	2.7	1.7	3.2	3.2	-	2.8	0.0	2.2	1.1	1.5	-	1.5	-	2.6	1.6	5.1	-	2.4	2.6
Bicycles on Road	0	0	1	1	-	2	0	0	2	2	-	4	0	0	4	0	-	4	0	0	10	1	-	11	21
% Bicycles on Road	0.0	0.0	0.0	0.1	-	0.0	0.0	0.0	0.0	0.1	-	0.0	0.0	0.0	0.2	0.0	-	0.1	-	0.0	0.5	0.2	-	0.2	0.1
Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	8	-	-
% Bicycles on Crosswalk	-	-	-	-	10.3	-	-	-	-	-	20.0	-	-	-	-	-	0.0	-	-	-	-	-	47.1	-	-
Pedestrians	-	-	-	-	26	-	-	-	-	-	8	-	-	-	-	-	11	-	-	-	-	-	9	-	-
% Pedestrians	-	-	-	-	89.7	-	-	-	-	-	80.0	-	-	-	-	-	100.0	-	-	-	-	-	52.9	-	-

FDOT D1
 TWO 11 Manatee Ave W (SR 64)
 Manatee Ave (SR 64) & 75th St W
 Weekday TMC

Albeck Gerken, Inc.
 1911 N US Hwy 301
 Suite 410
 Tampa, Florida, United States 33619
 (813) 319-3790

Count Name: 605_Manatee Ave (SR 64) & 75th St W_WD
 Site Code: 605
 Start Date: 01/10/2017
 Page No: 5

Turning Movement Peak Hour Data (16:30)

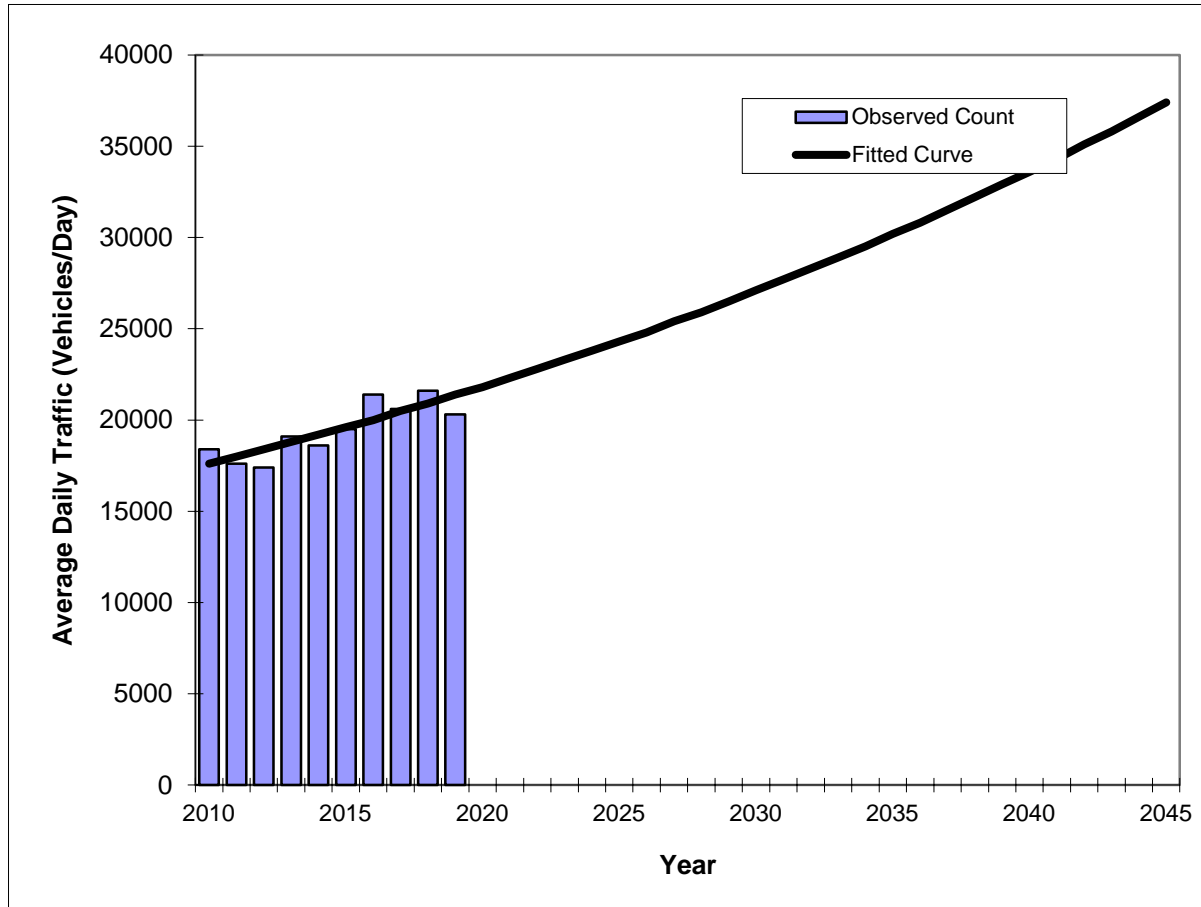
Start Time	Manatee Ave (SR 64) Eastbound						Manatee Ave (SR 64) Westbound						75th St W Northbound						75th St W Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
16:30	0	21	113	45	0	179	2	69	126	73	0	270	0	45	94	83	0	222	0	71	60	14	0	145	816
16:45	0	30	137	60	0	227	3	69	119	74	1	265	0	51	116	54	0	221	0	67	66	19	1	152	865
17:00	0	21	140	62	0	223	0	77	194	61	1	332	0	51	93	72	0	216	0	69	63	14	0	146	917
17:15	0	17	154	58	0	229	1	77	169	74	0	321	0	39	92	67	0	198	0	72	92	6	1	170	918
PHF	0.000	0.742	0.883	0.907	-	0.937	0.500	0.948	0.784	0.953	-	0.895	0.000	0.912	0.851	0.831	-	0.965	0.000	0.969	0.764	0.697	-	0.901	0.958
Lights	0	88	528	216	-	832	5	291	603	279	-	1178	0	185	392	271	-	848	0	275	276	51	-	602	3460
% Lights	-	98.9	97.1	96.0	-	97.0	83.3	99.7	99.2	98.9	-	99.2	-	99.5	99.2	98.2	-	98.9	-	98.6	98.2	96.2	-	98.2	98.4
Other Vehicles	0	1	16	9	-	26	1	1	4	3	-	9	0	1	3	5	-	9	0	4	3	2	-	9	53
% Other Vehicles	-	1.1	2.9	4.0	-	3.0	16.7	0.3	0.7	1.1	-	0.8	-	0.5	0.8	1.8	-	1.1	-	1.4	1.1	3.8	-	1.5	1.5
Bicycles on Road	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	0	0	2	0	-	2	3
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.2	0.0	-	0.1	-	0.0	0.0	0.0	-	0.0	-	0.0	0.7	0.0	-	0.3	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	50.0	-	-	-	-	-	-	-	-	-	-	-	50.0	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	50.0	-	-	-	-	-	-	-	-	-	-	-	50.0	-	-

Traffic Trends - V03.a

75TH STREET W. -- Manatee Ave to 20th Ave W

FIN#	1234
Location	1

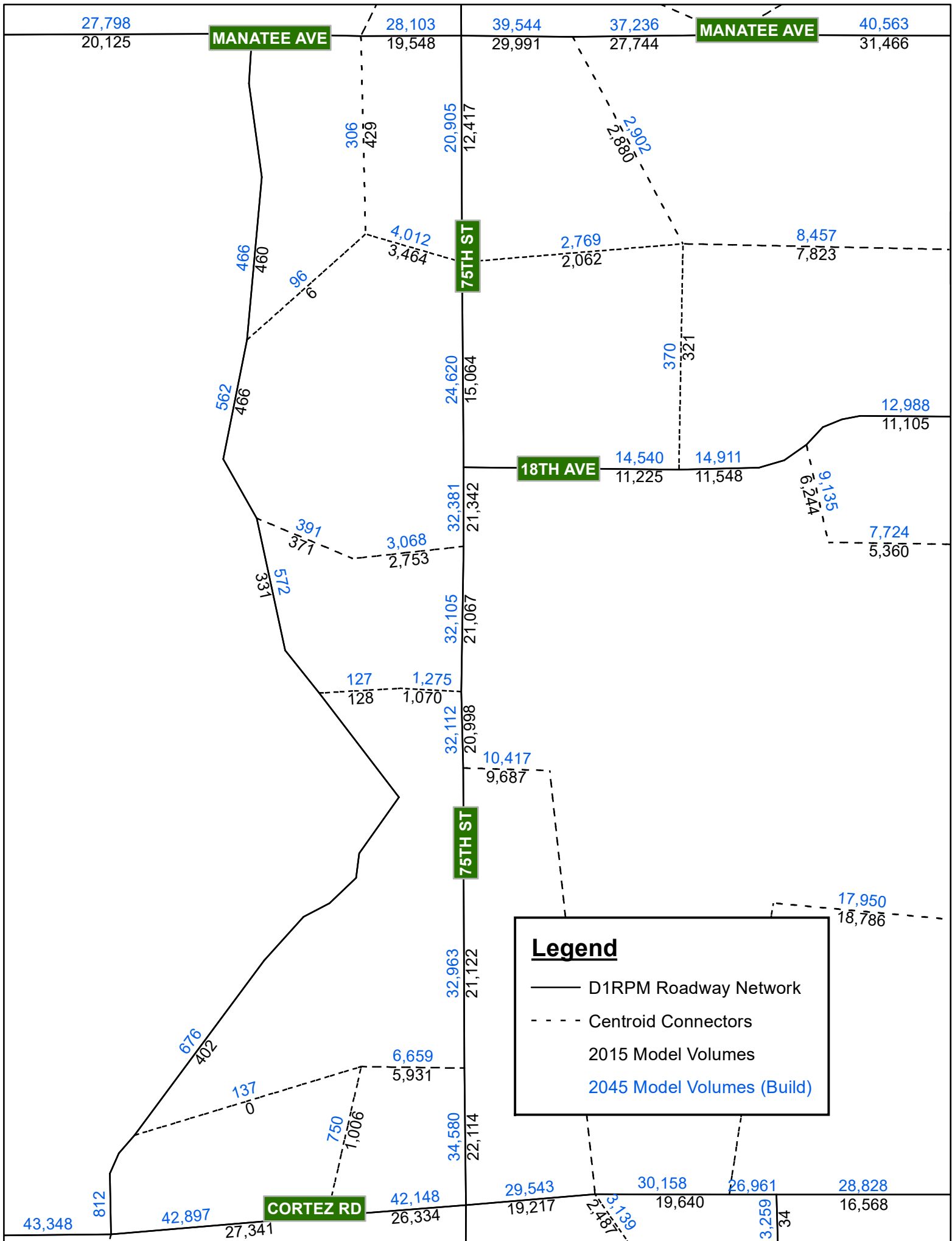
County:	Manatee (13)
Station #:	01-28
Highway:	75th Street W



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2010	18400	17600
2011	17600	18000
2012	17400	18400
2013	19100	18800
2014	18600	19200
2015	19500	19600
2016	21400	20000
2017	20600	20500
2018	21600	20900
2019	20300	21400
2025 Opening Year Trend		
2025	N/A	24300
2035 Mid-Year Trend		
2035	N/A	30200
2045 Design Year Trend		
2045	N/A	37400
TRANPLAN Forecasts/Trends		

Trend R-squared:	72.09%
Compounded Annual Historic Growth Rate:	2.20%
Compounded Growth Rate (2019 to Design Year):	2.17%
Printed:	28-Jul-21
Exponential Growth Option	

*Axle-Adjusted



Attachment C: Intersection Volume Development Worksheets

EXISTING (2021) VOLUME DEVELOPMENT AT STUDY INTERSECTIONS

INTERSECTION: 75TH St W & Manatee Ave W

COUNT DATE: January 10, 2017

AM PEAK HOUR FACTOR: 0.95

PM PEAK HOUR FACTOR: 0.95

"AM EXISTING TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
AM Raw Turning Movements	84	445	140	217	455	282	180	319	168	264	385	59
Seasonal Factor (Min. 1.00)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AM EXISTING CONDITIONS	84	445	140	217	455	282	180	319	168	264	385	59
"PM EXISTING TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
PM Raw Turning Movements	89	544	225	298	608	282	186	395	276	279	281	53
Seasonal Factor (Min. 1.00)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PM EXISTING CONDITIONS	89	544	225	298	608	282	186	395	276	279	281	53
"AM BACKGROUND TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Years To Buildout	4	4	4	4	4	4	4	4	4	4	4	4
Yearly Growth Rate	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%
AM BACKGROUND TRAFFIC GROWTH	8	40	13	20	41	26	16	29	15	24	35	5
AM NON-PROJECT TRAFFIC	92	485	153	237	496	308	196	348	183	288	420	64
"PM BACKGROUND TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Years To Buildout	4	4	4	4	4	4	4	4	4	4	4	4
Yearly Growth Rate	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%
PM BACKGROUND TRAFFIC GROWTH	8	49	20	27	55	26	17	36	25	25	26	5
PM NON-PROJECT TRAFFIC	97	593	245	325	663	308	203	431	301	304	307	58

EXISTING (2021) VOLUME DEVELOPMENT AT STUDY INTERSECTIONS

INTERSECTION: 75th St W & 18th Ave W

COUNT DATE: March 25, 2021

AM PEAK HOUR FACTOR: 0.92

PM PEAK HOUR FACTOR: 0.97

"AM EXISTING TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
AM Raw Turning Movements	0	0	0	103	0	57	0	722	103	90	649	0
Seasonal Factor (Min. 1.00)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AM EXISTING CONDITIONS	0	0	0	103	0	57	0	722	103	90	649	0
"PM EXISTING TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
PM Raw Turning Movements	0	0	0	145	0	62	0	771	128	52	765	0
Seasonal Factor (Min. 1.00)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PM EXISTING CONDITIONS	0	0	0	145	0	62	0	771	128	52	765	0
"AM BACKGROUND TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Years To Buildout	0	0	0	0	0	0	0	0	0	0	0	0
Yearly Growth Rate	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%
AM BACKGROUND TRAFFIC GROWTH	0	0	0	0	0	0	0	0	0	0	0	0
AM NON-PROJECT TRAFFIC	0	0	0	103	0	57	0	722	103	90	649	0
"PM BACKGROUND TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Years To Buildout	0	0	0	0	0	0	0	0	0	0	0	0
Yearly Growth Rate	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%
PM BACKGROUND TRAFFIC GROWTH	0	0	0	0	0	0	0	0	0	0	0	0
PM NON-PROJECT TRAFFIC	0	0	0	145	0	62	0	771	128	52	765	0

OY 2025 VOLUME DEVELOPMENT AT STUDY INTERSECTIONS

INTERSECTION: 75th St W & Manatee Ave W

COUNT DATE: January 1, 2021

AM PEAK HOUR FACTOR: 0.95

PM PEAK HOUR FACTOR: 0.96

"AM EXISTING TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
AM Raw Turning Movements	92	485	153	237	496	308	196	348	183	288	420	64
Seasonal Factor (Min. 1.00)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AM EXISTING CONDITIONS	92	485	153	237	496	308	196	348	183	288	420	64
"PM EXISTING TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
PM Raw Turning Movements	97	593	245	325	663	308	203	431	301	304	307	58
Seasonal Factor (Min. 1.00)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PM EXISTING CONDITIONS	97	593	245	325	663	308	203	431	301	304	307	58
"AM BACKGROUND TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Years To Buildout	4	4	4	4	4	4	4	4	4	4	4	4
Yearly Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
AM BACKGROUND TRAFFIC GROWTH	2	9	3	5	10	6	13	22	12	19	27	4
AM NON-PROJECT TRAFFIC	94	494	156	242	506	314	209	370	195	307	447	68
	95	495	160	245	510	315	210	370	195	310	450	70
"PM BACKGROUND TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Years To Buildout	4	4	4	4	4	4	4	4	4	4	4	4
Yearly Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
PM BACKGROUND TRAFFIC GROWTH	2	11	5	6	13	6	13	28	19	20	20	4
PM NON-PROJECT TRAFFIC	99	604	250	331	676	314	216	459	320	324	327	62
	100	605	250	335	680	315	220	460	320	325	330	65

OY 2025 VOLUME DEVELOPMENT AT STUDY INTERSECTIONS

INTERSECTION: 75th St W & 18th Ave W

COUNT DATE: January 1, 2021

AM PEAK HOUR FACTOR: 0.92

PM PEAK HOUR FACTOR: 0.95

"AM EXISTING TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
AM Raw Turning Movements	0	0	0	103	0	57	0	722	103	90	649	0
Seasonal Factor (Min. 1.00)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AM EXISTING CONDITIONS	0	0	0	103	0	57	0	722	103	90	649	0
"PM EXISTING TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
PM Raw Turning Movements	0	0	0	145	0	62	0	771	128	52	765	0
Seasonal Factor (Min. 1.00)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PM EXISTING CONDITIONS	0	0	0	145	0	62	0	771	128	52	765	0
"AM BACKGROUND TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Years To Buildout	4	4	4	4	4	4	4	4	4	4	4	4
Yearly Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
AM BACKGROUND TRAFFIC GROWTH	0	0	0	2	0	1	0	46	7	6	42	0
AM NON-PROJECT TRAFFIC	0	0	0	105	0	58	0	768	110	96	691	0
	0	0	0	105	0	60	0	770	110	100	695	0
"PM BACKGROUND TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Years To Buildout	4	4	4	4	4	4	4	4	4	4	4	4
Yearly Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
PM BACKGROUND TRAFFIC GROWTH	0	0	0	3	0	1	0	50	8	3	49	0
PM NON-PROJECT TRAFFIC	0	0	0	148	0	63	0	821	136	55	814	0
	0	0	0	150	0	65	0	825	140	55	815	0

DY 2045 VOLUME DEVELOPMENT AT STUDY INTERSECTIONS

INTERSECTION: 75th St W & Manatee Ave W

COUNT DATE: January 1, 2021

AM PEAK HOUR FACTOR: 0.95

PM PEAK HOUR FACTOR: 0.96

"AM EXISTING TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
AM Raw Turning Movements	92	485	153	237	496	308	196	348	183	288	420	64
Seasonal Factor (Min. 1.00)	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
AM EXISTING CONDITIONS	85	446	141	218	456	283	180	320	168	265	386	59
"PM EXISTING TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
PM Raw Turning Movements	97	593	245	325	663	308	203	431	301	304	307	58
Seasonal Factor (Min. 1.00)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PM EXISTING CONDITIONS	97	593	245	325	663	308	203	431	301	304	307	58
"AM BACKGROUND TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Years To Buildout	24	24	24	24	24	24	24	24	24	24	24	24
Yearly Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
AM BACKGROUND TRAFFIC GROWTH	10	54	17	27	56	34	82	145	76	120	175	27
AM NON-PROJECT TRAFFIC	95	500	158	245	512	317	262	465	244	385	561	86
"PM BACKGROUND TRAFFIC"	95	500	160	245	515	320	265	465	245	385	565	90
"PM BACKGROUND TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Years To Buildout	24	24	24	24	24	24	24	24	24	24	24	24
Yearly Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
PM BACKGROUND TRAFFIC GROWTH	12	72	30	40	81	38	92	195	136	138	139	26
PM NON-PROJECT TRAFFIC	109	665	275	365	744	346	295	626	437	442	446	84
	110	665	275	365	745	350	295	630	440	445	450	85

DY 2045 VOLUME DEVELOPMENT AT STUDY INTERSECTIONS

INTERSECTION: 75th St W & 18th Ave W

COUNT DATE: January 1, 2021

AM PEAK HOUR FACTOR: 0.92

PM PEAK HOUR FACTOR: 0.95

"AM EXISTING TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
AM Raw Turning Movements	0	0	0	103	0	57	0	722	103	90	649	0
Seasonal Factor (Min. 1.00)	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
AM EXISTING CONDITIONS	0	0	0	98	0	54	0	686	98	86	617	0
"PM EXISTING TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
PM Raw Turning Movements	0	0	0	145	0	62	0	771	128	52	765	0
Seasonal Factor (Min. 1.00)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PM EXISTING CONDITIONS	0	0	0	145	0	62	0	771	128	52	765	0
"AM BACKGROUND TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Years To Buildout	24	24	24	24	24	24	24	24	24	24	24	24
Yearly Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
AM BACKGROUND TRAFFIC GROWTH	0	0	0	12	0	7	0	311	44	39	280	0
AM NON-PROJECT TRAFFIC	0	0	0	110	0	61	0	997	142	125	897	0
	0	0	0	110	0	65	0	1000	145	125	900	0
"PM BACKGROUND TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Years To Buildout	24	24	24	24	24	24	24	24	24	24	24	24
Yearly Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
PM BACKGROUND TRAFFIC GROWTH	0	0	0	18	0	8	0	350	58	24	347	0
PM NON-PROJECT TRAFFIC	0	0	0	163	0	70	0	1,121	186	76	1,112	0
	0	0	0	165	0	70	0	1125	190	80	1115	0

Attachment D: Synchro Outputs

D-1: Existing Conditions (2021)

Lanes, Volumes, Timings
1: 75th St W & Manatee Ave W

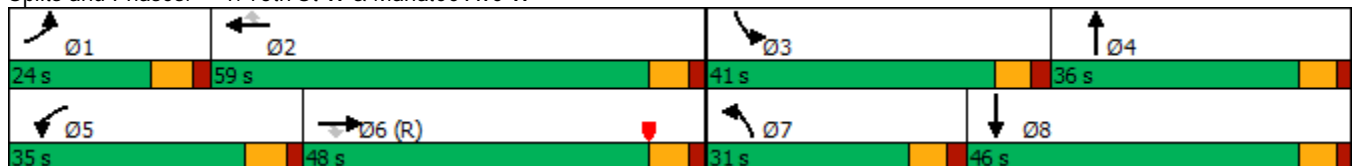
DTM 75th Street West
2021 - AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	485	153	237	496	308	196	348	183	288	420	64
Future Volume (vph)	92	485	153	237	496	308	196	348	183	288	420	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		320	670		200	220		600	320		0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			45			45	
Link Distance (ft)		1826			3734			4547			1548	
Travel Time (s)		31.1			63.6			68.9			23.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2						
Detector Phase	1	6	6	5	2	2	7	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	12.0	27.8	27.8	11.8	27.8	27.8	11.8	27.4		11.7	27.4	
Total Split (s)	24.0	48.0	48.0	35.0	59.0	59.0	31.0	36.0		41.0	46.0	
Total Split (%)	15.0%	30.0%	30.0%	21.9%	36.9%	36.9%	19.4%	22.5%		25.6%	28.8%	
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.4	4.4		4.4	4.4	
All-Red Time (s)	2.2	2.0	2.0	2.0	2.0	2.0	2.4	2.0		2.3	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	6.8	6.8	6.8	6.8	6.8	6.8	6.4		6.7	6.4	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	Max	Max	Max	None	None		None	None	

Intersection Summary

Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 3 (2%), Referenced to phase 6:EBT, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated

Splits and Phases: 1: 75th St W & Manatee Ave W



HCM 6th Signalized Intersection Summary
 1: 75th St W & Manatee Ave W

DTM 75th Street West
 2021 - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑	↗	↙	↑↑	↗	↙	↑↑		↙	↑↑	
Traffic Volume (veh/h)	92	485	153	237	496	308	196	348	183	288	420	64
Future Volume (veh/h)	92	485	153	237	496	308	196	348	183	288	420	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1811	1811	1811	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	97	511	161	249	522	324	206	366	193	303	442	67
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	6	6	6	2	2	2	2	2	2
Cap, veh/h	118	915	408	304	1261	563	228	402	209	325	719	108
Arrive On Green	0.07	0.26	0.26	0.18	0.37	0.37	0.13	0.18	0.18	0.18	0.23	0.23
Sat Flow, veh/h	1781	3554	1585	1725	3441	1535	1781	2262	1174	1781	3097	467
Grp Volume(v), veh/h	97	511	161	249	522	324	206	286	273	303	253	256
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1725	1721	1535	1781	1777	1659	1781	1777	1786
Q Serve(g_s), s	8.6	20.0	13.4	22.2	18.1	27.1	18.2	25.3	25.9	26.8	20.4	20.6
Cycle Q Clear(g_c), s	8.6	20.0	13.4	22.2	18.1	27.1	18.2	25.3	25.9	26.8	20.4	20.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.71	1.00		0.26
Lane Grp Cap(c), veh/h	118	915	408	304	1261	563	228	316	295	325	412	415
V/C Ratio(X)	0.83	0.56	0.39	0.82	0.41	0.58	0.91	0.91	0.92	0.93	0.61	0.62
Avail Cap(c_a), veh/h	189	915	408	304	1261	563	269	329	307	382	440	442
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.59	0.59	0.59	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.8	51.5	49.1	63.4	37.8	40.7	68.8	64.5	64.7	64.4	55.0	55.1
Incr Delay (d2), s/veh	14.4	2.5	2.8	21.3	1.0	4.3	19.3	18.1	22.1	27.0	2.3	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	9.2	5.6	11.5	7.8	10.8	9.4	12.8	12.6	14.4	9.3	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	88.2	54.0	51.9	84.7	38.8	44.9	88.2	82.5	86.8	91.4	57.2	57.4
LnGrp LOS	F	D	D	F	D	D	F	F	F	F	E	E
Approach Vol, veh/h		769			1095			765			812	
Approach Delay, s/veh		57.9			51.1			85.6			70.0	
Approach LOS		E			D			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.6	65.4	35.9	34.9	35.0	48.0	27.2	43.5				
Change Period (Y+Rc), s	* 7	6.8	* 6.7	6.4	6.8	6.8	6.8	6.4				
Max Green Setting (Gmax), s	* 17	52.2	* 34	29.6	28.2	41.2	24.2	39.6				
Max Q Clear Time (g_c+l1), s	10.6	29.1	28.8	27.9	24.2	22.0	20.2	22.6				
Green Ext Time (p_c), s	0.1	4.5	0.4	0.6	0.3	3.6	0.2	2.5				

Intersection Summary

HCM 6th Ctrl Delay	64.7
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
2: 75th St W & 18th Ave W

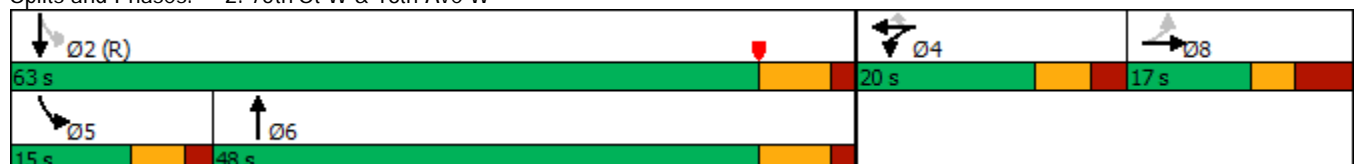
DTM 75th Street West
2021 - AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	103	0	57	0	722	103	90	649	0
Future Volume (vph)	0	0	0	103	0	57	0	722	103	90	649	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		143			1884			1582			4547	
Travel Time (s)		3.3			42.8			24.0			68.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	4%	4%	4%	3%	3%	3%
Shared Lane Traffic (%)												
Turn Type				Split	NA	Perm		NA		pm+pt	NA	
Protected Phases		8		4	4			6		5	2	
Permitted Phases	8					4				2		
Detector Phase	8	8		4	4	4		6		5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0		20.0		7.0	20.0	
Minimum Split (s)	14.8	14.8		29.8	29.8	29.8		34.3		13.1	27.3	
Total Split (s)	17.0	17.0		20.0	20.0	20.0		48.0		15.0	63.0	
Total Split (%)	17.0%	17.0%		20.0%	20.0%	20.0%		48.0%		15.0%	63.0%	
Yellow Time (s)	3.4	3.4		4.2	4.2	4.2		5.3		4.1	5.3	
All-Red Time (s)	4.4	4.4		2.6	2.6	2.6		2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)		7.8			6.8	6.8		7.3		6.1	7.3	
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Recall Mode	None	None		None	None	None		Max		None	C-Max	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 56 (56%), Referenced to phase 2:SBTL, Start of Yellow
 Natural Cycle: 125
 Control Type: Actuated-Coordinated

Splits and Phases: 2: 75th St W & 18th Ave W



HCM 6th Signalized Intersection Summary
2: 75th St W & 18th Ave W

DTM 75th Street West
2021 - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔		↔		↔	↔	
Traffic Volume (veh/h)	0	0	0	103	0	57	0	722	103	90	649	0
Future Volume (veh/h)	0	0	0	103	0	57	0	722	103	90	649	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	0	1841	1841	1856	1856	0
Adj Flow Rate, veh/h	0	0	0	112	0	62	0	785	112	98	705	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	0	4	4	3	3	0
Cap, veh/h	0	2	0	149	0	133	0	1022	146	372	1438	0
Arrive On Green	0.00	0.00	0.00	0.08	0.00	0.08	0.00	0.65	0.65	0.07	0.78	0.00
Sat Flow, veh/h	0	1870	0	1781	0	1585	0	1575	225	1767	1856	0
Grp Volume(v), veh/h	0	0	0	112	0	62	0	0	897	98	705	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1781	0	1585	0	0	1800	1767	1856	0
Q Serve(g_s), s	0.0	0.0	0.0	6.1	0.0	3.7	0.0	0.0	34.9	1.6	13.8	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	6.1	0.0	3.7	0.0	0.0	34.9	1.6	13.8	0.0
Prop In Lane	0.00		0.00	1.00		1.00	0.00		0.12	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	149	0	133	0	0	1168	372	1438	0
V/C Ratio(X)	0.00	0.00	0.00	0.75	0.00	0.47	0.00	0.00	0.77	0.26	0.49	0.00
Avail Cap(c_a), veh/h	0	172	0	235	0	209	0	0	1168	414	1438	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.78	0.78	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	44.8	0.0	43.7	0.0	0.0	12.3	11.8	4.1	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	7.3	0.0	2.5	0.0	0.0	4.9	0.3	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	3.0	0.0	1.5	0.0	0.0	12.7	0.8	3.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	52.1	0.0	46.2	0.0	0.0	17.2	12.1	5.0	0.0
LnGrp LOS	A	A	A	D	A	D	A	A	B	B	A	A
Approach Vol, veh/h		0			174			897			803	
Approach Delay, s/veh		0.0			50.0			17.2			5.9	
Approach LOS					D			B			A	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		84.8		15.2	12.6	72.2		0.0				
Change Period (Y+Rc), s		7.3		* 6.8	6.1	7.3		7.8				
Max Green Setting (Gmax), s		55.7		* 13	8.9	40.7		9.2				
Max Q Clear Time (g_c+I1), s		15.8		8.1	3.6	36.9		0.0				
Green Ext Time (p_c), s		5.0		0.3	0.1	2.1		0.0				

Intersection Summary

HCM 6th Ctrl Delay	15.4
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
1: 75th St W & Manatee Ave W

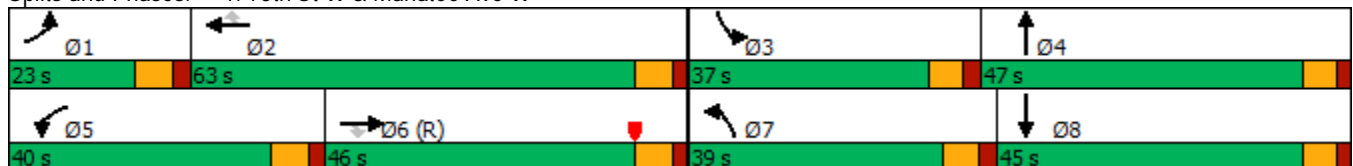
DTM 75th Street West
2021 - PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	97	593	245	325	663	308	203	431	301	304	307	58
Future Volume (vph)	97	593	245	325	663	308	203	431	301	304	307	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		320	670		200	220		600	320		0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			45			45	
Link Distance (ft)		1826			3734			4547			1548	
Travel Time (s)		31.1			63.6			68.9			23.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	4%	4%	4%
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2						
Detector Phase	1	6	6	5	2	2	7	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	12.0	27.8	27.8	11.8	27.8	27.8	11.8	27.4		11.7	27.4	
Total Split (s)	23.0	46.0	46.0	40.0	63.0	63.0	39.0	47.0		37.0	45.0	
Total Split (%)	13.5%	27.1%	27.1%	23.5%	37.1%	37.1%	22.9%	27.6%		21.8%	26.5%	
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.4	4.4		4.4	4.4	
All-Red Time (s)	2.2	2.0	2.0	2.0	2.0	2.0	2.4	2.0		2.3	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	6.8	6.8	6.8	6.8	6.8	6.8	6.4		6.7	6.4	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	Max	Max	Max	None	None		None	None	

Intersection Summary

Area Type: Other
 Cycle Length: 170
 Actuated Cycle Length: 170
 Offset: 21 (12%), Referenced to phase 6:EBT, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated

Splits and Phases: 1: 75th St W & Manatee Ave W



HCM 6th Signalized Intersection Summary
 1: 75th St W & Manatee Ave W

DTM 75th Street West
 2021 - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	593	245	325	663	308	203	431	301	304	307	58
Future Volume (veh/h)	97	593	245	325	663	308	203	431	301	304	307	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	102	624	258	342	698	324	214	454	317	320	323	61
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	4	4	4
Cap, veh/h	121	813	363	348	1265	564	236	476	331	312	832	155
Arrive On Green	0.07	0.23	0.23	0.20	0.36	0.36	0.13	0.24	0.24	0.18	0.28	0.28
Sat Flow, veh/h	1767	3526	1572	1781	3554	1585	1781	2004	1392	1753	2942	549
Grp Volume(v), veh/h	102	624	258	342	698	324	214	402	369	320	190	194
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1781	1777	1585	1781	1777	1620	1753	1749	1742
Q Serve(g_s), s	9.7	28.1	25.7	32.5	26.8	28.1	20.1	37.9	38.2	30.3	14.9	15.2
Cycle Q Clear(g_c), s	9.7	28.1	25.7	32.5	26.8	28.1	20.1	37.9	38.2	30.3	14.9	15.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	1.00		0.32
Lane Grp Cap(c), veh/h	121	813	363	348	1265	564	236	422	385	312	494	493
V/C Ratio(X)	0.84	0.77	0.71	0.98	0.55	0.57	0.91	0.95	0.96	1.02	0.39	0.39
Avail Cap(c_a), veh/h	166	813	363	348	1265	564	337	424	387	312	494	493
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.57	0.57	0.57	1.00	1.00	1.00
Uniform Delay (d), s/veh	78.2	61.1	60.2	68.1	43.9	44.3	72.7	63.9	64.0	69.8	49.1	49.2
Incr Delay (d2), s/veh	23.2	6.9	11.3	44.2	1.7	4.2	13.6	22.0	24.5	57.2	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.9	19.3	16.7	26.1	17.7	17.2	13.9	24.9	23.4	25.7	10.7	10.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	101.5	68.0	71.5	112.3	45.6	48.5	86.3	85.9	88.5	127.1	49.6	49.7
LnGrp LOS	F	E	E	F	D	D	F	F	F	F	D	D
Approach Vol, veh/h		984			1364			985			704	
Approach Delay, s/veh		72.4			63.0			86.9			84.8	
Approach LOS		E			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.7	67.3	37.0	46.8	40.0	46.0	29.3	54.5				
Change Period (Y+Rc), s	* 7	6.8	* 6.7	6.4	6.8	6.8	6.8	6.4				
Max Green Setting (Gmax), s	* 16	56.2	* 30	40.6	33.2	39.2	32.2	38.6				
Max Q Clear Time (g_c+l1), s	11.7	30.1	32.3	40.2	34.5	30.1	22.1	17.2				
Green Ext Time (p_c), s	0.1	6.1	0.0	0.2	0.0	3.3	0.4	1.9				

Intersection Summary

HCM 6th Ctrl Delay	74.9
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
2: 75th St W & 18th Ave W

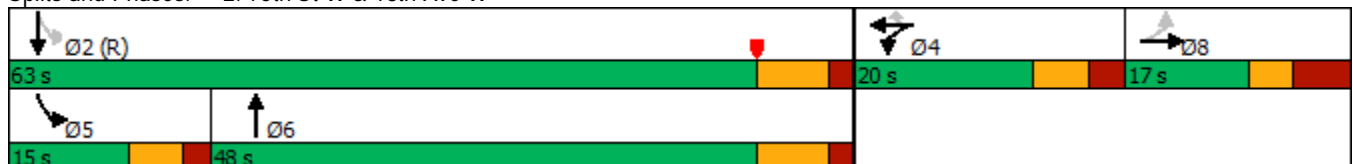
DTM 75th Street West
2021 - PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	145	0	62	0	771	128	52	765	0
Future Volume (vph)	0	0	0	145	0	62	0	771	128	52	765	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		143			1884			1582			4547	
Travel Time (s)		3.3			42.8			24.0			68.9	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%
Shared Lane Traffic (%)												
Turn Type				Split	NA	Perm		NA		pm+pt	NA	
Protected Phases		8		4	4			6		5	2	
Permitted Phases	8					4				2		
Detector Phase	8	8		4	4	4		6		5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0		20.0		7.0	20.0	
Minimum Split (s)	14.8	14.8		29.8	29.8	29.8		34.3		13.1	27.3	
Total Split (s)	17.0	17.0		20.0	20.0	20.0		48.0		15.0	63.0	
Total Split (%)	17.0%	17.0%		20.0%	20.0%	20.0%		48.0%		15.0%	63.0%	
Yellow Time (s)	3.4	3.4		4.2	4.2	4.2		5.3		4.1	5.3	
All-Red Time (s)	4.4	4.4		2.6	2.6	2.6		2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)		7.8			6.8	6.8		7.3		6.1	7.3	
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Recall Mode	None	None		None	None	None		Min		None	C-Min	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 56 (56%), Referenced to phase 2:SBTL, Start of Yellow
 Natural Cycle: 125
 Control Type: Actuated-Coordinated

Splits and Phases: 2: 75th St W & 18th Ave W



HCM 6th Signalized Intersection Summary
2: 75th St W & 18th Ave W

DTM 75th Street West
2021 - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔		↔		↔	↔	
Traffic Volume (veh/h)	0	0	0	145	0	62	0	771	128	52	765	0
Future Volume (veh/h)	0	0	0	145	0	62	0	771	128	52	765	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	0	1870	1870	1856	1856	0
Adj Flow Rate, veh/h	0	0	0	149	0	64	0	795	132	54	789	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	3	3	0
Cap, veh/h	0	2	0	186	0	165	0	1000	166	328	1401	0
Arrive On Green	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.64	0.64	0.05	0.75	0.00
Sat Flow, veh/h	0	1870	0	1781	0	1585	0	1564	260	1767	1856	0
Grp Volume(v), veh/h	0	0	0	149	0	64	0	0	927	54	789	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1781	0	1585	0	0	1824	1767	1856	0
Q Serve(g_s), s	0.0	0.0	0.0	8.2	0.0	3.8	0.0	0.0	37.3	0.9	18.1	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	8.2	0.0	3.8	0.0	0.0	37.3	0.9	18.1	0.0
Prop In Lane	0.00		0.00	1.00		1.00	0.00		0.14	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	186	0	165	0	0	1166	328	1401	0
V/C Ratio(X)	0.00	0.00	0.00	0.80	0.00	0.39	0.00	0.00	0.79	0.16	0.56	0.00
Avail Cap(c_a), veh/h	0	172	0	235	0	209	0	0	1166	389	1401	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.75	0.75	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	43.8	0.0	41.8	0.0	0.0	13.2	12.7	5.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	14.5	0.0	1.5	0.0	0.0	3.9	0.2	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.0	7.7	0.0	2.8	0.0	0.0	19.4	0.8	8.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	58.2	0.0	43.3	0.0	0.0	17.1	12.9	6.5	0.0
LnGrp LOS	A	A	A	E	A	D	A	A	B	B	A	A
Approach Vol, veh/h		0			213			927			843	
Approach Delay, s/veh		0.0			53.8			17.1			6.9	
Approach LOS					D			B			A	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		82.8		17.2	11.5	71.2		0.0				
Change Period (Y+Rc), s		7.3		* 6.8	6.1	7.3		7.8				
Max Green Setting (Gmax), s		55.7		* 13	8.9	40.7		9.2				
Max Q Clear Time (g_c+I1), s		20.1		10.2	2.9	39.3		0.0				
Green Ext Time (p_c), s		5.9		0.3	0.0	0.9		0.0				

Intersection Summary

HCM 6th Ctrl Delay	16.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

D-2: No Build Conditions

Lanes, Volumes, Timings
1: 75th St W & Manatee Ave W

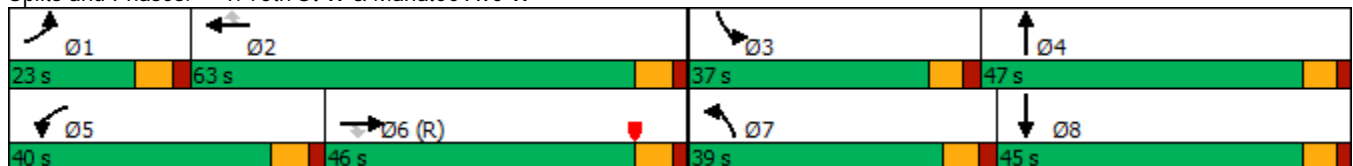
DTM 75th Street West - No Build
2025 Design Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	605	250	335	680	315	220	460	320	325	330	65
Future Volume (vph)	100	605	250	335	680	315	220	460	320	325	330	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		320	670		200	220		600	320		0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			45			45	
Link Distance (ft)		1826			3734			4547			1548	
Travel Time (s)		31.1			63.6			68.9			23.5	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	4%	4%	4%
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2						
Detector Phase	1	6	6	5	2	2	7	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	12.0	27.8	27.8	11.8	27.8	27.8	11.8	27.4		11.7	27.4	
Total Split (s)	23.0	46.0	46.0	40.0	63.0	63.0	39.0	47.0		37.0	45.0	
Total Split (%)	13.5%	27.1%	27.1%	23.5%	37.1%	37.1%	22.9%	27.6%		21.8%	26.5%	
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.4	4.4		4.4	4.4	
All-Red Time (s)	2.2	2.0	2.0	2.0	2.0	2.0	2.4	2.0		2.3	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	6.8	6.8	6.8	6.8	6.8	6.8	6.4		6.7	6.4	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	Max	Max	Max	None	None		None	None	

Intersection Summary

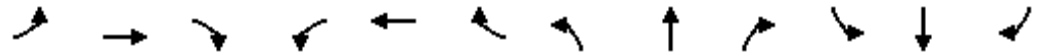
Area Type: Other
 Cycle Length: 170
 Actuated Cycle Length: 170
 Offset: 21 (12%), Referenced to phase 6:EBT, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated

Splits and Phases: 1: 75th St W & Manatee Ave W



HCM 6th Signalized Intersection Summary
 1: 75th St W & Manatee Ave W

DTM 75th Street West - No Build
 2025 Design Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	100	605	250	335	680	315	220	460	320	325	330	65
Future Volume (veh/h)	100	605	250	335	680	315	220	460	320	325	330	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	104	630	260	349	708	328	229	479	333	339	344	68
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	4	4	4
Cap, veh/h	123	813	363	348	1261	562	251	479	332	312	804	157
Arrive On Green	0.07	0.23	0.23	0.20	0.35	0.35	0.14	0.24	0.24	0.18	0.28	0.28
Sat Flow, veh/h	1767	3526	1572	1781	3554	1585	1781	2007	1390	1753	2917	570
Grp Volume(v), veh/h	104	630	260	349	708	328	229	424	388	339	205	207
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1781	1777	1585	1781	1777	1620	1753	1749	1738
Q Serve(g_s), s	9.9	28.5	25.9	33.2	27.3	28.6	21.5	40.6	40.6	30.3	16.3	16.7
Cycle Q Clear(g_c), s	9.9	28.5	25.9	33.2	27.3	28.6	21.5	40.6	40.6	30.3	16.3	16.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	1.00		0.33
Lane Grp Cap(c), veh/h	123	813	363	348	1261	562	251	424	387	312	482	479
V/C Ratio(X)	0.84	0.77	0.72	1.00	0.56	0.58	0.91	1.00	1.00	1.08	0.42	0.43
Avail Cap(c_a), veh/h	166	813	363	348	1261	562	337	424	387	312	482	479
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.44	0.44	0.44	1.00	1.00	1.00
Uniform Delay (d), s/veh	78.1	61.3	60.3	68.4	44.2	44.6	72.0	64.7	64.7	69.8	50.5	50.6
Incr Delay (d2), s/veh	24.0	7.1	11.5	49.1	1.8	4.4	12.5	28.8	31.0	75.5	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.1	19.5	16.9	27.1	18.1	17.4	14.1	26.5	24.7	28.5	11.6	11.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	102.2	68.4	71.8	117.5	46.0	49.0	84.5	93.4	95.7	145.3	51.1	51.3
LnGrp LOS	F	E	E	F	D	D	F	F	F	F	D	D
Approach Vol, veh/h		994			1385			1041			751	
Approach Delay, s/veh		72.8			64.7			92.3			93.7	
Approach LOS		E			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.9	67.1	37.0	47.0	40.0	46.0	30.7	53.3				
Change Period (Y+Rc), s	* 7	6.8	* 6.7	6.4	6.8	6.8	6.8	6.4				
Max Green Setting (Gmax), s	* 16	56.2	* 30	40.6	33.2	39.2	32.2	38.6				
Max Q Clear Time (g_c+l1), s	11.9	30.6	32.3	42.6	35.2	30.5	23.5	18.7				
Green Ext Time (p_c), s	0.1	6.2	0.0	0.0	0.0	3.2	0.4	2.1				

Intersection Summary

HCM 6th Ctrl Delay	78.8
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
2: 75th St W & 18th Ave W

DTM 75th Street West - No Build
2025 Design Hour

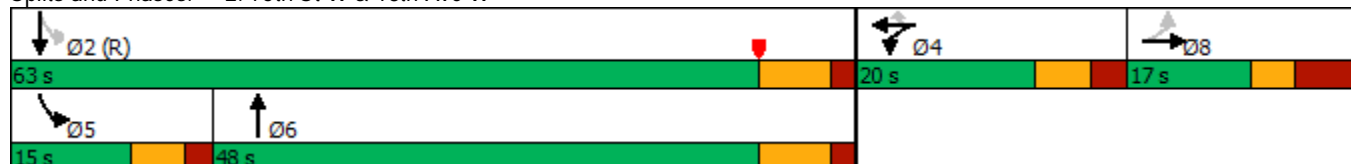


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗		↕		↗	↕	
Traffic Volume (vph)	0	0	0	150	0	65	0	825	140	55	815	0
Future Volume (vph)	0	0	0	150	0	65	0	825	140	55	815	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		143			1884			1582			4547	
Travel Time (s)		3.3			42.8			24.0			68.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%
Shared Lane Traffic (%)												
Turn Type				Split	NA	Perm		NA		pm+pt	NA	
Protected Phases		8		4	4			6		5	2	
Permitted Phases	8					4				2		
Detector Phase	8	8		4	4	4		6		5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0		20.0		7.0	20.0	
Minimum Split (s)	14.8	14.8		29.8	29.8	29.8		34.3		13.1	27.3	
Total Split (s)	17.0	17.0		20.0	20.0	20.0		48.0		15.0	63.0	
Total Split (%)	17.0%	17.0%		20.0%	20.0%	20.0%		48.0%		15.0%	63.0%	
Yellow Time (s)	3.4	3.4		4.2	4.2	4.2		5.3		4.1	5.3	
All-Red Time (s)	4.4	4.4		2.6	2.6	2.6		2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)		7.8			6.8	6.8		7.3		6.1	7.3	
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Recall Mode	None	None		None	None	None		Min		None	C-Min	

Intersection Summary

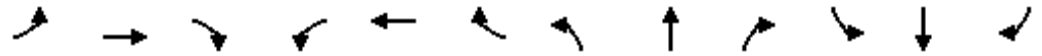
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 56 (56%), Referenced to phase 2:SBTL, Start of Yellow
 Natural Cycle: 145
 Control Type: Actuated-Coordinated

Splits and Phases: 2: 75th St W & 18th Ave W



HCM 6th Signalized Intersection Summary
2: 75th St W & 18th Ave W

DTM 75th Street West - No Build
2025 Design Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔		↔		↔	↔	
Traffic Volume (veh/h)	0	0	0	150	0	65	0	825	140	55	815	0
Future Volume (veh/h)	0	0	0	150	0	65	0	825	140	55	815	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	0	1870	1870	1856	1856	0
Adj Flow Rate, veh/h	0	0	0	158	0	68	0	868	147	58	858	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	3	3	0
Cap, veh/h	0	2	0	194	0	173	0	987	167	266	1392	0
Arrive On Green	0.00	0.00	0.00	0.11	0.00	0.11	0.00	0.63	0.63	0.06	0.75	0.00
Sat Flow, veh/h	0	1870	0	1781	0	1585	0	1559	264	1767	1856	0
Grp Volume(v), veh/h	0	0	0	158	0	68	0	0	1015	58	858	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1781	0	1585	0	0	1823	1767	1856	0
Q Serve(g_s), s	0.0	0.0	0.0	8.7	0.0	4.0	0.0	0.0	46.1	1.0	21.5	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	8.7	0.0	4.0	0.0	0.0	46.1	1.0	21.5	0.0
Prop In Lane	0.00		0.00	1.00		1.00	0.00		0.14	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	194	0	173	0	0	1154	266	1392	0
V/C Ratio(X)	0.00	0.00	0.00	0.81	0.00	0.39	0.00	0.00	0.88	0.22	0.62	0.00
Avail Cap(c_a), veh/h	0	172	0	235	0	209	0	0	1154	324	1392	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.72	0.72	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	43.6	0.0	41.5	0.0	0.0	15.2	17.3	5.8	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	16.4	0.0	1.5	0.0	0.0	8.1	0.3	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.0	8.2	0.0	2.9	0.0	0.0	24.7	1.2	9.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	60.0	0.0	42.9	0.0	0.0	23.3	17.6	7.3	0.0
LnGrp LOS	A	A	A	E	A	D	A	A	C	B	A	A
Approach Vol, veh/h		0			226			1015			916	
Approach Delay, s/veh		0.0			54.9			23.3			8.0	
Approach LOS					D			C			A	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		82.3		17.7	11.7	70.6		0.0				
Change Period (Y+Rc), s		7.3		* 6.8	6.1	7.3		7.8				
Max Green Setting (Gmax), s		55.7		* 13	8.9	40.7		9.2				
Max Q Clear Time (g_c+I1), s		23.5		10.7	3.0	48.1		0.0				
Green Ext Time (p_c), s		6.7		0.3	0.0	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	20.1
HCM 6th LOS	C

Notes

- User approved pedestrian interval to be less than phase max green.
- * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
1: 75th St W & Manatee Ave W

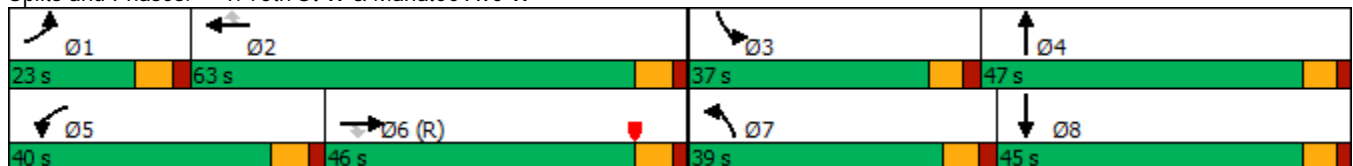
DTM 75th Street West - No Build
2045 Design Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	665	275	365	745	350	295	630	440	445	450	85
Future Volume (vph)	110	665	275	365	745	350	295	630	440	445	450	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		320	670		200	220		600	320		0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			45			45	
Link Distance (ft)		1826			3734			4547			1548	
Travel Time (s)		31.1			63.6			68.9			23.5	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	4%	4%	4%
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2						
Detector Phase	1	6	6	5	2	2	7	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	12.0	27.8	27.8	11.8	27.8	27.8	11.8	27.4		11.7	27.4	
Total Split (s)	23.0	46.0	46.0	40.0	63.0	63.0	39.0	47.0		37.0	45.0	
Total Split (%)	13.5%	27.1%	27.1%	23.5%	37.1%	37.1%	22.9%	27.6%		21.8%	26.5%	
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.4	4.4		4.4	4.4	
All-Red Time (s)	2.2	2.0	2.0	2.0	2.0	2.0	2.4	2.0		2.3	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	6.8	6.8	6.8	6.8	6.8	6.8	6.4		6.7	6.4	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	Max	Max	Max	None	None		None	None	

Intersection Summary

Area Type: Other
 Cycle Length: 170
 Actuated Cycle Length: 170
 Offset: 21 (12%), Referenced to phase 6:EBT, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated

Splits and Phases: 1: 75th St W & Manatee Ave W



HCM 6th Signalized Intersection Summary
1: 75th St W & Manatee Ave W

DTM 75th Street West - No Build
2045 Design Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	110	665	275	365	745	350	295	630	440	445	450	85
Future Volume (veh/h)	110	665	275	365	745	350	295	630	440	445	450	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	115	693	286	380	776	365	307	656	458	464	469	89
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	4	4	4
Cap, veh/h	135	813	363	348	1239	553	325	478	333	312	686	129
Arrive On Green	0.08	0.23	0.23	0.20	0.35	0.35	0.18	0.24	0.24	0.18	0.23	0.23
Sat Flow, veh/h	1767	3526	1572	1781	3554	1585	1781	2002	1394	1753	2936	554
Grp Volume(v), veh/h	115	693	286	380	776	365	307	582	532	464	278	280
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1781	1777	1585	1781	1777	1619	1753	1749	1741
Q Serve(g_s), s	10.9	32.0	29.1	33.2	30.9	33.1	28.9	40.6	40.6	30.3	24.6	24.9
Cycle Q Clear(g_c), s	10.9	32.0	29.1	33.2	30.9	33.1	28.9	40.6	40.6	30.3	24.6	24.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	1.00		0.32
Lane Grp Cap(c), veh/h	135	813	363	348	1239	553	325	424	387	312	409	407
V/C Ratio(X)	0.85	0.85	0.79	1.09	0.63	0.66	0.94	1.37	1.38	1.48	0.68	0.69
Avail Cap(c_a), veh/h	166	813	363	348	1239	553	337	424	387	312	409	407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	77.6	62.6	61.5	68.4	46.1	46.9	68.6	64.7	64.7	69.8	59.3	59.5
Incr Delay (d2), s/veh	28.4	11.0	15.9	75.3	2.4	6.1	5.8	168.6	170.5	234.7	4.5	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.0	21.9	19.0	31.5	20.2	19.9	15.3	49.3	45.4	51.3	16.8	17.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.0	73.6	77.4	143.7	48.5	53.0	74.4	233.3	235.2	304.5	63.9	64.3
LnGrp LOS	F	E	E	F	D	D	E	F	F	F	E	E
Approach Vol, veh/h		1094			1521			1421			1022	
Approach Delay, s/veh		78.0			73.4			199.7			173.2	
Approach LOS		E			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.9	66.1	37.0	47.0	40.0	46.0	37.9	46.1				
Change Period (Y+Rc), s	* 7	6.8	* 6.7	6.4	6.8	6.8	6.8	6.4				
Max Green Setting (Gmax), s	* 16	56.2	* 30	40.6	33.2	39.2	32.2	38.6				
Max Q Clear Time (g_c+I1), s	12.9	35.1	32.3	42.6	35.2	34.0	30.9	26.9				
Green Ext Time (p_c), s	0.1	6.5	0.0	0.0	0.0	2.5	0.1	2.4				

Intersection Summary

HCM 6th Ctrl Delay	130.0
HCM 6th LOS	F

Notes

- User approved pedestrian interval to be less than phase max green.
- * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
2: 75th St W & 18th Ave W

DTM 75th Street West - No Build
2045 Design Hour

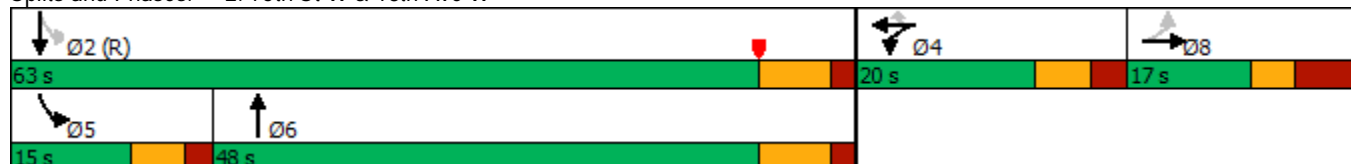


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗		↗		↗	↕	↗
Traffic Volume (vph)	0	0	0	165	0	70	0	1125	190	80	1115	0
Future Volume (vph)	0	0	0	165	0	70	0	1125	190	80	1115	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		143			1884			1582			4547	
Travel Time (s)		3.3			42.8			24.0			68.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%
Shared Lane Traffic (%)												
Turn Type				Split	NA	Perm		NA		pm+pt	NA	
Protected Phases		8		4	4			6		5	2	
Permitted Phases	8					4				2		
Detector Phase	8	8		4	4	4		6		5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0		20.0		7.0	20.0	
Minimum Split (s)	14.8	14.8		29.8	29.8	29.8		34.3		13.1	27.3	
Total Split (s)	17.0	17.0		20.0	20.0	20.0		48.0		15.0	63.0	
Total Split (%)	17.0%	17.0%		20.0%	20.0%	20.0%		48.0%		15.0%	63.0%	
Yellow Time (s)	3.4	3.4		4.2	4.2	4.2		5.3		4.1	5.3	
All-Red Time (s)	4.4	4.4		2.6	2.6	2.6		2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)		7.8			6.8	6.8		7.3		6.1	7.3	
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Recall Mode	None	None		None	None	None		Min		None	C-Min	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 56 (56%), Referenced to phase 2:SBTL, Start of Yellow
 Natural Cycle: 145
 Control Type: Actuated-Coordinated

Splits and Phases: 2: 75th St W & 18th Ave W



HCM 6th Signalized Intersection Summary
 2: 75th St W & 18th Ave W

DTM 75th Street West - No Build
 2045 Design Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔		↔		↔	↔	
Traffic Volume (veh/h)	0	0	0	165	0	70	0	1125	190	80	1115	0
Future Volume (veh/h)	0	0	0	165	0	70	0	1125	190	80	1115	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	0	1870	1870	1856	1856	0
Adj Flow Rate, veh/h	0	0	0	174	0	74	0	1184	200	84	1174	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	3	3	0
Cap, veh/h	0	2	0	209	0	186	0	963	163	184	1376	0
Arrive On Green	0.00	0.00	0.00	0.12	0.00	0.12	0.00	0.62	0.62	0.06	0.74	0.00
Sat Flow, veh/h	0	1870	0	1781	0	1585	0	1560	263	1767	1856	0
Grp Volume(v), veh/h	0	0	0	174	0	74	0	0	1384	84	1174	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1781	0	1585	0	0	1823	1767	1856	0
Q Serve(g_s), s	0.0	0.0	0.0	9.6	0.0	4.3	0.0	0.0	61.7	1.5	44.5	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	9.6	0.0	4.3	0.0	0.0	61.7	1.5	44.5	0.0
Prop In Lane	0.00		0.00	1.00		1.00	0.00		0.14	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	209	0	186	0	0	1126	184	1376	0
V/C Ratio(X)	0.00	0.00	0.00	0.83	0.00	0.40	0.00	0.00	1.23	0.46	0.85	0.00
Avail Cap(c_a), veh/h	0	172	0	235	0	209	0	0	1126	229	1376	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.54	0.54	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	43.2	0.0	40.9	0.0	0.0	19.1	25.0	9.1	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	20.0	0.0	1.4	0.0	0.0	111.3	1.0	3.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.0	9.1	0.0	3.1	0.0	0.0	79.6	2.2	17.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	63.2	0.0	42.2	0.0	0.0	130.4	26.0	13.0	0.0
LnGrp LOS	A	A	A	E	A	D	A	A	F	C	B	A
Approach Vol, veh/h		0			248			1384			1258	
Approach Delay, s/veh		0.0			56.9			130.4			13.8	
Approach LOS					E			F			B	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		81.5		18.5	12.4	69.0		0.0				
Change Period (Y+Rc), s		7.3		* 6.8	6.1	7.3		7.8				
Max Green Setting (Gmax), s		55.7		* 13	8.9	40.7		9.2				
Max Q Clear Time (g_c+I1), s		46.5		11.6	3.5	63.7		0.0				
Green Ext Time (p_c), s		5.7		0.2	0.1	0.0		0.0				

Intersection Summary

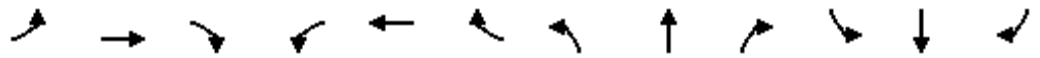
HCM 6th Ctrl Delay	73.4
HCM 6th LOS	E

Notes

- User approved pedestrian interval to be less than phase max green.
- * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

D-3: TSM&O Conditions

Lanes, Volumes, Timings
1: 75th St W & Manatee Ave W

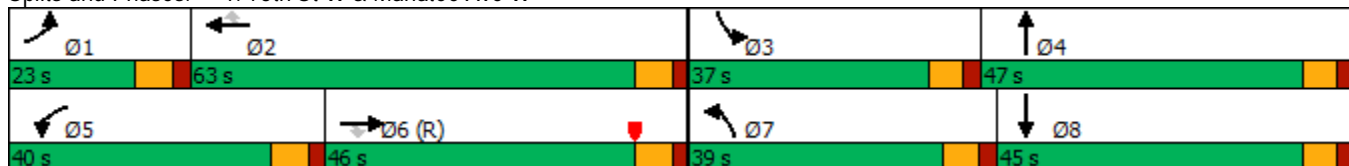


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑	↗	↙	↑↑	↗	↙	↑↑		↙	↑↑	
Traffic Volume (vph)	100	605	250	335	680	315	220	460	320	325	330	65
Future Volume (vph)	100	605	250	335	680	315	220	460	320	325	330	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		320	670		200	220		600	320		0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			45			45	
Link Distance (ft)		1826			3734			4547			1548	
Travel Time (s)		31.1			63.6			68.9			23.5	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	4%	4%	4%
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2						
Detector Phase	1	6	6	5	2	2	7	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	12.0	27.8	27.8	11.8	27.8	27.8	11.8	27.4		11.7	27.4	
Total Split (s)	23.0	46.0	46.0	40.0	63.0	63.0	39.0	47.0		37.0	45.0	
Total Split (%)	13.5%	27.1%	27.1%	23.5%	37.1%	37.1%	22.9%	27.6%		21.8%	26.5%	
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.4	4.4		4.4	4.4	
All-Red Time (s)	2.2	2.0	2.0	2.0	2.0	2.0	2.4	2.0		2.3	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	6.8	6.8	6.8	6.8	6.8	6.8	6.4		6.7	6.4	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	Max	Max	Max	None	None		None	None	

Intersection Summary

Area Type: Other
 Cycle Length: 170
 Actuated Cycle Length: 170
 Offset: 21 (12%), Referenced to phase 6:EBT, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated

Splits and Phases: 1: 75th St W & Manatee Ave W



HCM 6th Signalized Intersection Summary
 1: 75th St W & Manatee Ave W

DTM 75th Street West - TSM&O
 2025 Design Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	100	605	250	335	680	315	220	460	320	325	330	65
Future Volume (veh/h)	100	605	250	335	680	315	220	460	320	325	330	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	104	630	260	349	708	328	229	479	333	339	344	68
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	4	4	4
Cap, veh/h	123	813	363	348	1261	562	251	479	332	312	804	157
Arrive On Green	0.07	0.23	0.23	0.20	0.35	0.35	0.14	0.24	0.24	0.18	0.28	0.28
Sat Flow, veh/h	1767	3526	1572	1781	3554	1585	1781	2007	1390	1753	2917	570
Grp Volume(v), veh/h	104	630	260	349	708	328	229	424	388	339	205	207
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1781	1777	1585	1781	1777	1620	1753	1749	1738
Q Serve(g_s), s	9.9	28.5	25.9	33.2	27.3	28.6	21.5	40.6	40.6	30.3	16.3	16.7
Cycle Q Clear(g_c), s	9.9	28.5	25.9	33.2	27.3	28.6	21.5	40.6	40.6	30.3	16.3	16.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	1.00		0.33
Lane Grp Cap(c), veh/h	123	813	363	348	1261	562	251	424	387	312	482	479
V/C Ratio(X)	0.84	0.77	0.72	1.00	0.56	0.58	0.91	1.00	1.00	1.08	0.42	0.43
Avail Cap(c_a), veh/h	166	813	363	348	1261	562	337	424	387	312	482	479
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.62	0.62	0.62	1.00	1.00	1.00
Uniform Delay (d), s/veh	78.1	61.3	60.3	68.4	44.2	44.6	72.0	64.7	64.7	69.8	50.5	50.6
Incr Delay (d2), s/veh	24.0	7.1	11.5	49.1	1.8	4.4	16.3	34.2	36.7	75.5	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	13.4	11.4	19.7	12.3	11.8	10.9	22.1	20.4	19.9	7.2	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	102.2	68.4	71.8	117.5	46.0	49.0	88.3	98.9	101.4	145.3	51.1	51.3
LnGrp LOS	F	E	E	F	D	D	F	F	F	F	D	D
Approach Vol, veh/h		994			1385			1041			751	
Approach Delay, s/veh		72.8			64.7			97.5			93.7	
Approach LOS		E			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.9	67.1	37.0	47.0	40.0	46.0	30.7	53.3				
Change Period (Y+Rc), s	* 7	6.8	* 6.7	6.4	6.8	6.8	6.8	6.4				
Max Green Setting (Gmax), s	* 16	56.2	* 30	40.6	33.2	39.2	32.2	38.6				
Max Q Clear Time (g_c+l1), s	11.9	30.6	32.3	42.6	35.2	30.5	23.5	18.7				
Green Ext Time (p_c), s	0.1	6.2	0.0	0.0	0.0	3.2	0.4	2.1				

Intersection Summary

HCM 6th Ctrl Delay	80.0
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

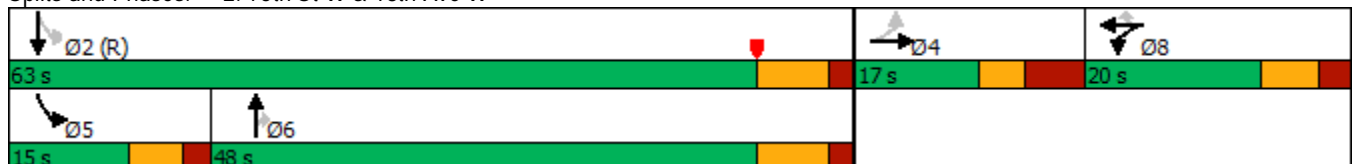
Lanes, Volumes, Timings
2: 75th St W & 18th Ave W

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	155	0	65	0	825	140	55	815	0
Future Volume (vph)	0	0	0	155	0	65	0	825	140	55	815	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		500
Storage Lanes	0		0	0		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		144			1884			1582			4547	
Travel Time (s)		3.3			42.8			24.0			68.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%
Shared Lane Traffic (%)												
Turn Type				Split	NA	Perm		NA	Perm	pm+pt	NA	
Protected Phases		4		8	8			6		5	2	
Permitted Phases	4					8			6	2		
Detector Phase	4	4		8	8	8		6	6	5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0		20.0	20.0	7.0	20.0	
Minimum Split (s)	25.8	25.8		24.8	24.8	24.8		27.3	27.3	13.1	27.3	
Total Split (s)	17.0	17.0		20.0	20.0	20.0		48.0	48.0	15.0	63.0	
Total Split (%)	17.0%	17.0%		20.0%	20.0%	20.0%		48.0%	48.0%	15.0%	63.0%	
Yellow Time (s)	3.4	3.4		4.2	4.2	4.2		5.3	5.3	4.1	5.3	
All-Red Time (s)	4.4	4.4		2.6	2.6	2.6		2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)		7.8			6.8	6.8		7.3	7.3	6.1	7.3	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None		None	None	None		Max	Max	None	C-Max	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 56 (56%), Referenced to phase 2:SBTL, Start of Yellow
 Natural Cycle: 125
 Control Type: Actuated-Coordinated

Splits and Phases: 2: 75th St W & 18th Ave W



HCM 6th Signalized Intersection Summary
2: 75th St W & 18th Ave W

DTM 75th Street West - TSM&O
2025 Design Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔		↑	↔	↔	↑	
Traffic Volume (veh/h)	0	0	0	155	0	65	0	825	140	55	815	0
Future Volume (veh/h)	0	0	0	155	0	65	0	825	140	55	815	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	0	1870	1870	1856	1856	0
Adj Flow Rate, veh/h	0	0	0	163	0	68	0	868	147	58	858	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	3	3	0
Cap, veh/h	0	2	0	199	0	177	0	1179	999	342	1387	0
Arrive On Green	0.00	0.00	0.00	0.11	0.00	0.11	0.00	0.63	0.63	0.06	0.75	0.00
Sat Flow, veh/h	0	1870	0	1781	0	1585	0	1870	1585	1767	1856	0
Grp Volume(v), veh/h	0	0	0	163	0	68	0	868	147	58	858	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1781	0	1585	0	1870	1585	1767	1856	0
Q Serve(g_s), s	0.0	0.0	0.0	8.9	0.0	4.0	0.0	32.0	3.8	1.0	21.7	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	8.9	0.0	4.0	0.0	32.0	3.8	1.0	21.7	0.0
Prop In Lane	0.00		0.00	1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	199	0	177	0	1179	999	342	1387	0
V/C Ratio(X)	0.00	0.00	0.00	0.82	0.00	0.38	0.00	0.74	0.15	0.17	0.62	0.00
Avail Cap(c_a), veh/h	0	172	0	235	0	209	0	1179	999	400	1387	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.72	0.72	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	43.4	0.0	41.2	0.0	12.7	7.5	10.9	5.9	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	17.6	0.0	1.4	0.0	4.1	0.3	0.2	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.9	0.0	1.6	0.0	12.2	1.2	0.4	6.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	61.0	0.0	42.6	0.0	16.9	7.8	11.1	7.4	0.0
LnGrp LOS	A	A	A	E	A	D	A	B	A	B	A	A
Approach Vol, veh/h		0			231			1015			916	
Approach Delay, s/veh		0.0			55.6			15.6			7.7	
Approach LOS					E			B			A	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		82.0		0.0	11.7	70.3		18.0				
Change Period (Y+Rc), s		7.3		7.8	6.1	7.3		6.8				
Max Green Setting (Gmax), s		55.7		9.2	8.9	40.7		13.2				
Max Q Clear Time (g_c+I1), s		23.7		0.0	3.0	34.0		10.9				
Green Ext Time (p_c), s		6.7		0.0	0.0	3.4		0.2				

Intersection Summary

HCM 6th Ctrl Delay	16.5
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Lanes, Volumes, Timings
1: 75th St W & Manatee Ave W

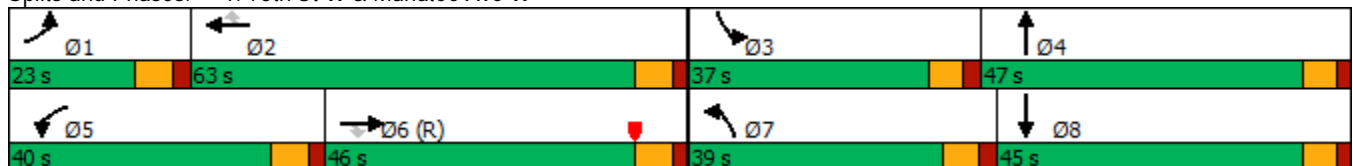
DTM 75th Street West - TSM&O
2045 Design Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	665	275	365	745	350	295	630	440	445	450	85
Future Volume (vph)	110	665	275	365	745	350	295	630	440	445	450	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		320	670		200	220		600	320		0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			45			45	
Link Distance (ft)		1826			3734			4547			1548	
Travel Time (s)		31.1			63.6			68.9			23.5	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	4%	4%	4%
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2						
Detector Phase	1	6	6	5	2	2	7	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	12.0	27.8	27.8	11.8	27.8	27.8	11.8	27.4		11.7	27.4	
Total Split (s)	23.0	46.0	46.0	40.0	63.0	63.0	39.0	47.0		37.0	45.0	
Total Split (%)	13.5%	27.1%	27.1%	23.5%	37.1%	37.1%	22.9%	27.6%		21.8%	26.5%	
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.4	4.4		4.4	4.4	
All-Red Time (s)	2.2	2.0	2.0	2.0	2.0	2.0	2.4	2.0		2.3	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	6.8	6.8	6.8	6.8	6.8	6.8	6.4		6.7	6.4	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	Max	Max	Max	None	None		None	None	

Intersection Summary

Area Type: Other
 Cycle Length: 170
 Actuated Cycle Length: 170
 Offset: 21 (12%), Referenced to phase 6:EBT, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated

Splits and Phases: 1: 75th St W & Manatee Ave W



HCM 6th Signalized Intersection Summary
 1: 75th St W & Manatee Ave W

DTM 75th Street West - TSM&O
 2045 Design Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	110	665	275	365	745	350	295	630	440	445	450	85
Future Volume (veh/h)	110	665	275	365	745	350	295	630	440	445	450	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	115	693	286	380	776	365	307	656	458	464	469	89
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	4	4	4
Cap, veh/h	135	813	363	348	1239	553	325	478	333	312	686	129
Arrive On Green	0.08	0.23	0.23	0.20	0.35	0.35	0.18	0.24	0.24	0.18	0.23	0.23
Sat Flow, veh/h	1767	3526	1572	1781	3554	1585	1781	2002	1394	1753	2936	554
Grp Volume(v), veh/h	115	693	286	380	776	365	307	582	532	464	278	280
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1781	1777	1585	1781	1777	1619	1753	1749	1741
Q Serve(g_s), s	10.9	32.0	29.1	33.2	30.9	33.1	28.9	40.6	40.6	30.3	24.6	24.9
Cycle Q Clear(g_c), s	10.9	32.0	29.1	33.2	30.9	33.1	28.9	40.6	40.6	30.3	24.6	24.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	1.00		0.32
Lane Grp Cap(c), veh/h	135	813	363	348	1239	553	325	424	387	312	409	407
V/C Ratio(X)	0.85	0.85	0.79	1.09	0.63	0.66	0.94	1.37	1.38	1.48	0.68	0.69
Avail Cap(c_a), veh/h	166	813	363	348	1239	553	337	424	387	312	409	407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	77.6	62.6	61.5	68.4	46.1	46.9	68.6	64.7	64.7	69.8	59.3	59.5
Incr Delay (d2), s/veh	28.4	11.0	15.9	75.3	2.4	6.1	5.8	168.6	170.5	234.7	4.5	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.0	21.9	19.0	31.5	20.2	19.9	15.3	49.3	45.4	51.3	16.8	17.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.0	73.6	77.4	143.7	48.5	53.0	74.4	233.3	235.2	304.5	63.9	64.3
LnGrp LOS	F	E	E	F	D	D	E	F	F	F	E	E
Approach Vol, veh/h		1094			1521			1421			1022	
Approach Delay, s/veh		78.0			73.4			199.7			173.2	
Approach LOS		E			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.9	66.1	37.0	47.0	40.0	46.0	37.9	46.1				
Change Period (Y+Rc), s	* 7	6.8	* 6.7	6.4	6.8	6.8	6.8	6.4				
Max Green Setting (Gmax), s	* 16	56.2	* 30	40.6	33.2	39.2	32.2	38.6				
Max Q Clear Time (g_c+I1), s	12.9	35.1	32.3	42.6	35.2	34.0	30.9	26.9				
Green Ext Time (p_c), s	0.1	6.5	0.0	0.0	0.0	2.5	0.1	2.4				

Intersection Summary

HCM 6th Ctrl Delay	130.0
HCM 6th LOS	F

Notes

- User approved pedestrian interval to be less than phase max green.
- * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
2: 75th St W & 18th Ave W

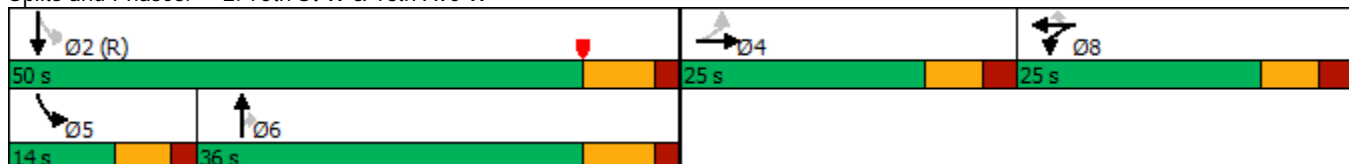


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗		↕	↗	↘	↕	
Traffic Volume (vph)	0	0	0	165	0	70	0	1125	190	80	1115	0
Future Volume (vph)	0	0	0	165	0	70	0	1125	190	80	1115	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		500
Storage Lanes	0		0	0		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		144			1884			1582			4547	
Travel Time (s)		3.3			42.8			24.0			68.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%
Shared Lane Traffic (%)												
Turn Type				Split	NA	Perm		NA	Perm	pm+pt	NA	
Protected Phases		4		8	8			6		5	2	
Permitted Phases	4					8			6	2		
Detector Phase	4	4		8	8	8		6	6	5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0		20.0	20.0	7.0	20.0	
Minimum Split (s)	24.8	24.8		24.8	24.8	24.8		27.3	27.3	13.1	27.3	
Total Split (s)	25.0	25.0		25.0	25.0	25.0		36.0	36.0	14.0	50.0	
Total Split (%)	25.0%	25.0%		25.0%	25.0%	25.0%		36.0%	36.0%	14.0%	50.0%	
Yellow Time (s)	4.2	4.2		4.2	4.2	4.2		5.3	5.3	4.1	5.3	
All-Red Time (s)	2.6	2.6		2.6	2.6	2.6		2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.8			6.8	6.8		7.3	7.3	6.1	7.3	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None		None	None	None		Max	Max	None	C-Max	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 56 (56%), Referenced to phase 2:SBTL, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated

Splits and Phases: 2: 75th St W & 18th Ave W



HCM 6th Signalized Intersection Summary
2: 75th St W & 18th Ave W

DTM 75th Street West - TSM&O
2045 Design Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔		↑	↔	↔	↑	
Traffic Volume (veh/h)	0	0	0	165	0	70	0	1125	190	80	1115	0
Future Volume (veh/h)	0	0	0	165	0	70	0	1125	190	80	1115	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	0	1870	1870	1856	1856	0
Adj Flow Rate, veh/h	0	0	0	174	0	74	0	1184	200	84	1174	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	3	3	0
Cap, veh/h	0	2	0	216	0	192	0	1147	972	184	1369	0
Arrive On Green	0.00	0.00	0.00	0.12	0.00	0.12	0.00	0.61	0.61	0.06	0.74	0.00
Sat Flow, veh/h	0	1870	0	1781	0	1585	0	1870	1585	1767	1856	0
Grp Volume(v), veh/h	0	0	0	174	0	74	0	1184	200	84	1174	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1781	0	1585	0	1870	1585	1767	1856	0
Q Serve(g_s), s	0.0	0.0	0.0	9.5	0.0	4.3	0.0	61.3	5.6	1.5	45.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	9.5	0.0	4.3	0.0	61.3	5.6	1.5	45.2	0.0
Prop In Lane	0.00		0.00	1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	216	0	192	0	1147	972	184	1369	0
V/C Ratio(X)	0.00	0.00	0.00	0.81	0.00	0.38	0.00	1.03	0.21	0.46	0.86	0.00
Avail Cap(c_a), veh/h	0	340	0	324	0	288	0	1147	972	212	1369	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.54	0.54	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	42.8	0.0	40.5	0.0	19.3	8.5	24.9	9.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	8.6	0.0	1.3	0.0	35.1	0.5	1.0	4.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.0	8.2	0.0	3.1	0.0	43.1	3.2	2.2	17.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	51.4	0.0	41.8	0.0	54.4	9.0	25.9	13.4	0.0
LnGrp LOS	A	A	A	D	A	D	A	F	A	C	B	A
Approach Vol, veh/h		0			248			1384			1258	
Approach Delay, s/veh		0.0			48.5			47.9			14.2	
Approach LOS					D			D			B	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		81.1		0.0	12.4	68.6		18.9				
Change Period (Y+Rc), s		7.3		* 6.8	6.1	7.3		6.8				
Max Green Setting (Gmax), s		42.7		* 18	7.9	28.7		18.2				
Max Q Clear Time (g_c+I1), s		47.2		0.0	3.5	63.3		11.5				
Green Ext Time (p_c), s		0.0		0.0	0.1	0.0		0.6				

Intersection Summary

HCM 6th Ctrl Delay	33.3
HCM 6th LOS	C

Notes

- User approved pedestrian interval to be less than phase max green.
- * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

D-4: Build Conditions

Lanes, Volumes, Timings
1: 75th St W & Manatee Ave W

DTM 75th Street West - Build
2025 Design Hour

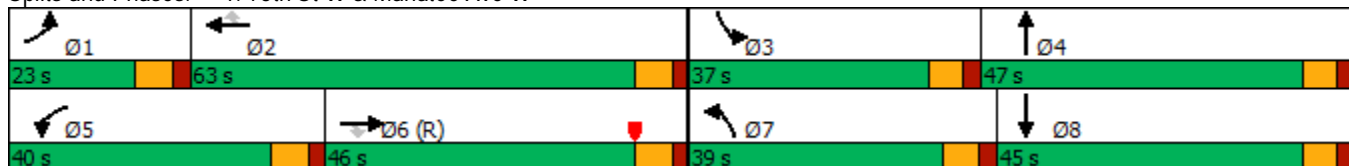


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↗	↖	↖	↗↗	↖	↖	↗↗		↖	↗↗	
Traffic Volume (vph)	100	605	250	335	680	315	220	460	320	325	330	65
Future Volume (vph)	100	605	250	335	680	315	220	460	320	325	330	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		320	670		200	220		0	320		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			45			45	
Link Distance (ft)		1826			3734			4547			1548	
Travel Time (s)		31.1			63.6			68.9			23.5	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	4%	4%	4%
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2						
Detector Phase	1	6	6	5	2	2	7	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	12.0	27.8	27.8	11.8	27.8	27.8	11.8	27.4		11.7	27.4	
Total Split (s)	23.0	46.0	46.0	40.0	63.0	63.0	39.0	47.0		37.0	45.0	
Total Split (%)	13.5%	27.1%	27.1%	23.5%	37.1%	37.1%	22.9%	27.6%		21.8%	26.5%	
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.4	4.4		4.4	4.4	
All-Red Time (s)	2.2	2.0	2.0	2.0	2.0	2.0	2.4	2.0		2.3	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	6.8	6.8	6.8	6.8	6.8	6.8	6.4		6.7	6.4	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	Max	Max	Max	None	None		None	None	

Intersection Summary

Area Type: Other
 Cycle Length: 170
 Actuated Cycle Length: 170
 Offset: 21 (12%), Referenced to phase 6:EBT, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated

Splits and Phases: 1: 75th St W & Manatee Ave W



HCM 6th Signalized Intersection Summary
1: 75th St W & Manatee Ave W

DTM 75th Street West - Build
2025 Design Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	605	250	335	680	315	220	460	320	325	330	65
Future Volume (veh/h)	100	605	250	335	680	315	220	460	320	325	330	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	104	630	260	349	708	328	229	479	333	339	344	68
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	4	4	4
Cap, veh/h	123	813	363	348	1261	562	251	479	332	312	804	157
Arrive On Green	0.07	0.23	0.23	0.20	0.35	0.35	0.14	0.24	0.24	0.18	0.28	0.28
Sat Flow, veh/h	1767	3526	1572	1781	3554	1585	1781	2007	1390	1753	2917	570
Grp Volume(v), veh/h	104	630	260	349	708	328	229	424	388	339	205	207
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1781	1777	1585	1781	1777	1620	1753	1749	1738
Q Serve(g_s), s	9.9	28.5	25.9	33.2	27.3	28.6	21.5	40.6	40.6	30.3	16.3	16.7
Cycle Q Clear(g_c), s	9.9	28.5	25.9	33.2	27.3	28.6	21.5	40.6	40.6	30.3	16.3	16.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	1.00		0.33
Lane Grp Cap(c), veh/h	123	813	363	348	1261	562	251	424	387	312	482	479
V/C Ratio(X)	0.84	0.77	0.72	1.00	0.56	0.58	0.91	1.00	1.00	1.08	0.42	0.43
Avail Cap(c_a), veh/h	166	813	363	348	1261	562	337	424	387	312	482	479
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	78.1	61.3	60.3	68.4	44.2	44.6	72.0	64.7	64.7	69.8	50.5	50.6
Incr Delay (d2), s/veh	24.0	7.1	11.5	49.1	1.8	4.4	21.5	41.0	43.9	75.5	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	13.4	11.4	19.7	12.3	11.8	11.2	22.9	21.2	19.9	7.2	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	102.2	68.4	71.8	117.5	46.0	49.0	93.5	105.7	108.6	145.3	51.1	51.3
LnGrp LOS	F	E	E	F	D	D	F	F	F	F	D	D
Approach Vol, veh/h		994			1385			1041			751	
Approach Delay, s/veh		72.8			64.7			104.1			93.7	
Approach LOS		E			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.9	67.1	37.0	47.0	40.0	46.0	30.7	53.3				
Change Period (Y+Rc), s	* 7	6.8	* 6.7	6.4	6.8	6.8	6.8	6.4				
Max Green Setting (Gmax), s	* 16	56.2	* 30	40.6	33.2	39.2	32.2	38.6				
Max Q Clear Time (g_c+l1), s	11.9	30.6	32.3	42.6	35.2	30.5	23.5	18.7				
Green Ext Time (p_c), s	0.1	6.2	0.0	0.0	0.0	3.2	0.4	2.1				

Intersection Summary

HCM 6th Ctrl Delay	81.7
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
2: 75th St W & 18th Ave W

DTM 75th Street West - Build
2025 Design Hour

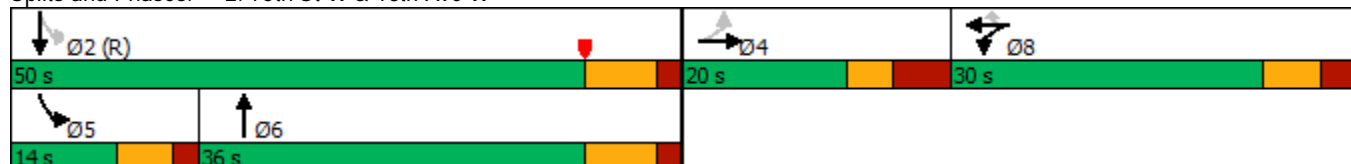


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗		↕↗		↗	↕↕	
Traffic Volume (vph)	0	0	0	150	0	65	0	825	140	55	815	0
Future Volume (vph)	0	0	0	150	0	65	0	825	140	55	815	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		165			1884			1582			4547	
Travel Time (s)		3.8			42.8			24.0			68.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%
Shared Lane Traffic (%)												
Turn Type				Split	NA	Perm		NA		pm+pt	NA	
Protected Phases		4		8	8			6		5	2	
Permitted Phases	4					8				2		
Detector Phase	4	4		8	8	8		6		5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0		20.0		7.0	20.0	
Minimum Split (s)	14.8	14.8		24.8	24.8	24.8		27.3		13.1	27.3	
Total Split (s)	20.0	20.0		30.0	30.0	30.0		36.0		14.0	50.0	
Total Split (%)	20.0%	20.0%		30.0%	30.0%	30.0%		36.0%		14.0%	50.0%	
Yellow Time (s)	3.4	3.4		4.2	4.2	4.2		5.3		4.1	5.3	
All-Red Time (s)	4.4	4.4		2.6	2.6	2.6		2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)		7.8			6.8	6.8		7.3		6.1	7.3	
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Recall Mode	None	None		None	None	None		Max		None	C-Max	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 2: 75th St W & 18th Ave W



HCM 6th Signalized Intersection Summary
2: 75th St W & 18th Ave W

DTM 75th Street West - Build
2025 Design Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔		↔↔		↔	↕	↕
Traffic Volume (veh/h)	0	0	0	150	0	65	0	825	140	55	815	0
Future Volume (veh/h)	0	0	0	150	0	65	0	825	140	55	815	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	0	1870	1870	1856	1856	0
Adj Flow Rate, veh/h	0	0	0	158	0	68	0	868	147	58	858	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	3	3	0
Cap, veh/h	0	2	0	204	0	181	0	1908	323	435	2625	0
Arrive On Green	0.00	0.00	0.00	0.11	0.00	0.11	0.00	0.63	0.63	0.06	0.74	0.00
Sat Flow, veh/h	0	1870	0	1781	0	1585	0	3133	515	1767	3618	0
Grp Volume(v), veh/h	0	0	0	158	0	68	0	507	508	58	858	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1781	0	1585	0	1777	1778	1767	1763	0
Q Serve(g_s), s	0.0	0.0	0.0	8.6	0.0	4.0	0.0	14.9	14.9	1.0	8.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	8.6	0.0	4.0	0.0	14.9	14.9	1.0	8.2	0.0
Prop In Lane	0.00		0.00	1.00		1.00	0.00		0.29	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	204	0	181	0	1115	1116	435	2625	0
V/C Ratio(X)	0.00	0.00	0.00	0.78	0.00	0.38	0.00	0.45	0.45	0.13	0.33	0.00
Avail Cap(c_a), veh/h	0	228	0	413	0	368	0	1115	1116	475	2625	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.72	0.72	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	43.0	0.0	41.0	0.0	9.7	9.7	6.1	4.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	6.2	0.0	1.3	0.0	1.3	1.3	0.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.1	0.0	1.6	0.0	5.2	5.2	0.3	2.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	49.3	0.0	42.3	0.0	11.0	11.0	6.2	4.5	0.0
LnGrp LOS	A	A	A	D	A	D	A	B	B	A	A	A
Approach Vol, veh/h		0			226			1015			916	
Approach Delay, s/veh		0.0			47.1			11.0			4.7	
Approach LOS					D			B			A	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		81.8		0.0	11.7	70.1		18.2				
Change Period (Y+Rc), s		7.3		7.8	6.1	7.3		6.8				
Max Green Setting (Gmax), s		42.7		12.2	7.9	28.7		23.2				
Max Q Clear Time (g_c+I1), s		10.2		0.0	3.0	16.9		10.6				
Green Ext Time (p_c), s		6.2		0.0	0.0	4.7		0.8				

Intersection Summary

HCM 6th Ctrl Delay	12.1
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Lanes, Volumes, Timings
1: 75th St W & Manatee Ave W

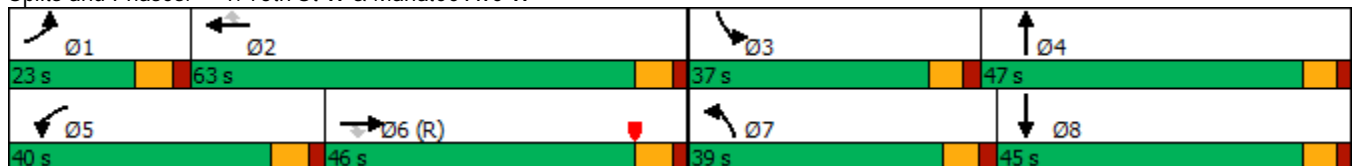
DTM 75th Street West - Build
2045 Design Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	665	275	365	745	350	295	630	440	445	450	85
Future Volume (vph)	110	665	275	365	745	350	295	630	440	445	450	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		320	670		200	220		0	320		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			45			45	
Link Distance (ft)		1826			3734			4547			1548	
Travel Time (s)		31.1			63.6			68.9			23.5	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	4%	4%	4%
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2						
Detector Phase	1	6	6	5	2	2	7	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	12.0	27.8	27.8	11.8	27.8	27.8	11.8	27.4		11.7	27.4	
Total Split (s)	23.0	46.0	46.0	40.0	63.0	63.0	39.0	47.0		37.0	45.0	
Total Split (%)	13.5%	27.1%	27.1%	23.5%	37.1%	37.1%	22.9%	27.6%		21.8%	26.5%	
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.4	4.4		4.4	4.4	
All-Red Time (s)	2.2	2.0	2.0	2.0	2.0	2.0	2.4	2.0		2.3	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	6.8	6.8	6.8	6.8	6.8	6.8	6.4		6.7	6.4	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	Max	Max	Max	None	None		None	None	

Intersection Summary

Area Type: Other
 Cycle Length: 170
 Actuated Cycle Length: 170
 Offset: 21 (12%), Referenced to phase 6:EBT, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated

Splits and Phases: 1: 75th St W & Manatee Ave W



HCM 6th Signalized Intersection Summary
 1: 75th St W & Manatee Ave W

DTM 75th Street West - Build
 2045 Design Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	110	665	275	365	745	350	295	630	440	445	450	85
Future Volume (veh/h)	110	665	275	365	745	350	295	630	440	445	450	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	115	693	286	380	776	365	307	656	458	464	469	89
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	4	4	4
Cap, veh/h	135	813	363	348	1239	553	325	478	333	312	686	129
Arrive On Green	0.08	0.23	0.23	0.20	0.35	0.35	0.18	0.24	0.24	0.18	0.23	0.23
Sat Flow, veh/h	1767	3526	1572	1781	3554	1585	1781	2002	1394	1753	2936	554
Grp Volume(v), veh/h	115	693	286	380	776	365	307	582	532	464	278	280
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1781	1777	1585	1781	1777	1619	1753	1749	1741
Q Serve(g_s), s	10.9	32.0	29.1	33.2	30.9	33.1	28.9	40.6	40.6	30.3	24.6	24.9
Cycle Q Clear(g_c), s	10.9	32.0	29.1	33.2	30.9	33.1	28.9	40.6	40.6	30.3	24.6	24.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	1.00		0.32
Lane Grp Cap(c), veh/h	135	813	363	348	1239	553	325	424	387	312	409	407
V/C Ratio(X)	0.85	0.85	0.79	1.09	0.63	0.66	0.94	1.37	1.38	1.48	0.68	0.69
Avail Cap(c_a), veh/h	166	813	363	348	1239	553	337	424	387	312	409	407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.72	0.72	0.72	1.00	1.00	1.00
Uniform Delay (d), s/veh	77.6	62.6	61.5	68.4	46.1	46.9	68.6	64.7	64.7	69.8	59.3	59.5
Incr Delay (d2), s/veh	28.4	11.0	15.9	75.3	2.4	6.1	27.4	177.8	180.5	234.7	4.5	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.0	21.9	19.0	31.5	20.2	19.9	20.9	56.3	52.1	51.3	16.8	17.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.0	73.6	77.4	143.7	48.5	53.0	96.0	242.5	245.2	304.5	63.9	64.3
LnGrp LOS	F	E	E	F	D	D	F	F	F	F	E	E
Approach Vol, veh/h		1094			1521			1421			1022	
Approach Delay, s/veh		78.0			73.4			211.9			173.2	
Approach LOS		E			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.9	66.1	37.0	47.0	40.0	46.0	37.9	46.1				
Change Period (Y+Rc), s	* 7	6.8	* 6.7	6.4	6.8	6.8	6.8	6.4				
Max Green Setting (Gmax), s	* 16	56.2	* 30	40.6	33.2	39.2	32.2	38.6				
Max Q Clear Time (g_c+l1), s	12.9	35.1	32.3	42.6	35.2	34.0	30.9	26.9				
Green Ext Time (p_c), s	0.1	6.5	0.0	0.0	0.0	2.5	0.1	2.4				

Intersection Summary

HCM 6th Ctrl Delay	133.5
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
2: 75th St W & 18th Ave W

DTM 75th Street West - Build
2045 Design Hour

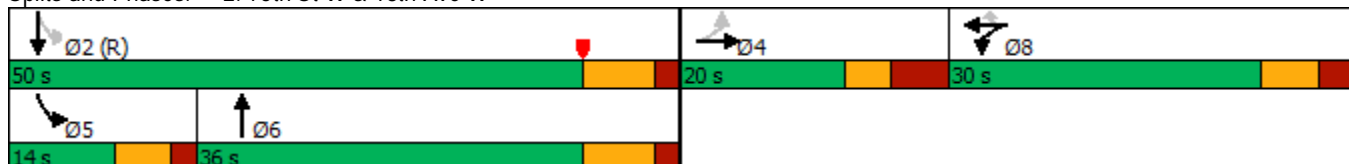


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗		↕↗		↗	↕↕	
Traffic Volume (vph)	0	0	0	165	0	70	0	1125	190	80	1115	0
Future Volume (vph)	0	0	0	165	0	70	0	1125	190	80	1115	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		165			1884			1582			4547	
Travel Time (s)		3.8			42.8			24.0			68.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%
Shared Lane Traffic (%)												
Turn Type				Split	NA	Perm		NA		pm+pt	NA	
Protected Phases		4		8	8			6		5	2	
Permitted Phases	4					8				2		
Detector Phase	4	4		8	8	8		6		5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0		20.0		7.0	20.0	
Minimum Split (s)	14.8	14.8		24.8	24.8	24.8		27.3		13.1	27.3	
Total Split (s)	20.0	20.0		30.0	30.0	30.0		36.0		14.0	50.0	
Total Split (%)	20.0%	20.0%		30.0%	30.0%	30.0%		36.0%		14.0%	50.0%	
Yellow Time (s)	3.4	3.4		4.2	4.2	4.2		5.3		4.1	5.3	
All-Red Time (s)	4.4	4.4		2.6	2.6	2.6		2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)		7.8			6.8	6.8		7.3		6.1	7.3	
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Recall Mode	None	None		None	None	None		Max		None	C-Max	

Intersection Summary

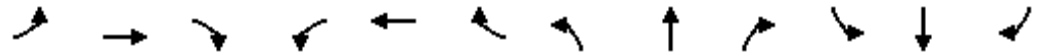
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:SBTL, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated

Splits and Phases: 2: 75th St W & 18th Ave W



HCM 6th Signalized Intersection Summary
2: 75th St W & 18th Ave W

DTM 75th Street West - Build
2045 Design Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗		↕↗		↗	↕↕	
Traffic Volume (veh/h)	0	0	0	165	0	70	0	1125	190	80	1115	0
Future Volume (veh/h)	0	0	0	165	0	70	0	1125	190	80	1115	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	0	1870	1870	1856	1856	0
Adj Flow Rate, veh/h	0	0	0	174	0	74	0	1184	200	84	1174	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	3	3	0
Cap, veh/h	0	2	0	220	0	196	0	1860	313	324	2592	0
Arrive On Green	0.00	0.00	0.00	0.12	0.00	0.12	0.00	0.61	0.61	0.06	0.74	0.00
Sat Flow, veh/h	0	1870	0	1781	0	1585	0	3137	511	1767	3618	0
Grp Volume(v), veh/h	0	0	0	174	0	74	0	689	695	84	1174	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1781	0	1585	0	1777	1778	1767	1763	0
Q Serve(g_s), s	0.0	0.0	0.0	9.5	0.0	4.3	0.0	24.6	25.0	1.5	13.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	9.5	0.0	4.3	0.0	24.6	25.0	1.5	13.2	0.0
Prop In Lane	0.00		0.00	1.00		1.00	0.00		0.29	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	220	0	196	0	1086	1087	324	2592	0
V/C Ratio(X)	0.00	0.00	0.00	0.79	0.00	0.38	0.00	0.63	0.64	0.26	0.45	0.00
Avail Cap(c_a), veh/h	0	228	0	413	0	368	0	1086	1087	352	2592	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.54	0.54	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	42.5	0.0	40.3	0.0	12.4	12.4	9.6	5.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	6.2	0.0	1.2	0.0	2.8	2.9	0.2	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.0	8.0	0.0	3.1	0.0	13.9	14.1	0.8	5.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	48.7	0.0	41.5	0.0	15.2	15.3	9.8	5.6	0.0
LnGrp LOS	A	A	A	D	A	D	A	B	B	A	A	A
Approach Vol, veh/h		0			248			1384			1258	
Approach Delay, s/veh		0.0			46.6			15.2			5.8	
Approach LOS					D			B			A	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		80.8		0.0	12.4	68.4		19.2				
Change Period (Y+Rc), s		7.3		7.8	6.1	7.3		6.8				
Max Green Setting (Gmax), s		42.7		12.2	7.9	28.7		23.2				
Max Q Clear Time (g_c+I1), s		15.2		0.0	3.5	27.0		11.5				
Green Ext Time (p_c), s		9.0		0.0	0.1	1.3		0.9				
Intersection Summary												
HCM 6th Ctrl Delay				13.8								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

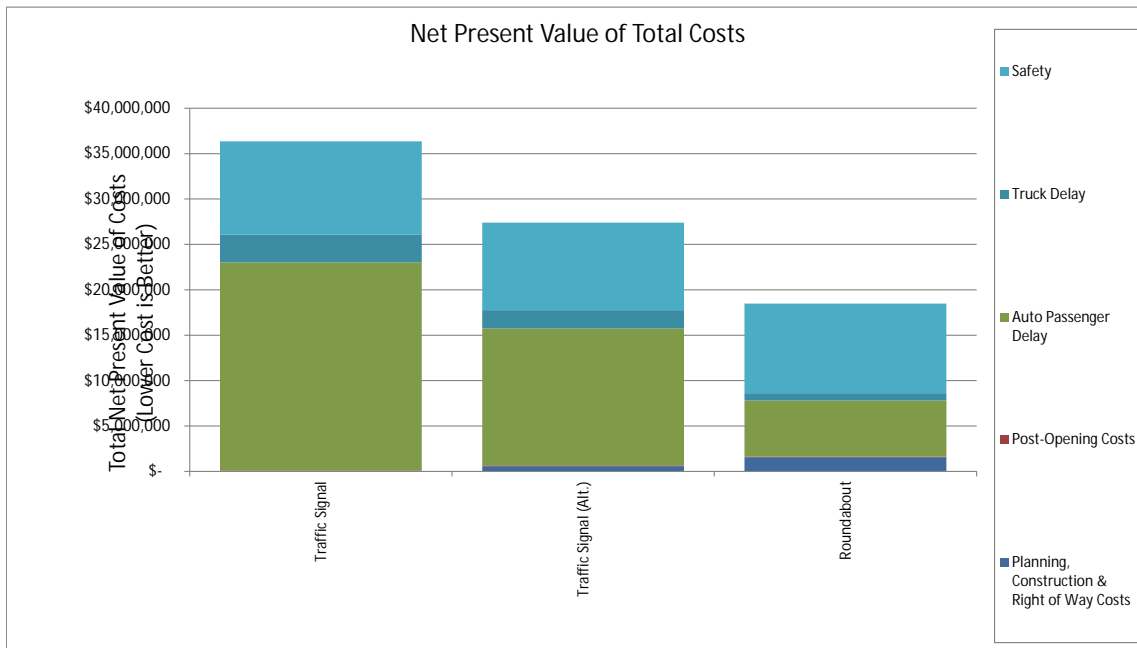
Attachment E: Intersection Control Evaluation

Agency:	Manatee County
Project Name:	75th St W Project Development and Study Corridor
Project Reference:	-
Intersection:	75th St W and 18th Ave W
City:	-
State:	FL
Performing Department or Organization:	-
Date:	9/7/2021
Analyst:	KHA
Analysis Type	At-Grade Intersection

Analysis Summary

Cost Categories	Net Present Value of Costs			
	Traffic Signal	Traffic Signal (Alt.)	Roundabout	Traffic Signal (Alt.)
Planning, Construction & Right of Way Costs	\$ -	\$ 575,000	\$ 1,560,284	\$ 575,000
Post-Opening Costs	\$ 98,229	\$ 98,229	\$ 72,952	\$ 98,229
Auto Passenger Delay	\$ 22,932,674	\$ 15,072,070	\$ 6,161,087	\$ 9,577,413
Truck Delay	\$ 3,059,136	\$ 2,010,308	\$ 821,630	\$ 1,277,183
Safety	\$ 10,265,950	\$ 9,646,232	\$ 9,873,412	\$ 9,646,232
Total cost	\$36,355,988	\$27,401,840	\$18,489,364	\$21,174,056

Select Base Case for Benefit-Cost Comparison: (Choose from list)	Traffic Signal			
Benefit Categories	Net Present Value of Benefits Relative to Base Case			
	Traffic Signal	Traffic Signal (Alt.)	Roundabout	Traffic Signal (Alt.)
Auto Passenger Delay		\$ 7,860,604	\$ 16,771,587	\$ 13,355,261
Truck Delay		\$ 1,048,828	\$ 2,237,506	\$ 1,781,954
Safety		\$ 619,718	\$ 392,538	\$ 619,718
Net Present Value of Benefits		\$ 9,529,149	\$ 19,401,631	\$ 15,756,932
Net Present Value of Costs		\$ 575,000	\$ 1,535,007	\$ 575,000
Net Present Value of Improvement		\$ 8,954,149	\$ 17,866,624	\$ 15,181,932
Benefit-Cost (B/C) Ratio		16.57	12.64	27.40
Delay B/C		15.49	12.38	26.33
Safety B/C		1.08	0.26	1.08



Federal Highway Administration (FHWA)
 Safety Performance for Intersection Control Evaluation Tool

Results

Summary of crash prediction results for each alternative

Project Information

Project Name:	75th Street West Project Development & Study Corridor	Intersection Type	At-Grade Intersections
Intersection:	75th St W & 18th Avenue	Opening Year	2025
Agency:	Manatee County	Design Year	2045
Project Reference:	-	Facility Type	On Urban and Suburban Arterial
City:	Manatee County	Number of Legs	4-leg
State:	FL	1-Way/2-Way	2-way Intersecting 2-way
Date:	9/2/2021	# of Major Street Lanes (both directions)	5 or fewer
Analyst:	KHA	Major Street Approach Speed	Less than 55 mph

Crash Prediction Summary

Control Strategy	Crash Type	Opening Year	Design Year	Total Project Life Cycle	Rank	AADT Within Prediction Range?	Source of Prediction
Traffic Signal	Total	4.36	6.20	110.78	3	Yes	Calibrated SPF
	Fatal & Injury	2.00	2.92	51.52			
Traffic Signal (Alt)	Total	4.19	5.95	106.23	2	Yes	Calibrated SPF
	Fatal & Injury	1.92	2.80	49.43			
2-lane Roundabout	Total	9.99	14.10	252.66	1	No	Uncalibrated SPF
	Fatal & Injury	1.81	2.64	46.63			



Interim & Ultimate
 Build Produce Same
 # of predicted
 crashes



Design Traffic Memorandum

Prepared by: Vincent Spahr, P.E.
Kimley-Horn and Associates, Inc.
1777 Main Street, Suite 800
Sarasota, FL 34236



**Appendix C –
Natural Resources Assessment Memo**



Natural Resources Assessment Memo

75th Street West – 20th Avenue West to Manatee Avenue

CIP #: 6108260

FINAL October 15, 2021



CONTENTS

Introduction.....	3
Methodology.....	6
Historic Review	6
Soils.....	7
Land Cover and Natural Communities.....	9
Upland Land Cover Types.....	9
Wetland/Surface Water Land Cover Types.....	10
Threatened and Endangered Species	12
Listed Species with the Potential to Occur Within the Study Area.....	12
Critical Habitat	16
Permitting Requirements and Coordination	16
SWFWMD Environmental Resource Permit.....	17
FDEP State 404 Program	17
NPDES	17
FWC Gopher Tortoise Relocation Program.....	17
Mitigation	17
Implementation Measures	18

FIGURES

Figure 1: Project Location Map	4
Figure 2: USGS Quad Map.....	5
Figure 3: NRCS Soils Map	8
Figure 4: FLUCFCS Map.....	11

TABLES

Table 1: NRCS Soils Within the Study Area	7
Table 2: Listed Species with the Potential to Occur Within the Study Area	13

Introduction

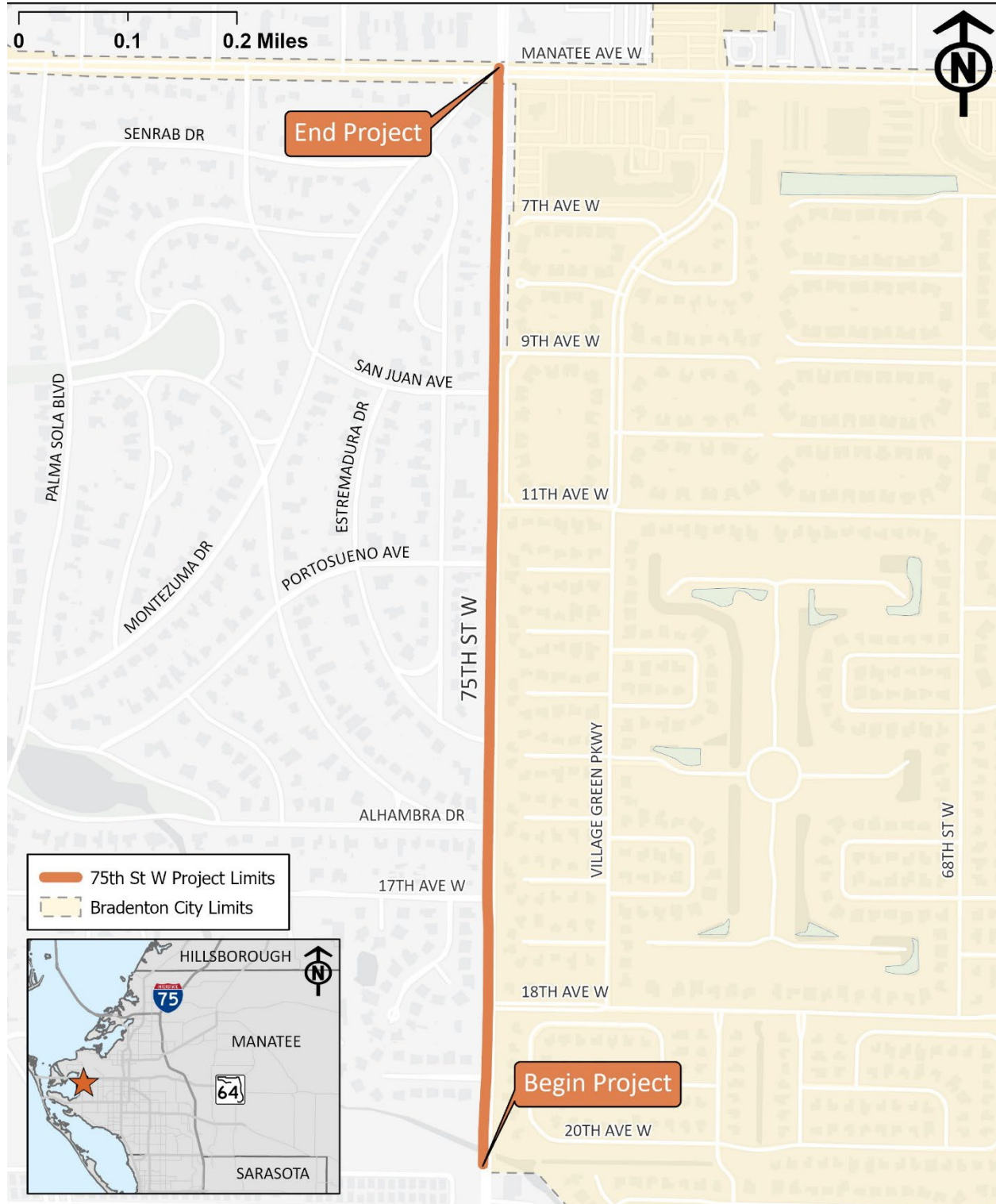
Manatee County is conducting a Project Development & Corridor Study to evaluate an approximately 1-mile segment of 75th Street West from approximately 20th Ave W to Manatee Avenue (State Route (SR) 64). The project limits are partially within the City of Bradenton and unincorporated Manatee County, Florida as shown in **Figure 1**. The study will evaluate options for widening the existing two-lane roadway to a four-lane roadway with a center left turn lane and/or median in addition to providing an enhanced mobility experience for all users.

For the purpose of this memorandum, the study area is considered the 1-mile segment of 75th Street West and an additional 250-foot buffer from the roadway centerline totaling approximately 65 acres. The study area is located in Sections 30 and 31 of Township 34 South and Range 17 East. A portion of the U.S. Geological Service (USGS) 7.5-Minute *Bradenton Beach, Florida* quadrangle map depicting the location of the study area is attached as **Figure 2**.

Natural Resources Assessment Memo

75th Street West – 20th Avenue West to Manatee Ave

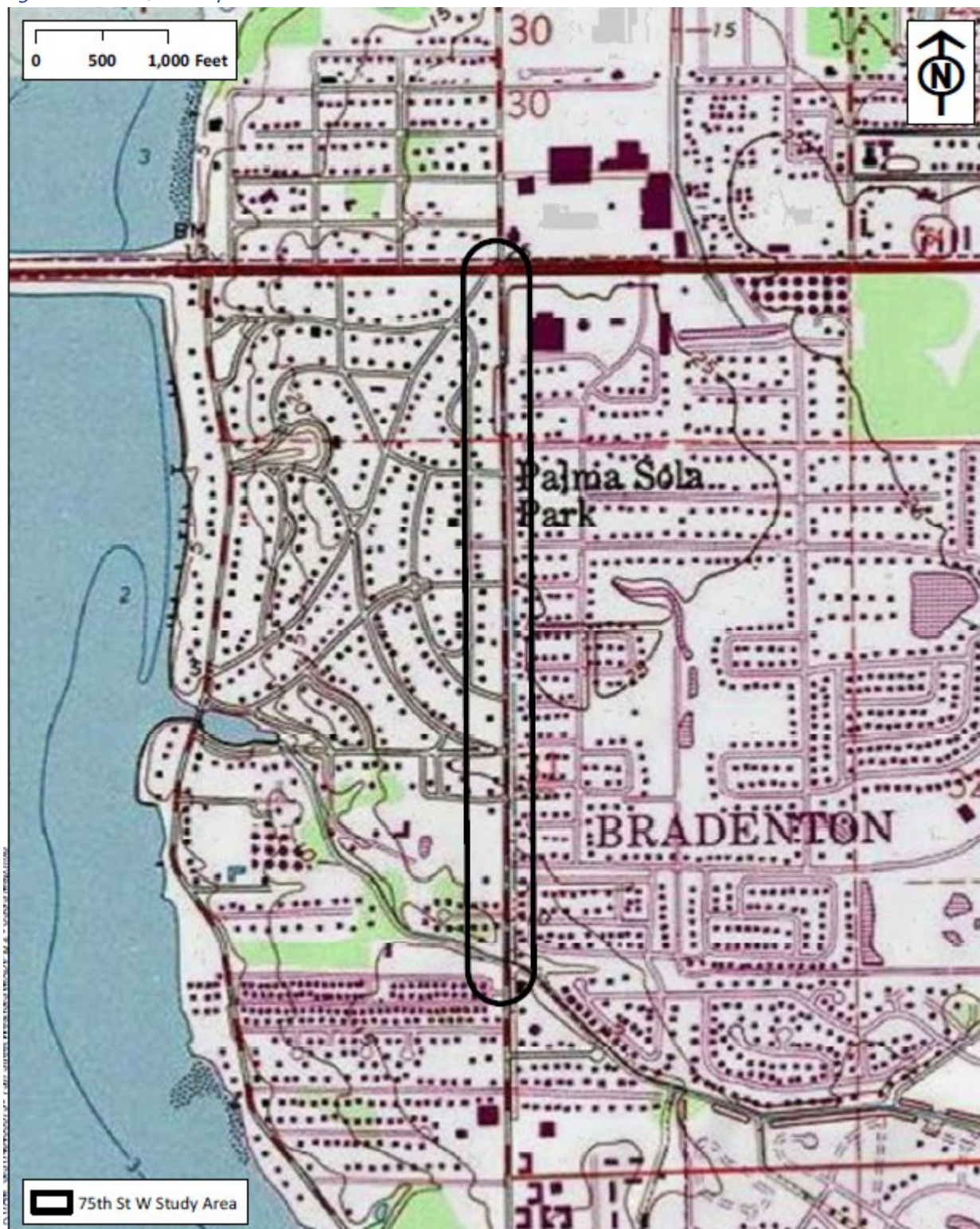
Figure 1: Project Location Map



Natural Resources Assessment Memo

75th Street West – 20th Avenue West to Manatee Ave

Figure 2: USGS Quad Map



Methodology

To determine the approximate locations and boundaries of existing upland and wetland communities and protected species within the study area, available site-specific data was collected and reviewed.

The information reviewed included:

- *Florida Natural Areas Inventory (FNAI) Biodiversity Matrix* (<http://www.fnai.org/biointro.cfm>)
- *Various Geographic Information System (GIS) data layers from the U.S. Fish and Wildlife Service (USFWS), U.S. Geological Survey (USGS), Florida Fish and Wildlife Conservation Commission (FWC)* (<http://legacy.myfwc.com/bba/data/default.asp>)
- *USFWS IPaC data* [(<https://ecos.fws.gov/ipac/>)]
- *U.S. Department of Agriculture (USDA) / Natural Resources Conservation Service (NRCS) Soil Survey of Manatee County, Florida (Web Soil Survey)* (<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>)
- *USFWS National Wetlands Inventory (NWI) Maps (Web-based maps available from* <http://www.fws.gov/wetlands/Data/mapper.html>*)*
- *USGS Quadrangle Maps, Land Boundary Information System (LABINS;* <http://www.labins.org>*)*
- *Audubon Florida EagleWatch Nest Map (Web-based maps available from* <https://www.arcgis.com/apps/SimpleViewer/index.html?appid=75ea06f653f847658c908634ffc6f640>*)*
- *Florida Water Permitting Portal, Southwest Florida Water Management District (SWFWMD) E-Permitting* (<http://flwaterpermits.org> and <https://www.swfwmd.state.fl.us/business/epermitting>)
- *Florida Department of Environmental Protection (FDEP) MapDirect GIS* (<https://ca.dep.state.fl.us/mapdirect/>)
- *Chapter 62-340, Florida Administrative Code (FAC) and the U.S. Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual*
- *State Historic Preservation Officer (SHPO), Florida Master Site File (FMSF)* (<http://www.flheritage.com>)
- *Federal Emergency Management Agency (FEMA) Digital Flood Insurance Rate Maps (FIRM; Web-based maps available from* <http://msc.fema.gov/>*)*
- *University of Florida Digital Collections. Aerial Photography: Florida Collection* (<https://ufdc.ufl.edu/aerials/map>)

Historic Review

A review of historic aerials of the study area is included as a part of this investigation. Historic aerials from 1951 show the study area as primarily upland pasture and row crops. 75th Street and Manatee Avenue (SR 64) are visible as two-lane paved roads. The Palma Sola Park community is visible adjacent and west of the study area and Manatee Avenue is visible as a paved two-lane roadway. In the 1951 historic aerials, 75th Street remains a dirt road; however, it has been widened. The 1957 historic aerials show Manatee Avenue as a four-lane divided roadway with the majority of the study area classified as

Natural Resources Assessment Memo

75th Street West – 20th Avenue West to Manatee Ave

pasture or row crops. Based on aerials from the 1970s, the general study vicinity has been cleared and graded for what appears to be future residential and/or commercial development. The 1984 historic aerials show the study area as primarily being developed with no open land remaining in the study area. A shopping plaza and associated parking lot is visible at the southeast corner of Manatee Avenue and 75th Street and the Mirabella Florida gated community is visible adjacent and east of 75th Street. With exception to small use changes, the study area appears to have remained unchanged from the 1984 condition to present.

Soils

The USDA / NRCS Soil Survey of Manatee County, Florida maps the following soil within the study area: (19) Duette fine sand, 0 to 5 percent slopes, (20) Eaugallie fine sand, 0 to 2 percent slopes, and (42) Pomello fine sand, 0 to 2 percent slopes. **Figure 3** shows the mapped soils within the study area and **Table 1** provides details of each soil type.

Table 1: NRCS Soils Within the Study Area

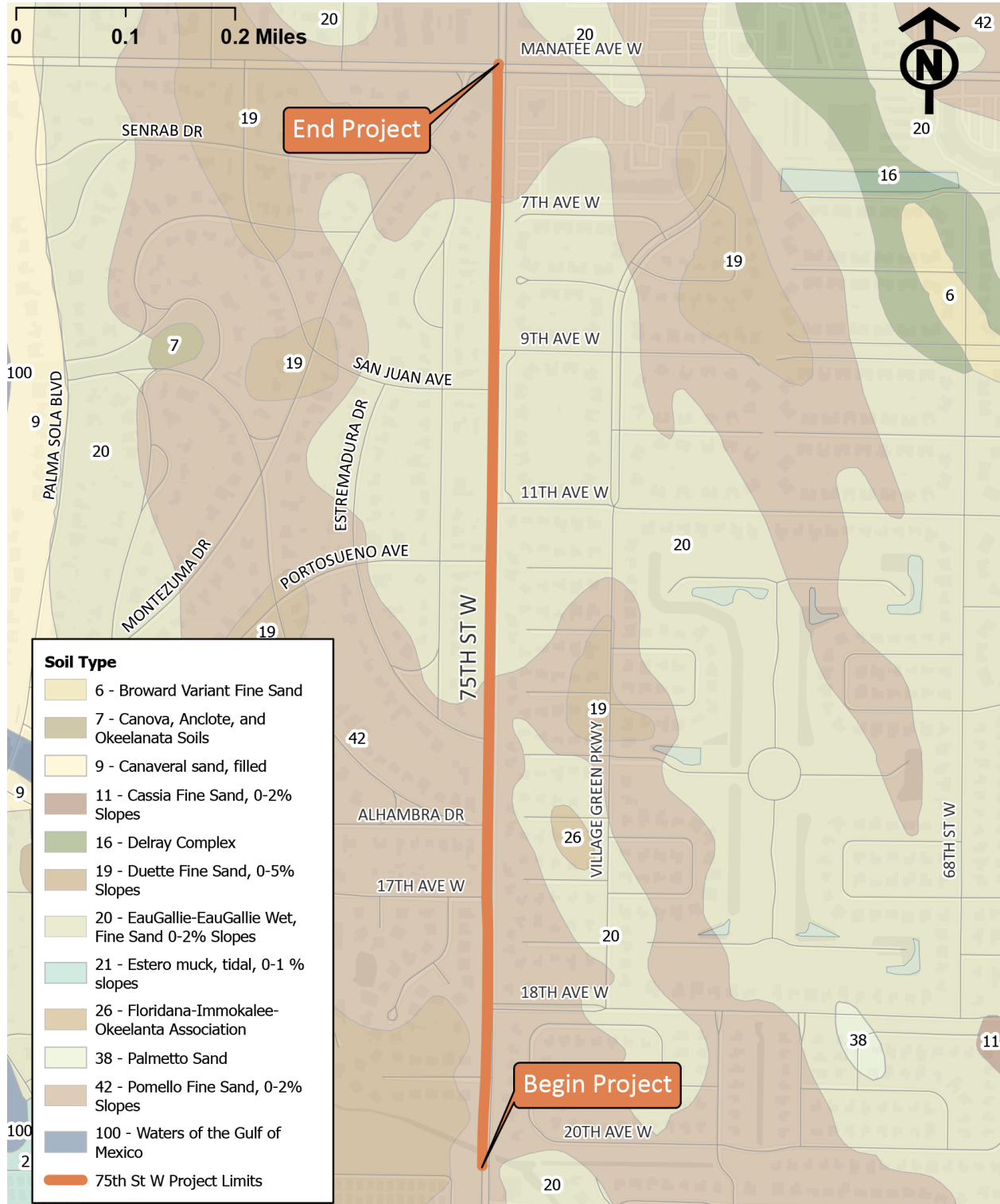
Soil ID No. ¹	Soil Name	Occurrence	Characteristics	Drainage Class	Groundwater Depth	Hydric, Hydric Inclusions, or Non-Hydric ²
19	Duette fine sand, 0 to 5 percent slopes	Slightly elevated knolls of ridges in flatwoods areas	Moderately rapid permeability	Moderately well drained	>48 inches	Non-Hydric
20	Eaugallie fine sand, 0 to 2 percent slopes	Flats, sloughs and depressional areas	Slow permeability	Very poorly or poorly drained	About 6 to 40 inches	Non-hydric
42	Pomello fine sand, 0 to 2 percent slopes	Ridges, hills, and knolls in the flatwoods on marine terraces	Moderately rapid permeability throughout	Moderately well to somewhat poorly drained	18 to 48 inches	Non-Hydric

1: Reference: Soil Survey of Manatee County (Web Soil Survey) - <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>
2: Reference: Hydric Soils of Florida Handbook, 4th Edition, March 2007

Natural Resources Assessment Memo

75th Street West – 20th Avenue West to Manatee Ave

Figure 3: NRCS Soils Map



Land Cover and Natural Communities

Field reconnaissance was conducted on July 21, 2021 and vegetative communities within the proposed study area were identified through pedestrian transects and aerial photograph interpretation. Vegetative communities were classified using the Florida Land Use, Cover, and Forms Classification System (FLUCFCS, Florida Department of Transportation, 1999). A FLUCFCS map of the study area is attached as **Figure 4**.

Upland Land Cover Types

A description of the upland land cover types included below characterizes the dominant vegetation observed along random pedestrian transects and does not represent an all-inclusive vegetative inventory. The acreage provided for each land cover is approximate, based on aerial mapping.

FLUCFCS 120 – Residential Medium Density (2 to 5 Dwelling Units per Acre) (+/- 47.33 Acres)

This classification comprises the majority of the study area. Approximately three to four houses per acre exists in these single-family and multi-family home neighborhoods. No remaining natural habitat exists in these areas.

FLUCFCS 130 – Residential High Density (6 or more Dwelling Units per Acre) (+/- 0.98 Acres)

This classification represents the Pine Bay Forest condominiums and Palma Sola Shores mobile home park located at the northwest corner of Manatee Avenue and 75th Street and the northwest corner of 22nd Avenue and 75th Street, respectively. No remaining natural habitat exists in these areas.

FLUCFCS 140 – Commercial and Services (+/- 4.57 Acres)

This classification comprises the shopping center located at the southeast corner of 75th Street and Manatee Avenue, the Bank of America at the northeast corner of 75th Street and Manatee Avenue, and the American Legion property located at the south end of the study area. These areas consist of the commercial structures and associated infrastructure, such as, parking lots and drainage structures. No remaining natural habitat exists in these areas.

FLUCFCS 171 – Educational Facilities (+/- 0.81 Acres)

This classification comprises the Bradenton Early Learning Academy and its associated infrastructure such as driveway and sidewalk. No remaining natural habitat exists in this area.

FLUCFCS 185 – Parks and Zoos (+/- 0.43 Acres)

This classification comprises the Palma Sola Scenic Highway Park located at the southwest corner of 75th Street and Manatee Avenue. Bahiagrass (*Paspalum notatum*), planted laurel oaks (*Quercus laurifolia*), and planted cabbage palms (*Sabal palmetto*) are located within this portion of the study area. No remaining natural habitat exists in this area.

FLUCFCS 190 – Open Land (+/- 0.92 Acres)

Natural Resources Assessment Memo

75th Street West – 20th Avenue West to Manatee Ave

This classification comprises a portion of the study area near the northwest corner of 75th Street and 11th Avenue. This community consists of a sparse overstory of slash pine (*Pinus elliottii*) and mimosa (*Albizia julibrissin*). The understory consists of immature mimosa and saw palmetto (*Serenoa repens*). The groundcover consists of primarily St. Augustine grass (*Stenotaphrum secundatum*).

FLUCFCS 810 – Transportation (+/- 0.27 Acres)

This classification consists of paved roadway, turn lanes, and medians within the study area. Roadside ditches were also located throughout this portion of the study area.

Wetland/Surface Water Land Cover Types

The presence of wetlands was evaluated based on the Florida unified wetland delineation methodologies in accordance with Chapter 62-340, Florida Administrative Code (FAC) and the U.S. Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual. These methods consider prevalence of wetland vegetation, hydric soil indicators, and wetland hydrology. Surface waters include both natural and manmade bodies of water, such as streams, lakes, ponds, canals, and ditches. One drainage canal which runs east to west through the study area approximately 450 feet north of 22nd Avenue (FLUCFCS 510) would be considered wetland due to the presence of wetland vegetation and hydrologic indicators such as flow lines and flowing water. No additional wetlands or surface waters occur within the study area.

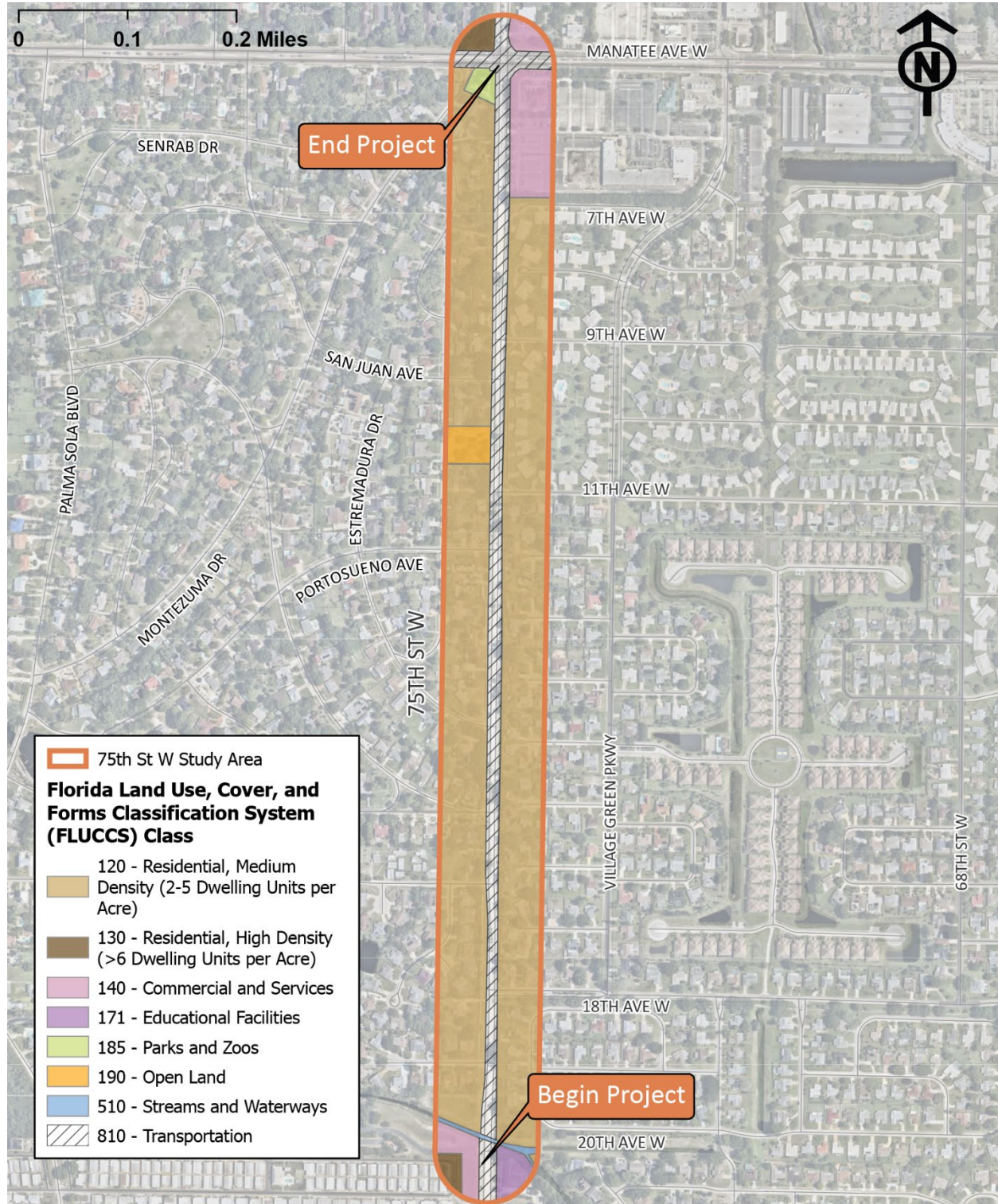
FLUCFCS 510 – Streams and Waterways (+/- 0.26 Acres)

This classification comprises a drainage canal which runs east to west through the study area approximately 450 feet north of 22nd Avenue. During the July 2021 visit, flowing water was observed in the canal. Vegetation within the flow way consisted of cattail (*Typha* sp.), chain fern (*Woodwardia virginica*), lizard's tail (*Saururus cernuus*), smartweed (*Polygonum hydropiperoides*), torpedograss (*Panicum repens*), and Peruvian primrose-willow (*Ludwigia peruviana*). Vegetation observed along the banks of the waterway consisted of oxeye (*Leucanthemum vulgare*), beggarticks (*Bidens alba*), air potato (*Dioscorea bulbifera*), frogfruit (*Phyla nodiflora*), and ragweed (*Ambrosia* spp.). Based on the current design, no impacts are proposed to this system.

Natural Resources Assessment Memo

75th Street West – 20th Avenue West to Manatee Ave

Figure 4: FLUCFCS Map



Threatened and Endangered Species

In order to determine federal and state listed protected plant and animal species that have potential to occur within the study area, available site-specific data was collected and evaluated by a Kimley-Horn environmental scientist. In addition, a field review of the study area was conducted on July 21, 2021 to assess the potential for occurrence of protected species and to identify any critical habitat that might be located within or adjacent to the study area.

During this survey, the study area was canvassed for direct observations of listed species or signs of their presence, including trails, tracks, scats, nests (cavity or stick), burrows, or calls. No listed species or signs of listed species were observed during the survey. Mourning dove (*Zenaida macroura*) was the only wildlife observed during the survey.

The Florida Fish and Wildlife Conservation Commission (FWC) wading bird rookery database was searched for active wading bird rookeries within one (1) mile of the study area. According to this FWC database, there are no active wading bird rookeries within one (1) mile of the study area.

The FWC Wildlife Observations database and Florida Natural Area Inventory (FNAI) Biodiversity Matrix Map server were reviewed for documented occurrences of listed species within one (1) mile of the study area. No documented wildlife observations were noted from the database.

The study area lies within the USFWS consultation area for piping plover (*Charadrius melodus*) and Florida scrub-jay (*Aphelocoma coerulescens*). However, habitat for the piping plover and scrub-jay does not exist within the study area.

Listed Species with the Potential to Occur Within the Study Area

Based on field reconnaissance and database reviews, a listing of the state and federally listed species potentially occurring within the immediate vicinity of the study area has been compiled. **Table 2** lists species that may occur and their likelihood of occurrence. Likelihood of occurrence is based on actual observation of the species, signs of the species (burrows, tracks, scat, etc.), observance of suitable habitat, or documented occurrences of the species within various databases. A Low ranking indicates that preferred habitat for that species was found within the study area, but the species has not been documented within one (1) mile of the study area. A Moderate ranking indicates that suitable habitat exists, and the species has been documented within one (1) mile of the study area. A High ranking indicates that suitable habitat exists, and the species was observed during field reconnaissance.

Natural Resources Assessment Memo

75th Street West – 20th Avenue West to Manatee Ave

Table 2: Listed Species with the Potential to Occur Within the Study Area

Common Name	Scientific Name	Status	Documented (<1 mile)	Habitat Present	Likelihood of Occurrence
Avian					
Florida scrub jay	<i>Aphelocoma coerulescens</i>	FT	Yes	No	Low
Wood stork	<i>Mycteria americana</i>	FT	No	Yes; foraging	Low
Little blue heron	<i>Egretta caerulea</i>	ST	No	Yes; foraging	Low
Roseate spoonbill	<i>Platalea ajaja</i>	ST	No	Yes; foraging	Low
Tricolored heron	<i>Egretta tricolor</i>	ST	No	Yes; foraging	Low
Reptilian					
Eastern indigo snake	<i>Drymarchon corais couperi</i>	FT	No	Yes, foraging and nesting	Low
Gopher tortoise	<i>Gopherus polyphemus</i>	C	No	Yes; foraging and burrowing	Low
Legend: FE - Federally Endangered; FT - Federally Threatened; FT(S/A) – Threatened due to Similarity of Appearance; C - Candidate for Listing SE - State Endangered; ST - State Threatened NL - Not Listed, but have other regulatory protections * The Bald eagle is still protected under the Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act and FWC Management Plan regulations. Note: Coordination is not required with FWC for federally listed species					

All habitat types within the study area were evaluated to determine the presence or potential for occurrence of federal and/or state protected species. No signs or evidence of protected species were observed within the study area. While the proposed project has taken all practicable measures to avoid and minimize impacts to potentially occurring protected species habitats, unavoidable impacts may occur as a result of construction. A determination of the anticipated project “effect” on protected species was made based on their probability of occurrence within the study area, anticipated changes to their habitat quality, quantity, and availability as a result of project construction, and how each species is expected to respond to anticipated habitat changes. Listed below are the “effect” determinations for each species.

Florida Scrub-Jay (*Aphelocoma coerulescens*)

The Florida scrub-jay is listed as *threatened* by the **United States Fish and Wildlife Service (USFWS)** and **FWC**. This species prefers low growing oak scrub habitats, including sand pine scrub and scrubby flatwoods found on sandy soils. The study area is located in the USFWS consultation area for the Florida scrub-jay. Although no potential habitat for the scrub jay is present within the study area, one (1) species occurrence has been documented within one mile of the study area. The species was not observed during site reconnaissance. As a result, the probability of occurrence of the Florida scrub-jay within the study area has been determined to be *low*. Based upon the lack of suitable habitat, it is anticipated that the project is “**not likely to adversely affect**” the Florida Scrub-Jay.

Natural Resources Assessment Memo

75th Street West – 20th Avenue West to Manatee Ave

Wood stork (*Mycteria americana*)

This large, white, wading bird is listed as **threatened** by the USFWS and FWC. The wood stork is opportunistic and utilizes various habitat types, including freshwater marshes, swamps, lagoons, ponds, tidal creeks, flooded pastures, and ditches. Water that is relatively calm, uncluttered by dense aquatic vegetation, and with a permanent or seasonal water depth between 2 and 15 inches deep is considered suitable foraging habitat for this species. Suitable foraging habitat is present within the study area for this species. The USFWS wood stork colony website was reviewed for active wood stork colonies located within 15 miles of the study area. This 15-mile distance corresponds to the core foraging area (CFA) established by the USFWS for the wood stork in the region. According to the USFWS wood stork colony website, the study area is located within the 15-mile CFA of the Ayers Point – Dot Dash wood stork nesting colony; however, there have been no documented sightings of the wood stork within one (1) mile of the study area, and it was not observed during the field review. As a result, the probability of occurrence of the wood stork within the study area has been determined to be **low**. Wetland impacts resulting from construction of this project will be minimal and under the threshold for required mitigation. Based on the assessment of the project utilizing the Effect Determination Key for the Wood Stork in South Florida (USFWS 2008), it is anticipated that the project will “**not likely to adversely affect**” the wood stork. The path to this determination followed the key steps A → B → C → NLAA.

Eastern indigo snake (*Drymarchon corais couperi*)

This large, glossy black snake is listed as **threatened** by the USFWS. The eastern indigo snake can be found in a variety of habitat types, including pine flatwoods, scrubby flatwoods, high pine, dry prairie, tropical hardwood hammocks, edges of freshwater marshes, agricultural fields, coastal dunes, as well as human-altered habitats. It may also utilize gopher tortoise burrows for shelter to escape hot or cold ambient temperatures within its range. Suitable habitat is present within the study area for this species; however, there have been no documented sightings of the eastern indigo snake within one (1) mile of the study area, and it was not observed during field reviews. As a result, the probability of occurrence of the eastern indigo snake within the study area has been determined to be **low**. However, it is possible that this species could utilize suitable habitat within the study area. Because there is suitable habitat for this species to occur, Standard Protection Measures for the Eastern Indigo Snake (USFWS, 2017) will be utilized during site preparation and construction of the project. Based upon assessment of the project utilizing the Eastern Indigo Snake Programmatic Effect Determination Key (USFWS 2013), it is anticipated that the project is “**not likely to adversely affect**” the eastern indigo snake. The path to this determination followed the key steps A → B → C → D → E → NLAA.

Gopher tortoise (*Gopherus polyphemus*)

This medium-sized land tortoise is listed as **threatened** by the FWC. The gopher tortoise prefers areas of well-drained loose soils that support adequate low-growing herbs and grasses for food. Gopher tortoises are most often found in xeric oak, sandhills, dry pine flatwoods, scrub habitats as well as old fields, pastures and roadsides. Gopher tortoise burrows also provide refuge and home to numerous

Natural Resources Assessment Memo

75th Street West – 20th Avenue West to Manatee Ave

species (burrow commensals), including listed species, which are either partially or wholly reliant upon the burrow. Suitable habitat is present within the study area for this species; however, there have been no documented sightings of the gopher tortoise within one (1) mile of the study area, and it was not observed during field reviews. As a result, the probability of occurrence for the gopher tortoise within the study area has been determined to be *low*. Avoidance or relocation of gopher tortoises and their commensal species in accordance with FWC regulations will be conducted if a burrow is located within 25 ft of the limits of work. Due to the limited amount of suitable habitat and lack of occurrences during field reviews, and the commitment to avoid/relocate any gopher tortoises that may be impacted by the project, it has been determined that “**no adverse effect is anticipated**” for the gopher tortoise as a result of the project.

Little blue heron (*Egretta caerulea*)

The little blue heron is a medium-sized, slate-blue, wading bird listed as *threatened* by the FWC. The little blue heron forages in shallow marine, brackish, or freshwater areas, including tidal ponds, sloughs, marshes, and human-created impoundments. It nests in colonies in woody shrubs that are separated from land by open water. Suitable habitat is present within the study area for this species; however, there have been no documented sightings of the little blue heron within one (1) mile of the study area, and it was not observed during field reviews. As a result, the probability of occurrence of the little blue heron within the study area has been determined to be *low*.

Roseate spoonbill (*Platalea ajaja*)

The roseate spoonbill is a bright pink bird with a spoon-like bill. This bird is listed as *threatened* by the FWC. Habitats such as freshwater mudflats and marshes, saltwater marshes, coastal flats, mangrove swamps, lagoons, wet prairies, and ditches are preferred by the roseate spoonbill for feeding. Suitable habitat is present within the study area for this species; however, there have been no documented sightings of the roseate spoonbill within one (1) mile of the study area, and it was not observed during field reviews. As a result, the probability of occurrence of the roseate spoonbill within the study area has been determined to be *low*.

Tricolored heron (*Egretta tricolor*)

The tricolored heron is a medium-sized, two-toned, wading bird listed as *threatened* by the FWC. The tricolored heron prefers both fresh- and saltwater habitats such as fresh- and saltwater marshes and mudflats, brackish marshes, coastal beaches, mangrove swamps, hardwood and cypress swamps, and wet prairies. Suitable habitat is present within the study area for this species; however, there have been no documented sightings of the tricolored heron within one (1) mile of the study area, and it was not observed during field reviews. As a result, the probability of occurrence of the tricolored heron within the study area has been determined to be *low*. It is reasonable to expect that these species could utilize suitable habitat within the study area.

The primary concern for impacts to these wading bird species is the loss of foraging habitat. Wetland impacts resulting from construction of this project will be minimal and under the threshold for

Natural Resources Assessment Memo

75th Street West – 20th Avenue West to Manatee Ave

required mitigation. It has been determined that “**no adverse effect**” is anticipated for the little blue heron, roseate spoonbill, or tricolored heron as a result of the project.

Bald eagle (*Haliaeetus leucocephalus*)

The bald eagle is a large raptor with a distinctive white head and yellow bill. The bald eagle has been de-listed by **both** the **USFWS** and **FWC**. However, it is still federally protected under the Bald and Golden Eagle Protection Act (BGEPA) in accordance with 16 United States Code 668 and the Migratory Bird Treaty Act of 1918. The bald eagle tends to utilize riparian habitat associated with coastal areas, lake shorelines, and riverbanks. Nests are generally located near water bodies that provide a dependable food source. According to the FWC database, there are no bald eagle nests within one (1) mile of the study area. As a result, the probability of occurrence of the bald eagle within the study area has been determined to be **low**. If any active nests are located within 660 ft of the project limits, coordination with the USFWS will be initiated. Based on this commitment, it has been determined that the project “**not likely to adversely affect**” the bald eagle.

Critical Habitat

The study area was also evaluated for the presence of Critical Habitat as defined by the Endangered Species Act of 1973, as amended and 50 CFR part 424. The USFWS is the authority, as a federal agency, to protect from destruction or adverse modification the biological or physical constituent elements essential to the conservation of listed species. Critical Habitat is defined as the specific areas within the geographical area occupied by a species on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection. No Critical Habitat or Proposed Critical Habitat for any federally listed species was identified within the study area.

Permitting Requirements and Coordination

Both the FDEP and SWFWMD regulate impacts to wetlands within the project area. Other agencies, including the USFWS, NMFS, EPA, and the FWC, review and comment on wetland permit applications. The FWC also issues permit for gopher tortoise relocation activities and incidental takes for state protected avian species, and the USFWS is the lead agency for eagle nest take permitting or coordination. In addition, the FDEP regulates stormwater discharges from construction sites. The complexity of the permitting process will depend on the degree of the impact to jurisdictional areas. It is anticipated that the following permits will be required for this project:

<u>Permit</u>	<u>Issuing Agency</u>
Environmental Resource Permit (ERP)	SWFWMD
Section 404 State Assumption	FDEP
National Pollutant Discharge Elimination System (NPDES)	FDEP
Gopher Tortoise Relocation Permit, if needed	FWC

Natural Resources Assessment Memo

75th Street West – 20th Avenue West to Manatee Ave

SWFWMD Environmental Resource Permit

SWFWMD requires an ERP when construction of any project results in the creation of a new or modification of an existing surface water management system or results in impacts to waters of the state. As with FDEP permits, the complexity associated with the ERP permitting process will depend on the size of the project and/or the extent of wetland impacts. Under current state rules, the SWFWMD will likely require a standard or individual permit for this project.

FDEP State 404 Program

In 2018, FDEP was given the authority to begin the rulemaking process to assume the federal dredge and fill permitting program under section 404 of the Clean Water Act within state-assumed waters. This process was completed in July 2020 and created the State 404 Program within Chapter 62-330 and 62-331, F.A.C. to facilitate this assumption. This State 404 Program is responsible for overseeing permitting for any project proposing dredge or fill activities within state-assumed waters. The State 404 Program is a separate program from the existing SWFWMD ERP program, and projects within the state-assumed waters require both an ERP and a State 404 Program authorization. The wetlands and surface waters associated with this project would fall under the state-assumed waters definition and therefore would require a permit through this program.

NPDES

40 CFR Part 122 prohibits point source discharges of stormwater to waters of the U.S. without a NPDES permit. Under the State of Florida's delegated authority to administer the NPDES program, construction sites that will result in greater than one acre of disturbance must file for and obtain either coverage under an appropriate generic permit contained in Chapter 62-621, F.A.C., or an individual permit issued pursuant to Chapter 62-620, F.A.C. A major component of the NPDES permit is the development of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP identifies potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharges from the site and discusses good engineering practices (i.e., best management practices) that will be used to reduce the pollutants.

FWC Gopher Tortoise Relocation Program

At the time of the site reviews, no gopher tortoise burrows were observed within or adjacent to the project limits. However, if gopher tortoises or burrows are found within the project area, Manatee County will coordinate with the FWC to secure all permits needed to relocate the tortoises and associated commensal species prior to construction. FWC requires the excavation and relocation of any gopher tortoise burrows and individuals within the project limits prior to construction. Permits to excavate and relocate tortoises are issued through FWC and would be completed as either a 10 or Fewer Burrows permit or a Conservation permit.

Mitigation

In 2008, the USACE and the EPA issued regulations governing compensatory mitigation for activities authorized by the Department of the Army (Federal Register, 2008). These regulations, as promulgated in 33 Code of Federal Regulations (CFR) Part 332, establish a hierarchy for determining

the type and location of compensatory mitigation. To briefly summarize, the rule establishes a preference for the use of mitigation bank credits if a mitigation bank has the appropriate number and resource type of credits available. If the permitted impacts are not in the service area of an approved mitigation bank, or if the appropriate number and resource type of credits are otherwise unavailable, then the rule establishes a preference for in-lieu fee program credits. If an approved mitigation bank or in-lieu fee program cannot be used to provide the required compensatory mitigation, the rule establishes a preference for permittee responsible mitigation conducted under a watershed approach. Wetland impacts which will result from the construction of this project will be mitigated pursuant to Section 373.4137, F.S., to satisfy all mitigation requirements of Part IV of Chapter 373, F.S., and 33 U.S.C. §1344. Compensatory mitigation for this project will be completed through the use of mitigation banks and any other mitigation options that satisfy state and federal requirements.

Presently, the study area is located within the service areas of the Long Bar Pointe Mitigation Bank. This bank has freshwater herbaceous and forested credits available and is within the South Coastal Drainage Basin. The bank services Charlotte, Manatee, and Sarasota Counties. Should the purchase of credits from the Long Bar Pointe Mitigation Bank be pursued as a mitigation option for this project, this option would be available to offset all direct impacts for the project.

Implementation Measures

Based on the field and literature reviews outlined in this report, federal- or state-listed protected species have the potential to occur within the project study area. To assure that the proposed project will not adversely impacts these species, Manatee County will adhere to the following:

- Manatee County will perform updated wildlife surveys for the species discussed in this report, and other wildlife species, during the project Design phase to ascertain the involvement, if any, of listed species.
- If gopher tortoises or burrows are found within the project area, Manatee County will coordinate with the FWC to secure all permits needed to relocate the tortoises and associated commensal species prior to construction.
- If a bald eagle nest is observed within 660 feet of the project area, Manatee County will coordinate with the USFWS to secure necessary approvals prior to constructing the project.



Natural Resources Assessment Memo

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Appendix D – Cultural Resources Memo



Cultural Resources Memo

75th Street West – 20th Avenue West to Manatee Avenue

CIP #: 6108260

FINAL October 15, 2021



CONTENTS

Introduction.....	3
Memorandum Purpose.....	3
Resource Identification Methodology	3
Area of Potential Impact Identification.....	3
Methodology and Process.....	5
Resource Identification Results.....	6
Recommendations.....	8

FIGURES

Figure 1: Project Location Map	4
Figure 2: 75th St W Area of Potential Effect (APE).....	5
Figure 3: Village Green Neighborhood	7
Figure 4: Palma Sola Park Neighborhood	7

ATTACHMENTS

Attachment A: Structures in APE Built in or Before 1981

Introduction

Manatee County is conducting a Project Development & Corridor Study to evaluate an approximately 1-mile segment of 75th Street West from approximately 20th Ave W to Manatee Avenue/State Road (SR) 64. The project limits are partially within the City of Bradenton and unincorporated Manatee County, Florida as shown in **Figure 1**. The study will evaluate options for widening the existing two-lane roadway to a four-lane roadway with a center left turn lane and/or median in addition to providing an enhanced mobility experience for all users.

Memorandum Purpose

The purpose of this Cultural Resource Assessment Memorandum (CRAM) is to evaluate and summarize the cultural resources within the 75th Street West study corridor's Area of Potential Effects (APE) and to assess their significance in terms of eligibility for listing in the National Register of Historic Places (NRHP). As defined in Section 1.1 of the Florida Department of Transportation (FDOT) Cultural Resource Management Handbook, cultural resources are "archaeological sites, historic structures, objects, and districts, which are typically 50 or more years old".

For additional guidance on the analysis of cultural resources, this assessment referred to the National Historic Preservation Act of 1966, as amended, Chapter 267, FS, Chapter 1A-46, FAC (revised August 2002), and FDHR's Cultural Resources Standards and Operational Manual (FDHR 2003). It was also conducted with guidance from with Part 2, Chapter 8 (Archaeological and Historical Resources) of the FDOT PD&E Manual (FDOT, 2020).

Resource Identification Methodology

In order to evaluate potential impacts on cultural resources near the 75th Street West project, an Area of Potential Effect (APE) was established. The APE serves as the geographic limits of the area surrounding the project limits that have potential to be affected by the project. Within the APE, data was collected from Manatee County Property Appraiser, the Florida State Historic Preservation Office, and field analysis.

Area of Potential Impact Identification

As defined in 36 CFR Part § 800.16(d), and recognized by Chapter 267, FS, the APE is the "geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist." Based on the scale and nature of the proposed improvements, the project has a limited potential for any indirect (visual or audible) or cumulative effects outside the right of way footprint. Therefore, the archaeological and historic/architectural APE was defined as 0.25 mile from the centerline of the 75th Street West corridor as shown in **Figure 2**.

Cultural Resources Memo

75th Street West – 20th Avenue West to Manatee Ave

Figure 1: Project Location Map

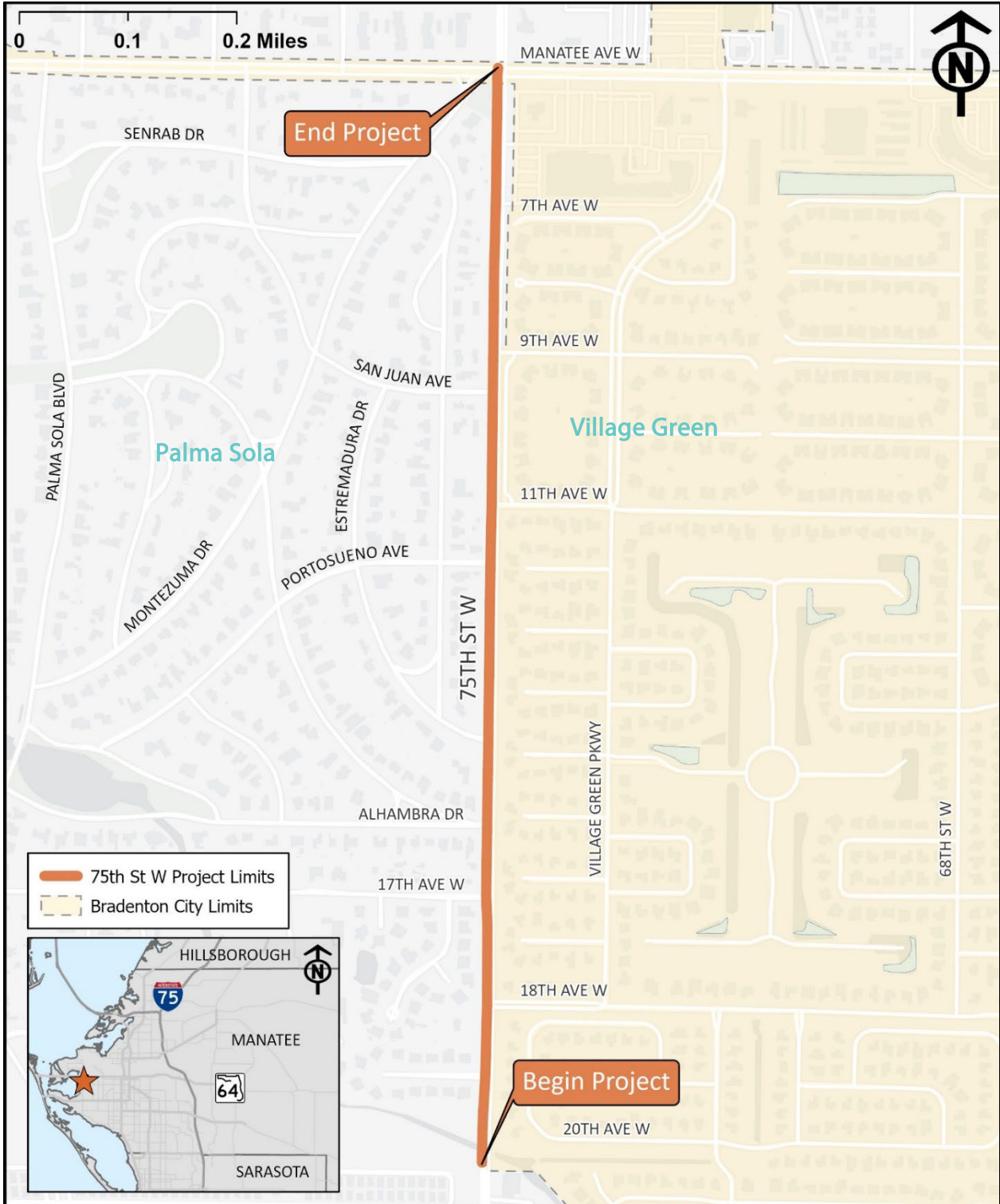


Figure 2: 75th Street West Area of Potential Effect (APE)



Methodology and Process

Background research was conducted to gather available information about cultural resources that may have been identified within the APE of the 75th Street corridor. The Florida State Historic Preservation Office (SHPO) was contacted for initial consideration of identifying cultural resources in the Florida Master Site File (FMSF) database, an inventory of significant historical and cultural resources throughout the state.

An inventory of potential eligible resources was developed using additional resources such as the Manatee County Open Data Portal, Manatee County Property Appraiser data, and field visits. Parcel information from the Manatee County Property Appraiser was utilized in order to identify buildings that may be 50 years of age or older by the buildout of this project. Geographic Information Systems (GIS) was used to add geographic data to the inventory and to spatially confirm the cultural resources located within the APE.

To be sure all structures at least 50 years when the project is complete are analyzed, structures built between 1971-1981 were included in the query as they may be over 50 years of age by the anticipated completion of the project. The historical buildings identified by the initial parcel query were then cross-referenced with satellite imagery to confirm the location of each property.

The Manatee County Open Data Portal was accessed to collect GIS information about potential cultural resources within the APE of the 75th Street West corridor. This portal provided shapefiles that

contained the location and details of topics such as the National Register of Historic Places (NHRP), Historical and Archaeological (HA) Overlay Districts, Cemeteries, Parks, and Preserves.

Resource Identification Results

It was determined by SHPO that there are no cultural resources currently identified in the Florida Master Site File within the APE boundaries of the 75th Street West project. (*See Figure 2 above.*) Additional sources were used to confirm that there are no culturally significant resources within the APE. These sources included the NRHP GIS shapefile maintained by Manatee County and the NRHP database maintained by the U.S. National Park Service.

Based on the GIS information available through the Manatee County Open Data Portal, no officially designated and protected Historical and Archaeological Overlay Districts fall within the APE of the 75th Street West corridor.

According to Section 6.1.3 of the FDOT *Cultural Resource Management Handbook*, cemeteries can contain important cultural and historic significance due to “graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events.”¹ However, none of the 27 cemeteries located within Manatee County are located within the study corridor’s APE boundary.

Attachment A includes a list of the buildings within 150 feet of the project limits that are identified per Manatee County Property Appraiser as having been built in 1981 or prior. These properties are at least or nearing 50 years old and have not been evaluated for NRHP eligibility. None of the items included on this inventory are currently NRHP-recognized or included in the FMSF. Impacted properties should be evaluated during the design phase, and coordination should occur with SHPO. As such, there are no effects anticipated to culturally significant resources throughout the 75th Street West improvements.

The APE does include two mature neighborhoods that have not been evaluated as historic districts. The Village Green community, initially planned in the 1970s², contains a mix of single family and duplex homes built between 1970 and 1985 in masonry vernacular (**Figure 3**).

Palma Sola Park, developed in the 1920s as the area of Palma Sola expanded³, contains mostly single-family homes built between 1969 and 1986 in masonry vernacular and mission revival architectural

¹ FDOT. 2013. Cultural Resources Handbook. Page 149. Accessed on July 29, 2021 from https://www.fdot.gov/docs/default-source/environment/pubs/cultmgmt/SEMO-CRM-Handbook_2013.pdf

² <http://www.villagegreenfla.com>

³ *Palma Sola*. (n.d.). Manatee County Public Library Digital Collection. Retrieved August 23, 2021, from https://mymanatee.contentdm.oclc.org/digital/custom/palma_sola

Cultural Resources Memo

75th Street West – 20th Avenue West to Manatee Ave

style (**Figure 4**). It is also noted that the Palma Sola neighborhood area, located on the west side of 75th Street, was first settled in 1868, though no apparent resources remain from that time.

Figure 3: Village Green Neighborhood



Figure 4: Palma Sola Park Neighborhood



Recommendations

Manatee County's unique cultural and historical richness need to continue to be preserved to allow for reflection and education of the local community and beyond. One of the goals of this evaluation is to limit and ultimately not impact cultural resources along the 75th Street West corridor.

Although no individual building within the APE is currently eligible for National Register listing, Palma Sola Park as a community may meet SHPO Criteria for Evaluation due to distinct characteristics of the period.⁴ The Village Green neighborhood could also be evaluated but lacks distinct and unique features that would make it an exceptional example of neighborhoods planned in that timeframe.

Although there are no existing cultural resources within the APE, potential historic properties should be evaluated by an architectural historian during the design phase. The NRHP eligibility finding can then be coordinated with the SHPO for concurrence.

⁴ Florida Dept. of State. 2021. Criteria for Listing. Accessed on Aug. 25, 2021 from <https://dos.myflorida.com/historical/preservation/national-register/criteria-for-listing/>

Attachment A

Structures in APE Built in or Before 1981

Cultural Resources Memo

75th Street West – 20th Avenue West to Manatee Ave

Table A: Structures in APE Built in or Before 1981

	Parcel ID	Address	YEAR BUILT
1	3899422558	7408 11TH AVE W	1971
2	3899416105	7409 11TH AVE W	1977
3	3899422509	7410 11TH AVE W	1971
4	3899422608	7404 11TH AVE W	1971
5	3899422806	7304 11TH AVE W	1971
6	3899416055	7405 11TH AVE W	1976
7	3899422657	7402 11TH AVE W	1971
8	3899422756	7308 11TH AVE W	1971
9	3899422707	7310 11TH AVE W	1971
10	3899416451	7409 12TH AVE W	1973
11	3899416352	7406 12TH AVE W	1977
12	3899416501	7405 12TH AVE W	1973
13	3899416402	7410 12TH AVE W	1973
14	3899416956	7406 13TH AVE W	1978
15	3899417053	7409 13TH AVE W	1973
16	3899417103	7405 13TH AVE W	1972
17	3899417004	7410 13TH AVE W	1973
18	3899417608	7412 13TH AVENUE DR W	1978
19	3899417558	7408 13TH AVENUE DR W	1978
20	3899417657	7411 13TH AVENUE DR W	1977
21	3899418259	7411 14TH AVE W	1977
22	3899418150	7408 14TH AVE W	1977
23	3899418200	7412 14TH AVE W	1977
24	3899418309	7407 14TH AVE W	1977
25	3899732253	7411 15TH AVE W	1977
26	3899732303	7407 15TH AVE W	1977
27	3899732154	7408 15TH AVE W	1976
28	3899732204	7412 15TH AVE W	1977
29	3899732808	7412 16TH AVE W	1977
30	3899732758	7408 16TH AVE W	1976
31	3899732857	7411 16TH AVE W	1977
32	3899732907	7407 16TH AVE W	1977
33	3899733459	7408 17TH AVE W	1976
34	3899733608	7407 17TH AVE W	1977
35	3899733558	7411 17TH AVE W	1977
36	3899733509	7412 17TH AVE W	1976
37	3905300004	7506 17TH AVE W	1979
38	3899734051	7408 18TH AVE W	1977
39	3899734002	7404 18TH AVE W	1977
40	3909210100	7504 19TH AVENUE DR W	1981
41	3909210753	7503 19TH AVENUE DR W	1981
42	3915410306	1906 74TH ST W	1980
43	3915410207	1814 74TH ST W	1980
44	3915410355	1910 74TH ST W	1979
45	3915410256	1902 74TH ST W	1980

Cultural Resources Memo

75th Street West – 20th Avenue West to Manatee Ave

	Parcel ID	Address	YEAR BUILT
46	3915410058	1802 74TH ST W	1980
47	3915410108	1806 74TH ST W	1979
48	3915410157	1810 74TH ST W	1979
49	3893600001	904 75TH ST W	1979
50	3893200000	620 75TH ST W	1968
51	3896000001	1214 75TH ST W	1972
52	3894110000	1004 75TH ST W	1973
53	3906100007	1816 75TH ST W	1953
54	3905200006	1608 75TH ST W	1953
55	3899422350	1005 75TH STREET PKWY W	1971
56	3899422103	903 75TH STREET PKWY W	1971
57	3899422301	1003 75TH STREET PKWY W	1971
58	3899422053	901 75TH STREET PKWY W	1971
59	3899422202	909 75TH STREET PKWY W	1971
60	3899422400	1009 75TH STREET PKWY W	1971
61	3899422459	1011 75TH STREET PKWY W	1971
62	3899422251	911 75TH STREET PKWY W	1971
63	3899422152	905 75TH STREET PKWY W	1971
64	3899436350	7417 7TH AVE W	1978
65	3899436400	7421 7TH AVE W	1978
66	3899436509	7410 8TH AVE W	1978
67	3899437150	7409 8TH AVE W	1978
68	3899437200	7413 8TH AVE W	1978
69	3899436459	7414 8TH AVE W	1978
70	3899437259	7414 9TH AVE W	1978
71	3899437309	7410 9TH AVE W	1978
72	3899422004	7405 9TH AVE W	1971
73	3870400003	7501 ALHAMBRA DR	1977
74	3892800008	613 CASABELLA DR	1949
75	3892700000	609 CASABELLA DR	1926
76	3893300008	621 CASABELLA DR	1958
77	3895600009	1207 CASABELLA DR	1969
78	3893000004	617 CASABELLA DR	1976
79	3893800007	635 CASABELLA DR	1964
80	3894900004	1019 CASABELLA DR	1977
81	3895500001	1205 CASABELLA DR	1979
82	3895800005	1211 CASABELLA DR	1960
83	3892900006	615 CASABELLA DR	1977
84	3896100009	1217 CASABELLA DR	1965
85	3892600002	605 CASABELLA DR	1926
86	3893700009	631 CASABELLA DR	1972
87	3896200007	1225 CASABELLA DR	1962
88	3892200001	601 CASABELLA DR	1950
89	3893100002	619 CASABELLA DR	1926
90	3894100001	1005 CASABELLA DR	1971
91	3895000002	1021 CASABELLA DR	1975
92	3894600000	1015 CASABELLA DR	1977

Cultural Resources Memo

75th Street West – 20th Avenue West to Manatee Ave

	Parcel ID	Address	YEAR BUILT
93	3892700059	611 CASABELLA DR	1977
94	3893500003	625 CASABELLA DR	1960
95	3895400004	1203 CASABELLA DR	1973
96	3881200109	1230 ESTREMADURA DR	1925
97	3892100003	505 MONTEZUMA DR	1951
98	3895100209	7506 PORTOSUENO AVE	1961
99	3894000003	7501 SAN JUAN AVE	1956
100	3915910109	2209 75TH ST W	1977
101	3915910109	2015 75TH ST W	1977
102	3915910109	2103 75TH ST W	1977



Cultural Resources Memo

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**Appendix E –
Potential Contamination Screening Memo**



Potential Contamination Screening Memo

75th Street West - 20th Avenue West to Manatee Avenue

CIP #: 6108260

FINAL October 15, 2021



CONTENTS

Introduction.....	3
Memorandum Purpose.....	3
Findings and Summary.....	5
Aerial Photograph and City Directory Review.....	5
Environmental Database Review	5
Current Conditions.....	6
Conclusions.....	6
Recommendations.....	6

FIGURES

Figure 1: Project Location Map	4
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ATTACHMENTS

Attachment A – Historic Aerials & City Directories

Attachment B – ERIS Database Report

Attachment C – FDEP Map Direct Database

Potential Contamination Screening Memo

75th Street West - 20th Ave West to Manatee Ave

Introduction

Manatee County is conducting a Project Development & Corridor Study to evaluate an approximately 1-mile segment of 75th Street West from 20th Ave West to Manatee Avenue (SR 64). The project limits are partially within the City of Bradenton and unincorporated Manatee County, Florida, as shown in **Figure 1**. The study will evaluate options for widening the existing 2-lane roadway to a 4-lane roadway with a center left turn lane and/or median in addition to providing an enhanced mobility experience for all users

Memorandum Purpose

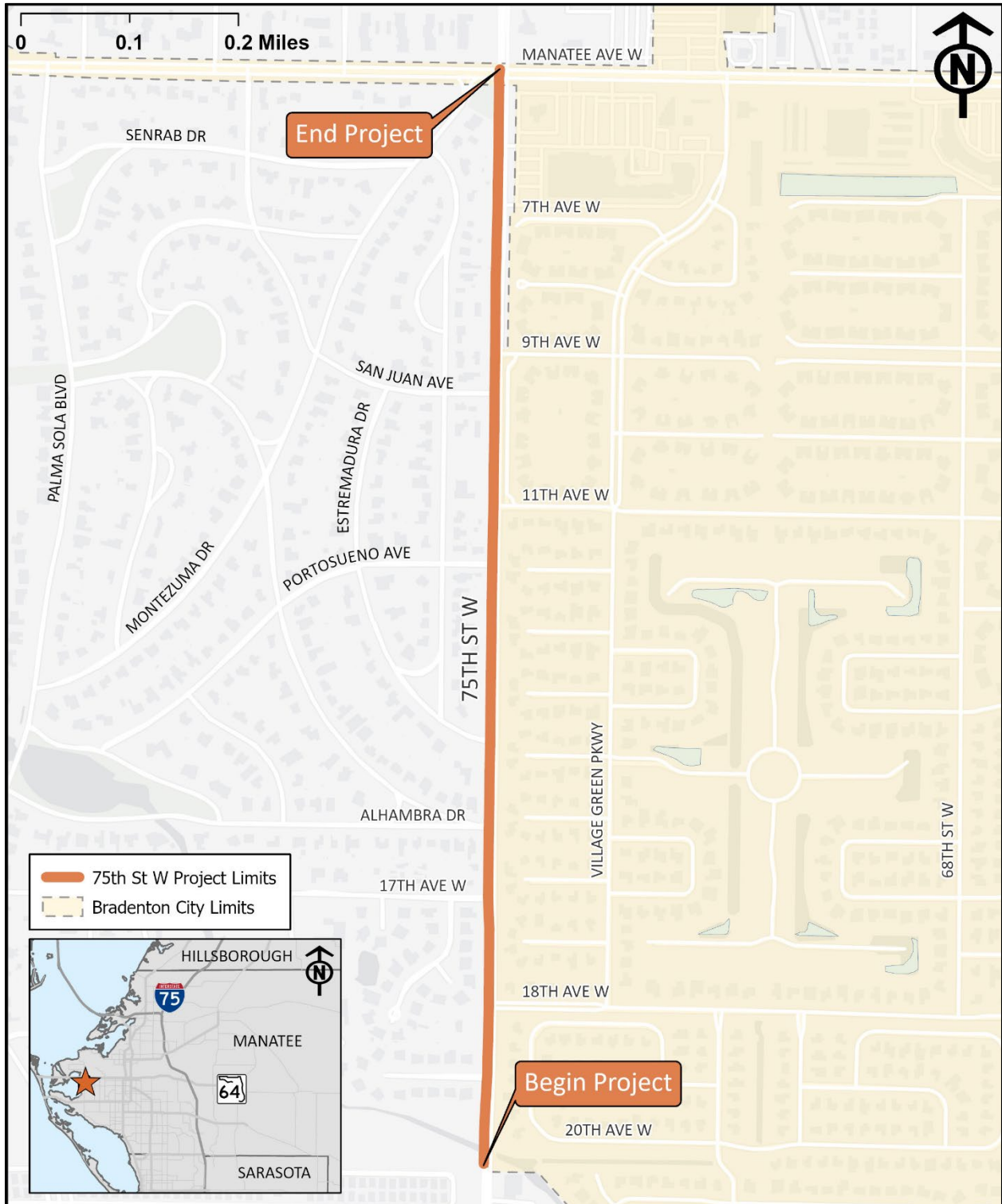
The purpose of this Potential Contamination Screening Memo is to document historical and environmental regulatory information that would be indicative of potential environmental hazards in connection with the Project Site. This is particularly important in areas where excavation activities would be most likely to occur (e.g. storm drainage modifications and traffic signal improvements). The scope of the evaluation consisted of the following tasks:

- Review of historical aerial photographs (1940, 1951, 1957, 1962, 1970, 1973, 1984, 1994, 1998, 2005, 2010, 2013, 2015, 2017 and 2019).
- Review of historical city reverse directories.
- Review of local, state, and federal records of known potentially hazardous waste sites or landfills, and sites currently under investigation for environmental violations, including any underground storage tanks (ERIS database report dated July 1, 2021)
- Review of Florida Department of Environmental Protection (FDEP) databases (Map Direct: <https://ca.dep.state.fl.us/mapdirect/>)
- Review other pertinent and readily available environmental records for adjacent properties.
- Conduct a site inspection.

Potential Contamination Screening Memo

75th Street West - 20th Ave West to Manatee Ave

Figure 1: Project Location Map



Findings and Summary

Aerial Photograph and City Directory Review

Kimley-Horn reviewed aerial photographs and city directories provided by Environmental Resource Information Services (ERIS) for the project corridor. The project corridor has been historically developed as roadway with adjacent commercial and residential use since at least 1970. Prior to 1970, the project corridor was undeveloped east of the 75th street corridor and was developed with residential use west of the 75th street corridor. City directories reviewed identified the following occupants or historical uses that may be an environmental concern:

- Metalworking Machinery Nec, 2508 75th Street, Bradenton, Florida
- Pest Control, 2508 75th Street, Bradenton, Florida

Copies of the Aerial Photographs and City Directories are provided in **Attachment A**.

Environmental Database Review

The environmental database (**Attachment B**) provided by ERIS was reviewed for facilities with identified contamination within 500 feet of the project site that could impact the planned Project Site activities. Facilities identified in the database report are described below:

- 7412 17th Avenue West Bradenton, FL, 34209 – Chemical Spill

According to the ERIS database, located at 7412 17th Avenue West, a one-gallon spill of a chlorine derivative was reported on 10/25/2008. No other information is known. Based on the regulatory status of this facility, it is considered a Low Risk. (Map Key – 1, Incident No. 40469).

- 7412 (7350) Manatee Ave West Bradenton, Fl, 34209-3443 – Kmart #7321 – Contaminated Site

According to the ERIS database, Kmart #7321, located at 7412 (7350) Manatee Avenue West, is listed as a contaminated facility within the FDEP's Division of Waste Management. Review of documents online indicated that a hydraulic lift removal was performed and there were no reported soil or groundwater impacts once the lifts were removed. As such, the contractor requested a No Further Action without conditions approval. Based on the regulatory status of this facility, it is considered a Low Risk. (Map Key – 3, Facility ID: 8630081)

Current Conditions

Kimley-Horn visited the Project Site on August 17, 2021 and no environmental concerns were identified during the site visit.

Review of Readily Available Environmental Reports

Kimley-Horn performed a desktop review of FDEP's Map Direct Database (**Attachment C**). Results of the review did not identify any additional facilities from the ERIS database.

Depth to Shallow Groundwater for the Project Site

Based on the topographic relief and location within Manatee County, groundwater is anticipated to be encountered 3-7 feet below land surface.

Conclusions

Based on available information, the project corridor is not likely to contain significant contamination. There does not appear to be any substantial environmental risks associated with the project corridor which could affect completing the planned improvements.

Recommendations

Should dewatering be required as part of the improvements proposed for this project, dewatering operations must obtain a National Pollution Discharge Elimination System (NPDES) Generic Permit for Discharge of Groundwater. Dewatering operations in areas identified with contamination issues require treatment of effluent to limits and requirements specified in the NPDES Generic Permit.

No further assessment/review for contamination appears warranted.

Potential Contamination Screening Memo

75th Street West - 20th Ave West to Manatee Ave

Attachment A – Historic Aerials & City Directories



HISTORICAL
AERIALS

Project Property: 75th St. Corridor
75th St W
Bradenton FL

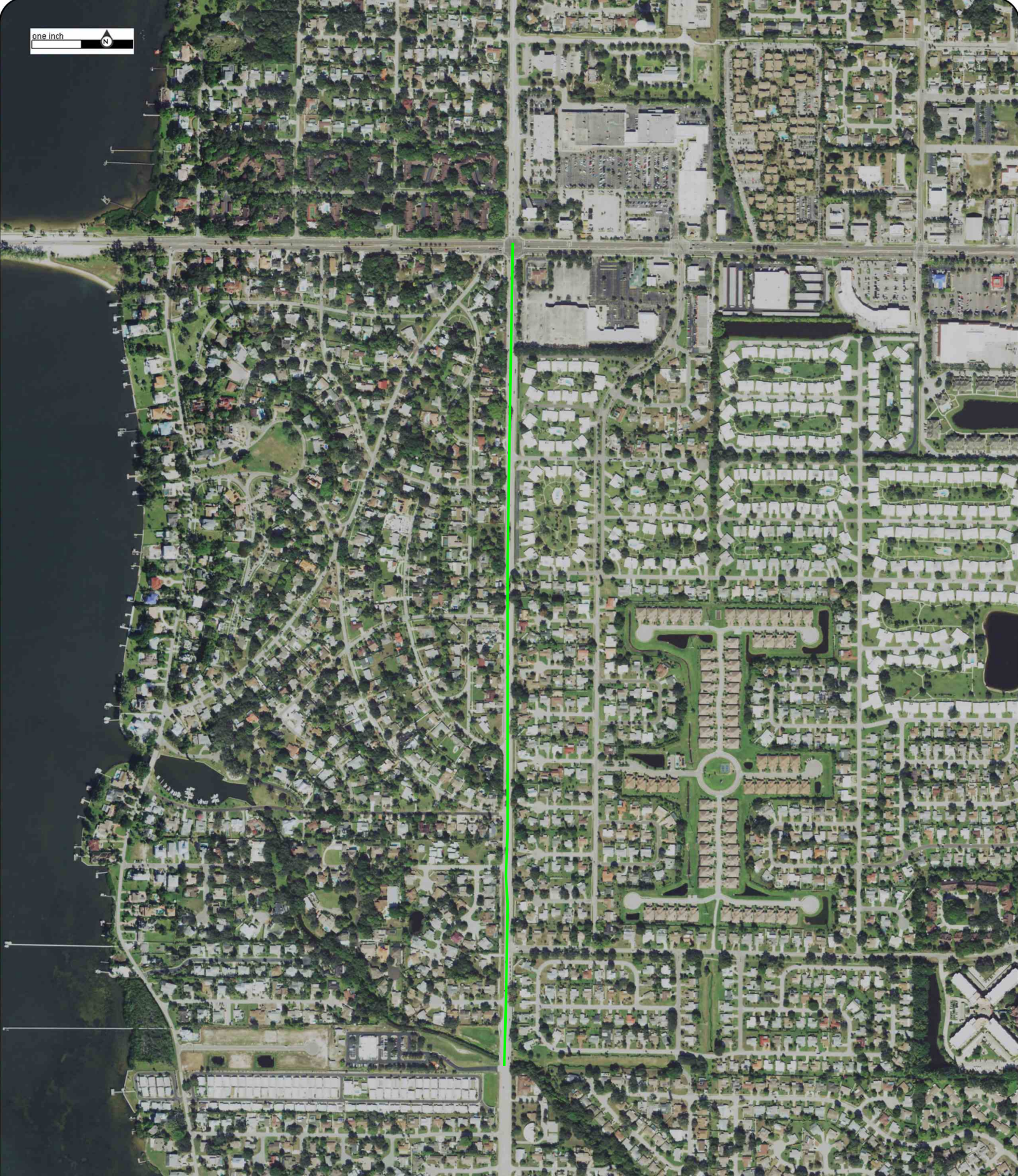
Requested By: Kimley-Horn & Associates, Inc

Order No: 21062500535

Data Completed: June 28,2021

Date	Source	Scale	Comments
2019	National Agriculture Information Program	1" to 700'	
2017	National Agriculture Information Program	1" to 700'	
2015	National Agriculture Information Program	1" to 700'	
2013	National Agriculture Information Program	1" to 700'	
2010	National Agriculture Information Program	1" to 700'	
2005	National Agriculture Information Program	1" to 700'	
1998	US Geological Survey	1" to 700'	
1994	US Geological Survey	1" to 700'	
1984	National High Altitude Photography	1" to 700'	
1973	Florida Department of Transportation	1" to 700'	
1970	Agriculture and Soil Conservation Service	1" to 700'	
1962	US Geological Survey	1" to 700'	
1957	Agriculture and Soil Conservation Service	1" to 700'	
1951	Agriculture and Soil Conservation Service	1" to 700'	
1940	Agriculture and Soil Conservation Service	1" to 700'	

one inch



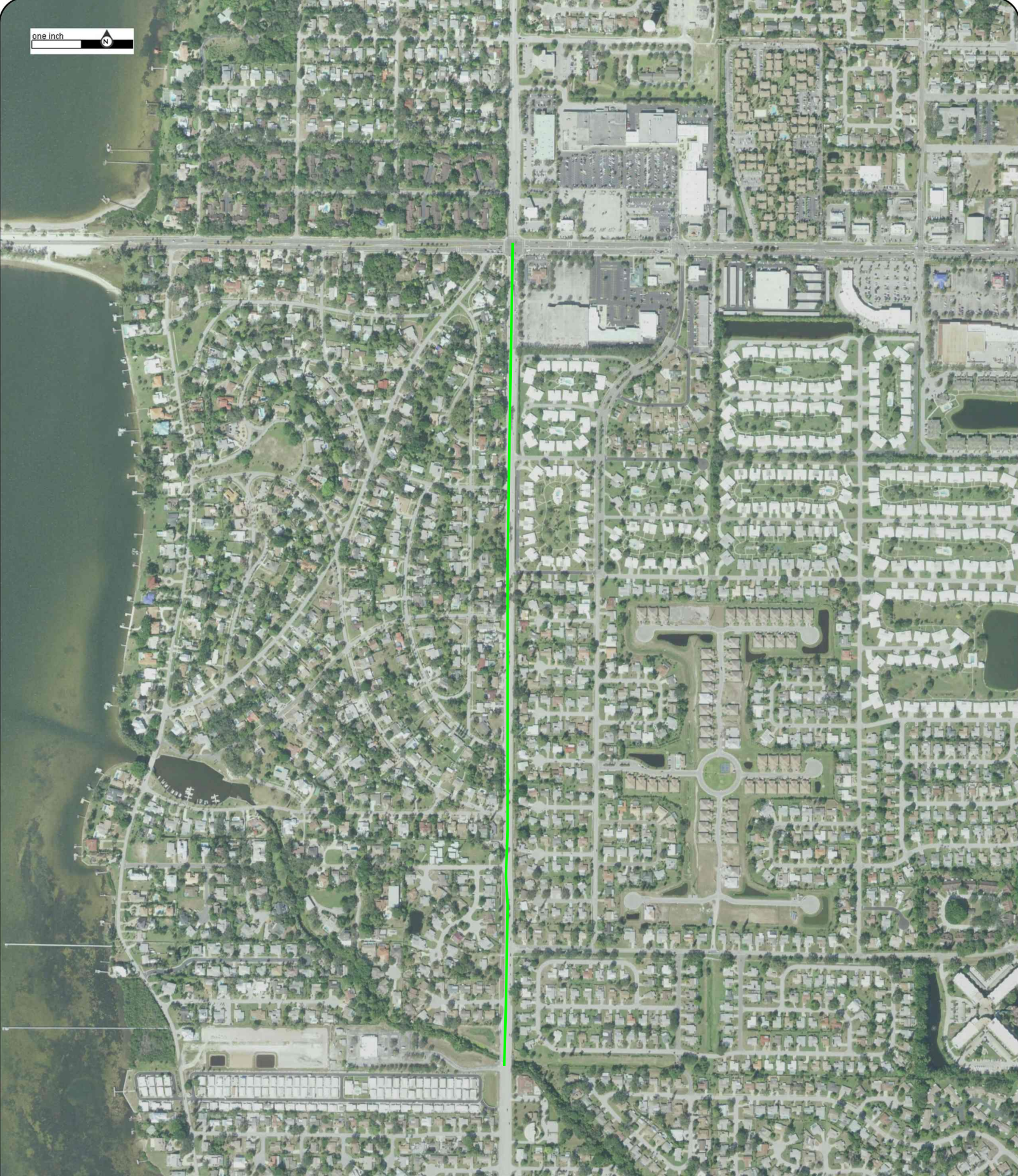
Year: 2019
Source: NAIP
Scale: 1" to 700'
Comment:

Address: 75th St W, Bradenton, FL
Approx Center: -82.63670031,27.4888362

Order No: 21062500535



one inch



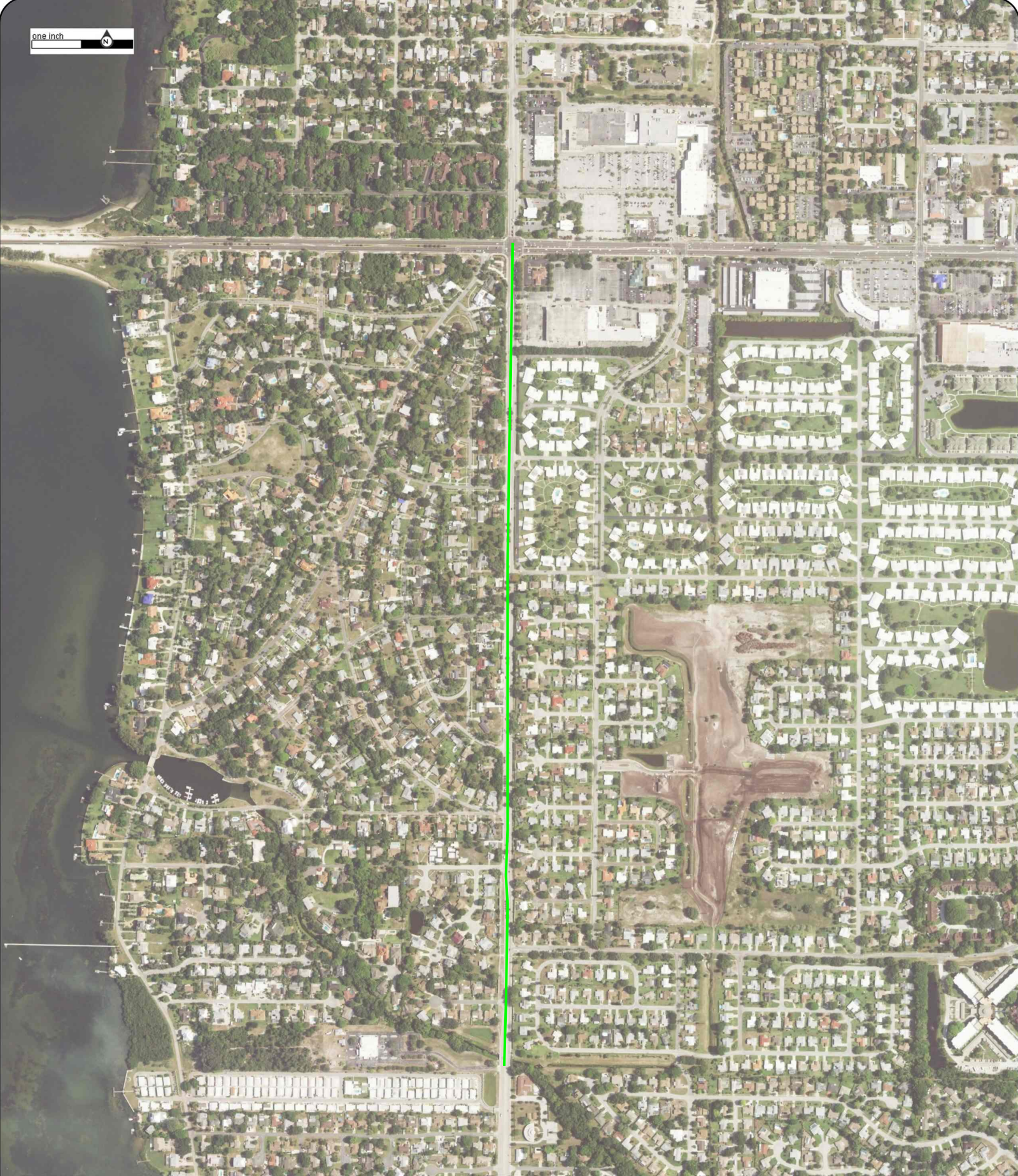
Year: 2017
Source: NAIP
Scale: 1" to 700'
Comment:

Address: 75th St W, Bradenton, FL
Approx Center: -82.63670031,27.4888362

Order No: 21062500535



one inch



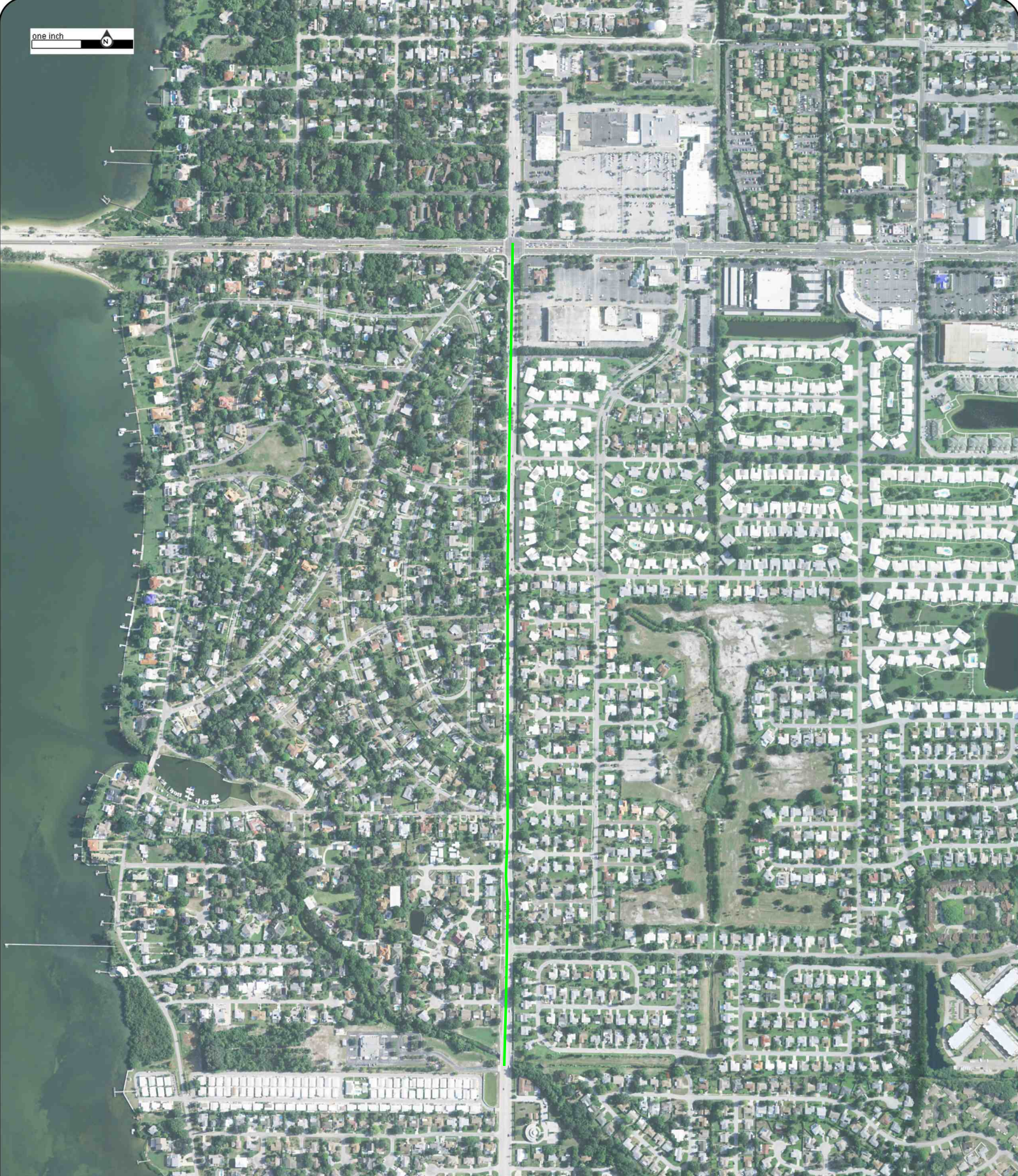
Year: 2015
Source: NAIP
Scale: 1" to 700'
Comment:

Address: 75th St W, Bradenton, FL
Approx Center: -82.63670031,27.4888362

Order No: 21062500535



one inch



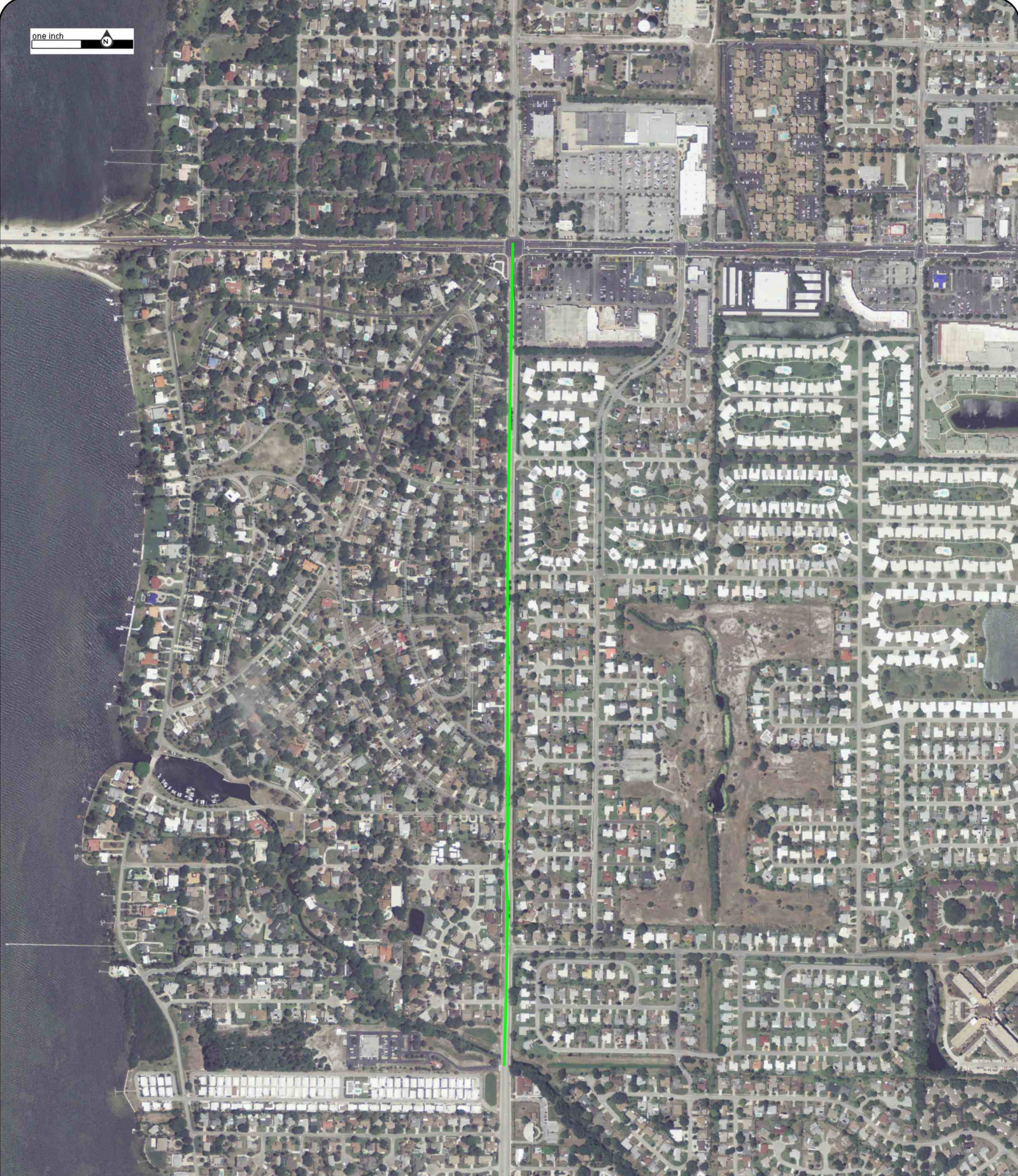
Year: 2013
Source: NAIP
Scale: 1" to 700'
Comment:

Address: 75th St W, Bradenton, FL
Approx Center: -82.63670031,27.4888362

Order No: 21062500535



one inch



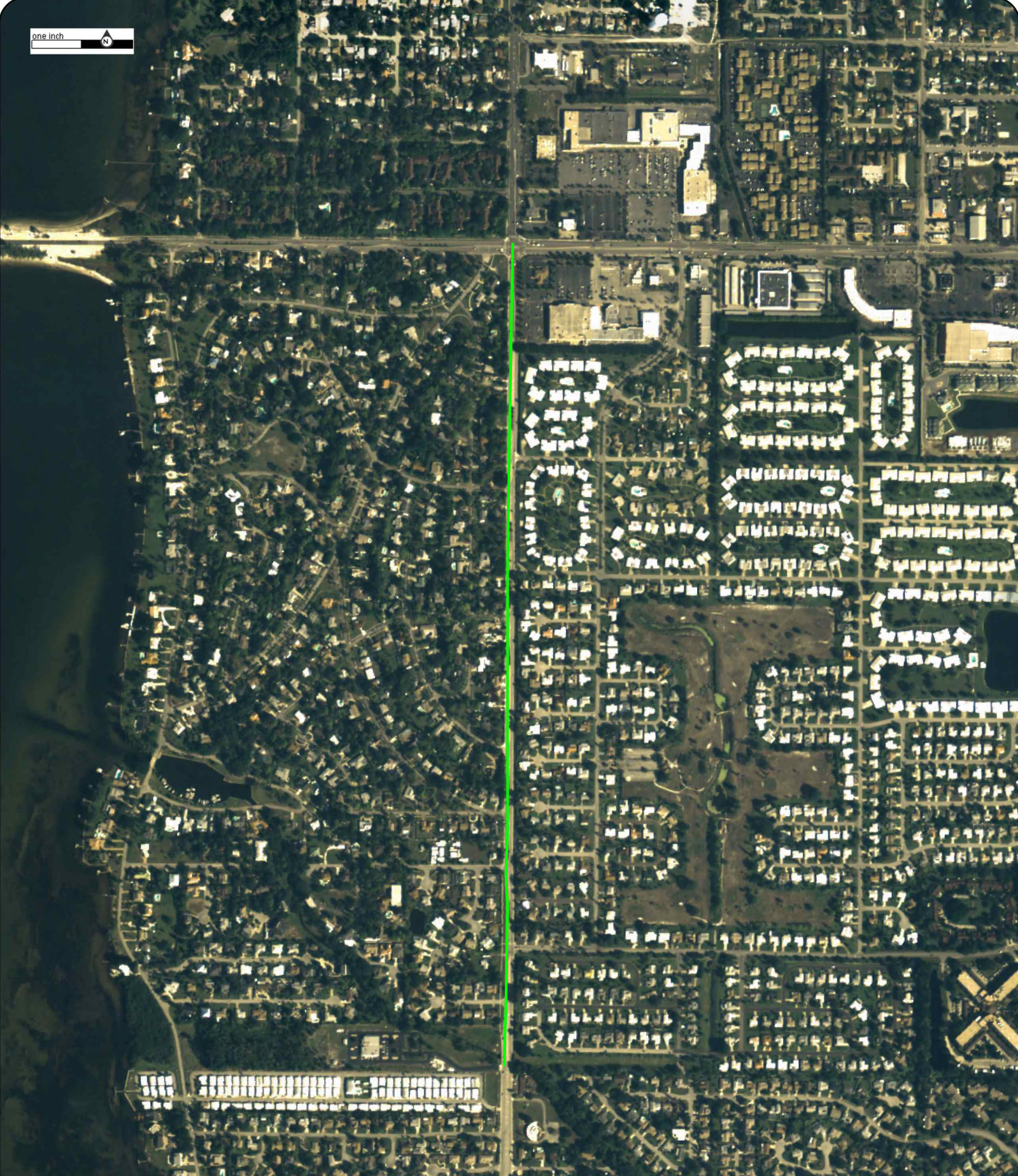
Year: 2010
Source: NAIP
Scale: 1" to 700'
Comment:

Address: 75th St W, Bradenton, FL
Approx Center: -82.63670031,27.4888362

Order No: 21062500535



one inch



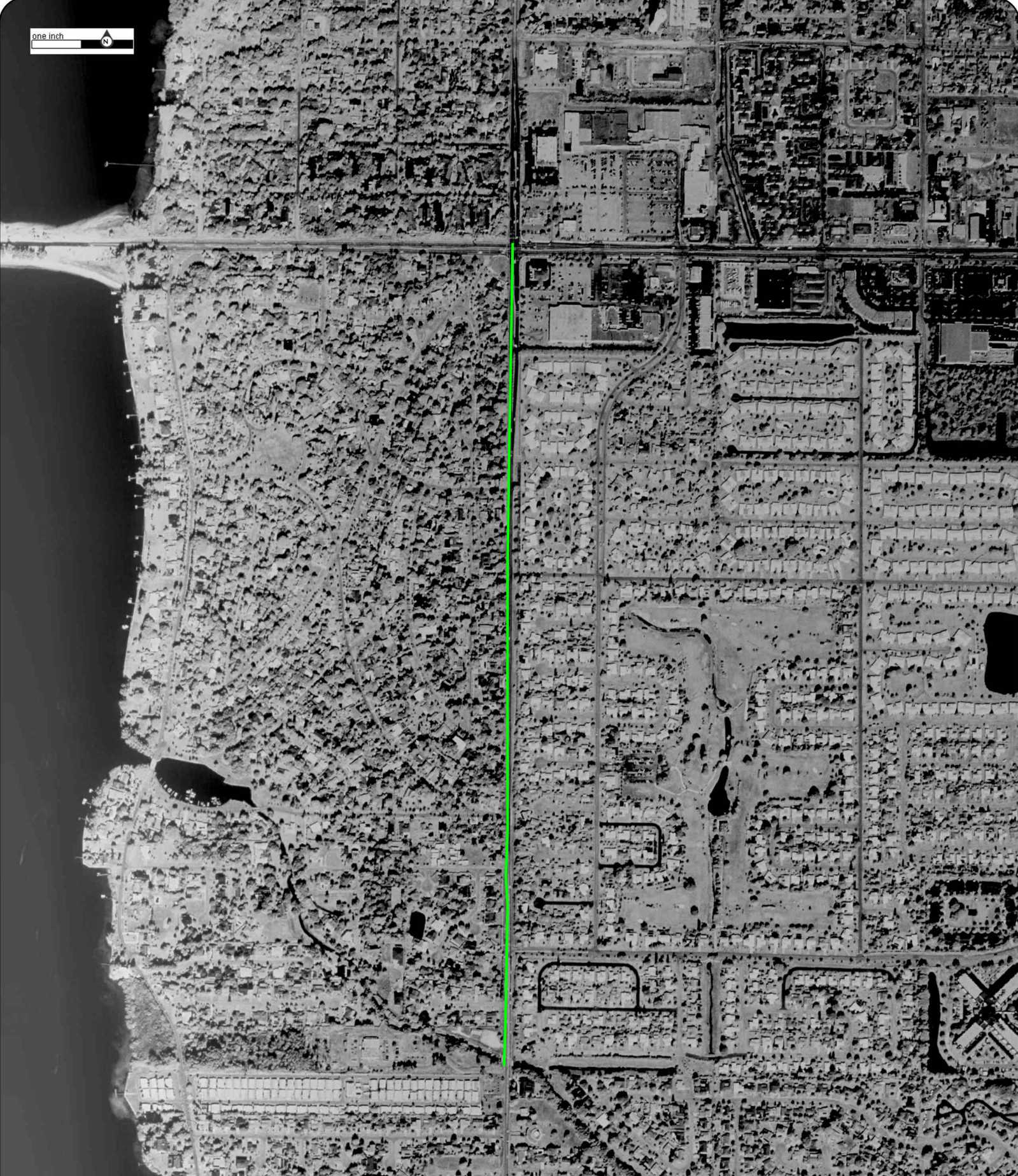
Year: 2005
Source: NAIP
Scale: 1" to 700'
Comment:

Address: 75th St W, Bradenton, FL
Approx Center: -82.63670031,27.4888362

Order No: 21062500535



one inch



Year: 1998

Address: 75th St W, Bradenton, FL

Order No: 21062500535

Source: USGS

Approx Center: -82.63670031,27.4888362

Scale: 1" to 700'

Comment:



one inch



Year: 1994

Address: 75th St W, Bradenton, FL

Order No: 21062500535

Source: USGS

Approx Center: -82.63670031,27.4888362

Scale: 1" to 700'

Comment:



one inch 



Year: 1984
Source: NHAP
Scale: 1" to 700'
Comment:

Address: 75th St W, Bradenton, FL
Approx Center: -82.63670031,27.4888362

Order No: 21062500535



one inch



Year: 1973
Source: FDOT
Scale: 1" to 700'
Comment:

Address: 75th St W, Bradenton, FL
Approx Center: -82.63670031,27.4888362

Order No: 21062500535



one inch



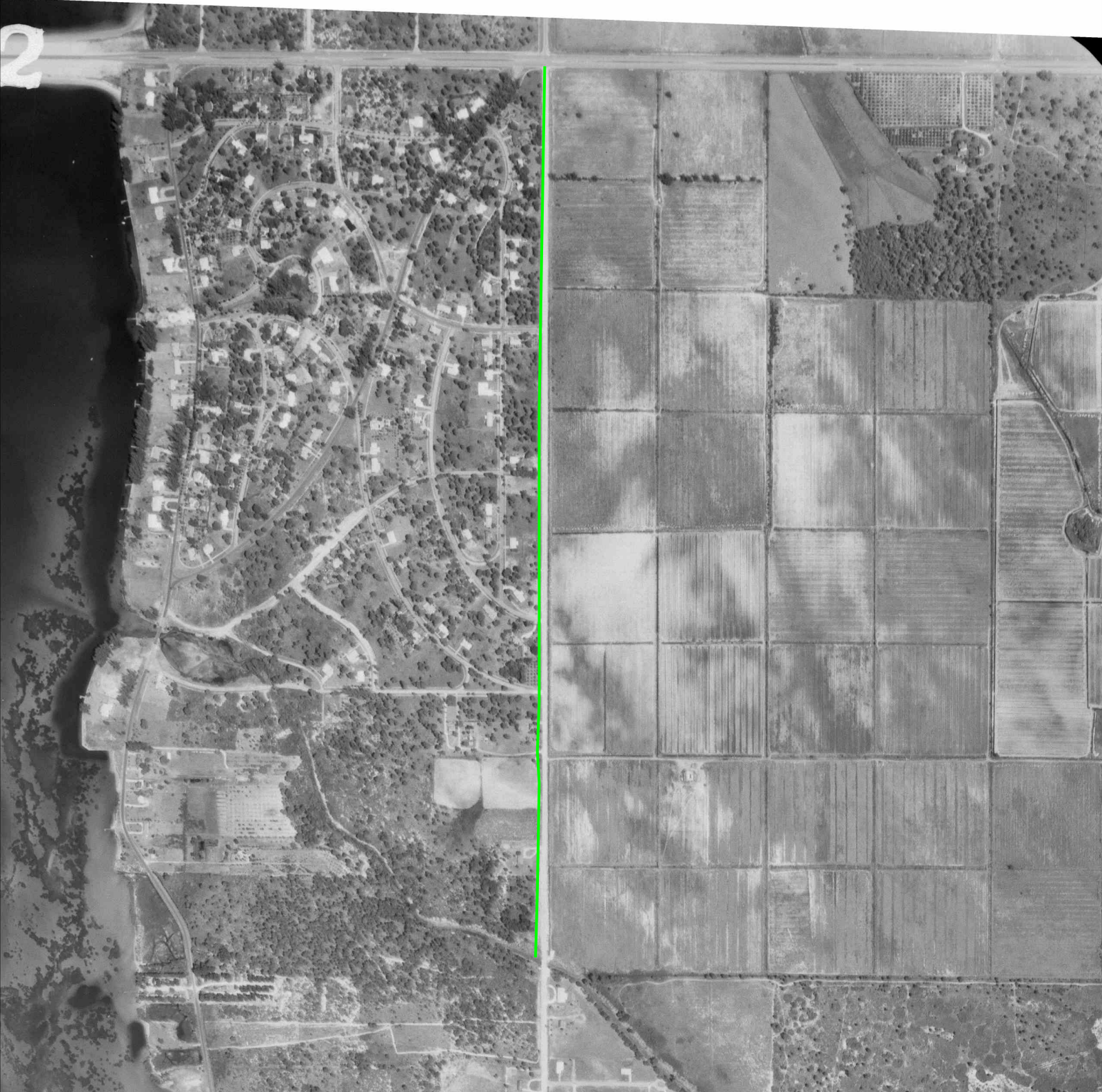
Year: 1970
Source: ASCS
Scale: 1" to 700'
Comment:

Address: 75th St W, Bradenton, FL
Approx Center: -82.63670031,27.4888362

Order No: 21062500535



2



Year: 1962
Source: USGS
Scale: 1" to 700'
Comment:

Address: 75th St W, Bradenton, FL
Approx Center: -82.63670031,27.4888362

Order No: 21062500535



one inch



Year: 1957
Source: ASCS
Scale: 1" to 700'
Comment:

Address: 75th St W, Bradenton, FL
Approx Center: -82.63670031,27.4888362

Order No: 21062500535



one inch



Year: 1951
Source: ASCS
Scale: 1" to 700'
Comment:

Address: 75th St W, Bradenton, FL
Approx Center: -82.63670031,27.4888362

Order No: 21062500535



one inch



Year: 1940
Source: ASCS
Scale: 1" to 700'
Comment:

Address: 75th St W, Bradenton, FL
Approx Center: -82.63670031,27.4888362

Order No: 21062500535





CITY
DIRECTORY

Project Property: *75th St. Corridor
75th St W
Bradenton, FL*

Project No: *148400075*

Requested By: *Kimley-Horn & Associates, Inc*

Order No: *21062500535*

Date Completed: *June 29, 2021*

June 29, 2021
RE: CITY DIRECTORY RESEARCH
75th St. Corridor
75th St W Bradenton, FL

Thank you for contacting ERIS for an City Directory Search for the site described above. Our staff has conducted a reverse listing City Directory search to determine prior occupants of the subject site and adjacent properties. We have provided the nearest addresses(s) when adjacent addresses are not listed. If we have searched a range of addresses, all addresses in that range found in the Directory are included.

Note: Reverse Listing Directories generally are focused on more highly developed areas. Newly developed areas may be covered in the more recent years, but the older directories will tend to cover only the "central" parts of the city. To complete the search, we have either utilized the ACPL, Library of Congress, State Archives, and/or a regional library or history center as well as multiple digitized directories. These do not claim to be a complete collection of all reverse listing city directories produced.

ERIS has made every effort to provide accurate and complete information but shall not be held liable for missing, incomplete or inaccurate information. To complete this search we used the general range(s) below to search for relevant findings. If you believe there are additional addresses or streets that require searching please contact us at 866-517-5204.

Search Criteria:

400-2100 of 75th Street West

Search Results Summary

Date	Source	Comment
2020	DIGITAL BUSINESS DIRECTORY	
2016	DIGITAL BUSINESS DIRECTORY	
2012	DIGITAL BUSINESS DIRECTORY	
2008	DIGITAL BUSINESS DIRECTORY	
2003	DIGITAL BUSINESS DIRECTORY	
1998	DIGITAL BUSINESS DIRECTORY	
1992	POLKS	
1987	POLKS	
1981-1982	POLKS	
1977	POLKS	
1972	POLKS	
1967	POLKS	
1964	POLKS	
1960	POLKS	
1955	POLKS	
1950	POLKS	
1945	POLKS	
1939	POLKS	
1936	POLKS	
1931	POLKS	
1927	POLKS	

115 ALL BRANDS APPLIANCE...Gas Appliances
 115 US POST OFFICE...Post Offices
 115 US POST OFFICE...State Governmental Security
 315 ALEXANDER, JACK M MD...Medical & Surgical Svc Organizations
 315 ALEXANDER, JACK M MD...Physicians & Surgeons
 315 COPPA, STEPHEN P DO...Physicians & Surgeons
 315 COPPA, STEPHEN P DO...Medical & Surgical Svc Organizations
 315 DABAGE-FORZOLI, NEMER MD...Medical & Surgical Svc Organizations
 315 DABAGE-FORZOLI, NEMER MD...Physicians & Surgeons
 315 FUSILLO, KRISTEN...Nurses-practitioners
 315 MALIK, RAJESH MD...Physicians & Surgeons
 315 MANNING, JAIME E...Physicians Assistants
 315 OBER, DANIEL H...Nurses-practitioners
 315 PENINSULA ORTHOPAEDIC SURGERY...Physicians & Surgeons
 315 PINNACLE MEDICAL URGENT CARE...Dentists
 315 PINNACLE MEDICAL URGENT CARE...Clinics
 315 SILVA, ANA C DO...Medical & Surgical Svc Organizations
 315 SILVA, ANA C DO...Physicians & Surgeons
 315 SOLER, JOSEPH M MD...Physicians & Surgeons
 315 WEST COAST SURGICAL GROUP...Physicians & Surgeons
 2000 AMERICAN LEGION...Veterans' & Military Organizations
 2000 AMERICAN LEGION...Non-profit Organizations
 2000 AMERICAN LEGION...Associations
 2015 LEAP START ACADEMY LLC...Child Care Service
 2209 GLOBAL IMPACT BIBLE CLG...Schools-universities & Colleges Academic
 2209 PERFECT PICKLER...Nonclassified Establishments
 2508 COLDWELL BANKER...Real Estate
 2508 COMPASS SELF STORAGE...Lessors Of Miniwarehouses & Self-storage Units
 2508 CONSOLIDATED RESOURCE...Land Clearing & Leveling
 2508 DUNCAN SEAWALL DOCK BOAT...Boat Lifts (mfrs)
 2508 FUN N SUN PARASAIL...Parasailing
 2508 GILMORE, DANIEL...Service Station Equipment (whls)
 2508 GILMORE, DANIEL...Construction Companies
 2508 GILMORE, DANIEL...Federal Government Contractors
 2508 GILMORE, DANIEL...Metalworking Machinery Nec (mfrs)
 2508 JOHN R DUNHAM III...Nonclassified Establishments
 2508 PROSPECTS PLUS...Nonclassified Establishments
 2508 VERTEX ENVIRONMENTAL INSURANCE...Insurance
 2511 ELKS LODGE...Fraternal Organizations
 2850 SAINTS PETER & PAUL CHURCH...Missions
 2850 SAINTS PETER & PAUL CHURCH...Churches
 2850 YOUTH MINISTRY OFFICE...Religious Organizations
 3900 VISTA AT PALMA SOLA...Federal Government Contractors
 3900 VISTA AT PALMA SOLA...Apartments
 3970 BAILEY PRODUCTIONS LLC...Nonclassified Establishments
 3982 ZULETA, ANA MD...Physicians & Surgeons
 4000 BRIDGE AT PALMA SOLA BAY...Missions
 4000 BRIDGE AT PALMA SOLA BAY...Churches
 4000 BRIDGE CHURCH AT PALMA SOLA...Churches
 4000 CHURCH OF MOTION INC...Churches
 4308 LOFT HAIR STUDIO...Beauty Salons
 4308 MILLENNIUM INSURANCE...Insurance
 4308 MILLENNIUM INSURANCE-INVSTMNT...Insurance
 4308 SEASIDE WELLNESS SPA...Wellness Programs
 4312 AMBRIOSIO, MARSHA...Insurance Annuities
 4312 BRAXTON & HOLWAY...Tax Return Preparation & Filing
 4312 BRAXTON & HOLWAY...Accountants
 4312 BRAXTON, BENJAMIN D CPA...Accountants
 4312 EAGLE RECOGNITION...Trophies Awards & Medals
 4312 EAGLE RECOGNITION...Tshirtsretail

115 ALL BRANDS APPLIANCE...Gas Appliances
 115 US POST OFFICE...Post Offices
 315 ALEXANDER, JACK M MD...Physicians & Surgeons
 315 CRAGER, KENNETH H MD...Physicians & Surgeons
 315 FUSILLO, KRISTEN...Nurses-practitioners
 315 HARWOOD, MARY A DO...Physicians & Surgeons
 315 LIEBERMAN, LAWRENCE J MD...Physicians & Surgeons
 315 LIEBERMAN, LAWRENCE J MD...Physicians & Surgeons
 315 MANNING, JAIME E...Physicians Assistants
 315 MARDONES, OSVALDO F MD...Physicians & Surgeons
 315 MCKINLEY, BRIAN T MD...Physicians & Surgeons
 315 OBER, DANIEL H...Nurses-practitioners
 315 PENINSULA ORTHOPAEDIC SURGERY...Physicians & Surgeons
 315 PINNACLE ORTHOPAEDIC ASSOC...Physicians & Surgeons
 315 PRINNACLE MEDICAL GROUP...Physicians & Surgeons
 315 SILVA, ANA C DO...Physicians & Surgeons
 315 SOLER, JOSEPH M MD...Physicians & Surgeons
 2000 AMERICAN LEGION...Non-profit Organizations
 2000 AMERICAN LEGION...Veterans' & Military Organizations
 2000 ATM...Automated Teller Machines
 2015 LEAP START ACADEMY LLC...Child Care Service
 2015 MANATEE LEARNING ACADEMY...Education Centers
 2209 GLOBAL IMPACT BIBLE CLG...Schools-universities & Colleges Academic
 2209 PERFECT PICKLER...Nonclassified Establishments
 2508 COLDWELL BANKER...Real Estate
 2508 COMPASS SELF STORAGE...Lessors Of Miniwarehouses & Self-storage Units
 2508 CONSOLIDATED RESOURCE...Land Clearing & Leveling
 2508 DEMOCRATIC PARTY OF MANATEE...Political Organizations
 2508 FUN N SUN PARASAIL...Cruises
 2508 FUN N SUN PARASAIL...Parasailing
 2508 GILMORE, DANIEL...Service Station Equipment (whls)
 2508 VERTEX ENVIRONMENTAL INSURANCE...Insurance
 2511 ATM...Automated Teller Machines
 2511 ELKS LODGE...Fraternal Organizations
 2511 ELKS LODGE...Non-profit Organizations
 2850 SAINTS PETER & PAUL CHURCH...Churches
 2850 YOUTH MINISTRY OFFICE...Religious Organizations
 2850 YOUTH MINISTRY OFFICE...Church Organizations
 3900 VISTA AT PALMA SOLA...Apartments
 3950 EQUITY JOINT VENTURE...Financial Advisory Services
 4000 BRIDGE AT PALMA SOLA BAY...Churches
 4000 BRIDGE CHURCH AT PALMA SOLA...Churches
 4000 CHURCH OF MOTION INC...Churches
 4308 LOFT HAIR STUDIO...Beauty Salons
 4308 MILLENNIUM INSURANCE...Insurance
 4308 SEASIDE WELLNESS SPA...Wellness Programs
 4312 BRAXTON & HOLWAY...Accountants
 4312 BRAXTON, BENJAMIN D CPA...Accountants
 4312 BVI...Unclassified Establishments
 4312 EAGLE RECOGNITION...Trophies Awards & Medals

127 total records. Part 1 of 3

115 US POST OFFICE...Post Offices
 115 UNITED STATES POSTAL SERVICE...Us Postal Service
 115 UNITED STATES POSTAL SERVICE...Post Offices
 115 US POST OFFICE...Postal Svc
 315 ALEXANDER JACK M MD...Physicians & Surgeons
 315 ALEXANDER JACK M MD...Offices Of Physicians Except Mental Health
 315 BOYCE W ALLEN MD...Physicians & Surgeons
 315 BOYCE W ALLEN MD...Offices Of Physicians Except Mental Health
 315 CRAGER KENNETH H MD...Offices Of Physicians Except Mental Health
 315 GRACE DAVID MD...Physicians & Surgeons
 315 GRACE DAVID MD...Offices Of Physicians Except Mental Health
 315 JOSEPH SOLER MD...Medical Doctor's Office
 315 LIEBERMAN LAWRENCE J MD...Physicians & Surgeons
 315 LIEBERMAN LAWRENCE J MD...Offices Of Physicians Except Mental Health
 315 MANNING JAIME E...Nurses-practitioners
 315 MARDONES OSVALDO F MD...Physicians & Surgeons
 315 MARDONES OSVALDO F MD...Offices Of Physicians Except Mental Health
 315 MC KINLEY BRIAN MD...Offices Of Physicians Except Mental Health
 315 MOWETT INDA MD...Offices Of Physicians Except Mental Health
 315 NELSON BRYAN MD...Physicians & Surgeons
 315 NELSON BRYAN MD...Offices Of Physicians Except Mental Health
 315 OBER DANIEL H...Nurses-practitioners
 315 PENINSULA ORTHOPAEDIC SURGERY...Physicians & Surgeons
 315 PINNACLE ORTHOPAEDIC ASSOC...Clinics
 315 PRINNACLE MEDICAL GROUP...Physicians & Surgeons
 315 PENINSULA ARTHRITIS ASSOC...Rheumatology
 315 PENINSULA ORTHOPAEDIC ASSOC...Medical Grps &clnics
 315 PINNACLE ARTHRITIS ASSOC...Medical Grps &clnics
 315 PINNACLE ARTHRITIS ASSOC...Offices Of Physicians Except Mental Health
 315 PINNACLE CARDIOVASCULAR...Offices Of Physicians Except Mental Health
 315 PINNACLE CARDIOVASCULAR...Cardiovascular Disease
 315 PINNACLE CARDIOVASCULAR...Physicians & Surgeons
 315 PINNACLE CARDIOVASCULAR...Medical Doctor's Office
 315 PINNACLE INTERNAL MEDICINE...Offices Of Physicians Except Mental Health
 315 PINNACLE INTERNAL MEDICINE...Medical Grps &clnics
 315 PINNACLE MEDICAL CTR...Emergency Medicine
 315 PINNACLE MEDICAL CTR...Freestanding Emergency Medical Centers
 315 PINNACLE MEDICAL CTR...Clinics
 315 PINNACLE MEDICAL GROUP...Diagnostics Center
 315 PINNACLE ORTHOPAEDIC ASSOC...Offices Of Physicians Except Mental Health
 315 PINNACLE URGENT CARE...Freestanding Emergency Medical Centers
 315 RODRIGUEZ CARLOS M MD...Physicians & Surgeons
 315 ROTHSTEIN MARTA J...Nurses-practitioners
 315 RODRIGUEZ CARLOS M MD...Offices Of Physicians Except Mental Health
 315 SOLER JOSEPH M MD...Physicians & Surgeons
 315 SALVIA MICHAEL MD...Offices Of Physicians Except Mental Health
 315 SILPA DANIEL MD...Offices Of Physicians Except Mental Health
 315 SOLER JOSEPH MD...Offices Of Physicians Except Mental Health
 315 TOMLINSON CAROL L...Nurses-practitioners
 315 TORO LUIS A MD...Offices Of Physicians Except Mental Health
 315 WESTSIDE INTERNAL MEDICINE...Internal Medicine
 315 WESTSIDE INTERNAL MEDICINE...Physicians & Surgeons
 1214 AVIATION SERVICES GROUP INC...Helicopter Charter Services

Part 2 of 3

2000 AMERICAN LEGION...Veterans' & Military Organizations
 2000 AMERICAN LEGION...Civil & Social Organizations
 2000 AMERICAN LEGION...Vet/mil Org
 2000 AMERICAN LEGION...Veterans' & Military Organizations
 2000 AMERICAN LEGION AUX NAT HDQTR...Civic/social Association
 2000 AMERICAN LEGION KIRBY STWRT...Misc Personal Services
 2000 FLORIDA GAMCO INC...Arcades
 2209 MANATEE LEARNING ACADEMY...Education Centers
 2508 ACCENT ELECTRONIC SYSTEMS...Radio Tv & Other Electronics Stores
 2508 APRO PEST CONTROL & LAWN...Pest Control
 2508 BUD HOOVER PHOTOGRAPHY...Photography
 2508 BUD JONES LANDSCAPE NURSERY...Landscaping Svcs
 2508 COLDWELL BANKER...Real Estate
 2508 CONSOLIDATED RESOURCE...Land Clearing & Leveling
 2508 COLDWELL BANKER...Real Estate Agt,mgr
 2508 COLDWELL BANKER RESIDENTIAL...Real Estate
 2508 ELITE MOVERS...Fum Move,storage Loc
 2508 ELITE MOVERS...General Freight Trucking, Local
 2508 FUN N SUN PARASAIL...Parasailing
 2508 NEAL COMMUNITIES...Home Builders
 2508 NEAL COMMUNITIES WISTERIA PARK...New Single-family General Contrs
 2508 NEAL COMMUNITIES WISTERIA PARK...New Const 1-fam House
 2508 SEA TRANSPORT BOAT US TOWNING...Other Specialized Trucking Long-distance
 2511 BRADENTON ELKS LODGE...Elks Club
 2511 ELKS LODGE...Fraternal Organizations
 2511 ELKS LODGE...Civil & Social Organizations
 2511 ELKS LODGE...Fraternal Org
 2511 ELKS LODGE...Fraternal Organizations
 2850 CHURCH OF ST PETER & PAUL...Religious Organization
 2850 CHURCH OF ST PETER & PAUL...Churches
 2850 SAINTS PETER & PAUL CHURCH...Churches
 2850 ST PETER & PAUL CHURCH...Catholic Church
 2850 ST PETER & PAUL CHURCH...Religious Organization
 2850 SAINT PETER & PAUL APSOTLE...Religious Organization
 2850 SAINTS PETER & PAUL APOSTLES...Churches
 2850 YOUTH MINISTRY OFFICE...Religious Organizations
 3810 FINEST TOUCH...Interior Decorators Design & Consultants
 3810 FINEST TOUCH...Interior Design Svcs
 3810 FINEST TOUCH...Interior Design Svcs
 3810 GARDEN CITY UPHL FARMINGTON...Reupholstery/furniture Repair
 3900 COLONIAL GRAND AT PALMA SOLA...Apartments
 3900 COLONIAL GRAND AT PALMA SOLA...Apartments
 3900 COLONIAL GRAND AT PALMA SOLA...Lessors Of Residential Buildings
 3900 COLONIAL GRAND AT PALMA SOLA...Apartment Bld Opers
 3900 COLONIAL VILLAGE AT PALM SOLA...Apartment Building Operator
 3900 PELICAN POINTE APARTMENTS...Apartments
 3910 PELICAN POINTE...Child Day Care Services
 3914 EQUITY PARTNERS JOINT VENTURE...Loans
 3914 PELICAN POINTE...Collection Agencies
 3922 NONI TAHITIAN INDEPENDENT PROD...Medical Doctors Off
 3938 EQUITY JOINT VENTURE...Financial Advisory Services
 3942 EQUITY JOINT VENTURE...Financial Advisory Services

Part 3 of 3

3942 PELICAN POINTE...Computer Systems Design
 3950 EQUITY JOINT VENTURE...Financial Advisory Services
 3974 EQUITY JOINT VENTURE...Financial Advisory Services
 4000 BRIDGE CHURCH-PALMA SOLA BAY...Churches
 4000 BRIDGE CHURCH...Religious Organization
 4000 PALMA SOLA BAY BAPTIST...Child Day Care Services, Nsk
 4000 PALMA SOLA BAY BAPTIST...Baptist Church
 4000 THE BRIDGE CHURCH...Churches
 4220 SUNDIAL FINANCIAL PARTNERS INC...Financial Advisory Services
 4220 SUNDIAL ADVISORY GROUP...Investment Advice
 4220 SUNDIAL FINANCIAL PARTNERS INC...Investment Advice
 4308 AMI REAL ESTATE...Offices Of Real Estate Agents & Brokers
 4308 SPA ON 75TH...Cosmetology & Barber Schools
 4308 SKINSATIONAL BODY...Spas-beauty & Day
 4308 SKINSATIONAL BODY...Physical Fitness Ct
 4308 SKINSATIONAL BODY & HAIR...Beauty Shop Misc Personal Services
 4312 BBI-EAGLE...Trophies Awards & Medals
 4312 BRAXTON & HOLWAY...Accountants
 4312 BRAXTON, BENJAMIN D CPA...Accountants
 4312 BRAXTON & HOLWAY...Acctg,audit,bkkeep
 4312 BRAXTON & HOLWAY...Offices Of Certified Public Accountants
 4312 BRAXTON, BENJAMIN D CPA...Offices Of Certified Public Accountants

115 UNITED STATES POSTAL SERVICE...Us Postal Service
 115 US POST OFFICE...Post Offices
 315 JOSEPH SOLER MD...Medical Doctor's Office
 315 PENINSULA ARTHRITIS ASSOC...Rheumatology
 315 PENINSULA ORTHOPAEDIC ASSOC...Medical Grps &clncls
 315 PINNACLE ARTHRITIS ASSOC...Medical Grps &clncls
 315 PINNACLE CARDIOVASCULAR...Cardiovascular Disease
 315 PINNACLE CARDIOVASCULAR...Physicians & Surgeons
 315 PINNACLE CARDIOVASCULAR...Medical Doctor's Office
 315 PINNACLE INTERNAL MEDICINE...Medical Grps &clncls
 315 PINNACLE MEDICAL CTR...Emergency Medicine
 315 PINNACLE MEDICAL CTR...Clinics
 315 PINNACLE MEDICAL GROUP...Diagnostics Center
 315 WESTSIDE INTERNAL MEDICINE...Internal Medicine
 315 WESTSIDE INTERNAL MEDICINE...Physicians & Surgeons
 1214 AVIATION SERVICES GROUP INC...Helicopter Charter Services
 2000 AMERICAN LEGION...Veterans' & Military Organizations
 2000 AMERICAN LEGION...Vet/mil Org
 2000 AMERICAN LEGION AUX NAT HDQTR...Civic/social Association
 2000 AMERICAN LEGION KIRBY STWRT...Misc Personal Services
 2508 APRO PEST CONTROL & LAWN...Pest Control
 2508 BUD HOOVER PHOTOGRAPHY...Photography
 2508 COLDWELL BANKER...Real Estate Agt,mgr
 2508 COLDWELL BANKER RESIDENTIAL...Real Estate
 2508 ELITE MOVERS...Furn Move,storage Loc
 2508 ELITE MOVERS...Movers
 2508 NEAL COMMUNITIES...Home Builders
 2508 NEAL COMMUNITIES WISTERIA PARK...New Const 1-fam House
 2511 BRADENTON ELKS LODGE...Elks Club
 2511 ELKS LODGE...Fraternal Organizations
 2511 ELKS LODGE...Fraternal Org
 2850 CHURCH OF ST PETER & PAUL...Churches
 2850 SAINT PETER & PAUL APSOTLE...Religious Organization
 2850 SAINTS PETER & PAUL-APOSTLES...Churches
 2850 ST PETER & PAUL CHURCH...Catholic Church
 3900 COLONIAL GRAND AT PALMA SOLA...Apartments
 3900 COLONIAL GRAND AT PALMA SOLA...Apartment Bld Opers
 3900 COLONIAL VILLAGE AT PALM SOLA...Apartment Building Operator
 3910 AT HOME CHILD CARE SOLUTI...Child Day Care Services
 3914 T C CO...Collection Agencies
 3942 D C B DESIGNS...Computer Systems Design
 4000 FAMILY LIFE COMMUNITY SCHOOL...Cath Elem,second Schs
 4000 PALMA SOLA BAY BAPTIST...Baptist Church
 4000 PALMA SOLA BAY BAPTIST CHURCH...Child Day Care Services Nsk
 4220 SUNDIAL ADVISORY GROUP...Investment Advice
 4308 SKINSATIONAL BODY...Physical Fitness Ct
 4308 SKINSATIONAL BODY...Spas-beauty & Day
 4308 SKINSATIONAL BODY & HAIR...Beauty Shop Misc Personal Services
 4312 BRAXTON & HOLWAY...Acctg,audit,bkkeep

115 US POST OFFICE...
 315 HEALTHSOUTH SPORTS MEDICINE...
 315 PINNACLE MEDICAL CTR...*Psychiatrists And Psychoanalysts*
 315 RICE PETER MD...*Internal Medicine Practitioners*
 2000 AMERICAN LEGION...*Fraternal Associations*
 2015 JUST LIKE HOME INC...
 2209 TEMPLE BETH EL...
 2508 BUD HOOVER PHOTOGRAPHY...
 2508 GLAMOUR IMAGES OF YOU...
 2511 ELKS LODGE...*Civic Associations*
 2511 HOMESTYLE CATERING...
 2850 SAINTS PETER & PAUL...
 3807 PALMA SOLA GOLF CLUB...
 3900 COLONIAL GRAND AT PALMASOLA...
 3900 PELICAN POINTE APARTMENTS...
 3910 G H NET INC...
 3930 NATURAL AWAKENINGS...*Periodicals, Publishing Only*
 4000 PALMA SOLA BAY BAPTIST CHURCH...
 4308 SKINSATIONAL BODY...

116 MANATEE HOME COMPANIONS INC...*Residential Care*
 2000 AMERICAN LEGION KIRBY STEWART POST 24 LOUNGE...*Business Services, Nec*
 2000 AMERICAN LEGION KIRBY STEWART POST 24 LOUNGE...*Business Services, Nec*
 2000 AMERICAN LEGION KIRBY STEWART POST 24 LOUNGE AUXILIARY...
 2209 TEMPLE BETH EL CONSERVATIVE OFC...*Religious Organizations*
 2209 TEMPLE BETH EL CONSERVATIVE RABBI...*Religious Organizations*
 2511 ELKS LODGE NO 1511 INC...*Civic And Social Associations*
 2511 GOURMET CATERING...*Eating Places*
 2850 SAINTS PETER AND PAUL THE APOSTLES...*Religious Organizations*
 3807 PALM SOLA GOLF CLUB...*Public Golf Courses*
 3807 PALMA SOLA GOLF CLUB...*Public Golf Courses*
 3900 PELICAN POINTE APARTMENTS...*Apartment Building Operators*
 3958 SIGNATURE PAINTING & DECORATING...*Special Trade Contractors Nec*
 3970 DIAMONDS FROM AFRICA...*Jewelry And Precious Stones*
 3982 VAUGHN GARY & GEORGIA...
 3990 MAKELA SCOTT & GEORGIA...
 3990 PELICAN POINTE APARTMENTS...
 4000 PALMA SOLA BAY BAPTIST CHURCH...*Religious Organizations*

315 COUNTY PUBLIC UTILITIES DIV (ENG DIV)
620 ANDERSON JAMES C & SOPHIE A
804 GERRISH COLLETTE M
904 CAPPUCETTI RONALD
1004 WEHRMEISTER GERALD A & DOROTHY
1212 GAFFNEY L
1214 NOT VERIFIED
1608 MC HARG HENRY
1816 EDERINGTON RAY H {&} LOIS E
2000 AMERICAN LEGION POST NO 24
2004 MEETING HALL (BOY SCOUTS)
2015 THACKSTON HILDA B
2209 TEMPLE BETH EL HEBREW SCHOOL

315 MANATEE COUNTY PUBLIC UTILITIES DIV (ENG DIV)
620 ANDERSON JAMES C
904 FURRY CHESTER
1004 WEHRMEISTER GERALD WINTER RES
1212 HUGHES LILLIAN B MS
1214 WITT ROBT H
1608 MC HARG HENRY RETD
1804 NO RETURN
1816 EDERINGTON RAY H
2000 AMERICAN LEGION POST NO 24
2004 WESTSIDE SENIOR CENTER ORG
2015 VACANT
2103 TEMPLE BETH EL HEBREW SCHOOL

315 GENERAL TELEPHONE CO OF FLORIDA
315 GENL TEL (CUSTOMER SERV)
620 ANDERSON JAMES C
904 FURRY CHESTER
1004 WEHRMEISTER GERALD
1608 MC HARG HENRY
1816 EDERINGTON RAY H
2000 AMERICAN LEGION POST NO 24
2015 VACANT
2103 BOYER ALLENE D MRS

216 MEDVETZ JOSEPH P
2000 AMERICAN LEGION POST NO 24
2015 DURFEE THERESE M MRS
2103 BOYER ALLENE D MRS

1972

SOURCE: POLKS

75TH STREET WEST

216 ORBAN BILL M
2000 AMERICAN LEGION POST NO 24
2015 BLANTON GERALD D
2103 GREEN CARL

1967

SOURCE: POLKS

75TH STREET WEST

NO LISTINGS IN RANGE

1964

SOURCE: POLKS

75TH STREET WEST

1960

SOURCE: POLKS

75TH STREET WEST

STREET NOT LISTED

STREET NOT LISTED

STREET NOT LISTED

STREET NOT LISTED

1945

SOURCE: POLKS

75TH STREET WEST

STREET NOT LISTED

1939

SOURCE: POLKS

75TH STREET WEST

STREET NOT LISTED

STREET NOT LISTED

STREET NOT LISTED

STREET NOT LISTED

Attachment B – ERIS Database Report



DATABASE REPORT

Project Property: *75th St. Corridor
75th St W
Bradenton FL*

Project No: *148400075*

Report Type: *Quote - Custom Radius - Linear Reports*

Order No: *21062500535*

Requested by: *Kimley-Horn & Associates, Inc*

Date Completed: *July 5, 2021*

Table of Contents

Table of Contents.....	2
Executive Summary.....	3
Executive Summary: Report Summary.....	4
Executive Summary: Site Report Summary - Project Property.....	8
Executive Summary: Site Report Summary - Surrounding Properties.....	9
Executive Summary: Summary by Data Source.....	10
Map.....	11
Aerial.....	12
Topographic Map.....	13
Detail Report.....	14
Unplottable Summary.....	18
Unplottable Report.....	20
Appendix: Database Descriptions.....	33
Definitions.....	45

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Executive Summary

Property Information:

Project Property: 75th St. Corridor
75th St W Bradenton FL

Project No: 148400075

Coordinates:

Latitude: 27.4888362
Longitude: -82.63670031
UTM Northing: 3,041,646.39
UTM Easting: 338,309.82
UTM Zone: 17R

Elevation: 21 FT

Order Information:

Order No: 21062500535
Date Requested: June 25, 2021
Requested by: Kimley-Horn & Associates, Inc
Report Type: Quote - Custom Radius - Linear Reports

Historicals/Products:

Aerial Photographs Historical Aerials (Boundaries)
City Directory Search CD - 1 Street Search
ERIS Xplorer [ERIS Xplorer](#)
Excel Add-On Excel Add-On

Executive Summary: Report Summary

<i>Database</i>	<i>Searched</i>	<i>Project Property</i>	<i>Within 0.095mi</i>	<i>Total</i>
<u>Standard Environmental Records</u>				
Federal				
DOE FUSRAP	Y	0	0	0
NPL	Y	0	0	0
PROPOSED NPL	Y	0	0	0
DELETED NPL	Y	0	0	0
SEMS	Y	0	0	0
SEMS ARCHIVE	Y	0	0	0
ODI	Y	0	0	0
CERCLIS	Y	0	0	0
IODI	Y	0	0	0
CERCLIS NFRAP	Y	0	0	0
CERCLIS LIENS	Y	0	0	0
RCRA CORRACTS	Y	0	0	0
RCRA TSD	Y	0	0	0
RCRA LQG	Y	0	0	0
RCRA SQG	Y	0	0	0
RCRA VSQG	Y	0	0	0
RCRA NON GEN	Y	0	0	0
FED ENG	Y	0	0	0
FED INST	Y	0	0	0
LUCIS	Y	0	0	0
ERNS 1982 TO 1986	Y	0	0	0
ERNS 1987 TO 1989	Y	0	0	0
ERNS	Y	0	0	0
FED BROWNFIELDS	Y	0	0	0
FEMA UST	Y	0	0	0
FRP	Y	0	0	0
HIST GAS STATIONS	Y	0	0	0

Database	Searched	Project Property	Within 0.095mi	Total
REFN	Y	0	0	0
BULK TERMINAL	Y	0	0	0
SEMS LIEN	Y	0	0	0
SUPERFUND ROD	Y	0	0	0

State

SHWS	Y	0	0	0
DELISTED SHWS	Y	0	0	0
CLEANUP DEP	Y	0	0	0
WCRPS	Y	0	0	0
DELISTED WCRPS	Y	0	0	0
SWF/LF	Y	0	0	0
LST	Y	0	0	0
DELISTED LST	Y	0	0	0
UST	Y	0	0	0
AST	Y	0	0	0
DEL UST AST TANK	Y	0	0	0
DEL STORAGE TANK	Y	0	0	0
FF TANKS	Y	0	0	0
STCS	Y	0	1	1
INST	Y	0	0	0
ENG	Y	0	0	0
VCP	Y	0	0	0
BROWNFIELDS	Y	0	0	0
BROWNFIELD AREA	Y	0	0	0

Tribal

INDIAN LUST	Y	0	0	0
INDIAN UST	Y	0	0	0
DELISTED ILST	Y	0	0	0
DELISTED IUST	Y	0	0	0

County

No County databases were selected to be included in the search.

Additional Environmental Records

Federal

PFAS NPL	Y	0	0	0
FINDS/FRS	Y	0	0	0
TRIS	Y	0	0	0
PFAS TRI	Y	0	0	0
PFAS WATER	Y	0	0	0

Database	Searched	Project Property	Within 0.095mi	Total
HMIRS	Y	0	0	0
NCDL	Y	0	0	0
TSCA	Y	0	0	0
HIST TSCA	Y	0	0	0
FTTS ADMIN	Y	0	0	0
FTTS INSP	Y	0	0	0
PRP	Y	0	0	0
SCRD DRYCLEANER	Y	0	0	0
ICIS	Y	0	0	0
FED DRYCLEANERS	Y	0	0	0
DELISTED FED DRY	Y	0	0	0
FUDS	Y	0	0	0
FORMER NIKE	Y	0	0	0
PIPELINE INCIDENT	Y	0	0	0
MLTS	Y	0	0	0
HIST MLTS	Y	0	0	0
MINES	Y	0	0	0
SMCRA	Y	0	0	0
MRDS	Y	0	0	0
URANIUM	Y	0	0	0
ALT FUELS	Y	0	0	0
SSTS	Y	0	0	0
PCB	Y	0	0	0

State

PRIORITYCLEAN	Y	0	0	0
DRYCLEANERS	Y	0	0	0
DELISTED DRYCLEANERS	Y	0	0	0
HISTORICAL DRYC	Y	0	0	0
SPILLS	Y	0	1	1
DWM CONTAM	Y	0	1	1
DEL CONTAM SITE	Y	0	0	0
PFAS AFFF	Y	0	0	0
PFAS	Y	0	0	0
UIC	Y	0	0	0
WELL SURVEILLANCE	Y	0	0	0
CDV SOUTHEAST	Y	0	0	0
TIER 2	Y	0	0	0
DELISTED COUNTY	Y	0	0	0

Tribal

No Tribal additional environmental record sources available for this State.

Database

Searched

Project
Property

Within
0.095mi

Total

County

No County additional environmental databases were selected to be included in the search.

Total:

0

3

3

Executive Summary: Site Report Summary - Project Property

<i>Map Key</i>	<i>DB</i>	<i>Company/Site Name</i>	<i>Address</i>	<i>Direction</i>	<i>Distance (mi/ft)</i>	<i>Elev Diff (ft)</i>	<i>Page Number</i>
--------------------	-----------	--------------------------	----------------	------------------	-----------------------------	---------------------------	------------------------

No records found in the selected databases for the project property.

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	SPILLS		near 7412 17th Avenue West BRADENTON FL	S	0.03 / 175.15	-2	14
			<i>Incident No Incident Date:</i> 40469 10/25/2008				
2	STCS	MANATEE CNTY SCHOOL BD-KING MIDDLE S	600 75TH ST W BRADENTON FL 34209	N	0.00 / 6.45	4	14
			<i>Facility ID Facility Status (Open Data):</i> 9046061 CLOSED				
3	DWM CONTAM	KMART #7321	7412 MANATEE AVE W BRADENTON FL 34209-3443	N	0.03 / 164.25	3	16
			<i>Facility ID:</i> 8630081 <i>Facility Status:</i> OPEN				

Executive Summary: Summary by Data Source

Standard

State

STCS - Storage Tank/Contaminated Facility Search

A search of the STCS database, dated Mar 2, 2021 has found that there are 1 STCS site(s) within approximately 0.095 miles of the project property.

<u>Site</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
MANATEE CNTY SCHOOL BD- KING MIDDLE S	600 75TH ST W BRADENTON FL 34209	N	0.00 / 6.45	2

Facility ID | Facility Status (Open Data): 9046061 | CLOSED

Non Standard

State

SPILLS - Oil and Hazardous Materials Incidents

A search of the SPILLS database, dated May 18, 2021 has found that there are 1 SPILLS site(s) within approximately 0.095 miles of the project property.

<u>Site</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
	near 7412 17th Avenue West BRADENTON FL	S	0.03 / 175.15	1

Incident No | Incident Date: 40469 | 10/25/2008

DWM CONTAM - Contaminated Sites

A search of the DWM CONTAM database, dated Mar 12, 2020 has found that there are 1 DWM CONTAM site(s) within approximately 0.095 miles of the project property.

<u>Site</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
KMART #7321	7412 MANATEE AVE W BRADENTON FL 34209-3443	N	0.03 / 164.25	3

*Facility ID: 8630081
Facility Status: OPEN*

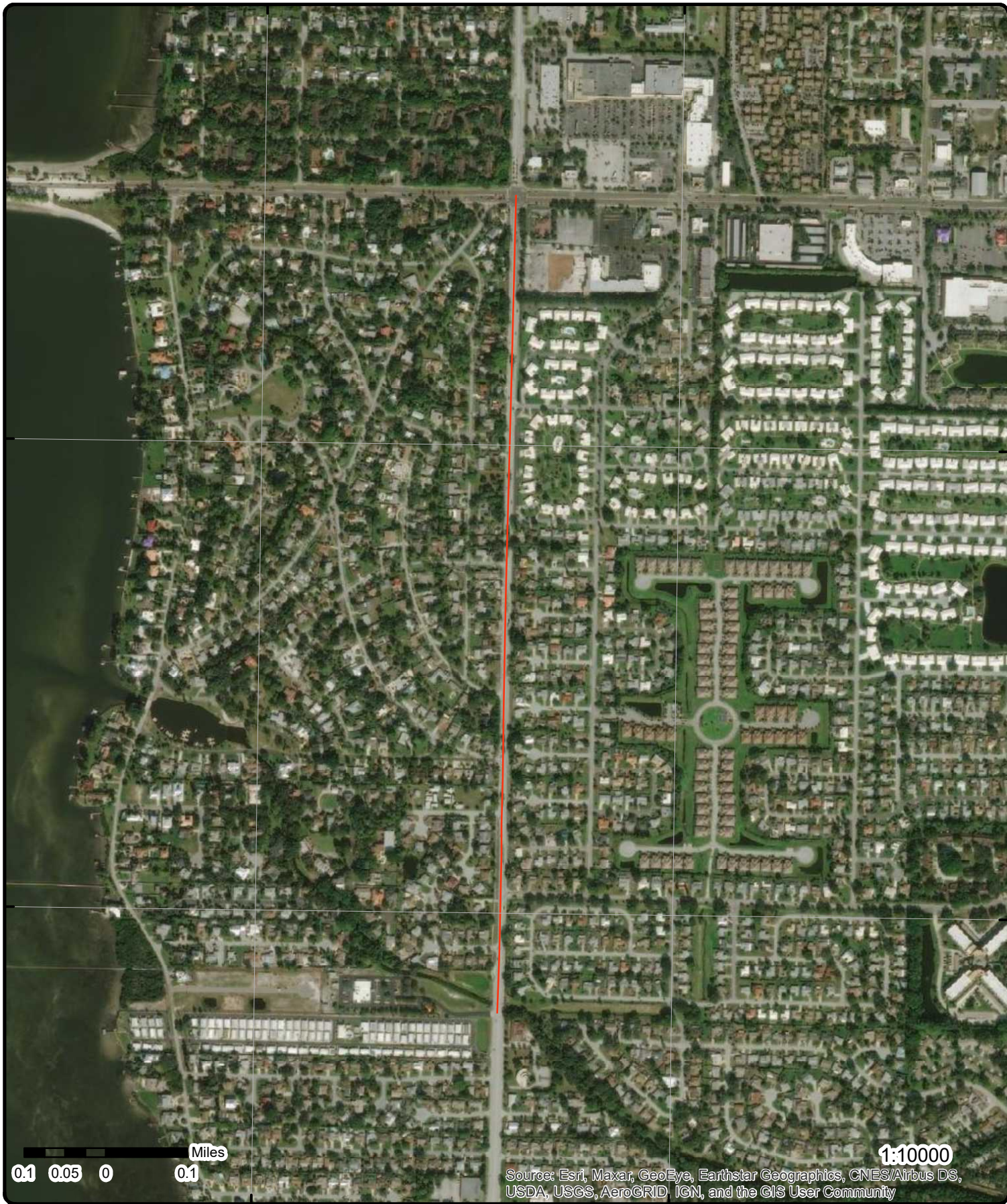


Map: 0.095 Mile Radius

Order Number: 21062500535
 Address: 75th St W, Bradenton, FL



	Buffer Outline		Rails		State Boundary		FWS Special Designation Areas		Plume
	Eris Sites with Higher Elevation		Major Highways		National Priority List Sites		State Brownfield Sites		
	Eris Sites with Same Elevation		Major Highways Ramps		National Wetland		State Brownfield Areas		State Superfund Areas:Dept. of Defense
	Eris Sites with Lower Elevation		Major Roads		Indian Reserve Land		State Superfund Areas:NPL		WQARF Areas
	Eris Sites with Unknown Elevation		Major Roads Ramps		100 Year Flood Zone		Federal Lands: Dept. of Defense (owned/administered areas)		
	County Boundary		Secondary Roads		500 Year Flood Zone		Historic Fill		
			Secondary Roads Ramps						
			Local Roads and Ramps						



0.1 0.05 0 0.1 Miles

1:10000
 Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Aerial Year: 2020

Address: 75th St W, Bradenton, FL

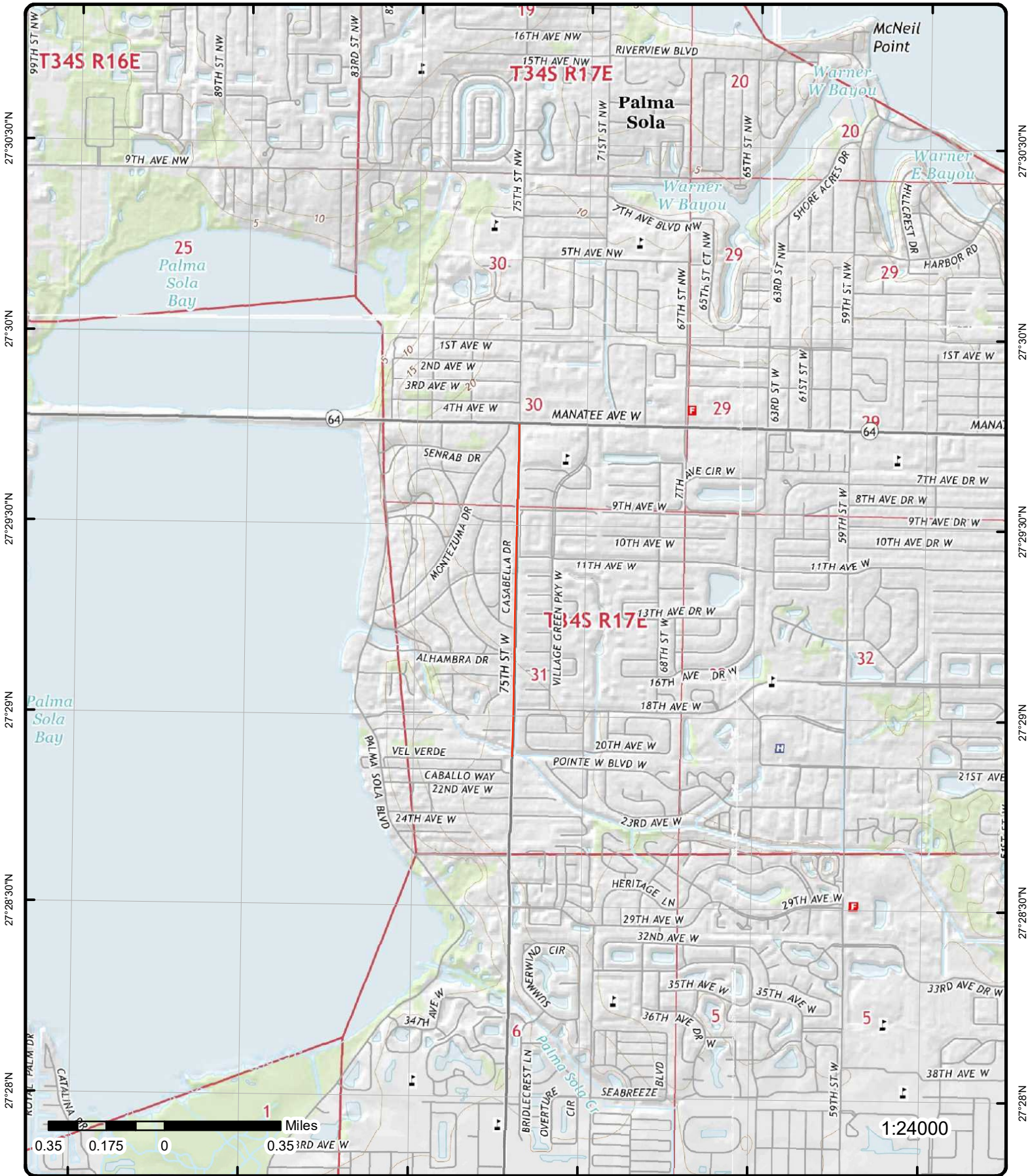
Source: ESRI World Imagery

Order Number: 21062500535



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82°39'30"W 82°39'W 82°38'30"W 82°38'W 82°37'30"W 82°37'W



Topographic Map

Year: 2015

Order Number: 21062500535

Address: 75th St W, FL

Quadrangle(s): Bradenton Beach, FL; Anna Maria, FL; Palmetto, FL; Bradenton, FL

Source: USGS Topographic Map



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Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of 1	S	0.03 / 175.15	18.41 / -2	near 7412 17th Avenue West BRADENTON FL	SPILLS

Incident No: 40469 **Incident Date:** 10/25/2008
Incident Type: Inland **County:** Manatee

Spill Details

Incident Status: Incident Party Type: Incident Party Name: Pollutant Name: Chlorine derivatives Pollutant Category: Pollutant Actual Volume: 1 Pollutant Unit Measure: gallon	Criminal Indicator: Hurricane Indicator: Description: Complaint On Scene Response:
--	---

Spill Details

Incident Status: Incident Party Type: Incident Party Name: Pollutant Name: Chlorine derivatives Pollutant Category: Pollutant Actual Volume: 1 Pollutant Unit Measure: gallon	Criminal Indicator: Hurricane Indicator: Description: Discharge On Scene Response:
--	---

2	1 of 1	N	0.00 / 6.45	24.19 / 4	MANATEE CNTY SCHOOL BD-KING MIDDLE S 600 75TH ST W BRADENTON FL 34209	STCS
-------------------	--------	---	-------------	-----------	---	------

Facility ID: 9046061 Status (Map): REVIEWED Contam (Map): Fac Type (Map): I Fac Stat (Map): CLOSED Address (Map): 600 75TH ST W Name (Map): MANATEE CNTY SCHOOL BD-KING MIDDLE S	City (Map): BRADENTON County (Map): 41 Zip4 (Map): 3304 Zip5 (Map): 34209 County: 41 - Manatee Type : I - County Government Status: Closed
---	---

Fac Name(OpenData): MANATEE CNTY SCHOOL BD-KING MIDDLE S
Status (Open Data): REVIEWED
Facility Status (Open Data): CLOSED
Facility Type Code (Open Data): I
Facility Type (Open Data): County Government
Fac Clnup Stat Cd(OpenData):

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
---------	-------------------	-----------	------------------	----------------	------	----

Fac Cleanup Status(OpenData):

Cleanup Status Effective Date: 1970/01/01 00:00:00+00
Address (Open Data): 600 75TH ST W
City (Open Data): BRADENTON
Zip5 (Open Data): 34209
County (Open Data): MANATEE
CC County ID (Open Data): 41

FDEP Storage Tank Monitoring Open Data Details

Object ID:	36004	Ver Prog:	TANKS-PETROLEUM CONTAMINATION
Regulated:	NO	Ver Date:	2006/12/20 15:54:59+00
OOIC:	FACILITY	Elevation:	
Rel Feat:	CENTR	EI Datum:	
ALB East:	534247.47	EI Resolut:	
ALB North:	389489.82	EI Units:	
Datum:	HARN	Loc ID:	36743
Col Meth:	DPHO	Lat DD:	27
Col Name:	BERNHARD_K	Lat MM:	30
Col Date:	2006/12/20 15:54:59+00	Long DD:	82
Col Prog:	TANKS-PETROLEUM CONTAMINATION	Long MM:	38
Map Src:	2004 doqqs	Lat SS:	
Map Scale:	5000	Long SS:	
Coord Acc:	4	X:	-82.6384343284885
Ver Meth:	DPHO	Y:	27.5043181156368
Ver Name:	BERNHARD_K		
Col Aff:	DEPARTMENT OF ENVIRONMENTAL PROTECTION		
Ver Aff:	DEPARTMENT OF ENVIRONMENTAL PROTECTION		
Direct:			
Documents:	https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/9046061/gis-facility!search		

FDEP Open Data - Storage Tank Contamination Monitoring (STCM)

Loc ID:	36743	Coord Acc:	4
Object ID:	36743	Ver Meth:	DPHO
OOIC:	FACILITY	Ver Name:	BERNHARD_K
Site Type:	County Government	Ver Prog:	TANKS-PETROLEUM CONTAMINATION
Contam Ind:		Ver Date:	12/20/2006
Next action:		Elevation:	
Fin Respon:		EI Datum:	
Rel Feat:	CENTR	EI Resolut:	
Alb East:	534247.47	EI Units:	
Alb North:	389489.82	Office:	SWD
Datum:	HARN	Phone:	8137417306
Col Meth:	DPHO	Operator:	MANATEE CNTY SCHOOL BD
Col Name:	BERNHARD_K	Lat DD:	27
Col Date:	12/20/2006	Lat MM:	30
Col Prog:	TANKS-PETROLEUM CONTAMINATION	Long DD:	82
Map Src:	2004 doqqs	Long MM:	38
Map Scale:	5000		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Col Aff:		DEPARTMENT OF ENVIRONMENTAL PROTECTION				
Ver Aff:		DEPARTMENT OF ENVIRONMENTAL PROTECTION				
Documents:		https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/9046061/gis-facility!search				

FDEP - Storage Tank Contamination Monitoring (STCM) Details

Contact:	Manatee Cnty School Bd	Latitude:	27:30:15.5270
Phone:	813-741-7306	Longitude:	82:38:18.3512
District:	SWD	LL Method:	DPHO - Unverified
County 1:	41 - Manatee	Account Owner:	Manatee Cnty School Bd
Name:	Manatee Cnty School Bd-King Middle S 600 75th St W Bradenton, FL 34209- 3304		

FDEP - Registered Tanks from Storage Tank Contamination Monitoring (STCM) Details

Tank No:	2	Installed:	
Placement:	UNDER	Size:	110
Status:	Removed from Site	Content:	Emerg Generator Diesel
Construction:			
Piping:			
Monitoring:			

FDEP - Registered Tanks from Storage Tank Contamination Monitoring (STCM) Details

Tank No:	1	Installed:	
Placement:	UNDER	Size:	2000
Status:	Removed from Site	Content:	Fuel Oil - Onsite Heat
Construction:			
Piping:			
Monitoring:			

3	1 of 1	N	0.03 / 164.25	23.88 / 3	KMART #7321 7412 MANATEE AVE W BRADENTON FL 34209-3443	DWM CONTAM
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Facility ID:	8630081	Related Party ID:	12117
Facility Type:	C - Fuel user/Non-retail	Primary RP Role:	ACCOUNT OWNER
Program Area:	Storage Tanks	RP Begin Date:	12/10/1986
Rank:	11086	RP Name:	KMART CORP
Operator:	L.A.RICHTER	RP Address1:	3100 W BIG BEAVER RD
Phone:	(813)792-1223	RP Address2:	REAL ESTATE DEPT
Name Changed:		RP City:	TROY
Addr Changed:		RP State:	MI
Method:	UNVR	RP Zip5:	48184
Datum:	0	RP Zip4:	
County:	MANATEE	Contact:	BUTCH PORTER ALT#: 248-463-4301
Range:	17E	RP Phone:	(313)643-1790
Township:	34S	RP Extension:	
Section:	30	Rp Bad Addr Ind:	N

<i>Map Key</i>	<i>Number of Records</i>	<i>Direction</i>	<i>Distance (mi/ft)</i>	<i>Elev/Diff (ft)</i>	<i>Site</i>	<i>DB</i>
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Program Details

Facility Status:	OPEN	Lat DD:	27
Priority Score:	5	Lat MM:	29
Score Effective Dt:	11/19/2009	Lat SS:	47.8212
Score When Ranked:	1/9/1900	Long DD:	82
Offsite Contam:		Long MM:	38
Program Eligible:		Long SS:	10.3019
Ineligible:		Datum:	0
District:	SWD	Staff Assigned:	
Method:	UNVR	Priority:	
Project Coordinator:			

Unplottable Summary

Total: 13 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID
AST	MOSAIC FERTILIZER LLC - MANATEE COUNTY WELL FIELD	HWY 64 E	BRADENTON FL	33860	813487284
AST	MOSAIC FERTILIZER LLC - MANATEE COUNTY WELL FIELD	HWY 64 E	BRADENTON FL	34202	813487283
ERNS		68TH AVE.	BRADENTON FL	34207	807055711
ERNS		57TH AVE WEST	BREADINGTON FL		806842416
FINDS/FRS	DEL PONTICELLO	N AND S SIDE OF 8TH AVE W	BRADENTON FL	00000	816413967
FINDS/FRS	ROBINSON PRESERVE ADDITION	9TH AVENUE WEST	BRADENTON FL	34209	816416452
FINDS/FRS	17TH AVENUE WEST BRIDGE REPLACEMENT	17TH AVENUE WEST	BRADENTON FL	34205	825954038
FINDS/FRS	CITY OF BRADENTON	12TH AVENUE WEST	BRADENTON FL	34209	816411943
SPILLS		Parking lot, 75 Street and Manatee Avenue West	BRADENTON FL		813598332
SPILLS		Robinson Preserve Site, end of 17th Ave. NW	BRADENTON FL		813600370
STCS	MOSAIC FERTILIZER LLC - MANATEE COUNTY WELL FIELD	HWY 64 E	BRADENTON FL	34202	836838159
STCS	BRADENTON CITY-LIFT STATION #7	8TH AVE W & WARES CREEK	BRADENTON FL	34205	836834018

STCS

TAYLOR & FULTON
MIXED VEGETABLES

HWY 64 E

BRADENTON FL

34202

836846505

Unplottable Report

Site: MOSAIC FERTILIZER LLC - MANATEE COUNTY WELL FIELD
HWY 64 E BRADENTON FL 33860

AST

Facility ID:	9602521	Lat DD:	27
Facility Status:	OPEN	Lat MM:	28
ASTS:	1	Lat SS:	38
USTS:	0	Long DD:	82
Tanks:	1	Long MM:	12
Facility Type:	C	Long SS:	12
Contact:	SANTINO A PROVENZANO / TOM POSPICAL / ATUSA AMIRI	Lat/Long Method:	AGPS
Facility Phone:	9414287106	Bad Addr Indicator:	
Owner ID:	10666	County:	MANATEE
Owner Phone:	8137754828	Dep Co:	P
Owner:	MOSAIC FERTILIZER LLC		
Owner Address1:	13830 CIRCA CROSSING DR		
Owner Address2:	SENIOR MGR, ENV. CONCENTRATES		
Owner City:	LITHIA		
Owner State:	FL		
Owner Zip 5:	33547		
Owner Zip 4:			
Type Desc:	Fuel user/Non-retail		
Oculus Docs Inventory URL:	https://erisservice7.ecologeris.com/ErisExt/flo/ocure.ashx?ID=9602521&CAT=11		
Information Portal Facility URL:	http://prodenv.dep.state.fl.us/DepNexus/public/facilitysearch?pagination=true&facility.id=9602521		
Information Portal Doc URL:	http://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/9602521/facility!search		

Tank Information

Tank ID:	2	Determination:	Double Walled
Tank Status:	U - In Service	Gallons:	2000
Status Date:	01-JAN-1990	Placement:	ABOVEGROUND
Installation Date:	01-JAN-1990	Tank Vessel Indic:	TANK
Substance:	H - Generator/Pump Diesel		

Piping

Tank ID:	2	Piping Description:	I-Suction piping system
Tkstat:	U		
Stat Date:	01-JAN-1990		
Tank ID:	2	Piping Description:	A-Abv, no soil contact
Tkstat:	U		
Stat Date:	01-JAN-1990		

Monitoring

Tkstat:	U	Stat Date:	01-JAN-1990
Monitoring Desc:	Q-Visual inspection of ASTs		
Tkstat:	U	Stat Date:	01-JAN-1990
Monitoring Desc:	F-Monitor dbl wall tank space		

Site: MOSAIC FERTILIZER LLC - MANATEE COUNTY WELL FIELD
HWY 64 E BRADENTON FL 34202

AST

Facility ID:	9102360	Lat DD:	27
Facility Status:	OPEN	Lat MM:	28
ASTS:	1	Lat SS:	24

USTS: 0 **Long DD:** 82
Tanks: 1 **Long MM:** 12
Facility Type: C **Long SS:** 34
Contact: SANTINO A PROVENZANO / TOM **Lat/Long Method:** AGPS
 POSPICHAL / ATUSA AMIRI
Facility Phone: 9414287106 **Bad Addr Indicator:**
Owner ID: 10666 **County:** MANATEE
Owner Phone: 8137754828 **Dep Co:** P
Owner: MOSAIC FERTILIZER LLC
Owner Address1: 13830 CIRCA CROSSING DR
Owner Address2: SENIOR MGR, ENV. CONCENTRATES
Owner City: LITHIA
Owner State: FL
Owner Zip 5: 33547
Owner Zip 4:
Type Desc: Fuel user/Non-retail
Oculus Docs Inventory URL: https://erisservice7.ecologeris.com/ErisExt/flo/ocure.ashx?ID=9102360&CAT=11
Information Portal Facility URL: http://prodenv.dep.state.fl.us/DepNexus/public/facilitysearch?pagination=true&facility.id=9102360
Information Portal Doc URL: http://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/9102360/facility!search

Tank Information

Tank ID: 1 **Determination:** Double Walled
Tank Status: U - In Service **Gallons:** 2000
Status Date: **Placement:** ABOVEGROUND
Installation Date: 01-JAN-1990 **Tank Vessel Indic:** TANK
Substance: H - Generator/Pump Diesel

Piping

Tank ID: 1 **Piping Description:** I-Suction piping system
Tkstat: U
Stat Date:
Tank ID: 1 **Piping Description:** A-Abv, no soil contact
Tkstat: U
Stat Date:

Monitoring

Tkstat: U **Stat Date:**
Monitoring Desc: F-Monitor dbl wall tank space
Tkstat: U **Stat Date:**
Monitoring Desc: Q-Visual inspection of ASTs

Site: 68TH AVE. BRADENTON FL 34207 ERNS

NRC Report No: 422736 **Latitude Degrees:**
Type of Incident: FIXED **Latitude Minutes:**
Incident Cause: DUMPING **Latitude Seconds:**
Incident Date: 2/3/1998 3:00:00 PM **Longitude Degrees:**
Incident Location: **Longitude Minutes:**
Incident Dtg: DISCOVERED **Longitude Seconds:**
Distance from City: **Lat Quad:**
Distance Units: **Long Quad:**
Direction from City: **Location Section:**
Location County: MANATEE **Location Township:**
Potential Flag: **Location Range:**
Year: Year 1998 Reports
Description of Incident: THE CALLER STATED THAT A NEIGHBOR IS USING HIS HOME AS A BODY SHOP WASHING THE MATERIAL INTO THE STREET

Material Spill Information

Chris Code: NCC **Unit of Measure:** UNKNOWN AMOUNT

CAS No:
UN No:
Name of Material: CAR PAINT AND PRIMER
Amount of Material: 0

If Reached Water: YES
Amount in Water: 0
Unit Reach Water: UNKNOWN AMOUNT

Calls Information

Date Time Received: 2/3/1998 4:03:53 PM
Date Time Complete: 2/3/1998 4:16:26 PM
Call Type: INC
Resp Company: UNKNOWN
Resp Org Type: PRIVATE CITIZEN

Responsible City: BRADENTON
Responsible State: FL
Responsible Zip: 34207
Source: UNAVAILABLE

Incident Information

Tank ID:
Tank Regulated: U
Tank Regulated By:
Capacity of Tank:
Capacity Tank Units:
Description of Tank:
Actual Amount:
Actual Amount Units:
Tank Above Ground: ABOVE
NPDES:
NPDES Compliance: U
Init Contin Rel No:
Contin Rel Permit:
Contin Release Type:
Aircraft ID:
Aircraft Runway No:
Aircraft Spot No:
Aircraft Type: UNKNOWN
Aircraft Model:
Aircraft Fuel Cap:
Aircraft Fuel Cap U:
Aircraft Fuel on Brd:
Aircraft Fuel OB U:
Aircraft Hanger:
Road Mile Marker:
Power Gen Facility: U
Generating Capacity:
Type of Fixed Obj: UNKNOWN
Type of Fuel:
DOT Crossing No:
DOT Regulated: U
Pipeline Type: UNKNOWN
Pipeline Abv Ground: ABOVE
Pipeline Covered: U
Exposed Underwater: U
Railroad Hotline: No
Railroad Milepost: UNKNOWN
Grade Crossing: N
Crossing Device Ty:
Ty Vehicle Involved: UNKNOWN
Device Operational: Y

Building ID:
Location Area ID:
Location Block ID:
OCSG No:
OCSF No:
State Lease No:
Pier Dock No:
Berth Slip No:
Brake Failure: N
Airbag Deployed:
Transport Contain: U
Location Subdiv:
Platform Rig Name:
Platform Letter:
Allision: N
Type of Structure:
Structure Name:
Structure Oper: Y
Transit Bus Flag:
Date Time Norm Serv:
Serv Disrupt Time:
Serv Disrupt Units:
CR Begin Date:
CR End Date:
CR Change Date:
FBI Contact:
FBI Contact Dt Tm:
Passenger Handling:
Passenger Route: XXX
Passenger Delay: XXX
Sub Part C Test Req: XXX
Conductor Test:
Engineer Test:
Trainman Test:
Yard Foreman Test:
RCL Operator Test:
Brakeman Test:
Train Dispat Test:
Signalman Test:
Oth Employee Test:
Unknown Test:

Incident Details Information

Release Secured: U
Release Rate:
Release Rate Unit:
Release Rate Rate:
Est Duration of Rel:
Desc Remedial Act: NONE / CALLER STATED THAT THE MATERIAL IS STAINING THE STREET
Fire Involved: N
Fire Extinguished: U

State Agen Report No:
State Agen on Scene:
State Agen Notified:
Fed Agency Notified:
Oth Agency Notified:
Body of Water:
Tributary of:
Near River Mile Make:

Any Evacuations:	N	Near River Mile Mark:	
No Evacuated:		Offshore:	N
Who Evacuated:		Weather Conditions:	
Radius of Evacu:		Air Temperature:	
Any Injuries:	U	Wind Direction:	
No. Injured:		Wind Speed:	
No. Hospitalized:		Wind Speed Unit:	
No. Fatalities:		Water Supp Contam:	U
Any Fatalities:	U	Water Temperature:	
Any Damages:	N	Wave Condition:	
Damage Amount:		Current Speed:	
Air Corridor Closed:	N	Current Direction:	
Air Corridor Desc:		Current Speed Unit:	
Air Closure Time:		EMPL Fatality:	
Waterway Closed:	N	Pass Fatality:	
Waterway Desc:		Community Impact:	N
Waterway Close Time:		Passengers Transfer:	UNK
Road Closed:	N	Passenger Injuries:	
Road Desc:		Employee Injuries:	
Road Closure Time:		Occupant Fatality:	
Road Closure Units:		Sheen Size:	
Closure Direction:		Sheen Size Units:	
Major Artery:	No	Sheen Size Length:	
Track Closed:	N	Sheen Size Length U:	
Track Desc:		Sheen Size Width:	
Track Closure Time:		Sheen Size Width U:	
Track Closure Units:		Sheen Color:	
Track Close Dir:		Dir of Sheen Travel:	
Media Interest:		Sheen Odor Desc:	
Medium Desc:	WATER	Duration Unit:	
Add Medium Info:	BOWLESS CREEK > INTERCOASTAL WATERWAY	Additional Info:	WX: OVERCAST / TEMP: 65F

Site: **57TH AVE WEST BREADINGTON FL** ERNS

NRC Report No:	633053	Latitude Degrees:	
Type of Incident:	STORAGE TANK	Latitude Minutes:	
Incident Cause:	DUMPING	Latitude Seconds:	
Incident Date:	12/31/2002 7:00:00 AM	Longitude Degrees:	
Incident Location:		Longitude Minutes:	
Incident Dtg:	DISCOVERED	Longitude Seconds:	
Distance from City:		Lat Quad:	
Distance Units:		Long Quad:	
Direction from City:		Location Section:	
Location County:	MANATEE	Location Township:	
Potential Flag:		Location Range:	
Year:	Year 2002 Reports		
Description of Incident:	THE CALLER IS REPORTING A COMPANY THAT IS DUMPING DRUMS OF OIL ON THEIR PROPERTY.		

Material Spill Information

Chris Code:	OUN	Unit of Measure:	UNKNOWN AMOUNT
CAS No:	000000-00-0	If Reached Water:	NO
UN No:		Amount in Water:	
Name of Material:	UNKNOWN OIL	Unit Reach Water:	
Amount of Material:	0		

Calls Information

Date Time Received:	12/31/2002 9:37:11 AM	Responsible City:	BREADINGTON
Date Time Complete:	12/31/2002 9:49:26 AM	Responsible State:	FL
Call Type:	INC	Responsible Zip:	
Resp Company:	ISAC'S SERVICE STATION	Source:	TELEPHONE
Resp Org Type:	PRIVATE ENTERPRISE		

Incident Information

Tank ID:
Tank Regulated: N
Tank Regulated By:
Capacity of Tank:
Capacity Tank Units:
Description of Tank: 55 GALLON DRUM
Actual Amount:
Actual Amount Units:
Tank Above Ground: ABOVE
NPDES:
NPDES Compliance: U
Init Contin Rel No:
Contin Rel Permit:
Contin Release Type:
Aircraft ID:
Aircraft Runway No:
Aircraft Spot No:
Aircraft Type:
Aircraft Model:
Aircraft Fuel Cap:
Aircraft Fuel Cap U:
Aircraft Fuel on Brd:
Aircraft Fuel OB U:
Aircraft Hanger:
Road Mile Marker:
Power Gen Facility: U
Generating Capacity:
Type of Fixed Obj:
Type of Fuel:
DOT Crossing No:
DOT Regulated: U
Pipeline Type:
Pipeline Abv Ground: ABOVE
Pipeline Covered: U
Exposed Underwater: N
Railroad Hotline:
Railroad Milepost:
Grade Crossing: N
Crossing Device Ty:
Ty Vehicle Involved:
Device Operational: Y

Building ID:
Location Area ID:
Location Block ID:
OCSG No:
OCSF No:
State Lease No:
Pier Dock No:
Berth Slip No:
Brake Failure: N
Airbag Deployed:
Transport Contain: Y
Location Subdiv:
Platform Rig Name:
Platform Letter:
Allision: N
Type of Structure:
Structure Name:
Structure Oper: U
Transit Bus Flag:
Date Time Norm Serv:
Serv Disrupt Time:
Serv Disrupt Units:
CR Begin Date:
CR End Date:
CR Change Date:
FBI Contact:
FBI Contact Dt Tm:
Passenger Handling:
Passenger Route: XXX
Passenger Delay: XXX
Sub Part C Test Req: XXX
Conductor Test:
Engineer Test:
Trainman Test:
Yard Foreman Test:
RCL Operator Test:
Brakeman Test:
Train Dispat Test:
Signalman Test:
Oth Employee Test:
Unknown Test:

Incident Details Information

Release Secured: U
Release Rate:
Release Rate Unit:
Release Rate Rate:
Est Duration of Rel:
Desc Remedial Act: NONE
Fire Involved: N
Fire Extinguished: U
Any Evacuations: N
No Evacuated:
Who Evacuated:
Radius of Evacu:
Any Injuries: N
No. Injured:
No. Hospitalized:
No. Fatalities:
Any Fatalities: N
Any Damages: N
Damage Amount:
Air Corridor Closed: N
Air Corridor Desc:
Air Closure Time:
Waterway Closed: N
Waterway Desc:
Waterway Close Time:
Road Closed: N

State Agen Report No:
State Agen on Scene:
State Agen Notified:
Fed Agency Notified:
Oth Agency Notified:
Body of Water:
Tributary of:
Near River Mile Make:
Near River Mile Mark:
Offshore: N
Weather Conditions: CLEAR
Air Temperature:
Wind Direction:
Wind Speed:
Wind Speed Unit:
Water Supp Contam: U
Water Temperature:
Wave Condition:
Current Speed:
Current Direction:
Current Speed Unit:
EMPL Fatality:
Pass Fatality:
Community Impact: N
Passengers Transfer: UNK
Passenger Injuries:

Road Desc:
Road Closure Time:
Road Closure Units:
Closure Direction:
Major Artery: No
Track Closed: N
Track Desc:
Track Closure Time:
Track Closure Units:
Track Close Dir:
Media Interest: NONE
Medium Desc: LAND
Addl Medium Info: SOIL

Employee Injuries:
Occupant Fatality:
Sheen Size:
Sheen Size Units:
Sheen Size Length:
Sheen Size Length U:
Sheen Size Width:
Sheen Size Width U:
Sheen Color:
Dir of Sheen Travel:
Sheen Odor Desc:
Duration Unit:
Additional Info: THE CALLER HAD NO ADDITIONAL INFORMATION.

Site: DEL PONTICELLO
N AND S SIDE OF 8TH AVE W BRADENTON FL 00000

FINDS/FRS

Registry ID: 110022414840
FIPS Code: FL081
HUC Code: 03100102
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 01-JUL-05
Update Date: 05-MAR-13
Interest Types: ICIS-NPDES NON-MAJOR, STATE MASTER, STORM WATER CONSTRUCTION
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor: ICIS
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 13
Census Block Code: 120810020102003
EPA Region Code: 04
County Name: MANATEE
US/Mexico Border Ind:
Latitude: 27.296111
Longitude: -82.234722
Reference Point:
Coord Collection Method: INTERPOLATION-PHOTO
Accuracy Value: 30
Datum: NAD83
Source:
Facility Detail Rprt URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110022414840
Program Acronyms:

FDM:28134, NPDES:FLR10AI61

Site: ROBINSON PRESERVE ADDITION
9TH AVENUE WEST BRADENTON FL 34209

FINDS/FRS

Registry ID: 110055262950
FIPS Code: 12081
HUC Code: 03100201
Site Type Name: BROWNFIELDS SITE
Location Description:
Supplemental Location:
Create Date: 18-JUN-13
Update Date: 11-MAR-14
Interest Types: BROWNFIELDS PROPERTY
SIC Codes:
SIC Code Descriptions:

NAICS Codes:
NAICS Code Descriptions:
Conveyor: ACRES
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 13
Census Block Code: 120810012041024
EPA Region Code: 04
County Name: MANATEE
US/Mexico Border Ind:
Latitude: 27.5067
Longitude: -82.6647
Reference Point: ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value:
Datum: NAD83
Source:
Facility Detail Rprt URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110055262950
Program Acronyms:

ACRES:156604

Site: 17TH AVENUE WEST BRIDGE REPLACEMENT
17TH AVENUE WEST BRADENTON FL 34205

[FINDS/FRS](#)

Registry ID: 110060352737
FIPS Code: FL081
HUC Code: 03100202
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 05-SEP-14
Update Date: 07-OCT-16
Interest Types: ICIS-NPDES NON-MAJOR, STORM WATER CONSTRUCTION
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor: ICIS
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 13
Census Block Code: 120810006013024
EPA Region Code: 04
County Name: MANATEE
US/Mexico Border Ind:
Latitude: 27.484588
Longitude: -82.580803
Reference Point:
Coord Collection Method:
Accuracy Value: 500
Datum: NAD83
Source:
Facility Detail Rprt URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110060352737
Program Acronyms:

NPDES:FLR10NY57

Site: CITY OF BRADENTON
12TH AVENUE WEST BRADENTON FL 34209

[FINDS/FRS](#)

Registry ID: 110055199379

FIPS Code: FL081
HUC Code: 03100202
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 05-APR-13
Update Date: 11-JAN-16
Interest Types: ICIS-NPDES NON-MAJOR
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 13
Census Block Code: 120810004071001
EPA Region Code: 04
County Name: MANATEE
US/Mexico Border Ind:
Latitude: 27.48904
Longitude: -82.62401
Reference Point: ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-BLOCK FACE
Accuracy Value: 500
Datum: NAD83
Source:
Facility Detail Rprt URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110055199379
Program Acronyms:

NPDES:FLR10ML79

Site: **Parking lot, 75 Street and Manatee Avenue West BRADENTON FL** **SPILLS**

Incident No: 25181
Incident Type: Inland
Incident Date: 12/27/2004
County: Manatee

Spill Details

Incident Status:		Criminal Indicator:	
Incident Party Type:		Hurricane Indicator:	
Incident Party Name:		Description:	Spill
Pollutant Name:	Diesel fuel	On Scene Response:	
Pollutant Category:			
Pollutant Actual Volume:	30		
Pollutant Unit Measure:	gallon		

Spill Details

Incident Status:		Criminal Indicator:	
Incident Party Type:		Hurricane Indicator:	
Incident Party Name:		Description:	Vehicle Accident
Pollutant Name:	Diesel fuel	On Scene Response:	
Pollutant Category:			
Pollutant Actual Volume:	30		
Pollutant Unit Measure:	gallon		

Site: **Robinson Preserve Site, end of 17th Ave. NW BRADENTON FL** **SPILLS**

Incident No: 7145
Incident Type: Inland
Incident Date: 11/07/2006
County: Manatee

Spill Details

Incident Status:
Incident Party Type:
Incident Party Name:
Pollutant Name: Waste oil
Pollutant Category:
Pollutant Actual Volume: 55
Pollutant Unit Measure: gallon

Criminal Indicator:
Hurricane Indicator:
Description: Abandoned Containers
On Scene Response:

Spill Details

Incident Status:
Incident Party Type:
Incident Party Name:
Pollutant Name: Waste oil
Pollutant Category:
Pollutant Actual Volume: 55
Pollutant Unit Measure: gallon

Criminal Indicator:
Hurricane Indicator:
Description: Leaking drum
On Scene Response:

Spill Details

Incident Status:
Incident Party Type:
Incident Party Name:
Pollutant Name: Waste oil
Pollutant Category:
Pollutant Actual Volume: 55
Pollutant Unit Measure: gallon

Criminal Indicator:
Hurricane Indicator:
Description: Spill
On Scene Response:

Site: MOSAIC FERTILIZER LLC - MANATEE COUNTY WELL FIELD
HWY 64 E BRADENTON FL 34202

STCS

Facility ID: 9102360
Status (Map): REVIEWED
Contam (Map):
Fac Type (Map): C
Fac Stat (Map): OPEN
Address (Map): HWY 64 E
Name (Map): MOSAIC FERTILIZER LLC - MANATEE COUNTY WELL FIELD

City (Map): BRADENTON
County (Map): 41
Zip4 (Map):
Zip5 (Map): 34202
County: 41 - Manatee
Type : C - Fuel User/Non-Retail
Status: Open

Fac Name(OpenData): MOSAIC FERTILIZER LLC - MANATEE COUNTY WELL FIELD
Status (Open Data): REVIEWED
Facility Status (Open Data): OPEN
Facility Type Code (Open Data): C
Facility Type (Open Data): Fuel user/Non-retail
Fac CInup Stat Cd(OpenData):
Fac Cleanup Status(OpenData):
Cleanup Status Effective Date: 1970/01/01 00:00:00+00
Address (Open Data): HWY 64 E
City (Open Data): BRADENTON
Zip5 (Open Data): 34202
County (Open Data): MANATEE
CC County ID (Open Data): 41

FDEP Storage Tank Monitoring Open Data Details

Object ID: 39649
Regulated: YES
OOIC: FACILITY
Rel Feat: EXACT
ALB East: 576573.68
ALB North: 386548.89
Datum: HARN
Col Meth: DPHO
Col Name: ALDEN_J41
Col Date: 2003/11/20 11:17:55+00

Ver Prog: TANKS-PETROLEUM CONTAMINATION
Ver Date: 2003/11/20 11:17:55+00
Elevation:
EI Datum:
EI Resolut:
EI Units:
Loc ID: 36673
Lat DD: 27
Lat MM: 28
Long DD: 82

Col Prog: TANKS-PETROLEUM CONTAMINATION **Long MM:** 12
Map Src: 1999 doqs **Lat SS:**
Map Scale: 1850 **Long SS:**
Coord Acc: 4 **X:** -82.2096317871122
Ver Meth: DPHO **Y:** 27.4729635352547
Ver Name: ALDEN_J41
Col Aff: COUNTY HEALTH DEPARTMENT
Ver Aff: COUNTY HEALTH DEPARTMENT
Direct:
Documents: <https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/9102360/gis-facility!search>

FDEP Open Data - Storage Tank Contamination Monitoring (STCM)

Loc ID: 36673 **Coord Acc:** 4
Object ID: 36673 **Ver Meth:** DPHO
OOIC: FACILITY **Ver Name:** ALDEN_J41
Site Type: Fuel user/Non-retail **Ver Prog:** TANKS-PETROLEUM CONTAMINATION
Contam Ind: **Ver Date:** 11/20/2003
Next action: PLACARD 17-JUN-2020 **Elevation:**
Fin Respon: **El Datum:**
Rel Feat: EXACT **El Resolut:**
Alb East: 576573.68 **El Units:**
Alb North: 386548.89 **Office:** SWD
Datum: HARN **Phone:** 9414287106
Col Meth: DPHO **Operator:** JIM BOWERS
Col Name: ALDEN_J41 **Lat DD:** 27
Col Date: 11/20/2003 **Lat MM:** 28
Col Prog: TANKS-PETROLEUM CONTAMINATION **Long DD:** 82
Map Src: 1999 doqs **Long MM:** 12
Map Scale: 1850
Col Aff: COUNTY HEALTH DEPARTMENT
Ver Aff: COUNTY HEALTH DEPARTMENT
Documents: <https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/9102360/gis-facility!search>

FDEP - Storage Tank Contamination Monitoring (STCM) Details

Contact: Jim Bowers **Latitude:** 27:28:22.6505
Phone: 941-428-7106 **Longitude:** 82:12:34.6625
District: SWD **LL Method:** DPHO - Autonomous GPS
County 1: 41 - Manatee **Account Owner:** Mosaic Fertilizer Llc
Name: Mosaic Fertilizer Llc - Manatee County Well Field
Hwy 64 E
Bradenton, FL 34202

FDEP - Registered Tanks from Storage Tank Contamination Monitoring (STCM) Details

Tank No: 1 **Installed:** 01/01/1990
Placement: ABOVE **Size:** 2000
Status: In Service **Content:** Generator/Pump Diesel
Construction: A - Ball Check Valve
C - Steel
M - Spill Containment Bucket
P - Level Gauges/Alarms
R - Double Wall - Tank Jacket
Piping: A - Abv, No Soil Contact
I - Suction Piping System
Monitoring: F - Monitor Dbl Wall Tank Space
Q - Visual Inspection Of Asts

Site: BRADENTON CITY-LIFT STATION #7
8TH AVE W & WARES CREEK BRADENTON FL 34205

STCS

Facility ID: 9700852 **City (Map):** BRADENTON
Status (Map): NOT REVIEWED **County (Map):** 41
Contam (Map): **Zip4 (Map):**
Fac Type (Map): H **Zip5 (Map):** 34205
Fac Stat (Map): CLOSED **County:** 41 - Manatee
Address (Map): 8TH AVE W & WARES CREEK **Type :** H - Local Government

Name (Map): BRADENTON CITY-LIFT STATION #7 **Status:** Closed
Fac Name(OpenData): BRADENTON CITY-LIFT STATION #7
Status (Open Data): NOT REVIEWED
Facility Status (Open Data): CLOSED
Facility Type Code (Open Data): H
Facility Type (Open Data): Local Government
Fac Cleanup Stat Cd(OpenData):
Fac Cleanup Status(OpenData):
Cleanup Status Effective Date: 1970/01/01 00:00:00+00
Address (Open Data): 8TH AVE W & WARES CREEK
City (Open Data): BRADENTON
Zip5 (Open Data): 34205
County (Open Data): MANATEE
CC County ID (Open Data): 41

FDEP Storage Tank Monitoring Open Data Details

Object ID:	51959	Ver Prog:	TANKS-PETROLEUM CONTAMINATION
Regulated:	NO	Ver Date:	1970/01/01 00:00:00+00
OOIC:	FACILITY	Elevation:	
Rel Feat:	VICIN	EI Datum:	
ALB East:		EI Resolut:	
ALB North:		EI Units:	
Datum:		Loc ID:	52715
Col Meth:	MMAP	Lat DD:	27
Col Name:	INITIAL LOAD	Lat MM:	29
Col Date:	1970/01/01 00:00:00+00	Long DD:	82
Col Prog:	TANKS-PETROLEUM CONTAMINATION	Long MM:	34
Map Src:		Lat SS:	
Map Scale:		Long SS:	
Coord Acc:		X:	-82.5791700887932
Ver Meth:		Y:	27.4916717251411
Ver Name:			
Col Aff:			
Ver Aff:			
Direct:			
Documents:	https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/9700852/gis-facility!search		

FDEP Open Data - Storage Tank Contamination Monitoring (STCM)

Loc ID:	52715	Coord Acc:	
Object ID:	52715	Ver Meth:	
OOIC:	FACILITY	Ver Name:	
Site Type:	Local Government	Ver Prog:	TANKS-PETROLEUM CONTAMINATION
Contam Ind:		Ver Date:	1/1/1970
Next action:	INVOICE DUE	Elevation:	
Fin Respon:		EI Datum:	
Rel Feat:	VICIN	EI Resolut:	
Alb East:		EI Units:	
Alb North:		Office:	SWD
Datum:		Phone:	9417480800
Col Meth:	MMAP	Operator:	WILLIAM TAYLOR
Col Name:	INITIAL LOAD	Lat DD:	27
Col Date:	1/1/1970	Lat MM:	29
Col Prog:	TANKS-PETROLEUM CONTAMINATION	Long DD:	82
Map Src:		Long MM:	34
Map Scale:			
Col Aff:			
Ver Aff:			
Documents:	https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/9700852/gis-facility!search		

FDEP - Storage Tank Contamination Monitoring (STCM) Details

Contact:	William Taylor	Latitude:	27:29:30.0000
Phone:	941-748-0800	Longitude:	82:34:45.0000
District:	SWD	LL Method:	MMAP - Manual Map Interpolation
County 1:	41 - Manatee	Account Owner:	Bradenton City
Name:	Bradenton City-Lift Station #7		

FDEP - Registered Tanks from Storage Tank Contamination Monitoring (STCM) Details

Tank No: 1
Placement: UNDER
Status: Removed from Site
Construction:
Piping:
Monitoring:

Installed: 07/01/1997
Size: 130
Content: Emerg Generator Diesel

Site: TAYLOR & FULTON MIXED VEGETABLES
HWY 64 E BRADENTON FL 34202

STCS

Facility ID: 9602263
Status (Map): REVIEWED
Contam (Map):
Fac Type (Map): M
Fac Stat (Map): CLOSED
Address (Map): HWY 64 E
Name (Map): TAYLOR & FULTON MIXED VEGETABLES
Fac Name(OpenData): TAYLOR & FULTON MIXED VEGETABLES
Status (Open Data): REVIEWED
Facility Status (Open Data): CLOSED
Facility Type Code (Open Data): M
Facility Type (Open Data): Agricultural
Fac Clnup Stat Cd(OpenData):
Fac Cleanup Status(OpenData):
Cleanup Status Effective Date: 1970/01/01 00:00:00+00
Address (Open Data): HWY 64 E
City (Open Data): BRADENTON
Zip5 (Open Data): 34202
County (Open Data): MANATEE
CC County ID (Open Data): 41

City (Map): BRADENTON
County (Map): 41
Zip4 (Map):
Zip5 (Map): 34202
County: 41 - Manatee
Type : M - Agricultural
Status: Closed

FDEP Storage Tank Monitoring Open Data Details

Object ID: 49736
Regulated: NO
OOIC: FACILITY
Rel Feat: EXACT
ALB East: 563750.56
ALB North: 382898.97
Datum: HARN
Col Meth: DPHO
Col Name: REEDER_J
Col Date: 2007/04/13 10:36:39+00
Col Prog: TANKS-PETROLEUM CONTAMINATION
Map Src: 2004 doqs
Map Scale: 5000
Coord Acc: 4
Ver Meth: DPHO
Ver Name: REEDER_J
Col Aff: DEPARTMENT OF ENVIRONMENTAL PR
Ver Aff: DEPARTMENT OF ENVIRONMENTAL PR
Direct:
Documents: <https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/9602263/gis-facility!search>

Ver Prog: TANKS-PETROLEUM CONTAMINATION
Ver Date: 2007/04/13 10:36:39+00
Elevation:
EI Datum:
EI Resolut:
EI Units:
Loc ID: 51473
Lat DD: 27
Lat MM: 26
Long DD: 82
Long MM: 20
Lat SS:
Long SS:
X: -82.3401339071766
Y: 27.4417133855397

FDEP Open Data - Storage Tank Contamination Monitoring (STCM)

Loc ID: 51473
Object ID: 51473
OOIC: FACILITY
Site Type: Agricultural
Contam Ind:
Next action:
Fin Respon:

Coord Acc: 4
Ver Meth: DPHO
Ver Name: REEDER_J
Ver Prog: TANKS-PETROLEUM CONTAMINATION
Ver Date: 4/13/2007
Elevation:
EI Datum:

Rel Feat:	EXACT	EI Resolut:	
Alb East:	563750.56	EI Units:	
Alb North:	382898.97	Office:	SWD
Datum:	HARN	Phone:	9417293883
Col Meth:	DPHO	Operator:	MILLARD QUILLIAN
Col Name:	REEDER_J	Lat DD:	27
Col Date:	4/13/2007	Lat MM:	26
Col Prog:	TANKS-PETROLEUM CONTAMINATION	Long DD:	82
Map Src:	2004 doqs	Long MM:	20
Map Scale:	5000		
Col Aff:	DEPARTMENT OF ENVIRONMENTAL PR		
Ver Aff:	DEPARTMENT OF ENVIRONMENTAL PR		
Documents:	https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/9602263/gis-facility!search		

FDEP - Storage Tank Contamination Monitoring (STCM) Details

Contact:	Millard Quillian	Latitude:	27:26:30.1500
Phone:	941-729-3883	Longitude:	82:20:24.4700
District:	SWD	LL Method:	DPHO - Autonomous GPS
County 1:	41 - Manatee	Account Owner:	Taylor & Fulton Inc
Name:	Taylor & Fulton Mixed Vegetables Hwy 64 E Bradenton, FL 34202		

FDEP - Registered Tanks from Storage Tank Contamination Monitoring (STCM) Details

Tank No:	1	Installed:	03/01/1996
Placement:	ABOVE	Size:	3000
Status:	Removed from Site	Content:	Vehicular Diesel
Construction:			
Piping:			
Monitoring:			

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

Formerly Utilized Sites Remedial Action Program:

[DOE FUSRAP](#)

The U.S. Department of Energy (DOE) established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from the Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations. The DOE Office of Legacy Management (LM) established long-term surveillance and maintenance (LTS&M) requirements for remediated FUSRAP sites. DOE evaluates the final site conditions of a remediated site on the basis of risk for different future uses. DOE then confirms that LTS&M requirements will maintain protectiveness.

Government Publication Date: Mar 4, 2017

National Priority List:

[NPL](#)

National Priorities List (Superfund)-NPL: EPA's (United States Environmental Protection Agency) list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. The NPL, which EPA is required to update at least once a year, is based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action.

Government Publication Date: Apr 27, 2021

National Priority List - Proposed:

[PROPOSED NPL](#)

Includes sites proposed (by the EPA, the state, or concerned citizens) for addition to the NPL due to contamination by hazardous waste and identified by the Environmental Protection Agency (EPA) as a candidate for cleanup because it poses a risk to human health and/or the environment.

Government Publication Date: Apr 27, 2021

Deleted NPL:

[DELETED NPL](#)

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Government Publication Date: Apr 27, 2021

SEMS List 8R Active Site Inventory:

[SEMS](#)

The Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted.

Government Publication Date: Mar 23, 2021

SEMS List 8R Archive Sites:

[SEMS ARCHIVE](#)

The Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time.

Government Publication Date: Mar 23, 2021

Inventory of Open Dumps, June 1985:

ODI

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

Comprehensive Environmental Response, Compensation and Liability Information System -

CERCLIS

CERCLIS:

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

EPA Report on the Status of Open Dumps on Indian Lands:

IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

CERCLIS - No Further Remedial Action Planned:

CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens:

CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action:

RCRA CORRACTS

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Apr 5, 2021

RCRA non-CORRACTS TSD Facilities:

RCRA TSD

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites listed as treatment, storage and/or disposal facilities of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Government Publication Date: Apr 5, 2021

RCRA Generator List:

RCRA LQG

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste.

Government Publication Date: Apr 5, 2021

RCRA Small Quantity Generators List:

[RCRA SQG](#)

RCRA Info is the EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.

Government Publication Date: Apr 5, 2021

RCRA Very Small Quantity Generators List:

[RCRA VSQG](#)

RCRA Info is the EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Very Small Quantity Generators (VSQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Apr 5, 2021

RCRA Non-Generators:

[RCRA NON GEN](#)

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Apr 5, 2021

Federal Engineering Controls-ECs:

[FED ENG](#)

Engineering controls (ECs) encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Feb 23, 2021

Federal Institutional Controls- ICs:

[FED INST](#)

Institutional controls are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's (United States Environmental Protection Agency) expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site.

Government Publication Date: Feb 23, 2021

Land Use Control Information System:

[LUCIS](#)

The LUCIS database is maintained by the U.S. Department of the Navy and contains information for former Base Realignment and Closure (BRAC) properties across the United States.

Government Publication Date: Sep 1, 2006

Emergency Response Notification System:

[ERNS 1982 TO 1986](#)

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System:

[ERNS 1987 TO 1989](#)

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System:

[ERNS](#)

Database of oil and hazardous substances spill reports made available by the United States Coast Guard National Response Center (NRC). The NRC fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. These data contain initial incident data that has not been validated or investigated by a federal/state response agency.

Government Publication Date: Nov 9, 2020

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database:

[FED BROWNFIELDS](#)

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Jan 6, 2021

FEMA Underground Storage Tank Listing:

[FEMA UST](#)

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Facility Response Plan:

[FRP](#)

List of facilities that have submitted Facility Response Plans (FRP) to EPA. Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit Facility Response Plans (FRPs). Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments.

Government Publication Date: Dec 2, 2020

Historical Gas Stations:

[HIST GAS STATIONS](#)

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

Government Publication Date: Jul 1, 1930

Petroleum Refineries:

[REFN](#)

List of petroleum refineries from the U.S. Energy Information Administration (EIA) Refinery Capacity Report. Includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions. Survey locations adjusted using public data.

Government Publication Date: Jul 10, 2020

Petroleum Product and Crude Oil Rail Terminals:

[BULK TERMINAL](#)

List of petroleum product and crude oil rail terminals made available by the U.S. Energy Information Administration (EIA). Includes operable bulk petroleum product terminals located in the 50 States and the District of Columbia with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil that were active between 2017 and 2018. Petroleum product terminals comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings. Survey locations adjusted using public data.

Government Publication Date: Apr 28, 2020

LIEN on Property:

[SEMS LIEN](#)

The EPA Superfund Enterprise Management System (SEMS) provides LIEN information on properties under the EPA Superfund Program.

Government Publication Date: Mar 23, 2021

Superfund Decision Documents:

[SUPERFUND ROD](#)

This database contains a listing of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD), along with other associated memos and files. This information is maintained and made available by the US EPA (Environmental Protection Agency).

Government Publication Date: Jun 28, 2021

State

Superfund Waste Cleanup & State-Funded Action Sites:

[SHWS](#)

List of hazardous waste cleanup sites participating in various federal and state funded cleanup programs. Florida's State-Funded Action Sites and Superfund Waste Cleanup Sites lists are maintained and made available by the Florida Department of Environmental Protection (FDEP). This database is state equivalent CERCLIS.

Government Publication Date: May 18, 2021

Delisted State-Funded Action Sites:

[DELISTED SHWS](#)

This database contains a list of closed hazardous waste sites of various federal and state funded cleanup programs that were removed from the Florida Department of Environmental Protection (FDEP).

Government Publication Date: May 18, 2021

Florida Department of Environmental Protection Cleanup Sites:

[CLEANUP DEP](#)

The Cleanup Sites layer feeds the FDEP's Contamination Locator Map (CLM). It provides locations and document links for sites currently in the cleanup process and sites awaiting cleanup funding. Cleanup programs include: Brownfields, Petroleum, EPA Superfund (CERCLA), Drycleaning, Responsible Party Cleanup, State Funded Cleanup, State Owned Lands Cleanup and Hazardous Waste Cleanup.

Government Publication Date: Oct 28, 2020

Waste Cleanup Responsible Party Sites:

[WCRPS](#)

List of Open, Closed, and Inactive Waste Cleanup Responsible Party sites made available by the Florida Department of Environmental Protection.

Government Publication Date: Apr 11, 2021

Delisted Waste Cleanup Responsible Party Sites:

[DELISTED WCRPS](#)

List of sites which once appeared on - and have since been removed from - the list of Waste Cleanup Responsible Party Sites made available by the Florida Department of Environmental Protection.

Government Publication Date: Apr 11, 2021

Solid Waste Facilities and Landfills:

[SWF/LF](#)

The Solid Waste Facility Inventory Report made available by the Florida Department of Environmental Protection (FDEP) includes all types of authorized and unauthorized facilities: municipal solid waste, landfills, dumps, construction and demolition disposal, recycling facilities, and more.

Government Publication Date: Mar 24, 2021

Leaking Tanks:

[LST](#)

The Storage Tank Regulation Section is part of the Petroleum Restoration Program in the Florida Department of Environmental Protection (FDEP)'s Division of Waste Management. In 1983, Florida was one of the first states in the union to pass legislation and adopt rules for underground and aboveground storage tank systems. Since then, over 28,000 facilities have reported discharges of petroleum products from storage tank systems. Florida relies on groundwater for about 92 percent of its drinking water needs, and has some of the most stringent rules in the country.

Government Publication Date: May 17, 2021

Delisted Leaking Tanks:

[DELISTED LST](#)

Whereas Leaking Tanks (LST) includes only facilities which currently have contamination as recorded by the Florida Department of Environmental Protection, this list contains facilities which were once included in LST data but no longer appear on the list made available by FDEP. Facilities may be removed from the current LST list because the discharge has been cleaned up, or the discharge is not required for 62-770.

Government Publication Date: May 17, 2021

Underground Storage Tanks:

[UST](#)

List of underground storage tank locations made available by the Florida Department of Environmental Protection (FDEP). In an effort to minimize the occurrence and environmental risks of releases and discharges, FDEP administers standards pertaining to the construction, installation, operation, maintenance, repair, closure, and disposal of underground storage tank systems that store regulated substances.

Government Publication Date: Mar 1, 2021

Aboveground Storage Tanks:

[AST](#)

The Florida Department of Environmental Protection (FDEP) provides standards for aboveground storage tanks (ASTs) that have individual storage tank capacities greater than 550 gallons. The state also regulates the registration, construction, installation, operation, maintenance, repair, closure, and disposal of storage tank systems that store regulated substances. The listing of regulated aboveground storage tank facilities is maintained by FDEP.

Government Publication Date: Mar 1, 2021

Delisted AST UST Storage Tanks:

[DEL UST AST TANK](#)

This database contains a list of closed UST and AST storage tank sites that were removed from the Florida Department of Environmental Protection (FDEP) storage tank database.

Government Publication Date: Jul 2, 2015

Delisted Storage Tanks:

[DEL STORAGE TANK](#)

This database contains a list of closed storage tank sites that were removed from the Florida Department of Environmental Protection (FDEP) storage tank database.

Government Publication Date: Jun 24, 2021

Federal Facilities Listing:

[FF TANKS](#)

The Florida Department of Environmental Protection (FDEP) Storage Tank Program registers facilities and storage tanks where aboveground or underground storage tanks store pollutants, hazardous substances, and/or mineral acid substances regulated by Chapter 62-761, Florida Administrative Code, or when aboveground storage tanks or compression vessels store a hazardous substance which requires registration according to Chapter 376, Florida Statutes.

Government Publication Date: Jun 24, 2021

Storage Tank/Contaminated Facility Search:

[STCS](#)

List of facilities and tanks in the Florida Department of Environmental Protection (FDEP) Bureau of Petroleum Storage Systems Storage Tank/Contaminated Facility Search which do not currently have active, regulated underground or aboveground storage tanks (USTs or ASTs) containing petroleum. Note that tank details do not appear for facilities for which all tanks have been removed.

Government Publication Date: Mar 2, 2021

Institutional Controls Registry:

[INST](#)

The Institutional Controls registry is maintained by the Florida Department of Environmental Protection (FDEP). The registry aims to help preserve adequate protection of contaminated soil regions and help to minimize any chances of exposure.

Government Publication Date: Dec 10, 2020

Engineering Controls:

[ENG](#)

A listing of all engineering controls that are in place to eliminate or reduce the potential for contaminant migration and exposure to contaminants. These controls may include caps, barriers, guards or fences. The list is maintained by the Florida Department of Environmental Protection (FDEP).

Government Publication Date: Dec 10, 2020

Voluntary Cleanup Sites:

[VCP](#)

A listing of active and closed voluntary cleanup sites registered by the Florida Department of Environmental Protection (FDEP).

Government Publication Date: Dec 31, 2020

Brownfield Sites:

[BROWNFIELDS](#)

Brownfields are defined by the Florida Department of Environmental Protection (FDEP) as abandoned, idled, or underused industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination. This is a list of sites within designated Brownfield Areas within Florida where Brownfield Site Rehabilitation Agreement (BSRA)s have been executed between FDEP and a responsible party.

Government Publication Date: May 24, 2021

Brownfield Areas:

[BROWNFIELD AREA](#)

Brownfields are defined by the Florida Department of Environmental Protection (FDEP) as abandoned, idled, or underused industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination. This is a list of Brownfield Areas, defined by the FDEP as contiguous areas of one or more brownfield sites, some of which may not be contaminated, that have been designated as such by a local government resolution. Such areas may include all or portions of community redevelopment areas, enterprise zones, empowerment zones, other such designated economically deprived communities and areas, and Environmental Protection Agency (EPA) designated brownfield pilot projects. Because a variety of sources and methods were used to derive information for this data, locations are approximate.

Government Publication Date: May 28, 2021

Tribal

Leaking Underground Storage Tanks (LUSTs) on Indian Land:

[INDIAN LUST](#)

Leaking Underground Storage Tanks (LUSTs) on Tribal/Indian Lands in EPA Region 4, which includes Florida.

Government Publication Date: Apr 14, 2020

Underground Storage Tanks (USTs) on Indian Lands:

[INDIAN UST](#)

Listing of underground storage tanks (USTs) on Tribal/Indian Lands in EPA Region 4, which includes Florida.

Government Publication Date: Apr 14, 2020

Delisted Tribal Leaking Storage Tanks:

DELISTED ILST

Leaking Underground Storage Tank facilities which have been removed from the Regional Tribal LUST lists made available by the EPA.

Government Publication Date: Apr 14, 2020

Delisted Tribal Underground Storage Tanks:

DELISTED IUST

Underground Storage Tank facilities which have been removed from the Regional Tribal UST lists made available by the EPA.

Government Publication Date: Apr 14, 2020

County

No County databases were selected to be included in the search.

Additional Environmental Record Sources

Federal

PFOA/PFOS Contaminated Sites:

PFAS NPL

List of sites where PFOA or PFOS contaminants have been found in drinking water or soil. Made available by the Federal Environmental Protection Agency (EPA).

Government Publication Date: Mar 1, 2021

Facility Registry Service/Facility Index:

FINDS/FRS

The Facility Registry Service (FRS) is a centrally managed database that identifies facilities, sites, or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, and data collected from EPA's Central Data Exchange registrations and data management personnel. This list is made available by the Environmental Protection Agency (US EPA).

Government Publication Date: Nov 2, 2020

Toxics Release Inventory (TRI) Program:

TRIS

The EPA's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of over 650 toxic chemicals from thousands of U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment.

Government Publication Date: Feb 19, 2020

Perfluorinated Alkyl Substances (PFAS) Releases:

PFAS TRI

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a Per- or polyfluorinated alkyl substance (PFAS) included in the Environmental Protection Agency (EPA)'s consolidated PFAS Master List of PFAS Substances. The EPA's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of over 650 toxic chemicals from thousands of U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment.

Government Publication Date: Feb 19, 2020

Perfluorinated Alkyl Substances (PFAS) Water Quality:

PFAS WATER

The Water Quality Portal (WQP) is a cooperative service sponsored by the United States Geological Survey (USGS), the Environmental Protection Agency (EPA), and the National Water Quality Monitoring Council (NWQMC). This listing includes records from the Water Quality Portal where the characteristic (environmental measurement) is in the Environmental Protection Agency (EPA)'s consolidated PFAS Master List of PFAS Substances.

Government Publication Date: Jul 20, 2020

Hazardous Materials Information Reporting System:

HMIRS

US DOT - Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) Incidents Reports Database taken from Hazmat Intelligence Portal, U.S. Department of Transportation.

Government Publication Date: Sep 1, 2020

National Clandestine Drug Labs:

NCDL

The U.S. Department of Justice ("the Department") provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Toxic Substances Control Act:

[TSCA](#)

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI).

Government Publication Date: Apr 11, 2019

Hist TSCA:

[HIST TSCA](#)

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.

Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing:

[FTTS ADMIN](#)

An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing:

[FTTS INSP](#)

An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List:

[PRP](#)

Early in the cleanup process, the Environmental Protection Agency (EPA) conducts a search to find the potentially responsible parties (PRPs). EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site.

Government Publication Date: Apr 27, 2021

State Coalition for Remediation of Drycleaners Listing:

[SCRD DRYCLEANER](#)

The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS):

[ICIS](#)

The Integrated Compliance Information System (ICIS) is a system that provides information for the Federal Enforcement and Compliance (FE&C) and the National Pollutant Discharge Elimination System (NPDES) programs. The FE&C component supports the Environmental Protection Agency's (EPA) Civil Enforcement and Compliance program activities. These activities include Compliance Assistance, Compliance Monitoring and Enforcement. The NPDES program supports tracking of NPDES permits, limits, discharge monitoring data and other program reports.

Government Publication Date: Mar 24, 2021

Drycleaner Facilities:

[FED DRYCLEANERS](#)

A list of drycleaner facilities from Enforcement and Compliance History Online (ECHO) online search. The Environmental Protection Agency (EPA) tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.

Government Publication Date: May 5, 2021

Delisted Drycleaner Facilities:

[DELISTED FED DRY](#)

List of sites removed from the list of Drycleaner Facilities (sites in the EPA's Integrated Compliance Information System (ICIS) with NAIC or SIC codes identifying the business as a drycleaner establishment).

Government Publication Date: May 5, 2021

Formerly Used Defense Sites:

FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DoD) is responsible for an environmental restoration. This list is published by the U.S. Army Corps of Engineers.

Government Publication Date: Jan 28, 2020

Former Military Nike Missile Sites:

FORMER NIKE

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline, heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites. During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.

Government Publication Date: Dec 1, 1984

PHMSA Pipeline Safety Flagged Incidents:

PIPELINE INCIDENT

A list of flagged pipeline incidents made available by the U.S. Department of Transportation (US DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA regulations require incident and accident reports for five different pipeline system types.

Government Publication Date: Jul 7, 2020

Material Licensing Tracking System (MLTS):

MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: May 11, 2021

Historic Material Licensing Tracking System (MLTS) sites:

HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File:

MINES

The Master Index File (MIF) contains mine identification numbers issued by the Department of Labor Mine Safety and Health Administration (MSHA) for mines active or opened since 1971. Note that addresses may or may not correspond with the physical location of the mine itself.

Government Publication Date: Nov 3, 2020

Surface Mining Control and Reclamation Act Sites:

SMCRA

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by the Office of Surface Mining Reclamation and Enforcement (OSMRE) to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of Abandoned Mine Land (AML) impacts, as well as information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Government Publication Date: Dec 18, 2020

Mineral Resource Data System:

MRDS

The Mineral Resource Data System (MRDS) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS. The USGS has ceased systematic updates of the MRDS database with their focus more recently on deposits of critical minerals while providing a well-documented baseline of historical mine locations from USGS topographic maps.

Government Publication Date: Mar 15, 2006

Uranium Mill Tailings Radiation Control Act Sites:

[URANIUM](#)

The Legacy Management Office of the Department of Energy (DOE) manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The L.M. Office manages this database of sites registered under the Uranium Mill Tailings Control Act (UMTRCA).

Government Publication Date: Mar 4, 2017

Alternative Fueling Stations:

[ALT FUELS](#)

List of alternative fueling stations made available by the US Department of Energy's Office of Energy Efficiency & Renewable Energy. Includes Biodiesel stations, Ethanol (E85) stations, Liquefied Petroleum Gas (Propane) stations, Ethanol (E85) stations, Natural Gas stations, Hydrogen stations, and Electric Vehicle Supply Equipment (EVSE). The National Renewable Energy Laboratory (NREL) obtains information about new stations from trade media, Clean Cities coordinators, a Submit New Station form on the Station Locator website, and through collaborating with infrastructure equipment and fuel providers, original equipment manufacturers (OEMs), and industry groups.

Government Publication Date: Apr 27, 2021

Registered Pesticide Establishments:

[SSTS](#)

List of active EPA-registered foreign and domestic pesticide-producing and device-producing establishments based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that facilities producing pesticides, active ingredients, or devices be registered. The list of establishments is made available by the EPA.

Government Publication Date: Apr 13, 2021

Polychlorinated Biphenyl (PCB) Notifiers:

[PCB](#)

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: Nov 19, 2020

State

Priority Ranking List:

[PRIORITYCLEAN](#)

The Florida Legislature has established a state-funded program to cleanup properties that are contaminated as a result of the operations of a drycleaning facility or wholesale supply facility (Chapter 376, Florida Statutes). The program is administered by the Florida Department of Environmental Protection (FDEP). The statute was sponsored by the drycleaning industry to address environmental, economic, and liability issues resulting from drycleaning solvent contamination. The program provides limited liability protection to the owner, operator and real property owner of drycleaning or wholesale supply facilities for cleanup of drycleaning solvent contamination if the parties meet the eligibility conditions stated in the law.

Government Publication Date: Apr 21, 2021

Dry Cleaning Facilities:

[DRYCLEANERS](#)

A listing of dry cleaning facilities registered with the Florida Department of Environmental Protection (FDEP). The information contains facility identification number, site location information, related party (owner) information, and facility type and status. Data is taken from the Storage Tank & Contamination Monitoring database, the registration repository of dry cleaner facility data.

Government Publication Date: Mar 9, 2021

Delisted Dry Cleaning Facilities:

[DELISTED DRYCLEANERS](#)

List of sites removed from the drycleaners database made available by the Florida Department of Environmental Conservation (DEC).

Government Publication Date: Mar 9, 2021

Historical Dry Cleaners:

[HISTORICAL DRYC](#)

The Florida Department of Environmental Protection (FDEP) provided this historical database of regulated and non-regulated dry cleaning facilities. These facilities were at one time tracked and registered by the FDEP OCULUS Electronic Document Management System as "drums" in the underground storage tank database.

Government Publication Date: Aug 2, 2013

Oil and Hazardous Materials Incidents:

[SPILLS](#)

Statewide listing of oil and hazardous materials spills and incidents recorded by the Florida Department of Environmental Protection (FDEP).

Government Publication Date: May 18, 2021

Contaminated Sites:

DWM CONTAM

Florida Department of Environmental Protection (FDEP) Division of Waste Management (DWM) listing of active or known sites that include sites requiring cleanup but are not actively being worked on due to the agency's lack of funding (primarily petroleum and drycleaning).

Government Publication Date: Mar 12, 2020

Delisted Contaminated Sites:

DEL CONTAM SITE

List of sites which were once included on the Florida Department of Environmental Protection (FDEP) Division of Waste Management (DWM)'s Contaminated Sites list. As sites on the Contaminated Sites (CS) list are cleaned up or closed under risk based corrective action, they are removed from the CS list.

Government Publication Date: Sep 30, 2015

Aqueous Film Forming Foam (AFFF):

PFAS AFFF

A list of fire fighter training facilities that use or possibly used Aqueous Film Forming Foam (AFFF). This list is made available by the Florida Department of Environmental Protection (DEP).

Government Publication Date: Aug 20, 2020

PFAS Investigation at Federal Facilities:

PFAS

List of Federal facilities in Florida with confirmed or suspected usage of Aqueous Film Forming Foam (AFFF) made available by the Florida Department of Environmental Protection (DEP). Investigative work for AFFF source areas at DOD facilities in Florida is in the early stages with some preliminary sampling completed to confirm perfluorooctanoic acid (PFOA) and/or perfluorooctane sulfonate (PFOS) presence and some sampling to be completed at suspected AFFF potential release areas. DEP will continue to work closely with the Department of Defense (DOD), as well as other federal facilities, in order to investigate and mitigate for PFOA and PFOS introduced due to use of AFFF or other sources, with an emphasis to identify and protect drinking water resources.

Government Publication Date: Apr 20, 2020

Underground Injection Control Wells:

UIC

Class I Underground Injection Control (UIC) wells that are currently or were previously active, as well as proposed sites, regulated by the Florida Department of Environmental Protection (FDEP). Class I UIC wells are used to inject nonhazardous waste, hazardous waste (new hazardous waste wells were banned in 1983), or municipal waste below the lowermost underground source of drinking water.

Government Publication Date: May 18, 2021

Well Surveillance Program Facilities:

WELL SURVEILLANCE

List of facilities made available by the Florida Health Well Surveillance group. The Well Surveillance group manages several programs to identify and monitor areas in Florida where contaminated drinking water is suspected and may pose a threat to public health. The section coordinates with the County Health Departments (CHDs) to locate potable wells and conduct water sampling for contaminants of concern. The Well Surveillance Section is composed of the State Underground Petroleum Environmental Response Act (SUPER Act), Drinking Water Toxics Program (Toxics), Drycleaner Solvent Cleanup Program (DSCP). Includes locations of known cattle dipping vats.

Government Publication Date: Apr 5, 2021

Cattle Dip Vats:

CDV SOUTHEAST

A list of Cattle Dip Vats in Southeast Florida made available by the Florida Department of Environmental Protection.

Government Publication Date: Jan 19, 2017

Tier 2 Report:

TIER 2

A list of Tier 2 facilities in the state of Florida. The list tracks the inventory of chemicals within a particular facility. This list is provided by the Florida Division of Emergency Management.

Government Publication Date: Jun 24, 2020

Delisted County Records:

DELISTED COUNTY

Records removed from county databases. Records may be removed from the county lists made available by the respective county departments because they are inactive, or because they have been deemed to be below reportable thresholds.

Government Publication Date: Apr 13, 2021

Tribal

No Tribal additional environmental record sources available for this State.

County

No County additional environmental databases were selected to be included in the search.

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

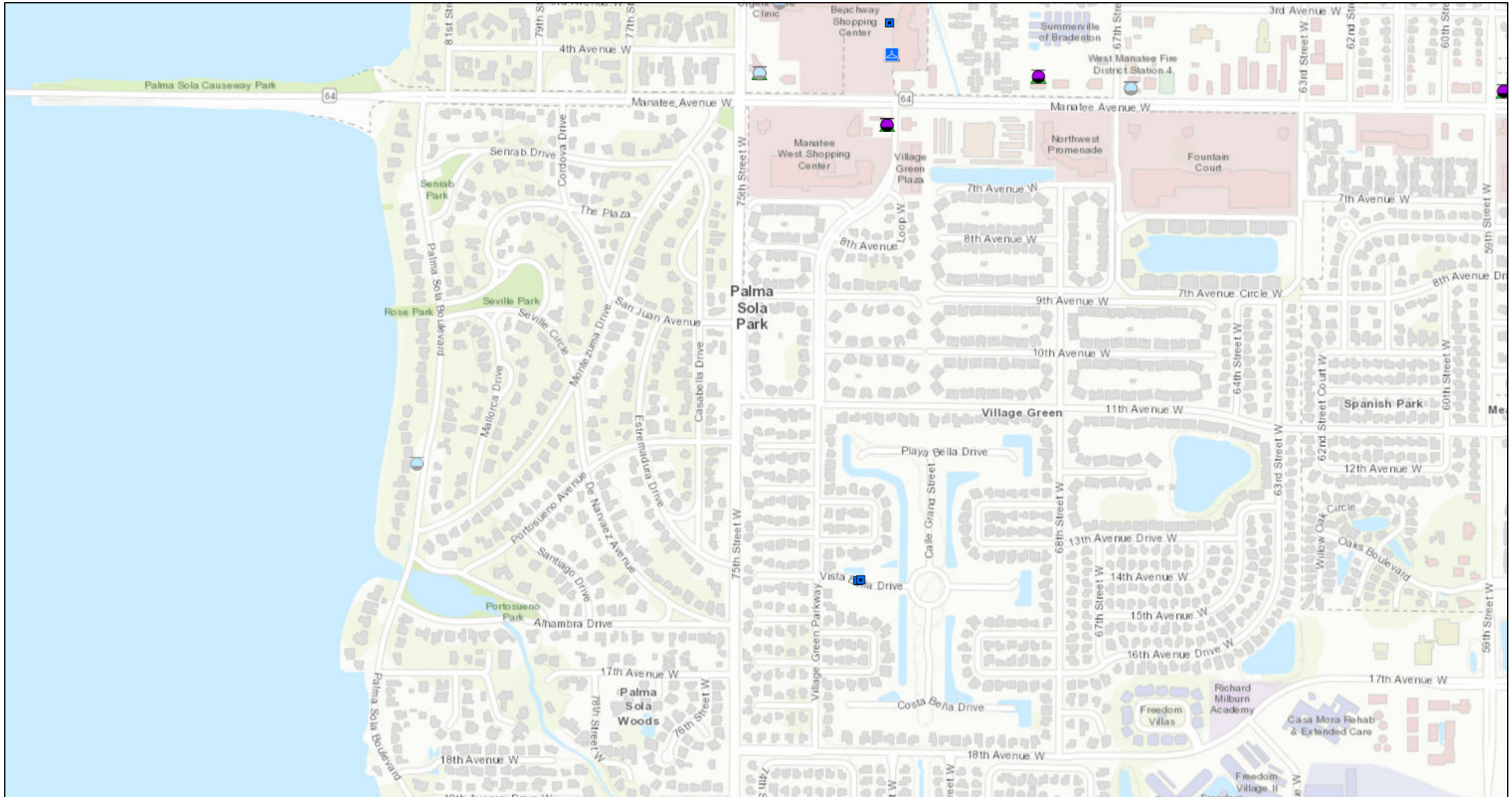
Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

Potential Contamination Screening Memo

75th Street West - 20th Ave West to Manatee Ave

Attachment C - FDEP Map Direct Database

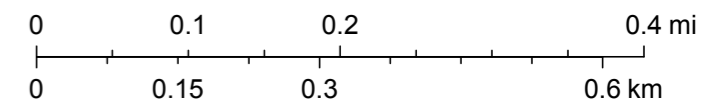
Standard Map



August 17, 2021

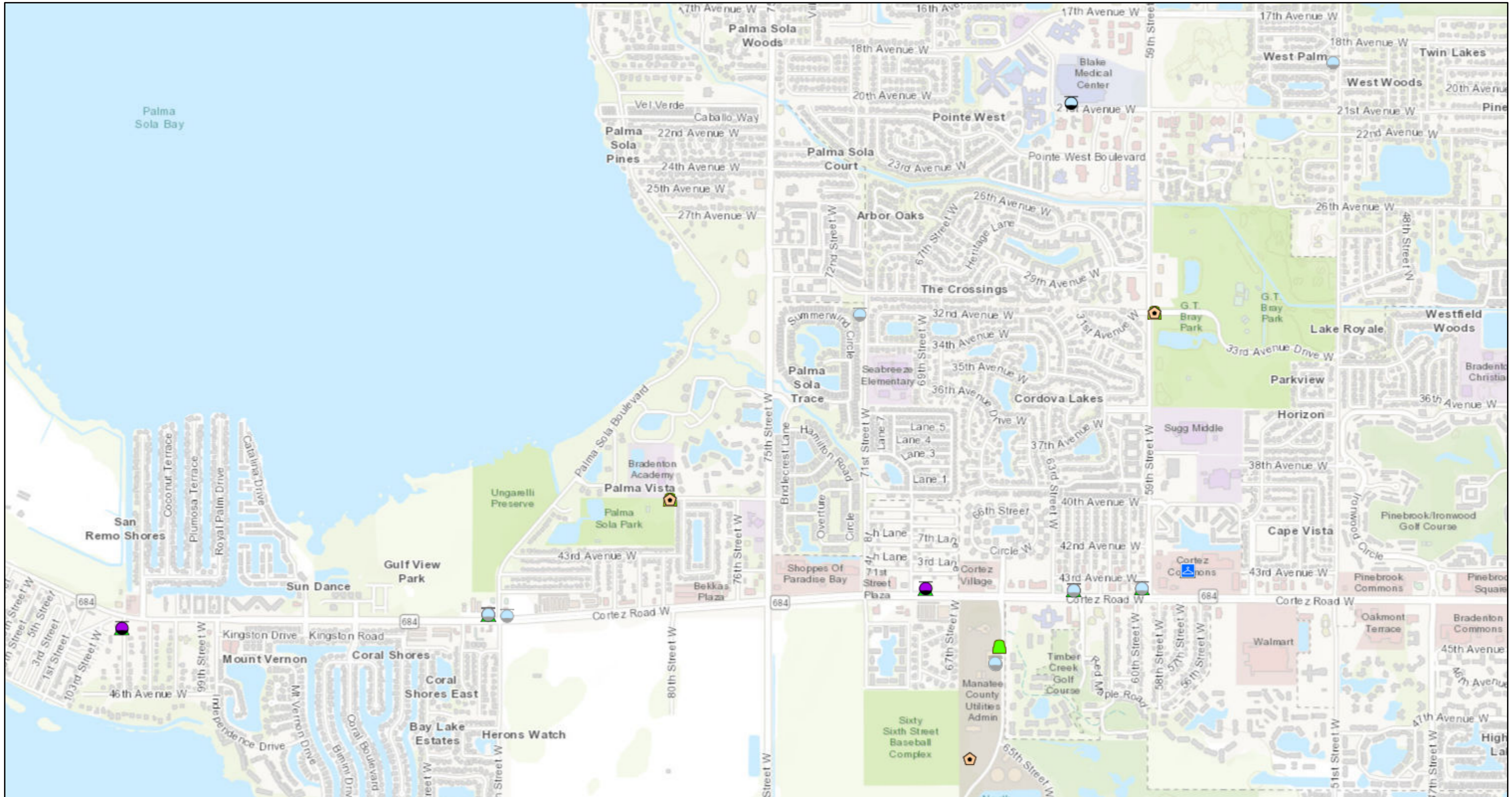
1:9,028

- ERIC Waste Cleanup
- Petroleum Contamination Monitoring (PCTS) Discharges from STCM
- ▲ DEP Cleanup Sites
- ELIGIBLE DISCHARGES OPEN
- ▲ PETROLEUM
- ELIGIBLE DISCHARGES COMPLETED
- ▲ OTHER WASTE CLEANUP
- INELIGIBLE DISCHARGES COMPLETED
- Drycleaning Solvent Program Cleanup Sites












FDEP, DWM, Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community, FDEP/DWM/BWC

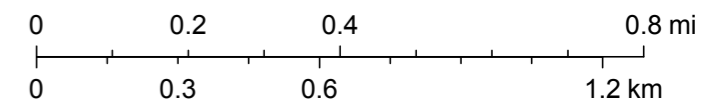
Standard Map



August 17, 2021

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- | | |
|--|---|
|  ERIC Waste Cleanup |  Waste Processing Area |
| DEP Cleanup Sites | Petroleum Contamination Monitoring (PCTS) Discharges from STCM |
|  PETROLEUM |  ELIGIBLE DISCHARGES OPEN |
|  OTHER WASTE CLEANUP |  ELIGIBLE DISCHARGES COMPLETED |
| Solid Waste Facilities |  INELIGIBLE DISCHARGES COMPLETED |
|  Facility |  Drycleaning Solvent Program Cleanup Sites |



FDEP, DWM, Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community, FDEP/DWM/BWC



Potential Contamination Screening Memo

Prepared by: Bill Spinner, P.G.
Kimley-Horn and Associates, Inc.
1777 Main Street, Suite 800
Sarasota, FL 34236



Appendix F – Drainage Information

THIS FORM IS INTENDED TO FACILITATE AND GUIDE THE DIALOGUE DURING A PRE-APPLICATION MEETING BY PROVIDING A PARTIAL "PROMPT LIST" OF DISCUSSION SUBJECTS. IT IS NOT A LIST OF REQUIREMENTS FOR SUBMITTAL BY THE APPLICANT.



**SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
RESOURCE REGULATION DIVISION
PRE-APPLICATION MEETING NOTES**

**FILE
NUMBER:

PA 408889**

Date:	10/06/2021		
Time:	14:00		
Project Name:	59th Street W from Cortez Rd to Manatee Ave		
District Engineer:	Scott VanOrsdale		
District ES:	Russell Martin		
Attendees:	Cris Schooley, Victor Gallo, Manatee County, Gloria Manriquez		
County:	Manatee County	Sec/Twp/Rge:	05/35/17
Total Land Acreage:	N/A	Project Acreage:	TBD acres

- Prior On-Site/Off-Site Permit Activity:**
- Multiple ERPs adjacent to project area. Applicant to review and determine if impacts will result. Must modify or accommodate any impacts to existing permits.

- Project Overview:**
- Manatee County is conducting a Project Development & Corridor Study to evaluate a 2.3-mile segment of 59th Street West from Cortez Road to Manatee Avenue in the City of Bradenton and Manatee County, Florida. The study evaluates options for widening the existing 2-lane roadway to a 4-lane roadway with a center left turn lane and/or median with bicycle lanes and sidewalks to provide an enhanced mobility experience for all users. As part of the study, pond site options are also being evaluated.
 - Similar expansion of 75th Street West from Manatee Avenue South to Palma Sola Drain.
 - New Individual permit.
 - Portion of the runoff will drain north to the Manatee River, which is part of the Tampa Bay and will require net improvement.
 - Additional comments and requirements mentioned below:

- Environmental Discussion:** (Wetlands On-Site, Wetlands on Adjacent Properties, Delineation, T&E species, Easements, Drawdown Issues, Setbacks, Justification, Elimination/Reduction, Permanent/Temporary Impacts, Secondary and Cumulative Impacts, Mitigation Options, SHWL, Upland Habitats, Site Visit, etc.)
- No wetland or surface water impacts proposed. No widening of bridge over canal proposed.
 - Provide the limits of jurisdictional wetlands and surface waters. Roadside ditches or other water conveyances, including permitted and constructed water conveyance features, can be claimed as surface waters per Chapter 62-340 F.A.C. if they do not meet the definition of a swale as stated under Rule 403.803 (14) F.S.
 - A site visit by District staff will be required to verify the presence or absence of wetlands and/or surface waters. Prior to the site visit, District staff will contact the applicant or authorized agent to provide an approximate date of the site visit and to ensure that the project area is accessible. If wetlands or surface waters are discovered during the site visit, additional information may be required.

- Site Information Discussion:** (SHW Levels, Floodplain, Tailwater Conditions, Adjacent Off-Site Contributing Sources, Receiving Waterbody, etc.)
- Watersheds – City of Bradenton, see links below for Floodplain Limits within the PA
 - WBIDs need to be independently verified by the consultant - [WBID](#) – 1885A West Cedar Hammock; impaired for fecal coliform. [WBID](#) – 1848A; Manatee River below Braden River; part of Tampa Bay and will require net improvement for nutrients.
 - No direct discharges to an OFW
 - Document/justify SHWE's at pond locations, wetlands, and OSWs.
 - Determine normal pool elevations of wetlands.
 - Determine 'pop-off' locations and elevations of wetlands.
 - Provide documentation to support tailwater conditions for quality and quantity design
 - Proposed control structures in wetlands should be consistent with existing 'pop-off' elevations of wetlands; demonstrate no adverse impacts to wetland hydroperiod for up to 2.33yr mean annual storm.
 - Minimum flows and levels of receiving waters shall not be disrupted.

- Contamination issues need to be resolved with the FDEP. Check FDEP MapDirect layer for possible contamination points within/adjacent to the project area. [FDEP MapDirect Link](#)
 - Multiple FDEP Site ID Nos. located within or adjacent to site. Please verify with FDEP if any have current contamination issues.

For known contamination within the site or within 500' beyond the proposed stormwater management system:

- after the application is submitted, please contact FDEP staff listed below and provide them with the ERP Application ID # along with a mounding analysis (groundwater elevation versus distance) of the proposed stormwater management system that shows the proposed groundwater mound will not adversely impact the contaminated area. FDEP will review the plans submitted to the District and mounding analysis to determine any adverse impacts. Provide documentation from FDEP that the proposed construction will not result in adverse impacts. This is required prior to the ERP Application being deemed complete.

For known offsite contamination between 500' and 1500' beyond the site:

- FDEP may also require a mounding analysis (groundwater elevation versus distance) for the proposed stormwater systems. SWFWMD will issue the permit when contamination sites are located outside the 500 ft radius prior to concurrence from DEP, however, it is the Permittee's responsibility to resolve contaminated site assessment concerns with the FDEP prior to beginning any construction activities. A permit condition will be used to reiterate this. You are advised to contact DEP as soon as possible, preferably during permit application period.

FDEP Contacts:

- For projects located within Citrus, Hernando, Pasco, Hillsborough, Pinellas, Manatee, Polk and Hardee Counties: Yanisa Angulo yanisa.angulo@floridadep.gov

- Stormwater retention and detention systems are classified as moderate sanitary hazards with respect to public and private drinking water wells. Stormwater treatment facilities shall not be constructed within 100 feet of an existing public water supply well and shall not be constructed within 75 feet of an existing private drinking water well. Subsection 4.2, A.H.V.II.

Water Quantity Discussions: (Basin Description, Storm Event, Pre/Post Volume, Pre/Post Discharge, etc.)

- Project will outfall to the Palma Sola Drain, a tidally influenced creek. There appears to be several constrictions downstream which will require attenuation requirements. Given the downstream location, it may be possible to demonstrate that increasing the discharge rate into the creek will not cause adverse upstream or downstream impacts.
- Demonstrate that post development peak discharges from proposed project area will not cause an adverse impact for a 25-year, 24-hour storm event.
- Demonstrate that site will not impede the conveyance of contributing off-site flows.
- Demonstrate that the project will not increase flood stages up- or down-stream of the project area(s).
- Watershed Model information may be available for download using the following link: <https://watermatters.sharefile.com/d-s8c9019e00fd243908654e733a6b2016c>
- Provide equivalent compensating storage for all 100-year, 24-hour riverine floodplain impacts if applicable. Providing cup-for-cup storage in dedicated areas of excavation is the preferred method of compensation if no impacts to flood conveyance are proposed and storage impacts and compensation occur within the same basin. In this case, tabulations should be provided at 0.5-foot increments to demonstrate encroachment and compensation occur at the same levels. Otherwise, storage modeling will be required to demonstrate no increase in flood stages will occur on off-site properties, using the mean annual, 10-year, 25-year, and 100-year storm events for the pre- and post-development conditions.
- Please be aware that if there is credible historical evidence of past flooding or the physical capacity of the downstream conveyance or receiving waters indicates that the conditions for issuance will not be met without consideration of storm events of different frequency or duration, applicants shall be required to provide additional analyses using storm events of different duration or frequency than the 25-year 24-hour storm event, or to adjust the volume, rate or timing of discharges. [Section 3.0 Applicant's Handbook Volume II]

Water Quality Discussions: (Type of Treatment, Technical Characteristics, Non-presumptive Alternatives, etc.)

- Applicant must demonstrate a net improvement for the parameters of concern by performing a pre/post pollutant loading analysis based on existing land use and the proposed land use.
- Also, replace treatment function of existing ditches to be filled.
- Presumptive Water Quality Treatment for Alterations to Existing Public Roadway Projects:
-Refer to Section 4.5 A.H.V.II for Alterations to Existing Public Roadway Projects.

- Refer to Sections 4.8, 4.8.1 and 4.8.2 A.H.V.II for Compensating Stormwater Treatment, Overtreatment, and Offsite Compensation.
- All co-mingled existing & new impervious that is proposed to be connected to a treatment pond will require treatment for an area equal to the co-mingled existing & new impervious (times ½” for dry treatment or 1” for wet treatment). This applies whether or not equivalent treatment concepts are used.
- However, if equivalent treatment concepts are used it is possible to strategically locate the pond(s) so that the minimum treatment requirement may be for an area equivalent to the new impervious area only. That is, co-mingled existing & new impervious that is not connected to a treatment pond may bypass treatment (as per Section 4.5(2), A.H.V.II); if the ‘total impervious area’ that is connected to the treatment pond(s) is at least equivalent to the area of new impervious only. The ‘total impervious area’ that is connected to the pond(s) may be composed of co-mingled existing & new impervious.
- Offsite impervious not required to be treated; but may be useful to be treated when using equivalent treatment concepts.
- Existing treatment capacity displaced by any road project will require additional compensating volume. Refer to Subsection 4.5(c), A.H.V.II.
- Will acknowledge compensatory treatment to offset pollutant loads associated with portions of the project area that cannot be physically treated.
- Net improvement
 - Refer to rule 62-330.301(2), F.A.C.
 - The Tampa Bay Estuary Program (TBEP) identifies WBID 1848A as a discharge to Tampa Bay. Tampa Bay is designated as a Category 4b waterbody (impaired, but no TMDL required); therefore, net improvement (for nutrients) is required for discharges to Tampa Bay.
 - The application must demonstrate a net improvement for nutrients. Applicant may demonstrate a net improvement for the parameters of concern by performing a pre/post pollutant loading analysis based on existing land use and the proposed land use. Refer to ERP Applicant's Handbook Vol. II Subsection 4.1(g).
 - Effluent filtration is known to be ineffective for treating nutrient related impairments, unless special nutrient adsorption media provided. However, please note special nutrient adsorption media has extremely low conductivity values compared to typical sand type effluent filtration filter media. Note: if treatment volume required for net improvement is less than the treatment volume required for 'presumptive' treatment, then use of effluent filtration is ok.

Sovereign Lands Discussion: (Determining Location, Correct Form of Authorization, Content of Application, Assessment of Fees, Coordination with FDEP)

- No SSL issues.

Operation and Maintenance/Legal Information: (Ownership or Perpetual Control, O&M Entity, O&M Instructions, Homeowner Association Documents, Coastal Zone requirements, etc.)

- The permit must be issued to entity that owns or controls the property.
- Provide evidence of ownership or control by deed, easement, contract for purchase, etc. Evidence of ownership or control must include a legal description. A Property Appraiser summary of the legal description is NOT acceptable.

Application Type and Fee Required:

- SWERP – Sections A, C, and E of the ERP Application.
- < 40 acres of project area and < 3 acres wetland or surface water impacts - \$2,491.50 Online Submittal
- < 100 acres of project area and < 10 acre of wetland or surface water impacts - \$2,798.25
- Consult the [fee schedule](#) for different thresholds.

Other: (Future Pre-Application Meetings, Fast Track, Submittal Date, Construction Start Date, Required District Permits – WUP, WOD, Well Construction, etc.)

- An application for an individual permit to construct or alter a dam, impoundment, reservoir, or appurtenant work, requires that a notice of receipt of the application must be published in a newspaper within the affected area. Provide documentation that such noticing has been accomplished. Note that the published notices of receipt for an ERP can be in accordance with the language provided in Rule 40D-1.603(10), F.A.C.
- Provide a copy of the legal description (of all applicable parcels within the project area) in one of the following forms:
 - a. Deed with complete Legal Description attachment.
 - b. Plat.
 - c. Boundary survey of the property(ies) with a sketch.

- The plans and drainage report submitted electronically must include the appropriate information required under Rules 61G15-23.005 and 61G15-23.004 (Digital), F.A.C. The following text is required by the Florida Board of Professional Engineers (FBPE) to meet this requirement when a digitally created seal is not used and must appear where the signature would normally appear:

ELECTRONIC (Manifest): *[NAME] State of Florida, Professional Engineer, License No. [NUMBER] This item has been electronically signed and sealed by [NAME] on the date indicated here using a SHA authentication code. Printed copies of this document are not considered signed and sealed and the SHA authentication code must be verified on any electronic copies*

DIGITAL: *[NAME] State of Florida, Professional Engineer, License No. [NUMBER]; This item has been digitally signed and sealed by [NAME] on the date indicated here; Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.*

- Provide soil erosion and sediment control measures for use during construction. Refer to ERP Applicant's Handbook Vol. 1 Part IV Erosion and Sediment Control.
- Demonstrate that excavation of any stormwater ponds does not breach an aquitard (see Subsection 2.1.1, A.H.V.II) such that it would allow for lesser quality water to pass, either way, between the two systems. In those geographical areas of the District where there is not an aquitard present, the depth of the pond(s) shall not be excavated to within two (2) feet of the underlying limestone which is part of a drinking water aquifer. [Refer to Subsection 5.4.1(b), A.H.V.II]
- If lowering of SHWE is proposed, then burden is on Applicant to demonstrate no adverse onsite or offsite impacts as per Subsection 3.6, A.H.V.II. Groundwater drawdown 'radius of influence' computations may be required to demonstrate no adverse onsite or offsite impacts. Please note that new roadside swales or deepening of existing roadside swales may result in lowering of SHWE. Proposed ponds with control elevation less than SHWE may result in adverse lowering of onsite or offsite groundwater.
- On December 17, 2020, the Environmental Protection Agency (EPA) formally transferred permitting authority under CWA Section 404 from the U.S. Army Corps of Engineers (Corps) to the State of Florida for a broad range of water resources within the State. The primary State 404 Program rules are adopted by the Florida Department of Environmental Protection (FDEP) as Chapter 62-331 of the Florida Administrative Code (F.A.C.). While the State 404 Program is a separate permitting program from the Environmental Resource Permitting program (ERP) under Chapter 62-330, F.A.C., and agency action for State 404 Program verifications, notices, or permits shall be taken independently from ERP agency action, the FDEP and the Southwest Florida Water Management District (SWFWMD) will be participating in a Joint application Process. Upon submittal of an ERP application that proposes dredge/fill activities in wetlands or surface waters within state assumed waters, the SWFWMD will forward a copy of your application to the FDEP for activities under State 404 jurisdiction. The applicant may choose to have the State 404 Program and ERP agency actions issued concurrently to help ensure consistency and reduce the need for project modifications that may occur when the agency actions are issued at different times. Additional information on the FDEP's 404 delegation can be found at: <https://floridadep.gov/water/submerged-lands-environmental-resources-coordination/content/state-404-program>

Additionally, for those projects located in areas where the Corps retains jurisdiction, the applicant is advised that the District will not send a copy of an application that does not qualify for a State Programmatic General Permit (SPGP) to the U.S. Army Corps of Engineers. If a project does not qualify for a SPGP, you will need to apply separately to the Corps using the appropriate federal application form for activities under federal jurisdiction. Please see the Corps' Jacksonville District Regulatory Division Sourcebook for more information about federal permitting. Please call your local Corps office if you have questions about federal permitting. Link: <http://www.saj.usace.army.mil/Missions/Regulatory/Source-Book/>

Disclaimer: The District ERP pre-application meeting process is a service made available to the public to assist interested parties in preparing for submittal of a permit application. Information shared at pre-application meetings is superseded by the actual permit application submittal. District permit decisions are based upon information submitted during the application process and Rules in effect at the time the application is complete.

Curve Number and Runoff Volume Calculation (25YR/24HR)

Basin 2A:

Pre-Condition Curve Number Calculation

Land Use Description	Soil Map Unit	Hydrologic Group	Area		CN	Product
Impervious Roadway	--	--	1.77	acres	98	174
Sod/Grass	19, 42	A	1.00	acres	39	39
Additional ROW			0.00	acres	39	0
Pond Site			0.66	acres	39	26

Totals: 3.43 acres 238

Pre-Condition Composite Curve Number: 69.5

Pre-Condition Runoff Volume Calculation

$$25\text{-yr/24-hr Rainfall Depth (P)} = \frac{8.90}{1} \text{ IN}$$

$$\text{CN} = \frac{69.5}{1}$$

$$\text{Drainage Area (A)} = \frac{3.43}{1} \text{ AC}$$

Potential maximum retention after runoff begins (S) and S is:

$$(S) = \frac{1000}{\text{CN}-10} = \frac{4.39}{1} \text{ IN}$$

$$\text{Runoff Depth (Q)} = \frac{(P-0.2S)^2}{(P+0.8S)} = \frac{5.18}{1} \text{ IN}$$

$$\text{Pre-Condition Runoff Volume (V}_{\text{PRE}}) = A \times Q = \frac{1.48}{1} \text{ AC-FT}$$

Post-Condition Curve Number Calculation

Land Use Description	Soil Map Unit	Hydrologic Group	Area		CN	Product
Impervious Roadway	--	--	2.35	acres	98	231
Sod/Grass	19, 42	A	0.42	acres	39	16
Subtotal:			2.77	acres		
Pond Impervious	--	--	0.41	acres	100	41
Pond Pervious	19, 42	A	0.25	acres	39	10

Totals: 3.43 acres 298

Post-Condition Composite Curve Number: 86.8

Post-Condition Runoff Volume Calculation

$$25\text{-yr/24-hr Rainfall Depth (P)} = \frac{8.90}{1} \text{ IN}$$

$$\text{CN} = \frac{86.8}{1}$$

$$\text{Drainage Area (A)} = \frac{3.43}{1} \text{ AC}$$

Potential maximum retention after runoff begins (S) and S is:

$$(S) = \frac{1000}{\text{CN}-10} = \frac{1.52}{1} \text{ IN}$$

$$\text{Runoff Depth (Q)} = \frac{(P-0.2S)^2}{(P+0.8S)} = \frac{7.30}{1} \text{ IN}$$

$$\text{Post-Condition Runoff Volume (V}_{\text{POST}}) = A \times Q = \frac{2.09}{1} \text{ AC-FT}$$

Required Attenuation Volume = V_{POST} - V_{PRE} =	0.61 AC-FT
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Pond 2A: Existing Wet Pond Treatment Volume Calculation

Drainage Area = 3.43 Acres
 Treatment Volume Required = 1.0 Inch
 Treatment Volume Required = 0.29 Acre-Feet

Pond Size Estimation

Soil Data

NRCS Soils at Pond Site: 19 - Duette

Average High Water Depth = 4.0 Ft (From Manatee County Soil Survey)

Modifications to Existing Pond

Treatment plus Attenuation Volume Required =	<u>0.50</u>	Acre-Feet	(Excavation is needed to provided the required treatment and attenuation volume)
Average Surface Area of Pond =	<u>0.80</u>	Acre	
Additional Depth Needed in Pond=	<u>0.63</u>	Feet	
Additional Depth Needed in Pond=	<u>7.5</u>	Inches	

Curve Number and Runoff Volume Calculation (FDOT 100YR/24HR)

Basin 2B:

Pre-Condition Curve Number Calculation

Land Use Description	Soil Map Unit	Hydrologic Group	Area		CN	Product
Impervious Roadway	--	--	2.79	acres	98	274
Sod/Grass	19, 42	A, A/D	1.57	acres	39	61
Additional ROW			0.00	acres	39	0
Pond Site			0.86	acres	39	33
Totals:			5.22	acres		368
Pre-Condition Composite Curve Number:					70.6	

Pre-Condition Runoff Volume Calculation

$$25\text{-yr}/24\text{-hr Rainfall Depth (P)} = \frac{8.90}{1} \text{ IN}$$

$$\text{CN} = \frac{70.6}{1}$$

$$\text{Drainage Area (A)} = \frac{5.22}{1} \text{ AC}$$

Potential maximum retention after runoff begins (S) and S is:

$$(S) = \frac{1000}{\text{CN}-10} = \frac{4.17}{1} \text{ IN}$$

$$\text{Runoff Depth (Q)} = \frac{(P-0.2S)^2}{(P+0.8S)} = \frac{5.32}{1} \text{ IN}$$

$$\text{Pre-Condition Runoff Volume (V}_{\text{PRE}}) = A \times Q = \frac{2.31}{1} \text{ AC-FT}$$

Post-Condition Curve Number Calculation

Land Use Description	Soil Map Unit	Hydrologic Group	Area		CN	Product
Impervious Roadway	--	--	3.71	acres	98	363
Sod/Grass	19, 42	A, A/D	0.65	acres	39	26
Subtotal:			4.36	acres		
Pond Impervious	--	--	0.21	acres	100	21
Pond Pervious	19, 42	A, A/D	0.65	acres	39	25
Totals:			5.22	acres		435
Post-Condition Composite Curve Number:					83.4	

Post-Condition Runoff Volume Calculation

$$25\text{-yr}/24\text{-hr Rainfall Depth (P)} = \frac{8.90}{1} \text{ IN}$$

$$\text{CN} = \frac{83.4}{1}$$

$$\text{Drainage Area (A)} = \frac{5.22}{1} \text{ AC}$$

Potential maximum retention after runoff begins (S) and S is:

$$(S) = \frac{1000}{\text{CN}-10} = \frac{2.00}{1} \text{ IN}$$

$$\text{Runoff Depth (Q)} = \frac{(P-0.2S)^2}{(P+0.8S)} = \frac{6.88}{1} \text{ IN}$$

$$\text{Post-Condition Runoff Volume (V}_{\text{POST}}) = A \times Q = \frac{2.99}{1} \text{ AC-FT}$$

Required Attenuation Volume = V_{POST} - V_{PRE} =	0.68 AC-FT
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Pond 2B: Wet Pond

Treatment Volume Calculation

Drainage Area = 5.22 Acres
 Treatment Volume Required = 1.0 Inch
 Treatment Volume Required = 0.43 Acre-Feet

Pond Size Estimation

Soil Data

NRCS Soils at Pond Site: 42 - Pomello

Average High Water Depth = 2.5 Ft (From Manatee County Soil Survey)

Pond Vertical Constraints

Roadway Edge of Pavement Low Elevation = 18.0 Feet
 Average Existing Ground Elevation at Pond Site = 16.0 Feet
 Seasonal High Water Table Elevation at Pond Site = 13.5 Feet
 Available Depth for Treatment and Attenuation = 4.5 Feet
 Actual Depth of Treatment and Attenuation = 4.0 Feet

Pond Elevations

Bottom of Treatment Volume Elevation = 13.0 Feet (Liner Required)
 Top of Treatment Volume Elevation = 14.9 Feet
 Top of Attenuation Volume Elevation = 17.0 Feet
 Proposed Bottom of Berm Elevation = 18.0 Feet
 Proposed Top of Berm Elevation = 19.5 Feet

Pond Size

Square Dimension at Bottom of Treatment Depth = 95 Feet
 Square Dimension at Top of Treatment Depth = 110 Feet
 Square Dimension at Top of Attenuation Depth = 127 Feet
 Square Dimension Bottom of Berm = 135 Feet
 Square dimension at top berm = 165 Feet
 Outside pond dimensions (including tie-down) = 193 Feet

Minimum Total Area Required = 0.94 Acres (10% SAFETY FACTOR)

Stage-Storage Calculation

Elevation	Area	Area	Incremental Volume	Total Volume	Total Volume	REMARKS
(ft)	(sf)	(ac)	(cf)	(cf)	(ac-ft)	
13.00	9025	0.21	0	0	0.00	
14.85	12056	0.28	19500	19500	0.45	<i>Top of TV</i>
17.00	16129	0.37	30299	49799	1.14	<i>Top of AV</i>
18.00	18225	0.42	17177	66976	1.54	<i>Bottom of Berm</i>

Required Treatment Volume = 0.43 Acre-Feet
Provided Treatment Volume = 0.45 Acre-Feet ✓

Required Attenuation Volume = 0.68 Acre-Feet
Provided Attenuation Volume = 0.69 Acre-Feet ✓

Curve Number and Runoff Volume Calculation (FDOT 100YR/24HR)

Basin 2C:

Pre-Condition Curve Number Calculation

Land Use Description	Soil Map Unit	Hydrologic Group	Area		CN	Product
Impervious Roadway	--	--	2.79	acres	98	274
Sod/Grass	19, 42	A, A/D	1.57	acres	39	61
Additional ROW			0.00	acres	39	0
Pond Site			0.91	acres	39	35
Totals:			5.27	acres		370
Pre-Condition Composite Curve Number:					70.2	

Pre-Condition Runoff Volume Calculation

$$25\text{-yr}/24\text{-hr Rainfall Depth (P)} = \frac{8.90}{1} \text{ IN}$$

$$\text{CN} = \frac{70.2}{1}$$

$$\text{Drainage Area (A)} = \frac{5.27}{1} \text{ AC}$$

Potential maximum retention after runoff begins (S) and S is:

$$(S) = \frac{1000}{\text{CN}-10} = \frac{4.24}{1} \text{ IN}$$

$$\text{Runoff Depth (Q)} = \frac{(P-0.2S)^2}{(P+0.8S)} = \frac{5.28}{1} \text{ IN}$$

$$\text{Pre-Condition Runoff Volume (V}_{\text{PRE}}) = A \times Q = \frac{2.32}{1} \text{ AC-FT}$$

Post-Condition Curve Number Calculation

Land Use Description	Soil Map Unit	Hydrologic Group	Area		CN	Product
Impervious Roadway	--	--	3.71	acres	98	363
Sod/Grass	19, 42	A, A/D	0.65	acres	39	26
Subtotal:			4.36	acres		
Pond Impervious	--	--	0.36	acres	100	36
Pond Pervious	19, 42	A, A/D	0.55	acres	39	21
Totals:			5.27	acres		446
Post-Condition Composite Curve Number:					84.7	

Post-Condition Runoff Volume Calculation

$$25\text{-yr}/24\text{-hr Rainfall Depth (P)} = \frac{8.90}{1} \text{ IN}$$

$$\text{CN} = \frac{84.7}{1}$$

$$\text{Drainage Area (A)} = \frac{5.27}{1} \text{ AC}$$

Potential maximum retention after runoff begins (S) and S is:

$$(S) = \frac{1000}{\text{CN}-10} = \frac{1.81}{1} \text{ IN}$$

$$\text{Runoff Depth (Q)} = \frac{(P-0.2S)^2}{(P+0.8S)} = \frac{7.04}{1} \text{ IN}$$

$$\text{Post-Condition Runoff Volume (V}_{\text{POST}}) = A \times Q = \frac{3.09}{1} \text{ AC-FT}$$

Required Attenuation Volume = V_{POST} - V_{PRE} =	0.78 AC-FT
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Pond 2C: Wet Pond

Treatment Volume Calculation

Drainage Area = 5.27 Acres
 Treatment Volume Required = 1.0 Inch
 Treatment Volume Required = 0.44 Acre-Feet

Pond Size Estimation

Soil Data

NRCS Soils at Pond Site: 19 - Duette
42 - Pomello

Average High Water Depth = 4.0 Ft (From Manatee County Soil Survey)

Pond Vertical Constraints

Roadway Edge of Pavement Low Elevation = 18.0 Feet
 Average Existing Ground Elevation at Pond Site = 18.0 Feet
 Seasonal High Water Table Elevation at Pond Site = 14.0 Feet
 Available Depth for Treatment and Attenuation = 4.0 Feet
 Actual Depth of Treatment and Attenuation = 3.0 Feet

Pond Elevations

Bottom of Treatment Volume Elevation = 14.0 Feet
 Top of Treatment Volume Elevation = 15.3 Feet
 Top of Attenuation Volume Elevation = 17.0 Feet
 Proposed Bottom of Berm Elevation = 18.0 Feet
 Proposed Top of Berm Elevation = 19.5 Feet

Pond Size

Square Dimension at Bottom of Treatment Depth = 125 Feet
 Square Dimension at Top of Treatment Depth = 135 Feet
 Square Dimension at Top of Attenuation Depth = 149 Feet
 Square Dimension Bottom of Berm = 157 Feet
 Square dimension at top berm = 187 Feet
 Outside pond dimensions (including tie-down) = 199 Feet

Minimum Total Area Required = 1.00 Acres (10% SAFETY FACTOR)

Stage-Storage Calculation

Elevation	Area	Area	Incremental Volume	Total Volume	Total Volume	REMARKS
(ft)	(sf)	(ac)	(cf)	(cf)	(ac-ft)	
14.00	15625	0.36	0	0	0.00	
15.30	18333	0.42	22073	22073	0.51	<i>Top of TV</i>
17.00	22201	0.51	34454	56527	1.30	<i>Top of AV</i>
18.00	24649	0.57	23425	79952	1.84	<i>Bottom of Berm</i>

Required Treatment Volume = 0.44 Acre-Feet
Provided Treatment Volume = 0.51 Acre-Feet ✓

Required Attenuation Volume = 0.78 Acre-Feet
Provided Attenuation Volume = 0.79 Acre-Feet ✓

Curve Number and Runoff Volume Calculation (FDOT 100YR/24HR)

Basin 2D:

Pre-Condition Curve Number Calculation

Land Use Description	Soil Map Unit	Hydrologic Group	Area		CN	Product
Impervious Roadway	--	--	1.61	acres	98	157
Sod/Grass	19, 42	A/D	0.90	acres	39	35
Additional ROW			0.00	acres	39	0
Pond Site			0.74	acres	37	28
Totals:			3.25	acres		220
Pre-Condition Composite Curve Number:					67.7	

Pre-Condition Runoff Volume Calculation

$$25\text{-yr/24-hr Rainfall Depth (P)} = \frac{8.90}{1} \text{ IN}$$

$$\text{CN} = \frac{67.7}{1}$$

$$\text{Drainage Area (A)} = \frac{3.25}{1} \text{ AC}$$

Potential maximum retention after runoff begins (S) and S is:

$$(S) = \frac{1000}{\text{CN}-10} = \frac{4.78}{1} \text{ IN}$$

$$\text{Runoff Depth (Q)} = \frac{(P-0.2S)^2}{(P+0.8S)} = \frac{4.96}{1} \text{ IN}$$

$$\text{Pre-Condition Runoff Volume (V}_{\text{PRE}}) = A \times Q = \frac{1.34}{1} \text{ AC-FT}$$

Post-Condition Curve Number Calculation

Land Use Description	Soil Map Unit	Hydrologic Group	Area		CN	Product
Impervious Roadway	--	--	2.13	acres	98	209
Sod/Grass	19, 42	A/D	0.38	acres	39	15
Subtotal:			2.51	acres		
Pond Impervious	--	--	0.28	acres	100	28
Pond Pervious	19, 42	A/D	0.47	acres	39	18
Totals:			3.25	acres		270
Post-Condition Composite Curve Number:					82.9	

Post-Condition Runoff Volume Calculation

$$25\text{-yr/24-hr Rainfall Depth (P)} = \frac{8.90}{1} \text{ IN}$$

$$\text{CN} = \frac{82.9}{1}$$

$$\text{Drainage Area (A)} = \frac{3.25}{1} \text{ AC}$$

Potential maximum retention after runoff begins (S) and S is:

$$(S) = \frac{1000}{\text{CN}-10} = \frac{2.06}{1} \text{ IN}$$

$$\text{Runoff Depth (Q)} = \frac{(P-0.2S)^2}{(P+0.8S)} = \frac{6.83}{1} \text{ IN}$$

$$\text{Post-Condition Runoff Volume (V}_{\text{POST}}) = A \times Q = \frac{1.85}{1} \text{ AC-FT}$$

Required Attenuation Volume = V_{POST} - V_{PRE} =	0.51 AC-FT
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Pond 2D: Wet Pond

Treatment Volume Calculation

Drainage Area = 3.25 Acres
 Treatment Volume Required = 1.0 Inch
 Treatment Volume Required = 0.27 Acre-Feet

Pond Size Estimation

Soil Data

NRCS Soils at Pond Site: 20 - EauGallie

Average High Water Depth = 1.0 Ft (From Manatee County Soil Survey)

Pond Vertical Constraints

Roadway Edge of Pavement Low Elevation = 22.0 Feet
 Average Existing Ground Elevation at Pond Site = 22.0 Feet
 Seasonal High Water Table Elevation at Pond Site = 21.0 Feet
 Available Depth for Treatment and Attenuation = 1.0 Feet
 Actual Depth of Treatment and Attenuation = 2.5 Feet

Pond Elevations

Bottom of Treatment Volume Elevation = 18.5 Feet (Liner Required)
 Top of Treatment Volume Elevation = 19.5 Feet
 Top of Attenuation Volume Elevation = 21.0 Feet
 Proposed Bottom of Berm Elevation = 22.0 Feet
 Proposed Top of Berm Elevation = 23.5 Feet

Pond Size

Square Dimension at Bottom of Treatment Depth = 110 Feet
 Square Dimension at Top of Treatment Depth = 118 Feet
 Square Dimension at Top of Attenuation Depth = 130 Feet
 Square Dimension Bottom of Berm = 138 Feet
 Square dimension at top berm = 168 Feet
 Outside pond dimensions (including tie-down) = 180 Feet

Minimum Total Area Required = 0.82 Acres (10% SAFETY FACTOR)

Stage-Storage Calculation

Elevation	Area	Area	Incremental Volume	Total Volume	Total Volume	REMARKS
(ft)	(sf)	(ac)	(cf)	(cf)	(ac-ft)	
18.50	12100	0.28	0	0	0.00	
19.50	13924	0.32	13012	13012	0.30	<i>Top of TV</i>
21.00	16900	0.39	23118	36130	0.83	<i>Top of AV</i>
22.00	19044	0.44	17972	54102	1.24	<i>Bottom of Berm</i>

Required Treatment Volume = 0.27 Acre-Feet
Provided Treatment Volume = 0.30 Acre-Feet ✓

Required Attenuation Volume = 0.51 Acre-Feet
Provided Attenuation Volume = 0.53 Acre-Feet ✓

Curve Number and Runoff Volume Calculation (FDOT 100YR/24HR)

Basin 2E:

Pre-Condition Curve Number Calculation

Land Use Description	Soil Map Unit	Hydrologic Group	Area		CN	Product
Impervious Roadway	--	--	1.61	acres	98	157
Sod/Grass	19, 42	A/D	0.90	acres	39	35
Additional ROW			0.00	acres	39	0
Pond Site			0.74	acres	37	27
Totals:			3.25	acres		220
Pre-Condition Composite Curve Number:					67.7	

Pre-Condition Runoff Volume Calculation

$$25\text{-yr}/24\text{-hr Rainfall Depth (P)} = \frac{8.90}{1} \text{ IN}$$

$$\text{CN} = \frac{67.7}{1}$$

$$\text{Drainage Area (A)} = \frac{3.25}{1} \text{ AC}$$

Potential maximum retention after runoff begins (S) and S is:

$$(S) = \frac{1000}{\text{CN}-10} = \frac{4.77}{1} \text{ IN}$$

$$\text{Runoff Depth (Q)} = \frac{(P-0.2S)^2}{(P+0.8S)} = \frac{4.96}{1} \text{ IN}$$

$$\text{Pre-Condition Runoff Volume (V}_{\text{PRE}}) = A \times Q = \frac{1.34}{1} \text{ AC-FT}$$

Post-Condition Curve Number Calculation

Land Use Description	Soil Map Unit	Hydrologic Group	Area		CN	Product
Impervious Roadway	--	--	2.13	acres	98	209
Sod/Grass	19, 42	A/D	0.38	acres	39	15
Subtotal:			2.51	acres		
Pond Impervious	--	--	0.33	acres	100	33
Pond Pervious	19, 42	A/D	0.41	acres	39	16
Totals:			3.25	acres		273
Post-Condition Composite Curve Number:					83.9	

Post-Condition Runoff Volume Calculation

$$25\text{-yr}/24\text{-hr Rainfall Depth (P)} = \frac{8.90}{1} \text{ IN}$$

$$\text{CN} = \frac{83.9}{1}$$

$$\text{Drainage Area (A)} = \frac{3.25}{1} \text{ AC}$$

Potential maximum retention after runoff begins (S) and S is:

$$(S) = \frac{1000}{\text{CN}-10} = \frac{1.92}{1} \text{ IN}$$

$$\text{Runoff Depth (Q)} = \frac{(P-0.2S)^2}{(P+0.8S)} = \frac{6.95}{1} \text{ IN}$$

$$\text{Post-Condition Runoff Volume (V}_{\text{POST}}) = A \times Q = \frac{1.88}{1} \text{ AC-FT}$$

Required Attenuation Volume = V_{POST} - V_{PRE} =	0.54 AC-FT
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Pond 2E: Wet Pond Treatment Volume Calculation

Drainage Area = 3.25 Acres
 Treatment Volume Required = 1.0 Inch
 Treatment Volume Required = 0.27 Acre-Feet

Pond Size Estimation

Soil Data

NRCS Soils at Pond Site: 20 - EauGallie

Average High Water Depth = 1.0 Ft (From Manatee County Soil Survey)

Pond Vertical Constraints

Roadway Edge of Pavement Low Elevation = 22.0 Feet
 Average Existing Ground Elevation at Pond Site = 24.0 Feet
 Seasonal High Water Table Elevation at Pond Site = 23.0 Feet
 Available Depth for Treatment and Attenuation = -1.0 Feet
 Actual Depth of Treatment and Attenuation = 2.2 Feet

Pond Elevations

Bottom of Treatment Volume Elevation = 18.8 Feet (Liner Required)
 Top of Treatment Volume Elevation = 19.6 Feet
 Top of Attenuation Volume Elevation = 21.0 Feet
 Proposed Bottom of Berm Elevation = 22.0 Feet
 Proposed Top of Berm Elevation = 23.5 Feet

Pond Size

Square Dimension at Bottom of Treatment Depth = 120 Feet
 Square Dimension at Top of Treatment Depth = 126 Feet
 Square Dimension at Top of Attenuation Depth = 138 Feet
 Square Dimension Bottom of Berm = 146 Feet
 Square dimension at top berm = 176 Feet
 Outside pond dimensions (including tie-down) = 180 Feet

Minimum Total Area Required = 0.81 Acres (10% SAFETY FACTOR)

Stage-Storage Calculation

Elevation	Area	Area	Incremental Volume	Total Volume	Total Volume	REMARKS
(ft)	(sf)	(ac)	(cf)	(cf)	(ac-ft)	
18.80	14400	0.33	0	0	0.00	
19.60	15977	0.37	12151	12151	0.28	<i>Top of TV</i>
21.00	18934	0.43	24438	36588	0.84	<i>Top of AV</i>
22.00	21199	0.49	20067	56655	1.30	<i>Bottom of Berm</i>

Required Treatment Volume = 0.27 Acre-Feet
Provided Treatment Volume = 0.28 Acre-Feet ✓
 Required Attenuation Volume = 0.54 Acre-Feet
Provided Attenuation Volume = 0.56 Acre-Feet ✓

Curve Number and Runoff Volume Calculation (25YR/24HR)

Basin 3A:

Pre-Condition Curve Number Calculation

Land Use Description	Soil Map Unit	Hydrologic Group	Area		CN	Product
Impervious Roadway	--	--	1.26	acres	98	123
Sod/Grass	42	A/D, B/D, CD	0.44	acres	48	21
Additional ROW			0.00	acres	48	0
Pond Site			0.56	acres	43	24
Totals:			2.26	acres		169
Pre-Condition Composite Curve Number:					74.6	

Pre-Condition Runoff Volume Calculation

$$25\text{-yr}/24\text{-hr Rainfall Depth (P)} = \frac{8.90}{1} \text{ IN}$$

$$\text{CN} = \frac{74.6}{1}$$

$$\text{Drainage Area (A)} = \frac{2.26}{1} \text{ AC}$$

Potential maximum retention after runoff begins (S) and S is:

$$(S) = \frac{1000}{\text{CN}-10} = \frac{3.40}{1} \text{ IN}$$

$$\text{Runoff Depth (Q)} = \frac{(P-0.2S)^2}{(P+0.8S)} = \frac{5.81}{1} \text{ IN}$$

$$\text{Pre-Condition Runoff Volume (V}_{\text{PRE}}) = A \times Q = \frac{1.09}{1} \text{ AC-FT}$$

Post-Condition Curve Number Calculation

Land Use Description	Soil Map Unit	Hydrologic Group	Area		CN	Product
Impervious Roadway	--	--	1.45	acres	98	142
Sod/Grass	42	A/D, B/D, CD	0.26	acres	53	14
Subtotal:			1.70	acres		
Pond Impervious	--	--	0.19	acres	100	19
Pond Pervious	42	A/D, B/D, CD	0.37	acres	43	16
Totals:			2.26	acres		190
Post-Condition Composite Curve Number:					84.0	

Post-Condition Runoff Volume Calculation

$$25\text{-yr}/24\text{-hr Rainfall Depth (P)} = \frac{8.90}{1} \text{ IN}$$

$$\text{CN} = \frac{84.0}{1}$$

$$\text{Drainage Area (A)} = \frac{2.26}{1} \text{ AC}$$

Potential maximum retention after runoff begins (S) and S is:

$$(S) = \frac{1000}{\text{CN}-10} = \frac{1.90}{1} \text{ IN}$$

$$\text{Runoff Depth (Q)} = \frac{(P-0.2S)^2}{(P+0.8S)} = \frac{6.96}{1} \text{ IN}$$

$$\text{Post-Condition Runoff Volume (V}_{\text{POST}}) = A \times Q = \frac{1.31}{1} \text{ AC-FT}$$

Required Attenuation Volume = V_{POST} - V_{PRE} =	0.22 AC-FT
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Pond 3A: Wet Pond

Treatment Volume Calculation

Drainage Area = 2.26 Acres
 Treatment Volume Required = 1.0 Inch
 Treatment Volume Required = 0.19 Acre-Feet

Pond Size Estimation

Soil Data

NRCS Soils at Pond Site: 42 - Pomello

Average High Water Depth = 2.5 Ft (From Manatee County Soil Survey)

Pond Vertical Constraints

Roadway Edge of Pavement Low Elevation = 24.0 Feet
 Average Existing Ground Elevation at Pond Site = 24.0 Feet
 Seasonal High Water Table Elevation at Pond Site = 21.5 Feet
 Available Depth for Treatment and Attenuation = 2.5 Feet
 Actual Depth of Treatment and Attenuation = 2.0 Feet

Pond Elevations

Bottom of Treatment Volume Elevation = 21.0 Feet (Liner Required)
 Top of Treatment Volume Elevation = 22.0 Feet
 Top of Attenuation Volume Elevation = 23.0 Feet
 Proposed Bottom of Berm Elevation = 24.0 Feet
 Proposed Top of Berm Elevation = 25.5 Feet

Pond Size

Square Dimension at Bottom of Treatment Depth = 90 Feet
 Square Dimension at Top of Treatment Depth = 98 Feet
 Square Dimension at Top of Attenuation Depth = 106 Feet
 Square Dimension Bottom of Berm = 114 Feet
 Square dimension at top berm = 144 Feet
 Outside pond dimensions (including tie-down) = 156 Feet

Minimum Total Area Required = 0.61 Acres (10% SAFETY FACTOR)

Stage-Storage Calculation

Elevation	Area	Area	Incremental Volume	Total Volume	Total Volume	REMARKS
(ft)	(sf)	(ac)	(cf)	(cf)	(ac-ft)	
21.00	8100	0.19	0	0	0.00	
22.00	9604	0.22	8852	8852	0.20	<i>Top of TV</i>
23.00	11236	0.26	10420	19272	0.44	<i>Top of AV</i>
24.00	12996	0.30	12116	31388	0.72	<i>Bottom of Berm</i>

Required Treatment Volume = 0.19 Acre-Feet
Provided Treatment Volume = 0.20 Acre-Feet ✓

Required Attenuation Volume = 0.22 Acre-Feet
Provided Attenuation Volume = 0.24 Acre-Feet ✓



Project Development and Corridor Study Report

County Project Manager: Eric S. Shroyer, P.E.

Manatee County Public Works

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