PRELIMINARY ENGINEERING REPORT

Florida Department of Transportation

District 1

Palmetto Trails Network PD&E Study

Green Bridge at the intersection of Riverside Drive and U.S. 41 Business to Washington Park

Manatee County, Florida

Financial Management Number: 444857-1

ETDM Number: 14421

11/18/2026

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to 23 U.S.C. §327 and a Memorandum of Understanding dated May 26, 2022, and executed by Federal Highway Administration and FDOT.

PROFESSIONAL ENGINEER CERTIFICATION

PRELIMINARY ENGINEERING REPORT

Project: Palmetto Trails Network PD&E Study

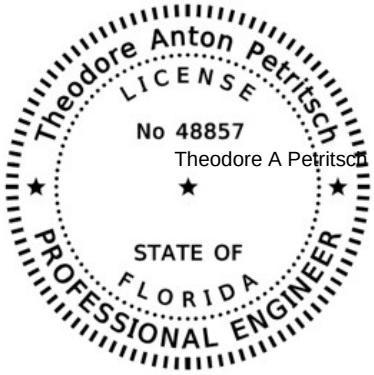
ETDM Number: 14421

Financial Project ID: 444857-1-22-01

Federal Aid Project Number: D120 13 B

This preliminary engineering report contains engineering information that fulfills the purpose and need for the Palmetto Trails Network Project Development & Environment Study from the Green Bridge at the intersection of Riverside Drive and U.S. 41 Business to Washington Park 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 Landis Evans + Partners, Inc., and that I have prepared or approved the evaluation, findings, opinions, conclusions or technical advice for this project.



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1.0 PROJECT SUMMARY

1.1 Project Description

In 2020, the Florida Department of Transportation (FDOT), District One, on behalf of Manatee County, initiated a Project Development and Environment (PD&E) Study (FPID 444857-1) to develop the Palmetto Trails Network Plan connecting Connor Park, the Manatee County Area Transit (MCAT) Palmetto Transit Station and Park and Ride on 7th Ave., Coach Eddie Shannon Park, and Washington Park.

The purpose of the Palmetto Trails Network project is to reestablish multimodal, community connections throughout the City of Palmetto and Manatee County. Other goals of the project are to provide safe and viable travel options for the community to access area destinations and support quality of life and economic objectives of the surrounding area.

A collection of pathways, known collectively as the Palmetto Trails Network Plan (PTNP), are one of six transportation improvements proposed in Manatee County's Better Utilizing Investments to Leverage Development (BUILD)/Rebuilding American Infrastructure with Sustainability and Equity (RAISE)/Transportation, Housing and Urban Development (T-HUD) Grant applications. The alignment in the original BUILD Grant application is shown in **FIGURE 1-1**. The Southern Section of the proposed network, connecting Business U.S. 41 at the Manatee River to the Dr. Martin Luther King, Jr. Trail was not initially in the FDOT's PD&E Study scope, for budget reasons. The Middle Section includes shared use path segments between the Palmetto Youth Center, Dr. Martin Luther King, Jr. Trail, Lincoln Memorial Middle School, and Coach Eddie Shannon Park (formerly known as Lincoln Park). The Northern Section includes the development of shared use path segments ultimately connecting Coach Eddie Shannon Park to Washington Park.

In 2024, the southern end of the project, now connecting Connor Park to the Dr. Martin Luther King, Jr. Trail, was added back into the PD&E Study.

1.0 PROJECT SUMMARY

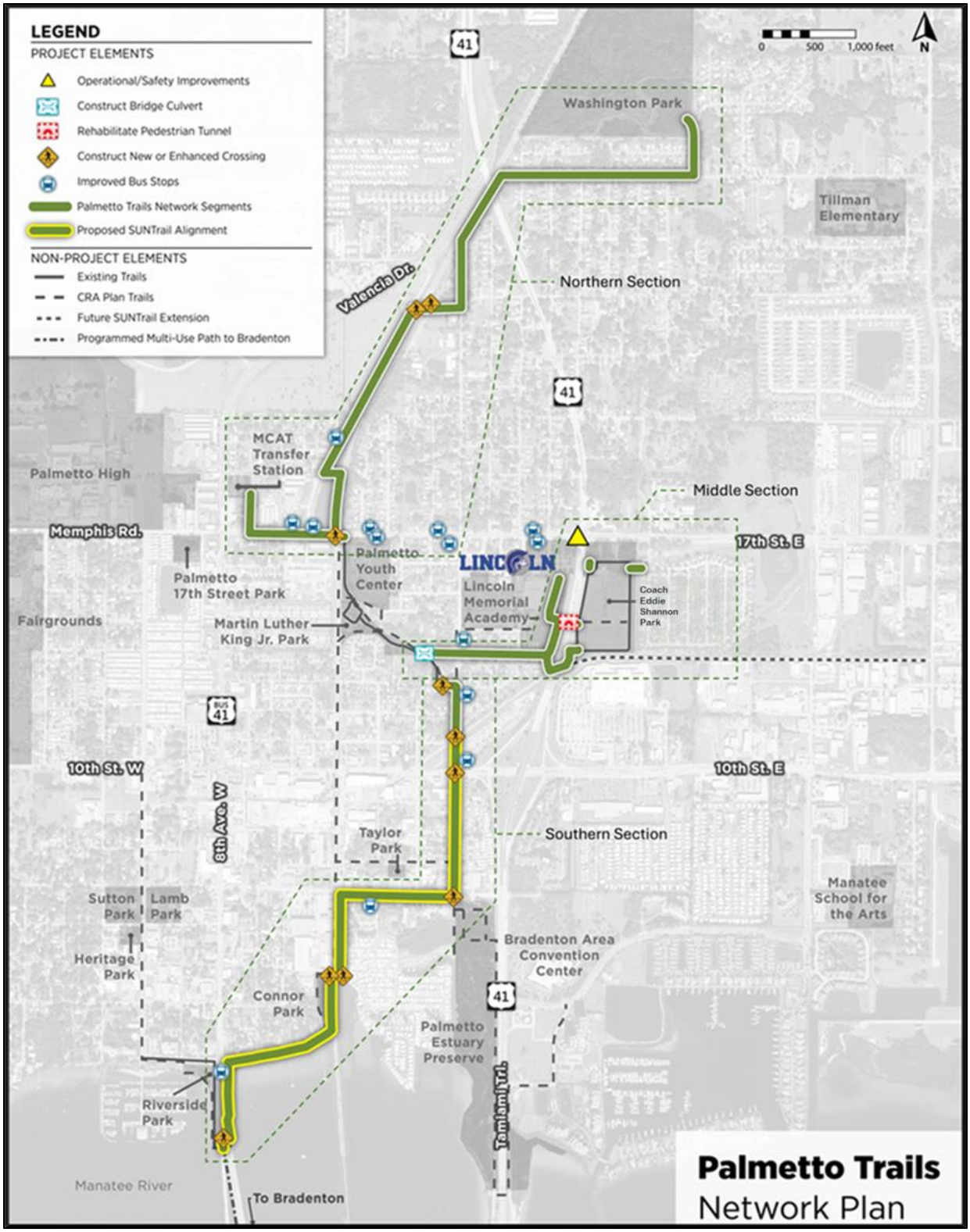


FIGURE 1-1 Original BUILD Grant alignment and project limits.

1.0 PROJECT SUMMARY

An Efficient Transportation Decision Making (ETDM) Programming Screening for the Middle and Northern Sections of the Palmetto Trails Network PD&E Study was completed 2020 under ETDM Project #14421. The Programming Screen Summary Report can be viewed by the Environmental Technical Advisory Team (ETAT) members on the ETDM website. Non-ETAT agencies can view the Programming Screen Summary Report on the public access website located at: https://etdmpub.fla-etat.org/est/pub/ProjectDetails.do?projectId=14421.

Since the start of the PD&E Study in 2020 and distribution of the Advance Notification (AN) Package dated November 12, 2019, there have been project refinements. While there are no changes proposed for the Middle Section, the Northern Section has been revised from the alignment previously reviewed by the ETAT during the ETDM screening.

The original proposed alignment along Bayshore Road and the CSX Railroad tracks (west of U.S. 41) was shown within Manatee County's BUILD/RAISE/T-HUD Grant applications. Following preliminary coordination with CSX Railroad that occurred after the ETDM screening, the prior BUILD/RAISE/T-HUD alignment was determined not feasible due to multiple potential conflicts with CSX Railroad right-of-way (ROW) and necessary safety criteria. As a result, the Northern Section alignment was shifted approximately 0.4 to 0.6 miles east to better serve the needs of the existing residential community east of U.S. 41, while maintaining connections to Coach Eddie Shannon Park and Washington Park.

With the adjustment of the Northern Section Route to east of U.S. 41, a distinct Middle Section was created that connects the MCAT Station on 7th Ave. W to the Dr. Martin Luther King, Jr. Trail through Dr. Martin Luther King, Jr. Park, and west from Dr. Martin Luther King, Jr. Park to Coach Eddie Shannon Park.

In addition to this change, the FDOT and Manatee County expanded the PD&E Study limits in Summer 2024 to include a proposed shared use pathway through the City of Palmetto, known as the Southern Section. The Southern Section involved the evaluation of shared use path segments and low-stress shared-street facilities (e.g., traffic calming, shared bicycle markings on the road, and sidewalks) beginning at Connor Park and ending at Dr. Martin Luther King, Jr. Park. Given that the Southern Section of the project was not screened through the ETDM process, an Area of Interest (AOI) analysis was conducted to note potential resources in the area that could possibly be affected by this alignment if it advances. This update was provided to the ETAT on April 3, 2025.

The final study area is represented in **FIGURE 1-2**. The lines are shown to represent the beginning and endpoints of the Palmetto Trails Plan PD&E Study, not actual evaluated alignments.



FIGURE 1-2 Palmetto Trails Plan PD&E Study limits.

1.2 Purpose & Need

The purpose of the Palmetto Trails Network Plan (PTNP) is to reestablish multimodal, community connections throughout the City of Palmetto, Manatee County, that were previously lost through the construction of U.S. 41. Other goals of the project are to

1) provide safe and viable travel options for the community to access area destinations and
2) support quality of life and economic objectives of the surrounding area.

Over the course of this project, the alignments have changed, as have the terminal points of the study corridor. However, the Purpose and Need for the project remain the same.

The need for the proposed project is based on the following criteria:

Area Wide Network / System Linkage: Regional Bicycle and Pedestrian Connectivity
The study area has limited dedicated bicycle facilities. The only roadway with bike lanes is 17th St E. The majority of the roadway network includes residential streets. However, the major highways which are crossed by these residential streets are typically uncontrolled at the crossing location. Sidewalks are present on the arterial roadways and collectors. On local roadways, sidewalks are less common. These local sidewalks are generally less than 5 feet wide and often have utility poles located within their width.

Safety: Provide Safe Multimodal Access to Destinations
As stated in the PTNP BUILD/RAISE/T-HUD Grant Application (July 2018), both pedestrian and bicycle fatality rates within the urban areas of the City of Palmetto and City of Bradenton are significantly higher [28.0% and 17.0% respectively] than national averages [14.0% and 2.3%]. Over the last five years (2021–2025), there were a total of 100 pedestrian and bicycle crashes, consisting of 99 long-form crashes and 1 short-form crash, based on crash data obtained from Signal Four Analytics. Among these crashes, 8 resulted in fatalities, and 15 resulted in serious injuries.

Most of the roadways in the PTNP have substandard two-lane designs and limited rights-of-way to accommodate bicycle/pedestrian facilities and/or improved drainage features. Specifically, the majority of roadways under consideration have no sidewalks and exhibit substantial sidewalk gaps.

Social and Economic Demand: Enhance Quality of Life and Support Economic Development
The PTNP area consists of a large transit dependent population composed primarily of minority and low-income populations, as well as housing units with no vehicle available. Compared to the demographic characteristics for Manatee County, the project analysis areas [which consist of United States Census block groups within a 500-ft buffer of each project segment] contain higher percentages of minority populations, individuals age 18 and under, and housing units with no vehicle available and notably lower median family incomes. These demographic characteristics

indicate the presence of populations with a higher propensity to walk, bike, or take transit to access essential services.

The study area is mostly within the Palmetto Community Redevelopment Area (CRA). CRAs are recognized as special districts under Florida Statute created to encourage investment within the district through a series of strategic and timely public investments; activities that occur within them are detailed in customized redevelopment plans and include infrastructure improvements, streetscaping or beautification treatments, affordable housing, recreation and park facility improvements, economic development/redevelopment strategies, transportation improvements, and neighborhood enhancement.

1.3 Commitments

No commitments have been identified as of the submittal of this Preliminary Engineering Report (PER).

1.4 Alternatives Analysis Summary

This summary documents three stages of the process used to develop, evaluate, and determine the recommended alternative. These stages are the Initial Route Alternatives, beginning with the BUILD/RAISE/T-HUD Grant alignment and initial alignment alternatives, the Refined Route Alternatives, which were based on the selected alternative form the initial alternatives, and the Final PD&E alternatives which were based on the recommended alignment selected from the refined route alternatives.

The initial scope for the PD&E Study was limited to the Middle and Northern Sections of the Palmetto Trails Plan. In the summer of 2024, Manatee County expanded the PD&E Study limits to include a proposed shared use pathway through the City of Palmetto, known as the Southern Section. The Southern Section involves the evaluation of shared use path segments and low-stress shared-street facilities (e.g., traffic calming, shared bicycle markings on the road, and sidewalks) beginning at Connor Park and ending at Dr. Martin Luther King, Jr. Park. Given that the Southern Section of the project was not screened through the ETDM process, an AOI analysis was conducted to note potential resources in the area that could possibly be affected by this alignment if it advances. This update was provided to the ETAT on April 3, 2025.

The Middle and Northern Sections evaluations were substantially completed when the Southern Section was added to the Study scope. Consequently, this report often discusses these sections beginning with the Middle and Northern Sections, followed by discussion of the Southern Section.

1.4.1 Middle and Northern Initial Route Alternatives

1.4.1.1 Middle Section Route

The Middle Section route of the Palmetto Trails Network PD&E Study retained the alignment proposed in the BUILD Grant. The Middle Section connects the MCAT transfer station on 7th Ave. W to Dr. Martin Luther King, Jr. Park, and continues to Coach Eddie Shannon Park. The Northern Section of the Study connects Coach Eddie Shannon Park to Washington Park. **FIGURE 1-3** shows the Middle Section's study segments as an orange line.

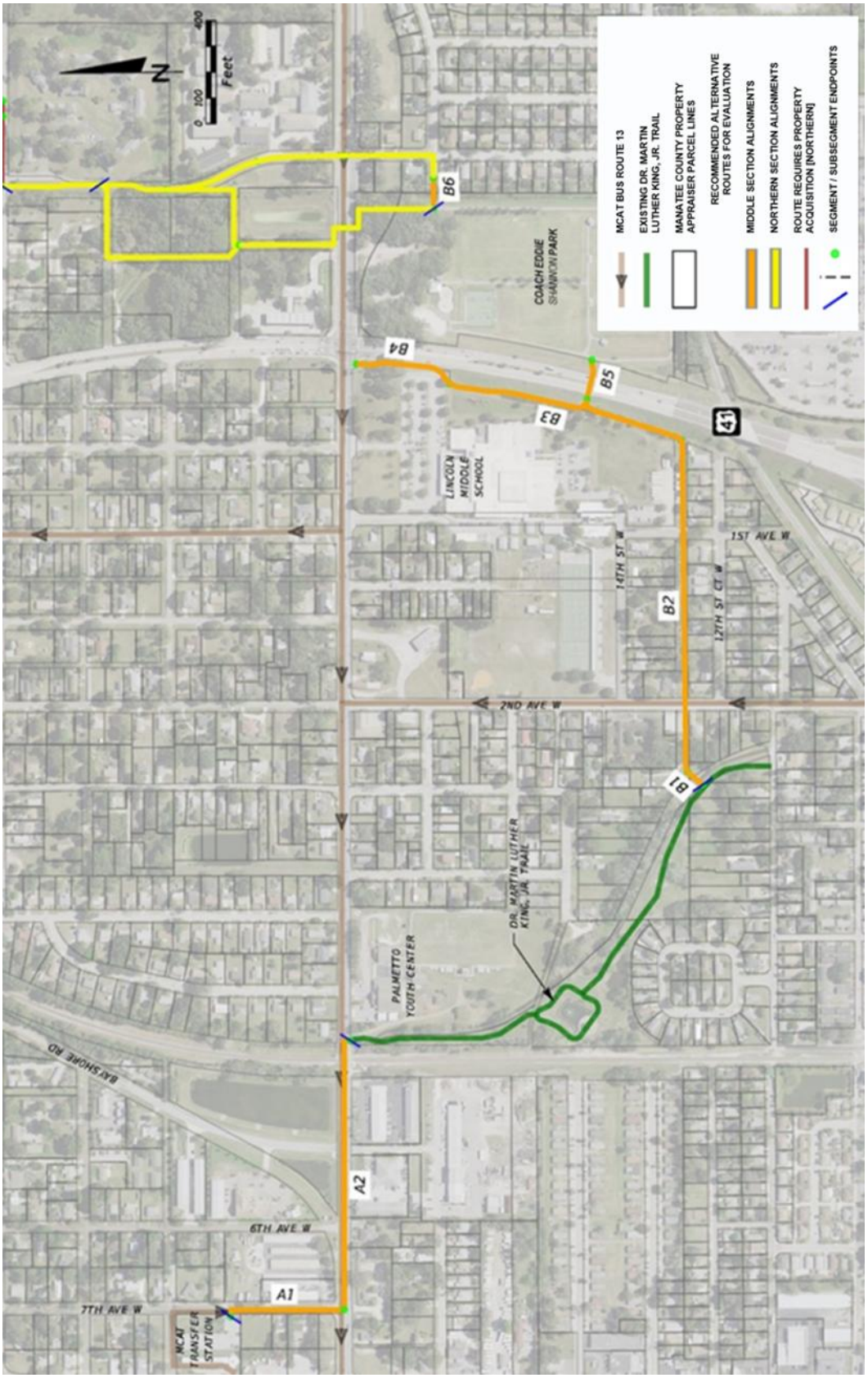


FIGURE 1-3 Initial refined route alternatives – Middle Section.

1.4.1.2 Northern Section Route Alternatives

The initial alignment for the Northern Section followed the proposal of the BUILD/RAISE Grant application submitted by Manatee County in 2018 and connected the Palmetto Youth Center with Washington Park via a path along Bayshore Boulevard, a railroad crossing at 25th St. W and, near the northern end, the use of an underpass within CSX right of way (**FIGURE 1-4**). This BUILD/RAISE Grant alignment would not have provided the CSX-required separation from their rails and was denied further review by CSX during the beginning stages of the PD&E Study. After coordination with the key stakeholders of the area, namely Manatee County and City of Palmetto representatives and the Community Pastors' Association, wherein general corridor alternatives were developed and presented (**FIGURE 1-5**), the area east of U.S. 41 (henceforth referred to as the Northern Section) was identified as the general corridor area through which alternative alignments could be considered to provide a (trail) connection between Coach Eddie Shannon and Washington Park as part of the Palmetto Trails Network.

1.4.2 Middle and Northern Sections Refined Route Alternatives

Prior to determining the new route alignments in this new general corridor, five focus group meetings were held throughout the Palmetto neighborhoods in the study area. The primary goals of these focus group meetings were to enable the Project Team to gain preliminary insight after the alignment change and understand the community needs which could be served by the trail network. It was through the consideration of the comments at the focus groups and evaluation of the anecdotal survey results that the refined route alternatives in **FIGURE 1-3** and **FIGURE 1-6** were developed.

Community-wide outreach was then accomplished to solidify trip purpose and factors of importance in the community. This, in combination with initial engineering analysis, led to further refinement of the route alternatives as shown in **FIGURE 1-7**.

A discussion of the focus group and community-wide outreach feedback is included in **Section 6.1.2.**



FIGURE 1-4 Initial BUILD Grant route.

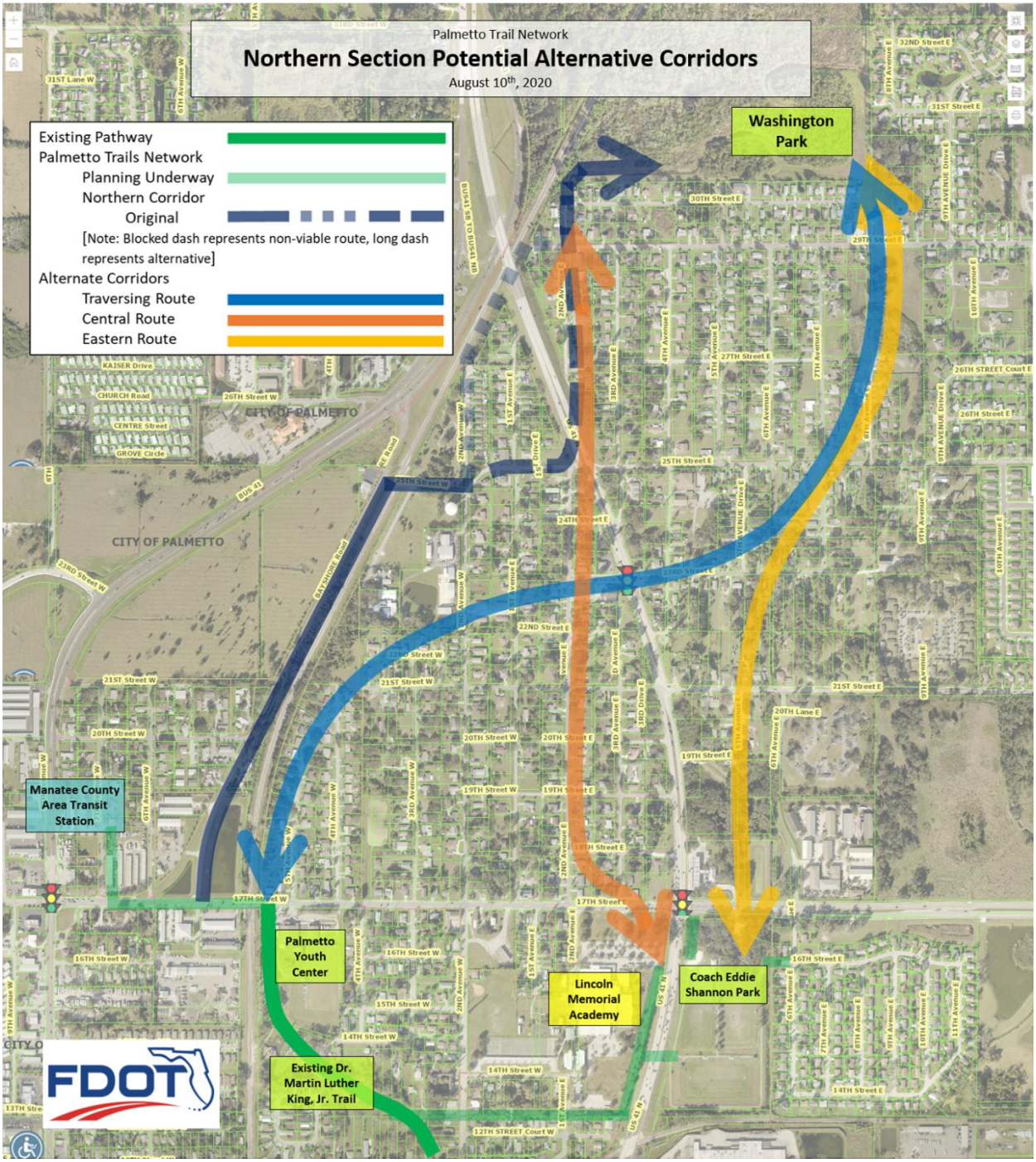


FIGURE 1-5 Northern Section route alternatives.

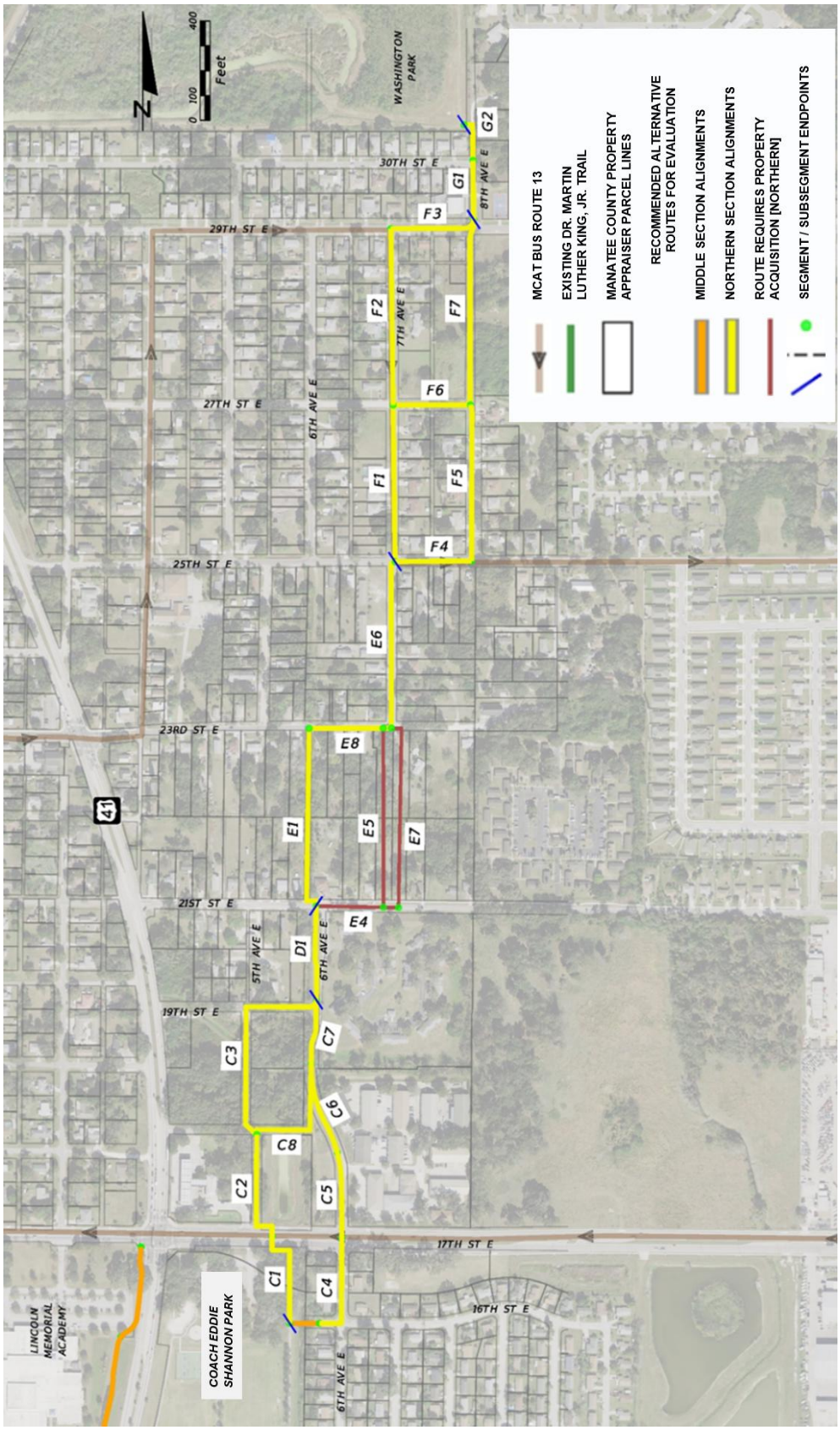


FIGURE 1-6 Initial refined route alternatives – Northern Section.

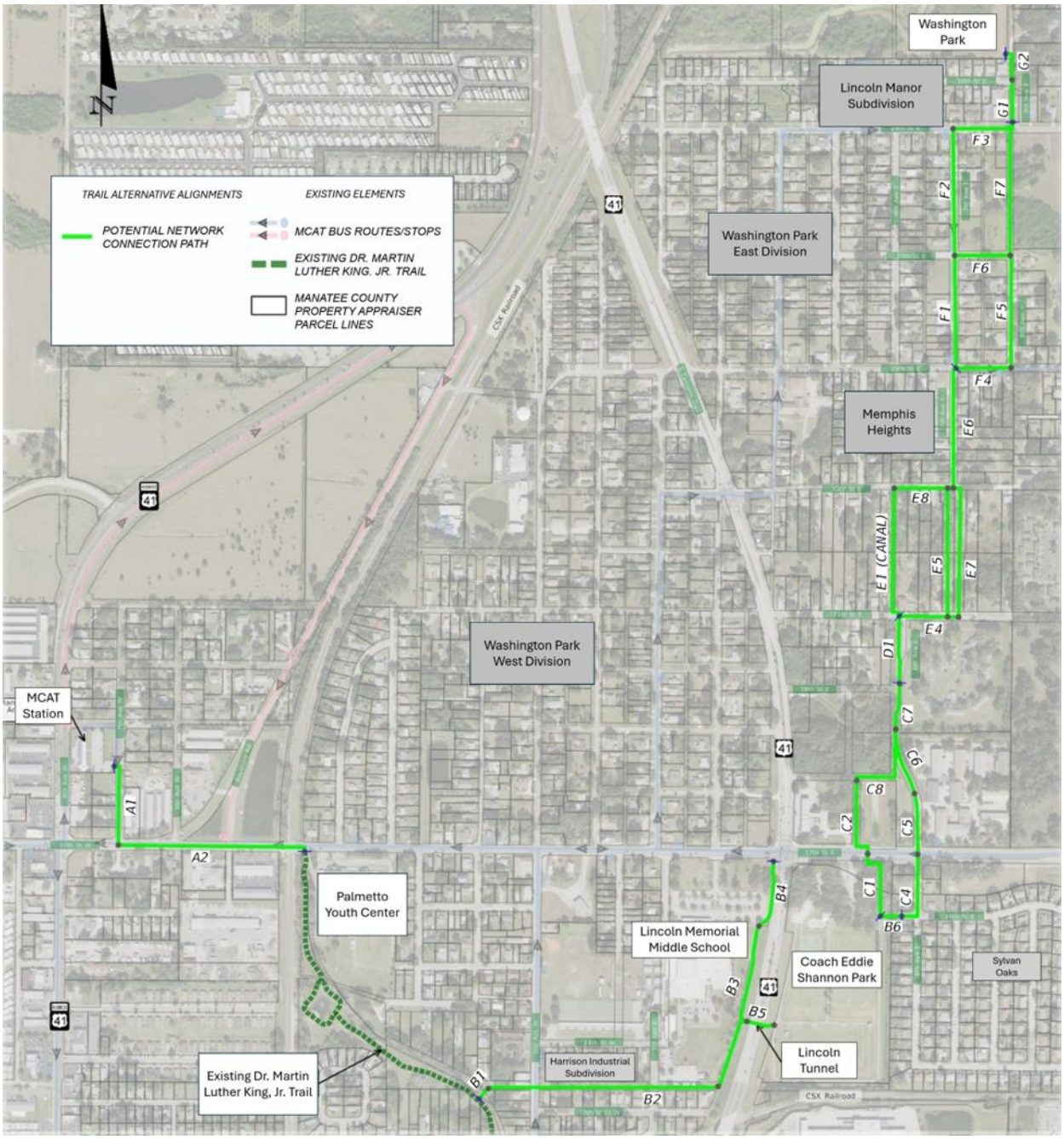


FIGURE 1-7 Final refined route alternatives – Middle and Northern Sections.

1.4.3 Southern Section Alternative Route Identification Study

With the addition of the Southern Section, the Palmetto Trails Network PD&E Study corridor now extends from Dr. Martin Luther King, Jr. Park south to Connor Park. This section outlines the Southern Section Original Alignment (as it will herein be referred to) as originally proposed in the 2018 BUILD/RAISE/T-HUD Grant applications by Manatee County, its existing conditions (per

desktop and initial field review), potential alternatives, and associated opportunities and constraints (based on preliminary existing conditions).

1.4.4 Southern Section Refined Route Alternatives

The BUILD/RAISE/T-HUD Grant applications proposed that a shared use path would be constructed along Riverside Dr W to the Riverside Dr W Conner Park access and into Connor Park. A facility through Connor Park was to exit Connor Park on the northeast corner of the park onto 5th St. W. The path would continue north along 5th Ave. W to 7th St. W where it would turn and follow 7th St. W to the Carr Drain corridor.

During initial reviews of the BUILD/RAISE/T-HUD Grant route, it was found that there would likely be right-of-way, drainage, utility, environmental, public sentiment, cultural, or socio-economic factors which make one or more of these original alignment segments ultimately infeasible, or undesirable, as a recommended alternative. As a contingency, potential alternative segments were identified for this PD&E Study. These routes are shown in blue dashed lines in **FIGURE 1-8**.

As with the Middle and Northern Sections, multiple public outreach events were conducted for the Southern Segments for stakeholder and community perspectives to help to determine the desirability of the potential alternative routes.

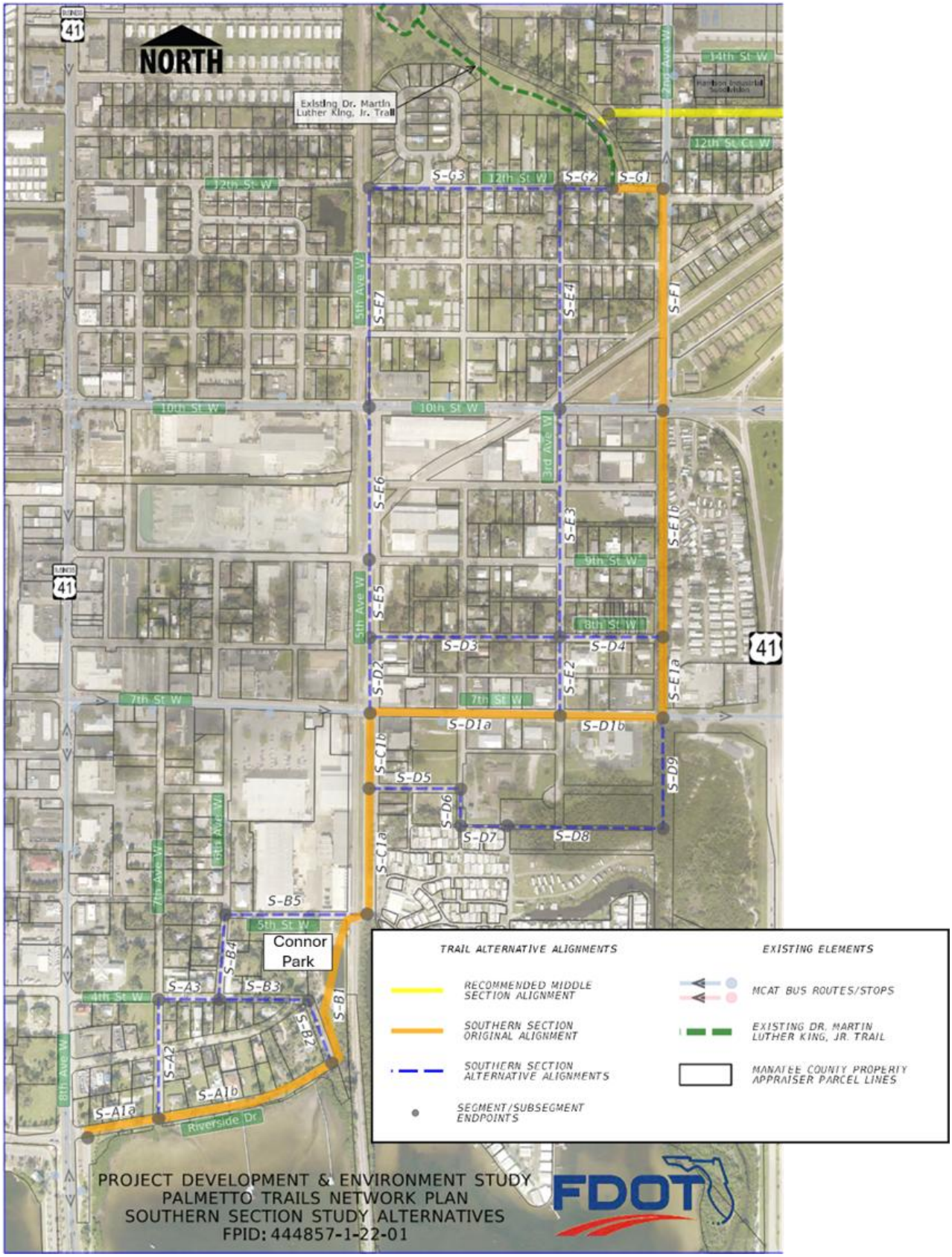


FIGURE 1-8 Southern Section with labeled alternative alignments.

1.4.5 Final PD&E Alternatives

1.4.5.1 Middle and Northern Sections

The refined route alternatives still left several route alternatives to consider for PD&E analysis. A public workshop was held to showcase these route alternatives and help determine recommended facility types for the segments along the routes. The feedback from this workshop resulted in the recommended alignment in **FIGURE 1-9** and **FIGURE 1-10** for PD&E analysis. A discussion of the public workshop feedback is included in **Section 6.1.2**.

Conceptual typical section alternatives were developed for this recommended alignment to be evaluated for selection of the recommended alternative.

Six categories of evaluative criteria were finalized and established for evaluating the alternatives:

1. Facility Purpose,
2. Social Impacts,
3. Potential Natural/Cultural Environmental Impacts
4. Potential Physical Effects,
5. Safety, and
6. Estimated Project Costs

The candidate typical section alternatives were evaluated within each of the seven segments (A through G) of the recommended alignment routes, based on available data.

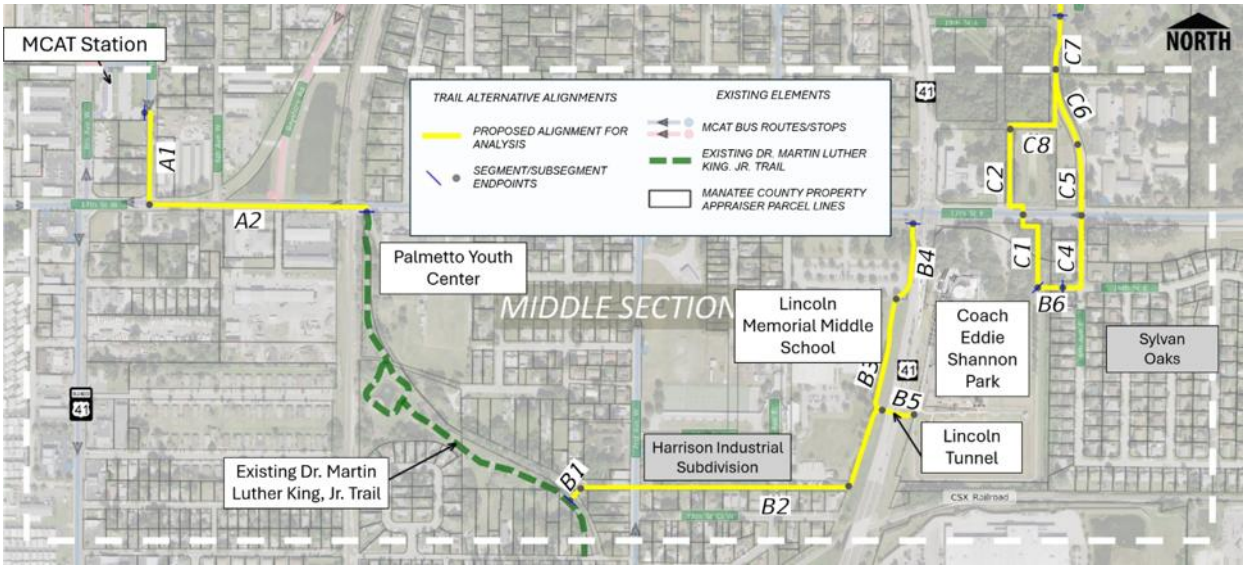


FIGURE 1-9 Final PD&E alternatives – Middle Section.

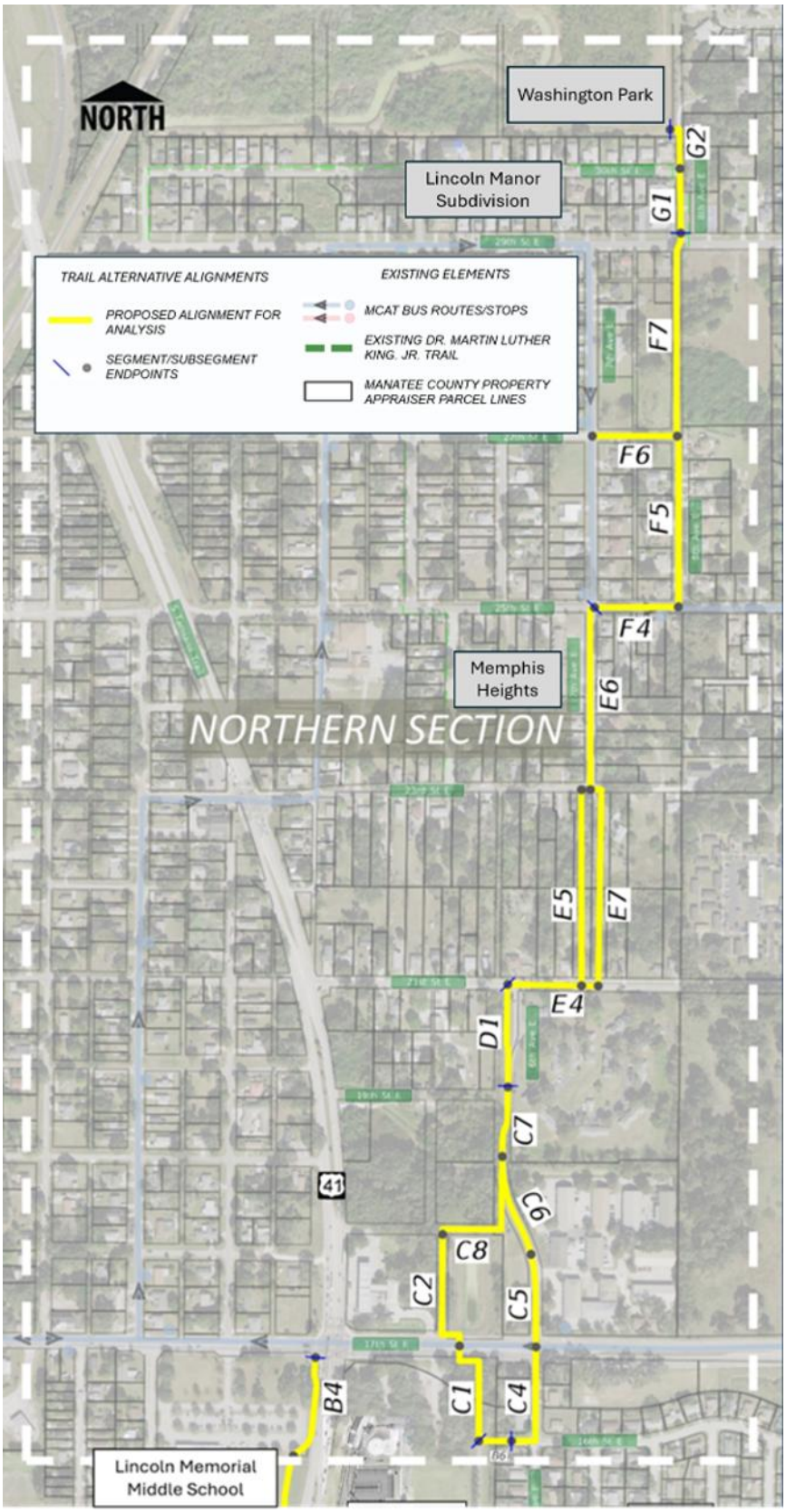


FIGURE 1-10 Final PD&E alternatives – Northern Section.

1.4.5.2 Southern Section

With the addition of the Southern Section, additional stakeholder coordination and public input/workshops were held to present the public the various options for connecting Business U.S. 41 and Riverside Dr W, to Connor Park, then north to the existing Dr. Martin Luther King, Jr. Trail. For the Southern Section, all the alternatives presented in **Section *1.4.4*** were included in the final PD&E alternatives analysis.

1.5 Description of Recommended Alternative

The recommended alternative for the corridor is displayed in **FIGURE 1-11**, **FIGURE 1-12**, and **FIGURE 1-13**. The recommended alternative includes the selection of a single alignment within each segment and a single typical section for each segment. The recommended alternatives for the Northern and Middle Sections, as of the date of this PER, are listed in **TABLE 1-1**.

TABLE 1-1 Middle and Northern Sections Segment Descriptions

Segments	Typical Section
A1	10-ft Shared use path (8-ft where constrained); 5-ft bike lane; Shared travel lanes with shared lane markings and speed cushions
A2*	12-ft Shared use path (10-ft where constrained)
B1 and B6	Prefabricated steel truss bridge
B2, B3*, B4*	12-ft Shared use path (10-ft where constrained B4)
B5	Lincoln Tunnel rehabilitation
C1, C2, C7*, C8	12-ft Shared use path (10-ft where constrained C1, C2, C8)
D1*	12-ft Shared use path
E4, E6*	Shared travel lanes with shared lane markings and speed cushions. 6-ft - 8-ft sidewalks
E5	12-ft Shared use path
F4, F5, F6, F7	12-ft Shared use path (10-ft where constrained F4)
G1, G2	10-ft Shared use path

*Urban Roadway Section

The recommended alternatives for the Southern Section, as of the date of this PER, are listed in **TABLE 1-2**.

TABLE 1-2 Southern Section Segment Descriptions

Segment	Sub-Segment Description
S-C1a	12-ft shared use path in the median of 5th Ave. W
S-C1b	12-ft shared use path in the median of 5th Ave. W
S-D2	12-ft shared use path on west side of 5th Ave. W
S-E5	8-ft shared use path on the west side of 5th Ave. W
S-D5, S-D6, S-D7	Shared travel lanes with shared lane markings and speed cushions along with 6-ft sidewalks
S-E6	• Southern portion: 12-ft shared use path on the west side of 5th Ave. W • Northern portion: 10-ft shared use path on the west side of 5th Ave. W (would require narrowing existing roadway pavement)
S-E7	Shared travel lanes with shared lane markings and speed cushions along with 6-ft sidewalks on 5th Ave. W
S-G2	Shared travel lanes with shared lane markings and speed cushions along with 6-ft sidewalks on 12th St. W
S-G3	Shared travel lanes with shared lane markings and speed cushions along with 6-ft sidewalks on 12th St. W

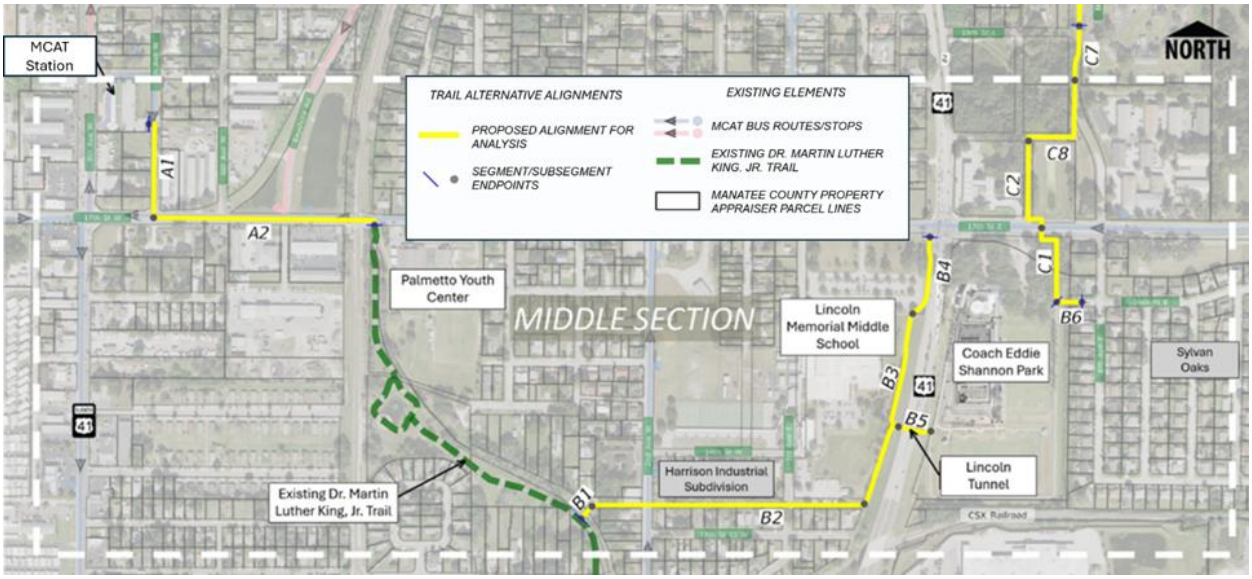


FIGURE 1-11 Recommended Alternative – Middle Section.

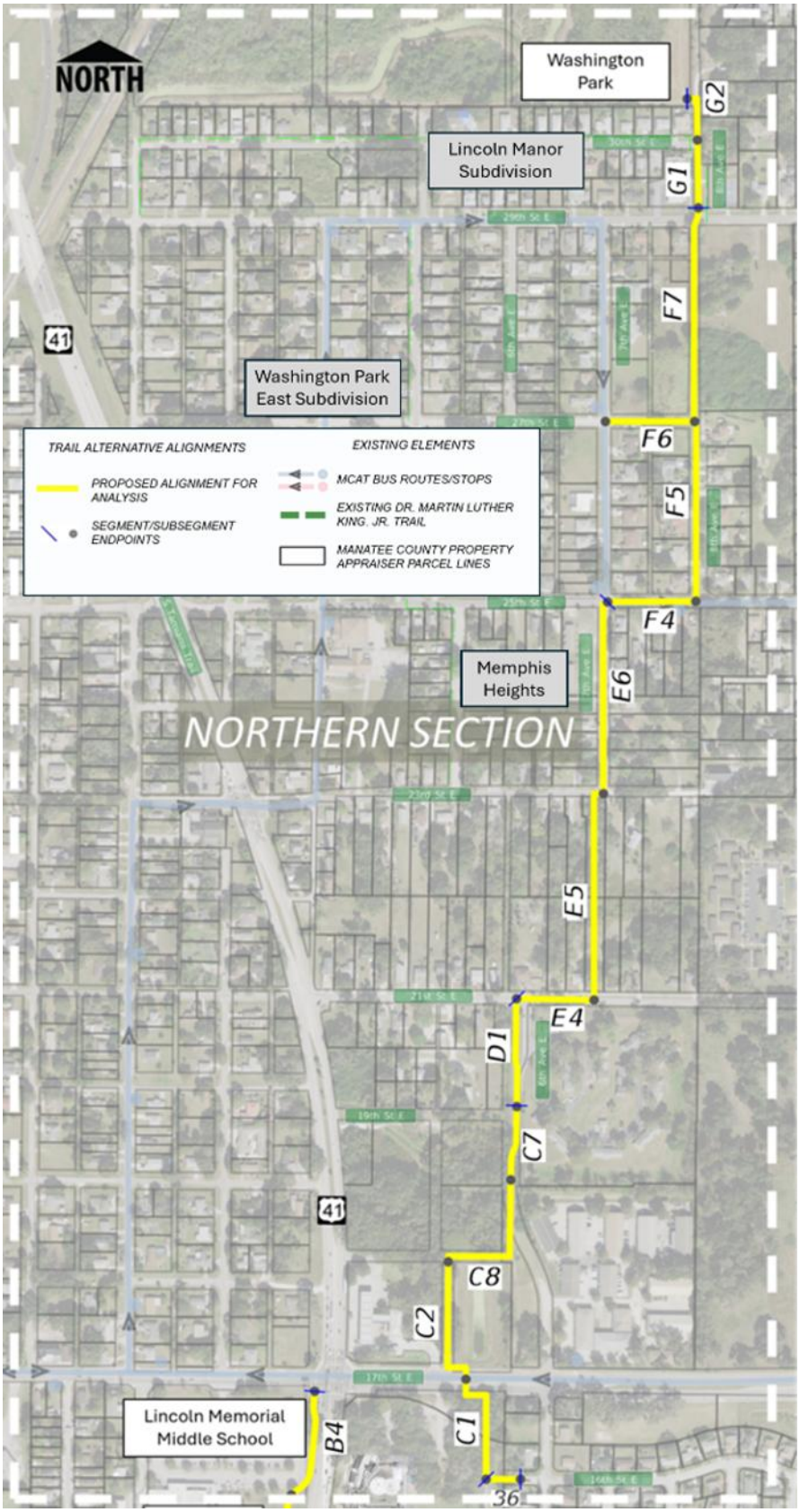


FIGURE 1-12 Recommended Alternative – Northern Section.

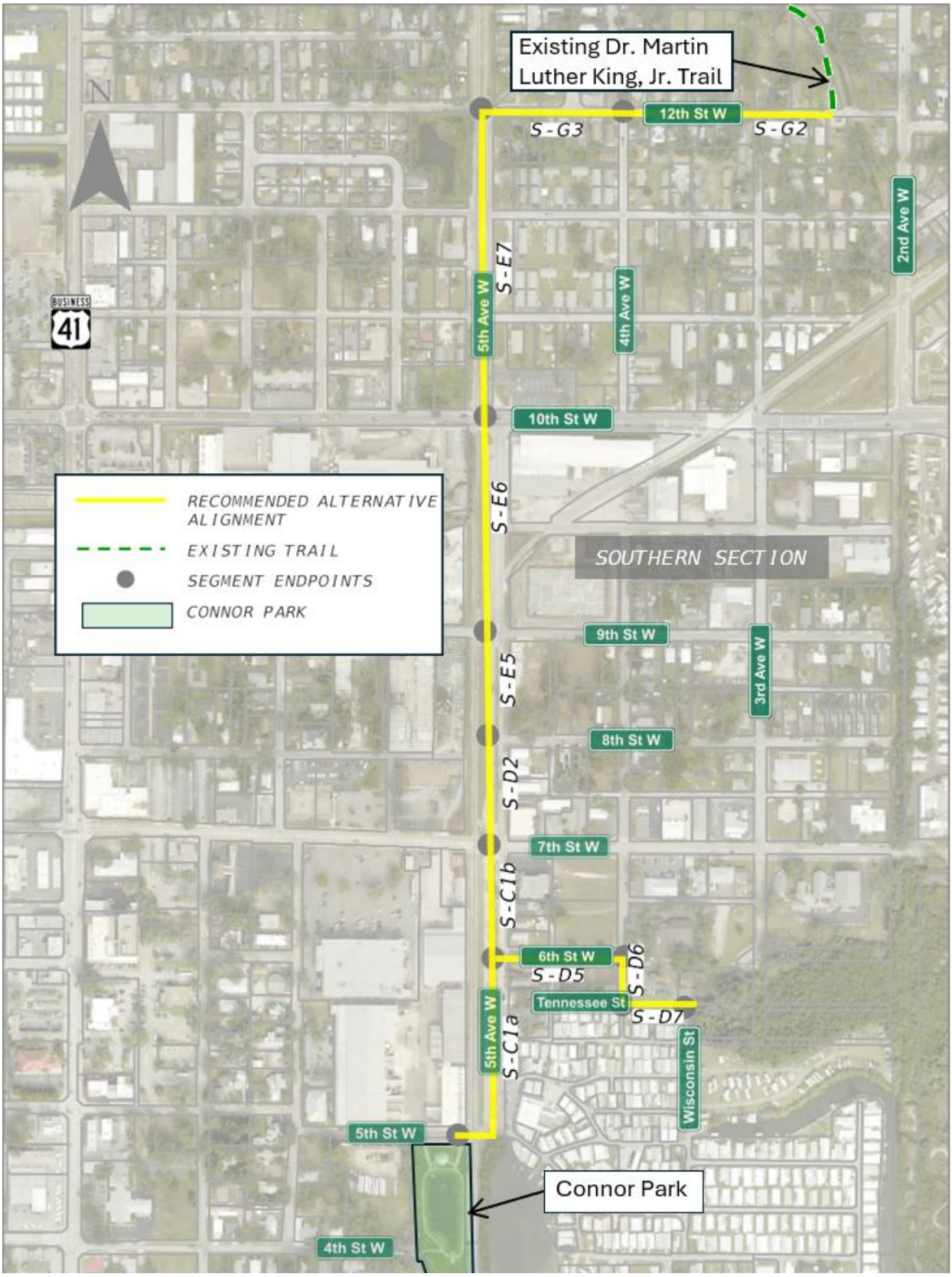


FIGURE 1-13 Recommended Alternative – Southern Section.

1.6 List of Technical Documents

TABLE 1-3 lists the technical documents created for this project.

TABLE 1-3 Technical Documents

Document	Completion Data
Safety Analysis	Final, May 2026
Alternative Route Screening Evaluation	Final, May 2023
Natural Resource Evaluation (NRE)	Draft, April 2026
Contamination Screening Evaluation Report (CSER)	Final, May 2026
Cultural Resource Assessment Survey (CRAS)	Final, May 2026
Advance Draft Abbreviated Location Hydraulic Report Memorandum (LHR)	May, 2026
Matrix and Recommended Alternative Memo	April 2026

2.0 EXISTING CONDITIONS

2.1 Previous Planning Studies

The study corridor was proposed as a part of BUILD/RAISE/T-HUD Grant applications made for funding of this trail by the Manatee County Board of Commissioners. The PD&E study alternatives were developed to be consistent with this application.

2.1.1 Manatee County BUILD/RAISE/T-HUD Grant Applications

These applications were born out of the County's concern for the health, safety, and quality of life of the City of Palmetto affected by the U.S. 41 roadway which bisects a portion of the community. The applications proposed a corridor that connects Washington Park to, ultimately, the Green Bridge. This PD&E Study was initially scoped to analyze the corridors for the Middle and Northern Sections of this overall Palmetto Trails Network.

2.2 Existing Roadway Conditions

The existing conditions review provided in this section is for the final PD&E alternatives.

2.2.1 Roadway Typical Sections

The existing roadway features in each direction are summarized in **TABLE 2-1** and **TABLE 2-2** and these tables detail the following:

- Segment ID
- Segment Location
- Segment Beginning and End Points
- Apparent Right-of-Way Width
- Existing Surface Type
- Existing Roadway Width
- Existing Roadway Lanes
- Curb/Gutter Type
- Bike Lane Width
- Sidewalk Width
- Sidewalk to EOP Distance
- Ditch Presence
- Apparent Right-of-Way Distance from the Edge of Pavement

The vast majority of the roadways in the study corridor are off system and thus not included in Straight Line Diagrams (SLDs). SLD exhibits are provided in **FIGURE 2-1** and **FIGURE 2-2** to show the mile points where segments do occur on or near enough to the FDOT network.

TABLE 2-1 Existing Roadway Conditions of Middle and Northern Sections

Segment Letter	Segment Number	Segment Mainline	Segment Start	Segment End	Total Apparent R/W Width	Existing Surface Type	Existing Roadway Width	Existing Roadway Lanes	North or West Side						South or East Side					
									Curb/Gutter Type	Bike Lane Width	Sidewalk Width	Sidewalk to EOP Distance	Ditch Present?	Apparent R/W Distance from EOP	Curb/Gutter Type	Bike Lane Width	Sidewalk Width	Sidewalk to EOP Distance	Ditch Present?	Apparent R/W Distance from EOP
A	1	7th Ave W	17th St W	MCAT Transfer Station	50'	Asphalt	22.25'	2-lane, 2-way, marked	None	None	4'	8'	No	13'	Granite (Type D)	None	None	N/A	No	14.75'
	2	17th St W	7th Ave E	Palmetto Youth Center	55'	Asphalt	32'	2-lane, 2-way, marked	F	4'	5'	4'	No	9'	F	4'	5'	4'	No	9'-15'
B	2	13th St W	MLK Jr Trail	US 41	48'-50'	Dirt	N/A	N/A	None	None	None	N/A	No	N/A	None	None	None	N/A	No	N/A
	3	US 41 Embankment	13th St W	LMA Parking Lot	56'-73' (From EOP)	Dirt	N/A	N/A	None	None	None	N/A	Yes	N/A	None	None	None	N/A	No	N/A
	4	Along Fence Parallel to US 41	LMA Parking Lot	17th St W	6'-9' (From EOP)	Dirt/ Concrete	N/A	N/A	F	None	6	1.5'	No	6'-9'	F	None	None	N/A	No	14'
	5	Lincoln Tunnel	US 41 Embankment	Lincoln Park Sidewalks	N/A	Concrete	10'	N/A	None	None	None	N/A	No	60'	None	None	None	N/A	No	N/A
	6	16th St E Bridge Ext.	Lincoln Park Sidewalks	6th Ave E	50'	Ditch Crossing	N/A	N/A	None	None	None	N/A	Yes	N/A	None	None	None	N/A	Yes	N/A
C	1	Lincoln Park Trail Ext.	16th St E Bridge Ext.	17th St E	N/A	Dirt	N/A	N/A	None	None	None	N/A	No	N/A	None	None	None	N/A	No	N/A
	2/8	Undeveloped R/W 1 (West)	17th St E	6th Ave E	40'	Dirt/ Wetland	N/A	N/A	None	None	None	N/A	No	N/A	None	None	None	N/A	No	N/A
	4	6th Ave E 1 (South)	16th St E Bridge Ext.	17th St E	50'	Asphalt	24'	2-lane, 2-way, unmarked	None	None	None	N/A	No	8.5'-9'	None	None	None	N/A	No	17'-17.5'
	5	6th Ave E 2 (North Developed)	17th St E	18th St E	50'	Asphalt	24'	2-lane, 2-way, unmarked	F	None	None	N/A	No	11'	F	None	None	N/A	No	15'
	6/7	6th Ave E 3 (North Undeveloped)	18th St E	19th St E	50'-61'	Dirt	N/A	N/A	None	None	None	N/A	Yes	N/A	None	None	None	N/A	No	N/A
D	1	6th Ave E 4 (North Developed)	19th St E	21st St E	61'-116'	Asphalt	24'	2-lane, 2-way, unmarked	F	None	None	N/A	Yes	41'-98'	F	None	None	N/A	No	-5'- -6' (EOP in R/W)
E	4	21st St E	6th Ave E	7th Ave E Ext.	50'	Asphalt	20'	2-lane, 2-way, unmarked	None	None	5'	5'-10'	No	12'-15'	None	None	None	N/A	No	13'-15'
	5	Property Acquisition 1 (West)	21st St E	23rd St E	66' (Various Acqusitions)	Dirt	N/A	N/A	None	None	None	N/A	No	N/A	None	None	None	N/A	No	N/A
	6	7th Ave E 1 (South)	23rd St E	25th St E	42'	Asphalt	24'	2-lane, 2-way, marked	Drop	None	None	N/A	No	3'-7'	Drop	None	None	N/A	No	11'-13'
	7	Property Acquisition 2 (East)	21st St E	23rd St E	57'-66' (Various Acquisitions)	Dirt	N/A	N/A	None	None	None	N/A	No	N/A	None	None	None	N/A	No	N/A
F	4	25th St E	6th Ave E	8th Ave E	45'	Asphalt	20'	2-lane, 2-way, marked	None	None	None	N/A	Yes	10'-14'	None	None	None	N/A	Yes	10.5'-16.5'
	5	8th Ave E 1 (South)	25th St E	27th St E	62'-64'	Asphalt	15'	2-lane, 2-way, unmarked	None	None	None	N/A	No	12'-15'	None	None	None	N/A	No	33'-35'
	6	27th St E Ext.	7th Ave E	8th Ave E	50'	Dirt/ Wetland	N/A	N/A	None	None	None	N/A	No	N/A	None	None	None	N/A	No	N/A
	7	8th Ave E 2 (Undev. Ext.)	27th St E Ext.	29th St E	35'-40'	Dirt/ Wetland	N/A	N/A	None	None	None	N/A	No	N/A	None	None	None	N/A	No	N/A
G	1	8th Ave E 3 (North)	29th St E	30th St E	51'	Asphalt	16.5'	2-lane, 2-way, unmarked	None	None	5.5'	18'	Yes	7.5'-8.5'	None	None	None	N/A	Yes	27'
	2	8th Ave E 4 (Terminus)	30th St E	Washington Park	26'	Dirt/Gravel	12'	N/A	None	None	None	N/A	No	4'-7'	None	None	None	N/A	Yes	7'-10'

TABLE 2-2 Existing Roadway Conditions of Southern Section

Segment Letter	Segment Number	Segment Mainline	Segment Start	Segment End	Total Apparent R/W Width	Existing Surface Type	Existing Roadway Width	Existing Roadway Lanes	North or West Side						South or East Side					
									Curb/Gutter Type	Bike Lane Width	Sidewalk Width	Sidewalk to EOP Distance	Ditch Present?	Apparent R/W Distance from EOP	Curb/Gutter Type	Bike Lane Width	Sidewalk Width	Sidewalk to EOP Distance	Ditch Present?	Apparent R/W Distance from EOP
S-A	1a	Riverside Dr	8th Ave W	7th Ave W	29'-61'	Asphalt	20'	2-lane, 2-way, unmarked	D	None	None	N/A	No	6'-23'	D	None	None	N/A	No	3'-18'
	1b	Riverside Dr	7th Ave W	Riverside Dr/4th St W	29'-61'	Brick	20'	2-lane, 2-way, unmarked	D	None	None	N/A	No	6'-23'	D	None	None	N/A	No	3'-18'
	2	7th Ave W	Riverside Dr	4th St W	24'-40'	Asphalt	20'	2-lane, 2-way, unmarked	RA	None	None	N/A	No	2'-10'	RA	None	6'	2'	No	2'-10'
	3	4th St W	7th Ave W	6th Ave W	24'-40'	Asphalt	20'	2-lane, 2-way, unmarked	D	None	4'	N/A	No	2'-10'	D	None	6'	N/A	No	2'-10'
S-B	2	Riverside Dr	Riverside Dr	4th St W	24'-40'	Asphalt	20'	2-lane, 2-way, unmarked	D	None	None	N/A	No	2'-10'	D	None	None	N/A	No	2'-10'
	3	4th St W	6th Ave W	Riverside Dr	24'-40'	Asphalt	20'	2-lane, 2-way, unmarked	D	None	None	N/A	No	2'-10'	D	None	6'	N/A	No	2'-10'
	4	6th Ave W	4th St W	5th St W	24'-40'	Asphalt	20'	2-lane, 2-way, unmarked	D	None	4'	N/A	No	2'-10'	D	None	6'	N/A	No	2'-10'
	5	5th St W	6th Ave W	5th Ave W	24'-40'	Asphalt	22'	2-lane, 2-way, unmarked	D	None	None	N/A	No	0'-9'	D	None	6'	N/A	No	0'-9'
S-C	1a	5th Ave W	5th St W	6th St W	131'	Asphalt	40'	4-lane, 2-way, 25' median	D	None	5' in median	3'-17'	No	64'	D	None	5' in median	3'-17'	No	27'
	1b	5th Ave W	6th St W	7th St W	131'	Asphalt	40'	4-lane, 2-way, 25' median	D	None			No	64'	D	None			No	27'
S-D	1a	7th St W	5th Ave W	3rd Ave W	41'	Asphalt	38'	2-lane, 2-way, marked	F	None	5'	6'	No	8'	F	None	5'	6'	No	-5 (EOP in R/W)
	1b	7th St W	3rd Ave W	Carr Drain	41'	Asphalt	38'	2-lane, 2-way, marked	F	None	5'	6'	No	8'	F	None	5'	6'	No	-5 (EOP in R/W)
	2	5th Ave W	7th St W	8th St W	140'	Asphalt	40'	2-lane, 2-way, 16' median	F	None	5'	7'	No	88'	F	None	None	N/A	No	28'
	3	8th St W	5th Ave W	3rd Ave W	24'-40'	Asphalt	20	2-lane, 2-way, unmarked	F	None	5'	2'	No	2'-10'	RA	None	6'	2'	No	2'-10'
	4	8th St W	3rd Ave W	Carr Drain	24'-40'	Asphalt	20'	2-lane, 2-way, unmarked	RA	None	4'	2'	No	2'-10'	RA	None	None	N/A	No	2'-10'
	5	6th St W	5th Ave W	4th Ave W	40'	Asphalt	20'	2-lane, 2-way, unmarked	None	None	None	N/A	No	10'	None	None	None	N/A	No	10'
	6	4th Ave W	6th St W	Tennessee St	26'	Asphalt	20'	2-lane, 2-way, unmarked	None	None	None	N/A	No	6'	None	None	None	N/A	No	0'
	7	Tennessee St	4th Ave W	Wisconsin St	12'	Asphalt	15'	2-lane, 2-way, unmarked	None	None	None	N/A	No	-3 (EOP in R/W)	None	None	None	N/A	No	0'

TABLE 2-2 Existing Roadway Conditions of Southern Section (Continued)

Segment Letter	Segment Number	Segment Mainline	Segment Start	Segment End	Total Apparent R/W Width	Existing Surface Type	Existing Roadway Width	Existing Roadway Lanes	North or West Side						South or East Side					
									Curb/Gutter Type	Bike Lane	Sidewalk Width	Sidewalk to EOP	Ditch Present?	Apparent R/W Distance from	Curb/Gutter Type	Bike Lane	Sidewalk Width	Sidewalk to EOP	Ditch Present?	Apparent R/W Distance from
S-E	2	3rd Ave W	7th St W	8th St W	24'-40'	Asphalt	26'	2-lane, 2-way, unmarked	RA	None	None	N/A	No	7'	RA	None	6'	2'	No	7'
	3	3rd Ave W	8th St W	10th St W	24'-40'	Asphalt	26'	2-lane, 2-way, unmarked	RA	None	4'	2'	No	7'	RA	None	6'	2'	No	7'
	4	3rd Ave W	10th St W	12th St W	24'-40'	Asphalt	20'	2-lane, 2-way, unmarked	RA	None	None	N/A	No	2'-10'	RA	None	6'	2'	No	2'-10'
	5	5th Ave W	9th St W	9th St Dr W	140'	Asphalt	40'	2-lane, 2-way, 16' median	F	None	5'	7'	No	88'	F	None	None	N/A	No	28'
	6	5th Ave W	10th St W	9th St W	140'	Asphalt	40'	2-lane, 2-way, unmarked	F	None	5'	7'	No	80'	F	None	None	N/A	No	20'
	7	5th Ave W	12th St W	10th St W	88'	Asphalt	20'	2-lane, 2-way, unmarked	RA	None	None	N/A	No	67'	RA	None	None	N/A	No	6'
S-F	1	2nd Ave W	10th St W	12th St W	62'-88'	Asphalt	24'	2-lane, 2-way, marked	RA	None	5'	2'	No	12'-38'	RA	None	5'	2'	No	26'
S-G	1	12th St W	MLK Jr Trail	2nd Ave W	24'-40'	Asphalt	20'	2-lane, 2-way, unmarked	RA	None	5'	N/A	No	2'-10'	RA	None	5'	N/A	No	2'-10'
	2	12th St W	MLK Jr Trail	3rd Ave W	24'-40'	Asphalt	20'	2-lane, 2-way, unmarked	RA	None	None	N/A	No	2'-10'	RA	None	5'	N/A	No	2'-10'
	3	12th St W	3rd Ave W	5th Ave W	24'-40'	Asphalt	20'	2-lane, 2-way, unmarked	RA	None	None	N/A	No	2'-10'	RA	None	5'	N/A	No	2'-10'

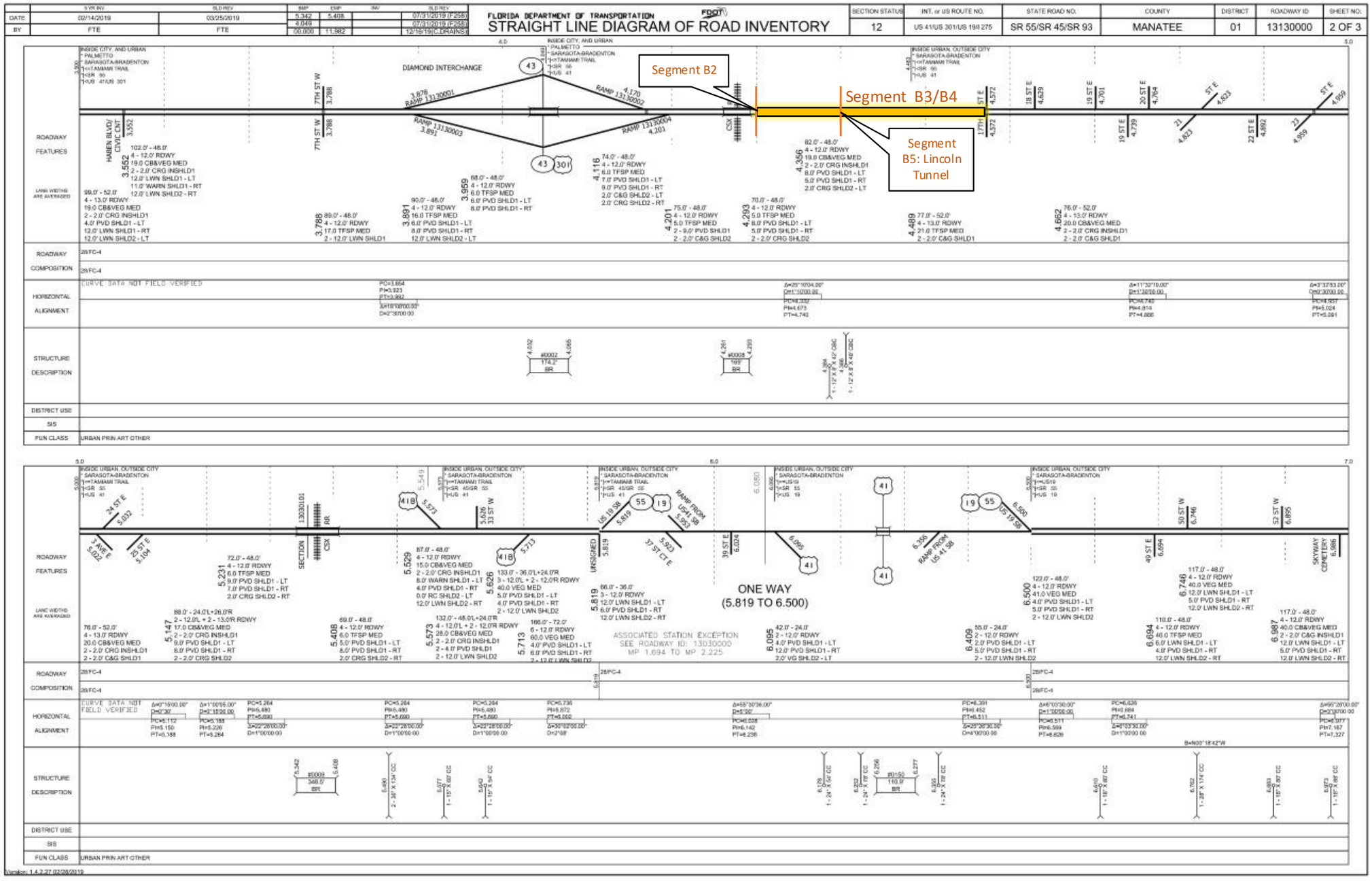


FIGURE 2-1 Straight line diagram of U.S. 41/U.S. 301.

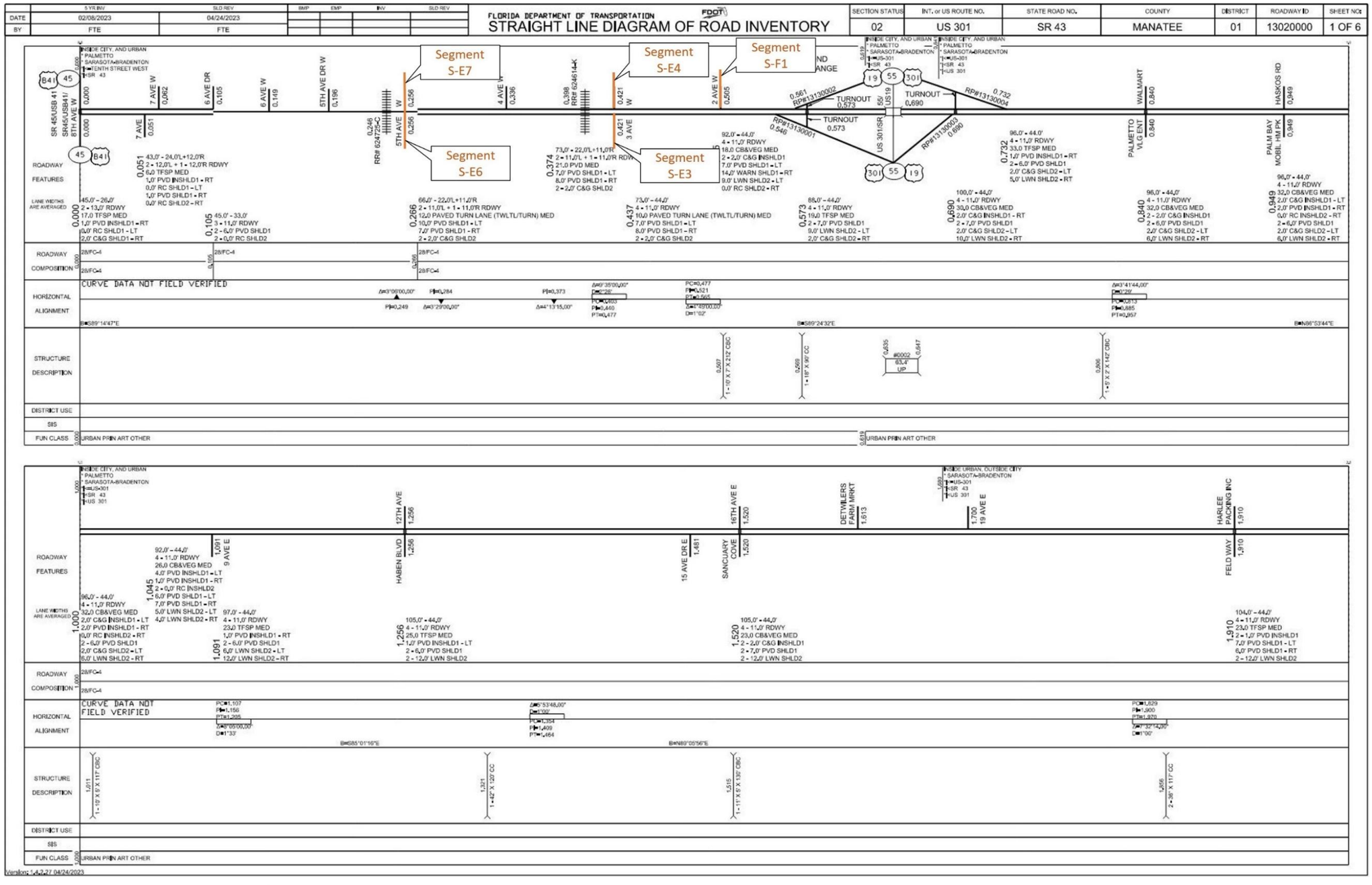


FIGURE 2-2 Straight line diagram of U.S. 301.

2.2.2 Roadway Functional & Context Classifications

In the Middle and Northern Sections U.S. 41 has a functional classification of Urban Principal Arterial while 17th St. has a functional classification of Urban Major Collector. In the Southern Section, 10th St. W has a functional classification of Urban Principal Arterial while 7th St. W has a functional classification of Urban Minor Collector. All other segments have a Local Road functional classification.

The segment of 10th St. W located within the Southern Section has a context classification of Urban General (C4). The roadways evaluated within this study that are not officially classified appear to meet the criteria for a context classification of Suburban Residential (C3R).

2.2.3 Access Management Classification

The Middle and Northern Sections of this project parallels U.S. 41 (Tamiami Trail) for approximately ¼ mile from where the 13th St. E alignment meets U.S. 41 (M.P. 5.321) north to 17th St. E (M.P. 4.572). U.S. 41 has an Access Management Classification of 3 along this segment.

The Southern Section of this project intersects the U.S. 301 / 10th St. W at 5th Ave. W (0.256 MP), 3rd Ave. W (0.421 MP), and 2nd Ave. W (0.505 MP). This segment of U.S. 301 / 10th St. W has an Access Management Classification of 7.

2.2.4 Right-of-Way

Right of way widths varied greatly along the corridor and at numerous locations and consisted mostly of County right of way with only U.S 41, U.S. 41 Business, and 10th St. having FDOT right of way.

The assumed right of way lines are shown on the alternative maps. Manatee County Property Appraiser Maps were used to develop the anticipated right of way for the project. The variation in right of way widths is identified in **TABLE 2-1** and **TABLE 2-2** in the previous section. It shows the range of right of way widths over each segment of roadway.

2.2.5 Adjacent Land Use

Zoning maps from Manatee County and City of Palmetto were used to evaluate adjacent land uses along the route alternatives developed in **FIGURE 1-7** and **FIGURE 1-8** within 50 feet of each segment. The land use that emerged throughout most of the corridor was Residential at various densities. Less substantial but also existing along the corridor are commercial, recreational, industrial, and open land uses.

According to the Manatee County zoning map shown in **FIGURE 2-3**, the Northern Section of the study corridor (highlighted in orange) passes primarily through medium-density residential single-family areas (RSF-6), with a small portion of medium-density residential multi-family zoning

(RMF-9) adjacent to Segment E6. Other less prevalent zoning categories along this section include Agricultural Suburban (A-1), Light Manufacturing (LM), and Planned Development Residential (PD-R). Additionally, this section connects to Washington Park at Segment G2, which is designated for Recreation/Open Space (ROS).

In the Middle Section, zoning varies by side. On the west side of the corridor, Segment A2 is adjacent to mostly General Commercial (GC) zones. On the east side, Segments B3 and B4 are adjacent to Public (P) zoning.

For the Southern Section of the corridor, the zoning map of the City of Palmetto (shown in **FIGURE 2-4**) indicates that the corridor from Riverside Drive to 6th St. W passes through areas mostly zoned for medium-density multi-family residential (RM-6). This segment is also adjacent to other zoning types, including General Commercial (GC), Single-Family Residential (RS-4), and Heavy Commercial and Light Industrial (CHI).

Moving northward, the corridor section from 6th St. W to 10th St. W transitions into an area mainly zoned for General Commercial (GC), with additional adjacent zones including CHI, RS-4, and RM-6. Additionally, less substantial zoning types such as Neighborhood Commercial (CN) and Planned Development – Housing (PD-H) are located near Segments S-E5 and S-E1b.

The final portion of the Southern Section from 10th St. W to 12th St. W is once again adjacent mostly to medium-density multi-family residential (RM-6) zones, with a minor presence of general commercial (GC) zoning along 10th St. W and adjacent to Segment S-E7.

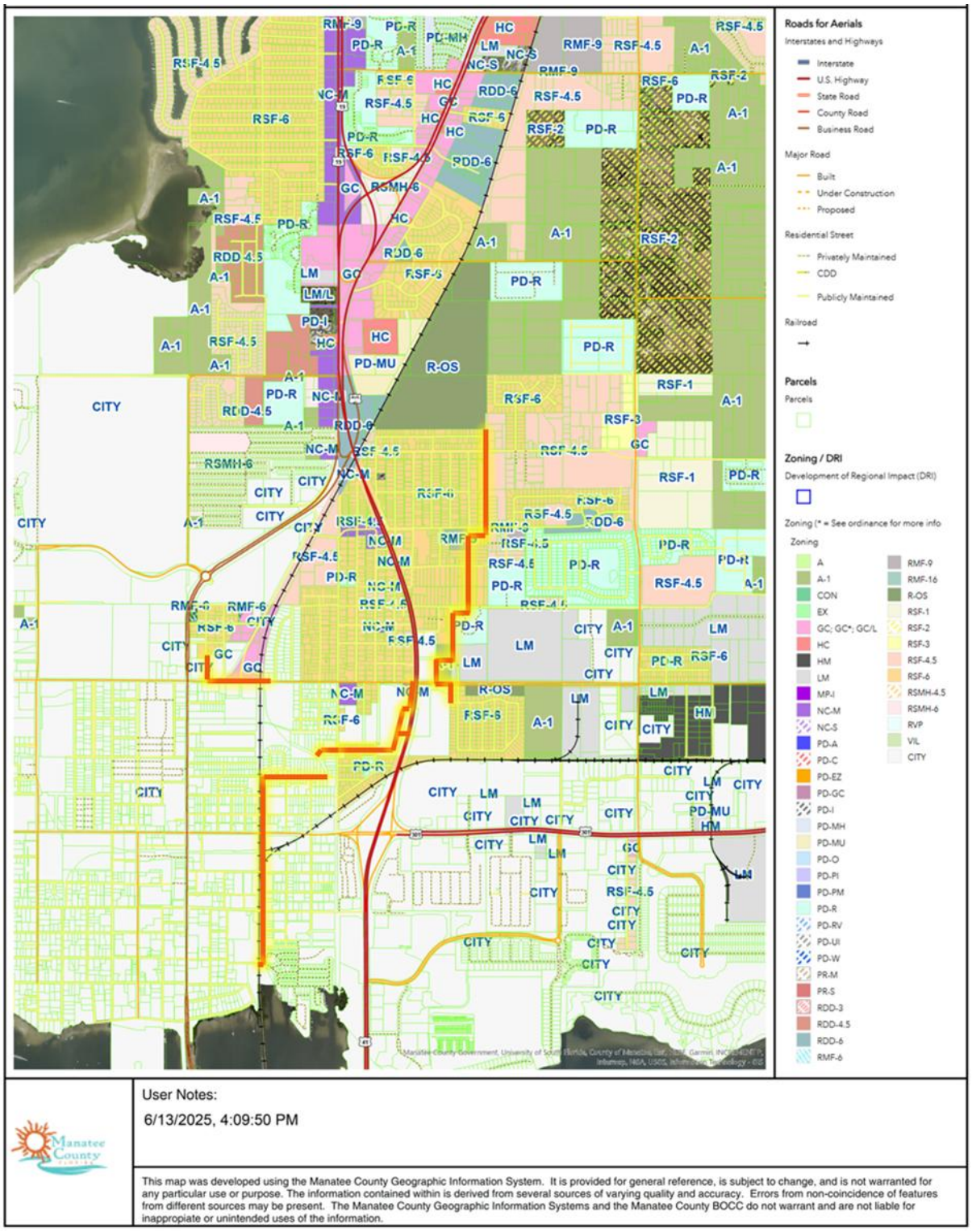


FIGURE 2-3 Manatee County zoning map.

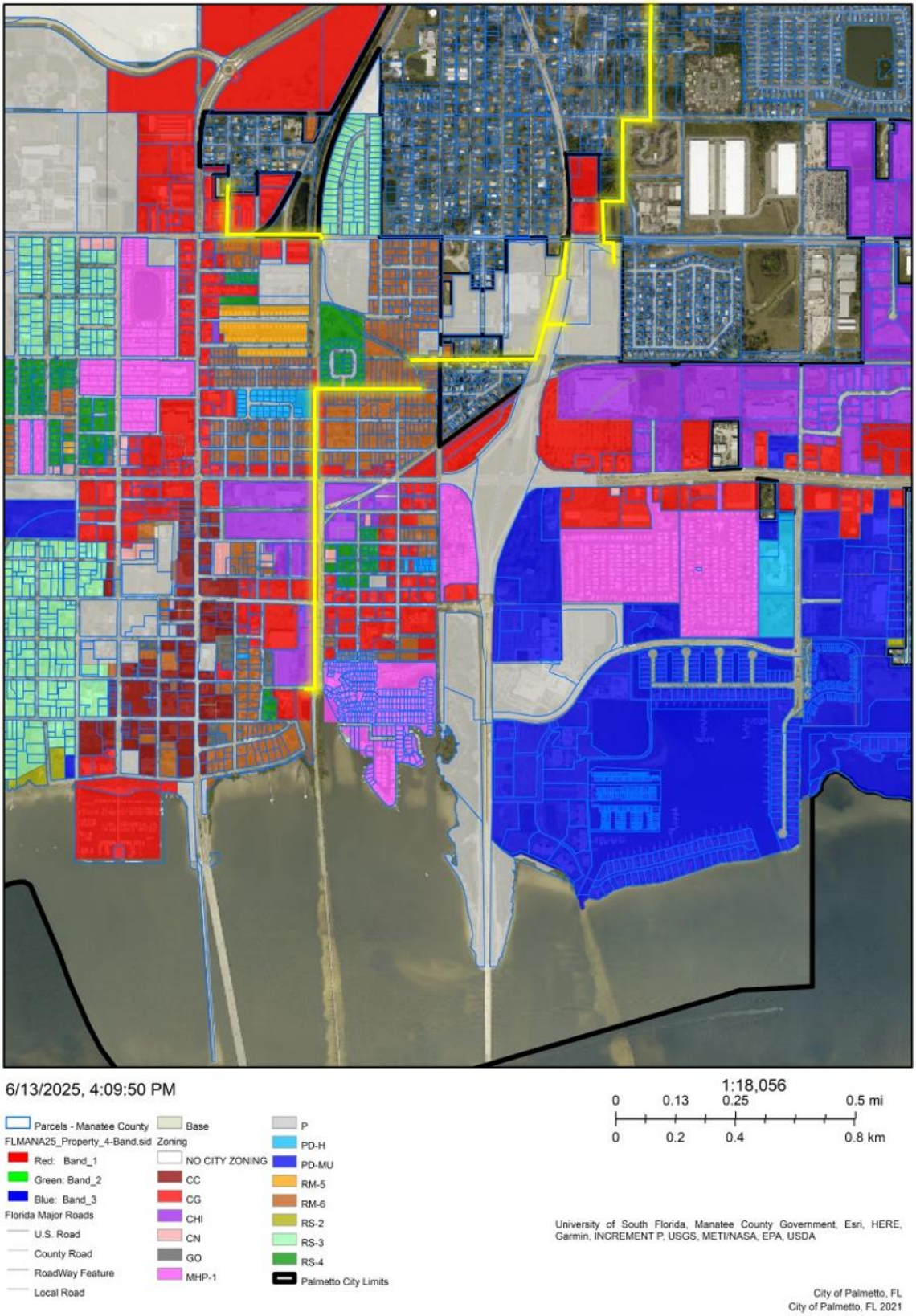


FIGURE 2-4 City of Palmetto zoning map.

2.2.6 Pavement Type and Condition

The following paragraphs describe the pavement type and condition of the roadways along the emergent Palmetto Trails Plan alignment. On those facilities where shared use paths are the emergent facility type, the roadway pavement condition will not impact the facility development. On those facilities where the bike facility is anticipated to be a shared roadway the pavement will be a significant factor in user perceptions of comfort and safety.

Pavement conditions for on-street facilities were observed qualitatively (e.g., poor, fair, good). The roadway pavement condition was noted for roadway facility which parallels a roadway or on which a shared roadway is proposed. See **TABLE 2-3** for a summary of ratings for the segments on the emergent alignments.

TABLE 2-3 Pavement Condition Summary

Segment Letter	Segment Number	Parallel Roadway	Segment Start	Segment End	Facility Type	Pavement Condition
A	1	7th Ave. W	17th St. W	MCAT Transfer Station	Shared Use Path	Good
	2	17th St. W	7th Ave. E	Palmetto Youth Center	Shared Use Path	Good
B	3	U.S. 41 Embankment	13th St. W	LMA Parking Lot	Shared Use Path	Fair
	4	Along Fence Parallel to U.S. 41	LMA Parking Lot	17th St. W	Shared Use Path	Fair
C	4	6th Ave. E 1 (South)	16th St. E Bridge Ext.	17th St. E		
	5	6th Ave. E 2 (North Developed)	17th St. E	18th St. E		
D	1	6th Ave. (North Developed)	19th St. E	21st St. E	Shared Use Path	Poor
E	4	21st St. E	6th Ave. E	7th Ave. E Ext.	Shared Road	Poor
	6	7th Ave. E 1 (South)	23rd St. E	25th St. E	Shared Road	Fair
F	4	25th St. E	6th Ave. E	8th Ave. E	Shared Use Path	Fair
	5	8th Ave. E 1 (South)	25th St. E	27th St. E	Shared Road	Poot
G	1	8th Ave. E 3 (North)	29th St. E	30th St. E	Shared Use Path	Fair
	2	8th Ave. E 4 (Terminus)	30th St. E	Washington Park	Shared Use Path	Poor
S-A	1a	Riverside Dr	8th Ave. W	7th Ave. W	Shared Road*	Poor
	1b	Riverside Dr	7th Ave. W	Riverside Dr/4th St. W	Shared Road*	Poor
	2	7th Ave. W	Riverside Dr	4th St. W	Shared Road	Good
	3	4th St. W	7th Ave. W	6th Ave. W	Shared Road	Good

TABLE 2-3 Pavement Condition Summary (Continued)

Segment Letter	Segment Number	Parallel Roadway	Segment Start	Segment End	Facility Type	Pavement Condition
S-B	2	Riverside Dr	Riverside Dr	4th St. W	Shared Road*	Good
	3	4th St. W	6th Ave. W	Riverside Dr	Shared Road	Fair
	4	6th Ave. W	4th Ave. W	5th Ave. W	Shared Road	Fair
	5	5th Ave. W	6th Ave. W	5th Ave. W	Shared Road*	Good
S-C	1a	5th Ave. W	5th St. W	6th St. W	Shared Use Path	Good
	1b	5th Ave. W	6th St. W	7th St. W	Shared Use Path	Good
S-D	1a	7th St. W	5th Ave. W	3rd Ave. W	Shared Use Path	Good
	1b	7th St. W	3rd Ave. W	Carr Drain	Shared Use Path	Good
	2	5th Ave. W	7sth St. W	8sth St. W	Shared Use Path	Good
	3	8th St. W	5th Ave. W	3rd Ave. W	Shared Road	Poor
	4	8th St. W	3rd Ave. W	Carr Drain	Shared Road	Poor
	5	6th St. W	5th Ave. W	4th Ave. W	Shared Road	Good
	6	4th Ave. W	6th St. W	Tennessee St	Shared Road	Good
	7	Tennessee St	4th Ave. W	Wisconsin St	Shared Road	Good
S-E	2	3rd Ave. W	7th St. W	8th St. W	Shared Road	Fair
	3	3rd Ave. W	8th St. W	10th St. W	Shared Road	Fair
	4	3rd Ave. W	10th St. W	12th St. W	Shared Road	Fair
	5	5th Ave. W	8th St. W	9th St. W	Shared Use Path	Good
	6	5th Ave. W	9th St. W	10th St. W	Shared Use Path	Good
	7	5th Ave. W	10th St. W	12th St. W	Shared Use Path	Good
S-F	1	2nd Ave. W	10th St. W	12th St. W	Shared Use Path	Fair
S-G	1	12th St. W	2nd Ave. W	MLK Trail	Shared Road	Good
	2	12th St. W	MLK Trail	3rd Ave. W	Shared Road	Good
	3	12th St. W	3rd Ave. W	5th Ave. W	Shared Road	Good

* The anticipated cross section is a two-way on street bike facility

2.2.7 Existing Design and Posted Speed

The design speed of the trail will be 18 mph per *FDM 224.9*. The posted speed limit of roadways through the corridor varies between 15 and 50 MPH, based on street-view aerial review. Segments that did not show a posted speed were assumed to be the same speed limit as similar adjacent segments with speed limits posted. Some of the segments are undeveloped and thus do not have posted speed limits.

The designated speed limits by segment for developed roadway segments are provided in **TABLE 2-4** on the following page.

TABLE 2-4 Roadway Segment Speed Limit

Segment Letter	Segment Number	Parallel Roadway	Segment Start	Segment End	Speed Limit (MPH)
A	1	7th Ave. W	17th St. W	MCAT Transfer Station	30
	2	17th St. W	7th Ave. E	Palmetto Youth Center	30
B	3	U.S. 41 Embankment	13th St. W	LMA Parking Lot	50
	4	Along Fence Parallel to U.S. 41	LMA Parking Lot	17th St. W	50
C	4	6th Ave. E 1 (South)	16th St. E Bridge Ext.	17th St. E	25
	5	6th Ave. (North Developed)	17th St. E	18th St. E	25*
D	1	6th Ave. E 4 (North Developed)	19th St. E	21st St. E	30*
E	4	21st St. E	6th Ave. E	7th Ave. E Ext.	30
	6	7th Ave. E 1 (South)	23rd St. E	25th St. E	25*
F	4	25th St. E	6th Ave. E	8th Ave. E	25
	5	8th Ave. E 1 (South)	25th St. E	27th St. E	25*
G	1	8th Ave. E 3 (North)	29th St. E	30th St. E	25*
	2	8th Ave. E 4 (Terminus)	30th St. E	Washington Park	25*
S-A	1a	Riverside Dr	8th Ave. W	7th Ave. W	20
	1b	Riverside Dr	7th Ave. W	Riverside Dr/4th St. W	20
	2	7th Ave. W	Riverside Dr	4th St. W	20
	3	4th St. W	7th Ave. W	6th Ave. W	20*
S-B	2	Riverside Dr	Riverside Dr	4th St. W	20
	3	4th St. W	6th Ave. W	Riverside Dr	20*
	4	6th Ave. W	4th Ave. W	5th Ave. W	20*
	5	5th Ave. W	6th Ave. W	5th Ave. W	20*
S-C	1a	5th Ave. W	5th St. W	6th St. W	30
	1b	5th Ave. W	6th St. W	7th St. W	30
S-D	1a	7th St. W	5th Ave. W	3rd Ave. W	35
	1b	7th St. W	3rd Ave. W	Carr Drain	35
	2	5th Ave. W	7sth St. W	8sth St. W	30
	3	8th St. W	5th Ave. W	3rd Ave. W	25
	4	8th St. W	3rd Ave. W	Carr Drain	25
	5	6th St. W	5th Ave. W	4th Ave. W	25*
	6	4th Ave. W	6th St. W	Tennessee St	25*
	7	Tennessee St	4th Ave. W	Wisconsin St	25*
S-E	2	3rd Ave. W	7th St. W	8th St. W	35
	3	3rd Ave. W	8th St. W	10th St. W	35
	4	3rd Ave. W	10th St. W	12th St. W	15
	5	5th Ave. W	8th St. W	9th St. W	30 (NB)/ 15 (SB)
	6	5th Ave. W	9th St. W	10th St. W	30 (NB)/ 15 (SB)
	7	5th Ave. W	10th St. W	12th St. W	15
S-F	1	2nd Ave. W	10th St. W	12th St. W	25
S-G	1	12th St. W	2nd Ave. W	MLK Trail	25
	2	12th St. W	MLK Trail	3rd Ave. W	25
	3	12th St. W	3rd Ave. W	5th Ave. W	25

*No posted speed observed. Speed limits were assumed from adjacent roadways.

2.2.8 Horizontal Alignment

The proposed shared use path facilities will largely use the right of way of the adjacent roadways of the study corridor. While following the same general alignment as the adjacent roadways, the shared use paths will have horizontal and vertical curves independent of the roadway alignments.

On some segments, the roadway facility will be a shared roadway for bicyclists in addition to adjacent sidewalks. Traffic calming devices will also be put on those roadways, but none of these improvements will impact the horizontal or vertical alignment of those roadways.

2.2.9 Vertical Alignment

Design level survey was not conducted as part of the PD&E Study phase. Based on field observations, the Conceptual Plan's alignments do not consist of any steep slopes and are generally flat. To meet Americans with Disabilities Act (ADA) criteria, trail construction will not exceed a cross slope of 2% and the maximum longitudinal grade will be 5%.

2.2.10 Multi-modal Facilities

Sidewalks exist sparsely along the corridor. Where sidewalks exist, they typically span the entire segment. Existing roadway segments and where, if any, sidewalks and bike lanes are located are summarized in **TABLE 2-5**.

TABLE 2-5 Pedestrian and Bicycle Existing Facilities

Segment Letter	Segment Number	Segment Mainline	Sidewalk Side	Sidewalk Width	Bike Lane Side	Bike Lane Width
A	1	7th Ave. W	West	5 ft	None	None
	2	17th St. W	Both	5 ft	Both	6 ft
C	4	6th Ave. E 1 (South)	None	None	None	None
	5	6th Ave. E 2 (North Developed)	None	None	None	None
D	1	6th Ave. E 4 (North Developed)	None	None	None	None
E	4	21st St. E	North	5 ft	None	None
	6	7th Ave. E 1 (South)	None	None	None	None
F	4	25th St. E	None	None	None	None
	5	8th Ave. E 1 (South)	None	None	None	None
G	1	8th Ave. E 3 (North)	West	5 ft	None	None
	2	8th Ave. E 4 (Terminus)	None	None	None	None
S-A	1a	Riverside Dr	None	None	None	None
	1b	Riverside Dr	None	None	None	None
	2	7th Ave. W	East	6 ft	None	None
	3	4th St. W	South	6 ft	None	None

TABLE 2-5 Pedestrian and Bicycle Existing Facilities (Continued)

Segment Letter	Segment Number	Segment Mainline	Sidewalk Side	Sidewalk Width	Bike Lane Side	Bike Lane Width
S-B	2	Riverside Dr	None	None	None	None
	3	4th St. W	South	6 ft	None	None
	4	6th Ave. W	East	6 ft	None	None
	5	5th Ave. W	South	6 ft	None	None
S-C	1a	5th Ave. W	In Median	5 ft	None	None
	1b	5th Ave. W	In Median	5 ft	None	None
S-D	1a	7th St. W	Both	5 ft	None	None
	1b	7th St. W	Both	5 ft	None	None
	2	5th Ave. W	West	5 ft	None	None
	3	8th St. W	North[1]	5 ft	None	None
	4	8th St. W	North	5 ft	None	None
	5	6th St. W	None	None	None	None
	6	4th Ave. W	None	None	None	None
	7	Tennessee St	None	None	None	None
S-E	2	3rd Ave. W	East	6 ft	None	None
	3	3rd Ave. W	Both[2]	4 ft (W), 6 ft (E)	None	None
	4	3rd Ave. W	East	6 ft	None	None
	5	5th Ave. W	West	5 ft	None	None
	6	5th Ave. W	None	None	None	None
	7	5th Ave. W	None	None	None	None
S-F	1	2nd Ave. W	Both	5 ft	None	None
S-G	1	12th St. W	Both[3]	5 ft (N), 6 ft (S)	None	None
	2	12th St. W	South	6 ft	None	None
	3	12th St. W	South	6 ft	None	None

[1] A 200-ft portion of the S-D3 segment, from west of 3rd Ave. W to 4th Ave. W, has a sidewalk on the north side, but it is blocked by vegetation.
[2] A 160-ft portion of the S-E3 segment, from north of 9th St. W to 9th St. Dr W, has a sidewalk on the west side, the rest of this segment has sidewalk on the east side.
[3] This segment has a sidewalk along its entire length on the south side, but only a 65-ft sidewalk, from the canal to the Dr. Martin L. King, Jr. Trail, on the north side.

Marked crosswalks only exist at the 7th Ave. E and 17th St. W intersection and the U.S. 41 and 17th St. E intersection. Marked crosswalks generally don't exist at local road intersections, which encompasses most of the PD&E corridor.

Six-ft bike lanes currently exist along the 17th St. W segment. Segment A2 and Segment B1 are also connected by the Dr. Martin Luther King, Jr. Trail, an 11-ft shared use path. No other bicycle-specific accommodation exists within the corridor.

A fixed-route transit service along the Middle and Northern Section corridors is provided by MCAT Routes 1 and 13. Route 1 runs from Bradenton Downtown Station, north to U.S. 41 Business and Bayshore Road, and East past I-75 along 10th St. W. It intersects with the 17th St. W segment (A2). Route 13 runs from Bradenton Downtown Station to Palmetto Station and within the City of

Palmetto and Memphis areas. The route runs along the Tamiami Trail Bridge and provides direct transit service along the study's 7th Ave. W, 17th St. W, and 25th St. E segments (A2, A1, and F4). It also runs parallel to 8th Ave. E (F5, F7), and directly along 7th Ave. E. Segment F6 is intended to form a future connection to the route.

For the Southern Section, Route 13 runs directly along the study's 7th St. W and 2nd Ave. W segments (S-D1 and S-F1). It also runs along 10th St. W which intersects with the 5th Ave. W, 3rd Ave. W, and 2nd Ave. W segments (S-E6 to S-E7, S-E3 to S-E4, and S-E1b to S-F1).

As summarized in **TABLE 2-6**, there are six bus stops located directly on or near study segments within the Middle and Northern Section corridors, except for Bus Stop 2209, which is not directly on the corridor but is intended to connect through Segment F6. In comparison, only three bus stops serve the Southern Section corridors.

TABLE 2-6 MCAT Route and Stop Locations

Segment Letter	Segment Number	Segment Mainline	Bus Route #	Bus Stop # (Side)
A	2	17th St. W	1	1057 (W of Bayshore Rd)
			13	1055 (N), 1056 (N), 1076 (N)
C	2	6th Ave. E (North Developed)	13	2220 (N of 17th St. E)
F	4	25th St. E	13	2211 (N), 2210 (W of 7th Ave. E)
	6	27th St. E Ext.	13	2209 (W of 7th Ave. E)
S-D	1a	7th St. W	13	2235 (S)
	1b	7th St. W	13	2249 (S)
S-E	6	5th Ave. W	1	1073 (S of 10th St. W)
S-F	1	2nd Ave. W	1	1029 (N of 10th St. W)
			13	2243 (E), 2244 (E)

2.2.11 Intersections

The proposed trail network crosses a total of nine existing intersections: three within the Middle and Northern Sections and six within the Southern Section. At each of these intersections, trail users must cross to continue along the trail, except at T-intersections, where the trail runs along the side opposite the intersecting leg, so no crossing is required. None of the nine intersections are signalized. Five are four-way intersections, and four are three-way intersections, of which three are T-intersections. **TABLE 2-7** summarizes the location of each intersection and the corresponding proposed trail segment that crosses it.

TABLE 2-7 Intersection Trail Crossings within Study Area

Cross Street	Configuration	Traffic Control	Segment
17th St. W & 7th Ave. W	Four-Way Intersection	Two-Way Stop	A1; A2
25th St. E & 8th Ave. E	T-Intersection	One-Way Stop	F4; F5
29th St. E & 8th Ave. E	T-Intersection	One-Way Stop	F7; G1
5th St. W & 5th Ave. W	Three-Way Intersection	Three-Way Stop	S-C1a
6th St. W & 5th Ave. W	T-Intersection	One-Way Stop	S-C1a; S-C1b
7th St. W & 5th Ave. W	Four-Way Intersection	Two-Way Stop	S-C1b; S-D2
10th St. W & 5th Ave. W	Four-Way Intersection	Two-Way Stop	S-E6; S-E7
7th St. W & 4th Ave. W	Four-Way Intersection	Two-Way Stop	S-D1a
7th St. W & 3rd Ave. W	Four-Way Intersection	Two-Way Stop	S-D1a

2.2.12 Traffic Data

The 2025 traffic data was obtained from Florida Traffic Online (FTO) for the roadway on which the study corridor's segments are located, near, or crossing. The collected data includes Annual Average Daily Traffic (AADT), peak hour volume, Directional Design Hour Volume (DDHV), and truck percentage. **TABLE 2-8** summarizes the obtained traffic data. No additional traffic data collection was included in this project.

TABLE 2-8 Traffic Data from Florida Traffic Online

Section	Location	Segment	Site #	AADT	Peak Volume	DDHV	Truck (%)
Northern	17th St. W – 200 ft W of 14th Ave. E	C1, C2 (crossing)	134218	10600	954	495 (WB) 459 (EB)	11.6%
Middle	17th St. W – 200 ft W of 14th Ave. E	A2	134218	10600	954	495 (WB) 459 (EB)	11.6%
Southern	10th St. W – 200 ft W of 2nd Ave. W	S-E3, S-E4, S-E6, S-E7 (crossing)	135007	19600	984	900 (WB) 864 (EB)	6.4%
	7th St. W – 80 ft W of 4th Ave. W	S-D1a; S-D1b	130084	6400	334	324 (WB) 252 (EB)	3.9%

Traffic data for the study corridor was obtained from the Manatee County Traffic Engineering Division traffic counts data. Count information was not available for the majority of the local roadways on the corridor. Those that were on or near study corridor segments are summarized in **TABLE 2-9** on the following page.

TABLE 2-9 Traffic Data

Location	Segment	Site #	AADT (2021)
17th St. – 200 ft E of 2nd Ave.	A2	09-01	8,417
21st St. – 200 ft E of S.R. 45/U.S. 41	E4	09-11	2,663
29th St. – 200 ft W of Canal Rd	G1/G2	09-45	1,769

In the MCAT 2021 Year in Review publication, the fixed route ridership for fiscal year 2021 was over 1.1 million and projected to be 1.4 million in fiscal year 2022. This would include route 13 which traverses through this project's study corridor.

There is no bicycle or pedestrian count available for the roadways of the study corridor. Field observations and anecdotal data received from the local community suggest that there is substantial walking and bicycling for utilitarian purposes along these corridors.

Questionnaire responses from the focus groups held in 2021 indicate that people will use the trail network for non-utilitarian purposes, especially exercise and recreation, with over 30 responses indicating this kind of activity several times a month.

2.2.13 Roadway Operational Conditions

This project is not anticipated to impact the operational conditions of the roadways.

2.2.14 Managed Lanes

There are no managed lanes on any of the evaluated alignments.

2.2.15 Crash Data

Crash data for the Palmetto Trails Network Plan Study area were obtained using the Signal Four Analytics web application. Five years of data (January 1, 2021–December 31, 2025) were queried to obtain long- and short-form crashes with a First Harmful Event reported as either pedestrian or bicycle for the Southern, Middle, and Northern Sections. A total of 100 pedestrian and bicycle crashes were returned from Signal Four Analytics during this five-year period.

A crash data spreadsheet and copies of the crash reports were downloaded. The Crash Detail spreadsheet provides a crash-by-crash listing of spatial, temporal, behavioral, and environmental characteristics associated with each collision. Among these 100 crashes, a total of 23 fatal and serious injury pedestrian and bicycle crashes were reviewed in detail to identify safety concerns and crash patterns relevant to the development of the Palmetto Network Trail Plan. Specifically, there were 8 fatal crashes and 15 serious injury crashes. Detailed descriptions of these crashes are provided in the following subsections. These fatal and serious injury crashes were reported as long-form crashes only.

2.2.15.1 Middle and Northern Sections

2.2.15.1.1 Description of Pedestrian Crashes

Six pedestrian crashes occurred within the Middle and Northern Sections of the study corridor in the period 2021 – 2025 and are described in the following paragraphs.

- 5/22/2023 – Fatal: At 8th Ave. W and 13th St. W, two pedestrians were traveling east to west crossing over 8th Ave. W, after making it to the middle of the road, one pedestrian kept running but was hit by a vehicle traveling southbound on 8th Ave. W in the outside lane. The crash occurred under daylight conditions and was fatal.
- 11/10/2024 – Serious Injury: The vehicle was traveling southbound on 4th Ave. E, turned right, and collided with a pedestrian pushing a lawnmower on the shoulder at the corner of the intersection of 23rd St. E. The crash occurred under daylight conditions.
- 12/8/2024 - Fatal: The vehicle was traveling northbound on U.S. 41 and struck a pedestrian crossing midblock near the RaceTrac at the intersection of 17th St. E. The crash occurred under dark-lighted conditions.
- 2/13/2025 – Fatal: The vehicle was traveling westbound on 17th St. E and struck a pedestrian crossing northbound midblock. The crash occurred under dark-lighted conditions.
- 4/26/2025 – Serious Injury: The vehicle was traveling eastbound on 14th St. W, operated by a 13-year-old female, and struck a four-year-old boy crossing midblock. The crash occurred under dark-not lighted conditions.
- 6/14/2025 – Serious Injury: The vehicle was traveling southbound on 3rd Ave. E and struck a pedestrian riding an electric children's scooter eastbound after the pedestrian violated the stop sign at the intersection of 19th St. E. The crash occurred under dusk conditions.

2.2.15.1.2 Description of Bicycle Crashes

Three bicycle crashes occurred within the Middle and Northern Sections of the study corridor in the period 2021 – 2025 and are described in the following paragraphs.

- 9/10/2021 – Serious Injury: At U.S. 41/S.R. 45 and 21st St. E, a bicyclist was traveling over U.S. 41 from west to east and stopped in the median before continuing over U.S. 41 into the northbound lanes where they were hit by a vehicle traveling northbound on U.S. 41 in the inside lane. The crash occurred under dark/unlit conditions and was incapacitating.
- 1/13/2022 – Fatal: At 8th Ave. W and 20th St. W, a bicyclist traveling northbound on the west sidewalk of 8th Ave. W made an abrupt eastbound right turn over 8th Ave. W and was hit by a vehicle traveling southbound on 8th Ave. W. The crash occurred under daylight conditions and was fatal.
- 12/28/2023 – Serious Injury: At 12th St. W and the Dr Martin Luther King Jr Park trail, a bicyclist was traveling southbound on the park trail and was hit by a vehicle traveling

westbound on 12th St. W due to the cyclist not yielding to the right of way. The crash occurred under daylight conditions and was incapacitating.

2.2.15.2 Southern Section

2.2.15.2.1 Description of Pedestrian Crashes

Twelve pedestrian crashes occurred within the Southern Section of the study corridor in the period 2021 – 2025 and are described in the following paragraphs.

- 5/20/2021 – Serious Injury: At 8th Ave. W and 7th St. W, a pedestrian was crossing from east to west over 8th Ave. W and was hit by a vehicle making a westbound-to-southbound left turn from 7th St. W to 8th Ave. W. The crash occurred in daylight conditions and was incapacitating.
- 1/17/2022 – Serious Injury: On 10th St. W, a pedestrian was crossing over 10th St. W from south to north and was hit by a vehicle traveling westbound on 10th St. W in the outside lane. The crash occurred in dark/lit conditions and was incapacitating.
- 2/3/2022 – Fatal: On 10th St. W, a pedestrian was attempting to make a southbound crossing over 10th St. W and was hit by a vehicle traveling westbound in the inside lane of 10th St. W. The pedestrian was not visible to the vehicle due to a firetruck in the outside lane. The crash occurred in dark/lit conditions and was fatal.
- 3/23/2022 – Fatal: On 8th Ave. W, a pedestrian was jogging on the southbound sidewalk of 8th Ave. W and was hit by a vehicle that jumped the curb at high speeds while traveling southbound on 8th Ave. W. The crash occurred in daylight conditions and was fatal.
- 6/28/2022 – Serious Injury: On 8th Ave. W and 11th St. W, a vehicle making an eastbound-to-northbound left turn from 11th St. W onto 8th Ave. W and hit a pedestrian who was crossing from west to east across 8th Ave. W after stopping briefly in the painted median. The crash occurred in daylight conditions and was incapacitating.
- 10/5/2022 – Fatal: At 8th Ave. W and 11th St. W, a vehicle was traveling northbound on 8th Ave. W and hit a pedestrian attempting to cross over 8th Ave. W from east to west. The crash occurred in daylight conditions and was fatal.
- 1/25/2023 – Serious Injury: At 8th Ave. W and 7th St. W, a pedestrian was crossing westbound over 8th Ave. W within a marked crosswalk and was hit by a vehicle making a westbound-to-southbound left turn from 7th St. W onto 8th Ave. W, as the motorist did not yield to the pedestrian. The crash occurred in daylight conditions and was incapacitating.
- 5/23/2023 – Serious Injury: At 8th Ave. W and 5th St. W, a pedestrian was crossing westbound over 8th Ave. W within a marked crosswalk and was hit by a vehicle making a westbound-to-southbound left turn from 5th St. W that failed to yield to the pedestrian. The crash occurred in daylight conditions and was incapacitating.

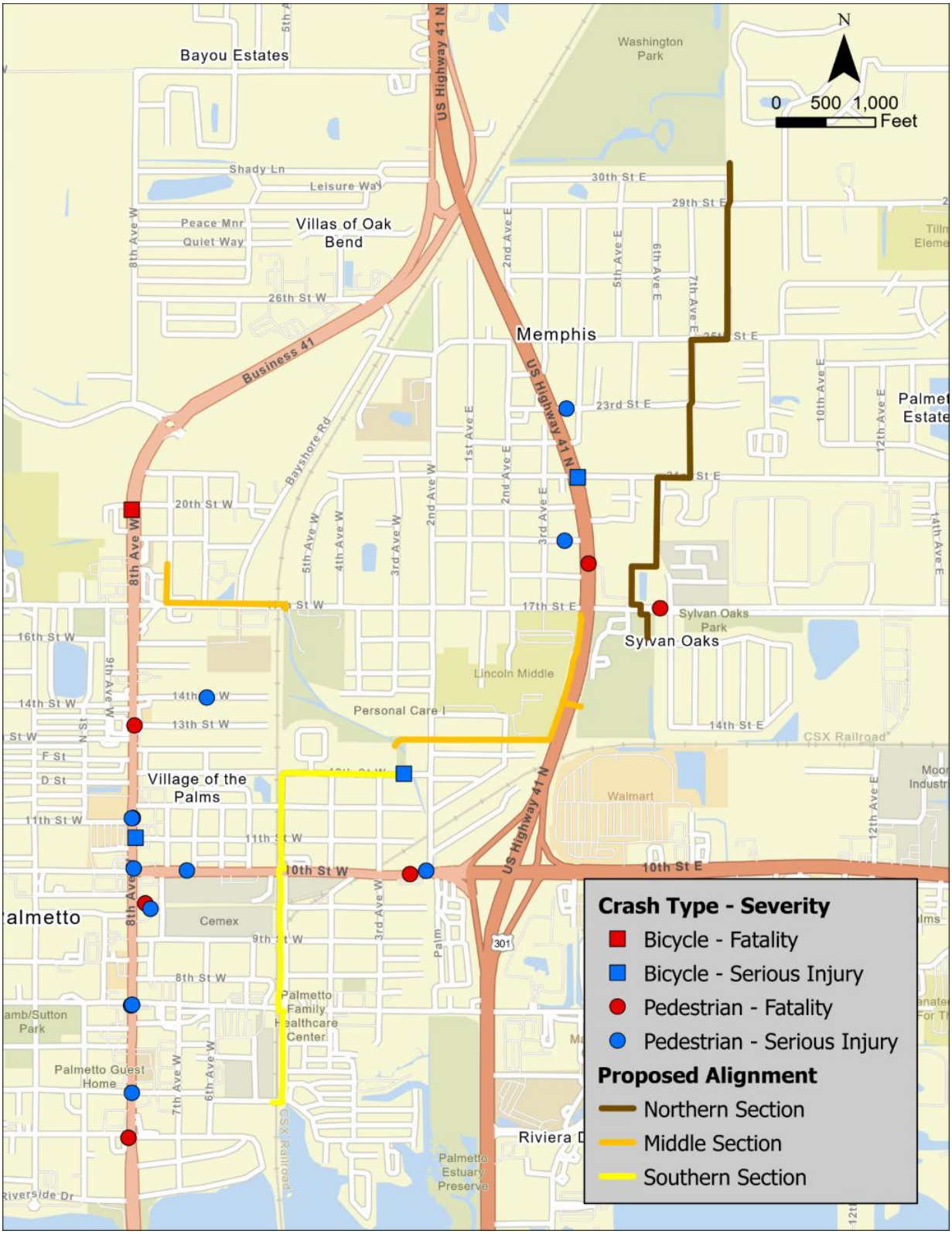
- 7/8/2023 – Fatal: In the drive aisle of the parking lot for Wild Turkey Saloon at 922 W 8th Ave., the driver of the vehicle involved in this crash entered their vehicle located in the rear parking lot, traveled north then turned left, eastbound, traveling to 8th Ave. W when the vehicle hit a pedestrian sitting against a wooden fence on the north side of the Wild Turkey Saloon's property. The crash occurred in dark/unlit conditions and was fatal.
- 8/9/2023 – Serious Injury: In the parking lot for Wild Turkey Saloon at 922 W 8th Ave., a vehicle was backing out of a parking space on the east side of the building and proceeded to make a northbound right turn in an attempt to leave the parking lot when they hit a pedestrian sitting on the north end of the parking lot. The crash occurred in dark/unlit conditions and was incapacitating.
- 4/6/2024 – Serious Injury: The vehicle was traveling westbound on 10th St. W and struck a pedestrian crossing northbound midblock near the intersection of 2nd Ave. W. The crash occurred under dark-lighted conditions.
- 3/16/2025 – Serious Injury: The vehicle was eastbound, turning left on a green light at 10th St. W, and struck a pedestrian crossing during the steady "Don't Walk" phase. The crash occurred under daylight conditions.

2.2.15.2.2 Description of Bicycle Crashes

Two bicycle crashes occurred within the Southern Section of the study corridor in the period 2021 – 2025 and are described in the following paragraphs.

- 1/22/2023 – Serious Injury: At 8th Ave. W and 11th St. W, a bicyclist was traveling southbound on the east side of 8th Ave. W and observed a vehicle traveling westbound on 11th St. W coming to a stop at the intersection. The motorist observed a break in traffic and began making a turn onto 8th Ave. W when they hit the bicyclist. The crash occurred in daylight conditions and was incapacitating.
- 12/28/2023 – Serious Injury: At 12th St. W and the Dr Martin Luther King Jr Park trail, a bicyclist was traveling southbound on the park trail and was hit by a vehicle traveling westbound on 12th St. W due to the cyclist not yielding to the right of way. The crash occurred in daylight conditions and was incapacitating.

FIGURE 2-5 shows the location of the crashes described above. Multiple crashes occurred along 8th Ave. W and U.S. 41. It is possible the presence of a trail (had one existed), by providing a safer route, may have prevented these crashes. A shared use path will separate nonmotorized users from the roadway, midblock conflicts will be designed to reduce the potential for crashes, and intersections will provide adequate sight distance and appropriate traffic control. These trail features should reduce the potential for crashes along the corridor.



Note: A total of 23 crashes are mapped; however, only 20 symbols are visible due to overlapping crash locations.

FIGURE 2-5 Crash locations within Southern, Middle, and Northern Sections.

2.2.16 Railroad Crossings

In the Middle and Northern Sections, one railroad corridor was identified within the limits of the study area. The CSX rail line that travels parallel to Business U.S. 41 crosses 17th St. just west of the Dr. Martin Luther King, Jr. trail and thus impacts one of the study segments (A2).

In the Southern Section, the southern part of the CSX rail line running parallel to U.S. 41 crosses 5th St. W, impacting study Segments S-B1 and S-B5. Additionally, this rail line splits to the northeast at 9th St. W and crosses the Southern Section alignments at three locations: 5th Ave. W, 3rd Ave. W, and 2nd Ave. W, intersecting study Segments S-E6, S-E4, and S-F1, respectively.

2.2.17 Drainage

2.2.17.1 Middle and Northern Sections

The Study Area consists of 21 segments and falls within the Braden River watershed. General flow is east to west via manmade conveyance systems. The final discharge is into the Terra Ceia Bay. See **FIGURE 2-6** on the following page. Detailed views of the flow are contained within the *Palmetto Trails Network PD&E Study – Conceptual Middle and Northern Sections Drainage Report* submitted as a separate document.

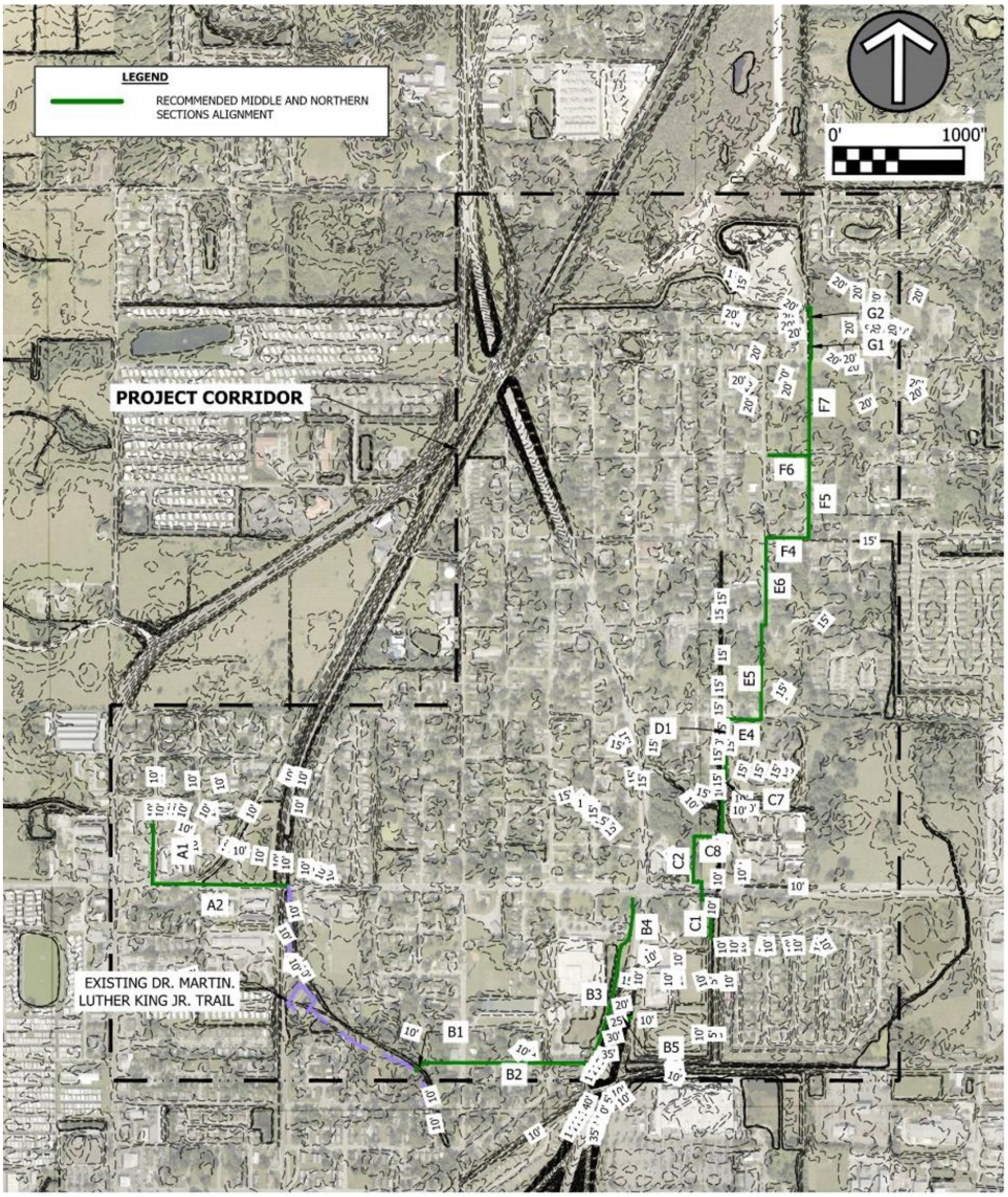


FIGURE 2-6 Middle and Northern Sections LiDAR topography.

2.2.17.1.1 Floodplain

A detailed watershed study of the subbasins has not been undertaken for the Study Area. Manatee County is considering undertaking a study in the future.

Based on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM), Panel Numbers 12081C0162F, 12081C0166F, 12081C0164F, 12081C0168F, effective dates August 10th, 2021, all the proposed construction activities are outside the 100-year flood zone. See **FIGURE 2-7**.

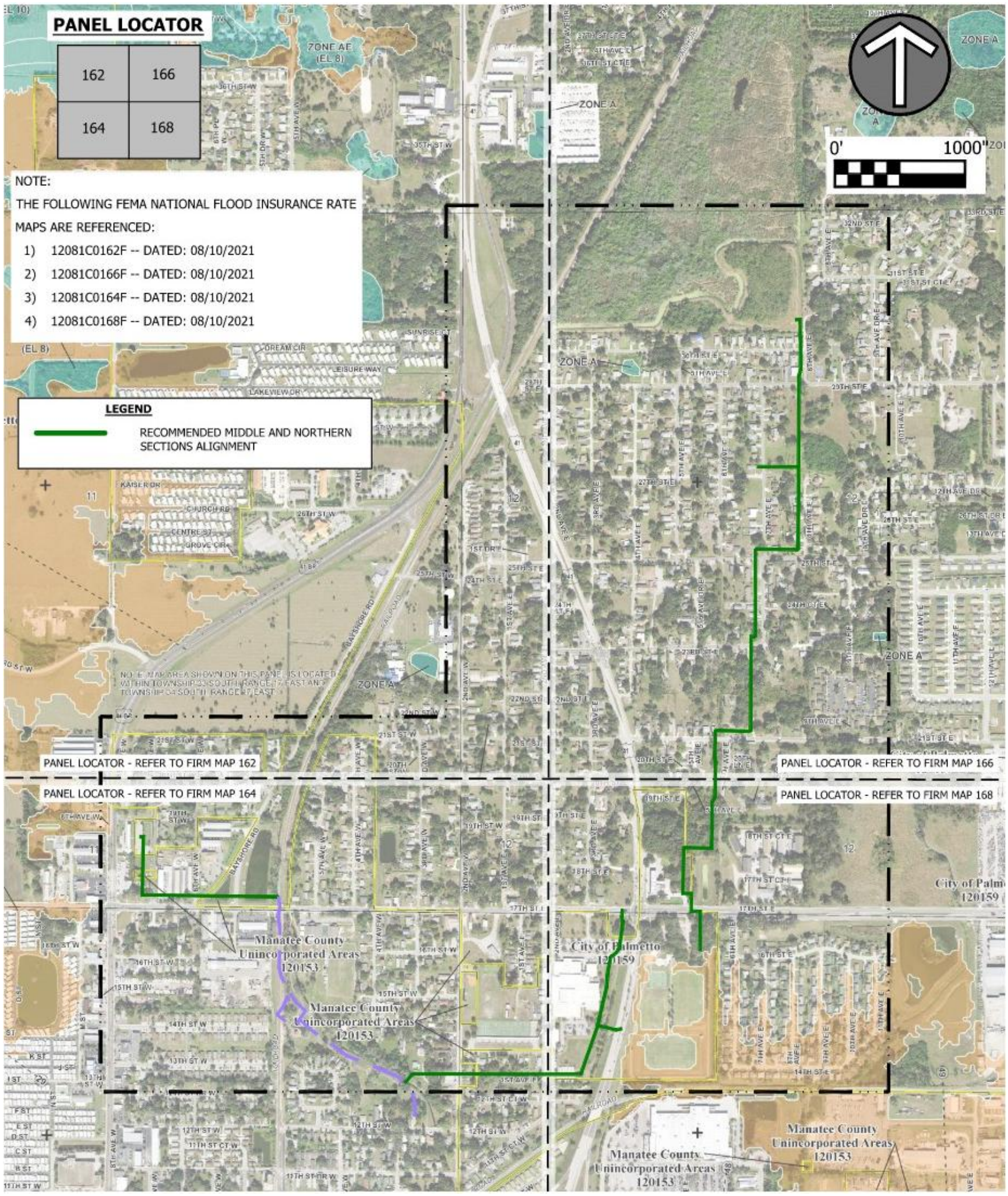


FIGURE 2-7 Middle and Northern Sections FEMA floodplain map.

2.2.17.1.2 Existing Permits

The Study Area falls under the jurisdiction of the Southwest Florida Water Management District (SWFWMD), FDOT, and Manatee County. There are eleven existing Environmental Resource Permits (ERP) permits along the corridor, one of which is currently active. Much of the surrounding properties were developed prior to the existence of SWFWMD and contain no permits.

TABLE 2-10 lists existing permits which have been identified relative to the Palmetto Trails Network PD&E Study issued by SWFWMD.

TABLE 2-10 Middle and Northern Sections Existing SWFWMD Permits

Permit No	Project Name	Applicant	Issue Date	Expiration Date	Permit Status	Project Acreage
860493	Lincoln Park Concession Building & Pedestrian Bridge	Manatee County Property Management	7/12/2023	7/12/2028	Issued	2.43
818587	Circle K - 8th Ave. W & 17th St. W - Palmetto	Varnadore Properties, LLC	5/4/2021	5/4/2026	Issued	2.29
684209	City of Palmetto - MLK Park Improvements & Wetland Restoration	City of Palmetto	10/29/2013	10/29/2018	Issued	5.07
639649	Manatee County Park and Ride	Manatee County Public Works Department	4/23/2011	2/24/2016	Issued	0.77
63187	Manatee County - 17th St. from U.S. 41 to Canal Road	Manatee County Public Works Department	6/25/2008	6/18/2013	Issued	20.50
50502	Manatee County - 17th St. W	Manatee County Public Works Department	9/30/2004	9/30/2011	Issued	24
42158	Lincoln Middle School Environmental Pond	Manatee County School Board	9/12/2002	12/31/2004	Issued	0.15
38600	City of Palmetto - Lincoln Community Park	Manatee County Parks & Recreation	5/21/1998	5/21/2003	Issued	14.50
26976	Palmetto Palms	City of Palmetto Public Works	1/26/1994	1/26/1997	Issued	8.76
6669	Palmetto, City of-Lincoln Block	City of Palmetto Public Works	7/24/1987	7/24/1990	Issued	10
859	Highland Apartments	Highland Assoc Ltd	7/11/1985	8/11/1988	Issued	10

A pre-application meeting with SWFWMD was conducted on June 13, 2023. It is unlikely that a permit, apart from the two existing permitted projects and creek crossing, will be needed. Verification of permit exemption and coordination with SWFWMD should continue in the final design phase. The SWFWMD pre-application minutes are contained within the *Palmetto Trails Network PD&E Study – Conceptual Middle and Northern Sections Drainage Report*.

2.2.17.2 Southern Section

The Study Area consists of 35 segments and falls within the Braden River watershed. General flow is north to south via manmade conveyance systems. The final discharge is into the Terra Ceia Bay. See **FIGURE 2-8** on the following page. Detailed views of the flow are contained within the *Palmetto Trails Network PD&E Study – Conceptual Southern Section Drainage Report* submitted as a separate document.

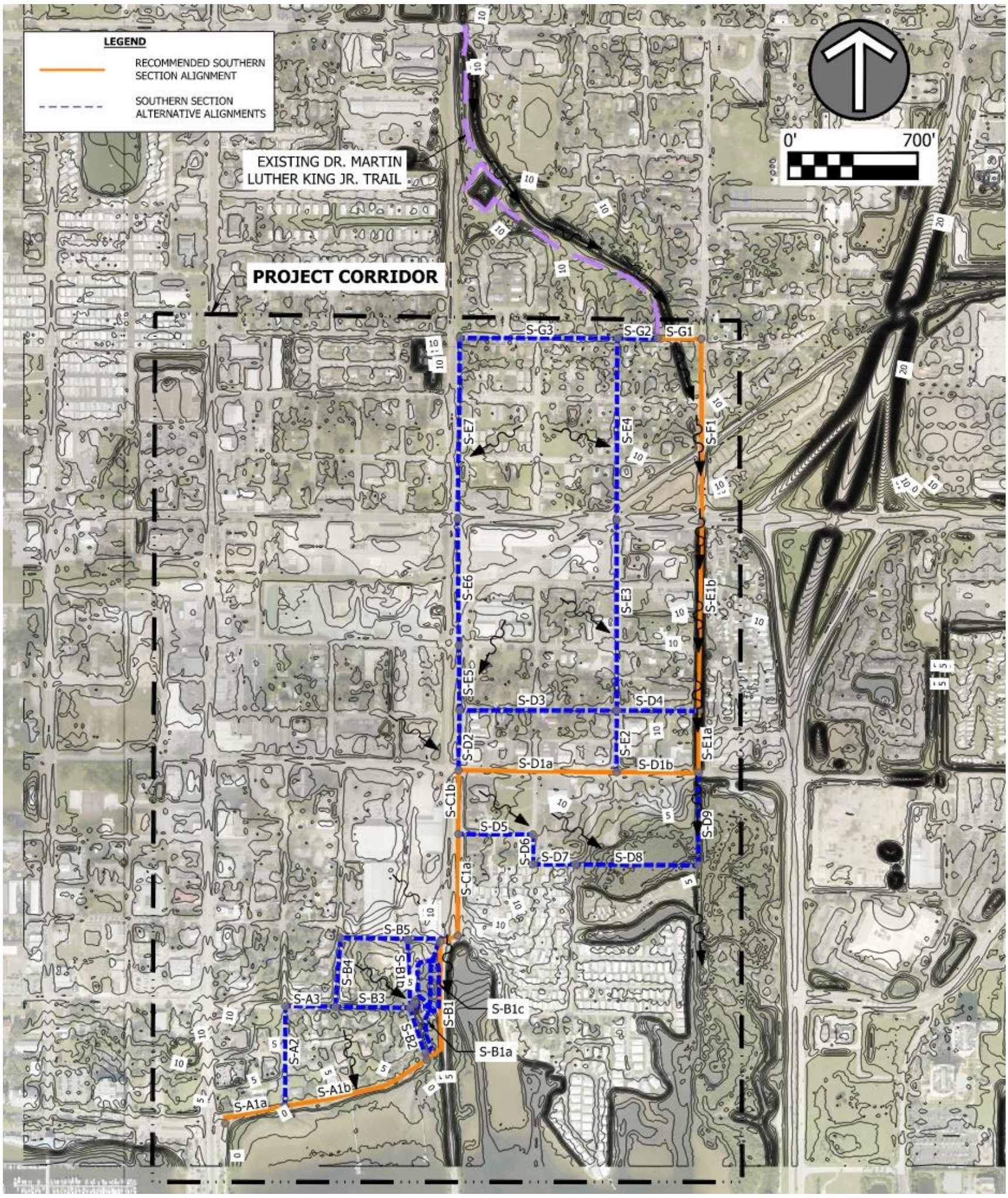


FIGURE 2-8 Southern Section LiDAR topography.

2.2.17.2.1 Floodplain

A detailed watershed study of the subbasins has not been undertaken for the Study Area. Manatee County is considering undertaking a study in the future.

The 100-year storm elevations have been based on FEMA FIRM, Panel Number 164 of 575, Map Number 12081C0164E, effective dates August 10th, 2021. See **FIGURE 2-9**.

2.2.17.2.2 Existing Permits

The Study Area falls under the justification of SWFWMD, FDOT and Manatee County. There are two existing SWFWMD ERPs along the corridor. Much of the surrounding properties were developed prior to the existence of SWFWMD and contain no permits. A pre-application meeting with SWFWMD was conducted on June 13, 2023. Based on the meeting minutes, most of the project will be exempt under 62-330.051 unless wetlands are encountered. Verification of permit exemption and coordination with SWFWMD should continue in the final design phase. The SWFWMD pre-application minutes is contained within the *Palmetto Trails Network PD&E Study – Conceptual Southern Section Report*.

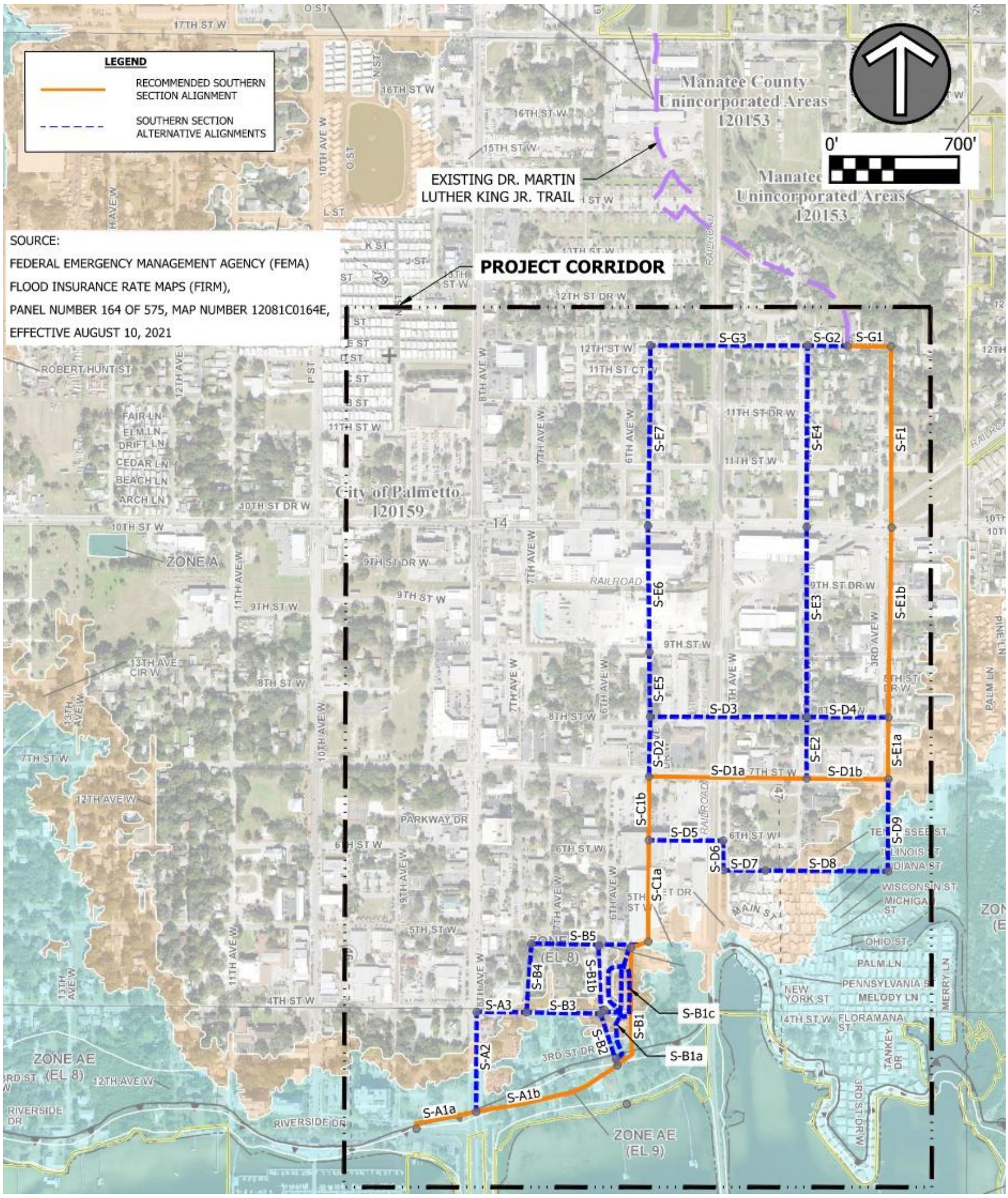


FIGURE 2-9 Southern Section FEMA floodplain map.

2.2.18 Lighting

Lighting along the project corridor is sparse. The lighting identified is summarized in **TABLE 2-11** below.

TABLE 2-11 Lighting along Study Corridor

Segment Letter	Segment Number	Type	Side	Notes
A	2	Other	Both	Lamps at 100' intervals
C	4	Cobra-Style	Both (North End)	1 streetlight on either side of intersection on south side of 17th St
E	4	Cobra-Style	Left	1 streetlight on north side of 21st St
G	1	Cobra-Style	Right	1 light for driveway to basketball court on east side of 8th Ave.
S-C	1a	Cobra -Style	Right	1 light for driveway to Mobile Home Park at Jet Drive 1 Light at 6th St
S-C	1b	Cobra-Style	Right	1 light over
S-E	7	Cobra-Style	Right	1 light at 11th St. W 1 light at 11th St. Dr W
S-G	2	Cobra-Style	Right	1 light at 3rd Ave. W
S-G	3	Cobra-Style	Right	1 light at 5th Ave. W

2.2.19 Utilities

As a result of the data collected and a design ticket from Sunshine 811, thirteen utility companies were identified as being present in the project corridor: Spectrum, City of Palmetto Water, City of Palmetto Sewer, Zayo Group, Florida Power & Light (FPL) Distribution, FPL Transmission, Frontier, MCI/Verizon Business, Manatee County Utilities, Manatee County Transportation Dept., TECO Peoples Gas, Uniti, Peace River Cooperative (PRECO). Of these Utility Agency Owners (UAOs), seven provided information about existing utilities; MCI, FPL, Spectrum, Uniti, PRECO, Frontier, Manatee County Utilities.

The following UAOs were contacted:

Spectrum
Mr. James Fleming
5413 SR 64 E
Bradenton, FL 34208
(941) 213-0877
James.Fleming1@charter.com

City of Palmetto Water
Mr. Mohammed Rayan
601 17th St. W
Palmetto, FL 34221
(941) 723-4580
mrayan@palmettofl.org

City of Palmetto Sewer
Mr. Robert Simpson
601 17th St. W
Palmetto, FL 34221
(941) 723-4580

Zayo Group *(Crown Castle Is Now Zayo)*
Mr. Danny Haskett
1601 NW 136th St. Ave., Ste A-200
Sunrise, FL, 33323
(786) 610-7073
danny.haskett@zayo.com
ZayoFLRelocations@zayo.com
Kate.Peters@Cobbfendley.com

Florida Power & Light Distribution
Mr. Brian Garver
1253 12th Ave. E
Palmetto, FL 34221
(941) 723-4442
brian.garver@fpl.com

Florida Power & Light Transmission
Mr. Craig Ledbetter
15430 Endeavor Drive
Jupiter, FL 33478
(561) 803-7942
Craig.Ledbetter@fpl.com

Frontier
Ms. Denise Hutton
1701 Ringling Blvd
Sarasota, FL 34236
((941) 504-9652
denise.hutton@ftr.com

MCI/Verizon Business
Mr. Michael Krol
7701 E Telecom Parkway
Temple Terrace, FL 33637
(813) 410-4803
michael.krol@verizon.com
bau-tampa@verizon.com

Manatee County Utilities
Mr. Lorenzo Duarte
1022 26th Ave. E
Bradenton, FL 34208
(941) 708-7450 x7373
lorenzo.duarte@mymanatee.org

Manatee County Transportation Dept.
Mr. Neil Byrne
2101 47th Terrace E
Bradenton, FL 34203
(941) 749-3500 x7859
neil.byrne@mymanatee.org

Peace River Cooperative
Mr. David McClintock
210 Methany Rd
Wauchula, FL 33873
863-767-4621
david.mcclintock@preco.coop

Peoples Gas System, Inc.
Mr. David Rivera
5101 NW 21st Ave. Ste 460
Fort Lauderdale, FL, 33309
(954) 453-0794
drrivera@tecoenergy.com

Uniti
Mr. Terry Young
805 Executive Center Drive W, Suite 110
St. Petersburg, FL 33702
(251) 422-3872
Terry.Young@uniti.com

2.2.20 Soil and Geotechnical Data

Review of the project limits and 300-ft buffer using United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (https://websoilsurvey.nrcs.usda.gov) identified 11 soil types within 12 map units, which are listed in **TABLE 2-12** below. A map of Web Soil Survey results within the project limits is included in the *Natural Resource Evaluation (NRE) Attachment B, FIGURE B-2* submitted as a separate document.

TABLE 2-12 NRCS Soils Within Project Limits

MAP UNIT SYMBOL	MAP UNIT NAME	HYDRIC RATING (%)	Gopher Tortoise BURROWING SUITABILITY	ACRES	PERCENT
20	EauGallie-EauGallie wet, fine sand, 0 to 2 percent slopes	19	Less Suited	4.0	72.0%
48	Wabasso-Wabasso, wet, fine sand, 0 to 2 percent slopes	23	Unsuitable	0.7	12.4%
13	Chobee loamy fine sand, frequently ponded, 0 to 1 percent slopes	100	Unsuitable	0.4	6.4%
5	Bradenton fine sand, limestone substratum	100	Unsuitable	0.0	0.3%
54	Zolfo fine sand, 0 to 2 percent slopes	3	Highly Suited	0.2	3.3%
42	Pomello fine sand, 0 to 2 percent slopes	0	Highly Suited	0.1	1.7%
16	Delray complex	95	Unsuitable	0.1	1.0%
26	Floridana-Immokalee-Okeelanta association	96	Unsuitable	0.2	2.8%
TOTAL				**5.6**	**100.0%**

The Web Soil Survey utilizes multiple sources to identify and rate map units based on their components. The hydric rating indicates the percentage of components meeting the criteria for hydric soils within each map unit. According to the Florida Association of Environmental Soil Scientists (FAESS), soil may not be classified as hydric in all situations. Nullifying factors include the inclusion of certain soil types or the composition of the dominant soil in addition to the soil being located within a specific landform type (e.g., marine terrace, sloughs, tidal marsh, etc.). Final determination of the hydric condition for those soils which may be hydric will be determined during the permitting and design stage of this project.

2.2.21 Aesthetics Features

The 2.8-mile study corridor lines a suburban community in the City of Palmetto and Manatee County. The network will traverse/connect two parks: Coach Eddie Shannon Park, south of 17th St, which was recently improved to include a heated pool and other athletic/recreational facilities, and Washington Park, at the north end of the corridor, which is currently under construction to include a trail and other cultural, aesthetic, and recreational features.

Several segments are anticipated to traverse undeveloped rights of way within residential areas which will provide natural shade and landscaping. The corridor will also connect to the existing Dr. Martin Luther King, Jr. Trail with several landscaping and aesthetic features along the path.

Both 17th St. and 7th Ave. are largely commercial/industrial corridors.

The future trail and landscape design should respect and embrace the history and culture of the local communities and City of Palmetto. Landscaping and amenities may be implemented if funded and maintained by the City or County.

2.2.22 Traffic Signs

There are no overhead traffic signs along the study corridor.

2.2.23 Noise Walls and Perimeter Walls

There are no noise walls present along the study alignments.

2.2.24 Intelligent Transportation Systems (ITS)/Transportation System Management and Operations (TSM&O) Features

There are multiple fiber optic lines within the intersecting or near the study network. An excerpt from the Final "As-Built" Plans for the FDOT Advanced Traffic Management System Phase II project (FPID 426635-1-52-01) is provided in **FIGURE 2-10**. The graphic has been annotated to show the PTNP proposed alignment.

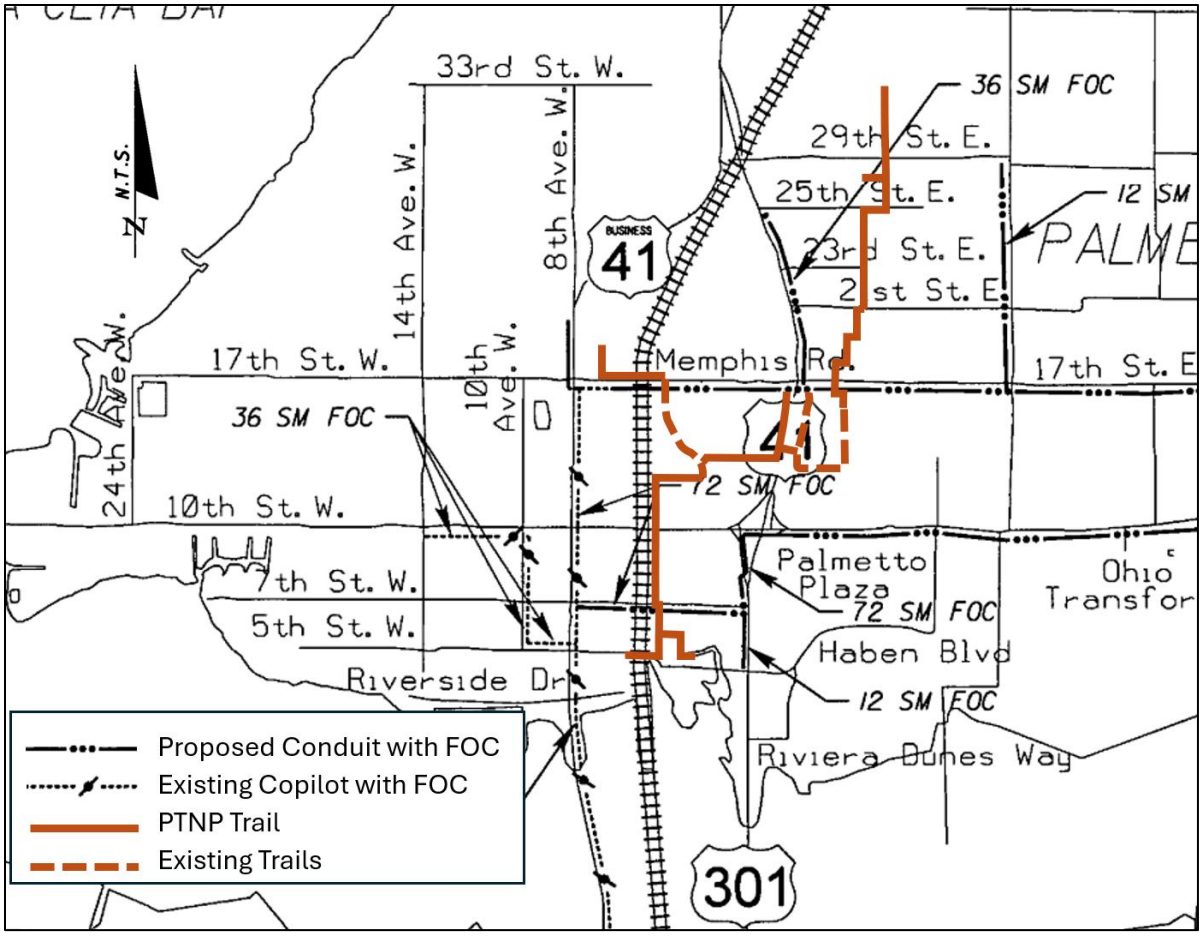


FIGURE 2-10 ITS/TMS&O Fiber Optic Lines in the PTNP Study Area

2.3 Existing Bridges and Structures

Each of the existing structures was evaluated to determine its existing condition and the feasibility of its extension or use in the accommodation of the Recommended Alternative. There are two existing concrete box culverts within the project limits.

1. Existing Precast Concrete Arch Culvert at South End of Dr. Martin Luther King, Jr. Park

There is an existing precast concrete, as shown in **FIGURE 2-11**, 3-sided arch culvert at the south end of Dr. Martin Luther King, Jr. Park, along 12th St. W between 2nd Ave. W and 3rd Ave. W.

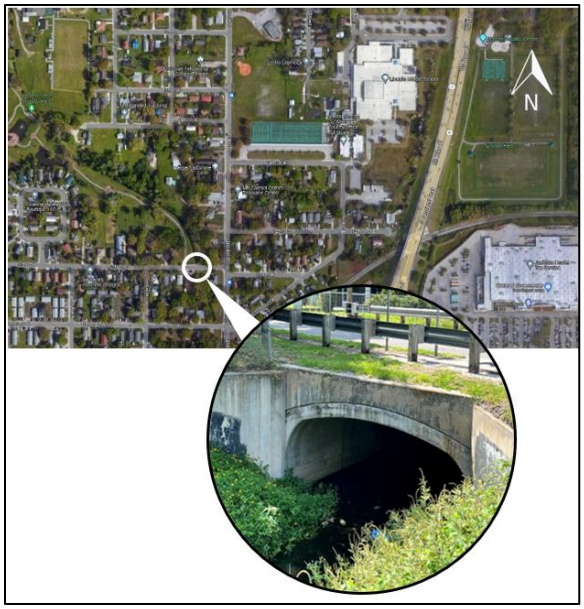


FIGURE 2-11 Existing precast concrete arch culvert.

Existing or as-built plans for this structure could not be located, and the year it was installed is also unknown. However, Contech Engineering Solutions, LLC was able to confirm that this is one of their "open bottom" CON/SPAN O-Series systems, with prefabricated concrete components as shown in **FIGURE 2-12** below.

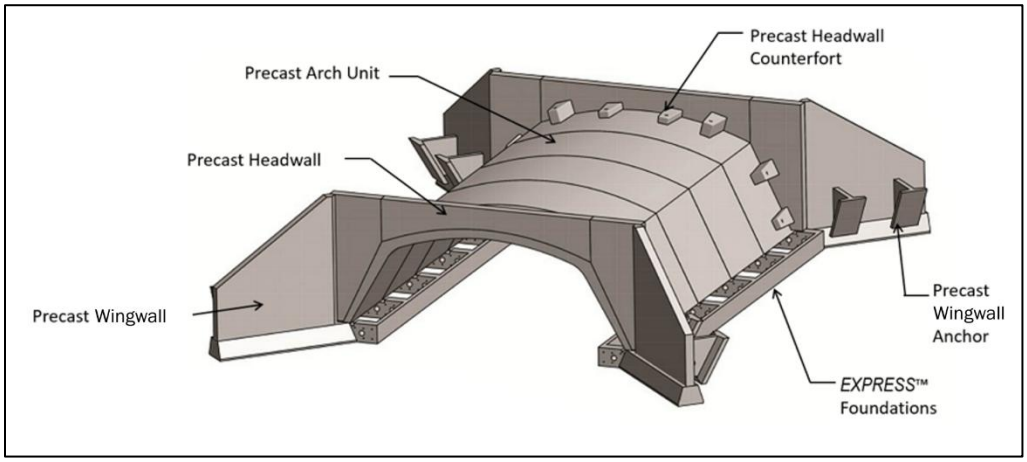


FIGURE 2-12 CON/SPAN O-Series system.

The headwall length on each end of the culvert is approximately 17'-8". The opening beneath the culvert is approximately 15'-0" wide by 5'-0" tall, and the length of the culvert extending beneath 12th St. W is approximately 55 feet long. Since the culvert opening is less than 20 feet wide, this culvert does not qualify or meet the definition of a "bridge" structure.



FIGURE 2-13 South end of existing culvert.



FIGURE 2-14 South end of existing culvert.

2. Lincoln Tunnel

The Lincoln Tunnel is an existing 12-ft wide by 8-ft tall by 90-ft long reinforced concrete box culvert that was built circa 1963/1964 to serve as a pedestrian underpass beneath S.R. 45 (U.S. 41) at MP 4.386. Since the culvert opening is less than 20 feet wide, this culvert does not qualify or meet the definition of a "bridge" structure. The culvert cross-section from the existing plans for this pedestrian underpass (from old State Job No. 13130-3202-01-21) is shown below, and the existing plans are also included in **Appendix A**.

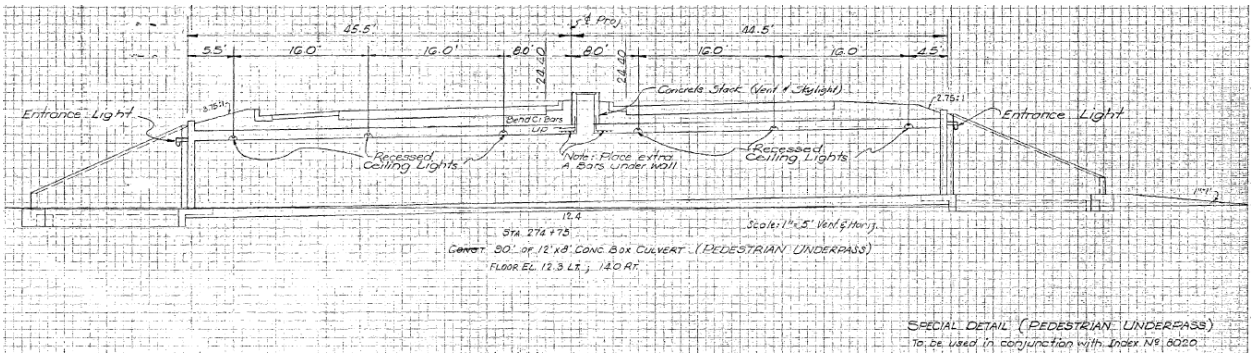


FIGURE 2-15 Cross-section of Lincoln Tunnel from existing plans (State Job. No. 13030-3202-01-21).

As indicated on the detail above from the existing plans, the tunnel used to have recessed lighting along the top slab of the culvert, as well overhead entrance lights at each end of the tunnel. The overhead entrance lights at the ends of the tunnel are not currently there, and it is unknown whether or not the interior recessed lighting is still operational. There is also an open-air vent/skylight located at the center of the tunnel, situated within the median of U.S. 41.



FIGURE 2-16 Location of the Lincoln Tunnel.

The Lincoln Tunnel has historic significance related to the old Lincoln Memorial High School. Prior to desegregation in 1969, Lincoln Memorial High School was the only public high school for African American students in Manatee County. The high school was situated on the west side of U.S. 41, and the Lincoln Tunnel was used to access the school's football field on the east side of U.S. 41. To accommodate desegregation in 1969, Lincoln Memorial High School became the Lincoln Middle School, and the football field has since been turned into Coach Eddie Shannon Park. A documentary film entitled "Through the Tunnel" was produced in 2019 (directed by Durand Adams, Charles E. Williams, and Charles Clapsaddle). It documents the history associated with the tunnel and Lincoln Memorial High School.

The existing tunnel currently has an approximately 3" to 4½" thick monolithic concrete buildup on the bottom slab of the culvert (see detail below from the existing plans). This buildup has a crowned cross-slope, presumably to help with drainage, and a broom-finished non-skid surface (the Lincoln Memorial High School football players used to walk through this tunnel wearing spiked football cleats). The buildup along the bottom slab reduces the vertical clearance within the box culvert from 8 feet (the nominal interior height of the box culvert) down to approximately 7'-7½".

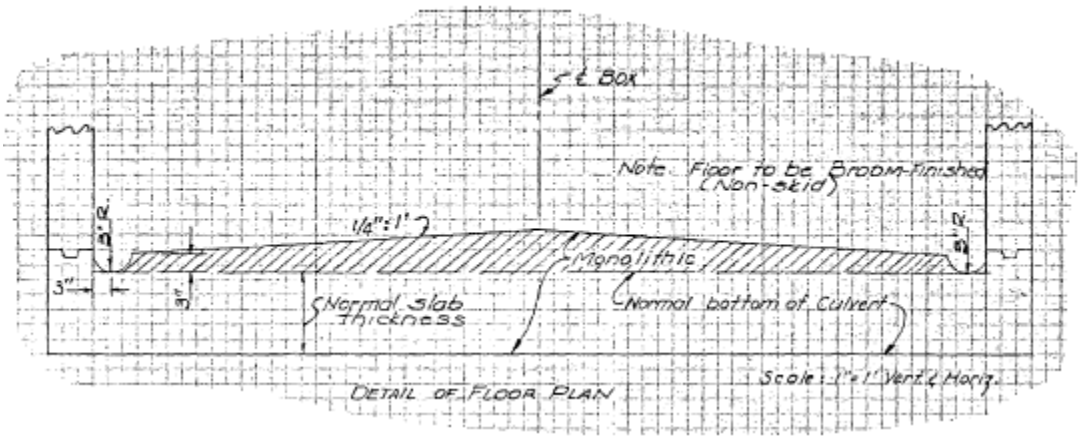


FIGURE 2-17 Existing concrete build-up on bottom slab of Lincoln Tunnel.



FIGURE 2-18 East side of Lincoln Tunnel.



FIGURE 2-19 Gates and locks on entrances to Lincoln Tunnel.



FIGURE 2-20 Concrete spall along top of headwall.



FIGURE 2-21 Concrete spall along top of headwall and typical graffiti/vandalism on walls.



FIGURE 2-22 Interior of Lincoln Tunnel.

The Lincoln Tunnel has been kept locked and gated for at least the past several years, presumably to prevent further acts of vandalism (such as graffiti) and possibly due to other safety and security concerns. According to the FDOT District Structure Maintenance Office, this culvert is currently not being inspected by FDOT, and there are no previous inspection reports or maintenance records associated with this structure. Based on recent field reviews and visual inspection, the culvert appears to be in generally good to very good (structural) condition. There is some spalling of the concrete along the top of the headwalls with no exposed rebar, and there is possibly some minor rotation of the wingwalls.

Using the existing plans, an LRFD/LRFR (Load and Resistance Factor Design/Load and Resistance Factor Rating) load rating analysis was performed on this box culvert (provided in **Appendix A**). The results of the load rating analysis indicate that the culvert is currently structurally sufficient and capable of supporting the current U.S. 41 live load traffic.

Existing Prefabricated Steel Truss Pedestrian Bridge at North End of Dr. Martin Luther King Jr Park

There is an existing prefabricated steel truss pedestrian bridge at the north end of *Dr. Martin Luther King* Jr Park. Per a placard mounted on the bridge, this structure was manufactured by Contech Engineered Solutions in June of 2014.

The existing plans for this bridge were requested and provided by Contech Engineered Solutions (see **Appendix A**). This prefabricated steel pedestrian bridge is 40'-10½" long by 10'-0" wide (between railings). The bridge superstructure materials consist of "weathering steel" and wood plank decking. According to the signed and sealed bridge plans, and also the placard that is mounted on the bridge, this bridge was designed for a "light vehicle" maximum load of 5 tons.



FIGURE 2-23 Existing prefabricated steel pedestrian bridge.



FIGURE 2-24 Existing prefabricated steel pedestrian bridge.



FIGURE 2-25 Existing prefabricated steel pedestrian bridge.



FIGURE 2-26 Existing prefabricated steel pedestrian bridge.

Based on field reviews and visual observation, this bridge is in overall good condition. There are no proposed modifications to this existing bridge related to this project.

2.4 Existing Environmental Features

2.4.1 Wetlands and Surface Waters

The wetlands and Other Surface Waters (OSWs) identified during field surveys conducted in October 2020, January 2021, December 2024, and May 2026 are depicted in the NRE *Attachment B, FIGURE B-4*. Representative photographs are provided in the *NRE Attachment C*. Approximately 0.11 acres of wetlands were identified and delineated within the project limits. An additional 0.44 acres of wetlands were identified adjacent to (within 25 feet of) the project limits (**TABLE 2-13**). Wetland areas within and adjacent to the project limits are of moderate quality with some indicators of disturbance and moderate coverage of nuisance and exotic species present. Approximately 0.07 acres of OSWs were identified and delineated within the project limits (**TABLE 2-14**). OSWs within the project limits consist of excavated ditches.

TABLE 2-13 Impacts of Wetlands

ID	CLASSIFICATION		IMPACTS (ACRES)[1]	
	FLUCCS	USFWS[2]	PRIMARY	SECONDARY
Wetland 1	Wetland Forested Mixed (630)	PSS1	0.11	0.42
Wetland 2	Wetland Forested Mixed (630)	PSS1	-	0.00
Wetland 3	Mangrove Swamp (612)	EFO1	0.00	0.02
Total Wetland Impacts			**0.11**	**0.44**
Sum of Total Wetland Impacts (Primary + Secondary)			**0.55**	

1 – 0.00 represents a value less than 0.01
2 – **PSS1** = Palustrine, Scrub-Shrub, Broad-Leaved Deciduous; **EFO1** = Estuarine, Intertidal, Forested, Broad-Leaved Deciduous
FLUCCS - Florida Land Use, Cover and Forms Classification System; **USFWS** – U.S. Fish and Wildlife Service

TABLE 2-14 Impacts to Other Surface Waters

ID	CLASSIFICATION		IMPACTS (ACRES)[1]	
	FLUCCS	USFWS[2]	PRIMARY	SECONDARY
OSW 1	Streams and Waterways (510)	R4OW	0.00	-
OSW 2	Streams and Waterways (510)	R4OW	0.07	-
OSW 3b	Streams and Waterways (510)	R4OW	0.01	-
Total Other Surface Water Impacts			**0.07**	**N/A**

1 – 0.00 represents a value less than 0.01
2 – **R4OW** = Riverine, Lower Perennial, Open Water;
FLUCCS - Florida Land Use, Cover and Forms Classification System; **USFWS** – U.S. Fish and Wildlife Service

2.4.2 Listed Wildlife and Plant Species

Based on this evaluation, the project limits do not contain federally designated critical habitat for any species. A total of nine (9) federally-listed wildlife species, seven (7) state-listed wildlife species, two (2) non-listed protected wildlife species, and one (1) species proposed for federal listing were identified as potentially occurring based on the project falling within the documented range of the species. **TABLE 2-15** lists these wildlife species.

Field reviews took place in October 2020, January 2021, December 2024, and May 2026. Reviews consisted of vehicular surveys, roadside observations, and pedestrian surveys through natural areas and altered habitats with the potential to support protected species. The purpose was to document any protected plant and wildlife species or indicators of their presence (e.g., vocalizations, tracks, scat, burrows, etc.) within or immediately adjacent to the project limits. During pedestrian surveys, visual observations were also conducted on adjacent lands.

Two (2) federally listed plant species and three (3) state-listed plant species were identified as potentially occurring within the project limits based on known species distributions. These plant species are provided in **TABLE 2-16**. Additional state-listed plant species documented within Manatee County were not included due to the lack of suitable habitat within the project limits. A list of potentially occurring protected species was developed, and each species was assigned a no, low, moderate, or high likelihood for occurrence within habitats found within the project limits. Definitions for likelihood of occurrence are provided below:

No — Species with no likelihood of occurrence within the project limits are defined as those species that are known to occur in Manatee County or the bioregion, but suitable habitat is not present within the project limits.

Low — Species with a low likelihood of occurrence within the project limits are defined as those species that are known to occur in Manatee County or the bioregion, but suitable habitat is limited within the project limits, or the species is rare or has been extirpated.

Moderate — Species with a moderate likelihood for occurrence are those species known to occur in Manatee or nearby counties, and for which suitable habitat is present within the project limits, but no observations or positive indications exist to verify their presence.

High — Species with a high likelihood for occurrence are suspected within the project limits based on known ranges and existence of suitable habitat within the project limits; or have been previously observed or documented within the project limits.

TABLE 2-15 Potentially Occurring Protected and Proposed Wildlife Species

Species		Potential for Occurrence				Protected Status*
		No	Low	Moderate	High	
American crocodile	*Crocodylus acutus*	x				FED-T
crested caracara	*Caracara plancus audubonii*	x				FED-T
eastern black rail	*Laterallus jamaicensis jamaicensis*	x				FED-T
eastern indigo snake	*Drymarchon corais couperi*			x		FED-T
Everglade snail kite	*Rostrhamus sociabilis plumbeus*	x				FED-E
Florida panther	*Puma concolor coryi*	x				FED-E
Florida sandhill crane	*Grus canadensis*		x			SL-T
gopher tortoise	*Gopherus polyphemus*			x		SL-T
Gulf sturgeon	*Acipenser oxyrhynchus desotoi*	x				FED-T; managed by USFWS
little blue heron	*Egretta caerulea*		x			SL-T
roseate spoonbill	*Platalea ajaja*		x			SL-T; ISMP
rufa red knot	*Calidris canutus rufa*	x				FED-T
southeastern American kestrel	*Falco sparverius paulus*				x	SL-T
tricolored bat	*Perimyotis subflavus*		x			NL; proposed FED-E
tricolored heron	*Egretta tricolor*		x			SL-T; ISMP
wood stork	*Mycteria americana*				x	SL-T
West Indian manatee	*Trichechus manatus*	x				FED-T

*** FED** = Federally Listed; **SL** = State Listed; **T** = Threatened; **E** = Endangered; **NL** = Not Listed; **USFWS** = United States Fish and Wildlife Service; **ISMP** = FWC Imperiled Species Management Plan

TABLE 2-16 Potentially Occurring Protected Plant Species

Species		Potential for Occurrence				Protected Status*
		No	Low	Moderate	High	
pygmy fringe-tree	*Chionanthus pygmaeus*	x				FED-E
Florida perforate cladonia	*Cladonia perforata*	x				FED-E
cardinal airplant	*Tillandsia fasciculata*		x			FL-E
Florida loosestrife	*Lythrum flagellare*		x			FL-E
giant airplant	*Tillandsia utriculata*		x			FL-E

***FED** = Federally Listed; **FL** = State Listed; **E** = Endangered; **T** = Threatened
****NE** = No Effect; **NEA** = No Adverse Effect Anticipated

Many of the species identified in **TABLE 2-15** and **TABLE 2-16** have no potential to occur within project limits due to lack of suitable habitat. Only those species with the potential to occur within project limits are discussed below.

2.4.2.1 Federally-Listed Wildlife and Plant Species

Eastern Indigo Snake

Eastern indigo snakes are federally listed as Threatened; the probability of occurrence within the project limits is moderate. These non-venomous snakes occur in a variety of habitats, including forested uplands and wetlands as well as wet and dry prairies. This species feeds on snakes, frogs, salamanders, toads, small mammals, birds, and young turtles. Some areas of suitable habitat for this species occur within and adjacent to the project limits. However, no individuals were observed during the field surveys.

2.4.2.2 Species Proposed for Federal Listing

Tricolored Bat

The tricolored bat is not currently protected at the federal or state level; the probability of occurrence within the project limits is low. As of September 13, 2022, the USFWS has proposed listing the tricolored bat as federally Endangered due to impacts of white-nose syndrome. White-nose syndrome describes a fungus that grows on bats' wings and muzzles during hibernation. Tricolored bats hibernate in trees, culverts, bridges, and other structures in the winter, and roost in Spanish moss and dead leaves of mature hardwood trees during spring, summer, and fall. They hunt insects at night over waterbodies and at forested edges. The project limits contain limited suitable roosting habitat (mature hardwood trees) and foraging habitat (open water and forested edges) for this species. If the tricolored bat is listed by the USFWS as Threatened or Endangered and the project may affect the species, the FDOT commits to re-initiating consultation with the

USFWS to determine appropriate avoidance and minimization measures for protection of the newly listed species.

2.4.2.3 State-Listed Wildlife and Plant Species

Florida Sandhill Crane

The Florida sandhill crane is state designated Threatened and included in the Florida Fish and Wildlife Conservation Commission (FWC) Imperiled Species Management Plan (ISMP); the probability of occurrence within the project limits is low. They have a distinct rattling bugle call that can be heard up to 2.5 miles away. They forage for roots, seeds, insects, snakes, and frogs as well as young birds or small mammals. This species inhabits freshwater marshes, pastures, and prairies. Sandhill cranes are monogamous breeders; they nest in late winter and spring on floating vegetation mats within shallow wetlands. Little to no suitable habitat for this species is present within the project limits, and the species was not observed during field reviews.

Gopher Tortoise

The gopher tortoise is state designated Threatened; the probability of occurrence within the project limits is moderate. Suitable habitat for gopher tortoises must include well-drained sandy soils for burrowing, herbaceous plants for forage, and areas with sparse canopy. This species can be found in disturbed environments including utility easements, residential yards, and pastures. According to the NRCS Web Soil Survey, the project limits are comprised of 5.0% soil types that are highly suited for gopher tortoise burrowing, 72.0% soil types that are less suited, and 23.0% soil types that are unsuitable for gopher tortoise burrowing. Surveys for gopher tortoise burrows, as well as commensal species, will be conducted during the design phase and permits to relocate tortoises and commensals as appropriate will be obtained from the FWC.

Little Blue Heron

The little blue heron is state designated Threatened; the probability of occurrence within the project limits is low. The little blue heron nests in colonies, using trees and shrubs near water or wetland vegetation. It feeds alone, wading in freshwater systems or walking on floating vegetation, and its diet includes amphibians, fish and invertebrates including insects and shrimp. This wading bird is usually found in swamps, estuaries, ponds, lakes, and rivers within Florida. One (1) little blue heron was observed outside of project limits, in Connor Park, during the May 2026 field reviews. However, limited suitable habitat is present within the project limits.

Tricolored Heron

The tricolored heron is state designated Threatened; the probability of occurrence within the project limits is low. Tricolored heron colonies nest in trees or shrubs located on salt marsh islands or in standing water. This wading bird is usually found in swamps, estuaries, ponds, lakes, and rivers within Florida, where it feeds primarily on fish. Suitable habitat is present within the project limits but the species was not observed during field reviews.

Roseate Spoonbill

The roseate spoonbill is state designated Threatened; the probability of occurrence within the project limits is low. It feeds on crustaceans and small fish using its specialized bill to forage in shallow water. Roseate spoonbills nest in colonies in mangroves and other trees, mostly on the coast. Nesting habitat for this species includes coastal areas, mangrove islands and dredge-spoil islands. Ditches within the project limits may provide suitable foraging habitat, but suitable nesting habitat is limited. No roseate spoonbills were observed during field surveys.

Southeastern American Kestrel

The Southeastern American kestrel is a non-migratory subspecies of kestrel that is state designated Threatened; the probability of occurrence within the project limits is low. Traditional habitat for these small falcons includes savannah pine habitats maintained by fire, sandhill, or open woodlands but they will also utilize open fields or pastures within residential areas. They require open areas with places to perch and hunt insects, lizards, and small mammals, and nesting cavities which either occur naturally or are excavated by woodpeckers in dead trees or utility poles. Potential nesting cavities are likely present in mature and dead trees and utility poles within and adjacent to the project limits, but there are few open areas within project limits. One (1) kestrel was observed within project limits during field reviews in January 2021, during which time the non-listed migratory subspecies of kestrel is known to occur in Florida. Therefore, this observation cannot be definitively identified as the listed non-migratory subspecies. Kestrel surveys will be conducted prior to construction in accordance with the FWC *Southeastern American Kestrel Species Conservation Measures and Permitting Guidelines*.

Wood Stork

Effective March 12, 2026, the USFWS has removed the Southeast U.S. distinct population segment of the wood stork from the Federal List of Endangered and Threatened Wildlife. Federal agencies [including FDOT under National Environmental Policy Act (NEPA) assignment] will no longer be required to consult with the USFWS under Section 7 of Endangered Species Act (ESA) for the wood stork. The wood stork is now a state-listed Threatened species, occurring on Florida's Endangered and Threatened Species List with state protections through the FWC who regulate and manage these species (68A-27, F.A.C.).

The probability of wood stork occurrence within the project area is high based on an observation documented during the January 2021 field review. Wood storks utilize freshwater and estuarine habitats for nesting, foraging, and roosting. These large white birds are typically colonial nesters and construct their nests in medium to tall trees located within wetlands or on islands. The FWC has documented one (1) wood stork colony nearby: Ayers Point - Dot Dash is located 2.8 miles southeast of the project limits and was classified as active during the most recent FWC survey (2019).

Cardinal Airplant

The cardinal airplant, also known as common wild-pine, is state designated Threatened; the probability of occurrence within the project limits is low. Habitat includes swamps, hammocks, flatwoods, and the edges of sloughs and marshes. It is typically observed on cypress (*Taxodium sp.*), live oak (*Quercus virginiana*) or other trees with thick ridged bark, which allows for easy attachment. Limited suitable habitat is present within the project limits, and the species was not observed during field reviews.

Florida Loosestrife

The Florida loosestrife is state designated Threatened; the probability of occurrence within the project limits is low. It is distributed from south Florida north to Orange and Hernando Counties. Habitat for this species includes swamps, marshes, and depressions. Limited suitable habitat is present within the project limits, and the species was not observed during field reviews.

Giant Airplant

The giant airplant, also known as spreading airplant, is state designated Threatened; the probability of occurrence within the project limits is low. Habitat includes bright areas in swamps, hammocks, mesic flatwoods, improved pasture, and the edges of basin marshes, where it is found on live oaks and other trees with thick ridged bark. Although suitable habitat is present within the project limits, the species was not observed during field review.

2.4.2.4 Non-Listed, Protected Species

Bald Eagle

The bald eagle (*Haliaeetus leucocephalus*) was removed from the USFWS endangered species list in 2007 and from the FWC imperiled species list in 2008. However, the species continues to receive federal protection under the Migratory Birds Program per the *Migratory Bird Treaty Act* (MBTA) and the *Bald and Golden Eagle Protection Act* (BGEPA). Additionally, the species is protected by the State Bald Eagle Rule (Chapter 68A-16.002 F.A.C.). The USFWS regulates activity within 660 feet of an active bald eagle nest. No bald eagle nests are documented within 660 feet of the project limits, and none were observed during field reviews.

Osprey

The osprey (*Pandion haliaetus*) is not a listed species but is federally protected by the Migratory Birds Program per the MBTA. Additionally, it is included in the FWC IMSP. Habitat for this species includes coastal areas, rivers, lakes, and swamps, where they feed on fish. Ospreys build nests of large sticks on top of trees in these areas, and also use manmade structures including utility poles, cell towers, and nest platforms. Although suitable habitat exists within the project limits, no osprey or osprey nests were observed within project limits during field reviews.

2.4.2.5 Essential Fish Habitats

According to ETDM Summary Report No. 14421, dated September 4, 2020, National Marine Fisheries Service (NMFS) concluded that the project does not appear to directly impact nearby estuarine habitats utilized by federally managed fish species, including the Manatee River. The NMFS stated that indirect impacts are anticipated to be minimized by stormwater management upgrades and utilization of Best Management Practices (BMPs) during construction. This was updated on March 31, 2025 with no changes to anticipated potential impacts.

2.4.3 FLUCCS Land Use

Land use within 300 feet of the project limits was classified according to the FDOT's *FLUCCS Manual*, (1999). A desktop review was conducted utilizing land use data from the SWFWMD 2023, ArcGIS basemap imagery sourced from Manatee County (2025) and Google Earth aerial imagery dated November 2023. Results of the desktop review were ground-truthed during field reviews in October 2020, January 2021, December 2024, and May 2026. A map of existing land use is provided in the *NRE Attachment B, FIGURE B-1*.

The dominant land use within the project limits is transportation (810). Additional land uses include medium-density residential (120), high-density residential (130), upland hardwood-coniferous mix (434), recreational (180), open land (190), institutional (170), commercial and services (140), residential low density (110), and mobile home units (112). The project limits contain less than 0.01 acre each of industrial (150), streams and waterways (510), and mangrove swamps (612). **TABLE 2-17** provides a summary of land use cover types and prevalence within the project limits.

TABLE 2-17 Existing Land Use Classifications

Land Use (FLUCCS)	Acres	Description
Residential, Low Density (110)	0.1	Residential land uses range from low density (less than two dwelling units per acre) to high density (six or more dwelling units per acre), including single-family houses, mobile home units, and multi-family apartment complexes.
Mobile Home Units (112)	0.1	
Residential, Medium Density (120)	0.5	
Residential, High Density (130)	0.3	
Commercial and Services (140)	0.1	Commercial areas are used for the distribution of products and services and include both the main building(s) and secondary structures such as storage, parking, and landscaped areas.
Institutional (170)	0.2	Institutional areas encompass religious, educational, or health facilities, including all associated buildings, parking areas, and grounds.
Recreational (180)	0.2	Recreational areas include those structured to accommodate active user-oriented recreation. Examples include parks, marinas, and golf courses.
Open Land (190)	0.1	Open Land refers to undeveloped land within an urban area that does not contain structures or indications of intended use.
Upland Hardwood-Coniferous Mix (434)	0.2	Upland Hardwood-Coniferous Mix indicates an upland forest in which neither hardwood nor coniferous species dominate the canopy.
Streams and Waterways (510)	0.1	Streams and Waterways include rivers, creeks, canals, and other linear water bodies. Areas mapped as FLUCCS 510 within the project limits are excavated ditches associated with stormwater drainage.
Mangrove Swamps (612)	0.0*	Mangrove Swamp applies to wetlands where red and black mangroves are the sole or predominant species. Associate species include white mangrove, buttonwood, cabbage palm, and sea grape.
Wetland Forested Mixed (630)	0.1	Wetland Forested Mixed indicates a wetland forest in which neither hardwood nor coniferous species dominate the canopy.
Transportation (810)	3.8	Transportation includes the roadway and associated right-of-way (ROW) as well as non-jurisdictional stormwater features such as drainage swales, culverts, and stormwater inlets.

*0.00 represents a value less than 0.001

2.4.4 Coordination with Permitting Agencies

This project is likely to require environmental permits, coordination, and authorizations from the following agencies:

- United States Army Corps of Engineers (USACE)
- Southwest Florida Water Management District (SWFWMD)
- Florida Fish and Wildlife Conservation Commission (FWC)
- Florida Department of Environmental Protection (FDEP)

2.4.5 Contamination Screening

A Level I CSER was prepared to support the PD&E for the PTNP located in Manatee County, Florida. The contamination evaluation was performed in accordance with *Part 2, Chapter 20* of the *FDOT PD&E Manual* (July 1, 2020). Drainage is within existing right-of-way. Therefore, drainage alternatives were not evaluated in this study.

Based on this contamination screening evaluation, a total of eighteen contamination sites were identified within the project limits. The following **TABLE 2-18** presents a summary of the risk ratings assigned for each contamination site/facility.

TABLE 2-18 Number of Contamination Sites Per Risk Finding

Number of Contamination Sites Per Risk Finding			
High	**Medium**	**Low**	**No**
0	3	8	7

Based on the conclusions of this study and the risk ratings noted above, the following recommendations are made.

- Additional information may become available or site-specific conditions may change from the time this report was prepared and should be considered prior to acquiring right-of-way and/or proceeding with roadway construction. If the recommended alignment changes or pond sites are evaluated, and/or new potential contamination sites have been constructed, this report should be revised and updated to reflect those changes.
- For the locations rated "No" or "Low" for contamination, no further action is required. These locations have been determined not to have any contamination risk to the study area at this time.
- Three "Medium" rated locations were identified within the study area: Site 10 – RaceTrac gasoline station, Site 14 – Former Railroad Track, and Site 15 – Railroad Track. Level II can include hazardous material surveys, soil borings, monitoring well installation, soil and groundwater sampling, and laboratory testing. Further evaluation and Level II testing, if

deemed appropriate by the District Contamination Impact Coordinator, are recommended for the following:

- For Site 10 – RaceTrac (active gasoline station with no reported discharges), groundwater analytical testing may include Total Recoverable Petroleum Hydrocarbons (TRPH) by the Florida Petroleum-Range Organics (FL-PRO) method, Benzene, Toluene, Ethylbenzene, and Xylenes/ Methyl tert-butyl ether (BTEX/MTBE) by United States Environmental Protection Agency (EPA) Method 8260, and Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270. Detections above the regulatory standard may require additional samples for delineation purposes. Level II testing costs are estimated at $5,000 to $10,000 per site. If Level III support is needed for National Pollution Discharge Elimination System permitting and treatment, costs can reach up to $100,000 per site.
- For Site 14 – Former Railroad and Site 15 - Railroad, analytical testing may include herbicides using EPA Method 8151, PAHs using EPA Method 8270, and arsenic using EPA Method 6010. Level II testing costs are estimated at $5,000 per site.

- Once final design plans are available, additional review is recommended in consideration of dewatering operations that may be necessary under the National Pollutant Discharge Elimination System Generic Permit for Stormwater Discharges from Large and Small Construction Activities. Verification testing may be warranted for contamination issues within 500 feet of the dewatering area.
- In accordance with *FDOT PD&E Manual, Part 2, Chapter 20*, an asbestos survey is recommended for structures (possibly at Station 17 and Station 19) located within PTNP. For parcels with building structures that might be purchased as part of the right of way acquisition, Level II Assessment should include review of building interiors, if possible.

The Complete CSER is contained within a separate document.

TABLE 2-19 Recommended Level 1 Contamination Assessments

Site #	Location	Site ID	Notes	Risk Rating
2	Palmetto – 12th St. Site 206 W. 12th St	US Brownfields 152721	The U.S. Brownfields database provides information on environmentally distressed properties that have received grants or targeted funding for cleanup and redevelopment.	Low
4	**Manatee County Schools - Lincoln Middle School** 1400 1st Ave. E	TANKS 8841898	Environmental Data Management's (EDM's) report states this site has two 2,000-gallon heating oil Underground Storage Tanks (USTs).	Low

TABLE 2-19 Recommended Level 1 Contamination Assessments (Continued)

Site #	Location	Site ID	Notes	Risk Rating
8	**Palmetto City Public Works** 600 17th St. W (610 17th St. W on MCPA database)	STCERC/ LUST/TANKS 8623804 8623978	EDM's report states this site has a total of seven registered fuel storage tanks. Six registered diesel, leaded and unleaded gasoline USTs (five 6,000-gallons and one 8,000-gallons) were removed from the site. One 15,000-gallon unleaded gasoline Above ground Storage Tank (AST) was installed in 2006 and remains in-service.	Low
10	**RaceTrac #549** 1730 U.S. 41 North	TANKS 9602592 (9700318 replaced with 9602592)	This site has a total of three in-service registered USTs installed in 1996: one 12,000-gallons diesel, one 12,000-gallons unleaded gasoline, and one 15,000-gallons unleaded gasoline. No discharges were reported.	Medium
11	**Former Amerson Landscape, Inc.** 1704 6th Ave. W	TANKS 9806915	A 100-gallon diesel fuel discharge was reported on February 17, 2003. Media affected include soil and surface water. This site was issued a No Further Action (NFA) on December 19, 2005	Low
13	**Palmetto Walmart** 508 10th St. E	ERIC_11552 COM_239845 TANKS 9807991 9815770	Arsenic exceeds the Cleanup Target Levels (CTLs) for both soil and groundwater at this location. Contaminant sources were determined to be both naturally occurring, anthropogenic, and not considered a contamination concern.	Low
14	**Former Railroad Track** (Station 10 to 25)	NA	This location was observed as a portion of a paved road (2nd Ave. W), grassy and wooded areas, and a portion of a church driveway. Dense overgrowth and unsafe conditions precluded a closer investigation during the site reconnaissance from Station 15 to Station 20.	Medium
15	**Railroad Track** (Station 111)	NA	This site was observed as CSX railroad tracks located within the PTNP, at 17th St. W, Given the possibility for residual contamination associated with herbicides, heavy metals and petroleum products, this site is assigned a risk rating of Medium.	Medium
16	**Former Groves** (Station 28 to 43)	NA	This site was observed as grassy areas, a trail, 17th St. E, and two houses.	Low
18	**Industrial Park** **722 17th St. E**	NA	This site was observed as an industrial park (no name). No petroleum tanks or monitor wells were noted.	Low

3.0 FUTURE CONDITIONS

3.1 Future Conditions Considerations

3.1.1 Adjacent Land Use

Future land use within 300 feet of the study alignments was identified based on the 2023 City of Palmetto's Future Land Use data. The dominant land use within 300 feet of the study alignments is General Commercial. Additional land uses include Residential-14, Residential-10, Residential-6, Public Use, Heavy Commercial/Industrial, Public Service Facility, **TABLE 3-1** provides a summary of future land uses within the 300 feet of the study alignments.

TABLE 3-1 Future Land Uses within 300 feet of the Study Alignments

Future Land Use	Acres	Description
General Commercial (GCOM)	47.0	General (Light) Commercial, Office, Residential, Mixed Use, Churches, Open Space, Lodging, Health Care
Residential – 14 (RES-14)	6.4	Residential - all housing types, Mobile Home Parks, Residential support uses, Neighborhood serving commercial uses, Water-dependent uses. 14 Dwelling Units/Gross Acre 0.5 FAR
Residential – 10 (RES-10)	27.2	Residential - all housing types, Mobile Home Parks, Residential support uses, Neighborhood serving commercial uses, Water-dependent uses. 10 Dwelling Units/Gross Acre 0.5 FAR
Residential – 6 (RES-6)	2.1	Single-Family Residential support uses, Neighborhood serving commercial uses, Water-dependent uses. 6 Dwelling Units/Gross Acre 0.5 FAR
Heavy Commercial/Industry (HCI)	18.4	Manufacturing Processing Assembly, Warehouse, Lumber Yards, Commercial Marinas, Boat Building, Supporting Commercial and Office Uses.
Public Use (PU)	19.8	Parks, Marinas, and Other Recreational and Open Space Uses
Public Service Facility (PF)	11.9	Government Owned Facilities, Schools, Libraries, and Fairgrounds

3.1.2 Context Class

The study alignments are primarily on off-system roadways, except for Tamiami Trail (U.S. 41) and 10th St. W (U.S. 301), which intersect study segments in the Middle and Southern sections, respectively. According to FDOT's Preliminary Context Classification Map, the future context classes of these two roadways are as follows.

- Tamiami Trail (U.S. 41):
  - Future Context Classification C3R – Suburban Residential (Date: 5/6/2021)
- 10th St. W (U.S. 301):
  - Future Context Classification C4 – General Urban (Date: 12/3/2025)

While not formally classified, the balance of the roadways on the Middle and Northern Sections of study network were considered as C3R and on the Southern Section study network as C4-Urban General.

3.1.3 Travel Demand

The roadway configuration changes shown in the Manatee County Comprehensive Plan (updated 2023) do not include the roadway segments of this study corridor. Therefore, the existing roadway configurations along the study corridor are expected to remain unchanged through at least 2045.

4.0 DESIGN CONTROLS & CRITERIA

4.1 Design Controls

TABLE 4-1 Design Controls

Design Control	Northern Section	Middle Section	Southern Section
Roadway context classification (FDM 201.2)	C3R	C3R	C4
Functional classification and SIS designation	Principal Arterial-Other (U.S. 41) Major Collector (17th St. E) Local[1]	Major Collector (17th St. W) Local[1]	Principal Arterial-Other (10th St. W) Minor Collector (7th St. W) Local[1]
Access management class and applicable standards	Class 03 (U.S. 41)	N/A	Class 07 (10th St. W)
Design speed (FDM 224.9) and Target Speed	18 mph / 10 mph	18 mph / 10 mph	10 mph / 10 mph
Type of stormwater management facilities[2]	Open	Closed	Closed

[1] The trail is assumed to have a Local functional classification where segments follow roadways without a designated functional classification.
[2] Classification is with respect to facilities located on or adjacent to roadways.

Capacity and LOS target: This design control is not applicable to this project. The proposed facility is a non-motorized multi-use trail intended for active transportation use. The trail is not intended to serve vehicular traffic and therefore does not require traffic capacity or LOS analysis. However, per the FDOT 2023 Multimodal Quality/Level of Service Handbook, the Bicycle Level of Traffic Stress (BLTS) 1 and Pedestrian Level of Traffic Stress (PLTS) 1 are used as design controls for bicycle and pedestrian quality of service.

Design vehicle: design vehicles such as passenger cars, trucks, or buses are not applicable to this project, as the proposed facility is a non-motorized multi-use trail intended for pedestrians, bicyclists, and other active transportation users. This study will consider a typical pedestrian and bicyclist as design users.

Physical constraints: physical constraints are identified based on the Manatee County Property Appraiser map, field review, and Google Earth aerial imagery review of the right of way and existing roadway conditions. The primary physical constraints along the study alignments include the following:

- Restricted Rights of Way
- CSX Rail lines, either at crossings or as parallel facilities
- Drainage facilities, such as canals adjacent to potential alignments
- Utility structures proximate to or along the alignment

Environmental constraints (e.g., public parks, historic and cultural features, wetlands, floodplains): environmental constraints are identified based on the results of the CSER and CRAS. See **Section 2.4**.

Navigational requirements: N/A

Design high water, including impacts from projections: Segments E and F would be developed proximately to wetlands. Increasing the trail elevation or specialized base may be required.

Design wave heights for coastal bridges, including impacts from sea level rise projections: N/A

4.2 Design Criteria

The proposed design criteria for the shared use path along the study corridors are primarily based upon the *2023 FDOT Design Manual*. These design criteria are provided in **TABLE 4-2**.

TABLE 4-2 Design Criteria

Design Component	FDM Section	PTNP
Shared Use Path		
Minimum Width	224.4	
Standard		12’
Limited Right of Way[1]		10’
Constrained Conditions[2]		8’
Maximum Longitudinal Grade without a Ramp	224.6	5% or grade of parallel adjacent street
Maximum Ramp Slope	224.6	1:12
Maximum Ramp Rise without a 5’ Landing	224.6	30”
Maximum Cross Slope	224.5	2%
Minimum Lateral Offset from Obstruction	224.7	4’
Maximum Graded Shoulder Area	224.7	2’
Maximum Cross Slope of Shoulder	224.7	1:6
Minimum Vertical Clearance	224.8	
Overhead Signs and Obstruction (Constrained Conditions)		8’
Overhead Obstruction		10’
SUN Trail Vertical Clearance		12’
Design Speed	224.9	18 MPH
Minimum Radii for Horizontal Curves (FDM Chapter 224, Table 224.10.1)	224.10.1	
18 MPH, Normal Crown		74’

[1] Per FDM 224.4, SUN Trail network facilities less than 12 feet wide require approval from the Chief Planner, with a minimum width of 10 feet.

[2] For shared use paths not in the SUN Trail network.

Design Component	FDM Section	PTNP
18 MPH, Reverse Crown		86’

TABLE 4-2 Design Criteria (Continued)

Design Component	FDM Section	PTNP
Shared Use Path		
Minimum Stopping Sight Distance Flat	224.10.2	
18 MPH		134’
Maximum Change in Grade without a Vertical Curve for a Design Speed of 18 MPH	224.11	6.7%
Minimum Separation from Roadway	224.12	
Rural, Full Shoulder (Measured from Shoulder break)		5’
Minimum Railing Height	222.4	42”
Edge Drop-off Height Requiring Shielding	224.15	
> total drop-off within 2 feet of path		10”
from a slope greater than 1:2 beginning within 2’ from path		60”
Sidewalk		
Minimum Width for C3	222.2.1.1	
For C3 Context Classification		6’
For C4 Context		6’
Minimum Unobstructed Sidewalk Width	222.2.1.1	
Aboveground Utilities		36”
Signal, Light, Sign Pole		48”
Minimum Vertical Clearance	222.2.1.2	7’
Maximum Longitudinal Grade	222.2.1.3	
Back of Curb		Match Existing Grade
Separated from Roadway		5%
Maximum Cross Slope	222.2.1.3	2%
Minimum Graded Shoulder Area	222.2.1.3	1’
Maximum Cross Slope of Shoulder	222.2.1.3	1:6
Curb Ramp Options	222.2.2	
Unrestricted Ramp and Landing Depths		CR-A, CR-B, CR-C
Restricted Ramp and Landing Depths		CR-K, CR-L
Linear Pedestrian Traffic		CR-D, CR-E, CR-F, CR-G, CR-H
Maximum Ramp Slope	222.2.2	1:12
Maximum Curb Ramp Length	222.2.2	15’
Maximum Transition Slope	222.2.2	1:10
Minimum Pedestrian Pushbutton Clear Area	222.2.2	30”x48”
Minimum Detectable Warning Width	222.3	Sidewalk Width
Minimum Detectable Warning Depth	222.3	2’
Edge drop-offs should be avoided. When drop-offs cannot be avoided and lie within 2 feet of the edge of sidewalk, they should be shielded.	222.2.1.3	

TABLE 4-2 Design Criteria (Continued)

Design Component	FDM Section	PTNP
Midblock Crossing		
Minimum Distance from Intersection	222.2.3.2	300’
Maximum Crossing Distance	222.2.3.2	60’
Maximum Longitudinal Grade	222.2.3.2	5%
Maximum Cross Slope	222.2.3.2	2%
Sidewalk Median Crossing Type	222.2.3.2	
W ≤ 16		Depressed
W > 16		Raised
Bike Lane		
Minimum Width	223.2.1.1	
Preferred (Buffered Bike Lane)		7’
Guardrail or Barrier		5’
Other		6’,5’,4’
Minimum Transition Length to Intersection	223.2.1.2	150’
Minimum Keyhole Lane Width	223.2.1.3	5’
Required Lateral Offset to the Traveled Way for the Sidewalk-Level Bicycle Parking Facilities, with a Roadway Design Speed	223.5	
≤ 35 mph		1.5’
≥ 40 mph		4’
Required Lateral Offset to the Traveled Way for the On-Street Bicycle Parking Facilities	223.5	1.5’
When parked, the device fits completely within the parking area (i.e. does not extend into the travel lane) and does not interfere with pedestrian facilities	223.5	
Speed Management Techniques		
Roundabout, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, Islands in crossings, Road Diet, RRFB and PHB, Terminated Vista, Chicanes, Islands in Curve Sections, Vertical Deflection		

5.0 ALTERNATIVES ANALYSIS

5.1 No-Build (No-Action) Alternative

The primary advantage of the No-Build Alternative is no design or construction costs.

The primary disadvantage of the No-Build Alternative is that it does not provide a facility that meets the purpose and need of the project.

The identified benefits and drawbacks are provided below:

Benefits:

- No cost
- No impact to roadway operations
- No impact to drainage patterns
- No impact to environmentally sensitive areas
- No right-of-way impacts

Drawbacks:

- Does not address general mobility needs of bicyclists, pedestrians, and micromobility device users on the corridor
- Does not provide nonmotorized access from surrounding neighborhoods to
    - Connor Park
    - Coach Eddie Shannon Park
    - Dr. Martin Luther King, Jr. Park
    - MCAT transfer station
    - Dr. Martin Luther King, Jr. Trail
    - Washington Park
    - Lincoln Middle School
- Does not provide enhanced crossings of "major" or "arterial collectors" roadways
    - Business U.S. 41
    - 10th St. West
- Does not enhance safety for bicyclists, pedestrians, and micromobility device users on the corridor

5.2 Transportation Systems Management and Operations (TSM&O) Alternative

No TSM&O alternatives would meet the purpose and need of the project and were not considered viable alternatives for this trail.

5.3 Build Alternatives

This section documents the process used to develop, evaluate, and determine the Recommended Alternatives through the evaluation of the Final PD&E alternatives.

A collection of pathways, known collectively as the PTNP, are one of six transportation improvements proposed in Manatee County's BUILD/ RAISE/ T-HUD Grant applications. The alignment proposed in the original BUILD Grant alignment is shown in **FIGURE 1-1**. The Southern Section of the proposed network, connecting Business U.S. 41 at the Manatee River to the Dr. Martin Luther King, Jr. Trail was initially excluded from this study. The Middle Section includes shared use path segments between the Palmetto Youth Center, Dr. Martin Luther King, Jr. Trail, Lincoln Memorial Middle School, and Coach Eddie Shannon Park (formerly known as Lincoln Park). The Northern Section includes the development of shared use path segments connecting Coach Eddie Shannon Park and Washington Park.

In 2024, the southern end of the project, now connecting Connor Park to Dr. Martin Luther King, Jr. Trail, was added back into the project.

5.3.1 Middle and Northern Sections

The Middle and Northern Sections PD&E BUILD alternatives were developed initially based on the BUILD/RAISE Grant applications corridor, modified in the Northern Section due to CSX requirements, and refined iteratively based on a series of public engagement activities and engineering and environmental analyses. The Final PD&E alternatives selected for study are shown in **FIGURE 5-1** and **FIGURE 5-2**.

These route alternatives were evaluated against the evaluation criteria to recommend and select the Recommended Alternatives.

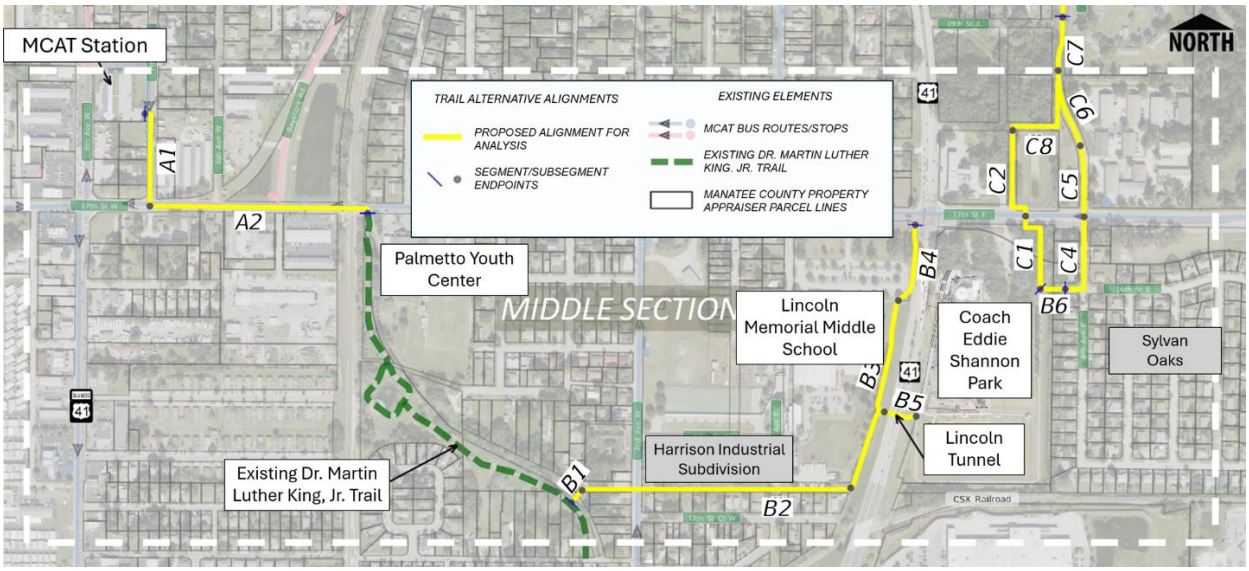


FIGURE 5-1 Final PD&E alternatives – Middle Section.

Insight from the community and the neighborhood attendees' comments during the local civic leadership's neighborhood meetings shaped the collection of possible alignments to study.

Throughout the public engagement, very little comment or concern had been expressed regarding the Middle Section; much attention, however, was directed towards the connection of Washington Park to Coach Eddie Shannon Park. Thus, it was toward this primary interest that the FDOT Project Team sought to gain insight from the community in an open public planning charette setting to establish a study alignment for the PD&E.

Based on the collected results of the initial focus group round of public involvement and initial engineering analysis, ROW availability, and existing conditions review, the Project Team shaped route alternatives which could be studied (**FIGURE 1-3** and **FIGURE 1-6**). The Middle Section included the evaluation of critical trail segments between the Manatee County Area Transit Center, Palmetto Youth Center, Dr. Martin Luther King, Jr. Trail, Lincoln Memorial Middle School, and Coach Eddie Shannon Park as well as the rehabilitation of the historic Lincoln Tunnel under U.S. 41.

The Northern Section included the development and evaluation of trail segments connecting Coach Eddie Shannon Park and Washington Park through the neighborhoods just east of U.S. 41. Due to some of the comments by the Spring 2021 survey questionnaire respondents, it was anticipated that some segments of the trail alignment(s) (particularly in the Northern Section) which were within existing roadway sections might have low-stress shared-street facility alternatives ultimately considered as well as a conventional shared use path typical section. Several routes through the Northern Section appeared they might require acquisition of private property.

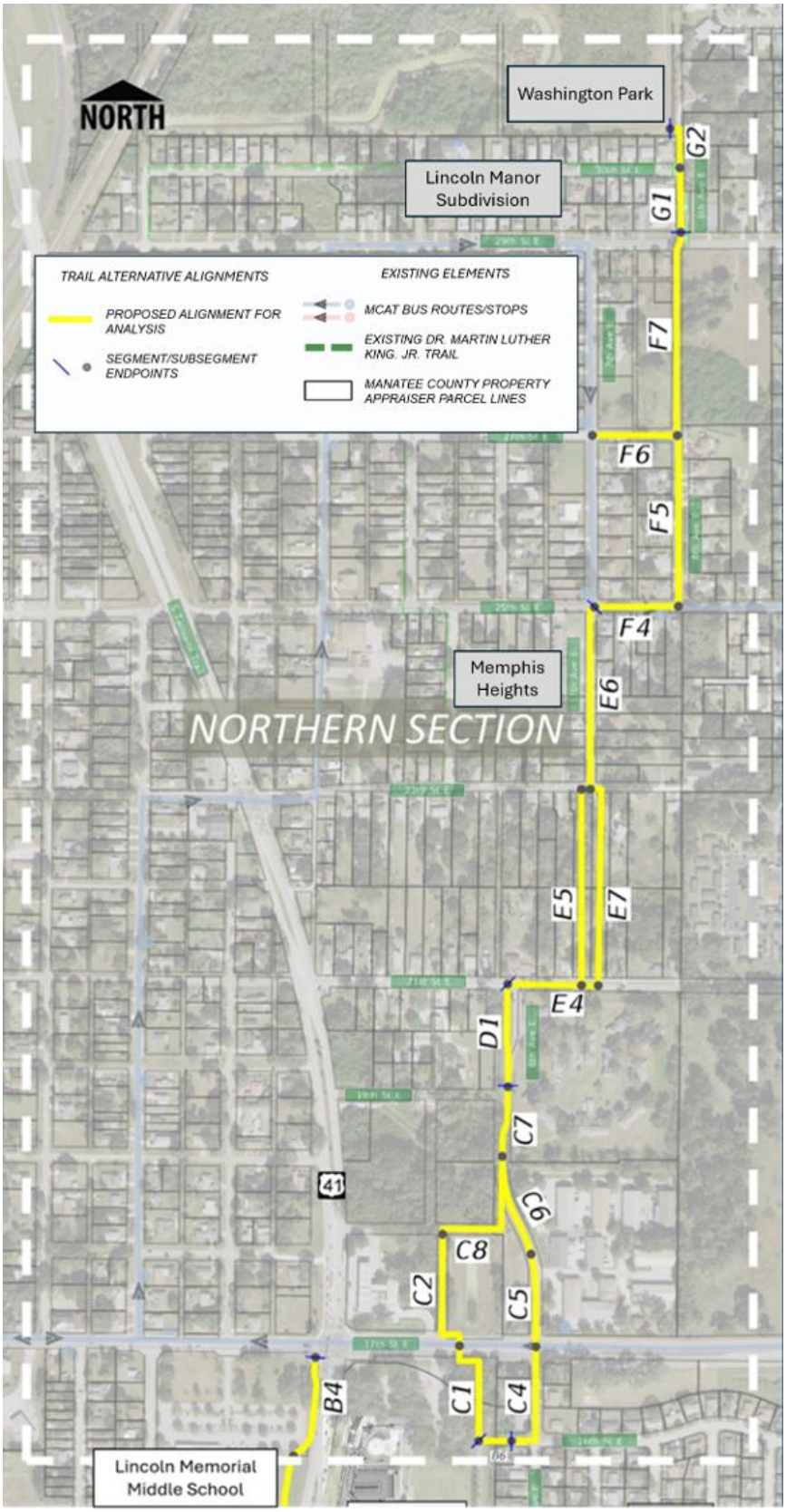


FIGURE 5-2 Final PD&E alternatives – Northern Section.

Following further feedback from the community-wide outreach, Segment C3 was removed from consideration due to its path through a forested area which provided less security and visibility. Segments E2 & E3 were also removed due to their proximity to front yards which may result in ROW acquisition and its circuitous route.

Based upon community and neighborhood input, the Project Team recommended the refined alignment for the PD&E Study to be advanced for the PD&E's engineering and environmental analyses (**FIGURE 1-7**). For the Middle Section (MCAT station to Coach Eddie Shannon Park), shared use pathway typical sections among the alternatives were to be considered. In the Northern Section (Coach Eddie Shannon Park to Washington Park), shared use path alternatives only in those segments where there is no existing street infrastructure were to be considered.

While community leaders and general comments voiced during meetings have expressed support of the trail network connecting the community's assets and its role in serving safe transportation and recreational infrastructure for the youth, many resident participants expressed concern for a pathway being in their "front yards" or the network introducing "strangers" into their neighborhood. These concerns appeared to be from participants who lived in the Northern Section (e.g., the Memphis Heights, Washington Park, etc.) neighborhoods. Accordingly, the typical sections which were developed for the segments within the Northern Section focused on providing connectivity via traditional sidewalks and shared use (roadway) bicycle accommodations. For those few segments where there is not an existing street (e.g., C6, C7, E5/7, F7), a shared use path as an alternative in addition to evaluating a new traffic-calmed street with (a) sidewalk(s) was to be developed.

The disposition of two segments in the Northern Section bore comments: the elimination of (canal) Segment E1 (and the connecting Segment E8); and the inclusion of Segment F6. Several times during the community dialogue, participants suggested consideration of the canal Segment E1 as a possible connection route between 21st St. and 23rd St. Preliminary engineering research revealed that substantial floodplain and wetland mitigation, County maintenance easement requirements, and the enormity of construction costs i.e., a large longitudinal box culvert, would render the conversion of the existing canal into a shared use pathway infeasible in comparison to alternative alignment route Segments E5/7.

The remaining alignments in the *Final Refined Route Alternatives* (**FIGURE 1-7**) were put forward for full PD&E Study and development of typical section alternatives the Middle and Northern Sections. Each of the Middle and Northern Sections segments is described in **TABLE 5-1**.

TABLE 5-1 Middle and Northern Sections Segment Descriptions

Section	Segment	Sub-Segment	Sub-Segment Description
Middle	A	A1	(Project Start) Along 7th Ave. W from MCAT Station to 17th St. W
		A2	Along 17th St. W from 7th Ave. W to Palmetto Youth Center
	B	B1	Bridge section from existing Dr. Martin Luther King, Jr. Trail to 13th St. W Corridor
		B2	Along 13th St. W corridor from east end of bridge section to the west side of the U.S. 41 Embankment
		B3	Along west side of U.S. 41 Embankment from 13th St. W corridor to the southeast corner of the Lincoln Middle School parking lot
		B4	Parallel to U.S. 41 from the southeast corner of the Lincoln Middle School parking lot to 17th St. W
		B5	Through Lincoln Tunnel underneath U.S. 41
		B6	Bridge section from an existing trail within Lincoln Park connecting to the west end of 16th St. E
Northern	C	C1	Within Lincoln Park from existing trail at the west end of bridge section B6 to 17th St. E
		C2	Along undeveloped right-of-way north from 17th St. E to right-of-way branch between C1 and C8
		C3	Follows undeveloped right-of-way north to 19th St. E then turns east and continues to undeveloped 6th Ave. E extension
		C4	Along 16th St. E and 6th Ave. E from the east end of bridge section B6 to 17th St. E
		C5	Along developed section of 6th Ave. E from 17th St. E to the end of the paved roadway
		C6	Along undeveloped section of 6th Ave. E parallel to canal from the change in right-of-way to the paved roadway at 19th St. E intersection
		C7	Along undeveloped section of 6th Ave. E parallel to canal from the change in right-of-way to the paved roadway at 19th St. E intersection
		C8	Along undeveloped right-of-way from the north end of C2 extending east and then north along the undeveloped 6th Ave. E extension
	D	D1	Along 6th Ave. E paved section from 19th St. E extension to 21st St. E
	E	E1	Along existing canal from 21st St. E to 23rd St. E
		E2	Along existing canal from 23rd St. E to 25th St. E through several parcels
		E3	Along 25th St. E from 6th Ave. E to 7th Ave. E
		E4	Along 21st St. E from 6th Ave. E to south end of either E5 or E7, depending on the route taken
		E5	Through two vacant parcels just to the west of what would be the extension of 7th Ave. E
		E6	Along 7th Ave. E from 23rd St. E to 25th St. E
		E7	Through two vacant parcels just to the east of what would be the extension of 7th Ave. E

TABLE 5-1 Middle and Northern Sections Segment Descriptions (Continued)

Section	Segment	Sub-Segment	Sub-Segment Description
Northern	F	F4	25th St. E from 7th Ave. E to 8th Ave. E
		F5	Along 8th Ave. E from 25th St. E to the end of the developed section of the roadway intersection the undeveloped extension of 27th St. E
		F6	Along undeveloped right-of-way for the 27th St. E extension from 7th Ave. E to the end of the developed roadway along 8th Ave. E
		F7	Along undeveloped right-of-way for the 8th Ave. E extension from the end of the paved roadway for 8th Ave. E to 29th St. E
	G	G1	Along 8th Ave. E from 29th St. E to the end of the paved roadway
		G2	Along 8th Ave. E from the end of the paved roadway to the entrance of Washington Park (Project Terminus)

5.3.1.1 Middle and Northern Section Benefits and Drawbacks

This subsection outlines the anticipated benefits and drawbacks of the studied segments based on existing conditions, constraints in Southern Section as listed in **TABLE 5-1**.

A1 - 7th Ave. W from MCAT Station to 17th St. W

Segment A1 is along 7th Ave. W, a two-lane roadway with sidewalks on the west side. There were four facility alternatives considered for this segment:

Alternative A – A 10-ft roadside pathway on the east side of 7th Ave. (**FIGURE 5-3**).

Benefits:

- Provides off-road, shared use path facility
- No change to motorist/resident traffic dynamic

Drawbacks:

- Path may need to be reduced to 8-ft on the south end of segment
- R/W will be required to construct
- Impact to business parking

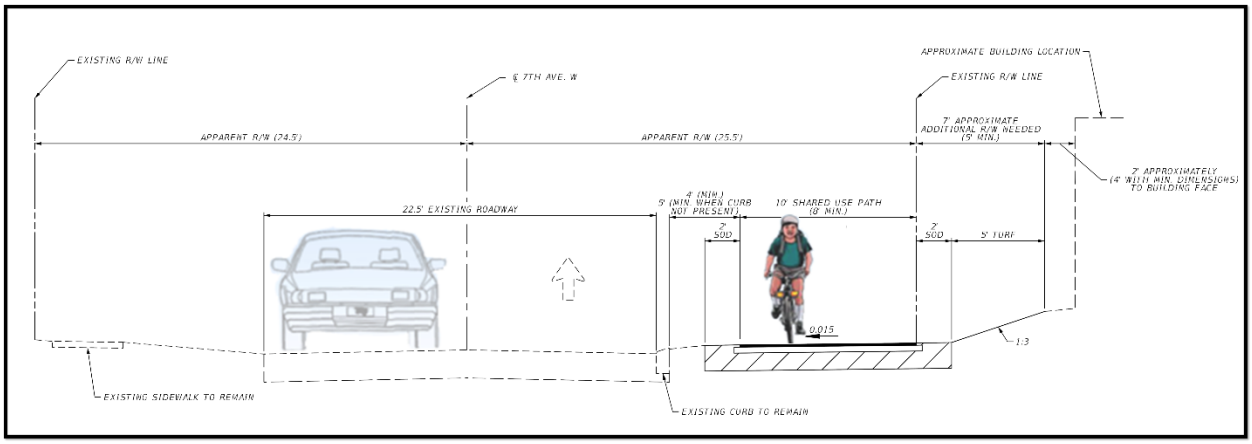


FIGURE 5-3 7th Ave. W with a 10-ft shared use path on east side of roadway

Alternative B – A 10-ft roadside pathway on the west side of 7th Ave. and 6-ft sidewalk on the east side (**FIGURE 5-4**).

Benefits:

- Provides off-road, shared use path facility
- No change to motorist/resident traffic dynamic

Drawbacks:

- Path may need to be reduced to 8-ft on the south end of segment
- R/W will be required to construct

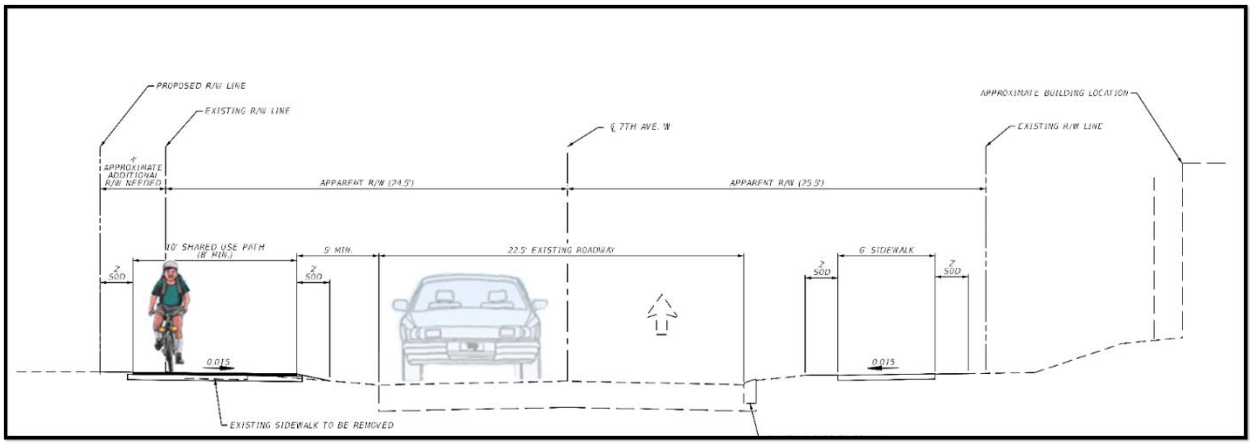


FIGURE 5-4 7th Ave. W with a 10-ft shared use path on west side of roadway

Alternative C – Convert 7th Ave. W to a complete street design with bike lanes and sidewalks (**FIGURE 5-5**).

Benefits:

- No R/W required to construct
- No change to motorist/resident traffic dynamic

Drawbacks:

- Does not provide a shared use path facility
- May impact business parking

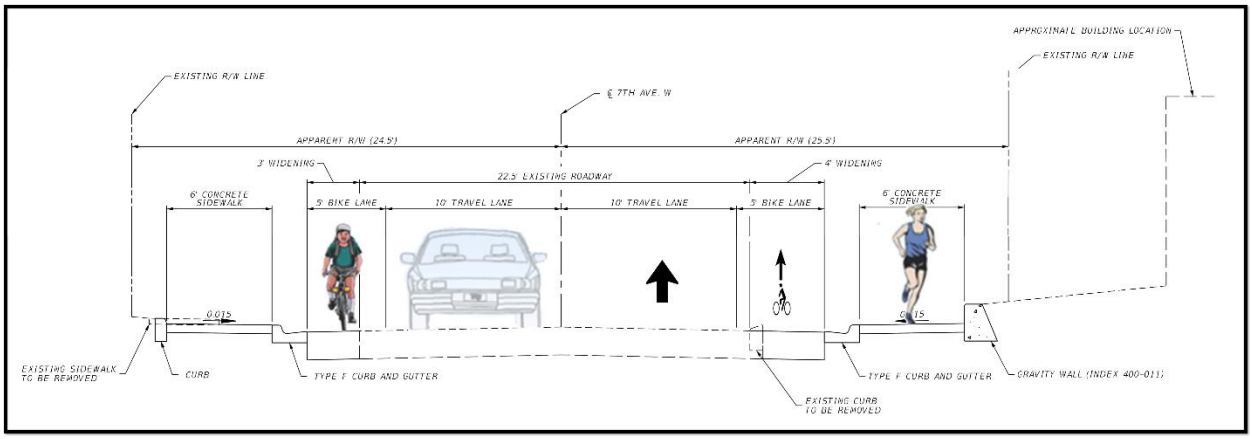


FIGURE 5-5 7th Ave. W complete street with bike lanes and sidewalks

Alternative D – Convert 7th Ave. W to a neighborhood greenway facility. This would include widening sidewalks, providing shared lane markings, and installing traffic calming along the roadway (**FIGURE 5-6**).

Benefits:

- No R/W required to construct
- Slows motorists on roadway

Drawbacks:

- Does not provide a shared use path facility
- Requires bicyclists share travel lanes with motorists

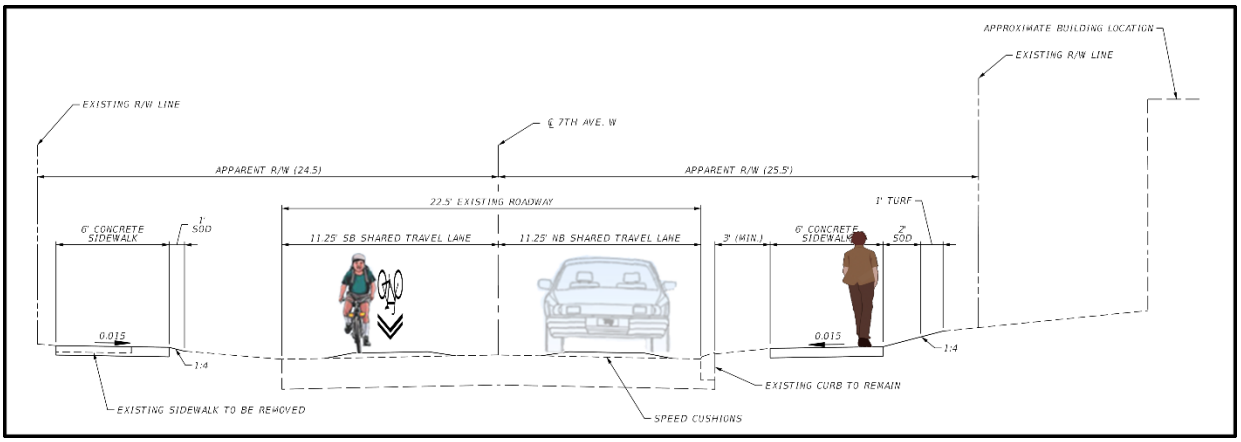


FIGURE 5-6 Neighborhood greenway facility on 7th Ave. W

A2 – 17th St. W from 7th Ave. W to Existing Dr. Martin Luther King, Jr. Trail

This segment is along 17th St. W, a two-lane roadway with bike lanes and sidewalks on both sides of the roadway. For this segment the proposed facility is a shared use path along the north side of 17th St. W (**FIGURE 5-7**).

Benefits:

- Provides off-road, shared use path facility

Drawbacks:

- Path may need to be reduced to 8-ft on the west end of segment
- R/W will be required to construct

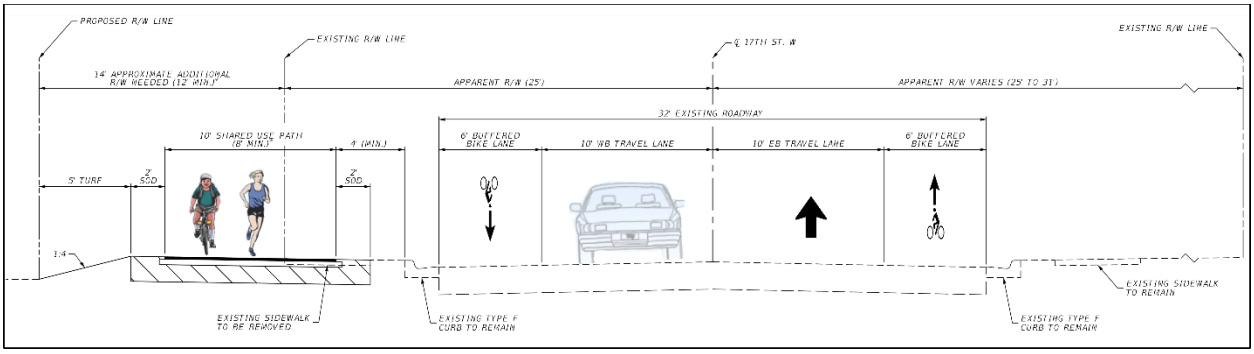


FIGURE 5-7 Shared use path on north side of 17th St. W

B1 – 17th St. W from 7th Ave. W to Existing Dr. Martin Luther King, Jr. Trail

Segment B1 begins at the existing Dr. Martin Luther King, Jr. Trail and crosses a drainage canal. The facility will likely be a pre-fab steel bridge with a clear width of 12- ft (**FIGURE 5-8**).

Benefits:

- Provides off-road, shared use path facility

Drawbacks:

None identified

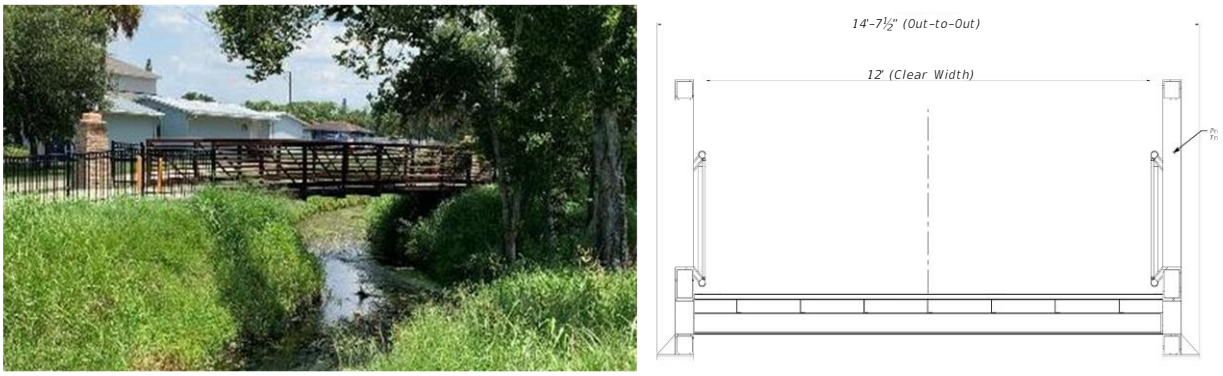


FIGURE 5-8 Prefabricated example and cross section

B2 – Segment B1 crossing canal in Dr. Martin Luther King, Jr. Park to Segment B3 on west Side of U.S. 41

The build alternative for Segment B2 is a 12-ft shared use path. The path would be 4 feet minimum clear of the near side right of way line, have 2-ft graded shoulders and be aligned adjacent to an existing drainage swale (**FIGURE 5-9).** Similar cross section would be used for Segments C1, C2, C6, C8, F5, F6 and F7.

Benefits:

- Provides off-road, shared use path facility

Drawbacks:

- Located in fenced off area behind houses

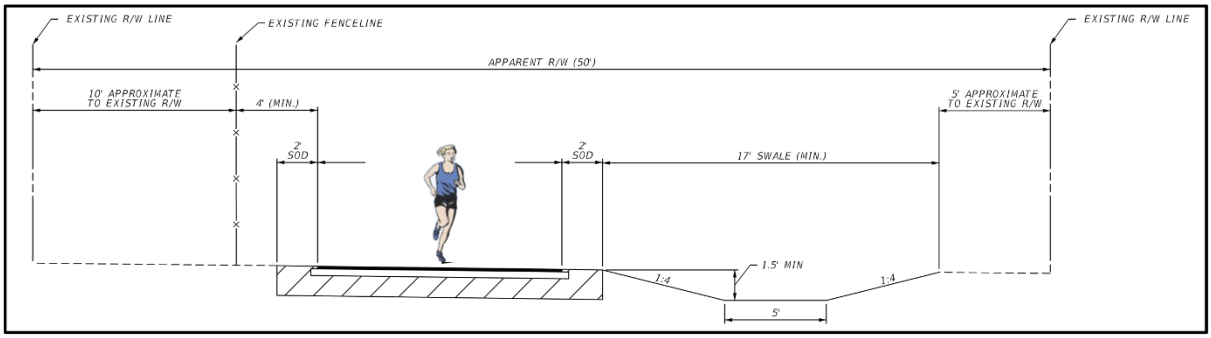


FIGURE 5-9 12-ft path along drainage swale

B3 – On the west side of U.S. 41 along the berm for bridge over the CSX railroad.

Segment B3 parallels U.S. 41 on the west side of the roadway on the southbound approach to the bridge over the CSX railroad. Given the roadway berm, and the need to maintain drainage along the east side of U.S. 41, the cross section will be placed mid-berm and include two retaining walls to achieve a 2% max cross slope for the path surface (**FIGURE 5-10**).

Benefits:

- Provides off-road, shared use path facility

Drawbacks:

None identified

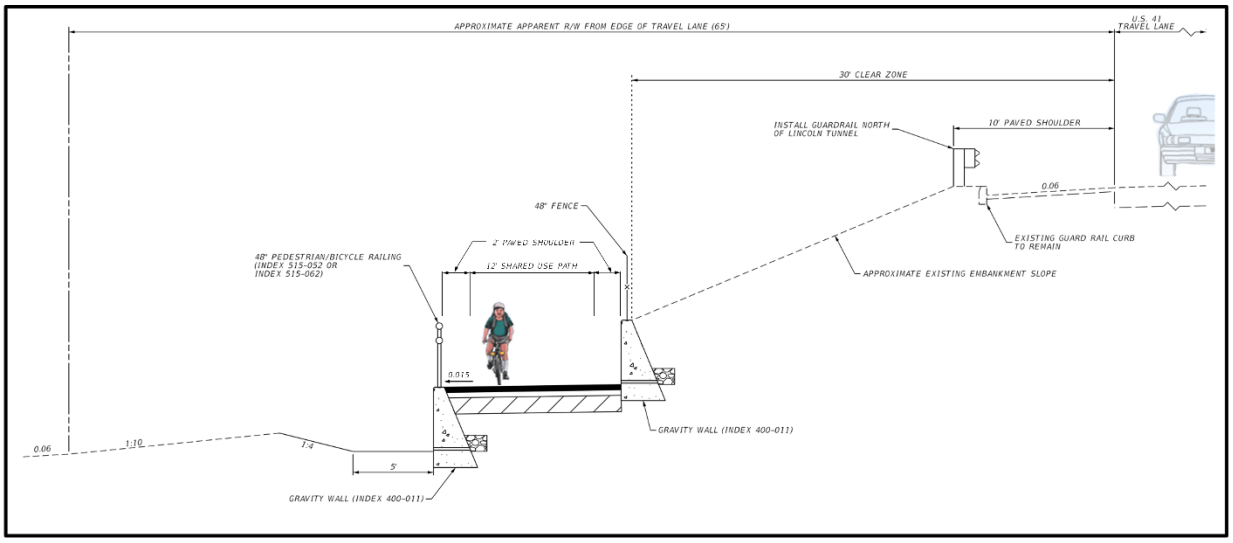


FIGURE 5-10 Shared use path on U.S. 41 berm

B4 – On the west side of U.S. 41 from end of Segment B3 to 17th St. W.

Once U.S. 41 comes down to grade, the trail will parallel U.S. 41 at 5 feet minimum behind the curb. This northern portion of this segment will encroach into the property of the school on the west side of the trail (**FIGURE 5-11**).

Benefits:

- Provides off-road, shared use path facility

Drawbacks:

- R/W required

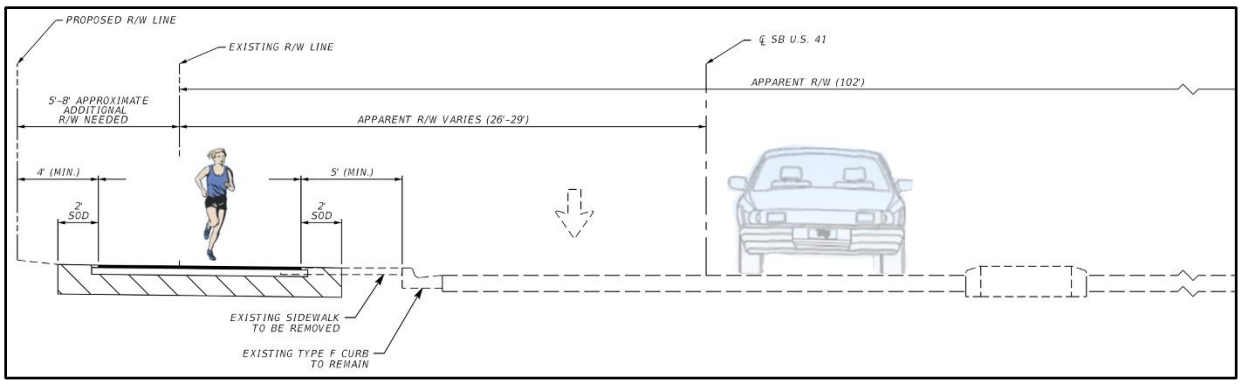


FIGURE 5-11 12 ft shared use path on west side of U.S. 41

B5 – The Lincoln Tunnel

The existing Lincoln Tunnel has a 12-ft wide clear span opening. The vertical clearance is 7'- $7^5/_8$" (±). The proposed facility would increase the vertical clearance through the tunnel to 8 ft (**FIGURE 5-12**).

Benefits:

- Provides a shared use path facility
- Avoids an at grade crossing of U.S. 41

Drawbacks:

- Security lighting required
- Security cameras (by others) may be required

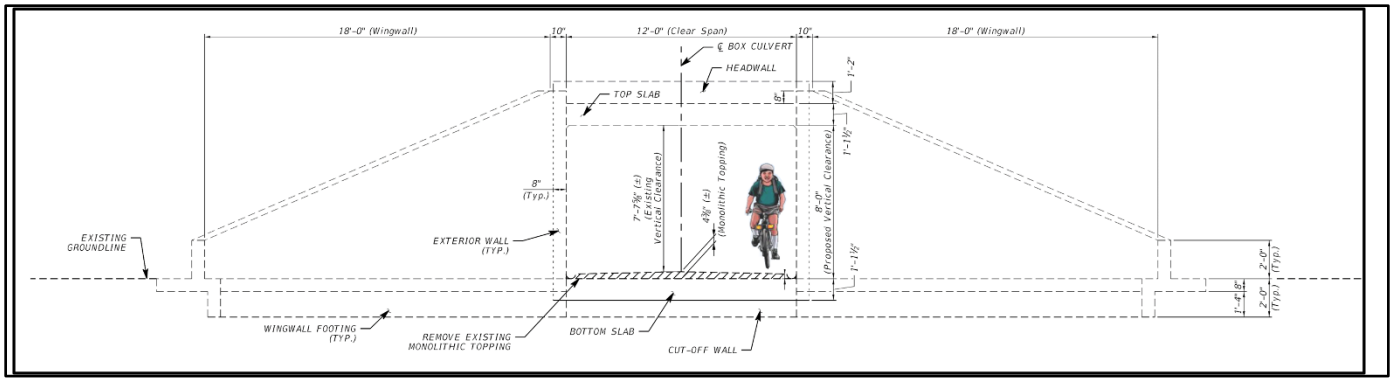


FIGURE 5-12 The Lincoln Tunnel

C1 – In-park connector from existing trail within Coach Eddie Shannon Park and 17th St. E

Within Coach Eddie Shannon Park is an existing trail. The northeast terminus of which is just north of the newly constructed trail bridge connecting the Park to the Sylvan Oaks Park Subdivision along the alignment of 16th St. E. Segment C1 would make and in-park connection between this terminus and 17th St. E. The cross section would be similar to that of Segment B2 (**FIGURE 5-9**).

Benefits:

- Provides a shared use path facility
- Provides and independent alignment away from roadway traffic
- Provides additional non-motorized access to park
- Allows for crossing of 17th St. E to occur at a location with a raised median that can be used as a refuge island

Drawbacks:

- Does not pass through the Sylvan Oaks Park subdivision

C2, C8, and C6 – Shared use path from 17th St. E along west side retention pond west of 6th Ave. E (C2), north side of retention pond (C8,) and along undeveloped 6th Ave. N (C6)

This facility would be a 12-ft shared use path similar to that shown for Segment B2 (**FIGURE 5-9**). However instead of being adjacent to a swale Segments C2 and C8, this facility would be adjacent to a retention pond.

Benefits:

- Provides a shared use path facility
- Provides and independent alignment away from roadway traffic

Drawbacks:

None identified

C4 – Shared use path from the new bridge on the 16th St. E alignment, to 6th Ave. E, then north along 6th Ave. E to 17th St. E

This facility would be a 12-ft shared use path adjacent to the roadway (**FIGURE 5-13**). The houses along this corridor are as close as 32 feet from the roadway. This means the path surface would be located about 15 ft from the front of the buildings.

Benefits:

- Provides a shared use path facility
- Passes through Sylvan Oaks Park Subdivision

Drawbacks:

- Would require R/W
- Potential removal of substantial oak trees
- Path would be very close to the houses

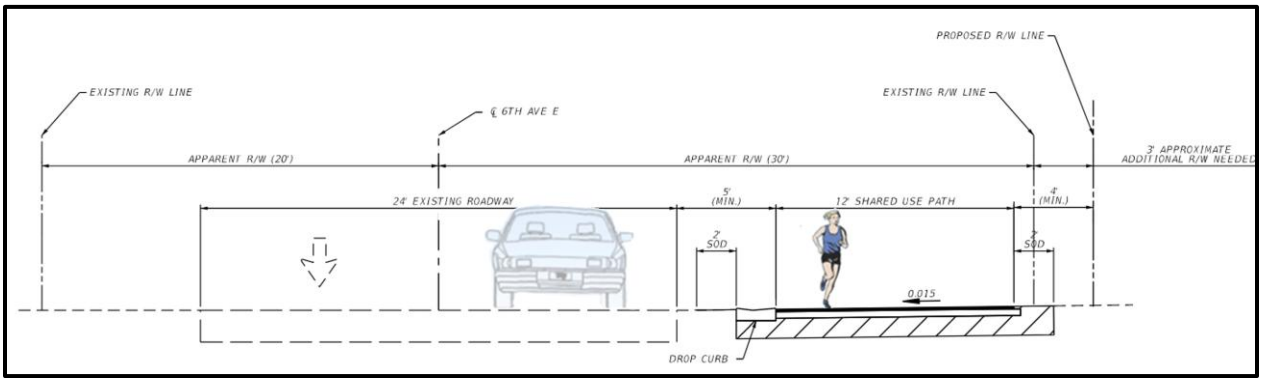


FIGURE 5-13 Shared use path on south side of 16th S E and east side of 6th Av E

C5 – Shared use path from the 17th St. E to undeveloped 6th Ave. E right of way

This facility would be a 10-ft shared use path adjacent to the roadway (**FIGURE 5-14**) between 6th Ave. E and a private retention pond.

Benefits:

- Provides a shared use path facility

Drawbacks:

- Would require R/W
- Would require retaining wall
- Would require re-grading a private retention pond

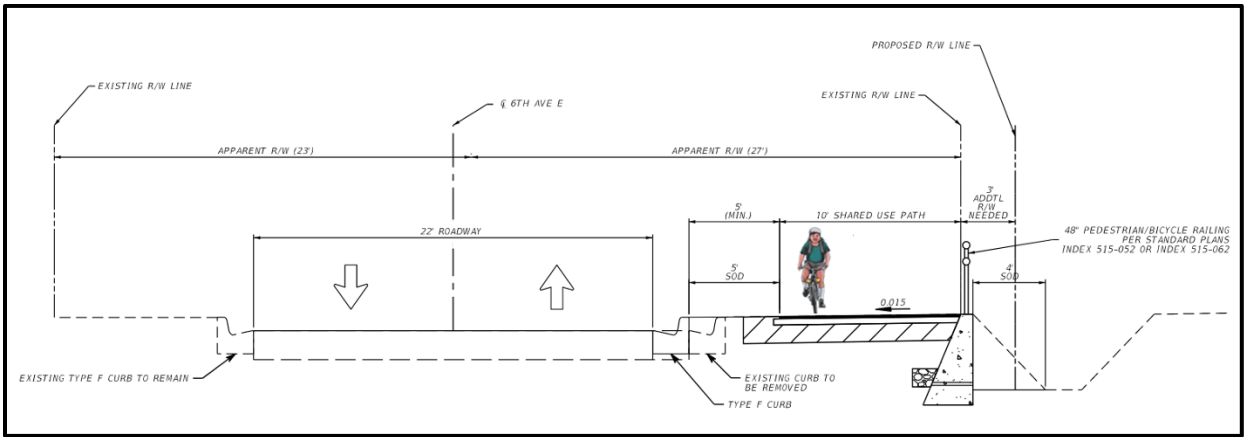


FIGURE 5-14 Shared use path with retaining wall and re-graded pond

C7 – Shared use path on closed portion of paved 6th Ave. E

A portion of 6th Ave. E, south of 20th Ln E is closed to motor vehicle traffic. This segment would utilize that section of roadway for a shared use path connection (**FIGURE 5-15**).

Benefits:

- Provides a shared use path facility
- No right of way required

Drawbacks:

None identified

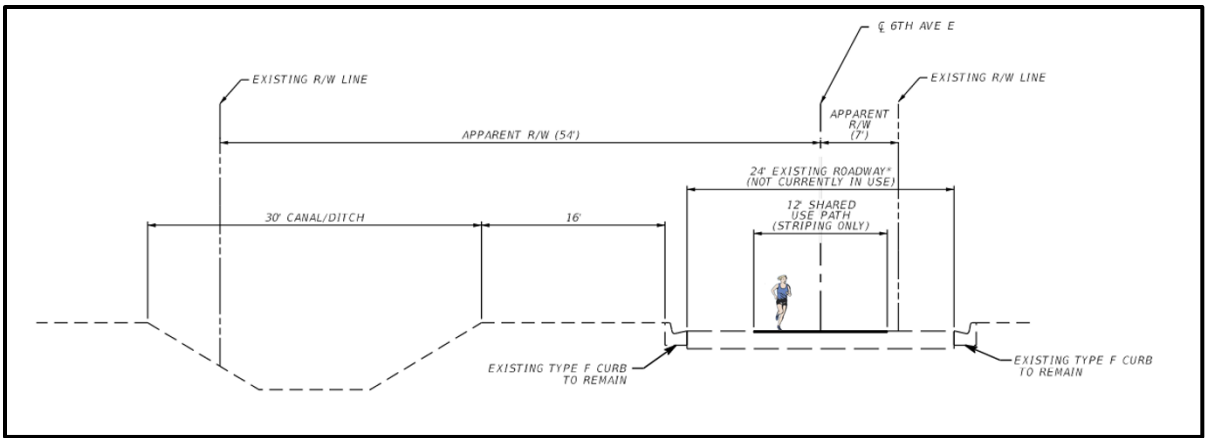


FIGURE 5-15 Shared use path on closed roadway section

D1 – Shared use path on closed portion of paved 6th Ave. E

This segment parallels 6th Ave. E from just south of 20th Ln E to 21st St. E. The facility is a shared use path between the roadway and a drainage canal (**FIGURE 5-16**).

Benefits:

- Provides a shared use path facility
- No right of way required

Drawbacks:

None identified

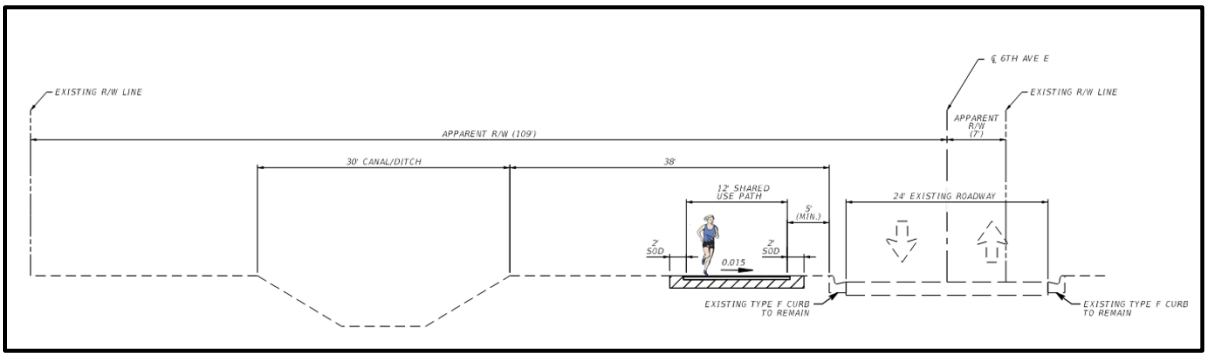


FIGURE 5-16 Shared use path between roadway and drainage canal

E4 – Shared roadway and sidewalks along 21st St. E

Segment E4 is along 21st St. E. This segment would be improved as a shared roadway with traffic calming with a 6-ft to 8-ft sidewalk for pedestrians separated from the roadway by a 5-ft buffer (**FIGURE 5-17**).

Benefits:

- Does not require right of way
- Provides a wide sidewalk for pedestrians

Drawbacks:

- Does not provide a separate shared use path facility

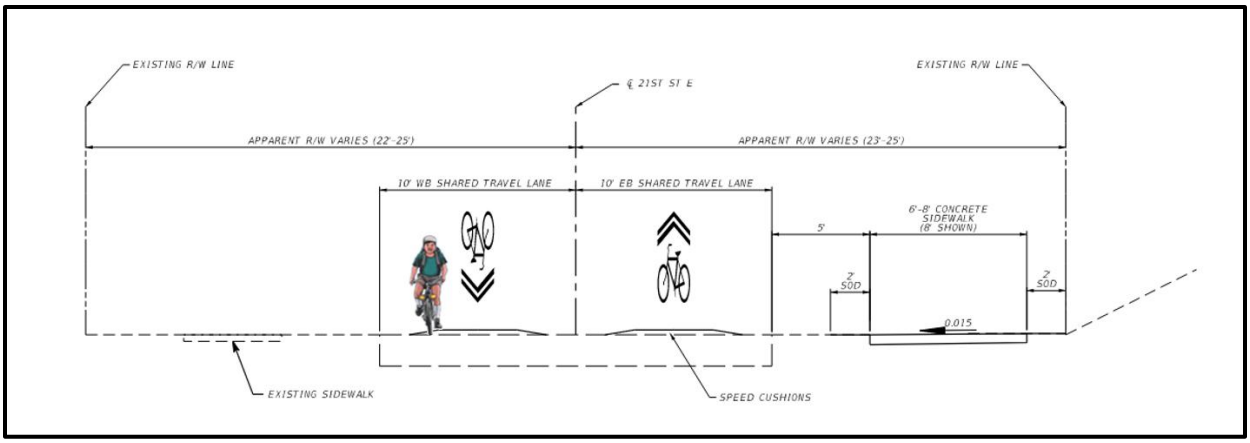


FIGURE 5-17 Shared roadway with 5 ft separation to wide sidewalk

E5 and E7 – Shared use path on independent alignment between 21st St. E and 23rd St. E

This facility would be a 12-ft shared use path similar to that shown for Segment B2 (**FIGURE 5-9**).

Benefits:

- Provides off-road, shared use path facility

Drawbacks:

- Requires right of way

E6 – Shared roadway and sidewalks along 7th Ave. E

This segment would be improved as a shared roadway with traffic calming with a 6-ft to 8-ft sidewalk for pedestrians separated from the roadway by a 5-ft buffer (**FIGURE 5-18**)

Benefits:

- Does not require right of way
- Provides a wide sidewalk for pedestrians

Drawbacks:

- Does not provide a separate shared use path facility

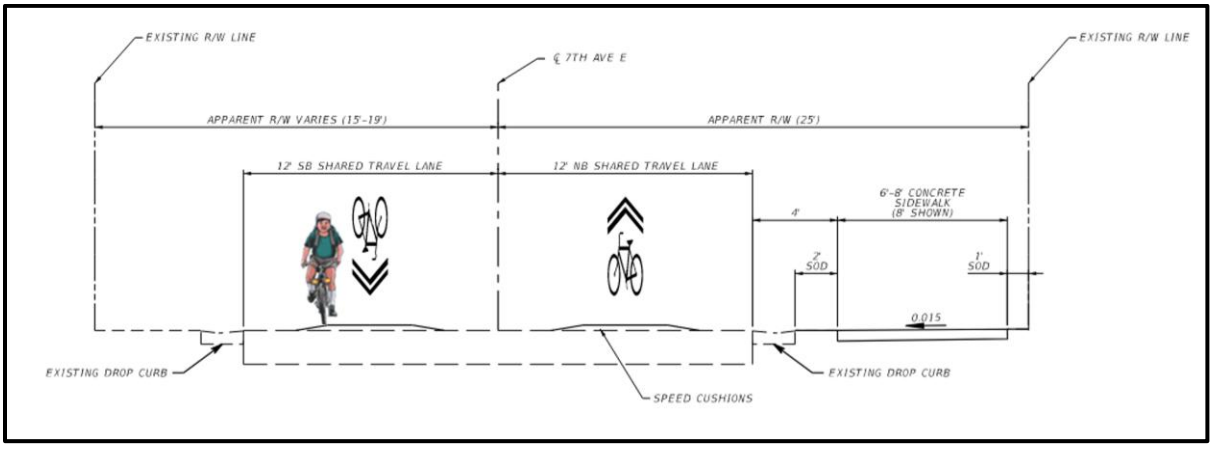


FIGURE 5-18 Shared roadway with 4-ft separation to wide sidewalk

F4 – 12-ft shared use path along 25th St. E

This facility would be a 12-ft wide shared use path separated from 25th St. E by a 5-ft buffer. Drainage would need to be modified to include pipes to fit the facility adjacent to the roadway (**FIGURE 5-19**).

Benefits:

- Provides a separated shared use path facility

Drawbacks:

- Requires right of way

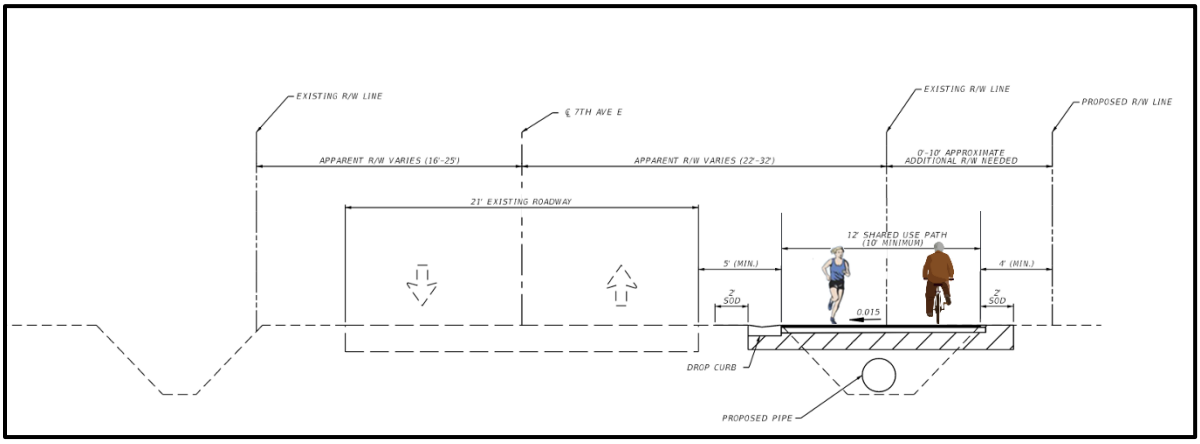


FIGURE 5-19 Shared use path with piped ditch

F5 – 12-ft shared use path along 8th Ave. E

The build alternative for Segment B2 is a 12-ft shared use path. The path would be 4 feet minimum clear of the near side right of way line, have 2-ft graded shoulders and be aligned adjacent to an existing drainage swale (**FIGURE 5-9**). Similar cross section would be used for Segments C1, C2, C6, C8, F6 and F7.

Benefits:

- Provides off-road, shared use path facility

Drawbacks:

None identified

F6 and F7 – 12-ft shared use path along undeveloped alignments of 8th Ave. E and 27th St. E

This facility would be a 12-ft wide shared use path along independent alignments. The cross section would be similar to that of Segment B2 (**FIGURE 5-9**).

Benefits:

- Provides a separated shared use path facility

Drawbacks:

- No right of way required

G1 – 10-ft shared use path along 8th Ave. E between 29th St. E and 30th St. E

This segment would be a 10-ft shared use path on the east side of 8th Ave. E (**FIGURE 5-20**). The existing ditch would need to be piped to implement this cross section.

Benefits:

- Provides off-road, shared use path facility

Drawbacks:

- Ditch must be piped
- Right of way required

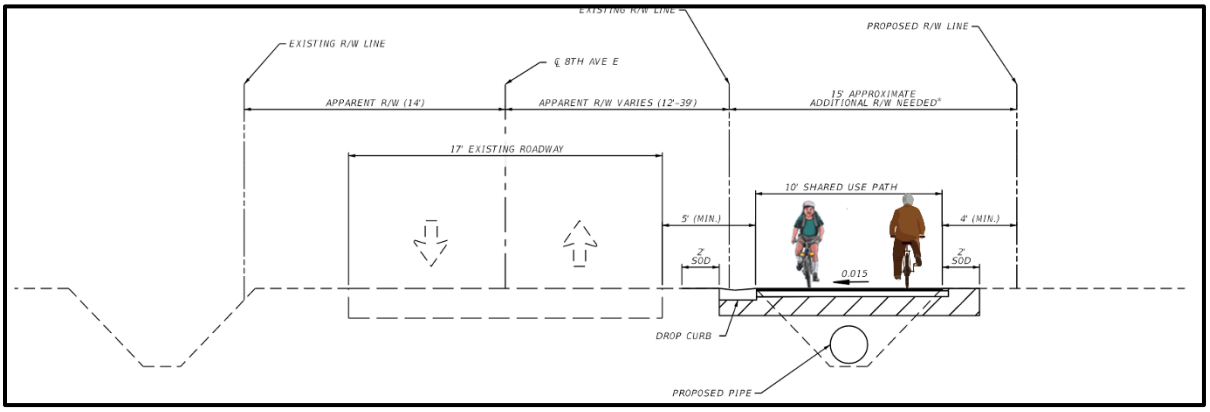


FIGURE 5-20 10-ft shared use path over piped ditch

G2 – 10-ft shared use path along 8th Ave. E between 30th St. E and Washington Park

This segment would be a 10-ft shared use path on the east side of 8th Ave. E. The cross section would be similar to the G1 Segment (**FIGURE 5-20**). However, the facility could be built on and existing easement.

Benefits:

- Provides off-road, shared use path facility

Drawbacks:

None identified

5.3.2 Southern Section

The Southern Section of Manatee County's BUILD/RAISE/T-HUD Grants' suggested alignment extends the Palmetto Trails Network PD&E Study corridor from Dr. Martin Luther King, Jr. Park south to the Manatee River, specifically toward the intersection of Business U.S. 41 and Riverside Drive.

An initial review of the grant applications' proposed alignment suggested there may be some insurmountable right of way or permitting challenges. Consequently, additional alignments were evaluated as alternatives to the grant applications' proposed alignment. Following engineering and environmental study, and initial community feedback from a February 2025 public meeting – and after extensive discussions with the City of Palmetto, and in consultation with Manatee County, the PD&E Project Team removed two southern segments, SA-1 and SB-1, from the PD&E

Study's corridor per the City of Palmetto's desire. The resulting PD&E Study evaluated segments are illustrated in **FIGURE 5-21** and described in **TABLE 5-2**.

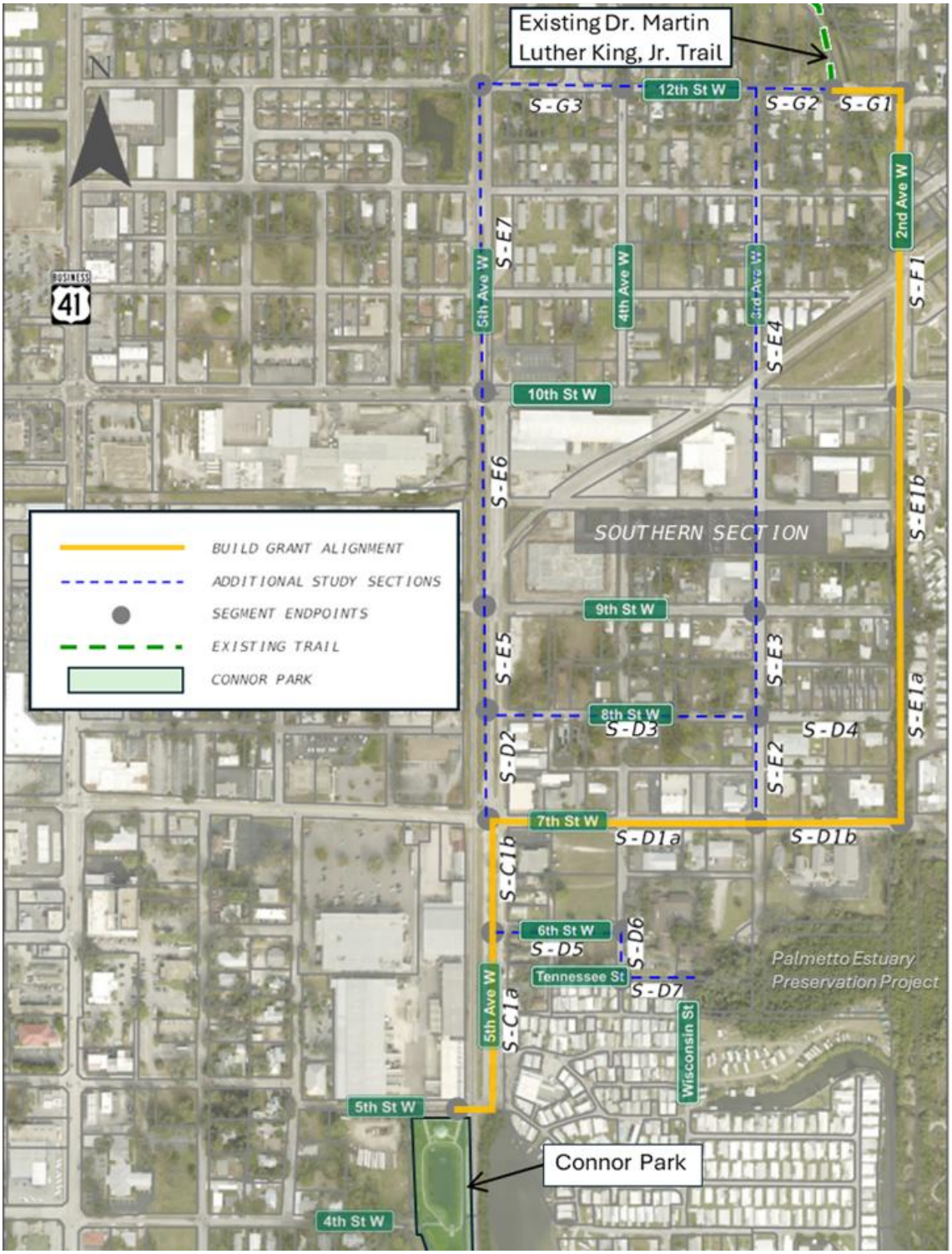


FIGURE 5-21 Final PD&E alternatives – Southern Section.

TABLE 5-2 Southern Segment Descriptions

Section	Segment	Sub-Segment	Sub-Segment Description
Southern	S-C	S-C1a	Along 5th Ave. W from Connor Park to 6th St. W
		S-C1b	Along 5th Ave. W from 6th St. W to 7th St. W
	S-D	S-D1a	Along 7th St. W from 5th Ave. W to 3rd Ave. W
		S-D1b	Along 7th St. W from 3rd Ave. W to 2nd Ave. W
		S-D2	Along 5th Ave. W from 7th St. W to 8th St. W
		S-D3	Along 8th St. W from 5th Ave. W to 3rd Ave. W
		S-D4	Along 8th St. W from 3rd Ave. W to 2nd Ave. W
		S-D5	Along 6th St. W from 5th Ave. W to 4th Ave. W
		S-D6	Along 4th Ave. W from 6th St. W to Tennessee St
		S-D7	Along Tennessee St. from 4th Ave. W to Wisconsin St
	S-E	S-E1a	Along Carr Drain/2nd Ave. W right-of-way from 7th St. W to 9th St. W
		S-E1b	Along Carr Drain/2nd Ave. W right-of-way from 9th St. W to 10th St. W
		S-E2	Along 3rd Ave. W from 7th St. W to 8th St. W
		S-E3	Along 3rd Ave. W from 8th St. W to 9th St. W
		S-E4	Along 3rd Ave. W from 9th St. W to 12th St. W
		S-E5	Along 5th Ave. W from 8th St. W to 9th St. W
		S-E6	Along 5th Ave. W from 9th St. W to 10th St. W
		S-E7	Along 5th Ave. W from 10th St. W to 12th St. W
	S-F	S-F1	Along 2nd Ave. W from 10th St. W to 12th St. W
	S-G	S-G1	Along 12th St. W from Dr. Martin Luther King, Jr. Trail to 2nd Ave. W
		S-G2	Along 12th St. W from 3rd Ave. W to Dr. Martin Luther King, Jr. Trail
		S-G3	Along 12th St. W from 5th Ave. W to 3rd Ave. W

5.3.2.1 Southern Section Benefits and Drawbacks

This subsection outlines the anticipated benefits and drawbacks of the studied segments based on existing conditions, constraints in Southern Section as listed in **TABLE 5-2**.

S-C1, 5th Ave. W from Connor Park to 7th St. W

Three facility type alternatives were considered for this segment during the Typical Section Analysis of the PD&E and are presented on following pages.

Alternative A – A 10-ft roadside pathway between 5th Ave. W and the railroad. See concept in **FIGURE 5-22**. The property appraiser's website shows the railroad and 5th Ave. W in the same R/W. The allowability of a path in this space would need to be further evaluated.

Benefits:

- Separated from traffic
- No parking impacts

Drawbacks:

- Possible railroad coordination for clearance and permitting
- R/W on west side of road may not be usable for a shared use path

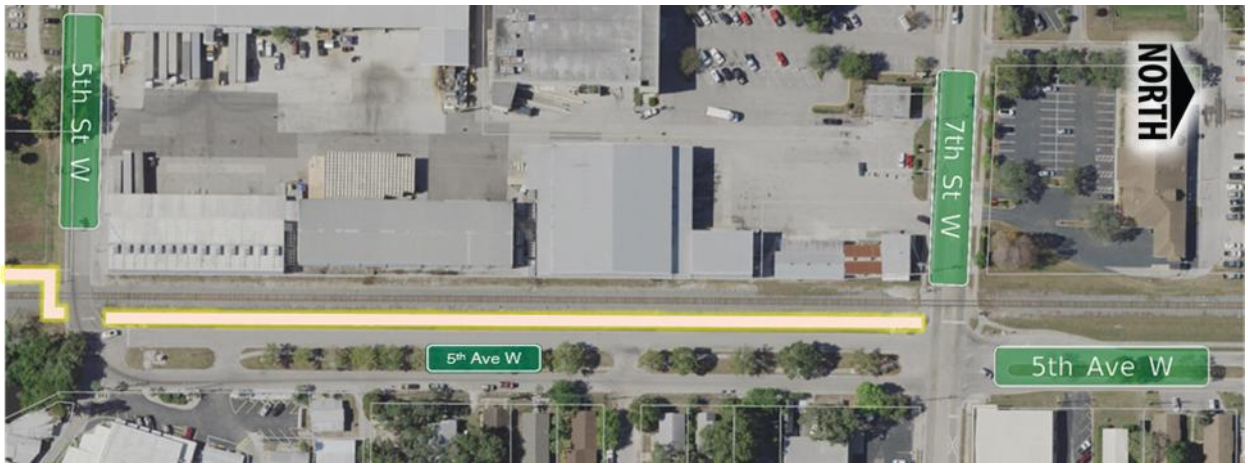


FIGURE 5-22 10-ft shared use path between 5th Ave. W and the Railroad

Alternative B – Left-side contraflow bike lanes on the southbound lane created by reallocating the pavement on the southbound travel way to provide a 10-ft southbound lane and using the remaining 10 feet to provide two-way bike lanes. See concept in **FIGURE 5-23**. No additional R/W would be needed for this alternative.

Benefits:

- No railroad coordination needed
- No additional R/W required
- Low cost to implement
- Preserves northbound allowable on-street parking

Drawbacks:

- Changes motorist/resident traffic dynamic
- Southbound allowable on-street parking impacted



FIGURE 5-23 5th Ave. S with southbound travel way modified to provide bike lanes

Alternative C – 20-ft two-way bike facility and two-way roadway created by converting the southbound lanes of 5th Ave. W to a shared use path and converting the northbound travel way to a two-way street with 10-ft travel lanes. See concept in **FIGURE 5-24**. No additional R/W would be needed for this alternative.

Benefits:

- Separated facility
- No railroad coordination needed
- No additional R/W required
- Low cost to implement

Drawbacks:

- Changes motorist/resident traffic dynamic
- Allowable on-street parking impacted on both sides of the road



FIGURE 5-24 5th Ave. W converted to a 20-ft two-way roadway and a 20-ft shared use path

Alternative D – Provide a 12-ft path in the median of 5th Ave. W. See concept in **FIGURE 5-25**. No additional R/W would be needed for this alternative.

Benefits:

- Separated facility
- No railroad coordination needed
- No additional R/W required
- On-street parking not impacted

Drawbacks:

- Unusual location for shared use path



FIGURE 5-25 Shared use path in median of 5th Ave. W

S-D1, 7th St. W from 5th Ave. W to Carr Drain

Two facility type alternatives for this segment were considered during the Typical Section Analysis of the PD&E:

Alternative A – A 12-ft shared use pathway created by removing the TWLTL and relocating the south side curb and gutter to construct a 10-ft shared use path on the south side of the roadway. See concept in **FIGURE 5-26.** The property appraiser's website shows the existing northern R/W within the northern sidewalk. The southern R/W line is shown within the eastbound lane. This alternative was developed to fit within the existing back-of-sidewalk to back-of-sidewalk width of 7th St. W.

Benefits:

- Fully separated pathway
- Bike/Pedestrian use
- Fits within the existing roadway footprint (No additional R/W anticipated)

Drawbacks:

- Changes motorist/resident traffic dynamic
- Possible drainage ditch modifications needed at east end
- High cost to implement
- Potential stakeholders' resistance to TWLTL removal



FIGURE 5-26 7th St. shared use path

Alternative B – Providing a 10-ft two-way separated bikeway by removing the TWLTL and reallocating the roadway space to provide a traffic separator and two-way bikeway. A concept is shown in **FIGURE 5-27**. This alternative was developed to fit within the existing back-of-sidewalk to back-of-sidewalk width of 7th St. W.

Benefits:

- Separation from traffic
- No curb and gutter modification
- No impact outside of roadway pavement (No additional R/W anticipated)
- Less costly to implement than Alternative A

Drawbacks:

- Changes motorist/resident traffic dynamic
- Potential stakeholders' resistance to two-way left turn lane removal



FIGURE 5-27 7th St. on-pavement two-way bikeway concept

S-E1, Carr Drain from 7th St. W to 10th St. W

Alternative A - A possible alternative for this alignment is a 12-ft shared use path on the west side of Carr Drain. A concept for this facility is shown in **FIGURE 5-28**. The potential benefits and drawbacks are described below.

Benefits:

- Separation from traffic
- Scenic and shaded
- No additional R/W required

Drawbacks:

- Potential neighbor resistance
- Potential bank reinforcement cost/permitting
- Adjacent property owners possibly encroaching into Carr Drain R/W
- Potential utility relocation north from 9th St
- Possible environmental impacts



FIGURE 5-28 Carr Drain shared use path

S-F1, 2nd Ave. W from 10th St. W to 12th St. W

Two facility type alternatives for this segment were considered during the Typical Section Analysis of the PD&E:

Alternative A – A 12-ft roadside pathway on the west side of 2nd Ave. See concept in **FIGURE 5-29**. There appears to be adequate R/W to implement this alternative for most of this segment. R/W acquisition would be required for the final 150 feet or an alternative cross section, such as a narrower pathway or Alternative B, may need to be implemented.

Benefits:
- Fully separated pathway
- Bike/Pedestrian use

Drawbacks:
- Potential conflict with utility
- R/W required at north end of segment



FIGURE 5-29 2nd Ave. shared use path

Alternative B – A neighborhood greenway, likely employing speed cushions and shared lane markings. See concept in **FIGURE 5-30**. No R/W would be needed to implement this alternative.

Benefits:
- Less costly to implement than Alternative A (sign/mark/sidewalk)
- No additional R/W required

Drawbacks:
- Bicyclists on street with motorists
- Existing sidewalk would need to be widened



FIGURE 5-30 2nd Ave. neighborhood greenway

S-G1, 12th St. W from 2nd Ave. to Existing Dr. Martin Luther King, Jr. Trail

Due to the constrained right-of-way within this segment, only one facility type alternative is being recommended.

Alternative A - A neighborhood greenway, likely employing speed cushions and shared lane markings. See concept in **FIGURE 5-31**.

Benefits:

- Low cost
- No additional R/W required

Drawbacks:

- Bicyclists on street with motorists
- Existing sidewalk would need to be added or widened
- May be impactive to the south end of MLK, Jr. Park during construction



FIGURE 5-31 12th St. W looking west from 2nd Ave. W

5.4 Comparative Alternatives Evaluation

Six categories of evaluative criteria were finalized and established:

1. Facility Purpose,
2. Social Impacts,
3. Potential Natural/Cultural Environmental Impacts,
4. Potential Physical Effects,
5. Safety, and
6. Estimated Project Costs

Each of the candidate alternatives was evaluated within each of the segments based on available data. The results were displayed on the Evaluation Matrices and documented in the *Recommended Alternatives Memoranda* dated August 30, 2023, and April 16, 2026, for the Middle & Northern and Southern Sections, respectively.

Facility Purpose

This category includes factors that relate to the purpose and need of the project as identified in the BUILD/RAISE/T-HUD Grant applications by the local sponsoring agencies and this PD&E's scope as well as feedback from local agencies and stakeholders from various public engagement activities and questionnaire response. The factors which emerged are listed below:

- Lateral Separation from Roadway
- Lateral Separation from Homes/Businesses
- Shade
- Service to Community Destinations
- School Connectivity/Student Mobility
- Connections to Transit Stops
- Trail Visibility/Security
- Trail System Continuity
- Public Support Ranking (of initial alternatives)

Most of these factors were scored on a Low/Medium/High scale except for Public Support Ranking, which was scored on a 1-5 scale, with 1 being the highest rank. This was tallied directly from received responses to the questionnaire provided as part of the January 27, 2022, and February 1, 2022 Public Workshops.

Social impacts

This category includes factors, identified in the *FDOT PD&E Manual,* that impact property and property ownership.

Number of Parcels Impacted

These parcel counts are based on Manatee County parcel boundaries as shown on the Manatee County Property Appraiser website.

Anticipated R/W Acquisition

This criterion represents the total acreage of overlap between the alternatives' estimated footprint per the typical sections and the parcels through which they pass, as identified in the criterion above. It represents a rough estimate of the magnitude of right-of-way acquisition that may be required.

Number of Potential Section 4(f) Resources

The amount of significant impact on properties protected by Section 4(f) of the U.S. Department of Transportation (USDOT) Act based on the results of the NRE, CSER, and CRAS reports.

Potential Cultural/Natural Environment Impacts

This category includes factors, identified from the *FDOT PD&E Manual,* that impact the natural or cultural environment of the area.

Historical Sites Potentially Affected

Historical sites impacted by the alternatives were identified by review of historical aerial imagery as outlined in the CRAS.

Wetlands (acres) Impacted & Other Surface Waters (acres) Impacted

Approximate wetland and OSW locations were identified along the alternatives. Wetland impacts associated with the construction of this project can be mitigated pursuant to Section 373.4137 Florida Statutes (F.S.) to satisfy all mitigation requirements of Part IV, Chapter 373, F.S. and 33 U.S.C.S. 1344. Under Section 373.4137 F.S., mitigation of wetland impacts will be implemented by the purchase of mitigation bank credits from a SWFWMD-approved mitigation bank.

The design of the trail alternative for Segments F4 and G1 will need to include treatment mitigation for the swales being filled. This could potentially be addressed through the use of perforated pipe or by treating roadway runoffs not currently treated within other network segments (e.g., F6, F7, etc.) within the watershed.

Potential Physical Effects

This category includes factors, identified from the *FDOT PD&E Manual,* that affect existing structures and land viability.

Utility Agency Owners (UAOs) Impacted

Utility Agency Owners within the corridor's vicinity were contacted to determine if there was any impact to their utilities as a result of the proposed alternatives.

Utility Relocations

Utility Agency Owners within the corridor were provided with alternatives to markup utility locations and potential impacts. The values in the matrix represent the approximate number of relocations amongst the owners who reported involvement.

Contamination Sites (M/H Levels Only)

In accordance with *Chapter 20* of the *FDOT PD&E Manual*, historical aerial photograph reviews, topographic map reviews, a database search, FDEP and County file reviews, and a precursory site reconnaissance were all performed to identify and rank the potential contamination risk facilities along the alignment alternatives.

Safety
This category includes factors, identified from the *FDOT PD&E Manual* and the Purpose and Need, that would affect the safety of the potential facilities' users.

Number of Driveway or Parking Lot Crossings
This evaluation criterion was documented through field- and aerial imagery-based research as compared to the alignment segment location and alternatives.

At-grade St. and R/R Crossings
This evaluation criterion was documented through field- and aerial imagery-based research as compared to the alignment segment location and typical sections.

Estimated Project Costs
This category includes cost factors, as identified in the *FDOT PD&E Manual*, necessary for comparison of alternatives. These cost factors will be further refined/updated with the approval of the Recommended Alternative and creation of the Conceptual Plan thereof.

Construction Cost - The cost estimate was based on the most recent 2026 FDOT Statewide Historical Cost for Market Area 10 – Manatee County.

Design & Construction Engineering and Inspection – Calculated as 27% of Construction Cost

Right of Way Acquisition – Upon the approval of the Recommended Alternative, concept plans for the Build Alternative that include the parcel identification number, existing right of way lines, proposed right of way lines and acreage of property required will be submitted to FDOT. The Department will estimate the cost for ROW acquisition, and cost estimates for relocations and business damages, if any.

Wetland Mitigation – Estimated cost to mitigate impacts to wetland by purchasing credits at available wetland mitigation banks.

5.4.1 Middle and Northern Sections

The recommended alternatives by segment for the Middle and Northern Sections are shown in **FIGURE 5-32** and **FIGURE 5-33**. These recommendations are made considering the evaluation results as shown within the Evaluation Matrices documented in the *Recommended Alternatives Memos*.

The Recommended Alternative for the Northern and Middle Sections is described as follows.

- Segment A1: 10-ft Shared use path (8-ft min.) on west side, 6-ft sidewalk on east side
- Segment A2: 12-ft Shared use path (10-ft min.)
- Segment B1 and B6: Prefabricated steel truss bridge (Segment B6 is being constructed by the County)
- Segment B2, B3, B4: 12-ft Shared use path (10-ft min. for segment B4)
- Segment B5: Lincoln Tunnel
- Segment C1, C2, C7, C8: 12-ft Shared use path (10-ft min. for segments C1, C2, C8)
- Segment D1: 10-ft Shared use path
- Segment E4, E6, F5: Shared travel lanes with shared lane markings and speed cushions. 6-ft - 8-ft sidewalks
- Segment E5: 12-ft Shared use path
- Segment F4, F6, F7: 12-ft Shared use path (10-ft min.)
- Segment G1, G2: 10-ft Shared use path

The Evaluation Matrix for the Middle and Northern Segments is shown in **TABLE 5-3**.

Each evaluation criterion in the Evaluation Matrix is rated on a three-level scale: Low (L), Medium (M), and High (H), representing the level of impact of the studied segments on the corresponding criterion. Low represents the least impact, Medium represents a moderate impact, and High represents the greatest impact. Depending on the evaluation criterion, the impact may be positive or negative, as summarized below.

Criteria with Positive Impact:

- Lateral Separation from Roadway
- Lateral Separation from Homes/Businesses
- Shade
- Trail Visibility/Security
- Service to Community Destinations
- School Connectivity/Student Mobility
- Connections to Transit Stops
- Trail System Continuity

Criteria with Negative Impact:

- Wildlife/Threatened and Endangered Species Occurrence Potential

Within the Middle and Northern sections, typical sections associated with each preferred alternative may impact parcels owned by the City of Palmetto, Manatee County, or private property owners. The number of parcels impacted by the typical sections for each preferred alternative is summarized in the Evaluation Matrix (see **TABLE 5-3)**.

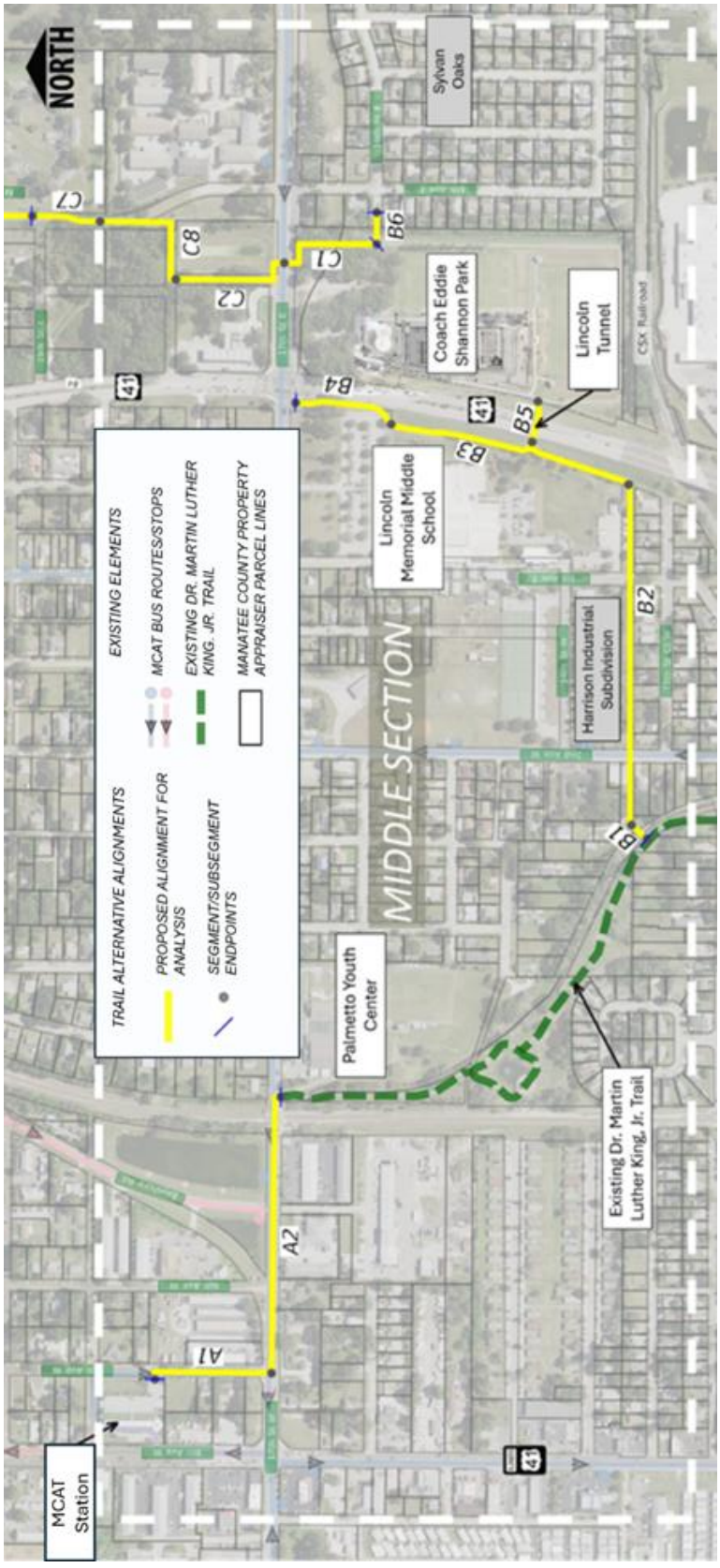


FIGURE 5-32 Recommended alternative – Middle Section.

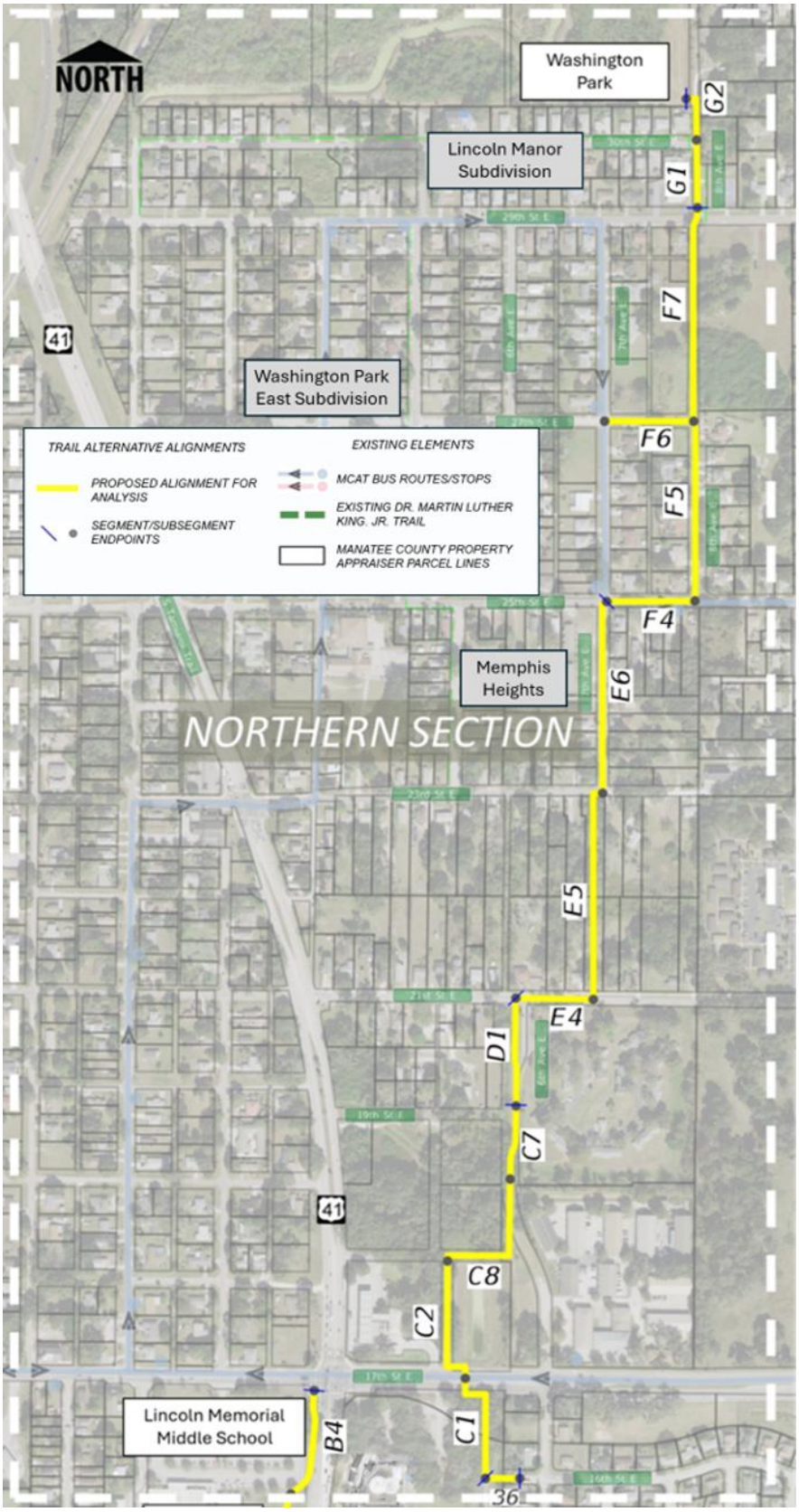


FIGURE 5-33 Recommended alternative – Northern Section.

TABLE 5-3 Middle and Northern Sections Evaluation Matrix

Evaluation Criteria	No-Build Alternative	Build Alternatives																
		Middle Sector Alignments							Northern Sector Alignments									
		Segment A					Segment B		Segment C			Segment D	Segment E		Segment F		Segment G
		A1 Facility Alternatives				A2	B6 Bridge (See Note 7)	B1 > B2 > B3 > B4 > B5	C1 > C2 > C8 > C7	C4 > C5 (a) > C6 > C7	C4 > C5 (b)> C6 > C7	D1	E4 > E5 > E6	E4 > E7 > E6	F6	F4 > F5 > F7	G1 > G2
		Typ. Sec. 1A	Typ. Sec. 1B	Typ. Sec. 1C	Typ. Sec. 1D	Typ. Sec. 2	Typ. Sec. 3	Typ. Sec. 3-7	Typ. Sec. 8, 11	Typ. Sec. 8-11	Typ. Sec. 8-11	Typ. Sec. 12	Typ. Sec. 13-15	Typ. Sec. 13-15	Typ. Sec. 8	Typ. Sec. 8,16,17	Typ. Sec. 18,19
Purpose and Need: Facility Purpose(s) (See note 2)																		
Lateral Separation from Roadway (L/M/H)	L	M	M	L	L	M	H	H	H	M	M	M	L	L	H	M	M
Lateral Separation from Homes/Businesses (L/M/H)	H	L	L	M	M	H	H	M	H	M	M	H	H	H	H	M	H
Shade (L/M/H)	L	L	L	L	L	L	H	M	H	M	M	L	M	M	M	M	M
Trail Visibility/Security (L/M/H)	L	H	H	H	H	H	L	L	L	M	M	M	M	M	M	M	H
Service to Community Destinations (L/M/H)	L	H	H	H	H	H	H	H	H	H	H	H	M	M	M	M	H
School Connectivity/Student Mobility (L/M/H)	L	L	L	L	L	L	H	H	H	H	H	H	M	M	M	M	M
Connections to Transit Stops (L/M/H)	L	H	H	H	H	H	L	L	L	M	M	L	L	L	M	M	M
Trail System Continuity (L/M/H)	L	H	H	M	M	H	H	H	H	H	H	H	M	M	H	H	H
Public Support Ranking (1 - high, 5-low)	-	4	-	1.5	1.5	-	-	-	2	1	1	-	1.75	1.75	-	1.25	-
Social Impacts																		
Parcels Impacted	0	2	2	0	0	4	1	5	3	4	3	0	2	2	0	6	2
Anticipated R/W Acquisition (acres)	0	0.08	0.04	0	0	0.23	0	0.42	0.54	0.04	0.02	0	0.55	0.55	0	0.07	0.10
Number of Potential Section 4(f) Resources	0	0	0	0	0	2	3	2	3	1	1	0	0	0	0	0	1
Potential Natural/Cultural Environmental Effects																		
Archaeological Sites Potentially Affected	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Historical Sites Potentially Affected	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0
Floodplains (acres) Impacted	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wetlands (acres) Impacted	0	0	0	0	0	0	0	0	0	0	0	0	0.33	0.38	0.22	0.66	0
Other Surface Waters (acres) Impacted	0	0	0	0	0	0.02	0.11	0	0.65	0.35	0.35	0.24	0.01	0.01	0	0	0.03
Wildlife/Threatened and Endangered Species Occurrence Potential (L/M/H) - See note 2	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
Potential Physical Effects																		
Utility Agency Owners impacted	0	3	3	3	3	5	4	4	5	6	6	4	4	4	3	4	5
Utility Relocations	0	3	3	3	3	5	4	4	5	6	6	5	4	4	3	4	5
Contamination Sites (M/H Levels Only)	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0
Purpose and Need: Safety																		
Number of Driveway or Parking Lot (Business or Residential) Crossings (Only consider new const)	0	2	3	3	3	1	0	0	0	3	3	0	8	8	0	13	1
At-grade Street and R/R Crossings	0	1	1	1	1	3	0	3	1	2	2	1	3	3	0	3	1
Estimated Project Costs (per August 2023 LRE)																		
Construction	$0	$ 95,000	$ 132,000	$ 445,000	$ 101,000	$ 500,000	$0	$ 4,619,000	$ 560,000	$ 1,012,000	$ 1,111,000	$ 118,000	$ 361,000	$ 368,000	$ 106,000	$ 685,000	$ 434,000
Design & Construction Engineering and Inspection (27% of Construction Cost)	$0	$ 26,000	$ 36,000	$ 120,000	$ 27,000	$ 135,000	$0	$ 1,247,000	$ 151,000	$ 273,000	$ 300,000	$ 32,000	$ 97,000	$ 99,000	$ 29,000	$ 185,000	$ 117,000
Right-of-Way Acquisition (Provided by FDOT)	$0	$ 175,000	$ 315,000	$0	$0	$ 545,000	$0	$ 645,000	$ 590,000	$ 295,000	$ 225,000	$0	$ 460,000	$ 430,000	$0	$ 400,000	$ 145,000
Wetland Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$0
Species Mitigation/Relocation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Estimated Total Costs	$0	$ 296,000	$ 483,000	$ 565,000	$ 128,000	$ 1,180,000	$0	$ 6,511,000	$ 1,301,000	$ 1,580,000	$ 1,636,000	$ 150,000	$ 1,118,000	$ 1,097,000	$ 335,000	$ 1,470,000	$ 696,000

Note:
1. The light green highlight represents the Recommended Alternative based on Subtask 4.17.1 evaluation results and route continuity.
2. The dark green highlight represents the most favorable response to the given criteria: L (low), M (medium), or H (high). (e.g. L for low impact to endangered species, H for High potential to provide shade)
3. Criteria which had the same result for all alternatives (no impacts or the same impact) were not shown this evaluation matrix: e.g., Floodplain (no impact), archaeological sites (no impact), Wildlife/Threatened and Endangered Species (all low impact).
4. The costs shown do not reflect the total project cost (e.g. lighting, trail amenities, tunnel enhancements, landscaping).
5. The construction costs shown do not reflect project unknowns and are only calculated based on the features present in the typical sections.
6. For Public Support Ranking, a "-" means that this typical section was either developed after the public workshop or had no alternatives to rank.
7. B6 bridge to be built by Manatee County. No FDOT associated cost.
8. Utility costs are not included as a part of this PD&E's scope (section 4.9.1).

5.4.2 Southern Section

The Recommended Alternative for the Southern Section is described from south to north as follows.

- Segment S-C1a: 12-ft shared use path in the median of 5th Ave. W
- Segment S-C1b: 12-ft shared use path in the median of 5th Ave. W
- Segment S-D2: 12-ft shared use path on west side of 5th Ave. W
- Segment S-E5: 8-ft shared use path on the west side of 5th Ave. W
- Segment S-E6:
    - Southern portion: 12-ft shared use path on the west side of 5th Ave. W
    - Northern portion: 10-ft shared use path on the west side of 5th Ave. W (would require narrowing existing roadway pavement)
- Segment S-E7: Shared travel lanes with shared lane markings and speed cushions along with 6-ft sidewalks on 5th Ave. W
- Segment G3: Shared travel lanes with shared lane markings and speed cushions along with 6-ft sidewalks on 12th St. W
- Segment G2: Shared travel lanes with shared lane markings and speed along with 6-ft sidewalks on 12th St. W

Three additional segments, S-D5, S-D6, and S-D7 were recommended by the Palmetto CRA to connect the primary alignment to the Palmetto Estuary Preservation Project area. The CRA noted that they have acquired the parcel adjacent to S-D5 (6th St. W) and S-D6 (4th Ave. W) and it could provide space for a trail facility. Segment S-D7 would make use of the very narrow right of way along Tennessee St. and be served by shared travel lanes.

The location of the Recommended Alternative is shown in **FIGURE 5-34**. The Evaluation Matrix for the Southern Segments is shown in **TABLE 5-4**. Similar to the Evaluation Matrix for the Middle and Northern Segments, a three-level scale of Low (L), Medium (M), and High (H) was also used for the Southern Segments to evaluate the positive and negative impacts of the studied segments on the evaluation criteria.

In addition to the criteria included in the Middle and Northern Segments Evaluation Matrix, Public Desirability was evaluated for the Southern Segments. For this criterion, Low represents the least public support, Medium represents moderate public support, and High represents the greatest public support, based on feedback received during public meetings and charrettes.

Within the Southern section, typical sections associated with each preferred alternative may impact parcels owned by the City of Palmetto, Manatee County, or private property owners. The number of parcels impacted by the typical sections for each preferred alternative is summarized in the Evaluation Matrix (see **TABLE 5-4**).

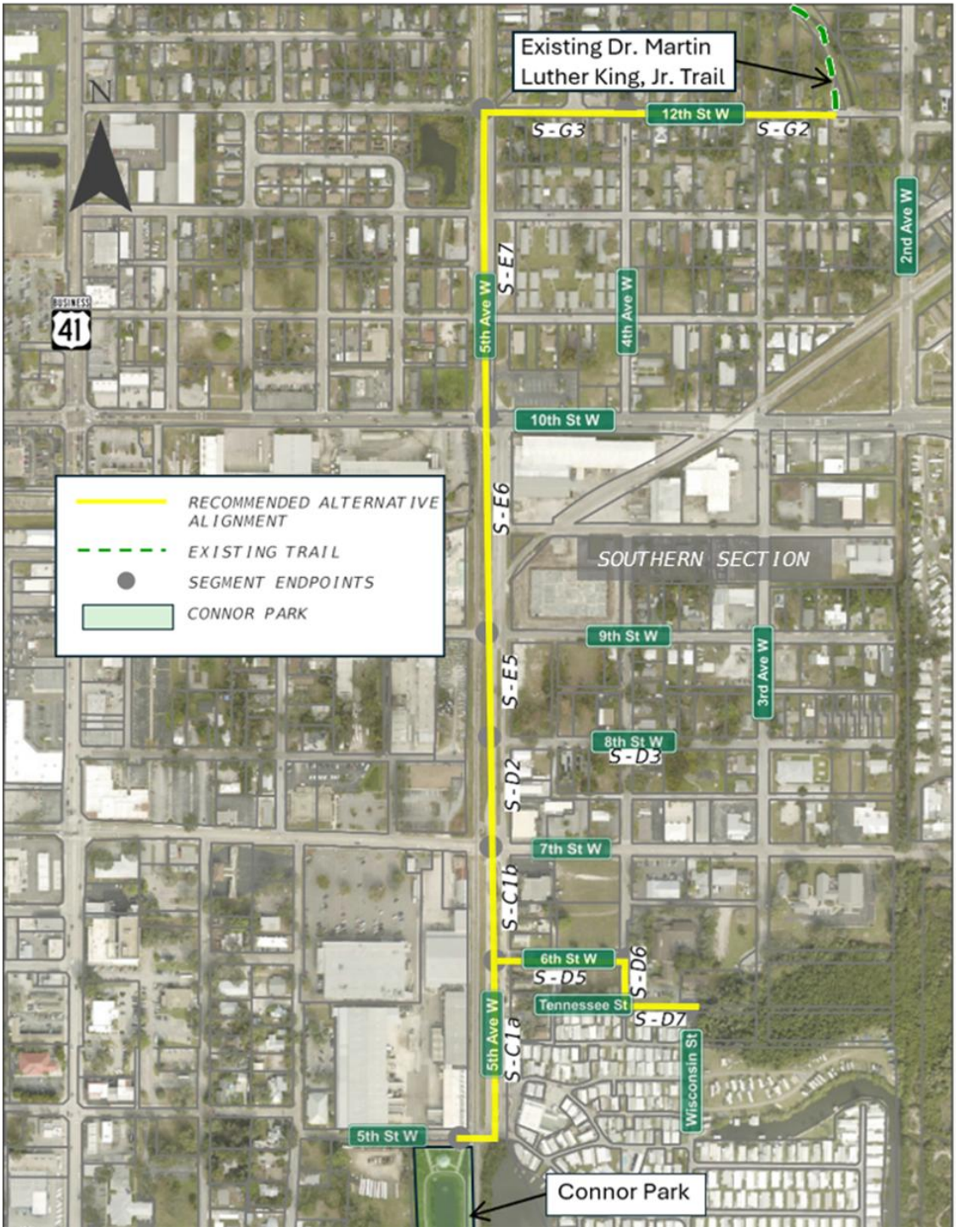


FIGURE 5-34 Recommended alternative Southern Section.

TABLE 5-4 Southern Section Evaluation Matrix

Evaluation Criteria	No-Build Alternative	Build Alternatives – Southern Section Alignments																												
		Segment C								Segment D								Segment E							Segment F		Segment G		
		S-C1a				S-C1b				S-D1a		S-D1b		S-D2	S-D3	S-D4	S-D5 > S-D6 > S-D7	S-E1a		S-E1b		S-E2	S-E3 > S-E4	S-E5 > S-E6 > S-E7	S-F1		S-G1	S-G2	S-G3
		Typ. Sec. 3A-S	Typ. Sec. 3B-S	Typ. Sec. 3C-S	Typ. Sec. 3D-S	Typ. Sec. 3A-S	Typ. Sec. 3B-S	Typ. Sec. 3C-S	Typ. Sec. 3D-S	Typ. Sec. 4A-S	Typ. Sec. 4B-S	Typ. Sec. 4A-S	Typ. Sec. 4B-S	Typ. Sec. 7-S	Typ. Sec. 10-S	Typ. Sec. 10-S	Typ. Sec. 12-S, 13-S, 14-S	Typ. Sec. 5A-S	Typ. Sec. 5B-S	Typ. Sec. 5A-S	Typ. Sec. 5B-S	Typ. Sec. 10-S	Typ. Sec. 10-S	Typ. Sec. 8-S, 11-S, 9S	Typ. Sec. 6A-S	Typ. Sec. 6B-S	Typ. Sec. 10-S	Typ. Sec. 10-S	Typ. Sec. 10-S
Purpose and Need: Facility Purpose(s) [See note 2]																														
Lateral Separation from Roadway (L/M/H)	L	M	L	H	M	M	L	H	M	M	M	M	M	H	L	L	L	H	H	H	H	L	L	M/H/L	M	L	L	L	L
Lateral Separation from Homes/Businesses (L/M/H)	H	H	H	H	H	H	H	H	H	M	M	M	M	H	L	M	M/H/L	M	M	M	M	M	L	H	M	M	L	L	L
Shade (L/M/H)	L	M	M	L	M	M	M	L	M	L	L	L	L	M	M	L	L	M	M	M	M	L	L	L	M	L	L	M	M
Service to Community Destinations (L/M/H)	L	H	H	H	H	M	M	M	M	H	H	H	H	L	H	M	M	H	H	M	M	M	M	L	M	M	H	H	M
School Connectivity/Student Mobility (L/M/H)	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	M	M	M	M	M	M/H	L	H	H	H	H	H
Connections to Transit Stops (L/M/H)	L	L	L	L	L	M	M	M	M	H	H	H	H	M	L	L	L	M	M	M	M	M	M	L/M/M	H	H	M	L	L
Trail Visibility/Security (L/M/H)	L	H	H	H	H	H	H	H	H	H	H	H	H	M	H	M	M	L	L	L	L	H	H	M	H	H	M	H	H
Trail System Continuity (L/M/H)	L	H	M	H	H	H	M	H	H	H	M	H	M	H	L	L	L	H	H	H	H	L	L	H/H/L	H	L	L	L	L
Public Feedback																														
Public Desirability (L/M/H) [see note 3]	L	M*	M	L	M*	M*	M	L	M*	M	M	M	M	M	M	M	H	M	M	M	M	M	M	M	M	M	M	M	M
Social Impacts																														
Parcels Impacted [see note 4]	0	0	0	0	0	0	0	0	0	5	0	1	0	0	0	0	0/1/2	0	0	0	0	0	0/9	0	1	0	2	3	15
Anticipated R/W Acquisition (acres) [see note 4]	0	0	0	0	0	0	0	0	0	0.189	0	0.101	0	0	0	0	0.106	0	0	0	0	0	0/0.056	0	0.021	0	0.027	0.023	0.070
Number of Potential Section 4(f) Resources	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
Potential Natural/Cultural Environmental Effects																														
Archaeological Sites Potentially Affected	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Historical Sites Potentially Affected	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	1	0	1	0	0	0	0
Floodplains (acres) Impacted [See note 5]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.08	0.15	0.19	0.36	0	0	0	0	0	0	0	0
Wetlands (acres) Impacted	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Surface Waters (acres) Impacted	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.001	0	0.11	0.2	0.34	0.64	0	0	0	0	0	0	0	0
Wildlife/Threatened and Endangered Species Occurrence Potential (L/M/H) [See note 2]	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
Potential Physical Effects																														
Utility Agency Owners impacted	0	5	0	0	5	5	0	0	5	6	6	6	6	4	4	3	3/2/2	3	4	4	5	4	5/3	4/4/2	4	4	3	3	3
Utility Relocations	0	5	0	0	5	5	0	0	5	6	6	6	6	3	4	3	3/2/2	3	4	4	5	4	5/3	4/4/2	4	4	3	3	3
Contamination Sites (M/H Levels of contamination only)	0	2	0	0	2	2	0	0	2	2	2	1	1	0	0	0	0/1/1	2	2	1	1	0	0/1	0	1	1	0	0	0
Purpose and Need: Safety																														
Number of Driveway or Parking Lot (Business or Residential) Crossings (Only consider new construction)	0	0	0	0	0	0	0	0	0	5	5	1	1	0	7	3	0/0/1	0	0	0	0	1	2/7	0	1	0	0	6	10
At-grade Street and R/R Crossings	0	3	3	3	3	1	1	1	1	2	2	0	0	0	3	0	2/0/1	1	1	1	1	3	4/3	1/2/2	2	2	0	0	3
Estimated Project Costs (per Month 2025 LRE) [see notes 6 & 7]																														
Construction	$0	$ 182,000	$ 5,000	$ 4,000	$ 205,000	$ 90,000	$ 3,000	$ 2,000	$ 103,000	$ 415,000	$ 116,000	$ 223,000	$ 62,000	$ 90,000	$ 113,000	$ 61,000	$ 79,000	$ 3,298,000	$ 140,000	$ 9,423,000	$ 400,000	$ 45,000	$ 234,000	$ 438,000	$ 249,000	$ 8,000	$ 31,000	$ 31,000	$ 113,000
Design & Construction Engineering and Inspection (27% of Construction Cost)	$0	$ 49,000	$ 1,000	$ 1,000	$ 55,000	$ 24,000	$ 1,000	$ 1,000	$ 28,000	$ 112,000	$ 31,000	$ 60,000	$ 17,000	$ 24,000	$ 31,000	$ 16,000	$ 21,000	$ 890,000	$ 38,000	$ 2,544,000	$ 108,000	$ 12,000	$ 63,000	$ 118,000	$ 67,000	$ 2,000	$ 8,000	$ 8,000	$ 31,000
Right-of-Way Acquisition (Provided by FDOT)	$0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 635,000	$ -	$ 105,000	$ -	$ -	$ -	$ -	$ 220,000	$ -	$ -	$ -	$ -	$ -	$ 495,000	$ -	$ 95,000	$ -	$ 165,000	$ 180,000	$ 815,000
Wetland Mitigation	$0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 200,000	$	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ -	$ -	$ -	$ -	$ -	$	$ -	$ -
Species Mitigation/Relocation	$0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Estimated Total Costs	$0	$ 231,000	$ 6,000	$ 5,000	$ 260,000	$ 114,000	$ 4,000	$ 3,000	$ 131,000	#########	$ 147,000	$ 388,000	$ 79,000	$ 114,000	$ 144,000	$ 277,000	$ 320,000	$ 4,388,000	$ 378,000	$ 12,167,000	$ 708,000	$ 57,000	$ 792,000	$ 556,000	$ 411,000	$ 10,000	$ 204,000	$ 219,000	$ 959,000

Note:
1. The light green highlight represents the Recommended Alternative based on Subtask 4.17.1 evaluation results and route continuity.
2. The dark green highlight represents the most favorable response to the given criteria: L (low), M (medium), or H (high). (e.g. L for low impact to endangered species, H for High potential to provide shade)
3. Public Desirability was based on feedback from public meetings and charrettes.
4. Parcels impacted and anticipated R/W acquisition values were based on the property appraiser, assuming the roadway centerline is synonmous with the centerline of the property appraiser right of way lines and not on the apparent right of way shown in the Typical Sections.
5. Floodplains Impacted only encompasses floodplain which requires mitigation.
6. The costs shown do not reflect the total project cost (e.g. lighting, trail amenities, tunnel enhancements, landscaping).
7. Utility costs are not included as a part of this PD&E's scope (section 4.9.1).
* Anticipated response based on dialogue with City of Palmetto

6.0 AGENCY COORDINATION & PUBLIC INVOLVEMENT

The PD&E Study was initially conducted for only what is now known as the Middle and Northern Sections. The Southern Section was added to the PD&E Study contract four years later. Thus, chronologically and geographically, the Agency Coordination and the Public Involvement were sequential and somewhat separate (albeit with purposeful interweaving when and where possible), with the merging of the two initiatives during the concluding months. Thus, this section of the PER is also presented in two sections, the Middle & Northern and the Southern Section, respectively, for better clarity into the progression of the Study's coordination with agencies and with the community involvement in creating the Recommended Alternatives.

6.1 Middle & Northern Section

6.1.1 Agency Coordination

The vast majority of the PD&E Study, and final recommended alignment, is off-system. Accordingly, per the *Public Involvement Plan*, the Project Team met with and communicated many times with public agencies involved in the project's development and its environment. These agencies are engaged in various planning, programming, maintenance, regulatory, and/or enforcement functions within the study area. Below is a list of those agencies.

- Manatee County; Public Works, Parks and Natural Resources
- Sarasota/Manatee Metropolitan Planning Organization (MPO)
- Manatee County Commission
- Palmetto CRA
- Manatee County Community Pastors Association
- Manasota Black Chamber of Commerce

Stakeholder meetings were held on September 4, 2020, December 18, 2020, June 15, 2021, November 12, 2021, and August 10, 2022. These meetings provided an overview of the project with a formal presentation. Agencies were asked to share their thoughts and feedback regarding a number of topics and determine if they would continue participation in project development. Updates of the project's process were communicated with stakeholders at subsequent meetings.

Discussions with the stakeholder agencies and decisions included the following topics:

- How to modify the route alignment after CSX denied the County's BUILD/RAISE Grant Concept of a trail underpass at the northern end of the alignment. The Project Team thus developed and did a high-level analysis of four potential (corridor) alternatives to allow linkage of the Middle Section to Washington Park in the north. This was presented to the stakeholder agencies. The consensus was in favor of an eastern route corridor and the

need to discuss this major change with relevant civic leaders such as the Manatee County Community Pastors Association.

- The consensus from the Manatee County Community Pastors Association was in favor of the eastern route corridor and the need to discuss this change with the community, which led to the Project Team's planning of the small neighborhood focus groups (see later section).
- The need to outline the public outreach strategy to inform the community of the change from the original BUILD/RAISE Grant applications' Concept and get their feedback.
- Affirmation of alignment of the Middle Section corridor and alternatives to the Northern Section corridor based on public feedback and initial analysis.
- Providing updates regarding funding and possible concerns regarding effects to private property.
- Affirmation of public awareness and outreach activities such as posters and flyers, information booths at Palmetto's Multi-cultural Festival, and the public workshops.

At the request of Bishop Lawrence Livingston of Manatee County Community Pastors Association, a Project Team representative met with Tarnisha Cliatt, the President and CEO of the Manasota Black Chamber of Commerce, on Tuesday, August 10, 2021, via Zoom. A summary of the PD&E Study goals along with the focus group materials was presented for her review. Ms. Cliatt then outlined some of the opportunities their organization saw regarding the trail and expressed desire to become involved as a stakeholder.

The Project Team also met with the Director of Palmetto Community Redevelopment Agency, Mr. Jeff Burton, on Monday, August 16, 2021. Mr. Burton concurred with the new eastern route for the Northern Section. He observed that that routing of the pathway in that area would better connect the two parks and also bring more people through the Lincoln Tunnel. He went on to identify ideas for Lincoln Tunnel improvements to mitigate drainage issues on the western end (outside) the tunnel. He also noted the need to coordinate with law enforcement a potential Crime Prevention Through Environmental Design (CPTED) pre-review and the need for properly placed lighting.

6.1.2 Public Involvement

As the Eastern Corridor's route for the new Northern Section was to "stairstep" through the neighborhoods east of U.S. Highway 41 and north of 17th St, gaining perspective and ideas from their residents was important to help establish the alignment. Accordingly, a series of small focus groups were conducted through outreach.

6.1.2.1 Neighborhood Focus Groups – Middle and Northern Sections

Four outdoor in-person and one virtual small neighborhood focus group meetings were held. The first in-person meeting was held on Monday, February 15, 2021, at the Eternity Temple First Born Church of the Living God under the covered drive-thru/porch. There were 25 attendees. The Project Team provided a brief introduction to the project using exhibits. Discussions with attendees centered around the project exhibits. Overall, attendees supported the trail. There were only a few attendees who chose to take advantage of the opportunity to provide written responses. Some of the discussion comments included the opportunities the trail could bring, possible improvements and amenities desired, and connecting the trail to parks.

The second in-person meeting was held on Thursday, February 18, 2021, in the parking lot of the Mt. Raymond Full Gospel Baptist Church. Nine attendees signed in including Corrine Tucker from the Sarasota/Manatee MPO and three returned questionnaires. Several residents from the first focus group meeting attended this meeting. As in the first meeting, conversations centered around the two displayed boards of the Middle and Northern Sections. Attendees were briefed on the origin of the project and were asked to give the Project Team their insight, ideas, and input on the project. Project staff encouraged attendees to pose questions and engage in discussion. The main points of discussion were regarding who in the community would be using the trail or able to use the trail, e.g. elderly residents.

The third in-person meeting was held on Friday, February 19, 2021, in the parking lot of the Palmetto Youth Center. Five attendees signed in and one questionnaire was received. The afternoon's inclement weather may have impacted meeting attendance. The main comments provided discussed the mix of new and old residents in the neighborhoods surrounding Memphis and Washington Parks and various trail options were discussed.

The fourth in-person meeting was held on Thursday, February 25, 2021, at the Lincoln Park parking lot. Eight attendees signed in and four questionnaires were received. City of Palmetto Mayor Shirley Bryant briefly attended the focus group meeting and submitted a route alignment suggestion to move the crossing of 17th St. to east of the 6th Ave. extension, then connect to either 19th St. or 22nd St. then continue north to 8th Ave. [The Recommended Alternative reflects this suggestion.] The format of the meeting was the same as the previous three meetings. Project Team members spoke with attendees and encouraged their submission of the questionnaire as well as registration for the upcoming virtual neighborhood focus group meeting. Of note was a hearing-impaired attendee who made use of the project materials and submitted a questionnaire. There were some new discussion points that arose which differed from those discussed in previous focus groups including expressed excitement for an increase in bicycle friendly amenities.

The final focus group for the Middle and Northern Sections was held virtually on Monday, March 1, 2021. There were five registrants and four attendees. Similar to what was provided in the

previous in-person meetings, the Project Team provided an overview of "What is a PD&E" and the project's anticipated schedule. Concerns were raised regarding the security of the proposed trail – however overall attendees believed the trail is a good idea.

While the overall public sentiment was supportive for the general concept of a multi-use pathway connecting (at the time) Lincoln Park – now named Coach Eddie Shannon Park, to the under-construction Washington Park at the terminus of the Northern Section, some residents had expressed strong concerns that a traditional trail facility might bring "unwanted" people into their neighborhood. As some of the civic leadership and local government representatives heard this (generally-post meeting) sentiment, they apparently reached out to their elected leadership for assistance. What resulted was an outcome which not only reflected a neighborhood and community consensus for the route (alignment), but also a sense of the facility types which were generally supported. The PD&E Project Team had a front row seat to this elected-officials-led "community charette".

6.1.2.2 Attended Meetings – Community Led Charettes

Commissioner Reggie Bellamy (via Bishop Livingston of the Manatee County Community Pastors Association) invited the Project Team to attend a community/neighborhood meeting on Wednesday, November 10, 2021, at the Eternity Temple First Born Church of the Living God. There, the Project Team listened to a discussion of the Palmetto Trails Network goals and concept. There were approximately 20 neighborhood residents at the meeting. Manatee County Parks and Natural Resources Director Charlie Hunsicker provided an overall description of the Palmetto Trails Network and the County's recent grant applications and congressional funding. Attendees were asked and provided their opinions of a multi-use pathway network within their community. People shared their sentiments which included the importance and need for facilities and resources for the youth in the community such as a connecting trail and acceptance that there might not be a full width trail but that some of the connections might be sidewalks. Several residents expressed concern that a pathway may be built too close to residential homes.

On Friday, December 17, 2021, the Project Team was invited to attend a second neighborhood meeting also held at the Eternity Temple First Born Church of the Living God. Approximately 18 people were in attendance including Congressman Vern Buchanan who expressed his support for the project, emphasized the importance of this pathway network connecting community assets, and shared his vision of a trail extending the entire length of Manatee County. The meeting concluded with observations of how E-bikes and other devices could give residents access to small businesses.

6.1.2.3 Public Workshop

After developing preliminary trail alternatives in keeping with the aforementioned "community charette" outcomes, the Project Team conducted a public workshop on Thursday, January 27, 2022, at the Palmetto Youth Center (**FIGURE 6-1**). A virtual public workshop was also held on Tuesday, February 1, 2022. The public was invited to express their views on the potential alternatives. After signing in, the attendees examined project information displayed throughout the meeting room and had the opportunity to develop typical section concepts, using Streetmix™, of the facilities they preferred along the study alignments. Project Team staff stationed throughout the venue answered questions and discussed specific items of interest and assisted attendees.

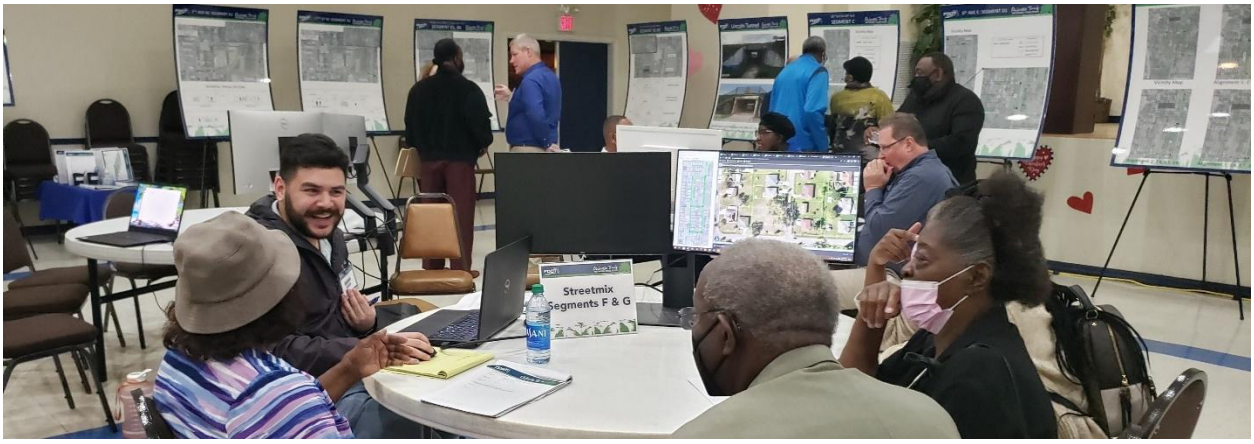


FIGURE 6-1 Attendees at public workshop.

6.1.2.4 Feedback Received

The community participants were very engaged during both the in-person and virtual workshops. They liked being able to envision potential connecting facilities such as pathways, sidewalks, or low-stress shared-street elements, which could be placed within or along the potential corridor alignments, assisted by the Streetmix™ software. Most participants were only interested in what might occur in the vicinity of their homes and generally only responded to that section in a questionnaire which was provided to help record their insight and ideas. Attendees' interest mostly centered around the segments of the Northern Section (Segments E, F, and G) between 21st St. E and Washington Park. The responses received after the workshop also centered around these areas, but reactions were more mixed regarding the desired facilities. Respondents indicated that Alignment #1 (Segments F1, F2, F3) was the least desired route in Segment F (see **FIGURE 1-6**). Respondents were also particularly against studying Segment E1 due to its proximity to homes and the potential need for ROW acquisition and perceived major infrastructure cost.

Workshop participants expressed openness to shared use pathways or wider sidewalks, while many of the mailed in responses were emphatic about no n"trails" being installed, only sidewalks.

Both "schools of thought", however, expressed that amenities such as lighting and traffic calming features would be important.

Following this Public Workshop, the Study Team then finalized the (Recommended) alignment and then refined the (facility) alternatives for evaluation (Scope Subtask 4.17). Then, using an evaluation matrix, the Project Team developed the Recommended Alternative(s) Memorandum (dated August 30, 2023) which was subsequently reviewed by both the local government (implementing) agency (Manatee County) and the District One Context and Typical Sections Committee.

6.2 Southern Section

In marked contrast with the Middle and Northern Sections (which had considerable community and public involvement and comparatively less agency coordination), the Southern Section was virtually the opposite. There, the Project Team had nearly a dozen meetings with the agencies and relatively fewer with the community. For the Southern Section, Agency Coordination and Public Involvement was intertwined, giving local, implementing agency, and community perspective in formulating the Recommended Alignment and Alternative(s). Using the same PD&E Study methodology as in the Middle & Northern Section, the Engineering and Environment activities were conducted simultaneously to advance the Southern Segment into combined *Recommended Alternative(s) Memoranda*.

The table below illustrates the chronology of the intertwined agency coordination and community involvement. Commentary for the prominent activities are in the respective following sections of Agency Coordination and Public Involvement.

TABLE 6-1 Combined Agency Coordination and Public Involvement

Date	Entity(ies)	General Topic	Agency Staff Participants
9/17/24	City & County	Southern Segment Study Alignment (Kick-off)	Public Works Director (City) City Clerk (City) Ryan Brown (MPO) Edward Johnson (CRA) Rowena Young-Gopie (CRA) Jon Moore (Consultant to CRA) Vicki Moore (Consultant to CRA) Clarke Davis (County) Charlie Hunsicker (County) Reggie Bellamy (Director Palmetto Youth Center) Bishop Livingston (Civic Leader)
10/30/24	Community (Neighborhood)	Focus Group (Sutton Park)	The Public

TABLE 6-1 Combined Agency Coordination and Public Involvement (Continued)

Date	Entity(ies)	General Topic	Agency Staff Participants
2/7/25	Palmetto CRA	Study Alignment	Edward Johnson (CRA) Rowena Young-Gopie (CRA) Jon Moore (Consultant to CRA) Vicki Moore (Consultant to CRA)
2/19/25	Public	Southern Section Public Workshop (in-person, Manatee County Fairgrounds)	The Public
2/20/25	County	Briefing with Commissioner Ballard	Commissioner Ballard (County) Jimmy Vilce (FDOT) Michelle Rutishauser (FDOT) Bruce Landis (FDOT)
2/27/25	Public	Southern Section Public Workshop (Virtual)	The Public
6/26/25	City & County	Southern Section Recommended Facilities (Typ. Sections) Review	Public Works Director (City) Jon Moore (Consultant to CRA) Rowena Young-Gopie (CRA) Edward Johnson (CRA) Clarke Davis (County) Bryan Parnell (County) Brandon Martingano (County) Chad Butzow (County)
8/4/25	City	Overview of Recommended Alignment & Alt. Facilities	City Commission
11/13/25	City Sr. Staff	Same as above	Public Works Director (City) Police Chief (City) City Clerk (City) Justin Rourk (County) Mayor West (City)
11/17/25	City	Riverside Alignment & U.S. BU.S. 41 Concept Alt.	City Commission
1/21/26	County	Termination of Southern Segment at Conner Park	Clarke Davis (County) Scott May (County) Stephen Siirtola (County) Jeff Streitmatter (County) Justin Rourk (County)

6.2.1 Agency Coordination

Coordination primarily involved the local and implementing agencies of Manatee County (Department of Public Works) and the City of Palmetto. Beginning in September of 2024, the Project Team met with County, City, the Palmetto CRA, and civic leadership to frame the Study's corridors starting with a potential alignment from the County's BUILD/RAISE/T-HUD Grant applications as a base. Subsequent meetings with the agencies, interspersed with community

meetings (see subsection below) resulted in the final study alignment and development of potential facilities (a mix of shared use path facilities and "neighborhood greenways" (traffic calmed local streets and sidewalks)). Later, resident opposition (and City Commission aversion to) of the alignment(s) or any changes to the local street system between Conner Park and the intersection of the Green Bridge pathway (Business 41 and Riverside Drive) resulted in the Study alignment's southern terminus being re-located to Conner Park – with the concurrence of Manatee County's Public Works Department.

6.2.2 Public Involvement

6.2.2.1 Southern Section Community Kick-off Meeting

A kick-off meeting (open house/open air format) was held for the public in October of 2024. The venue was the bandstand/stage at Sutton Park in the City of Palmetto. The Southern Section study area and alignment from the County's BUILD/RAISE/T-HUD Grant applications was displayed. Response / Comment forms were created to enable participants/respondents to comment not only on the primary study alignment, but also regarding potential alternate corridors. Also exhibited was the study alignment for the (paused at that time) Middle and Northern Sections. Comment cards enabled attendees/respondents to share insight and preferences into the route options for the potential alignment. See **Appendix B** for examples of the feedback from attendees. The attendance at the event (rescheduled several times due to weather) was sparse due to the residual community effects from recent major weather events (e.g., Hurricanes Helene and Milton).

6.2.2.2 Southern Section Public Workshop

The Southern Section Public Workshop presented information about the preliminary alternatives and provided the opportunity for the public to express their views on the potential alignments and facility types to be studied. The workshop(s) was(were) conducted in both an in-person and online format. The in-person meeting facility was at the Manatee County Fairgrounds. Workshop materials were posted to the project webpage (swflroads.com/palmettotrailsnetwork). The in-person workshop occurred on January 27, 2025, and the on-line version on February 1, 2025.

Twenty-two citizens and two elected officials and nine government officials/representatives signed in at the in-person workshop. Four citizens and three government officials/representatives joined the online workshop. A total of forty people attended the Southern Section Public Workshop.

At the start of the in-person workshop, attendees were provided with a packet which included a project handout, comment card, questionnaire, and roll plot activity materials and the Project Team explained the comment process. Online attendees were shown a PowerPoint presentation

by the Project Team and attendees had numerous stations for interaction and feedback. Both events provided the opportunity to ask questions to the Project Team.

Interactive activities included a roll plot where attendees could place green or red sticky dots corresponding with their comments regarding the trail alternatives and, similar to what was available at the Middle & Northern Section Workshop, a Streetmix™ station was available for users to explore various cross-section options with trail and/or shared lane facility options elements. Separate tables displayed FDOT processes and were available for Manatee County representatives to present information on the Washington Park construction to the public.

At the in-person workshop, attendees were able to leave written comments. All other comments were submitted either by email, website, or by mail. Eight comment forms and four questionnaires were received at the in-person workshop. No additional comments were received during the 11-day comment period following the online workshop.

Overall, residents were supportive of the Southern Section for trail or shared lane/sidewalk facilities. However, a number of residents living on Riverside Drive were opposed to any trail use or accommodation of bicycles or pedestrians along their roadway. Instead, they used some of the response materials to suggest alternative routes to the Green Bridge/Riverside Drive intersection, by-passing Conner Park, crossing U.S. 41 north of Conner Park.

6.3 Final Newsletter

While the PD&E Study had been scoped assuming a Class of Action (COA) as a Categorical Exclusion 2 (CE 2), as the Southern Segment was within the later stages of the Engineering and Environmental activities, it became evident that the COA for the overall project could be downgraded to a CE 1. Accordingly, and in consideration of the extensive (implementing) agency coordination, community focus group input, and in-depth public workshops, the Project Team determined that a Public Hearing was not needed. Accordingly, a final Newsletter was sent to all project stakeholders and residents in the study area(s). A copy of that newsletter is in **Appendix B** of this PER.

7.0 RECOMMENDED ALTERNATIVE

7.1 Typical Sections

A total of 26 typical sections are anticipated for this project. Of these, 17 are for the Middle and Northern Sections and 9 are for the Southern Section, corresponding to the recommended alternative segments within each section (see **FIGURE 7-1**, **FIGURE 7-2**, and **FIGURE 7-3**). These typical sections and their applications are described below and provided in **Appendix C.**

Typical sections for recommended Middle and Northern Sections alternatives

- Typical Section 1B – Segment A1: 10-ft shared use path (8-ft min.) on the southbound (west) side, and a 6-ft sidewalk on the northbound (east) side.
- Typical Section 2 – Segment A2: 12-ft shared use path (10-ft min.).
- Typical Section 3 – Segment B1: Prefabricated steel truss bridge.
- Typical Section 4 – Segment B2: 12-ft shared use path.
- Typical Section 5 – Segment B3: 12-ft shared use path.
- Typical Section 6 – Segment B4: 12-ft shared use path (10-ft min.).
- Typical Section 7 – Segment B5: Lincoln Tunnel enhancements.
- Typical Section 8 – Segment C1, C2, C8, F6, and F7: 12-ft shared use path (10-ft min.).
- Typical Section 11 – Segment C7: 12-ft shared use path.
- Typical Section 12 – Segment D1: 10-ft shared use path.
- Typical Section 13- Segment E4: Shared travel lanes with shared lane markings and speed cushions. 6-ft to 8-ft sidewalks on the eastbound (south) side.
- Typical Section 14 – Segment E5: 12-ft shared use path.
- Typical Section 15 – Segment E6: Shared travel lanes with shared lane markings and speed cushions. 6-ft to 8-ft sidewalks on the northbound (east) side.
- Typical Section 16 – Segment F4: 12-ft shared use path (10-ft min.)
- Typical Section 17 – Segment F5: Shared travel lanes with shared lane markings and speed cushions. 6-ft to 8-ft sidewalks on the northbound (east) side.
- Typical Section 18 – Segment G1: 10-ft shared use path.
- Typical Section 19 – Segment G2: 10-ft shared use path.

Typical sections for recommended Southern Section alternatives

- Typical Section 3A-S – Segment S-C1a and S-C1b: 12-ft shared use path in the median of 5th Ave. W.
- Typical Section 7-S – Segment S-D2 and S-E6 (southern portion where there is no existing angle on-street parking): 12-ft shared use path on west side of 5th Ave. W.
- Typical Section 8-S – Segment S-E5: 8-ft shared use path on the west side of 5th Ave. W.

- Typical Section 11-S – Segment S-E6 (northern portion, where angle on-street parking currently exists) 10-ft for the northern portion, which would require narrowing the existing roadway pavement.
- Typical Section 9-S – Segment S-E7: Shared travel lanes with shared lane markings and speed cushions along with 6-ft sidewalks on the west side of 5th Ave. W.
- Typical Section 10-S – Segment S-G2 and S-G3: Shared travel lanes with shared lane markings and speed cushions along with 6-ft sidewalks on the south side of 12th St. W.
- Typical Section 12-S – Segment S-D5: Shared travel lanes with shared lane markings and speed cushions along with 6-ft sidewalks on the south side of 6th St. W.
- Typical Section 13-S – Segment S-D6: Shared travel lanes with shared lane markings and speed cushions along with 6-ft sidewalks on the west side of 4th Ave. W.
- Typical Section 14-S – Segment S-D7: Shared travel lanes with shared lane markings and speed cushions along with 6-ft sidewalks on the north side of Tennessee St.

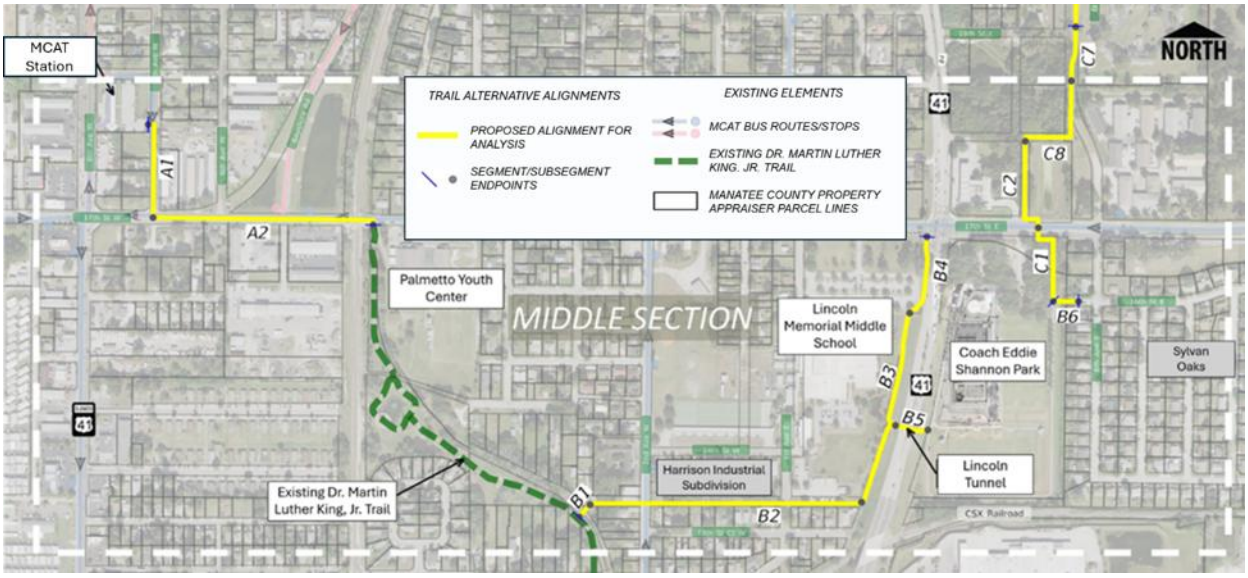


FIGURE 7-1 Recommended alternative – Middle Section.

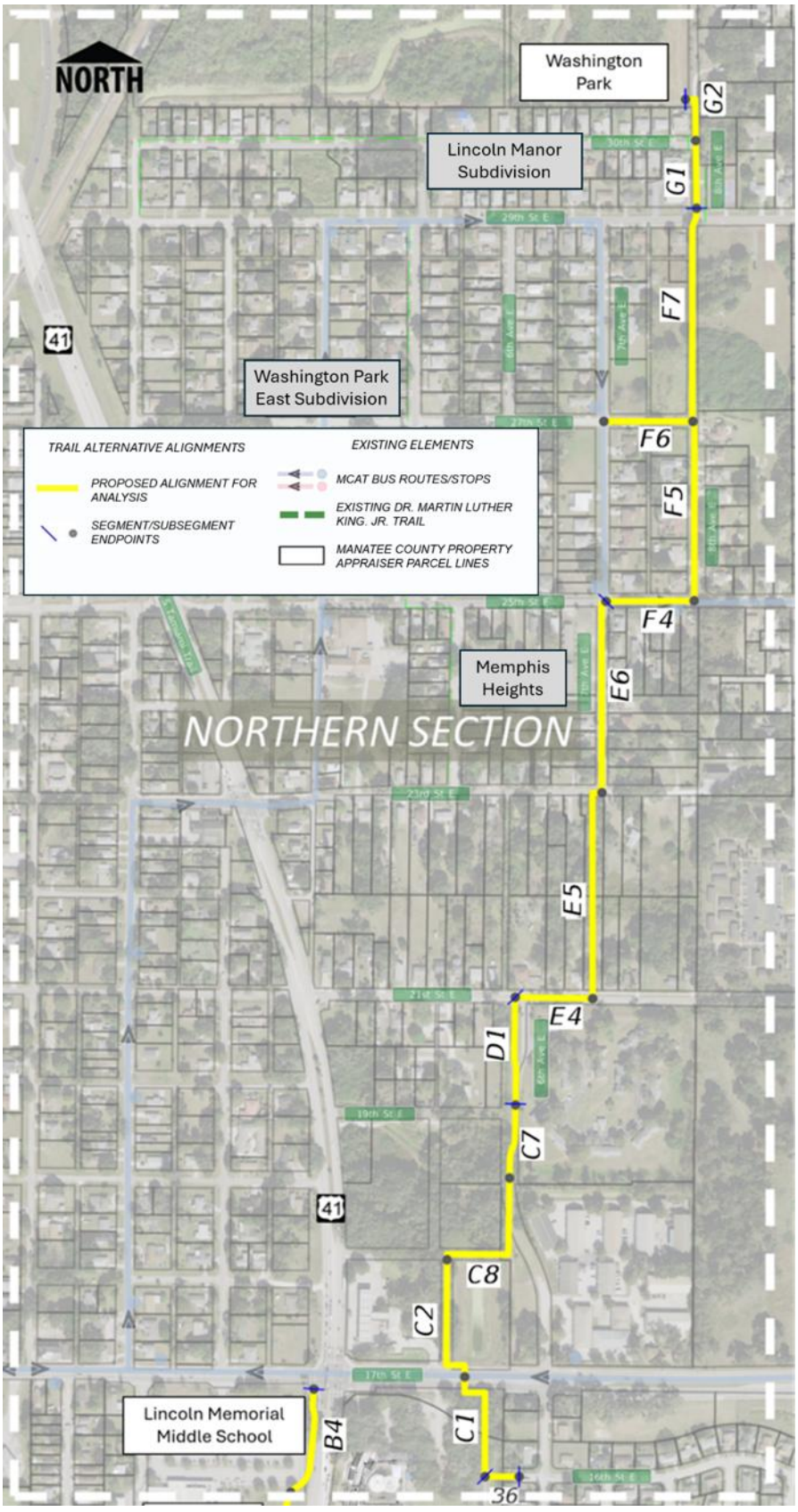


FIGURE 7-2 Recommended alternative – Northern Section.

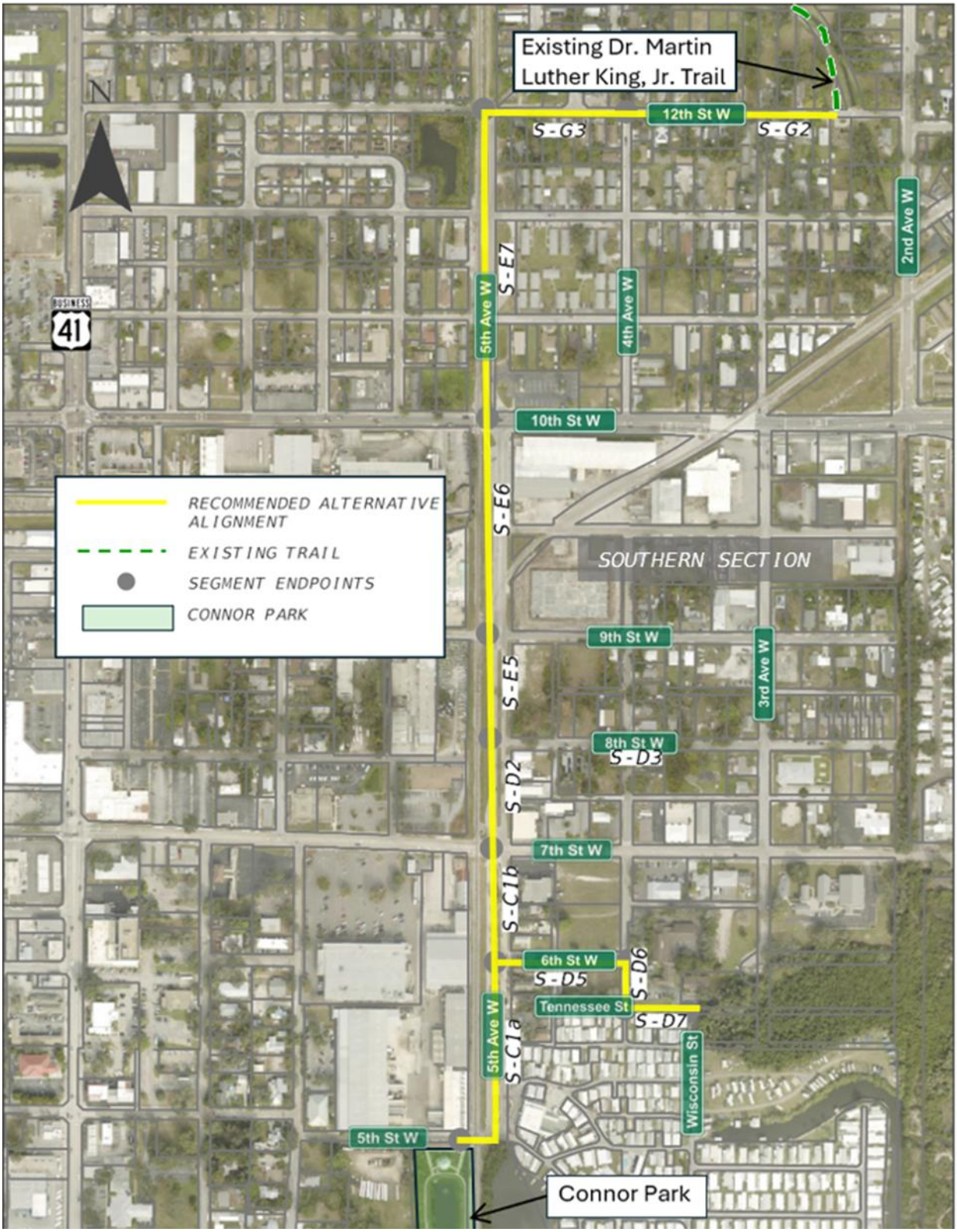


FIGURE 7-3 Recommended alternative – Southern Section.

7.2 Access Management

This project is not anticipated to require the substantial modification of driveways or restriction of median openings.

7.3 Right of Way

An initial estimate of acquisition needs has been made based upon preliminary right of way maps and data table which show the anticipated right of way acreage required per the property appraiser parcel lines and estimated right of way needs in the concept typical sections. As summarized in the Evaluation Matrix presented in **TABLE 5-3** and **TABLE 5-4**, the recommended alternative within the Middle and Northern Sections results in a total of 25 parcels impacted, equivalent to 1.95 acres of acquisition needed. On the Southern Section, there are 21 parcels impacted, equivalent to 0.199 acres. The proposed right of way limits of the recommended alternatives and the associated parcel impacts are illustrated in **Appendix D – Concept Plan**.

7.4 Horizontal and Vertical Geometry

The proposed shared use paths will largely use the right of way of the adjacent roadways of the study corridor. While following the same general alignment as the adjacent roadways, the shared use paths will have horizontal and vertical curves independent of the roadway alignments.

On some segments, the roadway facility will be a shared roadway for bicyclists in addition to adjacent sidewalks. Traffic calming devices will also be put on those roadways, but none of these improvements will impact the horizontal or vertical alignment of those roadways.

Design level survey was not conducted as part of the PD&E Study phase. Based on field observations, the Conceptual Plan's alignments do not consist of any steep slopes and are generally flat. Thus, no vertical curve design was conducted. To meet ADA criteria, trail construction will not exceed a cross slope of 2% and the maximum longitudinal grade will be 5%.

7.5 Design Variations and Design Exceptions

Per FDM 224.4, SUN Trail facilities require approval by the FDOT Chief Planner if the shared use path is less than 12 feet wide. Among the recommended alternatives' typical sections within the Middle and Northern Sections and the Southern Section, several segments are proposing a shared use path narrower than this 12-ft standard. While these segments meet the minimum 10-ft width where right-of-way is limited, or the 8-ft width permitted for short segments under constrained conditions, they do not meet the 12-ft width design control criterion. Thus, these segments will need a design variation, subject to approval by the FDOT Chief Planner. The segments requiring a design variation and their proposed widths are summarized below.

Middle and Northern Sections

- Segment A1: 10-ft shared use path (8-ft min.)
- Segment A2: 12-ft shared use path, reduced to a minimum width of 10-ft where right-of-way is constrained, which requires a design variation.
- Segment B4: 12-ft shared use path, reduced to a minimum width of 10-ft where right-of-way is constrained, which requires a design variation.
- Segment C1, C2, C8, F6, and F7: 12-ft shared use path, reduced to a minimum width of 10-ft where right-of-way is constrained, which requires a design variation.
- Segment D1: 10-ft shared use path.
- Segment F4: 12-ft shared use path, reduced to a minimum width of 10-ft where right-of-way is constrained, which requires a design variation.
- Segment G1: 10-ft shared use path.
- Segment G2: 10-ft shared use path.

Southern Section

- Segment S-E5: 8-ft shared use path.
- Segment S-E6 (northern portion, where angle on-street parking currently exists): 10-ft shared use path.

The second design control criterion is a 4-ft minimum clear area adjacent to both sides of the path, per FDM 224.7. The typical section requiring a design variation, along with the proposed horizontal clearance, are summarized below.

Middle and Northern Sections

- Typical Section 1B – Segment A1: 2-ft horizontal clearance available on the west side of the path.

The third design control criterion is a 5-ft minimum separation from the edge of the path to the roadway (face of curb), per FDM 224.12. The typical section requiring a design variation, along with the proposed separation width, is summarized below.

Southern Section

- Typical Section 8-S – Segment S-E5: 4-ft from the edge of the path to the face of curb.
- Typical Section 11-S – Segment S-E6: 4.5-ft from the edge of the path to the face of curb.

7.6 Multimodal Accommodations

This shared use path will provide a continuous pedestrian and bicycle facility providing access to MCAT route stops along the corridor.

7.7 Intersection/ Interchange Concepts and Signal Analysis

Recommended alternative concept plans are provided in **Appendix D**. This project does not alter the configuration of any intersections beyond the provision of facilities for the shared use path.

7.8 Tolled Projects

N/A

7.9 Intelligent Transportation System and TSM&O Strategies

The PTNP will cross the ITS/TSM&O fiber optic cables at the following locations:

- 7th St. just west of the CSX rail line
- 17th St. just west of the CSX rail line
- 17th St. 450 ft east of U.S. 41

This project is not anticipated to include or impact these ITS or TSM&O facilities.

7.10 Landscape

No landscaping was included in this study.

7.11 Lighting

No lighting or amenities were included in this study. Manatee County is anticipated to be responsible for any amenities for the Trail Network.

7.12 Wildlife Crossings

No wildlife crossings were included in this study.

7.13 Permits

Environmental permits, coordination, and authorization will likely be required for this project during design and prior to construction. **TABLE 7-1** outlines the anticipated permits for the Recommended Alternative.

TABLE 7-1 Anticipated Permits

Permit Name	Agency
ERP Exemption	SWFWMD
Gopher Tortoise Relocation Permit	FWC
Southeastern American Kestrel Incidental Take	FWC
National Pollutant Discharge Elimination System (NPDES)	FDEP

A pre-application meeting with SWFWMD was conducted on June 13, 2023. Based on the meeting minutes, most of the project will be exempt under 62-330.051 unless wetlands are encountered. See **Section 7.14** for a segment-by-segment summary of drainage observations. Verification of permit exemption and coordination with SWFWMD should continue in the final design phase. The SWFWMD pre-application minutes are included in the PD&E drainage reports submitted as separate documents.

None of the three OSWs intersecting project limits meet the definition of Waters of the United States (WOTUS), therefore they are not jurisdictional to the USACE.

7.14 Drainage and Stormwater Management Facilities

Florida Statutes 62-330.051 gives exemptions for certain recreational trails and bike paths given the minimum criteria is met.

(10) The construction, alteration, maintenance, removal or abandonment of recreational paths for pedestrians, bicycles, and golf carts, provided:

(a) There is no work in, on, or over wetlands or other surface waters other than those in drainage ditches constructed in uplands;

(b) There is no reduction in the capacity of existing swales, ditches, or other stormwater management systems legally in existence under Chapter 403 or Part IV of Chapter 373, F.S.;

(c) The paths have a width of eight feet or less for pedestrian paths, and 14 feet or less for multi-use recreational paths;

(d) The paths are not intended for use by motorized vehicles powered by internal combustion engines or electric-powered roadway vehicles, except when needed for maintenance or emergency purposes; and

(e) The paths comply with the limitations and restrictions in subsection 62-330.050(9), F.A.C.

The following Subsection outlines for each recommended facility segment the existing conditions and the design (potential) permitting and actions, if needed.

7.14.1 Middle and Northern Sections

Segment A1 will parallel 7th Ave. W. Stormwater runoff is collected in the roadway and travels to the north. Runoff from the shared use path will discharge into the roadway and be conveyed to the existing collection system. Under 62-330.051(10) this activity will be exempt from SWFWMD review.

Segment A2 will parallel 17th St. W. Manatee County permitted the road expansions in 2004 under ERP 44024790.001. As this roadway has an existing stormwater permit the exemption will not apply to this segment. The existing permit will need to be modified to account for the additional runoff associated with the shared use path. Stormwater attenuation may be required, and the existing stormwater pond may need to be expanded to account for the additional runoff. The existing pipe collection system within the roadway also needs to be checked for capacity spread within the travel lanes.

Segment B1, bridge section from existing Dr. Martin Luther King, Jr. Trail to the 13th St. W corridor. This segment will cross an existing canal and will not be exempt from SWFWMD review. The crossing will maintain the size and opening of the structure by spanning the ditch. No supports or fill will be placed within the ditch and conveyance will not be restricted. A "No Rise" hydraulic analysis may be required to show no adverse impacts to adjacent properties if fill is proposed within the 100-year peak stage of the ditch.

Segment B2, will be along 13th St. W from the proposed bridge crossing to the west side of the U.S. 41 embankment. This section of the trail is exempt from SWFWMD review. Under the exemption no treatment or attenuation of the stormwater runoff is required. As this path will be placed within a highly populated area, a swale is proposed along the entire length of the trail. The swale has been sized to retain the runoff from a 100-year storm event and will ensure that the trail's construction has no adverse impacts on adjacent properties.

Segment B3, along the west side embankment of U.S. 41 from 13th St. W corridor to the southeast corner of the Lincoln Middle School parking lot. Per F.S. 62-330.051(10) this segment is exempt from SWFWMD review.

Segment B4, will be parallel to U.S. 41 from the southeast corner of Lincoln Middle School parking lot to 17th St. W. The shared use path will discharge stormwater runoff into U.S. 41 and will be conveyed by the existing collection system. This segment is exempt from SWFWMD review.

Segment B5, will consist of the trail through the Lincoln Tunnel beneath U.S. 41 and is exempt from SWFWMD review.

Segment C1, within Coach Eddie Shannon Park from the existing trail at the west end of the bridge, Segment B6 to 17th St. E. The trail will be placed within a grass strip alongside an existing canal. This segment of the trail is exempt from SWFWMD review. The trail will discharge stormwater

runoff into a proposed swale. The swale has been sized to retain the runoff from a 100-year storm event. The swale eastern bank will be graded to overtop into the existing canal.

Segment C2, will be placed along the undeveloped right-of-way north from 17th St. to the right-of-way branch between Segments C3 and C8. The trail will discharge stormwater runoff into a proposed swale. The swale has been sized to retain the runoff from a 100-year storm event. This segment of the trail is exempt from SWFWMD review.

Segment C8, along the undeveloped right-of-way from the north end of Segment C2 extending east and then north along the undeveloped 6th Ave. E extension. This segment of the trail is exempt from SWFWMD review. The trail will discharge stormwater runoff into a proposed swale. The swale has been sized to retain the runoff from a 100-year storm event. The swale western bank will be graded to allow overtopping into the existing canal.

Segment C7, along the undeveloped section of 6th Ave. E parallel to the existing canal from the change in right-of-way to the paved roadway at 19th St. E intersection. This segment of the trail is exempt from SWFWMD review. The trail will discharge stormwater runoff into a proposed swale. The swale has been sized to retain the runoff from a 100-year storm event. The swale western bank will be graded to allow overtopping into the existing canal.

Segment D1, along the 6th Ave. E paved section from 19th St. E extension to 21st St. E. The shared use path will discharge stormwater runoff into the roadway and will be conveyed by the existing collection system. This segment is exempt from SWFWMD review.

Segment E4, parallel to 21st St. E. The shared use path will discharge stormwater runoff into the roadway and will be conveyed by the existing collection system. This segment is exempt from SWFWMD review.

Segment E5, through two vacant parcels just to the west of what would be the extension of 7th Ave. E. The trail will discharge stormwater runoff into a proposed swale. The swale has been sized to retain the runoff from a 100-year storm event. This segment of the trail is exempt from SWFWMD review.

Segment E6, along 7th Ave. E from 23rd St. E to 25th St. E. The shared use path will discharge stormwater runoff into the roadway and will be conveyed by the existing collection system. This segment is exempt from SWFWMD review.

Segment F4, along 25th St. E from 7th Ave. E to 8th Ave. E. This segment of the design will not be exempt from SWFWMD review under F.S. 62-330.051(4)b. The shared use path will be placed over an existing roadside ditch. As the length of culverts will exceed 30 feet the exemption does not apply. Existing culverts range from 12 to 15 inches at the driveway crossing. The proposed approach will use a 24-inch round reinforced concrete pipe (RCP) to increase capacity to account for the roadside swale. As the underlying pipe will address the swale capacity, the system needs

to account for the loss of stormwater treatment that is currently provided within the swale. Another option, assuming suitable soil and groundwater conditions, is to use a perforated pipe. Stormwater will be directed to the pipe either by inlets or trench drains. A ditch check will be provided to allow for the captured stormwater to infiltrate into the existing soils. A third option is to locate a nearby segment of roadway/trail that is not being treated within the watershed and provide an equal amount of treatment.

Segment F5, along 8th Ave. E from 25th St. E to the end of the developed section of the roadway intersecting the undeveloped extension of 27th St. E. The shared use path will discharge stormwater runoff into the roadway and will be conveyed by the existing collection system. This segment is exempt from SWFWMD review.

Segment F6, along undeveloped right-of-way for the 27th St. E extension from 7th Ave. E to the end of the developed roadway along 8th Ave. E. The trail will discharge stormwater runoff into a proposed swale. The swale has been sized to retain the runoff from a 100-year storm event. This segment of the trail is exempt from SWFWMD review.

Segment F7, to be placed along undeveloped right-of-way for the 8th Ave. E extension from the end of the paved roadway for 8th Ave. E to 29th St. E. The trail will discharge stormwater runoff into a proposed swale. The swale has been sized to retain the runoff from a 100-year storm event. This segment of the trail is exempt from SWFWMD review.

Segment G1, along 8th Ave. E from 29th St. E to the end of the paved roadway. This segment of the design will not be exempt from SWFWMD review under F.S. 62-330.051(4)b. The shared use path will be placed over an existing roadside ditch. As the length of culverts will exceed 30 feet the exemption does not apply. Existing culverts are 24 inch in size at the driveway crossing. The recommended approach would be to use a 36-inch RCP to increase capacity to account for the roadside swale. As the underlying pipe will address the swale capacity the system needs to account for the loss of stormwater treatment that is provided within the swale. One option, with suitable soil and groundwater conditions, is to use a perforated pipe. Stormwater will be directed to the pipe either by inlets or trench drains. A ditch check will be provided to allow for the captured stormwater to infiltrate into the existing soils. A second option is to locate a segment of roadway/trail that is not being treated within the watershed and provide an equal amount of treatment.

Segment G2, along 8th Ave. E from the end of the paved roadway to the entrance of Washington Park (Project Terminus). Manatee County permitted the Washington Park Preserve – Phase I, on October 3rd, 2018, under ERP 43043638.00. As this project has an existing stormwater permit the exemption will not apply to this segment. The existing permit will need to be modified to account for the additional runoff associated with the shared use path. Stormwater attenuation may be

required, and the existing stormwater pond may need to be expanded to account for the additional runoff.

7.14.2 Southern Section

Segment S-C1a will begin at the intersection of 5th St. W and 5th Ave. W and will travel north paralleling 5th Ave. W to 7th St. W. No existing water quality treatment systems, floodplain or wetlands will be impacted, and the activity will be exempt from SWFWMD permitting.

Segment S-C1b will continue north from the intersection of 5th Ave. W and 6th St. W to 7th St. W. No existing water quality treatment systems, floodplain or wetlands will be impacted, and the activity will be exempt from SWFWMD permitting.

Segment S-D2 travels north paralleling 5th Ave. W from the intersection of 7th St. W and 5th Ave. W to 8th St. W. No existing water quality treatment systems, floodplain or wetlands will be impacted, and the activity will be exempt from SWFWMD permitting.

Segment S-E5 commences at the intersection of 8th St. and 5th Ave. W, travels north paralleling 5th Ave. W to 9th St. W. No existing water quality treatment systems, floodplain or wetlands will be impacted, and the activity will be exempt from SWFWMD permitting.

Segment S-E6 will continue north from 9th St. W paralleling 5th Ave. W to 10th St. W. No existing water quality treatment systems, floodplain or wetlands will be impacted, and the activity will be exempt from SWFWMD permitting.

Segment S-E7 will continue north from 10th St. W paralleling 5th Ave. W to 12th St. W. No existing water quality treatment systems, floodplain or wetlands will be impacted, and the activity will be exempt from SWFWMD permitting.

Segment S-G2 will begin at the intersection of 12th St. W and 3rd Ave. W, travel east parallel 12th St. W to the entrance of Dr. Martin Luther King, Jr. Park (Project Terminus). No existing water quality treatment systems, floodplain or wetlands will be impacted, and the activity will be exempt from SWFWMD permitting.

Segment S-G3 commences at the intersection of 12th St. W and 5th Ave. W, travels east paralleling 12th St. W to 3rd Ave. W. No existing water quality treatment systems, floodplain or wetlands will be impacted, and the activity will be exempt from SWFWMD permitting.

The spur route to the Estuaries property includes the following segments:

Segment S-D5 starts at the intersection of 5th Ave. W and 6th St. W, travels east paralleling 6th St. W to 4th Ave. W. No existing water quality treatment systems, floodplain or wetlands will be impacted, and the activity will be exempt from SWFWMD permitting.

Segment S-D6 begins at the intersection of 4th Ave. W and 6th St. W, travels south on 4th Ave. W to Tennessee St. No existing water quality treatment systems, floodplain or wetlands will be impacted, and the activity will be exempt from SWFWMD permitting.

Segment S-D7 paralleling Tennessee St, extends east to the existing wetland. No existing water quality treatment systems, floodplain or wetlands will be impacted, and the activity will be exempt from SWFWMD permitting.

7.15 Floodplain Analysis

7.15.1 Middle and Northern Sections

A detailed watershed study of the subbasins has not been undertaken for the Study Area.

Manatee County is considering undertaking a study in the future.

Based on the FEMA FIRM, Panel Numbers 12081C0162F, 12081C0166F, 12081C0164F, 12081C0168F, effective dates August 10th, 2021, all the proposed construction activities are outside the 100-year flood zone.

The Floodplain Map for the Middle and Northern Sections is provided in **FIGURE 7-4**.

7.15.2 Southern Section

On the Southern Section the main alignment between Connor Park and the existing Dr. Martin Luther King, Jr. Trail will not impact wetlands or floodplains. However, the spur leading from the main alignment to the Estuaries property would impact wetlands and floodplain.

The Floodplain Map for the Southern Section is provided in **FIGURE 7-5**.

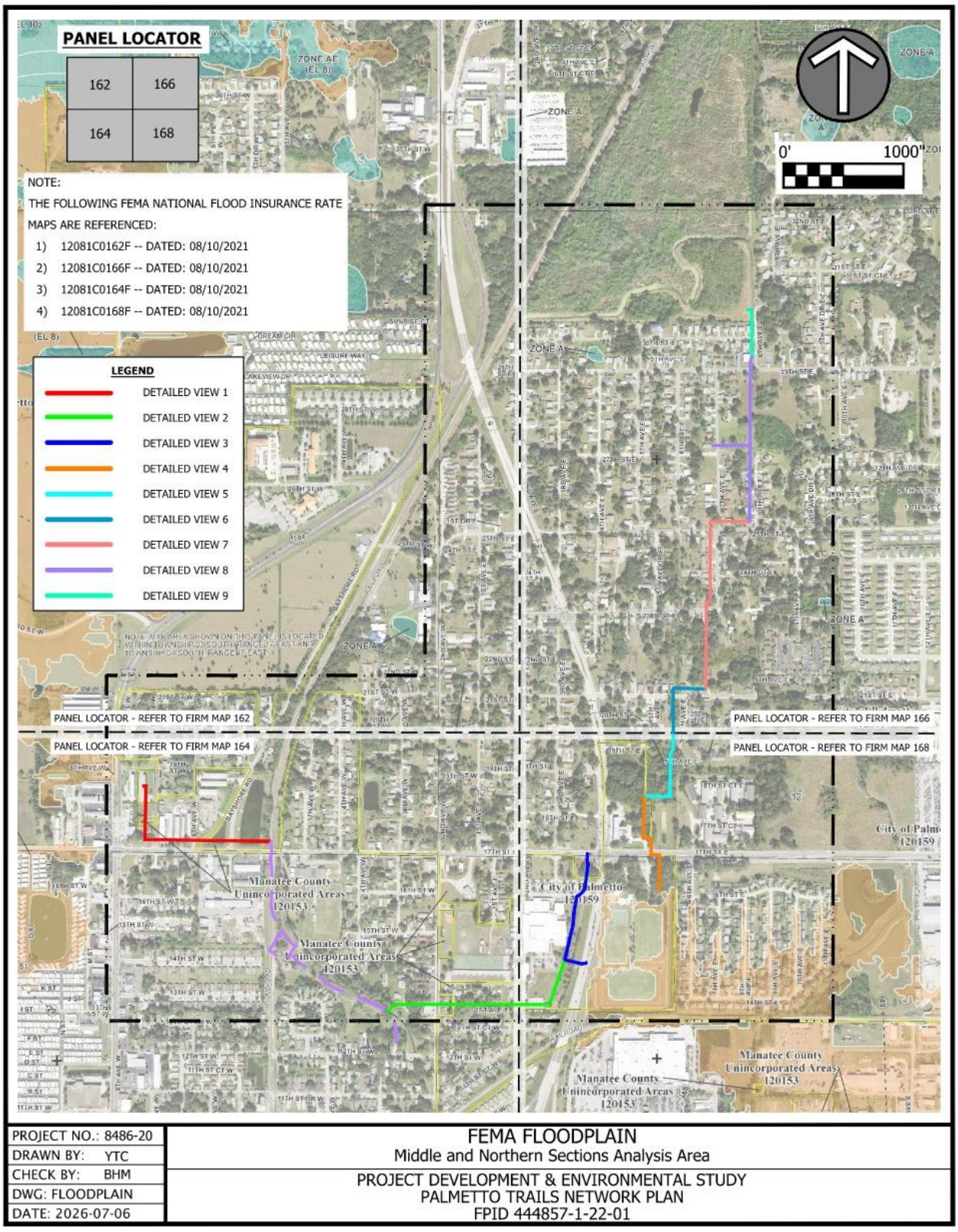


FIGURE 7-4 Middle and Northern Sections floodplain map.

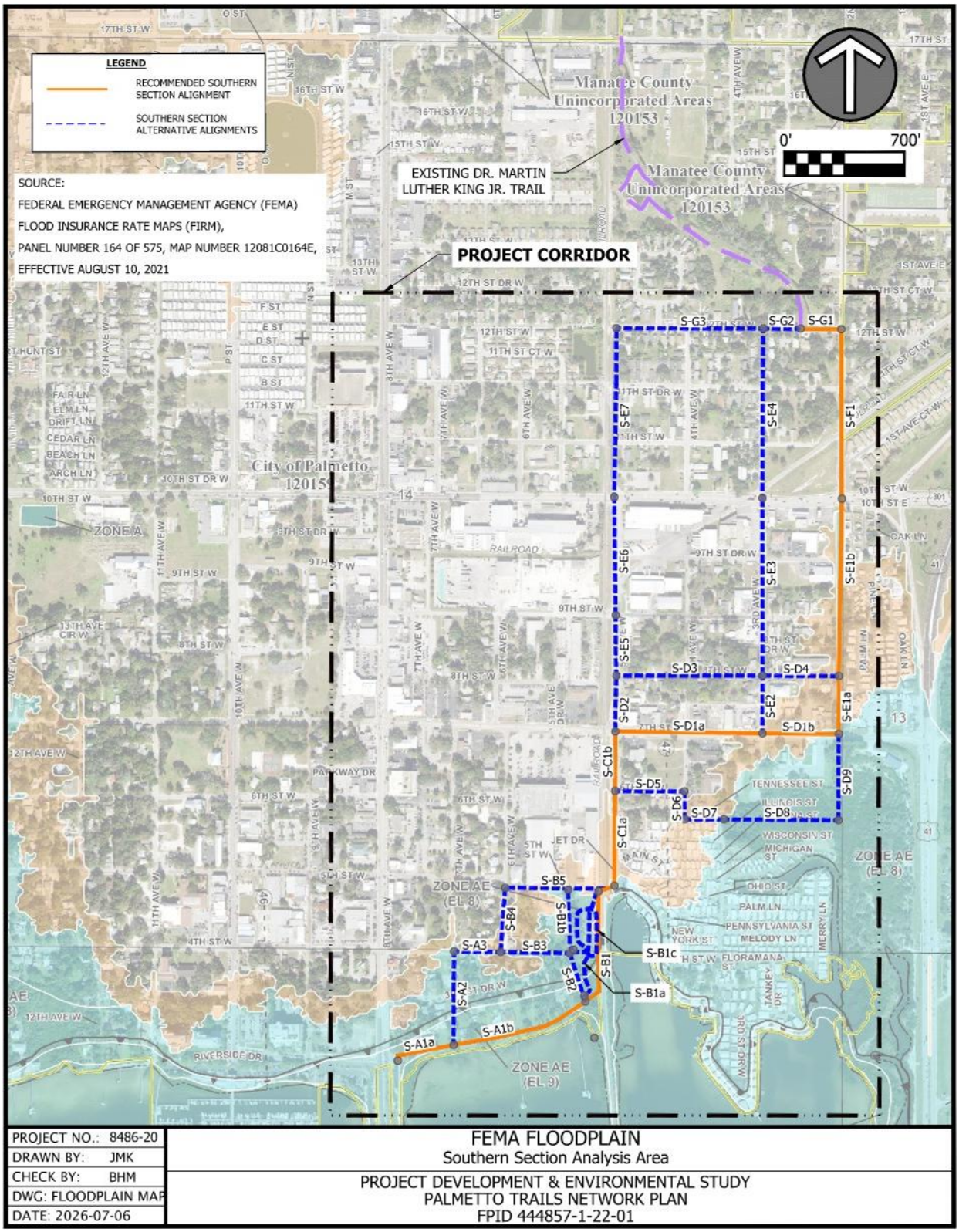


FIGURE 7-5 Southern Section floodplain map.

7.16 Bridge and Structure Analysis

Lincoln Tunnel

The May 2019 Central Manatee Network Alternatives Analysis (CMNAA) Summary of Findings report recommended restoring/refurbishing the Lincoln Tunnel (see rendering below). The County's various BUILD/RAISE/T-HUD Grant applications did likewise.

In order to maximize the vertical clearance and provide a full 8 feet of height through the tunnel, it is recommended to remove the existing 3" to 4½" thick monolithic concrete buildup along the bottom slab of the culvert. Based on the existing plans, this buildup is non-structural and presumably non-reinforced (no rebar or welded-wire fabric/mesh). The spalls in the concrete along the top of the headwall are recommended to be repaired, and rotated wingwalls can also be repaired or replaced. The estimated cost associated with restoring/refurbishing the Lincoln Tunnel will depend on the extent and desired levels of architectural features, historical placards/monumentation, lighting, fencing, safety features, landscaping, etc. Drainage through the tunnel should also be evaluated, to ensure that there is positive drainage and that water will not pond or otherwise collect within the culvert.



FIGURE 7-6 Rendering of restored Lincoln Tunnel (from CMNAA report, May 2019).

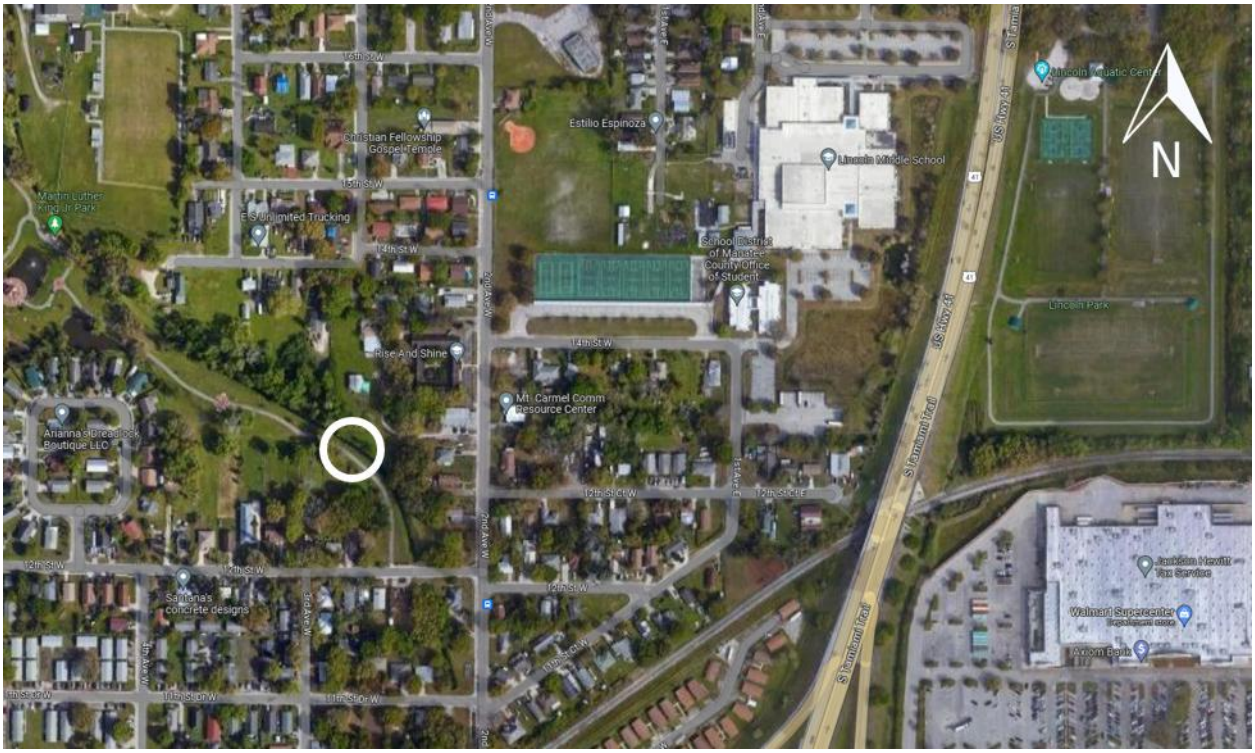


FIGURE 7-7 Location of new proposed pedestrian bridge.

New Proposed Pedestrian Bridge

For the new proposed pedestrian bridge structure at location "B1", a prefabricated steel pedestrian bridge is recommended, similar to the one installed at the north end of Dr. Martin Luther King, Jr. Park that was fabricated by Contech Engineered Solutions. This bridge will be over the same drainage canal, and would need to be approximately the same length as the northern bridge (approximately 40'-10½").

Bridge connecting Sylvan Oaks Subdivision to Coach Eddie Shannon Park

Manatee County constructed a new pedestrian bridge in the northeast corner of Coach Eddie Shannon Park, at 501 17th St. E.



FIGURE 7-8 New pedestrian bridge built by the County.



FIGURE 7-9 New pedestrian bridge at northeast end of Coach Eddie Shannon Park.

No structures are recommended for the Southern Section recommended alternative.

7.17 Transportation Management Plan

It is anticipated that the Palmetto Trails Plan projects will be completed in several phases. Travel Lane closures are anticipated during construction. Temporary driveway/side street lane closures will be needed to construct the proposed trail crossings. For side street single lane closures, a flagging operation will be needed, as there are two-lane roads at many locations. Where sidewalks are being widened, temporary pedestrian detour routes will be needed to shift pedestrians to the opposite side of the roadway to maintain continuity of the existing sidewalk during construction.

7.18 Constructability

The implementation of the Palmetto Trails Plan will have minor impacts on roadway traffic, including driveways and intersections. Access to all driveways and intersections should be maintained during construction.

It is anticipated that the County will implement the Palmetto Trails Plan in segments as funds become available. The segmentation of the overall facility, availability of future funding, and construction sequence of the facility are unknown.

Temporary traffic control plans should be developed during the final design phases for each implementation phase to move pedestrians and vehicles safely and efficiently through and around work zones. Pedestrian traffic should be maintained during all construction activities. Advance notice should be given for any sidewalk detours or closures. Construction should take place during off-peak hours whenever feasible to minimize disruptions to the travelling public, adjacent residences, and businesses.

7.19 Construction Impacts

7.19.1 Species Protection

Applicable Effect Determination Keys have been utilized for listed species and species proposed for listing that are likely to occur within the project limits. Where applicable, Effect Determination Keys published by the USFWS were utilized for listed species likely to occur within the project limits.

The effect determination for each wildlife species is included in **TABLE 7-2** and the effect determination for each plant species is included in **TABLE 7-3**.

Two (2) non-listed protected wildlife species were identified as potentially occurring: the bald eagle (*Haliaeetus leucocephalus*) and osprey (*Pandion haliaetus*). Impacts are not anticipated to these species.

TABLE 7-2 Potential Construction Effects on Potentially Occurring Protected and Proposed Wildlife Species

Species		Potential for Occurrence				Protected Status*	Effect **
		No	Low	Moderate	High		
American crocodile	*Crocodylus acutus*	x				FED-T	NE
crested caracara	*Caracara plancus audubonii*	x				FED-T	NE
eastern black rail	*Laterallus jamaicensis jamaicensis*	x				FED-T	NE
eastern indigo snake	*Drymarchon corais couperi*			x		FED-T	MANLAA
Everglade snail kite	*Rostrhamus sociabilis plumbeus*	x				FED-E	NE
Florida panther	*Puma concolor coryi*	x				FED-E	NE
Florida sandhill crane	*Grus canadensis*		x			SL-T	NAEA
gopher tortoise	*Gopherus polyphemus*			x		SL-T	NAEA
Gulf sturgeon	*Acipenser oxyrhynchus desotoi*	x				FED-T; managed by USFWS	NE
little blue heron	*Egretta caerulea*		x			SL-T	NAEA
roseate spoonbill	*Platalea ajaja*		x			SL-T; ISMP	NAEA
rufa red knot	*Calidris canutus rufa*	x				FED-T	NE
southeastern American kestrel	*Falco sparverius paulus*				x	SL-T	NAEA
tricolored bat	*Perimyotis subflavus*		x			NL; proposed FED-E	N/A
tricolored heron	*Egretta tricolor*		x			SL-T; ISMP	NAEA
wood stork	*Mycteria americana*				x	SL-T	NAEA
West Indian manatee	*Trichechus manatus*	x				FED-T	NE

*** FED** = Federally Listed; **SL** = State Listed; **T** = Threatened; **E** = Endangered; **NL** = Not Listed; **USFWS** = United States Fish and Wildlife Service; **ISMP** = FWC Imperiled Species Management Plan
**** NE** = No Effect; **MANLAA** = May Affect, Not Likely to Adversely Affect; **NAEA** = No Adverse Effect Anticipated; **N/A** = Not Applicable

TABLE 7-3 Potential Construction Effects on Potentially Occurring Protected Plant Species

Species		Potential for Occurrence				Protected Status*	Effect**
		No	Low	Moderate	High		
pygmy fringe-tree	*Chionanthus pygmaeus*	x				FED-E	NE
Florida perforate cladonia	*Cladonia perforata*	x				FED-E	NE
cardinal airplant	*Tillandsia fasciculata*		x			FL-E	NAEA
Florida loosestrife	*Lythrum flagellare*		x			FL-E	NAEA
giant airplant	*Tillandsia utriculata*		x			FL-E	NAEA

***FED** = Federally Listed; **FL** = State Listed; **E** = Endangered; **T** = Threatened
****NE** = No Effect; **NEA** = No Adverse Effect Anticipated

7.19.2 Wetlands Impact Mitigation

The project limits contain two (2) jurisdictional wetlands comprising 0.11 acres and three (3) other surface waters (OSW) comprising 0.07 acres. Secondary impacts were calculated for an additional 0.44 acres of jurisdictional wetlands within 25 feet of the project limits. Impacts to excavated other surface water ditches are generally exempt from mitigation requirements by the regulatory agencies. A summary of wetlands and other surface waters within and adjacent to the project limits and calculated impacts is included in **TABLE 2-13** and **TABLE 2-14**.

Whenever possible, permanent wetland impacts will be avoided or minimized to the greatest extent practical through design modification. Any temporary impacts to wetlands will be conducted utilizing BMPs and FDOT's "*Standard Specifications for Road and Bridge Construction*." The proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. The proposed project will have no significant short-term or long-term adverse impacts to wetlands.

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. The current wetland impact calculations consider the entire project limits, consisting of a primary impact area and the 25-ft buffer around the project limits, or secondary impact area. A total of 0.07 freshwater forested wetland mitigation credits will be required to offset 0.11 acres primary and 0.44 acres secondary impacts. Actual impacts, and therefore required mitigation credits, will likely be lower based on the final project design. Wetland impacts will be mitigated through the purchase of wetland mitigation credits through an approved mitigation bank.

7.20 Special Features

Below is a list of special features where the trail facilities are associated with the recommended alternative (See Concept Plans in **Appendix D**)

Concept Plan Station 100+25 – The alignment crosses a railroad at this location. Coordination with CSX will be required.

Concept Plan Station 101+70 to Station 102+50 – Just north of the intersection of 5th St. W and 5th Ave. W. The median at this location will be widened to the east to provide room for the shared use path. This is being done to avoid conflicts with a large utility structure in the median.

Concept Plan Station 161+20 to Station 168+00 – Along the west side of U.S. 41 adjacent to Lincoln Middle School. The trail facility is being built along an embankment. Retaining walls and handrails will be needed through this area.

Concept Plan Station 1165+20 to Station 1167+40 – Through Lincoln Tunnel. This section will traverse an existing tunnel. Modifications to the tunnel will be required.

Concept Plan Station 2119+90 – The alignment crosses a railroad at this location. Coordination with CSX will be required.

Concept Plan Station 2120+40 to Station 2121+20 – New midblock crossing. Midblock crossing treatments will be needed to connect the proposed facility on the north side of 17th St. W to the existing Dr. Martin Luther King, Jr. Trail on the south side of 17th St. W.

Concept Plan Station 179+00 to Station 179+20 – New midblock crossing. Midblock crossing treatments will be needed to connect the proposed facility on the south side of 17th St. W at Coach Eddie Shannon Park to north side of 17th St. W.

In addition, there may be locations where local agencies wish to light the trail or provide additional security features.

7.21 Utilities

As a result of the data collected and a design ticket from Sunshine 811, thirteen utility companies were identified as being present in the project corridor:

- Spectrum
- City of Palmetto Water
- City of Palmetto Sewer
- Zayo Group
- Florida Power & Light (FPL) Distribution
- FPL Transmission
- Frontier
- MCI/Verizon Business
- Manatee County Utilities
- Manatee County Transportation Dept
- TECO Peoples Gas
- Uniti
- Peace River Cooperative (PRECO)

1The concept plan was developed to minimize conflicts with utilities. However, it is likely that there will be a need to adjust utilities identified during design. These will primarily be represented by pole relocations on roadways with sidewalk modifications.

7.22 Cost Estimates

The construction costs of the recommended alternatives within the Southern, Middle, and Northern Sections were estimated based on the most recent 2026 FDOT Historical Cost data for Market Area 10 – Manatee County. Design and Construction Engineering and Inspection (CEI) costs were assumed to be 27% of the construction costs. The right-of-way costs for the recommended alternatives were estimated and provided by the District. The cost estimates are summarized in **TABLE 7-4** below.

TABLE 7-4 Cost Estimates of the Recommended Alternatives

	Southern	Middle	Northern
Design and CEI	$276,000	$1,418,000	$613,000
Construction Costs	$1,023,000	$5,251,000	$2,271,000
Wetland Mitigation	$0	$0	$600,000
Right of Way Cost	$1,215,000	$1,505,000	$1,565,000
Total	**$2,514,000**	**$8,174,000**	**$5,049,000**

APPENDICES