DRAFT

PRELIMINARY ENGINEERING REPORT

Florida Department of Transportation

District One

CR 887 (Old US 41) Project Development and Environment Study

From US 41 to Lee County Line and from Collier County Line to Bonita Beach Rd

Lee and Collier Counties, Florida

Financial Management Number: 435110-1-22-01 & 435347-1-22-01

ETDM Number: 14339

October 2025

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

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1.0 PROJECT SUMMARY

1.1 PROJECT DESCRIPTION

The Florida Department of Transportation, District One (FDOT) is conducting a Project Development & Environment (PD&E) study to consider the widening of CR 887 (Old US 41) from two lanes to four lanes from US 41 in Collier County to CR 865 (Bonita Beach Road) in Lee County in order to address existing congestion and projected travel demand as a result of area-wide growth. The roadway project has been divided into two segments (**Figure 1-1**) and is approximately 2.73 miles in length. Segment 1 (FPID# 435110-1) is 1.55 miles in length and extends from US 41 to the Lee County Line in the northwestern corner of unincorporated Collier County. Segment 2 (FPID# 435347-1), which is 1.18 miles in length, extends from the Collier County Line to Bonita Beach Road within the City of Bonita Springs in southern Lee County.

Within the project limits, the existing Old US 41 is classified as a two-lane, undivided major collector with a posted speed limit of 45 miles per hour. The roadway features two 12-foot travel lanes with intermittent left and right turn lanes throughout the length of the corridor as well as an open drainage system. An active rail line operated by Seminole Gulf Railway transects the project corridor at-grade. In general, the existing right-of-way (ROW) is 150-feet along Segment 1 and 105-feet along Segment 2. Although the roadway lacks bicycle and transit facilities, there are four non-continuous sidewalk sections along Segment 1 [three occur on the east side of the road and one occurs on the west side] and one section of path on the west side within Segment 2. Bicycle and pedestrian activity have been observed within the corridor.

The proposed improvements will expand the roadway to a four-lane divided roadway with 11-foot travel lanes and construct a new Quadrant Roadway between CR 887 and Race Track Road. The Preferred Alternative will require the purchase of additional ROW and includes a shared use path and bicycle lanes in both directions. There are no improvements planned for Old US 41 north of the proposed new Quadrant Roadway, including the Old US 41 and Bonita Beach Road intersection. The proposed new Quadrant Roadway connects Old US 41 with Race Track Road (**Figure 1-2**) which then continues onto Bonita Beach Road for the rest of the project segment. The new Quadrant Roadway will be a two-lane undivided road with 11-foot travel lanes, a 12-foot shared use path, an eight-foot sidewalk within a total of 70-foot ROW.

The conceptual plan set for the Preferred Alternative is provided in **Appendix A- Preferred Alternative Concept Plans**.

Figure 1-1: Project Location Map

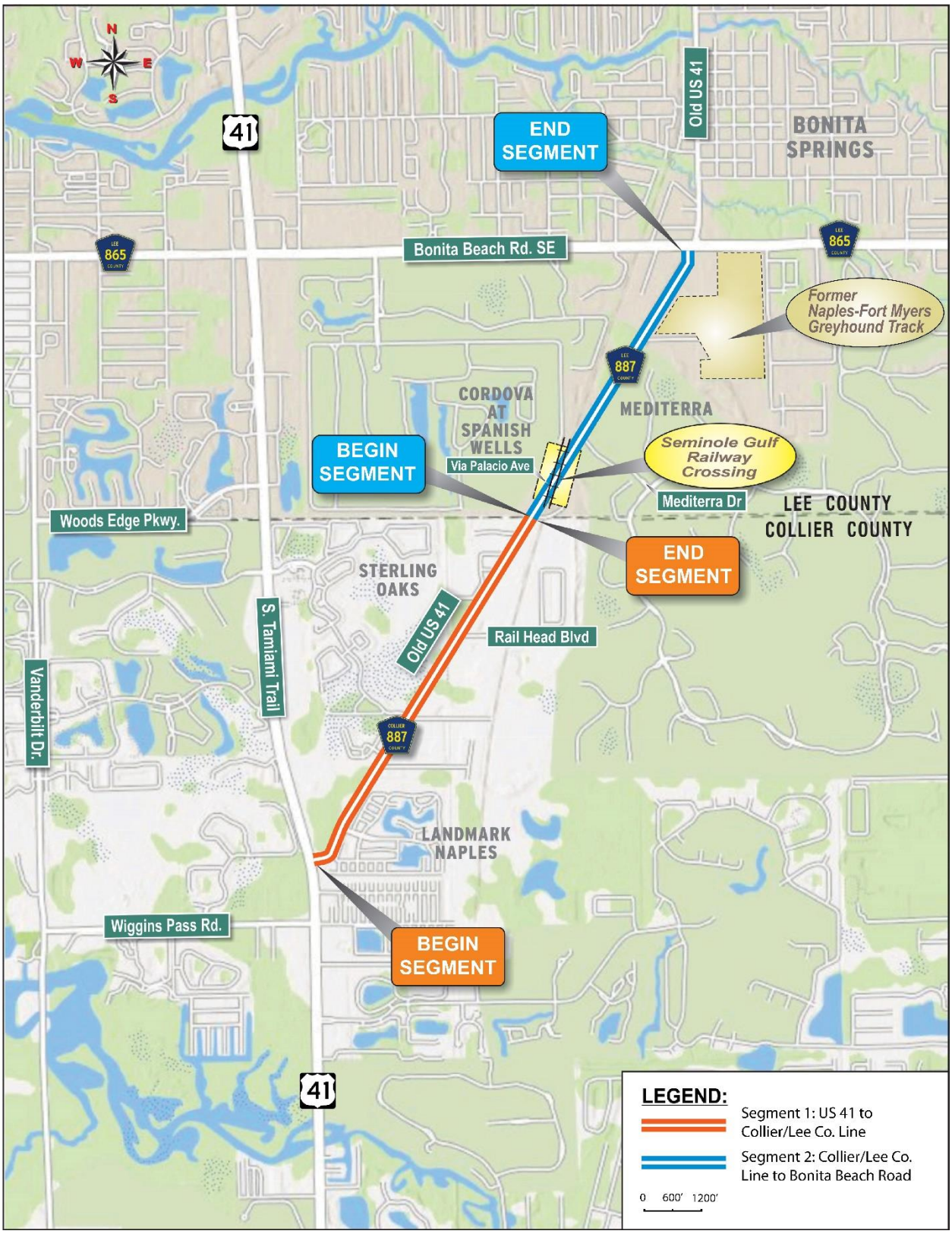
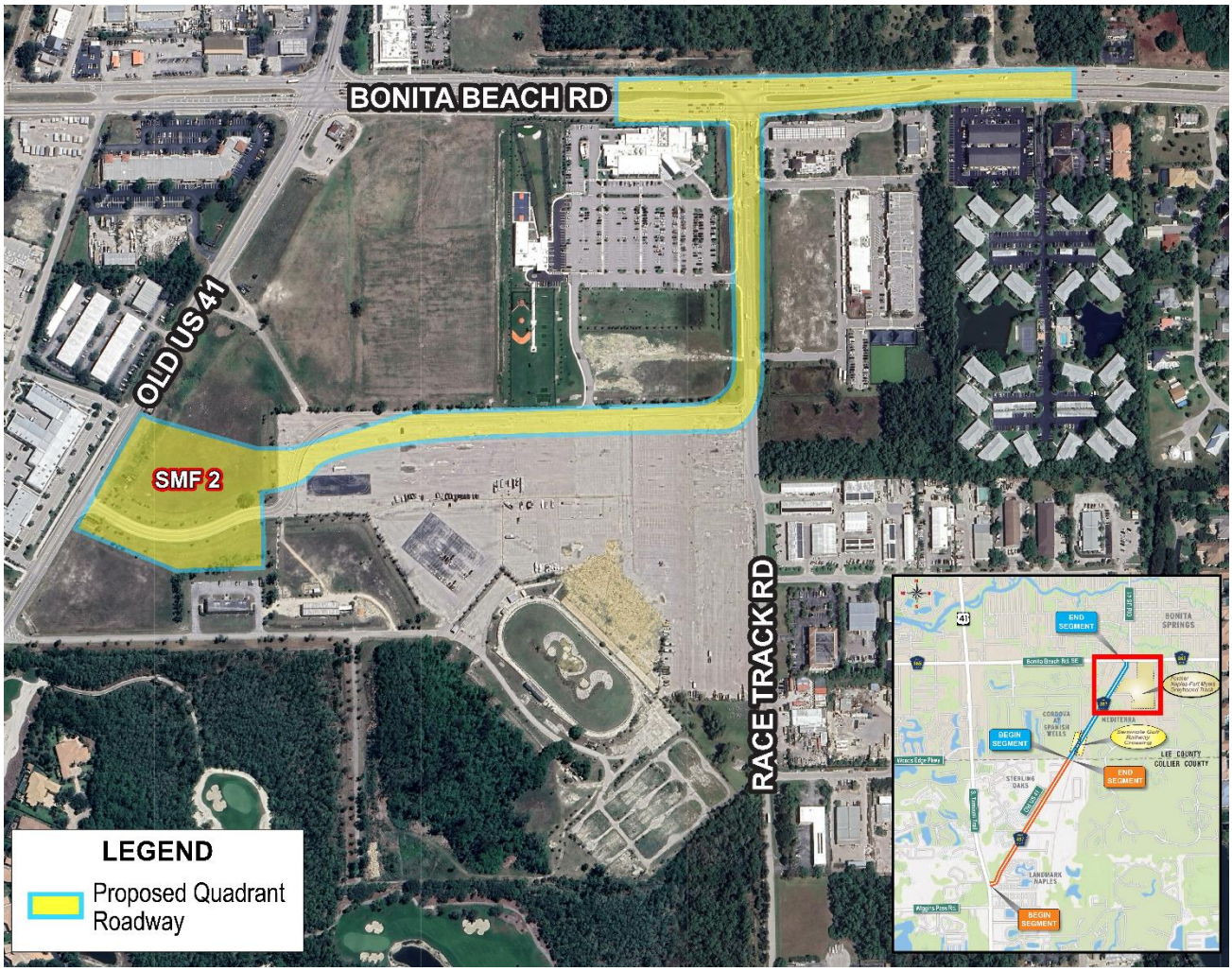


Figure 1-2: Proposed Quadrant Roadway Location Map



1.2 PURPOSE & NEED

The purpose of the project is to address roadway capacity deficiency along CR 887 (Old US 41) from US 41 in Collier County to Bonita Beach Road in Lee County in order to relieve existing congestion and accommodate future travel demand as a result of projected population and employment growth in the area. Other goals of the project include supporting increased industrial and residential development in the area and improving safety conditions for bicyclists and pedestrians. The need for the project is based on the following criteria:

Capacity/Transportation Demand: Improve Operational Conditions

Old US 41 serves as an important facility for commuters, as well as freight traffic, given the number of residential subdivisions and industrial parks present along the corridor and due to the roadway's access to major transportation facilities [including US 41 and Bonita Beach Road which connects to I-75].

According to the FDOT District One Regional Transportation Model, the population within the traffic analysis zones (TAZs) encompassing Segment 1 is expected to increase by 51% between 2010 and 2040; employment is expected to grow by 30% during the same time period. Regarding Segment 2, the population is expected to nearly double between 2010 and 2040 (91% increase), and employment is expected to grow by 51% during the same time period.

A traffic operational analysis was conducted to evaluate the overall performance of the study corridor under Existing Year (2019) and Design Year (2045) No-Build AM and PM peak hour conditions. The analysis results for Existing Year (2019) are presented in **Table 1-1**. The results indicate that all the intersections are operating at overall Level of Service (LOS) of D or better during the AM and PM peak hours.

Table 1-1: Existing Year (2019) Intersection Analysis Results

Intersection	AM Peak		PM Peak	
	Delay (s/veh)[1]	LOS	Delay (s/veh)[1]	LOS
Old US 41 at US 41 (Signalized)	33.4	C	34.2	C
Old US 41 at Gulf Coast Dr	14.4	B	2.5	A
Old US 41 at Collier Center Way	2.4	A	2.2	A
Old US 41 at Sun Century Rd/Sterling Oaks Dr	1.3	A	1.0	A
Old US 41 at Rail Head Blvd	2.3	A	2.9	A
Old US 41 at Via Palacio Ave	0.7	A	0.4	A
Old US 41 at Mediterra Dr	0.8	A	1.5	A
Bonita Beach Rd at Old US 41 (Signalized)	33.5	C	44.6	D
Bonita Beach Rd at Race Track Rd (Signalized)	10.3	B	9.4	A
US 41 at Wiggins Pass Road (Signalized)	27.3	C	28.5	C

[1]: Seconds per Vehicle

The analysis results for Design Year (2045) No-Build conditions are presented in **Table 1-2**. The results indicate that all six signalized intersections are expected to operate at overall LOS E or worse during at least one of the peak hours. The poor operations at signalized intersections are expected to negatively impact mobility by increasing congestion and queueing along Old US 41.

Table 1-2: Design Year (2045) No-Build Intersection Analysis Results

Intersection	AM Peak		PM Peak	
	Delay (s/veh)[1]	LOS	Delay (s/veh)[1]	LOS
Old US 41 at US 41 (Signalized)	76.6	E	63.1	E
Old US 41 at Gulf Coast Dr	68.2	F	74.8	F
Old US 41 at Collier Center Way	56.8	F	10.7	B
Old US 41 at Sun Century Rd/Sterling Oaks Dr	39.6	E	2.0	A
Old US 41 at Rail Head Blvd	30.4	D	31.1	D
Old US 41 at Via Palacio Ave	3.9	A	22.7	C
Old US 41 at Mediterra Dr	3.7	A	28.5	D
Bonita Beach Rd at Old US 41 (Signalized)	72.9	E	148.2	F
Bonita Beach Rd at Race Track Rd (Signalized)	57.4	E	10.8	B
US 41 at Wiggins Pass Road (Signalized)	45.9	D	112.1	F
US 41 at Veterans Memorial Extension (Signalized)	36.2	D	85.3	F
Old US 41 at Veterans Memorial Extension (Signalized)	113.7	F	72.6	E

Social Demands/Economic Development: Support Increased Industrial and Residential Development

Numerous residential, commercial, and industrial Planned Unit Developments are located along the extent of the project.

Based on Collier 2040, the most intense employment growth within Collier County is anticipated to occur within the Old US 41 Industrial Freight Activity Center located along Old US 41 within the project corridor. This site is recognized as only one of two sites in Collier County where a potential intermodal facility could be placed. The Collier County Future Land Use Map also depicts residential land uses on the west and southeast sides of Old US 41. According to the United States Census Bureau, Collier County is part of the 10th fastest growing metropolitan area in the country; residential growth is planned to continue along the project corridor in conjunction with heavy industrial development. According to the 2040 Florida Department of Transportation District One Regional Transportation Model, the population of the TAZs surrounding Segment 1 is projected to grow from 8,733 to 13,145 between 2010 and 2040 (1.4% exponential annual growth rate); employment is expected to increase from 7,284 to 9,460 over the same time period (0.9% exponential annual growth rate).

Likewise, the City of Bonita Springs at the northern project terminus is expected to nearly double in population between 1996 and 2030 as indicated through Lee County's Comprehensive Plan [*Lee Plan*]. *Lee Plan* identifies the City of Bonita Springs as one of the fastest growing communities in Lee County. The City of Bonita Springs Future Land Use Map shows industrial uses between the Seminole Gulf Railway line to the west and Old US 41 to the east, general commercial to the east of the intersection with Bonita Beach Road, and residential development along the remainder of the corridor. According to the 2040 Florida Department of Transportation District One Regional Transportation Model, the population of the TAZs surrounding Segment 2 is projected to grow from 11,966 to 22,868 between 2010 and 2040 (2.2% exponential annual growth rate); employment is expected to increase from 7,069 to 10,707 over the same time period (1.4% exponential annual growth rate).

It should also be noted that Old US 41 functions as an important freight corridor as it runs parallel to I-75 and provides access to other designated regional freight facilities [such as US 41, Bonita Beach Road, and the Old US 41 Industrial Freight Activity Center]. Truck traffic composes 3% of the 2017 Annual Average Daily Traffic (AADT) volume for Segment 1 and 4% of the 2017 AADT volume for Segment 2.

Safety: Improve Safety Conditions for Bicyclists and Pedestrians

Old US 41 lacks bicycle facilities; sidewalks are intermittent. Crosswalks are only present at the project termini. According to the Bicycle and Pedestrian Crashes and Fatalities Map in the Lee County MPO's *Bicycle and Pedestrian Master Plan*, there have been two pedestrian involved crashes between 2000 and 2010 as well as one pedestrian or bicycle fatality between 2000 and 2009 along Segment 2 of the corridor. The Lee County MPO's *2013 Lee Countywide Bicycle and Pedestrian Safety Action Plan* additionally identifies a number of bicycle and pedestrian crashes along Segment 2 between 2007 and 2010. This plan and the Lee County 2040 Transportation Plan identify the intersection of Old US 41 and Bonita Beach Road as a hotspot for non-motorized crashes, the only such hotspot in southern Lee County.

Status

Segment 1 of the Old US 41 widening project from US 41 to the Lee County Line is identified in the Collier MPO's Collier 2040 Cost Feasible Plan with funds allocated for the Preliminary Engineering phase in FY 2021 - 2025 and funds allocated for the Construction phase in FY 2026 - FY 2030. The project is also identified as a 2017 highway priority in the Collier MPO's FY 2019 - FY 2023 Transportation Improvement Program. Further, the project is consistent with the Collier County Comprehensive Plan [Collier County Growth Management Plan].

Segment 2 of the Old US 41 widening project from the Collier County Line to Bonita Beach Road is identified in the Lee County MPO's Lee County 2040 Transportation Plan Cost Feasible Plan. The project is also identified in the Lee County MPO's FY 2020/2021 - FY 2024/2025 Transportation Improvement Program. Further, the project is depicted on Map 3A: 2030 Financially Feasible Highway Plan Map of Lee Plan.

It should be noted that a shared-use path along Old US 41 is identified in both the Collier 2040 and the Lee County 2040 Transportation Plan as part of the Collier-Lee Bi-County Regional Transportation Network Pathways Component.

The project purpose and need aligns with the MPO's goals of infrastructure resiliency and safety.

1.3 COMMITMENTS

- If the listing status of the monarch butterfly is elevated by USFWS to Threatened or Endangered and the Preferred Alternative is located within the consultation area, FDOT commits to re-initiating consultation with the USFWS during the design and permitting phase of the project to determine the appropriate survey methodology and to address USFWS regulations regarding the protection of the monarch butterfly.
- The FDOT will implement the USFWS' Standard Protection Measures for the Eastern Indigo Snake.
- In accordance with the use of the USFWS' Consultation Key for the Florida Bonneted Bat and Florida Bonneted Bat Consultation Guidelines and the finding of a MANLAA-P effect determination for the Florida bonneted bat, the FDOT will implement bonneted bat BMP #1: If potential roost trees or structures need to be removed, check cavities for bats within 30 days prior to removal of trees, snags, or structures. When possible, remove structure outside of breeding season (e.g., January 1 – April 15). If evidence of use by any bat species is observed, discontinue removal efforts in that area and coordinate with the Service on how to proceed.
- In accordance with the use of the USFWS' Consultation Key for the Florida Bonneted Bat and Florida Bonneted Bat Consultation Guidelines and the finding of a MANLAA-P effect determination for the Florida bonneted bat, the FDOT will implement bonneted bat BMP #5: Conserve open freshwater and wetland habitats to promote foraging opportunities and avoid impacting water quality. Created/restored habitat should be designed to replace the function of native habitat.
- In accordance with the use of the USFWS' Consultation Key for the Florida Bonneted Bat and Florida Bonneted Bat Consultation Guidelines and the finding of a MANLAA-P effect determination for the Florida bonneted bat, the FDOT will implement bonneted bat BMP #7: Avoid or limit widespread application of insecticides (e.g., mosquito control,

agricultural pest control) in areas where Florida bonneted bats are known or expected to forage or roost.

- In accordance with the use of the USFWS' Consultation Key for the Florida Bonneted Bat and Florida Bonneted Bat Consultation Guidelines and the finding of a MANLAA-P effect determination for the Florida bonneted bat, the FDOT will implement bonneted bat BMP #10: Protect known Florida bonneted bat roost trees, snags or structures and trees or snags that have been historically used by Florida bonneted bats for roosting, even if not currently occupied, by retaining a 250-foot (76 m) disturbance buffer around the roost tree, snag, or structure to ensure that roost sites remain suitable for use in the future.
- As the timeline for construction is better defined, FDOT will adhere to the applicable commitments below:
    - Upon listing of the tricolored bat, if the project contains suitable habitat and requires tree trimming and/or clearing, FDOT will not conduct tree trimming/clearing activities during the tricolored bat pup season (May 1st to July 15th) and when bats may be in torpor (when temperatures are below 45 degrees Fahrenheit).
    - Upon listing of the tricolored bat, if the project contains suitable habitat and FDOT needs to trim or clear trees or perform work on bridges/culverts during the maternity season and/or when the temperature is below 45 degrees Fahrenheit, then FDOT will survey the project area for evidence of the tricolored bat. The Indiana Bat and Northern Long-eared Bat Survey Guidance (USFWS) acoustic survey protocol in the year-round range (mist netting is not being conducted in Florida at this time), will be used for areas with tree trimming/clearing. For bridges and culvers, the Indiana Bat and Northern Long-eared Bat Survey Guidance, Assessing Bridges and Culverts for Bats, will be used.
        - If the surveys result in no tricolored bats detected, then FDOT can proceed with the project activities. Negative results from bridge/culvert surveys are valid fortwoyears. Negative results for acoustic surveys are valid for five years. However, negative results for either survey may be invalidated if additional tricolored bat survey data is submitted to FWS showing presence of the species within the vicinity of the project area. Additional survey work by FDOT, or application of the avoidance and minimization measures noted in #4, may be required if updated detections are reported, and may result in reinitiation of consultation with FWS.
        - If the surveys result in positive detections of the tricolored bat, FDOT will implement conservation measures such as: not conducting tree trimming/clearing activities during the tricolored bat pup season (May 1st to July 15th) when pups are not volant and not able to escape disturbance;

similarly avoid tree trimming/clearing activities when the temperatures are below 45 degrees Fahrenheit when bats may be in torpor and unresponsive to disturbance.

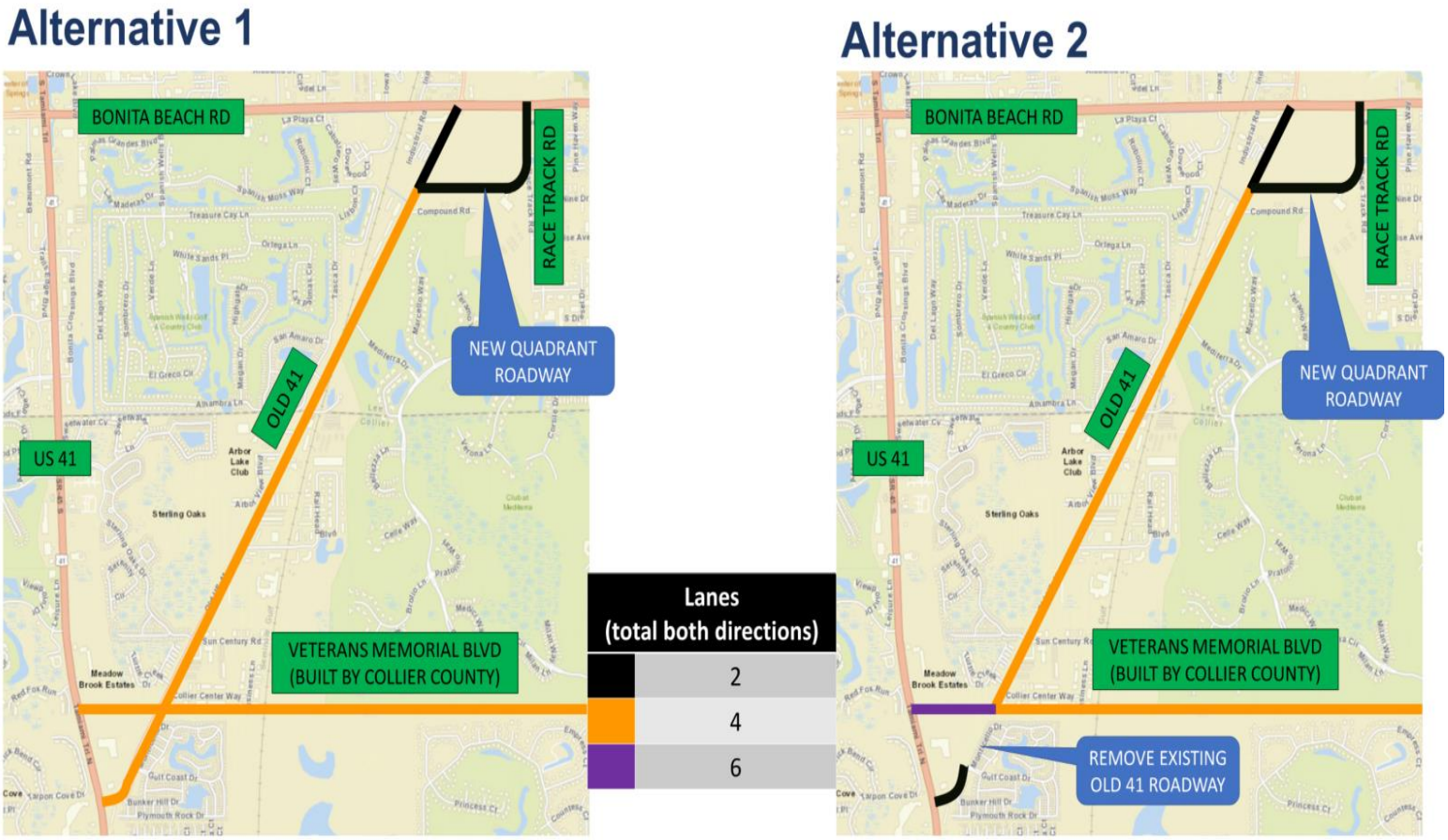
- FDOT will provide mitigation for impacts to wood stork Suitable Foraging Habitat within the Service Area of a Service-approved wetland mitigation bank or wood stork conservation bank.

1.4 ALTERNATIVES ANALYSIS SUMMARY

Two build alternatives were evaluated as part of this study. Alternative 1 and Alternative 2 both include widening the majority of Old US 41 within the study limits from two lanes to four lanes. Both alternatives include five-foot bicycle lanes in both directions, a six-foot sidewalk on the east side and a 10-foot shared use path on the west side throughout Segment 1. Within Segment 2, both alternatives include seven-foot bicycle lanes in both directions and a 12-foot shared use path on the west side. Both alternatives incorporate a new quadrant roadway through the former Naples Fort Myers Greyhound Track property between Old US 41 and Race Track Road at the north end of the study area. A 12-foot shared use path on the north/west side, and an eight-foot sidewalk on the south/east side are included along the new Quadrant Roadway.

The principal difference between Alternative 1 and 2 is at the southern end of the study area near Collier County's planned Veterans Memorial Boulevard (Blvd). Alternative 2 proposes that Old US 41 traffic would be rerouted onto Veterans Memorial Blvd to reach US 41. Old US 41 between Gulf Coast Drive and Veterans Memorial Blvd would be closed. Alterative 1 includes widening Old US 41 to four lanes along the entirety of the project area, including south of Veterans Memorial Blvd. Below in **Figure 1-3**, is a side by side comparison of Alternative 1 and Alternative 2.

Figure 1-3: Alternative 1 VS. Alternative 2



The overall cost difference between Alternative 1 and Alternative 2 is $2,693,317, with Alternative 1 being more costly. The construction costs were developed April 2025, using the FDOT's Long Range Estimates (*LRE*) system.

Alternative 1 selected as the Preferred Alternative for the following reasons:

- Alternative 1 requires approximately 6.72 acres of ROW acquisition from 44 parcels, while Alternative 2 would require approximately 7.78 acres of ROW acquisition from 39 parcels.
- Alternative 1 would result in less impacts than Alternative 2 on listed/protected species and floodplains, resulting in reduced compensatory mitigation needs/costs.
- Maintaining and widening along the existing alignment (Alternative 1) is preferred by Collier County staff and the public.
- Alternative 1 typically stays within the existing ROW although ROW would be required for turn lanes, the Quadrant Roadway, stormwater treatment ponds, and floodplain compensation facilities. Alternative 2 would require additional ROW along Veterans Memorial Blvd.

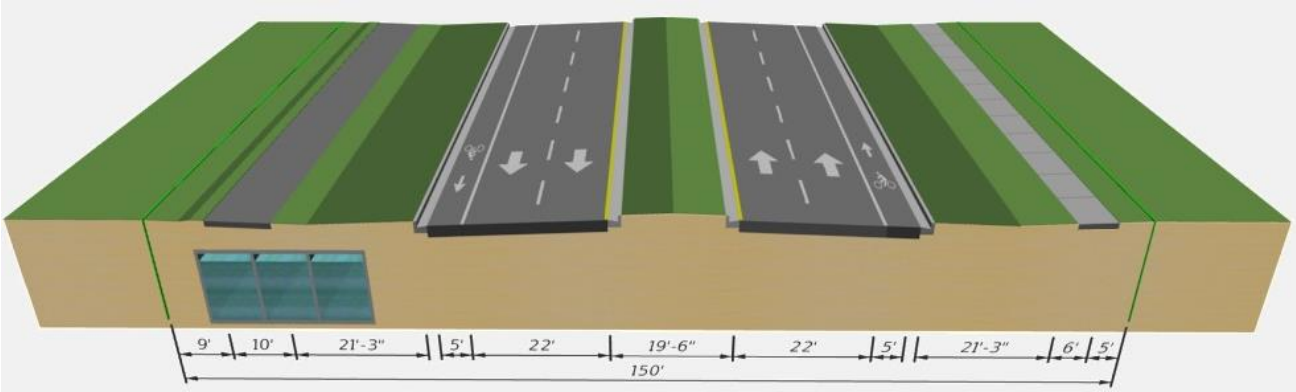
Following coordination with the public, stakeholders, and local government, Alternative 1 was modified to better fit the needs of the City of Bonita Springs in Lee County. With the revision, there are no improvements planned for Old US 41 north of the proposed new Quadrant Roadway, including the Old US 41 and Bonita Beach Road intersection. Alternative 1 will still include an expansion of Old US 41 from two to four lanes and the inclusion of bicycle lanes and shared use path throughout the rest of the study area. Additionally, the new Quadrant Roadway has been revised to remove the raised median and bike lanes to fit within 70-feet of ROW.

For more information regarding additional details on the Alternatives Analysis, see section **5.0 ALTERNATIVES ANALYSIS**.

1.5 DESCRIPTION OF PREFERRED ALTERNATIVE

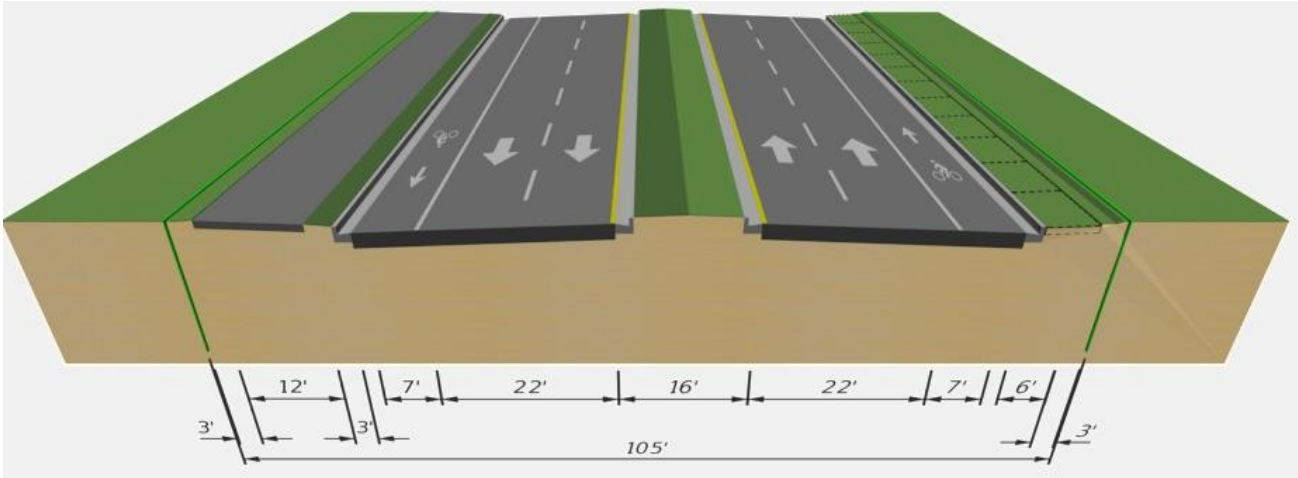
The Preferred Alternative includes widening Old US 41 to a four-lane divided roadway with 11-foot travel lanes both northbound and southbound between US 41 and the proposed new Quadrant Roadway. The alternative includes a five-foot bicycle lane in both directions, a six-foot sidewalk and a 10-foot shared use path throughout Old US 41 in Segment 1. See **Figure 1-4** for the Segment 1 Preferred Alternative Typical Section in Collier County.

Figure 1-4: Preferred Alternative Collier County



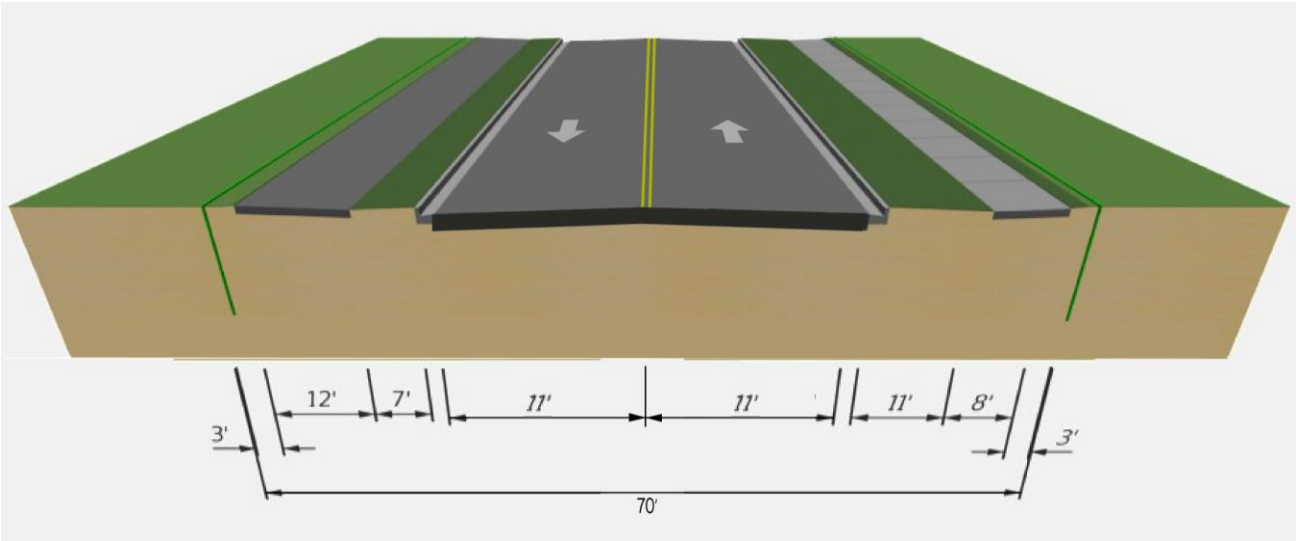
The Preferred Alternative includes a seven-foot bicycle lane in both directions and a 12-foot shared use path south of the new Quadrant Roadway in Bonita Springs (Lee County). There are no improvements planned for Old US 41 north of the proposed new Quadrant Roadway, including the Old US 41 and Bonita Beach Road intersection. See **Figure 1-5** below for the Segment 2 Preferred Alternative Typical Section in Lee County.

Figure 1-5: Preferred Alternative Lee County



The Preferred Alternative also includes a new Quadrant Roadway that will connect Old US 41 with Race Track Road with 11-foot travel lanes, a 12-foot shared use path on the north/west side, and an eight-foot sidewalk on the south/east side within 70-foot of ROW. The design speed is 30 mph. See **Figure 1-6** below for the Preferred Alternative Typical Section for the new Quadrant Roadway.

Figure 1-6: Preferred Alternative New Quadrant Roadway



This new Quadrant Roadway will allow traffic traveling between the southern end of the study and Interstate 75 to bypass the intersection at Old US 41 and Bonita Beach Road. The Preferred Alternative includes improvements on Bonita Beach Road east of Race Track Road. The

intersection of Race Track Road/Bonita Beach Road would remain as a conventional traffic signal with an additional southbound receiving lane and westbound left turn lane. To accommodate the addition westbound left turn lane length the median opening at Bonita Beach Road/Pine Haven Way would be modified to a directional median opening allowing only westbound left turns and northbound left turns. Eastbound U-turns would no longer be permitted.

New traffic signals are proposed along Old US 41 at Veterans Memorial Boulevard, Rail Head Boulevard, Via Palacio Avenue, Mediterra Drive, and the new Quadrant Roadway to balance safety, access management, and operational needs. Several intersections throughout the study corridor include pavement bulb outs to allow single unit trucks to safely make U-turns.

The existing traffic signal at the US 41/Old US 41 intersection would be modified into a Partial Median U-Turn (PMUT) intersection. The PMUT configuration prohibits left turns from northbound/southbound US 41 at Old US 41 - these movements would be accomplished via U-turns at new signalized intersections located north/south of the main US 41/Old US 41 intersection. Direct left turns from Old US 41 onto SB US 41 would be allowed.

The proposed roadway typically stays within the existing ROW throughout the project area, with the exception of a few intersections, including the Seminole Gulf Railroad crossing and the new Quadrant Roadway. Stormwater management and floodplain compensation sites will be located throughout the study area and will require additional ROW.

Proposed improvements will integrate multimodal transportation opportunities through the addition of bicycle lanes and shared use paths.

The Preferred Alternative provides for the City of Bonita Springs desired new Quadrant Roadway found in their planning documents. The Preferred Alternative will meet the purpose and need of this project by widening the roadway to accommodate future travel demand. The Preferred Alternative also creates the opportunity for complete streets with implementations of shared use paths, sidewalks, and bicycle lanes. **Appendix A- Preferred Alternative Concept Plans** depicts the Preferred Alternative and includes the locations of the stormwater management and floodplain compensation sites.

1.6 LIST OF TECHNICAL DOCUMENTS

Table 1-3 is a list of the technical documents completed for the project.

Table 1-3: Technical Documents

Technical Reports	Dated
Public Involvement	
Comments and Coordination Report	TBD
Public Hearing Transcript	TBD
Engineering	
Project Traffic Analysis Report (PTAR)	TBD
PTAR Supplement Analysis Memorandum	TBD
Utility Assessment Package	TBD
Location Hydraulics Report (LHR)	TBD
Pond Siting Report (PSR)	TBD
Water Quality Impact Evaluation (WQIE)	TBD
Typical Section Package	TBD
Environmental	
Cultural Resources Assessment Survey (CRAS)	TBD
Individual Section 4(f) Evaluation and Section 106 Notification Letter	TBD
Natural Resources Evaluation (NRE)	TBD
Noise Study Report	TBD
Contamination Screening Evaluation Report	TBD
Conceptual State Relocation Plan	TBD

2.0 EXISTING CONDITIONS

2.1 PREVIOUS PLANNING STUDIES

Although there are no previous planning studies that directly link to this PD&E study, the City of Bonita Springs has performed the following studies to guide development near Bonita Beach Road:

- Bonita Beach Road Land Use Study
- Bonita Beach Road Visioning Study
- Bonita Springs PATH (A Bicycle & Pedestrian Master Plan)

The Visioning Study, prepared November 2016, lays out a vision to preserve the two-lane section along Old US 41 and accommodate any increases in pedestrians, cyclists, and motorists through additional street network, more intersections, and additional paths or trails. The vision includes roundabouts on Bonita Beach Road at Industrial Road, Old US 41, and Race Track Road. It also includes a roundabout on Old US 41 south of Bonita Beach Road at the intersection with the new street network.

The Land Use Study further defines the additional street network around the Old US 41/Bonita Beach Road intersection. It envisions underutilized land surrounding the intersection transformed into a new neighborhood with a mix of housing and commercial use accompanying the existing racetrack and serving as an extension of Downtown Bonita Springs. It also recommends further evaluation to determine if the Old US 41 roundabouts noted in the Visioning Study are feasible and practical. The Land Use Study also contains a map of a few potential city extensions and proposed new streets that would connect Old US 41 and Race Track Road.

The Bicycle & Pedestrian Master Plan, prepared February 2017, has visions to improve and create accessibility for all modes of transportation, including pedestrian and bicyclist, throughout the City of Bonita Springs. The plan proposes replacing current sidewalks alongside Old US 41, new paved shoulders from Old US 41 Rd to Bonita Beach Rd and sharrow implementation within that roadway as well. The public communicated a need and desire for pedestrian facilities along Old US 41, Bonita Beach Road, and Terry Street which are all in the current study area. The desired vision for the project will create multimodal transportation systems while concurrently improving current facilities.

2.2 EXISTING ROADWAY CONDITIONS

A large (up to approximately 50-feet wide), permanently inundated ditch occurs on the west side of Old US 41 in Segment 1 of the project. Within the project limits it occurs from the Old US 41 and US 41 intersection to approximately 300-feet south of Rail Head Blvd, where it cuts north

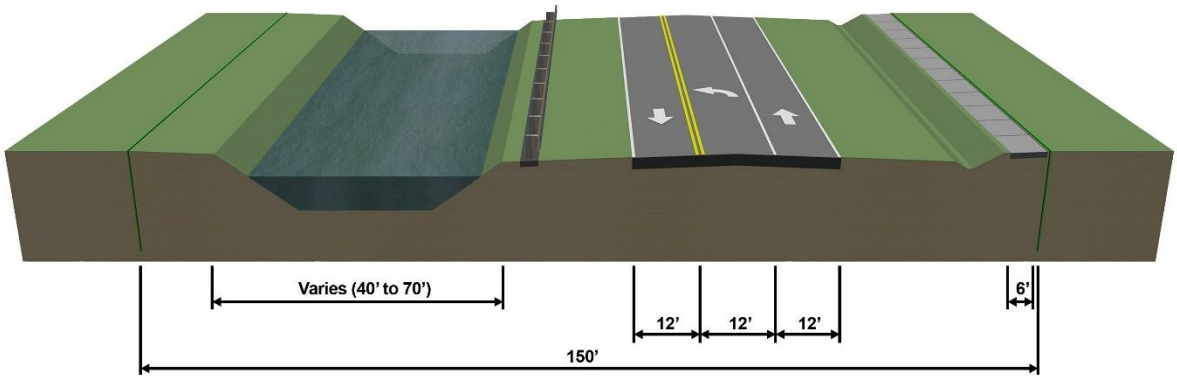
and continues outside of the study area. The ditch flows southwest within the project limits and flows west under US 41 out of the study area. Within the study area, the ditch flows under cross streets via mitered end sections.

2.2.1 Roadway Typical Sections

Existing typical sections are provided for Old US 41 and other key roadways (US 41 and Bonita Beach Road) in the study area that intersect Old US 41.

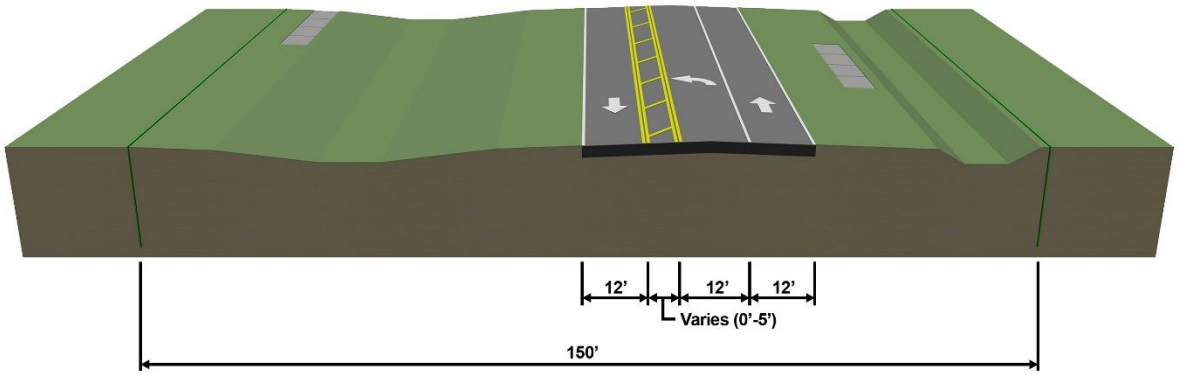
Starting at the southern end of the study area in Collier County, Old US 41 from US 41 to roughly 900-feet north of Gulf Coast Dr. is a two-lane undivided typical section with 12-foot travel lanes, a canal on west side, and a five-foot sidewalk on the east side. The southern portion of the canal is shielded by existing guardrail. **Figure 2-1** illustrates typical section one within 150-feet of existing ROW. Old US 41 from Gulf Coast Dr. to 900-feet north of Gulf Coast Dr. is a similar typical section without a guardrail.

Figure 2-1: Old US 41 from US 41 to North of Gulf Coast Dr.



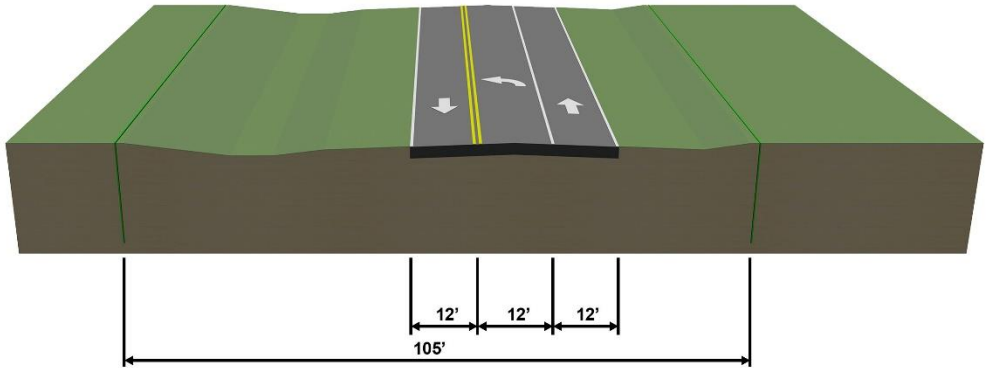
Old US 41 from north of Gulf Coast Dr. to the Lee County Line is a two-lane undivided typical section with 12-foot travel lanes and sidewalks at two locations. **Figure 2-2** illustrates typical section two within 150-feet of existing ROW.

Figure 2-2: Old US 41 from North of Gulf Coast Dr. to the Lee County Line



In Lee County, Old US 41 from the Collier County Line to Bonita Beach Road is a two-lane typical section with 12-foot travel lanes within 105-feet of existing ROW. This segment of Old US 41 has one-way left-turn lanes, and a portion has two-way left-turn lanes. **Figure 2-3** illustrates typical section three within the 105-feet ROW.

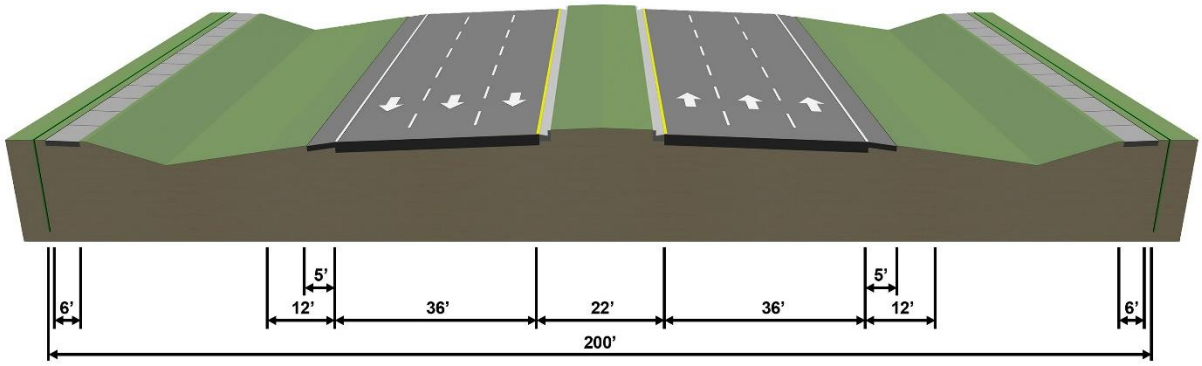
Figure 2-3: Old US 41 from the Collier County Line to Bonita Beach Road



Other key roadways in the study area that intersect Old US 41 are US 41 and Bonita Beach Road.

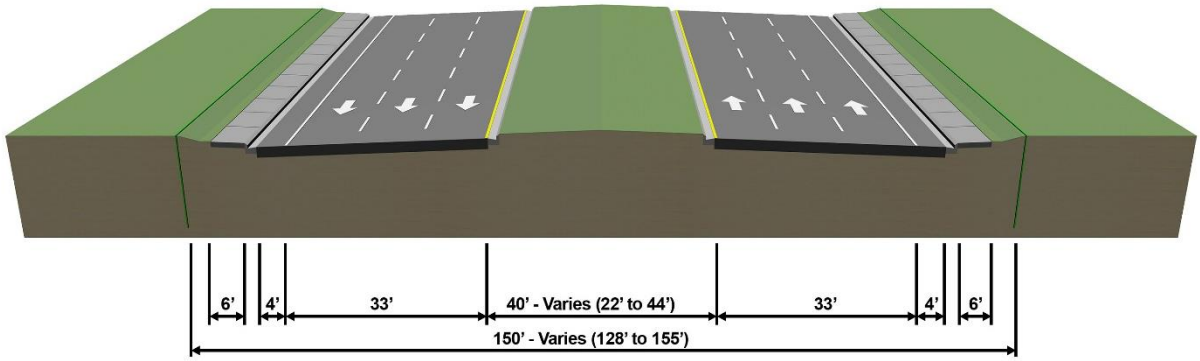
In Collier County, at the southern end of the study area, is US 41. US 41 is a six-lane divided typical section with 12-foot travel lanes, a 22-foot raised median, 12-foot outside shoulders (five-foot paved), and six-foot sidewalks on both sides. **Figure 2-4** is illustrates the US 41 typical section within 200-feet of existing ROW.

Figure 2-4: US 41



In Lee County, at the northern end of the study area, is Bonita Beach Road. Bonita Beach Road is a six-lane divided typical section with 11-foot travel lanes, a 40-foot median, four-foot bike lanes and six-foot sidewalks on both sides. **Figure 2-5** illustrates the Bonita Beach Road typical section within an existing ROW width that varies from 120-feet to 155-feet.

Figure 2-5: Bonita Beach Rd



2.2.2 Roadway Functional & Context Classification

The functional classification for Old US 41 is a Major Collector in both Collier County and the City of Bonita Springs. US 41 is a principal arterial – other and Bonita Beach Road is a minor arterial within the study area. US 41 is the only roadway within the study area on the State Highway System and National Highway System. The roadways within the study area are not designated as Strategic Intermodal System (SIS) facilities. However, Old US 41, US 41, and Bonita Beach Road are designated evacuation routes, except, for Old US 41 within Collier County.

2.2.3 Access Management Classification

Access Class three is the designated access classification for Old US 41, US 41, and Veterans Memorial Blvd within the study area in Collier County. **Table 2-1** provides spacing standards based on the access class of the five main roadways.

Table 2-1: Access Management Classification Spacing Standards

Roadway	Access Class	Design Speed (mph)	Spacing (ft)			Source
			Directional	Full	Signal	
Old US 41 (Collier County)	3	45	660	1,320	2,640	CC-AMR Table 1 PG 12
Old US 41 (City of Bonita Springs)	N/A	45	330	330	N/A	BS-LDC Sec. 3-291 Table 1
US 41	3	50	1,320	2,640	2,640	FDM Table 201.4.2
Bonita Beach Rd	N/A	45	440	440	N/A	LC-LDC Sec. 10-285 Table 1
Veterans Memorial Blvd	3	45	1,320	2,640	2,640	FDM Table 201.4.2

2.2.4 Right-of-Way

The existing ROW remains relatively consistent throughout the project limits. Starting at the southern end, US 41 itself will have a ROW of approximately 200-feet. Continuing through the intersection of US 41 and Old US 41, to the intersection of Old US 41 and Channel 30 Dr, the ROW is approximately 150-feet. Starting at the intersection of Old US 41 and Channel 30 Dr, to the intersection of Old US 41 and Bonita Beach Rd, the ROW is approximately 105-feet. From the intersection of Old US 41 and Bonita Beach Rd, to the intersection of Old US 41 and Packinghouse Ln, the ROW varies. It is 100-feet approximately, yet there are higher ROW values between 100-feet and 200-feet, specifically at the Old US 41 and Bonita Beach Rd intersection.

2.2.5 Adjacent Land Use

A review of existing land use and vegetative cover within the study area was conducted to assess potential habitats within the study area. Land use and cover types within the study area were initially assessed using the South Florida Water Management District (SFWMD) Florida Land Use, Cover and Forms Classification System (FLUCFCS) data (SFWMD 2016, FDOT 1999). The approximate land use boundaries were referenced onto true color aerial imagery using ArcGIS 10.6 software. The SFWMD FLUCFCS data did not include transportation land uses throughout the study area, so the ROW lines were used to supplement the land use data with transportation land uses. Project scientists then verified existing land use and cover classifications within the study area during field reviews in 2019 and 2021. Following the field reviews, the classification of land use and cover types were updated to reflect field-verified conditions. The resulting land use and cover types are shown in **Table 2-2**.

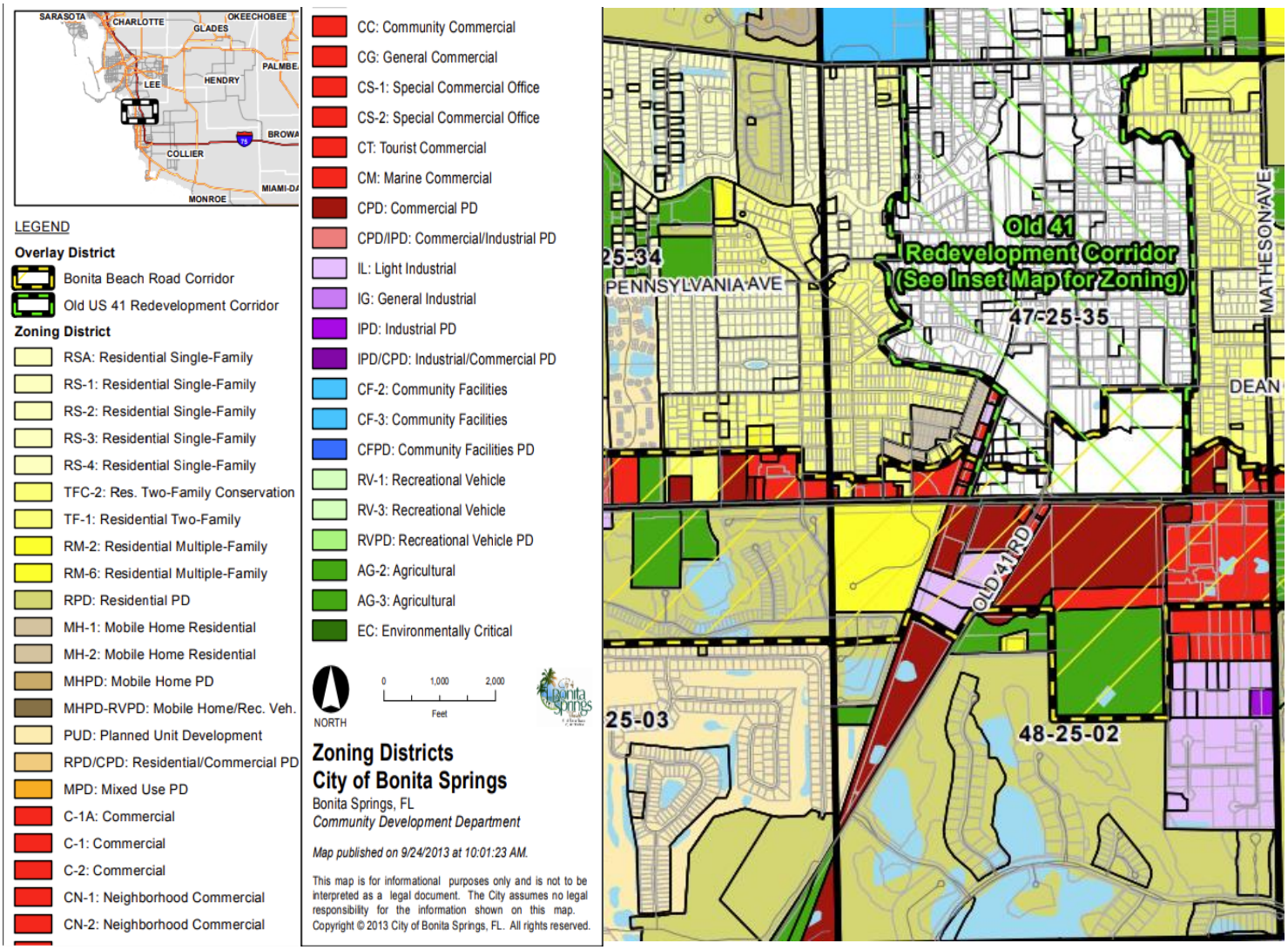
Table 2-2: Land Use and Cover within the Project Study Area

Land Use or Cover Type	FLUCFCS Code[1]	Acres of Study Area	Percent of Study Area
Low Density Fixed Single Family Units	1110	0.34	0.10%
Medium Density Fixed Single Family Units	1210	14.23	4.35%
Mobile Home Units	1320	10.25	3.14%
Multiple Dwelling Units, Low Rise	1330	5.09	1.56%
Multiple Dwelling Units, High Rise	1340	4.78	1.46%
Commercial and Services	1400	56.96	17.43%
Shopping Centers	1411	6.03	1.85%
Other Light Industry	1550	22.08	6.76%
Golf Course	1820	7.03	2.15%
Race Tracks	1830	34.26	10.48%
Open Land	1900	37.12	11.36%
Shrub and Brushland	3200	5.11	1.56%
Upland Coniferous Forests	4100	0.58	0.18%
Hardwood – Coniferous Mixed	4340	13.66	4.18%
Railroads	8120	1.41	0.43%
Roads and Highways	8140	62.52	19.13%
Communications	8200	1.66	0.51%
Electric Power Facilities	8310	1.78	0.54%
Uplands Sub-total		*284.89*	*87.18%*
Streams and Waterways	5100	8.03	2.46%
Reservoirs	5300	2.47	0.76%
Mixed Wetland Hardwoods	6170	4.54	1.39%
Exotic Wetland Hardwoods	6190	2.80	0.86%
Wetland Coniferous Forests	6200	3.40	1.04%
Cypress	6210	6.28	1.92%
Wetland Forested Mixed	6300	0.21	0.06%
Vegetated Non-Forested Wetlands	6400	1.89	0.58%
Freshwater Marsh	6410	12.27	3.75%
Wetlands and Other Surface Waters Sub-total		*41.89*	*12.82%*
	Total	**326.78**	**100%**

1. (FDOT 1999, SFWMD 2016)

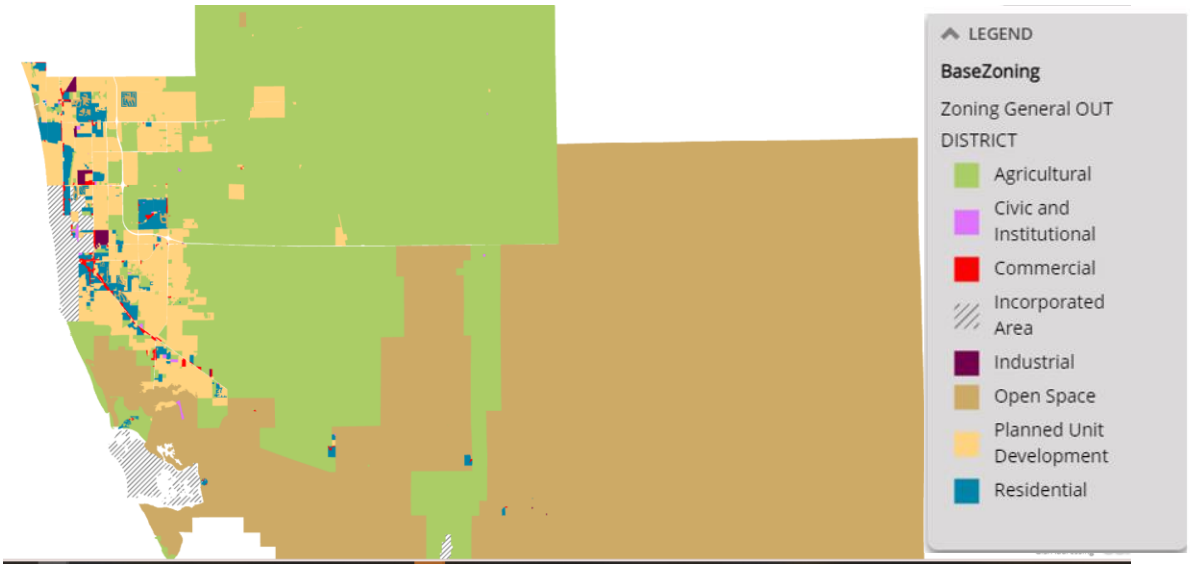
The only roadway within the study limits with a FDOT Context Classification is US 41 which is C3C, Suburban Commercial, south of Sunrise Blvd and C3R, Suburban Residential, north of Sunrise Blvd. The City of Bonita Springs Existing Zoning Map consists of residential, planned unit development, and agricultural. The City of Bonita Springs existing zoning map can be found below in **Figure 2-6**. For more information regarding Bonita's Spring zoning districts please see the City of Bonita Springs webpage.

Figure 2-6: Bonita Springs Existing Zoning Map



Collier County's base zoning map was used to identify the existing land and zone use. Currently, the main identifiable zoning for Collier County is residential, planned unit development, and agricultural. Collier County's base zone map can be found below in **Figure 2-7.** For more information regarding Collier County's planning and zoning please see Collier County's webpage.

Figure 2-7: Collier County's Existing Base Zone Map



Population projections from the University of Florida's Bureau of Economic and Business Research (BEBR) were collected to find low, medium, and high population growth estimates. Projections for Lee and Collier Counties are summarized below in **Table 2-3**. Growth percentages were calculated using the Compound Annual Growth Rate (CAGR) formula.

Table 2-3: BEBR Population Projections for Collier and Lee Counties

Collier County		2025		2030		2035		2040		2045	
2018	Projection	Pop	Growth	Pop	Growth	Pop	Growth	Pop	Growth	Pop	Growth
367,347	Low	382,600	0.58%	397,700	0.66%	407,200	0.61%	412,700	0.53%	415,200	0.63%
	Med	418,400	1.88%	449,500	1.70%	475,200	1.53%	496,800	1.38%	516,100	1.27%
	High	448,100	2.88%	494,200	2.50%	536,100	2.25%	575,200	2.06%	612,100	1.91%
Lee County		**2025**		**2030**		**2035**		**2040**		**2045**	
2018	**Projection**	**Pop**	**Growth**	**Pop**	**Growth**	**Pop**	**Growth**	**Pop**	**Growth**	**Pop**	**Growth**
713,903	Low	753,700	0.78%	789,400	0.84%	815,000	0.78%	833,100	0.70%	845,000	0.63%
	Med	824,400	2.08%	892,100	1.87%	949,800	1.69%	999,900	1.54%	1,045,200	1.42%
	High	882,900	3.08%	981,000	2.68%	1,073,000	2.43%	1,161,100	2.24%	1,245,800	2.08%

2.2.6 Pavement Type and Condition

Pavement type and condition data are usually obtained through the FDOT State Materials Office Pavement Condition Survey. Since Old US 41 is not part of the State Highway System, cracking or ride rankings are not available. A visual inspection indicates that the pavement is in acceptable condition. No data was found for Bonita Beach Road, however, data was found for US 41 through the FDOT Transportation Data and Analytics (TDA) Pavement Condition Data. US 41 has a pavement condition of 3.5 (good).

2.2.7 Existing Design and Posted Speed

The existing design and posted speed limit for Old US 41, US 41, and Bonita Beach Road are 45 mph, 50 mph, and 45 mph, respectively.

2.2.8 Horizontal Alignment

The horizontal alignment for Old US 41 is summarized in **Table 2-4**. The existing alignment was obtained from the existing plans, ROW maps, and aerials.

Table 2-4: Horizontal Alignment

Baseline PI Station	Bearing		Degree of Curvature	Radius (ft)	Length of Curve (ft)
	Back	Ahead			
100+00.00	-	N 78°06'40" E	-	-	-
104+32.32	N 78°06'40" E	N 22°10'32" E	19°05'55"	300.00	292.88
112+01.94	N 22°10'32" E	N 31°43'09" E	0°59'59"	5,729.65	954.37
182+36.07	N 31°43'09" E	N 31°41'29" E	-	-	-
246+39.83	N 31°41'29" E	N 1°06'15" W	3°30'00"	1,637.02	937.01

2.2.9 Vertical Alignment

The existing vertical alignment for the study area was estimated using data obtained from 0.1-foot LiDAR data. Beginning on the southern end, Old US 41 is at an elevation of 13.5-feet near the US 41 intersection (Station 101+00). Heading north, it drops to 11-feet at Station 105+00 and continues between 11-feet and 12-feet to Station 141+00. From Station 141+00 to Station 150+00 it rises from 12-feet to 14-feet. It continues at 14-feet to Station 168+00 where it begins to rise. From Station 168+00 to Station 176+00 it rises to 16.5-feet and continues between 16.5-feet and 15.5-feet to Station 197+00. From Station 197+00 to Station 206+00 it drops from 16-feet to 14-feet and continues near that elevation to Station 223+00. From Station 223+00 to Station 226+00 the elevation drops from 14-feet to 11.5-feet. From Station 226+00 to the end of the project at Station 244+00 (Bonita Beach Rd) the roadway stays between 11-feet and 12-feet.

2.2.10 Multi-modal Facilities

There are four non-continuous sidewalk sections along Old US 41 as well as a short path segment. The first location on the east side is a five-foot sidewalk from US 41 (Station 100+90) to the north

end of Landmark Naples (Station 119+25) for a length of approximately 1,835-feet. The second location is from Station 122+00 to Station 127+75, which is also a five-foot sidewalk on the east side of Old US 41 and is separated by Collier Center Way. The third section of sidewalk on the east side is six-feet wide from Station 166+55 to Station 170+45 north of Arbor View Blvd.

The fourth location of sidewalk is on the west side of Old US 41. It is six-feet wide from Station 174+95 to Station 181+20 crossing Performance Way, and ending at the Lee County Line. The short path on the west side is 11-feet wide from Station 224+85 to Station 232+10 separated by Industrial Rd along Old US 41.

There are no bicycle facilities along Old US 41 except for an 11-foot-wide path on the west side from Station 224+85 to Station 232+10 separated by Industrial Rd along Old US 41.

A review of the Lee County Transit (Lee Tran) map shows that there are currently no bus/mass transit routes operating along Old US 41, but Route 600 utilizes US 41, Bonita Beach Road, and Old US 41 north of Bonita Beach Road. This is a seasonal route effective January 5, 2020, and the closet stop to Old US 41 within the study limits is Stop Five at US 41 and Wiggins Pass Road on the south end and Stop Three at Old US 41 and Reynolds Street north of Bonita Beach Road on the north end.

2.2.11 Intersections

There are 14 intersections within the study area and two are signalized as shown in **Table 2-5**.

Table 2-5: Existing Intersections

Intersecting Street	Station	Signalized
US 41	100+00.00	Yes
Gulf Coast Dr	110+36.96	No
Collier Center Way	124+42.15	No
Turtle Creek Blvd	126+77.26	No
Sun Century Rd	135+71.64	No
Sterling Oaks Dr	135+87.34	No
Anglewood Ct	140+58.99	No
Rail Head Blvd	154+92.95	No
Performance Way	177+78.29	No
Collier County / Lee County Line	181+75.16	No
Channel 30 Dr	182+28.81	No
Via Palacio Ave	188+53.92	No
Railroad Tracks	194+88.68	No
Mediterra Dr	200+40.05	No
Compound Rd	222+89.52	No
Bonita Beach Rd	244+22.68	Yes

2.2.12 Physical or Operational Restrictions

There is a neighborhood wall surrounding a golf course starting at the intersection of Compound Road and Old US 41 Road on the northern portion of the corridor. Another wall runs along Old US 41 in the southern portion, enclosing a different neighborhood near the intersection of Via Palacio Avenue and Old US 41 Road, extending both north and south of the intersection.

2.2.13 Traffic Data

To generate and calibrate the VISSIM model, existing data including five (5) 72-hour bi-directional volume counts, three (3) seven-day vehicle classification counts, nine (9) 12-hour turning movement counts, and a four-hour queue survey, were collected in April 2019. The locations for traffic counts are shown in **Figure 2-8**. To calibrate the VISSIM model, field travel time runs were performed on December 5th, 2019, on Old US 41 from US 41 to Bonita Beach Road along both northbound and southbound directions. The traffic count data collected are as follows:

- Five (5) 72-hour bi-directional volume counts
    - US 41 south of Wiggins Pass Road
    - US 41 between Wiggins Pass Road and Old US 41
    - US 41 north of Old US 41
    - Old US 41 south of the Collier County line
    - Old US 41 north of Bonita Beach Road

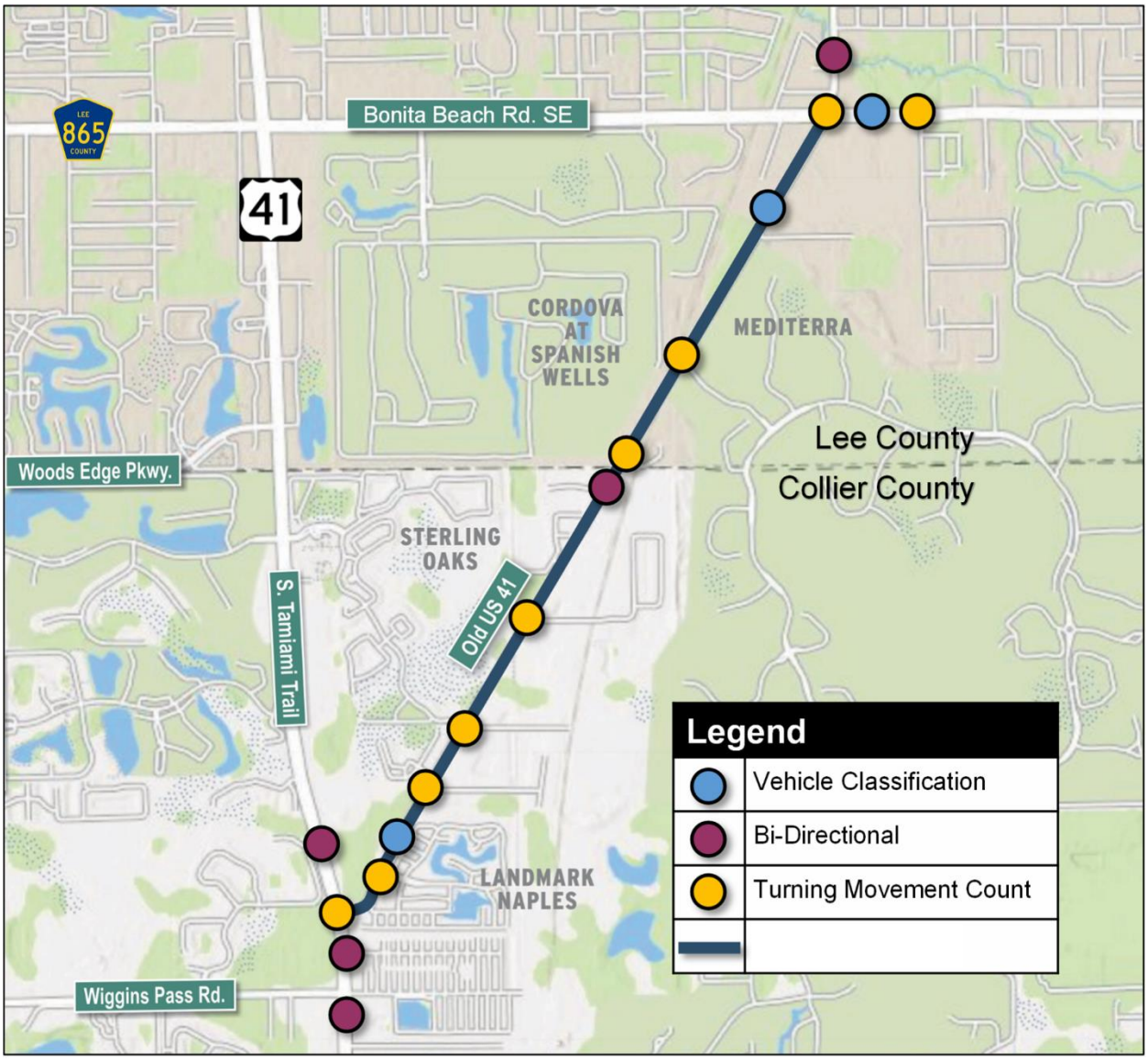
- Three (3) seven-day vehicle classification counts
    - Old US 41 north of Gulf Coast Drive
    - Old US 41 north of Compound Road
    - Bonita Beach Road east of Old US 41

- Nine (9) 12-hour turning movement counts
    - US 41 at Old US 41
    - Old US 41 at Gulf Coast Drive
    - Old US 41 at Collier Center Way
    - Old US 41 at Sun Century Road
    - Old US 41 at Rail Head Boulevard
    - Old US 41 at Via Palacio Avenue
    - Old US 41 at Mediterra Drive
    - Bonita Beach Road at Old US 41
    - Bonita Beach Road at Race Track Road

- One (1) four-hour queue survey
    - Bonita Beach Road at Old US 41

Following the collection of traffic data, the next step was to develop balanced traffic volumes for the Existing Year (2019) conditions. Based on the 2019 *FDOT Project Traffic Forecasting Handbook* guidance, short-term traffic counts are required to be converted to an estimated AADT using seasonal and axle factors, and this process ensures that data collection periods address seasonal variations in traffic volumes and truck traffic within the study area. The collected data was therefore adjusted to develop an initial 2019 Annual Average Daily Traffic (AADT); the adjustments included peak season and axle factors. The initial AADT's were developed from the turning movement count approach volumes and bi-directional and vehicle classification counts. The only exception to this approach was the development of traffic volumes for the intersection of US 41 at Wiggins Pass Road. Since no turning movement counts were collected at this location, AADT's from FDOT's Florida Traffic Online Application were utilized to develop initial AADT's on US 41 south of Wiggins Pass Road and Wiggins Pass Road west of US 41. It must be noted that the intersection of US 41 and Wiggins Pass Road was included in the later stages of the project and the only objective of including this intersection was to be able to mimic coordination along US 41 under existing conditions, given its proximity to the intersection of US 41 at Old US 41.

Figure 2-8: Traffic Count Locations



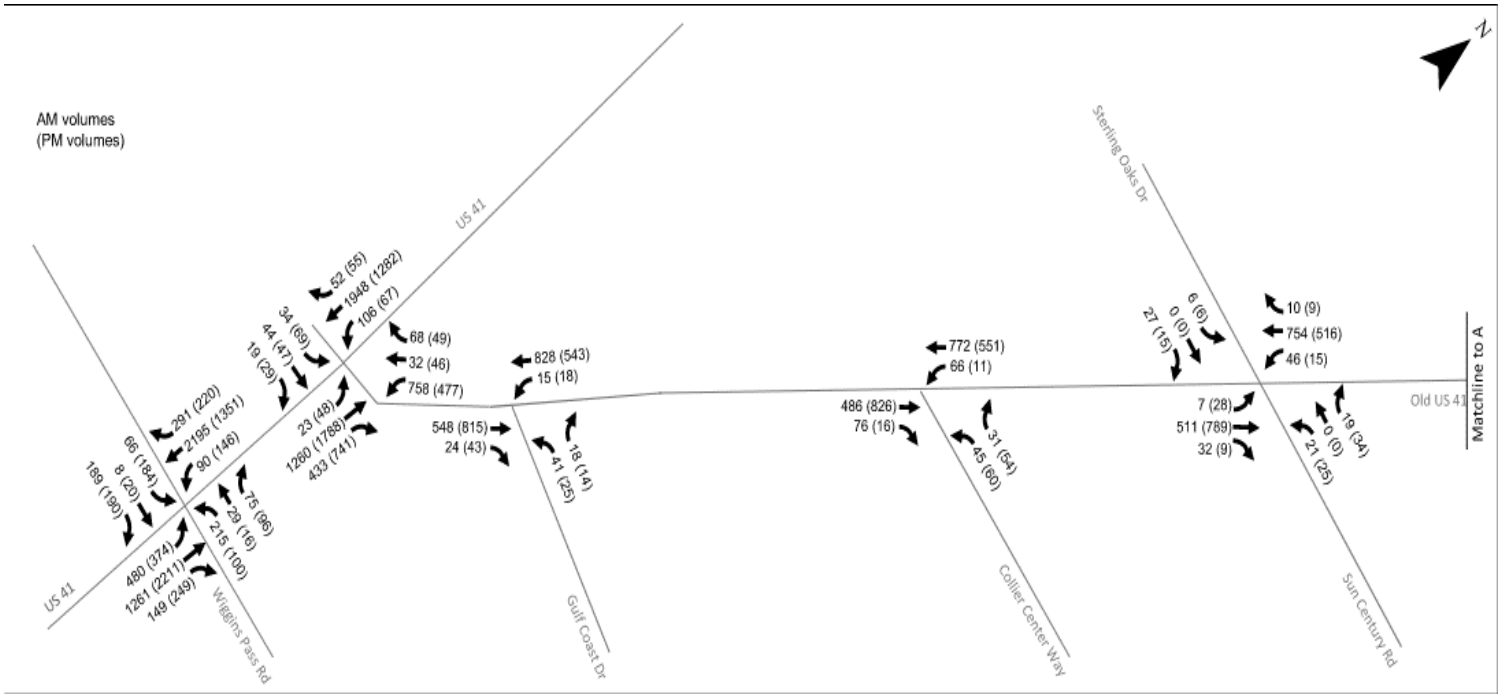
The initial 2019 AADT's were balanced throughout the corridor to minimize volume differences between intersections, and the balanced corridor AADT's are referred to as the recommended AADT. The Standard-K and Directional Factors were applied to the recommended AADT's to develop a directional volume. The directional volume was then multiplied by existing turning movement volume percentages to develop 2019 design hour turning movement volumes (DHTMV), for the intersection of US 41 at Wiggins Pass Road (where turning movement counts were not collected), the turning movement volume percentages from the adjacent intersection of US 41 at Old US 41 were utilized. The DHTMV's are used for the analysis instead of field counts to mitigate data collection variability that could have an outsize influence on a project. The 2019 DHTMV were therefore used in the

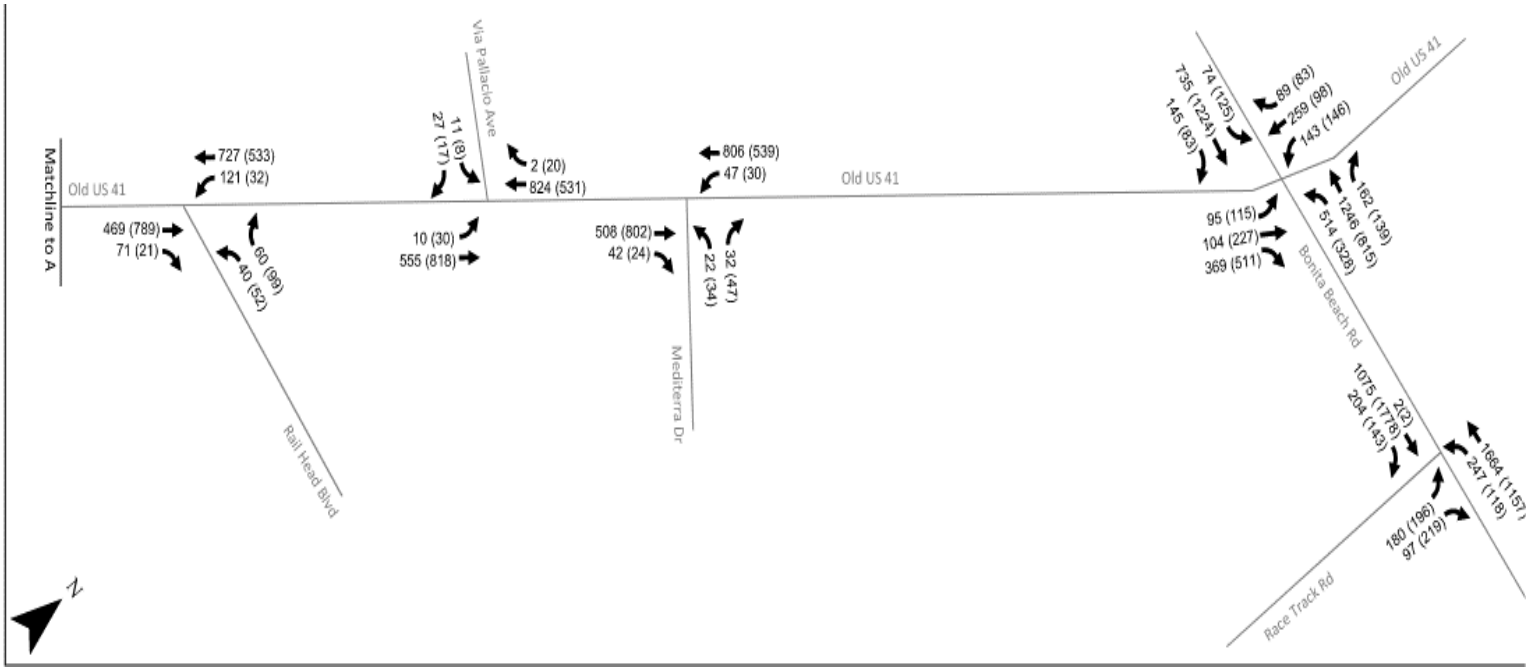
development of existing AM and PM microsimulation models. **Table 2-6** show Existing Year (2019) AADTs, respectively. **Figure 2-9** presents Existing Year (2019) turning movement volumes, respectively.

Table 2-6: Existing Year (2019) AADTs

Roadway	Location	Adjusted 2019 AADT
US 41	South of Wiggins Pass Rd	52,500
	From Wiggins Pass to Old US 41	47,700
	North of Old US 41	39,000
Old US 41	West of US 41	2,700
	From US 41 to Gulf Coast Dr	15,900
	From Gulf Coast Dr to Collier Center Way	15,600
	From Collier Center Wy to Sun Century Rd	15,600
	From Sun Century Rd to Rail Head Blvd	15,000
	From Rail Head Blvd to Via Palacio Ave	15,700
	From Via Palacio Av to Mediterra Dr	15,300
	From Mediterra Dr to Bonita Beach Rd	15,800
	North of Bonita Beach Rd	9,100
Race Track Rd	South of Bonita Beach Rd	7,700
Wiggins Pass Rd	West of US 41	7,300
	East of US 41	5,900
Gulf Coast Dr	East of Old US 41	1,100
Collier Center Way	East of Old US 41	2,100
Sun Century Rd	West of Old US 41	600
	East of Old US 41	1,100
Rail Head Blvd	East of Old US 41	2,800
Via Palacio Ave	West of Old US 41	700
Mediterra Dr	East of Old US 41	1,500
Bonita Beach Rd	West of Old US 41	26,500
	From Old US 41 to Race Track Rd	35,600
	East of Race Track Rd	35,600

Figure 2-9: Existing Year (2019) Turning Movement Volumes





Traffic operational analysis was conducted to evaluate the overall performance of the study corridor under Existing Year (2019) AM and PM peak hour conditions. The intent of the Existing conditions analyses is to provide a general understanding of the baseline traffic operations, and then to identify and evaluate improvement strategies. The calibrated *VISSIM* models (calibration process explained in greater detail in the *PTAR*) were utilized for the performance of the Existing conditions analyses.

The analysis results for Existing Year (2019) are presented in **Table 2-7** and **Table 2-8**. The results indicate that all the intersections are operating at overall LOS D or better during the AM and PM peak hours; however, some individual movements are failing at the following intersections:

- Old US 41 at US 41
- Bonita Beach Road at Old US 41
- US 41 at Wiggins Pass Road

Maximum queue results presented in **Table 2-7** and **Table 2-8**, indicate queue lengths exceeding 1,000' at the following locations:

- Old US 41 at US 41:
  - Westbound approach (AM) along US 41
- Bonita Beach Road at Old US 41:
  - Northbound approach (PM) along Old US 41 - Queueing at the northbound approach along Old US 41 at its intersection with Bonita Beach Road is resulting in queue spillback where the queue exceeds the available storage and blocks through traffic.

Table 2-7: Existing Year (2019) Analysis Results

Intersection	Approach	Movement	AM Peak				PM Peak			
			Volume	Delay (s/veh)	LOS	Maximum Queue (ft.)	Volume	Delay (s/veh)	LOS	Maximum Queue (ft.)
Old US 41 at US 41 (Signalized)	US 41	SBL	105	60.1	E	180	62	88.6	F	160
		SBT	1,963	24.1	C	605	1,284	27.2	C	450
		SBR	54	4.3	A	80	55	3.4	A	80
	Old US 41	WBL	695	88.6	F	1,070	504	90.4	F	950
		WBT	29	88.1	F	230	52	90.6	F	305
		WBR	59	52.4	D	265	53	52.7	D	315
	US 41	NBL	13	53.6	D	60	29	67.7	E	100
		NBT	1,283	21.4	C	355	1,813	22.6	C	585
		NBR	459	9.3	A	200	699	18.0	B	575
	Old US 41	EBL	32	57.4	E	95	65	84.8	F	165
		EBT	47	66.4	E	145	45	87.7	F	185
		EBR	18	33.2	C	195	30	45.2	D	235
	Overall		**4,756**	**33.4**	**C**	-	**4,690**	**34.2**	**C**	-
Old US 41 at Gulf Coast Dr	Old US 41	SBL	13	14.7	B	35	22	9.2	A	40
		SBT	756	24.9	C	920	584	4.6	A	200
	Gulf Coast Dr	WBL	40	32.5	D	80	24	18.7	C	65
		WBR	18	8.2	A	85	12	9.7	A	70
	Old US 41	NBT	583	0.6	A	75	762	0.3	A	0
		NBR	25	0.8	A	0	44	0.8	A	0
	Overall[1]		**1,435**	**14.4**	**B**	**925**	**1,446**	**2.5**	**A**	**230**
Old US 41 at Collier Center Way	Old US 41	SBL	62	3.8	A	60	12	6.5	A	35
		SBT	732	2.3	A	95	549	0.2	A	0
	Collier Center Way	WBL	42	26.8	D	135	57	38.1	E	165
		WBR	35	10.5	B	140	51	15.5	C	185
	Old US 41	NBT	507	0.2	A	0	759	0.2	A	0
		NBR	92	0.8	A	0	15	0.6	A	0
	Overall[1]		**1,470**	**2.4**	**A**	**220**	**1,442**	**2.2**	**A**	**185**
Old US 41 at Sun Century Rd/Sterling Oaks Dr	Old US 41	SBL	45	6.6	A	65	17	14.4	B	50
		SBT	748	0.9	A	30	520	0.3	A	0
		SBR	8	1.0	A	0	11	1.0	A	0
	Sun Century Rd	WBL	19	10.2	B	75	25	10.4	B	55
		WBT	0	0.0	A	70	0	0.0	A	55
		WBR	19	7.8	A	100	33	10.4	B	90
	Old US 41	NBL	6	3.9	A	30	28	4.2	A	50
		NBT	501	0.5	A	0	775	0.2	A	0
		NBR	36	0.7	A	0	9	0.6	A	0
	Sterling Oaks Dr	EBL	5	10.4	B	35	5	11.0	B	30
		EBT	0	0.0	A	25	0	0.0	A	0
		EBR	26	8.4	A	65	14	7.3	A	45
	Overall[1]		**1,414**	**1.3**	**A**	**115**	**1,436**	**1.0**	**A**	**90**
Old US 41 at Rail Head Blvd	Old US 41	SBL	120	5.2	A	105	33	7.9	A	65
		SBT	760	0.8	A	0	498	0.2	A	0
	Rail Head Blvd	WBL	42	28.1	D	185	48	34.0	D	210
		WBR	60	12.4	B	205	103	18.3	C	240
	Old US 41	NBT	457	0.4	A	0	792	0.5	A	0
		NBR	69	1.0	A	0	22	0.7	A	0
	Overall[1]		**1,508**	**2.3**	**A**	**210**	**1,496**	**2.9**	**A**	**240**

Table 2-8: Existing Year (2019) Analysis Results Continued

Intersection	Approach	Movement	AM Peak				PM Peak			
			Volume	Delay (s/veh)	LOS	Maximum Queue (ft.)	Volume	Delay (s/veh)	LOS	Maximum Queue (ft.)
Old US 41 at Via Palacio Ave	Old US 41	SBT	853	0.5	A	0	514	0.1	A	0
		SBR	2	0.6	A	0	17	0.6	A	0
	Old US 41	NBL	10	9.9	A	40	31	5.4	A	45
		NBT	510	0.3	A	0	864	0.2	A	0
	Via Palacio Ave	EBL	10	11.4	B	40	8	10.9	B	35
		EBR	28	8.6	A	50	17	7.9	A	40
	Overall[1]		**1,413**	**0.7**	**A**	**50**	**1,451**	**0.4**	**A**	**55**
Old US 41 at Mediterra Dr	Old US 41	SBL	43	3.7	A	70	27	11.2	B	65
		SBT	834	0.5	A	0	500	0.2	A	0
	Mediterra Dr	WBL	22	11.5	B	60	31	15.6	C	65
		WBR	32	6.4	A	60	48	13.7	B	70
	Old US 41	NBT	482	0.3	A	0	849	0.8	A	90
		NBR	38	0.7	A	0	23	0.7	A	0
	Overall[1]		**1,452**	**0.8**	**A**	**75**	**1,478**	**1.5**	**A**	**160**
Bonita Beach Rd at Old US 41 (Signalized)	Old US 41	SBL	153	52.8	D	295	151	84.6	F	325
		SBT	248	73.0	E	720	97	54.8	D	235
		SBR	86	9.3	A	70	80	4.4	A	70
	Bonita Beach Rd	WBL	490	75.1	E	405	346	78.9	E	305
		WBT	1,228	17.7	B	680	833	22.2	C	525
		WBR	157	3.2	A	35	143	6.6	A	75
	Old US 41	NBL	86	60.4	E	220	123	72.6	E	270
		NBT	93	60.1	E	215	238	86.7	F	1,035
		NBR	336	11.3	B	50	542	70.5	E	120
	Bonita Beach Rd	EBL	72	69.6	E	190	121	75.1	E	275
		EBT	769	28.9	C	485	1,257	28.6	C	895
		EBR	142	9.8	A	110	83	5.3	A	50
	Overall		**3,860**	**33.5**	**C**	**-**	**4,013**	**44.6**	**D**	**-**
Bonita Beach Rd at Race Track Rd (Signalized)	Bonita Beach Rd	WBL	248	16.1	B	205	122	23.4	C	125
		WBT	1,692	6.5	A	345	1,127	6.0	A	250
	Race Track Rd	NBL	184	65.4	E	435	189	64.0	E	395
		NBR	96	6.8	A	100	220	9.4	A	175
	Bonita Beach Rd	EBU	0	0.0	A	0	0	0.0	A	0
		EBT	1,059	7.0	A	200	1,802	5.4	A	220
		EBR	197	3.5	A	95	143	2.8	A	80
	Overall		**3,476**	**10.3**	**B**	**-**	**3,603**	**9.4**	**A**	**-**
US 41 at Wiggins Pass Rd (Signalized)	US 41	SBL	90	75.0	E	165	143	118.0	F	320
		SBT	2,191	20.6	C	575	1,358	13.1	B	355
		SBR	295	14.6	B	215	222	7.4	A	120
	Wiggins Pass Rd	WBL	212	52.2	D	345	97	77.3	E	215
		WBT	27	49.7	D	155	15	69.7	E	190
		WBR	76	16.0	B	180	98	28.4	C	215
	US 41	NBL	477	82.5	F	425	380	72.8	E	330
		NBT	1,256	17.4	B	325	2,203	20.2	C	755
		NBR	152	4.0	A	95	253	5.6	A	150
	Wiggins Pass Rd	EBL	69	46.8	D	145	188	100.6	F	700
		EBT	7	45.4	D	35	22	90.6	F	95
		EBR	184	12.4	B	150	183	27.3	C	310
	Overall		**5,036**	**27.3**	**C**	**-**	**5,161**	**28.5**	**C**	**-**

Note 1: Intersection delay for unsignalized intersection calculated as a weighted average of individual movements delays for ease of comparison.

2.2.14 Roadway Operational Conditions

The project's study area is predominantly a combination of residential and commercial land uses with some industrial developments along Old US 41. Collier and Lee Counties provide public transportation. The Lee Tran is the public transportation system implemented in Lee County. Route 600 on the Lee Tran provides transportation from Coconut Point Mall to Immokalee Road in Collier County while also serving downtown Bonita Springs. The Lee Tran Route 600 operates seven days a week and year-round excluding six major holidays. Route 600 has a bus stop that intersects at Old US 41 and Bonita Beach Rd south east. This is the closest bus stop to the project limits. The Lee Tran also operates Passport, ADA paratransit service for disabled citizens who are not able to use the fixed route system. Passport service is available along the same corridors served by a regular basis. For more information regarding additional routes, and Route 600's weekly schedule please see the Lee County webpage. Collier County's ride CAT transportation system does not have a route in the project limits. For more information regarding Collier County's ride CAT system, please see the CAT webpage.

2.2.15 Managed Lanes

There are no managed lanes throughout the corridor. There were no identifiable express lanes and or toll lane configurations and operations.

2.2.16 Crash Data

The safety analysis included the Old US 41 corridor within the project limits as well as two other major corridors within the vicinity of the project area. Five-year crash data from January 1st, 2014, to December 31st, 2018, was obtained from FDOT – State Safety Office Geographic Information System (SSOGIS) and Signal Four Analytics for the following corridors:

- Study Corridor - Old US 41 from US 41 to Bonita Beach Road
- US 41 from Old US 41 to North Boston Road
- Bonita Beach Road from Windsor Road to Race Track Road

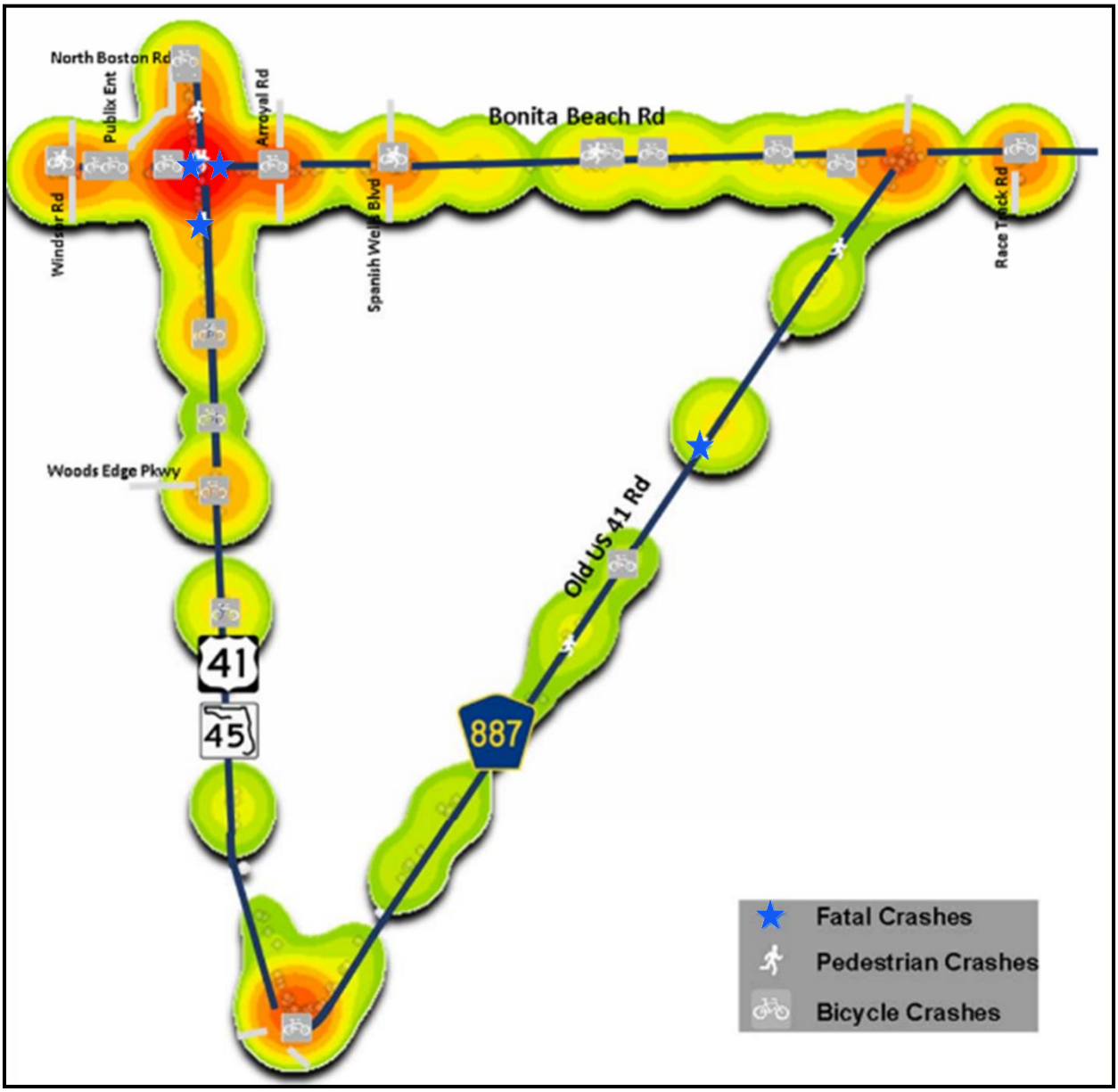
Based on the crash history, the most frequent crash type was rear-end (50.8%) followed by sideswipe (12.4%), and left turn (9.7%) related crashes. A total of 13 (1.1%) pedestrian and 25 (2.1%) bicycle crashes were recorded over the 5-year analysis period. Four crashes resulted in fatalities, two of them occurred at the intersection of US 41 at Bonita Beach Road and one just south of the US 41 at Bonita Beach Road intersection, the fourth fatal crash occurred along Old US 41 just south of Mediterra Drive. Out of the four fatal crashes, one of the crashes involved a pedestrian along Old US 41 just north of the railroad crossing. Additionally, 297 (25.2%) of the reported crashes resulted in an injury.

Majority of the crashes (79.4%) occurred during daylight condition while 15.0% of the crashes occurred during dark conditions. The majority of crashes (87.0%) occurred during dry pavement conditions with 11.8% of the crashes occurring during wet pavement conditions.

A crash density analysis was performed to identify crash hot spots. **Figure 2-10** shows the 5-year crash densities along the study corridor and locations where fatal, crashes, and crashes involving a pedestrian, or a bicycle were recorded. The crash densities are highest at the following intersections:

- US 41 at Bonita Beach Road (outside the study area)
- US 41 at Old US 41
- Old US 41 at Bonita Beach Road
- Bonita Beach Road at Spanish Wells Boulevard (outside the study area)
- Bonita Beach Road at Race Track Road.

Figure 2-10: Crash Densities



2.2.17 Railroad Crossings

Old US 41 crosses the Seminole Gulf Railway (Crossing #623508Y) at Station 194+88.68. This highly skewed crossing (12 degrees) is not currently used; however, it is still considered active. The roadway crossing was repaved in 2019 and has flashing crossbuck signals; there are no gates or pedestrian accommodations. There is one track within 130-feet of ROW.

2.2.18 Drainage

There are three (3) existing cross drains within the project limits. **Table 2-9** provides a summary of the existing culverts. At the time this report was compiled, no known drainage issues were reported related to the hydraulic adequacy of these cross drain culverts. Due to the preliminary nature of this study, the HY-8 analysis and other relevant calculations should be revised during design when survey information and geotechnical data are available. Tailwater elevations were obtained from information in the existing permits and are summarized in **Table 2-10** below.

Table 2-9: Summary of Existing Cross Drains

Cross Drain	Size	Length	Location
EX_CD-1	2 - 24" RCP	100-foot	Sta. 103+45
EX_CD-2	2 - 30" RCP	53-foot	Sta. 143+58
EX_CD-3	2 – 36" RCP	65-foot	Sta. 224+20

Table 2-10: Summary of Tailwater Elevations

Cross Drain	Location	Tailwater Elevation (NAVD)	Source
EX_CD-1	Sta. 103+45	6.88 (Water Surface)	SFWMD Permit No. 11-01984-P
EX_CD-2	Sta. 143+58	7.56 (Ex. Ground)	SFWMD Permit No. 11-01984-P
EX_CD-3	Sta. 224+20	7.48 (Ex. Ground)	SFWMD Permit No. 36-04608-P

A large, permanently inundated canal, referred to as Dunruss Creek, but also known as Wiggins Bay or Old US 41 Canal, is located on the west side of CR 887 in Segment 1 of the project. Within the project limits it is located from the CR 887-US 41 intersection to approximately 300-feet south of Rail Head Boulevard, where it cuts north into a Florida Power & Light (FPL) utility easement and continues outside of the study area. Dunress Creek flows southwest within the project limits and flows west under US 41 out of the study area. Within the study area, Dunress Creek flows under cross streets via mitered end sections. The canal was regraded in 2010 under SFWMD Permit #11-01984-P (Old US 41 Stormwater Improvements). The project traverses four Waterbody IDs (WBIDs). **Table 2-11** lists the WBIDs by watershed, as well as their respective waterbody name and impairments.

Table 2-11: Project WBIDs by Watershed

WBID	Waterbody Name	Impairments
West Cocohatchee River Watershed		
3278C	Wiggins Bay Outlet	Low Oxygen, Metals
3278D	Cocohatchee (Inland Segment)	Bacteria and Other Microbes, Low Oxygen
Imperial River Watershed		
3258F	Oak Creek	Bacteria and Other Microbes, Low Oxygen
3258EB	Imperial River (Marine Segment)	Algae, Bacteria and Other Microbes, Low Oxygen, Mercury, Metals, Nitrogen and/or Phosphorus

Both the Cocohatchee and Imperial Rivers are identified as Outstanding Florida Waters (OFW) and therefore require that projects discharging to them account for an additional 50% treatment of the required treatment volume. The allowable discharge rates as established by the 1994 SFWMD Appendix 2 *Allowable Discharge Values For Projects Within The South Florida Water Management District* are 25.6 cubic-feet-per-second-per-square-mile (CSM) for the Cocohatchee River and 25 CSM for the Imperial River.

The project can be divided into two major basins and one minor basin, designated in existing conditions as *EX_Basin 1*, *EX_Basin 3*, and *EX_Basin 2*, respectively.

EX_Basin 1 is approximately 8,175-feet long, extending from the southern project limits on CR 887 to the Lee County line (Sta. 100+00 to Sta. 181+75).

EX_Basin 2 is approximately 1,241-feet long, extending from the Collier County line to the Seminole Gulf/CSX Railroad crossing (Sta. 181+75 to Sta. 194+16).

EX_Basin 3-1 extends approximately 3,814-feet along CR 887 from the Seminole Gulf/CSX Railroad crossing to just south of the intersection with Bonita Beach Road (Sta. 194+16 to Sta. 232+30).

EX_Basin 3-2 includes areas from the old *Naples-Fort Myers Greyhound Track* compound.

For more information regarding existing drainage, please see the *Pond Siting Report (PSR)* and the *Location Hydraulics Report (LHR).*

2.2.19 Lighting

The existing lighting conditions in the project area are primarily in the signalized intersections along Old US 41, Bonita Beach Road, and US 41. Currently, streetlights are present in the entrance of the communities along the corridor.

2.2.20 Utilities

A Sunshine 811 design ticket request covering the study limits identified 12 Utility Agency Owners (UAOs). **Table 2-12**: below summarizes the facilities found along Old US 41. For additional information, refer to the *Utility Assessment Package*.

Table 2-12: Existing Utility Owners

Utility Agency/Owner	Facility Type	Limits and Details				
		Old US 41 (CR 887)	US 41	Bonita Beach Rd	Race Track Rd	Other
Bonita Springs Utilities, Inc.	Water	**Bonita Springs Utilities provided digital maps showing the following utilities:** 8" DIP water main on west side of CR 887 goes south from Bonita Beach Road and turns west twice towards Bonita Business Park; 10" PVC water main from west side of CR 887 crosses east towards Dog Track; 12" PVC water main runs parallel the north side of the ditch next to Causeway Commerce Park and turns south on CR 887; 10"/8" PVC water main on the west side of CR 887 crosses the road and heads east along Compound Road; 8" PVC water main on the west side of CR 887 goes south along Constitution Plaza	None	**Bonita Springs Utilities provided digital maps showing the following utilities:** 12" DIP potable water main on north side of Bonita Beach Rd turns north on CR 887; 12" PVC potable water main on the north side of Bonita Beach Road crosses CR 887 and continues east on Bonita Beach Rd; 12" PVC potable water main crosses Bonita Beach Road at Race Track Rd; 8" DIP potable water main on the south side of Bonita Beach Rd from Industrial Rd turns south onto CR 887	**Bonita Springs Utilities provided digital maps showing the following utilities:** 12" PVC potable water main crosses Bonita Beach Road and stays on the west side of Race Track Road and continues south; 10" PVC potable water main crosses Race Track Road to Performance Lane and continues east; 12" PVC potable water main crosses Race Track Road to K Nine Drive and continues east; 12" PVC potable water main crosses Race Track Road to Enterprise Avenue and continues east	**Bonita Springs Utilities provided digital maps showing the following utilities:** 6" PVC water main runs along the south side of Dog Track towards the east splitting into three sections to Race Track Road north and east, and south towards the track; 12" PVC water main from Race Track Road continues south, one section towards the track building, and the second one southwest towards buildings on the south; 6" PVC potable water main from CR 887 ends at Kennel Club

Utility Agency/Owner	Facility Type	Limits and Details				
		Old US 41 (CR 887)	US 41	Bonita Beach Rd	Race Track Rd	Other
Bonita Springs Utilities, Inc.	Sewer	8" PVC sewer force main on the east side of CR 887 runs south from Bonita Beach Road and connects to 6" DIP that turns east on Compound Road; 6" PVC sewer force main on the east side of CR 887 continues south from Compound Road and turns east towards Mediterra Drive; Sewer gravity main on west side of CR 887 runs along Causeway Commerce Park and crosses CR 887. It continues south towards Compound Road, then crosses CR 887 and runs along Constitution Plaza	None	6" PVC sewer force main on the south of Bonita Beach Road from the west crosses CR 887 by 6" HDPE ducts for transmission; sewer force main on the northeast quadrant of CR 887 and Bonita Beach Road crosses Bonita Beach to the south and connects to 16" PVC; 16" PVC sewer force main on the south side of Bonita Beach Road from Trackside Donuts continues east past W Brook Drive	6" PVC sewer force main from south of Bonita Beach Road continues south on the east side of Race Track Road	Sewer gravity main from Kennel Club east ends at Greyhound track; 6" DIP from CR 887 going east towards Greyhound track; Sewer gravity main under Race Track Road from Performance Lane to Enterprise Ave. It Continues east down side street at each end.
Centurylink	Underground Facilities	**CenturyLink provided aerial maps showing the following utilities:** Local buried asset runs along CR 887 from US 41 to Performance Way; Local buried asset runs along CR 887 from Constitution Plaza north, crosses Bonita Beach Road, ends at Dean Street; National buried asset on northwest side of CR 887 goes from US 41 to CSX, and continues north past Bonita Beach Road adjacent to CSX	**CenturyLink provided aerial maps showing the following utilities:** Local buried asset on the east side of US 41 from Retreat Drive to CR 887; Local buried asset on the west side of US 41 from Audubon Blvd to south past CR 887; National buried asset on the east side of US 41 from CR 887 to south past Royal Cove Drive	**CenturyLink provided aerial maps showing the following utilities:** Local buried asset south of Bonita Beach Road from CR 887 to west past Spanish Wells Blvd; Local buried asset north of Bonita Beach Road from CR 887 to Oak Creek	**CenturyLink provided aerial maps showing the following utilities:** Local buried asset west of Race Track Road from Bonita Beach Road south to Harmony Park Drive	**CenturyLink provided aerial maps showing the following utilities:** Local buried asset half way into Compound Road to Kennel Club

Utility Agency/Owner	Facility Type	Limits and Details				
		Old US 41 (CR 887)	US 41	Bonita Beach Rd	Race Track Rd	Other
City of Bonita Springs	Street Lighting and Irrigation	**The City provided aerial maps showing the following utilities:** Decorative street lighting and landscape irrigation on both sides of CR 887 north of Bonita Beach Road	None	None	None	None
Collier County BCC Road Maintenance	Irrigation Main Line	None	**Collier County BBC Road Maintenance provided marked maps and GIS files showing the following utilities:** 16" PVC Irrigation Main Line under the northbound lanes of US 41 from Wiggins Pass Rd to CR 887 where it shifts to the median and continues to the south Market Place Commons Driveway. Then crosses to the east side of US 41 and continues north past the study limits.	None	None	None

Utility Agency/Owner	Facility Type	Limits and Details				
		Old US 41 (CR 887)	US 41	Bonita Beach Rd	Race Track Rd	Other
Collier County BCC Road Maintenance	PVC Lateral Line	None	PVC Lateral Line on the west side of US 41 starts at the south corner of Tarpon Cove Community and continues north on US 41 to the south Market Place Commons driveway where it crosses to the east side of US 41 and intersects main; PVC Lateral Line on the east side of US 41 starts at the corner of CR 887 and continues north past Market Place Commons ; PVC Lateral Line on the east side of US 41 starts at the corner of CR 887 and continues south past Caribbean Naples	None	None	None
Collier County Public Utilities	Water	**Collier County Public Utilities provided digital maps and GIS files showing the following utilities:** 12" DIP water main on east side of CR 887 from south corner of Landmark Estates to Gulf Coast Dr; 16" DIP water main on east side of CR 887 from Gulf Coast Dr to Arbor View Blvd; 10" PVC water main on east side of CR 887 from Arbor View Blvd to Performance Way; 10" PVC water main crossing CR 887 to the north side of Performance Way; 8" PVC lateral line crossing CR 887 260' south of Arbor View Blvd; 8" PVC lateral line crossing CR	**Collier County Public Utilities provided digital maps and GIS files showing the following utilities:** 16" PVC water main on east side of US 41 from Market Place Commons to north past Tamiami Square; 16" PVC water main on east side of US 41, cross US 41 150' south of the south Market Place Commons driveway, and continue south to Wiggins Pass Rd on west side; 12" DIP water main on east side of US 41 from Wiggins Pass Rd to Sunrise Blvd where it continues north behind the 13800 Tamiami Trail shopping	None	None	**Collier County Public Utilities provided digital maps showing the following utilities:** 8" PVC water main on south side of Collier Center Way from CR 887 to end of the road towards Business Lane; 8" PVC water main south side of Rail Head Blvd from CR 887 past CSX; 16" DIP water main on north side of Sterling Oaks Dr; 10" PVC water main on north side of Gulf Coast Dr; 8" PVC water main on north side of Anlglewood Ct

Utility Agency/Owner	Facility Type	Limits and Details				
		Old US 41 (CR 887)	US 41	Bonita Beach Rd	Race Track Rd	Other
Collier County Public Utilities		887 100' south of Turtle Creek Blvd	center to CR 887; 8" PVC water main crossing US 41 at north Market Place Commons driveway			
	Sewer	10" PVC force main on the east side of CR 887 from US 41 to north corner of Landmark Community; 12" PVC force main on the east side of CR 887 from north corner of Landmark Community to Performance Way; 4" PVC force main crossing CR 887 on the east side of US 41 intersection; 4" PVC force main crossing CR 887 on the south side of the CVS driveway; 6" PVC force main crossing CR 887 100' south of Turtle Creek Blvd; 6" PVC force main crossing CR 887 on the south side of Sterling Oaks Dr; 4" PVC force main crossing CR 887 on the north side of Arbor View Blvd; 4" PVC force main crossing CR 887 on the south side of Performance Way	4" PVC force main on the east side of US 41 from CR 887 north past Market Place Commons; 12" PVC force main on the east side of US 41 from Wiggins Pass Rd to Sunrise Blvd where it continues north behind the 13800 Tamiami Trail shopping center to CR 887; 12" PVC force main crossing US 41 on the north side of the Wiggins Pass intersection; 4" PVC force main on the west side of US 41 from the north Market Place Commons driveway to 1,000' north where it turns west	None	None	4" PVC force main north side of Collier Center Way from CR 887 to channel (right before Business Lane); 6" PVC force main on the north side of Rail Head Blvd

Utility Agency/Owner	Facility Type	Limits and Details				
		Old US 41 (CR 887)	US 41	Bonita Beach Rd	Race Track Rd	Other
Collier County Traffic Operations and Information Technology	Buried Fiber Optic Cable, Roadway Lighting	None	**Collier County provided digital maps showing the following utilities:** Buried fiber (CCTO/CCIT) on the west side of US 41 from south of Sunrise Blvd to 650' north of CR 887; Roadway Lighting on both sides of US 41 from south of Sunrise Blvd to north of Red Fox Run	None	None	None
Comcast	Not available					

Utility Agency/Owner	Facility Type	Limits and Details				
		Old US 41 (CR 887)	US 41	Bonita Beach Rd	Race Track Rd	Other
Crown Castle NG	Fiber Facilities/Equipment	**Crown Castle provided digital maps showing the following utilities:** Underground Conduit located behind Market Place Commons and crosses CR 887 and stops around Ristorante Limoncello Naples; Underground Fiber located behind Market Place Commons from CR 887 to Market Place Commons parking lot; Aerial Fiber located west of US 41 past Market Place Commons and past CR 887	**Crown Castle provided digital maps showing the following utilities:** Underground Conduit located west of US 41 past Market Place Commons past CR 887; Underground Conduit east of CR 887 from CSX and continues north past Bonita Beach Road; Aerial Fiber on the east side of CR 887 from US 41 to Market Place Commons, crosses CR 887, and continues to the south corner of FPL Angler Substation and crosses CR 887 again and continues north on the east side of CR 887, and turns east on Sun Century Road	**Crown Castle provided digital maps showing the following utilities:** Aerial fiber on the north side of Bonita Beach Road from CR 887 to Race Track Road	**Crown Castle provided digital maps showing the following utilities:** Aerial fiber on north side of Bonita Beach Road crosses to east side of Race Track Road and continues south past Greyhound Track	None
Florida Power and Light - Collier/Lee	Overhead Electric	**Florida Power and Light provided digital maps showing the following utilities:** Overhead electric 23KV on the east side of CR 887 from US 41 to CVS crosses CR 887 and continues north on the west side and crosses again at Collier Center Way and continues north on the east side of CR 887 to Channel 30 Drive; Overhead electric 23KV on north and south side of Performance way from CR 887 to end of the road; Overhead electric 23KV on the west side of CR 887 from CSX area continues north past Bonita Beach Road	**Florida Power and Light provided digital maps showing the following utilities:** Overhead Electric on the west side of US 41 ranging past Retreat Drive and continues south past Imperial Golf Course	**Florida Power and Light provided digital maps showing the following utilities:** Overhead electric on north side of Bonita Beach Road from Washington Street and continues past Pine Haven Way	**Florida Power and Light provided digital maps showing the following utilities:** Overhead electric on the east side of Race Track Road from Bonita Beach Road to Harmony Park Drive	None

Utility Agency/Owner	Facility Type	Limits and Details				
		Old US 41 (CR 887)	US 41	Bonita Beach Rd	Race Track Rd	Other
Florida Power and Light - Collier/Lee	Buried Electric	**Florida Power and Light provided digital maps showing the following utilities:** Buried electric 23KV on the east side of CR 887 from US 41 to north corner of Landmark Community, and crosses CR 887 and continues on the west side of the road towards Meadow Brook Apartments; Buried electric 23KV on west side of CR 887 from Channel 30 Drive to CSX area	None	None	None	None
Hotwire Communications	Overhead Fiber Optic Cable	**Hotwire Communications provided marked maps showing the following utilities:** Overhead FOC crosses US 41 and stays east of CR 887 and ends at existing utility pole on the south corner of Landmark Estates; Overhead FOC on the east side of CR 887 at north corner Landmark Estates to Channel 30 Drive and crosses CR 887 and ends at the existing utility pole on the west side of CR 887	**Hotwire Communications provided marked maps showing the following utilities:** Overhead FOC on the west side of US 41 ranges past Tamiami Square and continues south past Gateway Shoppes	None	None	None

Utility Agency/Owner	Facility Type	Limits and Details				
		Old US 41 (CR 887)	US 41	Bonita Beach Rd	Race Track Rd	Other
Hotwire Communications	Underground Fiber Optic Cable	Underground FOC on the east side of CR 887 from Ristorante Limoncello Naples to the north corner of Landmark Estates Underground FOC on the east side of CR 887 from north corner of Landmark Estates continues north and turns east at Collier Center Way to the end of Business Lane; Underground FOC on the east side of CR 887 from Midgard Self Storage and turns east to Rail Head Blvd; Underground FOC on the west side of CR 887 from Channel 30 Drive to Causeway Commerce Park	None	None	None	None
Lee County Signal Department	Fiber Optic Cable, Traffic Signals	**Lee county signal department provided marked maps showing the following utilities:** Vehicle Count Station next to Channel 30 Drive; Fiber Optic Cable on west side of CR 887 from Bonita Beach Road continues north past Crockett Street	None	**Lee county signal department provided marked maps showing the following utilities:** Fiber Optic Cable on north side of Bonita Beach Road from box culvert next to Industrial Street and past Race Track Road; Traffic signal at Bonita Beach Road and CR 887; Traffic signal at Bonita Beach Road and Race Track Road	None	None
Summit Broadband Inc.	Buried Fiber Optic Cable	**Summit Broadband provided marked maps showing the following utilities:** East side of CR 887 from 300' south of Collier Center Way to Rail Head Blvd; West side of CR 887 from	**Summit Broadband provided marked maps showing the following utilities:** East side of US 41 from 13800 Tamiami Trail shopping center entrance to Red Fox Run	**Summit Broadband provided marked maps showing the following utilities:** South side of Bonita Beach Rd from Industrial Road to east of Race Track Rd; Crossing approx. 300' east of CR 887 intersection	None	None

Utility Agency/Owner	Facility Type	Limits and Details				
		Old US 41 (CR 887)	US 41	Bonita Beach Rd	Race Track Rd	Other
Summit Broadband Inc.		Bonita Business Park to Bonita Beach Rd				
	Overhead Fiber Optic Cable	**Summit Broadband provided marked maps showing the following utilities:** East/south side of CR 887 from US 41 to east of 13800 Tamiami Trail shopping center entrance where it crosses CR 887 and continues west side to FPL utility easement driveway. Crosses back to east side and continues north to 300' south of Collier Center Way where it goes underground.	**Summit Broadband provided marked maps showing the following utilities:** West side of US 41 from south entrance of Gateway Shoppes to north of Red Fox Run; Crossing of US 41 on the south side of the CR 887 intersection	None	None	None
TECP Peoples Gast - Ft Myers	Gas Main	**TECO Peoples Gas provided marked maps showing the following utilities:** 4" PE gas main on the west side of CR 887 starts at US 41 and ends at Collier Center Way; 4" PE gas main on the west side of CR 887 from Via Palacio Ave to just south of Bonita Beach Rd where it crosses to the east side of CR 887.	**TECO Peoples Gas provided marked maps showing the following utilities:** 8" CS gas main on the east side of US 41 past Red Fox Run crosses US 41 to the west side and continues south of Gateway Shoppes; 3/4" PE S/L on US 41 starts at Gateway Shoppes and transitions to a 4" PE GM and crosses US 41 at CR 887 and continues south on the east side of US 41	**TECO Peoples Gas provided marked maps showing the following utilities:** Buried 6" PE gas main on the south side of Bonita Beach Rd from west of Industrial Rd to east of Race Track Rd; 2" gas main crossing Bonita Beach Rd on east side of CR 887 intersection that continues north along CR 887	**TECO Peoples Gas provided marked maps showing the following utilities:** Buried 4" PE gas main on the west side of Race Track Rd from Bonita Beach Rd to Greyhound Track	**TECO Peoples Gas provided marked maps showing the following utilities:** 2" PE gas main starts on the west side of CR 887 and crosses the road to continue onto Collier Center Way, and ends at Cakes by Karen bakery; 2" PE gas main on west side of Industrial Rd south of Bonita Beach Rd

2.2.21 Soils and Geotechnical Data

The US Department of Agriculture, Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database for Florida (2023) were used to create maps showing the soil series within the study area. **Table 2-13** lists and details the total area of the soil series present within the study area (NRCS 2023). The NRCS' State Hydric Soils List (2025) was reviewed to identify hydric soils within the study area for the purposes of assessing wetland boundaries. Please see **Appendix D-Soil and Drainage Maps**, for the soil map, and the *NRE* for more information.

Table 2-13: Project Soil Series

Soil Map Unit : Description	Hydric Rating	Acreage within Study Area	Percentage of Study Area
7 : Matlacha Gravelly Fine Sand-Urban Land Complex, 0 to 2 percent slopes	No	2.62	0.80%
32 : Urban Land, 0 to 2 percent slopes*	Unranked	7.27	2.22%
36 : Immokalee Sand-Urban Land Complex, 0 to 2 percent slopes	No	17.05	5.22%
59 : Urban Land, 0 to 2 percent slopes*	Unranked	33.83	10.35%
64 : Brynwood Fine Sand, WET-Urban Land Complex 0 to 2 percent slopes	Yes	75.67	23.16%
101 : Basinger Fine Sand-Urban Land Complex, 0 to 2 percent slopes	Yes	5.05	1.55%
103 : Cypress Lake-Riviera-Copeland Fine Sands, Frequently Ponded-Urban Land Association, 0 to 1 percent slopes	Yes	5.85	1.79%
105 : Copeland Fine Sandy Loam, Ponded-Urban Land Complex, 0 to 1 percent slopes	Yes	10.00	3.06%
110 : Felda Fine Sand-Urban Land Complex, 0 to 2 percent slopes	Yes	2.84	0.87%
111 : Felda Fine Sand, Ponded-Urban Land Complex, 0 to 1 percent slopes	Yes	7.19	2.20%
115 : Holopaw-Basinger-Urban Land Complex, 0 to 2 percent slopes	Yes	2.93	0.90%
117 : Immokalee Fine Sand-Urban Land Complex, 0 to 2 percent slopes	No	98.99	30.29%
118 : Immokalee-Oldsmar, Limestone Substratum-Urban Land Complex, 0 to 2 percent slopes	No	15.75	4.82%
124 : Myakka Fine Sand, Ponded-Urban Land Complex, 0 to 1 percent slopes	Yes	1.98	0.61%
129 : Pineda-Riviera Fine Sands-Urban Land Association, 0 to 2 percent slopes	Yes	6.07	1.86%

Soil Map Unit : Description	Hydric Rating	Acreage within Study Area	Percentage of Study Area
132 : Pompano Fine Sand, Ponded-Urban Land Complex, 0 to 1 percent slopes	Yes	0.02	0.01%
133 : Satellite Fine Sand-Urban Land Complex, 0 to 2 percent slopes*	No	18.41	5.63%
134 : Satellite Fine Sand-Urban Land Complex, 0 to 2 percent slopes*	No	11.81	3.61%
137 : Wabasso Sand-Urban Land Complex, 0 to 2 percent slopes	No	3.45	1.06%
Total Hydric Soils		**117.60**	**35.99%**
Total Non-Hydric Soils		**168.08**	**51.44%**
Total Unranked Soils		**41.10**	**12.58%**
Total		**326.78**	**100.00%**

*These soil descriptions have multiple soil mussel numbers due to the project occurring in two counties.

2.2.22 Aesthetics Features

There are no scenic views or unique aesthetic features along Old US 41. No provisions or commitments were made regarding aesthetic features. The City of Bonita Springs is responsible for maintenance activities in the northern portion of the corridor. Collier County is also responsible for maintenance activities mainly in the southern region of this corridor.

2.2.23 Traffic Signs

There are no overhead signs along Old US 41. There is a dual-post guide sign on the north end approaching Bonita Beach Road.

2.2.24 Noise Walls

There are two perimeter walls along the corridor on the southern portion. Both walls border neighborhood and golf courses along Old US 41.

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

There are no Intelligent Transportation System (ITS) or Transportation System Management and operations (TSM&O) features in the project limits.

2.3 EXISTING BRIDGES AND STRUCTURES

There are no existing structures along Old US 41 within the study limits. There is, however, a twin-box concrete bridge culvert (number (No.) 030181) that carries US 41 over Dunruss Creek on the north side of the Old US 41 intersection. It is 25.9-feet long, built in 1974, has a sufficiency rating of 70, and a health index of 98.01.

2.4 EXISTING ENVIRONMENTAL FEATURES

The Old US 41 corridor is primarily urbanized throughout the area. Although urbanized, there are many protected species and habitats, and wetlands throughout the corridor. A *Natural Resource Evaluation* (*NRE*) was prepared within the study limits to evaluate the wetlands, federal and state protected species, protected habitats, and Essential Fish Habitat (EFH).

Protected Species

Literature reviews, agency database searches, and field reviews were conducted to assess federal and state-protected species presence, their habitat, and designated critical habitat occurring or potentially occurring within the project area. Fifteen (15) federally-protected (13 listed) species and fifty (50) state listed species were evaluated based on species ranges including Lee or Collier counties. Two non-listed/managed species, the bald eagle and Florida black bear, are also discussed based on the potential for occurrence within the study area and their protection under other existing regulations. Please see the *NRE* for more information regarding the protected species and their habitats.

Wetlands

The boundaries of all wetlands and other surface waters within the study area were approximated using both desktop and field reviews. No jurisdictional delineations/formal determinations were conducted. Based on the evaluation completed, approximately 41.89 acres of wetlands and other surface waters occur within the study area (31.39 acres of wetlands and 10.50 acres of other surface waters). Please see the *NRE* for more information regarding the wetlands.

Contamination Screening Evaluation

A *Contamination Screening Evaluation Report* (*CSER*) was prepared as part of this study. The purpose of the report is to present findings of a Level I contamination screening. A total of thirty-five contamination sites were evaluated for this PD&E study. Please see the *CSER* for more information regarding the contamination screening.

Cultural Resource Assessment Survey

A *Cultural Resource Assessment Survey (CRAS)* was prepared as part of this study. The purpose of the *CRAS* was to locate and identify any archaeological sites and historic resources within the project area of potential effect (APE) and to assess their significance in terms of eligibility for listing in the National Register of Historic Places (NRHP). The APE is the "geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist." Historic/architectural field survey resulted in the identification and evaluation of nine historic resources (8CR01664, 8CR01665, 8CR01666, 8CR01667, 8CR01668, 8CR01669, 8CR01670/8LL03078, 8LL02445, and 8LL03076) within the APE. These include five buildings (8CR01664, 8CR01665, 8CR01666, 8CR01667, and 8CR01668), constructed between circa (ca.) 1966 and 1977, one structure, the Naples-Fort Myers Greyhound Track (8LL03076), and three linear resources, the Transmission Corridor Canal (8CR01669), Old US 41 (8CR01670/8LL03078), and the Seminole Gulf Railway (8LL02445). Please see the *CRAS* for more information regarding the findings of the survey.

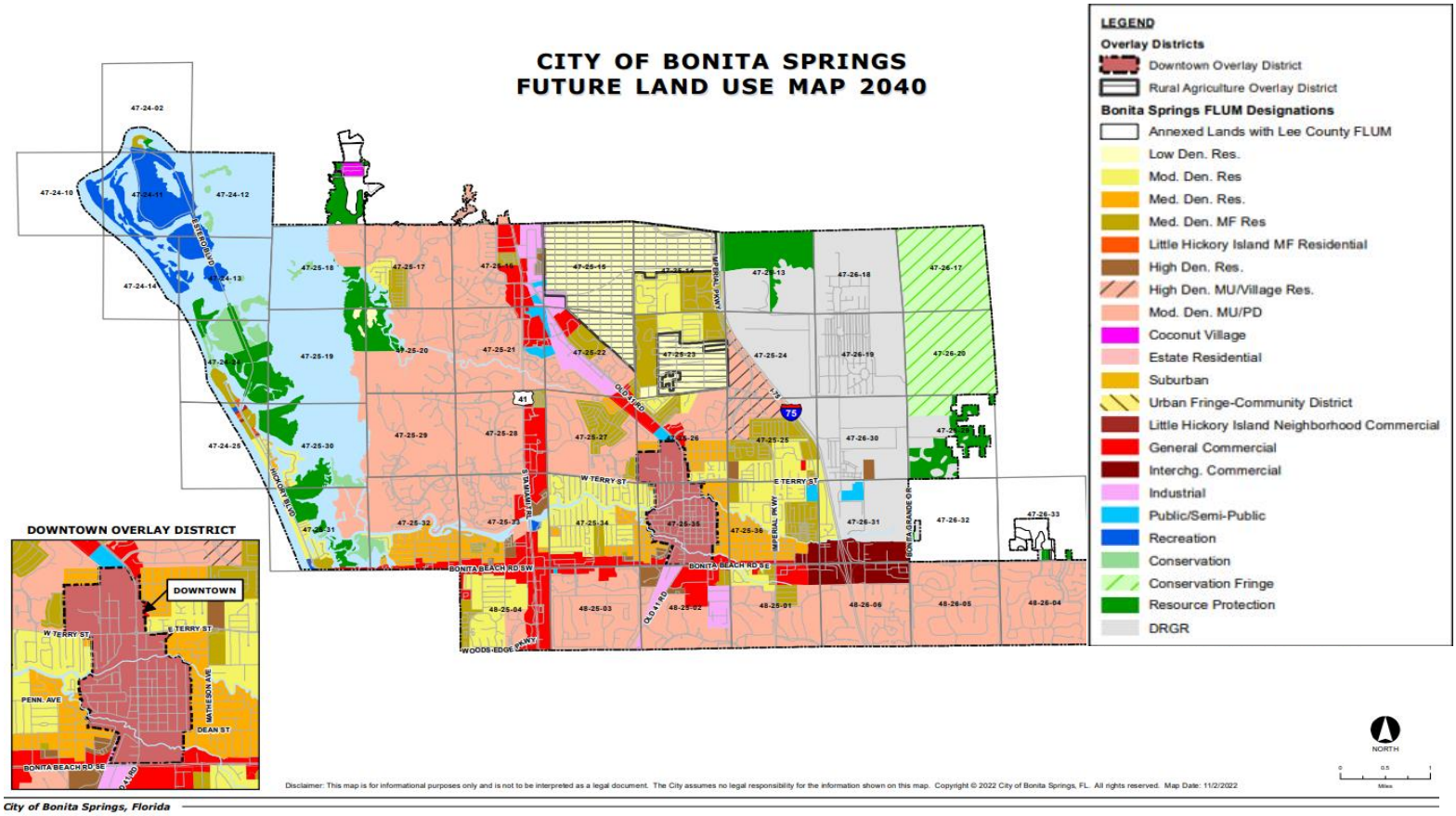
3.0 FUTURE CONDITIONS

3.1 FUTURE CONDITIONS CONSIDERATION

The former Naples Fort Myers Greyhound Track property is currently under development per the City of Bonita Springs future desired land use.

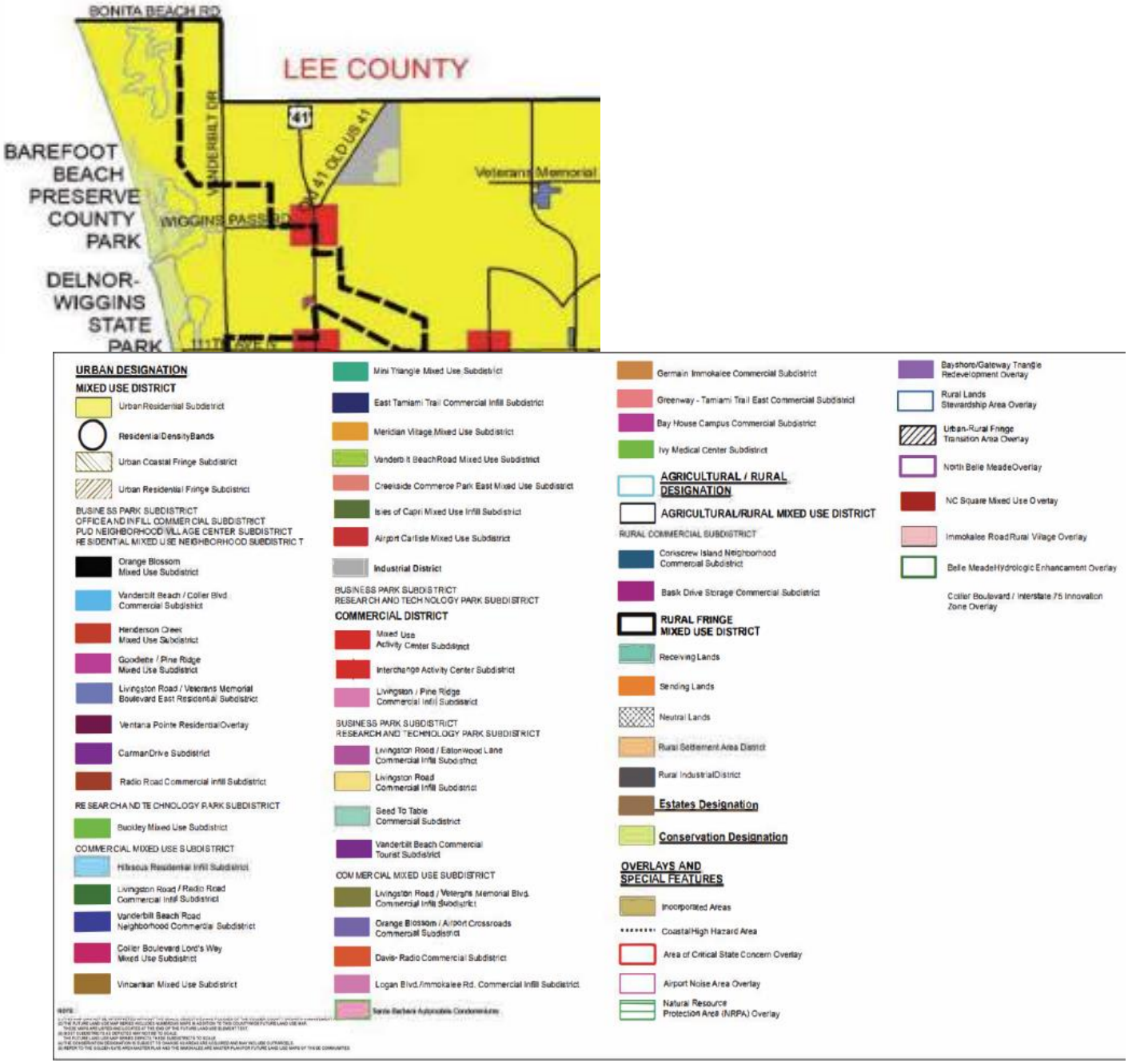
The City of Bonita Springs Comprehensive Plan was reviewed for existing land use within and adjacent to the study area. The Future Land use elements for the City of Bonita Springs show primarily future land use in the Downtown District being used as medium density residential and moderate density use. The City of Bonita Springs zoning district map was used to better compare the existing to the future land use. The existing zoning map is similar to the future land use map in which it is residential, commercial, and agricultural use in the north-east. **Figure 3-1** shows the City of Bonita Springs Future Land Use Map for the year 2040.

Figure 3-1: City of Bonita Springs 2040 Future Land Use Map



Collier County's Comprehensive Plan was reviewed for existing land use within and adjacent to the study area. Based on the below figure, Collier County shows future land use elements to be primarily urban residential, mixed, and conservation design use. Collier County's Planning and Zoning Maps were used in order to compare the existing and future land use. Similarly, to the future land use, the current zoning is primarily residential, planned unit development, and agricultural use. **Figure 3-2** shows Collier County's Future Land Use Map for the year 2025.

Figure 3-2: Collier County's 2025 Future Land Use Map



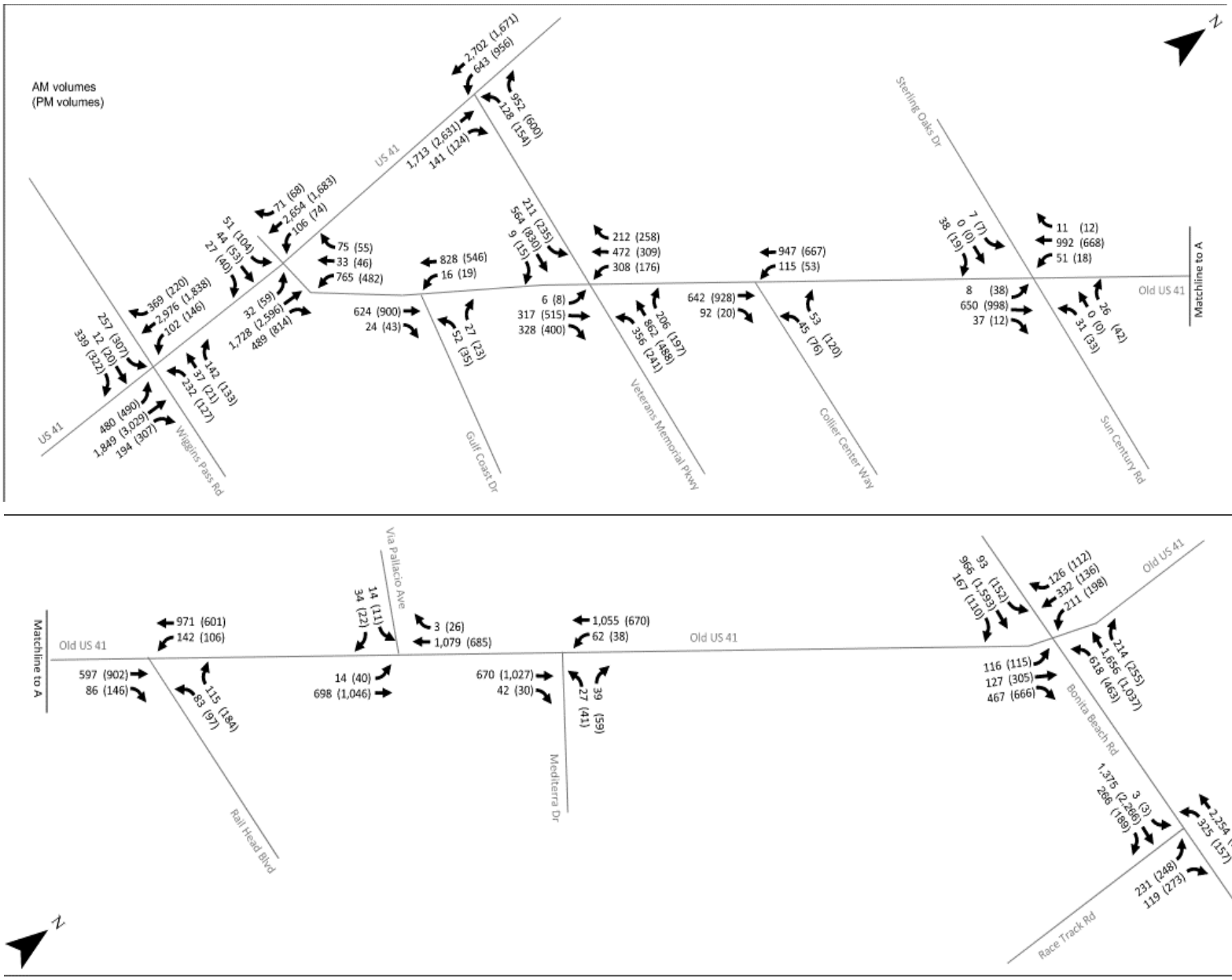
The future context class is the same as the existing context class. US 41 and south of Sunrise Blvd is a C3C Suburban Commercial, and it transitions to a C3R, Suburban Residential, north of Sunrise Blvd.

Table 3-1 below shows Design Year (2045) AADTs, respectively. **Figure 3-3** presents Design Year (2045) No-Build volumes, respectively. Please see the *PTAR* for more information regarding the No-Build conditions.

Table 3-1: Design Year (2045) Balanced AADTs

Roadway	Location	No-Build
US 41	South of Wiggins Pass Rd	70,900
	From Wiggins Pass to Old US 41	64,200
	From Old US 41 to Veterans Mem Pkwy	52,400
	North of Veterans Mem Pkwy	61,900
Old US 41	West of US 41	3,600
	From US 41 to Gulf Coast Dr	17,500
	From Gulf Coast Dr to Veterans Mem Pkwy	17,100
	From Veterans Mem Pkwy to Collier Center Way	18,400
	From Collier Center Wy to Sun Century Rd	19,700
	From Sun Century Rd to Rail Head Blvd	19,500
	From Rail Head Blvd to Via Palacio Ave	20,600
	From Via Palacio Ave to Mediterra Dr	20,000
	From Mediterra to Race Track Rd	20,700
	From Race Track Rd Ext to Bonita Beach Rd	20,100
	North of Bonita Beach Rd	12,400
Race Track Rd	South of Bonita Beach Rd	9,600
Wiggins Pass Rd	West of US 41	12,000
	East of US 41	7,600
Gulf Coast Dr	East of Old US 41	1,500
Veterans Mem Blvd	From US 41 to Old US 41	20,000
	East of Old US 41	26,400
Collier Center Way	East of Old US 41	3,600
Sun Century Rd	West of Old US 41	800
	East of Old US 41	1,400
Rail Head Blvd	East of Old US 41	5,200
Via Palacio Ave	West of Old US 41	900
Mediterra Dr	East of Old US 41	1,900
Race Track Rd	East of Old US 41	-
Bonita Beach Rd	West of Old US 41	34,400
	From Old US 41 to Race Track Rd	46,100
	East of Race Track Rd	47,800

Figure 3-3: Design Year (2045) No-Build Turning Movement Volumes



4.0 DESIGN CONTROLS & CRITERIA

4.1 DESIGN CONTROLS

See **Table 4-1** for the design controls and criteria. They are based on the following sources:

- Collier County Land Development Code (CC-LDC)
- FDOT Design Manual, Jan. 2023 Edition (FDM)
- Transportation Planning Development Guidebook (CC-TPDC)
- AASHTO Policy on Geometric Design of Highways and Streets, 2011 Edition (AASHTO)
- Collier County Growth Management Plan (CC-GMP)
- FDOT Roadway Characteristics Inventory (FDOT RCI)
- Florida Greenbook, 2018 Edition (FG)
- Lee County Land Development Code (LC-LDC)
- City of Bonita Springs Land Development Code (BS-LDC)
- FDOT SIS Atlas (FDOT SIS)
- FDOT Open Data Hub

4.2 DESIGN CRITERIA

The design criteria used to develop the build alternative are based on the 2023 FDOT Design Manual (FDM), the 2018 Florida Greenbook, the 2023 Bonita Springs Land Development Code, and the 2023 Collier County Development Code. The criteria are presented in **Table 4-1**.

Table 4-1: Design Control & Criteria

	Design Criteria			Old US 41 Collier County - New Construction		Old US 41 Bonita Springs - New Construction		Quadrant Roadway Bonita Springs - New Construction		US 41 FDOT - New Construction FDOT Design Manual January 1, 2020		Bonita Beach Road (CR 865) Lee County - New Construction	
				Value	Documentation	Value	Documentation	Value	Documentation	Value	Documentation	Value	Documentation
Facility	Functional Classification			Major Collector	CC-GMP Figure TR-3	Major Collector - URBAN	FDOT RCI	Collector	Zoning Ord. 19-02	Principal Arterial - Other - URBAN	FDOT RCI	Minor Arterial - URBAN	FDOT RCI
	Context Classification			N/A	N/A	N/A		N/A		C3C/C3R	FDOT Open Data Hub	N/A	
	Traffic Operations Min. Level of Service			D	CC-LDC Sec. 6.02.03	C or Higher	BS-LDC Sec. 3-302	C or Higher	BS-LDC Sec. 3-302	D	FDOT Topic 000-525-006-c		
	Strategic Intermodal System (SIS)			No	FDOT SIS	No	FDOT SIS	No	FDOT SIS	No	FDOT SIS	No	FDOT SIS
	Number of Mainline Travel Lanes			4	PTAR	2/4	PTAR	2	Zoning Ord. 19-02	6	Existing	4/6	Existing
	Low Annual Average Daily Volumes				PTAR		PTAR		PTAR				PTAR
	Posted Speed (mph)			45	Existing	45	Existing	30	N/A	50	Existing	45	Existing
	Design Speed Range (mph)			30 - 50	FG Table 3-1	25 - 45	BS-LDC Sec. 3-303 Table 3	25 - 45	BS-LDC Sec. 3-303	35-55	FDM Table 201.5.1	30-60	FG Table 3-1
	Design Speed (mph)			45	N/A	45	N/A	30	N/A	50	Existing	45	Existing
	Access Classification			3	Collier County Planning	N/A	N/A	N/A	N/A	3	FDOT RCI	N/A	N/A
	Min. Median Opening Spacing (ft)												
	Directional			660	CC Table 1 Page 12	330	BS-LDC Sec. 3-291 Table 1	330	BS-LDC Sec. 3-291	1320	FDM Table 201.4.2	440/330	LC-LDC Sec. 10-285 Table 1
	Full			1320	CC Table 1 Page 12	330	BS-LDC Sec. 3-291 Table 1	330	BS-LDC Sec. 3-291	2640	FDM Table 201.4.2	440/330	LC-LDC Sec. 10-285 Table 1
Typical Section	Travel Lane Width (ft)			11	CC-LDC Appendix B	11-12	BS-LDC Sec. 3-303 Table 3	11-12	BS-LDC Sec. 3-303	11-12	FDM Table 210.2.1	11	FG Table 3-20
	Min. Median Width without Barrier (ft)			15	CC-LDC Appendix B	16-35	BS-LDC Sec. 3-303 Table 3	16	BS-LDC Sec. 3-303	30(22)	FDM Table 210.3.1	22	FG Table 3-23
	Bicycle Lane Width (ft)			4	CC-LDC Sec. 6.06.02	7	BS-LDC Sec. 3-303 Table 3	7	BS-LDC Sec. 3-303	7	FDM Section 223.2.1.1	4	FG Figure 9-1
	Shared Use Path Width (ft)			10	FG Chap. 9 Section C.1	11-12	BS-LDC Sec. 3-303 Table 3	11-12	BS-LDC Sec. 3-303	12 Typ/10 Min(Limited Rw)	FDM Section 224.4	10	FG Chap. 9 Section C.1
	Sidewalk Width (ft)			6	CC-LDC Appendix B	8-10	BS-LDC Sec. 3-303 Table 3	8-10	BS-LDC Sec. 3-303	6	FDM Table 222.2.1	5	FG Chap. 8 Section B.1
	Shoulder Width	Outside	Full (ft)	N/A	N/A	N/A	N/A	N/A	N/A	10	FDM Table 210.4.1	N/A	N/A
			Paved (ft)	N/A	N/A	N/A	N/A	N/A	N/A	5	FDM Table 210.4.1	N/A	N/A
	Utility/Planted Strip Width (ft)			6	FG Chapter 8 Sec. C.2.b	5	BS-LDC Sec 3-303 Table 3	5	BS-LDC Sec 3-303 Table 3	Desired: SDWK at ROW Min.: SDWK at full SHLDR	FDM Section 222.2.1	6	FG Chap. 8 Section C.2.b
	Clear Zone Width (ft)			4	FG Table 3-15	4	FG Table 3-15	4	FG Table 3-15	24	FDM Table 215.2.1	4	FG Table 3-15
	Min. Right-of-Way Width (ft)			N/A	N/A	100	BS-LDC Sec. 3-302 Table 1	100	BS-LDC Sec. 3-302	N/A	N/A	N/A	N/A
Horizontal	Min. Stopping Sight Distance (ft)			360	FG Table 3-4	360	FG Table 3-4	200	FG Table 3-4	425	FDM Table 210.11.1	360	FG Table 3-4
	Max. Deflection without Curve (with C&G)			N/A	N/A	N/A	N/A	N/A	N/A	0° 45' 00"	FDM Section 210.8.1	N/A	N/A
	Length of Curve	Desirable (ft)		N/A	N/A	N/A	N/A	N/A	N/A	750	FDM Table 210.8.1	N/A	N/A
		Minimum (ft)		900 @ 1°; 500 @ 5°	FG Table 3-8	900 @ 1°; 500 @ 5°	FG Table 3-8	900 @ 1°; 500 @ 5°	FG Table 3-8	400	FDM Table 210.8.1	900 @ 1°; 500 @ 5°	FG Table 3-8
	Max Curvature (e = NC)			2083.00	FG Figure 3-2	2083	FG Figure 3-2	819	FG Figure 3-2	8,337	FDM Table 210.9.1	2083	FG Figure 3-2
	Max Curvature			694 (e max = 0.05)	FG Table 3-11	680 (e max = 0.05)	FG Table 3-5	245 (e max = 0.05)	FG Table 3-5	2,292 (e max = 0.05)	FDM Table 210.9.1	680 (e max = 0.05)	FG Table 3-5
Vertical	Max. Grade (Flat Terrain)			7/8 Rural/Urban	FG Table 3-16	8	FG Table 3-16	7/9 rural/urban	FG Table 3-16	6	FDM Table 210.10.1	6	FG Table 3-16
	Max Change in Grade Without Vertical Curve			0.70	FG Table 3-17	0.70	FG Table 3-17	1.00	FG Table 3-17	0.60	FDM Table 210.10.2	0.70	FG Table 3-17
	Crest Curve	K Value		61	FG Table 3-18	61	FG Table 3-18	19	FG Table 3-18	136	FDM Table 210.10.3	61	FG Table 3-18
		Min. Length (ft)'		135	FG Table 3-18	135	FG Table 3-18	90	FG Table 3-18	300	FDM Table 210.10.4	135	FG Table 3-18
	Sag Curve	K Value		79	FG Table 3-18	79	FG Table 3-18	37	FG Table 3-18	96	FDM Table 210.10.3	79	FG Table 3-18
		Min. Length (ft)'		135	FG Table 3-18	135	FG Table 3-18	90	FG Table 3-18	200	FDM Table 210.10.3	135	FG Table 3-18

5.0 ALTERNATIVES ANALYSIS

5.1 NO-BUILD (NO-ACTION) ALTERNATIVE

The No-Build Alternative assumes no changes to Old US 41 within the study area, other than ongoing construction projects and all funded and programmed improvements scheduled to be opened by the analysis year. This includes the four-lane extension of Veterans Memorial Blvd to US 41 in Collier County. The No-Build Alternative requires no additional expenditure of funds and has no environmental impacts. Although the No-Build Alternative does not meet the purpose and need and offers no future operational improvements, it was considered as a viable alternative throughout the study process, and it served as the basis of comparison for the other alternatives.

The No-Build Alternative has advantages and disadvantages. The advantages include:

- No additional expenditure of funds
- No inconveniences to the public during construction
- No environmental impacts
- No ROW required

The disadvantages include:

- Does not meet purpose and need
- No congestion relief
- No safety improvements
- No pedestrian facility upgrades.
- No additional bicycle accommodations
- No improvements in emergency response times

Traffic operational analysis was conducted to evaluate the overall performance of the study corridor under Design Year (2045) No-Build AM and PM peak hour conditions.

VISSIM network performance results including system-wide average delay, vehicle miles traveled, and latent demand are presented in **Table 5-1**. The results indicate that under Design Year (2045) No-Build conditions, the system-wide average delay is expected to increase 236% in the AM and 374% in the PM peak hour, when compared to the Existing Year (2019) conditions. Please see the *PTAR* for more information regarding the No-Build conditions.

Table 5-1: No-Build Network Performance Results

Network Performance Category	Existing Conditions		No-Build 2045		% Difference	
	AM	PM	AM	PM	AM	PM
System-Wide Average Delay (sec/veh)	55.0	60.2	184.5	285.7	236%	374%
Latent Demand (veh)	0	0	25	346	-	-
Vehicle Miles Traveled	17,395	17,055	26,821	24,211	54%	42%

The analysis results for Design Year (2045) No-Build conditions are presented in **Table 5-2**. The results indicate that four of the six signalized intersections are expected to operate at overall LOS F during at least one of the peak hours. In addition, at least one individual movement at every unsignalized intersection is expected to operate at LOS F during the AM or PM peak hours. In contrast, under Existing Year (2019) conditions all signalized intersections are operating at overall LOS D or better for both peak hours and none of the unsignalized intersections are showing failing movements. Also, under Design Year (2045) No-Build conditions, vehicular queue lengths exceeding 1,000' are expected at every study intersection, in comparison queue lengths exceeding 1,000' are only observed at two intersections under Existing Year (2019) conditions.

Table 5-2: Design Year (2045) No-Build Analysis Results

Intersection	Approach	Movement	AM Peak				PM Peak			
			Volume	Delay (s/veh)	LOS	Maximum Queue (ft.)	Volume	Delay (s/veh)	LOS	Maximum Queue (ft.)
Old US 41 at US 41 (Signalized)	US 41	SBL	102	134.4	F	220	73	165.5	F	270
		SBT	2,581	106.0	F	1,555	1,626	23.7	C	545
		SBR	65	66.9	E	85	68	4.2	A	80
	Old US 41	WBL	633	136.5	F	1,075	445	167.1	F	1,020
		WBT	28	120.8	F	140	48	133.4	F	255
		WBR	59	84.0	F	175	50	94.1	F	270
	US 41	NBL	30	73.3	E	100	52	117.5	F	150
		NBT	1,700	22.4	C	415	2,256	49.4	D	1,230
		NBR	479	12.7	B	335	701	113.9	F	1,265
	Old US 41	EBL	47	72.6	E	130	100	88.7	F	255
		EBT	45	119.5	F	240	52	88.8	F	215
		EBR	25	81.3	F	290	44	44.1	D	265
	Overall		**5,794**	**76.6**	**E**	-	**5,515**	**63.1**	**E**	-
Old US 41 at Gulf Coast Dr	Old US 41	SBL	13	40.8	E	25	20	35.4	E	55
		SBT	701	80.5	F	1,000	533	41.3	E	595
	Gulf Coast Dr	WBL	17	1510.8	F	1,470	7	1405.4	F	1,250
		WBR	7	1579.2	F	1,490	4	1874.7	F	1,270
	Old US 41	NBT	599	1.5	A	265	783	82.8	F	975
		NBR	26	0.9	A	0	44	37.9	E	0
	Overall[1]		**1,363**	**68.2**	**F**	-	**1,391**	**74.8**	**F**	-
Old US 41 at Collier Center Way	Old US 41	SBL	102	46.9	E	95	53	8.8	A	60
		SBT	866	63.5	F	1,100	633	4.6	A	220
	Collier Center Way	WBL	18	1072.2	F	1,325	76	89.7	F	655
		WBR	23	771.6	F	1,345	119	65.4	F	670
	Old US 42	NBT	594	0.7	A	45	828	0.7	A	5
		NBR	83	0.3	A	0	19	0.2	A	0
	Overall[1]		**1,685**	**56.8**	**F**	-	**1,728**	**10.7**	**B**	-
Old US 41 at Sun Century Rd/Sterling Oaks Dr	Old US 41	SBL	49	48.2	E	70	19	18.9	C	55
		SBT	914	64.8	F	1,790	634	1.4	A	90
		SBR	9	48.8	E	0	11	0.8	A	0
	Sun Century Rd	WBL	25	57.3	F	155	33	15.3	C	90
		WBT	0	0.0	A	155	0	0.0	A	90
		WBR	29	23.5	C	180	42	15.2	C	125
	Old US 41	NBL	7	15.7	C	45	33	7.8	A	70
		NBT	574	1.1	A	110	905	0.5	A	0
		NBR	5	1.3	A	110	10	0.7	A	0
	Sterling Oaks Dr	EBL	6	30.1	D	40	6	16.0	C	30
		EBT	0	0.0	A	80	0	0.0	A	0
		EBR	37	63.8	F	90	19	9.8	A	45
	Overall[1]		**1,685**	**39.6**	**E**	-	**1,711**	**2.0**	**A**	-
Old US 41 at Rail Head Blvd	Old US 41	SBL	140	21.3	C	135	98	14.7	B	150
		SBT	934	24.0	C	1,500	561	0.3	A	0
	Rail Head Blvd	WBL	65	273.8	F	1,470	102	197.4	F	1,065
		WBR	98	248.1	F	1,500	185	190.5	F	1,095
	Old US 41	NBT	530	0.6	A	0	821	2.6	A	225
		NBR	78	1.0	A	0	136	1.4	A	0
	Overall[1]		**1,844**	**30.4**	**D**	-	**1,903**	**31.1**	**D**	-

Table 5-2: Design Year (2045) No-Build Analysis Results (Continued)

Intersection	Approach	Movement	AM Peak				PM Peak			
			Volume	Delay (s/veh)	LOS	Maximum Queue (ft.)	Volume	Delay (s/veh)	LOS	Maximum Queue (ft.)
Old US 41 at Via Palacio Ave	Old US 41	SBT	1,057	4.6	A	250	637	1.9	A	160
		SBR	4	1.4	A	0	22	0.6	A	0
	Old US 41	NBL	13	15.8	C	60	36	32.8	D	55
		NBT	618	0.4	A	0	958	35.8	E	2,240
	Via Palacio Ave	EBL	12	19.2	C	45	10	121.1	F	45
		EBR	33	39.1	E	75	22	9.0	A	45
	Overall[1]		**1,737**	**3.9**	**A**	-	**1,685**	**22.7**	**C**	-
Old US 41 at Mediterra Dr	Old US 41	SBL	58	7.2	A	60	33	36.0	E	80
		SBT	1,037	5.0	A	375	628	0.8	A	65
	Mediterra Dr	WBL	26	14.8	B	75	30	80.5	F	90
		WBR	40	6.9	A	65	35	420.4	F	855
	Old US 41	NBT	597	0.3	A	0	929	35.5	E	1,135
		NBR	35	0.8	A	0	25	20.9	C	0
	Overall[1]		**1,792**	**3.7**	**A**	-	**1,680**	**28.5**	**D**	-
Bonita Beach Rd at Old US 41 (Signalized)	Old US 41	SBL	212	129.6	F	480	159	704.8	F	4,070
		SBT	318	178.8	F	2,570	104	410.3	F	290
		SBR	124	88.8	F	100	86	332.5	F	115
	Bonita Beach Rd	WBL	613	80.3	F	505	459	78.9	E	400
		WBT	1,617	85.9	F	1,485	1,033	22.1	C	785
		WBR	205	48.0	D	85	259	6.5	A	120
	Old US 41	NBL	108	86.8	F	285	102	128.5	F	215
		NBT	114	56.7	E	250	265	163.7	F	3,125
		NBR	417	14.6	B	70	571	166.4	F	3,195
	Bonita Beach Rd	EBL	89	84.9	F	215	136	207.4	F	300
		EBT	966	36.0	D	730	1,507	180.4	F	5,910
		EBR	166	17.4	B	160	98	139.3	F	95
	Overall		**4,948**	**72.9**	**E**	-	**4,780**	**148.2**	**F**	-
Bonita Beach Rd at Race Track Rd (Signalized)	Bonita Beach Rd	WBL	321	59.6	E	410	160	43.6	D	215
		WBT	2,212	92.0	F	1,790	1,502	6.8	A	340
	Race Track Rd	NBL	231	70.3	E	670	248	67.2	E	550
		NBR	118	9.2	A	120	271	13.7	B	255
	Bonita Beach Rd	EBU	0	0.0	A	0	0	0.0	A	0
		EBT	1,347	12.6	B	280	2,068	4.7	A	245
		EBR	258	4.7	A	135	173	2.9	A	95
	Overall		**4,486**	**57.4**	**E**	-	**4,422**	**10.8**	**B**	-
US 41 at Wiggins Pass Rd (Signalized)	US 41	SBL	97	93.2	F	215	135	373.2	F	810
		SBT	2,792	41.3	D	1,210	1,751	27.4	C	695
		SBR	344	28.4	C	275	215	15.4	B	115
	Wiggins Pass Road	WBL	236	63.0	E	460	127	83.3	F	335
		WBT	35	55.4	E	245	21	101.7	F	375
		WBR	138	27.8	C	265	132	83.4	F	395
	US 41	NBL	483	116.2	F	630	449	127.1	F	415
		NBT	1,833	21.3	C	530	2,665	116.2	F	5,620
		NBR	191	4.5	A	90	268	84.1	F	160
	Wiggins Pass Road	EBL	236	125.9	F	1,675	229	447.9	F	1,710
		EBT	10	100.2	F	40	14	439.0	F	55
		EBR	306	84.2	F	1,690	232	341.3	F	1,245
	Overall		**6,700**	**45.9**	**D**	-	**6,240**	**112.1**	**F**	-

Table 5-2: Design Year (2045) No-Build Analysis Results (Continued)

Intersection	Approach	Movement	AM Peak				PM Peak			
			Volume	Delay (s/veh)	LOS	Maximum Queue (ft.)	Volume	Delay (s/veh)	LOS	Maximum Queue (ft.)
US 41 at Veterans Memorial Extension (Signalized)	US 41	SBL	631	63.3	E	570	861	321.2	F	4,195
		SBT	2,692	37.5	D	1,430	1,618	28.2	C	200
	Veterans Memorial Extension	WBL	115	67.7	E	135	150	42.9	D	140
		WBR	834	36.3	D	665	587	21.7	C	360
	US 41	NBT	1,668	22.6	C	785	2,309	58.0	E	1,365
		NBR	137	24.6	C	170	107	46.8	D	90
	Overall		**6,076**	**36.2**	**D**	-	**5,632**	**85.3**	**F**	-
Old US 41 at Veterans Memorial Extension (Signalized)	Old US 41	SBL	273	68.7	E	550	174	50.3	D	375
		SBT	414	63.3	E	565	297	45.1	D	470
		SBR	195	8.4	A	130	237	6.7	A	195
	Veterans Memorial Extension	WBL	293	330.1	F	4,525	244	135.5	F	615
		WBT	744	198.5	F	4,525	490	37.8	D	295
		WBR	178	160.1	F	170	200	9.7	A	120
	Old US 41	NBL	6	91.6	F	40	8	165.9	F	40
		NBT	296	58.7	E	715	435	122.3	F	1,035
		NBR	306	11.6	B	190	336	77.0	E	505
	Veterans Memorial Extension	EBL	202	44.9	D	1,350	211	44.3	D	1,380
		EBT	555	81.2	F	1,350	743	105.8	F	1,470
		EBR	8	15.8	B	30	13	9.8	A	35
	Overall		**3,472**	**113.7**	**F**	-	**3,387**	**72.6**	**E**	-

Note 1: Intersection delay for unsignalized intersection calculated as a weighted average of individual movements delays for ease of comparison.

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

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

TSM&O options generally include traffic signal and intersection improvements, intelligent transportation systems, access management, and transit improvements. Upon analysis, it was determined, the additional capacity required to meet the projected traffic volumes along Old US 41 in the Design Year cannot be provided solely through the implementation of TSM&O improvements. Thus, the TSM&O Alternative is not considered a viable option, and no further evaluation of the Alternative was conducted. However, TSM&O strategies were incorporated into the build alternatives.

5.3 Multimodal Alternatives

Alternative 1 and Alternative 2 both implement bicycle lanes and shared use paths to help multimodal accommodation. Both alternatives provide both county and city the opportunity for complete streets in their community. Creating multimodal accommodation can help with travel demand due to alternative options for travel. The Bonita Springs Bicycle & Pedestrian Master Plan represents a vision for a multimodal transportation network within the city. The Bonita Springs Comprehensive Plan includes a table of goals, objectives, and policies in its transportation element. This includes a strategy for pedestrians, bicycles, and other alternative modes of transportation, with the goal of implementing multi-use pathways. This will create an opportunity for the City of Bonita Springs to obtain their goal of having shared use paths to increase accessibility throughout the city. The purpose and need of this project is to address roadway capacity deficiency along CR 887 (Old US 41) from US 41 in Collier County to Bonita Beach Road in Lee County in order to relieve existing congestion and accommodate future travel demand as a result of projected population and employment growth in the area. The purpose and need align with Policy 1.2.1 by designing roadways to relieve traffic and congestion as well as multimodal benefits by implementing bike lanes and shared use paths. For more information, please see the City of Bonita Springs Comprehensive Plan.

Collier County's Transportation Elements within the Growth Management Plan seek to provide multimodal transportation system to help aid future travel demand and grant accessibility. Similarly, the purpose and need of this project help Collier County achieve their goal of multimodal transportation and accommodating future travel demand by implementing the bike lanes and shared use paths. Providing options for different modes of transportation can help reduce vehicle traffic through multimodal solutions. For more information, please see Collier County's Transportation Element in the Growth Management Plan.

5.4 BUILD ALTERNATIVES

Based on the feedback from Lee County, Collier County, and other stakeholders, two build alternatives were developed and evaluated as part of identifying improvement options for this study.

This study has identified two proposed alternatives, or build alternatives, for this project, as well as a "No-Build Alternative". The two proposed build alternatives are Alternative 1 and Alternative 2. The proposed roadway improvements for both build alternatives involve the widening Old US 41 to four lanes. The need for the proposed build alternatives on Old US 41 were developed based on supporting increased industrial and residential development, and addressing sub-standard operating conditions. Proposed improvements will relieve existing congestion and accommodate future travel demand as well as improve safety for all users, including cyclists and pedestrians. The adopted 2045 Long Range Transportation Plans (or LRTPs) for both the Collier and Lee County Metropolitan Planning Organizations (or MPOs) include envisioning the expansion of Old US 41 to four lanes. Additionally, the City of Bonita Springs has overseen two studies that show a desire to redevelop the area surrounding Old US 41 and Bonita Beach Road with a focus on pedestrian and bicyclist improvements.

Build Alternative 1 proposes widening Old US 41 to four lanes from US 41 to the proposed new Quadrant Roadway that is south of Bonita Beach Road. North of the proposed new Quadrant Roadway, Old US 41 is proposed to have two southbound lanes and one northbound lane. There will be bicycle lanes implemented in both directions and a sidewalk on the east side as well as a shared use path on the west side to help accommodate complete streets. These improvements will be made both in Collier County and in the City of Bonita Springs. The proposed roadway typically stays within the existing ROW, except for areas where additional ROW is needed at a few intersections, such as the Seminole Gulf Railroad crossing, and the proposed new Quadrant Roadway. Build Alternative 1 addresses the purpose and need for the project by widening the existing roadway in order to accommodate future travel demand as well as implementing bicycle lanes to further accommodate multimodal travel.

Build Alternative 2 includes widening Old US 41 to four lanes from the planned Veterans Memorial Boulevard in Collier County to the proposed new Quadrant Roadway that is south of Bonita Beach Rd. North of the proposed new Quadrant Roadway, Old US 41 is proposed to have two southbound lanes and one northbound lane. There will bicycle lanes implemented in both directions and a sidewalk on the east side as well as a shared use path on the west side to help accommodate complete streets. These improvements will be made both in Collier County and in the City of Bonita Springs. The proposed roadway typically stays within the existing ROW, except for areas where additional ROW is needed at a few intersections, such as the Seminole Gulf Railroad crossing, and the proposed new Quadrant Roadway. Build Alternative 2 addresses the

purpose and need for the project by widening the roadway from two to four lanes, but would reroute Old US 41 traffic onto Veterans Memorial Blvd to reach US 41. Old US 41 would be closed south of Veterans Memorial Blvd. Below in **Figure 5-1** is a side by side comparison of Alternative 1 and Alternative 2. For more details of the US 41 and Old US 41 intersection configuration please see **Table 5-3**.

Under both Design Year (2045) Build conditions, three of the six existing unsignalized intersections along Old US 41 are projected to be signalized. Detailed lane configuration diagrams for Alternatives 1 and 2 are depicted in **Figure 5-2** and **Figure 5-3.**

Figure 5-1: Alternative 1 VS. Alternative 2

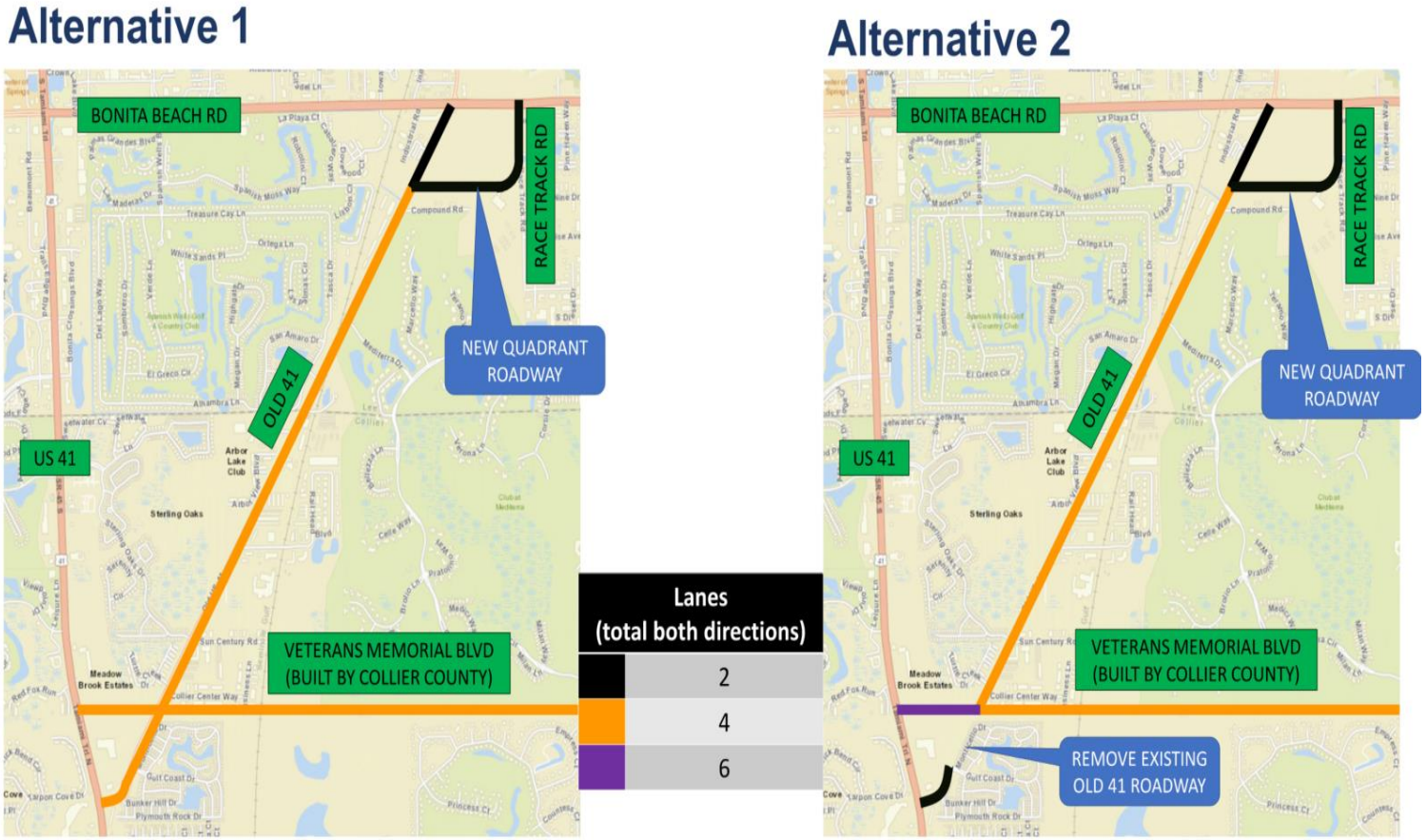


Table 5-3: US 41 and Old US 41 Intersection Configuration

Alternative	Alternative-Specific Improvements
Alternative 1	• Conventional Signalized intersection ○ Northbound: Left-Thru-Thru-Thru-Right-Right ○ Southbound: Left-Thru-Thru-Thru-Right ○ Eastbound: Left-Thru-Right ○ Westbound: Left-Left-Left-Thru-Right
Alternative 2	• Partial median U-turn (PMUT) intersection ○ The left turn lanes would be removed from the northbound and southbound approaches at the intersection of US 41 and Old US 41. ○ The left turn movements from the US 41 and Old US 41 intersection would be redistributed to new intersections for U-turns to the north and south. These intersections would be signalized and coordinated with signals on US 41 to maximize throughput.

Figure 5-2: Alternative 1 Proposed Lane Configuration

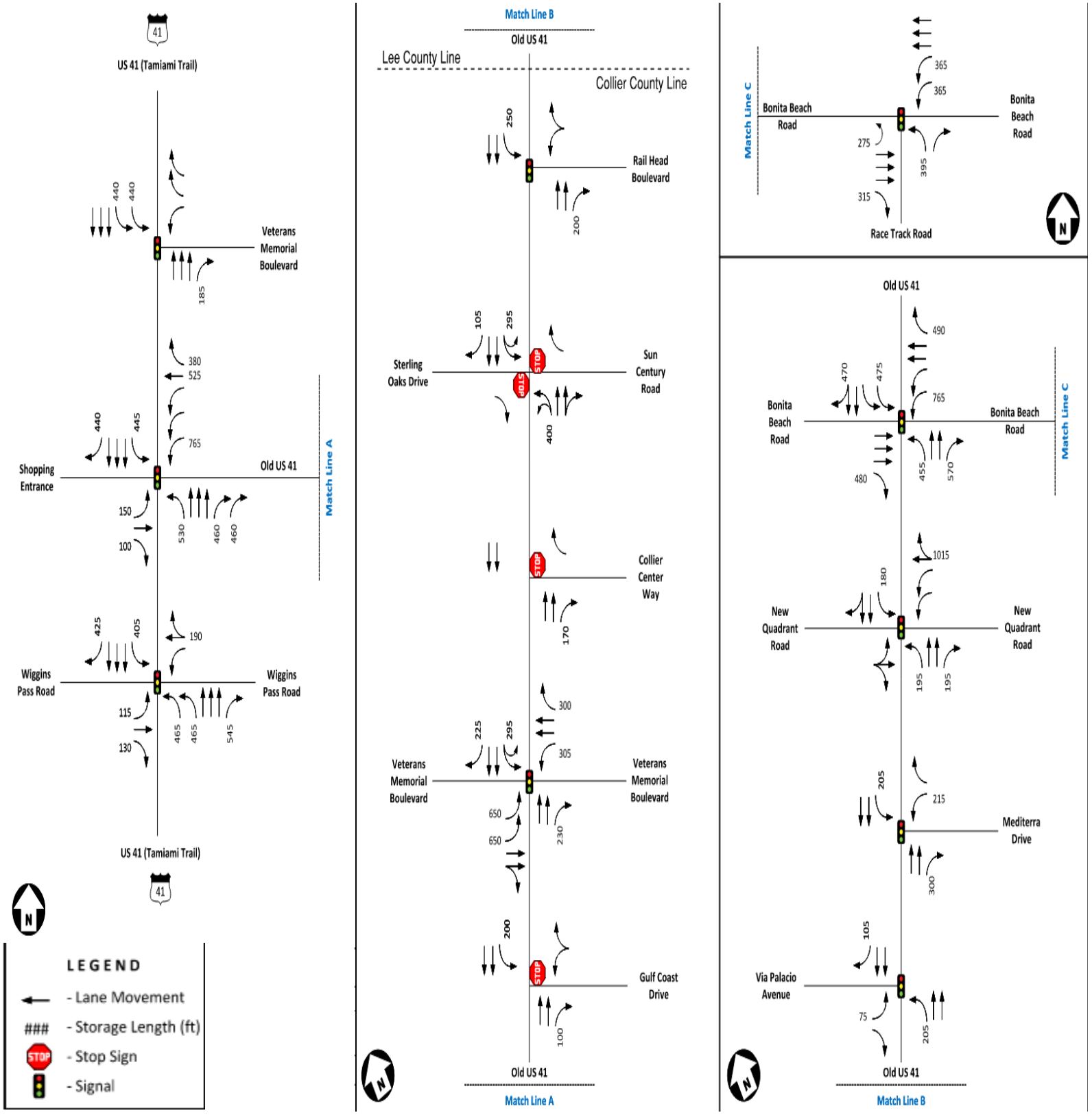
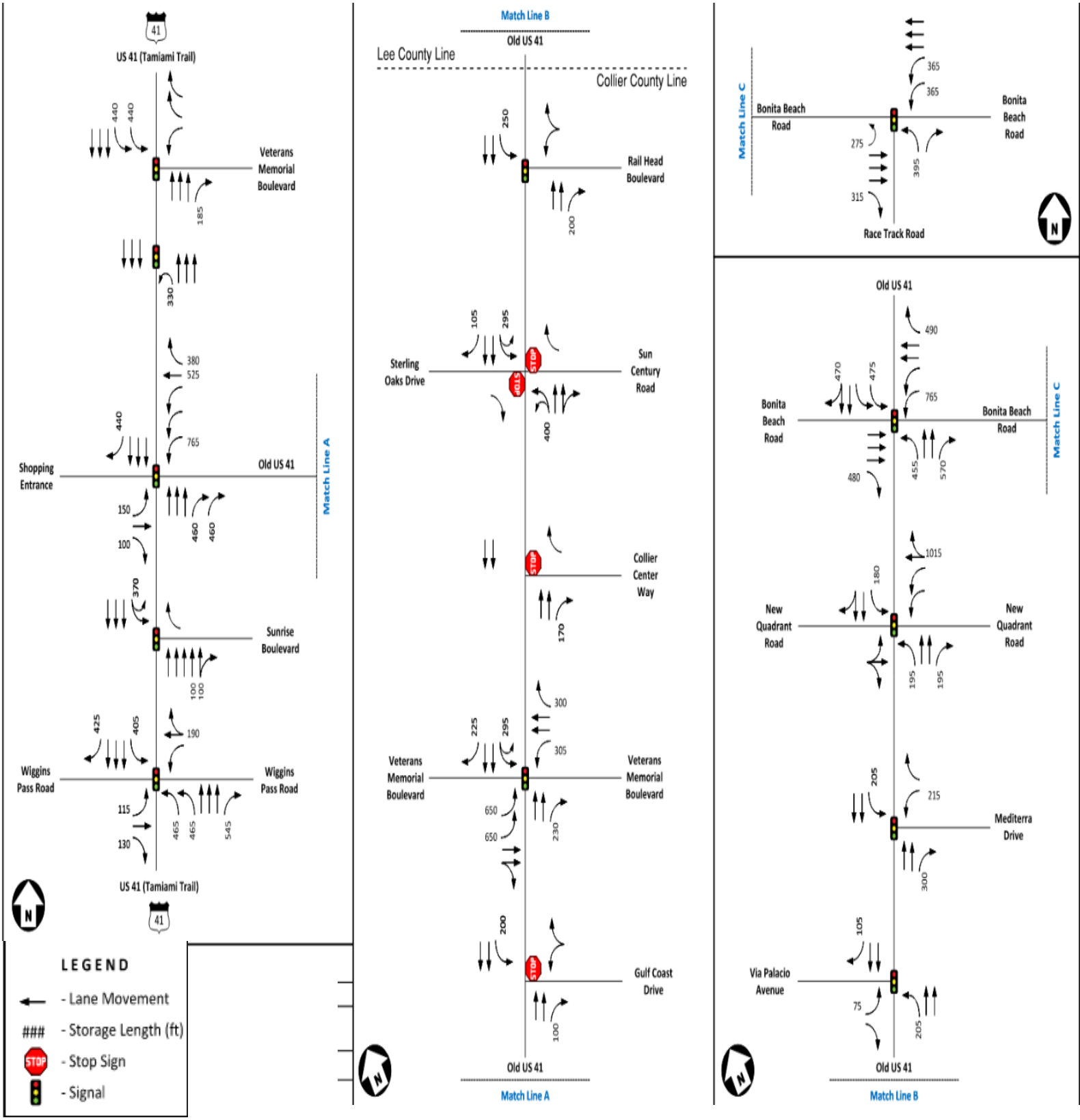


Figure 5-3: Alternative 2 Proposed Lane Configuration



The following sections include discussion of the engineering elements that were considered during the development of Build Alternatives. The information generally applies to both Build Alternatives unless stated otherwise.

5.4.1 Complete Streets

Complete streets aim to create safe travel options for all users and modes of transportation. Each build alternative includes bicycle lanes, sidewalks, and a shared use path, please see **7.1.1 Typical Sections** for the details of the typical sections. This will allow Old US 41 to be operated as a complete street for those walking, cycling, driving, or riding public transportation.

5.4.2 Pedestrian and Bicycle Accommodation

As mentioned above, both build alternatives would operate as a complete street by providing accessible options for all users. To accommodate pedestrians and bicycles, both build alternatives include sidewalks, bicycle lanes, and a shared use path.

5.4.3 Traffic Operations and Safety

Design Year (2045) *VISSIM* network performance results are presented in **Table 5-4.** The results indicate that under Build Alternative 1 conditions, average delay is expected to decrease by 24% in the AM and 55% in the PM peak hour when compared to No-Build conditions; under Build Alternative 2, average delay is expected to decrease by 33% in the AM and 56% in the PM peak hour when compared to No-Build conditions.

Table 5-4: Design Year (2045) Network Performance Results

Network Performance Category	No-Build 2045		Build Alt 1 2045		Build Alt 2 2045	
	AM	PM	AM	PM	AM	PM
System-Wide Average Delay (sec/veh)	184.5	285.7	141.1	130.0	123.3	125.5
Latent Demand (veh)	25	346	389	538	393	550
Vehicle Miles Traveled (miles)	26,821	24,211	32,172	31,282	32,417	31,385

A comparison of intersection analysis results for Design Year (2045) No-Build and Build conditions is presented in **Table 5-5**. The results indicate that for both Build Alternatives 85% of study intersections or more are expected to operate at overall LOS D or better during both peak hours. In contrast, under No-Build conditions, 50% of intersections or less are expected to operate at overall LOS D or better.

Table 5-5: Design Year (2045) Intersection Analysis Results Summary

Scenario	Type	AM Peak Hour			PM Peak Hour		
		LOS D or better	LOS E or Worse	% LOS D or better	LOS D or better	LOS E or Worse	% LOS D or better
No-Build	Overall LOS	5	7	42%	6	6	50%
	Lane Group LOS	49	54	48%	51	52	50%
Alternative 1	Overall LOS	11	2	85%	11	2	85%
	Lane Group LOS	77	34	69%	72	39	65%
Alternative 2	Overall LOS	14	1	93%	13	2	87%
	Lane Group LOS	87	31	74%	79	39	67%
Note: Lane group is a set of lanes established at an intersection approach for separate capacity and LOS analysis. All exclusive turn lanes are treated as separate lane groups, through lanes are also grouped together even if they allow for shared right/left turn movements.							

In general, network-wide performance and intersection analysis results indicate that traffic operations are expected to vastly improve under both Build Alternatives 1 and 2 when compared to No-Build conditions.

A summary of the SPICE tool results is provided in **Table 5-6**. The results indicate that predicted fatal and injury crashes under Alternative 1 are expected to be 18% higher than under Alternative 2. Similarly, the Design Year (2045) SSI score for Alternative B is expected to be 280% higher than the score for Alternative 1.

Table 5-6: SPICE Tool Results Summary

Scenario	Fatal and Injury Crashes (20-Year Project Life)	SSI Score
Alternative 1	89.68	10
Alternative 2	76.23	38
Note: A higher SSI score is indicative of improved traffic safety.		

5.4.4 Managed Lanes

There will be no implementation of managed lanes in either build alternative.

5.4.5 Access Management

The only roadway within the project limits with a FDOT Context Classification is US 41 which is C3C, Suburban Commercial, south of Sunrise Boulevard and C3R, Suburban Residential, north of Sunrise Boulevard. Please see **7.1.2 Access Management** for more information regarding access management.

5.4.6 Interchanges on Interstate Highways

There are no interchanges on interstate highways in either build alternative.

5.4.7 Intelligent Transportation Systems

There are no Intelligent Transportation System facilities or TSM&O strategies being implemented or added to either build alternative.

5.4.8 Lane Repurposing

There will be no lane repurposing for this project.

5.4.9 Landscape

The shared use paths in the build alternatives allow room for maximum landscaping between the path and the curb. The placement and maintenance of any landscaping shall comply with the required clear zone and sight distance at intersections. No other provisions or commitments were made regarding special aesthetic features.

5.4.10 Lighting

Lighting should be considered during the design phase so that the project can meet the needs of the community and better address the current lighting needs of the area.

5.4.11 Wildlife Crossings

There are no wildlife crossings being implemented and included in the build alternatives. Wildlife crossings are not warranted for this project due to the lack of documented roadkill mortalities and the lack of adjacent/local conservation lands of suitable size to support bear populations.

5.4.12 Permits

The US Army Corps of Engineers' (USACE) and SFWMD regulate impacts to surface waters within the project study area. Other agencies, including the US Fish and Wildlife Service (USFWS), National Marine Fisheries Services (NMFS), and the Florida Fish and Wildlife Conservation Commission (FWC), review and comment on wetland and permit applications. The FWC also issues permits for gopher tortoise relocation/conservation activities and incidental take of state-protected species. In addition, the Florida Department of Environmental Protection (FDEP) regulates stormwater discharges from construction sites. The complexity of the permitting process will depend on the degree of impact to jurisdictional areas. It is anticipated that the following permits will be required for this project:

Permit	Issuing Agency
Section 404 Dredge and Fill Individual Permit	USACE
Environmental Resource Individual Permit	SFWMD
National Pollutant Discharge Elimination System (NPDES)	FDEP
Gopher Tortoise Conservation Permit (as necessary)	FWC
Listed Species Incidental Take Permit (as necessary)	FWC

5.4.13 Stormwater Management

Due to the nature of the project, a stormwater management analysis was performed only for the Preferred Alternative. Please see **7.1.14 Drainage and Stormwater Management Facilities** for more information.

5.4.14 Sea Level Impact Protection (SLIP) Studies

This project is not within the coastal building zone therefore a Sea Level Impact Protection (SLIP) Study was not performed.

5.4.15 Water Quality

A Water Quality Impact Evaluation (WQIE) was completed for the project. The two impaired water body identification (WBID) numbers are 3278D (Everglades West Coast) and 3258F (Everglades West Coast). Both have pollutants of concern for Bacteria and Dissolved Oxygen.

The proposed stormwater management facility (SMF) alternatives were sized based on FDOT and SFWMD design criteria for water quality and quantity. All SMF alternatives are designed as wet detention facilities due to the high groundwater table. The pond sizing calculations assume treatment of *the first 1.5 inches of runoff from the right-of-way area* or *3.75 inches of runoff from impervious area*, whichever is greater. These water quality criteria address the additional 50% increase to SFWMD's treatment volume criteria required to account for the project basins ultimately outfalling to Outstanding Florida Waters (OFW) (Cocohatchee River). Preliminary stormwater runoff volumes were estimated based on the NRCS Runoff Curve Number method. Attenuation volumes were estimated with the SCS method.

5.4.16 Hydrology and Floodplains

The anticipated floodplain encroachments due to the proposed roadway widening were preliminarily estimated to determine potential impacts to the 100-year floodplains and necessary compensation volumes. The floodplain encroachments can be mitigated using offsite FPC sites. Cup-for-cup floodplain compensation calculations were provided for each floodplain encroachment. Each FPC site provides compensation within the same basin/encroachment location.

5.4.17 Utilities and Railroads

Utility identification was conducted with the use of comments from utility agencies/owners along Old US 41. **Table 2-12**: summarizes the facilities for the identified UAOs along Old US 41. No UAOs appear to have reimbursable impacts. Please see **7.1.21 Utilities** for more information regarding any utility impacts.

Old US 41 crosses the Seminole Gulf Railway (Crossing #623508Y), at this railroad crossing the shared use path will be extended perpendicular to the crossing to ensure safety for all users. Please see **2.2.17 Railroad Crossings** for more information regarding the railroad crossing in the project area.

5.4.18 Survey and Mapping

Designs were based on aerials and photographs; topographic surveys and LiDAR data was not used.

5.4.19 Geotechnical Investigation

Please see **2.2.22 Soils and Geotechnical Data** for information regarding geotechnical data.

5.4.20 Perimeter Walls

There will be no impacts to any existing perimeter walls. Please see **2.2.24 Noise Walls**, for existing perimeter walls.

5.4.21 Transportation Management Plan

Construction activities for the proposed build alternatives may cause minor short-term air quality, noise, water quality, traffic congestion, and visual impacts for residents and travelers within the immediate vicinity of the project.

The air quality effect will be temporary and primarily in the form of emissions from diesel-powered construction equipment and dust from embankment and haul road areas. The air pollution associated with the creation of airborne particles will be effectively controlled through the use of watering or the application of other controlled materials in accordance with FDOT's *Standard Specifications for Road and Bridge Construction*.

Noise and vibration effects will come from heavy equipment movement and construction activities. Although noise and potentially other impacts will occur, consideration and courtesy will be given to the community in the area. It will be minimized by adherence to noise control measures also found in the FDOT's *Standard Specifications for Road and Bridge Construction*. Specific noise level issues that might arise during the construction will be addressed by the Construction Engineer in cooperation with the appropriate environmental scientist.

Water quality impacts resulting from erosion and sedimentation will be controlled in accordance with FDOT's *Standard Specification for Road and Bridge Construction*, "Prevention, Control, and Abatement of Erosion and Water Pollution," and through the use of best management practices (BMP).

Short-term construction related wetland impacts will be minimized by adhering to FDOT's *Standard Specifications for Road and Bridge Construction*. These specifications include the use of siltation barriers, dewatering structures, and containment devices that will be implemented for controlling turbid water discharges outside of the construction limits.

Maintenance of traffic and sequence of construction will be planned and scheduled to reduce and minimize traffic delays throughout the project time frame. Signage will be utilized to provide pertinent information to the traveling public. Local news media will be notified in advance of road closures and other construction related activities that may significantly disrupt the community, allowing motorists, residents, and business owners to make necessary adjustments. All provisions of FDOT's *Standard Specifications for Road and Bridge Construction* will be followed. A sign will be displayed on-site providing the name, address, and telephone number of an FDOT contact person to assist the public in obtaining immediate answers to questions and logging complaints about project activity.

Access to the local properties, businesses, and residences will be maintained to the extent practical through controlled construction scheduling and the implementation of the project's specific Traffic Control Plan(s) and FDOT's *Standard Specifications for Road and Bridge Construction*.

For those residents living along the project, some construction materials stored for the project may be visually displeasing; however, it is a temporary condition and should pose no substantial problem.

5.4.22 Constructability

The constructability of both build alternatives aims to build the roadway in manner that will minimize disruptions to the current flow of traffic. Please see **7.1.18 Constructability** for more information regarding constructability.

5.4.23 Construction Impacts

During the construction phase for each build alternative, there is an anticipation of temporary impacts to noise, air, and potentially water quality.

In the beginning phase of construction, traffic will flow as normal on the existing roadways. Construction will take place outside of the existing roadway first to minimize impacts to traffic

flow. Once construction is completed, traffic will flow on the new constructed lanes. Construction will then take place on the existing roadway as traffic flows on the new roadway. Due to this, there is anticipation to have minimal impact traffic flow in the area.

5.4.24 Structures and Bridges

There are no planned bridges or structures included in either build alternative.

5.5 Comparative Alternatives Evaluation

The No-Build and the Build Alternatives were evaluated by factors such as cost, natural effects, physical effects, cultural effects, and property impacts. There was a benefit element evaluated as well for each alternative. The evaluation matrix was presented in the April 2022 Public Workshop. The evaluation is summarized in **Table 5-7**.

Table 5-7: Comparative Alternatives Evaluation

Evaluation Factors	No-Build Alternative	Alternative 1	Alternative 2
Benefits		Total	Total
Pedestrian Accommodations	✗	✓	✓
Bicycle Accommodations	✗	✓	✓
Increased Pedestrian/Bicycle Safety	✗	✓	✓
Reduced Traffic Congestion	✗	✓	✓
Enhanced Safety for All Users	✗	✓	✓
Property Impacts			
Right-of-Way to be Acquired for Roadway (acres)	0	6.72	7.78
Right-of-Way to be Acquired for Stormwater Management Facilities (Ponds) and Floodplain Compensation (acres)	0	10.11	10.11
Total Right-of-Way to be Acquired (acres)	0	16.83	17.89
Number of Properties Impacted (parcels)	0	44	39
Number of Business Relocations (parcels)	0	0	0
Number of Residential Relocations (parcels)	0	0	0
Number of Outdoor Advertising Sign Relocations	0	0	0
Number of Business/Community Sign Relocations	0/0	6	6
Natural/Cultural/Physical Environmental Effects			
Archaeological Site Involvement (potential - high, medium or low)	None	Medium	Medium
Number of Historic Sites	0	4	4
Number of Park and Recreation Sites Impacted	0	0	0
Number of Conservation Easements Impacted	0	0	1
Number of Noise Sensitive Sites	0	81	57
Wetland Impacts (acres)	0	3.14	2.99
Surface Water Impacts (acres)	0	6.95	6.94
Floodplain Impacts (acres)	0	40.25	41.02
Threatened and Endangered Species (potential - high, medium, or low)	None	Medium	High
Number of Sites with High/Medium Contamination Risk	0/0	0/3	0/3
Cost Estimates (2022 Cost)			
Final Design	$0	$5,498,983	$5,095,699
Right-of-Way Acquisition	$0	$19,568,000	$21,735,000
Wetland Mitigation	$0	$437,572	$416,668
Roadway Construction	$0	$46,438,330	$42,356,290
Stormwater Management Facilities (Ponds) and Floodplain Compensation Construction	$0	$4,066,767	$4,071,001
Utility Relocation and Railroad Construction	$0	$4,484,735	$4,529,696
Construction Engineering & Inspection	$0	$5,498,983	$5,095,699
Total Estimated Cost	$0	$85,993,370	$83,300,053

A summary of shared improvements, or improvements present in both Alternatives 1 and 2, are shown below in **Table 5-8**.

Table 5-8: Improvements Common in Both Alternatives 1 and 2

Alternative	Common improvements under both alternatives

Alternatives 1 and 2	• The intersection at US 41 and Veterans Memorial Blvd Extension would have the following approach configurations:
	  ○ Northbound: Thru-Thru-Thru-Right
	  ○ Southbound: Left-Left-Thru-Thru-Thru
	  ○ Westbound: Left-Right-Right
	• The intersection at Old US 41 and Veterans Memorial Blvd Extension would have the following approach configurations:
	  ○ Northbound: Thru-Thru-Right
	  ○ Southbound: Left-Thru-Thru-Right
	  ○ Eastbound: Left-Left-Thru-Thru/Right
	  ○ Westbound: Left-Thru-Thru-Right
	• Northbound left turns would be redirected to the northbound U-turn at Old US 41 and Sterling Oaks Dr / Sun Century Rd
	• Widen Old US 41 to provide two through lanes in each direction between US 41 and Bonita Beach Rd.
	• Modify the Old US 41 and Collier Center Way intersection to prohibit left turns from Collier Center Way. These left turns would be redirected to the northbound U-turn at Old US 41 and Sterling Oaks Dr / Sun Century Rd.
	• Modify the Old US 41 and Sterling Oaks Dr / Sun Century Rd intersection to prohibit left turns or through movements from either Sterling Oaks Dr or Sun Century Rd. Left turns and through movements from Sterling Oaks Dr would be redirected to the southbound U-turn at the Old US 41 and Collier Center Way intersection. Left turns and through movements from Sun Century Rd would be redirected to the northbound U-turn at Old US 41 and Rail Head Blvd.
	• Install a traffic signal at Old US 41 and Rail Head Blvd.
	• Install a traffic signal at Old US 41 and Via Palacio Ave.
	• Install a traffic signal at Old US 41 and Mediterra Dr.
	• Construct a new signalized intersection on Old US 41 approximately 1,200-feet south of Bonita Beach Rd. The intersecting roadway, new Quadrant Roadway, would connect to Industrial Rd to the west and Race Track Rd to the east. This intersection would have the following approach configurations:
	  ○ Northbound: Left-Thru-Thru-Right
	  ○ Southbound: Left-Thru-Thru/Right
	  ○ Eastbound: Left/Thru/Right
	  ○ Westbound: Left-Left-Thru/Right

Alternative	Common improvements under both alternatives
	• The signalized intersection at Bonita Beach Rd and Old US 41 would have eastbound lefts redirected to the eastbound U-turn at the intersection of Bonita Beach Rd and Race Track Rd. It would have the following approach configurations: ○ Northbound: Left-Thru-Thru-Right ○ Southbound: Left-Left-Thru-Thru/Right ○ Eastbound: Thru-Thru-Thru-Right ○ Westbound: Left-Left-Thru-Thru-Right Note: The additional northbound through lane would lead into a lane drop. • The signalized intersection at Bonita Beach Rd and Race Track Rd would have an additional westbound left turn lane with a storage length of 365-feet. An additional receiving lane would be provided on Race Track Rd and extend for approximately 500-feet.

5.6 Selection of Preferred Alternative

The No-Build Alternative fails to fulfill the project's purpose and need to accommodate existing congestion and future travel demand. The No-Build Alternative assumes no improvements will be made to Old US 41 though the year 2045 except routine maintenance. The No-Build Alternative will likely continue to increase congestion as travel demand rises and will limit opportunities for complete streets due to the lack of pedestrian and bicycle accommodations on Old US 41.

While the build alternatives are associated with costs, ROW acquisition (when necessary), wetland mitigation, and construction, it will result in a facility that is fostering multimodal accommodation as well as future expected growth for Collier and Lee Counites. The principal difference between Alternative 1 and 2 is at the southern end of the study area near the planned Veterans Memorial Boulevard. Veterans Memorial Boulevard will be built by Collier County and is expected to be completed before this project begins construction. Alternative 1 would widen Old US 41 along the existing alignment south of Veterans Memorial Boulevard while Alternative 2 would intersect Old US 41 into Veterans Memorial Boulevard and route all Old US 41 traffic west along Veterans Memorial Boulevard to US 41. Old US 41 between Gulf Coast Drive and Veterans Memorial Boulevard would be closed.

In selecting the Preferred Alternative, Alternative 1 was determined to best meet the purpose and need of this project by accommodating both current and future congestion, as well as implementing pedestrian and bicycle facilities throughout Old US 41. It is more effective in addressing congestion, as Alternative 2 will route traffic toward Old US 41 from the planned Veterans Memorial Boulevard.

Based on the comparative evaluation of the alternatives, the No-Build Alternative offers the benefit of no cost, but it provides no tangible benefits for the community, particularly in

addressing traffic congestion and accommodating multimodal features. The purpose of this project is to meet the future travel demand in the area, which the No-Build Alternative fails to do. Both Alternative 1 and Alternative 2 support the overall purpose of the project and address its needs. However, the Preferred Alternative was selected due to its lower impact, compared to Alternative 2, and its ability to create greater consistency along Old US 41 to better align with the project's objectives.

Alternative 1 has been modified after stakeholder and local government review. Alternative 1 will be expanded from US 41 to the proposed new Quadrant Roadway. There are no planned improvements for Old US 41 north of the proposed new Quadrant Roadway, including the Old US 41 and Bonita Beach Road intersection. New Quadrant Roadway will connect Old US 41 to Race Track Road, and improvements will continue east of Race Track Road onto Bonita Beach Road. A summary of the modified alternative improvements is presented in **Table 5-9**, and a lane configuration schematic is shown in **Figure 5-4**. For more information regarding the modified alternative please see the *PTAR Supplement Analysis Memorandum.*

Table 5-9: Modified Build Alternative 1 – Proposed Improvements

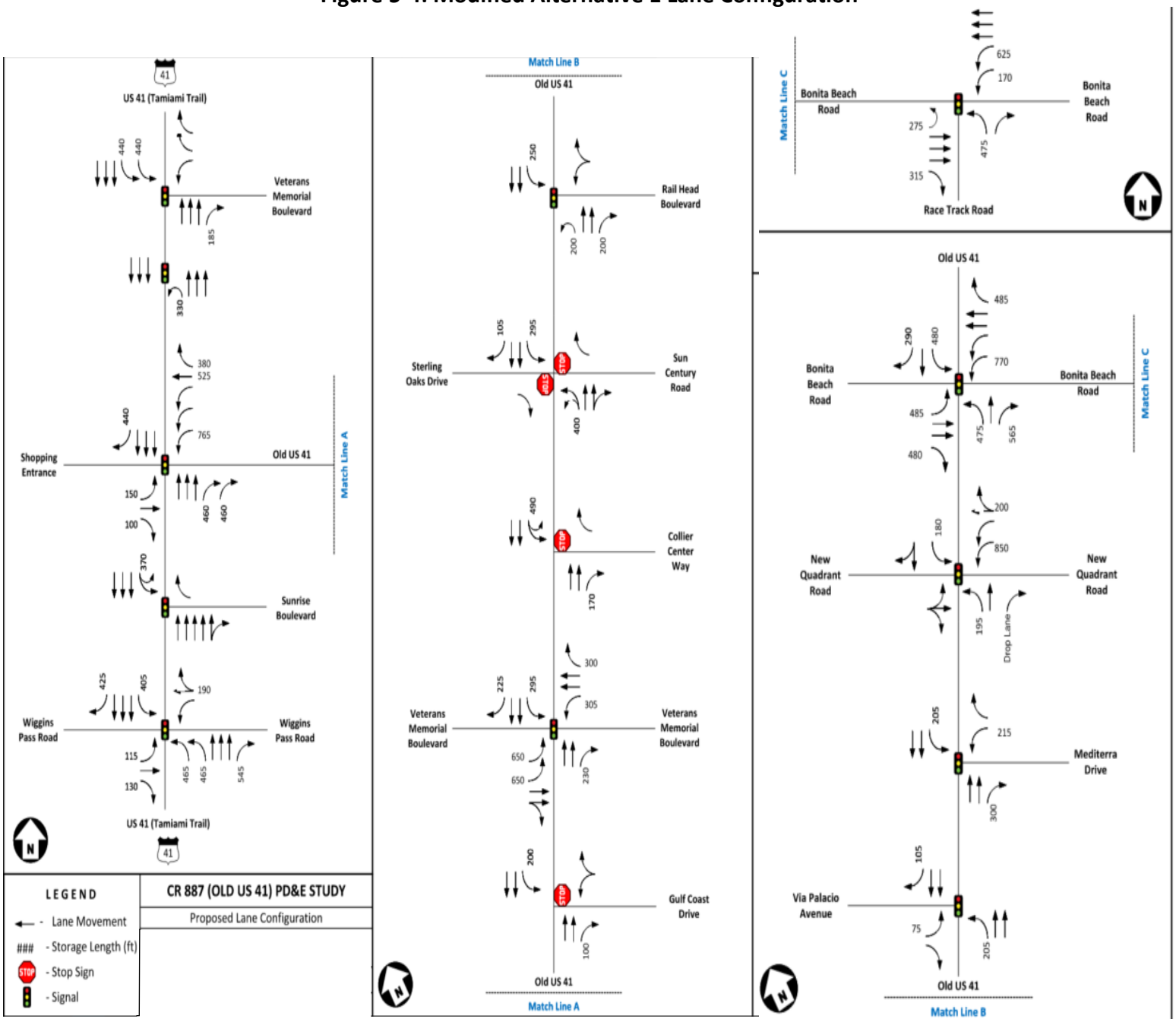
Alternative	Improvements

Modified Alternative 1	• The intersection at US 41 and Veterans Memorial Blvd Extension would have the following approach configurations:
	  ○ Northbound: Thru-Thru-Thru-Right
	  ○ Southbound: Left-Left-Thru-Thru-Thru
	  ○ Westbound: Left-Right-Right
	• The intersection at Old US 41 and Veterans Memorial Blvd Extension would have the following approach configurations:
	  ○ Northbound: Thru-Thru-Right
	  ○ Southbound: Left-Thru-Thru-Right
	  ○ Eastbound: Left-Left-Thru-Thru/Right
	  ○ Westbound: Left-Thru-Thru-Right
	• Northbound left turns would be redirected to the northbound U-turn at Old US 41 and Sterling Oaks Dr / Sun Century Rd
	• Modify the Old US 41 and Collier Center Way intersection to prohibit left turns from Collier Center Way. These left turns would be redirected to the northbound U-turn at Old US 41 and Sterling Oaks Dr / Sun Century Rd.
	• Modify the Old US 41 and Sterling Oaks Dr / Sun Century Rd intersection to prohibit left turns or through movements from either Sterling Oaks Dr or Sun Century Rd. Left turns and through movements from Sterling Oaks Dr would be redirected to the southbound U-turn at the Old US 41 and Collier Center Way intersection. Left turns and through movements from Sun Century Rd would be redirected to the northbound U-turn at Old US 41 and Rail Head Blvd.

Alternative	Improvements

	• Install a traffic signal at Old US 41 and Rail Head Blvd.
	• Install a traffic signal at Old US 41 and Via Palacio Ave.
	• Install a traffic signal at Old US 41 and Mediterra Dr.
	• Construct a new signalized intersection on Old US 41 approximately 1,200-feet south of Bonita Beach Rd. The intersecting roadway, New Quadrant Rd, would connect to Industrial Rd to the west and Race Track Rd to the east.
	• Widen Old US 41 to provide two through lanes in each direction between US 41 and New Quadrant Rd.
	• The signalized intersection at Bonita Beach Rd and Race Track Rd would have an additional westbound left turn lane with a storage length of 365-feet. An additional receiving lane would be provided on Race Track Rd and extend for approximately 500-feet.
	• The left turn lanes would be removed from the northbound and southbound approaches at the intersection of US 41 and Old US 41.
	• The left turn movements from the US 41 and Old US 41 intersection would be redistributed to partial median U-turn (PMUT) intersections to the north and south. These intersections would be signalized and coordinated with signals on US 41 to maximize throughput.
	• The Old US 41 at New Quadrant Rd intersection would have the following approach configurations:
	  ○ Northbound: Left-Thru-Right
	  ○ Southbound: Left-Thru/Right
	  ○ Eastbound: Left/Thru/Right
	• Westbound: Left-Left-Thru/Right

Figure 5-4: Modified Alternative 1 Lane Configuration



6.0 AGENCY COORDINATION & PUBLIC INVOLVEMENT

6.1 AGENCY COORDINATION

The project was evaluated through the FDOT's Efficient Transportation Decision Making (ETDM) process, designated as ETDM project #14339. An ETDM Final Programming Screen Summary Report (FDOT 2020B) was published on October 15, 2019, and contained comments from the Environmental Technical Advisory Team (ETAT) on the project's effects on various natural, physical, and social resources. During the project's ETDM review, various federal and state regulatory/permitting agencies reviewed the project's purpose and need, and generalized description of anticipated improvements. They provided comments on the project's potential impacts, and considerations for, natural resources and documentation/permitting under their regulatory purview.

6.2 PUBLIC INVOLVEMENT

Throughout the project, efforts have been made to meet with local MPO's, HOA's, Business Owners, and the local County and City Staff. Below in **Table 6-1** is a summary of coordination efforts for the study to date.

Table 6-1: Agency Coordination

Agency Kickoff Meeting	May 21, 2019
Presentation to Collier Metropolitan Planning Organization (MPO)	June 14, 2019
Presentation to Lee County MPO	June 21, 2019
Presentation to City of Bonita Springs City Council	August 7, 2019
Meeting with Collier County Environmental Staff	January 22, 2020
Meeting with Veterans Memorial Parkway Team	January 30, 2020
Stakeholder meeting with Quality State Investments, LLC	February 10, 2020
Project information booth at the Bonita Springs Farmers Market	March 3, 2020
Meeting with Collier County Engineering Staff	June 3, 2020
Meeting with Bonita Springs Engineering Staff	June 8, 2020
Meeting with Bonita Springs Staff	August 6, 2020
Meeting with Collier County Staff	August 7, 2020
Meeting with Bonita Springs Staff	October 28, 2020
Meeting with Collier County Staff	October 29, 2020
Meeting with Collier County Staff	November 16, 2020
Meeting with Lee County staff	January 22, 2021
Meeting with Southwest Florida Water Management District Staff	January 27, 2021
Meeting with Collier County on Veterans Memorial Boulevard Coordination	May 17, 2021
Meeting with Lee County Staff	October 11, 2021
Meeting with Collier County and City of Bonita Springs Engineering Staff	October 14, 2021
Meeting with Quality State Investments, LLC	November 9, 2021
Meeting with Collier MPO Bicycle Pedestrian Advisory Committee (BPAC)	May 17, 2022
Meeting with Collier MPO Congestion Management Committee (CMC)	May 18, 2022
Meeting with Collier County on Veterans Memorial Boulevard	May 19, 2022
Meeting with Collier MPO Citizen Advisory Committee (CAC)	May 23, 2022
Meeting with Collier MPO Technical Advisory Committee (TAC)	May 23, 2022
Meeting with Lee MPO Bicycle Pedestrian Coordinating Committee (BPCC)	May 24, 2022
Meeting with Bonita Springs City Council	June 1, 2022
Meeting with Lee MPO CAC	June 2, 2022
Meeting with Lee MPO TAC	June 2, 2022
Meeting with Collier County on Veterans Memorial Boulevard	June 8, 2022
Meeting with Collier MPO Board	June 10, 2022
Meeting with City of Bonita Springs Councilwoman Carr	June 17, 2022
Meeting with Lee MPO Board	June 17, 2022
Cordova at Spanish Wells HOA Meeting	June 22, 2022

6.3 PUBLIC WORKSHOP

FDOT held a public workshop regarding proposed improvements on Old US 41 (CR 887) from US 41 in Collier County to Bonita Beach Road in Lee County to provide interested persons an opportunity to provide their feedback on the proposed improvements. The workshop was held on Thursday, April 14, 2022, at the Bonita Springs Recreation Center, 26740 Pine Avenue, Bonita Springs, FL 34135, at five p.m. and on Tuesday, April 19, 2022, online through GoTo Webinar.

A letter regarding the public workshop was sent via email to elected and appointed officials on March 17, 2022. A notification flyer was mailed to property owners located within at least 300-feet of the project corridor on March 17, 2022. Notice of this meeting was published in the Naples Daily News and Fort Myers News Press on April 7, 2022. Advertisement of the public workshop was also posted on the Florida Administrative Register (FAR) and through FDOT media release. Notification emails, advertisements, screenshot of the website announcements, press release, mailing list and newsletter invite can be found in the *Public Involvement Plan*.

A total of forty-six (46) people attended the in-person meeting, including one elected official, as well as seventeen (17) staff members of the project team. Twenty-eight (28) people registered for the virtual workshop with forty (40) people attending the event. The meeting began with an open house period that took place from five p.m. to seven p.m. During this time, stakeholders were able to view project materials, boards and an informational video, and discuss any questions they had with project staff.

Participants were given an opportunity to provide public comments through the following methods:

- Written comments at the public workshop;
- Mail comments to Steven A. Andrews, P.E., FDOT Project Manager, PO Box 1249, Bartow, FL 33831;
- Email comments to Steven.Andrews@dot.state.fl.us;
- Visit the project website http://www.swflroads.com/us41/cr887/

Attendees were provided with a project handout with information on the project history and proposed alternatives, comment cards for providing feedback, and informational material on roundabouts.

Three comment cards were received at the April 2022 public workshop. 226 comments were provided by email and 381 comments were received by mail following the public workshop. Spanish Wells at Cordova, a community along the project corridor, sent out a set of documents instructing its residents on how to provide their comments to the project team. Additionally, they provided a standard script for their residents to send.

The following statements are a summary of frequent topics, regarding the project, taken from the April 2022 Public Workshop.

- Schedule
- Noise
- Impacts from U-turn bulb-outs
- Proposed Traffic Signals
- Community Entrance Access

As documented in the project's *Comments and Coordination Report*, the FDOT provided written responses to each comment received. Each comment was evaluated and incorporated into the project to the extent feasible per FDOT's design and safety standards and other project environmental considerations.

Following the public comment period, Collier County endorsed Alternative 1. Their letter of support can be found in the *Public Comments and Coordination Report*.

6.4 PUBLIC HEARING

This section will be updated upon the completion of the Public Hearing.

7.0 PREFERRED ALTERNATIVE

7.1 ENGINEERING DETAILS OF THE PREFERRED ALTERNATIVE

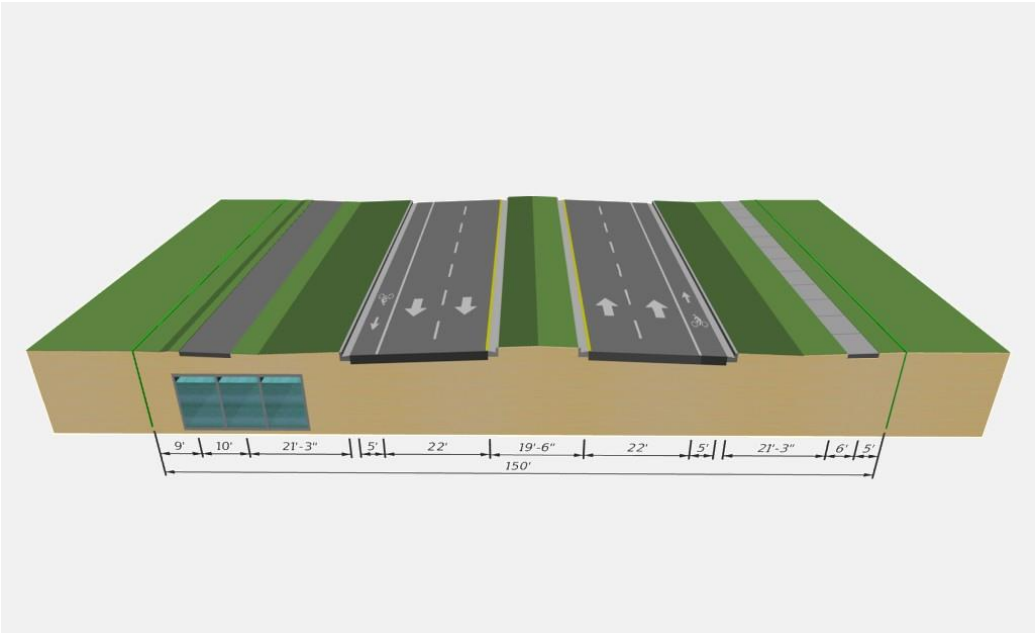
7.1.1 Typical Sections

The Preferred Alternative was designed and developed based on the congestion, future travel demand, and population growth along Old US 41. The typical sections are segmented by Collier County (Segment 1) and the City of Bonita Springs (Segment 2). Segment 1 contains three typical sections while Segment 2 contains two. The Preferred Alternative typical sections are outlined for Old US 41 and other key roadways in the study area that intersect Old US 41. See **Appendix C-Typical Section Package** for more information. The following figures and details are taken from the typical sections of the Preferred Alternative. The design speed is typically 45 mph with the exception of 30 mph on the proposed new Quadrant Roadway from Old US 41 to Race Track Rd.

Collier County

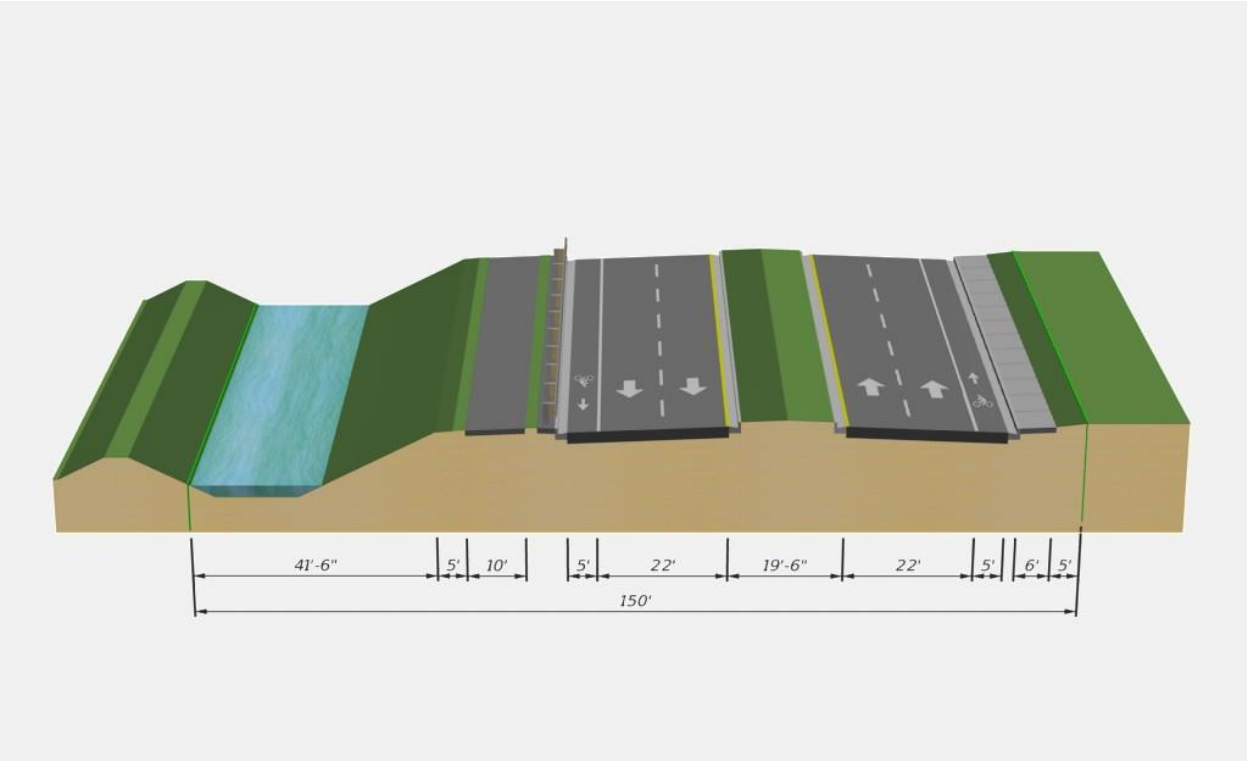
Old US 41 from US 41 to north of Sterling Oaks Drive consists of a four-lane divided typical section with a sod median width of 19.6-feet, 11-foot travel lanes, established five-foot bicycle lanes in both directions, a six-foot sidewalk on the east side, a 10-foot shared use path, and a canal box culvert on the west side. **Figure 7-1** below illustrates typical section one in Collier County within a 150-foot ROW.

Figure 7-1: US 41 to 300' N. of Sterling Oaks Dr



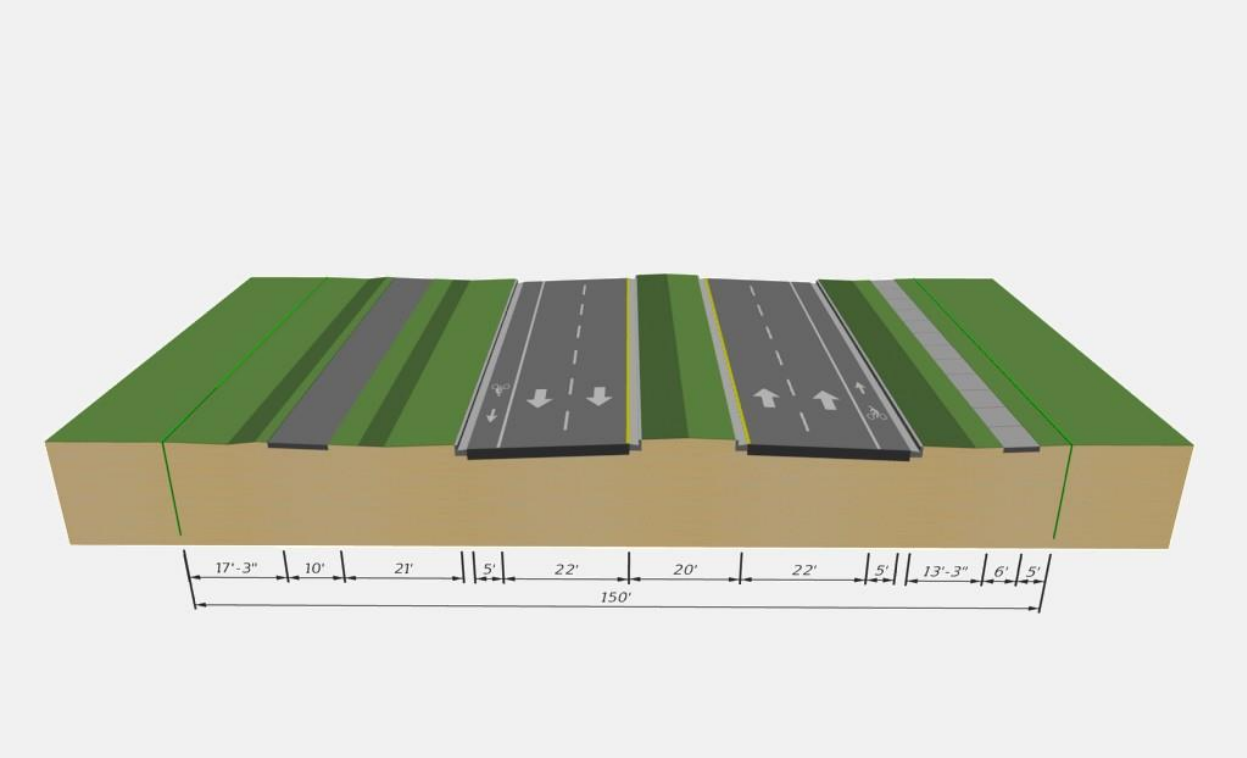
Old US 41 further North of Sterling Oaks Dr is a four-lane divided typical section with a sod median width of 19.6-feet, 11-foot travel lanes, established five-foot bicycle lanes north and south bound, and a six-foot concrete sidewalk on the east side. On the west side there is a canal, a 10-foot shared use path, and a guardrail that is parallel with the bicycle lane. **Figure 7-2** illustrates typical section two within a 150-foot ROW.

Figure 7-2: 300 N' of Sterling Oaks Dr to 1,000 N' Sterling Oaks Dr



The third typical section continues north of Sterling Oaks Dr to the Collier/Lee County line. It is a four-lane divided typical section with a sod median width of 20-feet, 11-foot travel lanes, established five-foot bicycle lanes, and a six-foot concrete sidewalk on the east side. On the west side there is a 10-foot shared use path with 21-feet of sod between the bicycle lane and the shared use path. **Figure 7-3** illustrates the typical section within a 150-foot ROW.

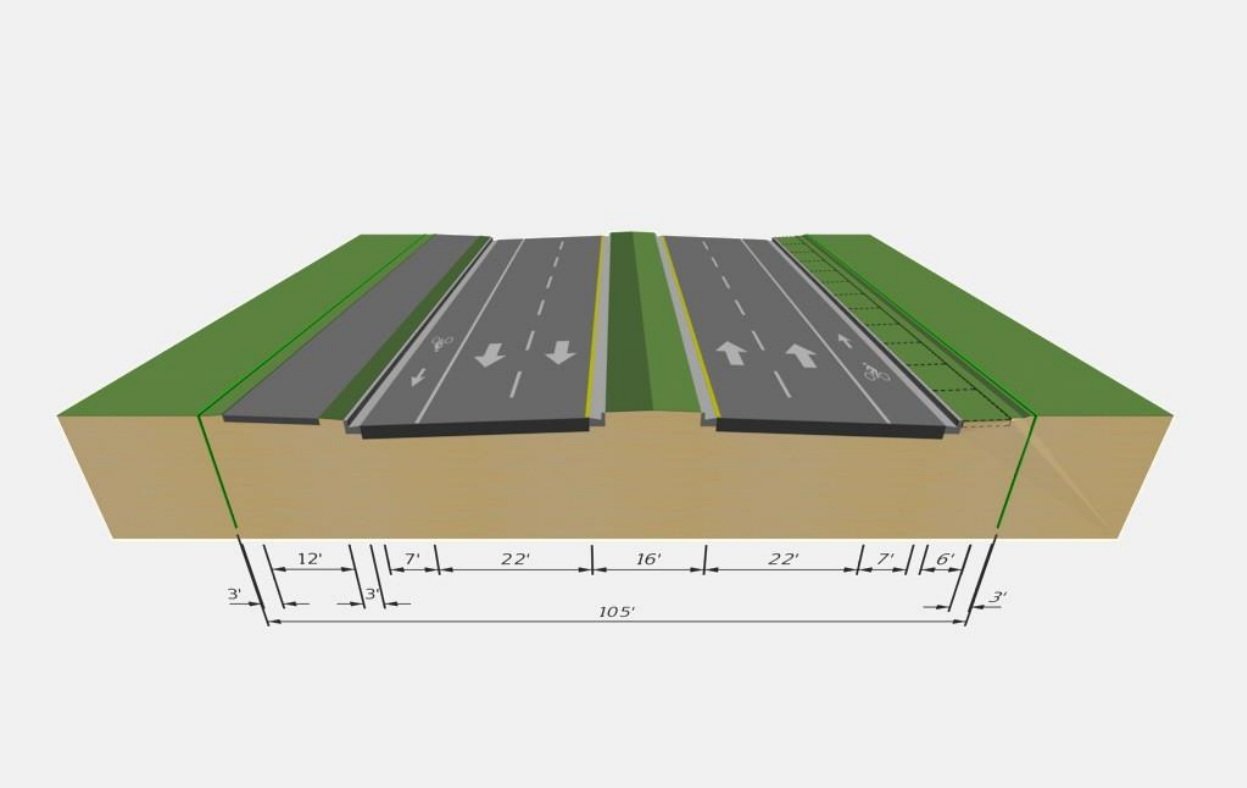
Figure 7-3: 1,000 N. of Sterling Oaks Dr to Collier/Lee County Line



City of Bonita Springs

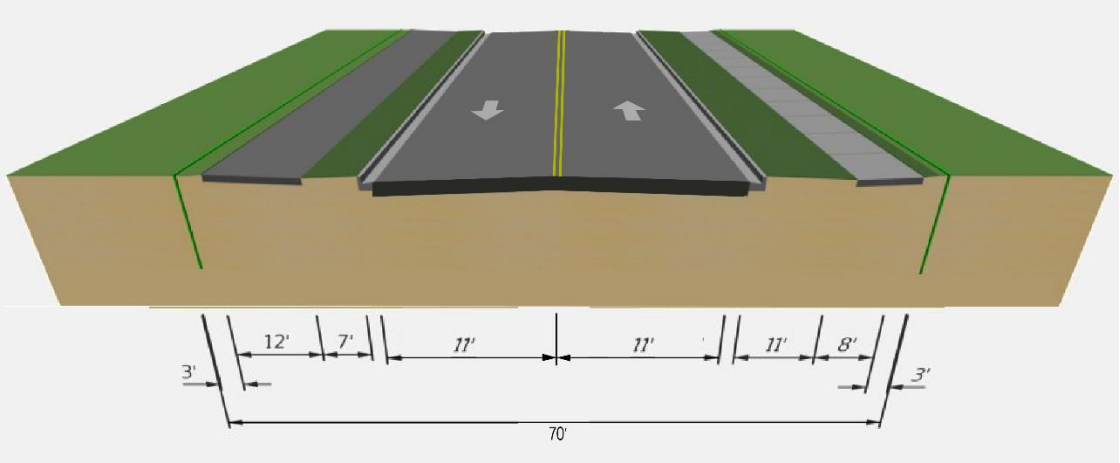
The first typical section in the City of Bonita Springs begins at the Collier/Lee County Line to the proposed new Quadrant Roadway. This segment is a four-lane divided typical section with a 16-foot sod median, 11-foot travel lanes, and established seven-foot bicycle lanes in both directions. On the east side there is a planned six-foot sidewalk and on the west side there is a 12-foot shared use path with a three-foot sod barrier between the bicycle lane and shared use path. **Figure 7-4** below illustrates this typical section within a 105-foot ROW.

Figure 7-4: Collier/Lee County Line to Proposed New Quadrant Roadway



Starting from the proposed new Quadrant Roadway from Old US 41 to Race Track Rd is a two-lane undivided typical section with 11-foot travel lanes. On the east side is an eight-foot concrete sidewalk with a 11-foot sod barrier between the roadways. On the west side there is 12-foot shared use path with a seven-foot barrier between the roadways**. Figure 7-5** illustrates the typical section within a 70-foot ROW.

Figure 7-5: Proposed New Quadrant Roadway from Old US 41 to Race Track Rd



7.1.2 Access Management

The access classification for Old US 41 will remain the same; however, access will change due to the inclusion of medians. The proposed median openings have been designed to provide a balance between access to adjacent properties and safety based on the access class spacing standards. Existing driveway connections will be maintained with minor modifications if any. However, bulbouts will be implemented along Old US 41 to facilitate single-truck U-turns. See the concept plans in **Appendix A- Preferred Alternative Concept Plans** and the *Access Management Report* for the type and location of median openings and connections.

7.1.3 Right of Way

The ROW in the Preferred Alternative remains relatively the same as the existing throughout the project limits, please see section **2.2.4 Right-of-Way**, for the ROW. The Preferred Alternative requires additional ROW for turn lanes, intersections, the new Quadrant Roadway, and SMF and FPC sites. The total ROW needed is 30.52 acres, the number of parcels are 18, and the total number of relocations is 138. The total ROW acquisition cost is $108,280,000. The new Quadrant Roadway will have a ROW of 70-feet. For more information regarding the additional ROW, please see **Appendix A- Preferred Alternative Concept Plans**.

7.1.4 Horizontal and Vertical Geometry

The vertical geometry of the Preferred Alternative will remain primarily the same as the existing conditions. The vertical geometry beginning on the southern end of Old US 41 is at an elevation of 13.5-feet near the US 41 intersection (Station 101+00). Heading north, it transitions to 11-feet at Station 105+00 and continues between 11-feet and 12-feet to Station 141+00. From Station 141+00 to Station 150+00 it rises from 12-feet to 14-feet. It continues at 14-feet to Station 168+00 where it begins to rise. From Station 168+00 to Station 176+00 it rises to 16.5-feet and continues between 16.5-feet and 15.5-feet to Station 197+00. From Station 197+00 to Station 206+00 it drops from 16-feet to 14-feet and continues near that elevation to Station 223+00. From Station 223+00 to Station 226+00 the elevation drops from 14-feet to 11.5-feet. From Station 226+00 to the intersection of Old US 41 and the new Quadrant Roadway at Station 232+48 the roadway stays between 11-feet and 12-feet.

The horizontal alignment for the centerline point of intersection (PI) stations were obtained through CADD. The horizontal alignment for Old US 41 and the new Quadrant Roadway is summarized below in **Table 7-1** and **Table 7-2**. For more information regarding the concept plans of the horizontal and vertical geometry for the project, see **Appendix A- Preferred Alternative Concept Plans**.

Table 7-1: Old US 41 Horizontal Alignment

Centerline PI Station	Bearing		Degree of Curvature	Radius (ft)	Length of Curve (ft)
	Back	Ahead			
100+00.00	-	N 78° 05' 08.11" E	-	-	-
104+05.45	N 78° 05' 08.11" E	N 22° 10' 32.00" E	20° 32' 10.04"	279.00	272.25
111+96.41	N 22° 10' 32.00" E	N 31° 43' 08.82" E	0° 59' 46.81"	5,750.65	957.87
132+13.87	N 31° 43' 08.82" E	N 34° 46' 27.00" E	0° 40' 42.88"	8,443.50	450.21
136+64.08	N 34° 46' 27.00" E	N 31° 43' 08.82" E	0° 40' 42.88"	8,443.50	450.21
143.+12.54	N 31° 43' 08.82" E	N 30° 43' 08.82"	-	-	-
152+29.32	N 30° 43' 08.82" E	N 31° 43' 08.82" E	-	-	-
169+96.07	N 31° 43' 08.82" E	N 32° 41' 28.75" E	-	-	-
181+76.43	N 32° 41' 28.75" E	N 31° 41' 28.75" E	-	-	-
231+69.53	N 31° 41' 28.75" E	-	-	-	-

Table 7-2: New Quadrant Roadway Horizontal Alignment

Centerline PI Station	Bearing		Degree of Curvature	Radius (ft)	Length of Curve (ft)
	Back	Ahead			
5+00.00	-	S 58° 17' 29.17" E	-	-	-
10+06.88	S 58° 17' 29.17" E	N 65° 05' 04.78" E	14° 00' 31.49"	409.00	404.20
15+08.06	N 65° 05' 04.78" E	N 88° 50' 53.28" E	5° 43' 46.48"	1,000.00	414.75
25+05.36	N 88° 50' 53.28" E	N 46° 10' 48.40" E	20° 02' 00.56"	286.00	212.98
27+30.81	N 46° 10' 48.40" E	N 0° 45' 19.17" W	20° 02' 00.56"	286.00	234.29
36+38.91	N 0° 45' 19.17" W	-	-	-	-

7.1.5 Design Variations and Design Exceptions

At this time, design variations and exceptions for the Preferred Alternative are not required, pending further review.

7.1.6 Multimodal Accommodations

When feasible pedestrian accommodations and crossings will be implemented throughout the design of Old US 41. Bicycle lanes will also be implemented throughout the corridor to accommodate bicyclist and provide a safe, accessible option for travel. The Preferred Alternative is intended to help maintain and operate safe and accessible use for all modes of transportation along Old US 41. The design is intended to consider complete streets ultimately for the overall transportation accommodation and progression of the area.

Freight accommodation will be provided by the widening of lanes and intersections, improving access for trucks that commute through Lee and Collier Counties. Old US 41 crosses the Seminole Gulf Railway where there will be a continuation of the sidewalk around the railroad crossing. There are multiple bulb outs on the Preferred Alternative to accommodate single unit trucks.

7.1.7 Intersection/ Interchange Concepts and Signal Analysis

New traffic signals are proposed along Old US 41 at Veterans Memorial Boulevard, Rail Head Boulevard, Via Palacio Avenue, Mediterra Drive, and the new Quadrant Roadway to balance safety, access management, and operational needs. See the *PTAR* and *PTAR Supplement Memorandum* for additional details on the intersections and level of service.

7.1.8 Tolled Projects

There are no tolled projects included in the Preferred Alternative.

7.1.9 Intelligent Transportation System and TSM&O Strategies

Please see **5.4.7 Intelligent Transportation Systems** for detailed information regarding Intelligent Transportation Systems and TSM&O Strategies in the Preferred Alternative.

7.1.10 Landscape

Context sensitive solutions such as aesthetics features and landscaping should be considered during the design phase so that the project is in harmony with the community and preserves and/or enhances the natural, environmental, scenic, and aesthetic values of the area. Please see **5.4.9 Landscape** for more information regarding landscape in the Preferred Alternative.

7.1.11 Lighting

Please see **5.4.10 Lighting** for detailed information regarding lighting in the Preferred Alternative.

7.1.12 Wildlife Crossings

Please see **5.4.11 Wildlife Crossings** for detailed information regarding wildlife crossings in the Preferred Alternative.

7.1.13 Permits

Please see **5.4.12 Permits** for detailed information regarding the permits required for the Preferred Alternative.

7.1.14 Drainage and Stormwater Management Facilities

The proposed roadway widening will require extensions to all three (3) existing cross drains along the corridor. In the existing conditions, stormwater runoffs from adjacent offsite areas in Collier County discharge into the conveyance ditches along the southeastern side of CR 887 and coalesce with the on-site runoff from the project area before entering cross drains CD-1 and CD-2. Due to right-of-way constraints, the typical section calls for the elimination of these ditches, and therefore a separate offsite collection system concept will need to be considered during the design phase to bypass the onsite conveyance system and maintain existing drainage patterns from the offsite areas draining to cross drains CD-01 and CD-02, assuming general post-development hydraulic connections for the offsite flows remain equivalent to pre-development conditions. This report assumes that the offsite bypass system concept will involve a closed drainage system that collects runoff from offsite areas, separate from the onsite curb inlet collection system, before discharging to CD-1 and CD-2. Due to differences in their hydraulic characteristics, closed concrete pipe systems typically convey flows at higher velocities than open grassed ditches, creating shorter times of concentration. The reduction in the times of concentration for these flows will result in impacts to the hydraulic adequacy of CD-1 and CD-2, therefore requiring upsizing improvements to meet the capacity needs of the projected closed

conveyance system. Opportunities may exist during design to prioritize maintaining open conveyance ditches within the right-of-way where feasible to sustain similar times of concentration, but for the purposes of this preliminary analysis, the "worst-case" scenario of a completely closed pipe system is assumed, as it is the only feasible option with the current typical section. However, the need for upsizing should be analyzed further during the design phase, once survey information is available and the offsite conveyance design is complete.

Preliminary data shows that there is adequate cover in the upsized condition based on the difference between the lowest edge of pavement (LEOP) and the crown of the infall inverts. **Table 7-3** below summarizes the recommended improvements and modifications to each cross drain, and

Table 7-4 demonstrates the available cover at each crossing.

Table 7-3: Summary of Recommended Cross Drain Improvements

Cross Drain	Size	Length	Location	Improvements
CD-1	2 - 30” RCP	130-foot	Sta. 103+45	Extension (Upsizing Recommended)
CD-2	2 - 36” RCP	90-foot	Sta. 143+58	Extension (Upsizing Recommended)
CD-3	2 – 36” RCP	115-foot	Sta. 224+20	Extension

Table 7-4: Summary of Available Cover for CD-1 and CD-2

Cross Drain	LEOP El.	Infall Invert El.	Pipe Crown El.	Available Cover (feet)
CD-1	12.07	5.17	7.96	4.11
CD-2	12.62	7.61	10.94	1.68

For more information regarding the cross drain improvements please see the *LHR*.

Wet detention ponds are anticipated to be required within the project limits. **Table 7-5** summarizes the stormwater management facility alternatives anticipated to be necessary for this project.

Table 7-5: Stormwater Management Facility Alternatives Summary

Basin	Alternative	Pond Area (ac)	Construction Cost	ROW Cost
Basin One	**1A**	**2.42**	**$667,982.41**	**$3,350,369.55**
	1B	2.73	$840,537.79	$3,149,367.99
	1C	4.97	$920,211.66	$5,369,541.24
Basin Three	3A	2.90	$859,133.31	$910,953.62
	3B	**3.09**	**$627,872.88**	**$699,264.94**
	3C	3.02	$610,744.70	$7,100,253.00

Ponds 1A and 3B are the recommended preferred alternatives for this project**.** The preferred pond sites were chosen based on their costs, minimal impacts to existing businesses, and proximity to the project area and outfall location. The results of this report are based on readily available information at the time of the analysis without the benefits of detailed survey information, a geotechnical investigation, formal wetland delineation, detailed field investigation, or other information that would be necessary to prepare a complete stormwater management design. Pond sizes and configurations may change during the final design as more detailed information becomes available.

Please see the *PSR* for more information regarding the proposed Stormwater Management Facilities.

7.1.15 Floodplain Analysis

It should be emphasized that the FPC calculations are preliminary, and the final calculations will need to be provided in the design phase. During the design phase, it is recommended that the tie-down slopes be optimized within the right-of-way to provide the minimum allowable floodplain encroachment volume to reduce the need for off-site FPC sites. These sites will likely be able to be reduced or possibly eliminated during the design phase, once the survey, geotechnical data, and proposed cross-sections are available and the conveyance and Stormwater Management Facility designs are complete.

Table 7-6 summarizes the project floodplain encroachment areas. There are six (6) proposed floodplain encroachment areas within the project limits. It is estimated that approximately 33.14

acre-feet of floodplain encroachments are associated with the proposed improvements in this study. Three off-site FPC areas were identified to compensate for the proposed encroachments.

Table 7-6: Summary of Floodplain Encroachment Areas (FEAs)

FEA Designation	BFE (feet, NAVD)	Avg. SHWT (feet, NAVD)	FEA Area (ac)	FEA Volume (ac-foot)
FEA_10	10.00	8.29	1.00	**1.71**
FEA_10.5	10.50	8.29	0.92	**2.03**
FEA_11	11.00	8.29	1.82	**4.93**
FEA_11.5	11.50	8.99	0.78	**1.96**
FEA_12	12.00	9.29	6.04	**16.37**
FEA_12.5	12.50	9.49	2.04	**6.14**

FPC Site One (FPC 1) is a 7.37-acre compensation area on the east side of CR 887 near Sta. 123+00. FPC Site Two (FPC 2) is a 6.62-acre compensation area on the east side of CR 887 near Sta. 153+00. FPC Site Three (FPC 3) is a 3.49-acre compensation area on the east side of CR 887 near Sta. 157+00. A map showing the location of the floodplain encroachment areas and corresponding FPC sites is available in the *LHR.*

7.1.16 Bridge and Structure Analysis

Please see **5.4.24 Structures and Bridges** for detailed information regarding bridges and structures for the Preferred Alternative.

7.1.17 Transportation Management Plan

Please see **5.4.21 Transportation Management Plan** for detailed information regarding the Transportation Management Plan for the Preferred Alternative.

7.1.18 Constructability

From the intersection of Old US 41 and US 41 to the intersection of Old US 41 and Sterling Oaks Dr, there is a canal box culvert located on the west side. The canal box culvert is a physical constraint that will be considered during construction.

Please see **5.4.22 Constructibility** for more information regarding constructibility for the Preferred Alternative.

7.1.19 Construction Impacts

The construction of the build alternatives aim to build the roadway in a manner that will minimize disruptions to the current flow of traffic.

Please see **5.4.23 Construction Impacts** for more information regarding construction impacts in the Preferred Alternative.

7.1.20 Special Features

There are no special features incorporated into the Preferred Alternative.

7.1.21 Utilities

Conservative utility relocation estimates were requested from Collier County as part of the utility coordination process, and subsequent follow-up with the UAOs. Relocation estimates were requested but none were received, expect for Collier County, all other UAOs appear to not have reimbursable impacts. Collier County provided a proposed cost estimate for the Preferred Alternative (referred to in their cost estimate as Alternative 1). The total combined estimated cost for relocations is $1,484,735. For further details of the cost estimate please refer to the *Utility Assessment Package*.

7.1.22 Cost Estimates

A construction cost estimate for the Preferred Alternative was developed using the FDOT's *LRE* system. The estimate includes major items such as roadway construction, inspection, stormwater management, utility relocation, and railroad construction. Construction costs were based on the most recent *LRE*, dated April 17, 2025. Please see **Appendix B-Long Range Estimate** for more information regarding the cost estimate.

In addition to the construction cost estimate, costs were provided by FDOT for the wetland mitigation and ROW acquisition. Final Design costs are based on the programmed design funding. The following costs estimates are summarized in the **Table 7-7** below.

Table 7-7: Preferred Alternative Cost Estimates

Cost Estimates (2025 Cost)	Preferred Alternative
Final Design	$5,200,000
Right-of-Way Acquisition	$100,670,000
Wetland Mitigation	$620,000
Roadway Construction, Stormwater Management Facilities (Ponds), and Floodplain Compensation Construction	$108,280,000
Utility Relocation and Railroad Construction	$4,480,000
Construction Engineering & Inspection	$10,830,000
Total Estimated Cost	**$230,080,000**

7.2 SUMMARY OF ENVIRONMENTAL IMPACTS

7.2.1 Future Land Use

The future land use for both the City of Bonita Springs and Collier County is mainly residential and commercial. The purpose and need of the project is to help alleviate congestion due to the fast growing population and land use. Since Old US 41 serves as an important roadway for both freight and commuter traffic, roadway expansion, along with the addition of the new Quadrant roadway, will help aid the growing population and roadway use.

Please see **3.1 Future Conditions Consideration** for more information regarding the City of Bonita Springs and Collier County future land use.

7.2.2 Section 4(f)

Five conservation easements all owned by SFWMD occur within the project vicinity. Through coordination with SFWMD, it was confirmed that none of these easements have any public access or allow public use. Considering this, Section 4(f) protections do not apply to these properties.

7.2.3 Cultural Resources

Given the results of background research and field survey, including the excavation of 57 shovel tests, no pre-Contact or historic archaeological sites were discovered. One historic linear resource, as contained within the APE, appears eligible for listing in the NRHP. The segment of the Seminole Gulf Railway (8LL02445) possesses significance for its association and engineering trends with the development of Florida's railroads and served as a transportation function. Furthermore, the railroad was constructed during one of the significant periods of history as stated in Florida's Historic Railroad Resources Multiple Property Listing (Johnston & Mattick 2001). Therefore, the segment of the Seminole Gulf Railway (8LL02445), as contained within the APE, appears eligible for listing in the NRHP under Criteria A and C in the areas of Transportation and Engineering. In addition, the railroad is a contributing resource to the existing Florida's Historic Railroad Resources Multiple Property Listing under property type F.3.The proposed work being conducted within the APE at this location includes the widening of the existing two-lane undivided highway to a divided four-lane roadway with 11-foot travel lanes in both directions, a seven-foot bicycle lane in both directions, and a 12-foot shared use path on the west side of CR 887 (Old US 41).

The shared use path will extend north of the roadway before crossing over the railroad corridor where minimal ROW acquisition is proposed. As such, the undertaking will not result in physical destruction, damage, or alteration of all or part of the Seminole Gulf Railway (8LL02445) for which it is NRHP eligible. Therefore, the proposed undertaking will have no adverse effect on the Seminole Gulf Railway (8LL02445). Based on the results of background research and field investigations, it is the opinion of ACI that the proposed undertaking will result in no adverse effect to historic properties. No further cultural resource work is recommended.

For more information, please see the *CRAS*.

7.2.4 Wetlands

In accordance with Executive Order 11990 and US DOT 5660.1A, and based on the documentation of existing wetland conditions as presented in the *NRE*, and in consideration of the Preferred Alternative and its effects on wetlands, it is determined that:

- Measures have been taken to minimize harm to wetlands.
- The proposed project will have no significant short-term or long-term adverse impacts to wetlands. The proposed project will have minimal impacts to wetlands in the project study area (i.e., approximately 5.44 of the 31.39 acres or 17.33%) and these impacts will be compensated by mitigation bank credits from established banks within the appropriate geographical service area.
- There is no practicable alternative to construction in wetlands.

A Uniform Mitigation Assessment Method (UMAM) analysis was performed to estimate the functional loss due to wetland impacts from the Preferred Alternative. Construction of the Preferred Alternative results in a loss of 3.22 functional units (2.12 direct and 1.10 secondary). Please see the *NRE* for more information.

7.2.5 Protected Species and Habitat

The study area was evaluated for the presence of federal and/or state protected species and their suitable habitat in accordance with Section seven of the ESA and the PD&E Manual. The potentials for occurrence and effect determinations for all species which were evaluated are presented in **Table 7-8**. Multiple protection measures are to be employed to negate and minimize any potential effects to these species. Some of the measures employed are anticipated to include more detailed field surveys and agency coordination during the project's Design phase, relocation of any potentially affected gopher tortoises prior to construction, and the use of Best Management Practices (BMPs) and species-specific standard protection measures (e.g., eastern indigo snake and Florida black bear) during construction. For more information regarding the protected species and habitat, please see the *NRE*.

Table 7-8: Potential for Occurrence and Proposed Effect Determination for Federal and State Protected Species for the Project Study Area

Species	Listing Status*	Potential for Occurrence	Proposed Effect Determination
Plants			
Aboriginal Prickly-Apple (*Harrisia aboriginum*)	USFWS/FDACS – Endangered	***No***	***No effect***
Beautiful Pawpaw (*Deeringothamnus pulchellus*)	USFWS/FDACS – Endangered	***No***	***No effect***
Florida Prairie-Clover (*Dalea carthagenensis*)	USFWS/FDACS – Endangered	***No***	***No effect***
Garber's Spurge (*Chamaesyce garberi*)	USFWS – Threatened FDACS – Endangered	***No***	***No effect***
American Bird's Nest Fern (*Asplenium serratum*)	FDACS – Endangered	***Moderate***	***No adverse effect anticipated***
Banded Wild-Pine (*Tillandsia flexuosa*)	FDACS – Threatened	***Moderate***	***No adverse effect anticipated***
Catesby's Lily (*Lilium catesbaei*)	FDACS – Threatened	***Moderate***	***No adverse effect anticipated***

Species	Listing Status*	Potential for Occurrence	Proposed Effect Determination
Clamshell Orchid (*Encyclia cochleata= Prosthechea cochleata*)	FDACS – Endangered	***Moderate***	***No adverse effect anticipated***
Cowhorn Orchid (*Cyrtopodium punctatum*)	FDACS – Endangered	***Moderate***	***No adverse effect anticipated***
Curtiss' Milkweed (*Asclepias curtissi*)	FDACS – Endangered	***Moderate***	***No adverse effect anticipated***
Florida Beargrass (*Nolina atopocarpa*)	FDACS – Threatened	***Moderate***	***No adverse effect anticipated***
Florida Dancing-Lady Orchid (*Oncidium ensatum = Oncidium floridanum*)	FDACS – Endangered	***Moderate***	***No adverse effect anticipated***
Florida Keys Indigo (*Indigofera mucronata var keyensis = Indigofera trita var scabra*)	FDACS – Endangered	***No***	***No effect anticipated***
Florida Peperomia (*Peperomia obtusifolia*)	FDACS – Endangered	***Low***	***No adverse effect anticipated***
Frosted Orchid (*Pleurothallis gelida = Stelis gelida*)	FDACS – Endangered	***Low***	***No adverse effect anticipated***
Fuchs' Bromeliad (*Guzmania monostachia*)	FDACS – Endangered	***No***	***No effect anticipated***
Fuzzy-Wuzzy Airplant (*Tillandsia pruinosa*)	FDACS – Endangered	***Low***	***No adverse effect anticipated***
Ghost Orchid (*Dendrophylax lindenii*)	FDACS – Endangered	***Moderate***	***No adverse effect anticipated***
Giant Orchid/Non-Crested Eulophia (*Orthochilus ecristata = Eulophia ecristata*)	FDACS – Threatened	***Moderate***	***No adverse effect anticipated***
Giant Wild-Pine (*Tillandsia utriculata*)	FDACS – Endangered	***High (Observed)***	***No adverse effect anticipated***
Hand Fern (*Ophioglossum palmatum*)	FDACS – Endangered	***Low***	***No adverse effect anticipated***
Hidden Orchid (*Maxillaria crassifolia*)	FDACS – Endangered	***Moderate***	***No adverse effect anticipated***
Leafless Orchid (*Campylocentrum pachyrrhizum*)	FDACS – Endangered	***Moderate***	***No adverse effect anticipated***
Leafy Beaked Ladies'-Tresses (*Sacoila lanceolata* var. *paludicola = Stenorrhynchos lanceolatum*)	FDACS – Threatened	***Moderate***	***No adverse effect anticipated***
Low Peperomia (*Peperomia humilis*)	FDACS – Endangered	***Low***	***No adverse effect anticipated***

Species	Listing Status*	Potential for Occurrence	Proposed Effect Determination
Many-Flowered Airplant/Catopsis (*Catopsis floribunda*)	FDACS – Endangered	***Moderate***	***No adverse effect anticipated***
Many-Flowered Grass Pink (*Calopogon multiflorus*)	FDACS – Threatened	***Low***	***No effect anticipated***
Meadow Joint-Vetch (*Aeschynomene pratensis*)	FDACS – Endangered	***Moderate***	***No adverse effect anticipated***
Narrow Strap Fern (*Campyloneurum angustifolium*)	FDACS – Endangered	***Moderate***	***No adverse effect anticipated***
Needleroot Airplant Orchid (*Harrisella porrecta = Dendrophylax porrectus*)	FDACS – Threatened	***Moderate***	***No adverse effect anticipated***
Night-Scented Orchid (*Epidendrum nocturnum*)	FDACS – Endangered	***Moderate***	***No adverse effect anticipated***
Nodding/Scrub Pinweed (*Lechea cernua*)	FDACS – Threatened	***Moderate***	***No adverse effect anticipated***
Pale Passionflower (*Passiflora pallens*)	FDACS – Endangered	***No***	***No effect anticipated***
Reflexed Wild-Pine (*Tillandsia balbisiana*)	FDACS – Threatened	***Moderate***	***No adverse effect anticipated***
Sand-Dune Spurge (*Chamaesyce cumulicola=Euphorbia cumulicola*)	FDACS – Endangered	***Moderate***	***No adverse effect anticipated***
Sanibel Island Lovegrass (*Eragrostis pectinacea* var. *tracyi*)	FDACS – Endangered	***Low***	***No adverse effect anticipated***
Scrub Stylisma/Showy Dawnflower (*Stylisma abdita*)	FDACS – Endangered	***Moderate***	***No adverse effect anticipated***
Skyblue Clustervine (*Jacquemontia pentanthos*)	FDACS – Endangered	***Low***	***No adverse effect anticipated***
Small's Flax (*Linum carteri* var. *smallii*)	FDACS – Endangered	***Low***	***No adverse effect anticipated***
Southern Ladies'-Tresses (*Spiranthes torta*)	FDACS – Endangered	***No***	***No effect anticipated***
Spiny Hackberry (*Celtis pallida*)	FDACS – Endangered	***No***	***No effect anticipated***
Spreading/Pine Pinweed (*Lechea divaricata*)	FDACS – Endangered	***Moderate***	***No adverse effect anticipated***
Stiff-Leaved Wild-Pine (*Tillandsia fasciculata* var. *densispica*)	FDACS - Endangered	***High (Observed)***	***No adverse effect anticipated***
Swamp Plume Polypody (*Pecluma ptilota = Polypodium ptilodon*)	FDACS - Endangered	***Low***	***No adverse effect anticipated***
Toothed Lattice-Vein Fern (*Thelypteris serrata*)	FDACS - Endangered	***Moderate***	***No adverse effect anticipated***

Species	Listing Status*	Potential for Occurrence	Proposed Effect Determination
Invertebrates			
Monarch Butterfly (*Danaus Plexippus*)	USFWS – Proposed Threatened	***Moderate***	***N/A***
Reptiles			
American Alligator (*Alligator mississippiensis*)	USFWS – Threatened (Similarity in appearance)	***High***	***N/A***
American Crocodile (*Crocodylus acutus*)	USFWS – Threatened	***No***	***No effect***
Eastern Indigo Snake (*Drymarchon corais couperi*)	USFWS – Threatened	***Low***	***May affect, not likely to adversely affect***
Florida Pine Snake (*Pituophis melanoleucus mugitus*)	FWC - Threatened	***Moderate***	***No adverse effect anticipated***
Gopher Tortoise (*Gopher polyphemus*)	FWC - Threatened	***High (Observed)***	***No adverse effect anticipated***
Birds			
Florida Scrub-Jay (*Aphelocoma coerulescens*)	USFWS - Threatened	***Low***	***No effect***
Red-Cockaded Woodpecker (*Picoides borealis*)	USFWS – Endangered	***Low***	***No effect***
Wood Stork (*Mycteria americana*)	USFWS – Threatened	***High (Observed)***	***May affect, not likely to adversely effect***
Eastern Black Rail (*Laterallus jamaicensis jamaicensis*)	USFWS – Threatened	***Low***	***May affect, not likely to adversely effect***
Florida Burrowing Owl (*Athene cunicularia floridana*)	FWC – Threatened	***Low***	***No adverse effect anticipated***
Florida Sandhill Crane (*Antigone canadensis pratensis*)	FWC – Threatened	***High***	***No adverse effect anticipated***
Little Blue Heron (*Egretta caerulea*)	FWC – Threatened	***High***	***No adverse effect anticipated***
Roseate Spoonbill (*Platalea ajaja*)	FWC – Threatened	***High***	***No adverse effect anticipated***
Tricolored Heron (*Egretta tricolor*)	FWC – Threatened	***High***	***No adverse effect anticipated***
Southeastern American Kestrel (*Falco sparverius paulus*)	FWC – Threatened	***High (Potentially observed)***	***No adverse effect anticipated***

Species	Listing Status*	Potential for Occurrence	Proposed Effect Determination
Bald Eagle (*Haliaeetus leucocephalus*)	N/A	***Moderate***	***N/A***
Mammals			
Florida Bonneted Bat (*Eumops floridanus*)	USFWS – Endangered	***High***	***May affect, not likely to adversely effect***
Tricolored Bat (*Pipistrellus subflavus*)	USFWS – Proposed Endangered	***Low***	***May affect, not likely to adversely affect***
Florida Panther (*Puma concolor coryi*)	USFWS – Endangered	***Low***	***No effect***
Big Cypress Fox Squirrel (*Sciurus niger avicennia*)	FWC – Threatened	***Moderate***	***No adverse effect anticipated***
Florida Black Bear (*Ursus americana floridana*)	N/A	***High***	***N/A***

7.2.6 Essential Fish Habitat

The project study area was reviewed for the presence of Essential Fish Habitat (EFH) in accordance with the Magnuson-Stevens Fishery Conservation and Management Act as amended (MSA) and the FDOT PD&E Manual. Due to the absence of marine, estuarine or tidally influenced stream features, there is no potential for EFH to occur in the project vicinity; therefore, the project will have no involvement with EFH. For more information, please see the *NRE*.

7.2.7 Highway Traffic Noise

This PD&E Noise Study Report (NSR) presents the methodology and results of the highway traffic noise evaluation for Old US 41 (Financial Management Numbers 435110-1 & 435347-1). The purpose of this noise study is to identify noise sensitive sites that would be impacted by the preferred alternative, evaluate abatement measures at impacted noise sensitive sites, and determine where noise abatement (i.e., noise barriers) should be included with the project and re-evaluated in the Design phase.

The Federal Highway Administration (FHWA) Traffic Noise Model (TNM), version 2.5, was utilized to predict noise levels at 344 receptor points representing 327 residences and seven special land uses (SLUs). For the year 2045 Build condition, noise levels are predicted to approach, meet, or exceed the Noise Abatement Criteria (NAC) at 16 residences and one SLU within the project limits. These impacted noise sensitive sites were evaluated to determine the feasibility and reasonableness of providing a barrier to reduce traffic noise. Additionally, a substantial increase of 15 dB(A) is not predicted to occur at any residence or SLU.

The noise barrier evaluation process identified that a noise barrier is a feasible and reasonable form of abatement and could potentially provide at least a five dB(A) reduction at impacted residences at a cost below the reasonable limit. Additionally, the noise barrier achieves the Noise Reduction Design Goal (NRDG). The following noise barriers were found to be potentially feasible and reasonable, and therefore recommended for further consideration at the following Noise Study Areas:

- NSA 2: This NSA is located on the northbound side of Old US 41 and represents the Landmark Naples housing community of densely populated single-family homes. A solid eight-foot noise barrier between CR 887 and the community can meet both FDOT feasibility and reasonable requirements.
- NSA 16: This NSA is located on the southbound side of US 41 and represents the Tarpon Cove housing community of apartments. A solid 10 to 14-foot noise barrier between US 41 and the community can meet both FDOT feasibility and reasonable requirements.

Construction of the proposed roadway improvements of CSR 887 may cause temporary noise and/or vibration impacts to nearby developed land uses. Should anticipated noise or vibration issues arise during the construction process, the Project Manager, in coordination with the District Noise Specialist and the Contractor, will investigate additional methods of controlling these impacts. Please see the *Noise Study Report* (*NSR*) for more information.

7.2.8 Contamination

A total of thirty-five contamination sites were evaluated for the study. The following are explanations of risks ratings used for the mainline sites. **Table 7-9** and **Table 7-10** are the number of mainline sites per risk rating and the drainage site risk ratings.

<u>No Risk Site</u>

A review of available information on the property and a review of the conceptual or design plans indicates there is no potential contamination impact to the project. It is possible that contaminants have been handled on the property. However, findings from the Level I evaluation indicate that contamination impacts are not expected.

<u>Low Risk Site</u>

A review of available information indicates that past or current activities on the property have an ongoing contamination issue; the site has a hazardous waste generator identification (ID) number, or the site stores, handles, or manufactures hazardous materials. However, based on the review of conceptual or design plans and/or findings from the Level I evaluation, it is not likely that there would be any contamination impacts to the project.

Medium Risk Site

After a review of conceptual or design plans and findings from a Level I evaluation, a potential contamination impact to the project has been identified. If there is insufficient information (such as regulatory records or site historical documents) to decide as to the potential for contamination impact, and there is reasonable suspicion that contamination may exist, the property should be rated at least as a Medium. Properties used historically as gasoline stations and which have not been evaluated or assessed by regulatory agencies, sites with abandoned in place underground petroleum storage tanks or currently operating gasoline stations should receive this rating.

High Risk Site

After a review of all available information and conceptual or design plans, there is appropriate analytical data that shows contamination will substantially impact construction activities, have implications to ROW acquisition or have other potential transfer of contamination related liability to the FDOT.

Based on the methodologies detailed herein, the following risk ratings were assigned to contamination sites identified along the project mainline.

Table 7-9: Number of Mainline Sites per Risk Rating

County	High	Medium	Low	No	Total
Collier	1	5	3	7	16
Lee	0	6	11	2	19
Total	1	11	14	9	35

Additionally, the PD&E study evaluated five drainage sites for this project. The SMF 1A and SMF 2B locations are the preferred alternatives. The following table presents a summary of the risk ratings for all five drainage sites:

Table 7-10: Drainage Site Risk Ratings

County	High	Medium	Low	No	Total
Collier	0	4	0	0	4
Lee	0	0	1	0	1
Total	0	4	1	0	5

For more information, please see the *CSER*.

8.0 APPENDIX

APPENDIX A- PREFERRED ALTERNATIVE CONCEPT PLANS

APPENDIX B-LONG RANGE ESTIMATE

APPENDIX C-TYPICAL SECTION PACKAGE

APPENDIX D-SOIL AND DRAINAGE MAPS

Appendix A- Preferred Alternative Concept Plans

COLLIER COUNTY

STATION	PROPOSED CONCRETE SEPARATOR
EXISTING ROW	PROPOSED SIDEWALK/PATH
PROPERTY LINES	PROPOSED PAVEMENT
PROPOSED ROW	PROPOSED MEDIAN
PROPOSED EASEMENT	FUTURE BY-OTHERS
WETLANDS	CONSERVATION EASEMENTS
SURFACE WATERS	POND (STORMWATER/FLOODPLAIN)
NOISE BARRIER	
CONSERVATION LAND	

HNTB CORPORATION
MATTHEW J.W. DOCKINS
P.E. LICENSE NUMBER 79350
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FLORIDA 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
CR 887	COLLIER AND LEE	435110-1-22-01 435347-1-22-01

PREFERRED ALTERNATIVE

SHEET NO. 1

COLLIER COUNTY

STATION	PROPOSED CONCRETE SEPARATOR	NOISE BARRIER
EXISTING ROW	PROPOSED SIDEWALK/PATH	CONSERVATION LAND
PROPERTY LINES	PROPOSED PAVEMENT	
PROPOSED ROW	PROPOSED MEDIAN	
PROPOSED EASEMENT	FUTURE BY-OTHERS	
WETLANDS	CONSERVATION EASEMENTS	
SURFACE WATERS	POND (STORMWATER/FLOODPLAIN)	

HNTB CORPORATION
MATTHEW J.W. DOCKINS
P.E. LICENSE NUMBER 79350
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FLORIDA 33602

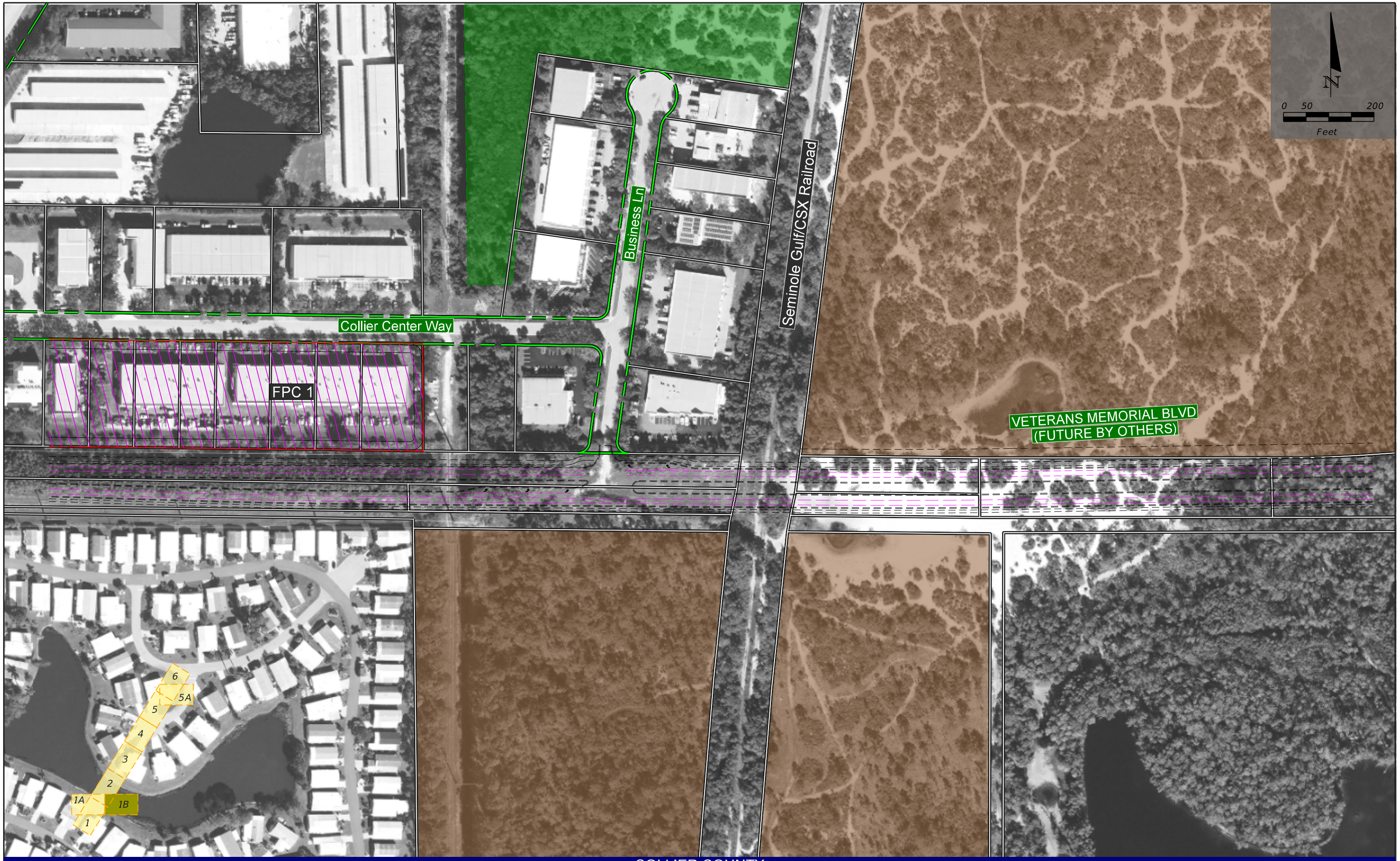
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
CR 887	COLLIER AND LEE	435110-1-22-01 435347-1-22-01

PREFERRED ALTERNATIVE

SHEET NO. 1A

\\tmaw00\jobs\85808 D1 US41 PDE\TECHPROD\43511012201\Roadway\old41PLAN01a.dgn 10/6/2025 10:36:26 AM



COLLIER COUNTY

100 STATION
EXISTING ROW
PROPERTY LINES
PROPOSED ROW
PROPOSED EASEMENT
WETLANDS
SURFACE WATERS

PROPOSED CONCRETE SEPARATOR
PROPOSED SIDEWALK/PATH
PROPOSED PAVEMENT
PROPOSED MEDIAN
FUTURE BY-OTHERS
CONSERVATION EASEMENTS
POND (STORMWATER/FLOODPLAIN)

NOISE BARRIER
CONSERVATION LAND

HNTB CORPORATION
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
CR 887	COLLIER AND LEE	435110-1-22-01 435347-1-22-01

PREFERRED ALTERNATIVE

SHEET NO. 1B

PI STA. = 132+13.87
Δ = 3° 03' 18" (RT)
D = 0° 40' 43"
T = 225.16
L = 450.21
R = 8,443.50
PC STA. = 129+88.71
PT STA. = 134+38.92

PI STA. = 136+64.08
Δ = 3° 03' 18" (LT)
D = 0° 40' 43"
T = 225.16
L = 450.21
R = 8,443.50
PC STA. = 134+38.92
PT STA. = 138+89.13

0 50 200
Feet

Turtle Creek Blvd
Sterling Oaks Dr
CD-02 2 - 36" RCP
OLD US 41
COLLIER 887 COUNTY
Collier Center Way
Sun Century Rd
Anglewood Ct
FPC 1

PI STA. 132+13.87
PC STA. 129+88.71
PRC STA. 134+38.92
PT STA. 138+89.13
PI STA. 143+12.54
PI STA. 152+29.32

N 31° 43' 09" E
N 30° 13' 09" E

1A 1 2 3 4 5 6 1B 5A

COLLIER COUNTY

100
STATION
EXISTING ROW
PROPERTY LINES
PROPOSED ROW
PROPOSED EASEMENT
WETLANDS
SURFACE WATERS
PROPOSED CONCRETE SEPARATOR
PROPOSED SIDEWALK/PATH
PROPOSED PAVEMENT
PROPOSED MEDIAN
FUTURE BY-OTHERS
CONSERVATION EASEMENTS
POND (STORMWATER/FLOODPLAIN)
NOISE BARRIER
CONSERVATION LAND

HNTB CORPORATION
MATTHEW J.W. DOCKINS
P.E. LICENSE NUMBER 79350
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FLORIDA 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
CR 887	COLLIER AND LEE	435110-1-22-01 435347-1-22-01

PREFERRED ALTERNATIVE

SHEET NO. 2

COLLIER COUNTY

100

STATION
EXISTING ROW
PROPERTY LINES
PROPOSED ROW
PROPOSED EASEMENT
WETLANDS
SURFACE WATERS
PROPOSED CONCRETE SEPARATOR
PROPOSED SIDEWALK/PATH
PROPOSED PAVEMENT
PROPOSED MEDIAN
FUTURE BY-OTHERS
CONSERVATION EASEMENTS
POND (STORMWATER/FLOODPLAIN)
NOISE BARRIER
CONSERVATION LAND

HNTB CORPORATION
MATTHEW J.W. DOCKINS
P.E. LICENSE NUMBER 79350
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FLORIDA 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
CR 887	COLLIER AND LEE	435110-1-22-01 435347-1-22-01

PREFERRED ALTERNATIVE

SHEET NO. 3

100 STATION
EXISTING ROW
PROPERTY LINES
PROPOSED ROW
PROPOSED EASEMENT
WETLANDS
SURFACE WATERS
PROPOSED CONCRETE SEPARATOR
PROPOSED SIDEWALK/PATH
PROPOSED PAVEMENT
PROPOSED MEDIAN
FUTURE BY-OTHERS
CONSERVATION EASEMENTS
POND (STORMWATER/FLOODPLAIN)
NOISE BARRIER
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
CR 887	COLLIER AND LEE	435110-1-22-01 435347-1-22-01

PREFERRED ALTERNATIVE

SHEET NO. 4

Seminole Gulf/CSX Railroad

CD-03 2 - 36" RCP

0 50 200
Feet

210 215 220 225 230

N 31° 41' 29" E

POT STA. 5+00.00

PC STA. 7+86.54

PT STA. 11+90.75

OLD US 41

SMF 2B

Compound Rd

NEW QUADARANT ROADWAY

PI STA. 10+06.88

PI STA. = 10+06.88
Δ = 56° 37' 26" (LT)
D = 14° 00' 31"
T = 220.33
L = 404.20
R = 409.00
PC STA. = 7+86.54
PT STA. = 11+90.75

1A 1 2 3 4 5 6 1B 5A

LEE COUNTY/CITY OF BONITA SPRINGS

100 STATION
EXISTING ROW
PROPERTY LINES
PROPOSED ROW
PROPOSED EASEMENT
WETLANDS
SURFACE WATERS
PROPOSED CONCRETE SEPARATOR
PROPOSED SIDEWALK/PATH
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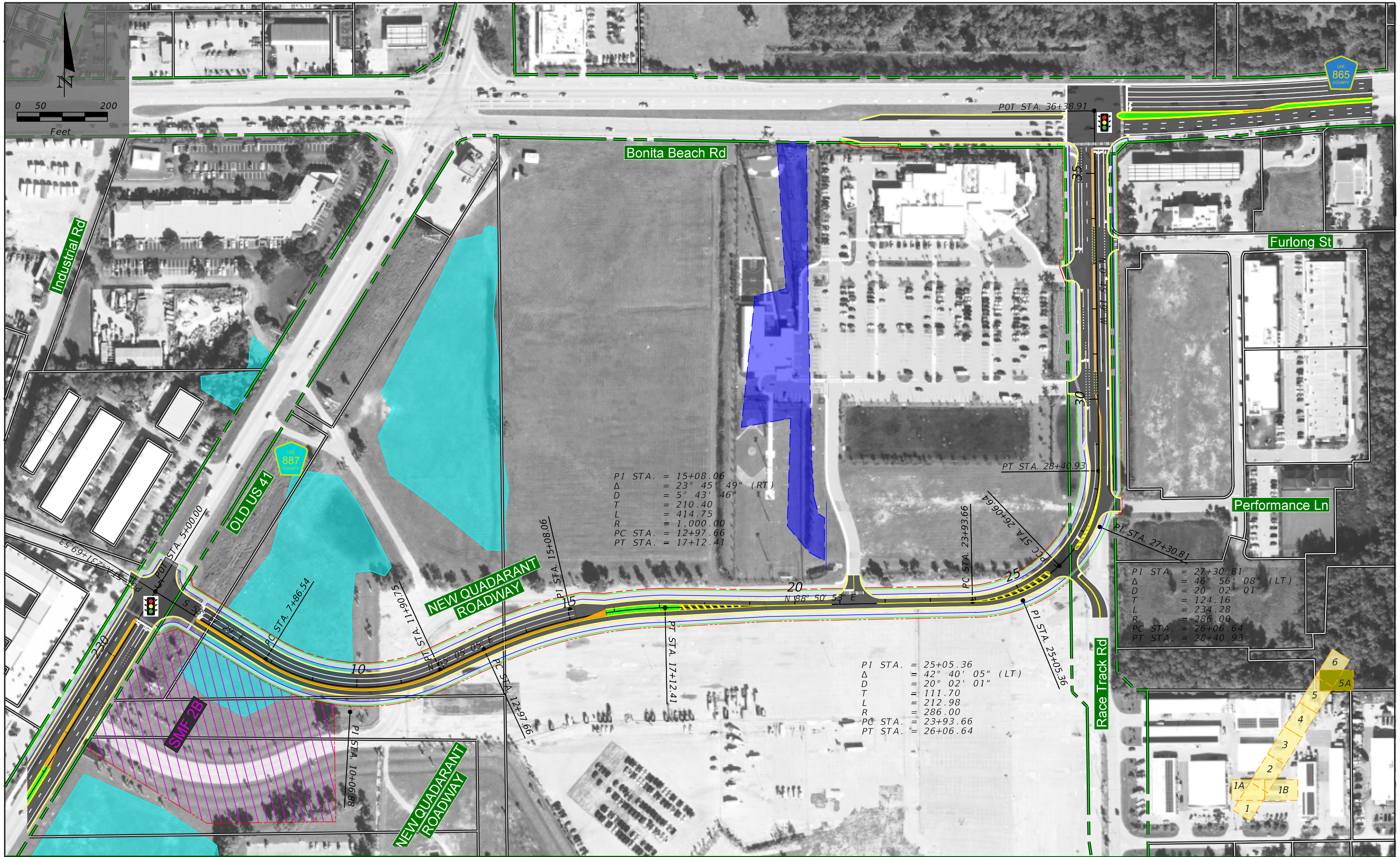
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
CR 887	COLLIER AND LEE	435110-1-22-01 435347-1-22-01

PREFERRED ALTERNATIVE

SHEET NO. 5



LEE COUNTY/CITY OF BONITA SPRINGS

100
STATION
EXISTING ROW
PROPERTY LINES
PROPOSED ROW
PROPOSED EASEMENT
WETLANDS
SURFACE WATERS
PROPOSED CONCRETE SEPARATOR
PROPOSED SIDEWALK/PATH
PROPOSED PAVEMENT
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CONSERVATION EASEMENTS
POND (STORMWATER/FLOODPLAIN)
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
CR 887	COLLIER AND LEE	435110-1-22-01 435347-1-22-01

PREFERRED ALTERNATIVE

SHEET NO. 5A

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LEE COUNTY/CITY OF BONITA SPRINGS

100
STATION
EXISTING ROW
PROPERTY LINES
PROPOSED ROW
PROPOSED EASEMENT
WETLANDS
SURFACE WATERS
PROPOSED CONCRETE SEPARATOR
PROPOSED SIDEWALK/PATH
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FUTURE BY-OTHERS
CONSERVATION EASEMENTS
POND (STORMWATER/FLOODPLAIN)
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
CR 887	COLLIER AND LEE	435110-1-22-01 435347-1-22-01

PREFERRED ALTERNATIVE

SHEET NO. 6

Appendix B-Long Range Estimate

Date: 4/17/2025 3:28:57 PM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 435110-1-22-01 **Letting Date:** 01/2099

Description: CR 887 (OLD US 41) FROM US 41 TO LEE COUNTY LINE

District: 01 **County:** 03 COLLIER **Market Area:** 10 **Units:** English

Contract Class: 1 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 1.550 MI

Project Manager: NEM-AEH-SAA

Version 9 Project Grand Total **$76,146,334.62**

Description: March 2025 Unit Cost Update from Version 8P - 3/31/25

Sequence: 1 NDU - New Construction, Divided, Urban **Net Length:** 0.736 MI 3,886 LF

Description: Old US 41 - US 41 to 300' N of Sterling Oaks Dr (STA. 100+00.00 to 138+87.64)

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	79.00 / 71.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.736
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	13.38 AC	$21,125.37	$282,657.45
120-6	EMBANKMENT	120,170.55 CY	$23.14	$2,780,746.53
	Earthwork Component Total			$3,063,403.98

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	27.00 / 27.00
Structural Spread Rate	330
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	27,772.52 SY	$7.87	$218,569.73
285-709	OPTIONAL BASE,BASE GROUP 09	23,316.48 SY	$23.68	$552,134.25

334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	3,847.22	TN	$176.63	$679,534.47
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	1,923.61	TN	$206.46	$397,148.52

Turnouts/Crossovers Subcomponent

Description	Value
Asphalt Adjustment	20.00
Stabilization Code	Y
Base Code	Y
Friction Course Code	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	5,554.50	SY	$7.87	$43,713.92
285-709	OPTIONAL BASE,BASE GROUP 09	4,663.30	SY	$23.68	$110,426.94
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	769.44	TN	$176.63	$135,906.19
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	384.72	TN	$206.46	$79,429.29

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	298.00	EA	$4.03	$1,200.94
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	2.94	GM	$1,451.86	$4,268.47
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	1.47	GM	$524.56	$771.10
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	2.94	GM	$5,890.06	$17,316.78
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	1.47	GM	$1,541.95	$2,266.67

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	10.00 / 0.00
Bike Path Structural Spread Rate	165
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	6,045.01	SY	$7.87	$47,574.23
285-701	OPTIONAL BASE,BASE GROUP 01	4,317.87	SY	$16.71	$72,151.61
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	356.22	TN	$176.63	$62,919.14

	Roadway Component Total	$2,425,332.25

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	32.50 / 34.50
Total Outside Shoulder Perf. Turf Width L/R	30.25 / 26.25
Sidewalk Width L/R	0.00 / 6.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	3,886.08	LF	$36.48	$141,764.20
520-1-10	CONCRETE CURB & GUTTER, TYPE F	3,886.08	LF	$36.48	$141,764.20
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	2,590.72	SY	$82.88	$214,718.87
570-1-1	PERFORMANCE TURF	24,395.95	SY	$4.21	$102,706.95

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	7,772.16	LF	$2.07	$16,088.37
104-11	FLOATING TURBIDITY BARRIER	184.00	LF	$12.93	$2,379.12
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	184.00	LF	$5.98	$1,100.32
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$3,039.90	$3,039.90
104-18	INLET PROTECTION SYSTEM	38.00	EA	$160.34	$6,092.92
107-1	LITTER REMOVAL	18.73	AC	$37.73	$706.68
107-2	MOWING	18.73	AC	$67.82	$1,270.27
	Shoulder Component Total				$631,631.80

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	19.50
Performance Turf Width	15.50

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	7,772.16	LF	$36.48	$283,528.40
570-1-1	PERFORMANCE TURF	6,692.69	SY	$4.21	$28,176.22
	Median Component Total				$311,704.62

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-351	INLETS, CURB, TYPE P-5, <10'	27.00	EA	$9,830.35	$265,419.45
425-1-451	INLETS, CURB, TYPE J-5, <10'	8.00	EA	$14,703.21	$117,625.68

425-1-521	INLETS, DT BOT, TYPE C, <10'	4.00	EA	$7,817.08	$31,268.32
425-2-41	MANHOLES, P-7, <10'	4.00	EA	$8,450.08	$33,800.32
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	1,952.00	LF	$205.65	$401,428.80
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	176.00	LF	$287.52	$50,603.52
430-175-148	PIPE CULV, OPT MATL, ROUND, 48"S/CD	3,680.00	LF	$413.04	$1,519,987.20
570-1-1	PERFORMANCE TURF	223.74	SY	$4.21	$941.95

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
524-1-29	CONC DITCH PAVT, 4", REINFORCED	13,000.00	SY	$146.33	$1,902,290.00
	Comment: for Retention Basin				

Box Culvert 1

Description	Value
Size	7 x 4
Length	1,770.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-4-1	CONC CLASS IV, CULVERTS	1,165.50	CY	$2,150.10	$2,505,941.55
415-1-1	REINF STEEL- ROADWAY	149,550.00	LB	$1.39	$207,874.50

Box Culvert 2

Description	Value
Size	10 x 4
Length	1,000.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-4-1	CONC CLASS IV, CULVERTS	989.80	CY	$2,150.10	$2,128,168.98
415-1-1	REINF STEEL- ROADWAY	125,566.00	LB	$1.39	$174,536.74

Box Culvert 3

Description	Value
Size	8 x 5
Length	836.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-4-1	CONC CLASS IV, CULVERTS	672.88	CY	$2,150.10	$1,446,759.29
415-1-1	REINF STEEL- ROADWAY	86,707.20	LB	$1.39	$120,523.01

Box Culvert 4

Description	Value
Size	7 x 4
Length	800.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-4-1	CONC CLASS IV, CULVERTS	535.00	CY	$2,150.10	$1,150,303.50
415-1-1	REINF STEEL- ROADWAY	68,264.00	LB	$1.39	$94,886.96

Box Culvert 5

Description	Value
Size	6 x 4
Length	112.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-4-1	CONC CLASS IV, CULVERTS	81.48	CY	$2,150.10	$175,190.15
415-1-1	REINF STEEL- ROADWAY	12,941.20	LB	$1.39	$17,988.27

Retention Basin 1

Description	Value
Size	5 AC
Multiplier	1
Depth	6.00
Description	SMF-1C

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	5.00	AC	$21,125.37	$105,626.85
120-1	REGULAR EXCAVATION	50,400.00	CY	$28.38	$1,430,352.00
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00	EA	$8,501.87	$8,501.87
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,860.00	LF	$30.35	$56,451.00
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	2.00	EA	$4,874.61	$9,749.22
570-1-1	PERFORMANCE TURF	24,200.00	SY	$4.21	$101,882.00

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	1,600.00	LF	$205.65	$329,040.00
430-175-130	PIPE CULV, OPT MATL, ROUND, 30"S/CD	520.00	LF	$275.39	$143,202.80
430-175-148	PIPE CULV, OPT MATL, ROUND, 48"S/CD	72.00	LF	$413.04	$29,738.88

Drainage Component Total $14,560,082.81

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-111	SINGLE COL GRND SIGN AS, F&I GM, <12 SF	18.00	EA	$528.87	$9,519.66
700-1-112	SINGLE COL GRND SIGN AS, F&I GM, 12-20	2.00	EA	$2,182.87	$4,365.74
700-2-115	MULTI- COLUMN SIGN, F&I GM, 50.1-100 SF	2.00	EA	$11,416.45	$22,832.90
700-2-116	MULTI- COLUMN SIGN, F&I GM, 100.1-200 SF	2.00	EA	$20,055.02	$40,110.04

Signing Component Total	$76,828.34

SIGNALIZATIONS COMPONENT

Signalization 1

Description	Value
Type	6 Lane Mast Arm
Multiplier	1
Description	US 41 SB

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	700.00	LF	$27.11	$18,977.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	300.00	LF	$35.22	$10,566.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$12,199.98	$12,199.98
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	22.00	EA	$1,417.71	$31,189.62
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$6,328.22	$6,328.22
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$13.94	$836.40
641-2-11	PREST CNC POLE,F&I,TYP P-II,PEDESTAL	1.00	EA	$2,575.08	$2,575.08
649-21-21	STEEL MAST ARM ASSEMBLY, F&I, 78'	6.00	EA	$107,224.36	$643,346.16
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	20.00	AS	$1,978.01	$39,560.20
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$1,186.76	$9,494.08
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	20.00	EA	$622.41	$12,448.20
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	20.00	AS	$1,916.26	$38,325.20
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$465.95	$3,727.60
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$50,982.29	$50,982.29
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$428.68	$1,714.72

Signalization 2

Description	Value
Type	6 Lane Mast Arm
Multiplier	1
Description	Old US 41

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	700.00	LF	$27.11	$18,977.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	300.00	LF	$35.22	$10,566.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$12,199.98	$12,199.98
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	22.00	EA	$1,417.71	$31,189.62
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$6,328.22	$6,328.22
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$13.94	$836.40

641-2-11	PREST CNC POLE,F&I,TYP P-II,PEDESTAL	1.00	EA	$2,575.08	$2,575.08
649-21-21	STEEL MAST ARM ASSEMBLY, F&I, 78'	6.00	EA	$107,224.36	$643,346.16
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	20.00	AS	$1,978.01	$39,560.20
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$1,186.76	$9,494.08
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	20.00	EA	$622.41	$12,448.20
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	20.00	AS	$1,916.26	$38,325.20
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$465.95	$3,727.60
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$50,982.29	$50,982.29
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$428.68	$1,714.72

Signalization 3

Description	Value
Type	6 Lane Mast Arm
Multiplier	1
Description	US 41 NB

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	700.00	LF	$27.11	$18,977.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	300.00	LF	$35.22	$10,566.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$12,199.98	$12,199.98
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	22.00	EA	$1,417.71	$31,189.62
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$6,328.22	$6,328.22
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$13.94	$836.40
641-2-11	PREST CNC POLE,F&I,TYP P-II,PEDESTAL	1.00	EA	$2,575.08	$2,575.08
649-21-21	STEEL MAST ARM ASSEMBLY, F&I, 78'	6.00	EA	$107,224.36	$643,346.16
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	20.00	AS	$1,978.01	$39,560.20
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$1,186.76	$9,494.08
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	20.00	EA	$622.41	$12,448.20
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	20.00	AS	$1,916.26	$38,325.20
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$465.95	$3,727.60
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$50,982.29	$50,982.29
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$428.68	$1,714.72

Signalization 4

Description	Value
Type	4 Lane Mast Arm
Multiplier	1

Description	Old US 41 @ Veteran's Memorial Blvd

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	750.00	LF	$27.11	$20,332.50
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	250.00	LF	$35.22	$8,805.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$12,199.98	$12,199.98
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00	EA	$1,417.71	$22,683.36
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$6,328.22	$6,328.22
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$13.94	$836.40
649-21-10	STEEL MAST ARM ASSEMBLY, F&I, 60'	4.00	EA	$88,647.15	$354,588.60
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	12.00	AS	$1,978.01	$23,736.12
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$1,186.76	$9,494.08
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	12.00	EA	$622.41	$7,468.92
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	12.00	AS	$1,916.26	$22,995.12
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$465.95	$3,727.60
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$50,982.29	$50,982.29
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$428.68	$1,714.72

Signalization 5

Description	Value
Type	4 Lane Mast Arm
Multiplier	1
Description	Old US 41 @ Rail Head Blvd

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	750.00	LF	$27.11	$20,332.50
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	250.00	LF	$35.22	$8,805.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$12,199.98	$12,199.98
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00	EA	$1,417.71	$22,683.36
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$6,328.22	$6,328.22
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$13.94	$836.40
649-21-10	STEEL MAST ARM ASSEMBLY, F&I, 60'	4.00	EA	$88,647.15	$354,588.60
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	12.00	AS	$1,978.01	$23,736.12
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$1,186.76	$9,494.08
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	12.00	EA	$622.41	$7,468.92
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	12.00	AS	$1,916.26	$22,995.12

665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00 EA	$465.95	$3,727.60
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00 AS	$50,982.29	$50,982.29
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00 EA	$428.68	$1,714.72
	Signalizations Component Total			$3,738,598.07

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	**Value**
Spacing	MIN

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	3,886.08	LF	$27.11	$105,351.63
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	771.33	LF	$35.22	$27,166.24
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	26.00	EA	$1,417.71	$36,860.46
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	14,193.02	LF	$4.01	$56,914.01
715-61-342	LIGHT POLE CMPLT,STD,F&I, 40'MH,12'ARM L	26.00	EA	$11,088.29	$288,295.54
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	26.00	EA	$912.96	$23,736.96
	Subcomponent Total				$538,324.84
	Lighting Component Total				$538,324.84

Sequence 1 Total $25,345,906.71

Sequence: 2 NDU - New Construction, Divided, Urban **Net Length:** 0.136 MI 718 LF

Description: Old US 41 - 300' N of Sterling Oaks Dr to 1000' N. Sterling Oaks Dr (STA. 138+87.64 to 145+87.64)

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	100.25 / 49.75
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.136
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	4 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.47	AC	$21,125.37	$52,179.66
120-6	EMBANKMENT	17,689.77	CY	$23.14	$409,341.28
	Earthwork Component Total				$461,520.94

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	27.00 / 27.00
Structural Spread Rate	330
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	5,131.88	SY	$7.87	$40,387.90
285-709	OPTIONAL BASE,BASE GROUP 09	4,308.48	SY	$23.68	$102,024.81
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	710.90	TN	$176.63	$125,566.27
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	355.45	TN	$206.46	$73,386.21

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	9.97	TN	$445.06	$4,437.25
	Comment: Under guardrail (2.5' x 718' at 100 lbs/sy)				
536-1-1	GUARDRAIL- ROADWAY, GEN TL-3	718.00	LF	$24.66	$17,705.88
536-6	PIPE RAIL FOR GUARDRAIL	718.00	LF	$21.88	$15,709.84

Turnouts/Crossovers Subcomponent

Description	Value

Asphalt Adjustment	20.00
Stabilization Code	Y
Base Code	Y
Friction Course Code	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	1,026.38	SY	$7.87	$8,077.61
285-709	OPTIONAL BASE,BASE GROUP 09	861.70	SY	$23.68	$20,405.06
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	142.18	TN	$176.63	$25,113.25
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	71.09	TN	$206.46	$14,677.24

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	55.00	EA	$4.03	$221.65
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.54	GM	$1,451.86	$784.00
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.27	GM	$524.56	$141.63
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.54	GM	$5,890.06	$3,180.63
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.27	GM	$1,541.95	$416.33

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	10.00 / 0.00
Bike Path Structural Spread Rate	165
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	1,117.01	SY	$7.87	$8,790.87
285-701	OPTIONAL BASE,BASE GROUP 01	797.87	SY	$16.71	$13,332.41
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	65.82	TN	$176.63	$11,625.79

Roadway Component Total $485,984.63

SHOULDER COMPONENT

User Input Data

Description	Value

Total Outside Shoulder Width L/R	30.75 / 13.25
Total Outside Shoulder Perf. Turf Width L/R	28.50 / 5.00
Sidewalk Width L/R	0.00 / 6.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	718.08	LF	$36.48	$26,195.56
520-1-10	CONCRETE CURB & GUTTER, TYPE F	718.08	LF	$36.48	$26,195.56
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	478.72	SY	$82.88	$39,676.31
570-1-1	PERFORMANCE TURF	2,672.85	SY	$4.21	$11,252.70

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,436.16	LF	$2.07	$2,972.85
104-11	FLOATING TURBIDITY BARRIER	34.00	LF	$12.93	$439.62
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	34.00	LF	$5.98	$203.32
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$3,039.90	$3,039.90
104-18	INLET PROTECTION SYSTEM	7.00	EA	$160.34	$1,122.38
107-1	LITTER REMOVAL	3.46	AC	$37.73	$130.55
107-2	MOWING	3.46	AC	$67.82	$234.66
	Shoulder Component Total				$111,463.41

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	19.50
Performance Turf Width	15.50

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	1,436.16	LF	$36.48	$52,391.12
570-1-1	PERFORMANCE TURF	1,236.69	SY	$4.21	$5,206.46
	Median Component Total				$57,597.58

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-351	INLETS, CURB, TYPE P-5, <10'	5.00	EA	$9,830.35	$49,151.75
425-1-451	INLETS, CURB, TYPE J-5, <10'	2.00	EA	$14,703.21	$29,406.42
425-1-521	INLETS, DT BOT, TYPE C, <10'	1.00	EA	$7,817.08	$7,817.08
425-2-41	MANHOLES, P-7, <10'	1.00	EA	$8,450.08	$8,450.08
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	360.00	LF	$205.65	$74,034.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	40.00	LF	$287.52	$11,500.80

430-175-148	PIPE CULV, OPT MATL, ROUND, 48"S/CD	680.00	LF	$413.04	$280,867.20
570-1-1	PERFORMANCE TURF	41.34	SY	$4.21	$174.04

Retention Basin 1

Description	Value
Size	2.5 AC
Multiplier	3
Depth	6.00
Description	

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	7.50	AC	$21,125.37	$158,440.28
120-1	REGULAR EXCAVATION	72,600.00	CY	$28.38	$2,060,388.00
425-1-361	INLETS, CURB, TYPE P-6, <10'	3.00	EA	$9,738.76	$29,216.28
425-2-71	MANHOLES, J-7, <10'	3.00	EA	$13,042.57	$39,127.71
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	168.00	LF	$335.03	$56,285.04
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	600.00	LF	$607.91	$364,746.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	4,005.00	LF	$30.35	$121,551.75
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	3.00	EA	$4,874.61	$14,623.83
570-1-1	PERFORMANCE TURF	36,300.00	SY	$4.21	$152,823.00

Retention Basin 2

Description	Value
Size	2 AC
Multiplier	3
Depth	6.00
Description	

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	6.00	AC	$21,125.37	$126,752.22
120-1	REGULAR EXCAVATION	58,080.00	CY	$28.38	$1,648,310.40
425-1-541	INLETS, DT BOT, TYPE D, <10'	3.00	EA	$8,501.87	$25,505.61
425-2-71	MANHOLES, J-7, <10'	3.00	EA	$13,042.57	$39,127.71
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	168.00	LF	$335.03	$56,285.04
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	600.00	LF	$607.91	$364,746.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	3,540.00	LF	$30.35	$107,439.00
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	3.00	EA	$4,874.61	$14,623.83
570-1-1	PERFORMANCE TURF	29,040.00	SY	$4.21	$122,258.40

Retention Basin 3

Description	Value
Size	2 AC
Multiplier	2
Depth	6.00
Description	

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	4.00	AC	$21,125.37	$84,501.48
120-1	REGULAR EXCAVATION	38,720.00	CY	$28.38	$1,098,873.60
425-1-541	INLETS, DT BOT, TYPE D, <10'	2.00	EA	$8,501.87	$17,003.74
425-2-71	MANHOLES, J-7, <10'	2.00	EA	$13,042.57	$26,085.14
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	112.00	LF	$335.03	$37,523.36
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	400.00	LF	$607.91	$243,164.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	2,360.00	LF	$30.35	$71,626.00
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	2.00	EA	$4,874.61	$9,749.22
570-1-1	PERFORMANCE TURF	19,360.00	SY	$4.21	$81,505.60
	Drainage Component Total				$7,633,683.61

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-111	SINGLE COL GRND SIGN AS, F&I GM, <12 SF	4.00	EA	$528.87	$2,115.48
700-1-112	SINGLE COL GRND SIGN AS, F&I GM, 12-20	1.00	EA	$2,182.87	$2,182.87
700-2-115	MULTI- COLUMN SIGN, F&I GM, 50.1-100 SF	1.00	EA	$11,416.45	$11,416.45
700-2-116	MULTI- COLUMN SIGN, F&I GM, 100.1-200 SF	1.00	EA	$20,055.02	$20,055.02
	Signing Component Total				$35,769.82

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MIN

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	718.08	LF	$27.11	$19,467.15
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	142.53	LF	$35.22	$5,019.91
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	5.00	EA	$1,417.71	$7,088.55
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	2,622.62	LF	$4.01	$10,516.71
715-61-342	LIGHT POLE CMPLT,STD,F&I, 40'MH,12'ARM L	5.00	EA	$11,088.29	$55,441.45
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	5.00	EA	$912.96	$4,564.80
	Subcomponent Total				$102,098.56
	Lighting Component Total				$102,098.57

Sequence 2 Total $8,888,118.56

Sequence: 3 NDU - New Construction, Divided, Urban **Net Length:** 0.680 MI 3,590 LF

Description: Old US 41 - 1000' N of Sterling Oaks Dr to Collier/Lee County Line (STA. 145+87.64 to 181+75.16)

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	87.00 / 63.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.680
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	12.36	AC	$21,125.37	$261,109.57
120-6	EMBANKMENT	111,170.75	CY	$23.14	$2,572,491.15
	Earthwork Component Total				$2,833,600.73

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	27.00 / 27.00
Structural Spread Rate	330
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	25,659.39	SY	$7.87	$201,939.40
285-709	OPTIONAL BASE,BASE GROUP 09	21,542.40	SY	$23.68	$510,124.03
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	3,554.50	TN	$176.63	$627,831.34
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	1,777.25	TN	$206.46	$366,931.04

Turnouts/Crossovers Subcomponent

Description	Value
Asphalt Adjustment	20.00
Stabilization Code	Y
Base Code	Y
Friction Course Code	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	5,131.88	SY	$7.87	$40,387.90

285-709	OPTIONAL BASE,BASE GROUP 09	4,308.48	SY	$23.68	$102,024.81
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	710.90	TN	$176.63	$125,566.27
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	355.45	TN	$206.46	$73,386.21

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	275.00	EA	$4.03	$1,108.25
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	2.72	GM	$1,451.86	$3,949.06
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	1.36	GM	$524.56	$713.40
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	2.72	GM	$5,890.06	$16,020.96
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	1.36	GM	$1,541.95	$2,097.05

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	10.00 / 0.00
Bike Path Structural Spread Rate	165
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	5,585.07	SY	$7.87	$43,954.50
285-701	OPTIONAL BASE,BASE GROUP 01	3,989.33	SY	$16.71	$66,661.70
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	329.12	TN	$176.63	$58,132.47

Roadway Component Total $2,240,828.39

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	40.50 / 26.50
Total Outside Shoulder Perf. Turf Width L/R	38.25 / 18.25
Sidewalk Width L/R	0.00 / 6.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	3,590.40	LF	$36.48	$130,977.79

520-1-10	CONCRETE CURB & GUTTER, TYPE F	3,590.40	LF	$36.48	$130,977.79
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	2,393.60	SY	$82.88	$198,381.57
570-1-1	PERFORMANCE TURF	22,539.73	SY	$4.21	$94,892.26

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	7,180.80	LF	$2.07	$14,864.26
104-11	FLOATING TURBIDITY BARRIER	170.00	LF	$12.93	$2,198.10
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	170.00	LF	$5.98	$1,016.60
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$3,039.90	$3,039.90
104-18	INLET PROTECTION SYSTEM	35.00	EA	$160.34	$5,611.90
107-1	LITTER REMOVAL	17.31	AC	$37.73	$653.11
107-2	MOWING	17.31	AC	$67.82	$1,173.96
	Shoulder Component Total				$583,787.24

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	19.50
Performance Turf Width	15.50

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	7,180.80	LF	$36.48	$261,955.58
570-1-1	PERFORMANCE TURF	6,183.47	SY	$4.21	$26,032.41
	Median Component Total				$287,987.99

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-351	INLETS, CURB, TYPE P-5, <10'	25.00	EA	$9,830.35	$245,758.75
425-1-451	INLETS, CURB, TYPE J-5, <10'	7.00	EA	$14,703.21	$102,922.47
425-1-521	INLETS, DT BOT, TYPE C, <10'	4.00	EA	$7,817.08	$31,268.32
425-2-41	MANHOLES, P-7, <10'	4.00	EA	$8,450.08	$33,800.32
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	1,800.00	LF	$205.65	$370,170.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	168.00	LF	$287.52	$48,303.36
430-175-148	PIPE CULV, OPT MATL, ROUND, 48"S/CD	3,400.00	LF	$413.04	$1,404,336.00
570-1-1	PERFORMANCE TURF	206.72	SY	$4.21	$870.29
	Drainage Component Total				$2,237,429.51

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-111	SINGLE COL GRND SIGN AS, F&I GM, <12 SF	17.00	EA	$528.87	$8,990.79
700-1-112	SINGLE COL GRND SIGN AS, F&I GM, 12-20	2.00	EA	$2,182.87	$4,365.74
700-2-115	MULTI- COLUMN SIGN, F&I GM, 50.1-100 SF	2.00	EA	$11,416.45	$22,832.90
700-2-116	MULTI- COLUMN SIGN, F&I GM, 100.1-200 SF	2.00	EA	$20,055.02	$40,110.04
	Signing Component Total				$76,299.47

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MIN

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	3,590.40	LF	$27.11	$97,335.74
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	712.64	LF	$35.22	$25,099.18
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	24.00	EA	$1,417.71	$34,025.04
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	13,113.12	LF	$4.01	$52,583.61
715-61-342	LIGHT POLE CMPLT,STD,F&I, 40'MH,12'ARM L	24.00	EA	$11,088.29	$266,118.96
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	24.00	EA	$912.96	$21,911.04
	Subcomponent Total				$497,073.58
	Lighting Component Total				$497,073.57

Sequence 3 Total $8,757,006.90

Sequence: 4 MIS - Miscellaneous Construction **Net Length:** 1.000 MI 5,280 LF

Description: MOT

ROADWAY COMPONENT

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
102-71-13	TEMPORARY BARRIER, F&I,LOW PROFILE,CONC	16,368.00	LF	$47.67	$780,262.56
102-104	TEMPORARY SIGNALIZATION AND MAINT, INTER	1,460.00	ED	$22.50	$32,850.00
	Comment: Assumes 2 years * 365 days * 2 intersections				
102-107-1	TEMP TRAFFIC DETECTION & MAINTEN, INTER	4,380.00	ED	$26.11	$114,361.80
	Comment: Assumes 2 years * 365 days * 2 intersections * 3 approaches				
	Roadway Component Total				$927,474.36

Sequence 4 Total $927,474.36

Sequence: 5 RSD - Resurfacing, Divided

Net Length: 0.421 MI
2,225 LF

Description: Milling & Resurfacing - US 41

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	8
Roadway Pavement Width L/R	48.00 / 48.00
Structural Spread Rate	220
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	23,733.25	SY	$5.10	$121,039.58
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	2,610.66	TN	$176.63	$461,120.88
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	949.33	TN	$192.62	$182,859.94

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	6

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	398.00	EA	$4.03	$1,603.94
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.69	GM	$1,451.86	$2,453.64
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	2.53	GM	$524.56	$1,327.14
711-15-101	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	1.69	GM	$7,172.47	$12,121.47
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	2.53	GM	$1,890.84	$4,783.83
	Roadway Component Total				$787,310.42

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	10.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	2.67 / 2.67
Paved Outside Shoulder Width L/R	5.00 / 5.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	2,472.21	SY	$12.86	$31,792.62
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	135.97	TN	$176.63	$24,016.38
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	98.89	TN	$192.62	$19,048.19
570-1-1	PERFORMANCE TURF	1,320.16	SY	$4.21	$5,557.87

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	42.14	LF	$12.93	$544.87
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	42.14	LF	$5.98	$252.00
107-1	LITTER REMOVAL	3.06	AC	$37.73	$115.45
107-2	MOWING	3.06	AC	$67.82	$207.53
	Shoulder Component Total				$81,534.91

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	40.00
Performance Turf Width	0.00
Total Median Shoulder Width L/R	0.00 / 0.00
Paved Median Shoulder Width L/R	0.00 / 0.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-5-21	TRAF SEP CONC - TYPE II, 4' WIDE	15,000.00	LF	$158.19	$2,372,850.00
	Median Component Total				$2,372,850.00

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-111	SINGLE COL GRND SIGN AS, F&I GM, <12 SF	9.00	EA	$528.87	$4,759.83
700-1-112	SINGLE COL GRND SIGN AS, F&I GM, 12-20	8.00	EA	$2,182.87	$17,462.96
700-1-500	SINGLE COL GRND SIGN AS, RELOCATE	1.00	EA	$344.14	$344.14
700-1-600	SINGLE COL GRND SIGN AS, REMOVE	7.00	EA	$55.10	$385.70
700-2-114	MULTI- COLUMN SIGN, F&I GM, 30.1-50 SF	1.00	EA	$11,310.68	$11,310.68
700-2-600	MULTI- COLUMN GROUND SIGN, REMOVE	1.00	EA	$2,014.55	$2,014.55

Signing Component Total	$36,277.86

Sequence 5 Total	$3,277,973.19

Sequence: 6 NDU - New Construction, Divided, Urban **Net Length:** 0.189 MI 1,000 LF

Description: Turn Lanes along US 41

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	0.00 / 40.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.189
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.92	AC	$21,125.37	$19,435.34
120-6	EMBANKMENT	10,908.74	CY	$23.14	$252,428.24
	Earthwork Component Total				$271,863.58

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	0.00 / 24.00
Structural Spread Rate	330
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	3,240.10	SY	$7.87	$25,499.59
285-709	OPTIONAL BASE,BASE GROUP 09	2,666.75	SY	$23.68	$63,148.64
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	440.01	TN	$176.63	$77,718.97
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	220.01	TN	$206.46	$45,423.26

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

706-1-3	RAISED PAVMT MARK, TYPE B	26.00 EA	$4.03	$104.78
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.76 GM	$1,451.86	$1,103.41
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.76 GM	$5,890.06	$4,476.45
	Roadway Component Total			$217,475.10

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	0.00 / 13.25
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 5.00
Sidewalk Width L/R	0.00 / 6.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	1,000.03	LF	$36.48	$36,481.09
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	666.69	SY	$82.88	$55,255.27
570-1-1	PERFORMANCE TURF	555.57	SY	$4.21	$2,338.95
	Shoulder Component Total				$94,075.31

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	22.00
Performance Turf Width	0.00

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-70	CONCRETE TRAFFIC SEPARATOR, SP- VAR WIDT	2,222.00	SY	$158.13	$351,364.86
	Median Component Total				$351,364.86

Sequence 6 Total $934,778.85

Date: 4/17/2025 3:28:58 PM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 435110-1-22-01 **Letting Date:** 01/2099

Description: CR 887 (OLD US 41) FROM US 41 TO LEE COUNTY LINE

District: 01 **County:** 03 COLLIER **Market Area:** 10 **Units:** English

Contract Class: 1 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 1.550 MI

Project Manager: NEM-AEH-SAA

Version 9 Project Grand Total **$76,146,334.62**

Description: March 2025 Unit Cost Update from Version 8P - 3/31/25

Project Sequences Subtotal			**$48,131,258.57**
102-1	Maintenance of Traffic	15.00 %	$7,219,688.79
101-1	Mobilization	10.00 %	$5,535,094.74
Project Sequences Total			**$60,886,042.10**
Project Unknowns		25.00 %	$15,221,510.52
Design/Build		0.00 %	$0.00

Non-Bid Components:

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
999-25	INITIAL CONTINGENCY AMOUNT (DO NOT BID)		LS	$38,782.00	$38,782.00
Project Non-Bid Subtotal					**$38,782.00**
Version 9 Project Grand Total					**$76,146,334.62**

Date: 4/17/2025 3:30:26 PM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 435347-1-22-01 **Letting Date:** 01/2099

Description: CR 887 (OLD US 41) FROM COLLIER COUNTY LINE TO BONITA BEACH RD

District: 01 **County:** 12 LEE **Market Area:** 10 **Units:** English
Contract Class: 4 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 1.180 MI

Project Manager: NEM-AEH-SAA

Version 6 Project Grand Total **$32,128,894.09**
Description: March 2025 Update with Markups per PM from Version 5P - 3/31/25

Sequence: 1 NDU - New Construction, Divided, Urban **Net Length:** 0.946 MI / 4,995 LF
Description: Old US 41 - Collier/Lee County Line to New Quandrant Roadway (STA. 181+75.16 to 231+72.37)

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	57.00 / 48.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.946
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	12.04	AC	$39,426.96	$474,700.60
120-6	EMBANKMENT	99,980.85	CY	$24.84	$2,483,524.31
	Earthwork Component Total				$2,958,224.91

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	29.00 / 29.00
Structural Spread Rate	330
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	37,916.69	SY	$8.18	$310,158.52
285-709	OPTIONAL BASE,BASE GROUP 09	32,189.23	SY	$23.68	$762,240.97

334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	5,311.22	TN	$176.63	$938,120.79
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	2,655.61	TN	$208.79	$554,464.81

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
102-71-13	TEMPORARY BARRIER, F&I,LOW PROFILE,CONC	12,460.80	LF	$42.02	$523,602.82

Turnouts/Crossovers Subcomponent

Description	Value
Asphalt Adjustment	20.00
Stabilization Code	Y
Base Code	Y
Friction Course Code	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	7,583.34	SY	$8.18	$62,031.72
285-709	OPTIONAL BASE,BASE GROUP 09	6,437.85	SY	$23.68	$152,448.29
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,062.24	TN	$176.63	$187,623.45
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	531.12	TN	$208.79	$110,892.54

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	383.00	EA	$4.49	$1,719.67
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	3.78	GM	$1,522.57	$5,755.31
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	1.89	GM	$559.49	$1,057.44
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	3.78	GM	$5,832.06	$22,045.19
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	1.89	GM	$1,499.44	$2,833.94

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	12.00 / 0.00
Bike Path Structural Spread Rate	165
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

160-4	TYPE B STABILIZATION	8,879.79	SY	$8.18	$72,636.68
285-701	OPTIONAL BASE,BASE GROUP 01	6,659.84	SY	$23.43	$156,040.05
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	549.44	TN	$176.63	$97,047.59
	Roadway Component Total				$3,960,719.78

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.25 / 11.25
Total Outside Shoulder Perf. Turf Width L/R	6.00 / 3.00
Sidewalk Width L/R	0.00 / 6.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	4,994.88	LF	$40.21	$200,844.12
520-1-10	CONCRETE CURB & GUTTER, TYPE F	4,994.88	LF	$40.21	$200,844.12
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	3,329.92	SY	$82.88	$275,983.77
570-1-1	PERFORMANCE TURF	4,994.88	SY	$3.69	$18,431.11

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	9,989.76	LF	$2.07	$20,678.80
104-11	FLOATING TURBIDITY BARRIER	236.50	LF	$13.97	$3,303.90
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	236.50	LF	$6.07	$1,435.56
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$3,130.10	$3,130.10
104-18	INLET PROTECTION SYSTEM	49.00	EA	$152.32	$7,463.68
107-1	LITTER REMOVAL	24.08	AC	$43.28	$1,042.18
107-2	MOWING	24.08	AC	$70.64	$1,701.01
	Shoulder Component Total				$734,858.36

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	16.00
Performance Turf Width	11.50

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-7	CONCRETE CURB & GUTTER, TYPE E	9,989.76	LF	$41.80	$417,571.97
570-1-1	PERFORMANCE TURF	6,382.35	SY	$3.69	$23,550.87
	Median Component Total				$441,122.84

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-351	INLETS, CURB, TYPE P-5, <10'	35.00	EA	$9,830.35	$344,062.25
425-1-451	INLETS, CURB, TYPE J-5, <10'	10.00	EA	$14,703.21	$147,032.10
425-1-521	INLETS, DT BOT, TYPE C, <10'	5.00	EA	$9,407.99	$47,039.95
425-2-41	MANHOLES, P-7, <10'	5.00	EA	$8,450.08	$42,250.40
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	2,504.00	LF	$227.87	$570,586.48
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	224.00	LF	$329.66	$73,843.84
430-175-148	PIPE CULV, OPT MATL, ROUND, 48"S/CD	4,736.00	LF	$455.71	$2,158,242.56
570-1-1	PERFORMANCE TURF	287.58	SY	$3.69	$1,061.17

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	1.00	EA	$4,874.61	$4,874.61
	Comment: For Pond				

Retention Basin 1

Description	Value
Size	1.5 AC
Multiplier	2
Depth	6.00
Description	SMF-2A

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	3.00	AC	$39,426.96	$118,280.88
120-1	REGULAR EXCAVATION	29,040.00	CY	$37.63	$1,092,775.20
425-1-541	INLETS, DT BOT, TYPE D, <10'	2.00	EA	$8,272.33	$16,544.66
425-2-71	MANHOLES, J-7, <10'	2.00	EA	$8,777.22	$17,554.44
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	112.00	LF	$392.27	$43,934.24
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	400.00	LF	$607.91	$243,164.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	2,050.00	LF	$30.35	$62,217.50
570-1-1	PERFORMANCE TURF	14,520.00	SY	$3.69	$53,578.80
	Drainage Component Total				$5,037,043.08

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-111	SINGLE COL GRND SIGN AS, F&I GM, <12 SF	23.00	EA	$663.50	$15,260.50
700-1-112	SINGLE COL GRND SIGN AS, F&I GM, 12-20	2.00	EA	$1,901.92	$3,803.84
700-2-115	MULTI- COLUMN SIGN, F&I GM, 50.1-100 SF	2.00	EA	$13,959.97	$27,919.94
700-2-116	MULTI- COLUMN SIGN, F&I GM, 100.1-200 SF	2.00	EA	$14,776.33	$29,552.66

Signing Component Total	$76,536.94

SIGNALIZATIONS COMPONENT

Signalization 1

Description	Value
Type	4 Lane Mast Arm
Multiplier	1
Description	Old US 41 @ Via Palacio Avenue Signal

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	750.00	LF	$17.00	$12,750.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	250.00	LF	$36.97	$9,242.50
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$11,823.54	$11,823.54
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00	EA	$1,291.84	$20,669.44
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$6,328.22	$6,328.22
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$11.06	$663.60
649-21-10	STEEL MAST ARM ASSEMBLY, F&I, 60'	4.00	EA	$96,984.71	$387,938.84
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	12.00	AS	$1,874.80	$22,497.60
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$1,152.75	$9,222.00
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	12.00	EA	$622.41	$7,468.92
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	12.00	AS	$1,544.45	$18,533.40
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$422.36	$3,378.88
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$50,982.29	$50,982.29
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$431.93	$1,727.72

Signalization 2

Description	Value
Type	4 Lane Mast Arm
Multiplier	1
Description	Old US 41 @ Mediterra Drive Signal

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	750.00	LF	$17.00	$12,750.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	250.00	LF	$36.97	$9,242.50
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$11,823.54	$11,823.54
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00	EA	$1,291.84	$20,669.44
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$6,328.22	$6,328.22
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$11.06	$663.60
649-21-10	STEEL MAST ARM ASSEMBLY, F&I, 60'	4.00	EA	$96,984.71	$387,938.84

650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	12.00	AS	$1,874.80	$22,497.60
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$1,152.75	$9,222.00
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	12.00	EA	$622.41	$7,468.92
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	12.00	AS	$1,544.45	$18,533.40
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$422.36	$3,378.88
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$50,982.29	$50,982.29
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$431.93	$1,727.72

Signalization 3

Description	Value
Type	4 Lane Mast Arm
Multiplier	1
Description	Old US 41 @ New Quadrant Road Signal

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	750.00	LF	$17.00	$12,750.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	250.00	LF	$36.97	$9,242.50
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$11,823.54	$11,823.54
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00	EA	$1,291.84	$20,669.44
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$6,328.22	$6,328.22
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$11.06	$663.60
649-21-10	STEEL MAST ARM ASSEMBLY, F&I, 60'	4.00	EA	$96,984.71	$387,938.84
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	12.00	AS	$1,874.80	$22,497.60
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$1,152.75	$9,222.00
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	12.00	EA	$622.41	$7,468.92
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	12.00	AS	$1,544.45	$18,533.40
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$422.36	$3,378.88
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$50,982.29	$50,982.29
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$431.93	$1,727.72
	Signalizations Component Total				$1,689,680.85

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MIN

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	4,994.88	LF	$17.00	$84,912.96

630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	991.41 LF	$36.97	$36,652.43
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	34.00 EA	$1,291.84	$43,922.56
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	18,242.66 LF	$4.33	$78,990.72
715-61-342	LIGHT POLE CMPLT,STD,F&I, 40'MH,12'ARM L	34.00 EA	$11,233.58	$381,941.72
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	34.00 EA	$840.80	$28,587.20
	Subcomponent Total			$655,007.59
	Lighting Component Total			$655,007.59

Sequence 1 Total $15,553,194.35

Sequence: 3 NDU - New Construction, Divided, Urban **Net Length:** 0.443 MI 2,339 LF

Description: New Quadrant Roadway from Old US 41 to Race Track Rd (STA. 10+00.00 to 33+41.00)

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.443
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	5.37	AC	$39,426.96	$211,722.78
120-6	EMBANKMENT	43,941.03	CY	$24.84	$1,091,495.19
	Earthwork Component Total				$1,303,217.97

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	11.00 / 11.00
Structural Spread Rate	330
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	8,399.75	SY	$8.18	$68,709.96
285-709	OPTIONAL BASE,BASE GROUP 09	5,717.65	SY	$23.68	$135,393.95
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	943.41	TN	$176.63	$166,634.51
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	471.71	TN	$208.79	$98,488.33

Turnouts/Crossovers Subcomponent

Description	Value
Asphalt Adjustment	10.00
Stabilization Code	Y
Base Code	Y
Friction Course Code	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	839.98	SY	$8.18	$6,871.04
285-709	OPTIONAL BASE,BASE GROUP 09	571.76	SY	$23.68	$13,539.28

334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	94.34 TN	$176.63	$16,663.27
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	47.17 TN	$208.79	$9,848.62

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	60.00	EA	$4.49	$269.40
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.77	GM	$1,522.57	$2,694.95
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	1.77	GM	$5,832.06	$10,322.75

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	12.00 / 0.00
Bike Path Structural Spread Rate	165
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	4,158.29	SY	$8.18	$34,014.81
285-701	OPTIONAL BASE,BASE GROUP 01	3,118.72	SY	$23.43	$73,071.61
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	257.29	TN	$176.63	$45,445.13

Roadway Component Total $681,967.61

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	22.00 / 22.00
Total Outside Shoulder Perf. Turf Width L/R	19.75 / 11.75
Sidewalk Width L/R	0.00 / 8.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	2,339.04	LF	$40.21	$94,052.80
520-1-10	CONCRETE CURB & GUTTER, TYPE F	2,339.04	LF	$40.21	$94,052.80
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	2,079.15	SY	$82.88	$172,319.95
570-1-1	PERFORMANCE TURF	8,186.64	SY	$3.69	$30,208.70

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	4,678.08	LF	$2.07	$9,683.63
104-11	FLOATING TURBIDITY BARRIER	110.75	LF	$13.97	$1,547.18
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	110.75	LF	$6.07	$672.25
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$3,130.10	$3,130.10
104-18	INLET PROTECTION SYSTEM	23.00	EA	$152.32	$3,503.36
107-1	LITTER REMOVAL	11.27	AC	$43.28	$487.77
107-2	MOWING	11.27	AC	$70.64	$796.11
	Shoulder Component Total				$410,454.65

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-351	INLETS, CURB, TYPE P-5, <10'	16.00	EA	$9,830.35	$157,285.60
425-1-451	INLETS, CURB, TYPE J-5, <10'	5.00	EA	$14,703.21	$73,516.05
425-1-521	INLETS, DT BOT, TYPE C, <10'	3.00	EA	$9,407.99	$28,223.97
425-2-41	MANHOLES, P-7, <10'	3.00	EA	$8,450.08	$25,350.24
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	1,176.00	LF	$227.87	$267,975.12
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	104.00	LF	$329.66	$34,284.64
430-175-148	PIPE CULV, OPT MATL, ROUND, 48"S/CD	2,216.00	LF	$455.71	$1,009,853.36
570-1-1	PERFORMANCE TURF	134.67	SY	$3.69	$496.93
	Drainage Component Total				$1,596,985.91

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-111	SINGLE COL GRND SIGN AS, F&I GM, <12 SF	11.00	EA	$663.50	$7,298.50
700-1-112	SINGLE COL GRND SIGN AS, F&I GM, 12-20	1.00	EA	$1,901.92	$1,901.92
700-2-115	MULTI- COLUMN SIGN, F&I GM, 50.1-100 SF	1.00	EA	$13,959.97	$13,959.97
700-2-116	MULTI- COLUMN SIGN, F&I GM, 100.1-200 SF	1.00	EA	$14,776.33	$14,776.33
	Signing Component Total				$37,936.72

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MIN

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	2,339.04	LF	$17.00	$39,763.68

630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	464.26 LF	$36.97	$17,163.69
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00 EA	$1,291.84	$20,669.44
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	8,542.81 LF	$4.33	$36,990.37
715-61-342	LIGHT POLE CMPLT,STD,F&I, 40'MH,12'ARM L	16.00 EA	$11,233.58	$179,737.28
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	16.00 EA	$840.80	$13,452.80
	Subcomponent Total			$307,777.26
	Lighting Component Total			$307,777.26
Sequence 3 Total				$4,338,340.12

Sequence: 4 WDR - Widen/Resurface, Divided, Rural

Net Length: 0.236 MI
1,246 LF

Description: Bonita Beach Rd at Race Track Rd Widening

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	0.00 / 15.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.236
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Median Slope L/R	6 to 1 / 6 to 1
Existing Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.43	AC	$39,426.96	$16,953.59
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	206.30	CY	$84.02	$17,333.33
	Earthwork Component Total				$34,286.92

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Existing Roadway Pavement Width L/R	0.00 / 0.00
Structural Spread Rate	0
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 12.00
Widened Inside Pavement Width L/R	0.00 / 0.00
Widened Structural Spread Rate	330
Widened Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	5,053.55	SY	$8.18	$41,338.04
285-709	OPTIONAL BASE,BASE GROUP 09	1,707.13	SY	$23.68	$40,424.84
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	274.14	TN	$176.63	$48,421.35
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	66.46	TN	$360.62	$23,966.81

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.94	GM	$1,522.57	$1,431.22
711-15-101	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	0.94	GM	$6,682.02	$6,281.10
	Roadway Component Total				$161,863.36

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	12.25 / 12.25
New Total Outside Shoulder Width L/R	12.25 / 12.25
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 5.00
Existing Paved Outside Shoulder Width L/R	0.00 / 0.00
New Paved Outside Shoulder Width L/R	0.00 / 0.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
570-1-1	PERFORMANCE TURF	692.27	SY	$3.69	$2,554.48

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	2,865.98	LF	$2.07	$5,932.58
104-11	FLOATING TURBIDITY BARRIER	23.60	LF	$13.97	$329.69
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	23.60	LF	$6.07	$143.25
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$3,130.10	$3,130.10
107-1	LITTER REMOVAL	1.72	AC	$43.28	$74.44
107-2	MOWING	1.72	AC	$70.64	$121.50
	Shoulder Component Total				$12,286.04

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	40.00
Performance Turf Width	0.00
New Total Median Shoulder Width L/R	0.00 / 0.00
New Paved Median Shoulder Width L/R	0.00 / 0.00

Existing Total Median Shoulder Width L/R	0.00 / 0.00
Existing Paved Median Shoulder Width L/R	0.00 / 0.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-5-21	TRAF SEP CONC - TYPE II, 4' WIDE	325.00	LF	$158.19	$51,411.75

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-7	CONCRETE CURB & GUTTER, TYPE E	1,213.00	LF	$41.80	$50,703.40
	Comment: For Bonita Beach Rd Median				
	Median Component Total				$102,115.15

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	192.00	LF	$197.41	$37,902.72
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	24.00	LF	$329.66	$7,911.84
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	10.00	EA	$3,951.95	$39,519.50
570-1-1	PERFORMANCE TURF	166.14	SY	$3.69	$613.06
	Drainage Component Total				$85,947.12

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-111	SINGLE COL GRND SIGN AS, F&I GM, <12 SF	1.00	EA	$663.50	$663.50
700-1-112	SINGLE COL GRND SIGN AS, F&I GM, 12-20	6.00	EA	$1,901.92	$11,411.52
700-1-500	SINGLE COL GRND SIGN AS, RELOCATE	1.00	EA	$395.50	$395.50
700-1-600	SINGLE COL GRND SIGN AS, REMOVE	6.00	EA	$30.34	$182.04
700-2-114	MULTI- COLUMN SIGN, F&I GM, 30.1-50 SF	1.00	EA	$8,347.75	$8,347.75
700-2-600	MULTI- COLUMN GROUND SIGN, REMOVE	1.00	EA	$1,108.77	$1,108.77
	Signing Component Total				$22,109.08

Sequence 4 Total $418,607.67

Date: 4/17/2025 3:30:28 PM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 435347-1-22-01 **Letting Date:** 01/2099

Description: CR 887 (OLD US 41) FROM COLLIER COUNTY LINE TO BONITA BEACH RD

District: 01 **County:** 12 LEE **Market Area:** 10 **Units:** English

Contract Class: 4 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 1.180 MI

Project Manager: NEM-AEH-SAA

Version 6 Project Grand Total **$32,128,894.09**

Description: March 2025 Update with Markups per PM from Version 5P - 3/31/25

Project Sequences Subtotal			**$20,310,142.14**
102-1	Maintenance of Traffic	15.00 %	$3,046,521.32
101-1	Mobilization	10.00 %	$2,335,666.35
Project Sequences Total			**$25,692,329.81**
Project Unknowns		25.00 %	$6,423,082.45
Design/Build		0.00 %	$0.00

Non-Bid Components:

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
999-25	INITIAL CONTINGENCY AMOUNT (DO NOT BID)		LS	$13,481.83	$13,481.83
Project Non-Bid Subtotal					**$13,481.83**
Version 6 Project Grand Total					**$32,128,894.09**

Appendix C-Typical Section Package

STATE OF FLORIDA

DEPARTMENT OF TRANSPORTATION

TYPICAL SECTION PACKAGE

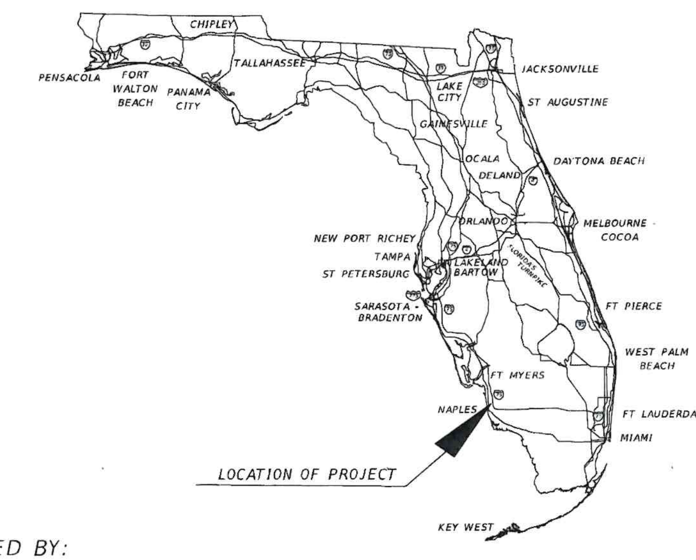
FINANCIAL PROJECT ID 435347-1-22-01

CITY OF BONITA SPRINGS (LEE COUNTY)

COUNTY ROAD 887 (OLD US 41)

RECONSTRUCTION OF CR 887

FROM 2-LANE TO 4-LANE



FDOT DISTRICT DESIGN ENGINEER	FDOT DISTRICT TRAFFIC OPERATIONS ENGINEER
CONCURRING WITH: TYPICAL SECTION ELEMENTS TARGET SPEED DESIGN & POSTED SPEEDS	CONCURRING WITH: TARGET SPEED DESIGN & POSTED SPEEDS
FDOT DISTRICT INTERMODAL SYSTEMS DEVELOPMENT MANAGER	FDOT DISTRICT STRUCTURES DESIGN ENGINEER
CONCURRING WITH: CONTEXT CLASSIFICATION TARGET SPEED	CONCURRING WITH: TYPICAL SECTION ELEMENTS
FHWA TRANSPORTATION ENGINEER	LOCAL TRANSPORTATION ENGINEER
CONCURRING WITH: TYPICAL SECTION ELEMENTS	ASSISTANT CITY MANAGER CONCURRING WITH: TYPICAL SECTION ELEMENTS
NOT USED	NOT USED
CONCURRING WITH:	CONCURRING WITH:

PROJECT LOCATION URL:	https://owpbstandardmap.fdot.gov/?query=WorkProgram Tol15 Dissolved_2004 itemseg 4353471
PROJECT LIMITS:	FROM US 41 TO LEE COUNTY LINE AND FROM COLLIER COUNTY LINE TO BONITA BEACH RD
EXCEPTIONS:	NONE
BRIDGE LIMITS:	NONE
RAILROAD CROSSING:	CSX CROSSING 623508Y

APPROVED BY:

MATTHEW J.W. DOCKINS LICENSE No. 79350 STATE OF FLORIDA PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

Matthew Dockins 27342 Digitally signed by Matthew Dockins 27342 DN: CN=Matthew Dockins 27342, OU=Employees, OU=Domain Users, DC=hntb, DC=org Date: 2025.08.05 11:34:05-04'00'

ON THE DATE ADJACENT TO THE SEAL

SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

HNTB CORPORATION
ONE TAMPA CITY CENTER
201 N FRANKLIN ST. SUITE 1200
TAMPA, FL. 33602
MATTHEW J.W. DOCKINS, P.E. 79350

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

INDEX OF SHEETS

SHEET NO	SHEET DESCRIPTION
1	COVER SHEET
2	TYPICAL SECTION NO.1
3	TYPICAL SECTION NO.2

SHEET NO. 1

5/27/2025 4:07:05 PM

PROJECT CONTROLS

CONTEXT CLASSIFICATION

( )	C1 : NATURAL	( )	C3C : SUBURBAN COMM.
( )	C2 : RURAL	( )	C4 : URBAN GENERAL
( )	C2T : RURAL TOWN	( )	C5 : URBAN CENTER
( )	C3R : SUBURBAN RES.	( )	C6 : URBAN CORE
( )	N/A : L.A. FACILITY	(X)	N/A : FL GREENBOOK

FUNCTIONAL CLASSIFICATION

( )	INTERSTATE	(X)	MAJOR COLLECTOR
( )	FREEWAY/EXPWY.	( )	MINOR COLLECTOR
( )	PRINCIPAL ARTERIAL	( )	LOCAL
( )	MINOR ARTERIAL		

HIGHWAY SYSTEM

- ( ) NATIONAL HIGHWAY SYSTEM
- ( ) STRATEGIC INTERMODAL SYSTEM
- ( ) STATE HIGHWAY SYSTEM
- (X) OFF-STATE HIGHWAY SYSTEM

ACCESS CLASSIFICATION

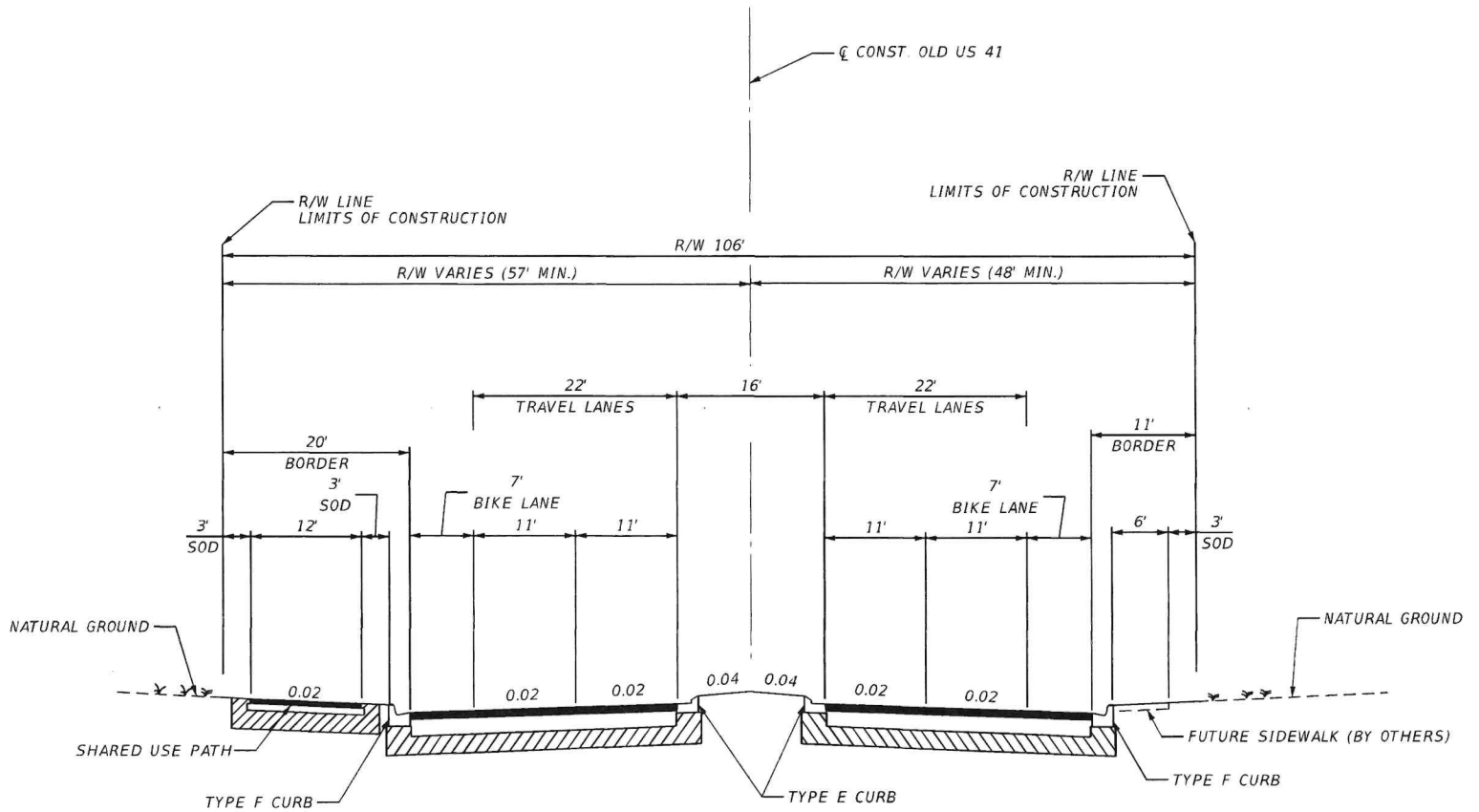
- ( ) 1 - FREEWAY
- ( ) 2 - RESTRICTIVE w/Service Roads
- ( ) 3 - RESTRICTIVE w/660 ft. Connection Spacing
- ( ) 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing
- ( ) 5 - RESTRICTIVE w/440 ft. Connection Spacing
- ( ) 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing
- ( ) 7 - BOTH MEDIAN TYPES

CRITERIA

- (X) NEW CONSTRUCTION / RECONSTRUCTION
- ( ) RESURFACING (LA FACILITIES)
- ( ) RRR (ARTERIALS & COLLECTORS)

POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

TYPICAL SECTION No. 1



OLD US 41
COLLIER/LEE COUNTY LINE TO NEW QUADRANT ROADWAY
STA. 181+75.16 TO STA. 231+72.37

TRAFFIC DATA

CURRENT YEAR = 2019 AADT = 15,800
ESTIMATED OPENING YEAR = 2025 AADT = 22,100
ESTIMATED DESIGN YEAR = 2045 AADT = 38,200
K = 9% D = 60% T = 4.6% (24 HOUR)
DESIGN HOUR T = 2.3%
DESIGN SPEED = 45 MPH
TARGET SPEED = 45 MPH
POSTED SPEED = 45 MPH

FINANCIAL PROJECT ID	SHEET NO.
435347-1-22-01	2

PROJECT CONTROLS

CONTEXT CLASSIFICATION

( )	C1 : NATURAL	( )	C3C : SUBURBAN COMM.
( )	C2 : RURAL	( )	C4 : URBAN GENERAL
( )	C2T : RURAL TOWN	( )	C5 : URBAN CENTER
( )	C3R : SUBURBAN RES.	( )	C6 : URBAN CORE
( )	N/A : L.A. FACILITY	(X)	N/A : FL GREENBOOK

FUNCTIONAL CLASSIFICATION

( )	INTERSTATE	( )	MAJOR COLLECTOR
( )	FREEWAY/EXPWY.	(X)	MINOR COLLECTOR
( )	PRINCIPAL ARTERIAL	( )	LOCAL
( )	MINOR ARTERIAL		

HIGHWAY SYSTEM

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- (X) OFF-STATE HIGHWAY SYSTEM

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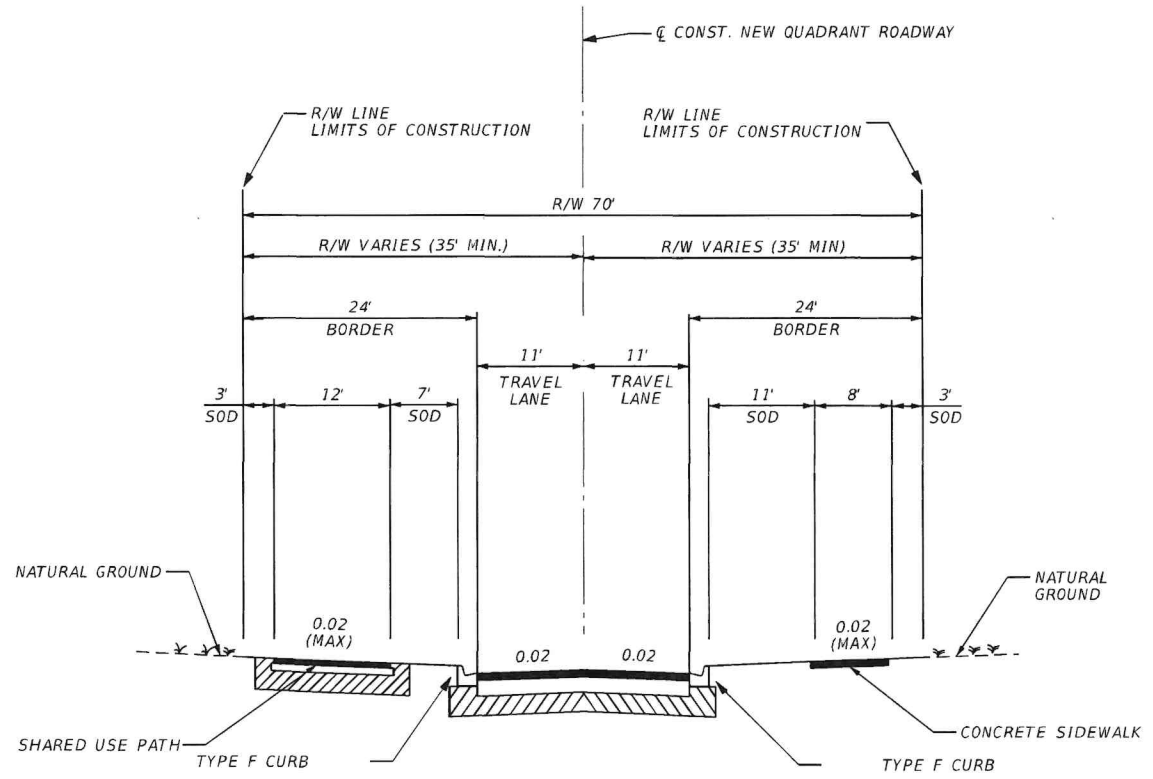
POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

TYPICAL SECTION No. 2



TRAFFIC DATA

CURRENT YEAR = 2019 AADT = 0
ESTIMATED OPENING YEAR = 2025 AADT = 10,600
ESTIMATED DESIGN YEAR = 2045 AADT = 18,100
K = 9% D = 60% T = 4.6% (24 HOUR)
DESIGN HOUR T = 2.3%
DESIGN SPEED = 30 MPH
TARGET SPEED = 30 MPH
POSTED SPEED = 30 MPH

NEW QUADRANT ROADWAY
FROM OLD US 41 TO RACE TRACK RD

FINANCIAL PROJECT ID	SHEET NO.
435347-1-22-01	3

STATE OF FLORIDA

DEPARTMENT OF TRANSPORTATION

TYPICAL SECTION PACKAGE

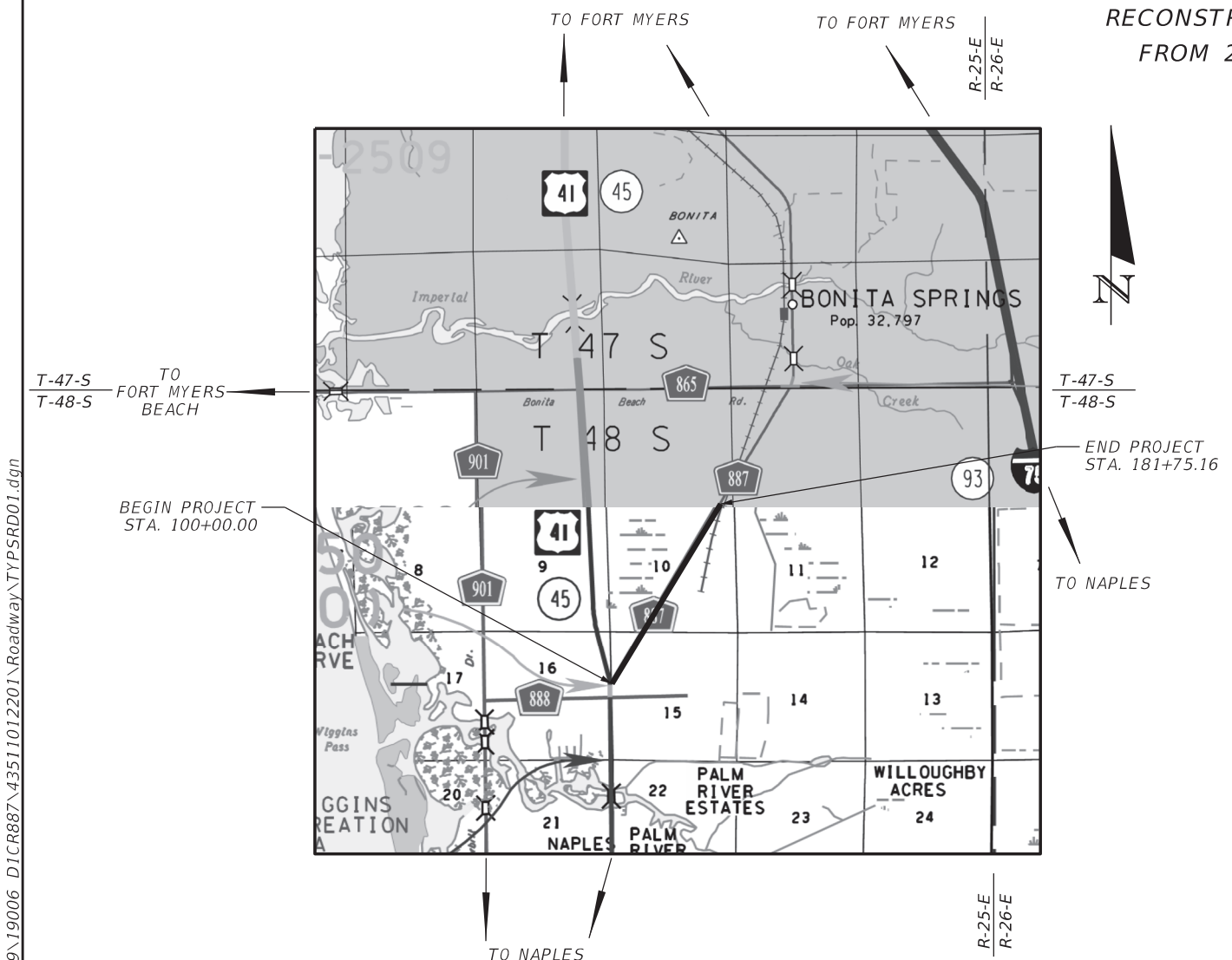
FINANCIAL PROJECT ID 435110-1-22-01

COLLIER COUNTY (03514)

COUNTY ROAD 887 (OLD US 41)

RECONSTRUCTION OF CR 887

FROM 2-LANE TO 4-LANE



APPROVED BY:

MATTHEW J. W. DOCKINS
LICENSE
No 79350
STATE OF FLORIDA
PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

Matt Dockins

Digitally signed by Matt Dockins
DN: E=mdockins@rkk.com, CN=Matt Dockins, OU=baltimore, OU=rkk, OU=UserAccounts, DC=ad, DC=rkk, DC=com
Date: 2022.02.25 13:56:06-05'00'

ON THE DATE ADJACENT TO THE SEAL

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

RUMMEL, KLEPPER & KAHL, LLP (RK&K)
402 S. KENTUCKY AVE., SUITE 400
LAKELAND, FLORIDA 33801
CERTIFICATE OF AUTHROIZATION No. 26879
MATTHEW J.W. DOCKINS P.E. NO. 79350

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

TYPICAL SECTION PACKAGE

TYPICAL SECTION, DESIGN SPEED, TARGET SPEED, AND POSTED SPEED CONCURRENCE

FOR PROCEDURAL CONCURRENCE ONLY
FDOT DISTRICT DESIGN ENGINEER

COLLIER COUNTY PUBLIC WORKS
DIRECTOR-TRANSPORTATION

SHEET NO.
1

2/25/2022 10:35:50 AM mdockins
\\ad.rkk.com\fs\Cloud\Projects\2019\19006 D1CR887\435110122201\Roadway\TYPSRD01.dgn

PROJECT CONTROLS

CONTEXT CLASSIFICATION

( )	C1 : NATURAL	( )	C3C : SUBURBAN COMM.
( )	C2 : RURAL	( )	C4 : URBAN GENERAL
( )	C2T : RURAL TOWN	( )	C5 : URBAN CENTER
( )	C3R : SUBURBAN RES.	( )	C6 : URBAN CORE
( )	N/A : L.A. FACILITY	(X)	N/A : FL GREENBOOK

FUNCTIONAL CLASSIFICATION

( )	INTERSTATE	(X)	MAJOR COLLECTOR
( )	FREEWAY/EXPWY.	( )	MINOR COLLECTOR
( )	PRINCIPAL ARTERIAL	( )	LOCAL
( )	MINOR ARTERIAL		

HIGHWAY SYSTEM

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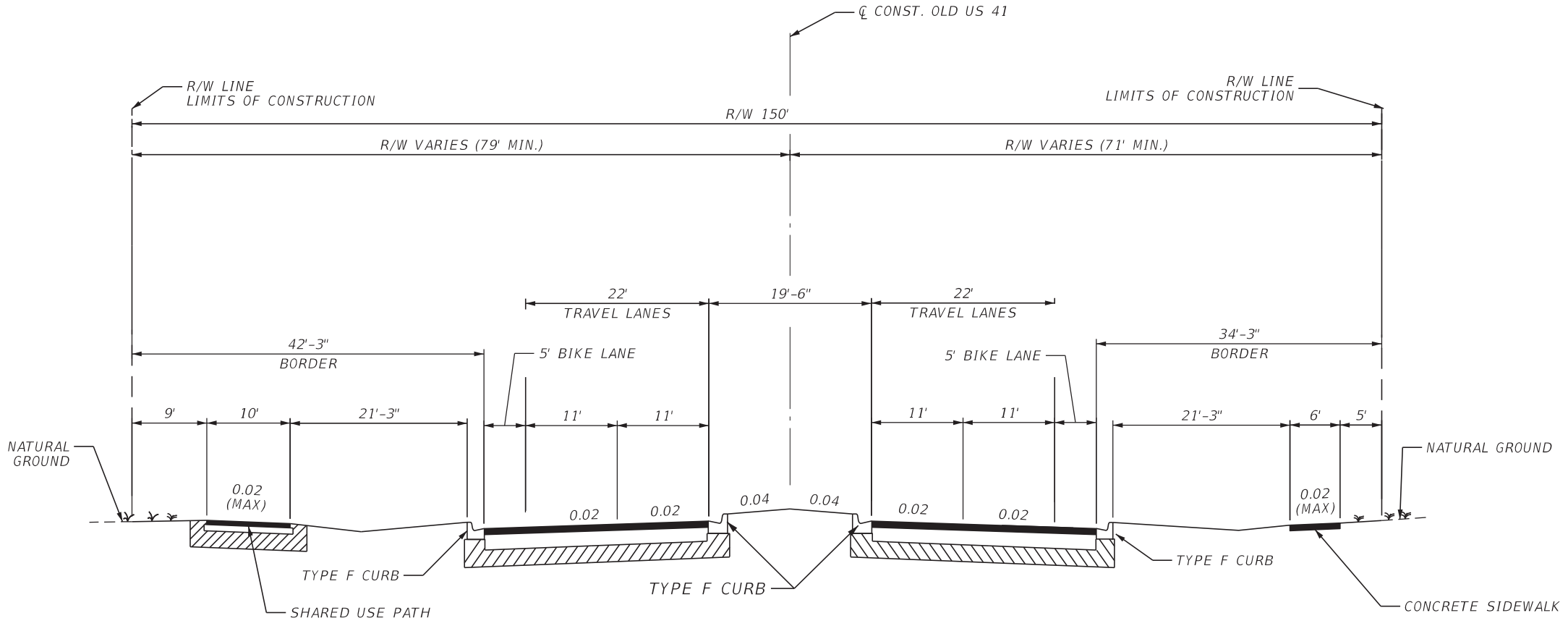
- ( ) 7 - BOTH MEDIAN TYPES

CRITERIA

- (X) NEW CONSTRUCTION / RECONSTRUCTION
- ( ) RESURFACING (LA FACILITIES)
- ( ) RRR (ARTERIALS & COLLECTORS)

POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

TYPICAL SECTION No. 1



OLD US 41
US 41 TO 300' N. OF STERLING OAKS DR
STA. 100+00.00 TO STA. 138+87.64

TRAFFIC DATA

CURRENT YEAR = 2019 AADT = 15,900
ESTIMATED OPENING YEAR = 2025 AADT = 21,400
ESTIMATED DESIGN YEAR = 2045 AADT = 39,500
K = 9% D = 60% T = 4.6% (24 HOUR)
DESIGN HOUR T = 2.3%
DESIGN SPEED = 45 MPH
TARGET SPEED = 45 MPH
POSTED SPEED = 45 MPH

FINANCIAL PROJECT ID	SHEET NO.
435110-1-22-01	2

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

PROJECT CONTROLS

CONTEXT CLASSIFICATION

( )	C1 : NATURAL	( )	C3C : SUBURBAN COMM.
( )	C2 : RURAL	( )	C4 : URBAN GENERAL
( )	C2T : RURAL TOWN	( )	C5 : URBAN CENTER
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( )	N/A : L.A. FACILITY	(X)	N/A : FL GREENBOOK

FUNCTIONAL CLASSIFICATION

( )	INTERSTATE	(X)	MAJOR COLLECTOR
( )	FREEWAY/EXPWY.	( )	MINOR COLLECTOR
( )	PRINCIPAL ARTERIAL	( )	LOCAL
( )	MINOR ARTERIAL		

HIGHWAY SYSTEM

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- ( ) STATE HIGHWAY SYSTEM
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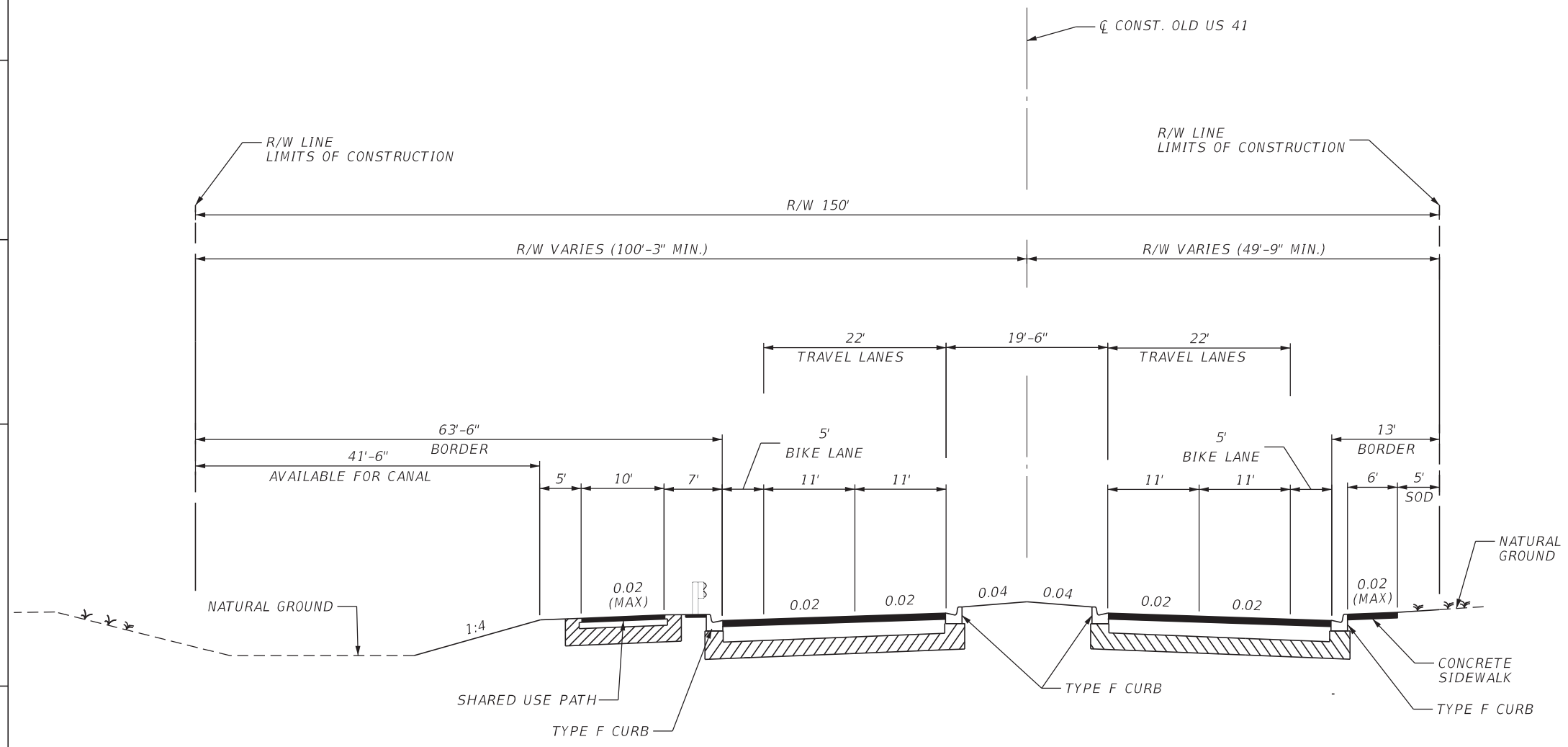
CRITERIA

- (X) NEW CONSTRUCTION / RECONSTRUCTION
- ( ) RESURFACING (LA FACILITIES)
- ( ) RRR (ARTERIALS & COLLECTORS)

POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

TYPICAL SECTION No. 2



OLD US 41
300' N. OF STERLING OAKS DR TO 1,000' N. STERLING OAKS DR
STA. 138+87.64 TO STA. 145+87.64

TRAFFIC DATA

CURRENT YEAR = 2019 AADT = 15,000
ESTIMATED OPENING YEAR = 2025 AADT = 21,100
ESTIMATED DESIGN YEAR = 2045 AADT = 38,600
K = 9% D = 60% T = 4.6% (24 HOUR)
DESIGN HOUR T = 2.3%
DESIGN SPEED = 45 MPH
TARGET SPEED = 45 MPH
POSTED SPEED = 45 MPH

FINANCIAL PROJECT ID	SHEET NO.
435110-1-22-01	3

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

PROJECT CONTROLS

CONTEXT CLASSIFICATION

( )	C1 : NATURAL	( )	C3C : SUBURBAN COMM.
( )	C2 : RURAL	( )	C4 : URBAN GENERAL
( )	C2T : RURAL TOWN	( )	C5 : URBAN CENTER
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( )	N/A : L.A. FACILITY	(X)	N/A : FL GREENBOOK

FUNCTIONAL CLASSIFICATION

( )	INTERSTATE	(X)	MAJOR COLLECTOR
( )	FREEWAY/EXPWY.	( )	MINOR COLLECTOR
( )	PRINCIPAL ARTERIAL	( )	LOCAL
( )	MINOR ARTERIAL		

HIGHWAY SYSTEM

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- ( ) STRATEGIC INTERMODAL SYSTEM
- ( ) STATE HIGHWAY SYSTEM
- (X) OFF-STATE HIGHWAY SYSTEM

ACCESS CLASSIFICATION

- ( ) 1 - FREEWAY
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- (X) 3 - RESTRICTIVE w/660 ft. Connection Spacing
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- ( ) 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing
- ( ) 7 - BOTH MEDIAN TYPES

CRITERIA

- (X) NEW CONSTRUCTION / RECONSTRUCTION
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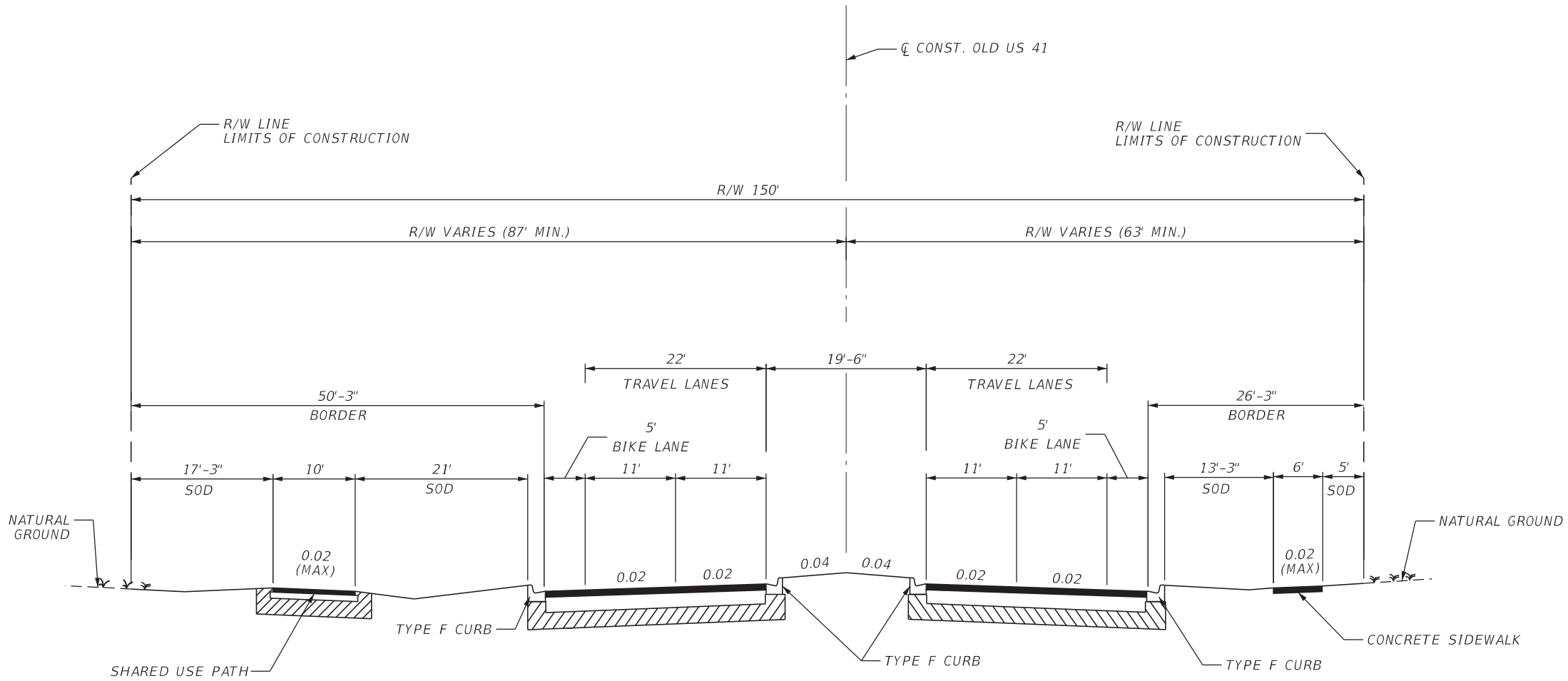
- ( ) RRR (ARTERIALS & COLLECTORS)

POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

TYPICAL SECTION No. 3



OLD US 41
1,000' N. OF STERLING OAKS DR TO COLLIER/LEE COUNTY LINE
STA. 145+87.64 TO STA. 181+75.16

TRAFFIC DATA

CURRENT YEAR = 2019 AADT = 15,700
ESTIMATED OPENING YEAR = 2025 AADT = 21,900
ESTIMATED DESIGN YEAR = 2045 AADT = 38,600
K = 9% D = 60% T = 4.6% (24 HOUR)
DESIGN HOUR T = 2.3%
DESIGN SPEED = 45 MPH
TARGET SPEED = 45 MPH
POSTED SPEED = 45 MPH

FINANCIAL PROJECT ID	SHEET NO.
435110-1-22-01	4

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

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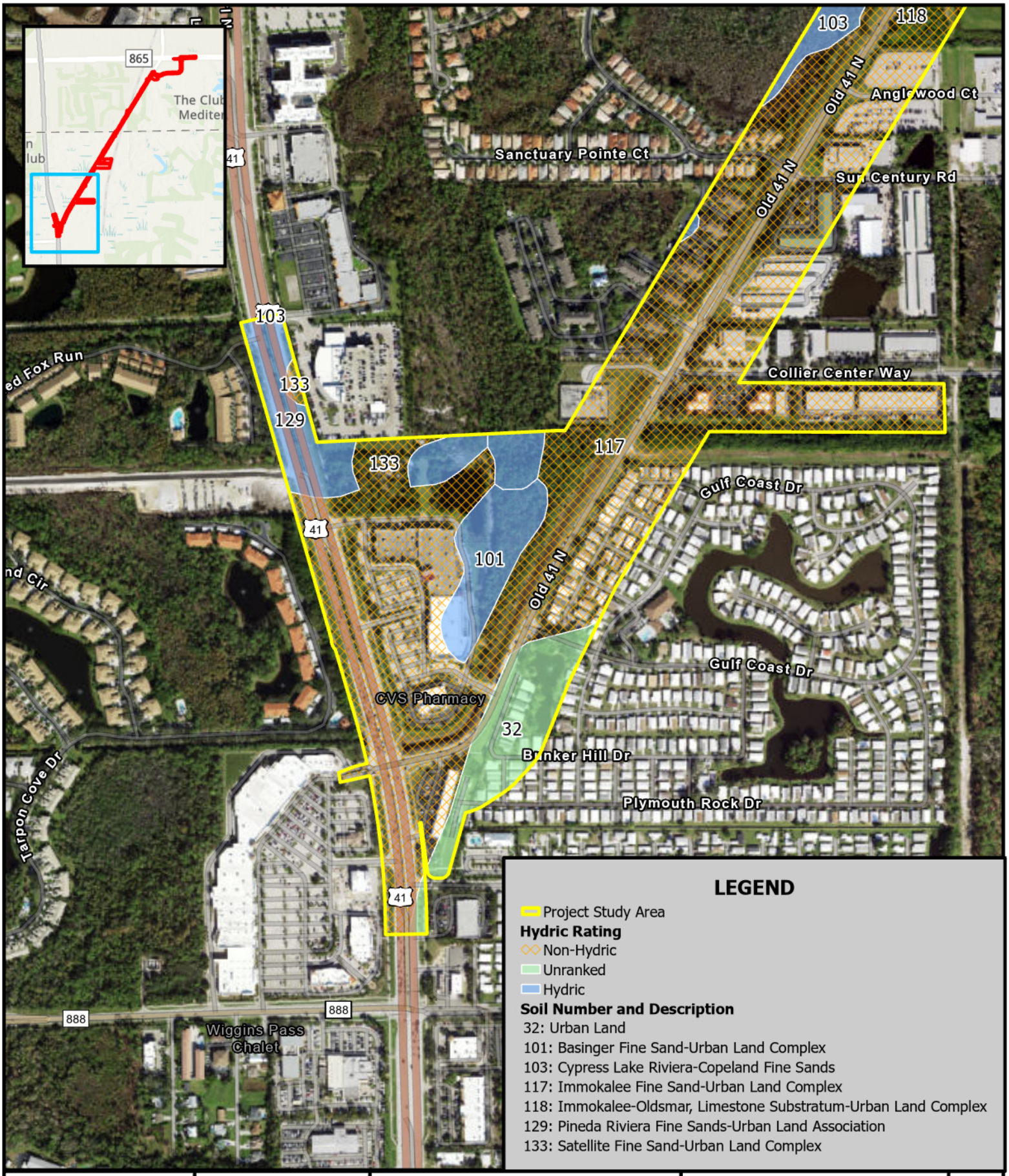
Appendix D-Soil and Drainage Maps



FDOT

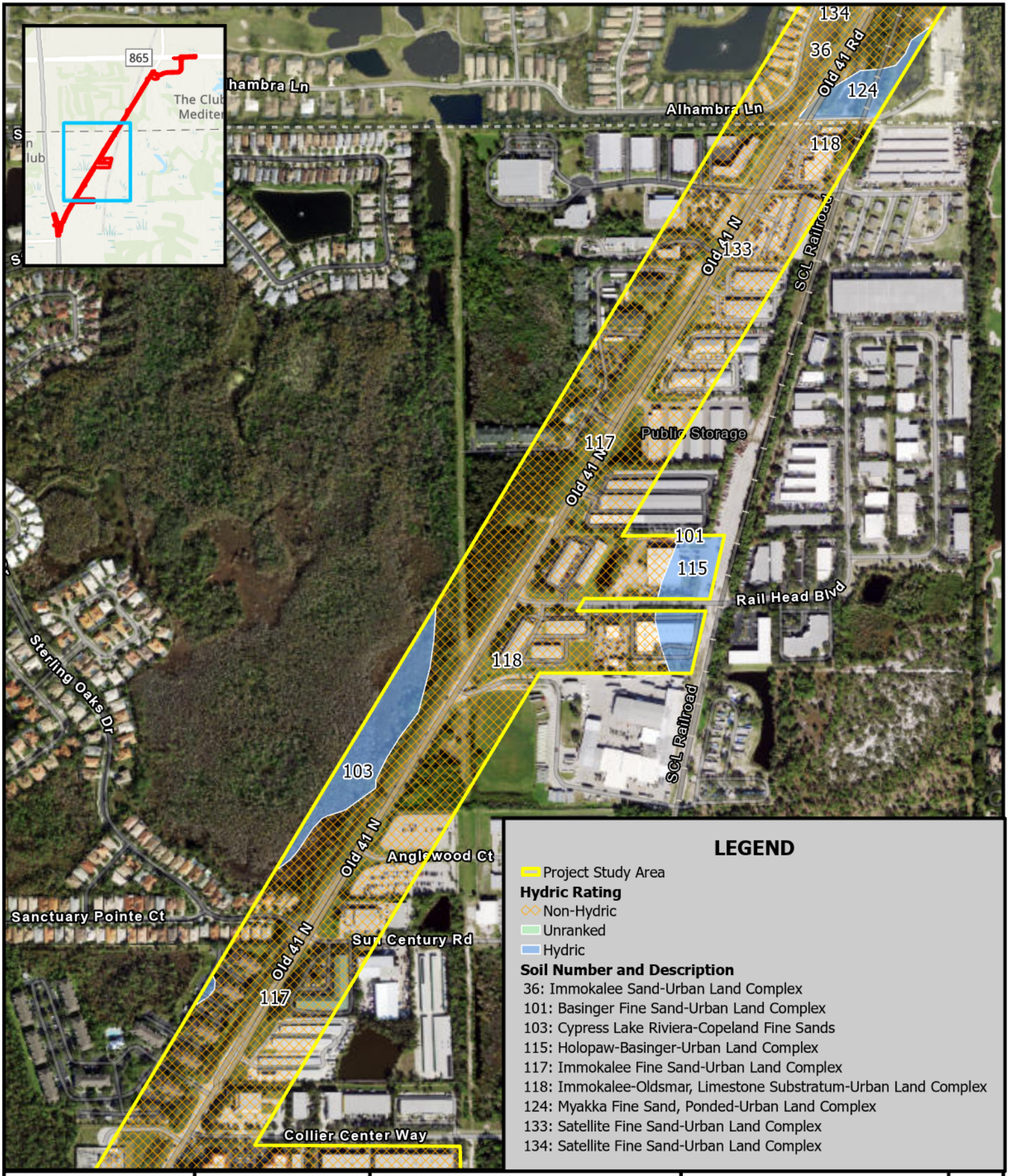
0 300 600
Feet
1 inch = 600 feet

NRCS Soils Map

Source: NRCS 2023

CR 887 (Old US 41)
FPIDs: 435110-1-22-01
& 435347-1-22-01
Lee & Collier Counties

N



LEGEND

Project Study Area

Hydric Rating

- Non-Hydric
- Unranked
- Hydric

Soil Number and Description

- 36: Immokalee Sand-Urban Land Complex
- 101: Basinger Fine Sand-Urban Land Complex
- 103: Cypress Lake Riviera-Copeland Fine Sands
- 115: Holopaw-Basinger-Urban Land Complex
- 117: Immokalee Fine Sand-Urban Land Complex
- 118: Immokalee-Oldsmar, Limestone Substratum-Urban Land Complex
- 124: Myakka Fine Sand, Ponded-Urban Land Complex
- 133: Satellite Fine Sand-Urban Land Complex
- 134: Satellite Fine Sand-Urban Land Complex

FDOT

0 300 600

Feet

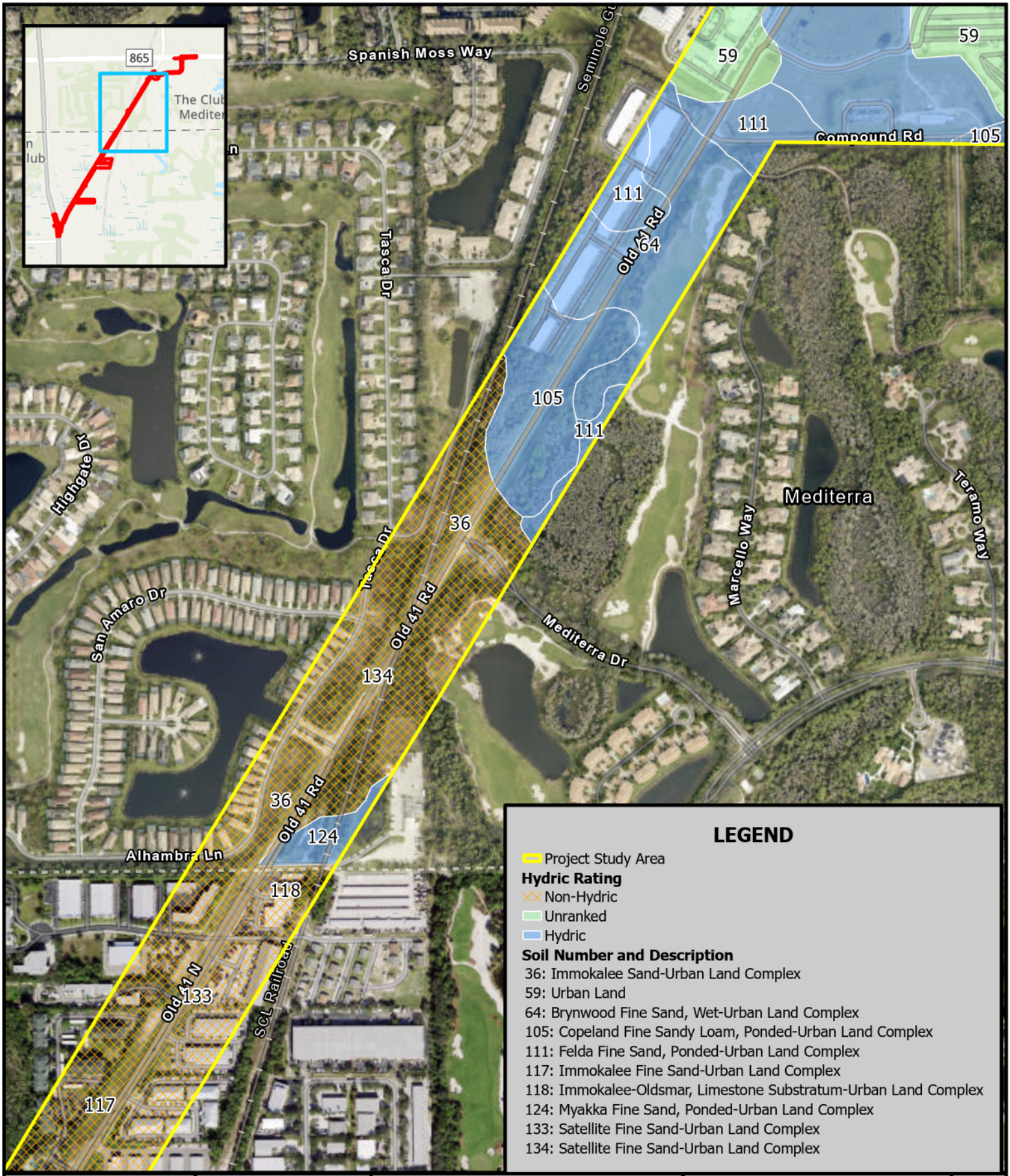
1 inch = 600 feet

NRCS Soils Map

Source: NRCS 2023

CR 887 (Old US 41)
FPIDs: 435110-1-22-01
& 435347-1-22-01
Lee & Collier Counties

N



FDOT

0 300 600

Feet

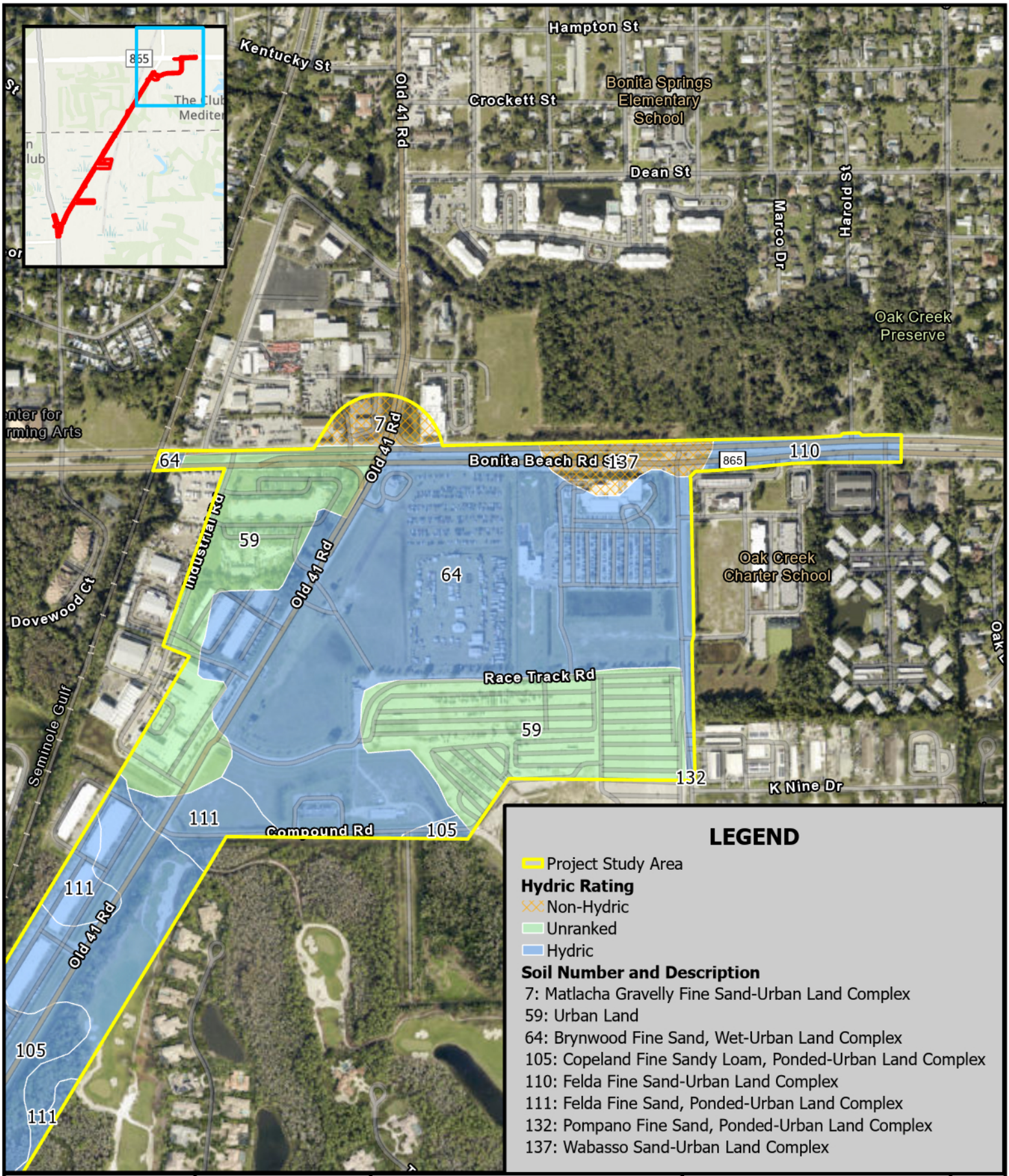
1 inch = 600 feet

NRCS Soils Map

Source: NRCS 2023

CR 887 (Old US 41)
FPIDs: 435110-1-22-01
& 435347-1-22-01
Lee & Collier Counties

N



FDOT

0 300 600
Feet
1 inch = 600 feet

NRCS Soils Map

Source: NRCS 2023

CR 887 (Old US 41)
FPIDs: 435110-1-22-01 & 435347-1-22-01
Lee & Collier Counties

N

0 100 500
Feet

FEA_10
1.00 AC.

FEA_10.5
0.92 AC.

FEA_11
1.82 AC.

FEA_11.5
0.78 AC.

FEA_12
6.04 AC.

FEA_12.5
2.04 AC.

ZONE AE
ELEV. 10

ZONE AE
ELEV. 10.5

ZONES AE & AH
ELEV. 11

ZONES AE & AH
ELEV. 11.5

ZONES AE & AH
ELEV. 12

ZONE AH
ELEV. 12.5

100-YR FLOODPLAIN

DRAINAGE EASEMENT

FPC 1
7.37 AC.

FPC 2
6.62 AC.

FPC 3
3.49 AC.

NOTES:
- SEE FEMA FIRM PANELS 12021C0191J AND 12021C0183J FOR MORE INFORMATION.
- "FEA ##" = FLOODPLAIN ENCROACHMENT AREA AT ## BASE FLOOD ELEVATION (BFE)

LEGEND
- FEA_10
- FEA_10.5
- FEA_11
- FEA_11.5
- FEA_12
- FEA_12.5
- BFE LINE

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
CR 887	COLLIER AND LEE	435110-1-22-01 435347-1-22-01

FLOODPLAIN COMPENSATION ANALYSIS EXHIBIT

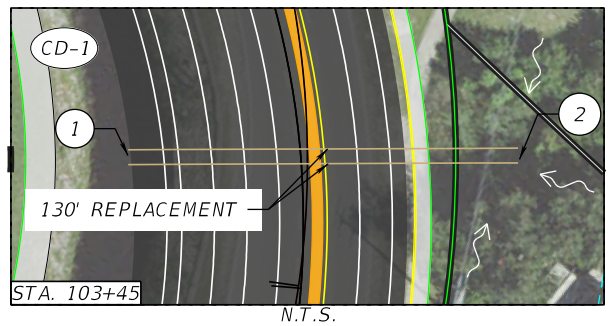
SHEET NO.

jaglover 4/30/2025 3:57:45 PM Default U:\Jobs\85808 GFDOT D1 US 41 PDE_ PSR_LHR\Exhibits\FPC Exhibit.dgn

100-YR FLOODPLAIN (TYP.)
POND ALT. 1B
CD-1 (SEE INSERT)
℄ CR 887
CD-01 Tc PATH
DUNRUSS CREEK
WETLAND
CD-2 (SEE INSERT)
CD-2 Tc PATH
POND ALT. 2C
CD-3 (SEE INSERT)
POND ALT. 2B
POND ALT. 2A
CD-1 BASIN 45.55 AC.
POND ALT. 1A
POND ALT. 1C
CD-2 BASIN 88.66 AC.
CD-3 BASIN 631.05 AC.
CD-3 Tc PATH

0 200 1000
Feet

CROSS DRAIN INSERT



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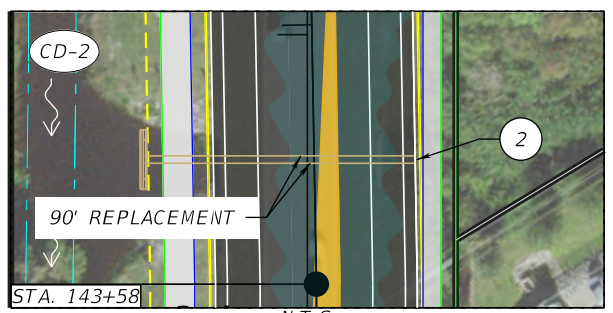

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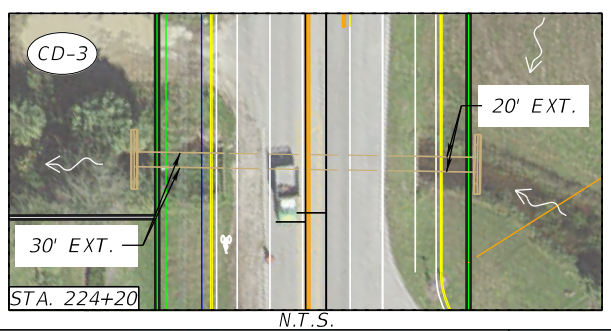

N.T.S.

CROSS DRAIN DATA

CD-1	2 - 30" RCP*
CD-2	2 - 36" RCP*
CD-3	2 - 36" RCP

*RECOMMENDED UPSIZING, SEE LOCATION HYDRAULICS REPORT NARRATIVE FOR FURTHER INFORMATION.

INSERT NOTES:
1. CONNECTION TO DUNRUSS CREEK CLOSED CONVEYANCE SYSTEM
2. CONNECTION TO OFFSITE BYPASS CLOSED CONVEYANCE SYSTEM

LEGEND

- CD-1 BASIN
- CD-2 BASIN
- CD-3 BASIN
- FLOW ARROW
- WETLAND

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
CR 887	COLLIER AND LEE	435110-1-22-01 435347-1-22-01

POST-DEVELOPMENT CROSS DRAIN BASIN MAP

SHEET NO.