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PRELIMINARY ENGINEERING REPORT

Florida Department of Transportation

District One

State Road (SR) 70 PD&E Study

from County Road (CR) 29 to Lonesome Island Road

Highlands County, Florida

Financial Management Number: 414506-5-22-01

ETDM Number: 14364

Date: September 2023

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

PROFESSIONAL ENGINEER CERTIFICATION

PRELIMINARY ENGINEERING REPORT

Project: State Road (SR) 70 from County Road (CR) 29 to Lonesome Island Road

ETDM Number: 14364

Financial Project ID: 414506-5-22-01

Federal Aid Project Number: TBD

This preliminary engineering report contains engineering information that fulfills the purpose and need for the State Road (SR) 70 Project Development & Environment Study from County Road (CR) 29 to Lonesome Island Road in Highlands County, Florida. I acknowledge that the procedures and references used to develop the results contained in this report are standard to the professional practice of transportation engineering as applied through professional judgment and experience.

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

[Only Sign and Seal the Final Report

Include "DRAFT" and Date on the Cover of the Draft Report]

This item has been digitally signed and sealed by Alejandro Mendez, PE, on the date adjacent to the seal.

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

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1.0 PROJECT SUMMARY

1.1 Project Description

The Florida Department of Transportation (FDOT), District One, is conducting a Project Development and Environment (PD&E) study to evaluate widening State Road 70 (SR 70) from County Road 29 (CR 29) to Lonesome Island Road in Lake Placid, Highlands County. The project is approximately 4.3 miles in length. The project study area is shown in **Figure 1-1**. The PD&E study is evaluating widening the existing two-lane undivided roadway to a four-lane divided roadway.

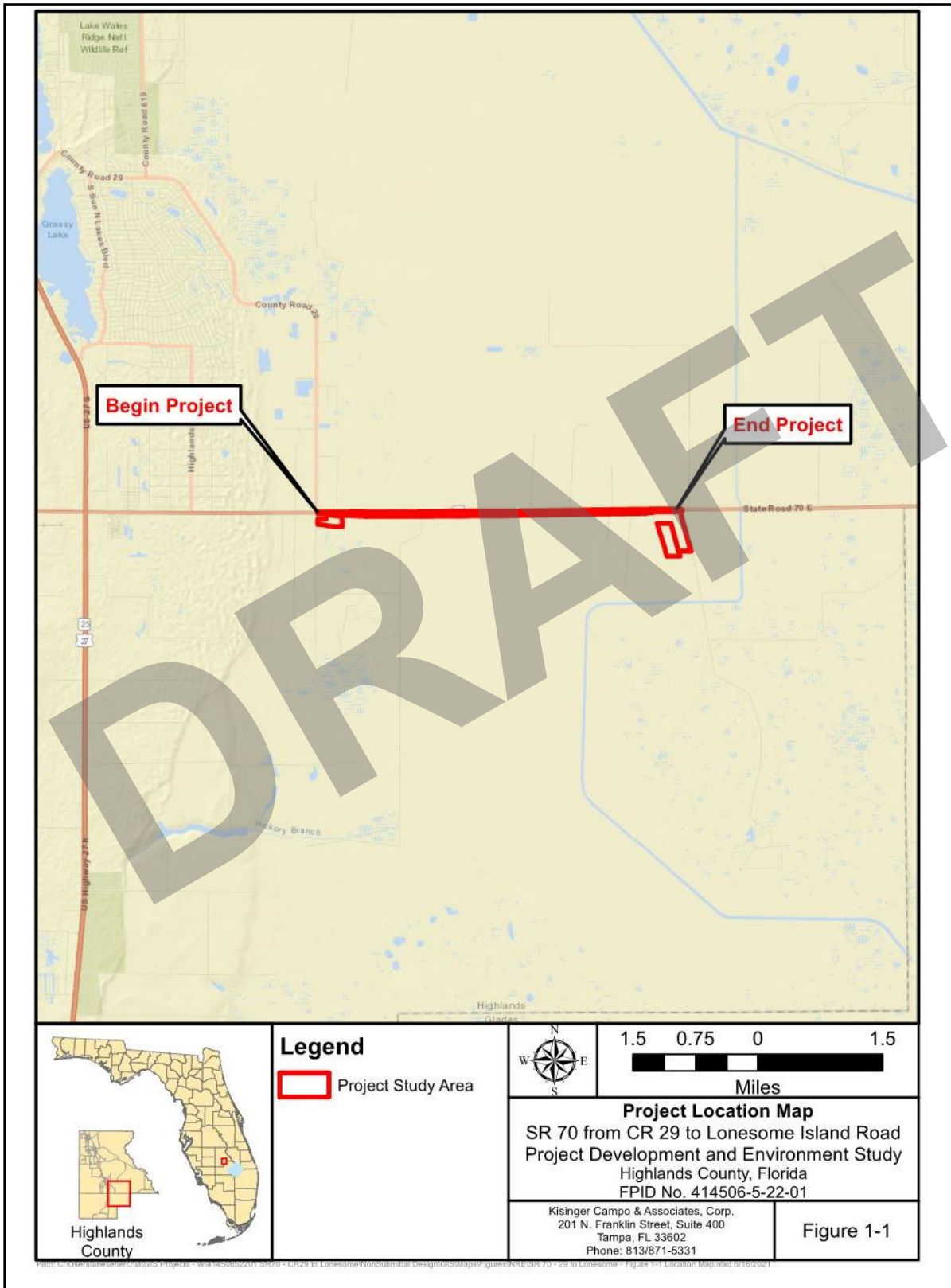
SR 70 is a designated hurricane evacuation route and part of Florida's Strategic Intermodal System (SIS). Facilities on the SIS are subject to special standards and criteria for design speed, level of service and other requirements. The existing SR 70 does not meet SIS facility criteria. The roadway is located between two agricultural canals (one located on each side of the roadway).

The study is evaluating the need for capacity improvements within the project limits and provides engineering and environmental analysis and documentation along with public involvement. The results of the study will aid FDOT and the FDOT Office of Environmental Management (OEM) for selection of the no build (no action) alternative or the preferred alternative for approval of the Type 2 Categorical Exclusion to grant Location Design Concept Acceptance (LDCA).

The project was evaluated through FDOT's Efficient Transportation Decision Making (ETDM) process as project #14364. An ETDM *Programming Screen Summary Report* containing comments from the Environmental Technical Advisory Team (ETAT) was published on September 24, 2019. The ETAT evaluated the project's effects on various natural, physical, and social resources.

Upon completion, the study will meet all requirements of the National Environmental Policy Act of 1969 (NEPA) as administered by the Federal Highway Administration (FHWA) and the requirements of other federal and state laws so as to qualify the proposed project for federal-aid funding.

Figure 1-1 Project Location Map



1.2 Purpose & Need

The purpose of this project is to improve roadway deficiencies along SR 70 from CR 29 to Lonesome Island Road. Additionally, the project will enhance operational capacity of the corridor, thereby improving vehicle safety and emergency evacuation/response times as well as access for standard roadway maintenance.

The need for the project is based on existing roadway deficiencies, operational conditions, vehicle safety conditions, area wide network/system linkage, and to support economic development, discussed below.

Roadway Deficiencies

Existing sections of the project segment contain pavement distresses (such as severe cracking, rutting, and potholes) as well as failing roadway slopes. The project is additionally located within the 100-year floodplain and prone to flooding. Furthermore, SR 70 is part of Florida's SIS. Facilities on the SIS are subject to special standards and criteria for number of lanes, design speed, access, level of service and other requirements. The existing SR 70 cross-section and geometrics do not meet SIS facility criteria. The potential future widening of the project segment will be built to meet the SIS facility standards and criteria.

Operational Conditions

SR 70 is part of the emergency evacuation route network designated by the Florida Division of Emergency Management (FDEM), as well as the network established by Highlands County. This roadway is critical in facilitating east-west traffic movement and evacuating residents of southern Highlands County. The project segment of SR 70 was deemed critical through the FDEM's Statewide Regional Evacuation Study Program due to vehicle queues lasting among the longest in the Central Florida region under various evacuation scenarios for different storm events.

Clearance time is also critical in emergency response situations. The narrow shoulders along the project corridor, in conjunction with the substandard setback of the guardrails from the roadway and adjacent canals, provide limited space for an emergency service vehicle to pass in response to a situation during periods of congestion. Likewise, inadequate space is provided to accommodate a disabled vehicle to prevent it from obstructing traffic flow.

Accessing the roadway to perform standard maintenance is additionally challenging due to the narrow width of the project corridor. During a maintenance event, a portion of one of the roadway's travel lanes must be closed to accommodate the maintenance vehicle, leading to vehicle queues and increased delays and clearance times.

Safety

Crash data collected within the project limits indicated 23 crashes for the three-year period from 2014 through 2016. The majority of the crashes were classified as "other" crashes (35%) and off-road crashes (22%), with most occurring in clear conditions (65%) and during daylight hours (69%). These crash types could be attributed to the substandard geometric elements of the roadway and deficient operational conditions. In addition, most of the crashes along the project segment occurred at the intersections of CR 29 and Lonesome Island Road. Further, the actual crash rate reported for the project corridor for the three-year period 2014-2016 (1.13) was above the statewide average crash rate reported for similar facilities (a rural undivided facility with 2 - 3 lanes) 0.69.

The improvements proposed along SR 70 are needed to enhance safety conditions of the corridor by:

- Correcting substandard roadway design elements (including adding auxiliary lanes for turning movements) and
- Dispersing traffic/enhancing traffic flow through the future widening.

Area Wide Network/System Linkage

SR 70 is a designated SIS highway corridor providing important east-west access within the central portion of the state. This facility extends from US 41 in Manatee County (west coast) to US 1 in St. Lucie County (east coast) connecting to several major north-south transportation facilities of the state (most of which are also part of the SIS) including: US 41, I- 75, US 17, US 27, US 441, Florida's Turnpike, I-95, and US 1.

The improvements proposed along the project section of SR 70 are needed to:

- Complement planned improvements identified in the 2029 - 2045 SIS Long Range Cost Feasible Plan to widen SR 70 to four lanes from CR 675 in Manatee County to US 98 in Okeechobee County and
- Provide a continuous four-lane, east-west connection and up-to-standards SIS facility between major transportation facilities, employment centers, agricultural lands, and residential areas across the state.

Economic

The Governor of the State of Florida issued Executive Order 11-81, pursuant to Florida Statute Section 228.0656, which identified the six-county South Central Rural Area of Opportunity (RAO); this RAO includes Highlands County. The RAO designation establishes the region as a priority for implementation of the Florida Department of Economic Opportunity's (FDEO) Rural Economic Development Initiative (REDI). Through this initiative, FDEO leads and coordinates efforts of state and regional agencies to better serve Florida's economically distressed rural communities.

The proposed reconstruction and widening of SR 70 from CR 29 to Lonesome Island Road will enhance the corridor's ability to function as a SIS highway and accomplish SIS objectives for interregional transportation linked to economic development.

1.3 Commitments

- To reduce the likelihood that construction of the Project will result in injuries or mortalities of eastern indigo snakes, the FDOT has agreed to have its contractor follow the Service's *Standard Protection Measures for the Eastern Indigo Snake* (SPM; Service 2013) during construction.
- To support the survival and recovery of the eastern indigo snake, the FDOT has agreed to provide sufficient credits at the Platt Branch Mitigation Bank (PBMB) in Highlands County, Florida to provide at least 75.87 acres of land cover type that provide habitat for the species. The FDOT has agreed not to commence construction of the Project until they provide the Service with a letter or email from the PBMB stating the credit ledger from the bank has been revised to reflect the deduction of the credits and the FDOT and their consultant receives an email or letter from the Service indicating that we have received this document.
- The FDOT will perform an Audubon's crested caracara survey of the project area during design and permitting phase of the project.
- If potential Florida bonneted bat 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.
- 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.
- Avoid and minimize the use of artificial lighting, retain natural light conditions, and install

wildlife friendly lighting (i.e., downward facing and lowest lumens possible). Avoid permanent night-time lighting to the greatest extent practicable.

- Incorporate engineering designs that discourage bats from using buildings or structures. If Florida bonneted bats take residence within a structure, contact the Service and Florida Fish and Wildlife Conservation Commission prior to attempting removal or when conducting maintenance activities on the structure.
- To avoid potential impacts to the Biscayne Sole Source Aquifer associated with construction of bridge foundation and/or construction dewatering, FDOT will implement the following Best Management Practices:
 - FDOT Design Manual Chapter 320 Stormwater Pollution Prevention Plan (SWPPP)
 - FDOT Standard Specifications for Road and Bridge Construction, Section 6 - Control of Materials, Section 104 – Prevention Control, And Abatement of Erosion and Water Pollution, and Section 455 – Structures Foundations
 - U.S. Bureau of Reclamation Engineering Geology Field Manual – Chapter 20 Water Control. <https://www.usbr.gov/tsc/techreferences/mands/geologyfieldmanual-vol2/Chapter20.pdf>
- The FDOT is committed to the construction of feasible and reasonable noise abatement measures at noise impacted locations contingent on the following:
 - Detailed noise analyses during the final design process support the need, feasibility, and reasonableness of providing abatement;
 - Cost analysis indicates that the cost of the noise barrier(s) will not exceed the cost reasonable criterion;
 - Community input supporting types, heights, and locations of the noise barrier(s) is provided to the District Office; and
 - Safety and engineering aspects as related to the roadway user and the adjacent property owner have been reviewed and any conflicts or issues resolved.

1.4 Alternatives Analysis Summary

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

A single Build Alternative is being evaluated south of the existing alignment which will avoid impacts to Florida Gas Transmission (FGT) and Natural Resources Conservation Service (NRCS) conservation lands to the north while minimizing right-of-way takes. The additional right-of-way

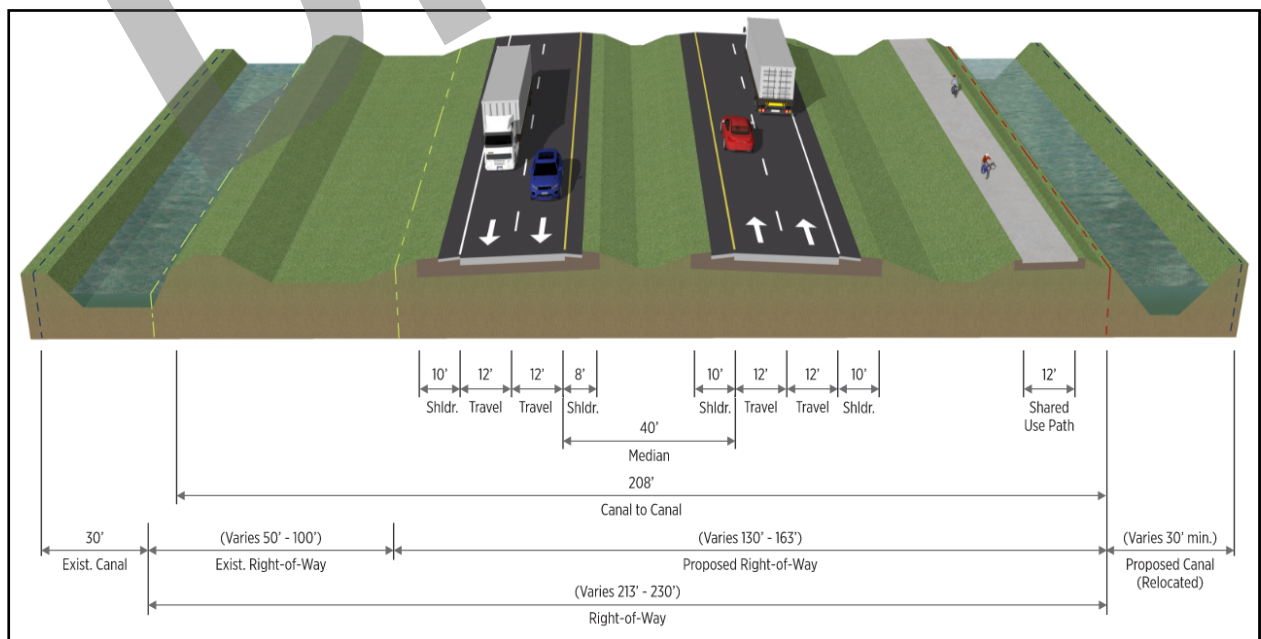
needed will provide sufficient width to accommodate a four-lane divided roadway. The Build Alternative is being analyzed based on forecast traffic volumes and the enhancements it provides to safety and mobility within the corridor.

1.5 Description of Preferred Alternative

Based on the ETDM programming screen, several significant natural resources, including conservation easements within the Wetlands Reserve Program (currently the Agricultural Conservation Easement Program), were identified directly north of the existing right-of-way. To avoid impacting these resources, one build alternative, the southern alignment alternative, was moved forward for further detailed analysis as the Preferred Alternative. Due to significant roadway deficiencies and subsurface geotechnical conditions, the Preferred Alternative requires construction of traffic lanes south of the existing SR 70 for temporary traffic control in order to correct these issues during construction of the project.

The Preferred Alternative includes the construction of a four-lane divided typical section south of the existing two-lane undivided travel lanes and applies a 70 miles-per-hour (mph) design speed. The Preferred Alternative’s typical section consists of 12-foot travel lanes, 10-foot (5-foot paved) outside shoulders, a 10-foot (5-foot paved) eastbound inside shoulder, an 8-foot (4-foot paved) westbound inside shoulder, a 40-foot median and a 12-foot shared use path along the south side of the proposed roadway as shown in **Figure 1-2**.

Figure 1-2 Preferred Alternative Typical Section



An evaluation matrix for this study can be found in **Table 1-1**. The evaluation matrix was determined based on environmental effects, right-of-way needs, project costs, and engineering factors. It also quantifies considerations such as potential business and residential relocations, impacts to environmental resources, and the area of right-of-way needed for the roadway improvements and stormwater facilities. The potential for the proposed widening to impact archaeological/historic sites, noise sensitive sites, and listed species are also included in the matrix. The bottom portion of the matrix details cost estimates for wetland mitigation, right-of-way acquisition, construction, design, and construction engineering and inspection. These estimates were based on the year 2023 unit costs. Construction costs were estimated using FDOT's Long Range Estimate (LRE) provided in **Appendix B**.

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Table 1-1 Evaluation Matrix

Evaluation Criteria	No-Build Alternative	Preferred Alternative
Estimated Project Impacts		
Centerline Length of Improvement		
Length of Improvement (miles)	0	4.3
Business Impacts		
Estimated number of business relocations	0	0
Residential Impacts		
Estimated number of residential relocations	0	0
Utility Relocations		
Estimated number of utility impacts requiring relocation	0	2
Environmental Effects		
Archaeological/Historical sites (eligible)	0	0
Public parks, recreation areas, or wildlife refuges	0	0
Wetlands and Other Surface Waters Direct & Secondary Impacts (acres)	0	3.67
Other Surface Waters (acres)	0	32.87
Potential for Federal and/or State Listed Species	None	High
Noise-Impacted Receptors	0	2
Contamination sites (medium/high)	0/0	9/0
Right-of-Way Needs (acres)		
Right-of-way to be acquired for roadway *	0	98.0
Right-of-way to be acquired for stormwater facilities	0	0
Right-of-way to be acquired for floodplain compensation	0	58.81
Total Right-of-Way Needs	0.0	156.81
Estimated Total Project Costs (2023 Costs)		
Mitigation Cost		
Total Mitigation Cost **	\$0	\$474,000
Right-of-Way Cost		
Right-of-way acquisition for roadway ***	\$0	\$6,220,000
Right-of-way acquisition for stormwater facilities	\$0	\$0
Right-of-way acquisition for floodplain compensation	\$0	\$4,130,000
Total Right-of-Way Cost	\$0	\$10,350,000
Construction Cost		
Construction cost for roadway	\$0	\$27,049,000
Construction cost for drainage	\$0	\$8,100,000
Construction cost for signing & pavement markings	\$0	\$634,000
Total Construction Cost	\$0	\$35,783,000
Preliminary Estimate of Engineering Cost		
Design (15%)	\$0	\$5,368,000
Construction Engineering & Inspection (15%)	\$0	\$5,368,000
Total Preliminary Estimate of Engineering Cost	\$0	\$10,736,000
Preliminary Total Cost	\$0	\$57,343,000

* Right-of-way to be acquired for roadway includes 46.65 acres for linear treatment ponds

** Wetland Mitigation (rounded cost based on \$129,000/acre x 3.67 acres)

*** Right-of-way acquisition cost for roadway includes cost of linear treatment ponds

1.6 List of Technical Documents

The purpose of the PD&E Study is to evaluate engineering and environmental data and record information that will help FDOT in determining the type, preliminary design, and location of the proposed improvements. The study was conducted to meet requirements of NEPA and other related federal and state laws, rules, and regulations. The technical reports that have been completed during this study and other reports necessary for reference are listed in **Table 1-2**.

Table 1-2 List of Technical Documents

Report Name	Submittal Date
Engineering	
Draft Preliminary Roadway Soil Survey	August 2019
Draft Design Traffic Technical Memorandum	November 2018
Draft Pond Siting Report	April 2023
Draft Utility Assessment Report	August 2023
Draft Location Hydraulic Report	April 2023
Draft Water Quality Impact Evaluation & Sole Source Aquifer Letter	July 2023
Typical Section Package	August 2023
Context Classification Memo	November 2018
Environmental	
Draft Type 2 Categorical Exclusion	August 2023
Draft Contamination Screening Evaluation Report	June 2023
Cultural Resources Assessment Survey	January 2023
Natural Resources Evaluation	October 2020
Natural Resources Evaluation Addendum	July 2021
Draft Noise Study Report	July 2023
Draft Farmland Impact Conversion Rating Form	May 2023
Draft Sociocultural Effects Technical Memorandum	May 2023

2.0 EXISTING CONDITIONS

2.1 Previous Planning Studies

There are no previous planning or PD&E studies which cover the study limits. There are ongoing adjacent PD&E studies for SR 70 in Highlands County. These adjacent studies include SR 70 PD&E Study from Jefferson Avenue to CR 29 (FPID No. 414506-1-22-01) and SR 70 PD&E Study from Lonesome Island Road to CR 721 S (FPID No. 449851-1-22-01) which are being completed by FDOT District One. These PD&E studies are evaluating capacity and safety improvements to widen SR 70 from a two-lane to four-lane facility.

The widening of SR 70 was identified in the Capital Improvement Element of the Highlands County 2030 Comprehensive Plan and adopted in the Heartland Regional Transportation Planning Organization (HRTPO) 2045 Long Range Transportation Plan adopted on March 10, 2021. The HRTPO Transportation Improvement Plan (TIP) for Fiscal Years 2023/2024 – 2027/2028 was adopted on June 21, 2023 has identified the project in the SIS Projects list on page 20 of the TIP. Additionally, SR 70 was classified as a high priority investment in the Florida Freight Mobility and Trade Plan: Investment Element – Project list (April 2020). Planning consistency will be achieved prior to submittal of the final environmental document to OEM and issuance of LDCA. Further, SR 70 is included as a four-lane facility throughout all of Highlands County in the FDOT's 2035 SIS Cost Feasible Plan.

2.2 Existing Roadway Conditions

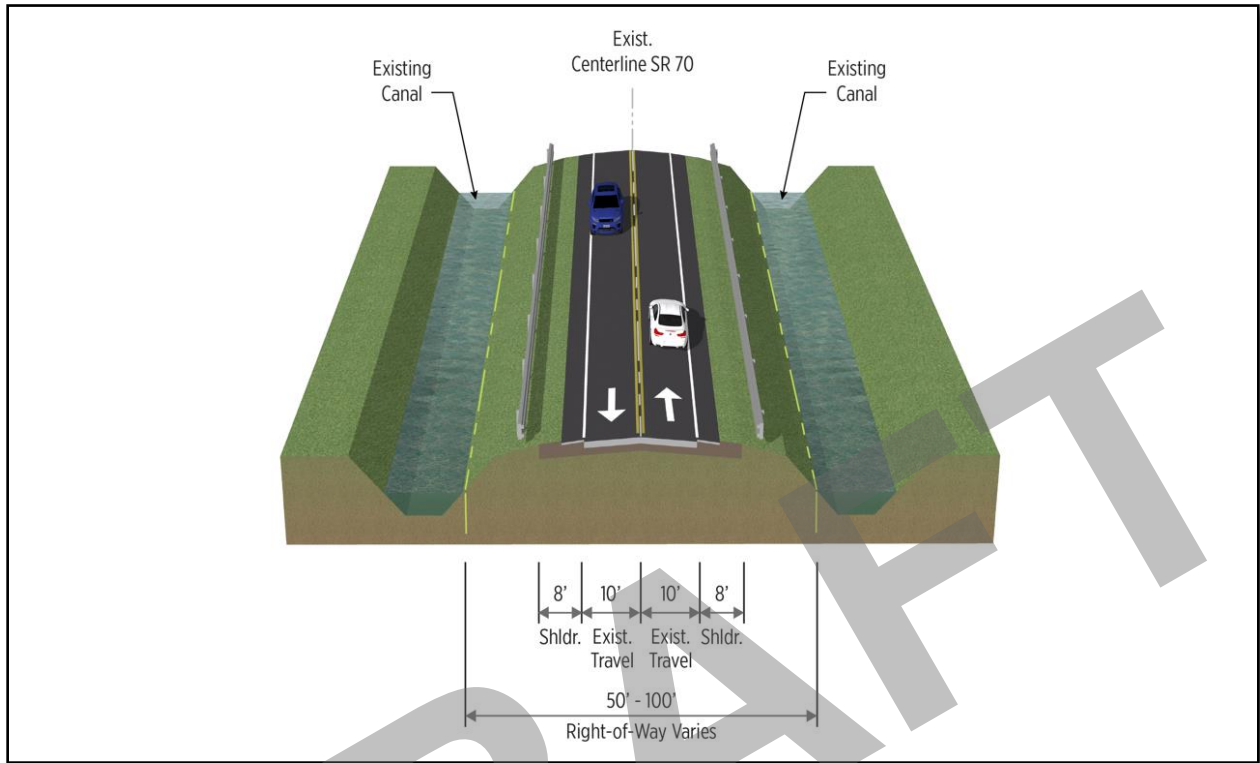
SR 70 is an east-west two-lane undivided facility in Highlands County. SR 70 is on the SIS, Florida's high priority network of transportation facilities important to the state's economy and mobility. SR 70 also serves as part of the emergency evacuation route network.

2.2.1 Roadway Typical Sections

The existing two-lane undivided facility of SR 70 consists of two 10-foot travel lanes with eight-foot outside shoulders, of which four feet are paved. There are two canals adjacent to both sides of the roadway that are shielded to drivers with guardrail throughout the entire study limits.

Figure 2-1 shows the existing typical section for SR 70 along the corridor.

Figure 2-1 Existing Two-Lane Typical Section



2.2.2 Roadway Functional & Context Classifications

SR 70 from CR 29 to Lonesome Island Road has a functional classification of Rural Principal Arterial Other. The SR 70 *Context Classification Memo* prepared for this segment of roadway in Highlands County in November 2018 identifies the context classification as C2 – Rural as defined by Section 200 of the FDOT Design Manual (FDM). The Context Classification Memo is located in **Appendix C**.

2.2.3 Access Management Classification

SR 70 does not have a median (either restrictive or non-restrictive) and is currently designated as Access Class 3. **Table 2-1** provides a listing of the minimum spacing for connections (i.e., driveways), median openings and traffic signal spacing for arterial facilities (Access Classes 2 through 7).

Table 2-1 Arterial Access Classifications & Standards

Access Class	Median Type	Connection Spacing (ft)	Median Opening Spacing (ft)		Signal Spacing (ft)
			Directional	Full	
2	Restrictive with Service Roads	1,320*/660**	1,320	2,640	2,640
3	Restrictive	660*/440**	1,320	2,640	2,640
4	Non-Restrictive	660*/440**	-	-	1,320
5	Restrictive	440*/245**	660	2,640*/1,320**	
6	Non-Restrictive	440*/245**	-	-	1,320
7	Both Median Types	125	330	660	1,320

*For design speeds greater than 45 mph

**For design speeds less than or equal to 45 mph

2.2.4 Right-of-Way

The existing right-of-way width along SR 70 varies from approximately 50 feet to 100 feet. **Table 2-2** summarizes the existing right-of-way widths within the project limits with stationing based on the centerline of construction. The *Preferred Alternative Concept Plans* can be found in **Appendix A**.

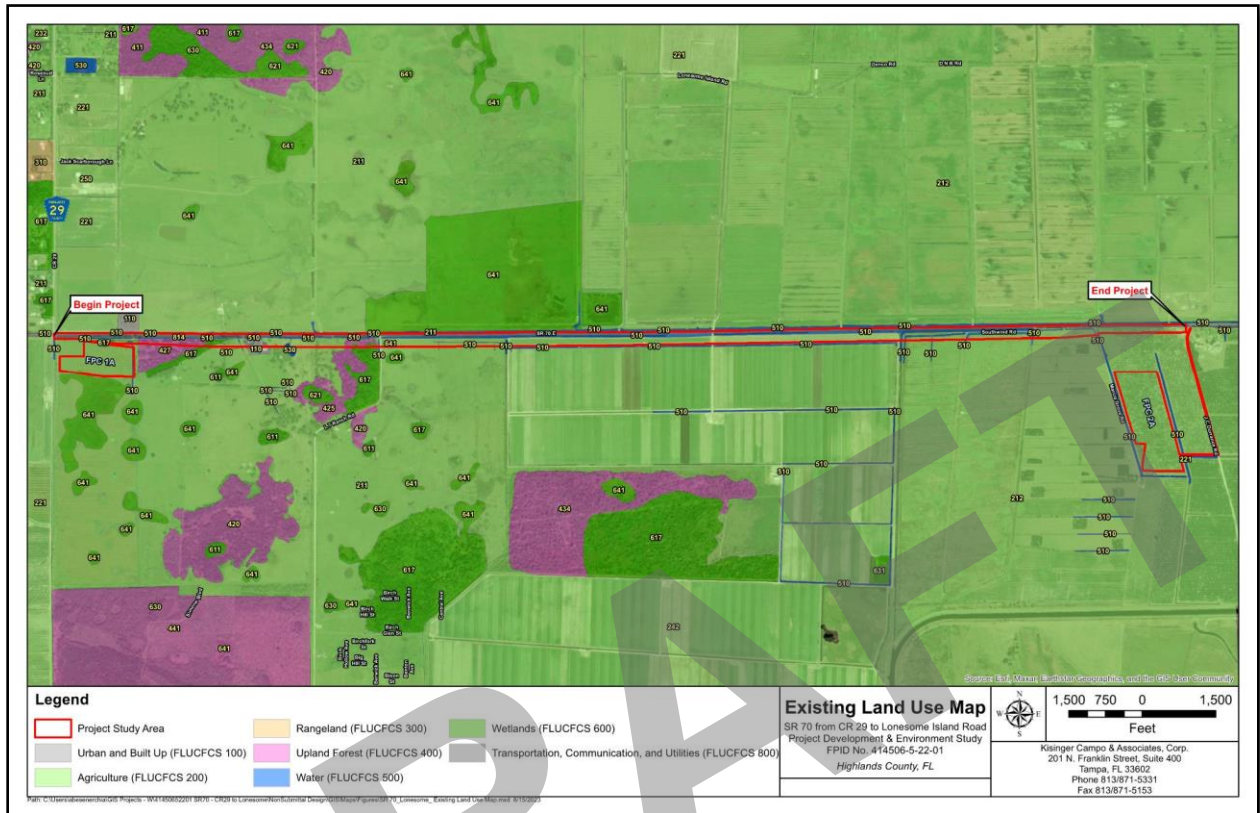
Table 2-2 Existing Right-of-Way Widths

Centerline of Construction Station Range	Total (ft)
10000+00.00 – 10002+39.34	65
10002+39.34 – 10019+71.57	100
10019+71.57 – 10054+87.56	78
10054+87.56 – 10068+56.95	52
10068+56.95 – 10082+25.59	51
10082+25.59 – 10094+40.27	55
10094+40.27 – 10100+14.47	58
10100+14.47 – 10109+64.01	54
10109+64.01 – 10233+67.24	50

2.2.5 Adjacent Land Use

The existing Florida Land Use, Cover and Forms Classification System (FLUCFCS) land use map is provided in **Figure 2-2**. The majority of the land use within the current project limits is undeveloped and classified by the FLUCFCS as Agriculture (FLUCFCS 200), Wetlands (FLUCFCS 600), Water (FLUCFCS 500) and Upland Forest (FLUCFCS 400). Additional upland land use types with minimal coverage of the project area includes Urban and build-up (FLUCFCS 100), Rangeland (FLUCFCS 300), Upland Forest (FLUCFCS 400), and Transportation, Communication, and Utilities (FLUCFCS 800).

Figure 2-2 Existing Land Map Use



2.2.6 Pavement Type and Condition

According to the Pavement Condition Survey for Highlands County dated February 22, 2023, pavement along the corridor has an average cracking rating of 10.0 and an average ride rating of 8.5. Ratings less than 6.0 indicate that the pavement is deficient. There are existing portions of the project study limits that contain pavement distresses (i.e., severe cracking, rutting and potholes). Therefore, the roadway was resurfaced within the project limits in 2022. As a result of the 2022 resurfacing project, additional analysis will be required to evaluate existing pavement conditions within the study limits in the design phase.

2.2.7 Existing Design and Posted Speed

The existing design and posted speed for SR 70 is 60 mph.

2.2.8 Horizontal Alignment

The existing horizontal geometry for SR 70 consists of a series of tangent sections detailed in **Table 2-3** with stationing based on the baseline of survey.

Table 2-3 Existing Horizontal Geometry

Baseline of Survey PI Station	Bearing Ahead
76+50.00	N 89° 47' 31" E
85+16.00	N 89° 49' 05" E
91+49.20	N 89° 21' 34" E
107+99.45	N 89° 54' 30" E
125+40.00	N 89° 54' 30" E
127+55.10	N 89° 05' 45" E
141+95.80	N 88° 38' 25" E
144+50.00	N 88° 38' 25" E
157+38.47	N 89° 11' 26" E
170+75.00	N 89° 11' 26" E
212+37.85	N 89° 23' 24" E

2.2.9 Vertical Alignment

The profile elevations vary from approximately 47 feet above sea level at the beginning of the corridor to 36 feet above sea level at the end of the study. The lowest elevation observed within the project limits was 31 feet above sea level at approximately the midpoint of the corridor.

2.2.10 Multi-modal Facilities

There are no existing sidewalks, crosswalks, or multi-use paths along the limits of this study. Also, there are no designated bicycle facilities within the limits of this corridor.

2.2.11 Intersections

There are no signalized intersections within the project limits. CR 29 is a stop-controlled T-intersection with SR 70. **Figure 2-3** illustrates the existing lane configuration at this intersection.

2.2.12 Physical or Operational Restrictions

There are no multimodal use lanes, parking or passing restrictions within the limits of this study. The existing lateral offset for the guardrail is approximately 8 to 9 feet from the edge of travel and should be 12 feet.

2.2.13 Traffic Data

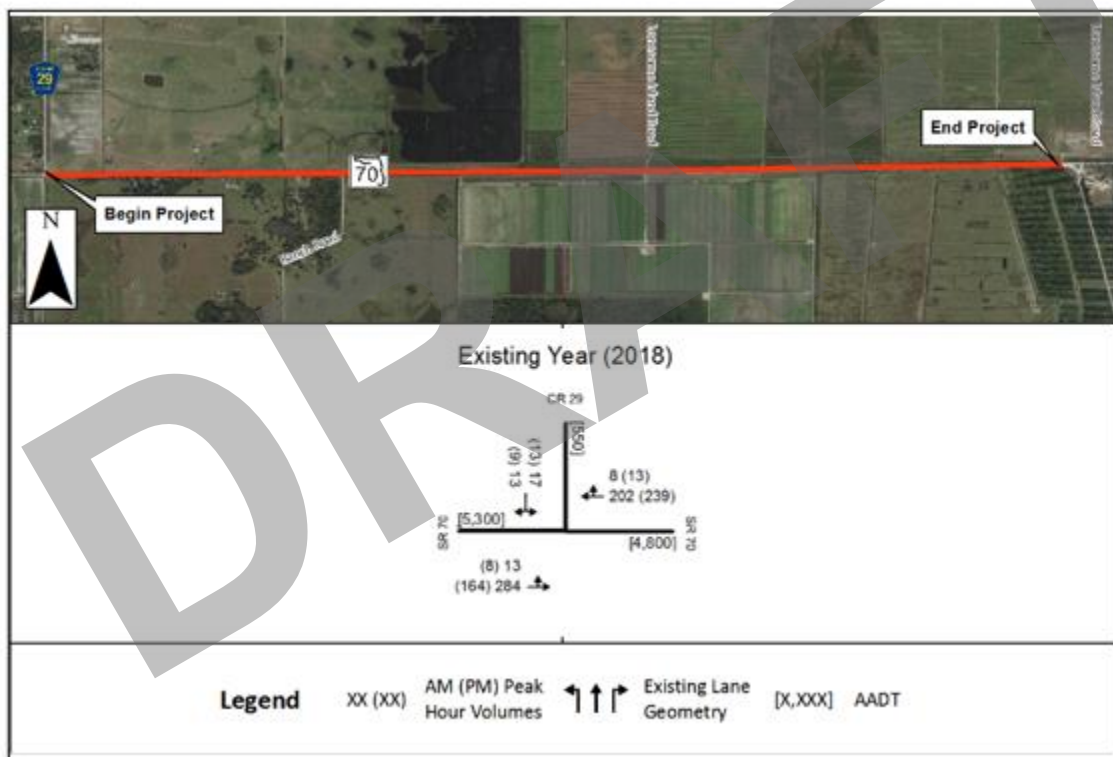
This section provides a summary of the existing traffic conditions information that can be found in the *Design Traffic Technical Memorandum (DTTM)* (November 2018). As stated in the DTTM, the

FDEM’s Statewide Regional Evacuation Study Program determined that SR 70, within the study area, is a critical segment with significant queues experienced during emergency evacuations.

The existing 2018 Annual Average Daily Traffic (AADT) ranges from 4,800 to 5,300 vehicles per day (vpd) along SR 70 within the study limits.

The truck factor of 21.9% was observed for all three years of 2015 to 2017. The design hour truck factor of 11.0% was recommended for SR 70. **Figure 2-3** depicts the existing (2018) AM and PM peak hour turning movement volumes, along with the existing lane geometry for the study corridor.

Figure 2-3 Existing (2018) Lane Geometry and Design Lane Geometry



2.2.14 Roadway Operational Conditions

Intersection and arterial operational analyses were conducted along SR 70 from CR 29 to Lonesome Island Road for the existing year (2018). Although existing year (2018) traffic data is five years old, it was determined by FDOT that the 2018 data is still valid to use for the project. Highway Capacity Software (HCS7) was utilized to conduct Highway Capacity Manual 6th Edition (HCM6E) two-way stop control analysis and directional two-lane highway segment analysis. The results of the existing year (2018) intersection analysis at SR 70 and CR 29 for the AM and PM peak hours are shown in **Table 2-4**. The results of the analysis indicate that the SR 70 and CR 29

intersection currently exceeds the level of service (LOS) standard C, as defined for non-urbanized areas in the FDOT 2023 Quality/Level of Service Handbook, for each of the analysis hours. Please refer to the DTTM for the traffic volumes and operational conditions.

Table 2-4 Existing Year (2018) Intersection Analysis

Approach	Movement	AM Peak Hour		PM Peak Hour	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS
Eastbound	Left Turn	7.8	A	7.9	A
	Through	0.0	A	0.0	A
	Total	0.4	A	0.4	A
Westbound	Total	0.0	A	0.0	A
Southbound	Total	11.7	B	11.2	B

The results of the existing year (2018) arterial analysis along SR 70 from CR 29 to Lonesome Island Road for the AM and PM peak hours are shown in **Table 2-5**. The results of the analysis indicate that the SR 70 corridor from CR 29 to Lonesome Island Road currently exceeds the FDOT LOS standard C for non-urbanized areas for each of the analysis hours.

Table 2-5 Existing Year (2018) Arterial Analysis

Direction	AM Peak Hour		PM Peak Hour	
	Volume to Capacity (v/c)	LOS	Volume to Capacity (v/c)	LOS
Eastbound	0.19	B	0.11	B
Westbound	0.13	B	0.16	B

2.2.15 Managed Lanes

There are no existing managed lanes within the study corridor.

2.2.16 Crash Data

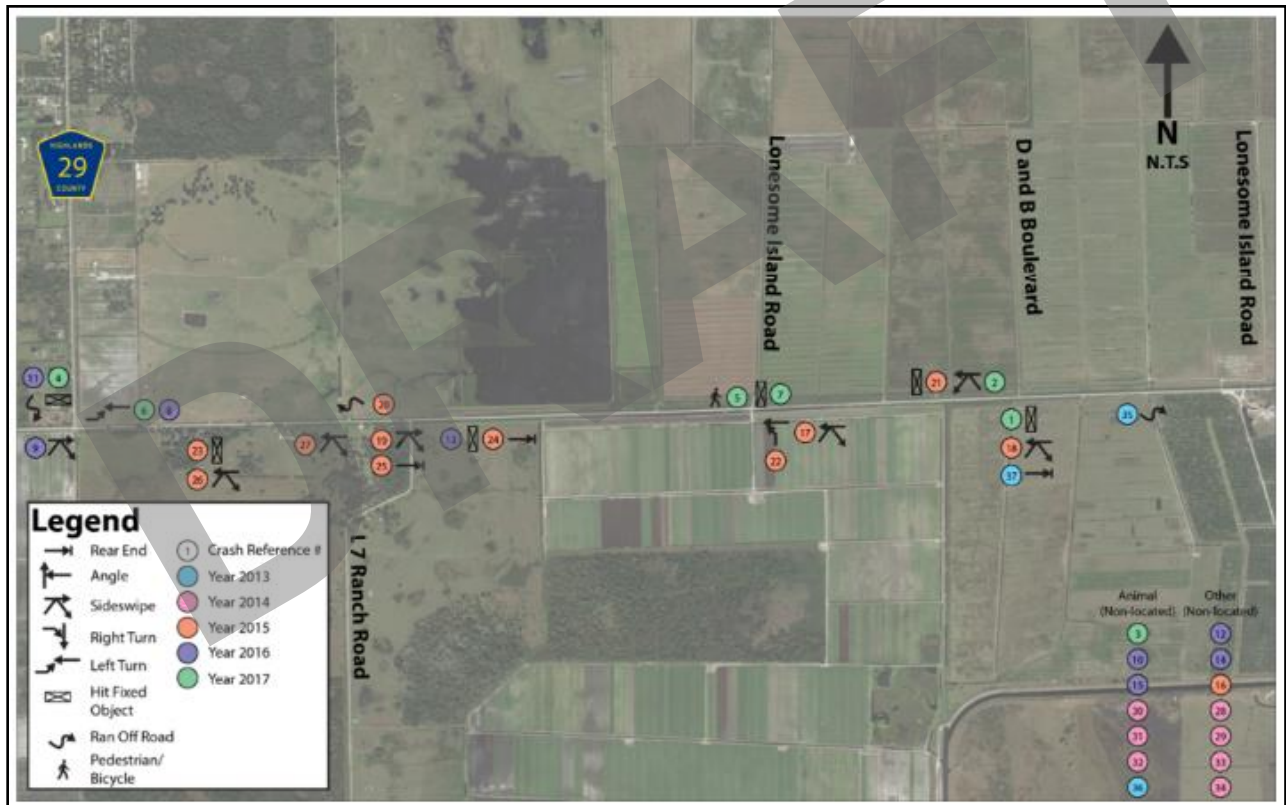
Traffic crash data along the State Road 70 (SR 70) within the project limits for the years 2013 through 2017 was obtained from Signal Four Analytics and spot-verified against the crash long forms for accuracy. A total of 37 crashes were reported during the five-year period, for an average of seven crashes per year. With 37 total crashes and an average AADT of 4,280 over five years, the results show that the project area has a crash rate of 1.102 crashes per million miles driven, which corresponds to 1.604 times the statewide average of 0.687 crashes per million miles driven for similar facility types as reported by the DTTM.

The most common crash type was hitting an animal, followed by hitting the guardrail. Twelve of the 37 crashes occurred in the dark without lighting, including a collision with a bicyclist. While unsignalized, nine crashes occurred along the corridor at the intersection of SR 70 and Lonesome Island Road.

Two of the crashes within the five year study period resulted in fatalities. The first of these fatalities was the result of a vehicle colliding with a bicycle just west of Lonesome Island Road. The second occurred when a vehicle drifted over the roadway centerline in the rain, striking another vehicle.

Figure 2-4 shows the collision diagram for the study corridor by crash type. **Table 2-6** summarizes the crash type, crash severity, and conditions for each year of the study period.

Figure 2-4 Collision Diagram



Four of the crashes within the five year study period resulted in severe injury. These crashes were the result of the following circumstances:

- A vehicle drifted over to the other side of the roadway and collided with an oncoming vehicle, causing both vehicles to strike the guardrail.

-
- A motorcyclist struck a vehicle carrying a trailer while it was turning left onto Lonesome Island Road, which resulted in serious injury to the motorcyclist.
 - As a freight truck slowed down due to a vehicle turning left onto Lonesome Island Road, another freight truck rear ended it, resulting in serious injury of the at fault driver.
 - A vehicle ran over a wooden post in the middle of the roadway, causing it to flip up, strike the front left driver's window, and causing pieces of glass to fly into the driver's eyes, causing severe injury to the driver.

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Table 2-6 Summary Crash Data (2013 to 2017)

Crash Data	Years					Total Crashes	Average Per Year	Percentage of Total Crashes
	2013	2014	2015	2016	2017			
Crash Type								
Animal	1	3	0	2	1	7	1.4	18.9%
Guardrail	0	0	2	1	3	6	1.2	16.2%
Rear End	1	0	2	1	0	4	0.8	10.8%
Sideswipe, Opposite Direction	0	0	4	0	0	4	0.8	10.8%
Other	0	2	0	2	0	4	0.8	10.8%
Sideswipe, Same Direction	0	0	1	1	1	3	0.6	8.1%
Other Non-Fixed Object	0	2	1	0	0	3	0.6	8.1%
Angle	0	0	1	0	1	2	0.4	5.4%
Ran Off Road	1	0	1	0	0	2	0.4	5.4%
Ran into Canal	0	0	0	1	0	1	0.2	2.7%
Bicycle	0	0	0	0	1	1	0.2	2.7%
Total	3	7	12	8	7	37	7.4	100.0%
Crash Severity								
Property Damage Only	1	4	8	6	4	23	4.6	62.2%
Minor Injury	0	2	1	0	1	4	0.8	10.8%
Moderate Injury	1	0	0	2	1	4	0.8	10.8%
Severe Injury	1	1	2	0	0	4	0.8	10.8%
Fatal	0	0	1	0	1	2	0.4	5.4%
Total	3	7	12	8	7	37	7.4	100.0%
Lighting Conditions								
Daylight	1	4	9	5	4	23	4.6	62.2%
Dark, Not Lighted	2	3	1	3	3	12	2.4	32.4%
Dusk	0	0	1	0	0	1	0.2	2.7%
Dawn	0	0	1	0	0	1	0.2	2.7%
Total	3	7	12	8	7	37	7.4	100.0%
Weather Conditions								
Clear	1	3	7	7	5	23	4.6	62.2%
Cloudy	2	3	2	1	2	10	2.0	27.0%
Rain	0	1	3	0	0	4	0.8	10.8%
Total	3	7	12	8	7	37	7.4	100.0%

2.2.17 Railroad Crossings

There are no existing railroad crossings within the study corridor.

2.2.18 Drainage

The project area includes all open basins and is located within the Harney Pond Canal (C-41) Watershed. The roadway drainage currently is conveyed to flanking canals to the north and south of the project. These canals then discharge into Harney Pond Canal (C-41). There are no existing stormwater management systems servicing the SR 70 project corridor. Most of the project area consists of poorly drained soil, which results in frequent ponding. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Community-Panel Numbers 12055C0533C, 12055C0535C, and 12055C0555C, almost the entire project area is located within floodplain Zone A (no base flood elevations determined).

There are three existing crossdrains located within the project limits shown in **Table 2-7**.

Table 2-7 Existing Crossdrain Summary

Number	MP	Centerline of Construction Station	Description	Outfall
CD-1	17.900	10037+65	36" CMP	Harney Pond Canal
CD-2	19.251	10109+00	2- 53" x 83" CMP	Harney Pond Canal
CD-3	21.017	10202+36	2- 82" x 128" CMP	Harney Pond Canal

Please refer to the *Pond Siting Report (April 2023)* under separate cover for the existing drainage maps within the limits of this project.

2.2.19 Lighting

There is no lighting within the project limits.

2.2.20 Utilities

The preliminary utility coordination and investigation effort was conducted through written and verbal communications with the existing Utility Agency Owners (UAOs). A Sunshine State 811 of the Florida Design Ticket System listing of existing UAOs was acquired on October 13, 2018. Initially, verbal communication was made to all UAOs outlining the investigation effort along with the project limits.

UAOs were provided aerial based concept plans depicting the SR 70 Preferred Alternative. Using these concept plans as a base map, each UAO was asked to indicate their existing and proposed utilities as well as any easements that may affect their reimbursement rights for potential relocations of their facilities. In response, most utility owners replied via written communications.

The UAOs provided the requested information concerning their facilities using either the utility plans or reference documentation (i.e., "As Built" or GIS maps). "Marked" Plans or reference documentation was received from all UAOs.

The existing SR 70 corridor has three utilities identified within the project limits. These utilities run primarily along the south side of the travel lanes and are either within proximity of the existing SR 70 roadway or far away with enough separation to avoid any possible impacts in a future widening phase of the corridor.

A 30-inch FGT line is one of the utilities located along the south side with sufficient distance from the existing travel lanes to avoid any impacts if future widening was to occur. The FGT line is located approximately 0.5 miles south of the existing roadway centerline. At approximately three miles east of the begin project limit, the FGT gas line turns to the north crossing SR 70 and turns again to the east to run parallel along the north side of the roadway at approximately 45 feet measured from the existing roadway centerline.

Glades Electric has a three-phase overhead electric feeder supplying 7.2 KV that is located on the south side of the project corridor. All of their structures are located outside of the existing FDOT right-of-way. Similarly, Century Link owns underground and aerial copper routes as well as aerial fiber routes that are on the south side of the existing roadway.

The UAOs known to operate utilities within the project corridor are summarized in **Table 2-8**. A *Utility Assessment Report (August 2023)* was prepared for this project under separate cover.

Table 2-8 Utility Agency Owners

Utility Owner	Utility Description	Location
Florida Gas Transmission Company, LLC	30" Gas Main	Located on the south side of the study corridor and crosses at Sta. 10173+40. Continues on the north side to the end of the project limits
Glades Electric	3-phase feeder supplying 7.2 KV	Runs along the south side of the study corridor. All structures located at least 36 feet outside of the existing FDOT right-of-way
Century Link	Underground Copper	Runs along CR 29, crosses on the east side and continues north. Also copper and fiber routes running through the SR 70 corridor

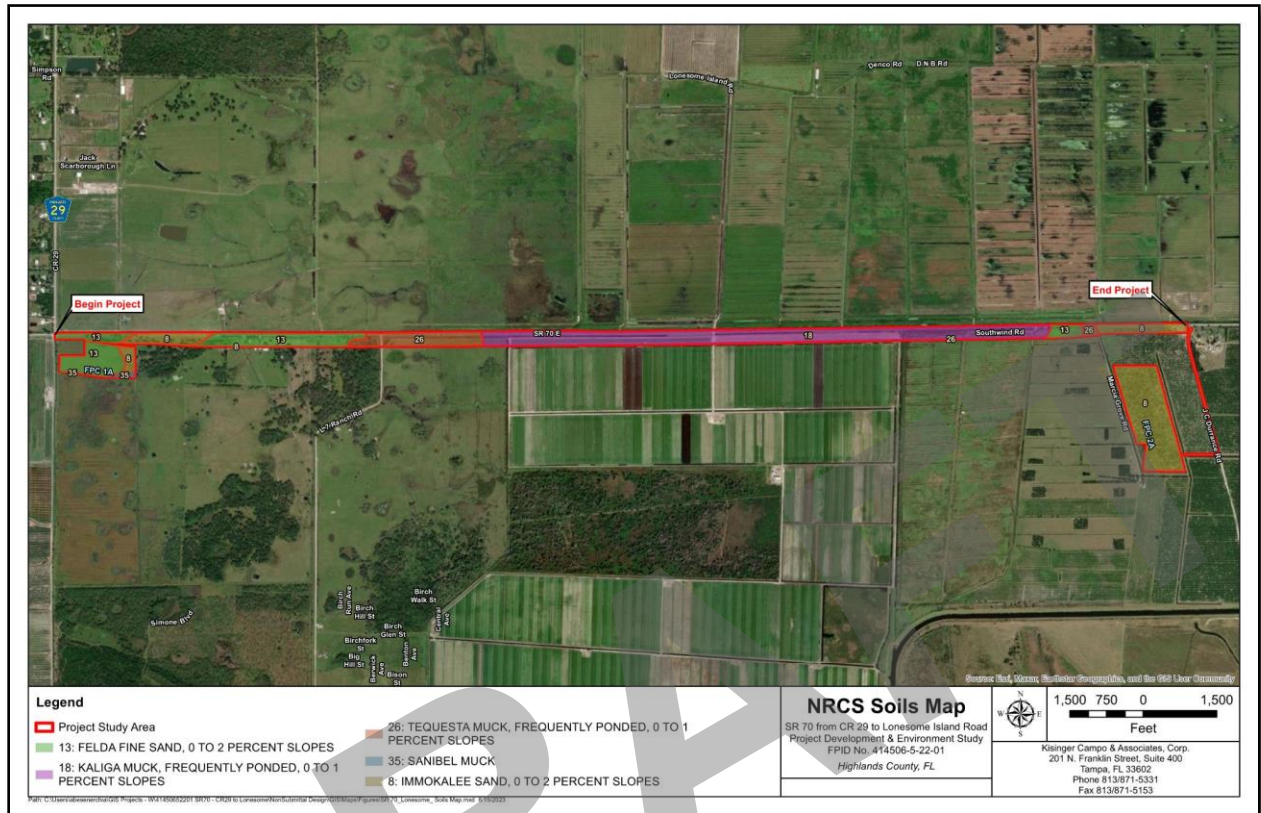
2.2.21 Soils and Geotechnical Data

The Soil Survey of Highlands County classifies the majority of soils within the project area as Immokalee Sand (#8), Felda Fine Sand (#13), Kaliga Muck (#18), and Tequesta Muck (#26). **Figure 2-5** shows the soil conditions within the project area.

Immokalee Sand soils are described as very poorly drained soils with very high runoff potential when thoroughly wet. These soils have a seasonal high water table (SHWT) depth of 0.5 to 1.0 feet below the existing ground and are classified as Hydrologic Soil Group (HSG) Type B/D. Felda Fine Sand soils are described as nearly level to gently sloping, poorly drained soils with very high runoff potential when thoroughly wet. These soils have a SHWT depth of 0.5 to 1.0 feet below the existing ground and are classified as HSG Type A/D. Kaliga Muck soils are described as very deep, very poorly drained, slowly to very slowly permeable soils in flatwoods and are classified as HSG Type C/D. The Preliminary Roadway Soil Survey SR 70 Reconstruction from CR 29 to JC Durrance Rd was completed for the project and includes borings at 500-foot spacings staggered left and right of the Preferred Alternative. Soil exploration encountered muck soils in many of the borings generally to depths of up to about 5 feet. In several of the borings, the boring terminated in muck / organic clay and so it is not known the full depth of the organic soil. Additional geotechnical work will be conducted during the design phase to provide greater detail on muck limits within the Preferred Alternative requiring excavation and to determine quantities of muck removal required to construct the project.

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Figure 2-5 Soil Condition Diagram



2.2.22 Aesthetic Features

There are no aesthetic features within the project limits.

2.2.23 Traffic Signs

There are a few speed limit signs located on the outside of the guardrail within the study corridor. There is a school bus stopping sign located on the south side of SR 70 towards the eastern limit of the PD&E study. This sign is not protected by guardrail. There are also two CR 29 signs located on the outside of the guardrail in the vicinity of this intersection.

2.2.24 Noise Walls and Perimeter Walls

There are no existing noise walls or perimeter walls within the project limits.

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

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

2.3 Existing Bridges and Structures

There are no existing bridges within the project limits.

2.4 Existing Environmental Features

The existing environmental features within the project limits were identified and evaluated when developing alternatives. These environmental features include location of wetlands and surface waters, documented protected species and habitat, permitted contamination sites and contamination remediation sites located north and south of the study limits along with existing NRCS conservation lands. The NRCS conservation lands are located to the north of SR 70. Furthermore, the existing environmental features are documented in more detail within the project's technical support documents. Existing environmental features are shown on the *Preferred Alternative Concept Plans* in **Appendix A**.

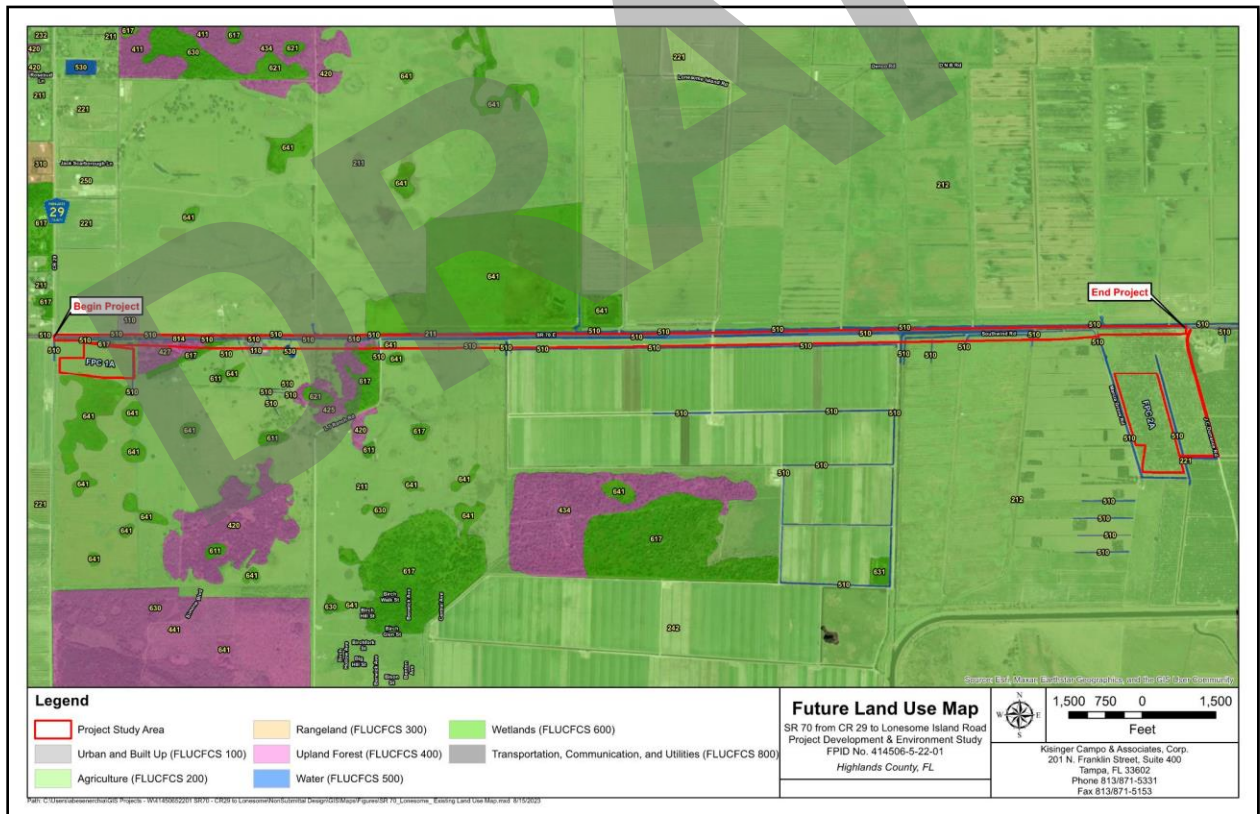
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3.0 FUTURE CONDITIONS

3.1 Future Conditions Considerations

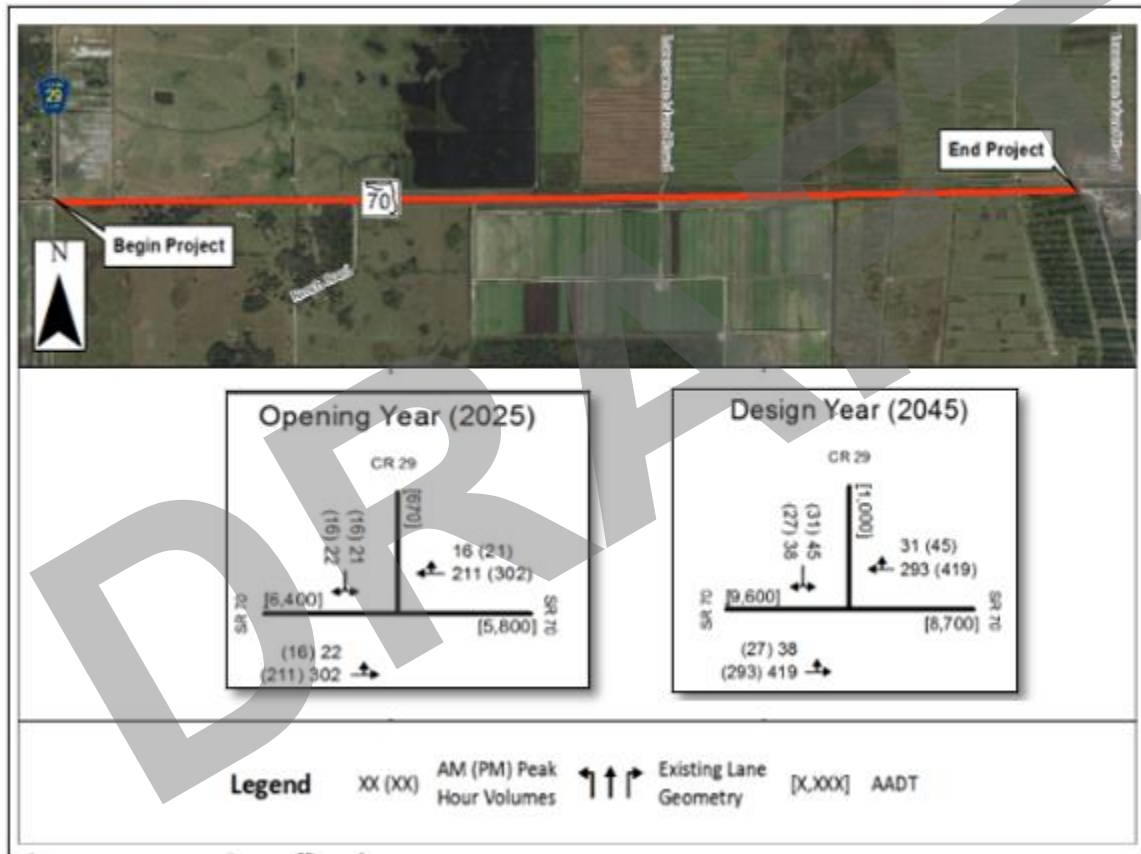
According to the Highlands County 2030 Comprehensive Plan Future Land Use, the study area is predominantly comprised of agriculture (FLUCFCS 200), Water (FLUCFCS 500), Wetlands (FLUCFCS 600) and Upland Forest (FLUCFCS 400). Additional upland land use types with minimal coverage of the project area or located in the surrounding area include Urban and build-up (FLUCFCS 100), Rangeland (FLUCFCS 300), Upland Forest (FLUCFCS 400), and Transportation, Communication, and Utilities (FLUCFCS 800). Comparing future and existing land use, future land use remains compatible with the existing land use. The project will maintain and improve access to surrounding agricultural land uses to maintain future agricultural zoning and practices. **Figure 3-1** shows the Future Land Use Map along the project limits.

Figure 3-1 Future Land Use Map



Future year design hour traffic volumes were developed using the standard K and D-factors used in the existing conditions analysis. The same annual growth rate of 3.0% used to develop the existing year (2018) design hour turning movement volumes was used in the development of design year AADT's. The future design hour traffic volumes and AADT's for the opening year (2025), and the design year (2045) can be found in **Figure 3-2**.

Figure 3-2 Future Design Traffic Volumes



Intersection and arterial operational analyses were conducted along SR 70 from CR 29 to Lonesome Island Road for the opening year (2025), and design year (2045) under No-Build conditions. HCS7 was utilized to conduct HCM6E two-way stop control analysis and directional two-lane highway segment analysis. The results of the future year intersection analyses at SR 70 and CR 29 under No-Build conditions are shown in **Table 3-1**. The results of the analyses indicate that the SR 70 and CR 29 intersection is expected to meet the FDOT LOS standard C for non-urbanized areas under No-Build conditions through the design year (2045).

Table 3-1 Future Year No-Build Intersection Analysis

SR 70 and CR 29 Approach	Movement	AM Peak Hour		PM Peak Hour	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS
Opening Year (2025)					
Eastbound	Left Turn	7.9	A	8.2	A
	Through	0.0	A	0.0	A
	Total	0.7	A	0.7	A
Westbound	Total	0.0	A	0.0	A
Southbound	Total	12.0	B	12.2	B
Design Year (2045)					
Eastbound	Left Turn	8.2	A	8.7	A
	Through	0.0	A	0.0	A
	Total	1.0	A	1.0	A
Westbound	Total	0.0	A	0.0	A
Southbound	Total	16.7	C	16.0	C

The results of the future year arterial analyses along SR 70 from CR 29 to Lonesome Island Road under No-Build conditions are shown in **Table 3-2**. The results of the analyses indicate that the SR 70 corridor from CR 29 to Lonesome Island Road is expected to meet the FDOT LOS standard C for non-urbanized areas under No-Build conditions through the design year (2045) and does not require any operational improvements. However, capacity improvements are proposed to widen SR 70 from CR 29 to Lonesome Island Road from a two-lane undivided facility to a four-lane divided roadway.

Table 3-2 Future Year No-Build Arterial Analysis

Direction	AM Peak Hour		PM Peak Hour	
	Volume to Capacity (v/c)	LOS	Volume to Capacity (v/c)	LOS
Opening Year (2025)				
Eastbound	0.21	B	0.14	B
Westbound	0.14	B	0.21	B
Design Year (2045)				
Eastbound	0.30	B	0.21	B
Westbound	0.21	B	0.30	B

Intersection and arterial operational analyses were conducted along SR 70 from CR 29 to Lonesome Island Road for the opening year (2025) and design year (2045) under the proposed build conditions. HCS7 was utilized to conduct HCM6E two-way stop control analysis and

directional two-lane highway segment analysis. The results of the future year intersection analyses at SR 70 and CR 29 under the proposed build conditions are shown in **Table 3-3**. The results of the analyses indicate that the SR 70 and CR 29 intersection is expected to exceed the FDOT LOS standard C for non-urbanized areas under the proposed build conditions through the design year (2045).

The results of the future year arterial analyses along SR 70 from CR 29 to Lonesome Island Road under the proposed build conditions are shown in **Table 3-4**. The results of the analyses indicate that the SR 70 corridor from CR 29 to Lonesome Island Road is expected to exceed the FDOT LOS standard C for non-urbanized areas under the proposed build conditions through the design year (2045).

Table 3-3 Future Year Build Intersection Analysis

SR 70 and CR 29 Approach	Movement	AM Peak Hour		PM Peak Hour	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS
Opening Year (2025)					
Eastbound	Left Turn	7.9	A	8.2	A
	Through	0.0	A	0.0	A
	Total	0.5	A	0.6	A
Westbound	Total	0.0	A	0.0	A
Southbound	Total	10.5	B	10.8	B
Design Year (2045)					
Eastbound	Left Turn	8.3	A	8.7	A
	Through	0.0	A	0.0	A
	Total	0.7	A	0.7	A
Westbound	Total	0.0	A	0.0	A
Southbound	Total	12.3	B	12.5	B

Table 3-4 Future Year Build Arterial Analysis

Direction	AM Peak Hour		PM Peak Hour	
	Volume to Capacity (v/c)	LOS	Volume to Capacity (v/c)	LOS
Opening Year (2025)				
Eastbound	0.09	A	0.06	A
Westbound	0.06	A	0.09	A
Design Year (2045)				
Eastbound	0.13	A	0.09	A
Westbound	0.09	A	0.13	A

Please refer to the *DTTM (November 2018)* prepared under separate cover for additional information.

As defined in the FDM Section 200.4 and in the Context Classification Memo prepared by FDOT, the existing and future context classification along this corridor is C2 – Rural for SR 70 from CR 29 to Lonesome Island Road in Highlands County. The Context Classification Memo can be found in **Appendix C**.

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4.0 DESIGN CONTROLS & CRITERIA

4.1 Design Controls

The design controls for the proposed SR 70 study will adhere to the FDM Chapter 201, effective January 2023, and Section 3.2.3.5 of Part 2 Chapter 3 of the PD&E Manual.

4.2 Design Criteria

The design criteria used for this PD&E Study are listed in **Table 4-1** and **Table 4-2**.

Table 4-1 Design Criteria for SR 70

Design Element	Design Criteria	2023 FDM
General		
Functional Classification	Rural Principal Arterial Other	SLD
SIS Facility	SIS Highway Corridor	SLD
Context Classification	C2	FDOT Memo
Design Speed SIS Minimum (mph)	65	Table 201.5.1
Design Speed (mph)	70	-
Typical Section Elements		
Lane Widths (ft)	12	Table 210.2.1
Median Widths (ft)	40	Table 210.3.1
Shoulder Widths – Outside (Full / Paved) (ft)	10 / 5	Table 210.4.1
Shoulder Widths – Inside (Full / Paved) (ft)	8 / 4	Table 210.4.1
Border Width (ft)	40	Table 210.7.1
Clear Zone (ft)	36	Table 215.2.1
Canal Lateral Offset (ft)	60	Figure 215.3.1
Horizontal Geometrics		
Maximum Deflection without Curve	0° 45' 00"	Section 210.8.1
Desired Length of Curve (ft)	1,050	Table 210.8.1
Minimum Length of Curve (ft)	400	Table 210.8.1
Superelevation (e_{max})	0.10	Section 210.9
Maximum Curvature ($e=NC$) (ft)	14,714	Table 210.9.1
Maximum Degree of Curve	3° 30' 00"	Table 210.9.1
Minimum Curvature ($e=0.10$) (ft)	1,637	Table 2.8.2
Vertical Geometrics		

Maximum Grade	3.00%	Table 210.10.1
Maximum Change in Grade Without Curve	0.20%	Table 210.10.2
K Value – Curve (Crest / Sag)	401 / 181	Table 210.10.3
Minimum Curve Length – Crest / Sag (ft)	500 / 400	Table 210.10.4
Minimum Stopping Sight Distance – Grade $\leq 2\%$ (ft)	730	Table 210.11.1

Table 4-2 Design Criteria for Shared Use Path

Design Element	Design Criteria	2023 FDM
Design Speed - $\leq 4\%$ Downgrade / $> 4\%$ Downgrade (mph)	18 / 30	Section 224.9
Width of Pavement (Standard / Minimum) (ft)	12 / 10	Section 224.4
Maximum Cross Slope	2%	Section 224.5
Minimum Cross Slope Transition Length (ft)	75	Section 224.5
Horizontal Clearance (ft)	4	Section 224.7
Vertical Clearance (ft)	10	Section 224.8
Minimum Radii Grade (-)2% (18 mph / 30 mph) (ft)	86 / 316	Table 224.10.1
Maximum Grade	5%	Section 224.6
Minimum Stopping Sight Distance – Grade 5% (Uphill 18 mph / Downhill 30 mph) (ft)	118 / 383	Table 224.10.2

5.0 ALTERNATIVES ANALYSIS

5.1 No-Build (No-Action) Alternative

Throughout this study, the No-Build Alternative (no-action) is also considered. It assumes that both normal and evacuation traffic volumes continue to increase in the future without capacity or operational improvements except for routine maintenance on the existing road. The No-Build Alternative remains a viable alternative throughout the study process although it does not accomplish the purpose and need for this project. The following are advantages and disadvantages associated with the No-Build Alternative:

Advantages of the No-Build Alternative:

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

Disadvantages of the No-Build Alternative:

- No pedestrian or bicycle facilities added
- Increased potential for crashes due to higher traffic volumes and a lack of physical separation between directional traffic volumes
- Increased traffic congestion and user costs associated with increased delays
- Increased vehicle emission pollutants due to higher levels of traffic congestion
- Increased emergency vehicle response times
- Increased maintenance costs to repair roadway and side slopes
- Traffic delays associated with routine maintenance due to lane closure requirements

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

The objective of TSM&O is to identify strategies that reduce traffic congestion. The project's DTTM (November 2018) concluded that the additional traffic capacity required along SR 70 cannot be provided solely through the implementation of TSM&O improvements. Additional through lanes were found to be required to meet Design Year acceptable LOS along SR 70.

This widening is proposed as an initiative to improve operations along SR 70 during emergency evacuations. Highlands County is part of the Rural Area of Critical Economic Concern (RACEC) or RAO program defined by the state of Florida legislature to encourage and facilitate the location

and expansion of major economic development projects of significant scale in such rural communities.

5.3 Multimodal Alternatives

There are no multimodal alternatives identified in HRTPO Long Range Transportation Plan, adopted March 10, 2021. Multimodal alternatives generally include bicycle/pedestrian improvements or connections to intermodal facilities. Therefore, a multimodal alternative without roadway widening is not considered a viable alternative, however, bicycle/pedestrian improvements will be considered as part of the Build Alternative.

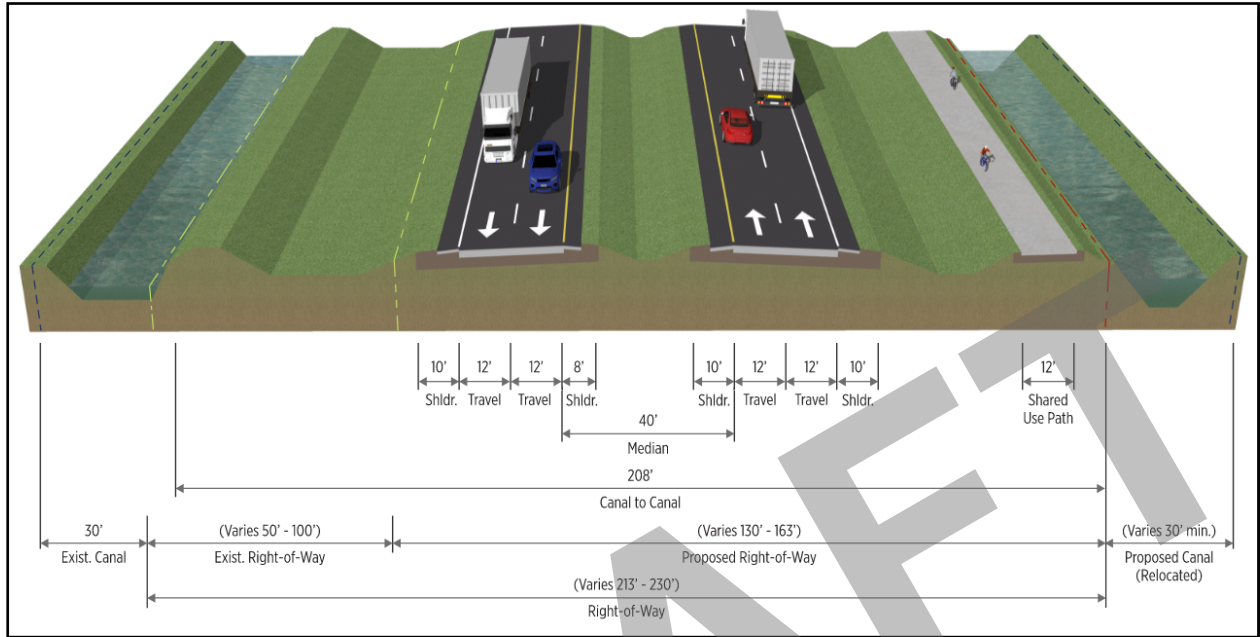
5.4 Build Alternatives

This study evaluated a single Build Alternative along with the No-Build Alternative. In order to avoid impacts to NRCS conservation lands to the north and impacts to FGT, the Build Alternative will shift the roadway to the south and will widen it from the existing two-lane undivided section to a four-lane divided typical section. Additional right-of-way will be needed to provide the width required to accomplish the proposed improvements. The Build Alternative will increase the existing design speed from 60 mph to 70 mph.

The Build Alternative's proposed typical section includes 12-foot travel lanes, 10-foot (5-foot paved) outside shoulders, a 10-foot (5-foot paved) eastbound inside shoulder, an 8-foot (4-foot paved) westbound inside shoulder, a 40-foot median and a 12-foot shared use path. The proposed shared use path will parallel the south side of the proposed roadway improvements and will enhance safety by separating bicyclists from vehicular traffic.

During one of the Maintenance of Traffic (MOT) phases of construction, the Build Alternative's future eastbound two through lanes will temporarily serve as a two-lane bidirectional undivided roadway allowing construction of the future Build Alternative's westbound lanes. Based on the anticipated long construction time to construct the westbound lanes, the future eastbound inside and outside shoulders are to be built 10-foot (5-foot paved) wide to provide the minimum shoulder width per FDM criteria. Upon completion of the project, the temporary westbound outside shoulder will become the Build Alternative's eastbound inside shoulder. Even though FDM criteria requires an 8-foot (4-foot paved) inside shoulder as shown in **Table 4-1**, the Build Alternative's eastbound inside shoulder will remain 10 feet to avoid reconstruction and throwaway. The proposed four-lane typical section is shown in **Figure 5-1**.

Figure 5-1 Proposed Four-Lane Typical Section



5.5 Comparative Alternatives Evaluation

An evaluation matrix was determined based on environmental effects, right-of-way needs, project costs, and engineering factors. The evaluation matrix is provided in **Table 5-1**. The matrix quantifies considerations such as potential business and residential relocations, impacts to environmental resources, and the amount of right-of-way needed for roadway improvements and stormwater management facilities. The matrix also quantifies potential impacts to archaeological/historical sites, noise sensitive sites, and threatened and endangered species.

The bottom portion of the evaluation matrix identifies estimates of project costs for wetland mitigation, right-of-way acquisition, construction, design, and construction engineering and inspection. These estimates were based on the year 2023 unit costs. Construction costs were estimated using the FDOT's LRE provided in **Appendix B**.

Table 5-1 Alternative Evaluation Matrix

Evaluation Criteria	No-Build Alternative	Preferred Alternative
Estimated Project Impacts		
Centerline Length of Improvement		
Length of Improvement (miles)	0	4.3
Business Impacts		
Estimated number of business relocations	0	0
Residential Impacts		
Estimated number of residential relocations	0	0
Utility Relocations		
Estimated number of utility impacts requiring relocation	0	2
Environmental Effects		
Archaeological/Historical sites (eligible)	0	0
Public parks, recreation areas, or wildlife refuges	0	0
Wetlands and Other Surface Waters Direct & Secondary Impacts (acres)	0	3.67
Other Surface Waters (acres)	0	32.87
Potential for Federal and/or State Listed Species	None	High
Noise-Impacted Receptors	0	2
Contamination sites (medium/high)	0/0	9/0
Right-of-Way Needs (acres)		
Right-of-way to be acquired for roadway *	0	98.0
Right-of-way to be acquired for stormwater facilities	0	0
Right-of-way to be acquired for floodplain compensation	0	58.81
Total Right-of-Way Needs	0.0	156.81
Estimated Total Project Costs (2023 Costs)		
Mitigation Cost		
Total Mitigation Cost **	\$0	\$474,000
Right-of-Way Cost		
Right-of-way acquisition for roadway ***	\$0	\$6,220,000
Right-of-way acquisition for stormwater facilities	\$0	\$0
Right-of-way acquisition for floodplain compensation	\$0	\$4,130,000
Total Right-of-Way Cost	\$0	\$10,350,000
Construction Cost		
Construction cost for roadway	\$0	\$27,049,000
Construction cost for drainage	\$0	\$8,100,000
Construction cost for signing & pavement markings	\$0	\$634,000
Total Construction Cost	\$0	\$35,783,000
Preliminary Estimate of Engineering Cost		
Design (15%)	\$0	\$5,368,000
Construction Engineering & Inspection (15%)	\$0	\$5,368,000
Total Preliminary Estimate of Engineering Cost	\$0	\$10,736,000
Preliminary Total Cost	\$0	\$57,343,000

* Right-of-way to be acquired for roadway includes 46.65 acres for linear treatment ponds

** Wetland Mitigation (rounded cost based on \$129,000/acre x 3.67 acres)

*** Right-of-way acquisition cost for roadway includes cost of linear treatment ponds

5.6 Selection of the Preferred Alternative

The Build Alternative addresses existing roadway deficiencies and improves safety for vehicles, bicyclists and pedestrians. It provides two additional travel lanes and accommodates the design year traffic volumes at an acceptable LOS. The proposed typical section consists of a four-lane divided roadway with a shared use path paralleling the eastbound lanes which will improve safety and mobility by accommodating pedestrian and bicycle traffic. The Build Alternative also avoids impacts to conservation lands and FGT by shifting the existing horizontal alignment to the south. Thus, the Build Alternative was selected as the Preferred Alternative to meet the purpose and need of this study.

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6.0 AGENCY COORDINATION & PUBLIC INVOLVEMENT

6.1 Agency Coordination

Agency coordination for this project has occurred through the ETDM process (ETDM No.: 14364) and Environmental Screening Tool (EST). Numerous local, regional, state, and federal agencies were identified as having an interest in this project through jurisdictional review or expressed interest. These agencies were identified and contacted through the Advance Notification (AN) process at the outset of the project in accordance with PD&E Manual. The AN Package was distributed by the Florida State Clearinghouse on December 13, 2018, for the project. Coordination with agencies is summarized below:

- FDOT completed an informal wetland determination with South Florida Water Management District (SFWMD) and obtained approval from SFWMD on November 26, 2018.
- FDOT and SFWMD permit coordination meeting on January 10, 2019 to determine stormwater quality and quantity requirements.
- FDOT and SFWMD email coordination on November 20, 2020, to confirm stormwater treatment requirements.
- FDOT sent the project's Natural Resources Evaluation (NRE), NRE Addendum and Biological Opinion on December 13, 2022, to U.S. Environmental Protection Agency (EPA), National Marine Fisheries Service (NMFS), U.S. Army Corps of Engineers (USACE), Florida Fish and Wildlife Commission (FWC), SFWMD, Florida Department of Environmental Protection (FDEP), and Florida Department of Agricultural and Consumer Services (FDACS) for review and comments.

Agency meeting minutes have been included in **Appendix E**. Additional coordination with local, state, and federal agencies will occur during the project's design phase.

6.2 Public Involvement

A comprehensive Public Involvement Plan (PIP) was developed for this project and prepared under separate cover. The PIP outlines the strategies used to address public involvement and outreach over the course of the study. A project newsletter was mailed out to all property owners within 300 feet of the centerline in April 2019. No comments were received as a result of the project newsletter being distributed. A project website, www.swflroads.com/project/414506-5, was created to provide the public with project specific information and to give the public an opportunity to make comments or ask questions about the project. At the conclusion of the study, a Comments and Coordination Report will be prepared to fully document the public involvement activities conducted throughout the project.

6.3 Public Hearing

A public hearing is planned for Thursday, September 28, 2023. This section will be updated following the public hearing.

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7.0 PREFERRED ALTERNATIVE

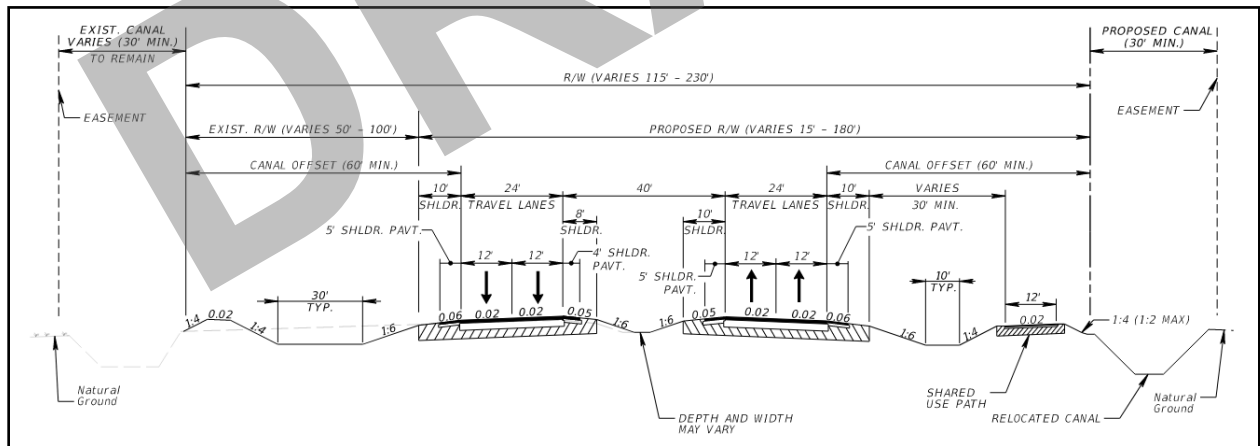
Based on the evaluation of the Build Alternative and the No-Build Alternative described in **Section 5.0**, the Build Alternative is the Preferred Alternative. The *Preferred Alternative Concept Plans* in **Appendix A** illustrate the proposed improvements of the Preferred Alternative.

7.1 Typical Sections

The Preferred Alternative proposed typical section will consist of a four-lane divided roadway with two 12-foot travel lanes in each direction, 10-foot (5-foot paved) outside shoulders, a 10-foot (5-foot paved) eastbound inside shoulder, an 8-foot (4-foot paved) westbound inside shoulder, a 40-foot median between opposing traffic and a 12-foot shared use path. The proposed shared use path will be placed along the south side of the proposed roadway. This will ensure safety by separating bicyclists and pedestrians from vehicular traffic. **Figure 7-1** shows the Preferred Alternative typical section within the project limits.

Additional details of the proposed roadway typical section for the Preferred Alternative are discussed in **Section 5.4**. The *Typical Section Package* is included in **Appendix D**.

Figure 7-1 Preferred Alternative Typical Section



7.2 Access Management

The access management classification for this project is Access Class 3. For this classification, the State Highway Classification System and Standards (Rule 14-97) allows for full median openings and signalized intersections spaced at 2,640 feet, and directional median openings spaced at 1,320 feet. **Table 7-1** identifies the proposed access management plan for SR 70 from CR 29 to

Lonesome Island Road. The proposed plan identifies four median openings that can be constructed with the future widening of SR 70.

Table 7-1 Access Management Plan for SR 70

Connection South Side / North Side	Centerline Station	Spacing (ft)	Median Opening	DMO ¹	FMO ²
				Distance (Deviation)	Distance (Deviation)
None / CR 29	10002+50		FMO*		
		1,315		1,315 (0.4%)	
None / Driveway	10015+65		DMO*		2,677
		285			
Driveway / None	10018+50		None	1,362	
		1,077			
None / Driveway	10029+27		FMO		
		1,173			
Driveway / None	10041+00		None		2,768
		372			
Driveway / None	10044+72		None		
		1,223			
None / Driveway	10056+95		EB DMO		5,018
		219			
Southwind Rd. / None	10059+14		WB DMO		
		991			
L7 Ranch Rd. / None	10069+05		None	2,031	
		1,040			
None / Driveway	10079+45		FMO		
		3,838		3,838	
None / Driveway	10117+83		DMO		5,745
		1,907		1,907	
Driveway / Lonesome Island Rd.	10136+90		FMO		
		2,627			2,627 (0.5%)
None / Denco Rd.	10163+17		FMO		
		2,505			
Southwind Rd. / None	10188+22		None		2,683
		178			
None / D and B Rd.	10190+00		FMO		
		1,263		1,263 (4.3%)	
Southwind Rd. / None	10202+63		WB DMO		4,010
		1,252		1,252 (5.2%)	
Dosia Smith Rd. / None	10215+15		DMO ⁴		
		1,495		1,495	
Lonesome Island Rd.	10230+10		FMO ³		

¹ Directional Median Opening

² Full Median Opening

³ Full and directional median openings added after future widening

⁴ Westbound directional median opening added after future widening

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7.3 Right-of-Way

The proposed roadway improvements for the Preferred Alternative will require additional right-of-way to be acquired along the south side of the corridor. The existing right-of-way width varies from approximately 50 feet to 100 feet throughout the limits of this study. The total proposed roadway right-of-way width required to accommodate the four-lane divided section and transitions at both ends of the corridor varies from 115 feet to 230 feet.

A total of 13 parcels are impacted by the Preferred Alternative but no residential or business relocations are anticipated. The total area of additional right-of-way acquisition required along the entire corridor to accommodate the Preferred Alternative typical section is 156.81 acres which includes right-of-way for roadway, canal relocation, stormwater facilities and floodplain compensation. The proposed right-of-way limits are shown on the *Preferred Alternative Concept Plans* included in **Appendix A**.

7.4 Horizontal and Vertical Geometry

The proposed centerline horizontal alignment for the Preferred Alternative contains eight horizontal curves within the project limits and is illustrated on the *Preferred Alternative Concept Plans* in **Appendix A**. The proposed horizontal curves for this project are listed in **Table 7-2**.

Table 7-2 Proposed Horizontal Geometry

PI Station	Bearing Ahead	PC Station	PT Station	Curve Radius (ft)	Curve Length (ft)
10000+00.00	N 89° 57' 16" W	-	-	-	-
10008+32.46	N 87° 16' 56" W	10004+89.28	10011+75.52	14,714	686
10015+18.71	N 89° 57' 16" W	10011+75.52	10018+61.77	14,714	686
10023+93.16	N 86° 21' 4" W	10019+30.31	10028+55.70	14,714	925
10033+04.33	N 89° 50' 38" W	10028+55.70	10037+52.69	14,714	897
10065+54.25	N 89° 34' 47" E	-	-	-	-
10120+60.00	N 89° 2' 21" E	-	-	-	-
10206+88.34	N 85° 56' 28" E	10202+90.42	10210+86.07	14,714	796
10215+03.35	N 89° 11' 24" E	10210+86.07	10219+20.42	14,714	834
10222+24.16	N 86° 49' 29" E	10219+20.42	10225+27.81	14,714	607
10228+73.10	N 89° 30' 48" E	10225+27.81	10232+18.27	14,714	690
10233+67.24	-	-	-	-	-

The proposed roadway profile will mostly follow the existing profile elevations discussed in **Section 2.2.9** with a vertical difference of approximately 16 feet within the project limits.

7.5 Design Variations and Design Exceptions

No design variations or exceptions from FDM criteria are anticipated.

7.6 Multimodal Accommodations

No additional multimodal accommodations, beyond the pedestrian and bicycle improvements noted in **Section 5.0** will be included in the Preferred Alternative. Impacts to transit and/or truck routes are not anticipated within the project limits.

7.7 Intersection/Interchange Concepts and Signal Analysis

There are no proposed signalized intersections within the project limits. The proposed improvements along this corridor are shown on the *Preferred Alternative Concept Plans* included in **Appendix A**.

7.8 Tolled Projects

There are no tolls identified within the limits of this study.

7.9 Intelligent Transportation System and TSM&O Strategies

As noted in the DTTM (November 2018), the additional traffic capacity required to meet the projected traffic demand along this segment of SR 70 cannot be provided solely through the implementation of ITS and TSM&O improvements. There are no existing or proposed ITS within the project limits.

7.10 Landscape

There are no landscape features proposed in the Preferred Alternative.

7.11 Lighting

There are no lighting features included in the Preferred Alternative.

7.12 Wildlife Crossings

There are no wildlife crossings proposed in the Preferred Alternative.

7.13 Permits

The Preferred Alternative will require environmental permits prior to construction. A SFWMD Environmental Resource Permit (ERP) will be required for the project. Coordination with FDOT Drainage and Permitting staff has occurred during the PD&E study along with coordinating with SFWMD to confirm the requirement for the project's stormwater management facilities and floodplain compensation. A FDEPs 404 Program permit will also be required for the project's proposed impacts to wetlands and surface waters. Lastly, prior to construction, a National Pollutant Discharge Elimination System (NPDES) Construction Generic Permit is required for disturbing greater than one acre of land.

7.14 Drainage and Stormwater Management Facilities

Linear ponds are the Preferred Alternative drainage system. This alternative includes incorporating control structures within the proposed FDOT right-of-way to create linear ponds along the length of the project. The linear ponds would outfall into the adjacent canals prior to the ultimate discharge within Harney Pond Canal (C-41). The linear ponds also are designed to operate under dry retention methodology, which relies on infiltration into the ground to recover the treatment volume.

Two crossdrains were modified to provide the designed drainage conditions identified in the Floodplain Modeling Report with the Preferred Alternative. CD-1 was replaced with a 34-inch by 53-inch ECP, and a third 53-inch by 83-inch pipe was added to CD-2. See **Section 2.2.18** for existing crossdrain details.

7.15 Floodplain Analysis

According to FEMA FIRM Community-Panel Numbers 12055C0533C, 12055C0535C, and 12055C0555C, almost the entire project area is located within floodplain Zone A (no base flood elevations determined). There are no FEMA floodways within the project limits. ICPR4 was used to obtain 100-year floodplain elevations by modelling the existing conditions within the project right-of-way as well as throughout the basins of interest. No fill of the floodplain is proposed along the northside of the project, but due to the widening and construction of a 12-foot shared use path to the south of the existing roadway, there will be a considerable amount of encroachment. Two floodplain compensation sites were proposed and modelled in ICPR4 to show that impacts to the floodplain are mitigated.

7.16 Bridge and Structure Analysis

There are no proposed bridges or retaining walls in the Preferred Alternative.

7.17 Transportation Management Plan

As described in **Section 5.4**, the Preferred Alternative's ultimate two-lane eastbound roadway will temporarily serve as a two-lane bidirectional undivided roadway during the construction of the Preferred Alternative's two-lane westbound roadway. This will facilitate MOT and will minimize potential road closures and detours.

7.18 Constructability

During the first MOT phases of construction, the future eastbound lanes will be constructed while traffic continues to use the existing SR 70 corridor. Traffic will then be shifted to the newly constructed eastbound lanes which will operate as a two-lane bidirectional roadway to allow the ability to maintain traffic. Construction of the future westbound lanes and grass median, removal of the existing corridor pavement and completion of final features will be some of the items accomplished in the last construction phases.

7.19 Construction Impacts

Construction of the Preferred Alternative is not expected to have any significant impact to property access or safety considerations while construction of roadway and drainage improvements take place. Also, construction of the Preferred Alternative is not expected to have any significant impact to water quality, noise, or air quality. The project will adhere to the FDOT Standard Specifications for Road and Bridge Construction along with implementation of a Stormwater Pollution Prevention Plan (SWPPP) and Best Management Practices to minimize or eliminate potential construction impacts.

7.20 Special Features

The drainage canal bordering the existing roadway along the south side will be relocated further to the south to accommodate the Preferred Alternative's typical section. This will also provide a minimum 60-foot-wide offset from the proposed edge of travel to meet canal offset design criteria. The *Preferred Alternative Concept Plans* in **Appendix A** and the *Typical Section Package* in **Appendix D** illustrate the Preferred Alternative's relocated canal.

7.21 Utilities

As discussed in **Section 2.2.20**, the existing corridor has three utility owners identified along SR 70 and two of these will require relocation in the Preferred Alternative.

The 30-inch FGT line will not be impacted nor will require relocation but may require protection at the SR 70 south-to-north crossing during construction. The Preferred Alternative will place the proposed eastbound and westbound lanes to the south of the existing corridor but to the north of the FGT line to avoid any potential impacts.

The three-phase overhead electric feeder supplying 7.2 KV and owned by Glades Electric will require relocation to the south to accommodate the proposed roadway and drainage improvements in the Preferred Alternative.

The Preferred Alternative will also require the Century Link underground and aerial copper and fiber routes to be relocated further to the south to accommodate the proposed roadway and drainage improvements.

The *Preferred Alternative Concept Plans* are provided in **Appendix A**. A *Utility Assessment Report (August 2023)* was prepared for this project under separate cover.

Contact information for the impacted utility companies is provided in **Table 7-3**.

Table 7-3 Utility Contact Information

Utility Owner	Utility Contact Name	Utility Contact Phone	Utility Contact E-mail
Florida Gas Transmission Company, LLC	Joe Sanchez	407-838-7171	joseph.e.sanchez@energytransfer.com
Glades Electric	Colin Evans	863-531-5034	cevans@gladeselectric.com
Century Link	Ezekiel "Zeke" Reid	239-791-1299	ezekiel.reid1@lumen.com

7.22 Cost Estimates

The total estimated project costs for the Preferred Alternative are summarized in **Table 7-4**. The FDOT’s LRE has been included within **Appendix B** which summarizes the construction cost for the project.

Table 7-4 Total Estimated Project Cost

Evaluation Criteria	No-Build Alternative	Preferred Alternative
Estimated Total Project Costs (2023 Costs)		
Mitigation Cost		
Total Mitigation Cost *	\$0	\$474,000
Right-of-Way Cost		
Right-of-way acquisition for roadway **	\$0	\$6,220,000
Right-of-way acquisition for stormwater facilities	\$0	\$0
Right-of-way acquisition for floodplain compensation	\$0	\$4,130,000
Total Right-of-Way Cost	\$0	\$10,350,000
Construction Cost		
Construction cost for roadway	\$0	\$27,049,000
Construction cost for drainage	\$0	\$8,100,000
Construction cost for signing & pavement markings	\$0	\$634,000
Total Construction Cost	\$0	\$35,783,000
Preliminary Estimate of Engineering Cost		
Design (15%)	\$0	\$5,368,000
Construction Engineering & Inspection (15%)	\$0	\$5,368,000
Total Preliminary Estimate of Engineering Cost	\$0	\$10,736,000
Preliminary Total Cost	\$0	\$57,343,000

* Wetland Mitigation (rounded cost based on \$129,000/acre x 3.67 acres)

** Right-of-way acquisition cost for roadway includes cost of linear treatment ponds

APPENDICES

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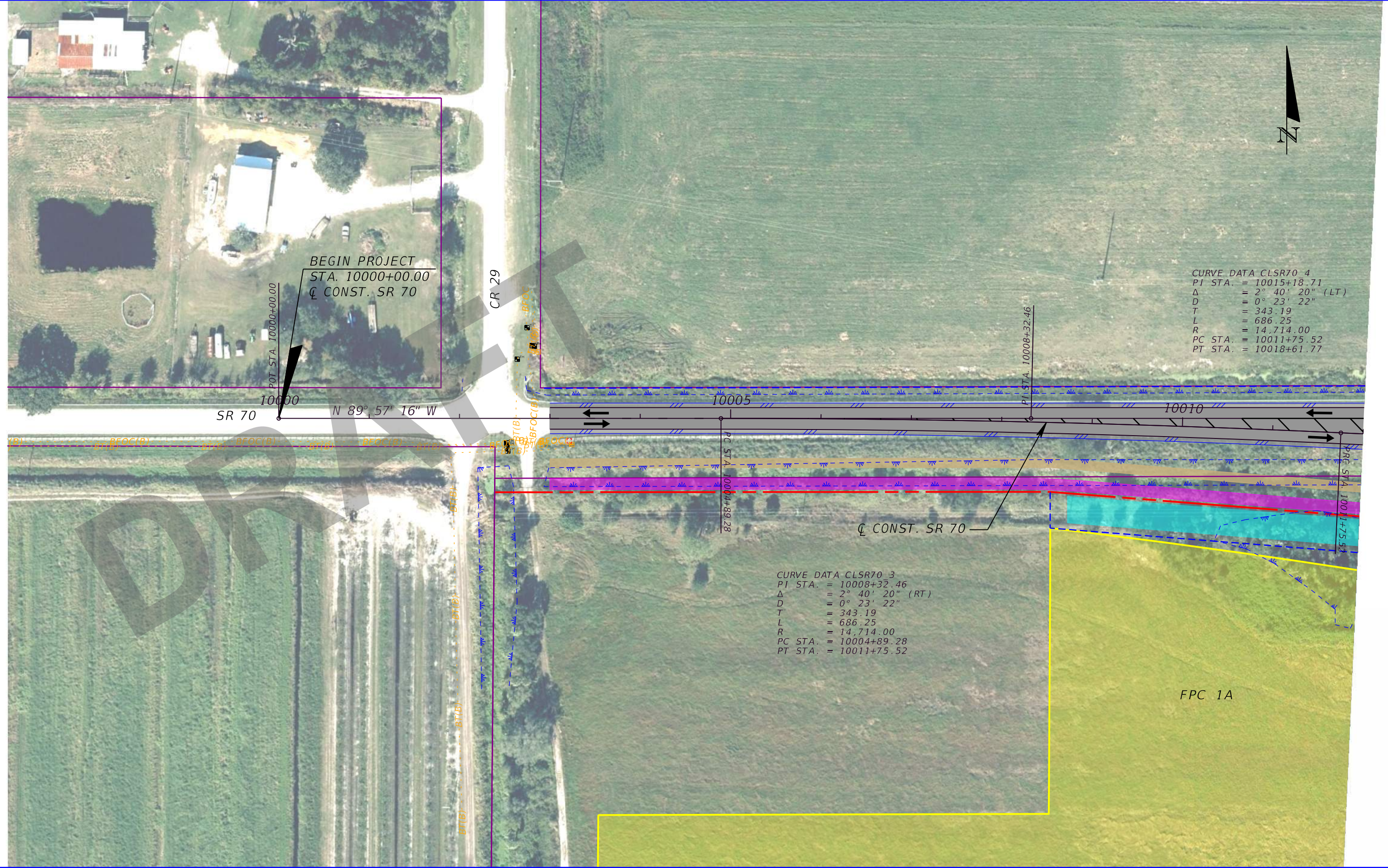
**APPENDIX A
PREFERRED ALTERNATIVE
CONCEPT PLANS**



BEGIN PROJECT
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CL CONST. SR 70

CURVE DATA CLSR70_4
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Δ = 2° 40' 20" (LT)
D = 0° 23' 22"
T = 343.19
L = 686.25
R = 14,714.00
PC STA. = 10011+75.52
PT STA. = 10018+61.77

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L = 686.25
R = 14,714.00
PC STA. = 10004+89.28
PT STA. = 10011+75.52



LEGEND		PROPOSED RIGHT-OF-WAY		PROPOSED GRASS MEDIAN		RELOCATED CANAL	0 20 100
		EXISTING PROPERTY LINE		PROPOSED PAVEMENT		PROPOSED SWALE	Feet
		EASEMENT		PROPOSED SHOULDER		PROPOSED POND	DATE OF AERIAL: 2020
		WETLAND & OTHER SURFACE WATERS		PROPOSED SHARED USE PATH		CONSERVATION LANDS	

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Tampa, Florida 33602
Phone: (813) 871-5331
Florida Certificate of Authorization No. 02317
Alejandro Mendez, P.E. No. 77055

SR 70 PD&E STUDY
From CR 29 to Lonesome Island Rd.
Concept Plans

SHEET NO.
1

CURVE DATA CLSR70 4
 PI STA. = 10015+18.71
 Δ = 2° 40' 20" (LT)
 D = 0° 23' 22"
 T = 343.19
 L = 686.25
 R = 14,714.00
 PC STA. = 10011+75.52
 PT STA. = 10018+61.77

N 89° 57' 16" W

PT STA. 10018+61.77

PI STA. 10023+93.16

10015

10020

10025

PI STA. 10015+18.71

PC STA. 10019+30.31

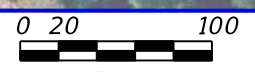
CL CONST. SR 70

FPC 1A

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 L = 925.39
 R = 14,714.00
 PC STA. = 10019+30.31
 PT STA. = 10028+55.70



LEGEND		PROPOSED RIGHT-OF-WAY		PROPOSED GRASS MEDIAN		RELOCATED CANAL
		EXISTING PROPERTY LINE		PROPOSED PAVEMENT		PROPOSED SWALE
		EASEMENT		PROPOSED SHOULDER		PROPOSED POND
		WETLAND & OTHER SURFACE WATERS		PROPOSED SHARED USE PATH		CONSERVATION LANDS
						CONTAMINATION SITES



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SR 70 PD&E STUDY
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SHEET NO.
2

CURVE DATA CLSR70_8
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 PC STA. = 10028+55.70
 PT STA. = 10037+52.69



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 R = 14,714.00
 PC STA. = 10019+30.31
 PT STA. = 10028+55.70

CL CONST. SR 70

N 89° 50' 38" W

LEGEND	PROPOSED RIGHT-OF-WAY	PROPOSED GRASS MEDIAN	RELOCATED CANAL
	EXISTING PROPERTY LINE	PROPOSED PAVEMENT	PROPOSED SWALE
	EASEMENT	PROPOSED SHOULDER	PROPOSED POND
	WETLAND & OTHER SURFACE WATERS	PROPOSED SHARED USE PATH	CONSERVATION LANDS
		CONTAMINATION SITES	

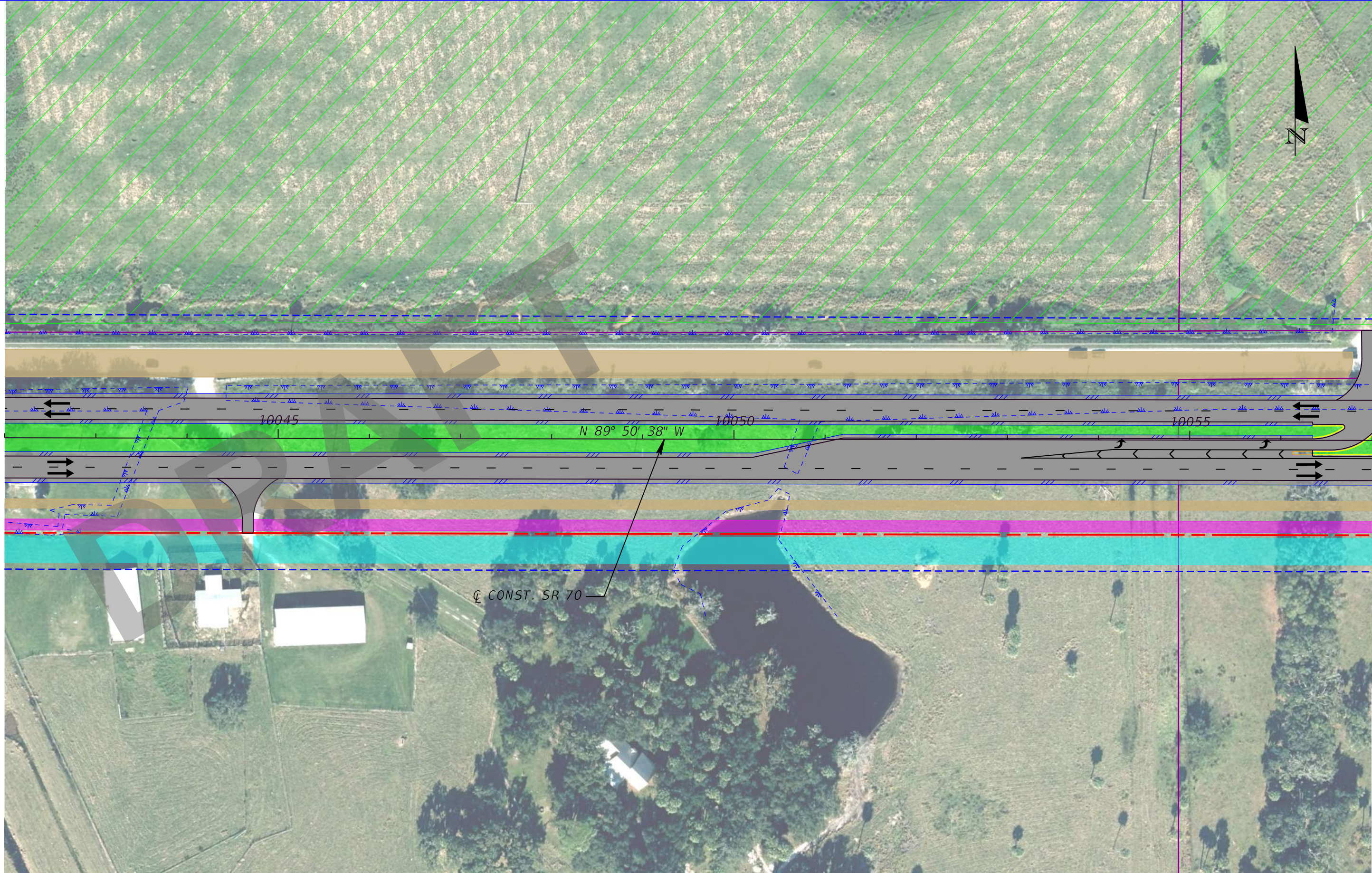


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SHEET
NO.
3

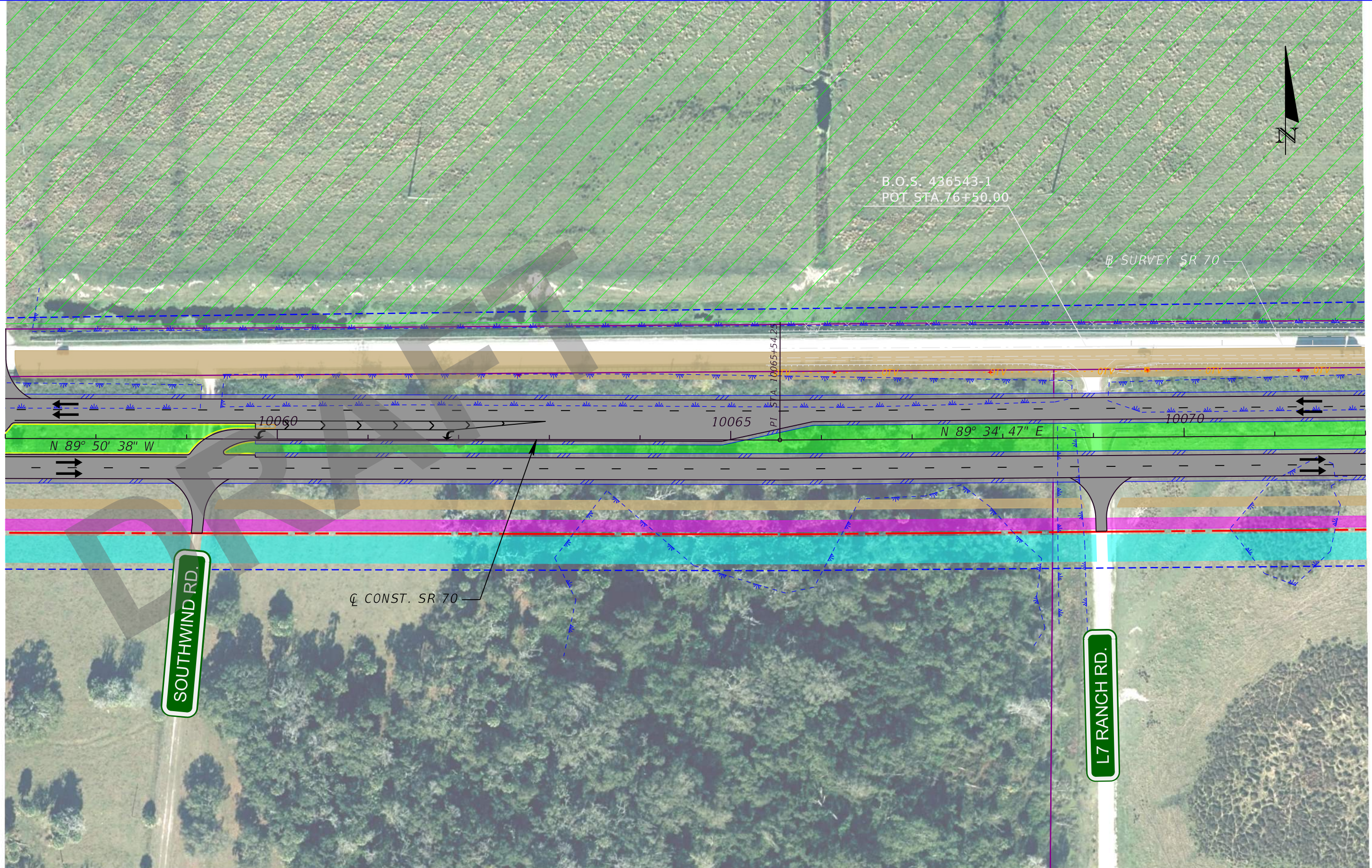


LEGEND	PROPOSED RIGHT-OF-WAY	PROPOSED GRASS MEDIAN	RELOCATED CANAL
	EXISTING PROPERTY LINE	PROPOSED PAVEMENT	PROPOSED SWALE
	EASEMENT	PROPOSED SHOULDER	PROPOSED POND
	WETLAND & OTHER SURFACE WATERS	PROPOSED SHARED USE PATH	CONSERVATION LANDS
			CONTAMINATION SITES

0 20 100
 Feet
 DATE OF AERIAL: 2020

SR 70 PD&E STUDY
 From CR 29 to Lonesome Island Rd.
 Concept Plans

SHEET NO.
4



B.O.S. 436543-1
 POT STA. 76+50.00

⊕ SURVEY SR 70

PI STA. 10065+54.25

N 89° 50' 38" W

N 89° 34' 47" E

10060

10065

10070

⊕ CONST. SR 70

SOUTHWIND RD.

L7 RANCH RD.

LEGEND		PROPOSED RIGHT-OF-WAY		PROPOSED GRASS MEDIAN		RELOCATED CANAL
		EXISTING PROPERTY LINE		PROPOSED PAVEMENT		PROPOSED SWALE
		EASEMENT		PROPOSED SHOULDER		PROPOSED POND
		WETLAND & OTHER SURFACE WATERS		PROPOSED SHARED USE PATH		CONSERVATION LANDS
						CONTAMINATION SITES

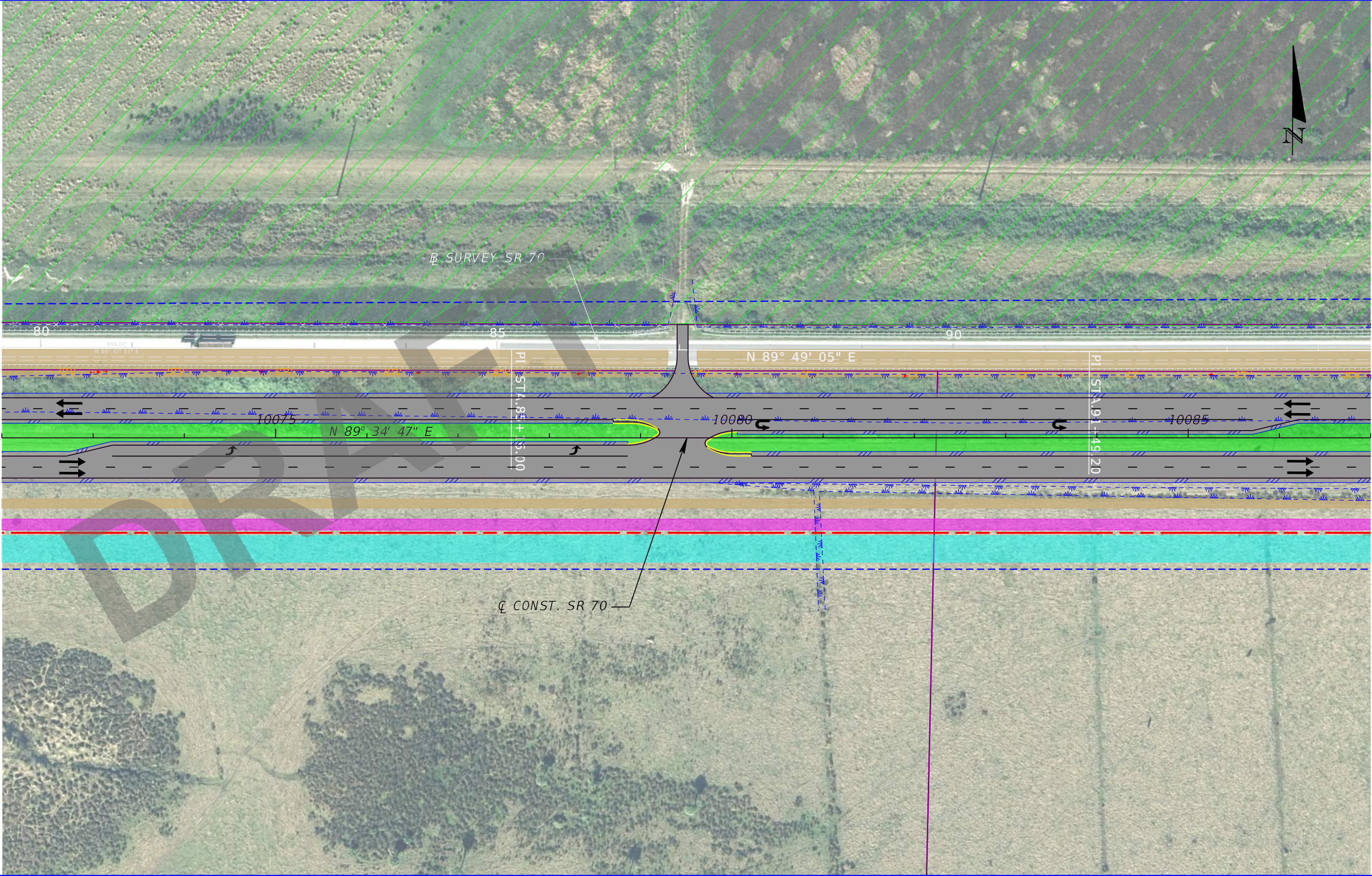


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 From CR 29 to Lonesome Island Rd.
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SHEET NO.
5



Q SURVEY SR 70

N 89° 49' 05" E

N 89° 34' 47" E

Q CONST. SR 70

LEGEND

	PROPOSED RIGHT-OF-WAY		PROPOSED GRASS MEDIAN		RELOCATED CANAL
	EXISTING PROPERTY LINE		PROPOSED PAVEMENT		PROPOSED SWALE
	EASEMENT		PROPOSED SHOULDER		PROPOSED POND
	WETLAND & OTHER SURFACE WATERS		PROPOSED SHARED USE PATH		CONSERVATION LANDS
					CONTAMINATION SITES

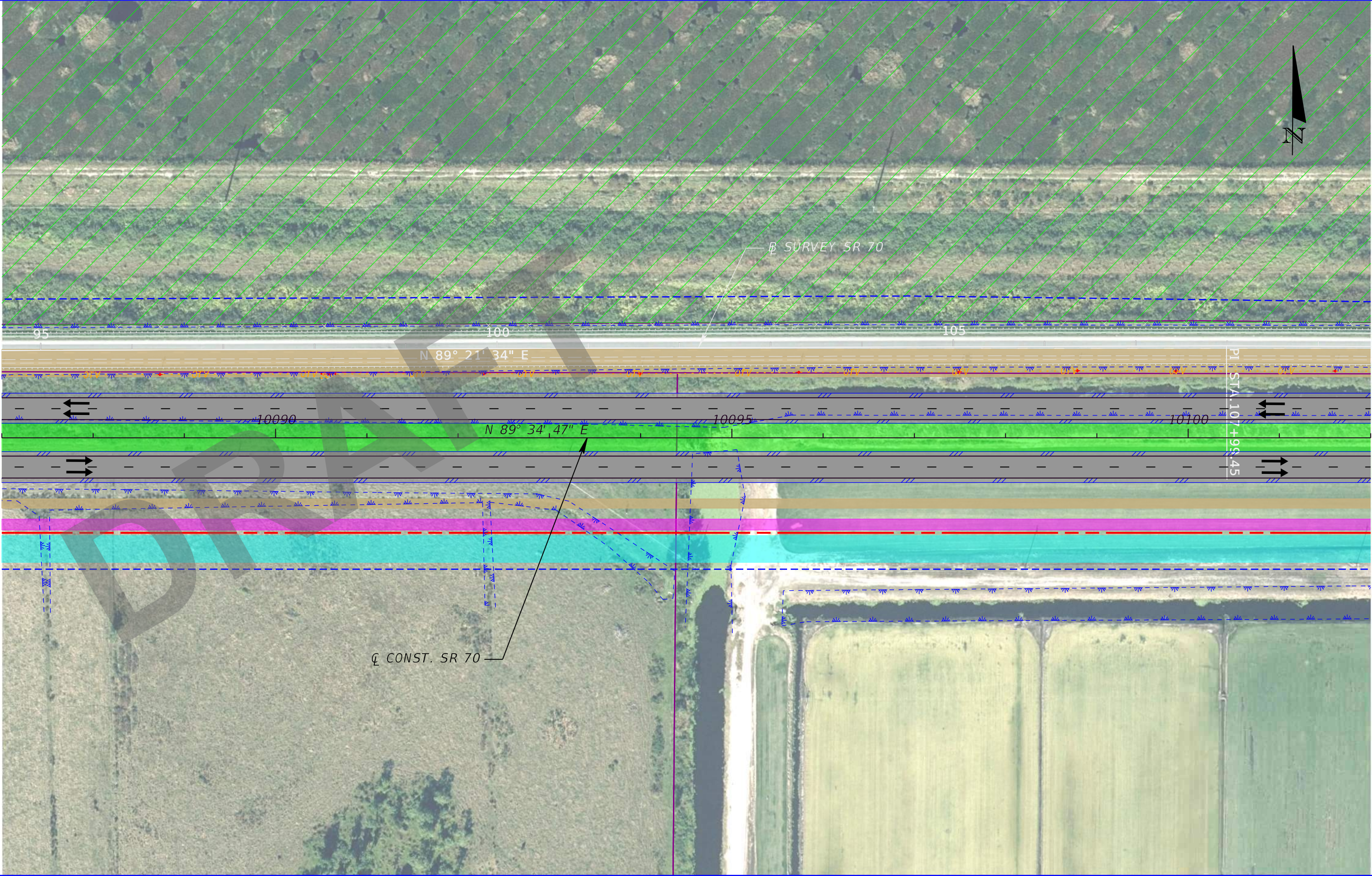


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 Alejandro Mendez, P.E. No. 77055

SR 70 PD&E STUDY
 From CR 29 to Lonesome Island Rd.
 Concept Plans

SHEET NO.
 6



B SURVEY SR 70

N 89° 21' 34" E

N 89° 34' 47" E

PI STA. 107+95.45

C CONST. SR 70

LEGEND

	PROPOSED RIGHT-OF-WAY		PROPOSED GRASS MEDIAN		RELOCATED CANAL
	EXISTING PROPERTY LINE		PROPOSED PAVEMENT		PROPOSED SWALE
	EASEMENT		PROPOSED SHOULDER		PROPOSED POND
	WETLAND & OTHER SURFACE WATERS		PROPOSED SHARED USE PATH		CONSERVATION LANDS
					CONTAMINATION SITES



Feet

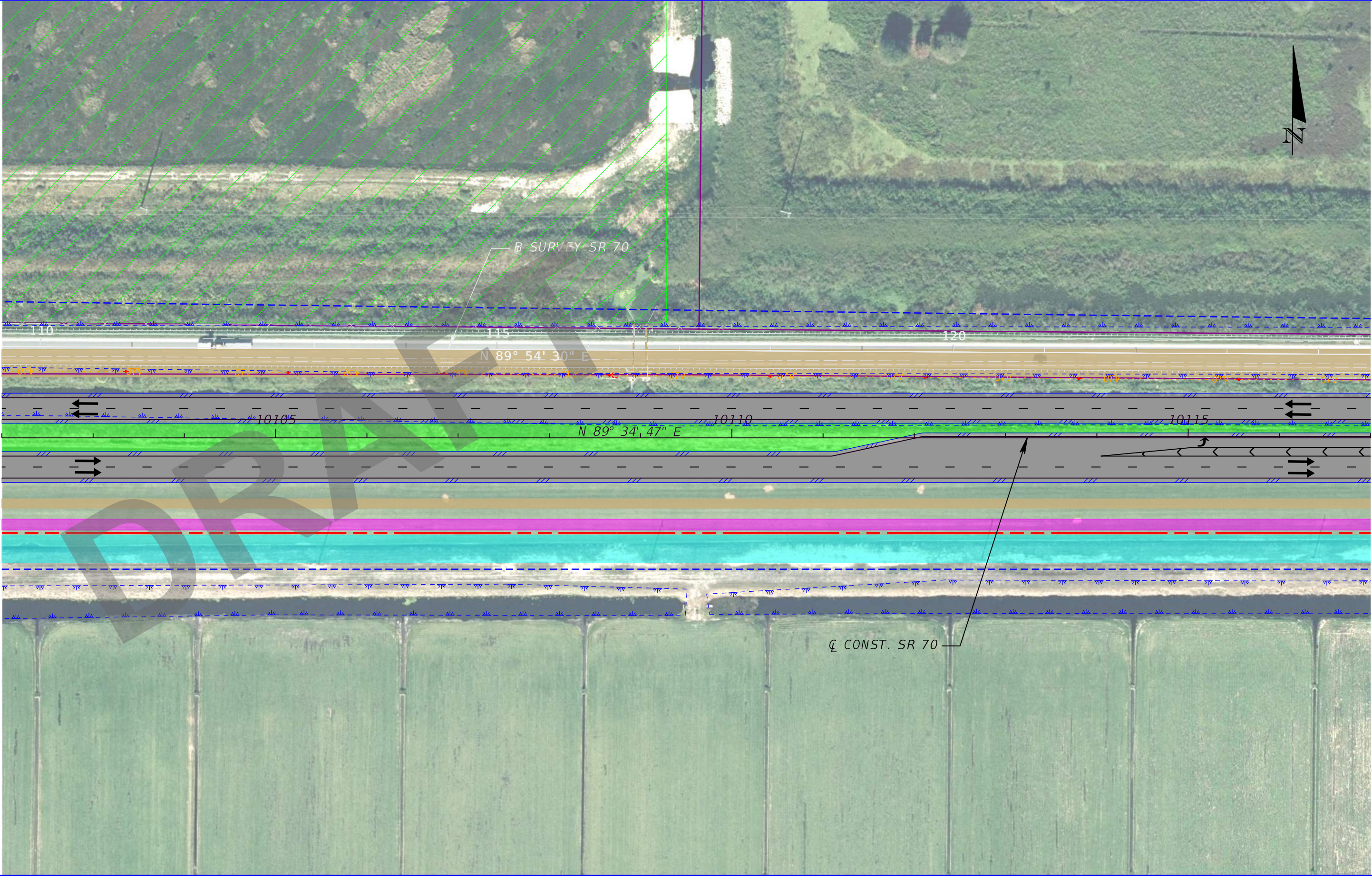
DATE OF AERIAL: 2020

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SR 70 PD&E STUDY
 From CR 29 to Lonesome Island Rd.
 Concept Plans

SHEET NO.

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LEGEND		PROPOSED RIGHT-OF-WAY		PROPOSED GRASS MEDIAN		RELOCATED CANAL
		EXISTING PROPERTY LINE		PROPOSED PAVEMENT		PROPOSED SWALE
		EASEMENT		PROPOSED SHOULDER		PROPOSED POND
		WETLAND & OTHER SURFACE WATERS		PROPOSED SHARED USE PATH		CONSERVATION LANDS
						CONTAMINATION SITES

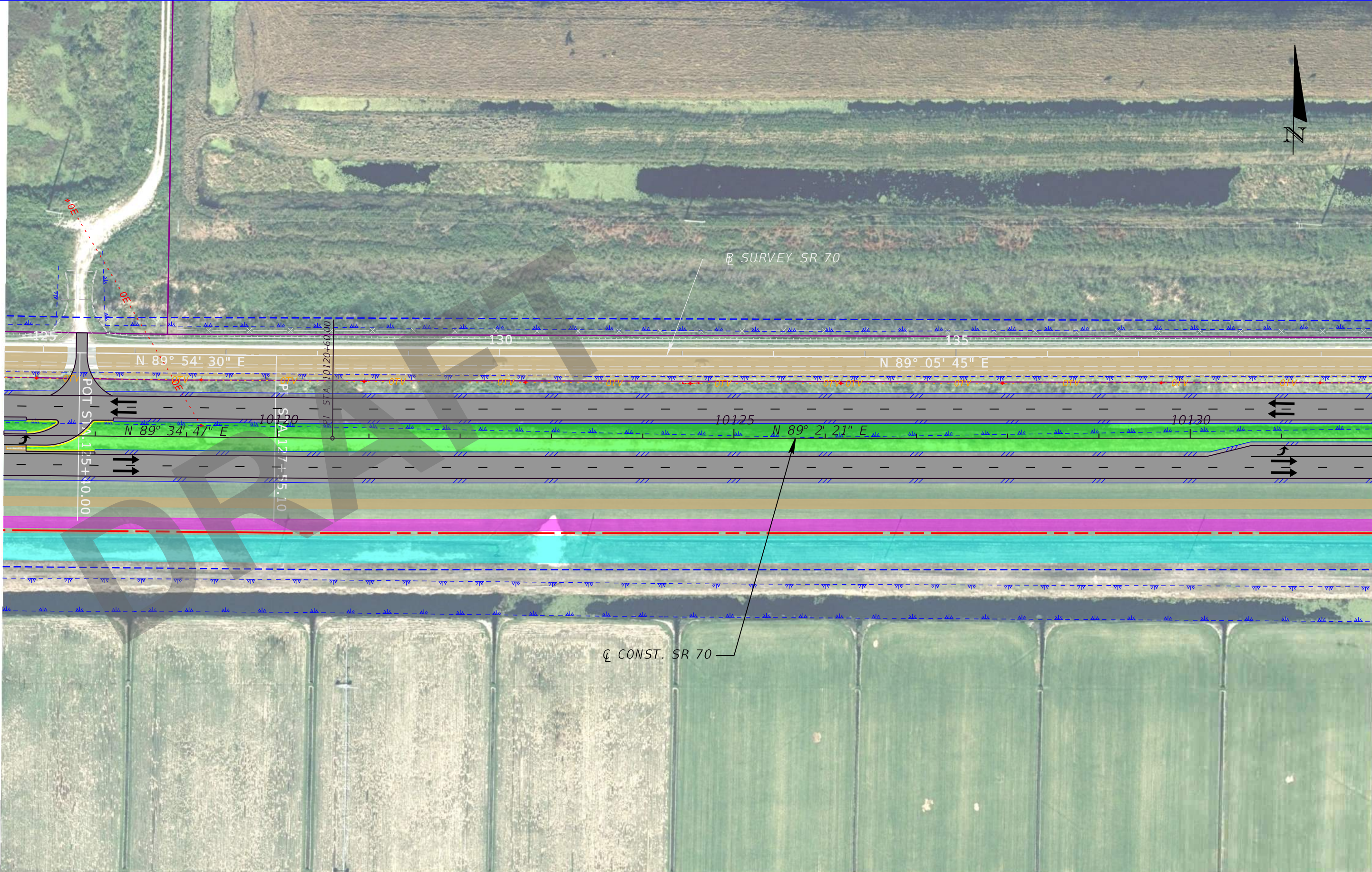


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SR 70 PD&E STUDY
 From CR 29 to Lonesome Island Rd.
 Concept Plans

SHEET
NO.
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LEGEND	PROPOSED RIGHT-OF-WAY	PROPOSED GRASS MEDIAN	RELOCATED CANAL
	EXISTING PROPERTY LINE	PROPOSED PAVEMENT	PROPOSED SWALE
	EASEMENT	PROPOSED SHOULDER	PROPOSED POND
	WETLAND & OTHER SURFACE WATERS	PROPOSED SHARED USE PATH	CONSERVATION LANDS

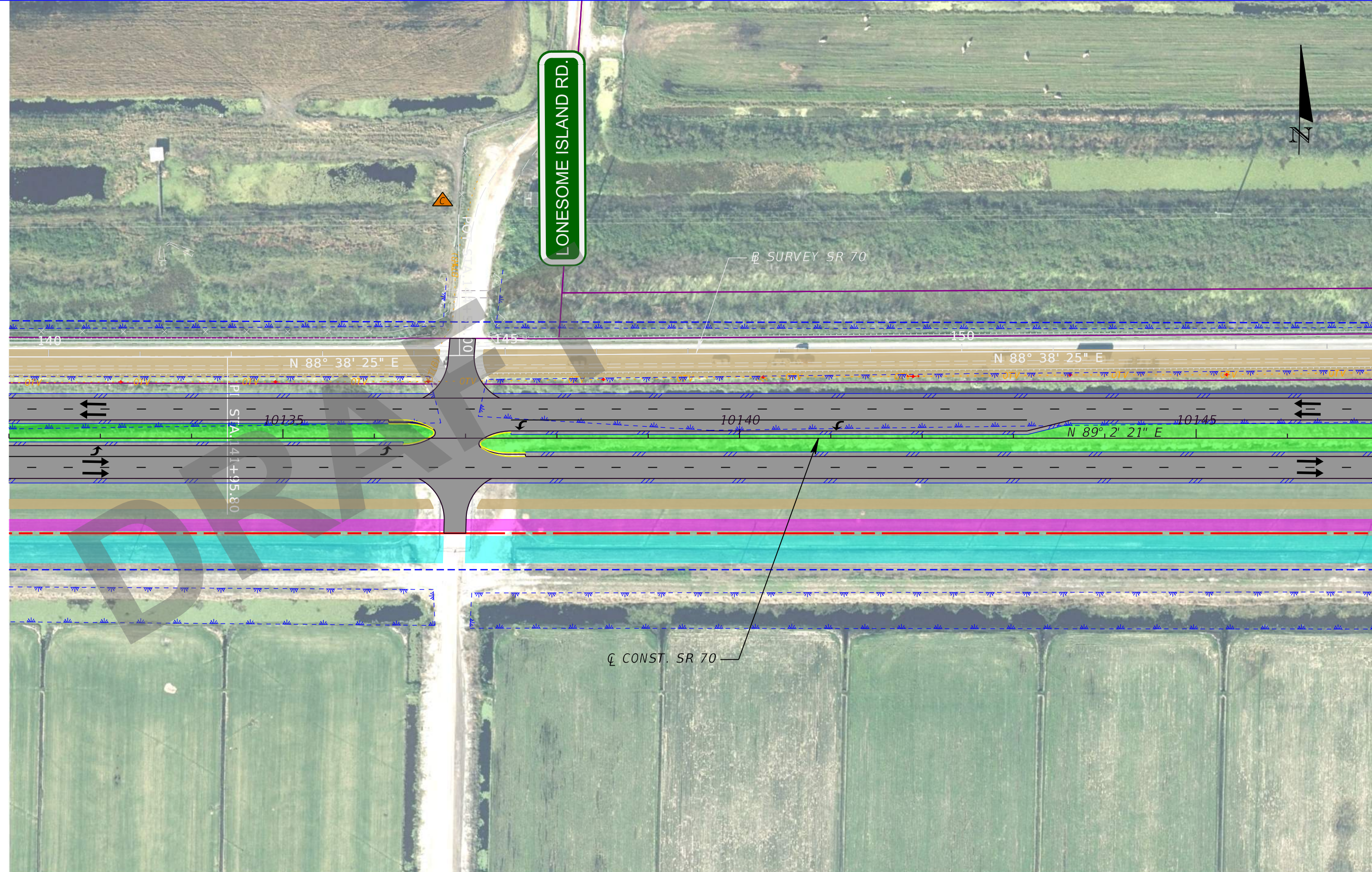
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 Feet
 DATE OF AERIAL: 2020
 CONTAMINATION SITES

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SR 70 PD&E STUDY
 From CR 29 to Lonesome Island Rd.
 Concept Plans

SHEET NO.
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LONESOME ISLAND RD.

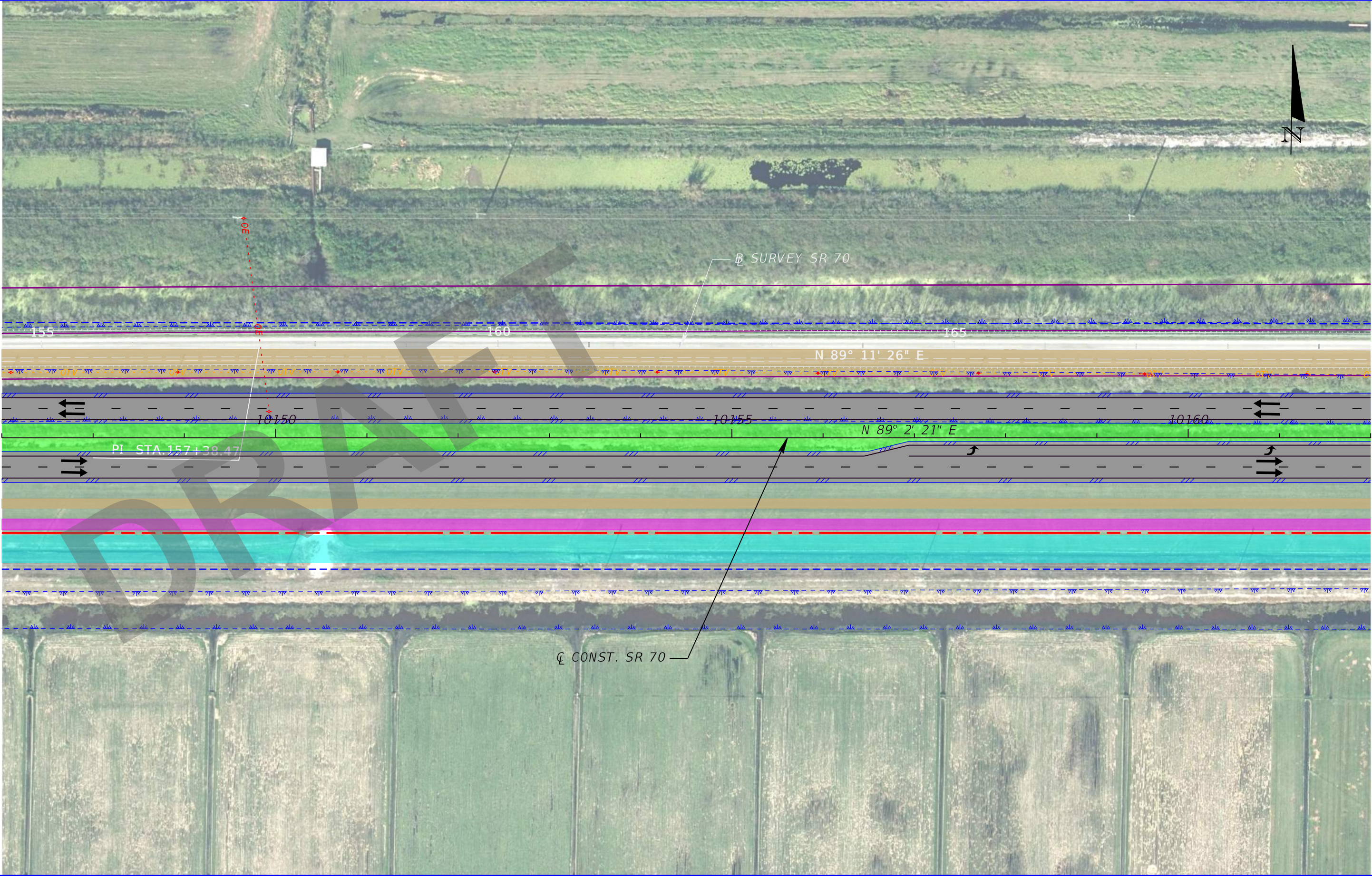


LEGEND	PROPOSED RIGHT-OF-WAY	PROPOSED GRASS MEDIAN	RELOCATED CANAL	0 20 100
	EXISTING PROPERTY LINE	PROPOSED PAVEMENT	PROPOSED SWALE	Feet
	EASEMENT	PROPOSED SHOULDER	PROPOSED POND	DATE OF AERIAL: 2020
	WETLAND & OTHER SURFACE WATERS	PROPOSED SHARED USE PATH	CONSERVATION LANDS	CONTAMINATION SITES

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SR 70 PD&E STUDY
 From CR 29 to Lonesome Island Rd.
 Concept Plans

SHEET NO.
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LEGEND	PROPOSED RIGHT-OF-WAY	PROPOSED GRASS MEDIAN	RELOCATED CANAL
	EXISTING PROPERTY LINE	PROPOSED PAVEMENT	PROPOSED SWALE
	EASEMENT	PROPOSED SHOULDER	PROPOSED POND
	WETLAND & OTHER SURFACE WATERS	PROPOSED SHARED USE PATH	CONSERVATION LANDS
		CONTAMINATION SITES	

0 20 100
 Feet
 DATE OF AERIAL: 2020
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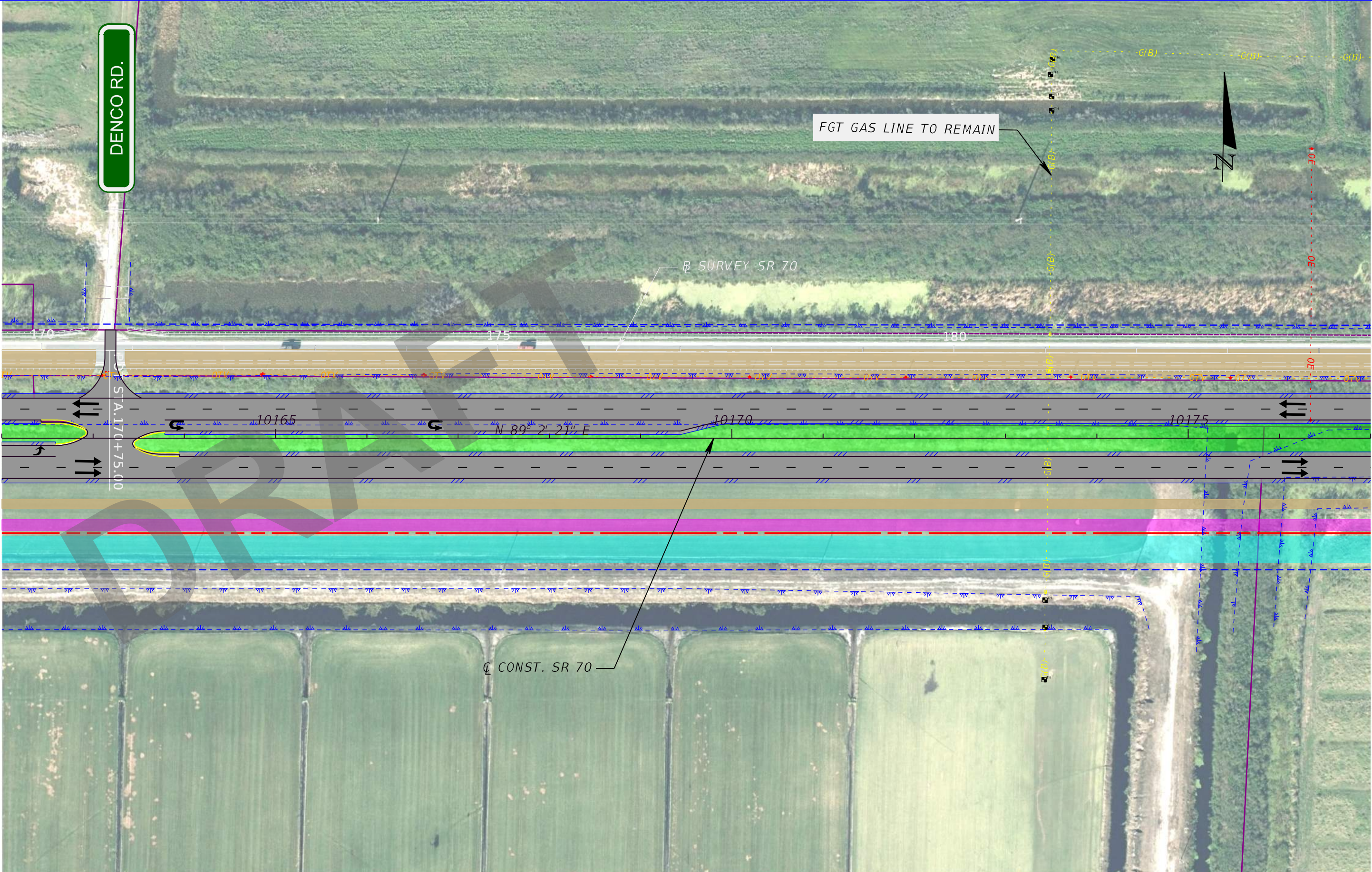
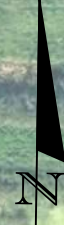
SR 70 PD&E STUDY
 From CR 29 to Lonesome Island Rd.
 Concept Plans

SHEET NO.
11

DENCO RD.

FGT GAS LINE TO REMAIN

Ⓟ SURVEY SR 70



LEGEND

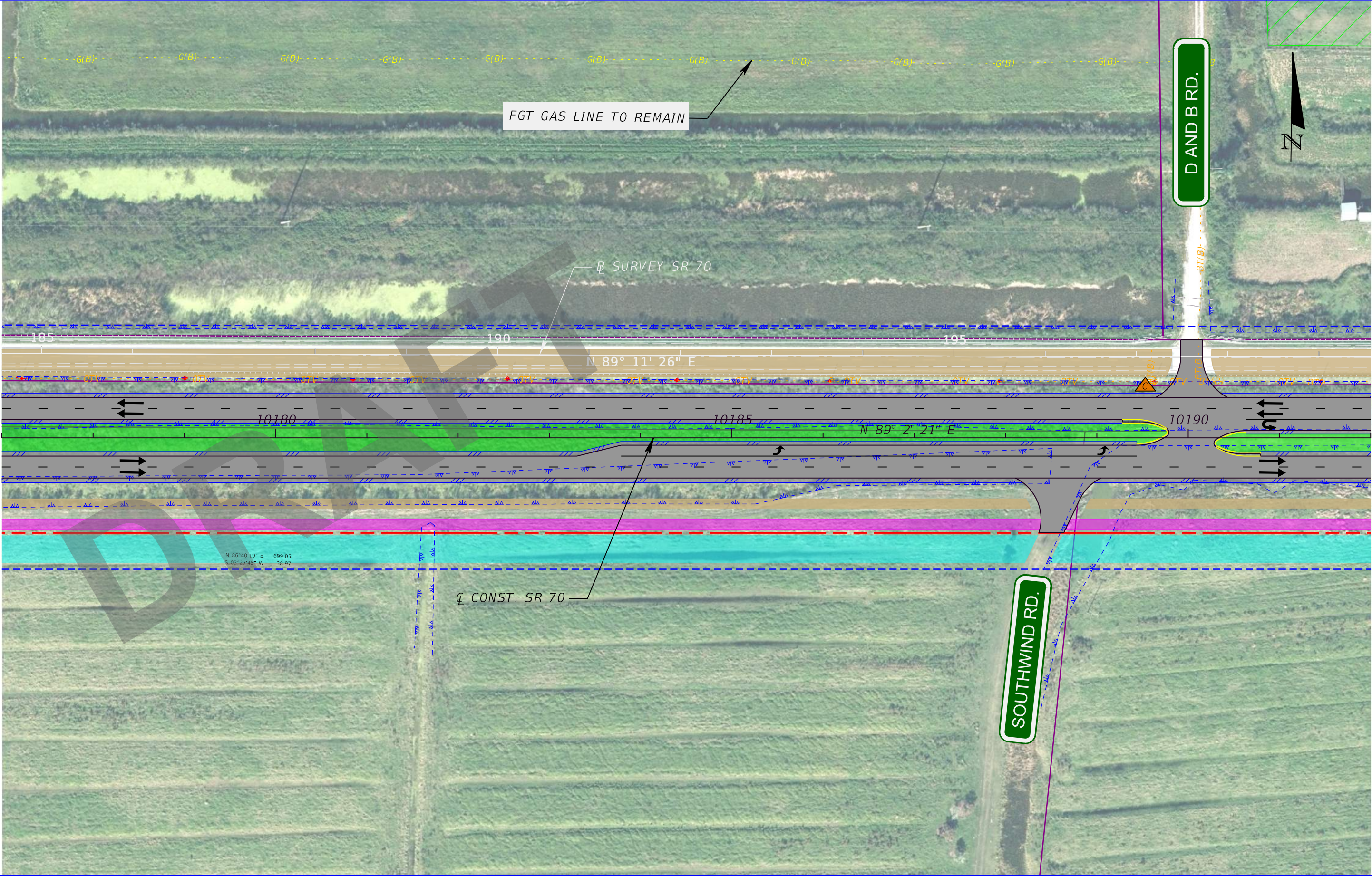
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	EXISTING PROPERTY LINE		PROPOSED PAVEMENT		PROPOSED SWALE
	EASEMENT		PROPOSED SHOULDER		PROPOSED POND
	WETLAND & OTHER SURFACE WATERS		PROPOSED SHARED USE PATH		CONSERVATION LANDS

0 20 100
Feet
DATE OF AERIAL: 2020
 CONTAMINATION SITES

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SR 70 PD&E STUDY
From CR 29 to Lonesome Island Rd.
Concept Plans

SHEET NO.
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LEGEND

	PROPOSED RIGHT-OF-WAY		PROPOSED GRASS MEDIAN		RELOCATED CANAL
	EXISTING PROPERTY LINE		PROPOSED PAVEMENT		PROPOSED SWALE
	EASEMENT		PROPOSED SHOULDER		PROPOSED POND
	WETLAND & OTHER SURFACE WATERS		PROPOSED SHARED USE PATH		CONSERVATION LANDS

0 20 100
 Feet
 DATE OF AERIAL: 2020
 CONTAMINATION SITES

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SR 70 PD&E STUDY
 From CR 29 to Lonesome Island Rd.
 Concept Plans

SHEET NO.
 13

CURVE DATA CLSR70 15
 PI STA. = 10206+88.34
 Δ = 3° 05' 54" (LT)
 D = 0° 23' 22"
 T = 397.92
 L = 795.65
 R = 14,714.00
 PC STA. = 10202+90.42
 PT STA. = 10210+86.07



DRIVEWAY RELOCATED
 TO STA. 10202+63.00



LEGEND		PROPOSED RIGHT-OF-WAY		PROPOSED GRASS MEDIAN		RELOCATED CANAL
		EXISTING PROPERTY LINE		PROPOSED PAVEMENT		PROPOSED SWALE
		EASEMENT		PROPOSED SHOULDER		PROPOSED POND
		WETLAND & OTHER SURFACE WATERS		PROPOSED SHARED USE PATH		CONSERVATION LANDS

0 20 100
 Feet
 DATE OF AERIAL: 2020
 CONTAMINATION SITES

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SR 70 PD&E STUDY
 From CR 29 to Lonesome Island Rd.
 Concept Plans

SHEET
 NO.
14



CURVE DATA CLSR70_15
 PI STA. = 10206+88.34
 Δ = 3° 05' 54" (LT)
 D = 0° 23' 22"
 T = 397.92
 L = 795.65
 R = 14,714.00
 PC STA. = 10202+90.42
 PT STA. = 10210+86.07

CURVE DATA CLSR70_17
 PI STA. = 10222+24.16
 Δ = 2° 21' 55" (LT)
 D = 0° 23' 22"
 T = 303.74
 L = 607.40
 R = 14,714.00
 PC STA. = 10219+20.42
 PT STA. = 10225+27.81

E.O.S. 436543-1
 POT STA. 222+50.00

SR SURVEY SR 70

CONST. SR 70

CURVE DATA CLSR70_16
 PI STA. = 10215+03.35
 Δ = 3° 14' 56" (RT)
 D = 0° 23' 22"
 T = 417.29
 L = 834.35
 R = 14,714.00
 PC STA. = 10210+86.07
 PT STA. = 10219+20.42

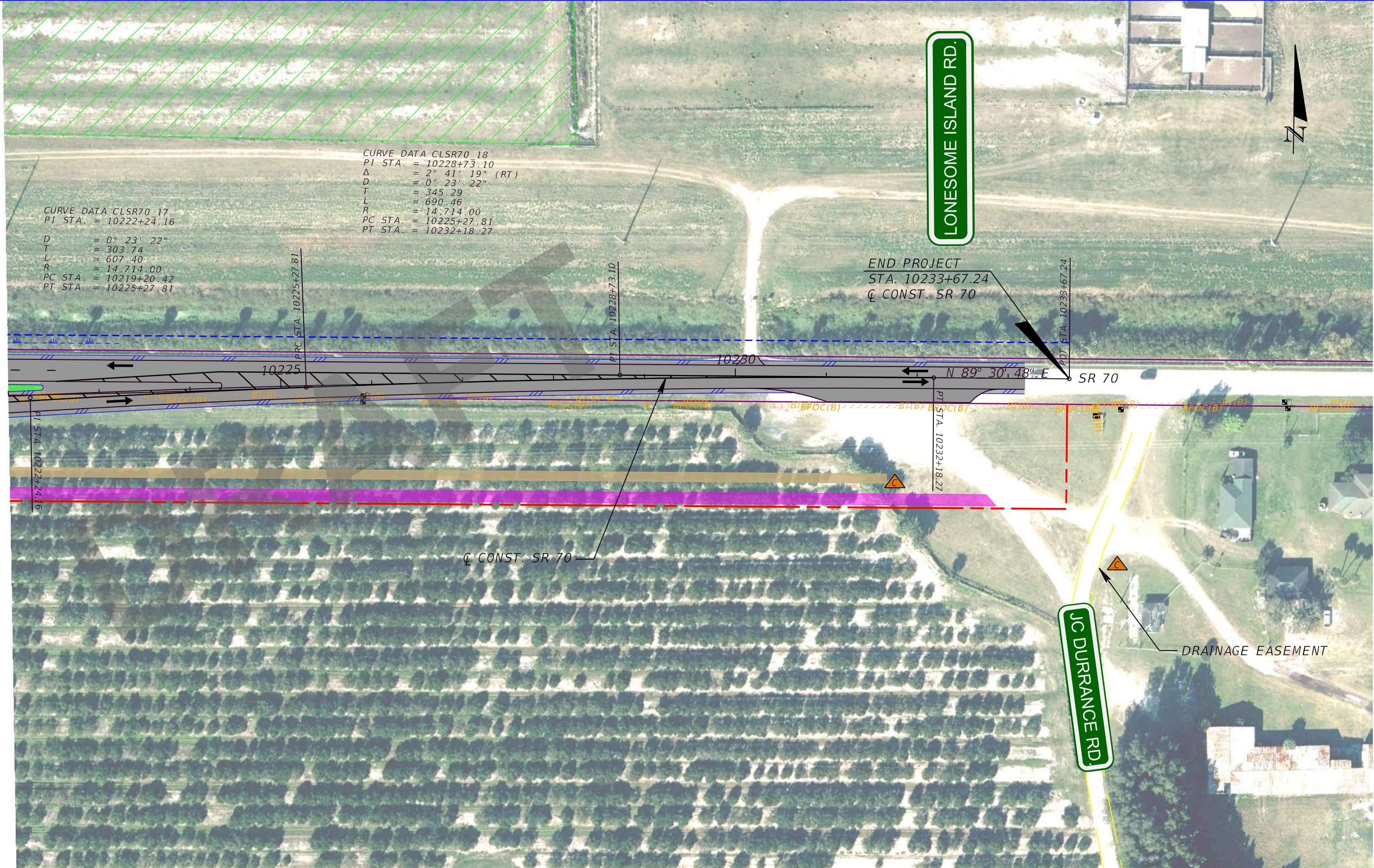
DOSIA SMITH RD.

LEGEND		PROPOSED RIGHT-OF-WAY		PROPOSED GRASS MEDIAN		RELOCATED CANAL	0 20 100 Feet DATE OF AERIAL: 2020 CONTAMINATION SITES
		EXISTING PROPERTY LINE		PROPOSED PAVEMENT		PROPOSED SWALE	
		EASEMENT		PROPOSED SHOULDER		PROPOSED POND	
		WETLAND & OTHER SURFACE WATERS		PROPOSED SHARED USE PATH		CONSERVATION LANDS	

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SR 70 PD&E STUDY
 From CR 29 to Lonesome Island Rd.
 Concept Plans

SHEET NO.
 15



LONESOME ISLAND RD.

JC DURRANCE RD.

CURVE DATA CLSR70 18
 PI STA. = 10228+73.10
 Δ = 2° 41' 19" (RT)
 D = 0° 23' 22"
 T = 345.29
 L = 690.46
 R = 14,714.00
 PC STA. = 10225+27.81
 PT STA. = 10232+18.27

CURVE DATA CLSR70 17
 PI STA. = 10222+24.16
 D = 0° 23' 22"
 T = 303.74
 L = 607.40
 R = 14,714.00
 PC STA. = 10219+20.42
 PT STA. = 10225+27.81

END PROJECT
 STA. 10233+67.24
 Q CONST. SR 70

DRAINAGE EASEMENT

LEGEND		PROPOSED RIGHT-OF-WAY		PROPOSED GRASS MEDIAN		RELOCATED CANAL	0 20 100 Feet DATE OF AERIAL: 2020 CONTAMINATION SITES
		EXISTING PROPERTY LINE		PROPOSED PAVEMENT		PROPOSED SWALE	
		EASEMENT		PROPOSED SHOULDER		PROPOSED POND	
		WETLAND & OTHER SURFACE WATERS		PROPOSED SHARED USE PATH		CONSERVATION LANDS	

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 From CR 29 to Lonesome Island Rd.
 Concept Plans

SHEET NO.
16

CURVE DATA CLSR70 4
 PI STA. = 10015+18.71
 Δ = 2° 40' 20" (LT)
 D = 0° 23' 22"
 T = 343.19
 L = 686.25
 R = 14,714.00
 PC STA. = 10011+75.52
 PT STA. = 10018+61.77

BEGIN PROJECT
 STA. 10000+00.00
 C₁ CONST. SR 70

C₁ CONST. SR 70

N 89° 57' 16" W

CURVE DATA CLSR70 3
 PI STA. = 10008+32.46
 Δ = 2° 40' 20" (RT)
 D = 0° 23' 22"
 T = 343.19
 L = 686.25
 R = 14,714.00
 PC STA. = 10004+89.28
 PT STA. = 10011+75.52

FPC 1A

CURVE DATA CLSR70 7
 PI STA. = 10023+93.16
 Δ = 3° 36' 12" (RT)
 D = 0° 23' 22"
 T = 462.85
 L = 925.39
 R = 14,714.00
 PC STA. = 10019+30.31
 PT STA. = 10028+55.70

LEGEND		PROPOSED RIGHT-OF-WAY		PROPOSED GRASS MEDIAN		RELOCATED CANAL	0 50 200 Feet DATE OF AERIAL: 2020 CONTAMINATION SITES
		EXISTING PROPERTY LINE		PROPOSED PAVEMENT		PROPOSED SWALE	
		EASEMENT		PROPOSED SHOULDER		PROPOSED POND	
		WETLAND & OTHER SURFACE WATERS		PROPOSED SHARED USE PATH		CONSERVATION LANDS	

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SR 70 PD&E STUDY
 From CR 29 to Lonesome Island Rd.
 Concept Plans

SHEET NO.
 17



LEGEND		PROPOSED RIGHT-OF-WAY		PROPOSED GRASS MEDIAN		RELOCATED CANAL	0 50 200 Feet DATE OF AERIAL: 2020 CONTAMINATION SITES
		EXISTING PROPERTY LINE		PROPOSED PAVEMENT		PROPOSED SWALE	
		EASEMENT		PROPOSED SHOULDER		PROPOSED POND	
		WETLAND & OTHER SURFACE WATERS		PROPOSED SHARED USE PATH		CONSERVATION LANDS	

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SR 70 PD&E STUDY
 From CR 29 to Lonesome Island Rd.
 Concept Plans

SHEET
 NO.
18

DRAFT

APPENDIX B
FDOT'S LONG RANGE ESTIMATE (LRE)

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 414506-5-22-01

Letting Date: 01/2099

Description: SR 70 FROM CR 29 TO LONESOME ISLAND ROAD

District: 01 **County:** 09 HIGHLANDS **Market Area:** 09 **Units:** English
Contract Class: 9 **Lump Sum Project:** N **Design/Build:** Y **Project Length:** 4.360 MI

Project Manager: JMK-JJM-DCT

Version 6 Project Grand Total **\$35,782,149.52**

Description: PM Markups from Version 4P - 5/15/23

Sequence: 1 NDR - New Construction, Divided, Rural **Net Length:** 0.364 MI
 1,924 LF

Description: 4-LANE (ULTIMATE CONDITION) West Transition

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	60.00 / 60.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.364
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 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	5.29 AC	\$15,000.00	\$79,350.00
120-6	EMBANKMENT	24,223.31 CY	\$11.88	\$287,772.92
Earthwork Component Total				\$367,122.92

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	12.40 / 17.40
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	10,646.31 SY	\$7.80	\$83,041.22

285-709	OPTIONAL BASE,BASE GROUP 09	6,652.88 SY	\$15.55	\$103,452.28
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,051.16 TN	\$147.66	\$155,214.29
337-7-25	ASPH CONC FC,INC BIT,FC- 5,PG76-22	254.83 TN	\$163.08	\$41,557.68

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	49.00	EA	\$3.73	\$182.77
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.46	GM	\$1,091.09	\$1,592.99
711-15-101	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	1.46	GM	\$4,605.32	\$6,723.77

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 12.00
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	3,420.50	SY	\$7.80	\$26,679.90
285-701	OPTIONAL BASE,BASE GROUP 01	2,565.38	SY	\$21.05	\$54,001.25
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	211.64	TN	\$147.66	\$31,250.76

Roadway Component Total

\$503,696.91

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 No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	2,278.91	SY	\$25.56	\$58,248.94

334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	117.58 TN	\$147.66	\$17,361.86
337-7-25	ASPH CONC FC,INC BIT,FC- 5,PG76-22	85.51 TN	\$163.08	\$13,944.97
570-1-2	PERFORMANCE TURF, SOD	1,141.59 SY	\$3.92	\$4,475.03

Erosion Control

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	5,002.48 LF	\$1.08	\$5,402.68
104-11	FLOATING TURBIDITY BARRIER	91.10 LF	\$9.76	\$889.14
104-12	STAKED TURBIDITY BARRIER- NYL REINF PVC	91.10 LF	\$5.22	\$475.54
104-15	SOIL TRACKING PREVENTION DEVICE	1.00 EA	\$2,576.76	\$2,576.76
104-18	INLET PROTECTION SYSTEM	3.00 EA	\$92.60	\$277.80
107-1	LITTER REMOVAL	8.83 AC	\$52.55	\$464.02
107-2	MOWING	8.83 AC	\$83.39	\$736.33
Shoulder Component Total				\$104,853.07

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	10.00
Performance Turf Width	5.00
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 \bar{i} $\frac{1}{2}$ No. of Sides	0

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
570-1-2	PERFORMANCE TURF, SOD	1,068.91 SY	\$3.92	\$4,190.13
Median Component Total				\$4,190.13

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
425-1-551	INLETS, DT BOT, TYPE E, <10'	3.00 EA	\$4,552.14	\$13,656.42
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	296.00 LF	\$144.64	\$42,813.44
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	128.00 LF	\$118.90	\$15,219.20
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	112.00 LF	\$230.57	\$25,823.84
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	15.00 EA	\$2,345.69	\$35,185.35
524-1-1	CONCRETE DITCH PAVT, NR, 3"	728.80 SY	\$74.60	\$54,368.48
570-1-1	PERFORMANCE TURF	256.54 SY	\$2.86	\$733.70
Drainage Component Total				\$187,800.43

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	\$416.08	\$416.08
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	9.00	AS	\$1,516.15	\$13,645.35
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	\$5,080.34	\$5,080.34
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	3.00	AS	\$5,017.48	\$15,052.44
Signing Component Total					\$34,194.21

Sequence 1 Total

\$1,201,857.67

DRAFT

Sequence: 2 NDR - New Construction, Divided, Rural

Net Length: 3.657 MI
19,308 LF

Description: 4-LANE (ULTIMATE CONDITION)West Transition

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	120.00 / 120.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	3.657
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 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	106.39 AC	\$15,000.00	\$1,595,850.00
120-6	EMBANKMENT	363,101.42 CY	\$11.88	\$4,313,644.87
Earthwork Component Total				\$5,909,494.87

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	24.00 / 24.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	184,497.75 SY	\$7.80	\$1,439,082.45
285-709	OPTIONAL BASE,BASE GROUP 09	105,807.31 SY	\$15.55	\$1,645,303.67
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	16,990.96 TN	\$147.66	\$2,508,885.15
337-7-25	ASPH CONC FC,INC BIT,FC- 5,PG76-22	4,119.02 TN	\$163.08	\$671,729.78

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	18,449.78 SY	\$7.80	\$143,908.28

285-709	OPTIONAL BASE,BASE GROUP 09	10,580.73 SY	\$15.55	\$164,530.35
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,699.10 TN	\$147.66	\$250,889.11
337-7-25	ASPH CONC FC,INC BIT,FC- 5,PG76-22	411.90 TN	\$163.08	\$67,172.65

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	1,481.00	EA	\$3.73	\$5,524.13
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	14.63	GM	\$1,091.09	\$15,962.65
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	7.31	GM	\$472.98	\$3,457.48
711-15-101	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	14.63	GM	\$4,605.32	\$67,375.83
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	7.31	GM	\$1,648.79	\$12,052.65

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 12.00
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	34,325.16	SY	\$7.80	\$267,736.25
285-701	OPTIONAL BASE,BASE GROUP 01	25,743.87	SY	\$21.05	\$541,908.46
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	2,123.87	TN	\$147.66	\$313,610.64

Roadway Component Total

\$8,119,129.53

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 ½No. of Sides	0

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	22,869.14 SY	\$25.56	\$584,535.22
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,179.93 TN	\$147.66	\$174,228.46
337-7-25	ASPH CONC FC,INC BIT,FC- 5,PG76-22	858.13 TN	\$163.08	\$139,943.84
570-1-2	PERFORMANCE TURF, SOD	11,456.02 SY	\$3.92	\$44,907.60

Erosion Control**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	50,200.55 LF	\$1.08	\$54,216.59
104-11	FLOATING TURBIDITY BARRIER	914.20 LF	\$9.76	\$8,922.59
104-12	STAKED TURBIDITY BARRIER- NYL REINF PVC	914.20 LF	\$5.22	\$4,772.12
104-15	SOIL TRACKING PREVENTION DEVICE	4.00 EA	\$2,576.76	\$10,307.04
104-18	INLET PROTECTION SYSTEM	22.00 EA	\$92.60	\$2,037.20
107-1	LITTER REMOVAL	88.64 AC	\$52.55	\$4,658.03
107-2	MOWING	88.64 AC	\$83.39	\$7,391.69

Shoulder Component Total

\$1,035,920.38

MEDIAN COMPONENT**User Input Data**

Description	Value
Total Median Width	40.00
Performance Turf Width	31.00
Total Median Shoulder Width L/R	8.00 / 10.00
Paved Median Shoulder Width L/R	4.00 / 5.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips $\frac{1}{2}$ No. of Sides	0

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	20,723.82 SY	\$25.56	\$529,700.84
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,061.93 TN	\$147.66	\$156,804.58
337-7-25	ASPH CONC FC,INC BIT,FC- 5,PG76-22	772.32 TN	\$163.08	\$125,949.95
570-1-2	PERFORMANCE TURF, SOD	66,505.00 SY	\$3.92	\$260,699.60

Median Component Total

\$1,073,154.97

DRAINAGE COMPONENT**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
425-1-551	INLETS, DT BOT, TYPE E, <10'	22.00 EA	\$4,552.14	\$100,147.08
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	2,928.00 LF	\$144.64	\$423,505.92
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	1,264.00 LF	\$118.90	\$150,289.60

430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	1,088.00 LF	\$230.57	\$250,860.16
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	147.00 EA	\$2,345.69	\$344,816.43
524-1-1	CONCRETE DITCH PAVT, NR, 3"	7,313.60 SY	\$74.60	\$545,594.56
570-1-1	PERFORMANCE TURF	2,574.39 SY	\$2.86	\$7,362.76
Drainage Component Total				\$1,822,576.51

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	8.00	AS	\$416.08	\$3,328.64
700-1-12	SINGLE POST SIGN, F&I GM, 12- 20 SF	88.00	AS	\$1,516.15	\$133,421.20
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	8.00	AS	\$5,080.34	\$40,642.72
700-2-15	MULTI- POST SIGN, F&I GM, 51- 100 SF	22.00	AS	\$5,017.48	\$110,384.56
Signing Component Total					\$287,777.12

Sequence 2 Total **\$18,248,053.38**

DRAFT

Sequence: 3 NDR - New Construction, Divided, Rural

Net Length: 0.338 MI
1,787 LF

Description: 4-LANE (ULTIMATE CONDITION) East Transition

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	60.00 / 60.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.338
Top of Structural Course For Begin Section	120.00
Top of Structural Course For End Section	120.00
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 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	4.92	AC	\$15,000.00	\$73,800.00
120-6	EMBANKMENT	219,818.07	CY	\$11.88	\$2,611,438.67
Earthwork Component Total					\$2,685,238.67

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	17.50 / 12.30
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	9,886.69	SY	\$7.80	\$77,116.18
285-709	OPTIONAL BASE,BASE GROUP 09	6,178.19	SY	\$15.55	\$96,070.85
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	976.16	TN	\$147.66	\$144,139.79
337-7-25	ASPH CONC FC,INC BIT,FC- 5,PG76-22	236.65	TN	\$163.08	\$38,592.88

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	46.00	EA	\$3.73	\$171.58
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.35	GM	\$1,091.09	\$1,472.97
711-15-101	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	1.35	GM	\$4,605.32	\$6,217.18

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 12.00
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	3,176.45	SY	\$7.80	\$24,776.31
285-701	OPTIONAL BASE,BASE GROUP 01	2,382.34	SY	\$21.05	\$50,148.26
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	196.54	TN	\$147.66	\$29,021.10
Roadway Component Total					\$467,727.10

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 i 1/2 No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	2,116.31	SY	\$25.56	\$54,092.88
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	109.19	TN	\$147.66	\$16,123.00
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	79.41	TN	\$163.08	\$12,950.18
570-1-2	PERFORMANCE TURF, SOD	1,060.14	SY	\$3.92	\$4,155.75

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	4,645.56	LF	\$1.08	\$5,017.20
104-11	FLOATING TURBIDITY BARRIER	84.60	LF	\$9.76	\$825.70
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	84.60	LF	\$5.22	\$441.61
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	\$2,576.76	\$2,576.76
104-18	INLET PROTECTION SYSTEM	3.00	EA	\$92.60	\$277.80
107-1	LITTER REMOVAL	8.20	AC	\$52.55	\$430.91

107-2 MOWING 8.20 AC \$83.39 \$683.80

Shoulder Component Total \$97,575.59

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	10.00
Performance Turf Width	5.00
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 1/2 No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
570-1-2	PERFORMANCE TURF, SOD	992.64	SY	\$3.92	\$3,891.15
Median Component Total					\$3,891.15

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-551	INLETS, DT BOT, TYPE E, <10'	3.00	EA	\$4,552.14	\$13,656.42
430-174-124	PIPE CULV, OPT MATL, ROUND, 24"SD	272.00	LF	\$144.64	\$39,342.08
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	120.00	LF	\$118.90	\$14,268.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	104.00	LF	\$230.57	\$23,979.28
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	14.00	EA	\$2,345.69	\$32,839.66
524-1-1	CONCRETE DITCH PAVT, NR, 3"	676.80	SY	\$74.60	\$50,489.28
570-1-1	PERFORMANCE TURF	238.23	SY	\$2.86	\$681.34
Drainage Component Total					\$175,256.06

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	\$416.08	\$416.08
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	9.00	AS	\$1,516.15	\$13,645.35
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	\$5,080.34	\$5,080.34
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	3.00	AS	\$5,017.48	\$15,052.44
Signing Component Total					\$34,194.21

DRAFT

Description: Flood Plain Compensation site

DRAINAGE COMPONENT

Retention Basin 1

Description	Value
Size	20 AC
Multiplier	1
Depth	1.00
Description	19 acre site (FPC 1A)

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	20.00	AC	\$15,000.00	\$300,000.00
120-1	REGULAR EXCAVATION	32,266.67	CY	\$8.89	\$286,850.70
570-1-1	PERFORMANCE TURF	96,800.00	SY	\$2.86	\$276,848.00

Retention Basin 2

Description	Value
Size	15 AC
Multiplier	2
Depth	1.00
Description	31.5 acre site (FPC 2A)

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	30.00	AC	\$15,000.00	\$450,000.00
120-1	REGULAR EXCAVATION	48,400.00	CY	\$8.89	\$430,276.00
570-1-1	PERFORMANCE TURF	145,200.00	SY	\$2.86	\$415,272.00

Retention Basin 3

Description	Value
Size	1.5 AC
Multiplier	1
Depth	1.00
Description	31.5 acre site (FPC 2A)

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.50	AC	\$15,000.00	\$22,500.00
120-1	REGULAR EXCAVATION	2,420.00	CY	\$8.89	\$21,513.80
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00	EA	\$6,188.22	\$6,188.22
425-2-71	MANHOLES, J-7, <10'	1.00	EA	\$12,983.79	\$12,983.79
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00	LF	\$306.90	\$17,186.40
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	200.00	LF	\$499.00	\$99,800.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,025.00	LF	\$18.50	\$18,962.50
550-60-234	FENCE GATE, TYP B, SLIDE/CANT, 18.1-20' OPEN	1.00	EA	\$1,175.00	\$1,175.00
570-1-1	PERFORMANCE TURF	7,260.00	SY	\$2.86	\$20,763.60

Drainage Component Total \$2,380,320.01

DRAFT

Sequence: 5 MIS - Miscellaneous Construction

Net Length: 0.000 MI
1 LF

Description: Relocated South Canal

DRAINAGE COMPONENT

Retention Basin 1

Description	Value
Size	15 AC
Multiplier	1
Depth	4.00
Description	Relocated South Canal

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	15.00	AC	\$15,000.00	\$225,000.00
120-1	REGULAR EXCAVATION	96,800.00	CY	\$8.89	\$860,552.00
570-1-1	PERFORMANCE TURF	72,600.00	SY	\$2.86	\$207,636.00

Retention Basin 2

Description	Value
Size	1 AC
Multiplier	1
Depth	4.00
Description	Relocated South Canal

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.00	AC	\$15,000.00	\$15,000.00
120-1	REGULAR EXCAVATION	6,453.33	CY	\$8.89	\$57,370.10
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00	EA	\$6,188.22	\$6,188.22
425-2-71	MANHOLES, J-7, <10'	1.00	EA	\$12,983.79	\$12,983.79
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00	LF	\$306.90	\$17,186.40
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	200.00	LF	\$499.00	\$99,800.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	840.00	LF	\$18.50	\$15,540.00
550-60-234	FENCE GATE, TYP B, SLIDE/CANT, 18.1-20' OPEN	1.00	EA	\$1,175.00	\$1,175.00
570-1-1	PERFORMANCE TURF	4,840.00	SY	\$2.86	\$13,842.40

Drainage Component Total \$1,532,273.91

Sequence 5 Total \$1,532,273.91

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 414506-5-22-01

Letting Date: 01/2099

Description: SR 70 FROM CR 29 TO LONESOME ISLAND ROAD

District: 01 **County:** 09 HIGHLANDS **Market Area:** 09 **Units:** English
Contract Class: 9 **Lump Sum Project:** N **Design/Build:** Y **Project Length:** 4.360 MI

Project Manager: JMK-JJM-DCT

Version 6 Project Grand Total **\$35,782,149.52**

Description: PM Markups from Version 4P - 5/15/23

Project Sequences Subtotal **\$26,826,387.75**

102-1	Maintenance of Traffic	15.00 %	\$4,023,958.16
101-1	Mobilization	10.00 %	\$3,085,034.59

Project Sequences Total **\$33,935,380.50**

Project Unknowns	5.00 %	\$1,696,769.02
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	\$150,000.00	\$150,000.00

Project Non-Bid Subtotal **\$150,000.00**

Version 6 Project Grand Total **\$35,782,149.52**

DRAFT

APPENDIX C
CONTEXT CLASSIFICATION MEMO

FPID Number	414506-5-22-01
County	Highlands
Road Name	SR 70
Project Limits	From: CR 29 To: Lonesome Island
Mile Posts	From: 17.255 To: 21.573
Type of Project	Widening/Reconstruction
Brief Description of Improvements	Complete rebuild of SR 70 with consideration of future four lanes. Significant removal of muck. Raising roadway profile. Relocating canal. Accommodating canal hazard offset with wider boarders. Project 414506-1-22-01, widening SR 70 from Jefferson to CR 29 is adjacent to the west.
Preliminary Context Classification (SR 70)	
Existing	Context Classification: (C2) From: CR 29 To: Lonesome Island Road
Future	No change

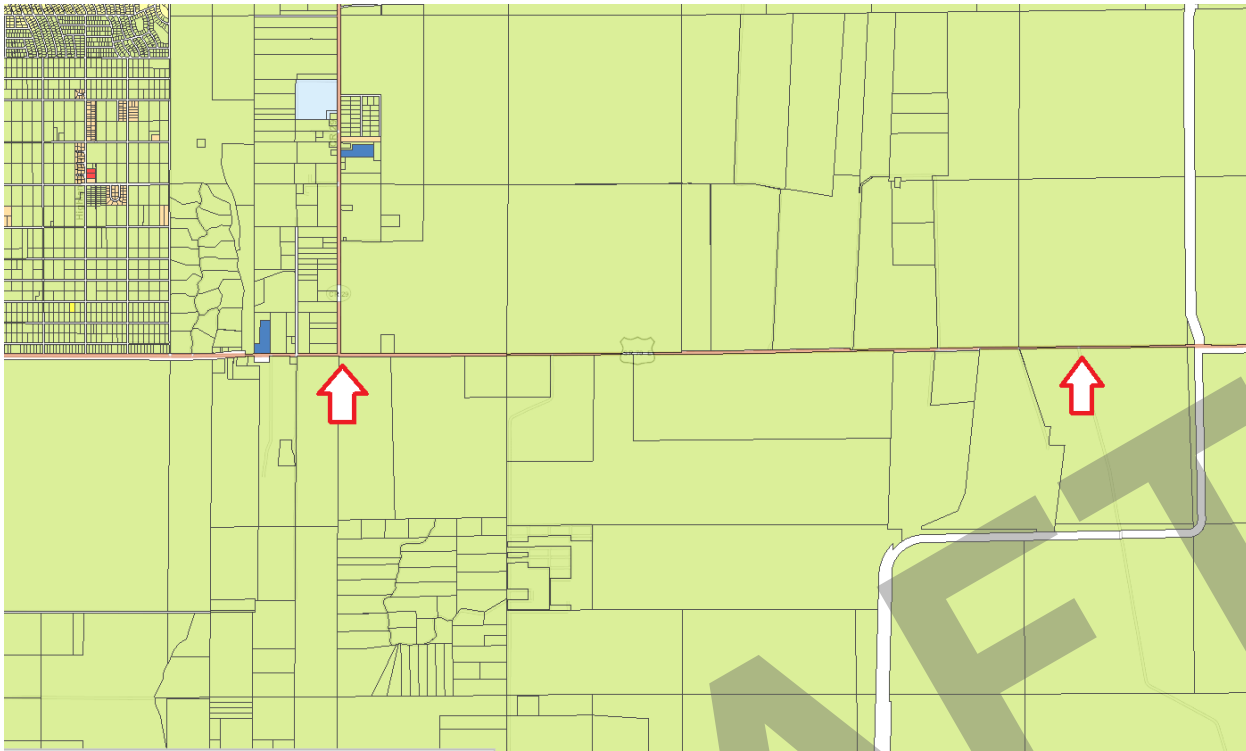
Context Classification Reviewer:

Reviewer: Deborah Chesna Date 11/6/2018

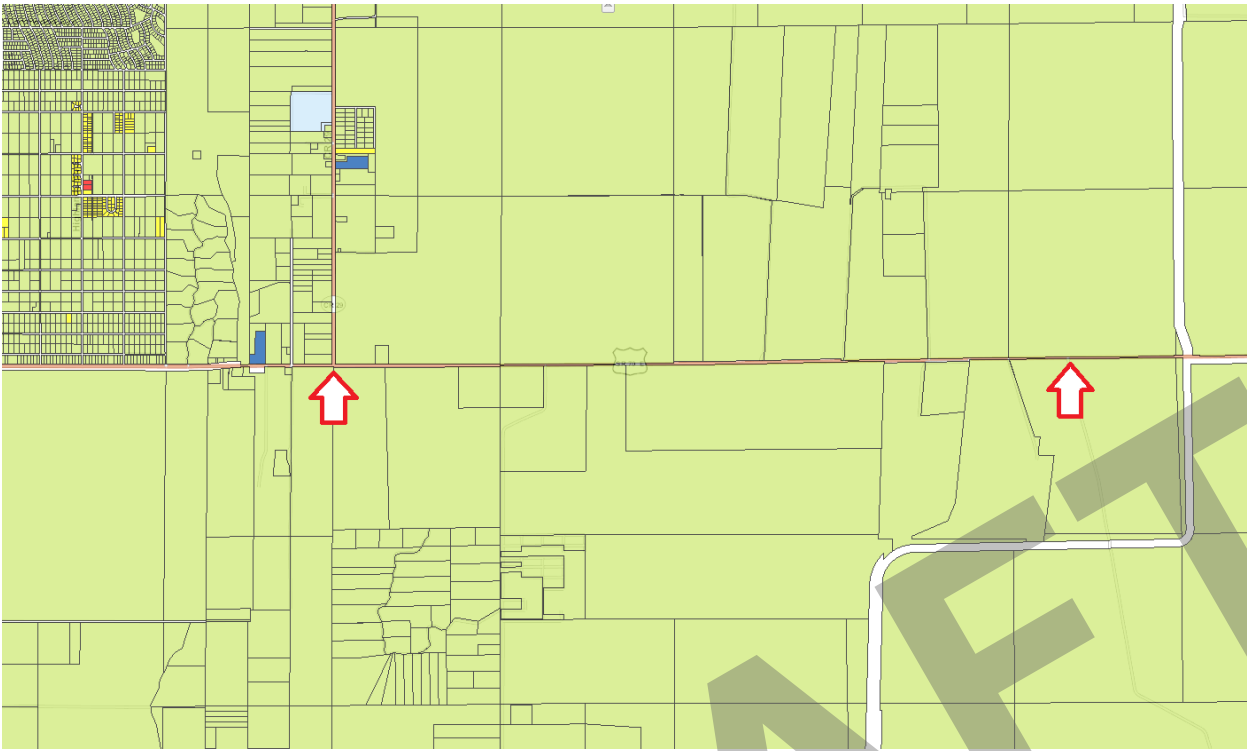
Corridor map:



Current Land Use



















Future Land Use



Legend:

FUTURE LAND USE

-  AGRICULTURE
-  CONSERVATION
-  RECREATION
-  CITY
-  COMM/IND MIX
-  INDUSTRIAL
-  COMMERCIAL
-  DOWNTOWN
-  LOW DEN RES
-  MED DEN RES
-  HIGH DEN RES
-  RESIDENTIAL/OFFICE
-  MIXED USE
-  EXISTING DESIGNATION
-  PUBLIC
-  PUBLIC WATER

DRAFT

**APPENDIX D
TYPICAL SECTION PACKAGE**

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTION PACKAGE

FINANCIAL PROJECT ID 414506-5-22-01
HIGHLANDS COUNTY (09060)
STATE ROAD NO. 70
FROM COUNTY ROAD NO. 29 TO LONESOME ISLAND ROAD
PD&E STUDY FOR SR 70 WIDENING

FDOT DISTRICT DESIGN ENGINEER



Kevin Ingle
2023.08.24
14:06:58-04'00'

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

FDOT DISTRICT INTERMODAL
SYSTEMS DEVELOPMENT MANAGER

Nicole Mills

DN: CN = Nicole E Mills C
= US O = FLORIDA
DEPARTMENT OF
TRANSPORTATION
Date: 2023.08.23 20:52:13
-04'00'

CONCURRING WITH:
CONTEXT CLASS
TARGET SPEED

FDOT DISTRICT TRAFFIC
OPERATIONS ENGINEER

NOT USED

Mark Mathes
Date: 2023.08.24
08:58:31 - 04'00'

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

CONCURRING WITH:

NOT USED

NOT USED

CONCURRING WITH:

CONCURRING WITH:

NOT USED

NOT USED

CONCURRING WITH:

CONCURRING WITH:

PROJECT LOCATION URL:

FDOT GIS: <https://tinyurl.com/yvhbvzwn>
Google: <https://tinyurl.com/4fy9exdx>

PROJECT DESCRIPTION: RECONSTRUCTION

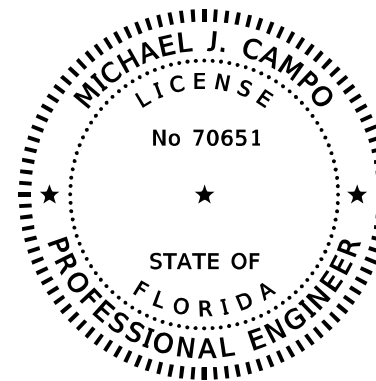
PROJECT LIMITS: FROM MP 17.245 TO MP 21.649

EXCEPTIONS: NONE

BRIDGE LIMITS: NONE

RAILROAD CROSSING: NONE

APPROVED BY:



THIS ITEM HAS BEEN DIGITALLY
SIGNED AND SEALED BY

Michael J Campo Digitally signed by
Michael J Campo
Date: 2023.06.17
18:13:02 -04'00'

ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE
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AND THE SIGNATURE MUST BE VERIFIED
ON ANY ELECTRONIC COPIES.

KISINGER CAMPO & ASSOCIATES
201 N. FRANKLIN ST., SUITE 400
TAMPA, FLORIDA 33602
PHONE: (813) 871-5331
MICHAEL J. CAMPO, P.E. 70651

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

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

SHEET NO.

1

PROJECT CONTROLS

CONTEXT CLASSIFICATION

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

FUNCTIONAL CLASSIFICATION

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

HIGHWAY SYSTEM

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

ACCESS CLASSIFICATION

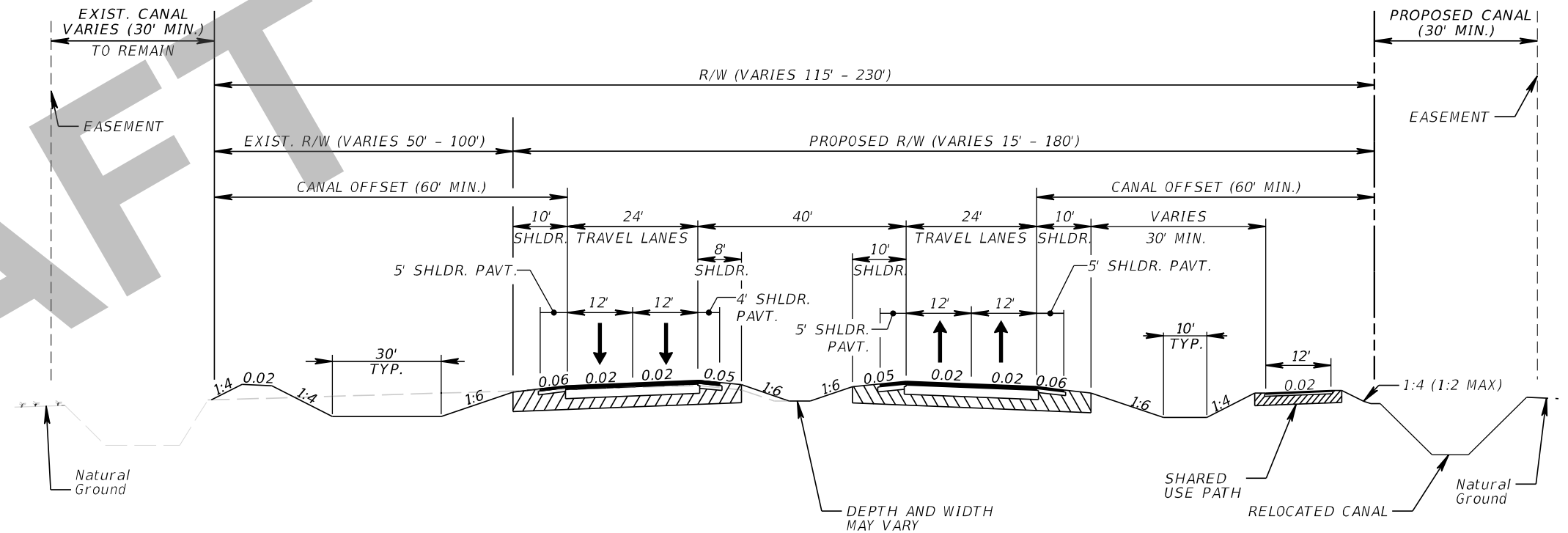
- () 1 - FREEWAY
- () 2 - RESTRICTIVE w/Service Roads
- (X) 3 - RESTRICTIVE w/660 ft. Connection Spacing
- () 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing
- () 5 - RESTRICTIVE w/440 ft. Connection Spacing
- () 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing
- () 7 - BOTH MEDIAN TYPES

CRITERIA

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

POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

TYPICAL SECTION No. 1



NOT TO SCALE

**SR 70
TYPICAL SECTION NO. 1
CONST. SR 70
FROM CR 29 TO LONESOME ISLAND RD.**

TRAFFIC DATA

CURRENT YEAR = 2021 AADT = 5,500
 ESTIMATED OPENING YEAR = 2030 AADT = 6,600
 ESTIMATED DESIGN YEAR = 2045 AADT = 8,900
 K = 9.5% D = 58.8% T = 21.9% (24 HOUR)
 DESIGN HOUR T = 11.0%
 TARGET SPEED = 70 MPH
 DESIGN SPEED = 70 MPH
 POSTED SPEED = 65 MPH

FINANCIAL PROJECT ID	SHEET NO.
414506-5-22-01	2

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

DRAFT

**APPENDIX E
AGENCY COORDINATION**



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

November 26, 2018

** Delivered via email*

Nicole Monies *
FDOT District 1
801 N Broadway Ave
Bartow, FL 33830

**Subject: SR 70 From CR 29 To Lonesome Island Road
Application No. 181105-945
Informal Wetland Determination No. 28-100736-P
Highlands County**

Dear Ms. Monies:

The District reviewed your request for an informal determination of the jurisdictional wetland and other surface water boundaries within the subject property, which is located as shown on the attached Exhibit 1. A site inspection was conducted on November 15, 2018 and November 20, 2018.

Based on the information provided and the results of the site inspection, jurisdictional wetlands and other surface waters as defined in Chapter 62-340, Florida Administrative Code, exist on the property. Exhibit 2, attached, identifies the boundaries of the property inspected and the approximate landward limits of the wetlands and other surface waters.

This correspondence is an informal jurisdictional wetland determination pursuant to Section 373.421(6), Florida Statutes, and Section 7.3 of Environmental Resource Permit Applicant's Handbook Volume I. It does not bind the District, its agents or employees, nor does it convey any legal rights, expressed or implied. Persons obtaining this informal jurisdictional determination are not entitled to rely upon it for purposes of compliance with provision of law or District rules.

Sincerely,


Ricardo A. Valera, P.E.
Bureau Chief, Environmental Resource Bureau

c: Bruce Williams, Kisinger Campo & Associates *

Exhibits

The following exhibits to this permit are incorporated by reference. The exhibits can be viewed by clicking on the links below or by visiting the District's ePermitting website (<http://my.sfwmd.gov/ePermitting>) and searching under this application number 181105-945.

[Exhibit No. 1.0 Location Map](#)

[Exhibit No. 3.0 IWD Verification](#)

DRAFT



Florida Department of Transportation

RON DESANTIS
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

KEVIN J. THIBAUT
SECRETARY

FDOT 414506-6 SR70 From CR29 to Lonesome Island Rd Meeting (Highlands County)

Go-To Meeting

January 10, 2019

1:00 pm – 1:30 pm

Meeting Minutes

Attendees:

Carolyn McCreedy, SFWMD
Nicole Monies, FDOT
Randy Lachler, FDOT
Patrick Bateman, FDOT

Brent Setchell, FDOT
Sergio Figueroa, FDOT
Manny Monreal, FDOT

44506-6 SR70 Realignment

Nicole opened the meeting with introductions and then she described the project. Brent added the history of the project and Sergio mentioned that this project is a FDOT SWAT job.

FDOT is evaluating options for realigning SR 70 within the project limits by reconstructing the two existing travel lanes on a new alignment south of the existing SR 70, with the option to expand to a 4-lane ultimate typical in the future. The total length of the proposed project is approximately 4.3 miles.

Discussion:

1. SFWMD stated north side of SR70 is a wetland restoration site
2. SFWMD stated south side of SR70 are permitted grove facilities
 - a) Verify permitted conditions and maintain control elevations
 - b) Verify locations of agricultural wells
3. SFWMD emphasized the importance of establishing an accurate SHW elevation
4. SFWMD emphasized the need for a reciprocal outfall if discharging to agricultural canal
 - a) Agricultural canal located adjacent to SR 70 on the south side will be relocated south
 - b) Agricultural canal will be owned and maintained by others
 - c) Agricultural canal may serve as an outfall for FDOT

Discussion Cont.:

5. SFWMD offered that it might be best to apply for a 20-year conceptual permit if FDOT only plans to construct the interim 2-lanes, but permit the ultimate 4-lanes.
6. FDOT indicated it will maintain/replace the 3 existing cross drains. Currently, these cross drains act as equalizers rather than moving water from one side to the other. FDOT will ensure they are sized appropriately.
7. Proposed Treatment Method Criteria:
 - a) Wet Detention: greater of 1" over basin or 2.5" over net new impervious
 - b) Dry Retention: 50% reduction (for dry retention, ensure facilities recover)
 - c) Nutrient Loading Calcs for discharges to impaired WBID (Harney Pond Canal, C-41)
 - d) SFWMD to verify the 50% more treatment criteria due to discharges to impaired WBID
8. Proposed Attenuation Criteria:
 - a) Design Storm Events: 25 year 72 hour, 100 year 72 hour
 - b) C-41 Basin Requirement: 35.4 CSM (cfs per Sq. Mile), 10 year 72 hour
9. Proposed Floodplain Compensation:
 - a) SFWMD emphasized no offsite impacts
 - b) SFWMD will allow Cup for Cup Method or Modeling Methodology
 - c) Hydrologic/Hydraulic Modeling (ICPR4): SFWMD emphasized no pre/post stage increases, and requested that model information represent construction documents and that a schematic be provided

Martin Horwitz

From: Priest, Gary <gpriest@sfwmd.gov>
Sent: Friday, November 20, 2020 8:43 AM
To: Setchell, Brent; McCreedy, Carolyn
Cc: Monies, Nicole; Figueroa, Sergio; Brett French; Martin Horwitz; Curt Sprunger
Subject: Re: 414506-6, SR 70 from CR 29 to Lonesome Island Road - Water Quality Treatment Requirements

Brent,

It is confirmed that FDOT is to provide the presumptive criteria, plus nutrient loading calculations demonstrating net improvement and the additional 50% of the required treatment volume is not needed for the subject project.

As to the regional treatment alternative, more discussions on this topic are warranted with additional information necessary for the District to understand the alternative.

Sincerely,
Gary R. Priest, P.E.
Section Leader
Okeechobee Regulatory Office
South Florida Water Management District
(863) 462-5260, Ext. 3016
Email: gpriest@sfwmd.gov

From: Setchell, Brent <Brent.Setchell@dot.state.fl.us>
Sent: Thursday, November 5, 2020 12:41 PM
To: Priest, Gary; McCreedy, Carolyn
Cc: Monies, Nicole; Figueroa, Sergio; Brett French; Martin Horwitz; Curt Sprunger
Subject: RE: 414506-6, SR 70 from CR 29 to Lonesome Island Road - Water Quality Treatment Requirements

[Please remember, this is an external email]

Gary and Carolyn,

I wanted to follow up on the inquiry below. I don't believe we received a response.

Thanks,

Brent Setchell, P.E.
District Drainage Design Engineer
Florida Department of Transportation
801 N. Broadway Avenue
Bartow, Florida 33830
863-519-2557

From: Setchell, Brent
Sent: Tuesday, February 25, 2020 9:12 AM

To: Priest, Gary <gpriest@sfwmd.gov>; McCreedy, Carolyn <cmccreed@sfwmd.gov>
Cc: Monies, Nicole <Nicole.Monies@dot.state.fl.us>; Figueroa, Sergio <Sergio.Figueroa2@dot.state.fl.us>; Brett French <BFrench@kcaeng.com>; Martin Horwitz <MHorwitz@kcaeng.com>; Curt Sprunger <CSprunger@kcaeng.com>
Subject: 414506-6, SR 70 from CR 29 to Lonesome Island Road - Water Quality Treatment Requirements

Gary and Carolyn,

I wanted to follow up on the stormwater quality treatment requirements for the subject project that we had a pre-application meeting back in January 2019. Please see attached minutes for reference. We are moving along with our pond siting report efforts and we need to narrow down the treatment volume requirements. At the meeting SFWMD requested that FDOT provide an additional 50% of the required treatment volume (TV) since the project discharges to a nutrient impaired water body. I believe this request stems from an old SFWMD "Bob Brown" 2009 memo which has subsequently move into Appendix E of SFWMD's Applicant's Handbook Volume II. Back in 2010 after the 2009 Bob Brown memo, FDOT District 1 provided the attached "SFWMD Memorandum Final 2010-8-2" requesting clarification on several items, specifically the requirement to provide the additional 50% water quality treatment volume for projects with direct discharges to verified impaired waters. Attached is an email from SFWMD's Assistant Executive Director, Lennart Lindahl, on April 26, 2013 agreeing to not require the additional 50% of the water quality volume for discharges to nutrient impaired WBIDs.

The additional 50% requirement is an extraneous hardship on FDOT especially for road widening projects where we are limited by the existing roadway elevation and the SHWE to provide the required treatment volume. Our only alternative is to buy more ROW for stormwater ponds which can be extremely costly especially in urban areas, potentially impact additional wetlands/floodplains, remove property from County tax rolls, and increase maintenance costs all for very little calculated benefit.

For clarification, FDOT will provide nutrient loading calculations demonstrating net improvement which should easily provide SFWMD the evidence it needs that the project will meet antidegradation criteria and meet the public interest test. Additionally, we are considering a regional treatment alternative which will offer substantial nutrient reductions over the traditional postage ponds. Please confirm that SFWMD is agreeable to allow FDOT to provide the presumptive criteria, plus nutrient loading calculations demonstrating net improvement and the additional 50% of the required TV is not needed for the subject project.

Thanks,

Brent Setchell, P.E.
District Drainage Design Engineer
Florida Department of Transportation
801 N. Broadway Avenue
Bartow, Florida 33830
863-519-2557

DRAFT

**APPENDIX F
PUBLIC INVOLVEMENT**