

**Florida Department of Agriculture and Consumer Services, Florida Forest Service**

**Land Management Plan Amendment**  
**to the**  
**Myakka State Forest Ten-Year Land Management Plan**

May 8, 2020

The Florida Forest Service (FFS) is requesting ARC approval of a Land Management Plan Amendment to the Myakka State Forest (MSF) Ten-Year Land Management Plan. The Southwest Florida Water Management District (SWFWMD) plans to install a water quality and bank stabilization feature in the southeast portion of MSF. The FFS-managed MSF is an approximately 8,500-acre, multiple-use state forest, located in Sarasota County. The Board of Trustees of the Internal Improvement Trust Fund of the State of Florida (BOT) and the SWFWMD both hold an undivided 50% interest to the affected portion of the state forest.

The SWFWMD's project is proposing to repair significant erosion damage, install a low water crossing on a trail road to protect and preserve an existing natural wetland, perform bank stabilization along approximately 650 linear feet of surface flow-way to prevent sedimentation, and provide improved water quality and drainage near an adjacent roadway. A detailed project design is included.

The project will result in an environmental net benefit and will focus on recovering the functions of water storage and conveyance in an impacted stream and drainage swale. The project will also focus on recapturing the benefits of water quality and wildlife habitat formerly provided by the impacted system in its undisturbed state. A detailed environmental assessment including site photos is included, and all the appropriate permits have been obtained by the SWFWMD.

FFS staff and a certified archaeological resource monitor (ARM) surveyed the proposed site area for threatened or endangered species and possible historical and/or archaeological evidence. They concluded, no known archeological sites occur in the project area, as well as, no evidence of threatened or endangered species were observed at the project site vicinity.

FFS additionally consulted with the Florida Natural Areas Inventory (FNAI) and the Division of Historic Resources (DHR) regarding the proposed activities. Consulting agency (FNAI, DHR) response letters are included with this request, as are applicable maps and photos of the proposed sites.



1018 Thomasville Road  
Suite 200-C  
Tallahassee, FL 32303  
850-224-8207  
fax 850-681-9364  
www.fnai.org

To: Todd Knapp

From: Dan, Hipes, Director, FNAI

Date: May 4, 2020

RE: Proposed Water Quality and Bank Stabilization Project

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We have reviewed the materials for the proposed water quality and bank stabilization project at Myakka State Forest. There are no records in the FNAI database for rare species at the specific location of the project. The plan appears to minimize disturbance to natural systems. We see no conflicts with any resources of concern.

Thank you for the review request.



Florida Resources  
and Environmental  
Analysis Center

Institute of Science  
and Public Affairs

The Florida State University

*Tracking Florida's Biodiversity*



## FLORIDA DEPARTMENT *of* STATE

**RON DESANTIS**  
Governor

**LAUREL M. LEE**  
Secretary of State

Mr. Todd Knapp  
State Lands Supervisor, Florida Forest Service  
Florida Department of Agriculture and Consumer Services  
3125 Conner Boulevard  
Suite I-266, Mail Stop C-25  
Tallahassee, FL 32399-1650

April 27, 2020

Re: DHR No.: 2020-2139  
Project: Water Quality and Bank Stabilization  
Myakka State Forest, Sarasota County

Dear Mr. Knapp:

Our office reviewed the referenced project in accordance with Chapter 267, *Florida Statutes*, and implementing state regulations, for possible effects on historic properties listed, or eligible for listing, in the *National Register of Historic Places*, or otherwise of historical, architectural or archaeological value.

It is the opinion of this agency that ground disturbing activities for the above project be monitored by someone who has completed our Archaeological Resource Management (ARM) training program. Once a project is complete, the monitor should submit the appropriate monitoring forms to this agency. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, *Florida Statutes*.

For any questions concerning our comments, please contact Robin Jackson, Historic Preservationist, Compliance and Review, by electronic mail at [robin.jackson@doh.myflorida.com](mailto:robin.jackson@doh.myflorida.com), or at 850.245.6496, or 800.847.7278.

Sincerely,

A handwritten signature in blue ink that reads "Jason Aldridge" with the word "For" written below it.

Timothy A. Parsons, Ph.D.  
Director, Division of Historical Resources and  
State Historic Preservation Officer





# Myakka State Forest

## Water Quality and Bank Stabilization Project



Lat. 24.95N, Lon. 82.26W  
S-36 T-40S R-20E



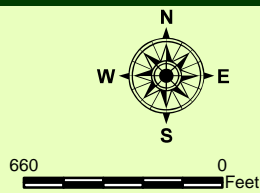
Prepared by: Duane A Weis, Florida Forest Service  
Date: 3/20/2020

Sources: ArcGIS Online / Bing Maps.  
NAD83 HARN FL GDL Albers

Source: Esri,  
DigitalGlobe,

-  Project Area
-  State Forest Boundary

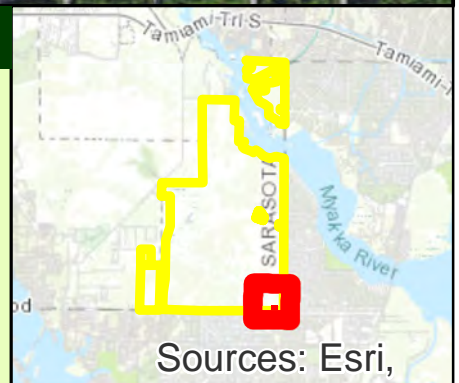
### Water Quality and Bank Stabilization



66 ft = 1 chain; 80 chains = 1 mile;  
10 sq. chains = 1 acre

#### DISCLAIMER

This map is the product of the Florida Forest Service. No warranties are provided for the data therein, its use, or its interpretation.



Sources: Esri,





# Myakka State Forest

## Water Quality and Bank Stabilization Project



Lat. 24.95N, Lon. 82.26W  
S-36 T-40S R-20E



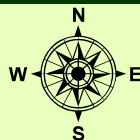
Prepared by: Duane A Weis, Florida Forest Service  
Date: 3/20/2020

Sources: ArcGIS Online / Bing Maps.  
NAD83 HARN FL GDL Albers

Sources: Esri,  
HERE, Garmin,  
Intermap,

-  Project Area
-  State Forest Boundary

### Water Quality and Bank Stabilization

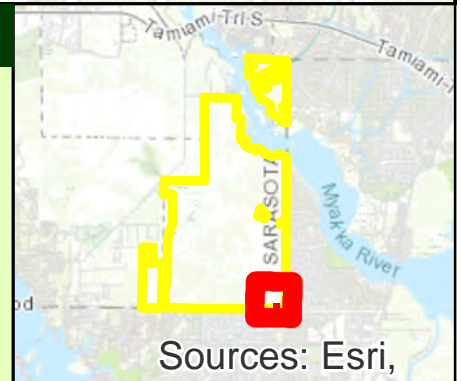


660 0 Feet

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10 sq. chains = 1 acre

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Sources: Esri,

# CONSTRUCTION PLANS OF MYAKKA STATE FOREST

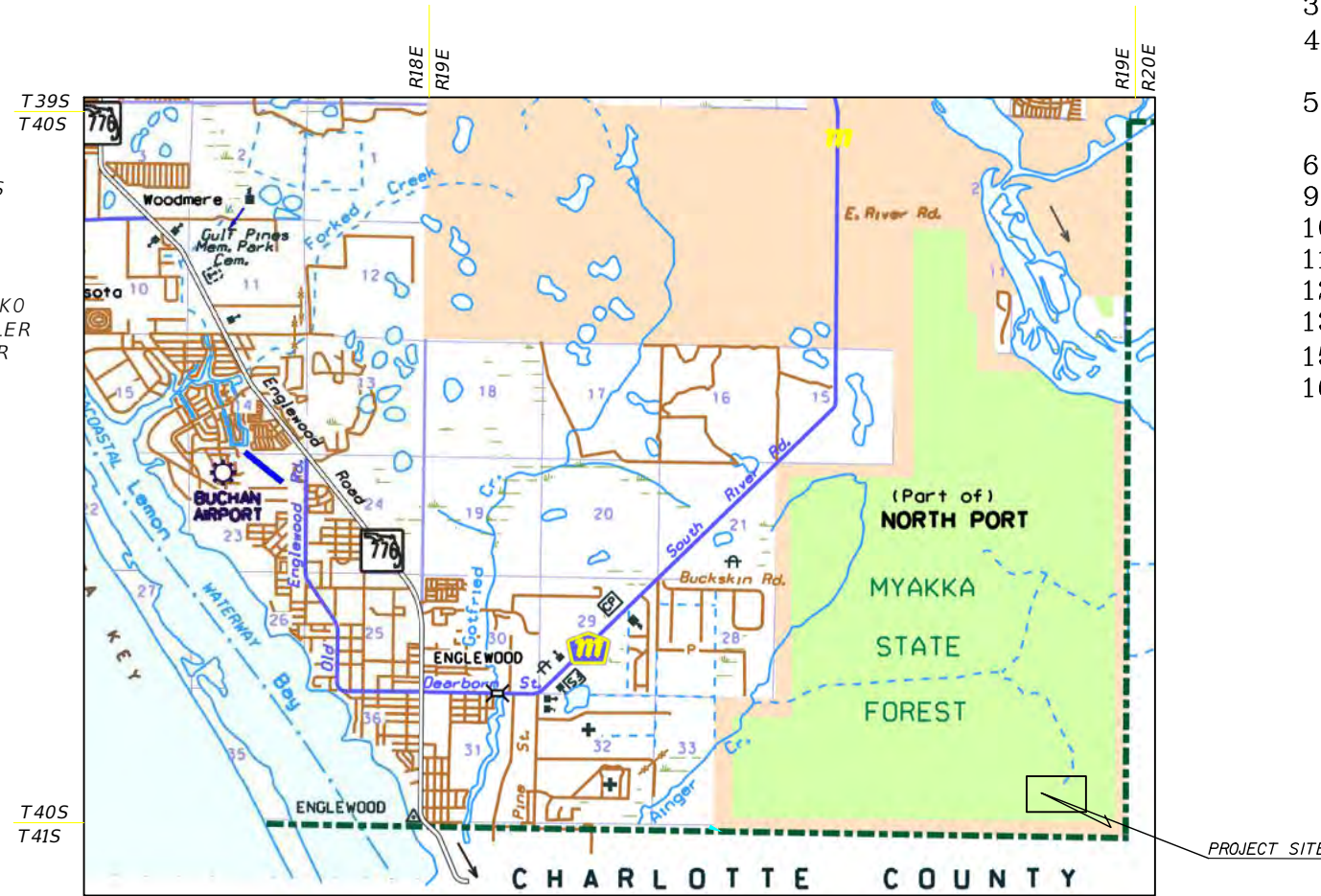
## WATER QUALITY AND BANK STABILIZATION PROJECT

SECTION 36, TOWNSHIP 40S, RANGE 20E  
CITY OF NORTH PORT  
SARASOTA COUNTY, FLORIDA

### SHEET INDEX

NO.	DESCRIPTION
1	COVER
2	MASTER PLAN
3	FLOW-WAY PLAN & PROFILE
4	FLOW-WAY/LOW WATER ACCESS CROSSING PLAN & PROFILE
5	WATER QUALITY TREATMENT SWALE PLAN & PROFILE
6-8	FORESMAN BLVD PLAN & PROFILES
9	WATER LEVEL RESTORATION STRUCTURE
10	DETAILS
11	EROSION CONTROL PLAN
12	GENERAL AND CONSTRUCTION NOTES
13-14	PLANTING PLANS
15	JURISDICTIONAL LINES / WETLAND IMPACTS
16	PROJECT AERIAL

UTILITY COMPANY	OWNER	TELEPHONE	
CABLE TV:	COMCAST	941.342.3578	GONZALO ROJAS
ELECTRIC:	FP&L DISTRIBUTION	941.723.4430	GREG COKER
	FP&L TRANSMISSION	561.694.3459	PETER WASHIO
TELEPHONE:	CENTURY LINK	863.452.3185	KEN LUTZ
WASTEWATER	BY OWNER		
WATER	CHARLOTTE COUNTY	941.764.4364	ALEX CEGERENKO
	CITY OF NORTH PORT	941.240.8000	PATRICK ZOELLER
GAS	TECO GAS	813.275.3731	FRANK KISTNER
UNDERGROUND FACILITY LOCATION SERVICE	(THE SUNSHINE STATE)	1.800.432.4770	



LOCATION MAP  
NOT TO SCALE

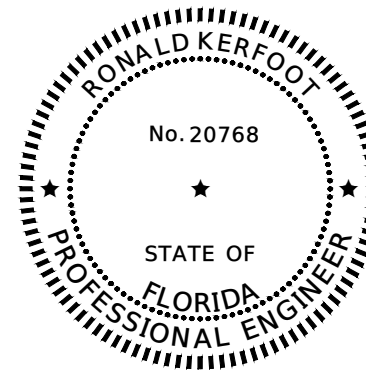
PREPARED FOR:  
**SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT**  
2379 BROAD STREET BROOKSVILLE, FL 34604 (352) 796-721 EXT. 4307

PREPARED BY:  
**AIM ENGINEERING & SURVEYING, INC.**



2161 FOWLER STREET  
FORT MYERS, FLORIDA 33901  
PHONE (239) 332-4569

CERTIFICATE OF AUTHORIZATION NO. 3114



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

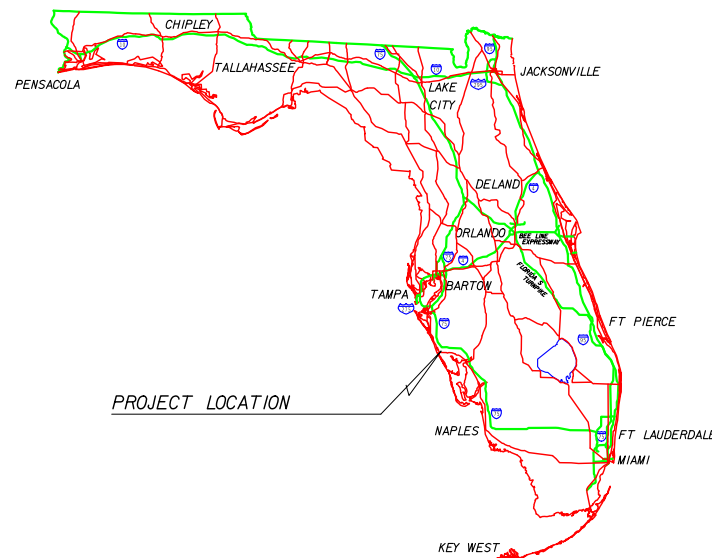
ON THE DATE ADJACENT TO THE SEAL  
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

*[Signature]*  
RONALD KERFOOT P.E. 20768  
ENGINEER OF RECORD

TWA NO. 17TW0000813  
AGREEMENT NO. 14MA0000003 (SA 25)

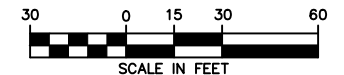
AIM PROJ. 17-0608

SHEET 01  
APRIL 23, 2019



NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION





FLOW-WAY RESTORATION  
WETLAND PLANTING SHELF  
0.3 AC

BANK STABILIZATION  
5:1 GRASSED SLOPES

REMOVE SPOIL  
DEPOSIT

MIDDLE  
WETLAND  
N.P. EL. 8.5  
H.W.L. EL. 9.0

UPPER WETLAND  
N.P. 8.5  
H.W.L. 9.0

LOWER WETLAND  
N.P. EL. 8.0  
H.W.L. EL. 8.5

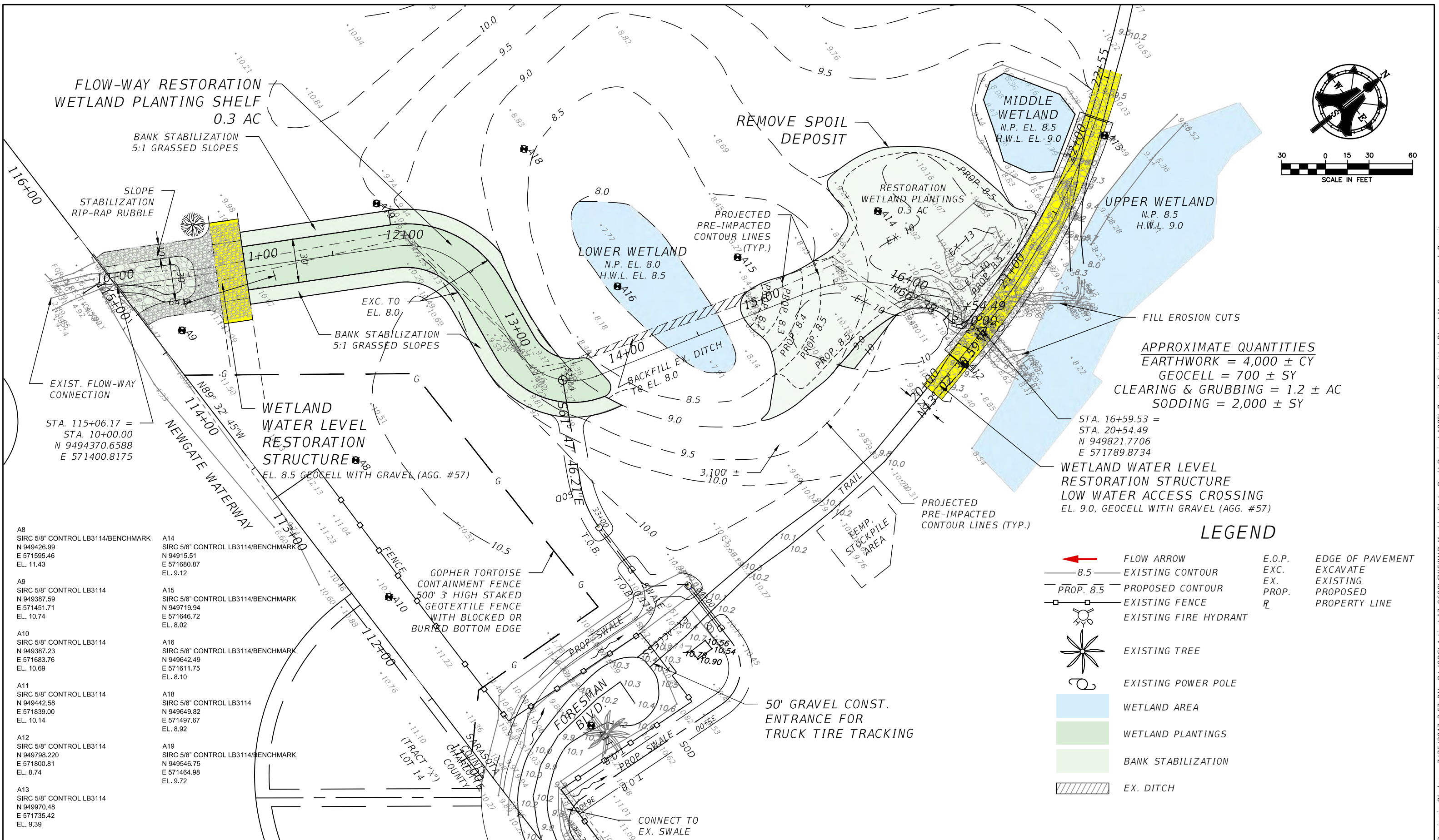
APPROXIMATE QUANTITIES  
EARTHWORK = 4,000 ± CY  
GEOCELL = 700 ± SY  
CLEARING & GRUBBING = 1.2 ± AC  
SODDING = 2,000 ± SY

WETLAND WATER LEVEL  
RESTORATION STRUCTURE  
LOW WATER ACCESS CROSSING  
EL. 9.0, GEOCELL WITH GRAVEL (AGG. #57)

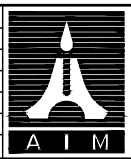
### LEGEND

- FLOW ARROW
- 8.5 EXISTING CONTOUR
- PROP. 8.5 PROPOSED CONTOUR
- EXISTING FENCE
- EXISTING FIRE HYDRANT
- EXISTING TREE
- EXISTING POWER POLE
- WETLAND AREA
- WETLAND PLANTINGS
- BANK STABILIZATION
- EX. DITCH
- E.O.P. EDGE OF PAVEMENT
- EXC. EXCAVATE
- EX. EXISTING
- PROP. PROPOSED
- P. PROPERTY LINE

- A8  
SIRC 5/8" CONTROL LB3114/BENCHMARK  
N 949426.99  
E 571595.46  
EL. 11.43
- A9  
SIRC 5/8" CONTROL LB3114  
N 949387.59  
E 571451.71  
EL. 10.74
- A10  
SIRC 5/8" CONTROL LB3114  
N 949387.23  
E 571683.76  
EL. 10.69
- A11  
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N 949442.58  
E 571839.00  
EL. 10.14
- A12  
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EL. 9.12
- A15  
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N 949719.94  
E 571646.72  
EL. 8.02
- A16  
SIRC 5/8" CONTROL LB3114/BENCHMARK  
N 949642.49  
E 571611.75  
EL. 8.10
- A18  
SIRC 5/8" CONTROL LB3114  
N 949649.82  
E 571497.67  
EL. 8.92
- A19  
SIRC 5/8" CONTROL LB3114/BENCHMARK  
N 949546.75  
E 571464.98  
EL. 9.72



NO.	DATE	DESCRIPTION
4		
3	4-23-19	100% PLANS
2	4-11-18	REV. SWFWMD COMMENTS
1	1-12-18	REV. SWFWMD COMMENTS



**AIM Engineering & Surveying, Inc.**  
 CIVIL ENGINEERING \* LAND SURVEYING \* S.U.E. \* TRANSPORTATION \* UTILITIES  
 \* PROJECT MANAGEMENT \* CONSTRUCTION ENGINEERING & MANAGEMENT  
 2161 FOWLER ST. FORT MYERS, FL. 33901 \* E-Mail: [engineering@aimengr.com](mailto:engineering@aimengr.com)  
 PHONE: 239-332-4569 \* CERTIFICATION OF AUTHORIZATION No. 3114

**SOUTHWEST FLORIDA WATER  
MANAGEMENT DISTRICT**  
 2379 BROAD STREET, BROOKSVILLE, FLORIDA  
 PHONE: (352) 796-7211 EXT. 4307

SCALE: AS-NOTED  
 DATE: SEP. 22, 2017  
 JES/RK

MYAKKA STATE FOREST  
 WATER QUALITY AND BANK  
 STABILIZATION PROJECT  
 MASTER PLAN

DRAWINGS ARE NOT APPROVED  
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 P.E. LICENSE NUMBER 20768  
 JOB NO.:  
**17-0608**  
 SHEET NO.:  
**2**

Benjamin Bledsaw 7/25/2017 2:57 PM P:\J0BS\Active\17-0608\SWFWMD Myakka State Park\Design\100% Permit Submittal\Plans\Master Concept Permit Plans.dwg

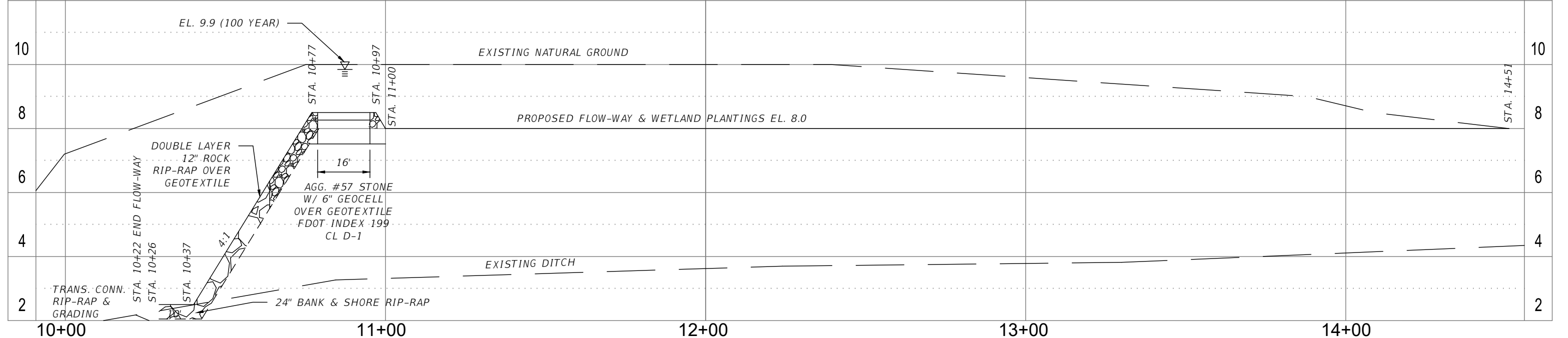
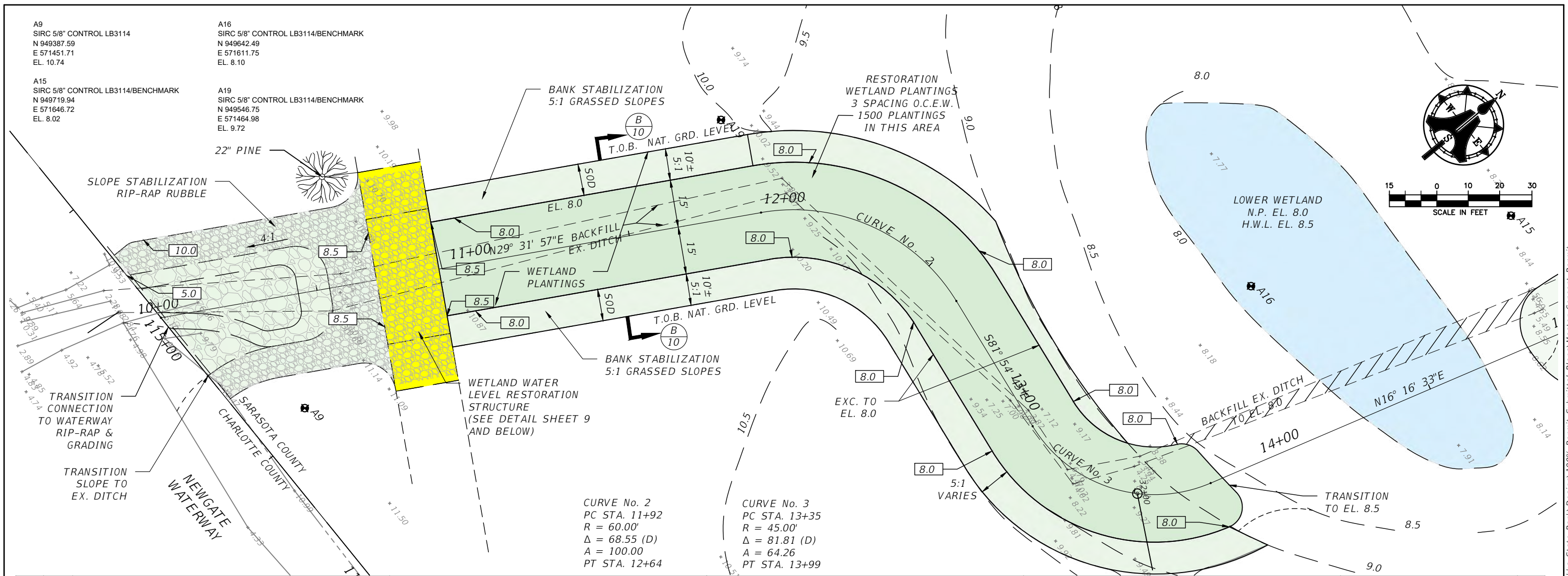


A9  
SIRC 5/8" CONTROL LB3114  
N 949387.59  
E 571451.71  
EL. 10.74

A15  
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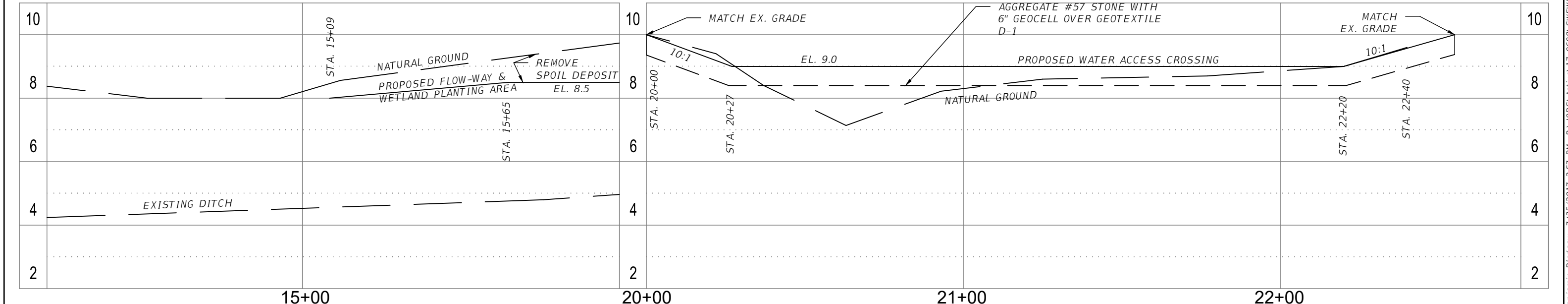
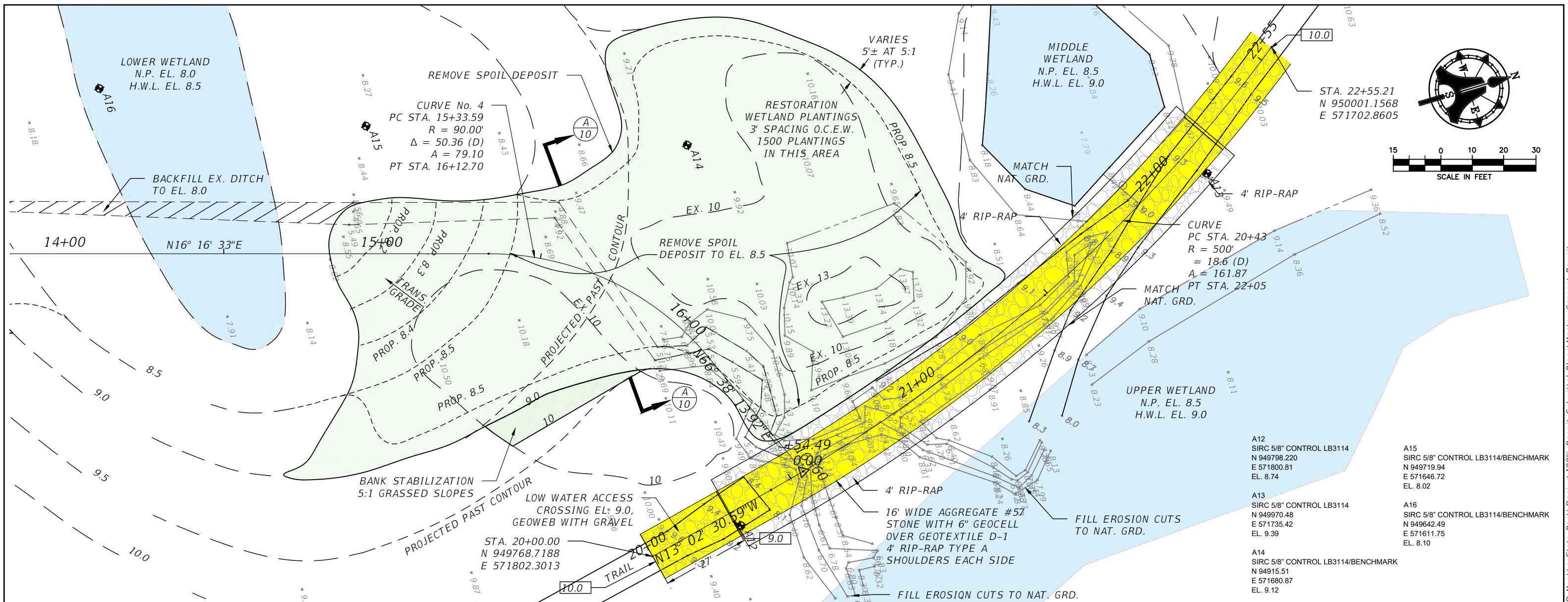
SCALE: AS-NOTED
DATE: SEP. 22, 2017
JES/RK

**MYAKKA STATE FOREST**  
 WATER QUALITY AND BANK STABILIZATION PROJECT  
 FLOW-WAY PLAN & PROFILE

DRAWINGS ARE NOT APPROVED UNLESS SIGNED & SEALED:  
 RONALD KERFOOT, P.E.  
 P.E. LICENSE NUMBER 20768

JOB NO.: 17-0608  
 SHEET NO.: 3

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**SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT**  
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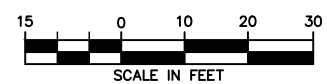
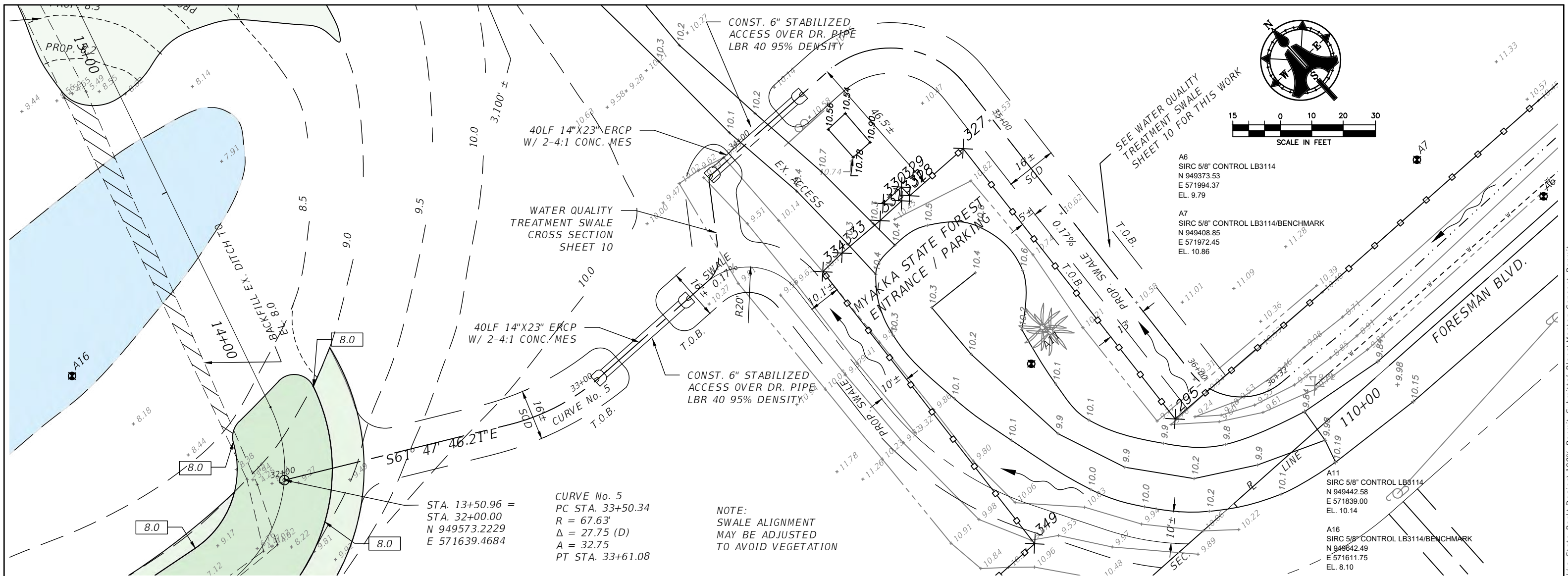
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JES/RK

**MYAKKA STATE FOREST**  
 WATER QUALITY AND BANK STABILIZATION PROJECT  
**FLOW-WAY/LOW WATER ACCESS CROSSING**  
 PLAN & PROFILE

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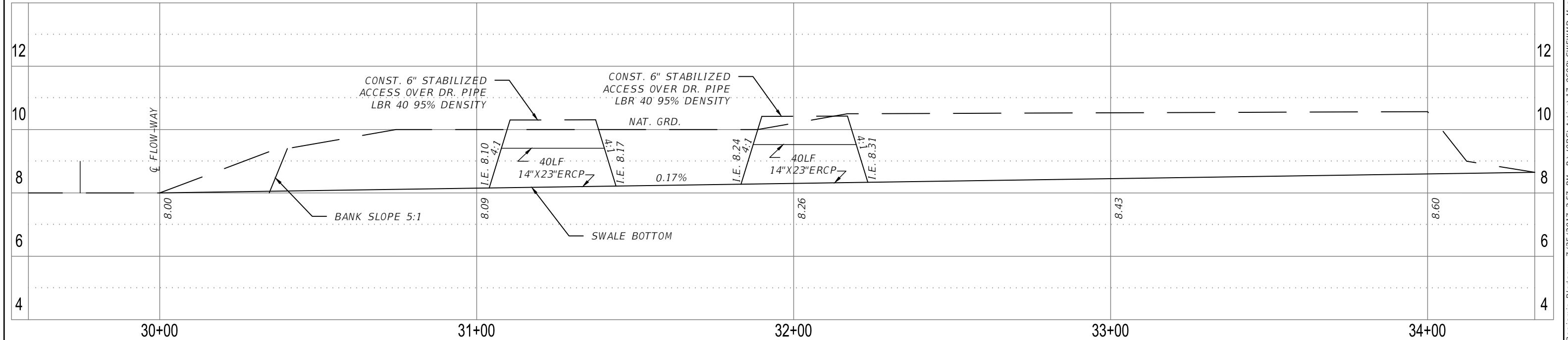
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SIRC 5/8\"/>

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SIRC 5/8\"/>

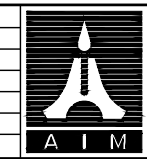
STA. 13+50.96 =  
STA. 32+00.00  
N 949573.2229  
E 571639.4684

CURVE No. 5  
PC STA. 33+50.34  
R = 67.63'  
Δ = 27.75 (D)  
A = 32.75  
PT STA. 33+61.08

NOTE:  
SWALE ALIGNMENT  
MAY BE ADJUSTED  
TO AVOID VEGETATION



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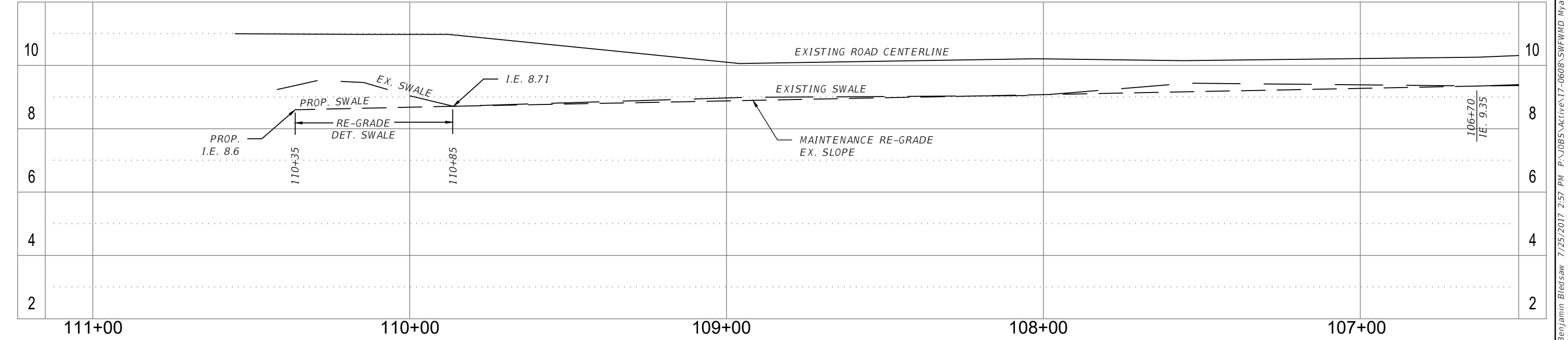
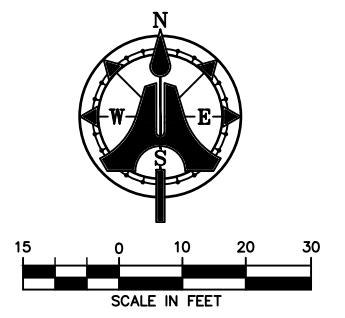
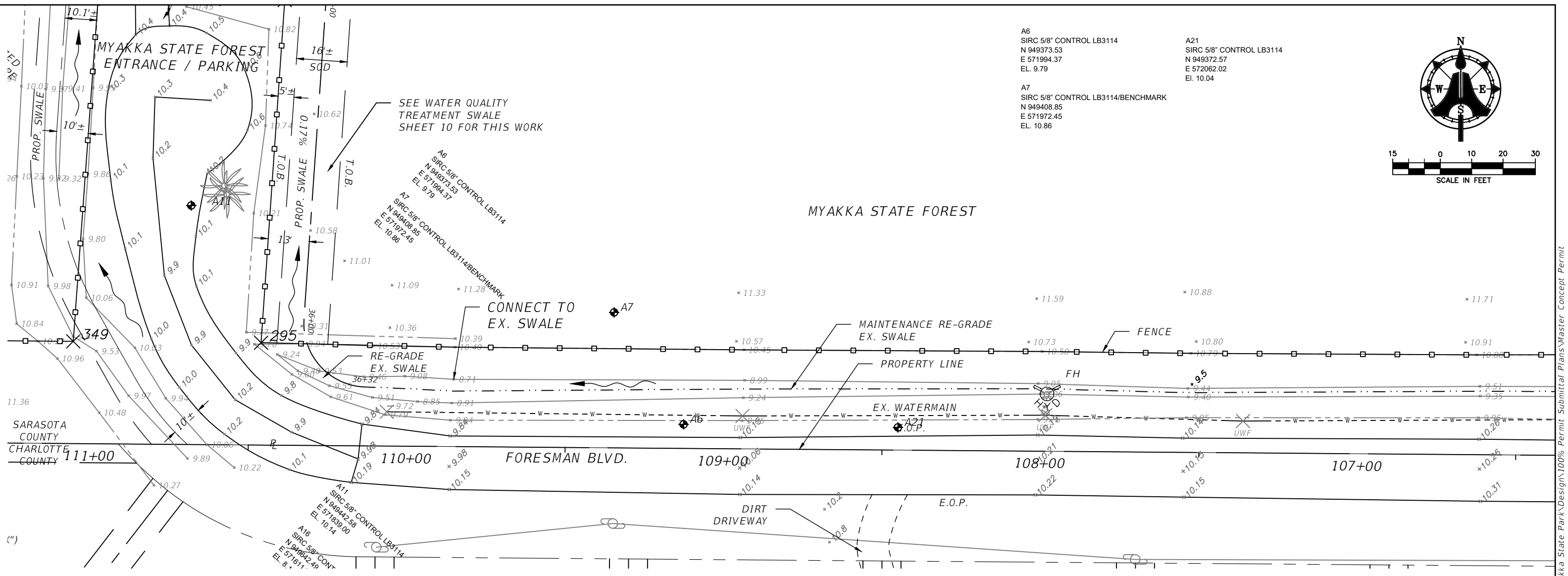
**MYAKKA STATE FOREST  
WATER QUALITY AND BANK  
STABILIZATION PROJECT**  
WATER QUALITY TREATMENT SWALE  
PLAN & PROFILE

DRAWINGS ARE NOT APPROVED  
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P.E. LICENSE NUMBER 20768

JOB NO.:  
**17-0608**  
SHEET NO.:  
**5**

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JES/RK

MYAKKA STATE FOREST  
 WATER QUALITY AND BANK STABILIZATION PROJECT  
 FORESMAN  
 PLAN & PROFILE

DRAWINGS ARE NOT APPROVED UNLESS SIGNED & SEALED:	JOB NO.: 17-0608
RONALD KERFOOT, P.E. P.E. LICENSE NUMBER 20768	SHEET NO.: 6

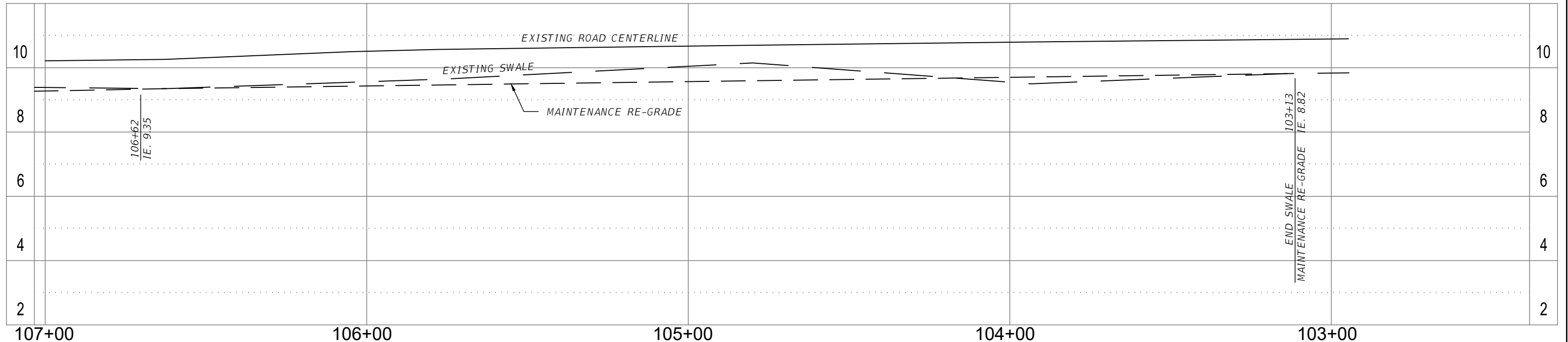
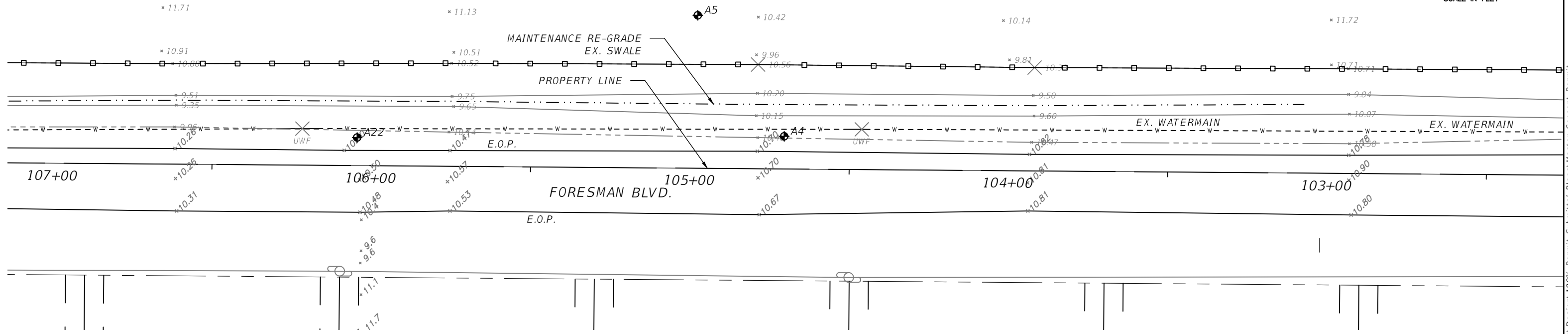
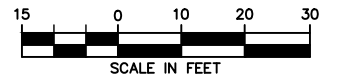
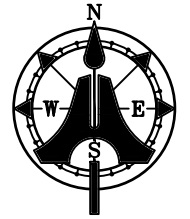
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MYAKKA STATE FOREST

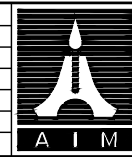
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SIRC 5/8" CONTROL LB3114  
N 949372.68  
E 572436.59  
EL. 10.43

A22  
SIRC 5/8" CONTROL LB3114  
N 949372.31  
E 572302.54  
EL. 10.2

A5  
SIRC 5/8" CONTROL LB3114/BENCHMARK  
N 949410.60  
E 572409.47  
EL. 11.13



NO.	DATE	DESCRIPTION
4		
3	4-23-19	100% PLANS
2	4-11-18	REV. SWFWMD COMMENTS
1	1-12-18	REV. SWFWMD COMMENTS



**AIM Engineering & Surveying, Inc.**  
CIVIL ENGINEERING \* LAND SURVEYING \* S.U.E. \* TRANSPORTATION \* UTILITIES  
\* PROJECT MANAGEMENT \* CONSTRUCTION ENGINEERING & MANAGEMENT  
2161 FOWLER ST. FORT MYERS, FL. 33901 \* E-Mail: [engineering@aimengr.com](mailto:engineering@aimengr.com)  
PHONE: 239-332-4569 \* CERTIFICATION OF AUTHORIZATION No. 3114

**SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT**  
2379 BROAD STREET, BROOKSVILLE, FLORIDA  
PHONE: (352) 796-7211 EXT. 4307

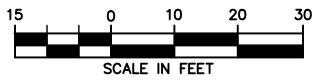
SCALE: AS-NOTED
DATE: SEP. 22, 2017
JES/RK

MYAKKA STATE FOREST  
WATER QUALITY AND BANK STABILIZATION PROJECT  
**FORESMAN PLAN & PROFILE**

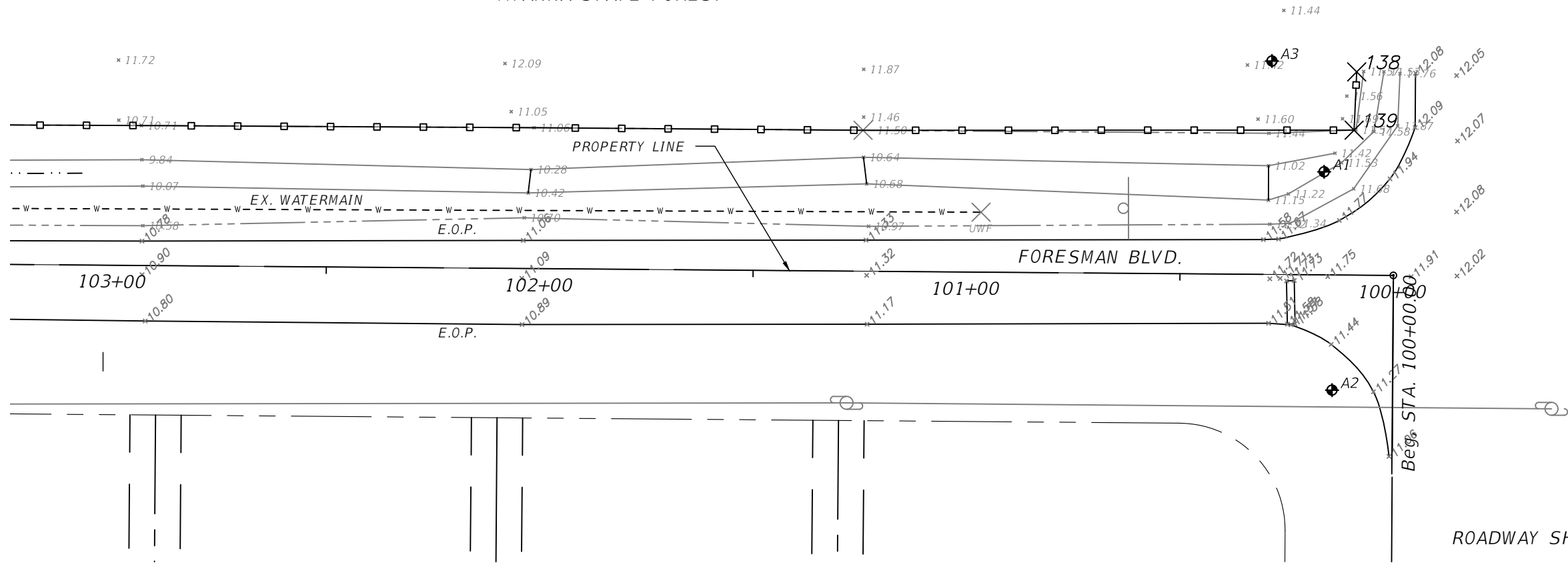
DRAWINGS ARE NOT APPROVED UNLESS SIGNED & SEALED:  
RONALD KERFOOT, P.E.  
P.E. LICENSE NUMBER 20768

JOB NO.: **17-0608**  
SHEET NO.: **7**

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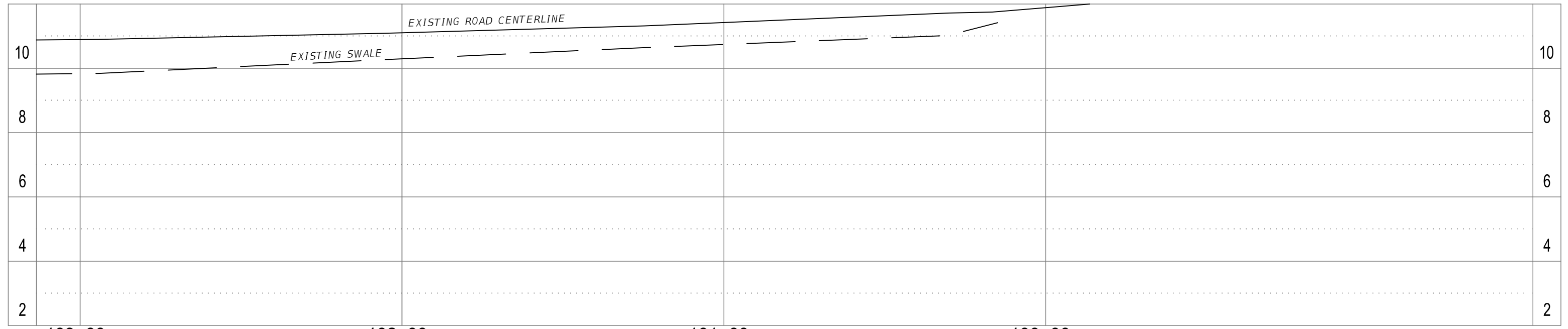
MYAKKA STATE FOREST



JENNING BLVD.

- A1  
SIRC 5/8" CONTROL LB3114  
N 949382.98  
E 572890.73  
EL. 11.37
- A2  
SIRC 5/8" CONTROL LB3114  
N 949331.84  
E 572892.58  
EL. 11.080
- A3  
SIRC 5/8" CONTROL LB3114/BENCHMARK  
N 949408.92  
E 572878.51  
EL. 11.12

ROADWAY SHOWN FOR REFERENCE ONLY. NO WORK PROPOSED



NO	DATE	DESCRIPTION
4		
3	4-23-19	100% PLANS
2	4-11-18	REV. SWFWMD COMMENTS
1	1-12-18	REV. SWFWMD COMMENTS

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 PHONE: 239-332-4569 \* CERTIFICATION OF AUTHORIZATION No. 3114

**SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT**  
 2379 BROAD STREET, BROOKSVILLE, FLORIDA  
 PHONE: (352) 796-7211 EXT. 4307

SCALE: AS-NOTED
DATE: SEP. 22, 2017
JES/RK

MYAKKA STATE FOREST  
 WATER QUALITY AND BANK STABILIZATION PROJECT  
**FORESMAN PLAN & PROFILE**

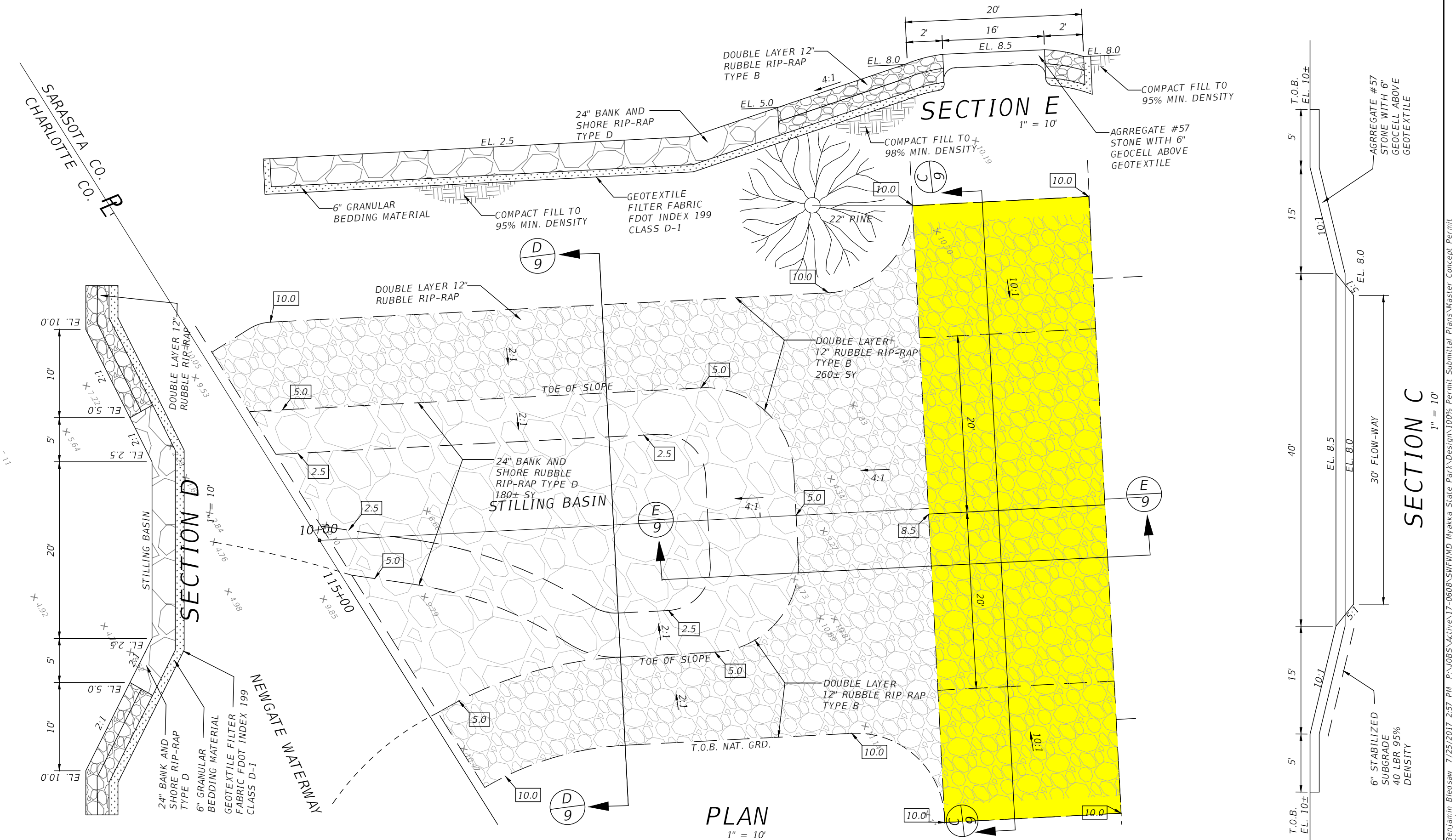
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SARASOTA CO. R  
CHARLOTTE CO. R



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2	4-11-18	REV. SWFWMD COMMENTS
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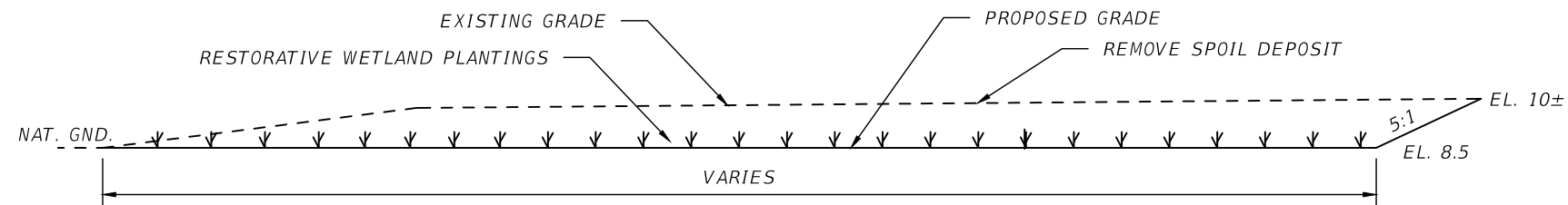
**SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT**  
 2379 BROAD STREET, BROOKSVILLE, FLORIDA  
 PHONE: (352) 796-7211 EXT. 4307

SCALE: AS-NOTED
DATE: SEP. 22, 2017
JES/IRK

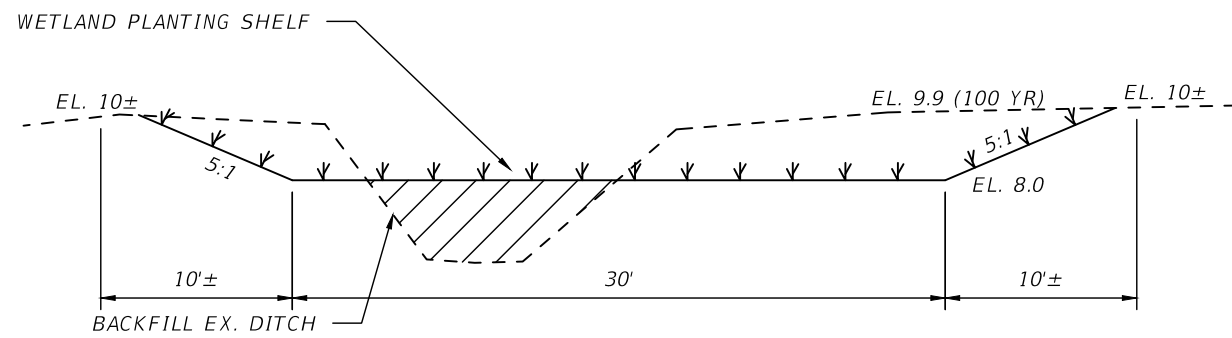
**MYAKKA STATE FOREST WATER QUALITY AND BANK STABILIZATION PROJECT**  
**WATER LEVEL RESTORATION STRUCTURE**

DRAWINGS ARE NOT APPROVED UNLESS SIGNED & SEALED:	JOB NO.: 17-0608
RONALD KERFOOT, P.E. P.E. LICENSE NUMBER 20768	SHEET NO.: 9

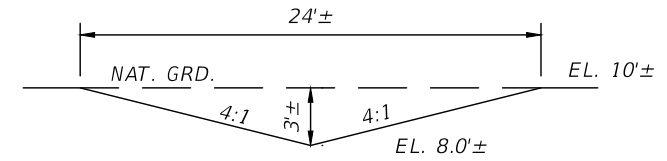
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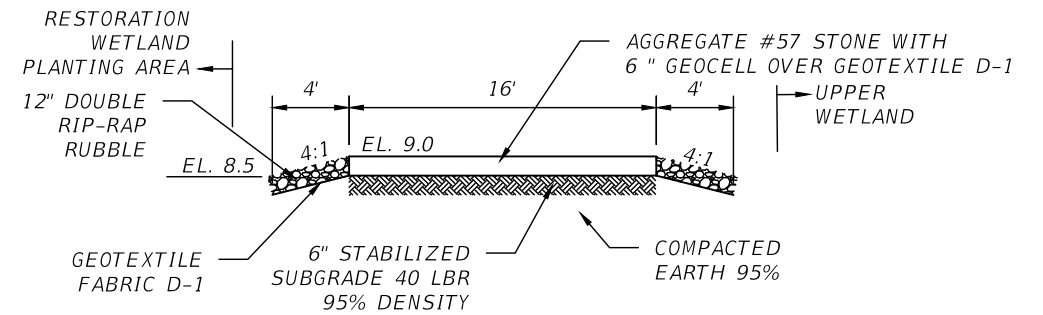
SECTION A - A  
TYPICAL RESTORATION  
WETLAND PLANTINGS AREA SECTION



SECTION B - B  
TYPICAL FLOW-WAY SECTION

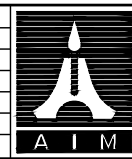


TYPICAL SWALE SECTION



TYPICAL LOW WATER ACCESS CROSSING SECTION

NO.	DATE	DESCRIPTION
4		
3	4-23-19	100% PERMITS
2	4-11-18	REV. SWFWMD COMMENTS
1	1-12-18	REV. SWFWMD COMMENTS



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**SOUTHWEST FLORIDA WATER  
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 2379 BROAD STREET, BROOKSVILLE, FLORIDA  
 PHONE: (352) 796-7211 EXT. 4307

SCALE: AS-NOTED
DATE: SEP. 22, 2017
JES/IRK

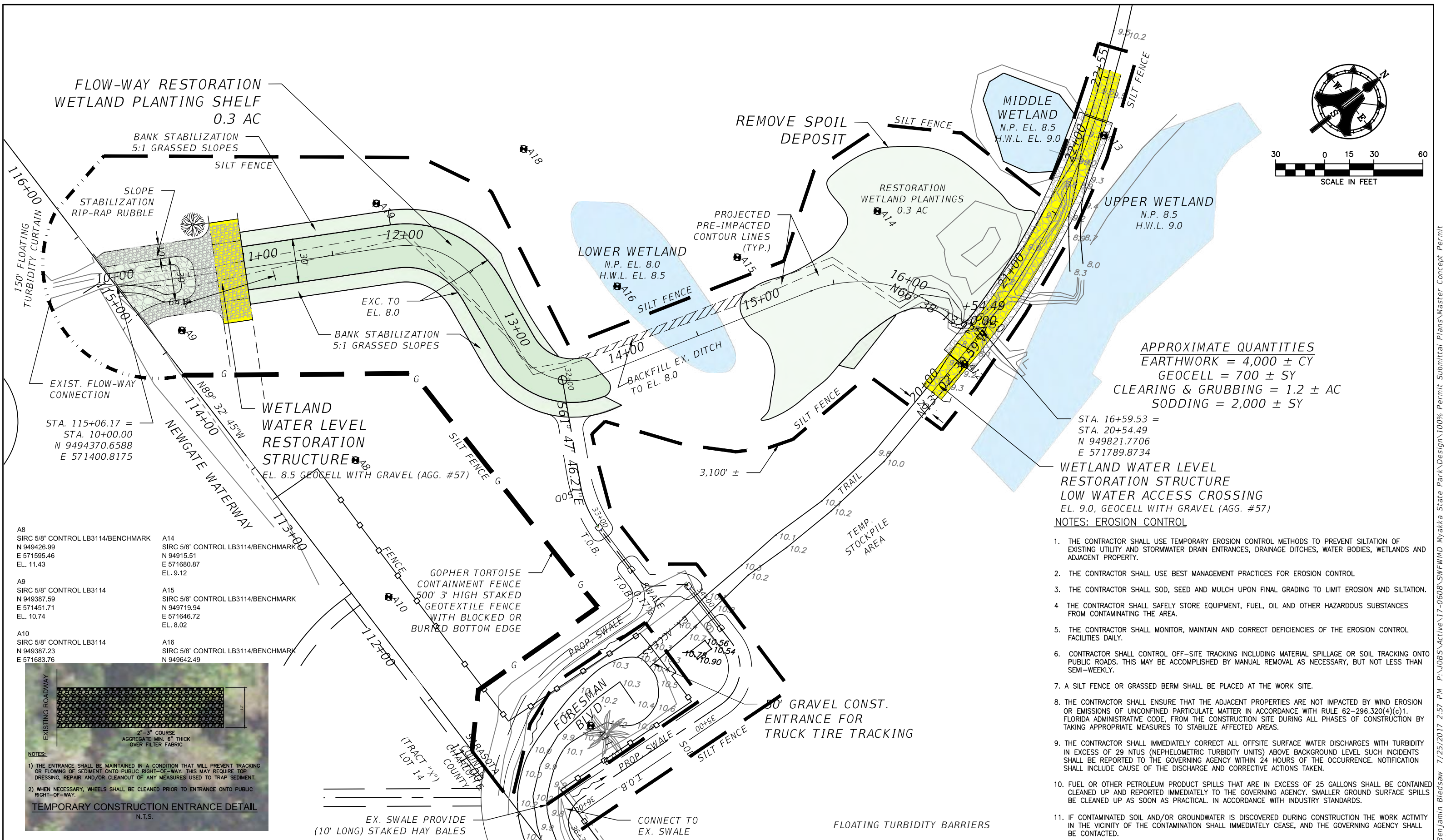
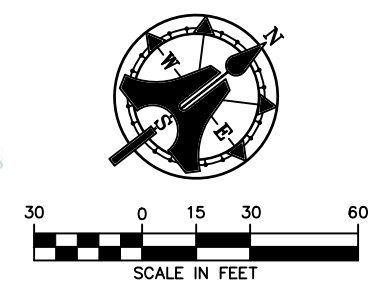
**MYAKKA STATE FOREST  
 WATER QUALITY AND BANK  
 STABILIZATION PROJECT**  
 DETAILS

DRAWINGS ARE NOT APPROVED  
 UNLESS SIGNED & SEALED:  
 RONALD KERFOOT, P.E.  
 P.E. LICENSE NUMBER 20768

JOB NO.:  
**17-0608**  
 SHEET NO.:  
**10**

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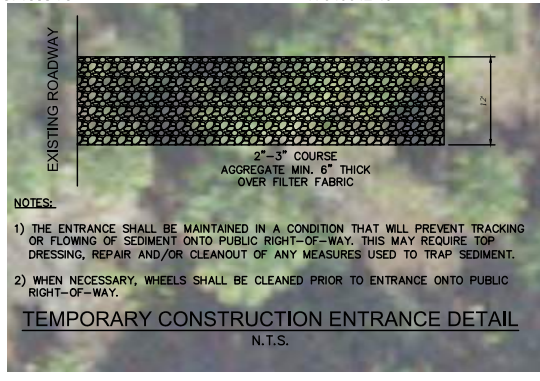




**APPROXIMATE QUANTITIES**  
 EARTHWORK = 4,000 ± CY  
 GEOCELL = 700 ± SY  
 CLEARING & GRUBBING = 1.2 ± AC  
 SODDING = 2,000 ± SY

- STA. 16+59.53 =  
 STA. 20+54.49  
 N 949821.7706  
 E 571789.8734
- WETLAND WATER LEVEL RESTORATION STRUCTURE LOW WATER ACCESS CROSSING**  
 EL. 9.0, GEOCELL WITH GRAVEL (AGG. #57)
- NOTES: EROSION CONTROL**
1. THE CONTRACTOR SHALL USE TEMPORARY EROSION CONTROL METHODS TO PREVENT SILTATION OF EXISTING UTILITY AND STORMWATER DRAIN ENTRANCES, DRAINAGE DITCHES, WATER BODIES, WETLANDS AND ADJACENT PROPERTY.
  2. THE CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICES FOR EROSION CONTROL
  3. THE CONTRACTOR SHALL SOD, SEED AND MULCH UPON FINAL GRADING TO LIMIT EROSION AND SILTATION.
  4. THE CONTRACTOR SHALL SAFELY STORE EQUIPMENT, FUEL, OIL AND OTHER HAZARDOUS SUBSTANCES FROM CONTAMINATING THE AREA.
  5. THE CONTRACTOR SHALL MONITOR, MAINTAIN AND CORRECT DEFICIENCIES OF THE EROSION CONTROL FACILITIES DAILY.
  6. CONTRACTOR SHALL CONTROL OFF-SITE TRACKING INCLUDING MATERIAL SPILLAGE OR SOIL TRACKING ONTO PUBLIC ROADS. THIS MAY BE ACCOMPLISHED BY MANUAL REMOVAL AS NECESSARY, BUT NOT LESS THAN SEMI-WEEKLY.
  7. A SILT FENCE OR GRASSED BERM SHALL BE PLACED AT THE WORK SITE.
  8. THE CONTRACTOR SHALL ENSURE THAT THE ADJACENT PROPERTIES ARE NOT IMPACTED BY WIND EROSION OR EMISSIONS OF UNCONFINED PARTICULATE MATTER IN ACCORDANCE WITH RULE 62-296.320(4)(c)1. FLORIDA ADMINISTRATIVE CODE, FROM THE CONSTRUCTION SITE DURING ALL PHASES OF CONSTRUCTION BY TAKING APPROPRIATE MEASURES TO STABILIZE AFFECTED AREAS.
  9. THE CONTRACTOR SHALL IMMEDIATELY CORRECT ALL OFFSITE SURFACE WATER DISCHARGES WITH TURBIDITY IN EXCESS OF 29 NTUS (NEPHELOMETRIC TURBIDITY UNITS) ABOVE BACKGROUND LEVEL SUCH INCIDENTS SHALL BE REPORTED TO THE GOVERNING AGENCY WITHIN 24 HOURS OF THE OCCURRENCE. NOTIFICATION SHALL INCLUDE CAUSE OF THE DISCHARGE AND CORRECTIVE ACTIONS TAKEN.
  10. FUEL OR OTHER PETROLEUM PRODUCT SPILLS THAT ARE IN EXCESS OF 25 GALLONS SHALL BE CONTAINED CLEANED UP AND REPORTED IMMEDIATELY TO THE GOVERNING AGENCY. SMALLER GROUND SURFACE SPILLS BE CLEANED UP AS SOON AS PRACTICAL. IN ACCORDANCE WITH INDUSTRY STANDARDS.
  11. IF CONTAMINATED SOIL AND/OR GROUNDWATER IS DISCOVERED DURING CONSTRUCTION THE WORK ACTIVITY IN THE VICINITY OF THE CONTAMINATION SHALL IMMEDIATELY CEASE, AND THE GOVERNING AGENCY SHALL BE CONTACTED.

- A8  
SIRC 5/8" CONTROL LB3114/BENCHMARK  
N 949426.99  
E 571595.46  
EL. 11.43
- A9  
SIRC 5/8" CONTROL LB3114  
N 949387.59  
E 571451.71  
EL. 10.74
- A10  
SIRC 5/8" CONTROL LB3114  
N 949387.23  
E 571683.76
- A14  
SIRC 5/8" CONTROL LB3114/BENCHMARK  
N 94915.51  
E 571680.87  
EL. 9.12
- A15  
SIRC 5/8" CONTROL LB3114/BENCHMARK  
N 949719.94  
E 571646.72  
EL. 8.02
- A16  
SIRC 5/8" CONTROL LB3114/BENCHMARK  
N 949642.49



NO.	DATE	DESCRIPTION
4		
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**SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT**  
 2379 BROAD STREET, BROOKSVILLE, FLORIDA  
 PHONE: (352) 796-7211 EXT. 4307

SCALE: AS-NOTED	MYAKKA STATE FOREST WATER QUALITY AND BANK STABILIZATION PROJECT	DRAWINGS ARE NOT APPROVED UNLESS SIGNED & SEALED:	JOB NO.: <b>17-0608</b>
DATE: SEP. 22, 2017		RONALD KERFOOT, P.E. P.E. LICENSE NUMBER 20768	SHEET NO.: <b>11</b>
JES/RK	<b>EROSION CONTROL PLAN</b>		

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CONSTRUCTION NOTES:

1. COPIES OF THESE PLANS AS DESIGNED BY THE PROFESSIONAL ENGINEER HAVE BEEN RETAINED BY THE PROFESSIONAL ENGINEER. SAID ENGINEER WILL NOT BE RESPONSIBLE FOR ANY SUBSEQUENT CHANGES TO THE REPRODUCIBLE ORIGINAL DOCUMENTS.
2. RIGHT OF WAY LINES BASED ON ORIGINAL DEDICATION.
3. A STORMWATER POLLUTION PREVENTION PLAN SHALL BE PREPARED BY THE CONTRACTOR, IN ACCORDANCE WITH FDEP N.P.D.E.S. THE NOTICE OF INTENT SHALL BE PREPARED FOR THE N.P.D.E.S. STORMWATER PERMIT AND SUBMITTED TO OBTAIN PERMIT COVERAGE. FULL COMPENSATION FOR ALL ITEMS AND WORK SHALL BE INCLUDED IN THE COST OF EROSION CONTROL PROGRAM.
4. APPROPRIATE TURBIDITY AND EROSION CONTROL FEATURES SHALL BE PLACED PRIOR TO CONSTRUCTION.
5. IN THE EVENT OF EXCAVATION OF UNSUITABLE MATERIAL IS REQUIRED IT MAY BE USED TO FLATTEN SLOPES.
6. PRIOR AND DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE STAKEOUT OF THE PROJECT, I.E., LINE, GRADE, SLOPE STAKE, UTILITY RELOCATIONS OR ANY OTHER STAKEOUT THAT MAY BE REQUIRED TO COMPLETE THE PROJECT IN ACCORDANCE WITH PLANS AND SPECIFICATIONS.
7. OVERALL CLEAN UP SHALL BE ACCOMPLISHED BY THE CONTRACTOR IN ACCORDANCE WITH COUNTY STANDARDS OR AS DIRECTED BY THE ENGINEER AND DISTRICT. ANY AND ALL EXPENSE INCURRED FOR THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR THE RELATED ITEM.
8. THE CONTRACTOR SHALL ENDEAVOR TO PROTECT PRIVATE PROPERTY, ANY DAMAGE CAUSED BY THE CONTRACTOR IN THE PERFORMANCE OF HIS WORK SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER AND DISTRICT AT THE CONTRACTOR'S EXPENSE.
9. ANY DAMAGE TO STATE, COUNTY OR LOCAL ROADS CAUSED BY THE CONTRACTOR'S HAULING OR EXCAVATION EQUIPMENT SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.
10. ANY SURVEY MARKER, INCLUDING BUT NOT LIMITED TO SECTION MARKERS, BENCHMARKS, LOT CORNER, ETC., WHICH ARE DISTURBED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE PRIOR TO FINAL PAYMENT. RESETTING OF MONUMENTS AND MARKERS SHALL BE PERFORMED BY A PROFESSIONAL LAND SURVEYOR, LICENSED TO PRACTICE IN THE STATE OF FLORIDA AND SHOWN ON THE AS-BUILT PLANS AS RESET. CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS TO THE ENGINEER UPON COMPLETION.
11. THE ELEVATIONS SHOWN HERON ARE ON THE NATIONAL GEODETIC VERTICAL DATUM (N.A.V.D.) OF 1988. ANY N.G.V.D. 1929 OR N.A.V.D. '88 MONUMENT WITHIN THE LIMITS OF CONSTRUCTION ARE TO BE PROTECTED
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF EXCAVATED MATERIAL, DEBRIS, VEGETATION AND CONCRETE AT A LEGAL DISPOSAL SITE OR BY OTHER MANNER APPROVED BY THE ENGINEER. DO NOT DEPOSIT MATERIALS CLEARED FROM SITE ONTO ADJACENT PROPERTY WITHOUT WRITTEN APPROVAL FROM THE ENGINEER AND DISTRICT. CONTRACTOR IS RESPONSIBLE FOR MATERIALS REMOVED FROM SITE.
13. THE CONTRACTOR SHALL FURNISH THE ENGINEER, PRIOR TO INCORPORATION INTO THE PROJECT, A CERTIFICATION FROM THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES DIVISION OF PLANT INDUSTRY, STATING THAT THE SOD, HAY AND MULCH MATERIALS ARE FREE OF NOXIOUS WEED, INCLUDING TROPICAL SODA APPLE.
14. ANY DAMAGE BY THE CONTRACTOR TO ANY DRIVE TURNOUT DURING THE CONSTRUCTION OF THE PROJECT SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
15. THE CONTRACTOR SHALL NOTIFY ALL REQUIRED UTILITIES AND GOVERNMENT AGENCIES AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION (48 HOURS BEFORE DIGGING

CALL TOLL FREE 1-800-638-4097 SUNSHINE CALL CENTER - PREVIOUSLY U.N.C.L.E.)

16. CONSTRUCTION DEWATERING HAS NOT BEEN AUTHORIZED. IF DEWATERING IS NECESSARY, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A WATER USE PERMIT FROM THE WATER MANAGEMENT DISTRICT.
17. PRIOR TO COMMENCEMENT, THE CONTRACTOR SHALL OBTAIN A COPY OF AND FOLLOW FLORIDA DEPARTMENT OF HISTORICAL RESOURCES (FDHR) DIRECTIVES FOR CONSTRUCTION WORK AND REPORTING OF HISTORICAL OR ARCHAEOLOGICAL ARTIFACTS DISCOVERED DURING GROUND DISTURBING ACTIVITIES FOR THE PROPOSED RESURFACING, INCLUDING REMOVAL OF THE PREVIOUS ROAD SURFACE, INSTALLATION OF SIGNAGE, AND TEMPORARY ACCESS AND STAGING AREAS.
18. CONTRACTOR SHALL PROVIDE A SUPERINTENDENT ON SITE AT ALL TIMES DURING CONSTRUCTION.
19. TEMPORARY DETOURS OF TRAFFIC SHALL BE PERMITTED ONLY UPON PRIOR WRITTEN APPROVAL BY THE DISTRICT. TEMPORARY SIGNS ARE PERMITTED AS LONG AS THEY ARE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). IF A ROAD CLOSURE IS ANTICIPATED TO BE IN EXCESS OF TWELVE (12) HOURS, POST MOUNTED SIGNAGE IS REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE EMS, FIRE & SHERIFFS, SCHOOL BOARD OFFICES PRIOR AND DURING ROAD CLOSURE.
20. THERE IS AN EXISTING WATERLINE WITHIN THE LIMITS OF THE PROJECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD LOCATE THESE SAID WATERLINES. ANY UTILITY CONFLICTS SHALL BE COORDINATED WITH CHARLOTTE COUNTY UTILITIES FOR ADJUSTMENT AND RELOCATION OF THE WATERLINE.

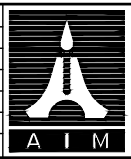
GENERAL NOTES:

1. CONTRACTORS SHALL OBTAIN ALL REQUIRED PERMITS. CONTRACTOR SHALL RETAIN, ON THE WORK SITE, COPIES OF ANY PERMITS NECESSARY FOR CONSTRUCTION.
2. THE CONTRACTOR SHALL OBTAIN PERMITS PRIOR TO WORK IN R/W'S. THE CONTRACTOR SHALL COMPLY WITH ALL REGULATORY AND PERMITTING AGENCIES REQUIREMENTS.
3. CONTRACTOR SHALL FOLLOW THE INSPECTION AND NOTIFICATION REQUIREMENTS. A MINIMUM OF 72 HOURS NOTICE SHALL BE GIVEN PRIOR TO ALL REQUIRED INSPECTIONS.
4. REFER TO SURVEY OF MYAKKA STATE FOREST FOR ALL PROPERTY LINE INFORMATION.
5. THE CONTRACTOR SHALL SUPPLY CONTROL POINTS FOR LINE AND GRADE SET BY A PROFESSIONAL SURVEYOR LICENSED BY THE STATE OF FLORIDA.
6. DISCREPANCIES IN FIELD CONDITIONS, PLAN CONDITIONS, OR CODES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER, PRIOR TO PROCEEDING.
7. THE CONTRACTOR SHALL CONTACT THE ENGINEER AND THE APPROPRIATE UTILITY COMPANY IMMEDIATELY CONCERNING ANY CONFLICTS WITH THEIR UTILITIES/STRUCTURES ARISING DURING CONSTRUCTION OF ANY FACILITIES SHOWN ON THESE DRAWINGS.
8. THE CONTRACTOR SHALL PREPARE AND PROVIDE AS-BUILT AND RECORD DRAWINGS IN COMPLIANCE WITH THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT, U.S. ARMY CORPS OF ENGINEERS STANDARDS AND SPECIFICATIONS FOR CERTIFICATION AND TRANSFER TO OPERATIONS. ALL SIGNED AND SEALED RECORD SURVEY PLANS AND ELECTRONIC COPIES SHALL BE DELIVERED TO THE ENGINEER-OF-RECORD FOR REVIEW, APPROVAL AND TRANSMITTING TO THE PERMITTING AGENCIES.
9. A PRE-CONSTRUCTION MEETING SHALL BE CONDUCTED AND A NOTICE TO PROCEED SHALL BE ISSUED BY THE DISTRICT TO THE GENERAL CONTRACTOR BEFORE ANY PHYSICAL WORK IS STARTED.
10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND TAKE ALL POSSIBLE PRECAUTIONS TO AVOID ANY DAMAGE TO ALL UNDERGROUND PIPELINES, TELEPHONE, CABLE TV, ELECTRIC LINES/ CONDUITS AND DRAINAGE STRUCTURES IN ADVANCE OF ANY CONSTRUCTION.

11. APPROPRIATE TURBIDITY CONTROL DEVICES (E.G. SILT FENCES, HAY BALES) WILL BE UTILIZED DURING ALL PHASES OF INSTALLATION AND GRADING. CONTRACTOR IS RESPONSIBLE FOR SUBMITTING THE NOTICE OF INTENT AND NOTICE OF TERMINATION TO THE FDEP. CONTRACTOR IS RESPONSIBLE FOR DEVELOPING AND MAINTAINING AN EFFECTIVE STORM WATER POLLUTION PREVENTION PLAN WHICH SHALL BE SUBMITTED TO THE PROJECT MANAGER FOR REVIEW AND APPROVAL BEFORE ANY PHYSICAL WORK HAS STARTED.
12. THE CONTRACTOR SHALL ADJUST ALL FRAMES, COVERS, VALVE BOXES, MANHOLES, ECT. TO FINISHED GRADE UPON COMPLETION OF PAVING OR RELATED CONSTRUCTION. ANY SUCH ITEMS WITHIN THE PROPOSED SIDEWALK SHALL BE FLUSH WITH THE SURFACE OF THE CONCRETE (ZERO TOLERANCE).
13. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC AND USAGE OF THE EXISTING STREETS ADJACENT TO THE PROJECT, ALL TRAFFIC MAINTENANCE CONTROL SHALL BE IN ACCORDANCE WITH THE FLORIDA MANUAL OF TRAFFIC CONTROL AND SAFE PRACTICES FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE, AND UTILITY OPERATIONS AND APPROVED BY CHARLOTTE COUNTY.

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NO	DATE	DESCRIPTION
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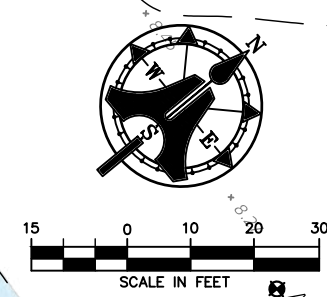
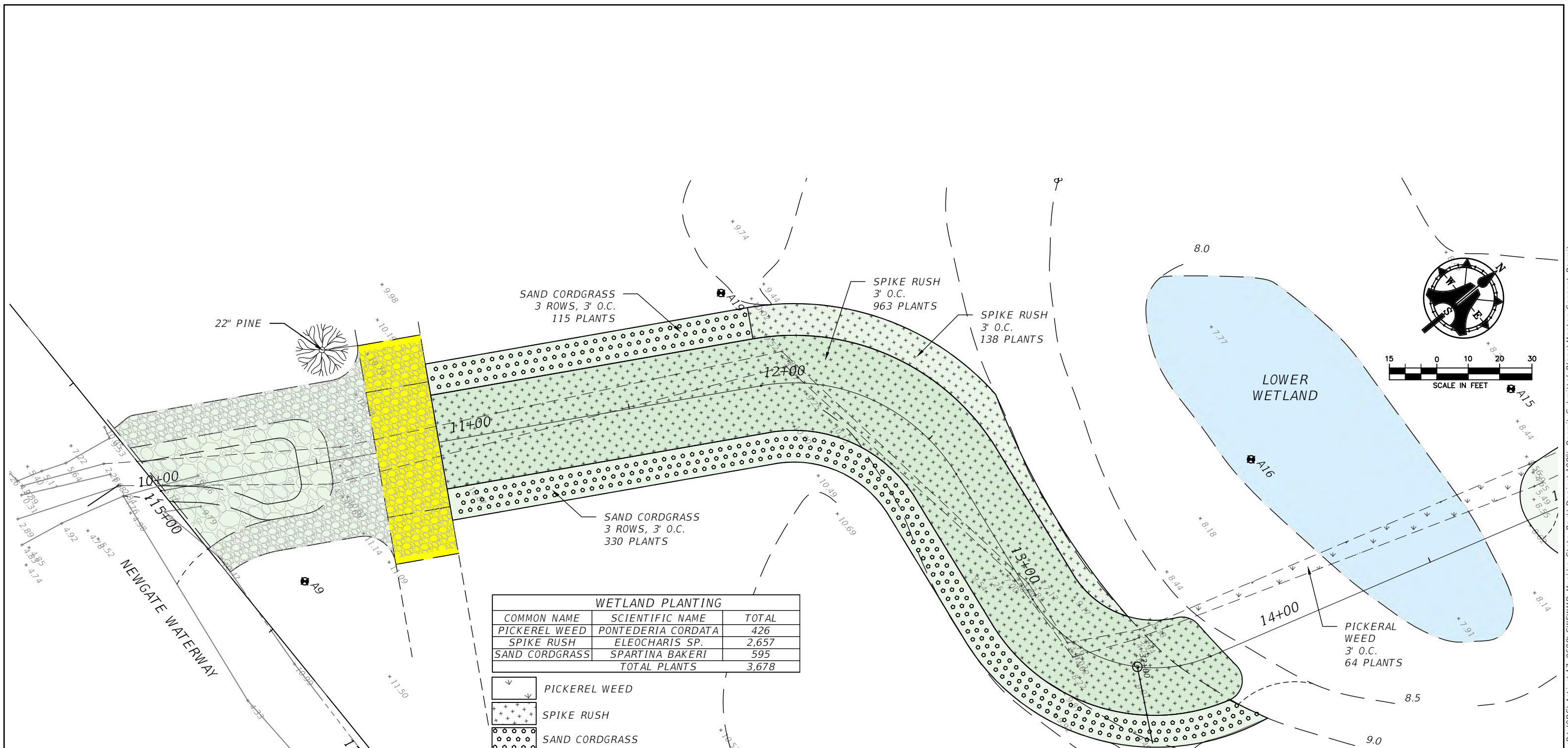
**SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT**  
 2379 BROAD STREET, BROOKSVILLE, FLORIDA  
 PHONE: (352) 796-7211 EXT. 4307

SCALE: AS-NOTED
DATE: SEP. 22, 2017
JESI/RK

**MYAKKA STATE FOREST WATER QUALITY AND BANK STABILIZATION PROJECT**  
**GENERAL AND CONSTRUCTION NOTES**

DRAWINGS ARE NOT APPROVED UNLESS SIGNED & SEALED:  
 RONALD KERFOOT, P.E.  
 P.E. LICENSE NUMBER 20768

JOB NO.: **17-0608**  
 SHEET NO.: **12**



WETLAND PLANTING		
COMMON NAME	SCIENTIFIC NAME	TOTAL
PICKEREL WEED	PONTEDERIA CORDATA	426
SPIKE RUSH	ELEOCHARIS SP.	2,657
SAND CORDGRASS	SPARTINA BAKERI	595
TOTAL PLANTS		3,678

- PICKEREL WEED
- SPIKE RUSH
- SAND CORDGRASS

NOTES:  
 PLANTING DENSITY: PLANTS SHALL BE PLANTED 3 FEET ON CENTERS.  
 PLANTING SIZE: PLANTS SHALL BE A MINIMUM OF 2 INCH LINERS OR LARGER

NO	DATE	DESCRIPTION
4		
3	4-23-19	100% PLANS
2	4-11-18	REV. SWFWMD COMMENTS
1	1-12-18	REV. SWFWMD COMMENTS

**AIM Engineering & Surveying, Inc.**  
 CIVIL ENGINEERING \* LAND SURVEYING \* S.U.E. \* TRANSPORTATION \* UTILITIES  
 \* PROJECT MANAGEMENT \* CONSTRUCTION ENGINEERING & MANAGEMENT  
 2161 FOWLER ST. FORT MYERS, FL. 33901 \* E-Mail: [engineering@aimengr.com](mailto:engineering@aimengr.com)  
 PHONE: 239-332-4569 \* CERTIFICATION OF AUTHORIZATION No. 3114

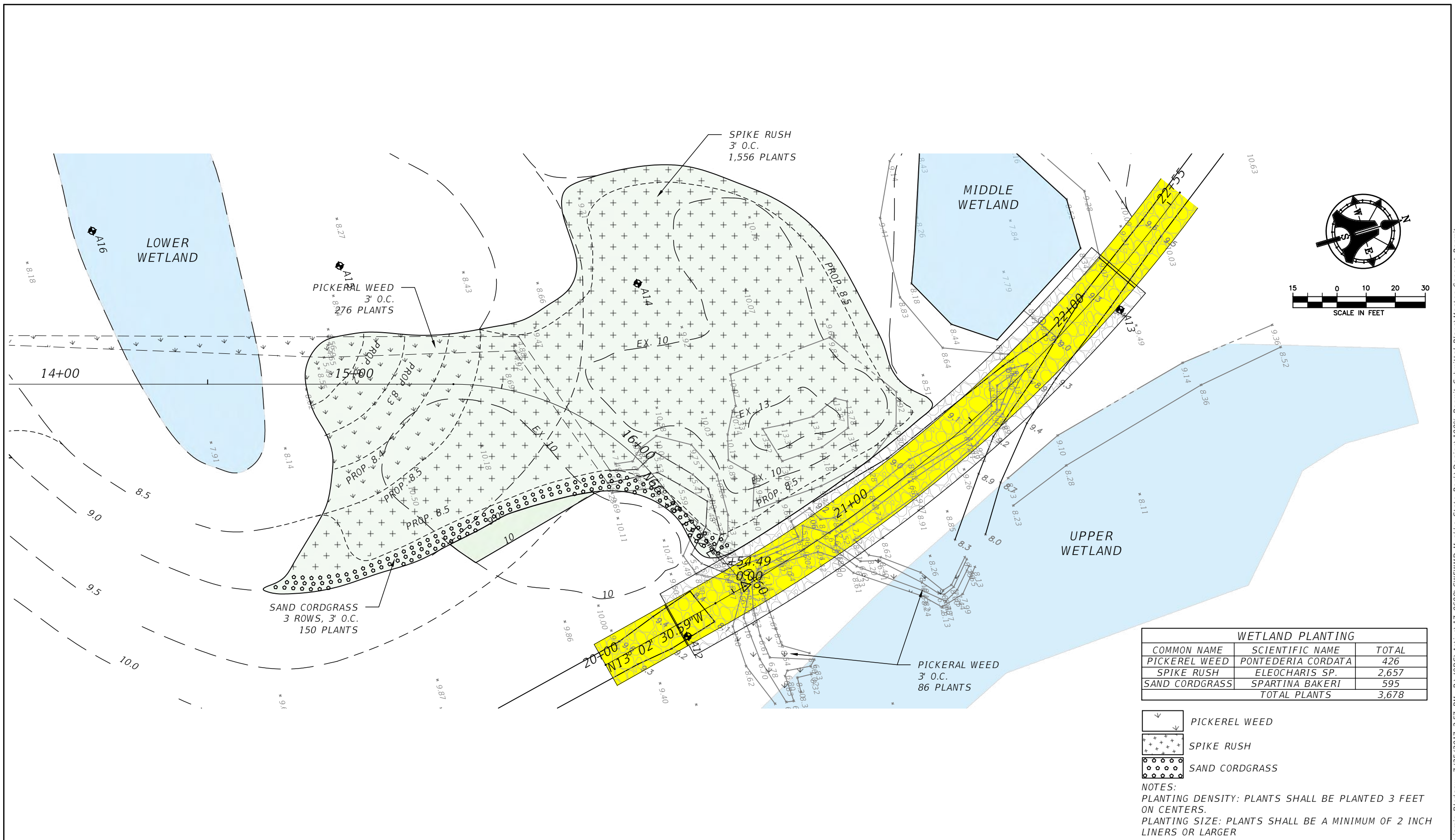
**SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT**  
 2379 BROAD STREET, BROOKSVILLE, FLORIDA  
 PHONE: (352) 796-7211 EXT. 4307

SCALE: AS-NOTED
DATE: SEP. 22, 2017
JES/RK

MYAKKA STATE FOREST  
 WATER QUALITY AND BANK STABILIZATION PROJECT  
 PLANTING PLAN 1 OF 2

DRAWINGS ARE NOT APPROVED UNLESS SIGNED & SEALED:	JOB NO.: 17-0608
RONALD KERFOOT, P.E. P.E. LICENSE NUMBER 20768	SHEET NO.: 13

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WETLAND PLANTING		
COMMON NAME	SCIENTIFIC NAME	TOTAL
PICKEREL WEED	PONTERDIA CORDATA	426
SPIKE RUSH	ELEOCHARIS SP.	2,657
SAND CORDGRASS	SPARTINA BAKERI	595
TOTAL PLANTS		3,678

-  PICKEREL WEED
-  SPIKE RUSH
-  SAND CORDGRASS

NOTES:  
 PLANTING DENSITY: PLANTS SHALL BE PLANTED 3 FEET ON CENTERS.  
 PLANTING SIZE: PLANTS SHALL BE A MINIMUM OF 2 INCH LINERS OR LARGER

NO	DATE	DESCRIPTION
4		
3	4-23-19	100% PLANS
2	4-11-18	REV. SWFWMD COMMENTS
1	1-12-18	REV. SWFWMD COMMENTS

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 2161 FOWLER ST. FORT MYERS, FL. 33901 \* E-Mail: [engineering@aimengr.com](mailto:engineering@aimengr.com)  
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**SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT**  
 2379 BROAD STREET, BROOKSVILLE, FLORIDA  
 PHONE: (352) 796-7211 EXT. 4307

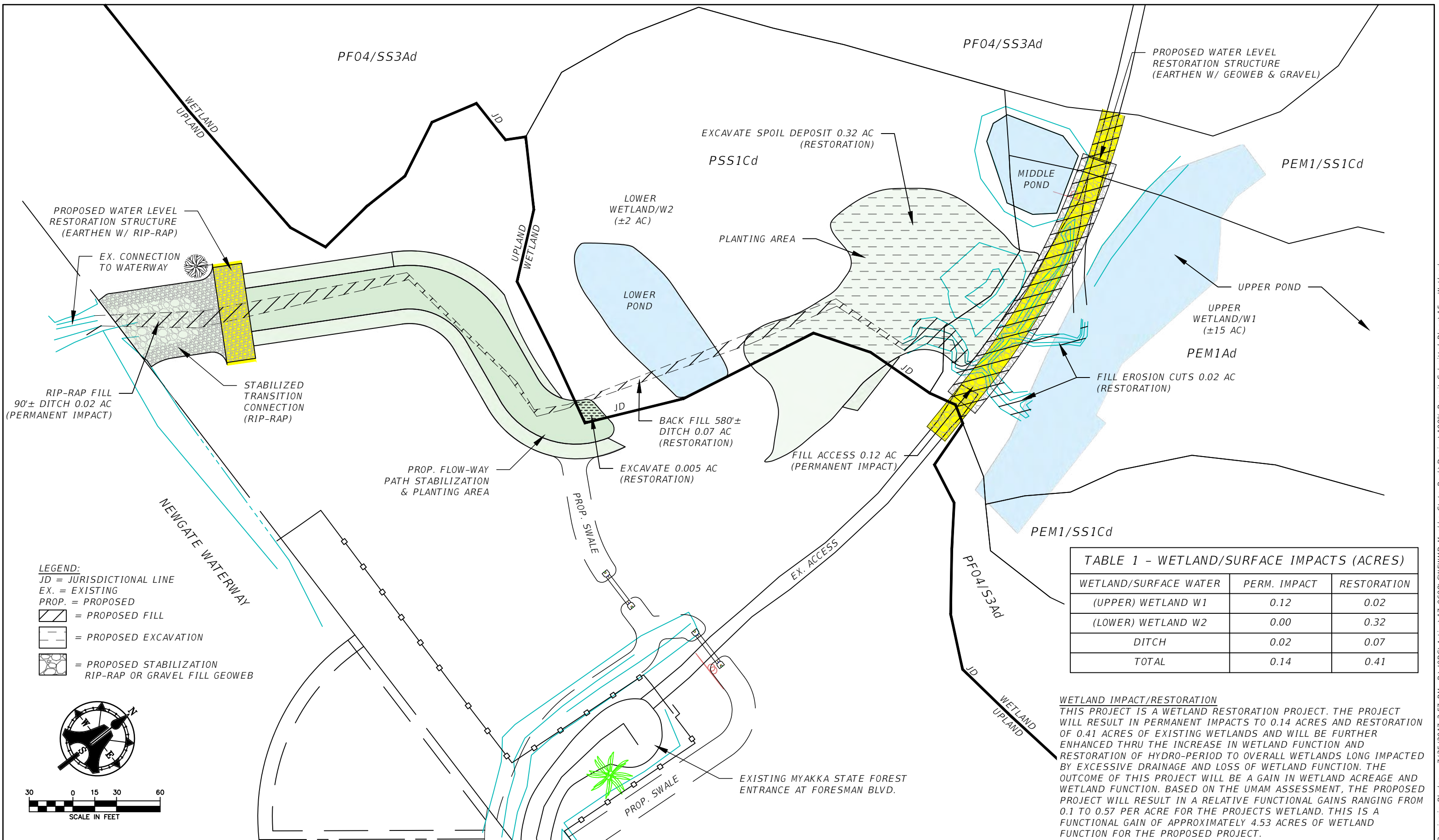
SCALE: AS-NOTED
DATE: SEP. 22, 2017
JES/RK

**MYAKKA STATE FOREST**  
 WATER QUALITY AND BANK STABILIZATION PROJECT  
 PLANTING PLAN 2 OF 2

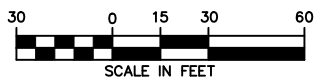
DRAWINGS ARE NOT APPROVED UNLESS SIGNED & SEALED:	JOB NO.: 17-0608
RONALD KERFOOT, P.E. P.E. LICENSE NUMBER 20768	SHEET NO.: 14

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**LEGEND:**  
 JD = JURISDICTIONAL LINE  
 EX. = EXISTING  
 PROP. = PROPOSED  
 = PROPOSED FILL  
 = PROPOSED EXCAVATION  
 = PROPOSED STABILIZATION RIP-RAP OR GRAVEL FILL GEOWEB



**TABLE 1 - WETLAND/SURFACE IMPACTS (ACRES)**

WETLAND/SURFACE WATER	PERM. IMPACT	RESTORATION
(UPPER) WETLAND W1	0.12	0.02
(LOWER) WETLAND W2	0.00	0.32
DITCH	0.02	0.07
<b>TOTAL</b>	<b>0.14</b>	<b>0.41</b>

**WETLAND IMPACT/RESTORATION**  
 THIS PROJECT IS A WETLAND RESTORATION PROJECT. THE PROJECT WILL RESULT IN PERMANENT IMPACTS TO 0.14 ACRES AND RESTORATION OF 0.41 ACRES OF EXISTING WETLANDS AND WILL BE FURTHER ENHANCED THRU THE INCREASE IN WETLAND FUNCTION AND RESTORATION OF HYDRO-PERIOD TO OVERALL WETLANDS LONG IMPACTED BY EXCESSIVE DRAINAGE AND LOSS OF WETLAND FUNCTION. THE OUTCOME OF THIS PROJECT WILL BE A GAIN IN WETLAND ACREAGE AND WETLAND FUNCTION. BASED ON THE UMAM ASSESSMENT, THE PROPOSED PROJECT WILL RESULT IN A RELATIVE FUNCTIONAL GAINS RANGING FROM 0.1 TO 0.57 PER ACRE FOR THE PROJECTS WETLAND. THIS IS A FUNCTIONAL GAIN OF APPROXIMATELY 4.53 ACRES OF WETLAND FUNCTION FOR THE PROPOSED PROJECT.

NO.	DATE	DESCRIPTION
4	4-23-19	100% PLANS
3	6-19-18	REV. NOTES
2	4-11-18	REV. SWFWMD COMMENTS
1	1-12-18	REV. SWFWMD COMMENTS

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**SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT**  
 2379 BROAD STREET, BROOKSVILLE, FLORIDA  
 PHONE: (352) 796-7211 EXT. 4307

SCALE: AS-NOTED  
 DATE: SEP. 22, 2017  
 JES/RK

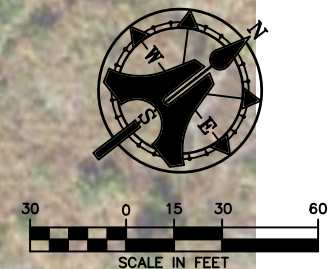
**MYAKKA STATE FOREST WATER QUALITY AND BANK STABILIZATION PROJECT**  
 JURISDICTIONAL LINES / WETLAND IMPACTS

DRAWINGS ARE NOT APPROVED UNLESS SIGNED & SEALED:  
 RONALD KERFOOT, P.E.  
 P.E. LICENSE NUMBER 20768

JOB NO.: **17-0608**  
 SHEET NO.: **15**

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**FLOW-WAY RESTORATION  
WETLAND PLANTING SHELF  
0.3 AC**

BANK STABILIZATION  
5:1 GRASSED SLOPES

REMOVE SPOIL  
DEPOSIT

MIDDLE  
WETLAND  
N.P. EL. 8.5  
H.W.L. EL. 9.0

UPPER WETLAND  
N.P. 8.5  
H.W.L. 9.0

LOWER WETLAND  
N.P. EL. 8.0  
H.W.L. EL. 8.5

RESTORATION  
WETLAND PLANTINGS  
0.3 AC

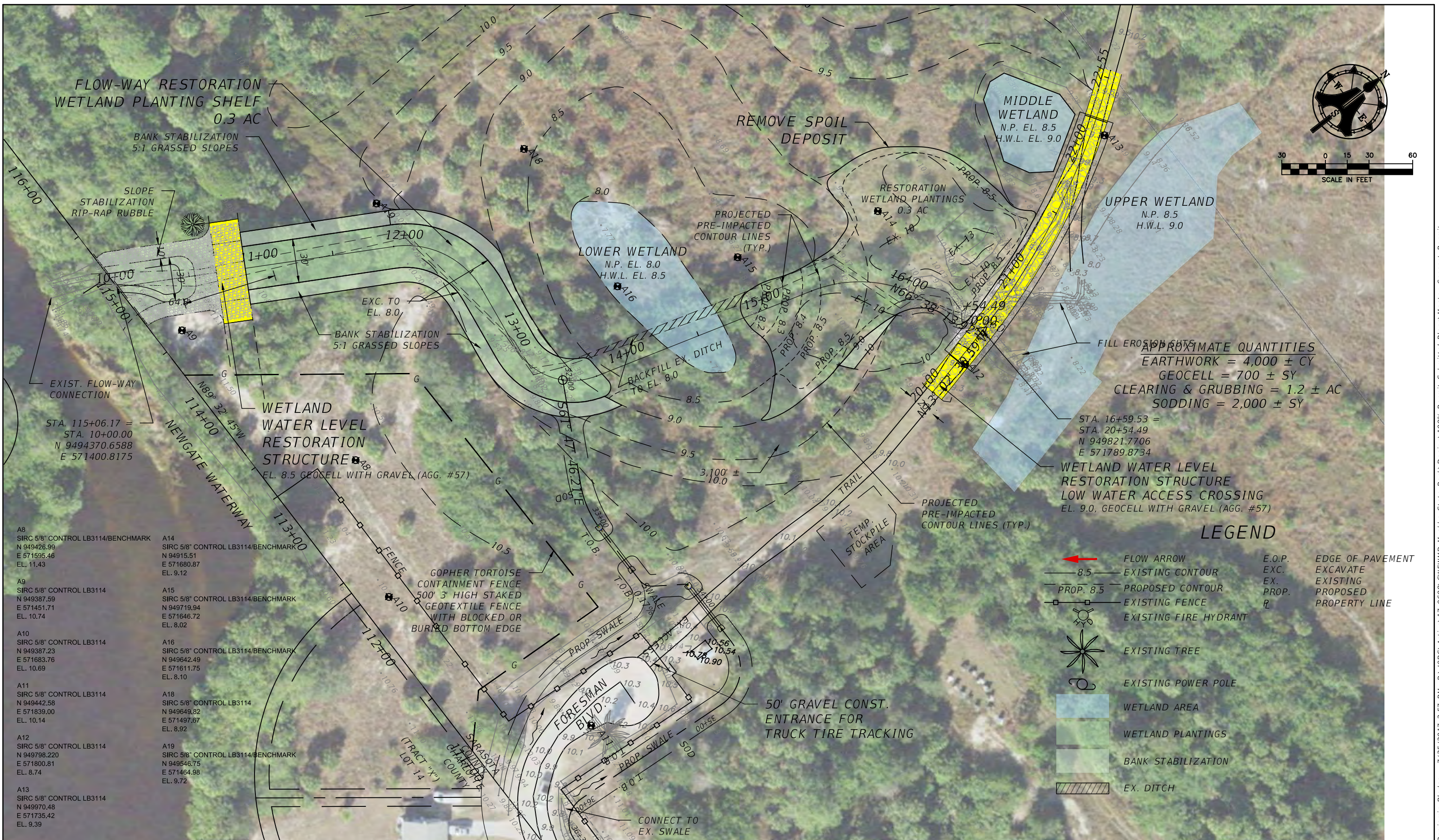
**APPROXIMATE QUANTITIES**  
EARTHWORK = 4,000 ± CY  
GEOCELL = 700 ± SY  
CLEARING & GRUBBING = 1.2 ± AC  
SODDING = 2,000 ± SY

WETLAND WATER LEVEL  
RESTORATION STRUCTURE  
LOW WATER ACCESS CROSSING  
EL. 9.0, GEOCELL WITH GRAVEL (AGG. #57)

**LEGEND**

- FLOW ARROW
- 8.5 EXISTING CONTOUR
- PROP. 8.5 PROPOSED CONTOUR
- EXISTING FENCE
- EXISTING FIRE HYDRANT
- EXISTING TREE
- EXISTING POWER POLE
- WETLAND AREA
- WETLAND PLANTINGS
- BANK STABILIZATION
- EX. DITCH
- E.O.P. EDGE OF PAVEMENT
- EXC. EXCAVATE
- EX. EXISTING
- PROP. PROPOSED
- P. PROPERTY LINE

- A8  
SIRC 5/8" CONTROL LB3114/BENCHMARK  
N 949426.99  
E 571595.46  
EL. 11.43
- A9  
SIRC 5/8" CONTROL LB3114  
N 949387.59  
E 571451.71  
EL. 10.74
- A10  
SIRC 5/8" CONTROL LB3114  
N 949387.23  
E 571683.76  
EL. 10.69
- A11  
SIRC 5/8" CONTROL LB3114  
N 949442.58  
E 571839.00  
EL. 10.14
- A12  
SIRC 5/8" CONTROL LB3114  
N 949798.220  
E 571800.81  
EL. 8.74
- A13  
SIRC 5/8" CONTROL LB3114  
N 949970.48  
E 571735.42  
EL. 9.39
- A14  
SIRC 5/8" CONTROL LB3114/BENCHMARK  
N 94915.51  
E 571680.87  
EL. 9.12
- A15  
SIRC 5/8" CONTROL LB3114/BENCHMARK  
N 949719.94  
E 571646.72  
EL. 8.02
- A16  
SIRC 5/8" CONTROL LB3114/BENCHMARK  
N 949642.49  
E 571611.75  
EL. 8.10
- A18  
SIRC 5/8" CONTROL LB3114  
N 949649.82  
E 571497.67  
EL. 8.92
- A19  
SIRC 5/8" CONTROL LB3114/BENCHMARK  
N 949546.75  
E 571464.98  
EL. 9.72



NO	DATE	DESCRIPTION
4		
3	4-23-19	100% PLANS
2	4-11-18	REV. SWFWMD COMMENTS
1	1-12-18	REV. SWFWMD COMMENTS

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**SOUTHWEST FLORIDA WATER  
MANAGEMENT DISTRICT**  
 2379 BROAD STREET, BROOKSVILLE, FLORIDA  
 PHONE: (352) 796-7211 EXT. 4307

SCALE: AS-NOTED
DATE: SEP. 22, 2017
JES/RK

MYAKKA STATE FOREST  
 WATER QUALITY AND BANK  
 STABILIZATION PROJECT  
 PROJECT AERIAL

DRAWINGS ARE NOT APPROVED UNLESS SIGNED & SEALED:	JOB NO.: <b>17-0608</b>
RONALD KERFOOT, P.E. P.E. LICENSE NUMBER 20768	SHEET NO.: <b>16</b>

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ENVIRONMENTAL ASSESSMENT  
FOR  
MYAKKA STATE FOREST WATER QUALITY  
AND BANK STABILIZATION PROJECT  
Sarasota and Charlotte Counties, Florida



July 2017

## 1.0 INTRODUCTION

This REPORT is to assist the Southwest Florida Water Management District (DISTRICT) with the design, plans preparation and permitting of the Myakka State Forest Water Quality and Bank Stabilization (PROJECT) at the southeastern corner of DISTRICT'S Myakka State Forest property. The PROJECT consists of water quality and flood improvements on the north side of Foresman Boulevard, installation of a low water crossing on a trail road to protect and preserve an existing natural wetland, [surface water outfall improvements for the existing wetland upstream of the trail](#) and approximately 650 linear feet of stream/flow-way restoration, to prevent sedimentation into Newgate and Lafitte Waterways, which flows into Oyster Creek and to Lemon Bay.

The PROJECT will result in an environmental net benefit and will focus on recovering the functions of water storage and conveyance in an impacted stream and drainage swale, and recapturing the benefits of water quality and wildlife habitat formerly provided by the impacted system in its undisturbed state.

The property is currently managed as a recreational facility by the Department of Agriculture and Consumer Services Division of Forestry. The PROJECT is located in Section 36, Township 40 South, Range 20 East, Sarasota County, Florida. **Figure 1-1**

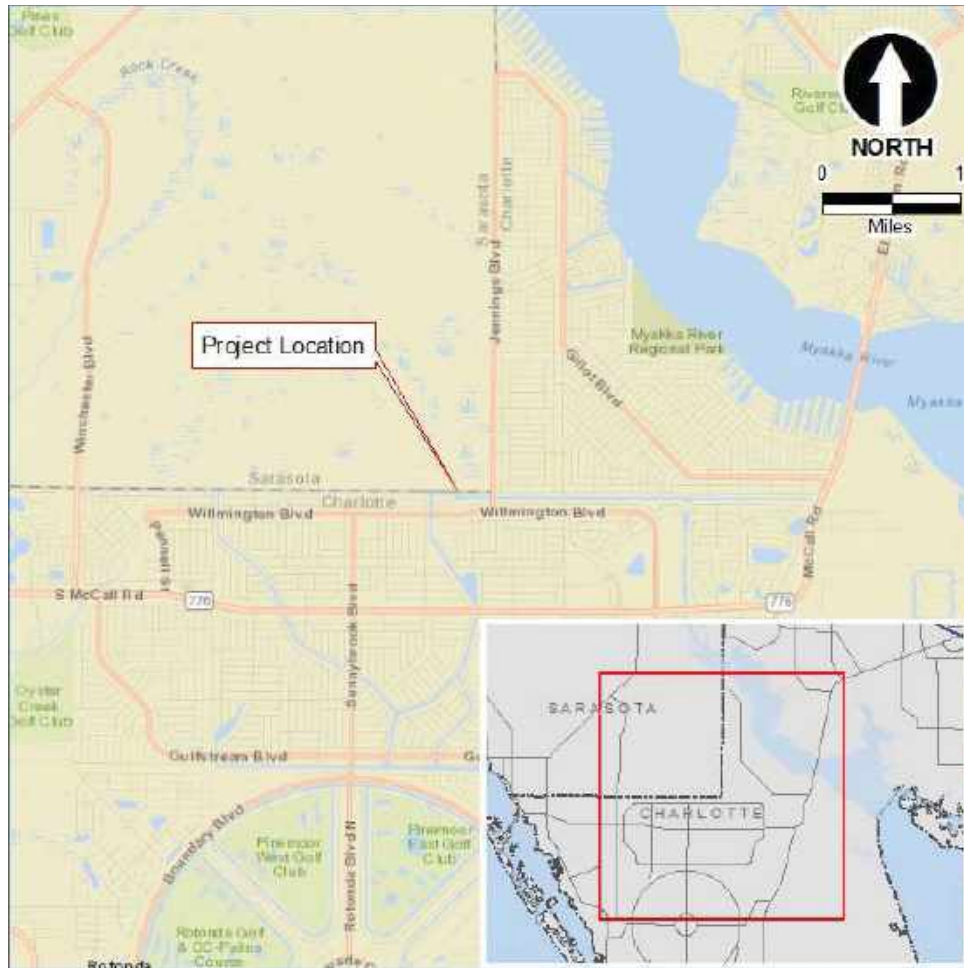


Figure 1-1

## 2.0 PRELIMINARY DATA COLLECTION

### 2.1 EXISTING AND HISTORICAL AERIALS

Historical aerial photographs were reviewed as part of the Scope to develop a history of the previous land uses and vegetative communities within the PROJECT and to identify any areas of potential restoration. Historic aerial photographs were obtained from the FDOT Aerial Photograph Look Up System (APLUS) for the years 1969, 1975, 1985, 1995, 2005, and 2014, which are provided in Appendix A.

#### 2.1.1 1969 Aerial Photograph

Jennings Blvd. and a portion of Foresman Blvd. are visible to the east of the PROJECT. The location of the Sarasota/Charlotte County line appears to be delineated by a ditch or trail. The land appears predominately in its natural vegetative communities, freshwater marshes interconnected in a broad flat flow-ways fringed by hydric and upland forests.

### **2.1.2 1975 Aerial Photograph**

Foresman Blvd. appears newly constructed within the PROJECT. The canal that parallels the Sarasota/Charlotte County line appears newly constructed. The trail extends north from Foresome Blvd is visible. Areas of disturbance are visible extending from the trail into the wetlands to either side. Broad areas of clearing also extend from Foresman and from the trail. The remainder of the project are appears undisturbed and undeveloped.

### **2.1.3 1985 Aerial Photograph**

Little change appears from the 1975 photograph. Increased vegetation along the canal and previously disturbed areas. A residence is visible at the western end of Foresman Blvd. The remainder of the project are appears undisturbed and undeveloped.

### **2.1.4 1995 Aerial Photograph**

Little change appears from the 1985 photograph. Increased vegetation along the canal and previously disturbed areas. A second residence is visible on Foresman Blvd. The remainder of the project are appears undisturbed and undeveloped.

### **2.1.5 2005 Aerial Photograph**

Little change appears from the 1995 photograph. A third residence is visible on Foresman Blvd. A fence is visible along the Myakka State Forest boundaries. The remainder of the project are appears undisturbed and undeveloped.

### **2.1.6 2015 Aerial Photograph**

The drainage “cut” is visible extending from the wetland northeast of the trail thru the wetland southwest.

## **2.2 LAND USE**

Land use was reviewed for the project and areas adjacent to the project. Residential, low-density land is located east and south of the project. Within the project area, the predominate land use/land cover is wet prairie and pine flatwoods. **Figure 2-1** depicts the 2011 SWFWMD land use and land cover classifications within the proposed project’s footprint. **Figure 2-2** depicts the 2014 NWI wetland classifications within the proposed project’s footprint.





Figure 2-1



Figure 2-2

### **4110 Pine Flatwoods**



The pine flatwoods class is dominated by slash pine. The common flatwoods understory species include saw palmetto, wax myrtle, gallberry and a wide variety of herbs and brush.

### **6430 Wet Prairie**



The wet prairie classification is composed predominately of grassy vegetation on hydric soils and is usually distinguished from marshes by having less water and shorter herbage. These communities will be predominated by one or more of the following species; sawgrass, maidencane, cordgrass, spike rushes, beach rushes, St. Johns wort, spiderlily, swamplily, yellow-eyed grass and whitetop sedge.



### **PFO4/SS3Ad-Freshwater Forested/Shrub Wetland**

Palustrine, Forested, Needle-leaved evergreen/Scrub-shrub, Broad-leaved evergreen, Temporarily flooded, Partially drained/ditched Wetland

### **PEM1/SS1Cd-Freshwater Emergent/Shrub Wetland**

Palustrine, Emergent, Persistent/Scrub-shrub, Broad-leaved deciduous, Seasonally flooded, Partially ditched/draind Wetland

### **PEM1Ad-Freshwater Emergent Wetland**

Palustrine, Emergent, Persistent/Scrub-shrub, Broad-leaved deciduous, Temporarily flooded, Partially ditched/draind Wetland

### **PSS1Cd-Freshwater Emergent/Shrub Wetland**

Palustrine, Scrub-shrub, Broad-leaved deciduous, Seasonally flooded, Partially ditched/draind Wetland

## **2.3 LISTED SPECIES**

The Endangered Species Act (ESA) of 1973, as amended, federally protects endangered and threatened species throughout their range, and the ecosystems they rely on for survival. The U.S. Fish and Wildlife Service (USFWS) determines which species are in need of federal protection under the ESA. The Florida Fish and Wildlife Conservation Commission (FWC) maintains the state list of animals designated as Federally-designated Endangered or Threatened, State-designated Threatened or State-designated Species of Special Concern, in accordance with Rules 68A-27.003, and 68A27.005, respectively, Florida Administrative Code (FAC). The State lists of plants, which are designated Endangered, Threatened, and Commercially Exploited, are administered and maintained by the Florida Department of Agriculture and Consumer Services (DOACS) via Chapter 5B-40, FAC.

The project area was evaluated for potential occurrences of federal- and state-listed protected plant and animal species. The evaluation included literature review database searches, and field assessments of the project area to identify the potential occurrences of protected species and/or presence of federal-designated critical habitat.

Field evaluation of the project area was conducted by project biologist on July 6, 2017.

Based on the evaluation of the collected data and field reviews, the federal- and state-listed species discussed below were observed as having the potential to occur within or adjacent to the project area.

### **Federal Protected**



The **eastern indigo snake** (*Drymarchon corais couperi*) is listed as threatened by the USFWS. No eastern indigo snakes were observed during field surveys. However, because areas of suitable habitat for this species occur adjacent to the project area, eastern indigo snake presence in the project area is possible. The owner will commit to implementing the USFWS Standard Protection Measures for the Eastern Indigo Snake.

The **wood stork** (*Mycteria americana*) is listed as endangered by the USFWS. The project area is located within the core foraging area (CFA) of five wood stork colonies. No wood storks were observed during field reviews the project area. Wetland impacts will be mitigated on-site.

### **State Protected**

The **gopher tortoise** (*Gopherus polyphemus*) is listed as threatened by the FWC. Several gopher tortoise burrows were observed during the field review, suitable habitat is limited to the areas of spoil located along the northern edge of the canal and Foresman Blvd.

The **bald eagle** (*Haliaeetus leucocephalus*) is listed as threatened by the FWC. No nests were observed within the project area. A documented nest is located approximately 2.5 miles north of the project.

The **Florida sandhill crane** (*Grus Canadensis pratensis*) is listed as threatened by the FWC. No nests were observed within the project area, however, suitable habitat for nesting and foraging is present within the project area.

The **limpkin** (*Aramus guarauna*), **little blue heron** (*Egretta caerulea*), **reddish egret** (*Egretta rufescens*), **snowy egret** (*Egretta thula*), **tricolored heron** (*Egretta tricolor*), **white ibis** (*Eudocimus albus*), and **roseate spoonbill** (*Platalea ajaia*) are listed as species of special concern by the FWC. No nests were observed within the project area, however, suitable habitat for nesting and foraging is present within the project area.

The **Florida scrub-jay** (*Aphelocoma coerulescens*), **black skimmer** (*Rynchops niger*), **brown pelican** (*Pelecanus occidentalis*), **burrowing owl** (*Athene cunicularia*), and **American oystercatcher** (*Haematopus palliatus*) are listed as species of special concern by the FWC. These species was not observed during field reviews and their preferred nesting habitat is not present within the project area.

### **3.0 PERMITTING**

The Southwest Florida Water Management District (SWFWMD) and U.S. Army Corps of Engineers (USACE) regulate works or other activities in, on or over wetlands and/or other surface waters within the project study area and will issue permits for this project. Other agencies, including the U.S. Fish and Wildlife Service (USFWS), the Florida Department of Environmental Protection (FDEP), and the Florida Fish and Wildlife Conservation Commission (FWC) review and comment on wetland permitting and potential affects to listed wildlife species.

AIM will prepare permit applications and pursue approval for the proposed restoration improvements. An AIM scientist will assist in preparing certain specific permit applications for the proposed restoration PROJECT. AIM will prepare the required application forms and supporting documents to submit the following anticipated regulatory permit applications:

- Florida Department of Environmental Protection (FDEP) Environmental Resource Permit for Restoration
- U.S. Army Corps of Engineer (USACE) Nationwide 27 Permit
- Sarasota County approval for restoration work as an exemption for maintenance activity
- Charlotte County approval for restoration work as an exemption for maintenance activity

CONSULTANT will also perform Request for Additional Information (RAI) coordination, and prepare responses to the above regulatory agencies regarding items submitted in the Applications. An AIM scientist will assist in RAI coordination and prepare responses regarding items submitted in the applications with FDEP, USACE, and other commenting agencies.

### **3.1 EVALUATION OF DESIGN**

**TBD**

### **3.2 WETLAND IMPACTS/MITIGATION**

**TBD**

### **4.0 CONCLUSIONS, COMMITMENTS, AND RECOMMENDATIONS**

**TBD**



2014





2005







1995





1985

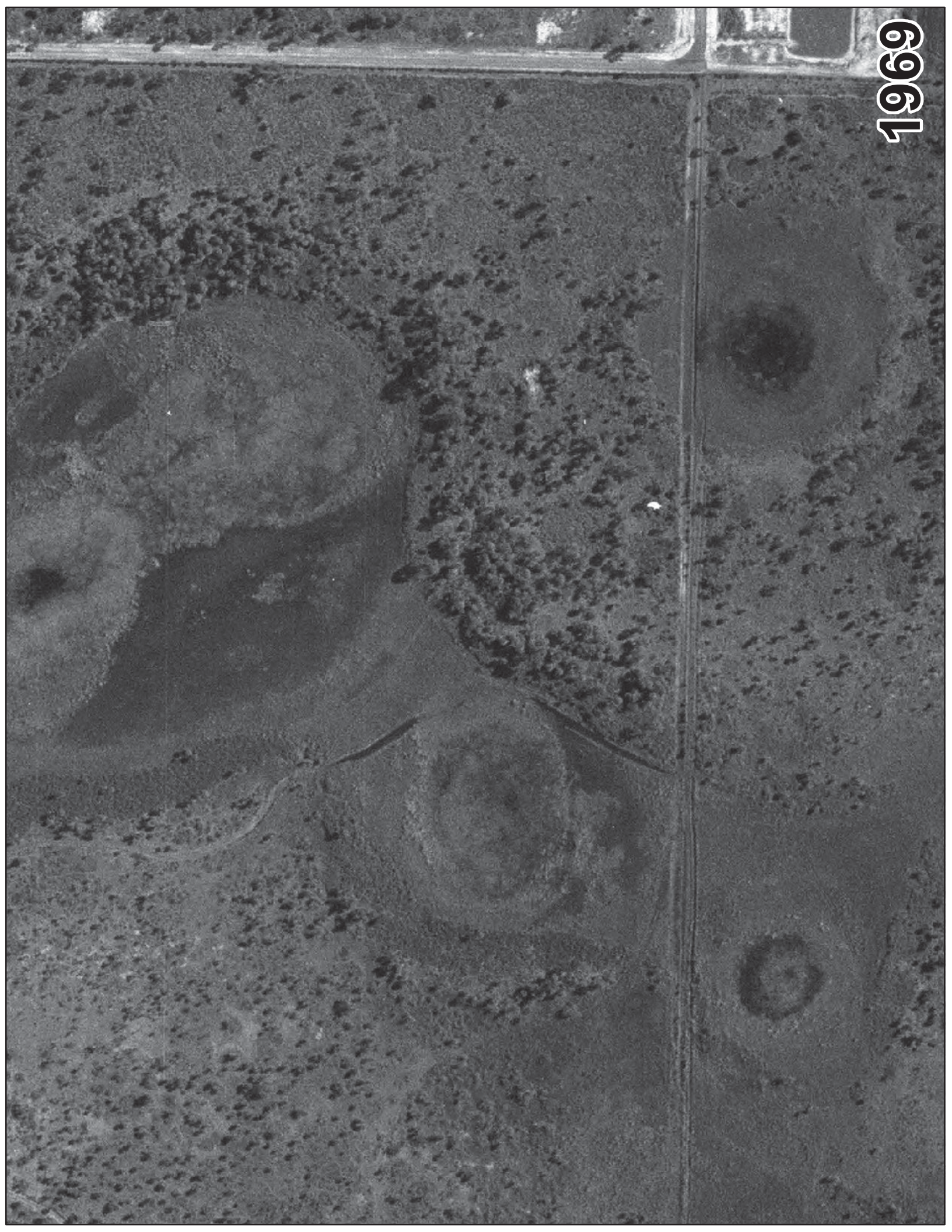




1975



1969







**Legend**  
2017\_07\_07\_Photos



Source: Esri, DigitalGlobe, GeoEye, Earthstar, Earthstar, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Photograph 1



Photograph 2





Photograph 3



Photograph 4





Photograph 5



Photograph 6





Photograph 7



Photograph 8





Photograph 9



Photograph 10





Photograph 11



Photograph 12





Photograph 13



Photograph 14





Photograph 15



Photograph 16





Photograph 17



Photograph 18





Photograph 19



Photograph 20





Photograph 21



Photograph 22





Photograph 23



Photograph 24

