

MAY 19, 2020

PUBLIC NOTICE

Permit Application Number SAJ-2019-01916(SP-MRE)

TO WHOM IT MAY CONCERN: The Jacksonville District of the U.S. Army Corps of Engineers (Corps) has received an application for a Department of the Army permit pursuant to Section 404 of the Clean Water Act (33 U.S.C. §1344) as described below:

APPLICANT: Jacksonville Electric Authority (JEA)
21 West Church Street
Jacksonville, Florida 32202

WATERWAY AND LOCATION: The project would affect waters of the United States (wetlands) associated with Big Davis Creek. The project site is located approximately 0.5 mile southeast of the intersection of State Road 9B and E-Town Parkway (Duval County Property Appraiser Parcel Identification Number 167779-0050) in Sections 8, 9, 16, 17, and 42, Township 4 South, Range 28 East, Jacksonville, Duval County, Florida. Access to the site affects wetlands encompassed by a portion of Duval County Property Appraiser Parcel Identification Number 167872-0310.

APPROXIMATE CENTRAL COORDINATES: Latitude 30.159175
Longitude -81.502100

PROJECT PURPOSE:

Basic: The basic project purpose is the establishment of a Water Reclamation Facility (WRF).

Overall: The overall project purpose is the establishment of a WRF to supplement services provided by existing JEA regional WRFs; and, provide additional treatment capacity to meet health and sanitation needs in south Duval County and north St. Johns County.

EXISTING CONDITIONS:

General: The majority of the Greenland WRF parcel and entry corridor currently are managed for silviculture operations, which covers approximately 72 percent of the total site. The forested and herbaceous wetlands on the property, except for the creek floodplain, have been altered to varying degrees by silviculture activities. Approximately 19 percent of the site encompasses wetlands altered by silviculture; however, less than 9 percent of the site encompasses natural wetlands. Due to the extensive, historic silviculture management, slash pine (*Pinus elliottii*) is the dominant species on approximately 89 percent of the total site. Most of the site is relatively flat at elevation 22 to 25 feet North American Vertical Datum (NGVD 1988); however, elevations drop 5 to 8 feet as the site slopes moderately toward Big Davis Creek to the northwest and toward perimeter wetlands (Powers Bay) to the southwest of the site. No excavated ditches are evident on the property. Drainage appears to be overland flow toward the low-lying areas of the site, creek, and swamps with groundwater percolation in low spots.

Soils: The project site encompasses five soil types identified by the *Natural Resources Conservation Service*. These soil types are *Leon fine sand, 0 to 2 percent slopes* (map unit 32), *Evergreen-Wesconnett complex, depressional, 0 to 2 percent slopes* (map unit 22), *Hurricane and Ridgewood soils, 0 to 5 percent slopes* (map unit 24), *Lynn Haven fine sand, 0 to 2 percent slopes* (map unit 35), and *Ortega fine sand, 0 to 5 percent slopes* (map unit 46). The proposed WRF project footprint would be located on *Leon fine sand*, which currently supports pine plantation. The soil type associated primarily with the floodplain of the creek and tributary is *Evergreen-Wesconnett complex, depressional*. Transitional areas between the floodplains and the pine plantation are somewhat aligned with the mapped areas of *Lynn Haven fine sand*. Wetlands on the site occur in four of the five soil types mapped on site, however, only two of these soil types (*Evergreen-Wesconnett complex, depressional* and *Lynn Haven fine sand*) have hydric characteristics. The general locations of these soils are depicted on the project drawings.

Vegetative Communities: The overall JEA property encompasses seven communities characterized by the *Florida Land Use, Cover, and Forms Classification System* (FLUCFCS). These communities are *Upland Pine Plantation* (FLUCFCS code 4410), *Xeric Oak* (FLUCFCS code 4210), *Wet Prairies* (FLUCFCS code 6430), *Mixed Wetland Hardwoods* (FLUCFCS code 6170), *Hydric Pine Flatwoods* (FLUCFCS code 6250), *Wetland Forested Mixed* (FLUCFCS code 6300), and *Cypress* (FLUCFCS code 6210). These areas support flora typical for the communities identified. The general locations of these communities are depicted on the project drawings.

PROPOSED WORK:

The applicant seeks authorization to eliminate a total of 15.48 acres of wetlands to establish an entrance road (affecting 2.02 acres of wetlands) and a WRF facility (affecting 13.46 acres of wetlands). The work associated with the establishment of the access road affects a channelized section of Big Davis Creek and contiguous wetlands. The work associated with the establishment of the WRF affects wet prairie, hydric pine flatwoods, cypress, and mixed forested wetland communities, all of which have been previously affected by silviculture activities.

This new facility would supplement JEA's regional wastewater treatment and reclaimed water supply network. The treatment processes, facilities, and buildings are based on the recently constructed Blacks Ford WRF. The major facilities associated with the Greenland WRF includes, but is not limited to, grease removal; odor control system using bio-trickling filter technology; biological nutrient removal system; re-aeration blowers; secondary clarifier flow splitting structure; return activated sludge/waste activated sludge pump station and dewatering; ultraviolet disinfection; effluent transfer pump station; reclaimed water storage tanks and distribution pump station; plant drain pump station; aerobic digestion; chemical building and feed system; reject water storage and pump station; storage pond to accept off-specification reclaimed water; operations and maintenance buildings; and an all-weather access road. One or more offsite transmission pipelines would be incorporated into the final design.

AVOIDANCE AND MINIMIZATION INFORMATION – The applicant has provided the following information in support of efforts to avoid and/or minimize impacts to the aquatic environment:

The WRF has been designed to avoid jurisdictional wetlands to the greatest extent practicable. Wetlands encompassed by the site total 49.60 acres; and, the applicant indicates that the project cannot avoid work affecting 15.48 acres. The only access to the site is from Apex Drive.

However, the WRF access drive would cross the tributary/wetland at its narrowest point. On the WRF site, forested wetlands associated with Big Davis Creek and an associated tributary would be avoided. However, for the WRF to function efficiently, it must be a contiguous campus; as such, the applicant indicates that upstream wetlands that extend into the center of the main site cannot be avoided. The applicant expressed an opinion that these wetlands have been significantly disturbed by pine plantation land use; and, that work affecting highly functioning wetlands has been minimized to the extent possible.

COMPENSATORY MITIGATION – The applicant has offered the following compensatory mitigation plan to offset unavoidable functional loss to the aquatic environment:

As compensatory mitigation for unavoidable work affecting wetlands and the associated loss of wetland functions and services, the applicant would purchase mitigation bank credits at a federally authorized mitigation bank with a service area encompassing the project site.

CULTURAL RESOURCES:

On April 30, 2019, the applicant sent a request for cultural resources data for the project site and a 1-mile buffer area to the *Florida Master Site File* (FMSF) for previously conducted cultural resource investigations and previously recorded cultural resources. The applicant's development team also examined historical maps and aerial photographs to identify past land use in the vicinity of the study area. The review of cultural resources data obtained from the FMSF indicated that no prior cultural resource surveys have been conducted at the site. The applicant's development team, separately, did not identify cultural resources during a site visit in April 2019; however, an onsite systematic survey has not been conducted. One previously recorded archaeological site, 12 field surveys, and 27 previously recorded historic structures are located within the 1-mile buffer area. According to the FMSF, "[the] search area may contain unrecorded archaeological sites, historical structures or other resources even if previously surveyed for the cultural resources." However, because of the previous agricultural ground disturbing activities on the property, the applicant expressed an opinion that the likelihood that extant cultural resources exist within the site is low.

Separately, the Corps is not aware of any known historic properties within the permit area. By copy of this public notice, the Corps is providing information for review. Our final determination relative to historic resource impacts is subject to review by and coordination with the State Historic Preservation Officer and those federally recognized tribes with concerns in Florida and the Permit Area.

ENDANGERED SPECIES:

Red Cockaded Woodpecker (*Picoides borealis*): The project site is approximately 1.5 miles from the nearest identified nest or cluster location for Red Cockaded Woodpecker (#1681); and, within the consultation area identified by the U.S. Fish and Wildlife Service (FWS) and the Corps for this species. Habitat for Red Cockaded Woodpecker typically incorporates mature pine woodlands (not wetlands); and, optimal habitat is characterized as a broad savanna with a scattered overstory of large pines and a dense groundcover containing a diversity of grass and shrub species. Nesting and roosting occur in cavity trees that are almost exclusively old, living, flat-topped pine trees. The project site does not encompass typical or optimum habitat; or, trees capable of supporting cavities. It is likely that this species, if present, only opportunistically forages at the site. However, as significant forested habitat is located near the project site, the Corps concludes that the project would have *no effect* on this species.

Wood Stork (*Mycteria americana*): Wood Storks nest in colonies (rookeries); and, roost and feed in flocks. Stork breeding populations in Florida trend in the central and southern counties with a few scattered northeastern Florida counties. The stork uses freshwater and estuarine wetlands as feeding, nesting, and roosting sites. Storks feed primarily on small fish in calm, uncluttered water depths between 2- to 15-inches deep. Often a dropping water level is needed to concentrate fish in an area to feed; conversely, a rise in water reduces the value of a site as feeding habitat. Generally, drying marshes, stock ponds, shallow roadside or agricultural ditches, narrow tidal creeks or shallow tidal pools, depressions in cypress swamps or sloughs provide the ideal feeding habitat. Most nesting colonies in the southeastern U.S. are located in woody vegetation over standing water or on islands surrounded by broad expanses of open water, including areas that have been impounded by man-made structures, although this is only for a short period of time. The project is approximately 5 miles from the Dee Dot Ranch (594004) Wood Stork colony and within the *Core Foraging Area* of that colony; however, the project would not affect suitable foraging habitat for Wood Storks. In consideration of this information, the Corps utilized *The Corps of Engineers, Jacksonville District, U.S. Fish and Wildlife Service, Jacksonville Ecological Services Field Office and State of Florida Effect Determination Key for the Wood Stork in Central and North Peninsular Florida, September 2008*, to determine potential effects upon this species. Use of this key resulted in the sequence A-B-no effect.

Eastern Indigo Snake (*Drymarchon corais couperi*): Eastern Indigo Snake frequents several habitat types, including pine flatwoods, scrubby flatwoods, high pine, dry prairie, tropical hardwood hammocks, edges of freshwater marshes, agricultural fields, coastal dunes, and human-altered habitats. Therefore, this species could utilize the area encompassed by the ESA scope of analysis for this project. Gopher tortoise (*Gopherus polyphemus*) burrows are commonly utilized as refuge from winter cold and/or desiccating conditions in xeric habitats; and, hollowed root channels, hollow logs, or burrows of rodents, armadillo (*Dasypus novemcinctus*), or land crabs (*Cardisoma guanhum*) provide shelter in wetter habitats. A recent evaluation of the project site identified only two active gopher tortoise burrows. One location would be affected by the WRF project construction; however, the other is on the JEA property but outside of the limits of construction and would not be affected. Prior to clearing or grubbing of tortoise-occupied habitat, a state-issued gopher tortoise relocation permit from the Florida Fish and Wildlife Conservation Commission (FWC) would be obtained. In consideration of the potential presence of eastern indigo snake habitat, the Corps utilized *The Eastern Indigo Snake Programmatic Effect Determination Key, August 2013*. Use of this key resulted in the sequence A-B-C-D-E-may affect, but is not likely to adversely affect, as the applicant has agreed to implement the *Standard Protection Measures for the Eastern Indigo Snake, August 12, 2013*. The FWS has indicated that they concur with determinations of *may affect, not likely to adversely affect* based on the key for eastern indigo snakes; and, that no additional consultation is necessary.

The Corps executed a Resources At Risk (RAR) report. The RAR did not indicate that the site is utilized by, or contains habitat critical to, any other federally listed threatened or endangered species. The Corps also reviewed geospatial data and other available information. The Corps has not received or discovered any information that the project site is utilized by, or contains habitat critical to, any other federally listed threatened or endangered species.

ESSENTIAL FISH HABITAT (EFH): This notice initiates consultation with the National Marine Fisheries Service on EFH as required by the Magnuson-Stevens Fishery Conservation and Management Act 1996. The project would not affect marine nor estuarine habitat or EFH. Our

initial determination is that the proposed action would not adversely affect EFH or federally managed fisheries in the St. Johns River. Our final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the National Marine Fisheries Service.

NOTE: This public notice is being issued based on information furnished by the applicant. This information has not been verified or evaluated to ensure compliance with laws and regulation governing the regulatory program. The Corps previously finalized an Approved Jurisdictional Determination, which verified the extent of Federal jurisdiction at the site.

AUTHORIZATION FROM OTHER AGENCIES: Water Quality Certification may be required from the Florida Department of Environmental Protection and/or one of the state Water Management Districts.

COMMENTS regarding the potential authorization of the work proposed should be submitted in writing to the attention of the District Engineer through the Jacksonville Permits Section, Post Office Box 4970, Jacksonville, Florida 32232 within 21 days from the date of this notice.

The decision whether to issue or deny this permit application will be based on the information received from this public notice and the evaluation of the probable impact to the associated wetlands. This is based on an analysis of the applicant's avoidance and minimization efforts for the project, as well as the compensatory mitigation proposed.

QUESTIONS concerning this application should be directed to the project manager, Mark R. Evans, in writing at the Jacksonville Permits Section, Post Office Box 4970, Jacksonville, Florida 32232; by electronic mail at mark.r.evans@usace.army.mil; by facsimile transmission at (904)232-1940; or, by telephone at (904)232-2028. **Please note, due to office staffing precautions associated with CoVid-19, electronic mail correspondence is preferred.**

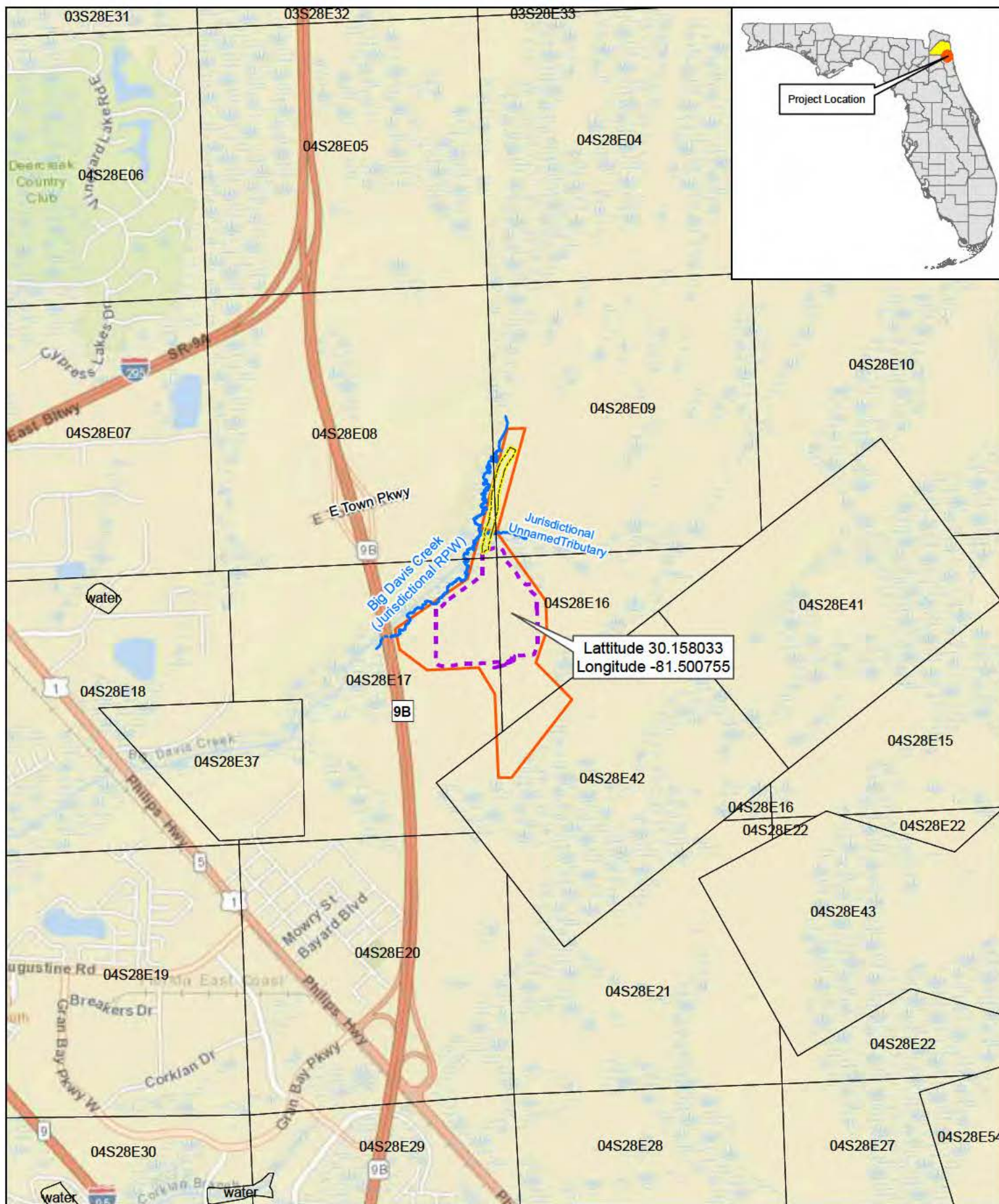
IMPACT ON NATURAL RESOURCES: Coordination with U.S. Fish and Wildlife Service, Environmental Protection Agency (EPA), the National Marine Fisheries Services, and other Federal, State, and local agencies, environmental groups, and concerned citizens generally yields pertinent environmental information that is instrumental in determining the impact the proposed action will have on the natural resources of the area.

EVALUATION: The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including cumulative impacts thereof; among these are conservation, economics, esthetics, general environmental concerns, wetlands, historical properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food, and fiber production, mineral needs, considerations of property ownership, and in general, the needs and welfare of the people. Evaluation of the impact of the activity on the public interest will also include application of the guidelines promulgated by the Administrator, EPA, under authority of Section 404(b) of the Clean Water Act or the criteria established under authority of Section 102(a) of the Marine Protection Research and Sanctuaries Act of 1972. A permit will be granted unless its issuance is found to be contrary to the public interest.

The US Army Corps of Engineers (Corps) is soliciting comments from the public; Federal, State, and local agencies and officials; Indian Tribes; and other Interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this determination, comments are used to assess impacts to endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

COASTAL ZONE MANAGEMENT CONSISTENCY: In Florida, the State approval constitutes compliance with the approved Coastal Zone Management Plan. In Puerto Rico, a Coastal Zone Management Consistency Concurrence is required from the Puerto Rico Planning Board. In the Virgin Islands, the Department of Planning and Natural Resources permit constitutes compliance with the Coastal Zone Management Plan.

REQUEST FOR PUBLIC HEARING: Any person may request a public hearing. The request must be submitted in writing to the District Engineer within the designated comment period of the notice and must state the specific reasons for requesting the public hearing.



LEGEND

- Township Range Section
- Entrance Road Footprint (7.80 ac)
- Project Footprint (71.21 ac)
- Relatively Permanent Water (RPW)
- Property Boundary (182.72 ac)

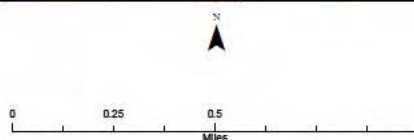
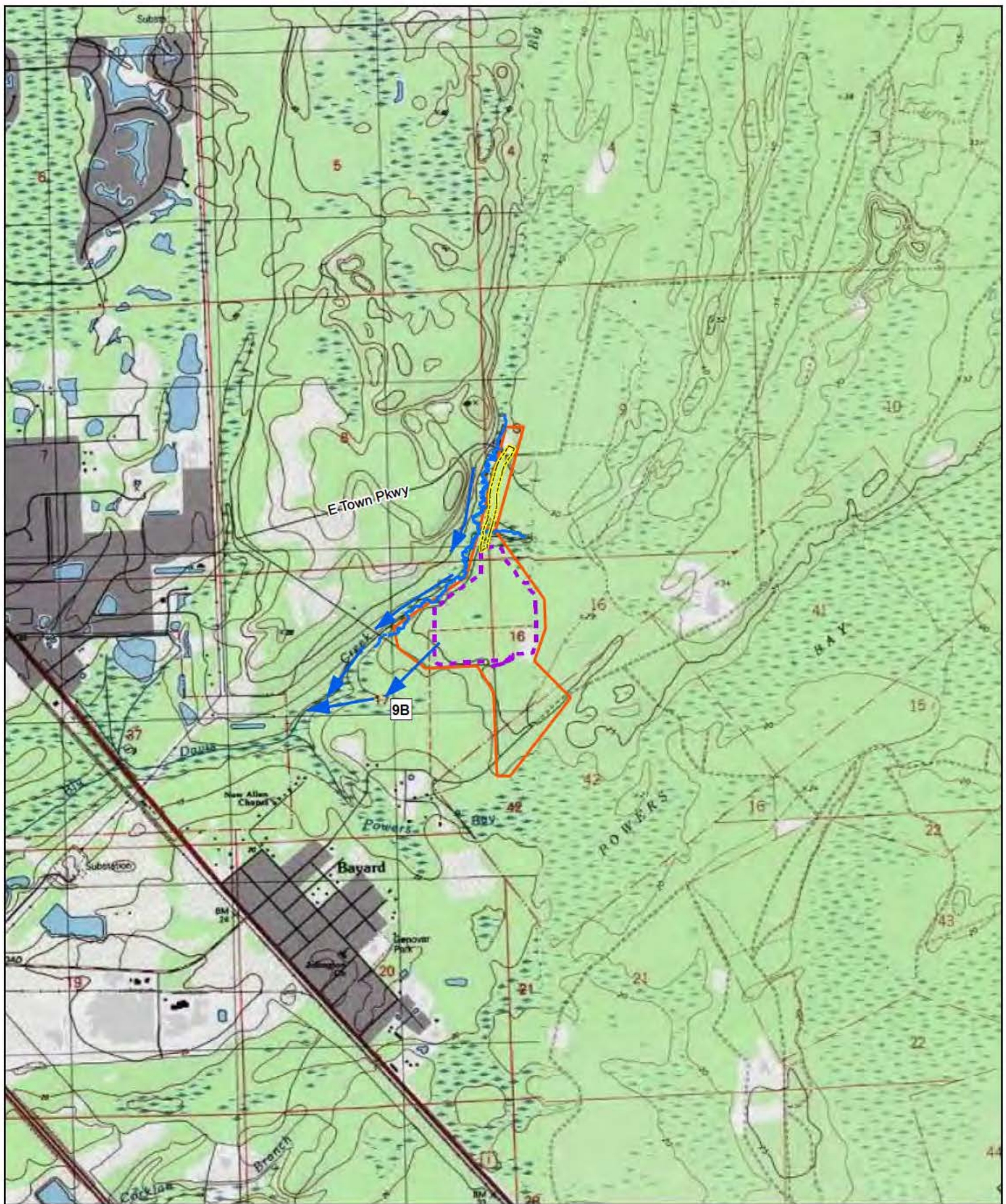


Figure 1. Project Location Map
JEA Greenland WRF
Duval County, Florida



- LEGEND**
- WOUS Direction of Flow
 - Entrance Road Footprint (7.80 ac)
 - Project Footprint (71.21 ac)
 - Relatively Permanent Water (RPW)
 - Property Boundary (182.72 ac)

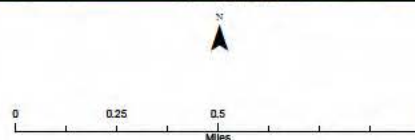
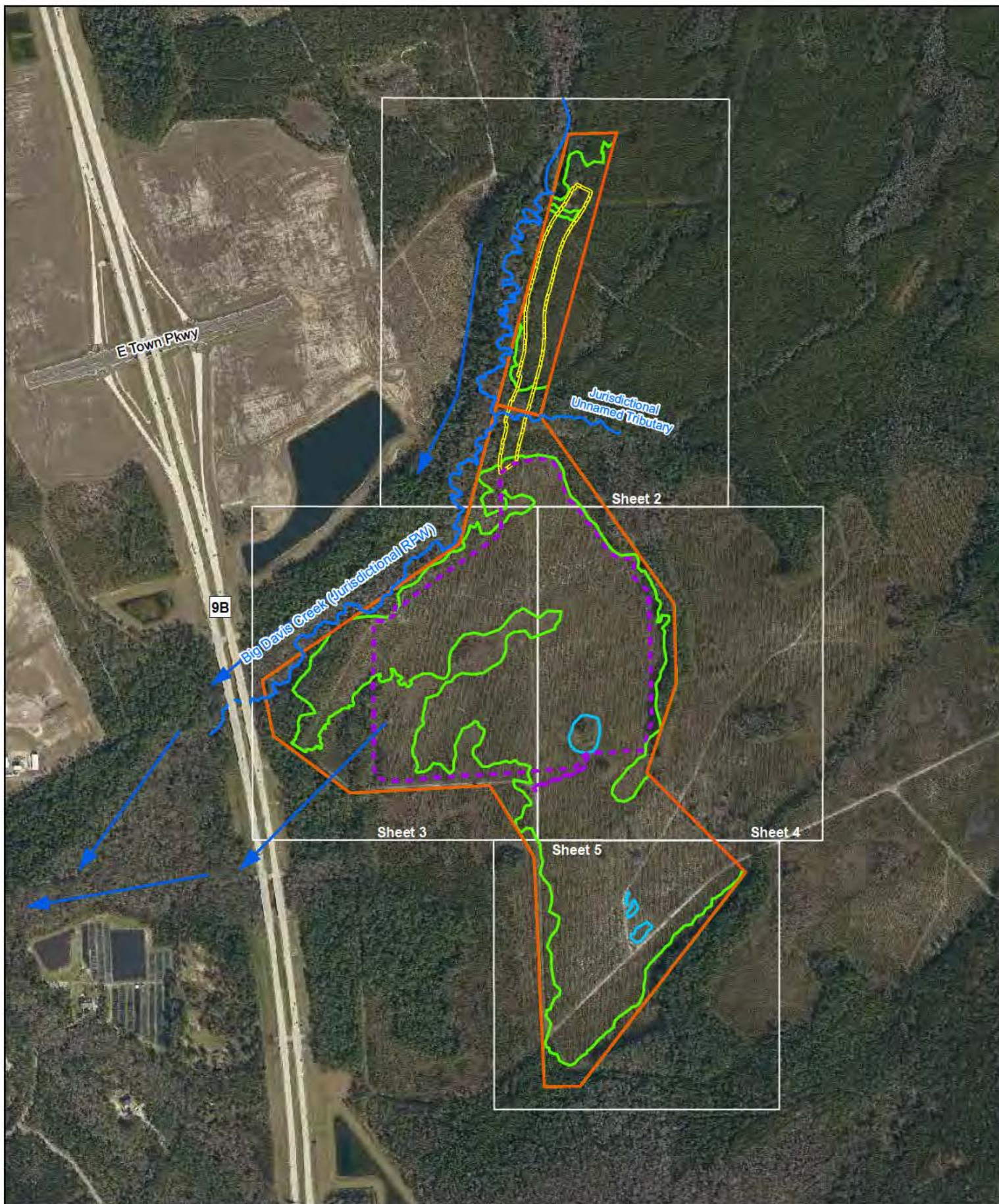


Figure 2. USGS US Topo
7.5 Quad, Bayard, FL
JEA Greenland WRF
Duval County, Florida



LEGEND

- Relatively Permanent Water (RPW)
- WOUS Direction of Flow
- Property Boundary (182.72 ac)
- Project Footprint (71.21 ac)
- Entrance Road Footprint (7.80 ac)

Wetlands

- USACE and FDEP Wetland (49.29 ac)
- USACE-Only Wetland (0.33 ac)
- FDEP-Only Wetland (1.49 ac)

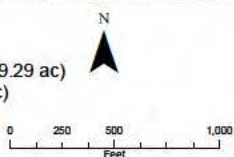
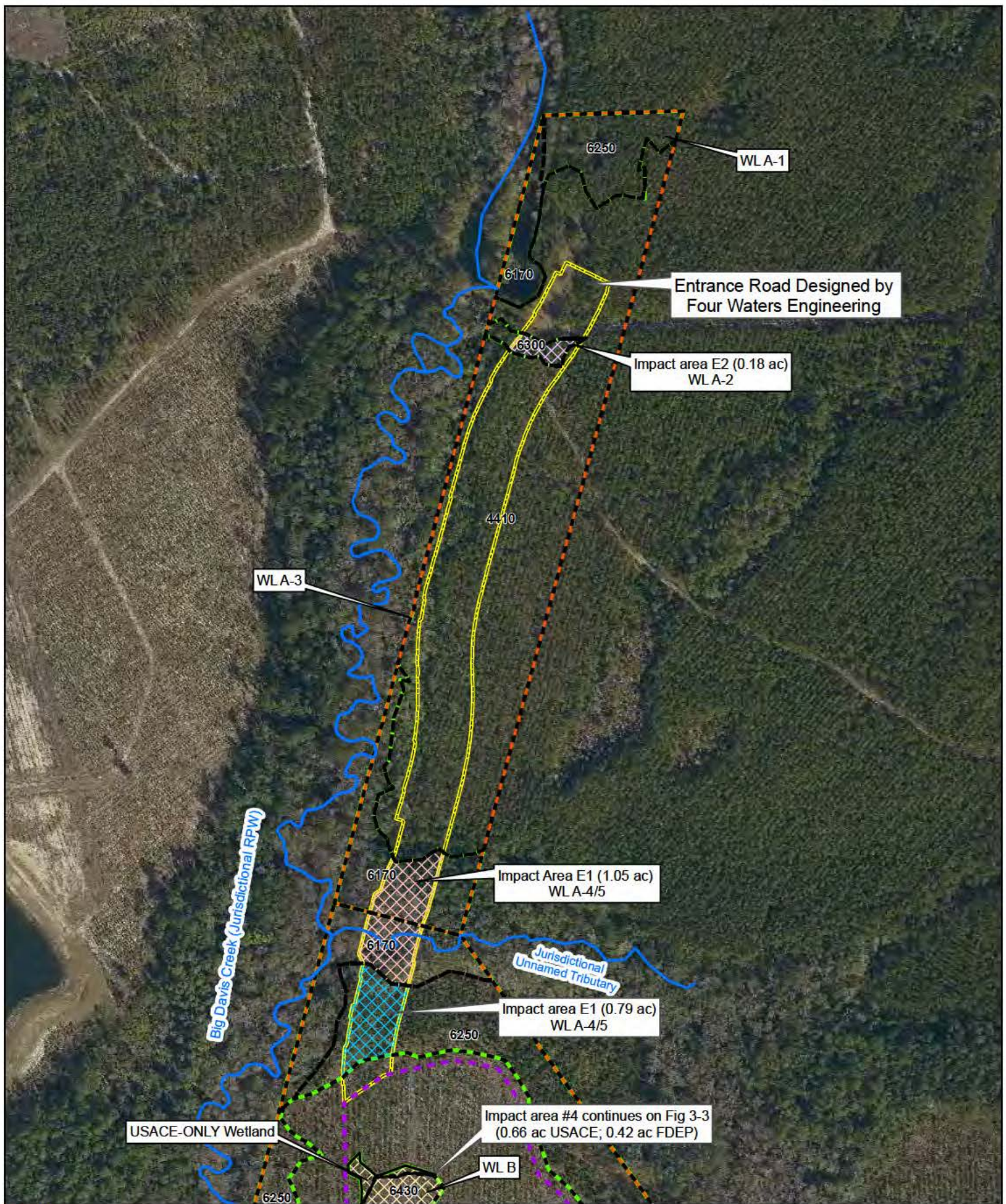


Figure 3-1. USACE Jurisdictional Wetlands
JEA Greenland WRF
Duval County, Florida



LEGEND

Relatively Permanent Water (RPW)	Wetland Impact Areas by FLUCCS 6170	Wetland Boundary
FLUCCS	6210	
Property Boundary (182.72 ac)	6250	
Project Footprint (71.21 ac)	6300	
Entrance Road Footprint (7.80 ac)	6430	

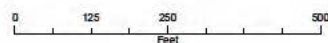


Figure 3 - 2 . Wetland Impact Areas
JEA Greenland WRF
Duval County, Florida



LEGEND

Relatively Permanent Water (RPW)	Wetland Impact Areas by FLUCCS 6170	Wetland Boundary
FLUCCS	6210	
Property Boundary (182.72 ac)	6250	
Project Footprint (71.21 ac)	6300	
Entrance Road Footprint (7.80 ac)	6430	

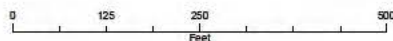


Figure 3 - 3 . Wetland Impact Areas
JEA Greenland WRF
Duval County, Florida

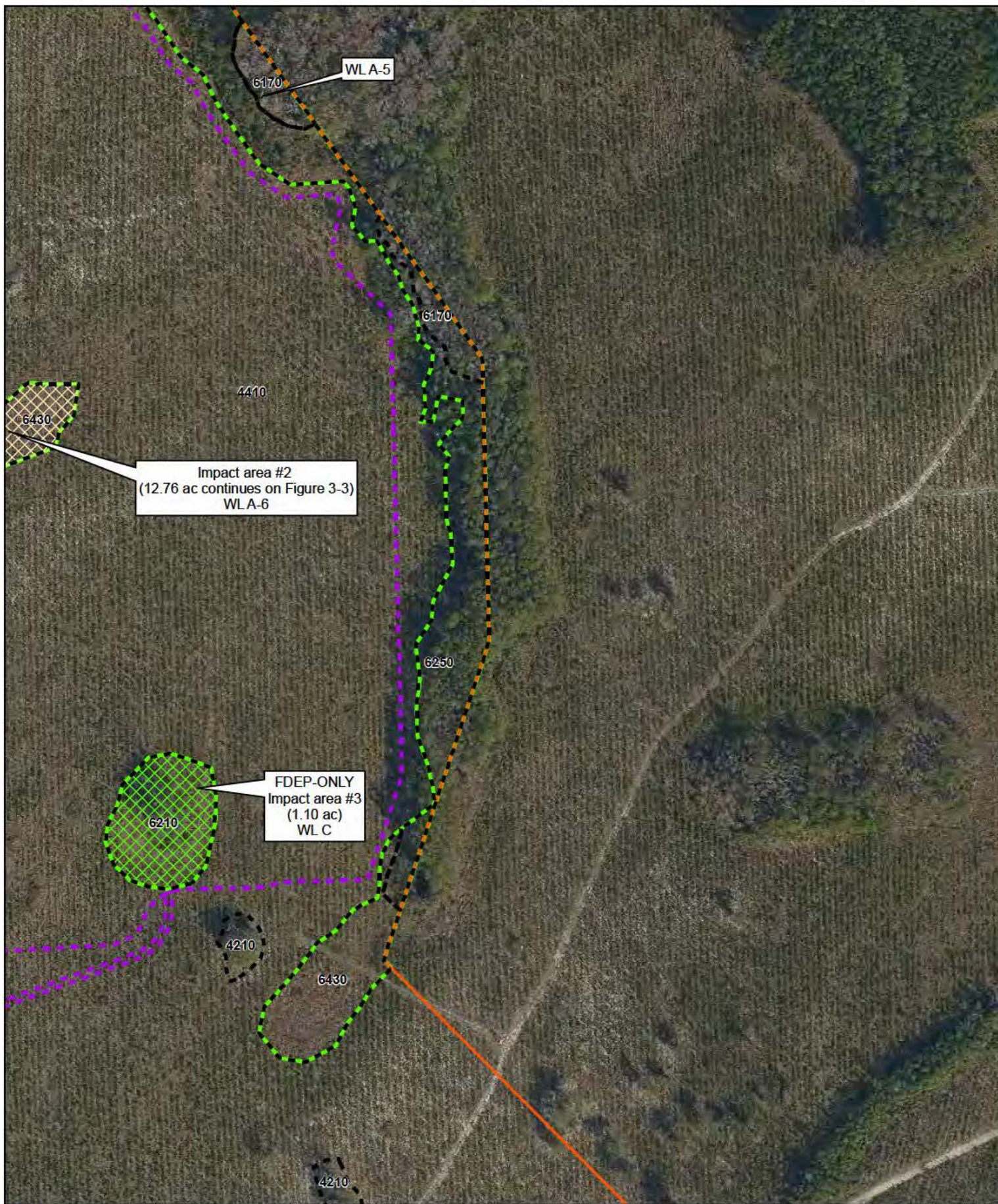
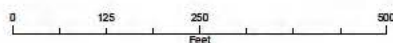
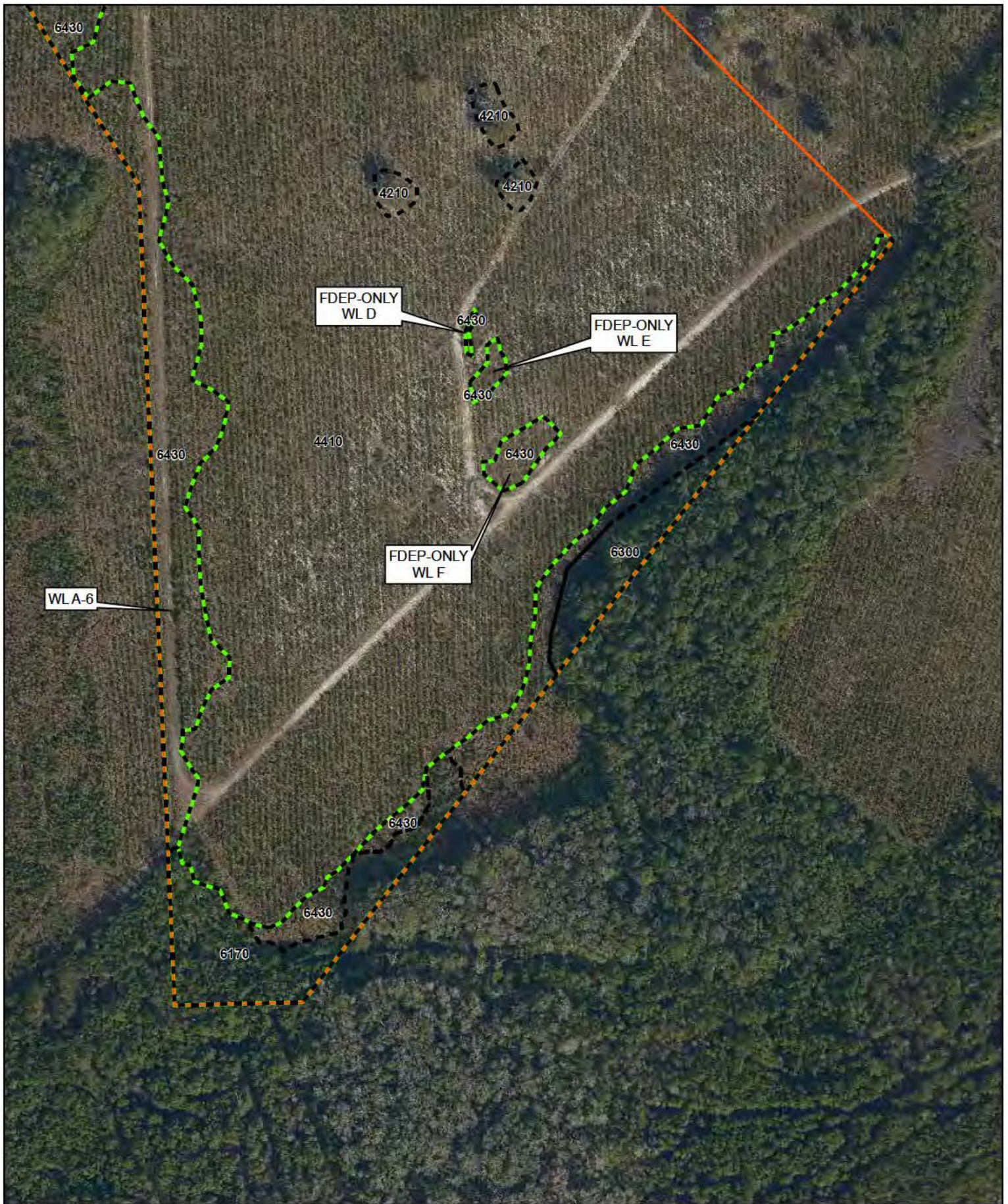


Figure 3 - 4 . Wetland Impact Areas
JEA Greenland WRF
Duval County, Florida





LEGEND

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| <ul style="list-style-type: none"> Relatively Permanent Water (RPW) FLUCCS Property Boundary (182.72 ac) Project Footprint (71.21 ac) Entrance Road Footprint (7.80 ac) | <p>Wetland Impact Areas by FLUCCS</p> <ul style="list-style-type: none"> 6170 6210 6250 6300 6430 | <ul style="list-style-type: none"> Wetland Boundary |
|--|--|--|

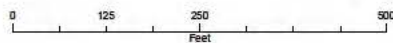
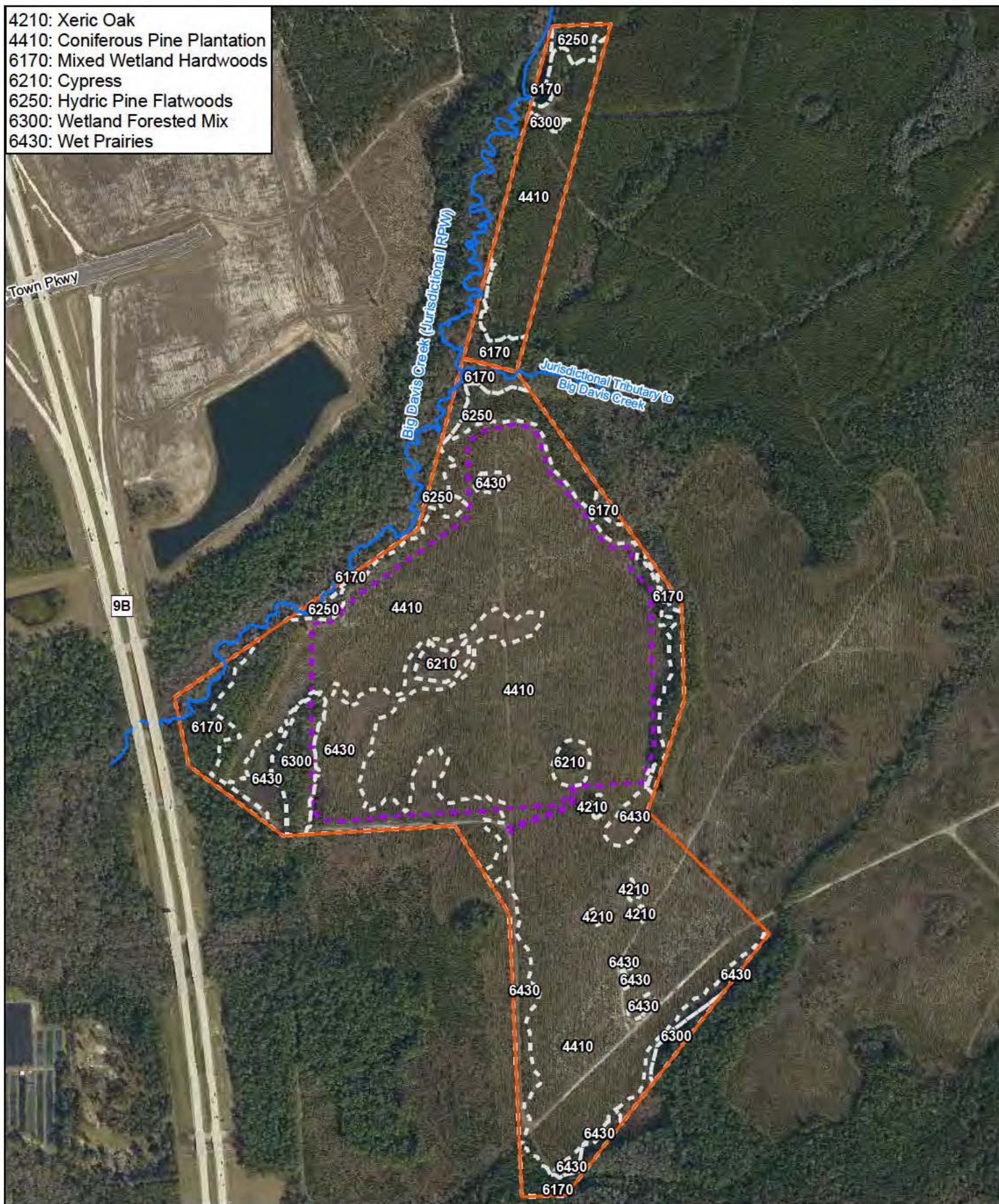


Figure 3 - 5 . Wetland Impact Areas
JEA Greenland WRF
Duval County, Florida

4210: Xeric Oak
 4410: Coniferous Pine Plantation
 6170: Mixed Wetland Hardwoods
 6210: Cypress
 6250: Hydric Pine Flatwoods
 6300: Wetland Forested Mix
 6430: Wet Prairies

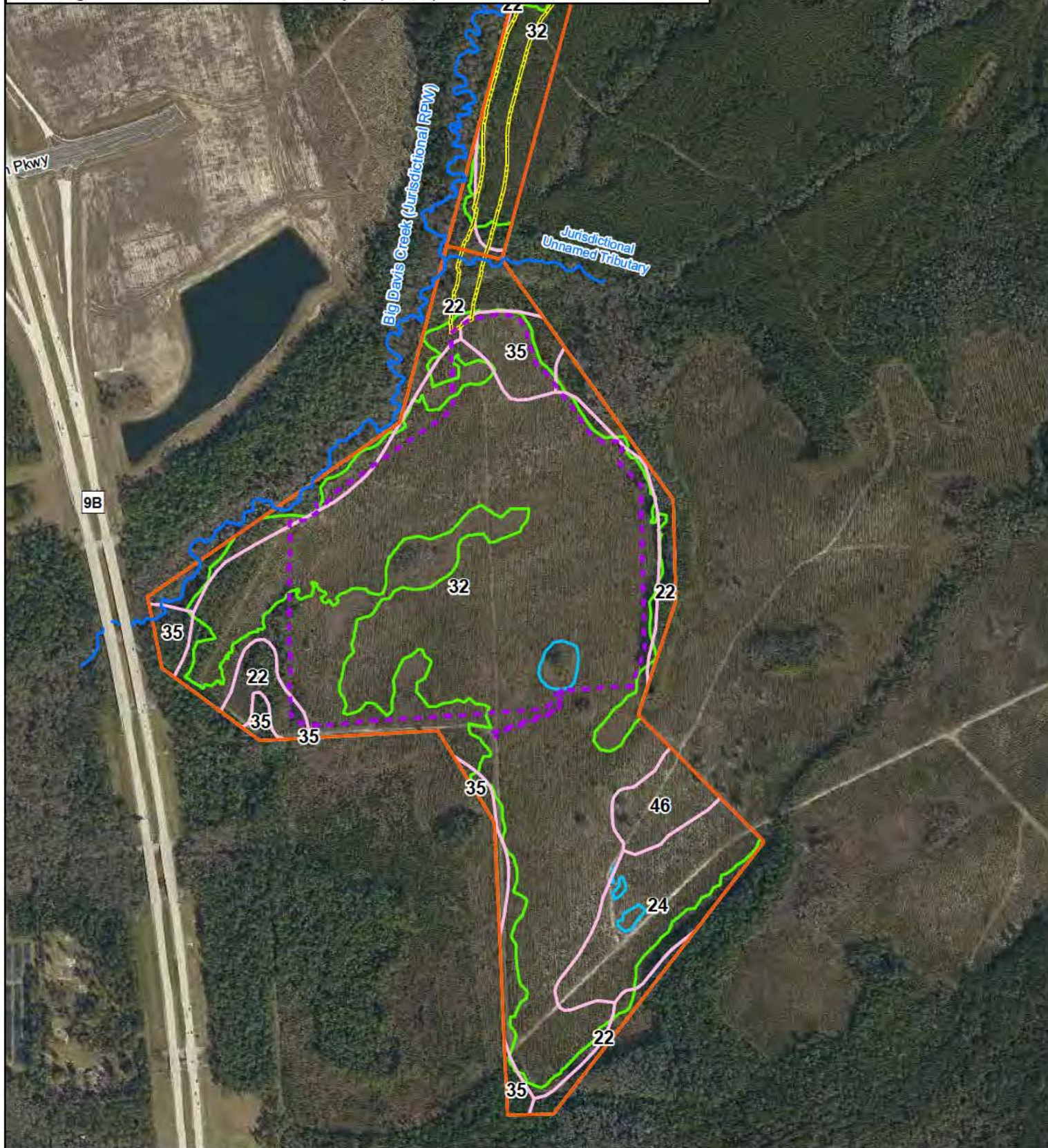


LEGEND
 Blue line: Relatively Permanent Water
 Orange line: Property Boundary (182.72)
 Dashed orange line: SJRWMD FLUCCS
 Purple dashed line: Project Footprint (71.21)

Figure 4. SJRWMD FLUCCS Map
 JEA Greenland WRF
 Duval County, Florida
 2017 Aerial



22: Evergreen-Wesconnett Complex, Depressional, 0 to 2 Percent Slopes (98%, A/D)
 24: Hurricane and Ridgewood Soils, 0 to 5 Percent Slopes (2%, A)
 32: Leon Fine Sand, 0 to 2 Percent Slopes (8%, A/D)
 35: Lynn Haven Fine Sand, 0 to 2 Percent Slopes (96%, A/D)
 46: Ortega Fine Sand, 0 to 5 Percent Slopes (0%, A)



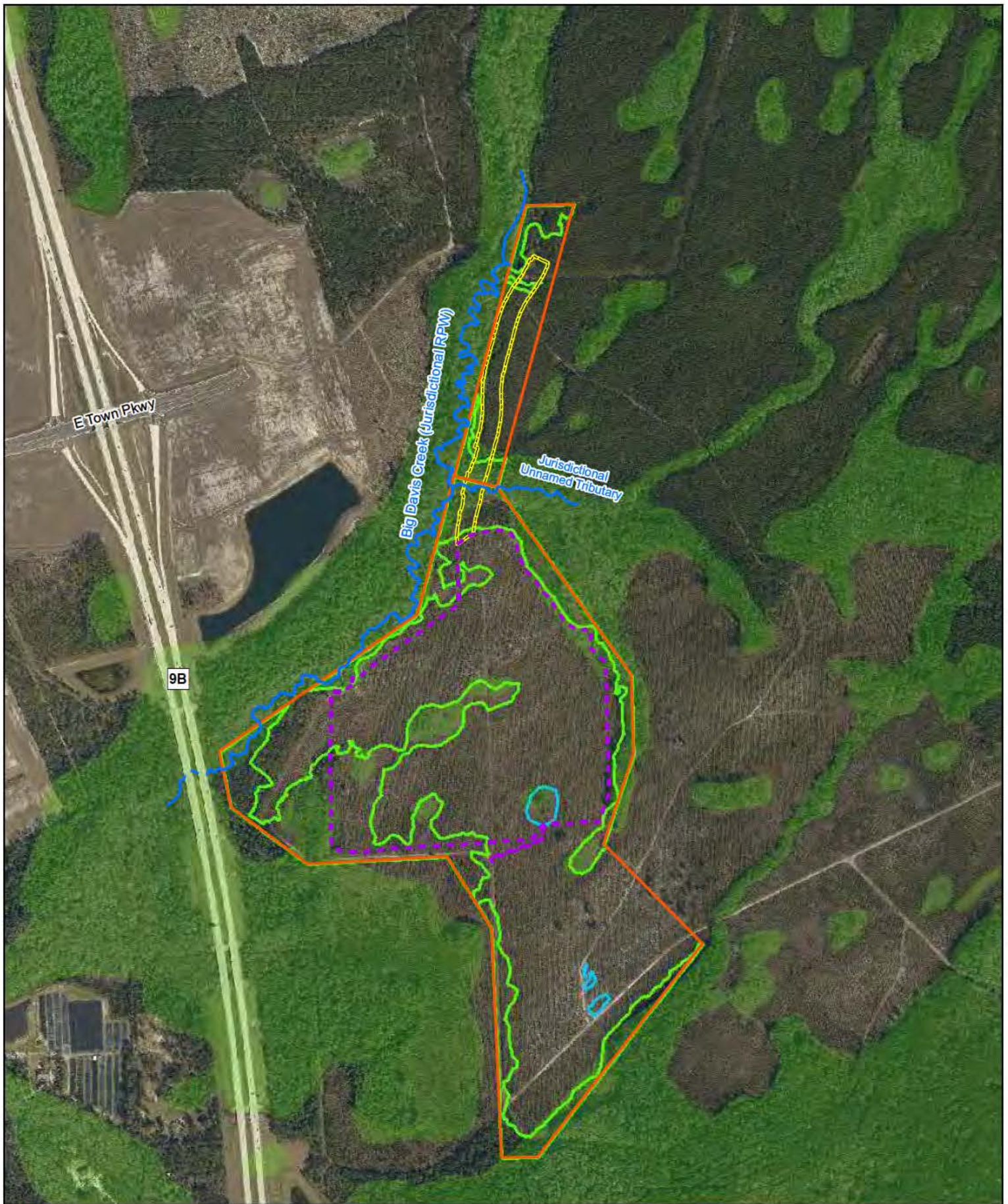
LEGEND

- Relatively Permanent Water (RPW)
- Property Boundary (182.72 ac)
- - - Project Footprint (71.21 ac)
- - - Entrance Road Footprint (7.80 ac)
- Natural Resources Conservation Service (NRCS)

Wetlands

- USACE and FDEP Wetland (49.29 ac)
- USACE-Only Wetland (0.33 ac)
- FDEP-Only Wetland (1.51 ac)

Figure 5. NRCS Hydric Soil Survey Map
 JEA Greenland WRF
 Duval County, Florida



- LEGEND**
- Relatively Permanent Water (RPW)
 - Property Boundary (182.72 ac)
 - Project Footprint (71.21 ac)
 - Entrance Road Footprint (7.80 ac)
 - National Wetland Inventory (NWI) 2018

Wetlands

- USACE and FDEP Wetland (49.29 ac)
- USACE-Only Wetland (0.33 ac)
- FDEP-Only Wetland (1.51 ac)

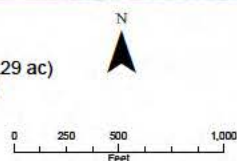
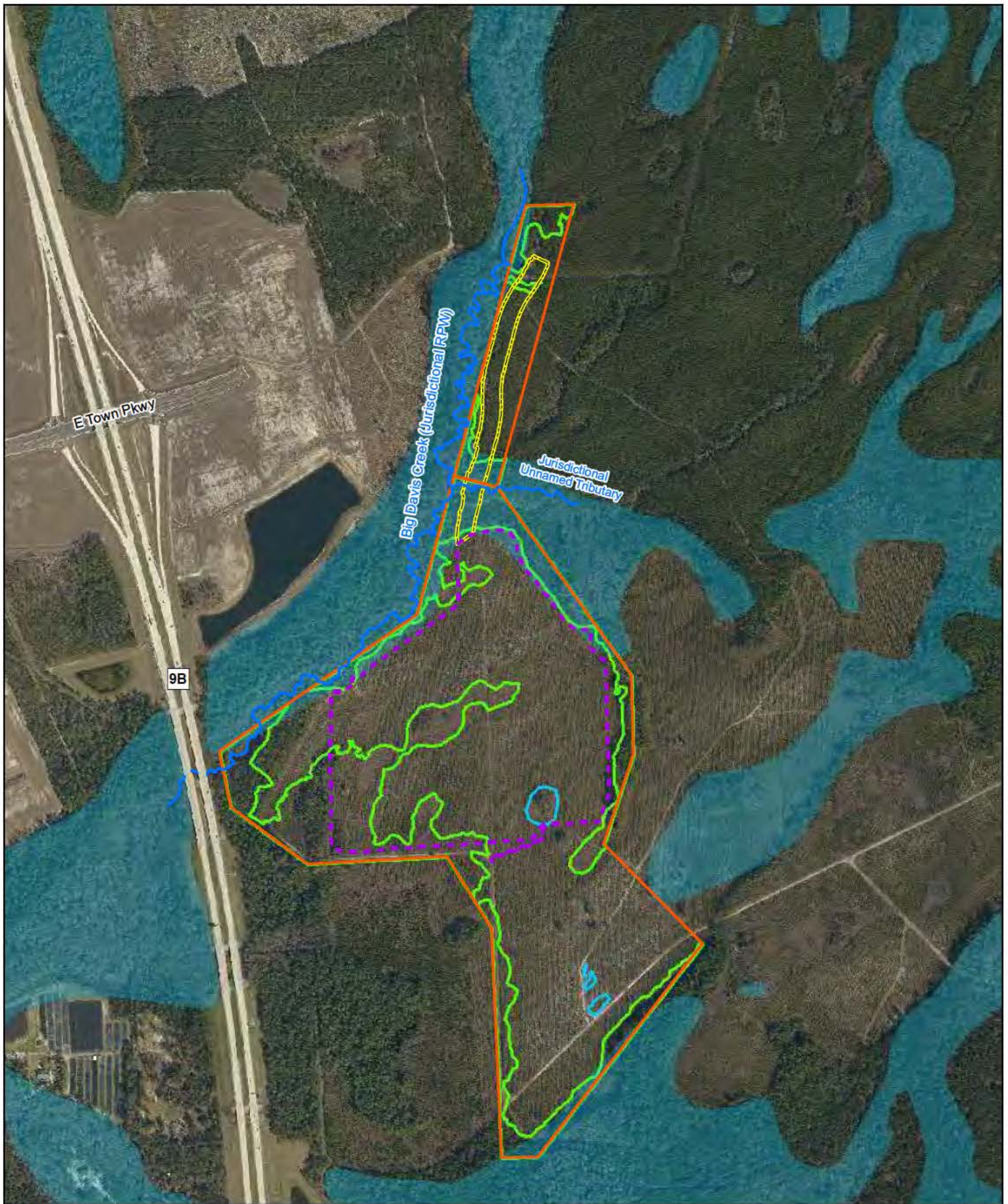


Figure 6. National Wetland Inventory Map
 JEA Greenland WRF
 Duval County, Florida



LEGEND

- Relatively Permanent Water (RPW)
- Property Boundary (182.72 ac)
- Project Footprint (71.21 ac)
- Entrance Road Footprint (7.80 ac)
- National Hydrography Data Set (NHD)

Wetlands

- USACE and FDEP Wetland (49.29 ac)
- USACE-Only Wetland (0.33 ac)
- FDEP-Only Wetland (1.51 ac)

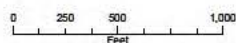


Figure 7. National Hydrography Dataset Map
 JEA Greenland WRF
 Duval County, Florida

FLUCCS CODE

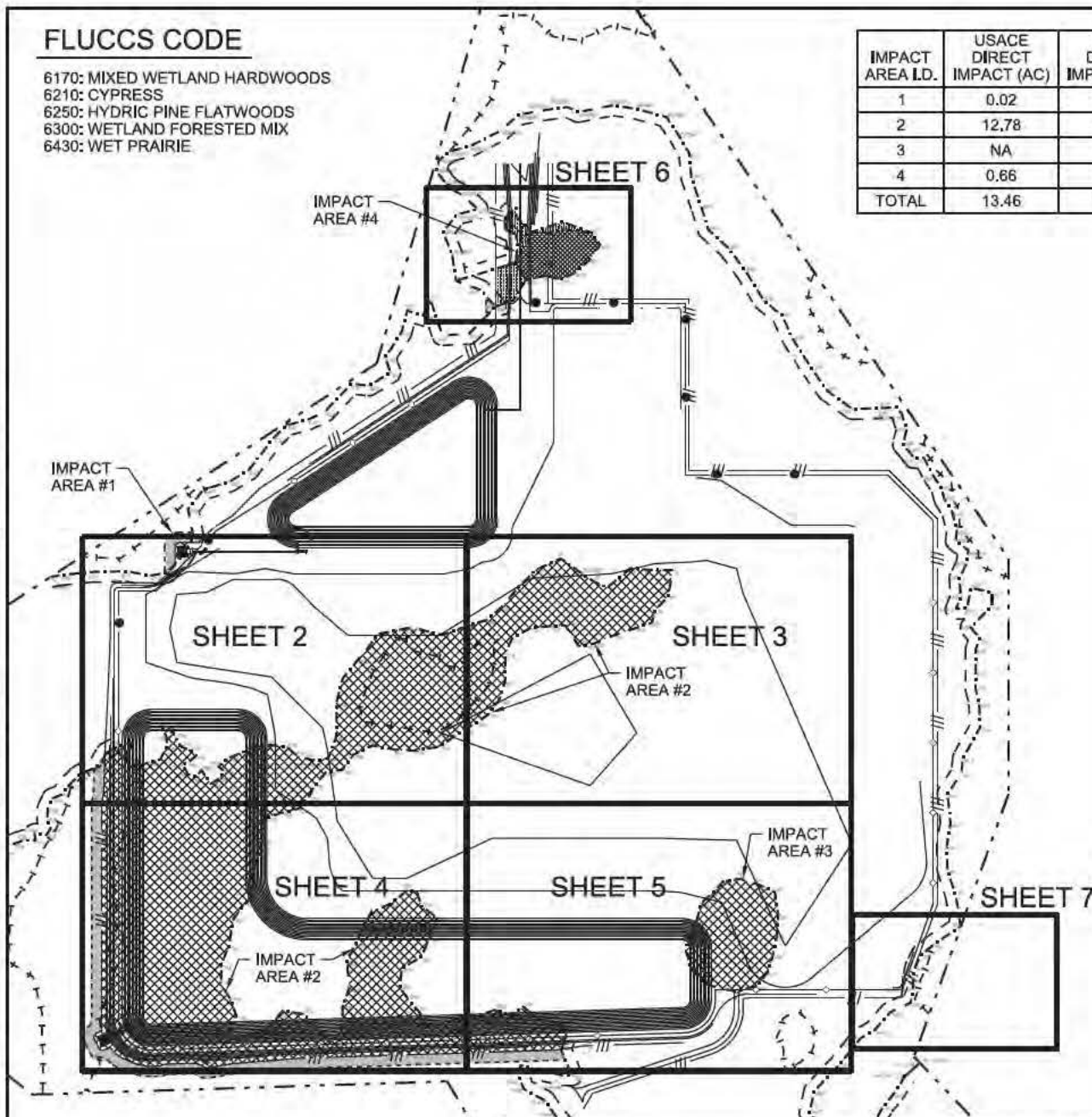
6170: MIXED WETLAND HARDWOODS
6210: CYPRESS
6250: HYDRIC PINE FLATWOODS
6300: WETLAND FORESTED MIX
6430: WET PRAIRIE

IMPACT AREA I.D.	USACE DIRECT IMPACT (AC)	FDEP DIRECT IMPACT (AC)	FDEP SECONDARY IMPACT (AC)	CUT (CU. YD.)	FILL (CU. YD.)	FLUCCS CODES
1	0.02	0.02	0.07	11.5	3.3	6250
2	12.78	12.78	1.08	75074.4	39100.0	6430, 6210, 6300
3	NA	1.10	NA	1244.0	3173.4	6210
4	0.66	0.42	0.01	3.5	457.8	6430, 6250
TOTAL	13.46	14.32	1.16	76333.4	42734.5	

PLOT TIME: 4:09:09 AM

PLOT DATE: 3/24/2020

FILENAME: P-01_D3192200.dgn



LEGEND

- PROPERTY LINE
- - - - - WETLAND LINE
- ||||| FLUCCS LIMITS
- - - - - 25' UPLAND BUFFER
- - - - - SECONDARY IMPACT LINE
- PERMANENT SECURITY FENCE
- TEMPORARY SECURITY FENCE
- ||— SILT FENCE
- PROPOSED WRF IMPROVEMENTS
- [] DREDGE FILL CUT SHEETS
- [] DIRECT IMPACTS
- [] USACE-ONLY IMPACT
- [] SECONDARY IMPACTS



APPLICANT: JEA

PROJECT: GREENLAND WRF

LOCATION: DUVAL COUNTY OF FLORIDA

DATUM: 1988 NAVD

JACOBS

200 FORSYTH STREET,
SUITE 1520
JACKSONVILLE, FLORIDA 32202
TEL:
LICENSE NO.

Richard Thomas Morrison, State of Florida,
Professional Engineer, License No. 87713
This document has been prepared, revised, and issued
by Richard Thomas Morrison, P.E., on the date
indicated below.
Printed copies of this document have not
been created, signed, and sealed and the signature
must be verified on any printed copies.

Richard
Thomas
Morrison
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Digitally signed
by Richard
Thomas
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Date: 2020.08.20
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SIGNED RICHARD MORRISON
P.E., NO. 67713

DREDGE/FILL SKETCHES

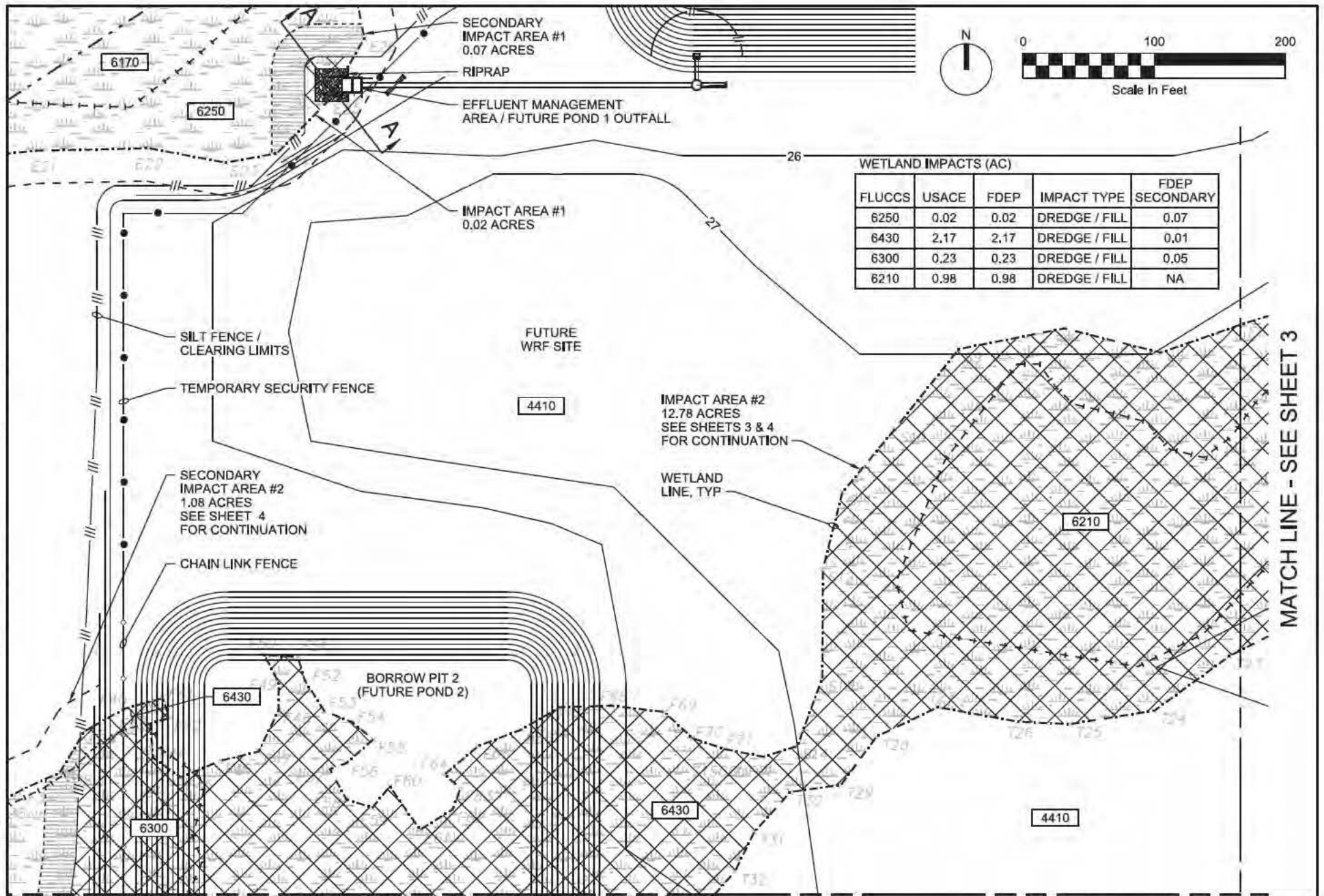
PURPOSE: WETLAND IMPACTS
DUVAL COUNTY, FLORIDA
SECTIONS 8, 9, 16, AND 17,
TOWNSHIP 4 SOUTH, RANGE 28 EAST

DATE: 04-01-2020
SHEET NO. 1 OF 11

PLOT TIME: 6:49:22 AM

PLOT DATE: 3/12/2020

FILENAME: P-02_D3192200.dgn



WETLAND IMPACTS (AC)

FLUCCS	USACE	FDEP	IMPACT TYPE	FDEP SECONDARY
6250	0.02	0.02	DREDGE / FILL	0.07
6430	2.17	2.17	DREDGE / FILL	0.01
6300	0.23	0.23	DREDGE / FILL	0.05
6210	0.98	0.98	DREDGE / FILL	NA

MATCH LINE - SEE SHEET 4

MATCH LINE - SEE SHEET 3

APPLICANT: JEA

PROJECT: GREENLAND WRF

LOCATION: DUVAL COUNTY OF FLORIDA

DATUM: 1988 NAVD

JACOBS

200 FORSYTH STREET,
SUITE 1520
JACKSONVILLE, FLORIDA 32202
TEL:
LICENSE NO.

Richard Thomas Morrison, State of Florida
Professional Engineer, License No. 97731
This seal was never digitally signed and sealed.
By Richard Thomas Morrison, PE, an Engineer
in the State of Florida.

Former owner: 4/1/2020 incorporation was not
certified signed and sealed and this signature
must be verified on any electronic copy.

SIGNED RICHARD MORRISON
P.E. NO. 67713

Digitally
signed by
Richard
Thomas
Morrison
Date:
2020.04.20
14:15:04
04707

DREDGE/FILL SKETCHES

PURPOSE: WETLAND IMPACTS
DUVAL COUNTY, FLORIDA
SECTIONS 8, 9, 16, AND 17,
TOWNSHIP 4 SOUTH, RANGE 28 EAST

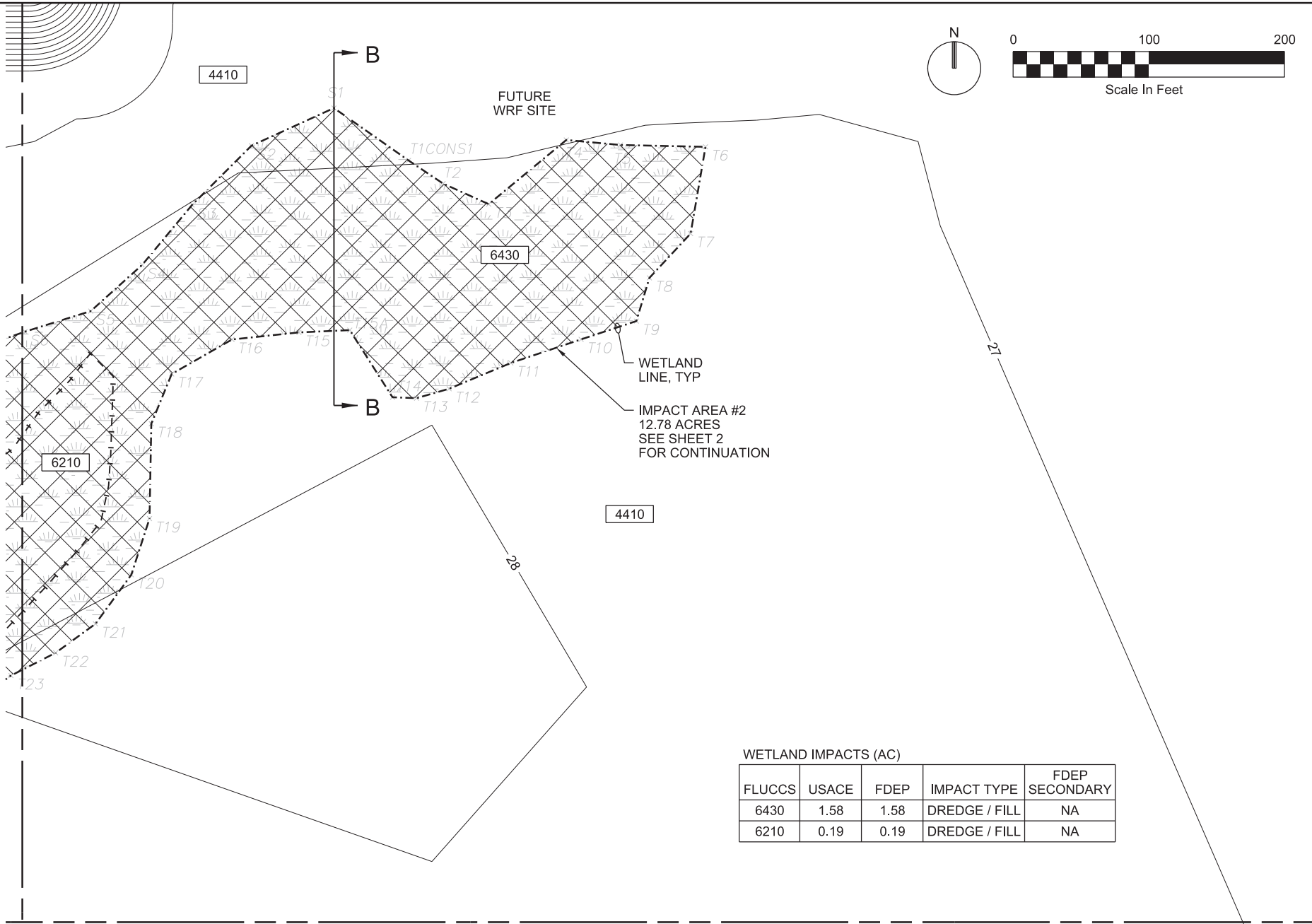
DATE: 04-01-2020
SHEET NO. 2 OF 11

PLOT TIME: 6:50:03 AM

PLOT DATE: 3/12/2020

FILENAME: P-03_D3192200.dgn

MATCH LINE - SEE SHEET 2



WETLAND IMPACTS (AC)

FLUCCS	USACE	FDEP	IMPACT TYPE	FDEP SECONDARY
6430	1.58	1.58	DREDGE / FILL	NA
6210	0.19	0.19	DREDGE / FILL	NA

MATCH LINE - SEE SHEET 5

APPLICANT: JEA

PROJECT: GREENLAND WRF
LOCATION: DUVAL COUNTY OF FLORIDA
DATUM: 1988 NAVD

JACOBS

200 FORSYTH STREET,
SUITE 1520
JACKSONVILLE, FLORIDA 32202
TEL:
LICENSE NO.

Richard Thomas Morrison, State of Florida,
Professional Engineer, License No. 67713.
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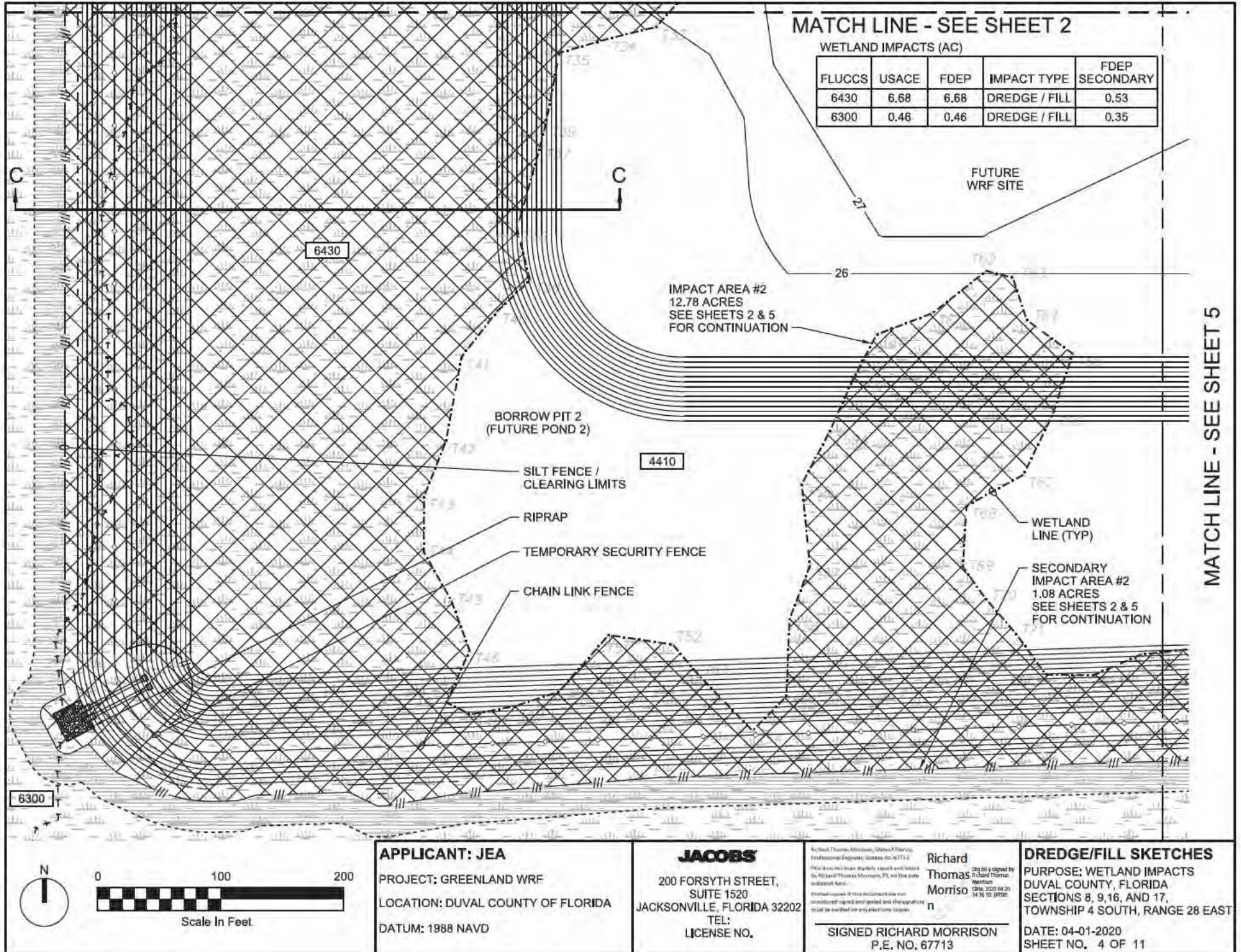
Richard Thomas Morrison
Digitally signed by Richard Thomas Morrison
Date: 2020.04.20 14:15:54 04'00"
SIGNED RICHARD MORRISON
P.E. NO. 67713

DREDGE/FILL SKETCHES
PURPOSE: WETLAND IMPACTS
DUVAL COUNTY, FLORIDA
SECTIONS 8, 9, 16, AND 17,
TOWNSHIP 4 SOUTH, RANGE 28 EAST
DATE: 04-01-2020
SHEET NO. 3 OF 11

PLOT TIME: 6:49:47 AM

PLOT DATE: 3/12/2020

FILENAME: P-04_D3192200.dgn



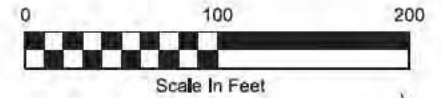
PLOT TIME: 6:50:31 AM

PLOT DATE: 3/12/2020

FILENAME: P-05_D3192200.dgn

MATCH LINE - SEE SHEET 4

MATCH LINE - SEE SHEET 3



WETLAND IMPACTS (AC)

FLUCCS	USACE	FDEP	IMPACT TYPE	FDEP SECONDARY
6430	0.49	0.49	DREDGE / FILL	0.14
6210	NA	1.10	DREDGE / FILL	NA

FUTURE WRF SITE

FDEP-ONLY
IMPACT AREA #3
1.10 ACRES

4410

6210

SECONDARY
IMPACT AREA #2
1.08 ACRES
SEE SHEET 4
FOR CONTINUATION

IMPACT AREA #2
12.78 ACRES
SEE SHEET 4
FOR CONTINUATION

WETLAND
LINE (TYP)

BORROW PIT 2
(FUTURE POND 2)

SILT FENCE /
CLEARING LIMITS

CHAIN LINK FENCE

6430

4210

4410

APPLICANT: JEA

PROJECT: GREENLAND WRF

LOCATION: DUVAL COUNTY OF FLORIDA

DATUM: 1988 NAVD

JACOBS

200 FORSYTH STREET,
SUITE 1520
JACKSONVILLE, FLORIDA 32202
TEL:
LICENSE NO.

Richard Thomas Morrison, State of Florida,
Professional Engineer (License No. 40734)

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SIGNED RICHARD MORRISON
P.E. NO. 67713

Richard
Thomas
Morrison
n

Digitally
signed by
Richard
Thomas
Morrison
Date:
2020.04.30
16:16:27
+0400

DREDGE/FILL SKETCHES

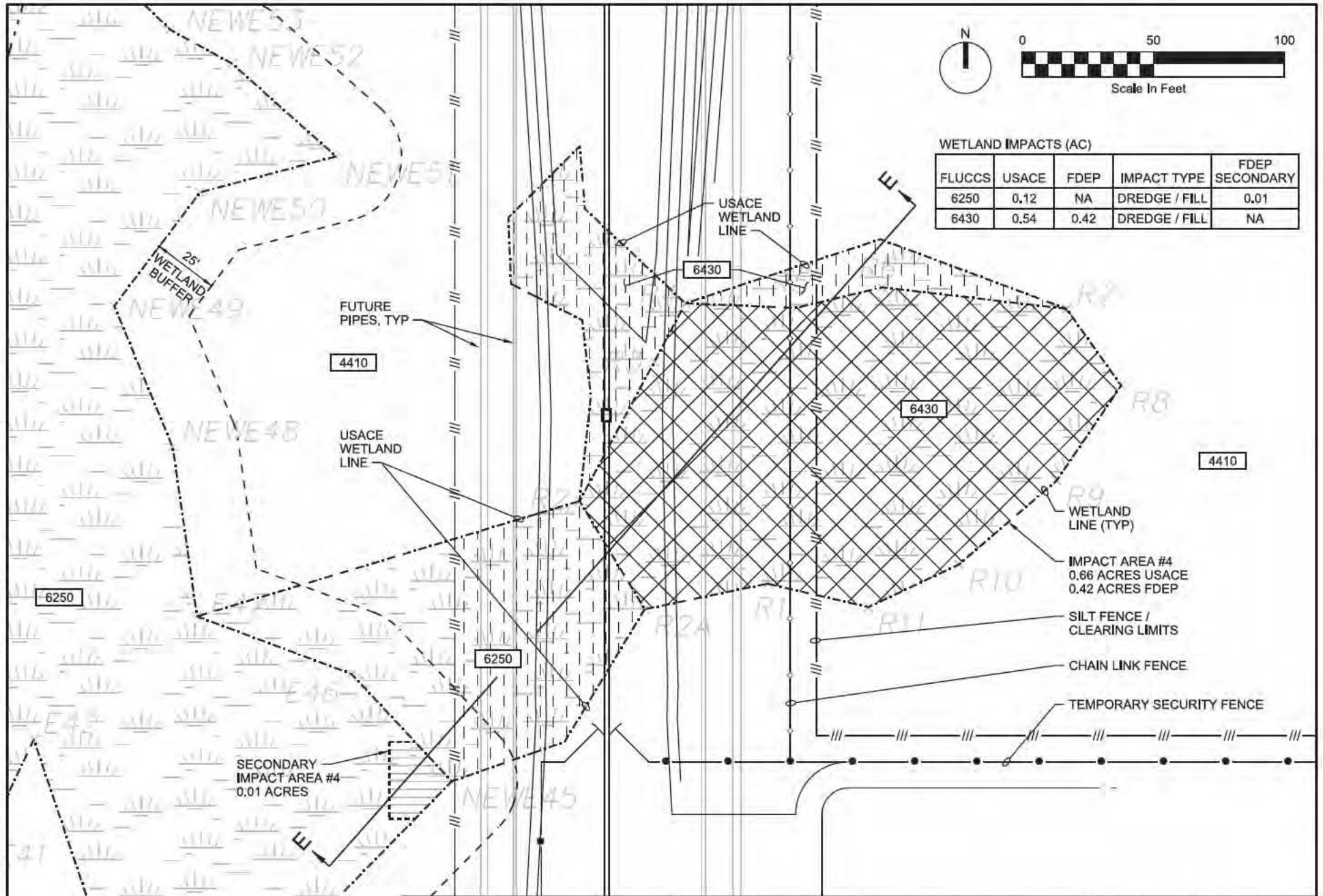
PURPOSE: WETLAND IMPACTS
DUVAL COUNTY, FLORIDA
SECTIONS 8, 9, 16, AND 17,
TOWNSHIP 4 SOUTH, RANGE 28 EAST

DATE: 04-01-2020
SHEET NO. 5 OF 11

PLOT TIME: 6:50:28 AM

PLOT DATE: 3/12/2020

FILENAME: P-06_D3192200.dgn



WETLAND IMPACTS (AC)

FLUCCS	USACE	FDEP	IMPACT TYPE	FDEP SECONDARY
6250	0.12	NA	DREDGE / FILL	0.01
6430	0.54	0.42	DREDGE / FILL	NA

APPLICANT: JEA

PROJECT: GREENLAND WRF

LOCATION: DUVAL COUNTY OF FLORIDA

DATUM: 1988 NAVD

JACOBS

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SUITE 1520
JACKSONVILLE, FLORIDA 32202
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Professional Engineer, License No. 67713

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Richard
Thomas
Morrison
P.E.

Digital signed by
Richard Thomas
Morrison
Date: 2020 04 20
1417:00: 9999

SIGNED RICHARD MORRISON
P.E. NO. 67713

DREDGE/FILL SKETCHES

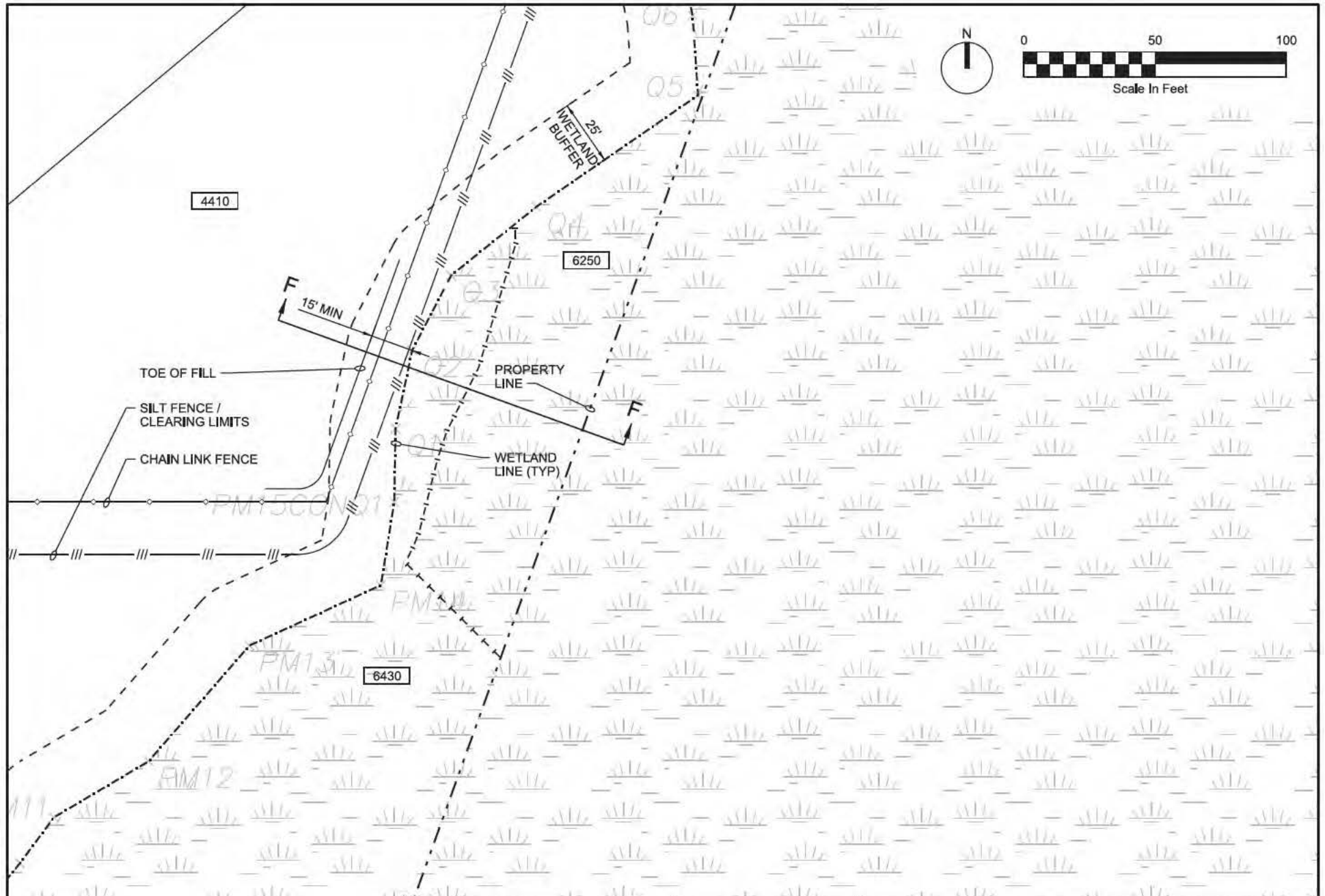
PURPOSE: WETLAND IMPACTS
DUVAL COUNTY, FLORIDA
SECTIONS 8, 9, 16, AND 17,
TOWNSHIP 4 SOUTH, RANGE 28 EAST

DATE: 04-01-2020
SHEET NO. 6 OF 11

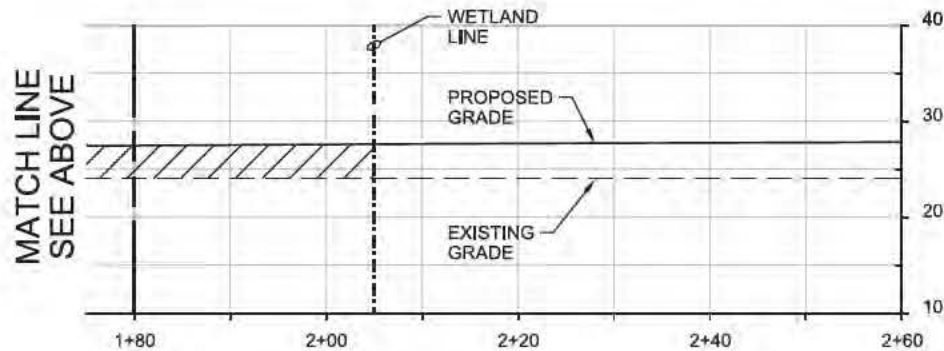
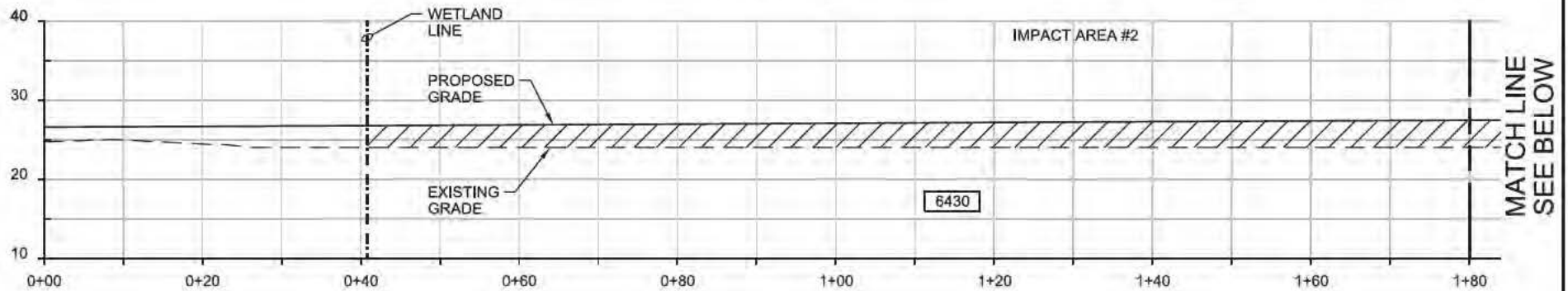
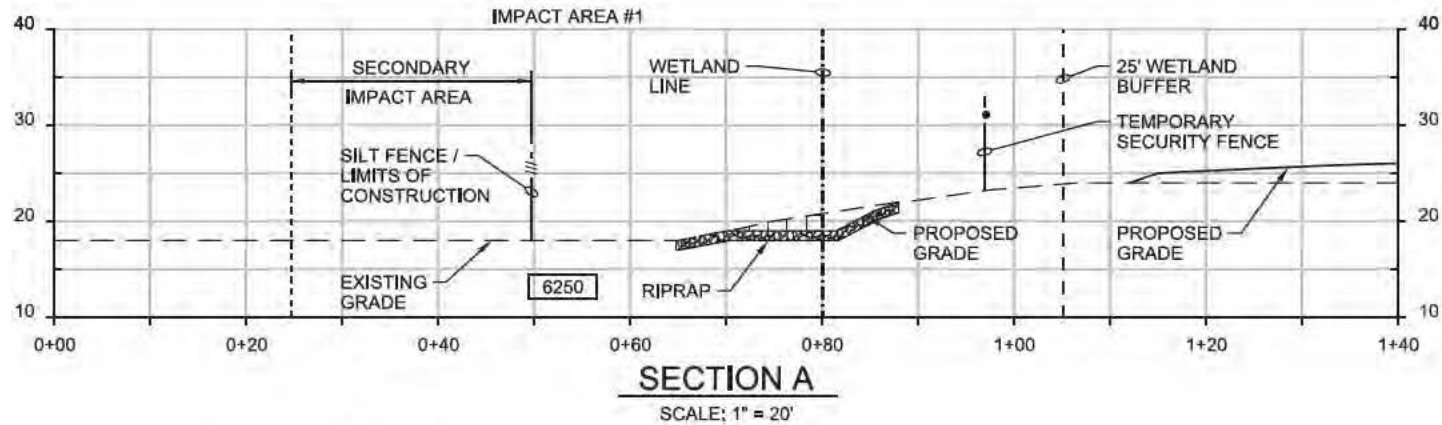
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PLOT DATE: 3/12/2020

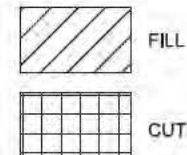
FILENAME: P-07_D3192200.dgn



APPLICANT: JEA PROJECT: GREENLAND WRF LOCATION: DUVAL COUNTY OF FLORIDA DATUM: 1988 NAVD	JACOBS 200 FORSYTH STREET, SUITE 1520 JACKSONVILLE, FLORIDA 32202 TEL: LICENSE NO.	<small>Richard Thomas Morrison, State of Florida, Professional Engineer, License No. 67713 This item has been digitally signed and sealed by Richard Thomas Morrison, PE, on the date indicated here. Printer copies of this document are not considered signed and sealed and this signature must be verified on any electronic copies.</small> Richard Thomas Morrison n SIGNED RICHARD MORRISON P.E. NO. 67713	<small>Digitally signed by Richard Thomas Morrison Date: 2020.04.30 14:17:15 0400</small> DREDGE/FILL SKETCHES PURPOSE: WETLAND IMPACTS DUVAL COUNTY, FLORIDA SECTIONS 8, 9, 16, AND 17, TOWNSHIP 4 SOUTH, RANGE 28 EAST DATE: 04-01-2020 SHEET NO. 7 OF 11
---	--	---	---

**SECTION B**

SCALE: 1" = 20'

**APPLICANT: JEA**

PROJECT: GREENLAND WRF
LOCATION: DUVAL COUNTY OF FLORIDA
DATUM: 1988 NAVD

JACOBS

200 FORSYTH STREET,
SUITE 1520
JACKSONVILLE, FLORIDA 32202
TEL:
LICENSE NO.

Richard Thomas Morrison, State of Florida,
Professional Engineer, License No. 17113
Reviewed this drawing electronically and sealed
by Richard Thomas Morrison, PE, on this date
indicated above.
I warrant compliance with applicable laws and
regulations and warrant that the information
herein is correct and complete.

Richard
Thomas
Morrison
n

Digital Signature
by Richard
Thomas
Morrison
Date: 2020/04/30
14:17:34 -04:00

SIGNED RICHARD MORRISON
P.E. NO. 67713

DREDGE/FILL SKETCHES

PURPOSE: WETLAND IMPACTS
DUVAL COUNTY, FLORIDA
SECTIONS 8, 9, 16, AND 17,
TOWNSHIP 4 SOUTH, RANGE 28 EAST

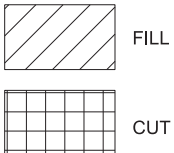
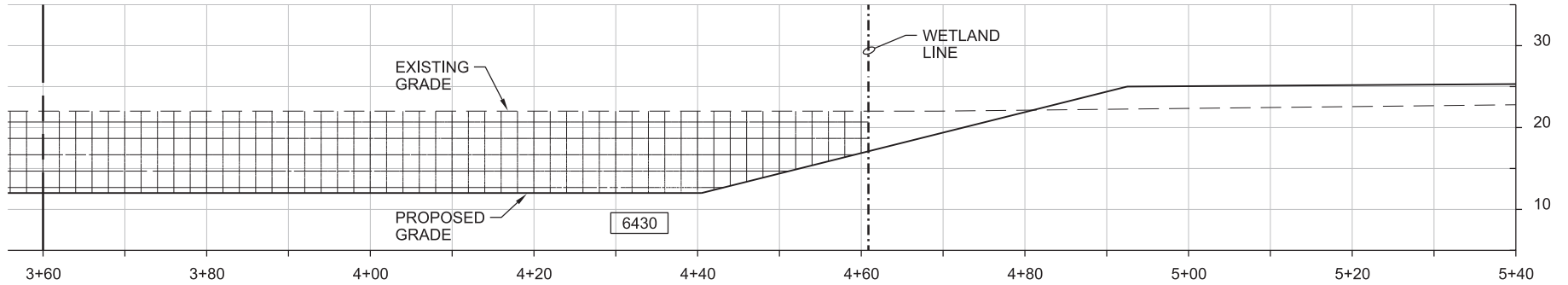
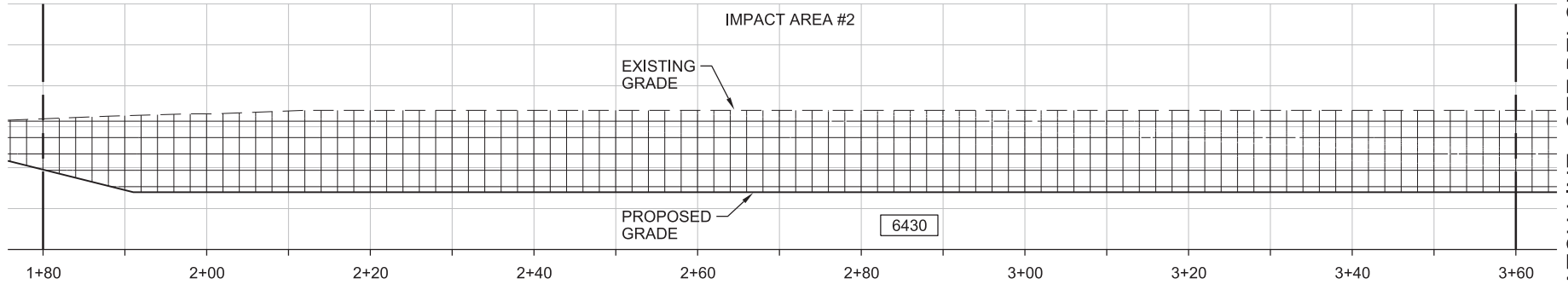
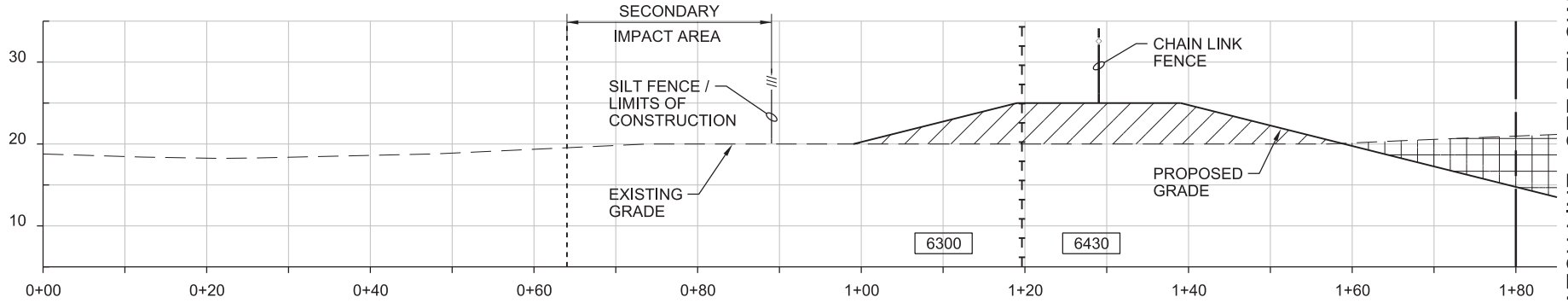
DATE: 04-01-2020
SHEET NO. 8 OF 11

MATCH LINE - SEE ABOVE

MATCH LINE - SEE ABOVE

MATCH LINE - SEE BELOW

MATCH LINE - SEE BELOW



SECTION C
SCALE: 1" = 20'

APPLICANT: JEA

PROJECT: GREENLAND WRF
LOCATION: DUVAL COUNTY OF FLORIDA
DATUM: 1988 NAVD

JACOBS

200 FORSYTH STREET,
SUITE 1520
JACKSONVILLE, FLORIDA 32202
TEL:
LICENSE NO.

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Professional Engineer, License No. 67713.
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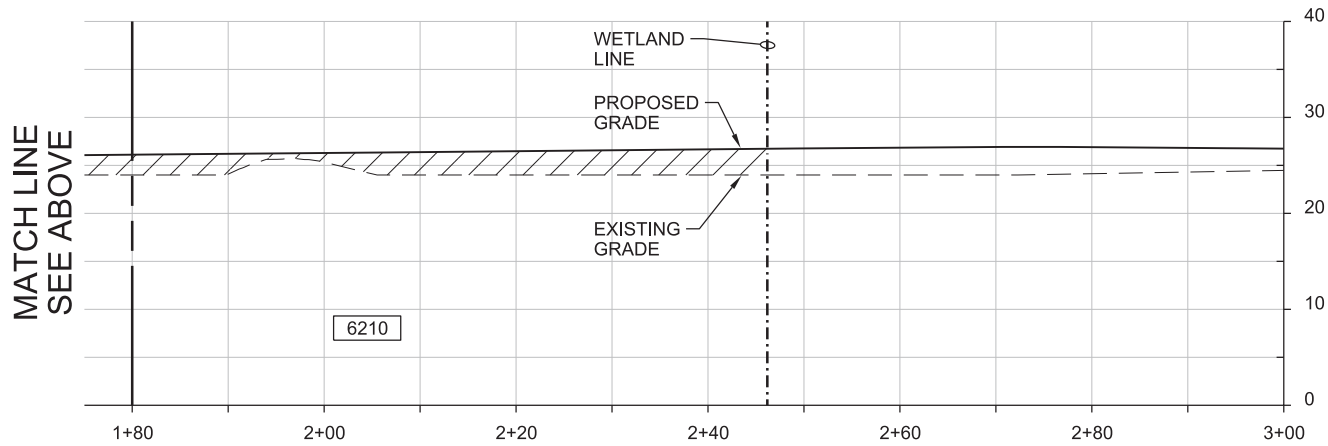
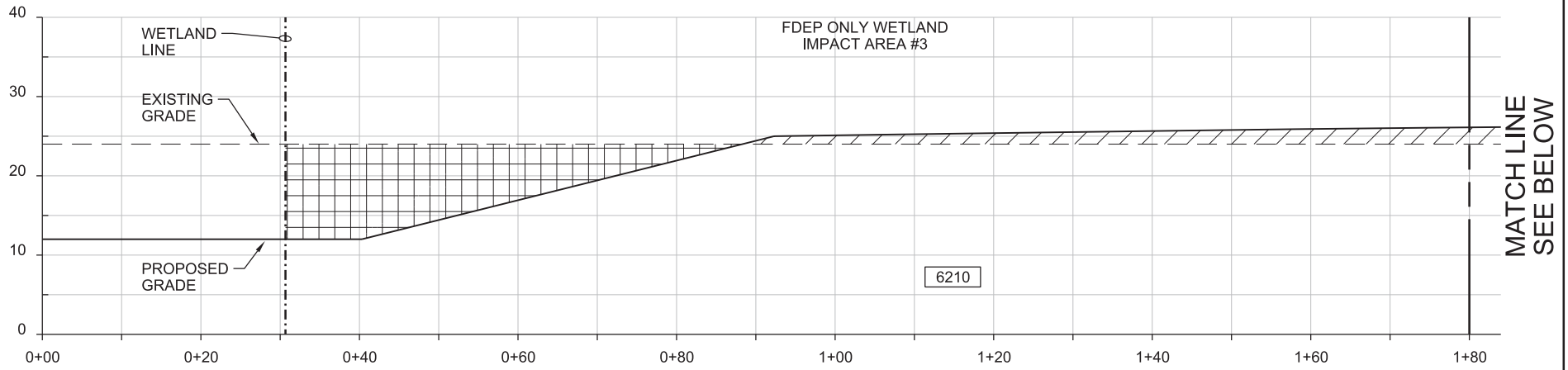
Digitally
signed by
Richard
Thomas
Morrison
Date:
2020.04.20
14:17:52
-04'00'
SIGNED RICHARD MORRISON
P.E. NO. 67713

DREDGE/FILL SKETCHES
PURPOSE: WETLAND IMPACTS
DUVAL COUNTY, FLORIDA
SECTIONS 8, 9, 16, AND 17,
TOWNSHIP 4 SOUTH, RANGE 28 EAST
DATE: 04-01-2020
SHEET NO. 9 OF 11

PLOT TIME: 6:50:11 AM

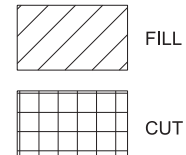
PLOT DATE: 3/12/2020

FILENAME: P-10_D3192200.dgn



SECTION D

SCALE: 1" = 20'



APPLICANT: JEA

PROJECT: GREENLAND WRF
LOCATION: DUVAL COUNTY OF FLORIDA
DATUM: 1988 NAVD

JACOBS

200 FORSYTH STREET,
SUITE 1520
JACKSONVILLE, FLORIDA 32202
TEL:
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Professional Engineer, License No. 67713
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Richard
Thomas
Morrison
n
Digitally signed
by Richard
Thomas
Morrison
Date: 2020.04.20
14:18:21 -0400

SIGNED RICHARD MORRISON
P.E. NO. 67713

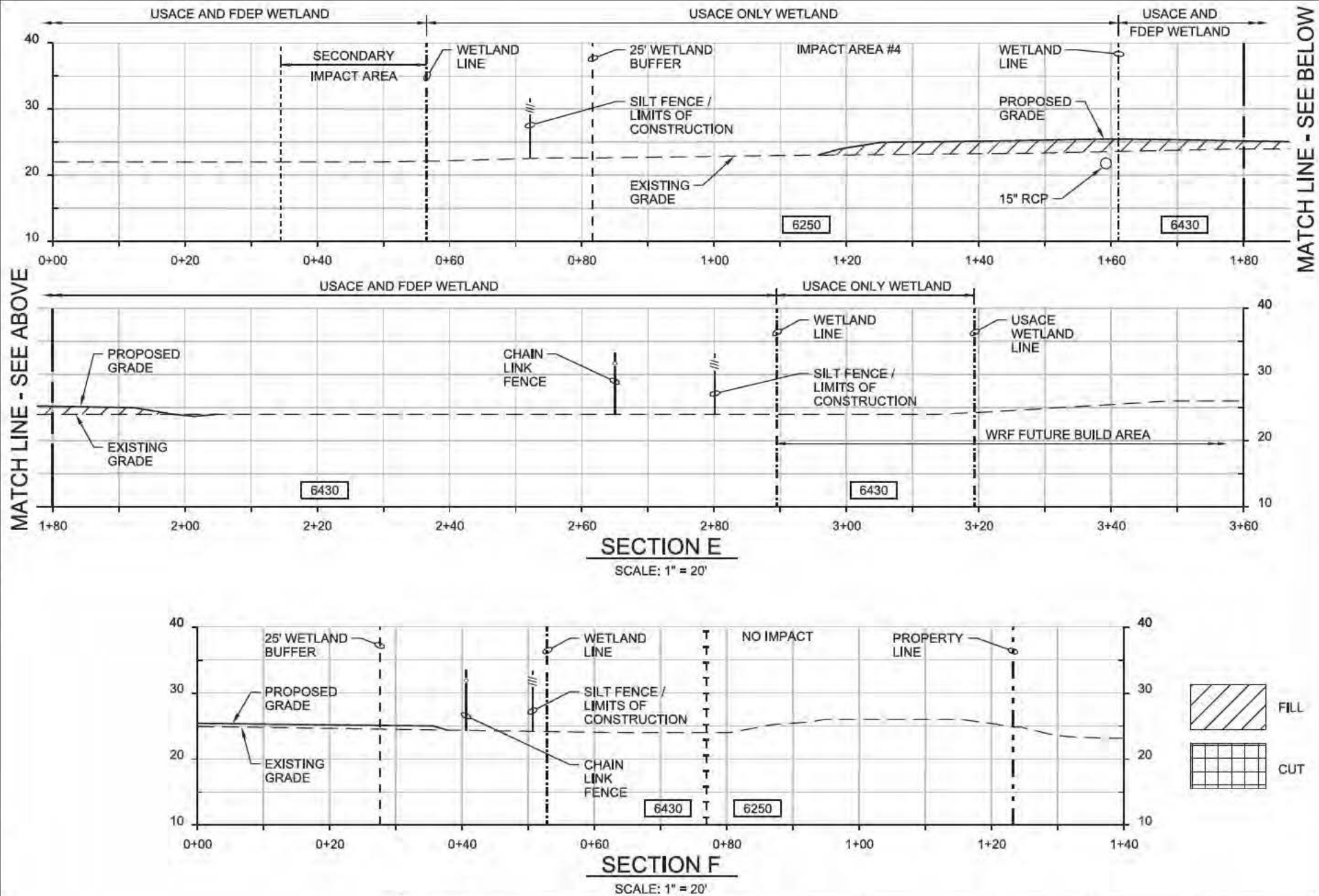
DREDGE/FILL SKETCHES

PURPOSE: WETLAND IMPACTS
DUVAL COUNTY, FLORIDA
SECTIONS 8, 9, 16, AND 17,
TOWNSHIP 4 SOUTH, RANGE 28 EAST
DATE: 04-01-2020
SHEET NO. 10 OF 11

PLOT TIME: 6:49:49 AM

PLOT DATE: 3/12/2020

FILENAME: P-11_D3192200.dgn

**APPLICANT: JEA**

PROJECT: GREENLAND WRF

LOCATION: DUVAL COUNTY OF FLORIDA

DATUM: 1988 NAVD

JACOBS200 FORSYTH STREET,
SUITE 1520
JACKSONVILLE, FLORIDA 32202TEL:
LICENSE NO.Richard Thomas Morrison, State of Florida,
Professional Engineer, License No. 57713
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by Richard Thomas Morrison, PE, on the last
indicated date.
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reproduced on any electronic copy.Richard
Thomas
Morrison
nDigitally
signed by
Richard
Thomas
Morrison
Date:
2020.04.30
16:18:45
0400SIGNED RICHARD MORRISON
P.E. NO. 67713**DREDGE/FILL SKETCHES**PURPOSE: WETLAND IMPACTS
DUVAL COUNTY, FLORIDA
SECTIONS 8, 9, 16, AND 17,
TOWNSHIP 4 SOUTH, RANGE 28 EASTDATE: 04-01-2020
SHEET NO. 11 OF 11

PLOT TIME: \$PLOTTIME

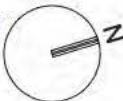
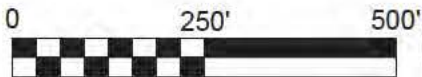
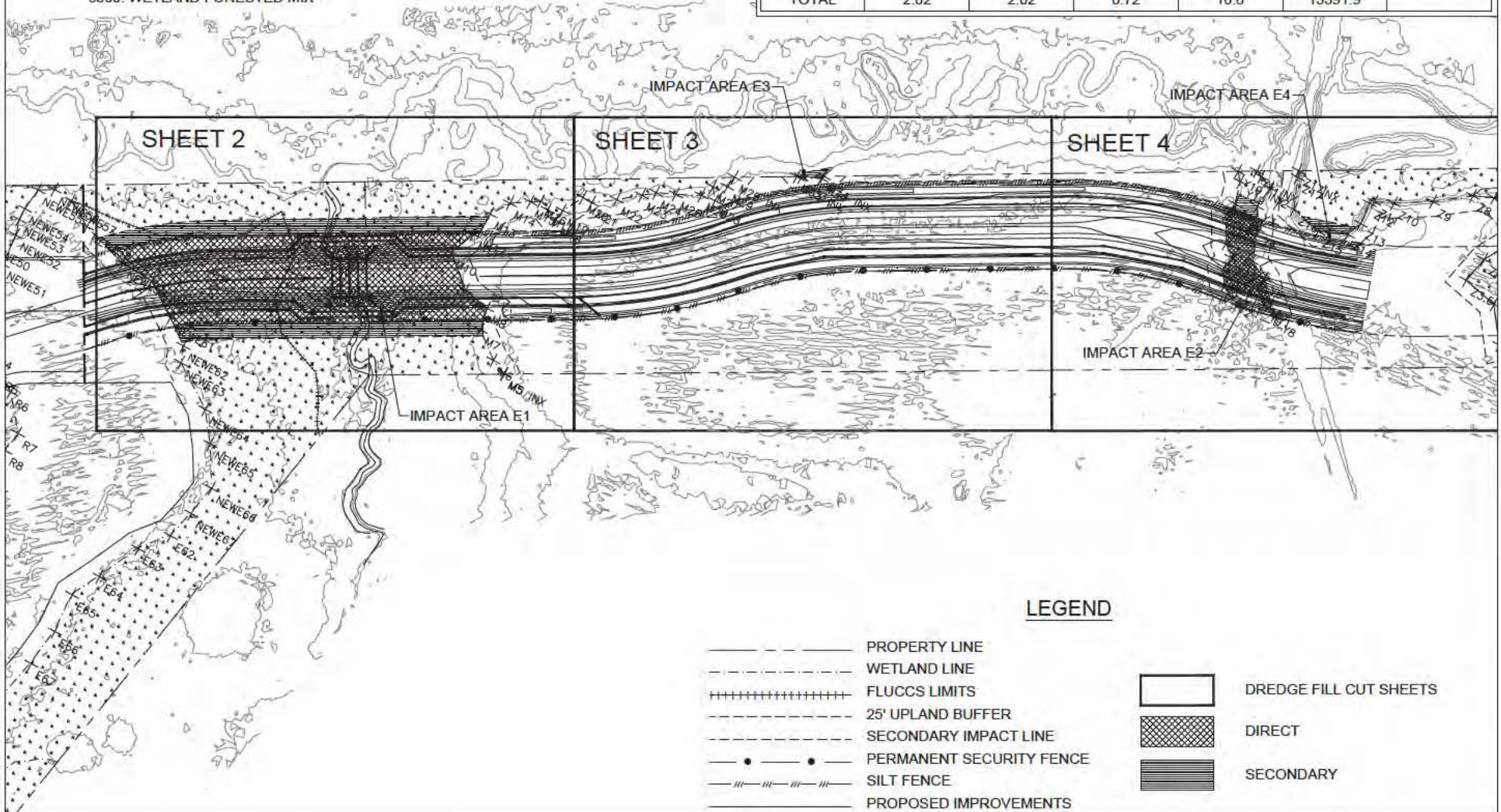
PLOT DATE: \$PLOTDATE

FILENAME: \$FILENAME

FLUCSS CODE

4410: CONIFEROUS PINE PLANTATION
 6170: MIXED WETLAND HARDWOODS
 6250: HYDRIC PINE FLATWOODS
 6300: WETLAND FORESTED MIX

IMPACT AREA I.D.	USACE DIRECT IMPACT (AC)	FDEP DIRECT IMPACT (AC)	FDEP SECONDARY IMPACT (AC)	CUT (CU. YD.)	FILL (CU. YD.)	FLUCSS CODES
E-1	1.84	1.84	0.66	3.4	12418.4	6250, 6170
E-2	0.18	0.18	0.02	13.4	973.5	6300
E-3	0	0	0.01	0	0	6170
E-4	0	0	0.03	0	0	6170
TOTAL	2.02	2.02	0.72	16.8	13391.9	

**APPLICANT: JEA**

PROJECT: GREENLAND WRF

LOCATION: DUVAL COUNTY OF FLORIDA

DATUM: 1988 NAVD

**FOUR WATERS
ENGINEERING**

324 6th AVENUE NORTH,
JACKSONVILLE BEACH, FL 32250
TEL: 904-414-2400
C.O.A LICENSE NO. 31101

Michael R. Klink, State of Florida,
Professional Engineer, License No.
718 0

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P.E. NO. 71840

Digitally signed by

Michael R Klink

Date: 2020.04.22

14:44:27 -04'00'

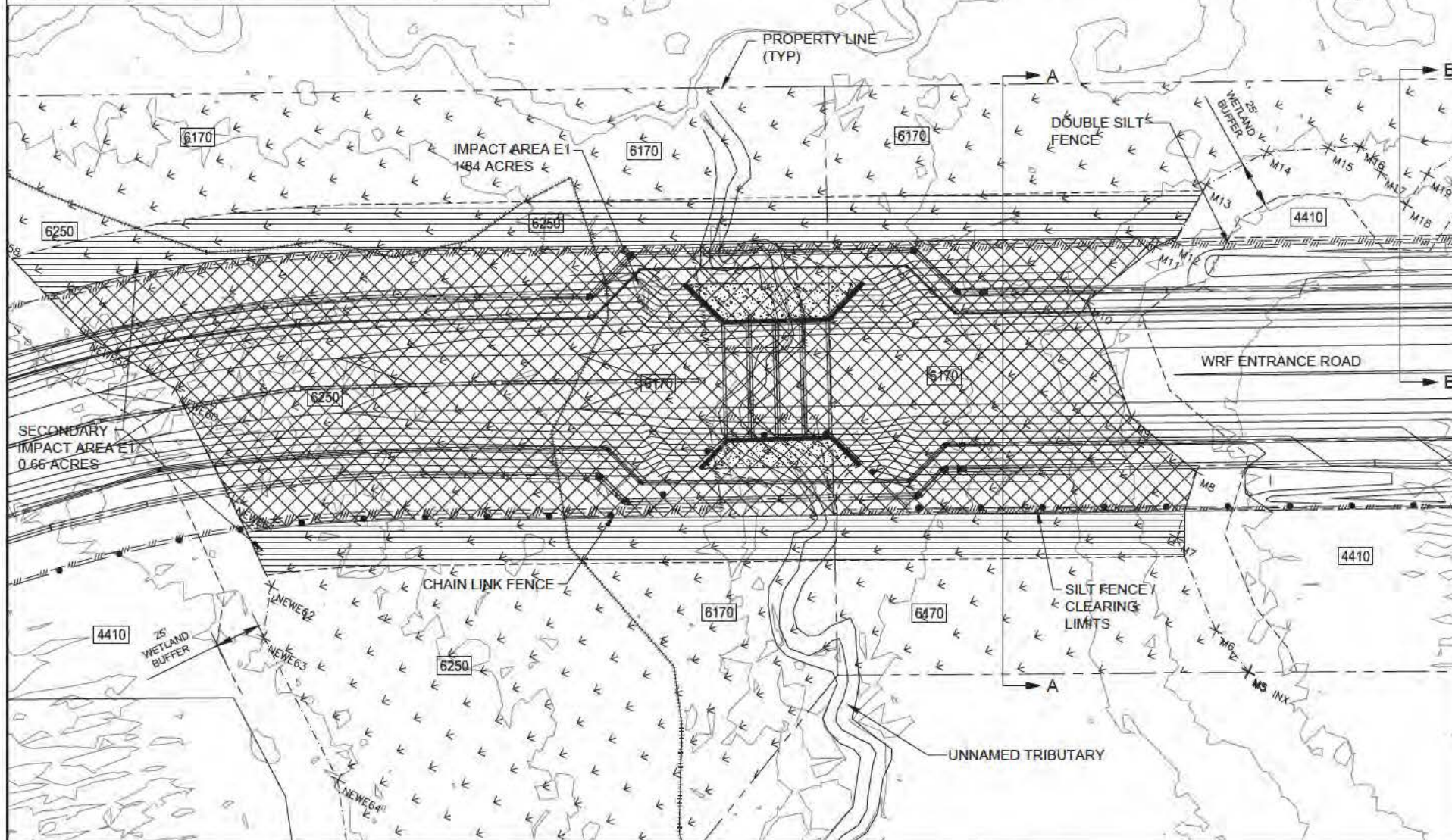
DREDGE/FILL SKETCHES

PURPOSE: WETLAND IMPACTS
DUVAL COUNTY, FLORIDA
SECTIONS 8, 9, 16, AND 17,
TOWNSHIP 4 SOUTH, RANGE 28 EAST

DATE: 04-01-2020
SHEET NO. 1 OF 7

WETLAND IMPACTS (AC)

FLUCCS CODES	USACE	FDEP	IMPACT TYPE	FDEP SECONDARY
6250	0.79	0.79	DREDGE/FILL	0.19
6170	1.05	1.05	DREDGE/FILL	0.47



APPLICANT: JEA

PROJECT: GREENLAND WRF

LOCATION: DUVAL COUNTY OF FLORIDA

DATUM: 1988 NAVD

**FOUR WATERS
ENGINEERING**

324 6th AVENUE NORTH,
JACKSONVILLE BEACH, FL 32250
TEL: 904-414-2400
C.O.A LICENSE NO. 31101

Michael R. Klink, State of Florida,
Professional Engineer, License No.
718 0

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SIGNED MICHAEL R. KLINK
P.E. NO. 71840

Digitally signed
by Michael R Klink
Date: 2020.04.22
14:44:46 -04'00'

DREDGE/FILL SKETCHES

PURPOSE: WETLAND IMPACTS
DUVAL COUNTY, FLORIDA
SECTIONS 8, 9, 16, AND 17,
TOWNSHIP 4 SOUTH, RANGE 28 EAST

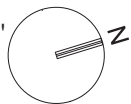
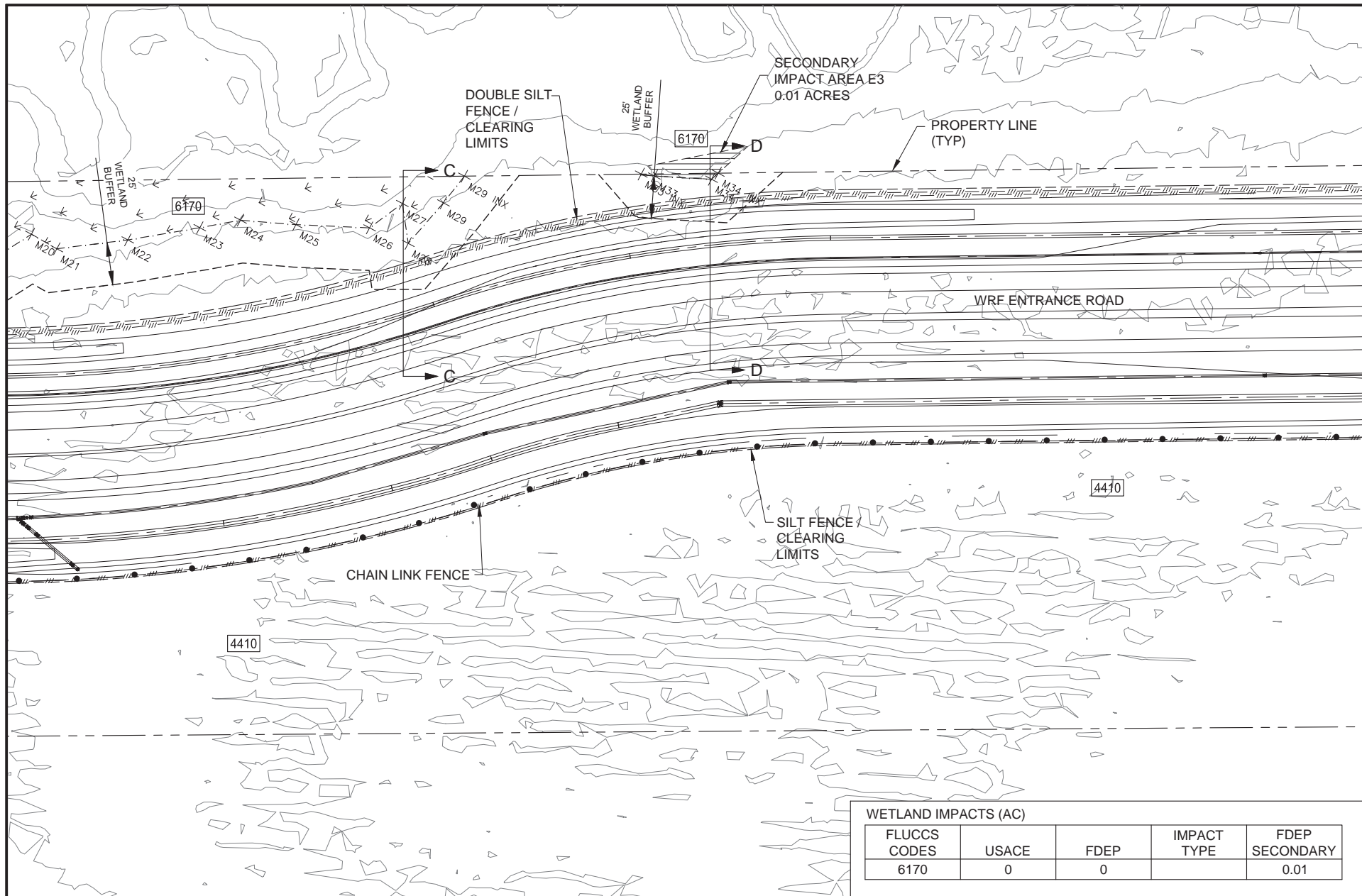
DATE: 04-01-2020
SHEET NO. 2 OF 7

PLOT TIME: \$PLOTTIME

PLOT DATE: \$PLOTDATE

FILENAME: \$FILENAME

FILENAME: \$FILENAME



DATUM: 1988 NAVD

324 6th AVENUE NORTH,
JACKSONVILLE BEACH, FL 32250
TEL: 904-414-2400
C.O.A LICENSE NO. 31101

SIGNED MICHAEL R. KLINK
P.E. NO. 71840

CHAELE R. KLINK
NO. 71840

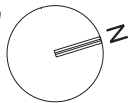
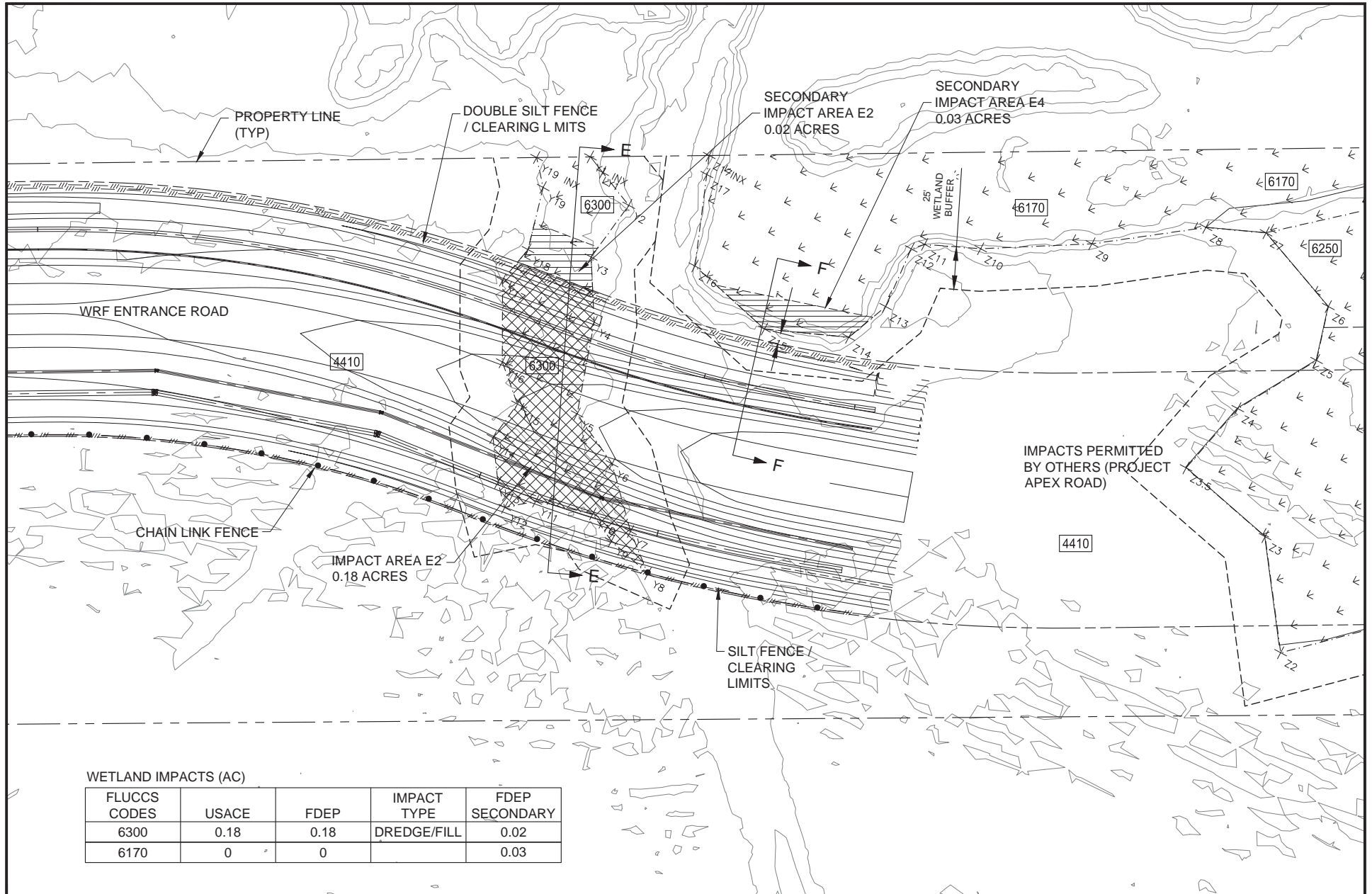
DATE: 04-01-2020
SHEET NO. 3 OF 7

WETLAND IMPACTS (AC)				
FLUCCS CODES	USACE	FDEP	IMPACT TYPE	FDEP SECONDARY
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PLOT TIME: \$PLOTTIME

PLOT DATE: \$PLOTDATE

FILENAME: \$FILENAME

**APPLICANT: JEA**

PROJECT: GREENLAND WRF

LOCATION: DUVAL COUNTY OF FLORIDA

DATUM: 1988 NAVD

**FOUR WATERS
ENGINEERING**

324 6th AVENUE NORTH,
JACKSONVILLE BEACH, FL 32250
TEL: 904-414-2400
C.O.A LICENSE NO. 31101

Michael R. Klink, State of Florida,
Professional Engineer, License No.
718 0

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P.E. NO. 71840

Digitally signed
by Michael R Klink
Date: 2020.04.22
14:45:24 -04'00'

DREDGE/FILL SKETCHES

PURPOSE: WETLAND IMPACTS
DUVAL COUNTY, FLORIDA
SECTIONS 8, 9, 16, AND 17,
TOWNSHIP 4 SOUTH, RANGE 28 EAST

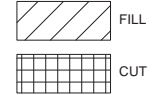
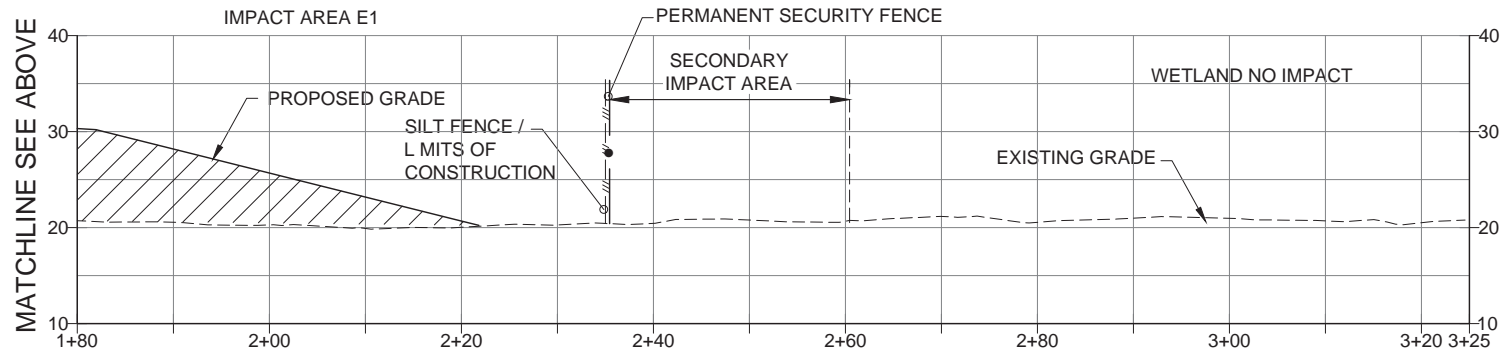
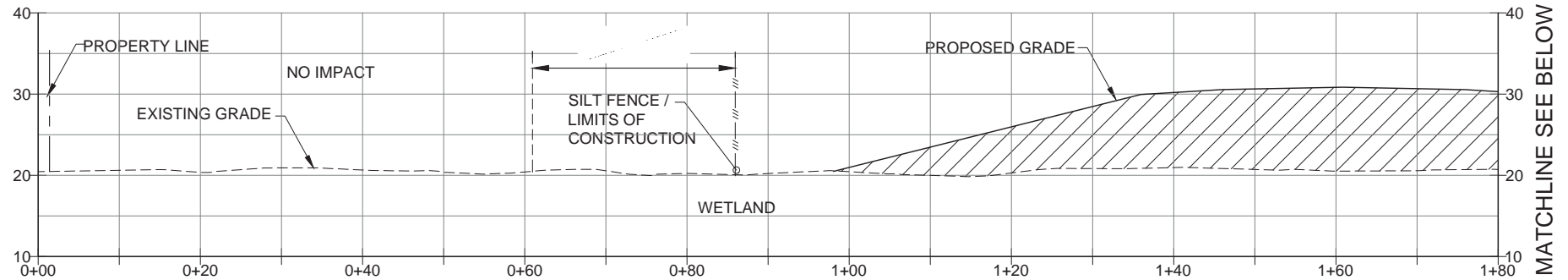
DATE: 04-01-2020
SHEET NO. 4 OF 7

PLOT TIME: \$PLOTTIME

PLOT DATE: \$PLOTDATE

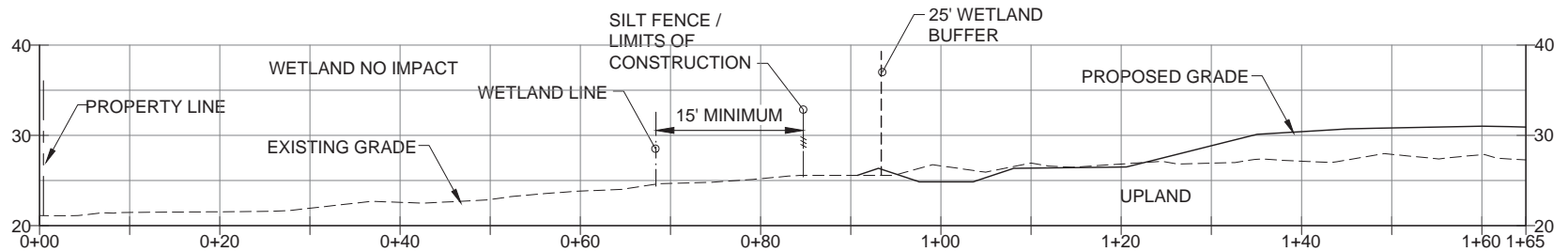
FILENAME: \$FILENAME

IMPACT AREA E1



SECTION A

SCALE: 1"=20'



SECTION B

SCALE: 1"=20'

APPLICANT: JEA

PROJECT: GREENLAND WRF

LOCATION: DUVAL COUNTY OF FLORIDA

DATUM: 1988 NAVD

FOUR WATERS
ENGINEERING324 6th AVENUE NORTH,
JACKSONVILLE BEACH, FL 32250
TEL: 904-414-2400
C.O.A LICENSE NO. 31101Michael R. Klink, State of Florida,
Professional Engineer, License No.
718 0This item has been digitally signed and
sealed by Michael R. Klink, P.E., on the
date indicated here.Printed copies of this document are not
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electronic copies.SIGNED MICHAEL R. KLINK
P.E. NO. 71840Digitally signed
by Michael R Klink
Date: 2020.04.22
14:45:40 -04'00'

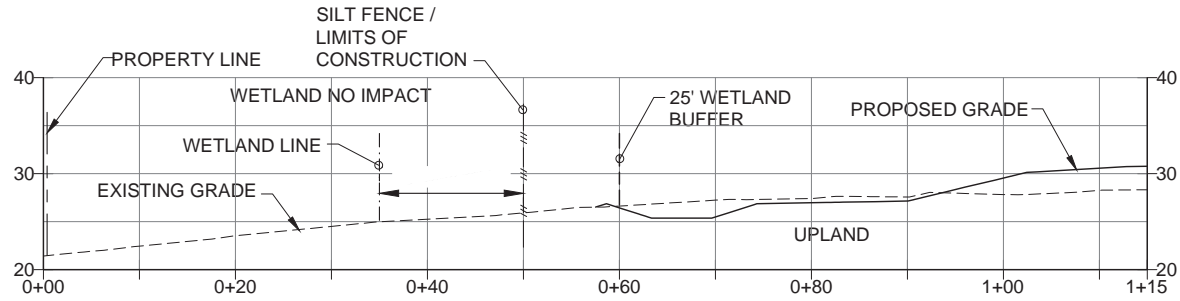
DREDGE/FILL SKETCHES

PURPOSE: WETLAND IMPACTS
DUVAL COUNTY, FLORIDA
SECTIONS 8, 9, 16, AND 17,
TOWNSHIP 4 SOUTH, RANGE 28 EASTDATE: 04-01-2020
SHEET NO. 5 OF 7

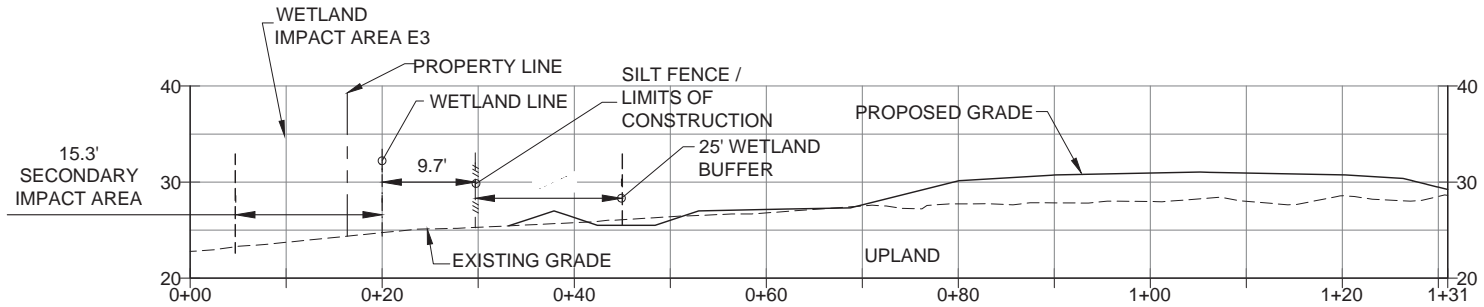
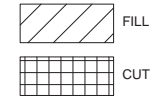
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PLOT DATE: \$PLOTDATE

FILENAME: \$FILENAME



SECTION C
SCALE: 1"=20'



SECTION D
SCALE: 1"=20'

APPLICANT: JEA

PROJECT: GREENLAND WRF

LOCATION: DUVAL COUNTY OF FLORIDA

DATUM: 1988 NAVD

**FOUR WATERS
ENGINEERING**

324 6th AVENUE NORTH,
JACKSONVILLE BEACH, FL 32250
TEL: 904-414-2400
C.O.A LICENSE NO. 31101

Michael R. Klink, State of Florida,
Professional Engineer, License No.
718 0

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sealed by Michael R. Klink, P.E., on the
date indicated here.

Printed copies of this document are not
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electronic copies.

SIGNED MICHAEL R. KLINK
P.E. NO. 71840

Digitally signed by

Michael R Klink

Date: 2020.04.22

14:46:00 -04'00'

DREDGE/FILL SKETCHES

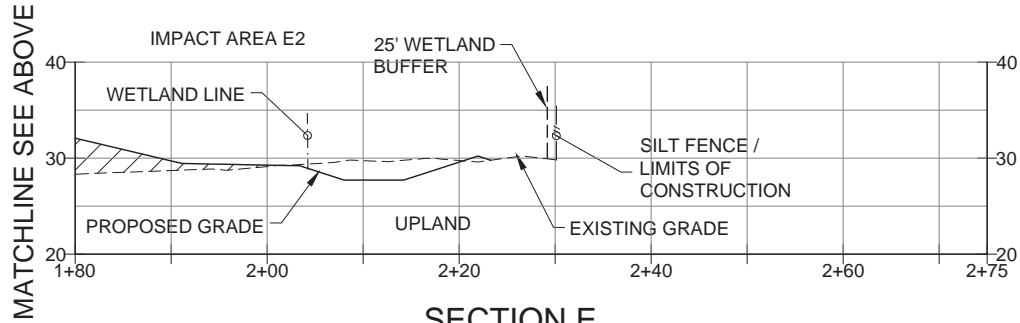
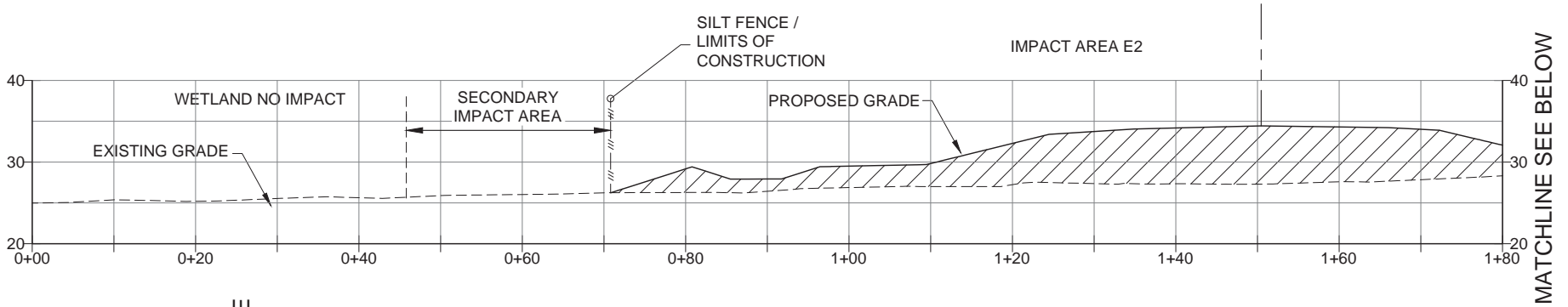
PURPOSE: WETLAND IMPACTS
DUVAL COUNTY, FLORIDA
SECTIONS 8, 9, 16, AND 17,
TOWNSHIP 4 SOUTH, RANGE 28 EAST

DATE: 04-01-2020
SHEET NO. 6 OF 7

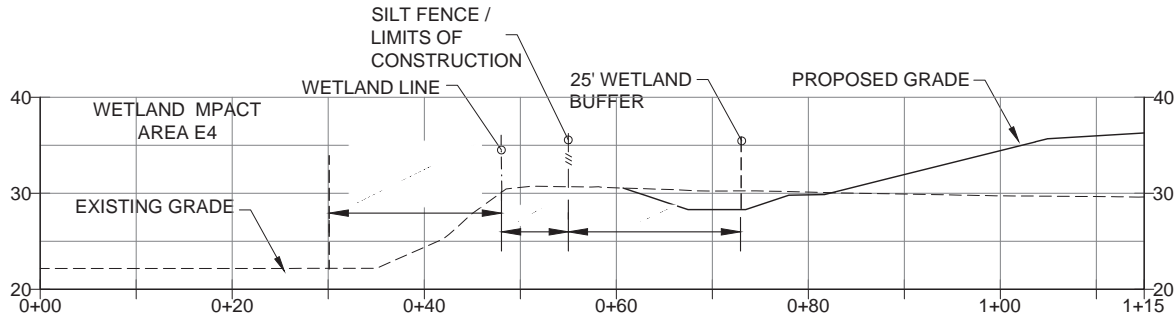
PLOT TIME: \$PLOTTIME

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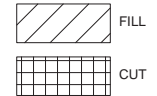
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SECTION E
SCALE: 1"=20'



SECTION F
SCALE: 1"=20'



APPLICANT: JEA

PROJECT: GREENLAND WRF

LOCATION: DUVAL COUNTY OF FLORIDA

DATUM: 1988 NAVD

**FOUR WATERS
ENGINEERING**

324 6th AVENUE NORTH,
JACKSONVILLE BEACH, FL 32250
TEL: 904-414-2400
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Michael R. Klink, State of Florida,
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SIGNED MICHAEL R. KLINK
P.E. NO. 71840

Digitally signed
by Michael R Klink
Date: 2020.04.22
14:46:17 -04'00'

DREDGE/FILL SKETCHES

PURPOSE: WETLAND IMPACTS
DUVAL COUNTY, FLORIDA
SECTIONS 8, 9, 16, AND 17,
TOWNSHIP 4 SOUTH, RANGE 28 EAST

DATE: 04-01-2020
SHEET NO. 7 OF 7