

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee	
To: _____	Location: _____
To: _____	Location: _____
To: _____	Location: _____
From: _____	Date: _____

Interoffice Memorandum

TO: Ken Huntington
Southwest District Office

FROM: Trudie D. Bell *MB*
Bureau of Wetland Resource Management

DATE: August 13, 1991

SUBJECT: PA89-25 Hardee Power Station and Transmission Lines:
Review of Post Certification Submittals

I am sending you a copy of the post-certification submittal from Seminole Electric for the transmission line from the Hardee Power Station to the Vandolah Substation. I am on a 30 day clock to do a completeness review of the package, so I have to have a CS out by September 11. If you have a chance to review the package and have any questions you want added, let me know. If you have any comments in general on the project, let me know.

HARDEE POWER STATION
CERTIFICATION PA 89-25
POST CERTIFICATION SUBMITTAL

HARDEE TO VANDOLAH TRANSMISSION LINE

PROJECT OVERVIEW

Seminole Electric Cooperative, Inc. (SECI) and TECO Power Services (TPS) have certified the Hardee Power Station and associated transmission line corridors through the Florida Electric Power Plant Siting Act. The certification PA 89-25 was approved by the Governor and Cabinet on November 27, 1990. This information and application are submitted in compliance with post certification conditions for the construction of a transmission line from the Hardee Power Station to the Vandolah substation in Hardee County, Florida. The information supplied responds directly to the Post Certification Conditions. The remaining post certification information for the 70 remaining miles of the certified transmission line will be submitted later this year.

This proposed segment of transmission line is approximately 8 miles in length (Fig. 1) and will consist of a double circuit 230 Kv transmission line. The required structures will be single, self supporting steel poles (Fig. 2) designed to meet standards set forth by the "Environmental Criteria for Electric Transmission Systems" as published jointly by the U.S. Dept. of the Interior and the U.S. Dept. of Agriculture and the National Electric Safety Code. Every effort has been put forth to minimize environmental impact where feasible.

INFORMATION IN RESPONSE TO POST CERTIFICATION CONDITIONS

Refer to Appendix E and F for the Conditions of Certification.

Condition XXXII 1, 2, 3.

Response - The proposed transmission line will be constructed along the right-of-way (ROW) depicted in the attached figures and the plan/profile drawings with the steel structures, access roads, and associated maintenance pads indicated. Construction of these facilities is designed to avoid wetlands wherever feasible. Avoidance of wetland impacts include variance of span length, utilization of existing roads without additional fill, minimization of stream crossings with access roads by alternative routing and back tracking. The approximate location of the structures, roads, and maintenance pads have been previously discussed with DER and SWFWMD in post certification meetings.

Condition XXXII 4.

Response - The ecological survey for threatened and endangered species was accomplished during June/July, 1991 by the consulting firm Environmental Consulting and Technology, Inc. The resulting report is included as Appendix A.

Condition XXXII 5.

Response - Archaeologically sensitive areas along the ROW were surveyed by an archeological team headed by Dr. Richard Williams of the University of South Florida during the months of September, 1990 and July, 1991. The resulting report is included in Appendix B.

Condition XXXII 6.

Response - Fill will be limited to the poles, access roads, and maintenance pads required for normal construction and maintenance of the transmission structures. The poles to be used within the wetland areas will be approximately 3 foot diameter embedded steel structures requiring no concrete or other fill material. Fill utilized for the roads and construction pads will typically be hauled in from local existing borrow pits outside of the corridor. No fill will be excavated from natural wetlands within the ROW. The areas requiring fill are indicated on the attached plan/profile drawings and the attached Figures.

Condition XXXII 7, 8.

Response - A conceptual mitigation plan is attached in Appendix C.

Condition XXXII 12, 13.

Response - Appendix D includes a description of the wetlands to be impacted along the ROW. As indicated in this information, no Brazilian Pepper, Australian Pine, or Melaleuca were found within the ROW. A plan to control these species will be submitted following construction.

Condition XXXII 14, 15, 16, 17, 18.

Response - Construction within the wetlands will include the use of low ground pressure vehicles including rubber tire and track vehicles. Initial activity will include clearing of trees along the ROW with the use of typical silvaculture equipment and hand clearing with woody debris removed to commercial disposal sites, sold to commercial interest, or burned in nearby upland areas in compliance with local regulations. Construction of access roads and maintenance pads will be accomplished with heavy earthmoving equipment such as dump trucks and bulldozers with all equipment activity limited to areas to be filled. During earthmoving activities, turbidity screens or hay bales will be utilized and maintained to limit discharges of turbid runoff from the construction site. Silt fences will be utilized when earthmoving is required in upland areas directly adjacent to wetland areas. No earthmoving is anticipated in any flowing waters. The side slopes of maintenance pads and access roads will be stabilized with appropriate grassing techniques.

After the structures are built, the conductors and ground wires will be strung between poles in wetland areas with the use of track vehicles. Impacts are expected to very temporary and every effort will be made to minimize soil disturbances.

Condition XXXII 19.

Response - No de-watering will be required for pole placement, road or maintenance pad construction in upland or wetland areas.

Condition XXXV C. 2.

Response - Wetland jurisdictional areas indicated on the attached figures

have been reviewed and approved by Mr. Howard Knight of the Bartow SWFWMD office.

a. The centerline profile, as determined by aerial photometric methods and ground truthing in some wetland areas, is included in the plan-profile drawings and the attached figures. The wetlands are also indicated on the attached figures with community types and impacts indicated.

b. Access road and maintenance pad designs are indicated on the plan profile drawings and the attached figures. Elevations are typically designed to have access road and maintenance pads to be constructed ± 1 foot above seasonal high water elevations as determined by biological indicators in the field such as stain lines, moss collars, and adventitious roots.

c. Cross sections of typical access roads and maintenance pads are indicated in Figures 11 and 12. Please note in order to maintain 2:1 side slopes varying thicknesses of fill require different areas to be filled.

d. Wetland cross sections are shown on the plan-profile drawings and the attached figures.

e. Structure locations and areas to be filled are shown on the plan-profile drawings and the attached figures.

The fill required in Wetland D (Fig. 5) will be a minor amount (+/- 0.4 acre feet) of clean fill to be placed within the 100 year floodplain. This area is a wetland transitional area dominated by seepage area type species such as sweetgum. The fill will be used for a road and construction pad located several hundred feet from the flow way. As shown in the plan/profile drawings, this area is several feet higher in elevation than the surface water channel and has no field indications of flooding such as stain lines, rack lines, etc. The fill will be constructed parallel to the existing railroad and will run roughly perpendicular to topographic contours. This configuration will not affect historic surface water runoff flow and will not place a significant amount of fill in an area utilized as flood storage, therefore, no compensation is proposed for this encroachment into the 100 year floodplain.

The fill required in wetland K (Lettis Creek headwaters) will also be placed within the 100 year floodplain. As shown on in Figure 13, topographic relief is minimal with land use upstream limited to cattle grazing. The upstream area has no public land use such as roads or residential areas. Approximately 4,900 cyds. of fill from the adjacent ROW areas will be hauled into the wetland area for construction of a road and maintenance pads (see Fig. 13). The excavated area, located outside of the 100 year floodplain, will be excavated to an elevation of ± 102 NGVD which is approximately 3 feet below the approximate 100 year floodplain elevation as extrapolated from the FEMA maps for the area. The area to be excavated is located within the ROW easement outside of the 100 year

floodplain and will slightly exceed the volume filled. This excavation area will compensate for the loss of floodplain storage in this area. After excavation the area will be planted with an appropriate cover crop.

f. The only access roads that will require culverts are the crossings of the railroad ditches that run between Payne Creek and Shirttail Branch (see Figure 16). The culverts are designed to fit DER General permit conditions (17-312.816) in that the ditches are non navigable, normal high water stages will pass through the culverts, no other culverts exist on the ditch systems, the length will be approximately 40 feet, the top width will not exceed 20 feet, the mucky soils beneath the culverts will be excavated and replaced with clean fill, and the culverts should provide approximately the same volume of discharge as the existing ditch under normal conditions. These ditches normally drain to Payne Creek, approximately 700 feet to the north. In the event that an unusually heavy storm event occurs and the culverts would impede flow, the flow would divert to Shirttail Branch, a tributary to Payne Creek. No public roads or residences would be impacted by this diversion of water flow.

g. The cross sections of proposed fill areas are shown on the plan-profile drawings and Figures 2-12.

h. Wet season surface water elevations are indicated on drawings as SHW (Seasonal High Water).

Condition XXXV C.4.

Response - Culverts are required in the railroad ditch near Shirttail Branch (see response to condition XXXV C.2.f). The other access roads will not affect hydroperiods, drainage patterns, or sheetflow along the ROW.

Condition XL. A. - Hardee County

Response - The transmission line shall be operated in conformance with Hardee County Ordinance No. 82-2.

Condition XL. B.

Response - The ROW has been located to minimize impacts with the existing land use. It will not be necessary to take any homes along the ROW.

TABLE 1
WETLAND ACTIVITIES
(FDER JURISDICTION)

	FORESTED WETLAND		SHRUB WETLAND		DISTURBED SHRUB WETLAND		MARSH
WETLAND	CLEARED	FILLED	CLEARED	FILLED	CLEARED	FILLED	FILLED
A	-	-	-	-	*	*	-
B	-	-	*	-	-	-	-
C	0.20	**	0.19	**	0.89	**	**
D	1.76	0.30	-	-	-	-	-
E	0.07	-	-	-	1.95	0.25	-
F	*	*	*	*	*	*	*
G	*	*	*	*	*	*	*
H	**	**	**	**	**	**	**
I	*	*	*	*	*	*	*
J	**	**	**	**	**	**	**
K	-	-	0.35	-	1.66	0.55	**
RR Ditch	-	-	-	-	-	-	0.05
TOTALS	2.03	0.30	0.54	-	4.50	0.80	0.05

* Isolated Wetlands (non-FDER Jurisdictional)

** No Clearing or Filling Required

TABLE 2
WETLAND ACTIVITIES
(SWFWMD JURISDICTION)

	FORESTED WETLAND		SHRUB WETLAND		DISTURBED SHRUB WETLAND		MARSH
WETLAND	CLEARED	FILLED	CLEARED	FILLED	CLEARED	FILLED	FILLED
A	-	-	-	-	0.76	0.08	-
B	-	-	-	-	0.57	-	-
C	0.92	-	0.19	-	0.89	-	**
D	1.76	0.30	-	-	-	-	-
E	0.07	-	-	-	1.95	0.25	-
F	-	-	-	-	-	-	0.18
G	-	-	-	-	0.17	0.13	**
H	**	**	**	**	**	**	**
I	-	-	-	-	-	-	0.13
J	**	**	**	**	**	**	**
K	-	-	0.35	**	1.66	0.55	**
TOTALS	2.75	0.30	0.54	-	6.00	1.01	0.31

** No Clearing of Filling Required

VICINITY MAP

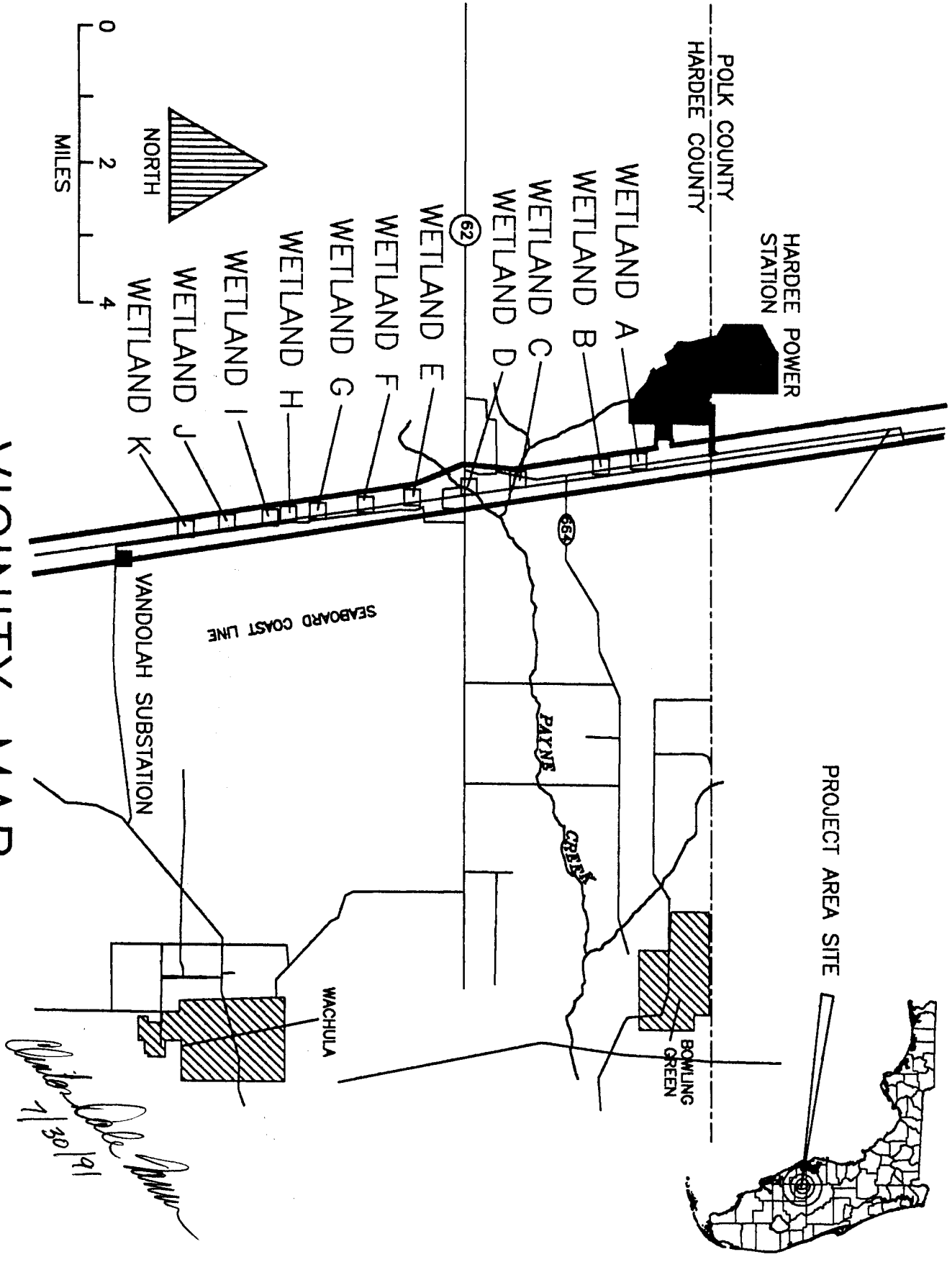
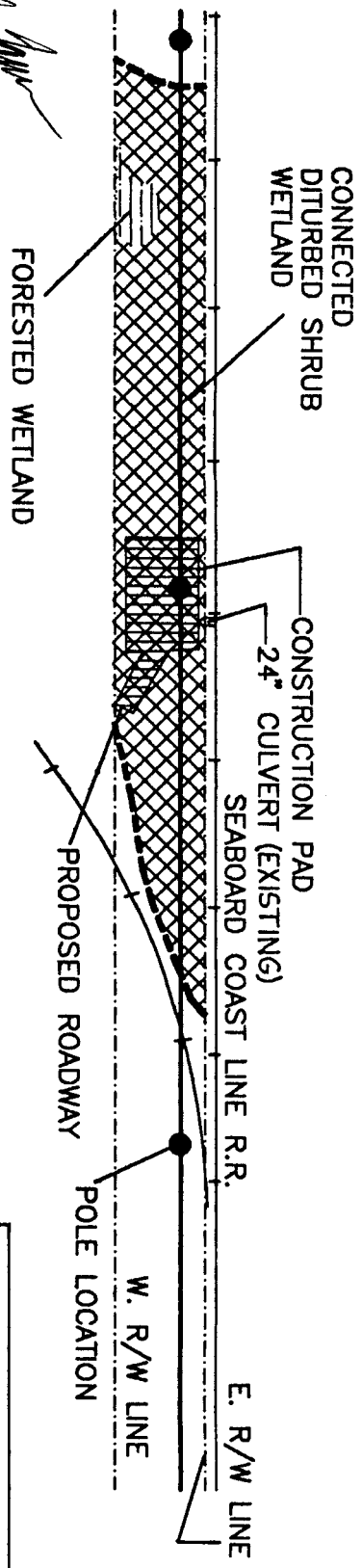
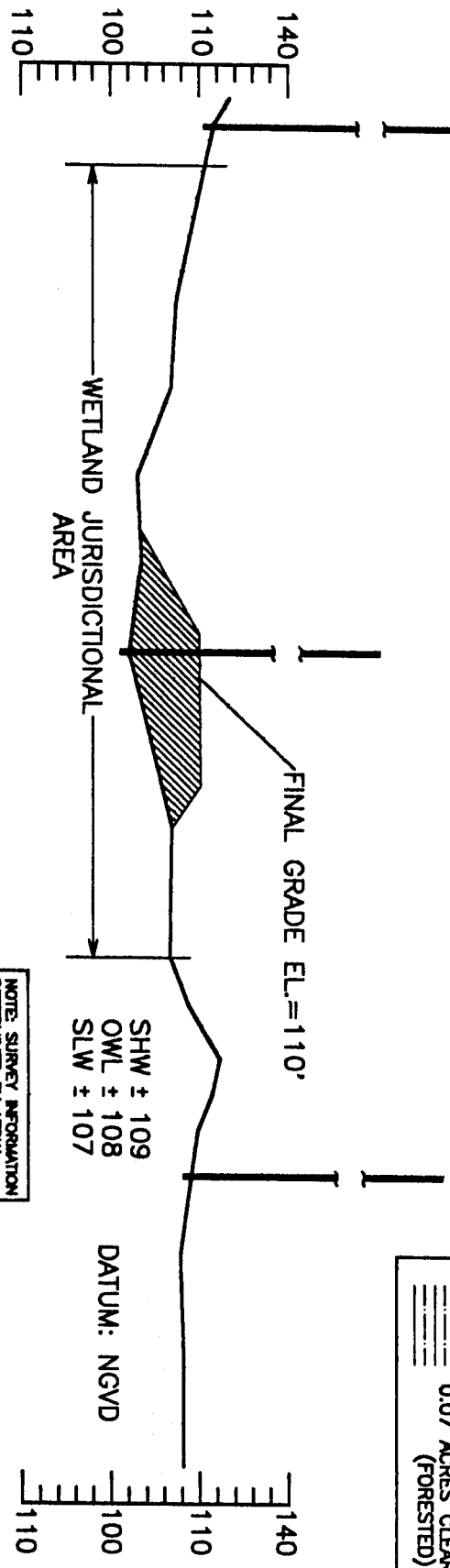


FIGURE 1

Alfred J. Cole
8/6/91



TRANSMISSION STRUCTURE
HEIGHT NOT TO SCALE

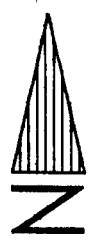
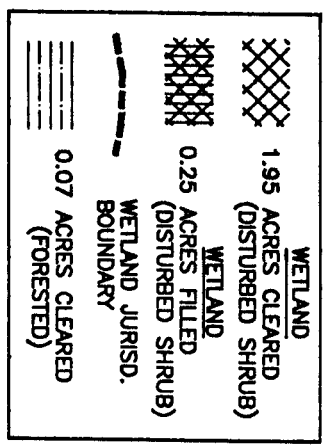


LEGEND for PROFILE

FILL

CENTERLINE, CL

NOTE: SURVEY INFORMATION
DETERMINED BY AERIAL
PHOTOMETRIC METHODS



WETLAND "E" PLAN/PROFILE

DATE: 7/17/91

JAMES ROAD C.R. 633

SEABOARD COAST LINE R.R.

E. R/W LINE

W. R/W LINE

ISOLATED MARSH WETLAND

CONSTRUCTION PAD

POLE LOCATION

ISOLATED MARSH WETLAND
PROPOSED ROADWAY

TRANSMISSION STRUCTURE
HEIGHT NOT TO SCALE

FINAL GRADE EL.=111.0'

DATUM: NGVD

SHW ± 110
OWL ± 109
SLW ± 108

WETLAND JURISDICTIONAL AREA

WETLAND JURISDICTIONAL AREA

NOTE: SURVEY INFORMATION
DETERMINED BY AERIAL
PHOTOMETRIC METHODS

WETLAND
1.42 ACRES (MARSH)
WETLAND
0.18 ACRES FILLED (MARSH)
WETLAND JURISD.
BOUNDARY

LEGEND for PROFILE

FILL

CENTERLINE, CL

16 FT. LEFT OF CL

16 FT. RIGHT OF CL

WETLAND "F"

PLAN/PROFILE

0 100 200 300



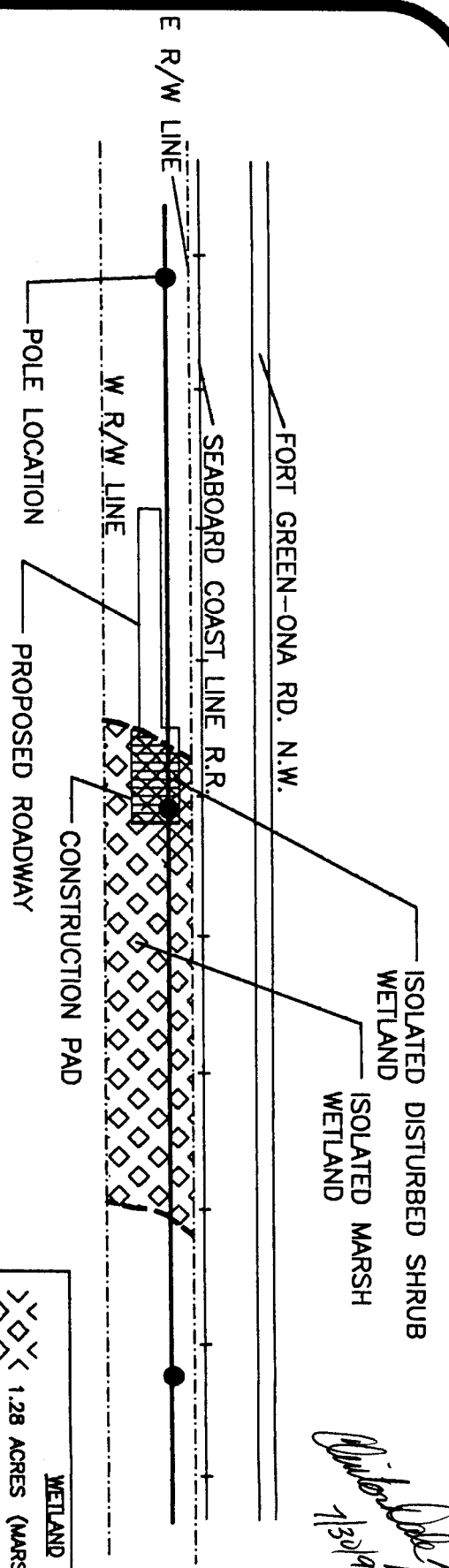
DATE: 7/17/91



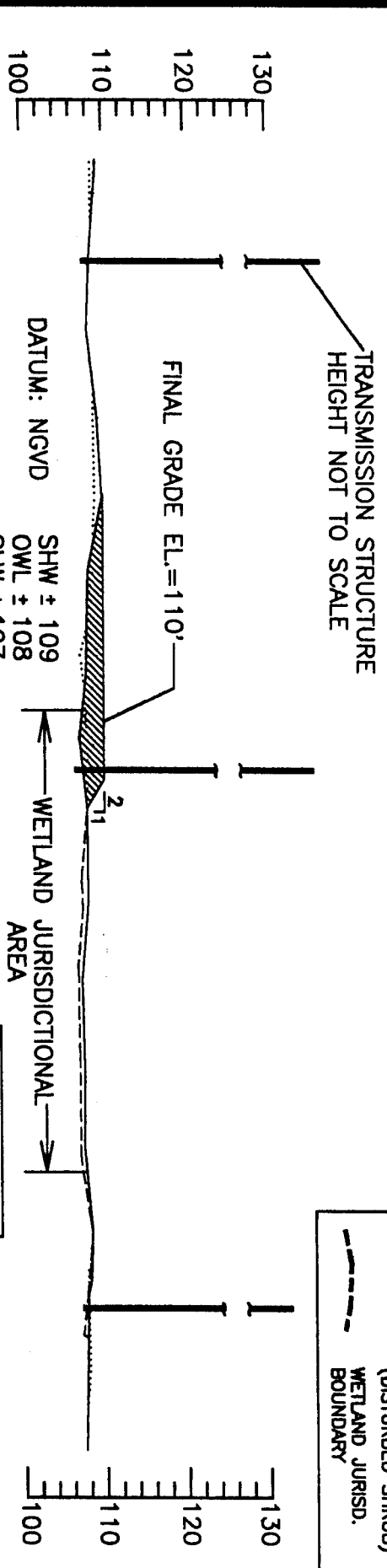
SEMINOLE
ELECTRIC
COOPERATIVE
INCORPORATED

FIGURE 7

Robert J. [Signature]
11/30/91



	1.28 ACRES (MARSH)
	0.17 ACRES CLEARED (DISTURBED SHRUB)
	0.13 ACRES FILLED (DISTURBED SHRUB)
	WETLAND JURISD. BOUNDARY



LEGEND for PROFILE

- FILL
- CENTERLINE, CL
- 16 FT. LEFT OF CL
- 16 FT. RIGHT OF CL

NOTE: SURVEY INFORMATION DETERMINED BY AERIAL PHOTOGRAMETRIC METHODS



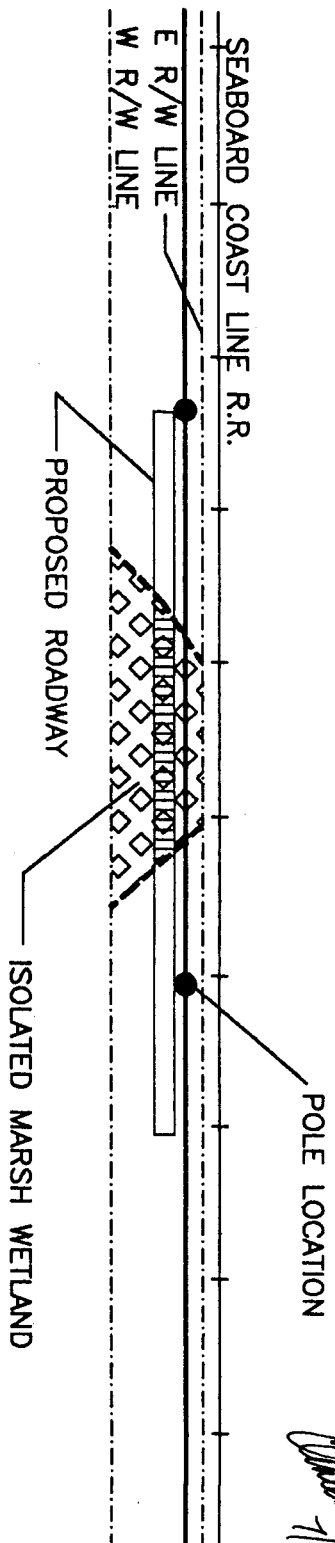
WETLAND "G" PLAN/PROFILE

SEMINOLE ELECTRIC COOPERATIVE INCORPORATED

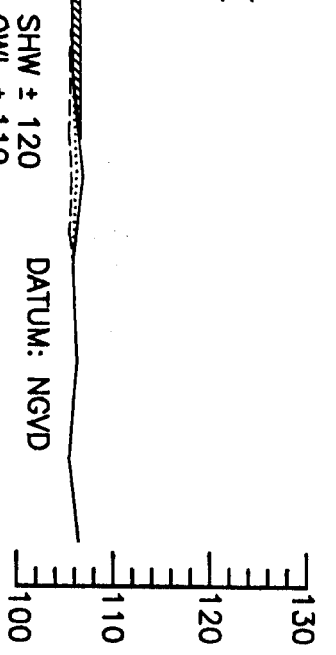
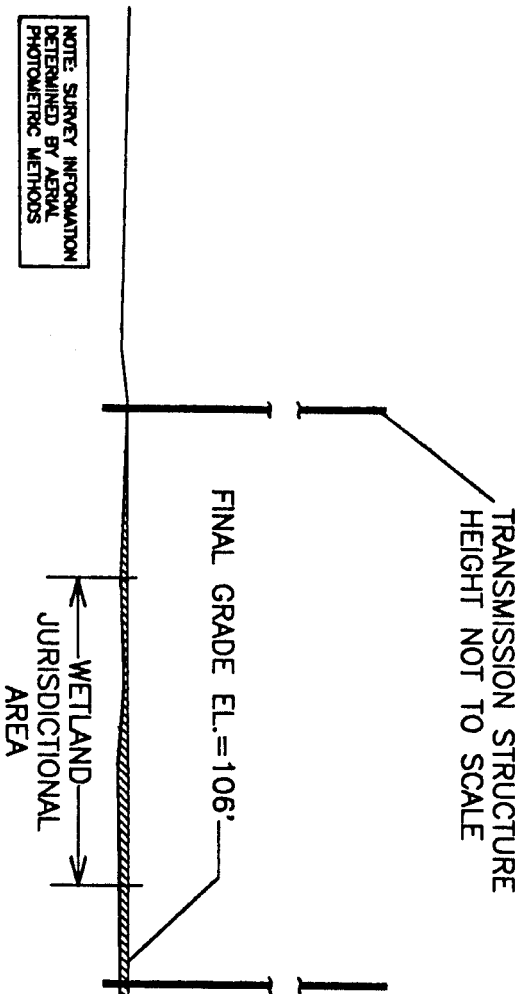
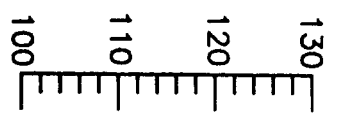
FIGURE 8

DATE: 7/17/91

John P. Lee
 7/30/91



	WETLAND
	0.60 ACRES (MARSH)
	0.13 ACRES FILLED (MARSH)
	WETLAND JURISD. BOUNDARY



LEGEND for PROFILE

- FILL
- CENTERLINE, CL
- 16 FT. LEFT OF CL
- 16 FT. RIGHT OF CL

NOTE: SURVEY INFORMATION DETERMINED BY AERIAL PHOTOMETRIC METHODS

WETLAND "I" PLAN/PROFILE



DATE: 7/17/91



FIGURE 9

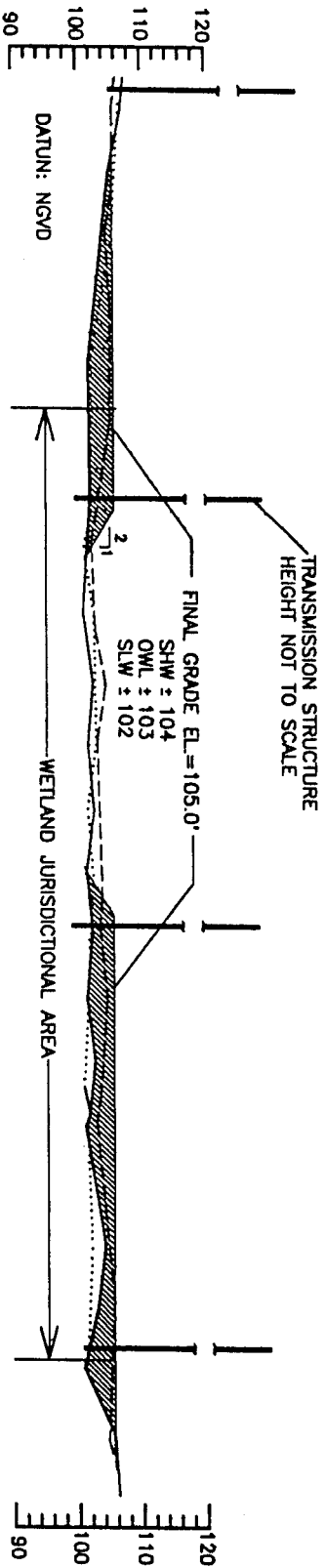
WETLAND "K" PLAN/PROFILE

DATE: 7/17/91

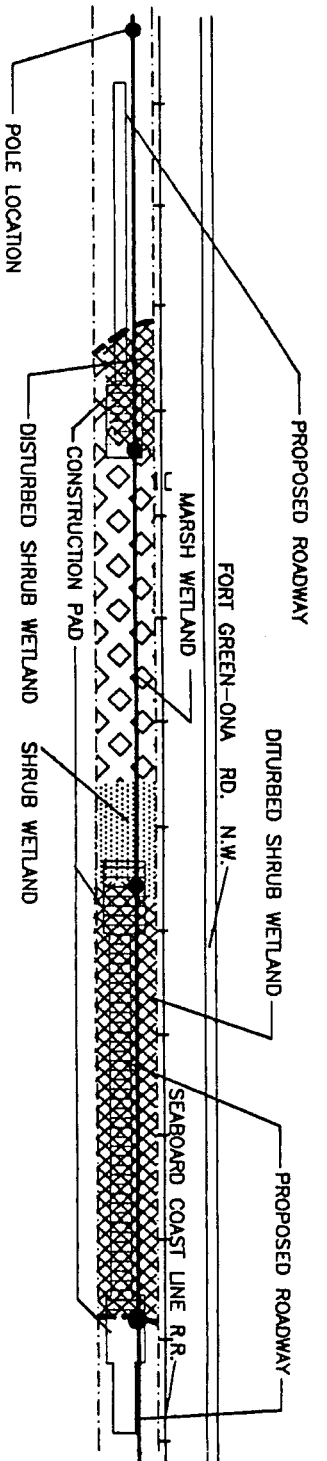
FIGURE 10

LEGEND for PROFILE
 FILL
 CENTERLINE, CL
 16 FT. LEFT OF CL
 16 FT. RIGHT OF CL

NOTE: SURVEY INFORMATION
 DETERMINED BY AERIAL
 PHOTO-METRIC METHODS



WETLAND (SHRUB)	0.35 ACRES CLEARED
WETLAND (DISTURBED SHRUB)	1.66 ACRES CLEARED
WETLAND (DISTURBED SHRUB)	0.55 ACRES FILL
WETLAND JURSD. BOUNDARY	0.94 ACRES (MARSH)

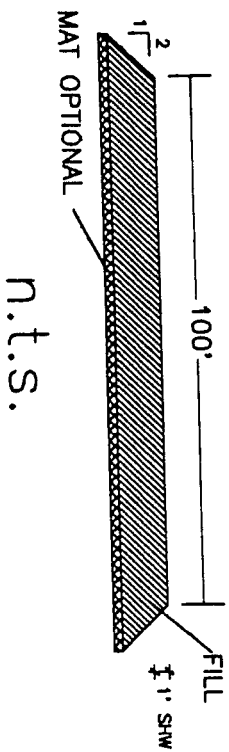
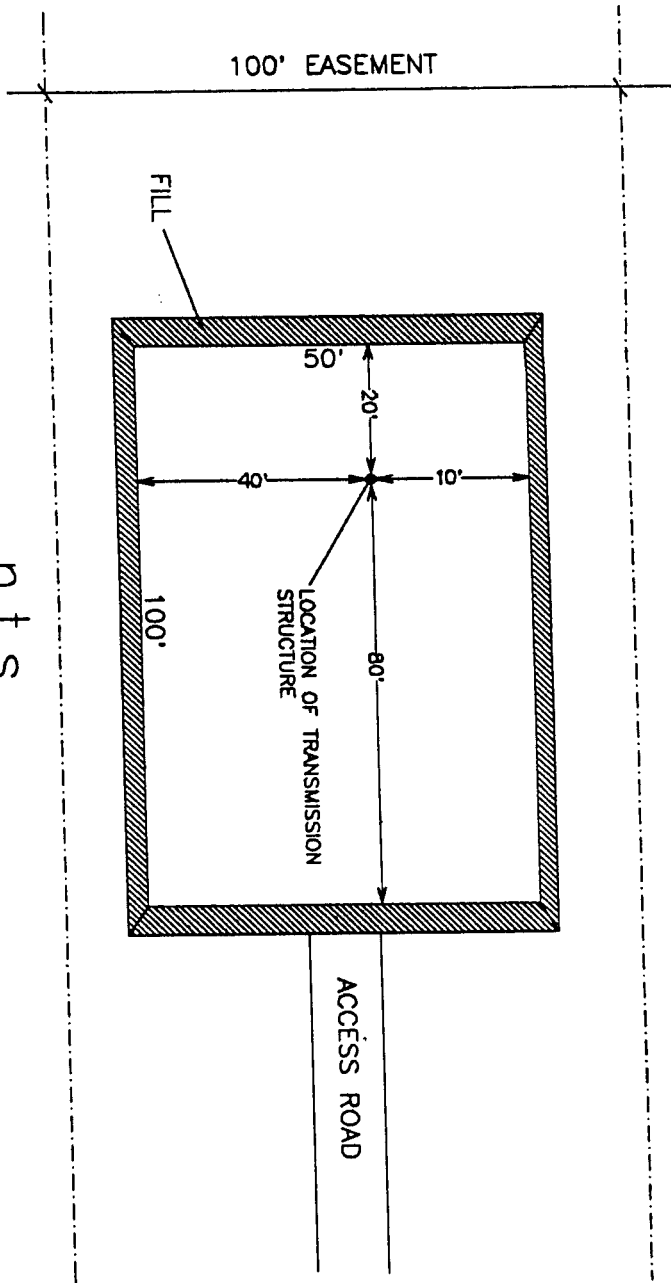


Handwritten signature and date: 8/16/91



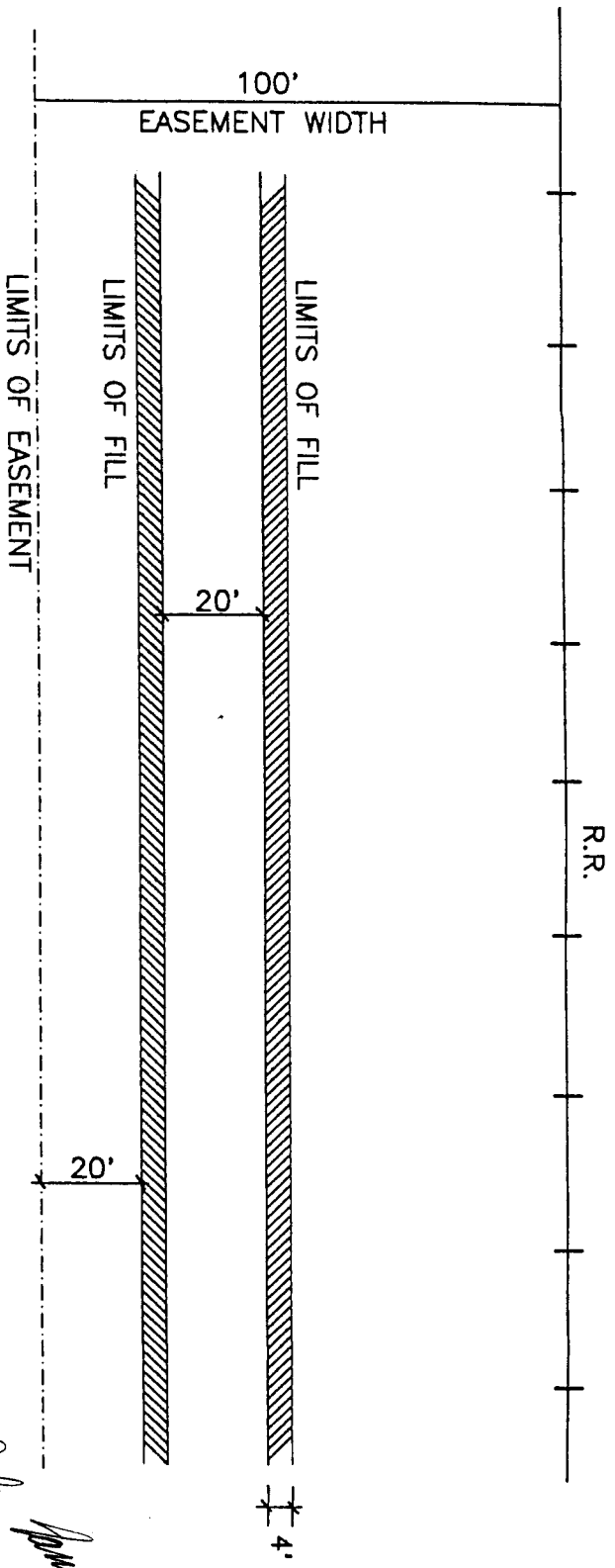
SEMINOLE
ELECTRIC
COOPERATIVE

TYPICAL PAD LAYOUT

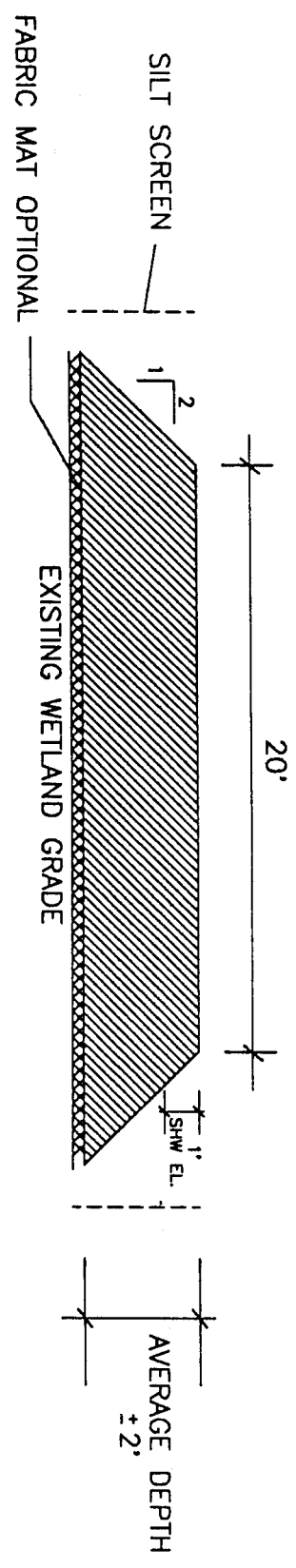


Approved
8/6/91

FIGURE 11



TYPICAL PLAN VIEW n.t.s.



TYPICAL PROFILE n.t.s.

— CENTERLINE, CL
- - - 16 FT. LEFT OF CL
..... 16 FT. RIGHT OF CL

LEGEND for PROFILE

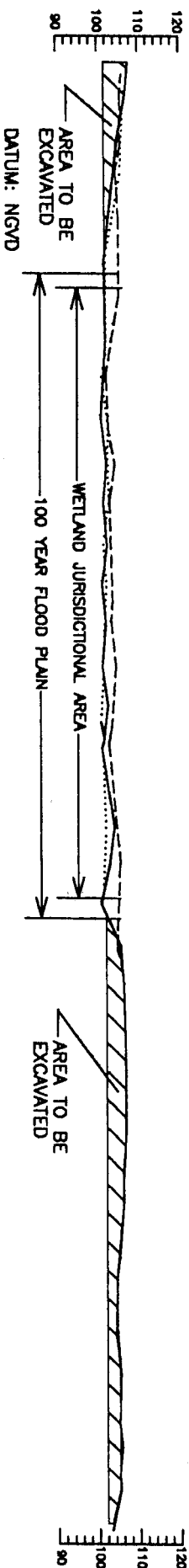
NOTE: SURVEY INFORMATION
DETERMINED BY AERIAL
PHOTOMETRIC METHODS

LETTIS CREEK HEADWATERS WETLAND "K" PLAN/PROFILE

DATE: 7/17/91

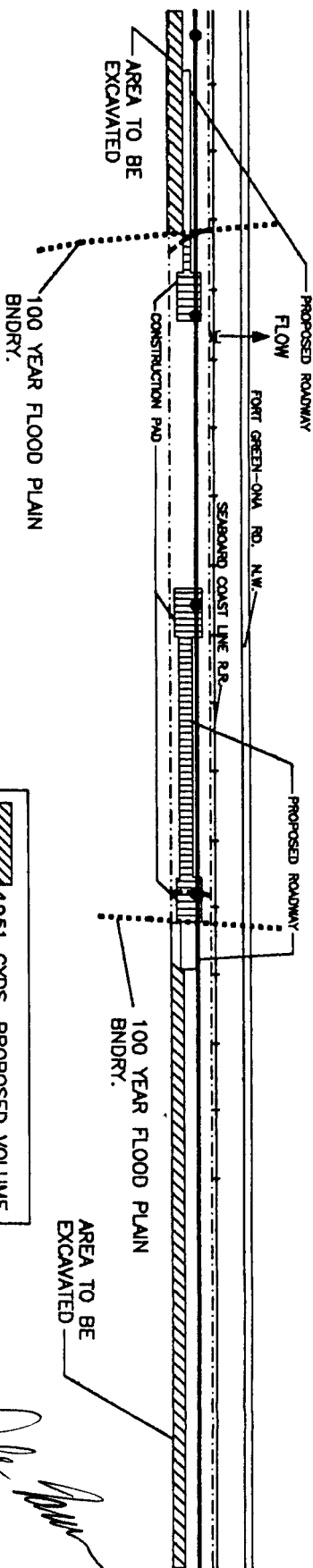


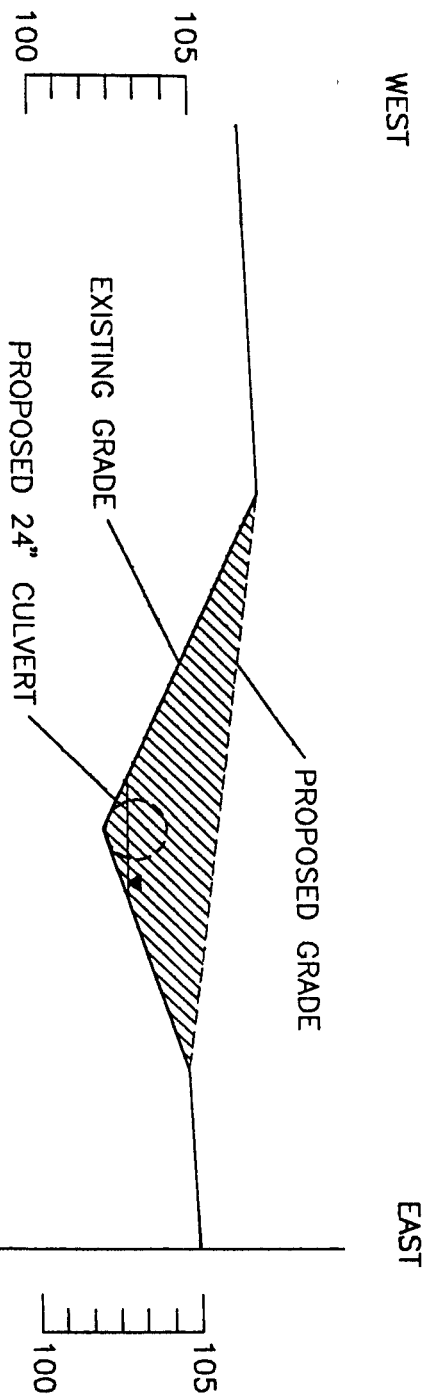
FIGURE 13



	4951 CYDS. PROPOSED VOLUME TO BE EXCAVATED (ABOVE 100 YR. F.P.)
	4922 CYDS. PROPOSED VOLUME TO BE FILLED (BELOW 100 YR. F.P.)
	WETLAND JURISD. BOUNDARY

Signature
8/6/91



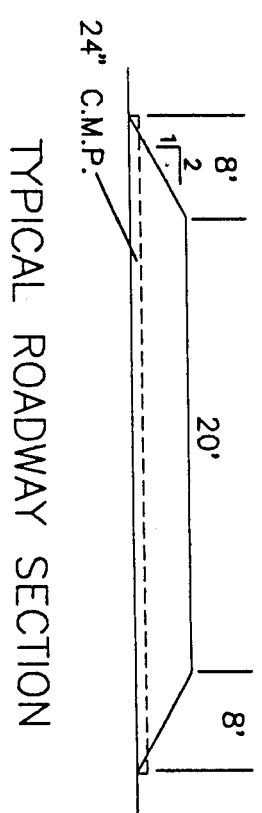


WEST RAILROAD DITCH SECTION LOOKING NORTH n.t.s.

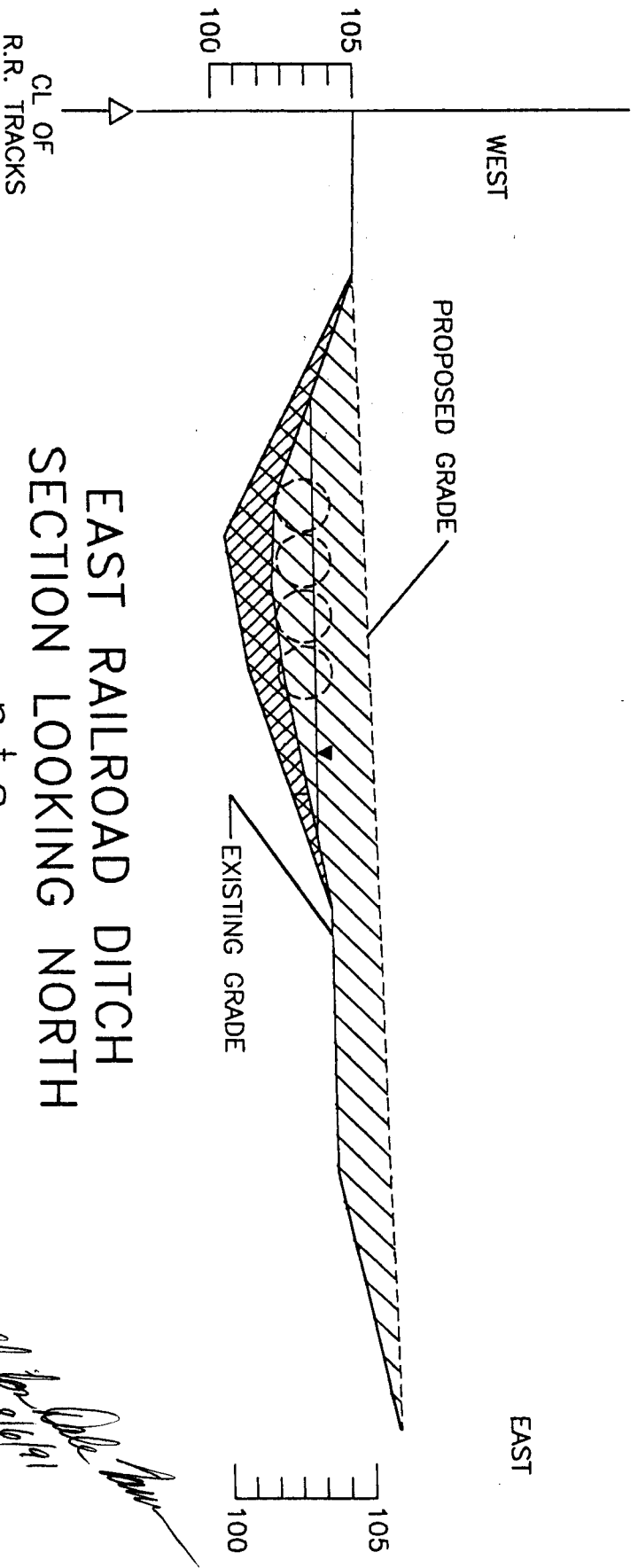
Signature
8/10/91

LEGEND

- ▼ WATER LEVEL 7/12/91
- - - PROPOSED ROADWAY
- PROPOSED 24" C.M.P. 40' LONG
- /// PROPOSED GRADE



DATUM: NGVD

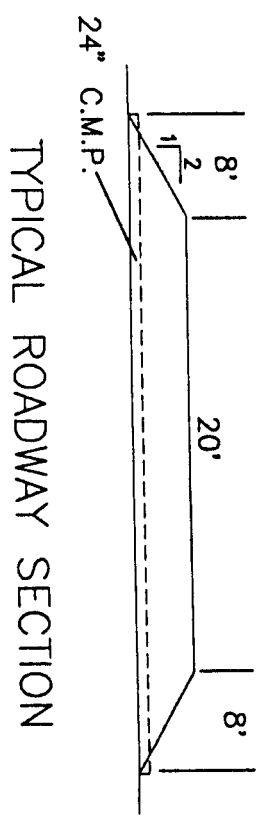


EAST RAILROAD DITCH SECTION LOOKING NORTH n.t.s.

John Doe
8/6/91

LEGEND

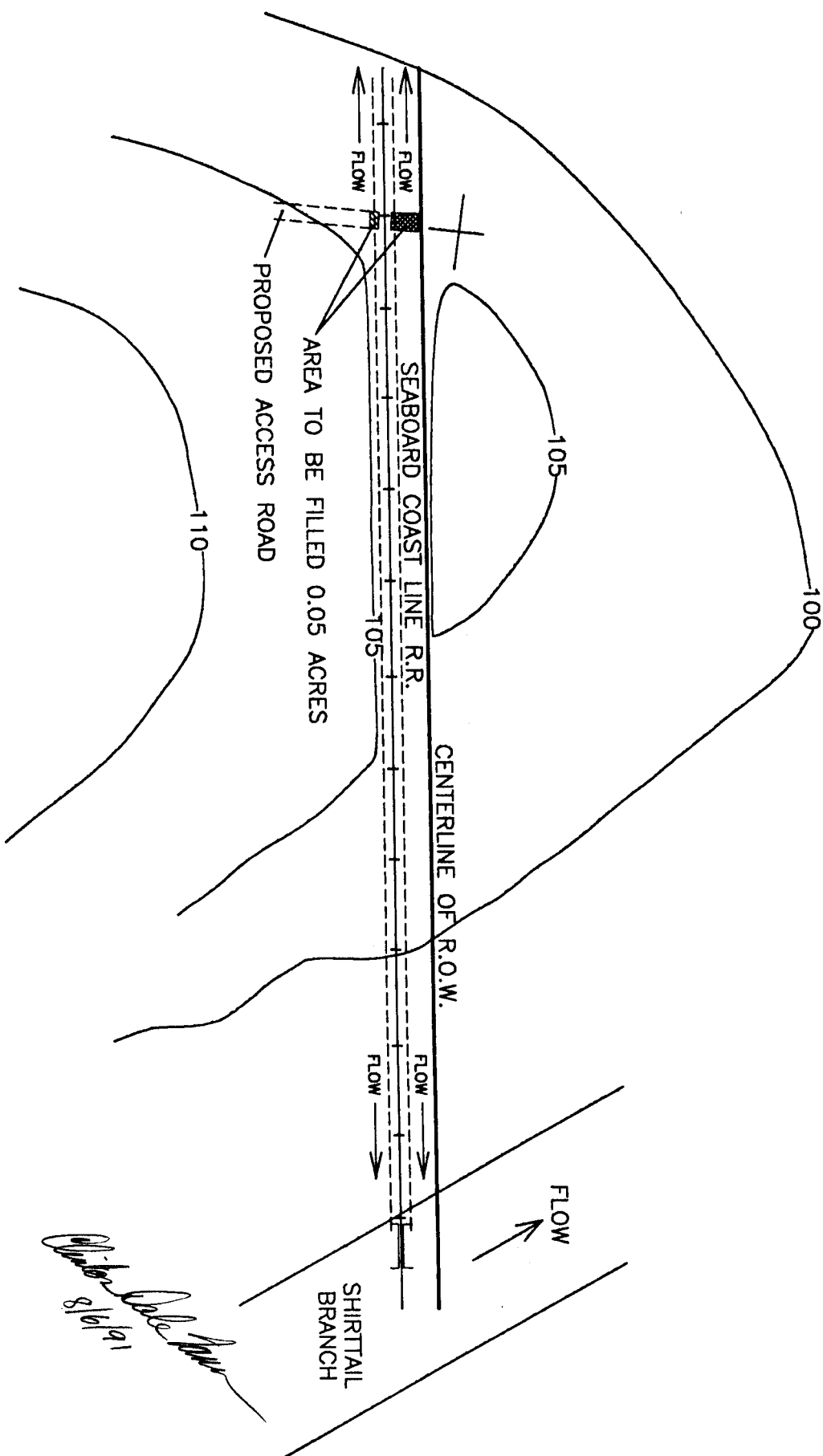
- ▼ WATER LEVEL 7/12/91
- - - PROPOSED ROADWAY
- PROPOSED 24" C.M.P. 40' LONG
- ▨ PROPOSED GRADE (TO BE FILLED)
- ▨ AREA TO BE EXCAVATED



TYPICAL ROADWAY SECTION

DATUM: NGVD

RAILROAD DITCH CROSSING



SOURCE: USGS QUAD
FT. GREEN SPRINGS



DATE: 7/17/91

APPENDIX C

HARDEE POWER STATION 230 KV TRANSMISSION LINE

CONCEPTUAL MITIGATION PLAN

HARDEE - LEE

INTRODUCTION

Wetland mitigation for the impacts due to the 230 kV transmission line from the Hardee Power Station to the Lee substation in State Waters and isolated wetlands are presented here in conceptual form. Details of the mitigation plan have not been resolved due to uncertainty about the total impacts to wetlands along the transmission line route. Activities will include minor fill in disturbed and undisturbed forested, shrub, and marsh wetlands. Clearing of relatively undisturbed forested and shrub wetlands as well as highly disturbed shrub wetlands will also occur but mitigation for these areas will be contingent on the outcome of current litigation concerning clearing of wetlands. Seminole reserves the right to withdraw mitigation offered for clearing activities if it is shown that the Department has no authority to require mitigation for these activities.

LOCATION

Mitigation for the impacts from the entire 78 mile length of transmission line are proposed to be located within the Peace River basin, the basin in which the majority of impacts are to occur from the construction of the line. The location of the mitigation area is proposed to be in the Cecil M. Webb Wildlife Management Area which is owned and managed by the Florida Game & Freshwater Fish Commission (FG&FWFC). Specifically, two areas are under investigation for possible mitigation work. These areas include the Myrtle Slough sub-basin, a tributary to the Peace River, and Webb Lake which drains into Alligator Slough, a tributary to Charlotte Harbor. Both of these areas are located within the Southwest Florida Water Management District and are FDER jurisdiction.

The Myrtle Slough area was chosen based on information received from the FG&FWFC concerning hydrological work that has been planned for the basin since the early 1980's. This work has not been attempted by the FG&FWFC due to budgetary constraints and with no end to State financial problems in sight it is doubtful that any money would be available for several years. The FG&FWFC suggested the area since an existing, abandoned, railroad grade/ditch constructed early this century has resulted in an apparent decreased hydroperiod for the wetlands within the basin. An engineering study, prepared by Johnson engineering in 1983, indicated that "Flow runs uncontrolled at the end of the wet season until the creek and thus the ground water table is depleted. Areas near SR 74 have channel depths of up to seven or eight feet into which the ground water runs. A control structure at this point would be very beneficial." This area appears ideal for enhancement of existing low lying areas that were high quality wetlands in before the railroad grade was constructed.

The Webb Lake area was also suggested by FG&FWFC as a possible mitigation site. The lake was designed and created by the FG&FWFC during the early 1980's and filled with water during 1983-84. The lake has approximately 21 miles of shoreline with a 10:1 littoral shelf down to an elevation of approximately 4 feet below existing weir structures. The littoral shelf was not planted with marsh species due to the hope that the area would vegetate through natural recruitment. Natural recruitment has been limited to only a few areas around the lake and the FG&FWFC has stated

that the littoral zone needs to be enhanced.

The FG&FWFC employees have planted a few areas around the lake with cypress trees and some success has been achieved. Currently, most of the lake has mature and numerous sapling pines existing just above high water. The area within a foot of high water is mostly unvegetated and would be appropriate for wetland hardwood planting. The FG&FWFC have suggested that this activity would be appropriate for the lake edge.

OBJECTIVES

Detailed hydrological and ecological evaluations of the areas are currently being performed the environmental consulting firm Dames & Moore. As their evaluation is made available, discussions will be held with DER, SWFWMD, and SFWMD concerning the enhancement of existing wetlands and low lying areas within the Myrtle Slough area. Several possibilities exist that would significantly enhance hydrological and ecological conditions on site. Possible enhancement efforts may include:

- . Enhancement of hydroperiod and flood control for the Myrtle Slough basin with the construction of a weir structure within the railroad ditch;
- . Enhancement of hydroperiod within specific sub-basins of the Myrtle Slough basin with the construction of ditch plugs within drainage ways currently draining low areas;
- . Enhancement of diversity and density of emergent marsh vegetation within the wetland areas through planting;
- . Enhancement of food availability for wildlife with the planting of wetland tree species that have edible acorns and fruits;
- . Enhancement of diversity and density of cypress and wetland hardwood forest communities by the re-introduction of species that present before logging occurred in the area;
- . Various other activities that could increase hydroperiod within historically wetland areas, increase water quality within the basin, or increase habitat value.

OTHER ISSUES

Several issues were raised during pre-application meetings with the water management districts and the Department of Environmental Regulation. These issues included locating the mitigation within one area for a 78 mile long corridor, the appropriateness of the Webb area for planting of wetland forested species, and the objectives of the FG&FWFC for managing the area. These concerns are addressed below.

- . The C.M. Webb Wildlife area is the largest tract of land in the State owned and managed by the FG&FWFC and therefore has a statewide significance over and above any political boundaries.
- . The majority of the wetland impacts for the project are within

the Peace River basin and all of the impacted areas are waterbodies that flow to Charlotte Harbor. The Myrtle Slough area is connected to the Peace River which flows to Charlotte Harbor.

- . According to the 10 year strategic management plan for the Webb area, the land has been extensively logged (during the late 1920's and 30's, cattlemen and hunters have burned the range, the area was used as a bombing range in the 1940's, and the stumps were removed in the 50's, 60's, and 70's under contract for use as a nitrogen source. These activities, along with natural fires have removed nearly all of the hardwoods from the area. Remnant wetland communities that exist in sparse patches throughout the Webb area include cabbage palm hammocks with species such as Florida elm, red maple, and water oak, as well as bayheads with species such as red bay, sweet bay, and dahoon holly.
- . The FG&FWFC have begun projects to reintroduce hardwoods to the Webb area. Species such as cypress, laurel oaks, live oaks, and cabbage palms have been planted by the early 1970's within the Myrtle Slough basin.
- . Long term FG&FWFC management plans for the Webb area include goals such as managing plant communities to increase their carrying capacity for wildlife, to protect maintain and increase threatened and endangered species, eradicate and prevent the reintroduction and spread of exotic plants, and manage the hydroperiod in a manner as close as feasible to natural regimes.

SCHEDULE

Current plans are to begin enhancement activities within the Webb area as soon as approval for the transmission line activities have been completed. Since approval is expected in early 1992, the dry season (February - May, 1992 would be ideal for construction of various forms of hydroperiod enhancement within the basin and perhaps individual wetlands. Wetland planting would best be accomplished during the wet season (June - September, 1992). All enhancement should be completed by December, 1992.

Any enhancements would be monitored and maintained in order to insure the achievement of the stated goals. A detailed monitoring and maintenance plan will be submitted once a detailed mitigation plan is prepared.

APPENDIX D

HARDEE POWER STATION 230 KV TRANSMISSION LINE
QUALITATIVE WETLAND DESCRIPTIONS

HARDEE - VANDOLAH

WETLAND "A"
Payne Creek Basin

Community Type: Isolated Disturbed Shrub

Agency Jurisdiction: SWFWMD

Predominant Species Present: Myrica cerifera, Sambucus canadensis, Baccharis spp., Ludwigia peruviana, Salix caroliniana, Cephalanthus occidentalis, Acer rubrum, Magnolia virginiana. *

Canopy Cover: > 80%

Hydrology: Seasonal High Water $\pm$ 12" above lowest elevations.

Soil Type: Basinger Fine Sand.

WETLAND "B"
Payne Creek Basin

Community Type: Isolated Shrub

Agency Jurisdiction: SWFWMD

Predominant Species Present: Acer rubrum, Myrica cerifera. *

Canopy Cover: > 95%

Hydrology: Seasonal High Water $\pm$ 12" above lowest ground elevation.

Soil Type: Ona Fine Sand

* Wetland species listed in order of predominance.

WETLAND "C"

Payne Creek

Community Type: Floodplain/stream (Forested, open water, Pine Oak hammock, shrub)

Agency Jurisdiction: FDER/SWFWMD

Predominant Species Present: Forested - Quercus nigra, Liquidambar styraciflua, Pinus elliotti, Acer rubrum;
Shrub - Cephalanthus occidentalis, Fraxinus caroliniana, Ludwigia peruviana;
Open water - Salvinia spp. *

Canopy Cover: Forested >95%; Shrub >80%.

Hydrology: $\pm$ 5 foot deep stream; Pine/oak floodplain - no evidence of inundation; lower floodplain - Seasonal High Water $\pm$ 2 feet above lowest elevations;

Soil Type: Bradenton - Felda - Chobee association.

WETLAND "D"
Shirrtail Branch

Community Type: Stream; Forested Seepage Area.

Agency Jurisdiction: DER/SWFWMD

Predominant Species Present: Acer rubrum, Liquidambar styraciflua, Ulmus floridana, Magnolia virginiana. *

Canopy Cover: >90%

Hydrology: Stream - Seasonal High Water $\pm$ 30" above stream bottom; Seepage area - no evidence of inundation.

Soil Type: Bradenton - Felda - Chobee association.

* Wetland species listed in order of predominance.

WETLAND "E"
Tributary to Doe Branch

Community Type: Forested seepage area; Disturbed Shrub.

Agency Jurisdiction: DER/SWFWMD

Predominant Species Present: Forested - Acer rubrum, Magnolia virginiana;
Disturbed Shrub - Salix caroliniana, Acer rubrum, Myrica cerifera,
Ludwigia peruviana, Cephalanthus occidentalis, Sambucus canadensis. *

Canopy Cover: Forested - >80%; Shrub >50%

Hydrology: Forested - Seasonal High Water at ground level; Shrub - Seasonal
High Water $\pm$ 12" above lowest elevations.

Soil Type: Manatee Mucky Fine Sand.

WETLAND "F"
Doe Branch Basin

Community Type: Isolated Marsh

Agency Jurisdiction: SWFWMD

Predominant Species Present: Lachnanthes caroliniana, Pontedaria cordata,
Cladium jamaicense. *

Canopy Cover: N/A

Hydrology: Seasonal High Water at ground elevation in ROW area.

Soil Type: Floridana Mucky Fine Sand.

* Wetland species listed in order of predominance.

WETLAND "G"
Lettis Creek Basin

Community Type: Isolated Disturbed Shrub; Isolated Marsh

Agency Jurisdiction: SWFWMD/DER

Predominant Species Present: Shrub - Salix caroliniana;
Marsh - Pontedaria cordata, Panicum hemitomom, Lachnanthes caroliniana,
Spartina bakeri, Sagittaria latifolia, Ludwigia peruviana. *

Canopy Cover: Shrub - >50%

Hydrology: Seasonal High Water $\pm$ 8" above elevation in ROW.

Soil Type: Basinger Fine Sand

WETLAND "H"
Lettis Creek Basin

Community Type: Isolated Marsh

Agency Jurisdiction: SWFWMD

Predominant Species Present: Sagittaria latifolia, Pontedaria cordata, Spartina bakeri, Woodwardia virginiana, Typha domingensis, Ludwigia peruviana, Juncus spp., Lachnocaulon anceps, Hypericum spp. *

Canopy Cover: N/A

Hydrology: Seasonal High Water $\pm$ 12" above lowest elevations in ROW.

Soil Type: Felde Fine Sand.

* Wetland species listed in order of predominance.

WETLAND "I"
Lettis Creek Basin

Community Type: Isolated Marsh

Agency Jurisdiction: SWFWMD/DER

Predominant Species Present: Pontedaria cordata, Lachnanthes caroliniana, Juncus spp., Spartina bakeri, Panicum hemitomon, Hydrocotyle umbellata. *

Canopy Cover: N/A

Hydrology: Seasonal High Water $\pm$ 18" above lowest elevations in ROW.

Soil Type: Floridana Mucky Fine Sand.

WETLAND "J"
Lettis Creek Basin

Community Type: Isolated Marsh

Agency Jurisdiction: SWFWMD

Predominant Species Present: Sagittaria latifolia, Pontedaria cordata, Panicum hemitomon, Spartina bakeri, Lachnanthes caroliniana, Lachnocaulon anceps, Typha domingensis, Juncus spp. *

Canopy Cover: N/A

Hydrology: Seasonal High Water $\pm$ 6" above lowest elevation in ROW.

Soil Type: Popash Mucky Fine Sand.

* Wetland species listed in order of predominance.

WETLAND "K"
Lettis Creek Headwaters

Community Type: Marsh; Disturbed Shrub.

Agency Jurisdiction: DER/SWFMD

Predominant Species Present: Marsh - Juncus spp., Panicum hemitomon.
Disturbed Shrub - Salix caroliniana, Myrica cerifera, Sambucus canadensis,
Baccharis spp., Cephalanthus occidentalis, Acer rubrum, Gordonia
lasianthus, Ludwigia peruviana.
Shrub - Acer rubrum, Cephalanthus occidentalis.

Canopy Cover: Disturbed shrub >80%; Shurb >50%.

Hydrology: Seasonal High Water $\pm$ 24" above lowest elevations in ROW.

Soil Type: Floridana Mucky Fine Sand / Kaliga Muck.

Railroad Ditch
(Between Payne Creek and Shirttail Branch)

Community Type : Excavated Waterbody (Herbaceous Ditch)

Agency Jurisdiction : DER

Predominant Species Present: Ludwigia peruviana.

Canopy Cover : 100 %

Hydrology : No flow noted - within 900 feet of sub-basin drainage divide. No
evidence of past flow, appears to have a long hydroperiod (> 9
months).

Soil Type : disturbed.

* Wetland species listed in order of predominance.

APPENDIX E

HARDEE POWER STATION 230 KV TRANSMISSION LINE

FDER CONDITIONS OF CERTIFICATION

HARDEE - LEE

XXIX. ROW DELINEATION AND COMPLIANCE VERIFICATION (HPS)

TPS is responsible for compliance with this General Condition with respect to the natural gas pipeline. TEC is responsible for compliance with this condition with respect to the Pebbledale transmission line. SECI is responsible for complying with this condition with respect to the Vandolah and Lee transmission lines.

At least 90 days prior to commencement of construction, three copies of blue-line reproductions of aerial photographs of at least 1:400 scale shall be submitted to DER and one copy to each water management district (insofar as an area within its jurisdiction is involved) delineating the ROW routes selected, boundaries, preliminary pole and pad locations, and access roads. The Permittees shall notify all parties of such filing. These photographs shall be submitted prior to commencement of construction on the various segments of the linear facility; it is recommended that this information be submitted in segments rather than waiting until the entire ROW is acquired. DER, the water management districts, and any other party who requests to do so shall have 30 days from receipt of notice to review the photographs and to call any apparent conflicts with the requirements of the conditions of certification to the Permittees' attention. However, this paragraph shall not operate to avoid the need for post-certification submittals and compliance reviews otherwise required by the conditions of certification.

If DER or any substantially affected party has reason to believe that the construction of the linear facility and access roads within the Permittees' designated ROW cannot be accomplished in compliance with the conditions of certification, the Permittees shall be notified in writing. Failure of such a notice to be served on Permittees within 30 days from the notice of filing of the various segments in the aerial photographs with DER constitutes acknowledgment that construction of the linear facility and access roads can be accomplished in compliance with the conditions of certification within the designated ROW or the various segments of ROW submitted for review.

The acquisition of a particular ROW or the expenditure of funds toward acquisition of a particular ROW prior to post-certification review pursuant to this condition will be at the Permittees' risk, and no party will be estopped by such acquisition to seek disapproval of the construction of the linear facility or access roads within the ROW in accordance with these conditions of certification.

XXXI. POST-CERTIFICATION SUBMITTALS (HPS)

Conditions of certification which provide for the post-certification submittal of information to agencies by the Permittees are intended to allow the agencies to monitor the effects arising from the location of the natural gas pipeline and transmission line rights-of-way and the construction and maintenance of the permitted activities to thereby assure continued compliance with state water quality requirements, other agency nonprocedural rules and standards, and the conditions of certification, without any further government action.

XXXII. TRANSMISSION (TEC and SECI) AND PIPELINE (TPS) ROWs

A. Construction.

1. The Permittee shall avoid impacting wetlands within all certified corridors wherever practicable. When necessary and feasible, the location of the span between power poles shall be maximized or varied to eliminate or reduce wetland impacts.
2. The Permittee shall, wherever practicable, utilize adjacent existing public roads for access to the ROW for construction, operation and/or maintenance purposes.
3. The Permittee shall consult with the Bureau of Wetland Resource Management prior to final determination of the access road locations, (including those not located on the ROW), tower locations, and construction techniques which are to be reflected on any post-certification review information submittals. At DER's request, the Permittee shall conduct field inspection with staff of this agency.
4. Prior to clearing activities within any of the ROW associated with the various linear facilities, an ecological survey shall be conducted to identify the presence of threatened or endangered species (plant and animals) as defined in the application, likely to occur in the ROW based on range and habitat. This survey shall also identify the location of any wading bird colonies. Results of this survey shall be submitted to the DER and the Florida Game and Freshwater Fish Commission (FGFWFC) and the United States Fish and Wildlife Service (USFWS). If any clearing activity will take place in or otherwise adversely affect jurisdictional wetlands, survey results will also be submitted to the appropriate water management district. If it is determined that any of these species will be affected by the construction of any of the linear facilities, the Permittee shall consult with DER and FGFWFC to determine the appropriate steps to be taken to avoid, minimize, mitigate, or otherwise appropriately deal with, any adverse impacts within each agency's respective jurisdiction.
5. After all ROWs have been selected, the Permittee shall conduct a survey of archaeological sensitive areas, as determined in consultation with the Department of State, Division of Historical Resources, where they are crossed by the ROW. This report shall be submitted to DHR. If practicable, sites considered to be eligible for the National Register shall be avoided during construction of the linear facilities, and subsequently during maintenance of the ROWs. For any other significant site, Permittee shall consult with DHR to determine appropriate action. If avoidance is not practicable, impact shall be mitigated through archaeological salvage operations or other methods acceptable to DHR.
6. All materials used for any purpose related to the construction of the transmission lines or other linear facilities shall come from fill sources in compliance with applicable local ordinances. No fill materials shall be obtained from excavated wetlands within the ROW unless authorized by DER and appropriate water management district in accordance with a mitigation plan submitted in compliance with certification.

7. The Permittee shall provide mitigation/compensation (M/C) for any wetland or open water habitat within the jurisdiction of DER or WMD which is degraded or destroyed as a result of the construction of any portion of the transmission lines, natural gas pipelines, or power plant facilities. M/C may include the creation of new wetland or openwaters habitat, the restoration of degraded habitat, the enhancement of functions and values provided by existing wetland or openwater habitats, removal of exotics, or other activities found by the relevant agencies and appropriate local government to be in compliance with their applicable regulations. Prior to the elimination or degradation of any such wetland or openwater habitat, the Permittee shall concurrently submit mitigation plans to DER, Bureau of Wetland Resources Management and the appropriate water management district. These mitigation plans shall, at a minimum, include the following:

- (a) Specific acreage figures, descriptions and locations of all jurisdictional wetlands, both within the ROW as well as adjacent to it which would be impacted by the construction or ROW maintenance activities, including an explanation of why no feasible alternative exists which would avoid impact to these wetlands;
- (b) A discussion and a detailed set of plan-view and cross-sectional drawings of the proposed M/C activities to be undertaken, including the location of all M/C areas and a description of the manner in which these areas will be created, restored or otherwise enhanced. Success standards will be determined based on the functional values of wetlands impacted and created. The Permittees will work with the appropriate agency staff to establish success criteria. The M/C plans proposed by Permittees shall be submitted concurrently to DER and the appropriate water management district for review and compliance monitoring.
- (c) A timetable for accomplishing the proposed M/C activities (i.e., the time for commencement and completion of activities for each mitigation area) concurrently with the construction of the various aspects of proposed facilities and any associated wetland impacts.
- (d) A monitoring and maintenance program including success criteria, to ensure the survival and success of any created, restored, or enhanced wetlands.

8. M/C plans must be found to fully compensate for the functions and values provided by wetlands that will be degraded or eliminated. DER and WMDs will work with the permittee in the development of acceptable mitigation plans. The mitigation plans proposed by the permittee shall be submitted for review and compliance monitoring to DER and the appropriate water management district and such review shall be subject to the time constraints set forth in specific Conditions XXXII. 9., and XXXV. C. below, as appropriate.

9. For all construction activities in waters of the State where DER has wetland resource protection jurisdiction pursuant to Chapter 403, Florida Statutes, the Permittees shall file with DER, Office of Siting Coordination and

Bureau of Wetland Resource Management the information described in Florida Administrative Code Rule 17-17.665 and 17-1.212(1), Section 3.2.2.

- (a) DER shall promptly review the submittal for completeness and sufficiency. If the submittal is found to be incomplete or insufficient, Permittee shall be so notified. Failure to issue such a notice within 30 days after filing of the submittal shall constitute a finding of completeness and sufficiency.
- (b) Within 90 days filing complete and sufficient information, DER shall determine whether there is reasonable assurance of compliance with applicable substantive agency regulations as required by the conditions of certification if the plans are executed as filed. If it is determined that reasonable assurance has not been provided, the Permittee shall be notified with particularity and possible corrective measures suggested. Failure to notify Permittee in writing within 90 days of receipt of a complete information submittal shall constitute a compliance verification.
- (c) If DER does not object within the time period specified, Permittee may begin construction pursuant to the terms of the conditions of certification and the subsequently submitted construction details and DER shall provide to the Corps of Engineers a letter indicating that the full requirements of this condition have been met and the water quality certification for the purposes of 33 USC Section 1341 is thereby conveyed.
- (d) Permittee, at its option, may submit information for different wetlands modification activities at different time intervals. Each submittal shall be processed by DER separately.

10. Semi-annual narrative reports shall be submitted to DER's Bureau of Wetlands Resource Management in Tallahassee and DER's Southwest District Office, indicating the status of all construction activities within waters of the State. These reports shall be submitted until all construction in that respective area is complete. The reports include the following information:

- (a) Date the activity (dredge and fill) began; if work has not begun on-site, please so indicate.
- (b) Brief description and extent of work completed since the previous report.
- (c) Brief description and extent of work anticipated in the next six months.

11. Upon completion of construction, the permittee shall provide DER with detailed engineering drawings which depict the pre and post construction contours in all areas in which construction occurred in waters of the State.

12. During construction all Brazilian Pepper, Australian Pine, and malaleuca in each ROW shall be removed or the trees cut and the stumps treated with an

approved herbicide consistent with these conditions. A plan for removal and disposal of such exotic species which minimizes seed dispersal shall be developed by the Permittee in consultation with DER. The Permittee shall abide by the plan.

13. Following construction, a plan for maintenance and control of Brazilian Pepper, Australian pine, and melaleuca within the ROWs shall be developed by the Permittee in consultation with DER. The Permittee shall abide by the plan.

14. The Permittee shall perform the work authorized under the certification in a manner so as to minimize any adverse impacts on fish, wildlife, native vegetation, natural environmental valued, water resources, and water quality.

15. The Permittee shall develop a water quality monitoring program to measure the turbidity generated by construction in all open waters to be crossed by the proposed natural gas pipeline. This program shall be developed in coordination with the Bureau of Wetland Resource Management of the Department prior to the commencement of construction.

16. The Permittee shall be responsible for the correction of any water quality problems that result from the construction, operation and/or maintenance of works authorized under this certification. The Permittee will work with DER to determine additional methods necessary to ensure that State Water Quality Standards are not violated as a result of construction.

17. Where necessary to prevent secondary impacts to adjacent wetlands during construction, adjacent wetland areas outside of the limits of construction shall be isolated from the construction area by silt fences. These silt containment devices shall be maintained and remain in place until all construction is complete and all associated side slopes or areas denuded of vegetation have been adequately stabilized. The Permittee shall be responsible for explaining the significance of these barriers to all construction personnel prior to construction. The Permittee shall use turbidity control as necessary so that turbidity levels in adjacent areas do not exceed 29 N.T.U.'s above natural background. Any placement of fill or encroachment into jurisdictional wetlands or waterbodies outside the limits of construction shall be immediately reported to DER, Southwest District Office in Tampa, and the Bureau of Wetland Resource Management in Tallahassee. Appropriate remedial action to restore the affected area shall be immediately undertaken.

18. In addition to the erosion and turbidity control measures specified above, best management practices, including but not limited to the use of floating silt screens in flowing waters, as well as the use of staked hay bales and silt curtains shall be used wherever necessary at all times during project construction. These erosion and turbidity control devices shall be regularly inspected and maintained when necessary. These devices shall remain in place until all construction is complete and all fill side slopes or denuded areas have been stabilized with suitable vegetation.

19. No dewatering operation shall be allowed unless the Permittee can provide reasonable assures to DER or WMD that no unauthorized adverse, off-site water resource impacts will occur as a result of the construction operation, and/or maintenance of the project.

B. Operation

1. Ground vehicles to be used in wetlands for maintenance access shall be low ground pressure vehicles unless limited to the access roads and structure pads.

2. Only EPA approved herbicides may be used in Waters of the State, or the use of other herbicides in any areas of the ROW, shall only be allowed with the concurrence of DER.

APPENDIX E

HARDEE POWER STATION 230 KV TRANSMISSION LINE

SWFWMD CONDITIONS OF CERTIFICATION

HARDEE - LEE

C. Project Informational Requirements.

1. General.

a. At least 90 days prior to the commencement of construction of any portion of the project for which additional information is required under Condition XXXV.C.2. below, for that portion proposed for construction, the Permittees shall submit such information to SWFWMD or SFWMD staff, as applicable, for a completeness and sufficiency review. If the water management district staff does not issue a written request for additional information within 30 days of receipt of the information, the information will be deemed to be complete and sufficient.

b. Within 60 days of the determination by SWFWMD or SFWMD staff that the additional information is complete and sufficient, the water management district shall determine and notify the Permittees in writing whether the proposed activities conform to applicable criteria in Chapters 40D-4 and 40E-4, Florida Administrative Code, and the conditions of certification. If necessary, the water management district shall identify what items are in need of clarification. Construction activities which impact works of the water management district or have surface water management impacts shall not begin until the water management district has an opportunity to assure that the activities are in compliance with the applicable water management district rule criteria and conditions of site certification, either in writing or by failure to notify the Permittees in writing.

c. Subsequent modifications to the drawings and supporting calculations submitted to SWFWMD or SFWMD which may significantly alter the quantity and/or quality of waters discharged off site shall also be submitted to the respective water management district for a determination that the modifications are in compliance with Chapters 40D or 40E-4, Florida Administrative Code, as appropriate, prior to the commencement of construction. However, minor deviations from construction plans deemed necessary in the field including, but not necessarily limited to, changes in the number, size, and location of culverts and other structures, shall be allowed.

d. The respective water management districts and the Permittees may mutually agree to vary the information requirements.

2. Surface Water Management.

Prior to the commencement of construction of any portion or phase of the project which may obstruct, divert, control, or impound waters of the state, such construction must be reviewed by the water management district with jurisdiction for a determination of compliance with Chapters 40D-4 or 40E-4, Florida Administrative Code and the conditions of certification, as appropriate. "Construction" activities for which such review is required includes but is not limited to, installation of all surface water and stormwater management facilities, the placement of structure pads, dredging and filling, the installation of access/maintenance roads and culverts and fill materials, wetlands mitigation/compensation and related activities in circumstances where a permit from the water management district would ordinarily be required under

applicable rules. For all construction activities, the applicable information requirements of Chapters 40D-4 and 40E-4, Florida Administrative Code, shall be submitted as may be appropriate. The Permittee shall submit to SWFWMD erosion control plans for the HPS construction project (or discrete phases of the project) detailing measures to be taken to prevent the offsite discharge of turbid waters during construction. These plans must also be provided to the construction contractor prior to the initiation of construction. For all construction activities related to linear facilities, the following information shall be provided at a minimum:

a. A centerline profile of existing topographic features along the proposed access/maintenance road(s) sufficient to show contours and drainage patterns;

b. Construction plans and designs of the proposed access/maintenance and finger road(s) with elevations and dimensions shown;

c. Typical cross-sections of the proposed access/maintenance and finger road(s);

d. Cross-section(s) of each wetland, stream or creek at the points to be crossed by the access/maintenance and finger road(s) or other construction;

e. Specifications showing the location of each linear facility structure, finger and maintenance/access road, and culvert to be constructed, including all areas to be filled or excavated;

f. Specifications, including supporting assumptions and calculations, showing the type and size of water control structures (ditch, culvert, equalizer, etc.) to be used, with proposed flowline elevations marked, drainage areas identified and design capacity verified;

g. A cross-section of all proposed fill/excavation areas, with the exception of fill/excavation directly associated with transmission line support poles, showing the proposed depth;

h. Identification of wet season water table elevations for each basin affected by construction.

3. In addition to the requirements of Section 2 above, specific detailed information shall be provided by the Permittees before, during and after construction which will be required to be submitted to the appropriate water management district to demonstrate compliance with recognized standards for reservoir and dam design, safety, construction, operation, and maintenance. The Permittees shall develop technical criteria and requirements which represent commonly recognized and accepted engineering and technical standards for reservoir and earthen dam design, safety, construction, operation, and maintenance. The criteria or standards shall be submitted to the District prior to final design of the dam and reservoir for consideration in accordance with the information submittal and review process outlined in the conditions of certification.

4. The Permittee shall employ culverts or other appropriate techniques and implement suitable maintenance practices where necessary to comply with the applicable regulation of the applicable WMD or DER and to maintain existing drainage patterns, hydroperiods, and sheetflow along the ROWs. The exact number, spacing, diameter, orientation, and length of culvert necessary to maintain existing hydrologic conditions and to maintain surface water flow conditions in the area shall be determined by the Permittee in consultation with applicable WMD or DER based on site-specific information. This information shall be submitted to SFWMD or SWFWMD as applicable for approval prior to construction to ensure that the culverting or other appropriate techniques meets applicable standards within all affected wetlands areas.