From:	Balcom, Ilia G.
To:	Mulkey, Cindy; Seiler, Ann
Cc:	SCO; Senn, Nate; Herrera, Justin H; Oneal, Tommy W; Mattina, Mark; Linton, William R
Subject:	DEF Hines Energy Complex COC Modification Request for Cooling Pond Water RO Treatment and UIC Well Conversion
Date:	Thursday, June 20, 2024 1:48:04 PM
Attachments:	DEF Hines Energy Complex COC Mod RO Treatment System-UIC Well Conversion.pdf
Importance:	High

EXTERNAL MESSAGE
This email originated outside of DEP. Please use caution when opening attachments, clicking links, or responding to this email.

Dear Cindy and Ann,

I hope this email finds you well.

Attached please find the COC Modification Request. A wire transfer for the amount of $20,000 for the application fee is being processed per the instructions previously provided.

Please let me know if you need me to send this application package as a hard copy, or if this electronic version is sufficient.

Thanks and have a great day!

Ilia

Ilia Balcom
Lead Environmental Specialist
Duke Energy Florida
813-362-5123

DUKE ENERGY FLORIDA

Justin H. Herrera
Station Manager
Hines Energy Complex

June 14, 2024

Mrs. Cindy Mulkey
Siting Coordination Office
Florida Department of Environmental Protection
2600 Blair Stone Road, MS 5500
Tallahassee, FL 32399-2400

Subject: Duke Energy Florida, LLC
Hines Energy Complex
Conditions of Certification PA 92-33J
Submittal of Petition for Modification-Cooling Pond Water Treatment Facility and Recharge Well Conversion

Dear Mrs. Mulkey:

Pursuant to Condition XXXIV.C of the above-referenced Conditions of Certification (COC) dated July 6, 2022, Duke Energy Florida (DEF) is petitioning for a modification of the COC to authorize the construction of a Cooling Pond Water Treatment Facility (CPWTF), and conversion of the existing Recharge Underground Injection Control well (UIC Well) to a backup Production Well. Enclosed please find the application package in the following attachments:

- Attachment I: Southwest Florida Water Management District (SWFWMD) Water Use Permit Letter Modification Short Form Application and supporting documents to convert the existing Recharge UIC well into a backup Production Well.
- Attachment II: Cooling Pond Water Treatment Facility Project Description and Conceptual Design
- Attachment III: Environmental Resource Permitting (ERP) Application for the CPWTF and lined brine ponds.

A wire transfer in the amount of $20,000 for the modification application fee will be submitted to the Department upon receipt of this modification request and as instructed by the Department.

Should you have any questions regarding this submittal, please contact Ms. Ilia Balcom at (813) 362-5123 or ilia.balcom@duke-energy.com. Please copy Ms. Balcom on all correspondence related to this submittal.

Sincerely,

Justin H.Herrera
Station Manager
Hines Energy Complex

Enclosures

Attachment I

SWFWMD WATER USE PERMIT LETTER MODIFICATION SHORT FORM APPLICATION AND SUPPORTING DOCUMENTS FOR CONVERSION OF UIC RECHARGE WELL INTO A BACK-UP PRODUCTION WELL

PROJECT DESCRIPTION

FACILITY BACKGROUND

Duke Energy Florida (DEF) owns and operates the Hines Energy Complex (HEC) located in Bartow, Florida in Polk County. HEC is located on County Road 555 south of State Road 640 as seen in Figure 1. It is approximately 7.5 miles to the southwest of the City of Bartow. The HEC is located within the Southern Water Use Caution Area (SWUCA) of the Southwest Florida Water Management District (SWFWMD).

The HEC is an 8,200-acre site that was built on previously mined land within the Bone Valley Phosphate Mining District. This area includes over 900 acres for power generation and ancillary facilities, a 1,200-acre cooling pond reservoir, and 2,000 acres of buffer areas along the east and southeast portions of the site. A detailed map of the HEC is presented in Figure 2.

Commercial operation of the first natural gas-fueled combined-cycle power block unit (PB-1) began in 1999 and is capable of producing 482 megawatts. Additional power block units, PB-2, PB-3, and PB-4, were constructed in 2003, 2005 and 2007, and are capable of producing 516, 500 and 530 megawatts, respectively.

EXISTING RECHARGE AND RECOVERY WELLS

The existing recharge TW-1 well was constructed following the requirements of Chapter 403, F.S., all rules of the Department of Environmental Protection (FDEP), and the requirements as outlined in the FDEP Permit Number 183519-001-UC. Figure 3 outlines the construction of the recharge well, TW-1. The recharge well was constructed with multiple casings (20-inch surface casing, 14-inch intermediate casing, 8-inch inner casing) with the inner casing completed to a depth of 614 ft bls and a total depth of 900 ft bls.

Since the issuance of the UIC permit, DEF constructed a production well, P-2, to act as the recovery well for the Aquifer Recharge and Recovery (ARR) system. This well was constructed approximately 250 ft to the southeast of TW-1 and borders the cooling pond for discharge. P-2 was constructed with a casing depth of 330 ft bls and a total depth of 880 ft bls. Since implementation of the Aquifer Recharge and Recovery (ARR) system was not initiated, P-2 has not been used as a recovery well and it is currently permitted under the Conditions of Certification PA 92-33 as a production well regulated by the Southwest Florida Water Management District.

Per UIC Permit #0183519-003-UC, two monitor wells were authorized to be constructed. However, these monitoring wells have not been constructed because the ARR system was never initiated.

Recharge Well Design and Construction Details:

(a) Total Depth:

The total depth of the recharge well, TW-1, is 900 ft below land surface (bls). TW-1 was completed in 2003. See Figure 3 for construction details. A chronological summary of the construction progress and

construction details was provided in the Feasibility Report for Exploratory Well (TW-1) (Schreuder, Inc., 2004).

(b) Depth and type of casing(s):

Casing Summary.

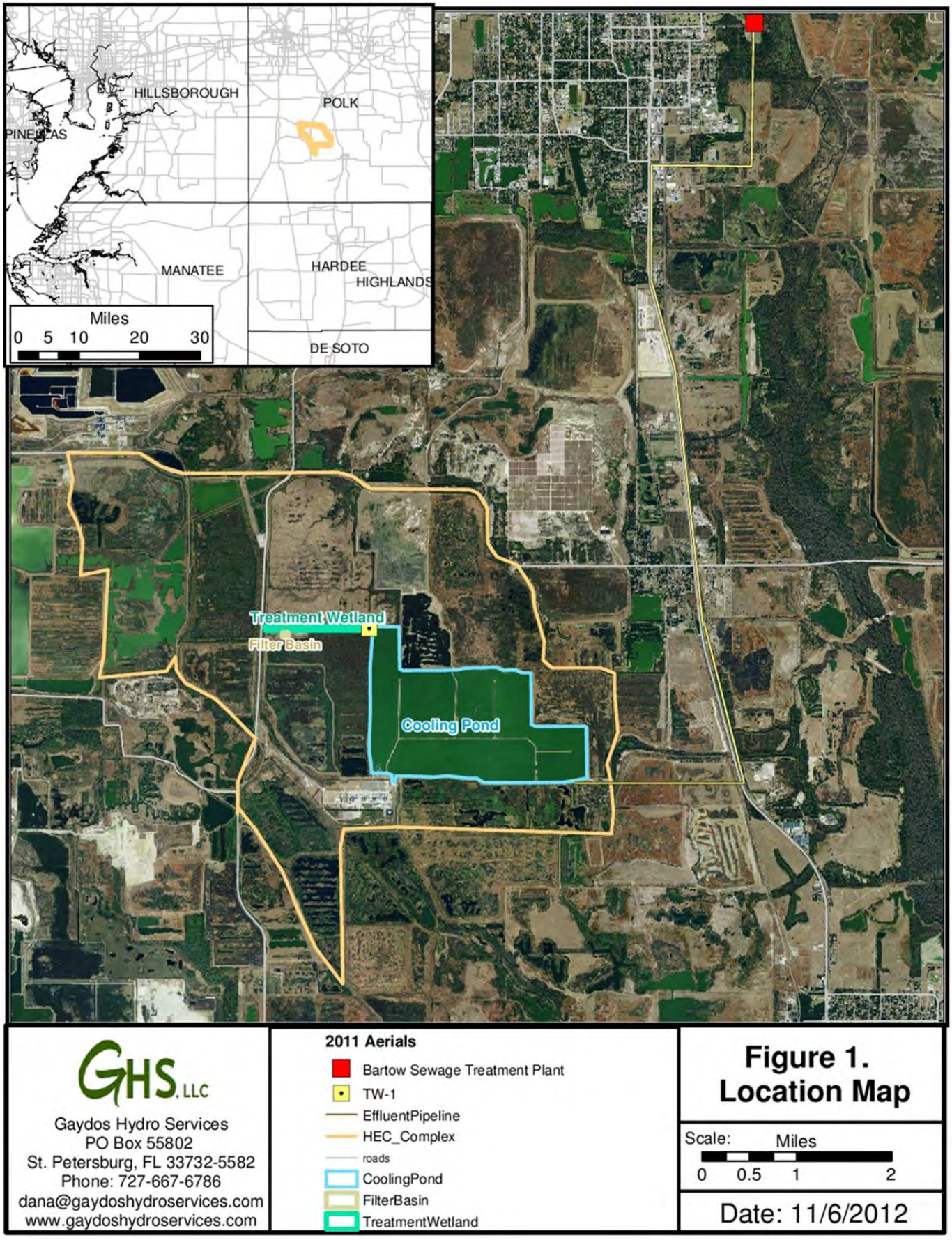
Outside Diameter	Wall Thickness	Total Depth
(inches)	(inches)	(ft bls)
20	0.375	64
14	0.375	315
8.625	0.322	614

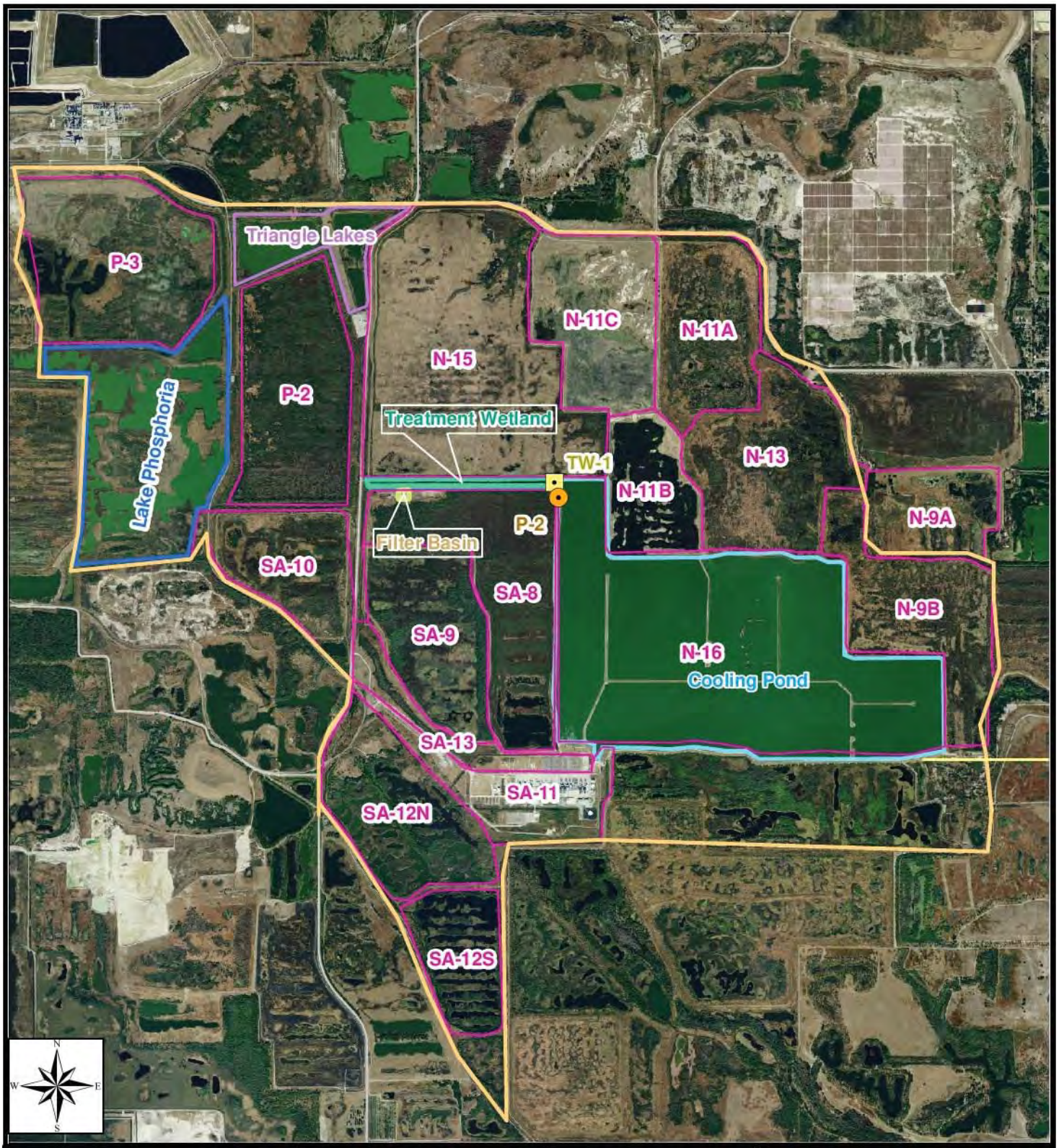
(c) Diameter of well:

The nominal diameter of the final casing of TW-1 is 20 inches with the wall thickness of 0.375 inches. See Casing Summary table above.

MODIFICATION REQUEST

Since implementation of the Water Cropping Areas and use of alternative water supply sources such as the City of Bartow, Tiger Bay Cogen and Mosaic, implementation of the ARR project is no longer needed. Therefore, DEF is submitting this modification request to permit the TW-1 recharge well into a backup production well to be used under emergency conditions. The permitting of this additional production well does not include a request to increase the withdrawal amount currently authorized under the Conditions of Certification.


HILLSBOROUGH
POLK
PINELLAS
MANATEE
HARDEE
HIGHLANDS
DE SOTO
Miles
0 5 10 20 30
Treatment Wetland
Filter Basin
Cooling Pond
GHS, LLC
Gaydos Hydro Services
PO Box 55802
St. Petersburg, FL 33732-5582
Phone: 727-667-6786
dana@gaydoshydroservices.com
www.gaydoshydroservices.com
2011 Aerials
Bartow Sewage Treatment Plant
TW-1
EffluentPipeline
HEC_Complex
roads
CoolingPond
FilterBasin
TreatmentWetland
Figure 1.
Location Map
Scale: Miles
0 0.5 1 2
Date: 11/6/2012



GHS, LLC
Gaydos Hydro Services
PO Box 55802
St. Petersburg, FL 33732-5802
Phone: 727-667-6786
dana@gaydoshydroservices.com
www.gaydoshydroservices.com

2011 Aerials

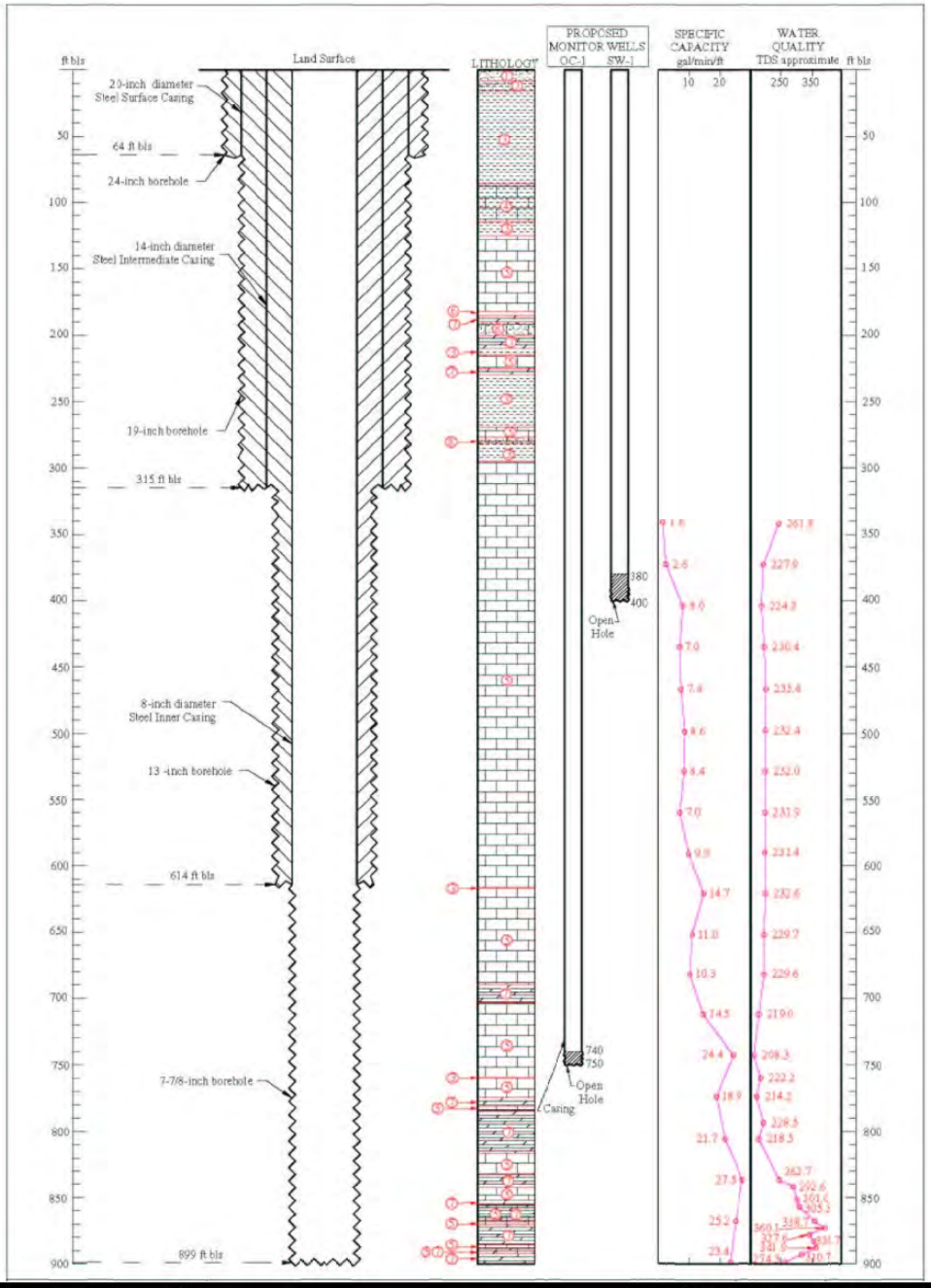
- P-2
- TW-1
- EffluentPipeline
- HEC_Complex
- Lake_Phosphoria
- Triangle Lakes
- CSAs
- CoolingPond
- FilterBasin
- TreatmentWetland
- roads

Figure 2. Site Map

Scale: Miles

0 0.25 0.5 1 1.5

Date: 12/18/2012



GHS, LLC
Gaydos Hydro Services
PO Box 55802
St. Petersburg, FL 33732-5802
Phone: 727-667-6786
dana@gaydoshydroservices.com
www.gaydoshydroservices.com

Land Surface
Borehole
Steel Casing
Neat Cement Grout
Scale note: Horizontal Exaggeration of 150X to show detail.

1 -Sand
2 -Silt
3 -Clay
4 -Mudstone
5 -Limestone
6 -Void (no returns)
7 -Dolostone
8 -Sandstone

Original Figure by Schreuder Inc.

Figure 3. Exploratory Well TW-1 Schematic

Scale:
see scale next to well

Date: 12/18/2012

GHS Environmental
PO Box 55802
St. Petersburg, FL 3372
727-667-6786

Mr. Joe Haberfeld
Aquifer Protection Program
Division of Water Resource Management
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

September 14, 2018

Re: RAI Responses for Hines Energy Complex (DUKE Energy) Class V UIC
WACS (Facility) ID: 98695
DEP Application No: 0183519-004-UC/5R

Dear Mr. Haberfeld,

GHS Environmental (GHS) is pleased to provide a response to Quesiton #1 on the Request for Additional Information (RAI) dated August 27, 2018.

1. A one-mile radius was drawn around the ASR well and a table was printed. However, no interpretation of the results was present. A table of all the wells listed as being for public supply, domestic, or drinking water should be listed with their known information including locations, casing depth, and total depth, with their locations highlighted on the map. A statement should be made as to whether there are any improperly abandoned wells, mines, sinkholes (including newly developed) or other geological features within the radius.

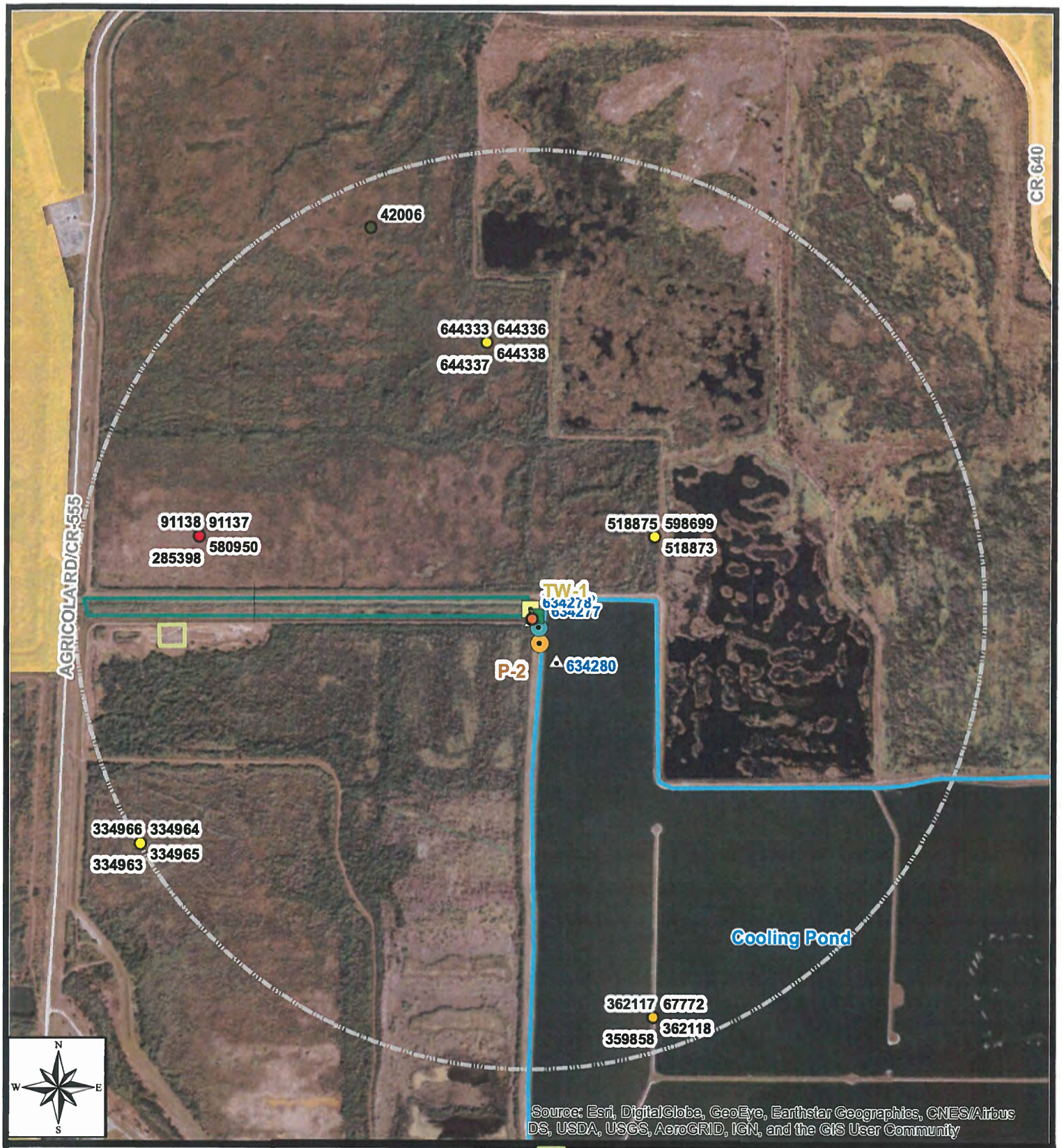
The well inventory was completed using information from SWFWMD, USGS, and FGS. Within the one-mile radius, there were only the well associated with the injection well either proposed or existing. See below table for the list of wells.

Site ID #	WUP #	DID #	Permittee #	Permittee	Status	Well Diameter (in)	Casing Depth (ft)	Total Depth (ft)	Latitude	Longitude
634278	10944	3	SW-1	Duke Energy Florida	Proposed	16	380	400	27 48 42.05	81 52 16.36
634280	10944	5	OC-1	Duke Energy Florida	Proposed	18	740	760	27 48 37.40	81 52 13.23
634277	10944	2	P-2	Duke Energy Florida	Existing	20	370	800	27 48 41.00	81 52 15.47
801122	10944	21	CP	Duke Energy Florida	Capped	20	315	614	27 48 42.37	81 52 15.84
519068	NA	NA	TW-1	Duke Energy Florida	Existing	8	614	899	27 48 51.39	81 52 00.54
634278	Same as 634277		P-2	Duke Energy Florida	Existing	20	370	800	27 48 42.05	81 52 16.36

Modeling previously submitted with the initial application showed that all of the injected water remained within the property boundary. The injection well was modeled to inject at a rate of 5 mgd for 10 years. Concurrently, Well P-1, at a distance of approximately 8,100 feet from the injection well, was withdrawing at a rate of 5 mgd for the 10-year period. The particle tracking shows that the injected water traveled a maximum distance of 5,260 feet towards Well P-1 (located on the southeast corner of the cooling pond) after 10 years and all of the injected water remained within the Hines Energy Complex property boundary.

Sincerely,
GHS Environmental

Dana J. Gaydos
Principal



GHS Environmental
PO Box 55802
St. Petersburg, FL 33732-5802
Phone: 727-667-6786
dana@ghsenvironmental.com
www.ghsenvironmental.com

WCPs in 1 mile TW-1

Use

- DOMESTIC
- INDUSTRIAL
- INJECTION WELL
- MONITOR
- PLUGGED
- POWER
- TEST

WUPs in 1-mile TW-1

Status, Type, Use

- Capped, Surface Withdrawal, Re-Pump
- Existing, Monitor,
- Existing, Withdrawal of Groundwater, Power Plant
- Proposed, Withdrawal of Groundwater, Power Plant
- P-2
- TW-1
- HEC_Complex
- CoolingPond
- FilterBasin
- TreatmentWetland
- TW-1 1 Mile Buffer
- Mandatory Phosphate Mine Boundaries 2015
- Roads

Closest sinkhole is 4.8 miles away from TW-1

Figure 5. Area of Review - 1 Mile Around TW-1

Scale: Miles

0 0.1 0.2 0.4 0.6

Date: 9/12/2018

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

WATER USE PERMIT
LETTER MODIFICATION SHORT FORM APPLICATION

THE INFORMATION REQUESTED IN THIS FORM IS REQUESTED PURSUANT TO CHAPTER 373, FLORIDA STATUTES (F.S.), AND RULES 40D-2.091, 40D-2.321(5), 40D-2.331(2)(b), FLORIDA ADMINISTRATIVE CODE (F.A.C.), TO APPLY FOR A LETTER MODIFICATION OF A WATER USE PERMIT.

June 14, 2024
(Date)

Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899

Subject: Modification of Water Use Permit Number: 10944 (COC PA 92-33J)

Permittee Name: Duke Energy Florida, LLC Hines Energy Complex

County Where Property is Located: Polk County

This is a request to modify the Water Use Permit (WUP) indicated above to:

Activate Alternative Use Standby Quantities (The form is only needed if this is a reactivation following one year of temporary activation. In the description of the modification request to be attached, specify which withdrawal points need to be reactivated, how much standby water needs to be reactivated and for how long.)

✓ Make an administrative change (e.g. change in permit condition(s), change in acres owned but not acres associated with a water use, add a permittee, permit extension, etc.)

✓ Technical/Operational Change (e.g., change in quantities, uses, minor changes in location of a proposed withdrawal point, replacement of a failed well, conversion of an existing water conservation plan to a goal-based water conservation plan, etc.)

Include or remove project funded pursuant to Chapter 40D-26, F.A.C. (FARMS project), including term extension

Attachments required:

✓ Description of the requested modification. Please be aware that in the Southern Water Use Caution Area (SWUCA), a request for an increase in quantities requires that the SWUCA Supplemental Form must be attached.

✓ Map: If there are changes to well locations, changes to irrigation areas, etc., attach a map. N/A

Water Conservation Documentation: Please provide all documentation that supports a permit extension based on public water supply water conservation efforts. N/A

✓ Other Supporting Documentation: Please attach any other documentation that supports this Letter Modification. N/A

I certify that this requested modification complies with the provisions of Section 40D-2.331(2)(b), F.A.C. If the request does not comply with these provisions, the Applicant will be informed that the desired changes must be made through the formal modification process, and the request will be converted to a Formal Modification and the Applicant shall submit the necessary information and fees required by the District. I certify that to the best of my knowledge and belief, all of the information provided on this form and in any attachment to it is correct. I also certify that I have legal authority to execute this application for the applicant and certify that the applicant will have sufficient legal authority to undertake the activities described herein. I understand that for any material false statement in an application to continue, initiate, or modify a use, or for any material false statement in any report or statement of fact required of the permittee, may result in revocation, in whole or in part, of the permit. (Section 373.243(1), Florida Statutes). With advance notice, I agree to provide District staff with proper identification entry to the project site for the purpose of performing analyses of the site for determining whether the conditions for issuance will be met.

Signature of Permittee or Authorized Agent*

Justin H. Herrera
Print Name

7700 County Road 555
Address

Bartow, FL 33830
City/State/Zip

(863) 519-6103
Telephone

If there are multiple permittees, attach a page containing all the Permittees' signatures. (All owners of the property included in this permit must sign this application or a letter of authorization for the above named Permittee to sign for them.) ✓ N/A

*Attach a letter of authorization signed by all Permittees that clearly shows your authority to act for the Permittees.

✓ N/A

Attachment II

COOLING POND WATER TREATMENT FACILITY DESCRIPTION AND CONCEPTUAL DESIGN

PROJECT DESCRIPTION

FACILITY BACKGROUND

Duke Energy Florida (DEF) owns and operates the Hines Energy Complex (HEC) located in Bartow, Florida in Polk County. HEC is located on County Road 555 south of State Road 640 as seen in Figure 1. It is approximately 7.5 miles to the southwest of the City of Bartow. The HEC is located within the Southern Water Use Caution Area (SWUCA) of the Southwest Florida Water Management District (SWFWMD).

The HEC is an 8,200-acre site that was built on previously mined land within the Bone Valley Phosphate Mining District. This area includes over 900 acres for power generation and ancillary facilities, a 1,200-acre cooling pond reservoir, and 2,000 acres of buffer areas along the east and southeast portions of the site. A detailed map of the HEC is presented in Figure 2.

Commercial operation of the first natural gas-fueled combined-cycle power block unit (PB-1) began in 1999 and is capable of producing 482 megawatts. Additional power block units, PB-2, PB-3, and PB-4, were constructed in 2003, 2005 and 2007, and are capable of producing 516, 500 and 530 megawatts, respectively.

PROJECT DESCRIPTION

Rising Total Dissolved Solids (TDS) in the cooling pond reservoir have impacted ground water quality and unit performance at the station. To reduce dissolved solids and counteract cycling in the Cooling Pond, DEF is proposing the construction of a Cooling Pond Water Treatment Facility (CPWTF). It will consist of a 2-stage Reverse Osmosis (RO) system, with a Recovery RO Stage 1 system providing primary treatment of the filtered water. The reject from the first stage RO shall be sent to the Recovery RO Stage 2 system for additional treatment and recovery. The CPWTF is also be designed to reduce total hardness and alkalinity, thereby reducing TDS entering the groundwater and improving system performance by reducing scaling potential.

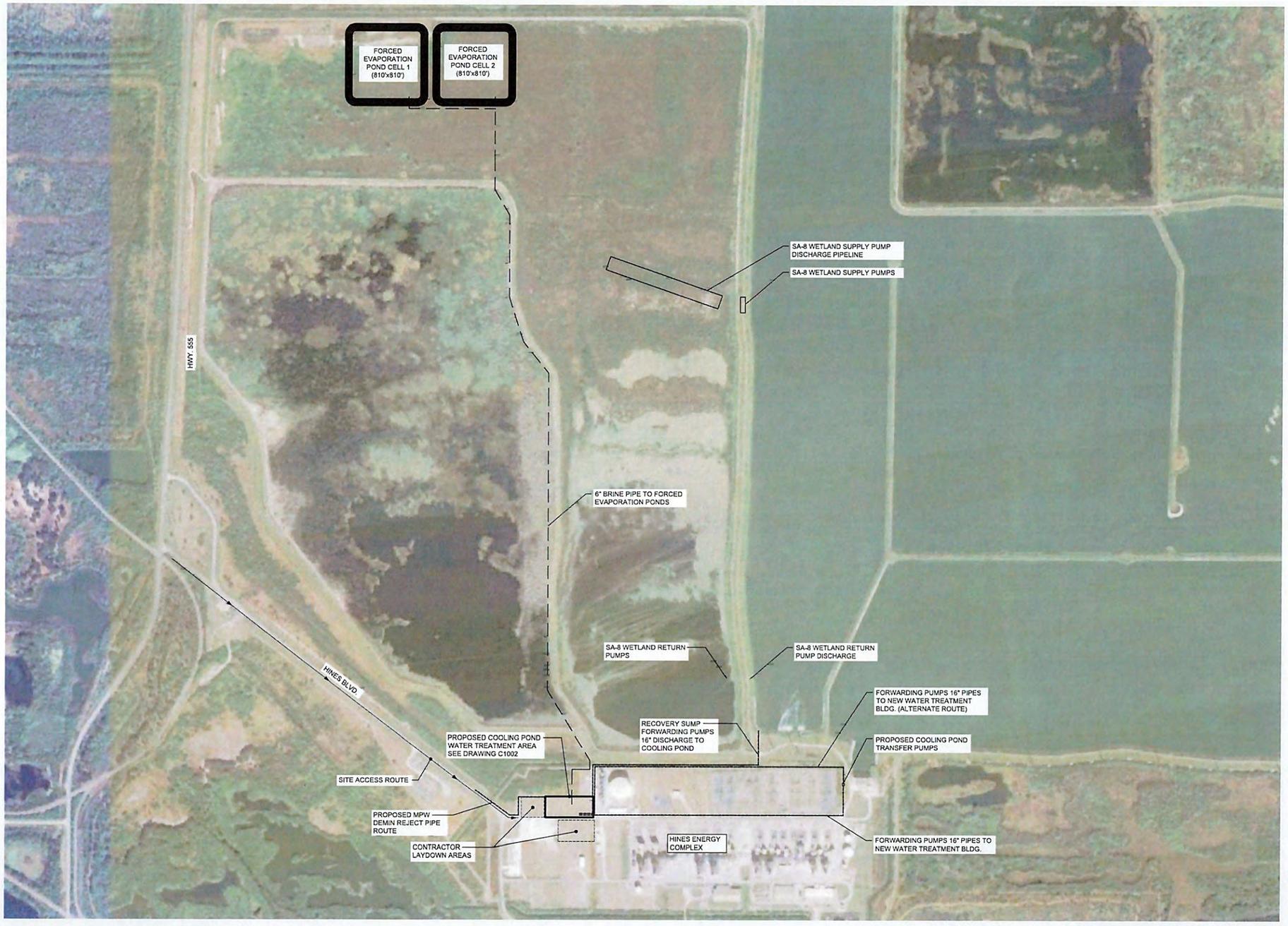
Recovery RO Stage 1 shall be designed to receive 1,000 gallons per minute (gpm) of feed flow and shall operate with a net recovery of at least 75%. Reject from Recovery RO Stage 1 will be stored in the Recovery RO Stage 2 Feed Tank. Recovery RO Stage 2 shall be designed to receive 250 gpm of Recovery RO Stage 1 Reject and shall operate with a net recovery of no less than 50%. The two RO systems shall be designed such that required feed and recovery shall meet design requirements assuming a 15% reduction in performance as indicated by decreased permeate flow, increased differential pressure, or decreased permeate quality. Recovery RO Stage 2 reject will be directed to the Brine Storage Tank for further treatment. The Brine Handling system shall consist of the Brine Storage Tank and Brine Forwarding Pumps. The Brine Pond consists of the two-cell, lined ponds with forced evaporators to be constructed in the north area of the SA-8 pond. The lined ponds will be cleaned out periodically and the dried salts will be disposed of at an authorized off-site landfill. Although the initial design is for 1,000 gpm, the infrastructure will be designed and constructed for a total of 4,000 gpm capacity to

allow for future expansion as needed. Figure 1 indicates the general layout of the CPWTF building and lined brine ponds with forced evaporators. Figure 2 indicates the process flow diagram for the CPWTF. Since this is a conceptual design, the final CPWTF design and Wastewater Application Form 2CG completed with final design information will be submitted as a post-certification submittal. Concurrent with the submittal of this COC Modification request, DEF is working with the Department's Air Resource Management Division on the permitting of the forced evaporators.

The existing wetland treatment system located in Pond SA-8 will be used to provide supplemental treatment to the cooling pond water.

With the addition of the two lined brine ponds, DEF will submit a revised Ground Water Monitoring Plan (GWMP) with the addition of one groundwater well to monitor potential impacts from the lined ponds. Included in this submittal is the previously submitted notification to the Department of the installation of two piezometers to determine the location of the new groundwater well. Once the location is determined, DEF will submit the revised GWMP proposal as a post-certification submittal.

The CPWTF will be housed in a building with occupancy for 2 Full Time Employees (FTEs) per shift. Potable water will be provided by the current Hines Potable Water System No. 6535433, a Non-Community Non-Transient system, with a permitted capacity of 35,000 gal per day. It is estimated that the new building will have an estimate water usage of 240 gallons per day. Current usage is an average of 30,000 gal per month. The 240 gallons per day of domestic wastewater generated will be treated by a new septic tank to be installed to serve only the RO system building. Details on the septic tank final design and location will be provided as a post-certification submittal once the final system design is completed.



NOTES:

1. SITE PLAN TAKEN FROM GOOGLE EARTH AND IS CONCEPTUAL FOR ESTIMATING AND FEASIBILITY ONLY. DO NOT USE FOR CONSTRUCTION.

MARK A. MATTINA LICENSE No. 53016 STATE OF FLORIDA PROFESSIONAL ENGINEER 6/13/24

FIGURE 1

SITE PLAN

SCALE: 1" = 500'-0"

500 250 0 500 1000 1500

ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
2	06/05/2024	REVISED BRINE POND LOCATIONS	J_B	AWS		
1	10/13/2023	ISSUED FOR BID	J_B	DCS	CRG	AWS
0	04/10/2023	ISSUED FOR BID	J_B	DCS	CRG	AWS

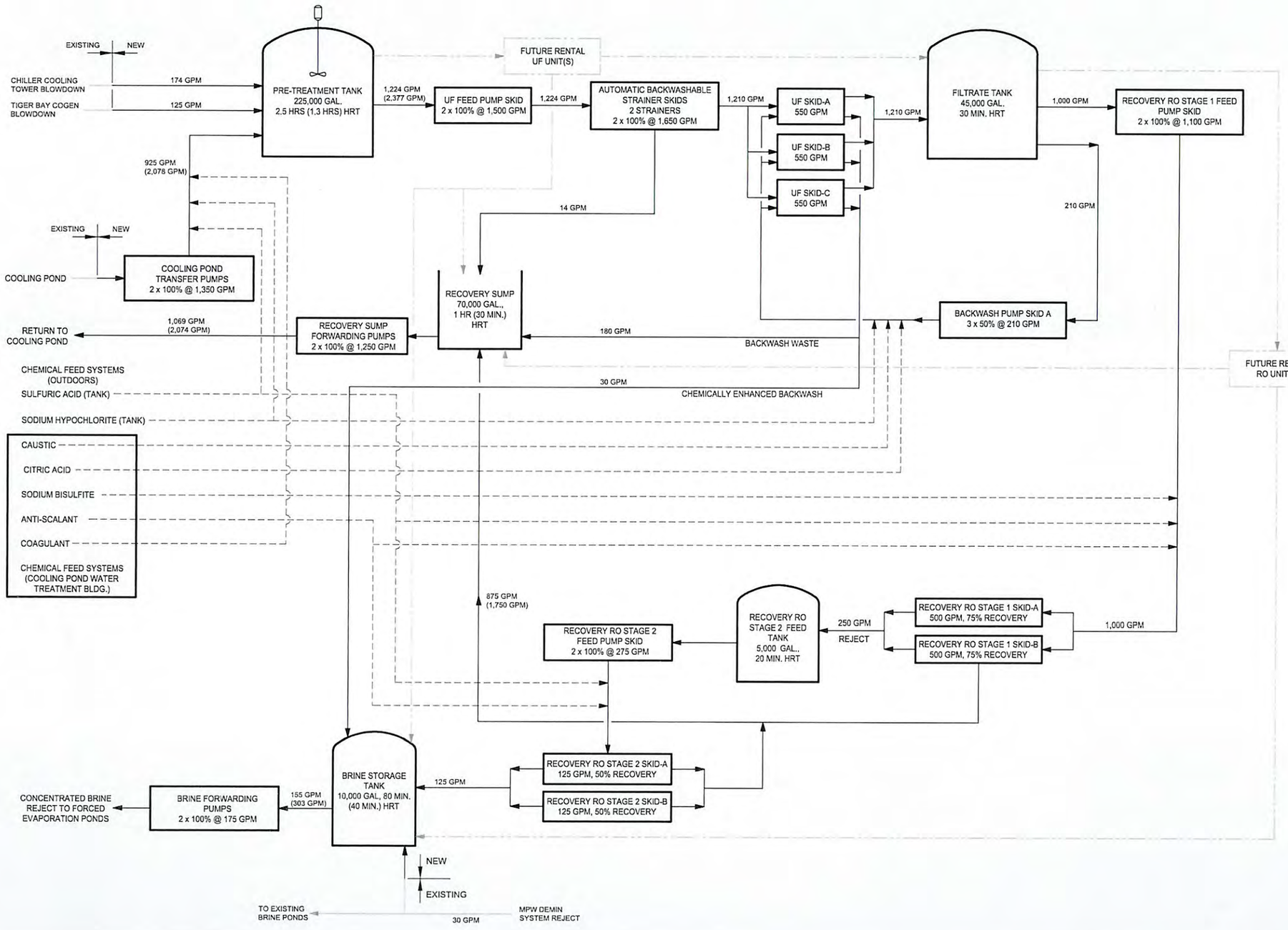
PRELIMINARY NOT FOR CONSTRUCTION

DUKE ENERGY®

HINES ENERGY STATION WATER TREATMENT
SITE PLAN
OVERALL

FILENAME C1001.dwg
SCALE 1"=500'

SHEET C1001



NOTES:

1. EQUIPMENT AND TANKS SIZE AND ARRANGEMENTS ARE APPROXIMATE AND MAY CHANGE BASED ON FINAL VENDOR SELECTION AND SIZING.
2. HYDRAULIC RETENTION TIMES (HRT) FOR NOMINAL 1,000 GPM TREATMENT SYSTEM ARE SHOWN, IF A 1,000 GPM RENTAL SYSTEM IS ADDED THE IMPACT TO RETENTION TIME FOR COMMON TANKS IS SHOWN IN ( ).
3. CHILLER COOLING TOWER BLOWDOWN AND TIGET BAY BLOWDOWN FLOWS ARE SHOWN BASED ON ANNUAL AVERAGES. ACTUAL BLOWDOWN FLOWS WILL VARY THROUGHOUT THE YEAR AND COOLING POND FLOW WILL ADJUST AS NEEDED TO MAINTAIN LEVELS IN THE PRETREATMENT TANK.
4. AVERAGE FLOW RATES ARE SHOWN IN GPM. IF A 1,000 GPM RENTAL SYSTEM IS ADDED, THE IMPACT TO THE EXPECTED AVERAGE FLOW IS SHOWN IN ( ).

MARK A. MATTINA
LICENSE
No. 53016
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
1/13/24

FIGURE 2

ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
1	10/13/2023	ISSUED FOR BID	J_B	DCS	CRG	AWS
0	04/10/2023	ISSUED FOR BID	J_B	DCS	CRG	AWS

PRELIMINARY
NOT FOR CONSTRUCTION

DUKE ENERGY®

HINES ENERGY STATION WATER TREATMENT
PIPING & INSTRUMENTATION DIAGRAM
WATER TREATMENT
PROCESS FLOW DIAGRAM

FILENAME: M1000.dwg
SCALE: NONE
SHEET: M1000

June 7, 2024 Project No.31404342US.2660

Tommy Oneal
Duke Energy Florida, LLC
7700 County Road 555
Bartow, FL 33830

PROPOSED GROUNDWATER MONITORING PLAN MODIFICATION—HINES ENERGY COMPLEX
PA 92-33 COC MOD J - FDEP FACILITY ID NO. FLA187348

Dear Mr. Oneal,

WSP USA Inc. (WSP), is providing Duke Energy Florida, LLC (Duke) this plan for installation of two piezometers and subsequent modification of the groundwater monitoring plan (GWMP) for the Hines Energy Complex (HEC). WSP understands that a modification to the Conditions of Certification PA 92-33 (COC) is being prepared to support Duke Energy's plans to install a reverse osmosis (RO) treatment system for the HEC Cooling Pond (CP). This plan is intended for submittal to the Florida Department of Environmental Protection (FDEP or Department) for its review. Two piezometers are proposed to be installed near the location of the proposed brine ponds being designed for the CP RO system to evaluate groundwater hydraulics and to estimate the approximate flow direction(s) in the vicinity of the proposed brine ponds. This plan includes a general scope of work and schedule for installation of two proposed piezometers, and subsequent hydraulic testing and water-level measurements to gather data that will inform the modification of the GWMP to support the proposed CP RO system. Following completion of the water-level measurements, we anticipate that the GWMP will be modified to add one monitoring well to the HEC monitoring well network located in the vicinity of the proposed brine pond to be sampled routinely – e.g. quarterly – during operation of the proposed brine pond.

BACKGROUND

The current groundwater monitoring network for the HEC CP includes eight monitoring wells installed into the strata just beneath the surficial aquifer, which was removed decades ago by mining activities to exploit the phosphate rock that exists naturally in the vicinity of the HEC. **Figure 1** shows the approximate locations of the existing monitoring wells and the cooling pond at the HEC and the proposed locations for the two proposed piezometers (PPZ-N and PPZ-S). **Table 1** contains a summary of construction details for the current monitoring wells at the HEC.

The recent increasing trend in TDS concentrations for groundwater samples from monitoring wells MWC-3 and MWC-7 appear to correlate with the increasing TDS in the cooling pond. A TDS exemption with a new groundwater standard of 840 mg/L was granted by FDEP in July 2022. This exemption is required to be renewed every 5 years. A new compliance groundwater well, MWC-8, located at the property boundary, was added to the groundwater monitoring network as part of the approval of the TDS exemption. The HEC is in the process of

designing an RO system to treat elevated total dissolved solids in the CP water. The byproduct of the RO system is the brine reject water that is planning to be transferred to lined brine ponds onsite and within a portion of the SA-8 basin.

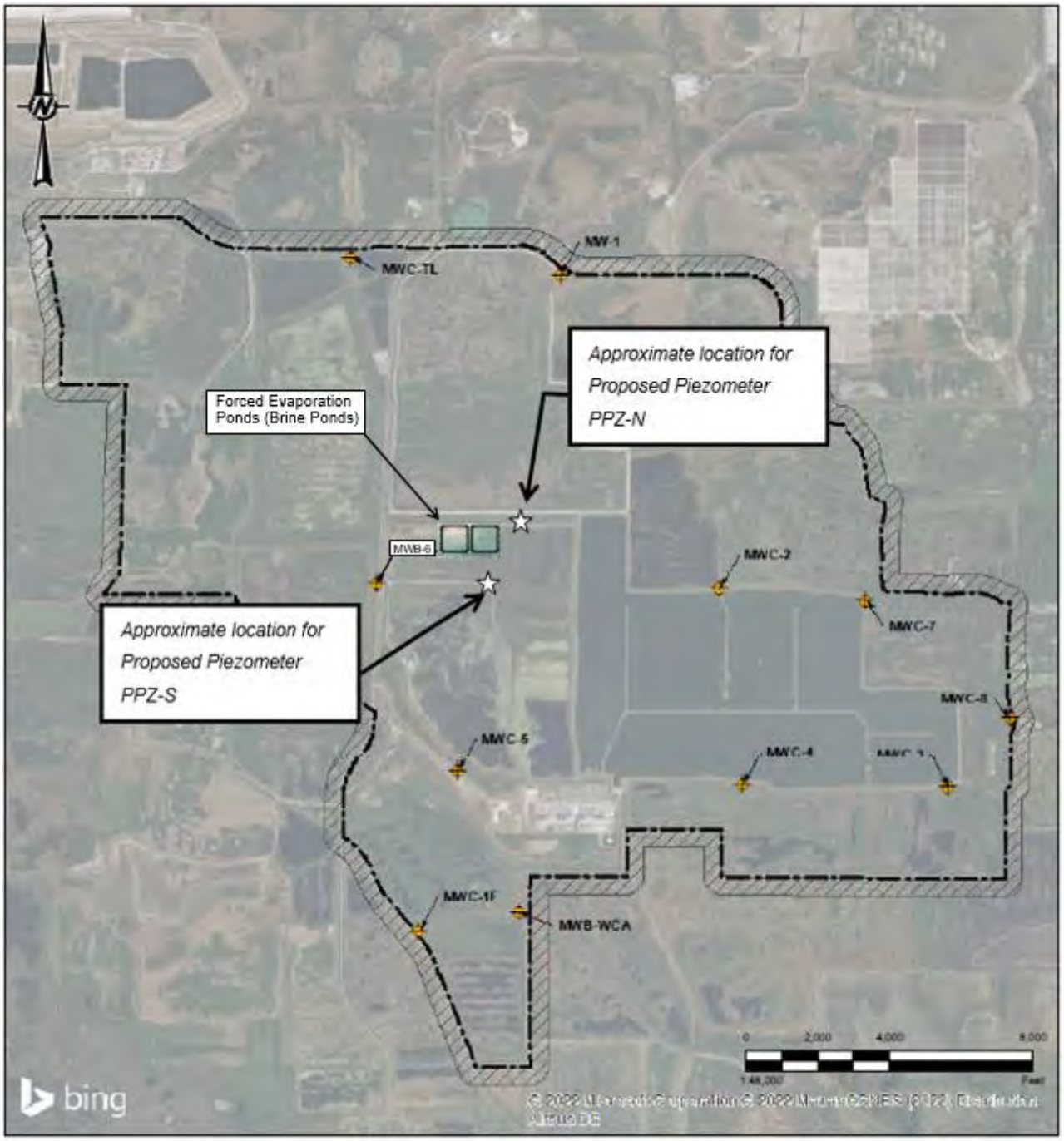


Figure 1: Existing Monitoring Well Network and Proposed Piezometer

Based on the locations, size, and configuration being considered for the proposed brine holding pond, WSP is planning for an additional monitoring well to be added to the GWMP. WSP is proposing to install two piezometers to evaluate water-level elevations for a period of at least one year. Piezometer construction will be suitable to use the piezometers for monitoring wells, and after evaluating the water-level flow direction in the vicinity of the proposed ponds, one of the piezometers will be recommended to serve as the monitoring well for the proposed brine pond area and the other piezometer will be recommended to be abandoned.

Table 1 Existing Monitoring Well Construction Details

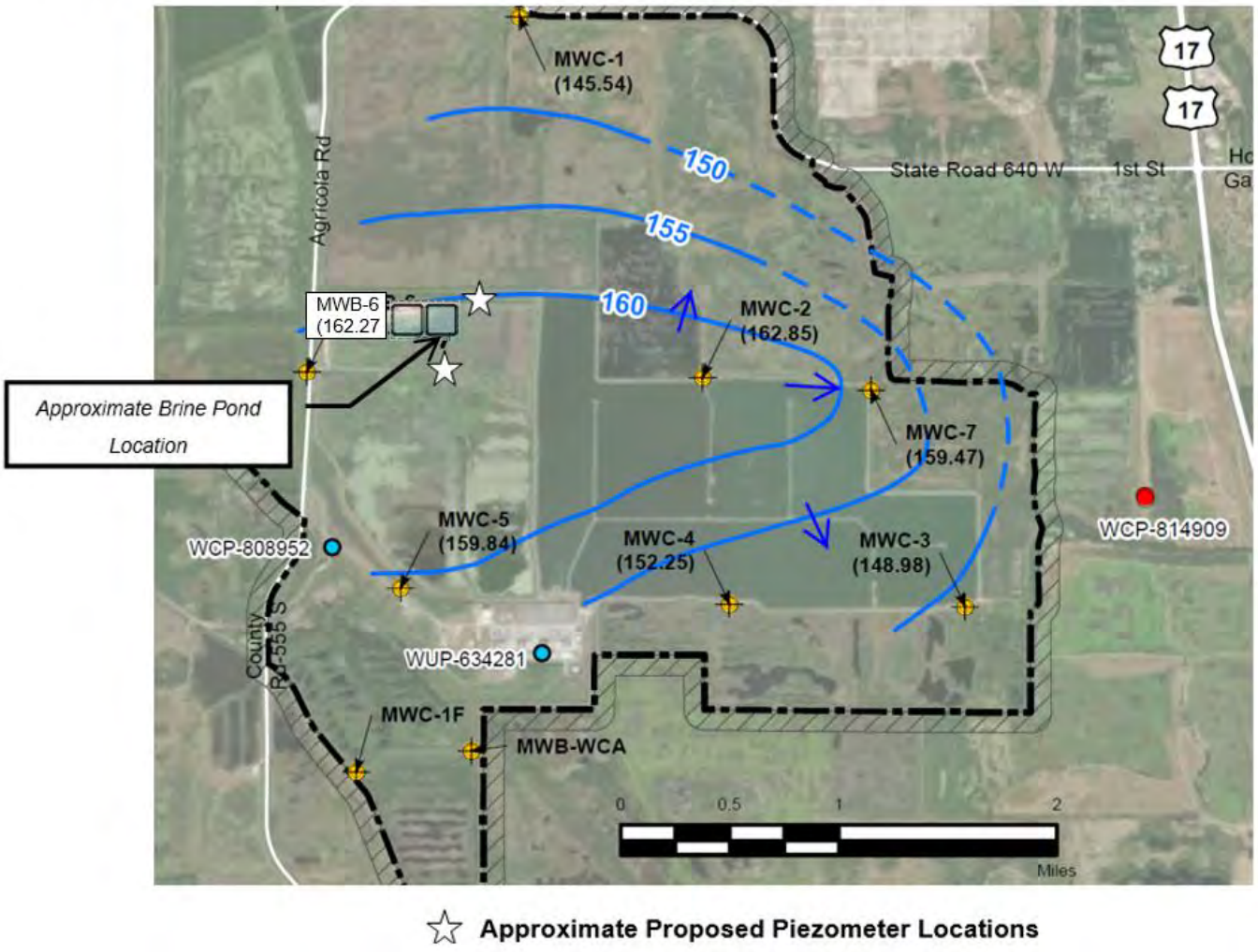
Well ID	Boring ID	Date Drilled	Date Completed	Ground Surface Elevation (ff MSL)	TOC Elevation (ft MSL)	Total Well Depth (ft BLS)	Total Well Depth (ft BTOC)	Screen Length (ft)	Top of Screen Elevation (ft MSL)[1]
MWC-1F	FMW-1*	1/13/1998	2/25/1998	166.3	169.06	220	224	10	-45
MWC-1	IMW-1*	1/13/1998	2/25/1998	175.7	178.60	90	94	20	105
MWC-2	IMW-2*	1/13/1998	2/25/1998	173.6	176.37	85	89	20	107
MWC-3	IMW-3*	1/13/1998	2/25/1998	153.3	157.30	56	58	15	114
MWC-4	IMW-4*	1/13/1998	2/25/1998	154.8	157.99	70	74	20	104
MWC-5	IMW-5*	1/13/1998	2/25/1998	161.2	163.91	70	75	20	109
MWB-6	IMW-6*	1/13/1998	2/25/1998	166.0	168.74	56	59	20	130
MWC-7	MWC-7	7/28/2016	7/29/2016	161.2	164.07	71	74.1	15	105
MWC-8	MW-8	9/22/2021	9/23/2021	164.5	167.31	75.5	77.8	15	105
MWC-LP [2]	SB-LPC3	5/9/2014	5/9/2014	162.4	165.23	23	25.8	10	149
MWB-WCA	MWB-WCA	7/29/2016	7/29/2016	165.2	168.02	24	26.5	10	152
MWC-TL	SB-TLB2	5/6/2014	5/6/2014	151.5	154.08	16	18.6	10	145

Notes

BLS = below land surface
ID – identification. ft = feet
BTOC = below top of casing
MSL = mean sea level
Monitoring Wells are approximately 2-inch inside diameter.
* As Listed in Monitoring Well Completion Reports (FPC 1998).
[1] Top of screen elevation is estimated = TOC Elevation - Total Well Depth (ft BTOC) + Screen Length
[2] *MWC-LP abandoned on 12/18/2020.*
Total Depth as Listed in Laboratory Reports included with Quarterly Groundwater Reports (PEF)

Groundwater flow within the vicinity of the proposed brine ponds is inferred to be towards the north-northwest as shown on **Figure 2**. To gain a better understanding of the groundwater flow direction in the area of the proposed brine holding ponds, the proposed piezometers PPZ-N and PPZ-S will be located north and south of the proposed brine holding ponds.

Figure 2 November 2020 Water-level elevations and contour lines for HEC Monitoring Wells.



PROPOSED MONITORING WELL INSTALLATION PLAN

Fieldwork including Monitoring Well Installation, Development, and Surveying

Two piezometers meeting the FDEP monitoring well construction specification guidelines will be installed in the vicinity of the proposed brine pond area. Soil/lithologic samples will be collected from ground surface to the total depth of each borehole scheduled to be drilled using the rotary-sonic drilling method via advancing 4-inch inside diameter (ID) by 6-inch ID sonic drill casings. At each borehole location for proposed piezometers PPZ-N and PPZ-S, a nominal 6-inch diameter borehole will be advanced using 6-inch ID rotary-sonic-casing to a depth of up to 70 ft bgs into strata of the intermediate aquifer zone similar to the existing HEC CP monitoring wells.

Soil samples collected will be examined in the field and the lithology, grain size, color, and degree of saturation will be recorded. WSP will classify recovered soils in general accordance with American Society for Testing and Materials (ASTM) D2487 and the Unified Soil Classification System. WSP will document the soil types, depths, and thicknesses encountered on field boring logs along with other observations made during drilling.

After the total depth of borehole is reached, up to 10 ft of 2-inch-ID, 0.010-inch slotted Schedule 40 PVC well screen fitted with a bottom cap and attached to an appropriate length of 2 inch-ID Schedule 40 PVC riser will be installed in the cased borehole. The annular space will be filled with 20/30 graded silica sand from the bottom of the borehole to approximately 5 ft above the top of the screen to form a filter pack, and approximately 4 ft of hydrated 3/8-inch bentonite chips placed on top of the filter pack to create a seal. The remaining annular space will be filled to ground surface with Type I/II Portland cement and less than 5% by dry weight bentonite grout mix using the tremie method, keeping the borehole annulus full of grout as the rotary-sonic-casing is removed.

Newly installed piezometers will be completed approximately 3 ft above grade in a 4-inch by 4-inch aluminum protective cover set into an approximately 2-ft by 2-ft by 4-inch-thick concrete pad. Soil and groundwater generated during monitoring well installation will be thin spread on ground surface in upland areas away from surface water near the piezometer location. At least 24-hours following completion of installing the grout into the annulus of the monitoring well, the monitoring well will be developed by pumping and surging until a relatively clear and sediment free discharge is obtained.

After installation, newly installed piezometers will be surveyed by a licensed professional land surveyor. Hydraulic testing on each newly installed piezometer will be performed including single well specific capacity testing and/or rising and falling head tests to estimate hydraulic conductivity. Water levels will be measured at the newly installed piezometers and select other cooling pond monitoring wells during four events scheduled to be performed generally quarterly in effort to evaluate for seasonal variation.

Reporting

A fieldwork notification to install the proposed piezometers will be sent to the FDEP at least three days prior to mobilization of the driller. The following deliverables will be submitted to the FDEP.

- Within 30 days of completion of piezometer installation and development, a Groundwater Monitoring Well Completion Report (FDEP Form 62-520.900(3)) will be submitted to FDEP and will include the water management district documents (permits and completion reports) for the newly installed piezometers.
- Within 60 days of completion of piezometer development, a drawing that includes the horizontal and vertical data, certified by a Professional Land Surveyor (PLS) and Mapper, for the piezometer locations.

Within approximately 60 days of receipt of the final round of water level measurements from the piezometers, a GWMP addendum will be prepared for submittal to the FDEP that summarizes the data. The GWMP addendum will include:

- An evaluation of groundwater flow direction(s) inferred from water-level measurements described above.
- A table summarizing piezometer construction details, well type (background, compliance, downgradient, intermediate, piezometer, etc.), and elevation data collected by a PLS, for newly installed monitoring wells. This survey will include monitoring well measuring point elevations (for water-level measurements) and horizontal coordinates.
- A table summarizing results of piezometer development activities which will include volume of water removed, duration of development, quantitative turbidity results in nephelometric turbidity units.
- Figures depicting piezometer and monitoring well locations, a summary of water-level data, and water-level elevation isocontour maps depicting approximate flow direction and a calculation estimating horizontal

hydraulic gradients and velocity for groundwater. Seasonal groundwater depths and flow directions at the site through preparation of seasonal water table contour maps, based upon water-level data obtained during the pre-operational and existing monitoring programs.

- Logs for soil borings, piezometer installations, and development for newly installed piezometers.
- FDEP Form 62-520.900(3) and Southwest Florida Water Management District documents (permits and completion reports) for newly installed piezometers.
- Location of potable wells located within half-mile of the new piezometers.

SCHEDULE

WSP will coordinate with the drilling contractor schedule for mobilizing to the HEC and will provide the FDEP with at least 3 business days advanced notice prior to mobilizing for the piezometer installation. Drilling, piezometer installation, and development will require up to four business days to complete. The surveyor will require up to four weeks following completion of the piezometer installation to mobilize to the site and provide the certified monitoring well location coordinates and elevation data.

WSP expects to provide the GWMP addendum including a summary of work performed to install proposed piezometers PPZ-N and PPZ-S, water-level measurements and hydraulic testing results to the Department within 60 days of the final round of water level measurement event. If Duke Energy and the Department would like to discuss the monitoring well installation plan, please contact the undersigned with WSP.

Sincerely,

WSP USA, INC.

Gene Morelli
Senior Consultant, Geologist

Gregory A. O'Neal II, P
FL PG No 2400 Date: 6/7/24

GREGORY A. O'NEAL II
LICENSE
NO. PG 2400
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

GJM/GAO

CC: Ilia Balcom – Duke Energy
Rebecca Warren – Duke Energy
Mark Mattina – Duke Energy

https://wsponlinenam.sharepoint.com/sites/us-tampafloridasarteam/shared documents/clients/duke energy/hines/6 deliverables/monitoring well installation plan 2024/hines gw monitoring well fdep proposed plan 2024.docx

Attachment III

Environmental Resource Permit for the Cooling Pond Water Treatment Facility

PROJECT DESCRIPTION

Duke Energy Florida, L.L.C. is planning the following modifications to the Hines Energy Complex (HEC), located at County Road 555, Bartow, FL with Parcel ID 233114000000011010:

- Cooling Pond Water Treatment Facility (CPWTF)
- Drive aisle and parking lot
- Lined Brine Ponds and piping associated with the CPWTF

The proposed CPWTF, drive aisle and parking lot will have 1.83 acre of impervious area, they are located in the Plant Island area of the HEC. A set of engineering plans are submitted herewith for review. Detailed engineering plans of the ponds and piping will be submitted separately as a post-certification submittal following completion of the final design.

The proposed improvement in the Plant Island area will follow the existing drainage pattern, it will drain to existing pond SA-12 via on site ditch. The existing pond SA-12 is then pumped to cooling pond N-16. The path of drainage is schematically shown on the included Drainage Basin Map. The site sheet flow to the existing drainage ditch, sheet flow does not generally present an increased concern for erosion. The proposed building finished floor elevation will be approximately 166 ft NAVD88, which is above the top of bank of SA-12 (160 ft NGVD per original Siting Certification Application).

Overall impact to the cooling pond level will be insignificant. Runoff volume for the new area based on a 100-year 24-hour storm is calculated as 1.45 acre-feet.

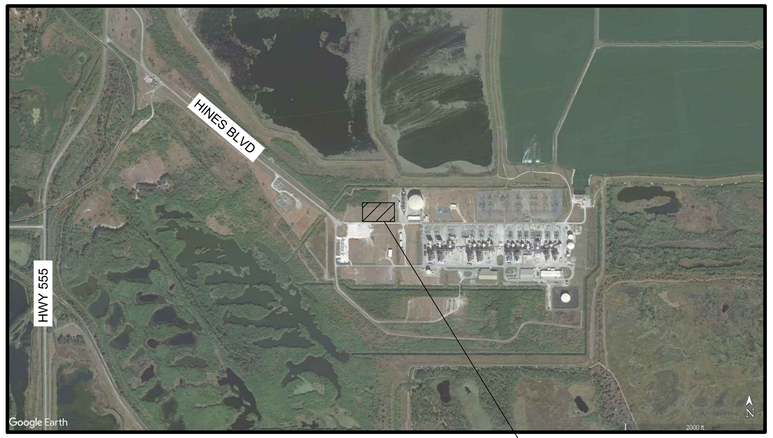
The stormwater system of HEC was designed to be a closed, zero surface water discharge system. Per the Conditions of Certification (COC), Section (B)(II)(A)(h), for the purposes of reducing groundwater consumption, “the licensee shall…increasing the amount of impervious surface at the Plant Island portion of Hines Energy Complex to increase surface water runoff flows into the cooling pond”.

In compliance with the COC, Section (A)(XXIX)(A)(1)(a) and (b), an Environmental Resources Permit (ERP) Application is being submitted with this package for review, along with its attachments. The amount of runoff produced in association with the added impervious area is insignificant in the HCE closed/zero surface discharge design. SWFWMD form 62-330.060(1) Sec. C (“Section C”) is also being submitted, which will demonstrate the proposed work is outside of jurisdictional wetlands and that no impacts to endangered species are anticipated. A copy of “Section C” and an endangered species summary provided in this package.

STORMWATER PERMIT DRAWINGS FOR

DUKE ENERGY
HINES ENERGY COMPLEX
WATER TREATMENT FACILITY

COUNTY ROAD 555,
BARTOW, FL 33830



N

SITE LOCATION

NTS

DUKE ENERGY PROJECT NO.
10393550

BARTOW, FL 33830
JUNE 2024

INDEX OF DRAWINGS

CIVIL

C-000	COVER SHEET
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C-021	EROSION CONTROL PLAN
C-101	AREA 1 SITE & UTILITIES PLAN
C-201	AREA 1 GRADING & DRAINAGE PLAN
C-202	BRINE PONDS PLAN
C-400	DETAILS

811
Know what's below.
Call before you dig.

HDR Engineering, Inc.
315 E Robinson Street Suite 400
Orlando, Florida 32801
Phone: (407) 420-4200
Certificate of Authorization #: 4213

ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
B	06/19/2024	STORMWATER PERMITTING	J_B	KSL	AWS	AWS
A	06/04/2024	FOR REVIEW	J_B	AWS		

ISSUED FOR PERMITTING

DUKE ENERGY®

COVER SHEET

FILENAME: COVER SHEET
SCALE: N/A

SHEET
C-000

EROSION CONTROL NOTES:

1. EROSION PREVENTION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE AND FUNCTIONAL BEFORE EARTH MOVING OPERATION BEGINS AND MUST BE CONSTRUCTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. TEMPORARY MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY BUT MUST BE REPLACED AT THE END OF THE WORKDAY.
2. THE FOLLOWING RECORDS SHALL BE MAINTAINED ON OR NEAR SITE: THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR; THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; THE DATES WHEN STABILIZATION MEASURES ARE INITIATED; INSPECTION RECORDS AND RAINFALL RECORDS.
3. THE CONTRACTOR SHALL MAINTAIN A RAIN GAUGE AND DAILY RAINFALL RECORDS AT THE SITE OR USE A REFERENCE SITE FOR A RECORD OF DAILY AMOUNT OF PRECIPITATION.
4. PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 10 DAYS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA IS SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER IS INSTALLED.
5. CONSTRUCTION MUST BE SEQUENCED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED AREAS.
6. SEDIMENT SHOULD BE REMOVED FROM SEDIMENT TRAPS, SILT FENCES, SEDIMENTATION PONDS AND OTHER SEDIMENT CONTROLS AS NECESSARY AND MUST BE REMOVED WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50% OR AS DIRECTED BY OWNER.
7. THE CONTRACTOR SHALL REMOVE SEDIMENT FROM ALL DRAINAGE STRUCTURES BEFORE ACCEPTANCE BY THE OWNER.
8. THE CONTRACTOR SHALL REMOVE THE TEMPORARY EROSION AND WATER POLLUTION CONTROL DEVICES ONLY AFTER A SOLID STAND OF GRASS HAS BEEN ESTABLISHED ON GRADED AREAS AND WHEN IN THE OPINION OF THE OWNER, THEY ARE NO LONGER NEEDED.

DEMOLITION NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL CHARTED AND UNCHARTED UTILITIES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.
2. THE CONTRACTOR SHALL VERIFY THE LIMITS OF DEMOLITION WITH THE OWNER PRIOR TO COMMENCEMENT OF WORK.
3. IN AREAS WHERE EXISTING PAVEMENT, WALKS, OR CURBS ARE TO BE REMOVED, SAW CUT TO PROVIDE A CLEAN EDGE. COORDINATE EXTENT OF PAVEMENT DEMOLITION WITH THE LIMIT OF NEW IMPROVEMENTS ON THE SITE LAYOUT PLAN & UTILITY INSTALLATION.
4. CONTRACTOR SHALL COORDINATE PHASING OF THE DEMOLITION WITH OWNER PRIOR TO BEGINNING WORK. DISRUPTION OF EXISTING UTILITY SERVICES AND TRAFFIC PATTERNS SHALL BE MINIMIZED TO THE EXTENT POSSIBLE AND INITIATED ONLY AFTER APPROVAL BY THE OWNER AND THE UTILITY COMPANIES.
5. CAVITIES LEFT BY STRUCTURE REMOVAL SHALL BE SUITABLY BACKFILLED AND COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS.
6. THE CONTRACTOR SHALL USE WATER SPRINKLING AND OTHER SUITABLE METHODS AS NECESSARY TO CONTROL DUST AND DIRT CAUSED BY THE DEMOLITION WORK.
7. THE CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION AND REMOVAL NECESSARY TO ACCOMPLISH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.
8. THE CONTRACTOR SHALL PRESERVE AND PROTECT SURVEY CONTROL POINTS AND SHALL BE RESPONSIBLE FOR REPLACEMENT OF ANY DISTURBED CONTROL POINTS.
9. EXISTING LIGHT FIXTURES BEING REMOVED SHALL BE FIRST OFFERED TO THE OWNER PRIOR TO DISPOSING OF THEM. COORDINATE LIGHTING DEMOLITION AND LAYOUT WITH THE ELECTRICAL DRAWINGS.
10. EXISTING TREES TO BE PRESERVED ARE TO BE PROTECTED BEFORE BEGINNING CONSTRUCTION IN ACCORDANCE WITH THE TREE PROTECTION NOTES ON THIS PLAN AND NOTES/DETAILS ON THE LANDSCAPE PLAN.
11. NO EXISTING STORM SEWER LINES SHALL BE DEMOLISHED UNTIL THE NEW LINES HAVE BEEN INSTALLED AND ARE PLACED INTO OPERATION.
12. WHERE WATER LINE AND SEWER LINE ABANDONMENT IS PLANNED, THE CONTRACTOR MAY ABANDON WATER LINES AND SEWER LINES IN PLACE WHERE THEY OCCUR AT LEAST 24" (TO TOP OF PIPE) BELOW FINAL SUBGRADE ELEVATIONS AND OUTSIDE THE BUILDING FOOTPRINT. ALL UTILITY LINES BEING ABANDONED IN PLACE SHALL HAVE ALL ENDS PERMANENTLY CLOSED USING A CONCRETE PLUG.
13. WHERE EXISTING IRRIGATION LINES LIE WITHIN THE AREA AFFECTED BY THE PROPOSED CONSTRUCTION, THE CONTRACTOR SHALL REWORK THE EXISTING IRRIGATION SYSTEMS IN ACCORDANCE WITH DIRECTIVES NOTED ON THE LANDSCAPE PLAN. SERVICE SHALL BE MAINTAINED DURING CONSTRUCTION TO THE LANDSCAPED AREAS CURRENTLY IRRIGATED.

GENERAL NOTES

1. THE PROJECT SITE IS SHOWN ON POLK COUNTY JURISDICTION, AS PARCEL 24-31-14-000000-011010.
2. BASE INFORMATION WAS TAKEN FROM A CADD FILE NAMED "SURVRD_23-022 (2-16-2023) PROVIDED BY DUKE ENERGY DATED 02/16/23. VERTICAL DATUM NOT PROVIDED; IT IS ASSUMED TO BE NAVD88. CONTRACTOR TO OBTAIN A RECENT SIGNED AND SEALED SURVEY FROM A FLORIDA LICENSED SURVEYOR, WHICH SHALL INCLUDE THE DATUM USED. HDR AND ANY OF THEIR CONSULTANTS SHALL NOT BE HELD RESPONSIBLE FOR THE ACCURACY AND/OR COMPLETENESS OF THAT INFORMATION SHOWN HEREON OR ANY ERRORS OR OMISSIONS RESULTING FROM SUCH.
3. THE SITE LAYOUT IS BASED ON REFERENCE POINTS AS NOTED.
4. THE CONTRACTOR SHALL CHECK ALL EXISTING CONDITIONS, (i.e. INVERTS, UTILITY ROUTINGS, UTILITY CROSSINGS, AND DIMENSIONS) IN THE FIELD PRIOR TO COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO THE ENGINEER.
5. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY. THE CONTRACTOR SHALL CALL NATIONAL ONE CALL (811) 72 HOURS PRIOR TO PROCEEDING WITH ANY EXCAVATION.
6. THE CONTRACTOR SHALL CONFORM TO ALL LOCAL CODES AND RECEIVE APPROVAL WHERE NECESSARY BEFORE CONSTRUCTION.
7. EXISTING PAVEMENT OF PUBLIC ROADWAYS SHALL BE PATCHED IN ACCORDANCE WITH LOCAL STANDARDS WHEREVER UTILITY INSTALLATION REQUIRES REMOVAL OF THE EXISTING PAVEMENT. COORDINATE PAVEMENT TRENCHING LOCATIONS WITH SITE CIVIL, PLUMBING AND ELECTRICAL PLANS.
8. PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING PAVEMENT AND NEW PAVEMENT. SLIGHT FIELD ADJUSTMENT OF FINAL GRADES MAY BE NECESSARY.
9. DIMENSIONS ARE TO FACE OF CURB AND/OR EXTERIOR FACE OF BUILDING UNLESS OTHERWISE NOTED.
10. CONCRETE FOR CURBS AND SIDEWALKS SHALL BE 3500 PSI CONCRETE.
11. ANY WORK UNACCEPTABLE TO THE OWNER SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE GOVERNMENT.
12. ACCESSIBLE RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1:12. GRADES WITHIN ACCESSIBLE SPACES SHALL BE MAXIMUM 2% IN ALL DIRECTIONS.
13. THE PROPOSED BUILDING SHALL BE LAID OUT UTILIZING THE EXISTING STRUCTURE AS A CONTROL POINT AND THE ARCHITECTURAL DRAWINGS. DIMENSIONS SHOWN TO THE PROPOSED BUILDING ARE CALCULATED TO THE FACE OF EXTERIOR WALL. SEE ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS.
14. CURBS SHALL BE PARALLEL TO THE CENTERLINE OF DRIVES. THE CURB SHALL BE PLACED ONLY AFTER HAVING ALL BREAK POINTS (PC & PT OF CURVES) LOCATED AT THE FACE OF CURB OR AT A CONSISTENT OFFSET BY A REGISTERED LAND SURVEYOR.
15. THE CONTRACTOR SHALL COMPLY WITH ALL PERTINENT PROVISIONS OF THE MANUAL OF ACCIDENT PREVENTION AND CONSTRUCTION ISSUED BY AGC OF AMERICA, INC. AND THE SAFETY AND HEALTH REGULATIONS OF CONSTRUCTION ISSUED BY THE U.S. DEPARTMENT OF LABOR.
16. THE CONTRACTOR SHALL PAVE IN THE DIRECTION OF TRAFFIC.
17. THE CONTRACTOR SHALL COLD PLANE IN THE DIRECTION OF TRAFFIC.
18. THE CONTRACTOR WILL BE REQUIRED TO ADJUST GRADES OF INTERSECTING STREETS, ALLEYS, PUBLIC ENTRANCES AND PRIVATE DRIVES AS DIRECTED BY THE ENGINEER.
19. ALL ROADWAY AND SIDEWALK CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF POLK COUNTY.
20. ALL CONSTRUCTION MATERIALS AND INSTALLATION SHALL CONFORM TO POLK COUNTY.
21. ALL CURBING WILL BE REQUIRED TO ADJUST TO THE GRADES OF INTERSECTING STREETS, ALLEYS, PUBLIC ENTRANCES, AND PRIVATE DRIVES AS DIRECTED BY THE ENGINEER.

SITE GRADING NOTES

1. THE DISTURBED AREA FOR THIS PROJECT IS APPROXIMATELY 54.7 ACRES.
2. THE SUBJECT PROPERTY DOES LIE WITHIN A SPECIAL FLOOD HAZARD ZONE ACCORDING TO COMMUNITY PANEL NO. 12105C0675G OF THE F.E.M.A. FLOOD INSURANCE RATE MAPS FOR POLK COUNTY, FL, WITH AN EFFECTIVE DATE OF 12/22/2016.
3. CONSTRUCT SILT BARRIERS BEFORE COMMENCING ANY GRADING OPERATIONS REFER TO EROSION CONTROL SHEETS.
4. MULCH AND SEED ALL DISTURBED AREAS AS SOON AS POSSIBLE AFTER FINAL GRADING IS COMPLETED, UNLESS OTHERWISE INDICATED. CONTRACTOR SHALL TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
5. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.
6. PROVIDE TEMPORARY CONSTRUCTION ACCESS(ES) AT THE POINT(S) WHERE CONSTRUCTION VEHICLES EXIT THE CONSTRUCTION AREA. MAINTAIN PUBLIC ROADWAYS FREE OF TRACKED MUD AND DIRT.
7. THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF THE STORM DRAIN CONNECTIONS AT THE BUILDING WITH THE PLUMBING PLANS.
8. THE CONTRACTOR SHALL CHECK ALL EXISTING GRADES AND DIMENSIONS IN THE FIELD PRIOR TO BEGINNING WORK AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
9. THE CONTRACTOR SHALL ADJUST THE CASTINGS OF ALL NEW AND EXISTING STRUCTURES TO MATCH PROPOSED FINISH GRADES.
10. THE CONTRACTOR SHALL COMPLY WITH ALL PERTINENT PROVISIONS OF THE MANUAL OF ACCIDENT PREVENTION AND CONSTRUCTION ISSUED BY AGC OF AMERICA, INC. AND THE SAFETY AND HEALTH REGULATIONS OF CONSTRUCTION ISSUED BY THE U.S. DEPARTMENT OF LABOR.
11. PROPOSED CONTOUR LINES AND SPOT ELEVATIONS ARE THE RESULT OF AN ENGINEERED GRADING DESIGN AND REFLECT A PLANNED INTENT WITH REGARD TO DRAINAGE AND MOVEMENT OF MATERIALS. SHOULD THE CONTRACTOR HAVE ANY QUESTION OF THE INTENT OR ANY PROBLEM WITH THE CONTINUITY OF GRADES, THE ENGINEER SHALL BE CONTACTED IMMEDIATELY.
12. ALL CUT AND FILL SLOPES SHALL BE 3 HORIZONTAL TO 1 VERTICAL OR FLATTER UNLESS OTHERWISE INDICATED ON THE PLANS.
13. ALL PIPES UNDER EXISTING PAVED AREAS SHALL BE BACKFILLED TO THE TOP OF SUBGRADE WITH CRUSHED STONE.
14. MINIMUM GRADE ON ASPHALT OR CONCRETE PAVING SHALL BE 1.0%. THE MAXIMUM GRADES WITHIN ACCESSIBLE SPACES SHALL BE 2% IN ANY DIRECTION.
15. CONTRACTOR SHALL CONFORM TO ALL APPLICABLE CODES AND OBTAIN APPROVAL AS NECESSARY BEFORE BEGINNING CONSTRUCTION.
16. ALL EARTHWORK, INCLUDING THE EXCAVATED SUBGRADE AND EACH LAYER OF FILL, SHALL BE MONITORED AND APPROVED BY A QUALIFIED GEOTECHNICAL ENGINEER, OR HIS/HER REPRESENTATIVE.
17. IF ANY SPRINGS OR UNDERGROUND STREAMS ARE EXPOSED DURING CONSTRUCTION PERMANENT FRENCH DRAINS MAY BE REQUIRED. THE DRAINS SHALL BE SPECIFIED AND LOCATED DURING CONSTRUCTION AS REQUIRED BY THE CONDITIONS WHICH ARE ENCOUNTERED, AND SHALL BE APPROVED BY THE ENGINEER.
18. THIS GRADING & DRAINAGE PLAN IS NOT A DETERMINATION OR GUARANTEE OF THE SUITABILITY OF THE SUBSURFACE CONDITIONS FOR THE WORK INDICATED. A GEOTECHNICAL SOILS REPORT HAS BEEN PREPARED AND IS AVAILABLE FROM THE OWNER. DETERMINATION OF THE SUBSURFACE CONDITIONS FOR THE WORK INDICATED IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
19. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO COMPACT FILL SUFFICIENTLY AROUND AND OVER ALL PIPES, STRUCTURES, VALVE STEMS, ETC., INSIDE THE PROPOSED PAVED AREAS TO AVOID SETTLEMENT. ANY SETTLEMENT DURING THE WARRANTY PERIOD SHALL BE RESTORED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
20. IN NO CASE SHALL SLOPE, HEIGHT, SLOPE INCLINATION, OR EXCAVATION DEPTH, INCLUDING TRENCH CONSTRUCTION, EXCEED THOSE SPECIFIED IN LOCAL, STATE AND FEDERAL REGULATIONS, SPECIFICALLY THE CURRENT OSHA HEALTH AND SAFETY STANDARDS FOR EXCAVATIONS (29 CRF PART 1926) SHALL BE FOLLOWED.
21. DO NOT DISTURB VEGETATION OR REMOVE TREES EXCEPT WHEN NECESSARY FOR GRADING PURPOSES.
22. STRIP TOPSOIL FROM ALL CUT AND FILL AREAS AND STOCKPILE UPON COMPLETION OF GENERAL GRADING OVER ALL DISTURBED AREAS, TO A MINIMUM DEPTH OF 6". CONTRACTOR SHALL SUPPLY ADDITIONAL TOP SOIL IF INSUFFICIENT QUANTITIES EXIST ON SITE.

SITE GRADING NOTES (CONT.)

23. TOP OF GRATE ELEVATIONS AND LOCATION OF COORDINATES FOR DRAINAGE STRUCTURES SHALL BE AS SHOWN ON THE DETAIL, UNLESS NOTED OTHERWISE. THE GRATES SHALL SLOPE LONGITUDINALLY WITH THE PAVEMENT GRADES.
24. ALL DRAINAGE CONSTRUCTION MATERIALS AND INSTALLATION SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF POLK COUNTY.
25. POSITIVE DRAINAGE SHALL BE ESTABLISHED AS THE FIRST ORDER OF WORK AND SHALL BE MAINTAINED AT ALL TIMES DURING AND AFTER CONSTRUCTION. SOIL SOFTENED BY PERCHED WATER IN FOUNDATION AND PAVEMENT AREAS MUST BE UNDERCUT AND REPLACED WITH SUITABLE FILL MATERIALS APPROVED BY THE GEOTECHNICAL ENGINEER. GROUNDWATER INFILTRATION INTO EXCAVATIONS SHOULD BE EXPECTED, AND THE WATER SHALL BE REMOVED USING GRAVITY DRAINAGE OR PUMPING.
26. REINFORCED CONCRETE STORM DRAINAGE PIPE SHALL BE CLASS III, WALL "B". HDPE SHALL BE CORRUGATED, SMOOTH WALL N-12 PIPE WITH SOIL TIGHT JOINTS.
27. FILL SLOPES 3:1 AND GREATER SHALL BE PLACED AND COMPACTED 5' BEYOND PROPOSED LIMITS AND THEN EXCAVATED BACK TO THE PROPOSED LOCATION.
28. THE CONTRACTOR SHALL PROVIDE AN ASBUILT SURVEY STAMPED BY A LICENSED SURVEYOR IN THE STATE OF FLORIDA OF ALL PUBLIC STORM SYSTEMS, ONSITE DETENTION PONDS, AND WATER QUALITY MEASURES VERIFYING COMPLIANCE WITH DESIGN DOCUMENTS.
29. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 72 HOURS PRIOR TO INSTALLATION OF THE WATER QUALITY DEVICES.
30. FILL IN GREATER QUANTITIES OF 500 CY NEEDS TO HAVE CURRENT CONTAMINTATION TESTING. ALL FILL MUST COME FROM AN FDOT APPROVED BURROW PIT.
31. ANY DISTURBED SOIL IN THE CUT OR FILL AREAS WILL NEED TO BE COMPACTED IN 1 FOOT LIFTS AND MEET A MINIMUM DENSITY OF 98% AS REQUIRED BY AASHTO T-180.

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HDR Engineering, Inc.
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Certificate of Authorization #: 4213

ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
B	06/19/2024	STORMWATER PERMITTING	J_B	KSL	AWS	AWS
A	06/04/2024	FOR REVIEW	J_B	AWS		

ISSUED FOR PERMITTING

DUKE ENERGY®

GENERAL NOTES

FILENAME	GENERAL NOTES	SHEET	C-001
SCALE	N/A		

LEGEND

- EDGE OF WOODS
- 163 — EXISTING CONTOURS
- EXISTING EDGE OF PAVEMENT (ASPHALT)
- BE(B) — EXISTING BURIED ELECTRICAL
- OE — EXISTING OVERHEAD ELECTRICAL
- APPROXIMATE WETLAND LINE
- EXISTING TREELINE
- EXISTING FENCE
- EXISTING LIGHT POLE

SHEET NOTES

1. EXISTING CONDITIONS WERE OBTAINED FROM CADD FILE NAMED "SURVRD_23-022 (2-16-2023) DWG" PROVIDED BY DUKE ENERGY, AND DOCUMENT TITLED "JURISDICTIONAL WETLANDS FIGURE" BY GOLDER ASSOCIATES DATED 9/26/2014. VERTICAL DATUM NOT PROVIDED; IT IS ASSUMED TO BE NAVD 88. CONTRACTOR TO OBTAIN A RECENT SIGNED AND SIGNED SURVEY FROM A FLORIDA LICENSED SURVEYOR, WHICH SHALL INCLUDE THE DATUM USED.
2. EXISTING CONDITIONS SHOWN IS LIMITED. IT IS NOT INCLUSIVE OF ALL EXISTING FEATURES WITHIN THE PROJECT SITE. THE DATA IS PROVIDED FOR REFERENCE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS.

0 30 60
GRAPHIC SCALE (IN FEET)

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ISSUED FOR PERMITTING

DUKE ENERGY®

EXISTING CONDITIONS

FILENAME	EXISTING CONDITIONS	SHEET	C-002
SCALE	1" = 30'		

LEGEND

- PROJECT LIMIT OF WORK
- PROPOSED 6" DIA. BRINE PIPE
- PROPOSED RECOVERY SUMP FORWARDING PUMPS 16" DIA. PIPES DISCHARGE TO COOLING POND
- PROPOSED FORWARDING PUMPS 16" DIA. PIPES TO NEW WATER TREATMENT BUILDING

SHEET NOTES

1. EXISTING CONDITIONS WERE OBTAINED FROM CADD FILE NAMED "SURVRD_23-022 (2-16-2023) DWG" PROVIDED BY DUKE ENERGY, AND DOCUMENT TITLED "JURISDICTIONAL WETLANDS FIGURE" BY GOLDER ASSOCIATES DATED 9/26/2014. VERTICAL DATUM NOT PROVIDED; IT IS ASSUMED TO BE NAVD 88. CONTRACTOR TO OBTAIN A RECENT SIGNED AND SEALED SURVEY FROM A FLORIDA LICENSED SURVEYOR, WHICH SHALL INCLUDE THE DATUM USED.
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3. PROPOSED UTILITIES SHOWN HEREIN ARE FOR REFERENCE ONLY; TO BE DESIGNED BY CONTRACTOR.
4. PROPOSED PONDS SHOWN HEREIN ARE FOR REFERENCE ONLY; TO BE DESIGNED BY CONTRACTOR.

0 500 1000
GRAPHIC SCALE (IN FEET)

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DUKE ENERGY®

OVERALL SITE KEY PLAN

FILENAME	OVERALL SITE KEY PLAN	SHEET	C-003
SCALE	1" = 500'		

LEGEND

- EDGE OF WOODS
- 163 EXISTING CONTOURS
- EXISTING EDGE OF PAVEMENT (ASPHALT)
- EXISTING BURIED ELECTRICAL
- EXISTING OVERHEAD ELECTRICAL
- APPROXIMATE WETLAND LINE
- EXISTING TREELINE
- EXISTING FENCE
- EXISTING LIGHT POLE

SHEET NOTES

1. EXISTING CONDITIONS WERE OBTAINED FROM CADD FILE NAMED "SURVRD_23-022 (2-16-2023) DWG" PROVIDED BY DUKE ENERGY, AND DOCUMENT TITLED "JURISDICTIONAL WETLANDS FIGURE" BY GOLDER ASSOCIATES DATED 9/26/2014. VERTICAL DATUM NOT PROVIDED; IT IS ASSUMED TO BE NAVD88. CONTRACTOR TO OBTAIN A RECENT SIGNED AND SEALED SURVEY FROM A FLORIDA LICENSED SURVEYOR, WHICH SHALL INCLUDE THE DATUM USED.
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KEYNOTES (#)

1. RELOCATE EXISTING LIGHT POLE. SEE C-101 FOR PROPOSED LOCATION.
2. MILL 3/4" OF EXISTING ASPHALT.

0 30 60
GRAPHIC SCALE (IN FEET)

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A	06/04/2024	FOR REVIEW	J_B	AWS		

ISSUED FOR PERMITTING

DUKE ENERGY®

DEMOLITION PLAN

FILENAME	DEMOLITION PLAN	SHEET	C-011
SCALE	1" = 30'		

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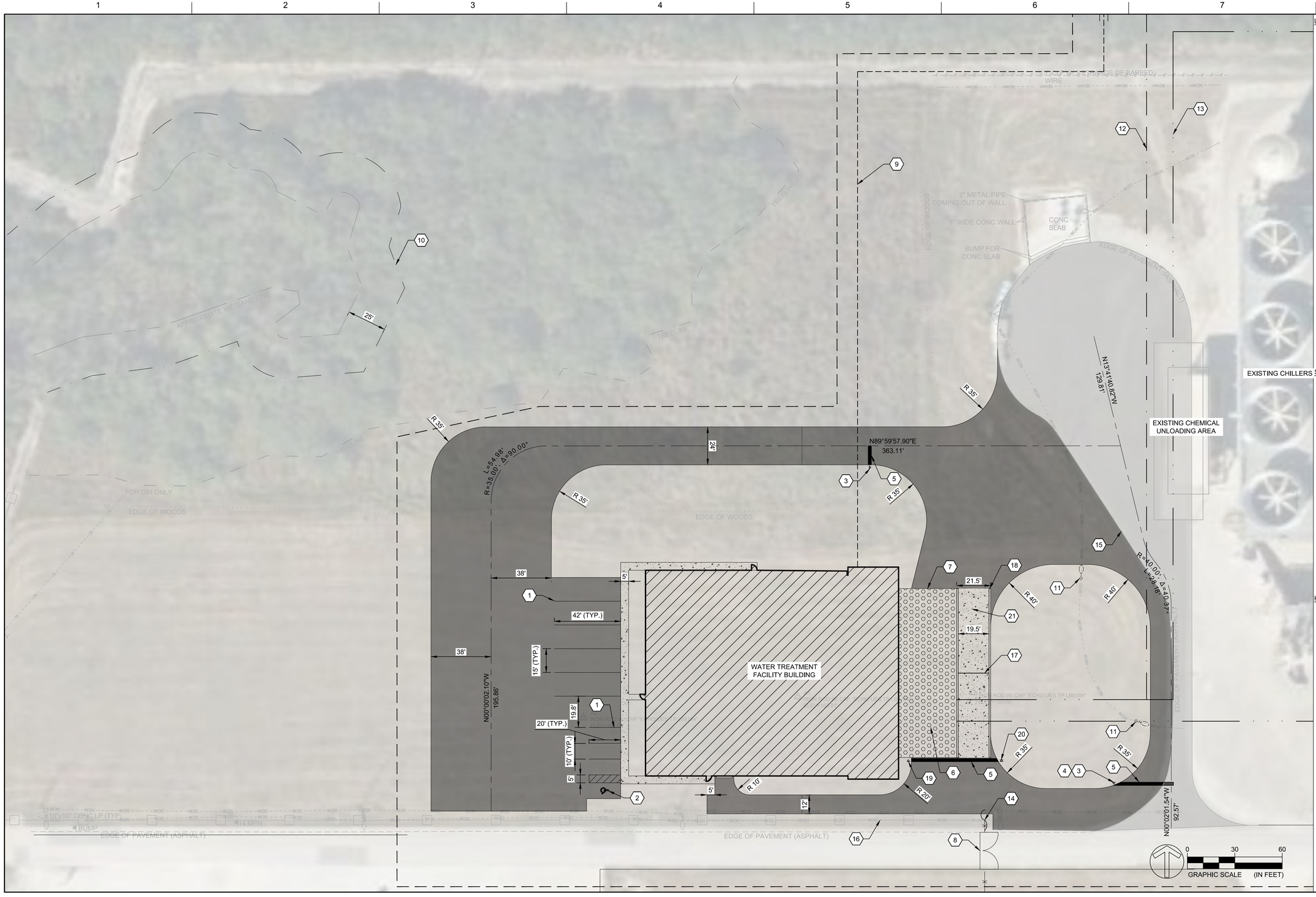
ISSUED FOR PERMITTING

DUKE ENERGY®

EROSION CONTROL PLAN

FILENAME	EROSION CONTROL PLAN
SCALE	1" = 30'
SHEET	C-021



LEGEND

- PROPOSED WATER TREATMENT FACILITY BUILDING
- PROPOSED HEAVY DUTY CONCRETE PAVEMENT (REFER TO DETAIL 7 ON SHEET C-400)
- EXISTING ASPHALT
- PROPOSED 2 -1/2" THICK ASPHALT (REFER TO DETAIL 5 ON SHEET C-400)
- PROPOSED 6" THICK CONCRETE (REFER TO DETAIL 6 ON SHEET C-400)
- PROJECT LIMIT OF WORK
- ROADWAY CENTERLINE
- APPROXIMATE WETLAND LINE
- EXISTING TREELINE
- PROPOSED 6" DIA. BRINE PIPE
- PROPOSED RECOVERY SUMP FORWARDING PUMPS 16" DIA. PIPES DISCHARGE TO COOLING POND
- PROPOSED FORWARDING PUMPS 16" DIA. PIPES TO NEW WATER TREATMENT BUILDING
- EXISTING FENCE
- PROPOSED FENCE
- RELOCATED LIGHT POLE

SHEET NOTES

1. EXISTING CONDITIONS WERE OBTAINED FROM CADD FILE NAMED "SURVRD_23-022 (2-16-2023) DWG" PROVIDED BY DUKE ENERGY, AND DOCUMENT TITLED "JURISDICTIONAL WETLANDS FIGURE" BY GOLDER ASSOCIATES DATED 9/26/2014. VERTICAL DATUM NOT PROVIDED; IT IS ASSUMED TO BE NAVD 88. CONTRACTOR TO OBTAIN A RECENT SIGNED AND SEALED SURVEY FROM A FLORIDA LICENSED SURVEYOR, WHICH SHALL INCLUDE THE DATUM USED.
2. EXISTING CONDITIONS SHOWN IS LIMITED. IT IS NOT INCLUSIVE OF ALL EXISTING FEATURES WITHIN THE PROJECT SITE. THE DATA IS PROVIDED FOR REFERENCE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS.
3. PROPOSED UTILITIES SHOWN HEREIN ARE FOR REFERENCE ONLY; TO BE DESIGNED BY CONTRACTOR.
4. PROPOSED PONDS & PIPING ASSOCIATED WITH THE WATER TREATMENT FACILITY TO BE DESIGNED AND PERMITTED SEPARATELY BY OTHERS.

KEYNOTES (#)

1. WHITE THERMOPLASTIC PARKING STRIPING (FDOT INDEX 711-001)
2. ADA PARKING SPACE (REFER TO DETAIL 9 ON SHEET C-400)
3. STOP SIGN (MUTCD R1-1)
4. CROSS TRAFFIC DOES NOT STOP SIGN (MUTCD W4-4P)
5. 24" THICK WHITE STOP BAR
6. PROPOSED OUTDOOR COVERED CONCRETE CHEMICAL STORAGE AREA (TO BE DESIGNED BY CONTRACTOR)
7. BUILDING OVERHANG
8. DUAL SWING GATE. REFER TO DETAIL 9 ON C-400.
9. PROPOSED 6" DIA. BRINE PIPE SHOWN FOR REFERENCE ONLY. REFER TO CONTRACTOR FOR DESIGN.
10. 25' WETLAND BUFFER (APPROXIMATE)
11. RELOCATED LIGHT POLE
12. PROPOSED RECOVERY SUMP FORWARDING PUMPS 16" DIA. PIPES DISCHARGE TO COOLING POND.
13. PROPOSED FORWARDING PUMPS 16" DIA. PIPES TO NEW WATER TREATMENT BUILDING.
14. TIE PROPOSED FENCE TO EXISTING FENCE TO THE WEST.
15. MILL EXISTING ASPHALT WHERE IT MEETS PROPOSED ASPHALT.
16. APPROXIMATE LOCATION OF EXISTING FENCE.
17. TRENCH DRAIN TO ISOLATED CHEMICAL SUMP
18. 12" WIDE X 1.5' TALL CONCRETE CONTAINMENT WALL
19. DO NOT ENTER SIGN (MUTCD R5-1)
20. DO NOT ENTER SIGN (MUTCD R5-1) FACING SOUTH AND STOP SIGN (MUTCD R1-1) FACING NORTH.
21. PROPOSED CHEMICAL UNLOADING AREA.

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DUKE ENERGY®

AREA 1 SITE & UTILITIES PLAN

FILENAME	SCALE	SHEET
AREA 1 SITE & UTILITIES PLAN	1" = 30'	C-101

LEGEND

- PROPOSED WATER TREATMENT FACILITY BUILDING
- PROPOSED CONCRETE
- EXISTING ASPHALT
- PROPOSED ASPHALT
- PROJECT LIMIT OF WORK
- x 164.73 PROPOSED SPOT GRADE
- FLOW ARROW
- PROPOSED 6" DIA. BRINE PIPE
- PROPOSED RECOVERY SUMP FORWARDING PUMPS 16" DIA. PIPES DISCHARGE TO COOLING POND
- PROPOSED FORWARDING PUMPS 16" DIA. PIPES TO NEW WATER TREATMENT BUILDING

SHEET NOTES

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3. PROPOSED UTILITIES SHOWN HEREIN ARE FOR REFERENCE ONLY; TO BE DESIGNED BY CONTRACTOR.
4. PROPOSED GRADE SHOWN IS CONCEPTUAL IN NATURE; FINE GRADING TO BE DESIGNED BY CONTRACTOR.
5. CONTRACTOR TO RESTORE PIPE TRENCH TO EXISTING GRADE.
6. PROPOSED PONDS & PIPING ASSOCIATED WITH THE WATER TREATMENT FACILITY TO BE DESIGNED AND PERMITTED SEPARATELY BY OTHERS.

0 30 60
GRAPHIC SCALE (IN FEET)

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A	06/04/2024	FOR REVIEW	J_B	AWS		

ISSUED FOR PERMITTING

DUKE ENERGY®

AREA 1 GRADING & DRAINAGE PLAN

FILENAME	AREA 1 GRADING & DRAINAGE PLAN	SHEET	C-201
SCALE	1" = 30'		

LEGEND

— — — PROJECT LIMIT OF WORK

- - - - - - PROPOSED 6" DIA. BRINE PIPE

SHEET NOTES

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0 120 240
GRAPHIC SCALE (IN FEET)

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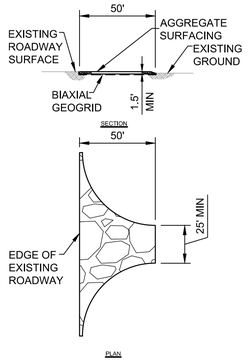
ISSUED FOR PERMITTING

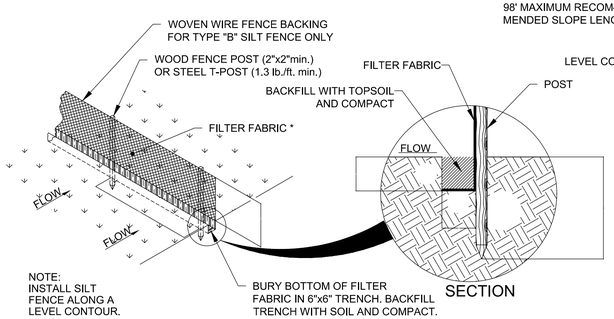
DUKE ENERGY®

BRINE PONDS AND UTILITIES PLAN

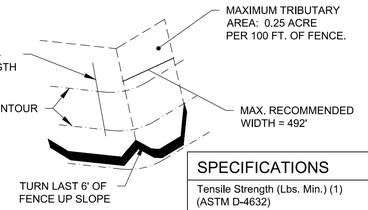
FILENAME	CS201.dwg
SCALE	1" = 120'
SHEET	C-202



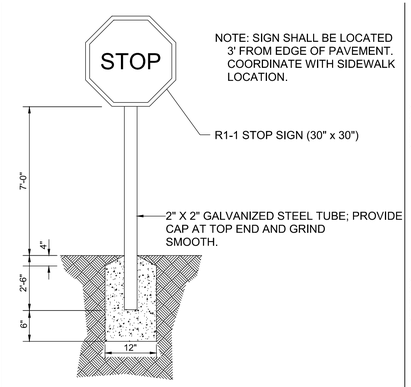
STABILIZED CONSTRUCTION ENTRANCE DETAIL
N.T.S. — 1 — C-400



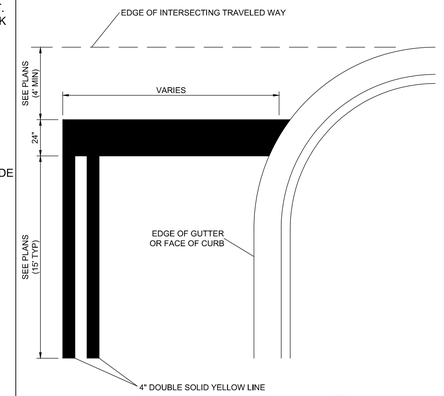
SILT FENCE - TYPES A AND B
N.T.S. — 2 — C-400



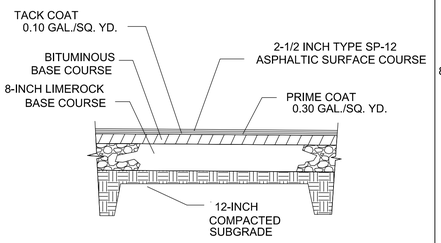
SPECIFICATIONS		
Tensile Strength (Lbs. Min.) (1) (ASTM D-4632)	Warp-120 Fill -100	Warp-120 Fill -100
Elongation (%Max.) (ASTM D-4632)	40	40
AOS (Apparent Opening Size) (Max. Sieve Size) (ASTM D-4751)	#30	#30
Flow Rate (Gal/Min/Sq. Ft.) (GDT-87)	25	25
Ultraciolet Stability (2) (ASTM D-4632 after 300 hours weathering in accordance with ASTM D-4355)	80	80
Bursting Strength (PSI Min.) (ASTM D-3786 Diaphram Bursting Strength Tester)	175	175
Minimum Fabric Width (Inches)	36	22



STOP SIGN
N.T.S. — 3 — C-400

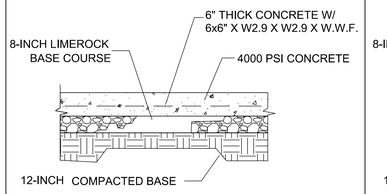


PAINTED STOP BAR
N.T.S. — 4 — C-400



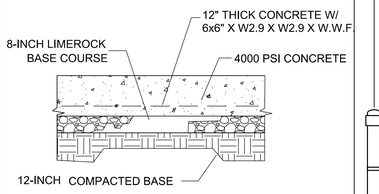
HEAVY DUTY PAVEMENT

PAVEMENT SECTION
N.T.S. — 5 — C-400



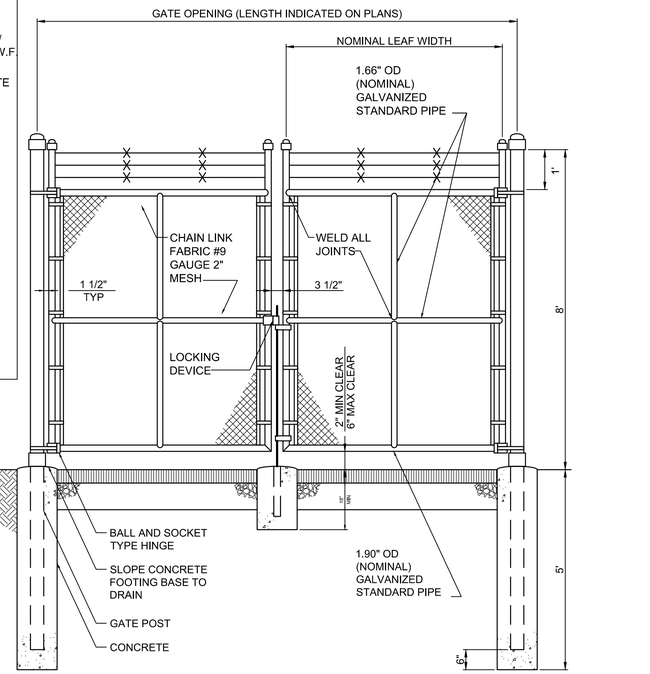
CONCRETE: 4000 PSI
STEEL: GRADE 60

CONCRETE PAVEMENT
N.T.S. — 6 — C-400

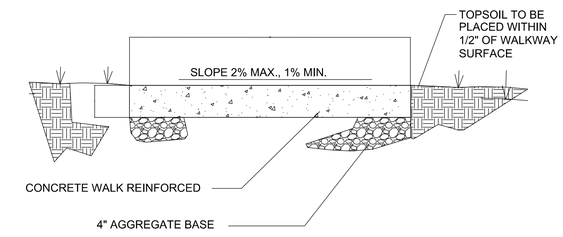


CONCRETE: 4000 PSI
STEEL: GRADE 60

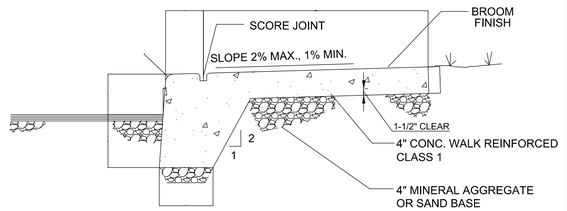
HEAVY DUTY CONCRETE PAVEMENT
N.T.S. — 7 — C-400



SWING GATE DETAIL
N.T.S. — 10 — C-400



CONCRETE SIDEWALK IN TURN AREA

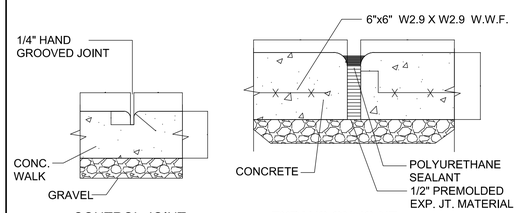


CONCRETE SIDEWALK AT TURN-DOWN CURB

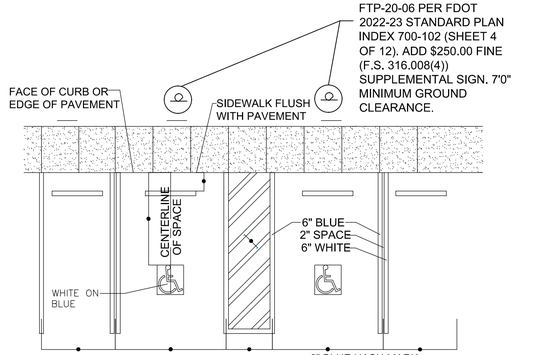
NOTE:
SIDEWALK SECTION AND REINFORCEMENT TO BE PER FDOT INDEX 310 AND FDOT STANDARD SPECIFICATION SECTION 522.

USE 3500 PSI CONCRETE;
PROVIDE CONTROL JOINTS @ 5' CENTERS
PROVIDE EXPANSION JOINTS @ 25' CENTERS
AND WHERE SIDEWALKS ABUT RIGID MATERIAL

CONCRETE SIDEWALK
N.T.S. — 11 — C-400



SIDEWALK JOINTS
N.T.S. — 8 — C-400



FLORIDA ACCESSIBLE PARKING DETAIL
N.T.S. — 9 — C-400

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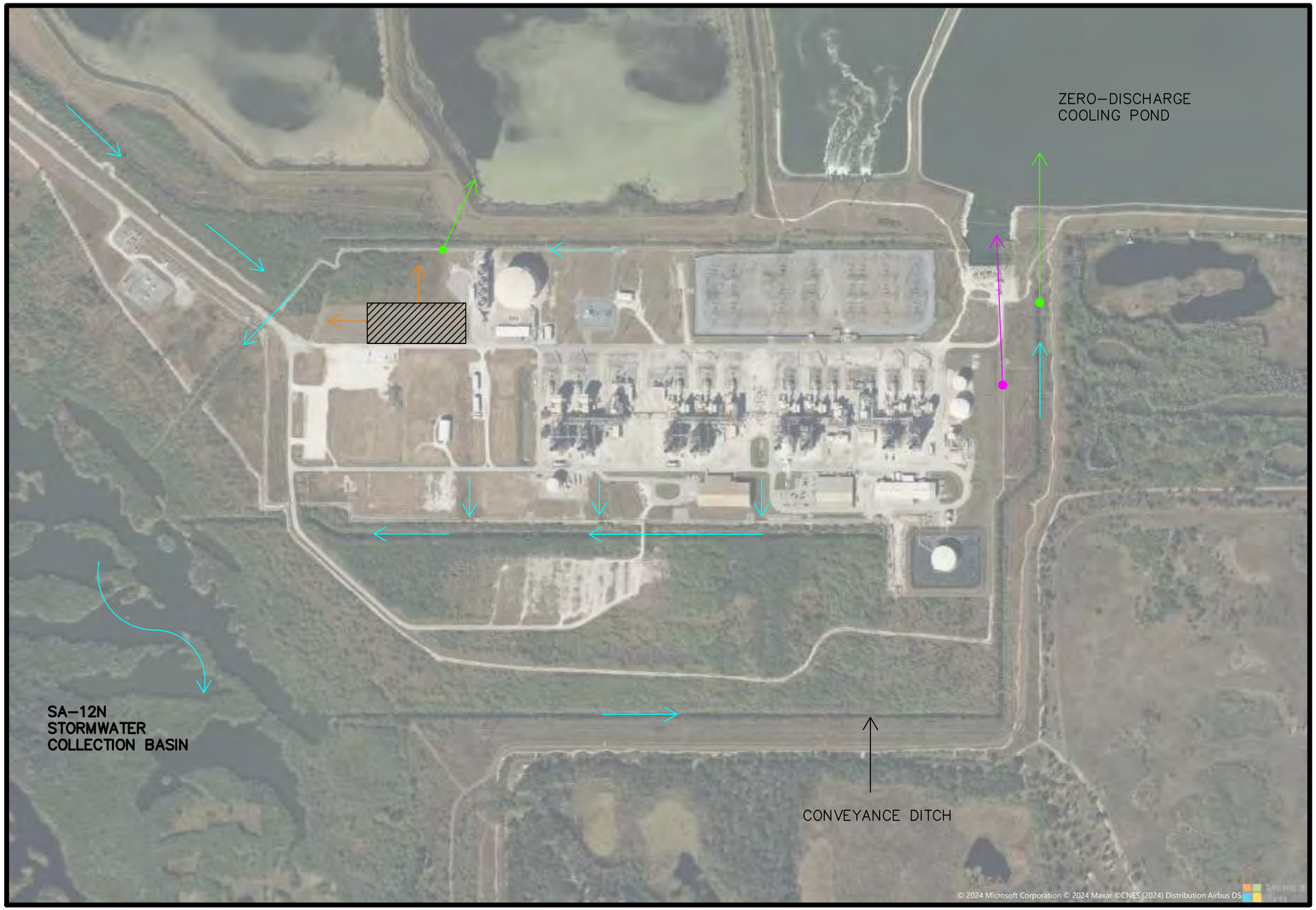
A	06/04/2024	FOR REVIEW	J_B	AWS		

ISSUED FOR PERMITTING

DUKE ENERGY®

DETAILS

FILENAME	DETAILS	SHEET	C-400
SCALE	N/A		



LEGEND

EXISTING FLOW DIRECTION

EXISTING WATER CROP PUMPS

EXISTING GW PRODUCTION WELLS

PROPOSED PROJECT SITE

FLOW FROM PROPOSED PROJECT

N.T.S.

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HINES ENERGY COMPLEX – PLANT ISLAND
POST–DEVELOPMENT DRAINAGE BASIN MAP

DATE
2024–05–15

FIGURE

Application for Individual and Conceptual Approval Environmental Resource Permit, State 404 Program Permit, and Authorization to Use State-Owned Submerged Lands

Florida Department of Environmental Protection/

Water Management Districts

Effective December 22, 2020

Instructions for Use of This Form:

This form is designed to assist you in submitting a complete application. All applications must include Section A-General Information for All Activities. Sections B through H list typical information that is needed based on the proposed activities and are only required as applicable. Part 1-C of Section A will guide you to the correct sections needed based on your proposed activities. Applicants are advised to consult Chapter 62-330, F.A.C., and the Environmental Resource Permit Applicant's Handbook Volumes I and II for information regarding the ERP permitting process and requirements while preparing their application. Internet addresses for Chapter 62-330, F.A.C., and the Applicant's Handbook, Agency contact information, and additional instructions for this form can be found in Attachment 1.

What Sections of the Application Must I Fill Out?

Type of Activity	Section A	Section B	Section C	Section D	Section E	Section F	Section G	Section H	Section I
Fill in wetlands or waters for a single family residence?	Y	Y	N	N	N	N	N	N	Y, if in assumed waters
Docks, shoreline stabilization, seawalls associated with a single family residence?	Y	Y	N	N	N	Y, as needed	N	N	Y, if in assumed waters
Wetland impacts (other than association with an individual residence)?	Y	N	Y	N	N	N	N	N	Y, if in assumed waters
Boating facilities, a marina, jetty, reef, or dredging?	Y	N	Y	Y	N	Y, as needed	N	N	Y, if in assumed waters
Any work on state owned submerged land?	Y	N	Y	N	N	Y	N	N	Y, if in assumed waters
Construction of a stormwater management system?	Y	N	Y, as needed	N	Y	N	N	N	N
Constructing a mitigation bank?	Y	N	Y	N	Y, as needed	N	Y	N	Y, if in assumed waters
Creating a mine?	Y	N	Y, as needed	N	N	N	N	Y	Y, if in assumed waters

If you have any questions, or would like assistance completing this form, please contact the staff of the nearest office of either the Florida Department of Environmental Protection (DEP) or a Water Management District (WMD) (see Attachment 2).

Section A:
General Information for All Activities

Part 1: Name, Application Type, Location, and Description of Activity

A. Name of project, including phase if applicable: **Modification of Site Certification PA92-33 (Construction of a Water treatment facility)**

B. This is for (check all that apply):

Construction and operation of **new** works, activities, and/ or a stormwater management system

☐ **Conceptual Approval** of proposed works, activities and/ or a stormwater management system

X Modification or alteration of **existing** works, activities, and/or a stormwater management system. Provide the existing DEP or WMD permit #, if known: PA92-33 Note: Minor modifications do not require completion of this form, and may instead be requested by letter in accordance with section 6.2 of Applicant's Handbook Volume I.

☐ **Maintenance or repair** of works, activities, and/ or a stormwater management system previously permitted by the DEP or WMD. Provide existing permit #, if known:

☐ Abandonment or removal of works, activities, and/ or a stormwater management system.

Provide existing DEP or WMD permit #, if known:

☐ Operation of an **existing unpermitted** work, activity, and/or stormwater management system.

☐ Construction of additional phases of a permitted work, activity, or system.

Provide the existing DEP or WMD permit #, if known:

☐ A State 404 Program authorization:

☐ Exemption ☐ General Permit ☐ Individual Permit

If requesting an Exemption or General Permit provide Rule #, if known:

☐ **By checking this box**, I hereby voluntarily waive, in accordance with Rule 62-330.090(8), F.A.C., the agency action deadlines in section 5.5.3 of Volume I in the event my project also requires a State 404 Program authorization (other than an exemption) under Chapter 62-331, F.A.C., and request that the agency actions for the ERP and State 404 Program authorizations be issued at the same time. (This is strongly recommended to ensure consistency, and to reduce the potential need for project modifications to resolve inconsistencies that may occur when the agency actions are issued at different times.) If this box is checked and the Agency(ies) determines that no State 404 Program authorization is required, the Agency will continue to abide by section 5.5.3 of Volume I.

C. **List the type of activities proposed. Check all that apply, and provide the supplemental information requested in each of the referenced application sections.** Please also reference Applicant's Handbook Volumes I and II for the type of information that may be needed.

☐ Activities associated with one single-family residence, duplex, triplex, or quadruplex that do not qualify for an exemption or a General Permit: **Provide the information requested in Section B. Do not complete Section C.**

☐ Activities within wetlands or surface waters, or within 25 feet of a wetland or surface water, (not including the activities associated with an individual single-family residence). Examples include dredging, filling, outfall structures, docks, piers, over-water structures, shoreline stabilization, mitigation, reclamation, and restoration/enhancement. **Provide the information requested in Section C.**

☐ Activities within navigable or flowing surface waters such as a multi-slip dock or marina, dry storage facility, dredging, bridge, breakwaters, reefs, or other offshore structures: **In addition to Section C, also provide the information requested in Section D.**

☐ Activities that are (or may be) located within, on, or over state-owned submerged lands (See Chapter 18-21, F.A.C. https://www.flrules.org/gateway/ChapterHome.asp?Chapter=18-21): **In addition to Section B or C, also provide the information requested in Section F.**

☐ Construction or alteration of a stormwater management system serving residential, commercial, transportation, industrial, agricultural, or other land uses, or a solid waste facility (excluding mines that are regulated by DEP). **Provide the information requested in Section E.**

☐ Creation or modification of a Mitigation Bank (refer to Chapter 62-342, F.A.C. https://www.flrules.org/gateway/ChapterHome.asp?Chapter=62-342): **Provide the information requested in Section G.**

☐ Mines (as defined in Section 2.0 of Applicant's Handbook Volume I) that are regulated by the DEP: **Provide the information requested in Section H.**

X Other, describe: **Modification of Site Certification PA92-33**. Please contact the Agency to determine which additional sections of the application are needed. See Attachment 2 for Agency contacts.

D. Describe in general terms the proposed project, system, works, or other activities. For permit modifications, please briefly describe the changes requested to the permit: Modification of Site Certification PA92-33 (**Construction of a Water Treatment Facility**)

E. Project/Activity Street/Road Address or other location (if applicable): **7700 County Rd 555**
City: **Bartow** County(ies): **Polk** Zip: **33830**

Note: For utility, road, or ditch/canal activities, provide a starting and ending point using street names and nearest house numbers or provide length of project in miles along named streets or highways.

F. Project location map and Section, Township, and Range information (use additional sheets if needed):

Please attach a location map showing the location and boundaries of the proposed activity in relation to major intersections or other landmarks. The map should also contain a north arrow and a graphic scale; show Section(s), Township(s), and Range(s); and must be of sufficient detail to allow a person unfamiliar with the site to find it.
Section(s): **14** Township: **31S** Range: **24E** Land Grant name, if applicable:
Section(s): Township: Range:

1. Section(s): Township: Range:

G. Latitude (DMS) 27° 47' 25.60" Longitude (DMS) 81° 52' 36.29" (Taken from central location of the activity). Explain source for obtaining latitude and longitude (i.e. U.S.G.S. Quadrangle Map, GPS, online resource): Google Earth

H. Tax Parcel Identification Number(s): 233114000000011010

[Number may be obtained from property tax bill or from the county property appraiser's office; if on multiple parcels, provide multiple Tax Parcel Identification Numbers]

I. Directions to Site (from major roads; include distances and landmarks as applicable): Approximately 4500 feet SE of intersection of County Road 555 and Hines Blvd., Bartow FL.

J. Project area or phase area: 3.30 acres

K. Name of waterbody(ies) (if known) in which activities will occur or into which the system will discharge: N/A

The following questions (M-O) are not applicable to activities related to an individual single-family residence, including a dock, pier, and/or seawall associated with that residence.

L. Is it part of a larger plan of development or sale? X yes ☐ no

M. Impervious or semi-impervious area excluding wetlands and other surface waters (if applicable):

1.83 acres or square feet

N. Volume of water the system is capable of impounding (if applicable):

Normal Pool: acre-feet. Depth ft.
Maximum Pool: acre-feet. Depth ft.

Part 2: Supplemental Information, and Permit History

A. Is this an application to modify an existing Environmental Resource Permit or to construct or implement part of a multi-phase project, such as a project with a Conceptual Approval permit? ☐ Yes ☐ No (If you answered "yes", please provide permit numbers below):

Agency	Date	Permit/Application No.	Project Name
FDEP	1992	PA92-33	Duke Energy Hines Energy Complex-Site Certification

B. Indicate if there have been any **pre-application meeting(s)** with the DEP, WMD, or delegated local government, or other discussions, meetings, or coordination with other stakeholders or agencies about the proposed project, system or activity. If so, please provide the date(s), location(s) of the meeting, and the name(s) of Agency staff that attended the meeting(s):

Agency	Date	Location	Meeting Attendees
N/A			

C. **Attach a depiction (plan and section views), which clearly shows the works or other activities proposed to be constructed.** Use multiple sheets, if necessary, a scale sufficient to show the location and type of works, and include a north arrow and a key to any symbols used. **Specific information to be included in the plans is based on the activities proposed and is further described in Sections B-H.** However, supplemental information may be required based on the specific circumstances or location of the proposed works or other activies.

D. Processing Fee: **Please submit the application processing fee along with this application form and supplemental information.** Processing fees vary based on the size of the activity, the type of permit applied for, and the reviewing Agency. Please reference Appendix D of Applicant's Handbook Volume I to determine the appropriate fee.

Part 3: Applicant and Associated Parties Information

Instructions: Please complete the following sections. For corporations, list a person who is a registered agent or officer of the corporation who has the legal authority to bind the corporation.

A. Applicant (Entity Must Have Sufficient Real Property Interest)

X (Please Contact Agent for additional information – (william.linton@duke-energy.com) (727) 560-4803

Last Name: Herrera
First Name: Justin
Middle Initial: H
Title: GM III
Company: Duke Energy Florida L.L.C.
Address: 7700 County Rd.
City: Bartow
State: FL
Zip: 33830
Home Telephone:
Work Telephone: C/O (727) 560-4803
Cell Phone:
E-mail Address: C/O william.linton@duke-energy.com

Correspondence will be sent via email, unless you check here to receive it via US Mail: ☐

B. Land Owner(S) (If Different or in Addition to Applicant)

☐ **Check here if land owner is also a co-applicant**

Last Name:
First Name:
Middle Initial:
Title:
Company:
Address:
City:
State:
Zip:
Home Telephone:
Work Telephone:
Cell Phone:
E-mail Address:

Correspondence will be sent via email, unless you check here to receive it via US Mail: ☐

C. Operation and Maintenance Entity(see Applicant's Handbook I, Section 12.3)

Last Name:
First Name:
Middle Initial:
Title:
Company:
Address:
City:
State:
Zip:
Home Telephone:
Work Telephone:
Cell Phone:
E-mail Address:

Correspondence will be sent via email, unless you check here to receive it via US Mail: ☐

D. Co-Applicant (If Different or In Addition to Applicant and Owner)

Last Name:
First Name:
Middle Initial:
Title:
Company:
Address:
City:
State:
Zip:
Home Telephone:
Work Telephone:
Cell Phone:
E-mail Address:

Correspondence will be sent via email, unless you check here to receive it via US Mail: ☐

E. Registered Professional Consultant
☐ **This is a contact person for additional information**

Last Name: Leissing | First Name: Karin | Middle Initial:
Title: Sr. Civil Site Engineer | Company: HDR
Address: 315 E Robinson Street, Suite 400
City: Orlando | State: FL | Zip: 32801
Home Telephone: | Work Telephone: (407) 420-4198
Cell Phone:
E-mail Address: Karin.leissing@hdrinc.com

Correspondence will be sent via email, unless you check here to receive it via US Mail: **X**

F. Environmental Consultant
☐ **This is a contact person for additional information**

Last Name: Huntington | First Name: Ken | Middle Initial:
Title: Sr. Transportation Environmental Specialist | Company: HDR
Address:
City: Orlando | State: FL | Zip: 32801
Home Telephone: | Work Telephone: (407) 420-4180
Cell Phone:
E-mail Address: ken.huntington@hdrinc.com

Correspondence will be sent via email, unless you check here to receive it via US Mail: ☐

G. Agent Authorized to Secure Permit - X Contact for Additional Information

Last Name: Linton | First Name: William | Middle Initial: R
Title: Sr. Environmental Specialist | Company: Duke Energy Florida L.L.C.
Address: 299 First Avenue North
City: St. Petersburg | State: FL | Zip: 33701
Home Telephone: | Work Telephone: (727) 560-4803
Cell Phone:
E-mail Address: william.linton@duke-energy.com

Correspondence will be sent via email, unless you check here to receive it via US Mail: ☐

If necessary, please add additional pages for other contacts and property owners related to this project.

H. Real Property Interest

a. Permits are only issued to entities having sufficient real property interest as described in Section 4.2.3(d) of Applicant's Handbook Volume I. **Please attach evidence of the applicant's real property interest over the land upon which the activities subject to the application will be conducted, including mitigation areas (if applicable).** Refer to Sections 4.2.3(d)-(e) for sufficient real property interest documentation.

b. For activities that require a recorded notice in accordance with rule 62-330.090(7), F.A.C., please provide either the complete legal description of the property or a copy of the pages of the document recorded in the public records that contains the complete legal description. If the land upon which the proposed activities are to occur is not owned by the applicant, the applicant must also provide copies of any right-of-way, leases, easements, or other legal agreement which authorizes the applicant to perform the activities on those lands.

Part 4: Signatures and Authorization to Access Property

Instructions: For multiple applicants please provide a separate Part 4 for each applicant. For corporations, the application must be signed by a person authorized to bind the corporation. A person who has sufficient real property interest (see Section 4.2.3(d) of Applicant's Handbook Volume I) is required in (B) to authorize access to the property, except when the applicant has the power of eminent domain.

A. By signing this application form, I am applying for the permit and any proprietary authorizations identified above, according to the supporting data and other incidental information filed with this application. I am familiar with the information contained in this application and represent that such information is true, complete and accurate. I understand this is an application and not a permit, and that work prior to approval is a violation. I understand that this application and any permit issued or proprietary authorization issued pursuant thereto does not relieve me of any obligation for obtaining any other required federal, state, water management district, or local permit prior to commencement of construction. I agree to operate and maintain the permitted system unless the permitting agency authorizes transfer of the permit to a different responsible operation and maintenance entity. I understand that knowingly making any false statement or representation in this application is a violation of Section 373.430, F.S. and 18 U.S.C. Section 1001.

Justine H. Herrera
Typed/Printed Name of Applicant or Applicant's Authorized Agent

Signature of Applicant or Applicant's Authorized Agent

Date 6/13/24

GMIII Duke Energy Florida, L.L.C.
(Corporate Title if applicable)

B. Certification of Sufficient Real Property Interest And Authorization For Staff To Access The Property:

I certify that:

X **I possess sufficient real property interest in or control, as defined in Section 4.2.3 (d) of Applicant's Handbook Volume I,** over the land upon which the activities described in this application are proposed and I have legal authority to grant permission to access those lands. I hereby grant permission, evidenced by my signature below, for staff of the Agency to access, inspect, and sample the lands and waters of the property as necessary for the review of the proposed works and other activities specified in this application, upon advance notice. I authorize these agents or personnel to enter the property as many times as may be necessary to make such review, inspection, and/ or sampling. Further, if a permit is granted, upon advance notice, I agree to provide entry to the project site for such agents or personnel with proper identification to determine compliance with permit conditions and permitted plans and specifications.

OR

☐ I represent an entity having **the power of eminent domain and condemnation authority**, and I/we shall make appropriate arrangements to enable staff of the Agency to legally access, inspect, and sample the property as described above.

Justin H. Herrera
Typed/Printed Name

Signature

Date 6/13/24

GM III Duke Energy Florida, L.L.C.
(Corporate Title if applicable)

C. Designation of Authorized Agent (If Applicable):

I hereby designate and authorize William R Linton to act on my behalf, or on behalf of my corporation, as the agent in the processing of this application for the permit and/or proprietary authorization indicated above and to furnish, on request, supplemental information in support of the application. In addition, I authorize the above-listed agent to bind me, or my corporation, to perform any requirements which may be necessary to procure the permit or authorization indicated above. I understand that knowingly making any false statement or representation in this application is a violation of Section 373.430, F.S., and 18 U.S.C. Section 1001.

Justin Herrera
Typed/Printed Name of Applicant

Signature of Applicant

Date 6/13/24

GM III Duke Energy Florida, L.L.C.
(Corporate Title if applicable)