



Florida Department of Environmental Protection

SOUTHEAST DISTRICT OFFICE
3301 GUN CLUB ROAD, MSC 7210-1
WEST PALM BEACH, FL 33406
561-681-6600

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Jonathan P. Steverson
Secretary

September 21, 2016

Florida Power and Light
c/o Matthew Raffenberg, Senior Director Environmental Services
700 Universe Blvd. JB/JES
Juno Beach, FL 33408
Sent via email: Matthew.raffenberg@fpl.com

Dear Mr. Raffenberg:

Enclosed is Environmental Resource Permit No. 13-0127512-013, issued pursuant to Part IV of Chapter 373, Florida Statutes (F.S.), and Title 62, Florida Administrative Code (F.A.C.).

Appeal rights for you as the permittee and for any affected third party are described in the text of the permit along with conditions which must be met when permitted activities are undertaken. Please review this document carefully to ensure compliance with both the general and specific conditions contained herein. As the permittee, you are responsible for compliance with these conditions. **Please ensure all construction personnel associated with your activity review and understand the attached drawings and conditions.** Failure to comply with this permit may result in liability for damages and restoration, and the imposition of civil penalties up to \$10,000.00 per violation per day pursuant to Sections 403.141 and 403.161, F.S.

It appears that the proposed scope of work may result in a stormwater discharge to surface waters of the State or a municipal separate storm sewer system, and disturb (which includes clearing, grading and excavation) one (1) or more acres of land. For information regarding Florida's National Pollutant Discharge Elimination (NPDES) stormwater program for construction activities, please visit: <http://www.dep.state.fl.us/water/stormwater/npdes/index.htm>.

In addition, please ensure the construction commencement notice and all other reporting conditions are forwarded to the appropriate office as indicated in the specific conditions.

If you have any questions about this document, please contact me at (772) 467-5560 or by email at cynthia.lott@dep.state.fl.us.

Sincerely,

A handwritten signature in blue ink that reads "Cynthia E. Lott".

Cynthia Lott
Environmental Specialist III
Submerged Lands & Environmental
Resources Program



Permit Review Checklist

(A summary of the required monitoring and reporting activities for your project)

Pre-Construction Requirements

Activity Completed	Date Due	Date
<input type="checkbox"/> Permit with All Attachments Kept at the Work Site	Permit shall be available on-site for DEP inspector at all times	_____
<input type="checkbox"/> Permanent Erosion & Turbidity Control Structures in Place	Structures should be inspected daily	_____
<input type="checkbox"/> Turbidity Monitoring	As necessary, submitted weekly	_____
<input type="checkbox"/> Report Changes to Permitted Drawings / Plans / Activities	Contact DEP before any changes	_____

Construction Requirements

Activity Completed	Date Due	Date
<input type="checkbox"/> Permit with All Attachments Kept at the Work Site	Permit shall be available on-site for DEP inspector at all times	_____
<input type="checkbox"/> Permanent Erosion & Turbidity Control Structures in Place	Structures should be inspected daily	_____
<input type="checkbox"/> Turbidity Monitoring	As necessary, submitted weekly	_____
<input type="checkbox"/> Report Changes to Permitted Drawings / Plans / Activities	Contact DEP before any changes	_____

Post-Construction Requirements

Activity Completed	Date Due	Date
<input type="checkbox"/> Restore Construction / Staging Areas	14 days after construction	_____
<input type="checkbox"/> Maintain All Temporary Impact Areas & Other Disturbed Areas Free of Exotic / Nuisance Vegetation	24 months	_____
<input type="checkbox"/> "Completion and Certification (As-Built) Form" signed & sealed by P.E. and sent to DEP	30 days after construction	_____
<input type="checkbox"/> Transfer Form Submitted to DEP	Within 30 days Sale of property (if property sold)	_____

For the above criteria that require you to contact Department, please contact the FDEP- Southeast District Office, Environmental Resources Permitting Section, 3301 Gun Club Road, MSC 7210-1, West Palm Beach, FL 33406; Attention: Christian White; Phone: (561) 681-6656; Email: Christian.N.White@dep.state.fl.us.

PLEASE NOTE: As the property owner/permittee, you are ultimately responsible for ensuring that the required conditions of your permit are complied with and timely reported to the Department. Please ensure that any designated contractors or agents acting on your behalf are familiar with these requirements.



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Permittee/Authorized Entity:

Florida Power and Light
c/o Matthew Raffenberg, Senior Director Environmental Services
700 Universe Blvd. JB/JES
Juno Beach, FL 33408
Email: Matthew.raffenberg@fpl.com

Project Name:

FPL Turkey Point/Turtle Point & Barge Canal Restoration

Authorized Agent:

Tetra Tech, Inc.
c/o Georgia Vince, Project Manager
Phone: (772) 781-3441; Email: Georgia.vince@tetrattech.com

Compliance Project Manager:

Christian White, Environmental Specialist II
Phone: (561) 681-6656; Email: Christian.N.White@dep.state.fl.us

Environmental Resource Permit - Granted

State-owned Submerged Lands Authorization – Granted

U.S. Army Corps of Engineers Authorization – Separate Corps Authorization Required

Permit No.: 13-0127512-013

Permit Issuance Date: September 21, 2016

Permit Construction Phase Expiration Date: September 20, 2021

**Consolidated Environmental Resource Permit
and
State-owned Submerged Lands Authorization**

**Permittee/Grantee: FPL Turkey Point
Permit No.: 13-0127512-013**

PROJECT LOCATION

The activities authorized by this Permit and state-owned submerged lands authorization are located within wetlands and Biscayne Bay, within the Biscayne Bay Aquatic Preserve, Outstanding Florida Waters, Class I/III Waters, adjacent to 9760 SW 344 St., Homestead (Section 34, Township 57 South, Range 60 East), in Miami-Dade County (Latitude N 25° 25' 09.00", Longitude W 80 19' 42.00").

PROJECT DESCRIPTION

The permittee is authorized to conduct the following activities in order to improve the hydrology, water quality and fringe habitat within 1.9 acres of remnant canal and 5.6 acres of the active barge basin adjacent to FPL Turkey Point Cooling Canal System (CCS) and Biscayne Bay by: (1) restoring the remnant Turtle Point Canal (TPC) by filling it to specified elevation and planting a portion of the restored canal with red mangroves; and (2) restoring the Barge Canal (BC) by filling it to a specified elevation. The project involves work within 7.5 acres of surface waters.

The submerged bottom at the Turtle Point Canal project site consists of barren mud and detritus with no submerged aquatic vegetative cover. Sediments outside the canal consist of a calcareous mixture of silt, sand and shell fragments. Mangroves occur along the three banks of the Turtle Point Canal, are not located within the project boundaries; therefore, this permit does not authorize impacts to these resources. All existing mangroves will be avoided. The backfilling shall not cause erosion or shoaling as this area does not have a large tidal range and minimal current.

The permittee shall restore mangrove habitat within the Turtle Point Canal by planting 0.35 acres (15,449 ft.²) of mangroves within the canal. The mangrove planting area will be graded flat to an elevation of 0.73 ft. to 0.93 ft. NAVD. Approximately 1,725 red mangrove plants with a minimum height of 18 in. shall be planted on 5 ft. centers.

The Barge Canal project site consists of a hardened shoreline basin with a submerged bottom of barren mud and detritus with no submerged aquatic vegetative cover. Sediments outside the barge canal consist of a calcareous mixture of silt, sand, shell fragments and organic material. Mature mangroves occur along a portion of the Barge Canal shoreline. Staging areas are available near the project site; fill material shall be delivered via truck directly to the staging area along existing roads.

Accessing the remnant canal and barge canal from the land side, with the exception of the construction barge with excavator to be mobilized to the canals, shall minimize barge traffic compared to a water-based operation and therefore avoids impacts from prop dredging, vessel groundings, and any potential strikes to protected marine species.

The attached standard manatee conditions (version 2011) shall be adhered to during all in-water work. Prior to construction commencement, weighted floating turbidity curtains will enclose the mouth of the Barge Canal, extending to within one- foot from the submerged bottom shall be utilized around the project area to ensure that any turbidity resulting from construction activities will be contained within the project boundaries. All water bodies, including any adjacent

submerged aquatic vegetation outside the specific limits of construction authorized by this permit shall be protected from erosion, siltation, sedimentation, and/or scouring. Additionally, curtains shall have a 3-ft. barrier above the water line to inhibit manatees from entering the fill zone. They shall be manufactured of entanglement-free material safe to use in the presence of marine mammals, sea turtles, and other marine fauna.

AUTHORIZATIONS

Environmental Resource Permit

The Department has determined that the activity qualifies for an Environmental Resource Permit. Therefore, the Environmental Resource Permit is hereby granted, pursuant to Part IV of Chapter 373, Florida Statutes (F.S.), and Chapter 62-330, Florida Administrative Code (F.A.C.).

Sovereignty Submerged Lands Authorization

The activity is located on sovereignty submerged lands owned by the State of Florida. It therefore also requires authorization from the Board of Trustees of the Internal Improvement Trust Fund (Board of Trustees), pursuant to Article X, Section 11 of the Florida Constitution, and Section 253.77, F.S., and Chapter 258, F.S.

As staff to the Board of Trustees under Sections 253.002, F.S., the Department has determined that the activity qualifies for and requires a Letter of Consent, as long as the work performed is located within the boundaries as described and is consistent with the terms and conditions herein.

During the term of this Letter of Consent you shall maintain satisfactory evidence of sufficient upland interest as required by paragraph 18-21.004(3)(b), Florida Administrative Code. If such interest is terminated or the Board of Trustees determines that such interest did not exist on the date of issuance of this Letter of Consent, this Letter of Consent may be terminated by the Board of Trustees at its sole option. If the Board of Trustees terminates this Letter of Consent, you agree not to assert a claim or defense against the Board of Trustees arising out of this Letter of Consent.

Federal Authorization

Your proposed activity as outlined on your notice and attached drawings does not qualify for Federal authorization pursuant to the State Programmatic General Permit and a separate permit or authorization may be required from the Corps. A copy of your permit application has been forwarded to the Corps for their review. The Corps will issue their authorization directly to you or contact you if additional information is needed. If you have not heard from the Corps within 30 days from the date your application was received at the local FDEP Office, contact the Corps at the Miami Regulatory Field Office at (305) 526-7181, for status and further information. Failure to obtain Corps authorization prior to construction could subject you to federal enforcement action by that agency.

Authority for review - an agreement with the USACOE entitled "Coordination Agreement Between the U. S. Army Corps of Engineers (Jacksonville District) and the Florida Department of Environmental Protection, or Duly Authorized Designee, State Programmatic General Permit", Section 10 of the Rivers and Harbor Act of 1899, and Section 404 of the Clean Water Act.

Coastal Zone Management

Issuance of this authorization also constitutes a finding of consistency with Florida's Coastal Zone Management Program, as required by Section 307 of the Coastal Zone Management Act.

Water Quality Certification

This permit also constitutes a water quality certification under Section 401 of the Clean Water Act, 33 U.S.C. 1341.

Other Authorizations

You are advised that authorizations or permits for this activity may be required by other federal, state, regional, or local entities including but not limited to local governments or municipalities. This permit does not relieve you from the requirements to obtain all other required permits or authorizations.

The activity described may be conducted only in accordance with the terms, conditions and attachments contained in this document. Issuance and granting of the permit and authorizations herein do not infer, nor guarantee, nor imply that future permits, authorizations, or modifications will be granted by the Department.

PERMIT/SOVEREIGNTY SUBMERGED LANDS CONDITIONS

The activities described must be conducted in accordance with:

- **The Specific Conditions**
- **The General Conditions**
- **The Special Consent Conditions**
- **The General Conditions for Sovereignty Submerged Lands Authorization X**
- **The limits, conditions and locations of work shown in the attached drawings**
- **The term limits of this authorization**

You are advised to read and understand these conditions and drawings prior to beginning the authorized activities, and to ensure the work is conducted in conformance with all the terms, conditions, and drawings herein. If you are using a contractor, the contractor also should read and understand these conditions and drawings prior to beginning any activity. Failure to comply with these conditions, including any mitigation requirements, shall be grounds for the Department to revoke the permit and authorization and to take appropriate enforcement action.

Operation of the facility is not authorized except when determined to be in conformance with all applicable rules and this permit and sovereignty submerged lands authorization, as described.

SPECIFIC CONDITIONS- PROJECT FORMS & ATTACHMENTS

(1) The attached 1-page permit checklist; the attached project drawings (sheets 1 through 11); Exhibit A Project Narrative, the Standard Manatee Conditions for In-Water Work, 2011, which can be downloaded at http://myfwc.com/media/415448/Manatee_StdCondIn_waterWork.pdf; and DEP forms 62-330.310(1); 62-330.310(2); 62-330.340(1); and 62-330.350(1), which may be downloaded at <http://www.dep.state.fl.us/water/wetlands/erp/forms.htm> become part of this permit. If the permittee does not have access to the Internet, please contact the Department at (561) 681-6600 to request the aforementioned forms and/or document(s).

SPECIFIC CONDITIONS - PRIOR TO CONSTRUCTION

(2) After selection of the contractor to perform the authorized activities and prior to the initiation of any work authorized by this permit, the permittee (or authorized agent) and the contractor shall attend a pre-construction conference with a representative of the Department. It shall be the responsibility of the permittee to contact this project's Compliance Project Manager, Christian White by email Christian.N.White@dep.state.fl.us, or by phone (561) 681-6656, to schedule the pre-construction conference. If the assigned Compliance Project Manager cannot be reached, the permittee shall contact the ERP Program Compliance/Enforcement section by phone (561) 681-6600, to schedule the pre-construction conference.

SPECIFIC CONDITIONS – CONSTRUCTION & RESTORATION ACTIVITIES

(3) All staging areas used for storage and stockpiling of construction materials shall be limited to construction barges, uplands, within the authorized impact areas. During construction activities, the permittee shall utilize existing fill roads for regular ingress and egress. These areas shall be designed and maintained in a manner that prevents turbid discharges into adjacent wetlands or surface waters.

(4) All existing mangroves occurring along the canal banks and adjacent wetlands shall be avoided during construction activities; therefore, this permit does not authorize impacts to these resources.

(5) The permittee shall restore mangrove habitat within the Turtle Point Canal by planting an approximately 0.35 acres (15,449 ft.²) of the filled canal. The mangrove planting area will be graded flat to an elevation of +0.73 ft. to +0.93 ft. NAVD at a 3:1 slope below the water line and no greater than a 2:1 slope for the limestone above the mean low water line.

(6) The mangrove restoration area shall consist of the planting of 1,725 red mangrove plants with a minimum height of 18 in. planted 5-ft. on center.

SPECIFIC CONDITIONS – TURBIDITY MONITORING/REPORTING REQUIREMENTS

(7) During all fill placement activities, turbidity curtains and/or other barriers shall enclose the north shoreline and mouth of the Turtle Point Canal and be maintained to minimize potential siltation and turbidity of surrounding mangrove and seagrass communities, as described in the attached restoration narrative.

(8) Turbidity curtains shall extend to the canal bottoms with a 3 foot barrier above the water line are to be securely anchored to 12 inch diameter or greater piles that are temporarily placed across the mouths of both canals. The barrier design has been proposed for turbidity control and also as a means to exclude manatees from the fill areas.

(9) Turbidity levels outside the construction area shall not exceed 0 NTU's above ambient levels. The following measures shall be taken immediately by the permittee whenever turbidity levels within waters of the State surrounding the project site exceed ambient turbidity levels of the surrounding Outstanding Florida Waters:

- a. Notify the Department at (561) 681-6656 at the time the violation is first detected.
- b. Immediately cease all work contributing to the water quality violation.

- c. Stabilize all exposed soils contributing to the violation. Modify the work procedures that were responsible for the violation, install more turbidity containment devices, and repair any non-functional turbidity containment devices.
- d. Perform turbidity monitoring.
- e. Resume construction activities once turbidity levels outside turbidity curtains fall below background levels.

(10) Water turbidity levels shall be monitored and recorded at least every 6 hours during construction activities and upon the occurrence of other circumstances that might create water quality violations on site. Samples shall be taken one foot above the bottom, mid-depth, and one-foot below the surface at monitoring stations located as follows:

- a. Approximately 100 feet up-current of the work sites and clearly outside the influence of construction activities. (This shall serve as the natural background sample against which other turbidity readings shall be compared.)
- b. Directly outside the turbidity curtains surrounding the work sites and within the densest portion of any visible turbidity plume. (This sample shall serve as the compliance sample.)

(11) During construction activities, the permittee or permittee's contractor shall collect the following turbidity monitoring data at the frequency and water depths directed by the Specific Condition above:

- a. Date and time of sampling event
- b. Turbidity sampling results (background NTUs, compliance NTUs, and the difference between them)
- c. Description of data collection methods
- d. An aerial map indicating the sampling locations
- e. Depth of sample(s)
- f. Weather conditions at times of sampling
- g. Tidal stage and direction of flow

Data shall be collected in a turbidity log and shall include a statement by the individual responsible for implementation of the sampling program attesting to the authenticity, precision, limits of detection, and accuracy of the data. The turbidity log shall be scanned and sent on a weekly basis to the Department's Compliance Project Manager, Christian White, by email at Christian.N.White@dep.state.fl.us. The subject line of the email shall include the project name, permit number, and the title "Turbidity Monitoring Reports."

SPECIFIC CONDITIONS – POST-CONSTRUCTION ACTIVITIES

(12) Restoration activities shall consist of material staging, sediment placement, grading, shoreline stabilization, and mangrove planting as described in the attached restoration plans and shown on the attached exhibits and sketch drawings. All staging areas shall be returned to pre-project conditions following project completion, including final cleanup notification to the Department provided by a FPL representative.

(13) The permittee shall submit a certified as-built survey of all canal restoration areas and mangrove planting area to the Department for review within 2 weeks of achieving final grades

and prior to mangrove plantings. The Department will review the survey to assess if grading is in compliance with the permitted drawings. The Department will notify the permittee to proceed with planting upon review of the survey and if it is in compliance. Planting shall commence within 10 days upon Department's notification. The Department's notification to proceed does not constitute a finding by the Department the restoration plantings will meet the success criteria. The survey shall include the following for each canal restoration and planting area:

- a. Surface area (total square footage or acreage of each canal restoration area): AND
- b. Locations and elevations for each permanent benchmark; OR
- c. Topographic survey on one-foot vertical intervals based on a 50 ft. grid.

SPECIFIC CONDITIONS – MANATEE CONDITIONS & ENDANGERED/THREATENED SPECIES

(18) The [Standard Manatee Construction Conditions for In-water Work \(2011\)](#) must be followed for all in-water activity.

(19) While filling and enclosing the canal, as well as enclosing the canal fill areas with turbidity curtains, it is important to ensure that manatees do not become entrapped during the curtain installation or gain access after the curtains have been installed and before filling work has been completed. In order to reduce potential risks to manatees during these activities, the following conservation measures shall be implemented:

- a. At least one observer shall be onsite at all times and dedicated to the task of watching for manatees during the in-water construction work associated with the canal. Observers must have prior on-the-job experience as a dedicated manatee observer during previous dredging operations.
- b. Final closure of the barrier across the mouth of the Turtle Point and Barge Canals shall be completed only after a dedicated observer confirms that no manatees will be trapped in the area to be filled. If a manatee becomes entrapped behind the barrier, the area shall be opened up to allow the manatee to leave of its own volition. It shall not be herded or harassed into leaving the area. If there are issues with the manatee not leaving the area, or if a manatee becomes entangled, report this immediately to the Florida Fish and Wildlife Conservation Commission (FWC) Hotline at 1-888-404-3922, and to FWC at ImperiledSpecies@myFWC.com.
- c. Backfilling shall begin at the end of the basin, moving waterward, and must not be performed after dusk or before dawn, when the possibility of spotting manatees is negligible.

(20) Endangered and threatened species training shall be provided to all construction personnel. Manatee observers shall be stationed on-site during all in-water construction activities.

The following measures shall be observed to reduce potential nesting impact during construction:

- a. Conduct construction activities outside of the breeding season (generally April through August), if feasible,

- b. Clear the site only when ready to build,
- c. Avoid leaving cleared areas with little to no activity for an extended amount of time, and
- d. Monitor daily during the nesting season any cleared sites to ensure no active nests of ground nesting birds are present prior to the commencement of construction activities.

If nesting on the project site is observed, contact FWC staff to discuss necessary nest buffers and potential permitting alternatives. Please refer to FWC's Florida Shorebird Alliance located at the following web address: <http://www.flshorebirdalliance.org/>.

(21) Presence of the American Crocodile (*Crocodylus acutus*) has also been documented within the Turtle Point Canal. The American Crocodile is listed as a Federally Threatened species. The FFWCC recommends the applicant coordinate with U.S. Fish and Wildlife Service (USFWS) South Florida Ecological Services Office (ESO) as necessary for information regarding potential impacts to this species. The USFWS South Florida ESO can be contacted at (772) 562-3909.

GENERAL CONDITIONS FOR INDIVIDUAL PERMITS

The following general conditions are binding on all individual permits issued under chapter 62-330, F.A.C., except where the conditions are not applicable to the authorized activity, or where the conditions must be modified to accommodate project-specific conditions.

(1) All activities shall be implemented following the plans, specifications and performance criteria approved by this permit. Any deviations must be authorized in a permit modification in accordance with Rule 62-330.315, F.A.C. Any deviations that are not so authorized may subject the permittee to enforcement action and revocation of the permit under Chapter 373, F.S.

(2) A complete copy of this permit shall be kept at the work site of the permitted activity during the construction phase, and shall be available for review at the work site upon request by the Agency staff. The permittee shall require the contractor to review the complete permit prior to beginning construction.

(3) Activities shall be conducted in a manner that does not cause or contribute to violations of state water quality standards. Performance-based erosion and sediment control best management practices shall be installed immediately prior to, and be maintained during and after construction as needed, to prevent adverse impacts to the water resources and adjacent lands. Such practices shall be in accordance with the State of Florida Erosion and Sediment Control Designer and Reviewer Manual (Florida Department of Environmental Protection and Florida Department of Transportation June 2007), and the Florida Stormwater Erosion and Sedimentation Control Inspector's Manual (Florida Department of Environmental Protection, Nonpoint Source Management Section, Tallahassee, Florida, July 2008), which are both incorporated by reference in subparagraph 62-330.050(9)(b)5., F.A.C., unless a project-specific erosion and sediment control plan is approved or other water quality control measures are required as part of the permit.

(4) At least 48 hours prior to beginning the authorized activities, the permittee shall submit to the Agency a fully executed Form 62-330.350(1), "Construction Commencement Notice," [October 1, 2013], which is incorporated by reference in paragraph 62-330.350(1)(d), F.A.C., indicating the expected start and completion dates. A copy of this form may be obtained from the

Agency, as described in subsection 62-330.010(5), F.A.C. If available, an Agency website that fulfills this notification requirement may be used in lieu of the form.

(5) Unless the permit is transferred under Rule 62-330.340, F.A.C., or transferred to an operating entity under Rule 62-330.310, F.A.C., the permittee is liable to comply with the plans, terms and conditions of the permit for the life of the project or activity.

(6) Within 30 days after completing construction of the entire project, or any independent portion of the project, the permittee shall provide the following to the Agency, as applicable:

- a. For an individual, private single-family residential dwelling unit, duplex, triplex, or quadruplex – “Construction Completion and Inspection Certification for Activities Associated With a Private Single-Family Dwelling Unit” [Form 62-330.310(3)]; or
- b. For all other activities – “As-Built Certification and Request for Conversion to Operational Phase” [Form 62-330.310(1)].
- c. If available, an Agency website that fulfills this certification requirement may be used in lieu of the form.

(7) If the final operation and maintenance entity is a third party:

- a. Prior to sales of any lot or unit served by the activity and within one year of permit issuance, or within 30 days of as- built certification, whichever comes first, the permittee shall submit, as applicable, a copy of the operation and maintenance documents (see sections 12.3 thru 12.3.3 of Volume I) as filed with the Department of State, Division of Corporations and a copy of any easement, plat, or deed restriction needed to operate or maintain the project, as recorded with the Clerk of the Court in the County in which the activity is located.
- b. Within 30 days of submittal of the as- built certification, the permittee shall submit “Request for Transfer of Environmental Resource Permit to the Perpetual Operation Entity” [Form 62-330.310(2)] to transfer the permit to the operation and maintenance entity, along with the documentation requested in the form. If available, an Agency website that fulfills this transfer requirement may be used in lieu of the form.

(8) The permittee shall notify the Agency in writing of changes required by any other regulatory agency that require changes to the permitted activity, and any required modification of this permit must be obtained prior to implementing the changes.

(9) This permit does not:

- a. Convey to the permittee any property rights or privileges, or any other rights or privileges other than those specified herein or in Chapter 62-330, F.A.C.;
- b. Convey to the permittee or create in the permittee any interest in real property;
- c. Relieve the permittee from the need to obtain and comply with any other required federal, state, and local authorization, law, rule, or ordinance; or
- d. Authorize any entrance upon or work on property that is not owned, held in easement, or controlled by the permittee.

(10) Prior to conducting any activities on state-owned submerged lands or other lands of the state, title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund, the permittee must receive all necessary approvals and authorizations under Chapters 253 and 258, F.S.

Written authorization that requires formal execution by the Board of Trustees of the Internal Improvement Trust Fund shall not be considered received until it has been fully executed.

(11) The permittee shall hold and save the Agency harmless from any and all damages, claims, or liabilities that may arise by reason of the construction, alteration, operation, maintenance, removal, abandonment or use of any project authorized by the permit.

(12) The permittee shall notify the Agency in writing:

- a. Immediately if any previously submitted information is discovered to be inaccurate; and
- b. Within 30 days of any conveyance or division of ownership or control of the property or the system, other than conveyance via a long-term lease, and the new owner shall request transfer of the permit in accordance with Rule 62-330.340, F.A.C. This does not apply to the sale of lots or units in residential or commercial subdivisions or condominiums where the stormwater management system has been completed and converted to the operation phase.

(13) Upon reasonable notice to the permittee, Agency staff with proper identification shall have permission to enter, inspect, sample and test the project or activities to ensure conformity with the plans and specifications authorized in the permit.

(14) If any prehistoric or historic artifacts, such as pottery or ceramics, stone tools or metal implements, dugout canoes, or any other physical remains that could be associated with Native American cultures, or early colonial or American settlement are encountered at any time within the project site area, work involving subsurface disturbance in the immediate vicinity of such discoveries shall cease. The permittee or other designee shall contact the Florida Department of State, Division of Historical Resources, Compliance and Review Section, at (850) 245-6333 or (800) 847-7278, as well as the appropriate permitting agency office. Such subsurface work shall not resume without verbal or written authorization from the Division of Historical Resources. If unmarked human remains are encountered, all work shall stop immediately and notification shall be provided in accordance with Section 872.05, F.S.

(15) Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding unless a specific condition of this permit or a formal determination under Rule 62-330.201, F.A.C., provides otherwise.

(16) The permittee shall provide routine maintenance of all components of the stormwater management system to remove trapped sediments and debris. Removed materials shall be disposed of in a landfill or other uplands in a manner that does not require a permit under Chapter 62-330, F.A.C., or cause violations of state water quality standards.

(17) This permit is issued based on the applicant's submitted information that reasonably demonstrates that adverse water resource-related impacts will not be caused by the completed permit activity. If any adverse impacts result, the Agency will require the permittee to eliminate the cause, obtain any necessary permit modification, and take any necessary corrective actions to resolve the adverse impacts.

(18) A Recorded Notice of Environmental Resource Permit may be recorded in the county public records in accordance with subsection 62-330.090(7), F.A.C. Such notice is not an encumbrance upon the property.

SPECIAL CONSENT CONDITIONS

1) The applicant agrees to indemnify, defend and hold harmless the Board of Trustees and the State of Florida from all claims, actions, lawsuits and demands in any form arising out of the authorization to use sovereignty submerged lands or the applicant's use and construction of structures on sovereignty submerged lands. This duty to indemnify and hold harmless will include any and all liabilities that are associated with the structure or activity including special assessments or taxes that are now or in the future assessed against the structure or activity during the period of the authorization.

2) Failure by the Board of Trustees to enforce any violation of a provision of the authorization or waiver by the Board of Trustees of any provision of the authorization will not invalidate the provision not enforced or waived, nor will the failure to enforce or a waiver prevent the Board of Trustees from enforcing the unenforced or waived provision in the event of a violation of that provision.

3) Applicant binds itself and its successors and assigns to abide by the provisions and conditions set forth in the authorization. If the applicant or its successors or assigns fails or refuses to comply with the provisions and conditions of the authorization, the authorization may be terminated by the Board of Trustees after written notice to the applicant or its successors or assigns. Upon receipt of such notice, the applicant or its successors or assigns will have thirty (30) days in which to correct the violations. Failure to correct the violations within this period will result in the automatic revocation of this authorization.

4) All costs incurred by the Board of Trustees in enforcing the terms and conditions of the authorization will be paid by the applicant. Any notice required by law will be made by certified mail at the address shown on page one of the authorization. The applicant will notify the Board of Trustees in writing of any change of address at least ten days before the change becomes effective.

5) This authorization does not allow any activity prohibited in a conservation easement or restrictive covenant that prohibits the activity.

GENERAL CONDITIONS FOR SOVEREIGNTY SUBMERGED LANDS AUTHORIZATION

Any use of sovereignty submerged lands is subject to the following general conditions are binding upon the applicant and are enforceable under Chapter 253, F.S. and Chapter 258, F.S.

(1) Sovereignty submerged lands may be used only for the specified activity or use. Any unauthorized deviation from the specified activity or use and the conditions for undertaking that activity or use will constitute a violation. Violation of the authorization will result in suspension or revocation of the applicant's use of the sovereignty submerged lands unless cured to the satisfaction of the Board of Trustees.

(2) Authorization under Rule 18-21.005, F.A.C., conveys no title to sovereignty submerged lands or water column, nor does it constitute recognition or acknowledgment of any other person's title to such land or water.

(3) Authorizations under Rule 18-21.005, F.A.C., may be modified, suspended or revoked in accordance with its terms or the remedies provided in Sections 253.04, F.S. and Chapter 18-14, F.A.C.

(4) Structures or activities will be constructed and used to avoid or minimize adverse impacts to resources.

(5) Construction, use, or operation of the structure or activity will not adversely affect any species which is endangered, threatened or of special concern, as listed in Rules 68A-27.003, 68A-27.004, and 68A-27.005, F.A.C.

(6) Structures or activities will not unreasonably interfere with riparian rights. When a court of competent jurisdiction determines that riparian rights have been unlawfully affected, the structure or activity will be modified in accordance with the court's decision.

(7) Structures or activities will not create a navigational hazard.

(8) Structures will be maintained in a functional condition and will be repaired or removed if they become dilapidated to such an extent that they are no longer functional.

(9) Structures or activities will be constructed, operated, and maintained solely for water dependent purposes.

(10) The applicant agrees to indemnify, defend and hold harmless the Board of Trustees and the State of Florida from all claims, actions, lawsuits and demands in any form arising out of the authorization to use sovereignty submerged lands or the applicant's use and construction of structures on sovereignty submerged lands. This duty to indemnify and hold harmless will include any and all liabilities that are associated with the structure or activity including special assessments or taxes that are now or in the future assessed against the structure or activity during the period of the authorization.

(11) Failure by the Board of Trustees to enforce any violation of a provision of the authorization or waiver by the Board of Trustees of any provision of the authorization will not invalidate the provision not enforced or waived, nor will the failure to enforce or a waiver prevent the Board of Trustees from enforcing the unenforced or waived provision in the event of a violation of that provision.

(12) Applicant binds itself and its successors and assigns to abide by the provisions and conditions set forth in the authorization. If the applicant or its successors or assigns fails or refuses to comply with the provisions and conditions of the authorization, the authorization may be terminated by the Board of Trustees after written notice to the applicant or its successors or assigns. Upon receipt of such notice, the applicant or its successors or assigns will have thirty (30) days in which to correct the violations. Failure to correct the violations within this period will result in the automatic revocation of this authorization.

(13) All costs incurred by the Board of Trustees in enforcing the terms and conditions of the authorization will be paid by the applicant. Any notice required by law will be made by

certified mail at the address shown on page one of the authorization. The applicant will notify the Board of Trustees in writing of any change of address at least ten days before the change becomes effective.

(14) This authorization does not allow any activity prohibited in a conservation easement or restrictive covenant that prohibits the activity.

NOTICE OF RIGHTS

This action is final and effective on the date filed with the Clerk of the Department unless a petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. On the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the hearing process may result in a modification of the agency action or even denial of the application.

Petition for Administrative Hearing

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. Pursuant to Rule 28-106.201, F.A.C., a petition for an administrative hearing must contain the following information:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, any email address, any facsimile number, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests are or will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;

(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;

(e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;

(f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and

(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

The petition must be filed (received by the Clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000. Also, a copy of the petition shall be mailed to the applicant at the address indicated above at the time of filing.

Time Period for Filing a Petition

In accordance with Rule 62-110.106(3), F.A.C., petitions for an administrative hearing by the applicant must be filed within 14 days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of the notice or within 14 days of

receipt of the written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who has asked the Department for notice of agency action may file a petition within 14 days of receipt of such notice, regardless of the date of publication. The failure to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

Extension of Time

Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, before the applicable deadline for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

Mediation

Mediation is not available in this proceeding.

FLAWAC Review

The applicant, or any party within the meaning of Section 373.114(1)(a) or 373.4275, F.S., may also seek appellate review of this order before the Land and Water Adjudicatory Commission under Section 373.114(1) or 373.4275, F.S. Requests for review before the Land and Water Adjudicatory Commission must be filed with the Secretary of the Commission and served on the Department within 20 days from the date when this order is filed with the Clerk of the Department.

Judicial Review

Once this decision becomes final, any party to this action has the right to seek judicial review pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Rules 9.110 and 9.190, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, M.S. 35, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this action is filed with the Clerk of the Department.

Judicial Review

Once this decision becomes final, any party to this action has the right to seek judicial review pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Rules 9.110 and 9.190, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, M.S. 35, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this action is filed with the Clerk of the Department.

Executed in Palm Beach County, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Diane Pupa
Permitting Program Administrator
Southeast District

Attachments:

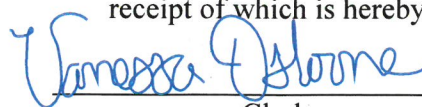
Permit checklist, 1 page
Project Drawings and Design Specs., 11 pages
Exhibit A – Restoration Plan Narrative 52 pages
Standard Manatee Conditions for In-Water Work, 2011, can be downloaded at
http://myfwc.com/media/415448/Manatee_StdCondIn_waterWork.pdf
As-built Certification and Request for Conversion to Operational Phase Form 62-330.310(1)*
Request for Transfer to the Perpetual Operation Entity Form 62-330.310(2)*
Request to Transfer Permit Form 62-330.340(1)*
Commencement Notice Form 62-330.350(1)*
*Can be downloaded at: <http://www.dep.state.fl.us/water/wetlands/erp/forms.htm>

Copies furnished to:

FDEP – Monica Sovacool, Cindy Lott, Christian White, Eric Buck
Rosalinda Rodriguez, USACOE- Miami-Dade, Rosalinda.Rodriguez@usace.army.mil
Lisa Spadafina, Miami-Dade County RER, spadaL2@miamidade.gov
Kellie Youmans, FFWCC- Bureau of Imperiled Species Management, kellie.youmans@myfwc.com
Ashleigh Blackford, U.S. Fish and Wildlife Service (USFWS) South Florida Ecological Services
Office (ESO) Ashleigh_blackford@fws.gov
Georgia Vince, Project Manager, Tetra Tech, Inc., Georgia.vince@tetrattech.com

FILING AND ACKNOWLEDGMENT

FILED, on this date, under 120.52(7) of the
Florida Statutes, with the designated Department Clerk,
receipt of which is hereby acknowledged.



Clerk

9-21-16

Date

STANDARD MANATEE CONDITIONS FOR IN-WATER WORK

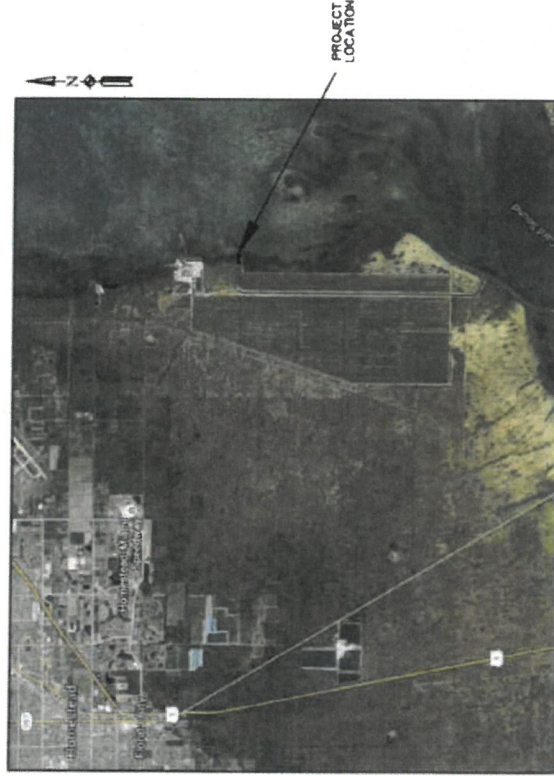
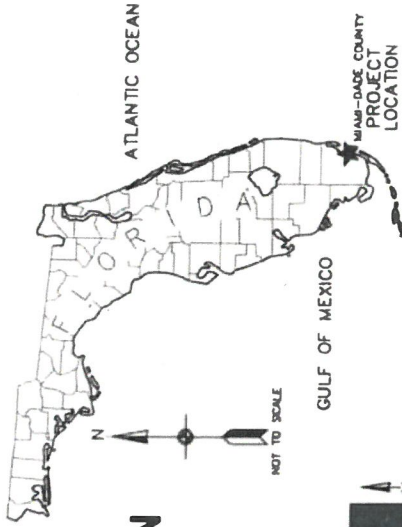
2011

The permittee shall comply with the following conditions intended to protect manatees from direct project effects:

- a. All personnel associated with the project shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act, the Endangered Species Act, and the Florida Manatee Sanctuary Act.
- b. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
- c. Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement.
- d. All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shutdown if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.
- e. Any collision with or injury to a manatee shall be reported immediately to the FWC Hotline at 1-888-404-3922. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-731-3336) for north Florida or Vero Beach (1-772-562-3909) for south Florida, and to FWC at ImperiledSpecies@myFWC.com
- f. Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the permittee upon completion of the project. Temporary signs that have already been approved for this use by the Florida Fish and Wildlife Conservation Commission (FWC) must be used (see MyFWC.com/manatee). One sign which reads *Caution: Boaters* must be posted. A second sign measuring at least 8 1/2" by 11" explaining the requirements for "Idle Speed/No Wake" and the shut down of in-water operations must be posted in a location prominently visible to all personnel engaged in water-related activities. Questions concerning these signs can be sent to the email address listed above.



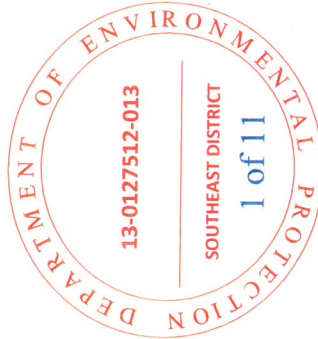
FLORIDA POWER AND LIGHT TURTLE POINT CANAL RESTORATION MIAMI-DADE COUNTY



VICINITY MAP
TURTLE POINT CANAL, MIAMI-DADE COUNTY, FLORIDA

INDEX OF SHEETS

SHEET #	TITLE	LASTEST UPDATE	REV.
C-001	COVER SHEET AND VICINITY MAP	7/28/16	0
C-002	LIMITS OF CONSTRUCTION	7/28/16	0
P-101	TURTLE POINT PLAN VIEW AND SURVEY	7/28/16	0
P-102	TURTLE POINT ELEVATIONS	7/28/16	0
P-103	TURTLE POINT CROSS-SECTIONS	7/28/16	0
P-104	TURTLE POINT FILL AREA	7/28/16	0



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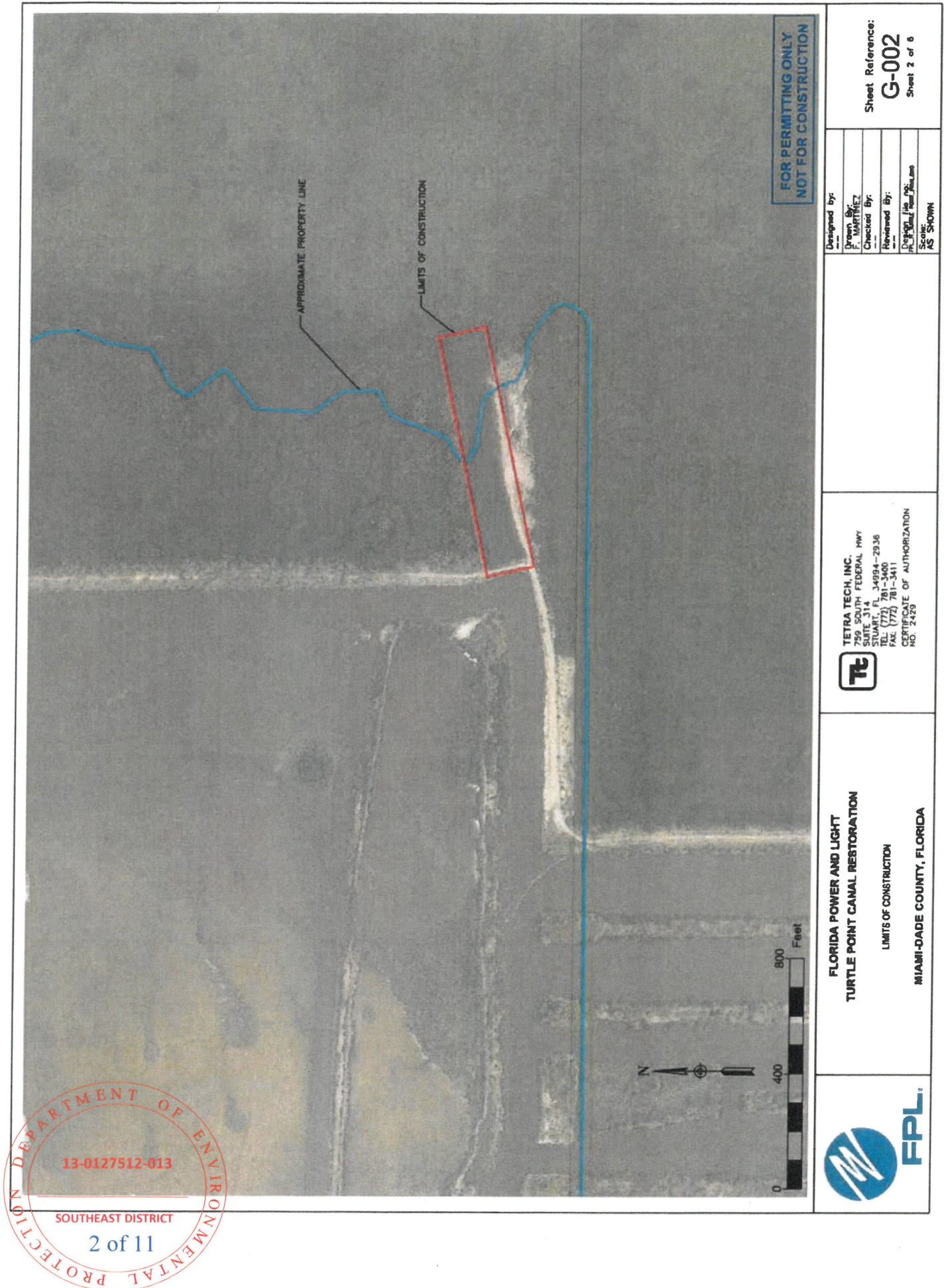


FLORIDA POWER AND LIGHT
TURTLE POINT CANAL RESTORATION
COVER SHEET AND VICINITY MAP
MIAMI-DADE COUNTY, FLORIDA

TE
TETRA TECH, INC.
759 SOUTH FEDERAL HWY
SUITE 314
STUART, FL 34984-2836
TEL: (772) 781-3400
FAX: (772) 781-3411
CERTIFICATE OF AUTHORIZATION
NO. 2420

Designed By:
Drawn By: MARTINEZ
Checked By:
Reviewed By:
Approved By: [Signature]
Scale: AS SHOWN

Sheet Reference:
G-001
Sheet 1 of 6



TETRA TECH, INC.
755 SOUTH FEDERAL HWY
SUITE 314
STUART, FL 34984-2936
TEL: (772) 781-3446
FAX: (772) 781-3411
CERTIFICATE OF AUTHORIZATION
NO. 2429

**FLORIDA POWER AND LIGHT
TURTLE POINT CANAL RESTORATION**

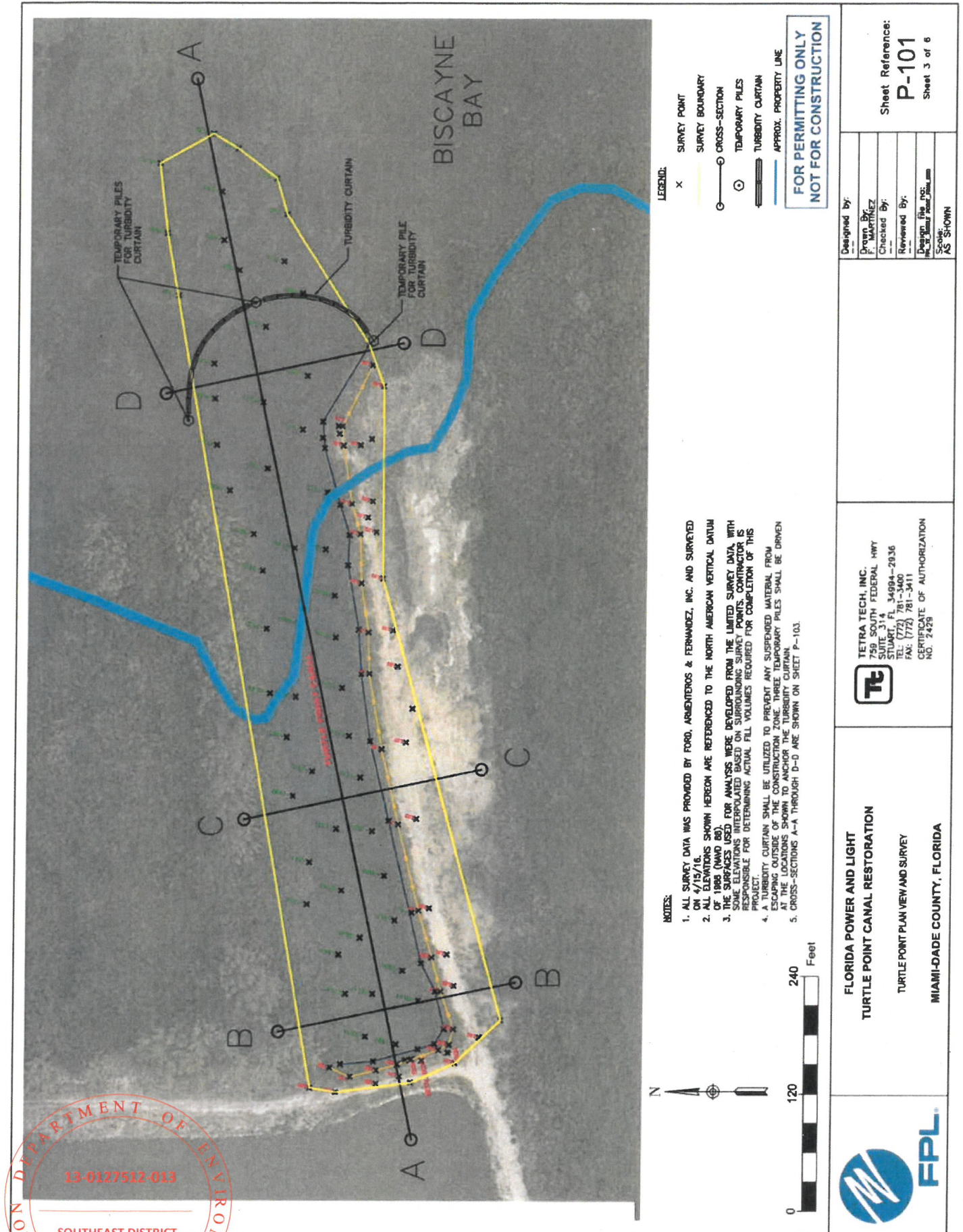
LIMITS OF CONSTRUCTION

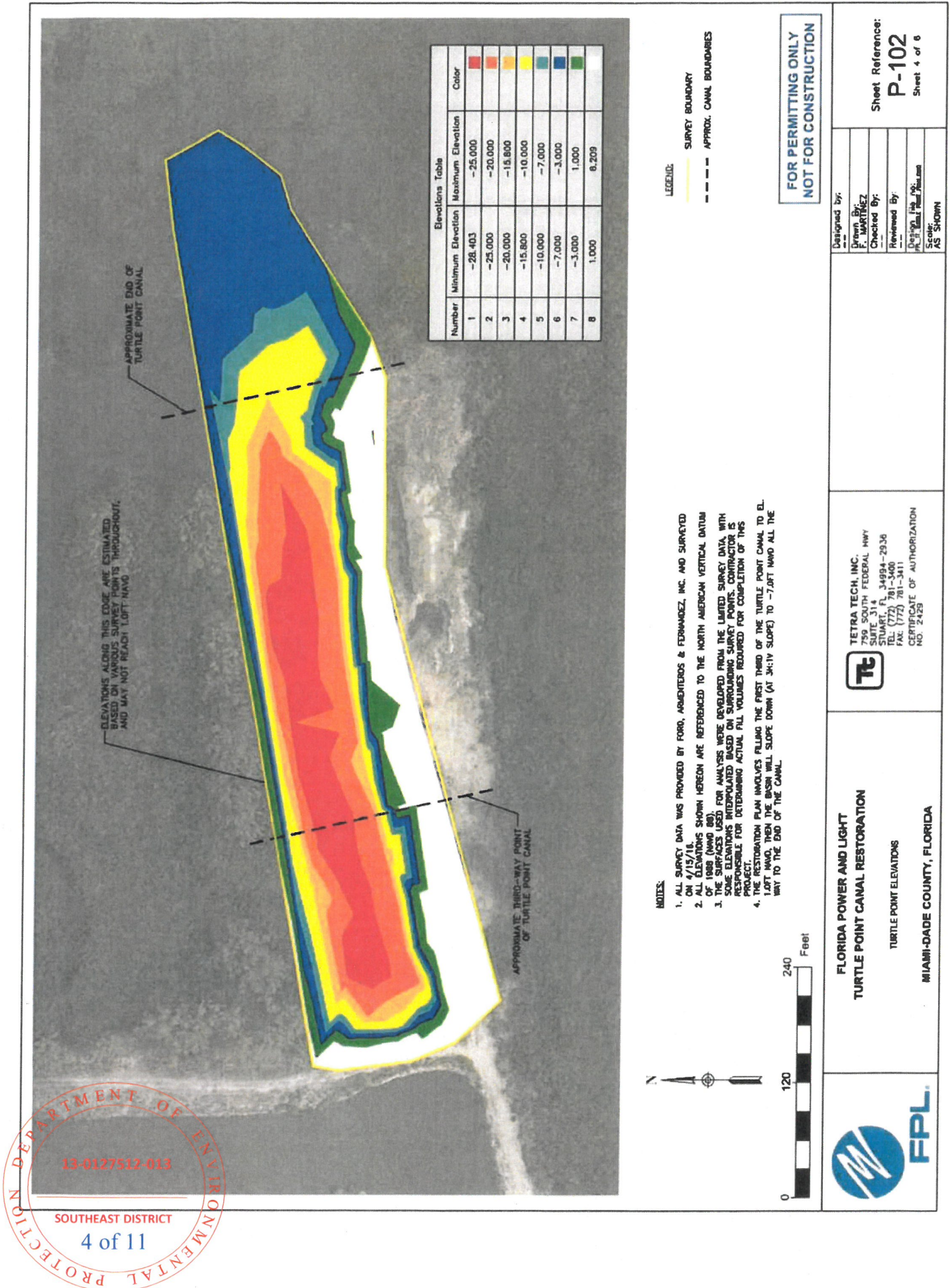
MIAMI-DADE COUNTY, FLORIDA

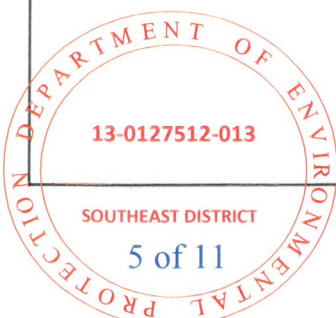


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Checked By:
Reviewed By:
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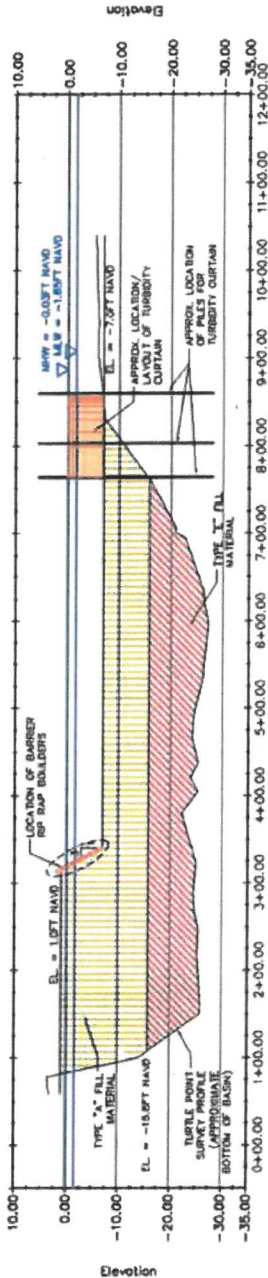
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G-002
Sheet 2 of 6



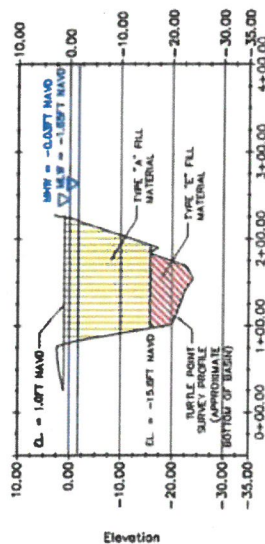




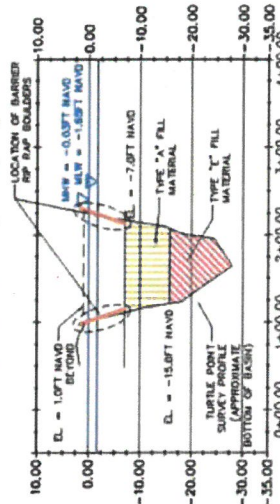
Profile View of A-A



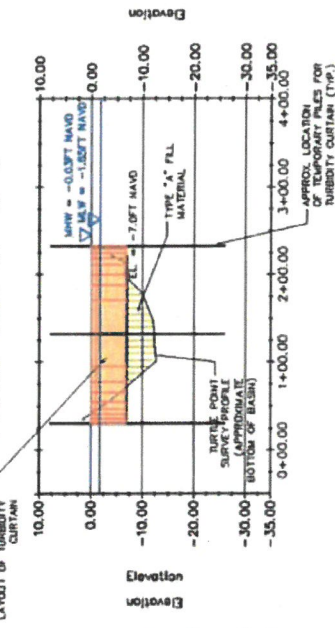
Profile View of B-B



Profile View of C-C



Profile View of D-D

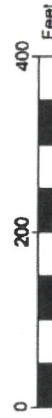


NOTES:

1. ALL SURVEY DATA WAS PROVIDED BY FORD, ARRIENDEZ & FERNANDEZ, INC. AND SURVEYED ON 4/15/16.
2. ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1980 (NAVD 80).
3. THE SURFACES USED FOR ANALYSIS WERE DEVELOPED FROM THE LIMITED SURVEY DATA WITH SOME ELEVATIONS INTERPOLATED BASED ON SURROUNDING SURVEY POINTS. CONTRACTOR IS RESPONSIBLE FOR DETERMINING ACTUAL FILL VOLUMES FOR COMPLETION OF THIS PROJECT.
4. RESTORATION PLAN FOR TURTLE POINT CANAL WILL BE FILLED TO EL. 1.0 FT NAVD, THEN THE BASIN WALL.
5. APPROXIMATE FILL VOLUME TO RESTORE CANAL 57,200 CY OVER AN AREA OF 2.1 ACRES (NOTE: VOLUMES INCLUDE AN ADDITIONAL 25% OF MATERIAL TO ACCOUNT FOR INEVITABLE LOSS OF MATERIAL). TWO TYPES OF FILL WILL BE USED:
 - 5.1. FILL TYPE "A": CALCIUM CARBONATE COARSE GRAIN SAND WITH A GRAIN SIZE OF LESS THAN 5% PASSING THROUGH A RANGE #4 TO #100 SIEVE IS UTILIZED FOR THE FILL TYPE "A" FILL QUANTITY IS 36,800 CY IN LAYER #1 FT TO -15.0 FT NAVD TO OPENING AT BISCAYNE BAY.
 - 5.2. FILL TYPE "E": CALCIUM CARBONATE COARSE GRAIN SAND WITH A GRAIN SIZE OF LESS THAN 10% PASSING THROUGH A RANGE #4 TO #100 SIEVE IS UTILIZED FOR THE FILL TYPE "E" FILL QUANTITY IS 17,100 CY IN LAYER #15.0 FT NAVD TO CANAL BOTTOM FULL LENGTH OF CANAL.
6. A R/R BARRIER WITH APPROXIMATELY 2 FT DIAMETER Limestone Boulders IS TO BE PLACED ALONG THE FILL SLOPE TO PROTECT MANGROVE PLANTINGS ON THE 1.0 FT NAVD RESTORATION FILL AREA.
7. MEAN HIGH WATER (MHW) ELEVATION AND MEAN LOW WATER ELEVATION (MLW) WERE DETERMINED FROM NOAA TIDE STATION 8725423, TURKEY POINT, BISCAYNE BAY, FL.

LEGEND:

- TYPE "A" FILL
- TYPE "E" FILL
- LOCATION OF R/R RAP



HORIZONTAL SCALE: 1" = 200'

VERTICAL EXAGGERATION: 6.0

VERTICAL SCALE: 1" = 33.3'

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FLORIDA POWER AND LIGHT
TURTLE POINT CANAL RESTORATION

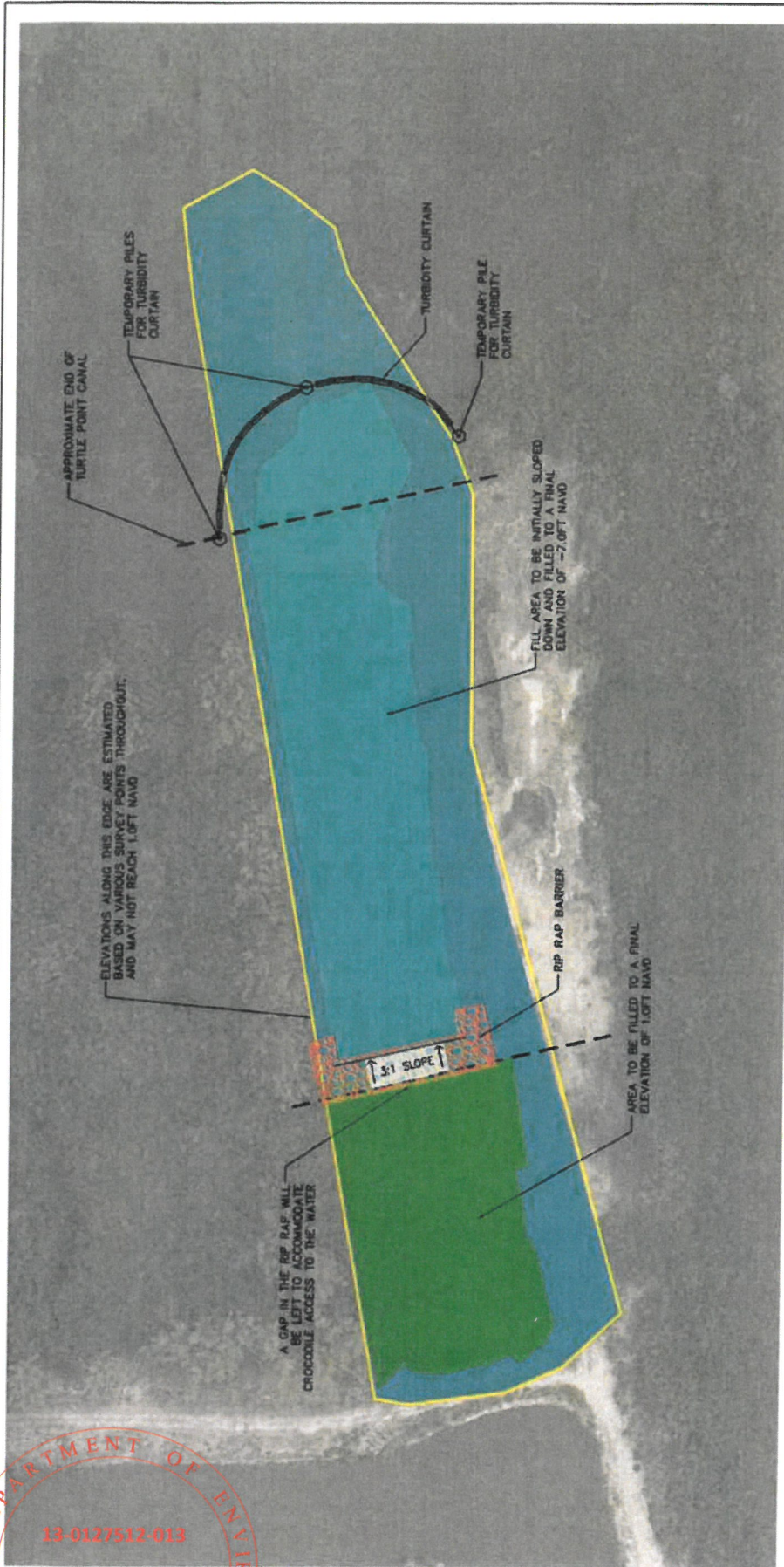
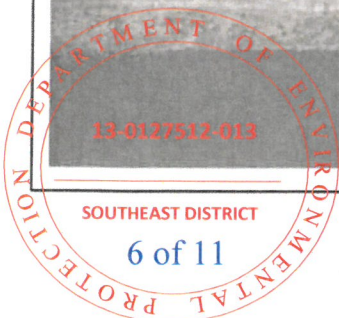
TURTLE POINT FILL CROSS-SECTIONS

MIAMI-DADE COUNTY, FLORIDA

TETRA TECH, INC.
750 SOUTH FEDERAL HWY
SUITE 314
STUART, FL 34994-2936
TEL: (772) 781-3400
FAX: (772) 781-3411
CERTIFICATE OF AUTHORIZATION
NO. 2493

Designed by:
Drawn By:
Checked By:
Reviewed By:
Design File No:
Scale:
AS SHOWN

Sheet Reference:
P-103
Sheet 5 of 6



NOTES:

1. ALL SURVEY DATA WAS PROVIDED BY FORD, ARMENTEROS & FERNANDEZ, INC. AND SURVEYED ON 4/15/16.
2. ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
3. THE SURFACES SHOWN HEREON WERE DEVELOPED FROM THE LIMITED SURVEY DATA WITH SOME ELEVATIONS INTERPOLATED BASED ON SURROUNDING SURVEY POINTS. CONTRACTOR IS RESPONSIBLE FOR DETERMINING ACTUAL FILL VOLUMES REQUIRED FOR COMPLETION OF THIS PROJECT.
4. RESTORATION FILL VOLUME TO BE FILLED TO EL. 1.0FT NAVD, THEN THE BASIN WILL SLOPE DOWN (AT 3:1 SLOPE) TO -7.0FT NAVD DOWN TO THE END OF THE CANAL.
5. APPROXIMATE FILL VOLUME TO RESTORE CANAL: 57,000 C.Y. OVER AN AREA OF 2.1 ACRES (NOTE: VOLUMES INCLUDE AN ADDITIONAL 25% OF MATERIAL TO ACCOUNT FOR IMMEDIATE LOSS OF MATERIAL). TWO TYPES OF FILL WILL BE USED:
 - 5.1. FILL TYPE "A": CALHOUN CARBONATE COARSE GRAIN SAND WITH A GRAIN SIZE OF LESS THAN 5% PASSING THROUGH A RANGE #4 TO #200 SIEVE. UTILIZED FOR THE FILL TYPE "A" FILL QUANTITY IS 39,900 CY IN LAYER +1FT TO -13.8FT NAVD TO OPENING OF TURBIDITY CURTAIN.
 - 5.2. FILL TYPE "B": CALHOUN CARBONATE COARSE GRAIN SAND WITH A GRAIN SIZE OF LESS THAN 10% PASSING THROUGH A RANGE #12 INCH TO #200 SIEVE IS UTILIZED FOR THE FILL TYPE "B" FILL QUANTITY IS 17,100 CY IN LAYER -13.8FT NAVD TO CANAL BOTTOM FULL LENGTH OF CANAL.
6. A RIP RAP BARRIER WITH APPROXIMATELY 2FT DIAMETER Limestone Boulders IS TO BE PLACED ALONG THE FILL SLOPE TO PROTECT MANGROVE PLANTINGS ON THE 1.0FT NAVD RESTORATION FILL AREA.



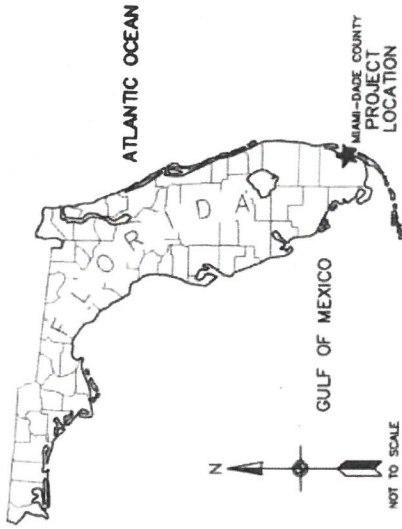
LEGEND:

- SURVEY BOUNDARY
- APPROX. CANAL BOUNDARIES
- 1.0FT NAVD FILL AREA
- 7.0FT NAVD FILL AREA
- EXISTING GROUND ELEVATION
- LOCATION OF RIP RAP

FOR PERMITTING ONLY
NOT FOR CONSTRUCTION

	FLORIDA POWER AND LIGHT TURTLE POINT CANAL RESTORATION TURTLE POINT FILL AREA MIAMI-DADE COUNTY, FLORIDA	TETRA TECH, INC. 759 SOUTH FEDERAL HWY SUITE 314 34084-2936 STUART, FL 34994 TEL: (772) 781-5400 FAX: (772) 781-3411 CERTIFICATE OF AUTHORIZATION NO. 2429	Sheet Reference: P-104 Sheet 0 of 6
	Designed by: Drawn By: F. MARTINEZ Checked By: Reviewed By: Design file: P01 in: P:\Turtle Point\Tetra.dwg Scale: AS SHOWN		

FLORIDA POWER AND LIGHT BARGE SLIP CANAL RESTORATION MIAMI-DADE COUNTY



VICINITY MAP BARGE SLIP CANAL, MIAMI-DADE COUNTY, FLORIDA

INDEX OF SHEETS

SHEET #	TITLE	LATEST UPDATE	REV.
G-001	COVER SHEET AND VICINITY MAP	7/26/16	0
G-002	LIMITS OF CONSTRUCTION	7/26/16	0
P-101	BARGE SLIP PLAN VIEW AND SURVEY	7/26/16	0
P-102	BARGE SLIP FILL CROSS-SECTIONS	7/26/16	0
P-103	BARGE SLIP ELEVATIONS	7/26/16	0

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NOT FOR CONSTRUCTION

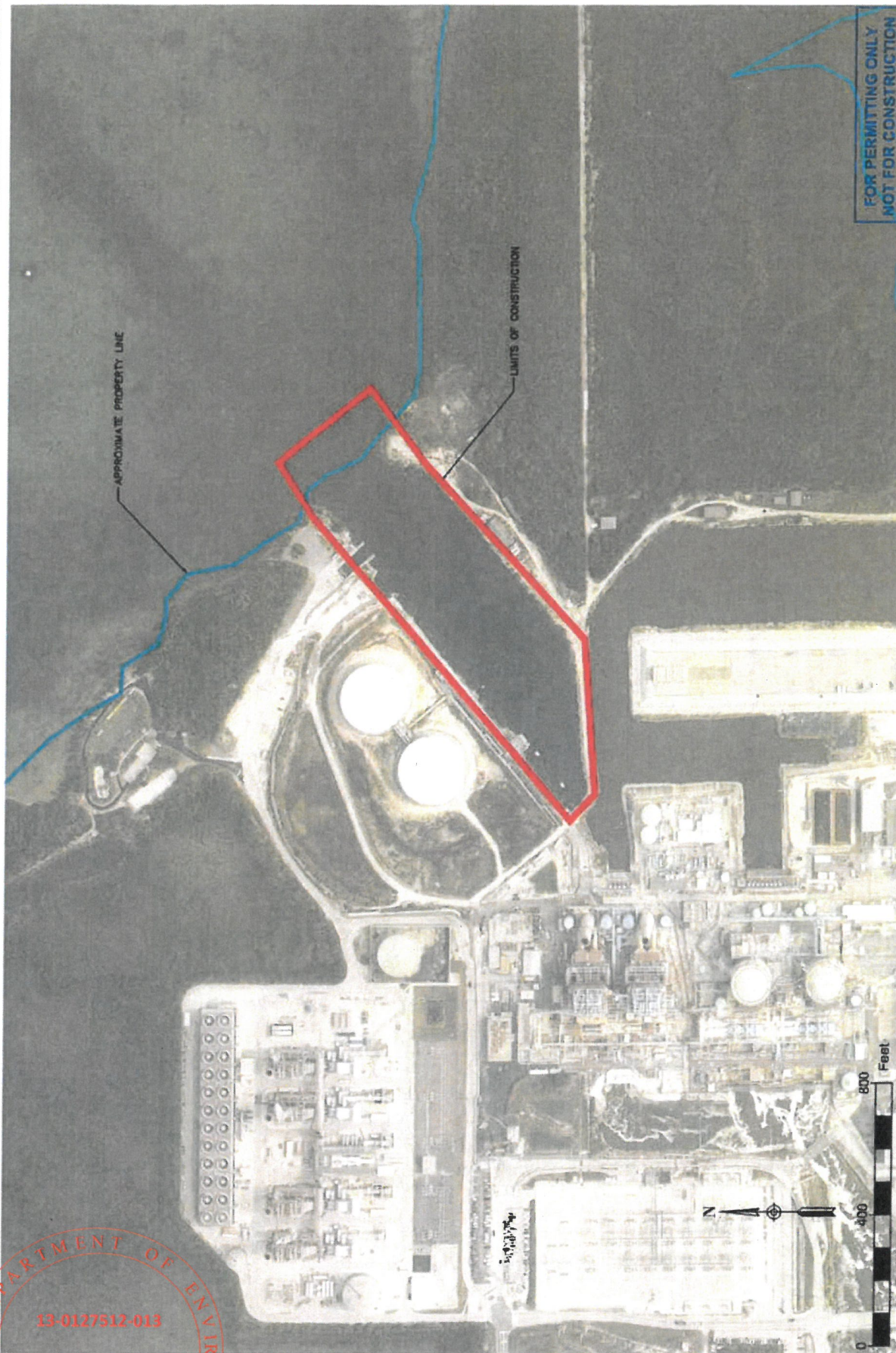
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F. MARTINEZ
Checked By:
Reviewed By:
Design File No:
FPL-SEC-PAW-000
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Sheet Reference:
G-001
Sheet 1 of 5

Tt
TETRA TECH, INC.
759 SOUTH FEDERAL HWY
SUITE 314
STUART, FL 34994-2936
TEL: (772) 781-3400
FAX: (772) 781-3411
CERTIFICATE OF AUTHORIZATION
NO. 2428

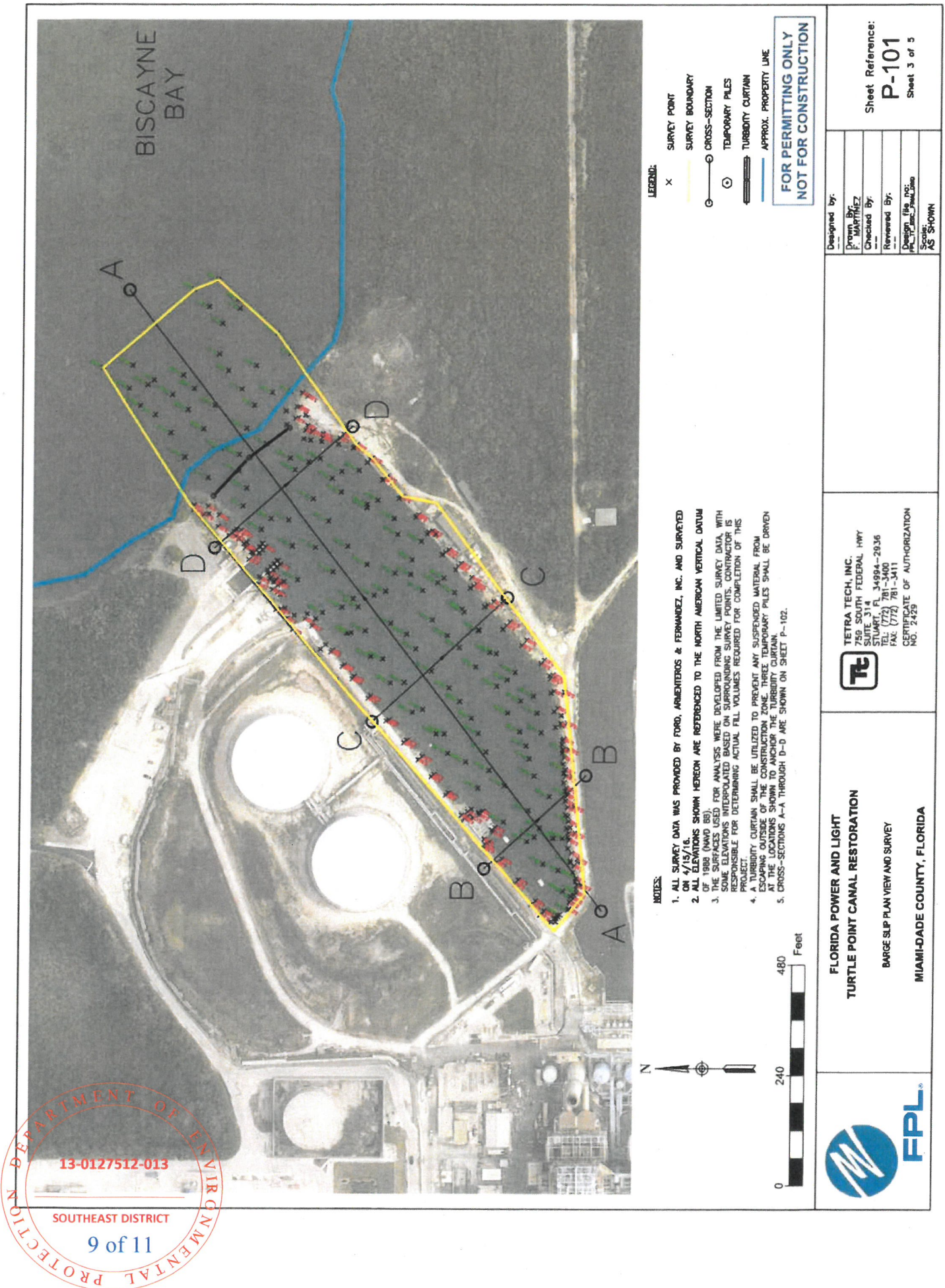
FLORIDA POWER AND LIGHT
BARGE SLIP CANAL RESTORATION
COVER SHEET AND VICINITY MAP
MIAMI-DADE COUNTY, FLORIDA



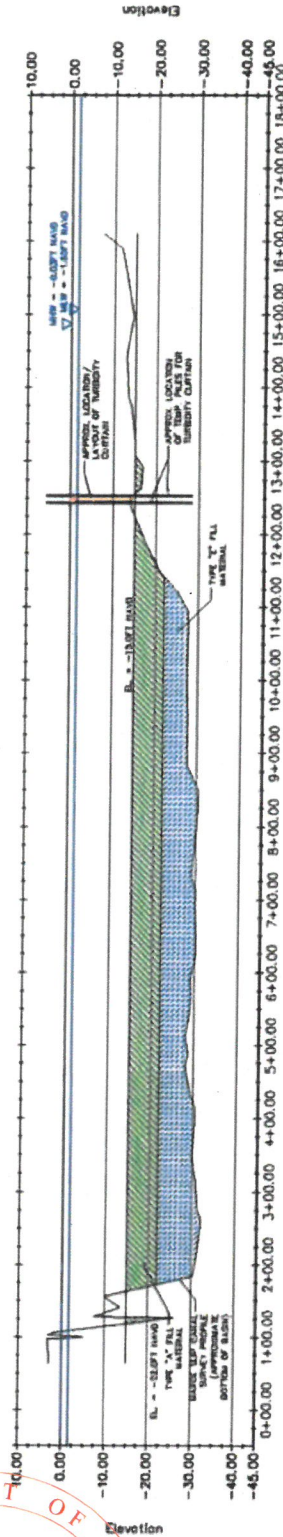


	FLORIDA POWER AND LIGHT BARGE SLIP CANAL RESTORATION LIMITS OF CONSTRUCTION MIAMI-DADE COUNTY, FLORIDA	 TETRA TECH, INC. 759 SOUTH FEDERAL HWY SUITE 314 MIAMI, FL 33134 TEL: (772) 781-3400 FAX: (772) 781-3411 CERTIFICATE OF AUTHORIZATION NO. 2429	Designed by: Drawn By: F. MARTINEZ Checked By: Reviewed By: Design File #: Scale: AS SHOWN	Sheet Reference: G-002 Sheet 2 of 5
	FOR PERMITTING ONLY NOT FOR CONSTRUCTION			

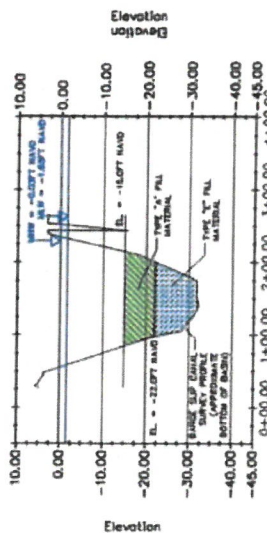




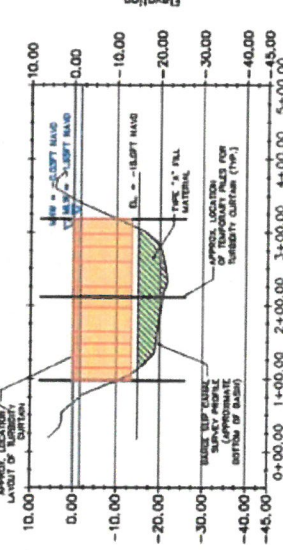
Profile View of BSC-A



Profile View of BSC-B



Profile View of BSC-D



NOTES:

1. ALL SURVEY DATA WAS PROVIDED BY FORD, ARMSTRONG & FERNANDEZ, INC. AND SURVEYED ON 4/15/18.
2. ALL ELEVATIONS SHOWN HEREIN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
3. THE SURFACES USED FOR ANALYSIS WERE DEVELOPED FROM THE LIMITED SURVEY DATA WITH SOME ELEVATIONS INTERPOLATED BASED ON SURROUNDING SURVEY POINTS. CONTRACTOR IS RESPONSIBLE FOR DETERMINING ACTUAL FILL VOLUMES REQUIRED FOR COMPLETION OF THIS PROJECT.
4. APPROXIMATE FILL VOLUME TO RESTORE BASIN TO -15.00' NAVD = 124,000 C.Y. (NOTE: VOLUMES INCLUDE AN ADDITIONAL 25% OF MATERIAL TO ACCOUNT FOR UNEXPECTED LOSS OF MATERIAL DUE TO SETTLEMENT THROUGH A RANGE #4 TO #200 SEVE IS UTILIZED FOR THE FILL TYPE "X" FILL QUANTITY IS 68,175 CY IN LAYER -22FT TO -15FT NAVD FULL LENGTH OF CANAL.
5. APPROXIMATE FILL VOLUME TO RESTORE BASIN TO -15.00' NAVD = 124,000 C.Y. (NOTE: VOLUMES INCLUDE AN ADDITIONAL 25% OF MATERIAL TO ACCOUNT FOR UNEXPECTED LOSS OF MATERIAL DUE TO SETTLEMENT THROUGH A RANGE #4 TO #200 SEVE IS UTILIZED FOR THE FILL TYPE "X" FILL QUANTITY IS 68,175 CY IN LAYER -22FT TO -15FT NAVD FULL LENGTH OF CANAL.
6. MEAN HIGH WATER (MHW) ELEVATION AND MEAN LOW WATER ELEVATION (MLW) WERE DETERMINED FROM NOAA TIDAL STATION 8723423, TURKEY POINT, BISCAYNE BAY, FL.



HORIZONTAL SCALE: 1" = 240'

VERTICAL EXAGGERATION: 6.0

VERTICAL SCALE: 1" = 40'

FOR PERMITTING ONLY
NOT FOR CONSTRUCTION



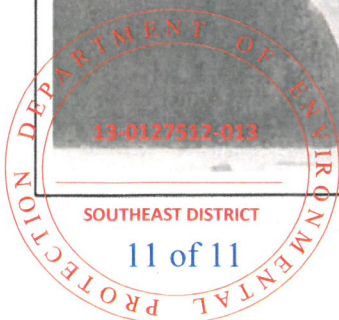
FLORIDA POWER AND LIGHT
TURTLE POINT CANAL RESTORATION
BARGE SLIP FILL CROSS-SECTIONS
MIAMI-DADE COUNTY, FLORIDA

TETRA TECH, INC.
759 SOUTH FEDERAL HWY
SUITE 314
STUART, FL 34994-2936
TEL: (772) 781-5400
FAX: (772) 781-5411
CERTIFICATE OF AUTHORIZATION
NO. 2428

Designed by:
Drawn By:
Checked By:
Reviewed By:
Scale:
AS SHOWN

Sheet Reference:
P-102
Sheet 4 of 5





Elevation Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-34.094	-28.000	Red
2	-28.000	-22.000	Yellow
3	-22.000	-18.000	Green
4	-18.000	-15.000	Blue
5	-15.000	0.000	White
6	0.000	9.927	White

LEGEND:

- SURVEY BOUNDARY
- APPROX. FILL BOUNDARY

FOR PERMITTING ONLY
NOT FOR CONSTRUCTION

NOTES:

1. ALL SURVEY DATA WAS PROVIDED BY FORU, ARMENTEROS & FERNANDEZ, INC. AND SURVEYED ON 4/15/16.
2. ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
3. THE SURFACES USED FOR ANALYSIS WERE DEVELOPED FROM THE LIMITED SURVEY DATA, WITH SOME ELEVATIONS INTERPOLATED BASED ON SURROUNDING SURVEY POINTS. CONTRACTOR IS RESPONSIBLE FOR DETERMINING ACTUAL FILL VOLUMES REQUIRED FOR COMPLETION OF THIS PROJECT.
4. APPROXIMATE FILL VOLUME TO RESTORE BASIN TO -15.0 FT NAVD = 124,000 CY (NOTE: VOLUMES INCLUDE AN ADDITIONAL 25% OF MATERIAL TO ACCOUNT FOR INADEQUATE LOSS OF MATERIAL TWO TYPES OF FILL WILL BE USED:
 - 4.1. FILL TYPE "A": CALCULATED CARBONATE COARSE GRAIN SAND WITH A GRAIN SIZE OF LESS THAN 5% PASSING THROUGH A #20 SIEVE IS UTILIZED FOR THE FILL TYPE "A" FILL QUANTITY IS 86,179 CY IN LATER -22FT TO -15FT NAVD
 - 4.2. FILL TYPE "B": CALCULATED CARBONATE COARSE GRAIN SAND WITH A GRAIN SIZE OF LESS THAN 10% PASSING THROUGH A #20 SIEVE IS UTILIZED FOR THE FILL TYPE "B" FILL QUANTITY IS 55,779 CY IN LATER -22FT TO CANAL BOTTOM FULL LENGTH OF CANAL
5. APPROXIMATE AREA OF BASIN TO BE FILLED = 5.9 ACRES



Designed by: Drawn By: F. MARTINEZ Checked By: Reviewed By: Design file no: FPL_Tec_Final.Dwg Scale: AS SHOWN	Tetra Tech, Inc. 759 SOUTH FEDERAL HWY SUITE 314 STUART, FL 34994-2936 TEL: (772) 781-5400 FAX: (772) 781-3411 CERTIFICATE OF AUTHORIZATION NO. 2429	FLORIDA POWER AND LIGHT BARGE SLIP CANAL RESTORATION BARGE SLIP ELEVATIONS MIAMI-DADE COUNTY, FLORIDA
Sheet Reference: P-103 Sheet 5 of 5		

