

GENERAL CONDITIONS

1. All activities authorized by this permit shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any deviation from the permitted activity and the conditions for undertaking that activity shall constitute a violation of this permit and Part IV, Chapter 373, F.S.
2. This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by District staff. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.
3. Activities approved by this permit shall be conducted in a manner which does not cause violations of State water quality standards. The permittee shall implement best management practices for erosion and pollution control to prevent violation of State water quality standards. Temporary erosion control shall be implemented prior to and during construction, and permanent control measures shall be completed within 7 days of any construction activity. Turbidity barriers shall be installed and maintained at all locations where the possibility of transferring suspended solids into the receiving waterbody exists due to the permitted work. Turbidity barriers shall remain in place at all locations until construction is completed and soils are stabilized and vegetation has been established. All practices shall be in accordance with the guidelines and specifications described in Chapter 6 of the Florida Land Development Manual: A Guide to Sound Land and Water Management (Department of Environmental Regulation, 1988), incorporated by reference in Rule 40E-4.091, F.A.C. unless a project-specific erosion and sediment control plan is approved as part of the permit. Thereafter the permittee shall be responsible for the removal of the barriers. The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.
4. The permittee shall notify the District of the anticipated construction start date within 30 days of the date that this permit is issued. At least 48 hours prior to commencement of activity authorized by this permit, the permittee shall submit to the District an Environmental Resource Permit Construction Commencement Notice Form Number 0960 indicating the actual start date and the expected construction completion date.
5. When the duration of construction will exceed one year, the permittee shall submit construction status reports to the District on an annual basis utilizing an annual status report form. Status report forms shall be submitted the following June of each year.
6. Within 30 days after completion of construction of the permitted activity, the permittee shall submit a written statement of completion and certification by a professional engineer or other individual authorized by law, utilizing the supplied Environmental Resource/Surface Water Management Permit Construction Completion/Certification Form Number 0881A, or Environmental Resource/Surface Water Management Permit Construction Completion Certification - For Projects Permitted prior to October 3, 1995 Form No. 0881B, incorporated by reference in Rule 40E-1.659, F.A.C. The statement of completion and certification shall be based on onsite observation of construction or review of as-built drawings for the purpose of determining if the work was completed in compliance with permitted plans and specifications. This submittal shall serve to notify the District that the system is ready for inspection. Additionally, if deviation from the approved drawings are discovered during the certification process, the certification must be accompanied by a copy of the approved permit drawings with deviations noted. Both the original and revised specifications must be clearly shown. The plans must be clearly labeled as "as-built" or "record" drawings. All surveyed dimensions and elevations shall be certified by a registered surveyor.
7. The operation phase of this permit shall not become effective: until the permittee has complied with the requirements of condition (6) above, and submitted a request for conversion of Environmental Resource Permit from Construction Phase to Operation Phase, Form No. 0920; the District determines the system to

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GENERAL CONDITIONS

- be in compliance with the permitted plans and specifications; and the entity approved by the District in accordance with Sections 9.0 and 10.0 of the Basis of Review for Environmental Resource Permit Applications within the South Florida Water Management District, accepts responsibility for operation and maintenance of the system. The permit shall not be transferred to such approved operation and maintenance entity until the operation phase of the permit becomes effective. Following inspection and approval of the permitted system by the District, the permittee shall initiate transfer of the permit to the approved responsible operating entity if different from the permittee. Until the permit is transferred pursuant to Section 40E-1.6107, F.A.C., the permittee shall be liable for compliance with the terms of the permit.
8. Each phase or independent portion of the permitted system must be completed in accordance with the permitted plans and permit conditions prior to the initiation of the permitted use of site infrastructure located within the area served by that portion or phase of the system. Each phase or independent portion of the system must be completed in accordance with the permitted plans and permit conditions prior to transfer of responsibility for operation and maintenance of the phase or portion of the system to a local government or other responsible entity.
 9. For those systems that will be operated or maintained by an entity that will require an easement or deed restriction in order to enable that entity to operate or maintain the system in conformance with this permit, such easement or deed restriction must be recorded in the public records and submitted to the District along with any other final operation and maintenance documents required by Sections 9.0 and 10.0 of the Basis of Review for Environmental Resource Permit applications within the South Florida Water Management District, prior to lot or units sales or prior to the completion of the system, whichever comes first. Other documents concerning the establishment and authority of the operating entity must be filed with the Secretary of State, county or municipal entities. Final operation and maintenance documents must be received by the District when maintenance and operation of the system is accepted by the local government entity. Failure to submit the appropriate final documents will result in the permittee remaining liable for carrying out maintenance and operation of the permitted system and any other permit conditions.
 10. Should any other regulatory agency require changes to the permitted system, the permittee shall notify the District in writing of the changes prior to implementation so that a determination can be made whether a permit modification is required.
 11. This permit does not eliminate the necessity to obtain any required federal, state, local and special district authorizations prior to the start of any activity approved by this permit. This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and Chapter 40E-4 or Chapter 40E-40, F.A.C..
 12. The permittee is hereby advised that Section 253.77, F.S. states that a person may not commence any excavation, construction, or other activity involving the use of sovereign or other lands of the State, the title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund without obtaining the required lease, license, easement, or other form of consent authorizing the proposed use. Therefore, the permittee is responsible for obtaining any necessary authorizations from the Board of Trustees prior to commencing activity on sovereignty lands or other state-owned lands.
 13. The permittee must obtain a Water Use permit prior to construction dewatering, unless the work qualifies for a general permit pursuant to Subsection 40E-20.302(3), F.A.C., also known as the "No Notice" Rule.
 14. The permittee shall hold and save the District harmless from any and all damages, claims, or liabilities

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which may arise by reason of the construction, alteration, operation, maintenance, removal, abandonment or use of any system authorized by the permit.

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 Section 373.421(2), F.S., provides otherwise.
16. The permittee shall notify the District in writing within 30 days of any sale, conveyance, or other transfer of ownership or control of a permitted system or the real property on which the permitted system is located. All transfers of ownership or transfers of a permit are subject to the requirements of Rules 40E-1.6105 and 40E-1.6107, F.A.C.. The permittee transferring the permit shall remain liable for corrective actions that may be required as a result of any violations prior to the sale, conveyance or other transfer of the system.
17. Upon reasonable notice to the permittee, District authorized staff with proper identification shall have permission to enter, inspect, sample and test the system to insure conformity with the plans and specifications approved by the permit.
18. If historical or archaeological artifacts are discovered at any time on the project site, the permittee shall immediately notify the appropriate District service center.
19. The permittee shall immediately notify the District in writing of any previously submitted information that is later discovered to be inaccurate.

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SPECIAL CONDITIONS

1. The construction phase of this permit shall expire on July 30, 2018.
2. Operation of the surface water management system shall be the responsibility of Homeowners Association. Within one year of permit issuance or concurrent with the engineering certification of construction completion, whichever comes first, the permittee shall submit a copy of the recorded deed restrictions (or declaration of condominium, if applicable), a copy of the filed articles of incorporation, and a copy of the certificate of incorporation for the association.
3. Discharge Facilities:
Structure 17:
1-3' WIDE SHARP CRESTED weir with crest at elev. 6.8' NGVD 29.
1-3" dia. CIRCULAR ORIFICE with invert at elev. 4.0' NGVD 29.

Receiving body : CBWCD S-22 Canal
Control elev : 4 feet NGVD 29.
4. The permittee shall be responsible for the correction of any erosion, shoaling or water quality problems that result from the construction or operation of the surface water management system.
5. Measures shall be taken during construction to insure that sedimentation and/or turbidity violations do not occur in the receiving water.
6. The District reserves the right to require that additional water quality treatment methods be incorporated into the drainage system if such measures are shown to be necessary.
7. Lake side slopes shall be no steeper than 4:1 (horizontal:vertical) to a depth of two feet below the control elevation. Side slopes shall be nurtured or planted from 2 feet below to 1 foot above control elevation to insure vegetative growth, unless shown on the plans.
8. Facilities other than those stated herein shall not be constructed without an approved modification of this permit.
9. A stable, permanent and accessible elevation reference shall be established on or within one hundred (100) feet of all permitted discharge structures no later than the submission of the certification report. The location of the elevation reference must be noted on or with the certification report.
10. The permittee shall provide routine maintenance of all of the components of the surface water management system in order to remove all trapped sediments/debris. All materials shall be properly disposed of as required by law. Failure to properly maintain the system may result in adverse flooding conditions.
11. This permit is issued based on the applicant's submitted information which reasonably demonstrates that adverse water resource related impacts will not be caused by the completed permit activity. Should any adverse impacts caused by the completed surface water management system occur, the District will require the permittee to provide appropriate mitigation to the District or other impacted party. The District will require the permittee to modify the surface water management system, if necessary, to eliminate the cause of the adverse impacts.
12. The permittee acknowledges that, pursuant to Rule 40E-4.101(2), F.A.C., a notice of Environmental Resource or Surface Water Management Permit may be recorded in the county public records. Pursuant to the specific language of the rule, this notice shall not be considered an encumbrance upon the property.
13. If 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

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SPECIAL CONDITIONS

colonial or American settlement are encountered at any time within the project site area, the permitted project should cease all activities involving subsurface disturbance in the immediate vicinity of such discoveries. The permittee, or other designee, should contact the Florida Department of State, Division of Historical Resources, Review and Compliance Section at (850) 245-6333 or (800) 847-7278, as well as the appropriate permitting agency office. Project activities should not resume without verbal and/or written authorization from the Division of Historical Resources. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, Florida Statutes.

- 14. Minimum building floor elevation: 9.00 feet NGVD 29.
- 15. Minimum road crown elevation: 7.00 feet NGVD 29.
- 16. In accordance with the work schedule in Exhibit 3.3, the permittee shall submit verification from the Florida Department of Environmental Protection (FDEP) that 0.13 freshwater herbaceous credit have been debited from the FPL Everglades Mitigation Bank ledger as mitigation for wetland impacts.

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NOTICE OF RIGHTS

As required by Sections 120.569(1), and 120.60(3), Fla. Stat., following is notice of the opportunities which may be available for administrative hearing or judicial review when the substantial interests of a party are determined by an agency. Please note that this Notice of Rights is not intended to provide legal advice. Not all the legal proceedings detailed below may be an applicable or appropriate remedy. You may wish to consult an attorney regarding your legal rights.

RIGHT TO REQUEST ADMINISTRATIVE HEARING

A person whose substantial interests are or may be affected by the South Florida Water Management District's (SFWMD or District) action has the right to request an administrative hearing on that action pursuant to Sections 120.569 and 120.57, Fla. Stat. Persons seeking a hearing on a District decision which does or may determine their substantial interests shall file a petition for hearing with the District Clerk within 21 days of receipt of written notice of the decision, unless one of the following shorter time periods apply: 1) within 14 days of the notice of consolidated intent to grant or deny concurrently reviewed applications for environmental resource permits and use of sovereign submerged lands pursuant to Section 373.427, Fla. Stat.; or 2) within 14 days of service of an Administrative Order pursuant to Subsection 373.119(1), Fla. Stat. "Receipt of written notice of agency decision" means receipt of either written notice through mail, or electronic mail, or posting that the District has or intends to take final agency action, or publication of notice that the District has or intends to take final agency action. Any person who receives written notice of a SFWMD decision and fails to file a written request for hearing within the timeframe described above waives the right to request a hearing on that decision.

Filing Instructions

The Petition must be filed with the Office of the District Clerk of the SFWMD. Filings with the District Clerk may be made by mail, hand-delivery or facsimile. **Filings by e-mail will not be accepted.** Any person wishing to receive a clerked copy with the date and time stamped must provide an additional copy. A petition for administrative hearing is deemed filed upon receipt during normal business hours by the District Clerk at SFWMD headquarters in West Palm Beach, Florida. Any document received by the office of the SFWMD Clerk after 5:00 p.m. shall be filed as of 8:00 a.m. on the next regular business day. Additional filing instructions are as follows:

- Filings by mail must be addressed to the Office of the SFWMD Clerk, P.O. Box 24680, West Palm Beach, Florida 33416.
- Filings by hand-delivery must be delivered to the Office of the SFWMD Clerk. **Delivery of a petition to the SFWMD's security desk does not constitute filing. To ensure proper filing, it will be necessary to request the SFWMD's security officer to contact the Clerk's office.** An employee of the SFWMD's Clerk's office will receive and file the petition.
- Filings by facsimile must be transmitted to the SFWMD Clerk's Office at (561) 682-6010. Pursuant to Subsections 28-106.104(7), (8) and (9), Fla. Admin. Code, a party who files a document by facsimile represents that the original physically signed document will be retained by that party for the duration of that proceeding and of any subsequent appeal or subsequent proceeding in that cause. Any party who elects to file any document by facsimile shall be responsible for any delay, disruption, or interruption of the electronic signals and accepts the full risk that the document may not be properly filed with the clerk as a result. The filing date for a document filed by facsimile shall be the date the SFWMD Clerk receives the complete document.

Initiation of an Administrative Hearing

Pursuant to Rules 28-106.201 and 28-106.301, Fla. Admin. Code, initiation of an administrative hearing shall be made by written petition to the SFWMD in legible form and on 8 and 1/2 by 11 inch white paper. All petitions shall contain:

1. Identification of the action being contested, including the permit number, application number, District file number or any other SFWMD identification number, if known.
2. The name, address and telephone number of the petitioner and petitioner's representative, if any.
3. An explanation of how the petitioner's substantial interests will be affected by the agency determination.
4. A statement of when and how the petitioner received notice of the SFWMD's decision.
5. A statement of all disputed issues of material fact. If there are none, the petition must so indicate.
6. A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the SFWMD's proposed action.
7. A statement of the specific rules or statutes the petitioner contends require reversal or modification of the SFWMD's proposed action.
8. If disputed issues of material fact exist, the statement must also include an explanation of how the alleged facts relate to the specific rules or statutes.
9. A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the SFWMD to take with respect to the SFWMD's proposed action.

A person may file a request for an extension of time for filing a petition. The SFWMD may, for good cause, grant the request. Requests for extension of time must be filed with the SFWMD prior to the deadline for filing a petition for hearing. Such requests for extension shall contain a certificate that the moving party has consulted with all other parties concerning the extension and that the SFWMD and any other parties agree to or oppose the extension. 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.

If the District takes action with substantially different impacts on water resources from the notice of intended agency decision, the persons who may be substantially affected shall have an additional point of entry pursuant to Rule 28-106.111, Fla. Admin. Code, unless otherwise provided by law.

Mediation

The procedures for pursuing mediation are set forth in Section 120.573, Fla. Stat., and Rules 28-106.111 and 28-106.401-405, Fla. Admin. Code. The SFWMD is not proposing mediation for this agency action under Section 120.573, Fla. Stat., at this time.

RIGHT TO SEEK JUDICIAL REVIEW

Pursuant to Sections 120.60(3) and 120.68, Fla. Stat., a party who is adversely affected by final SFWMD action may seek judicial review of the SFWMD's final decision by filing a notice of appeal pursuant to Florida Rule of Appellate Procedure 9.110 in the Fourth District Court of Appeal or in the appellate district where a party resides and filing a second copy of the notice with the SFWMD Clerk within 30 days of rendering of the final SFWMD action.

PROJECT EVALUATION:



The site is located west of SW 106th Avenue, approximately 0.45 miles north of Stirling Road, in the City of Cooper City, Broward County.

There are no permitted surface water management facilities within the project area. The site is undeveloped and consists of vegetated uplands with three isolated State jurisdictional wetlands as described within the Wetlands section of this report.

This project requires construction of a turn lane along SW 106th Avenue, for which a section of the CBWCD's S-22 Canal needs to be realigned, resulting in 0.06 acre of canal filling and 0.18 acre of canal excavation.



This application is a request for an Environmental Resource Permit to authorize construction and operation of a surface water management system to serve a 15.97 acre residential project known as Mill Creek at Cooper City.

The proposed surface water management system consists of inlets and culverts that collect and convey stormwater runoff to a 3.97 acre lake, which discharges to the CBWCD S-22 Canal through a proposed control structure.

The proposed project requires the addition of a turn lane along SW 106th Avenue, for which a portion of the CBWCD's S-22 Canal will be realigned and widened, resulting in approximately 0.05 acres of additional pavement along SW 106th avenue, filling of 0.06 acres of canal, and excavation of approximately 0.18 acres of canal area.



The following land use breakdown is for the Mill Creek development only. The associated turn lane along SW 106th Avenue and the canal realignment and widening is not included in this land use breakdown.

Construction Project:

	Total Project	
Building Coverage	2.80	acres
Lake	3.97	acres
Lake Bank	1.12	acres
Pavement	3.23	acres
Pervious	4.85	acres
Total:	15.97	



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Discharge Rate :

As shown in the table below, the proposed project discharge is within the allowable limit for the area.

Discharge Storm Frequency : 25 YEAR-3 DAY

Design Rainfall : 12.98 inches

Basin	Allow Disch (cfs)	Method Of Determination	Peak Disch (cfs)	Peak Stage (ft, NGVD 29)
Site	.5	Discharge Formula	.36	6.8

Finished Floors :

Building Storm Frequency : 100 YEAR-3 DAY

Design Rainfall : 16 inches

Basin	Peak Stage (ft, NGVD 29)	Proposed Min. Finished Floors (ft, NGVD 29)	FEMA Elevation (ft, NGVD 29)
Site	7.58	9	N/A

Road Design :

Road Storm Frequency : 10 YEAR-1 DAY

Design Rainfall: 8.5 inches

Basin	Peak Stage (ft, NGVD 29)	Proposed Min. Road Crown (ft, NGVD 29)
Site	5.75	7

Control Elevation :

Basin	Area (Acres)	Ctrl Elev (ft, NGVD 29)	WSWT Ctrl Elev (ft, NGVD 29)	Method Of Determination
Site	15.97	4	4.00	Adjacent Canal Control Elevation

Receiving Body :

Basin	Str.#	Receiving Body
Site	17	CBWCD S-22 Canal

Discharge Structures: Note: The units for all the elevation values of structures are (ft, NGVD 29)

Bleeders:

Basin	Str#	Count	Type	Width	Height	Length	Dia.	Invert Angle	Invert Elev.
Site	17	1	Circular Orifice				3"		4

Culverts:

Basin	Str#	Count	Type	Width	Length	Dia.
Site	17	1	Reinforced Concrete Pipe		53'	18"

Weirs:

Basin	Str#	Count	Type	Width	Height	Length	Dia.	Elev.
Site	17	1	Sharp Crested	3'				6.8 (crest)

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As the project is located within the Water Preserve Area Basin, water quality treatment of 1.5 inches over the project area will be provided in a 3.97 acre wet detention area. No adverse water quality impacts are anticipated as a result of the proposed project.

Basin	Treatment Method	Vol Req.d (ac-ft)	Vol Prov'd		
Site	Treatment	Wet Detention	3.97 acres	2	2

The project site consists of primarily uplands dominated by exotic invasive species, predominantly java plum, Brazilian pepper, and melaleuca. Three small isolated State jurisdictional wetlands, pursuant to Chapter 62-340, Florida Administrative Code (FAC), are present on the site as shown in Page 1 of Exhibit 3.1 for a total of 0.72 acre of wetlands. The site was historically altered for agricultural use in the 1950-1960's then left fallow to present day. Due to the prior land use, the site topography exhibited uncharacteristic variation within the site, but had not been disturbed within at least the last three decades and hydrologic indicators and hydric soils were present within the wetland areas. The wetlands are of very poor quality, primarily due to the predominance of an exotic canopy and reduced hydrology due to regional historic drainage. Due to the predominance of facultative invasive canopy species and the lack of groundcover due to shading, delineation of the wetland boundaries was performed jointly by District and the Applicant's environmental personnel utilizing the criteria in Chapter 62-340.300(d), FAC.

Wetland W-1 (0.54 acre) consists of a predominantly Brazilian pepper canopy and minimal to no groundcover, with periodic inundation of reduced duration as evidenced by moderate to weak hydrologic indicators (leaf staining, water marks) and muck soil with minimal subsidence. Wetland W-2 (0.14 acre) consists of a predominantly Melaleuca canopy and minimal to no groundcover, with periodic saturation to ground surface as evidenced by hydric soils (thin dark surface, dark surface) and isolated areas of shield ferns (FACW). Wetland W-3 (0.04 acre) is a linear non-forested area with predominantly wetland herbaceous vegetation, including shield fern, star rush, dayflower, milkweed and hydrocotyle. Muck soil is located at the ground surface indicating a surface hydrology of saturation to shallow short-term inundation conditions. Other surface waters are located immediately adjacent to the project's eastern boundary consisting of the Central Broward Water Control District (CBWCD) S-22 canal.

Wetland Impacts:

The applicant proposes to impact all onsite wetlands by filling 0.68 acre and dredging 0.04 acre for project construction, as shown in Exhibit 3.1. Net improvements to the CBWCD surface water canal consist of 0.07 acre of filling for construction of the access road and excavation of 4.16 acres of upland for widening and realignment as required by Broward County.

Mitigation Proposal:

Wetlands W-2 and W-3 are isolated wetlands less than one half acre in size, not preferred habitat for listed species, of very poor quality and not located within an area of critical state concern. Therefore, pursuant to Section 4.2.2.1 of the Basis of Review (BOR) mitigation for these impacts is not required. Wetland W-1 exceeds the one half acre threshold and mitigation is proposed to offset adverse impacts to this wetland.

Elimination/Reduction:

The wetlands on the project site are of very poor quality and provide minimal wetland functions, as described in the Wetlands section of this report and in the assessment scoresheets contained in the project file. Therefore, in accordance with Section 4.2.1.2(a), BOR, the applicant has proposed mitigation which provides greater long term ecological value than the wetlands to be adversely affected.

Mitigation Plan:

The applicant proposes to purchase mitigation credits from the FPL Everglades Mitigation Bank (EMB) to offset adverse impacts to 0.54 acre of wetlands. District environmental staff performed a functional assessment of onsite wetlands utilizing the Wetland Assessment Technique for Environmental Reviews (WATER) methodology, which is the methodology required for EMB. The assessment scoresheets are contained in Exhibit 4, incorporated by reference from the project file. Based upon the functional assessment, 0.10 credit were required to offset the adverse wetland impacts. The applicant has reserved 0.13 credit of herbaceous freshwater wetland credits from the EMB mitigation bank, as shown in Exhibit 3.2. The additional 0.03 credit represent additional mitigation required by other regulatory agencies and additionally contribute to the greater long term ecological value required by District reduction/elimination criteria. This permit is conditioned (Special Condition 16) to require the applicant to submit documentation demonstrating that the credits have been purchased and debited from the EMB mitigation bank ledger after permit issuance and prior to impacting wetlands in accordance with the schedule in Exhibit 3.3.

Wetland Inventory :

CONSTRUCTION		NEW		-Mill Creek at Cooper City									
Site Id	Site Type	Pre-Development				Post-Development							
		Pre Fluc cs	AA Type	Acreage (Acres)	Current Wo Pres	With Project	Time Lag (Yrs)	Risk Factor	Pres. Adj. Factor	Post Fluc cs	Adj Delta	Functional Gain / Loss	
1	OFF	641	Direct	.54								.000	.000
Total:				.54								.00	.00

<u>Fluc cs Code</u>	<u>Description</u>
641	Freshwater Marshes

MITBANK		F.P.L. EVERGLADES MITIGATION BANK	
Type Of Credits	Number Of Credits		
Fresh Water Herbaceous	Mitigation Bank Cr Used		
		.10	
Total:		.10	

The project site does not contain preferred habitat for wetland-dependent endangered or threatened wildlife species or species of special concern. No wetland-dependent endangered/threatened species or species of special concern were observed onsite, and potential use of the site by such species is minimal. This permit does not relieve the applicant from complying with all applicable rules and any other

agencies' requirements if, in the future, endangered/threatened species or species of special concern are discovered on the site.



It is suggested that the permittee retain the services of an appropriate registered professional registered in the State of Florida for periodic observation of construction of the surface water management (SWM) system. This will facilitate the completion of construction completion certification Form #0881 which is required pursuant to Section 10 of the Basis of Review for Environmental Resource Permit Applications within the South Florida Water Management District, and Rule 40E-4.361(2), Florida Administrative Code (F.A.C.).

Pursuant to Chapter 40E-4 F.A.C., this permit may not be converted from the construction phase to the operation phase until certification of the SWM system is submitted to and accepted by this District. Rule 40E-4.321(7) F.A.C. states that failure to complete construction of the SWM system and obtain operation phase approval from the District within the permit duration shall require a new permit authorization unless a permit extension is granted.

For SWM systems permitted with an operating entity who is different from the permittee, it should be noted that until the permit is transferred to the operating entity pursuant to Rule 40E-1.6107, F.A.C., the permittee is liable for compliance with the terms of this permit.

The permittee is advised that the efficiency of a SWM system will normally decrease over time unless the system is periodically maintained. A significant reduction in flow capacity can usually be attributed to partial blockages of the conveyance system. Once flow capacity is compromised, flooding of the project may result. Maintenance of the SWM system is required to protect the public health, safety and the natural resources of the state. Therefore, the permittee must have periodic inspections of the SWM system performed to ensure performance for flood protection and water quality purposes. If deficiencies are found, it is the responsibility of the permittee to correct these deficiencies in a timely manner.

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RELATED CONCERNS:

Water Use Permit Status:

The applicant has indicated that surface water from the on-site lake will be used as a source for irrigation water for the project. Water Use Permit No. 06-06665-W (Application No. 130322-6) has been issued for this project. The applicant has also indicated that dewatering is required for construction of this project. Water Use Permit No. 06-06666-W (Application No. 130328-6) has been issued for this project. This permit does not release the permittee from obtaining all necessary Water Use authorization(s) prior to the commencement of activities which will require such authorization, including construction dewatering and irrigation.

CERP:

The proposed project is not located within or adjacent to a Comprehensive Everglades Restoration Project component.

Potable Water Supplier:

Cooper City Utilities.

Waste Water System/Supplier:

Cooper City Utilities.

Right-Of-Way Permit Status:

A District Right-of-Way Permit is not required for this project.

DRI Status:

This project is not a DRI.

Historical/Archeological Resources:

The District has received correspondence dated April 24, 2013, from the Florida Department of State, Division of Historical Resources indicating that the proposed undertaking is not likely to have an effect on historic properties, provided that the applicant makes contingency plans in the case of fortuitous finds or unexpected discoveries during ground disturbing activities within the project area.

If prehistoric or historic artifacts, such as pottery or ceramics, projectile points, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with Native American, early European, or American settlement are encountered at any time within the project site area, the permitted project shall cease all activities involving subsurface disturbance in the immediate vicinity of the discovery. The applicant shall contact the Florida Department of State, Division of Historical Resources, Compliance Review Section at (850)-245-6333. Project activities shall not resume without verbal and/or written authorization. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, Florida Statutes.

DEO/CZM Consistency Review:

The issuance of this permit constitutes a finding of consistency with the Florida Coastal Management Program.

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Third Party Interest:

No third party has contacted the District with concerns about this application.

Enforcement:

There has been no enforcement activity associated with this application.

STAFF REVIEW:

DIVISION APPROVAL:

NATURAL RESOURCE MANAGEMENT:

Barbara J. Conmy

Barbara J. Conmy

DATE: 7/26/13

SURFACE WATER MANAGEMENT:

Carlos A. de Rojas

Carlos A. de Rojas, P.E.

DATE: 7/26/13

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Table of Contents for Staff Report Exhibits
Application No. 130321-12
MILL CREEK AT COOPER CITY

1.0 Location Map

2.0 Paving, Grading and Drainage Plans

3.1 Wetlands and Wetland Impacts Map

3.2 Letter of EMB Mitigation Credit Reservation

3.3 Work Schedule

4.0 W.A.T.E.R. Wetland Functional Assessment Scoresheets
(incorporated by reference from the permit file)

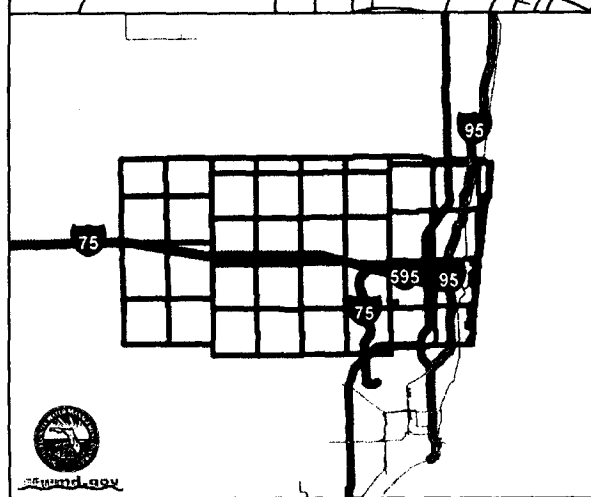
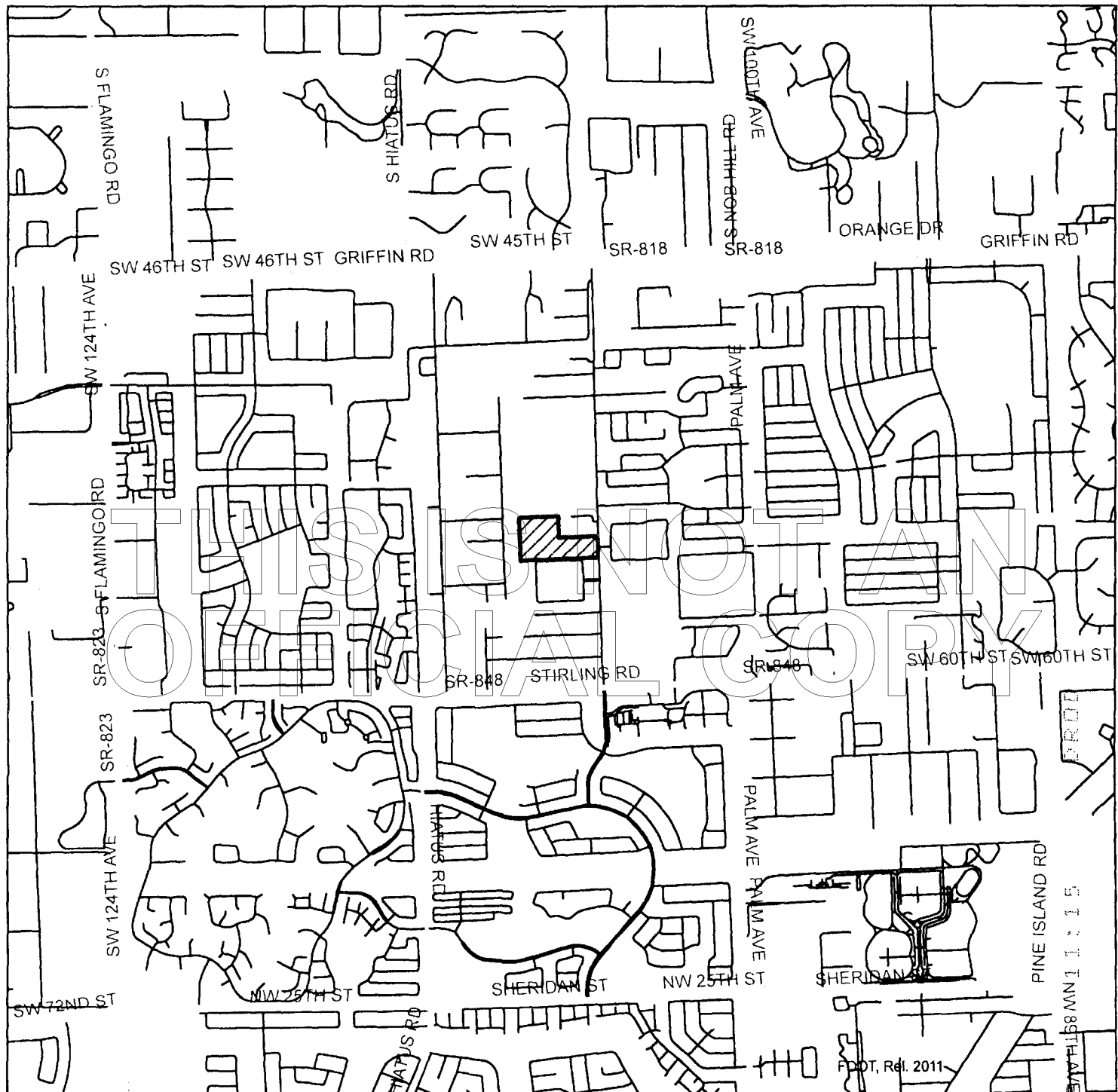
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
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BROWARD COUNTY, FLORIDA

Legend
 Application

Application Number: 130321-12

Map Date: 2013-07-25

Permit Number: 06-06686-P

Sec 31 / Twp 50 / Rge 41

Project Name: MILL CREEK AT COOPER CITY


0 0.1250.25
 Miles

Exhibit Number: 1



PINE ISLAND RD
SW 60TH ST
SR-848
1:15

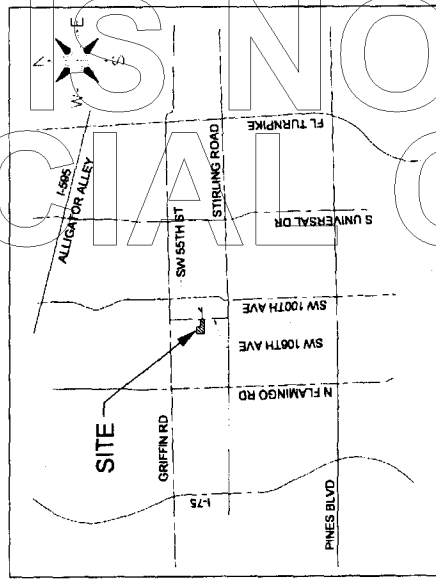
PDOT, Rel. 2011



FINAL SITE ENGINEERING PLANS
FOR

Mill Creek at Cooper City

Cooper City, Florida



LOCATION MAP
S 31, T 56S, R 41E
1/8" = 100'

LEGAL DESCRIPTION

THE WEST ONE-HALF (1/2) OF TRACT 33 AND ALL OF TRACT 34 OF FLORIDA FRUIT LANDS COMPANY'S SUBDIVISION NO. 1 OF SECTION 31, TOWNSHIP 56 NORTH, RANGE 41 EAST ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 8, PAGE 17, OF THE PUBLIC RECORDS OF DADE COUNTY, FLORIDA, SITUATE LYING AND BEING IN BROWARD COUNTY, FLORIDA.

SAID LANDS SITUATE LYING AND BEING IN THE CITY OF COOPER CITY, BROWARD COUNTY, FLORIDA, CONTAINING 179,250.17 SQUARE FEET (8.5 ACRES), MORE OR LESS.

OWNER:
Mill Creek at Cooper City, LLC
825 Coral Ridge Drive
Coral Springs, Florida 33071
(954) 688-5572
Email: jkeith@centerlinehomes.com

SCHNARS ENGINEERING CORPORATION
949A CLINT MOORE ROAD • BOCA RATON, FLORIDA 33487
TEL: (561) 241-6455 • FAX: (561) 241-5182
Certificate of Authorization No. 6640



INDEX OF SHEETS	SHEET NO.
CONSTRUCTION PERIOD STORMWATER POLLUTION PREVENTION PLAN	1
PAVING, GRADING & DRAINAGE PLAN	2 - 3
WATER & SEWER PLAN	4 - 5
SANITARY PROFILES	6
WATER & SEWER DETAILS	7 - 8
CONSTRUCTION DETAILS & NOTES	9 - 11

PROJECT NO. 12124
September 2012

SCHNARS ENGINEERING CORPORATION
 9840 Old Moore Road
 Fort Myers, Florida 33907
 Tel: (889) 291-8433 Fax: (889) 291-3963

PROJECT: MILL CREEK AT COOPER CITY
COOPER CITY: FLORIDA
DATE: 12/21/2012

REVISIONS:

1. REVISIONS
2. REVISIONS
3. REVISIONS
4. REVISIONS
5. REVISIONS

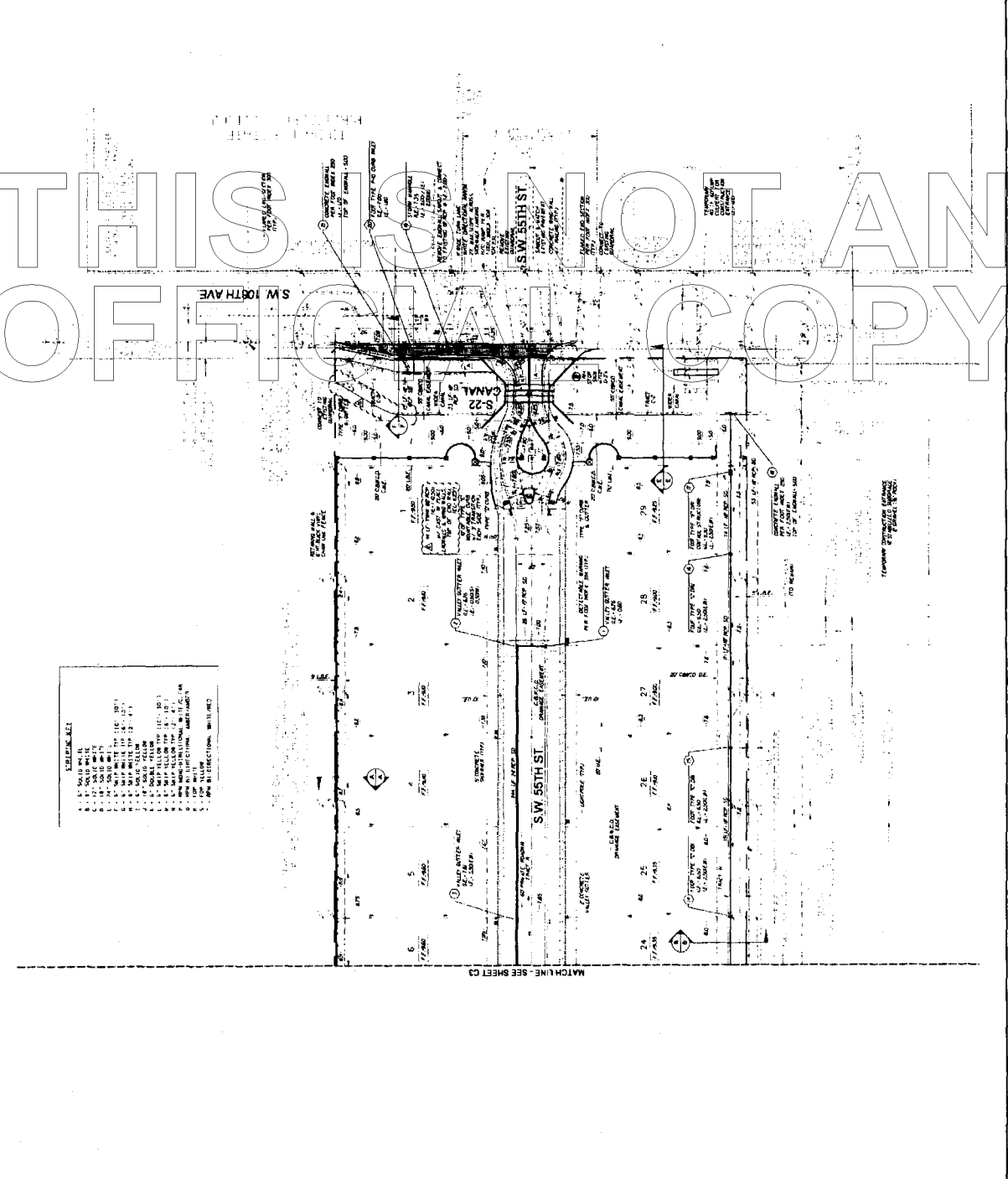
DESIGNED BY: SPT/2012
CHECKED BY: SPT/2012
DATE: 12/21/2012

PAVING, DRAINAGE & DRAINAGE PLAN

GRAPHIC SCALE
 0 40' 80'

PAVING, DRAINAGE & DRAINAGE LEGEND

- 1. PAVEMENT TYPE
- 2. DRAINAGE DITCH
- 3. DRAINAGE MANHOLE
- 4. DRAINAGE CURB
- 5. DRAINAGE GUTTER
- 6. DRAINAGE SLOPE
- 7. DRAINAGE ELEVATION
- 8. DRAINAGE FLOW DIRECTION
- 9. DRAINAGE INVERT
- 10. DRAINAGE COVER
- 11. DRAINAGE OPENING
- 12. DRAINAGE WIDTH
- 13. DRAINAGE SPACING
- 14. DRAINAGE MATERIAL
- 15. DRAINAGE FINISH
- 16. DRAINAGE CURB FINISH
- 17. DRAINAGE GUTTER FINISH
- 18. DRAINAGE MANHOLE FINISH
- 19. DRAINAGE COVER FINISH
- 20. DRAINAGE OPENING FINISH
- 21. DRAINAGE WIDTH FINISH
- 22. DRAINAGE SPACING FINISH
- 23. DRAINAGE MATERIAL FINISH
- 24. DRAINAGE FINISH
- 25. DRAINAGE CURB FINISH
- 26. DRAINAGE GUTTER FINISH
- 27. DRAINAGE MANHOLE FINISH
- 28. DRAINAGE COVER FINISH
- 29. DRAINAGE OPENING FINISH
- 30. DRAINAGE WIDTH FINISH
- 31. DRAINAGE SPACING FINISH
- 32. DRAINAGE MATERIAL FINISH
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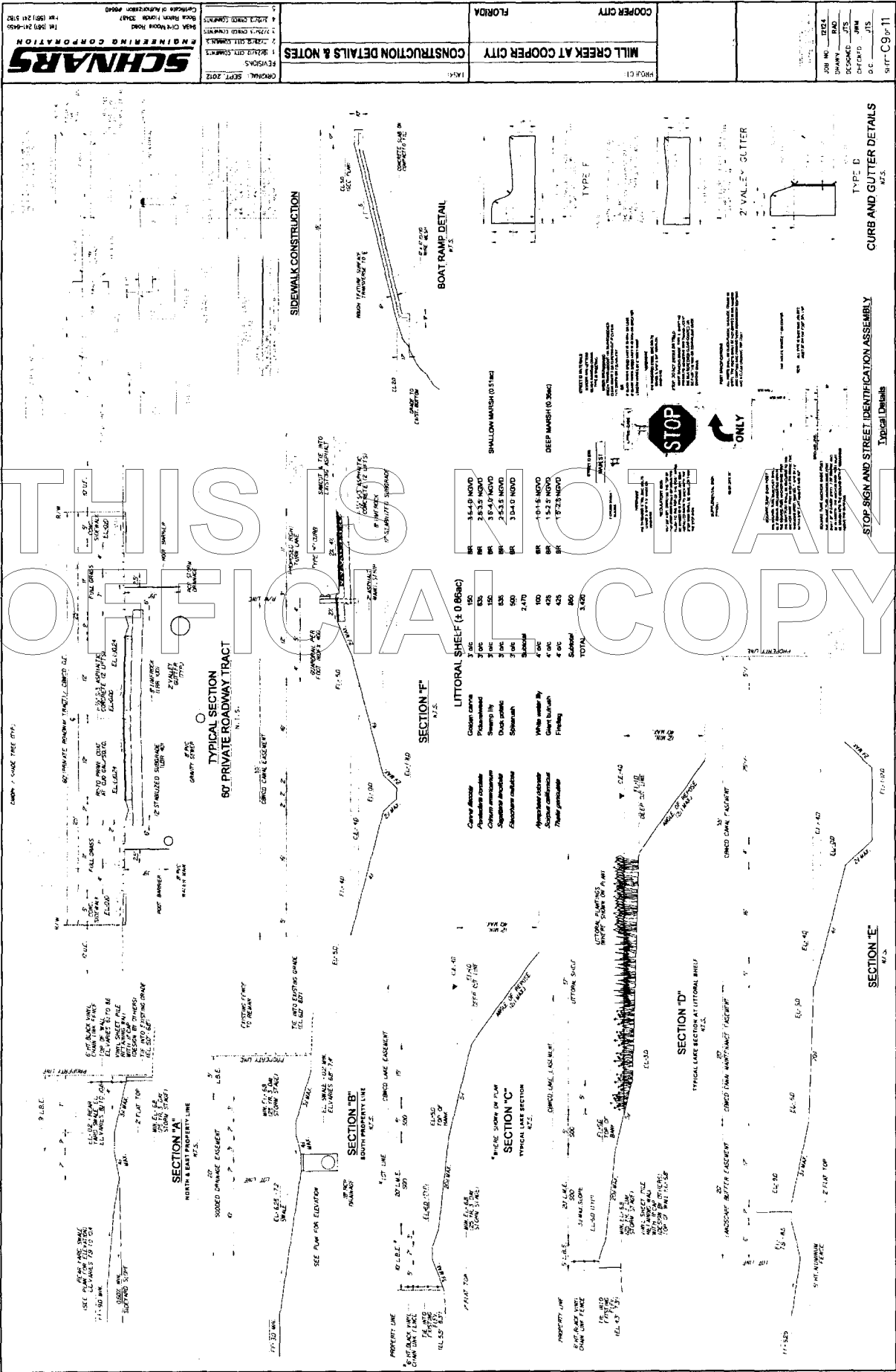



EXHIBIT 2


Application No. 130321-12

Page 5 of 7

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 <p> 3544 Old Myers Road Rock Hill, South Carolina 29733 Tel: (803) 281-6555 Fax: (803) 281-9182 </p>	PROJECT MILL CREEK AT COOPER CITY CONSTRUCTION DETAILS & NOTES 1/5/12	COOPER CITY FLORIDA	JOB NO. 1024 DRAWN: JMS DESIGNED: JMS CHECKED: JMS DATE: 01/12/12 SHEET: C10-11
---	--	------------------------	--

TYPICAL TRENCH DETAIL




REMOVE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

REPLACE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

REPLACE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

ASPHALT CONNECTION DETAIL

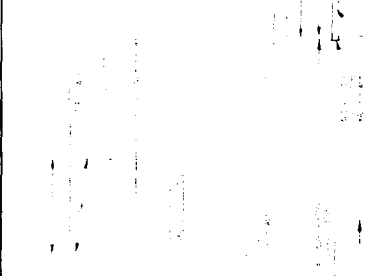


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REPLACE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.


REPLACE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

CONTROL STRUCTURE DETAIL



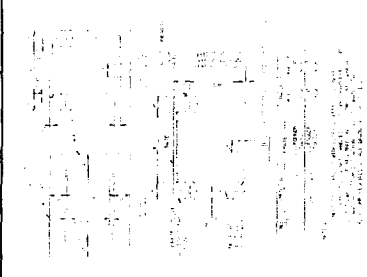
N.T.S.

DITCH BOTTOM INLET DETAIL



N.T.S.

TYPICAL C & E INLET DETAIL




REMOVE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

REPLACE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

REPLACE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

INLET GRATE DETAIL




REMOVE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

REPLACE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

REPLACE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

BRACKET DETAIL




REMOVE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

REPLACE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

REPLACE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

BASE DETAIL

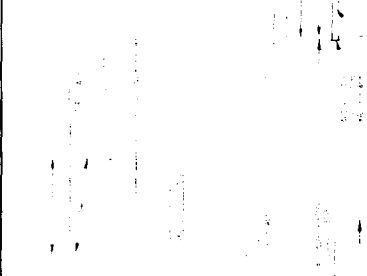


REMOVE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

REPLACE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

REPLACE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

PLAN




REMOVE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

REPLACE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

REPLACE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

PLAN

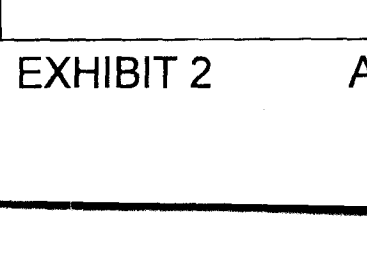


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REPLACE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

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PLAN




REMOVE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

REPLACE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

REPLACE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

PLAN



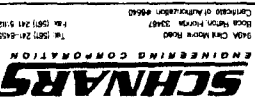
REMOVE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

REPLACE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

REPLACE EXISTING RISE ROCK AND REPAIR WITH NEW CONCRETE.

NOTES:

- ALL CURB INLETS SHALL BE ROUND.
- P.R.B. WHERE SHOWN ON PLAN.



1. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 10% OF THE TOTAL COST OF THE WORK...
2. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 10% OF THE TOTAL COST OF THE WORK...
3. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 10% OF THE TOTAL COST OF THE WORK...

Table with columns: REVISIONS, CONSTRUCTION NOTES, MILL CREEK AT COOPER CITY, COOPER CITY, FLORIDA

4. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 10% OF THE TOTAL COST OF THE WORK...
5. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 10% OF THE TOTAL COST OF THE WORK...
6. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 10% OF THE TOTAL COST OF THE WORK...

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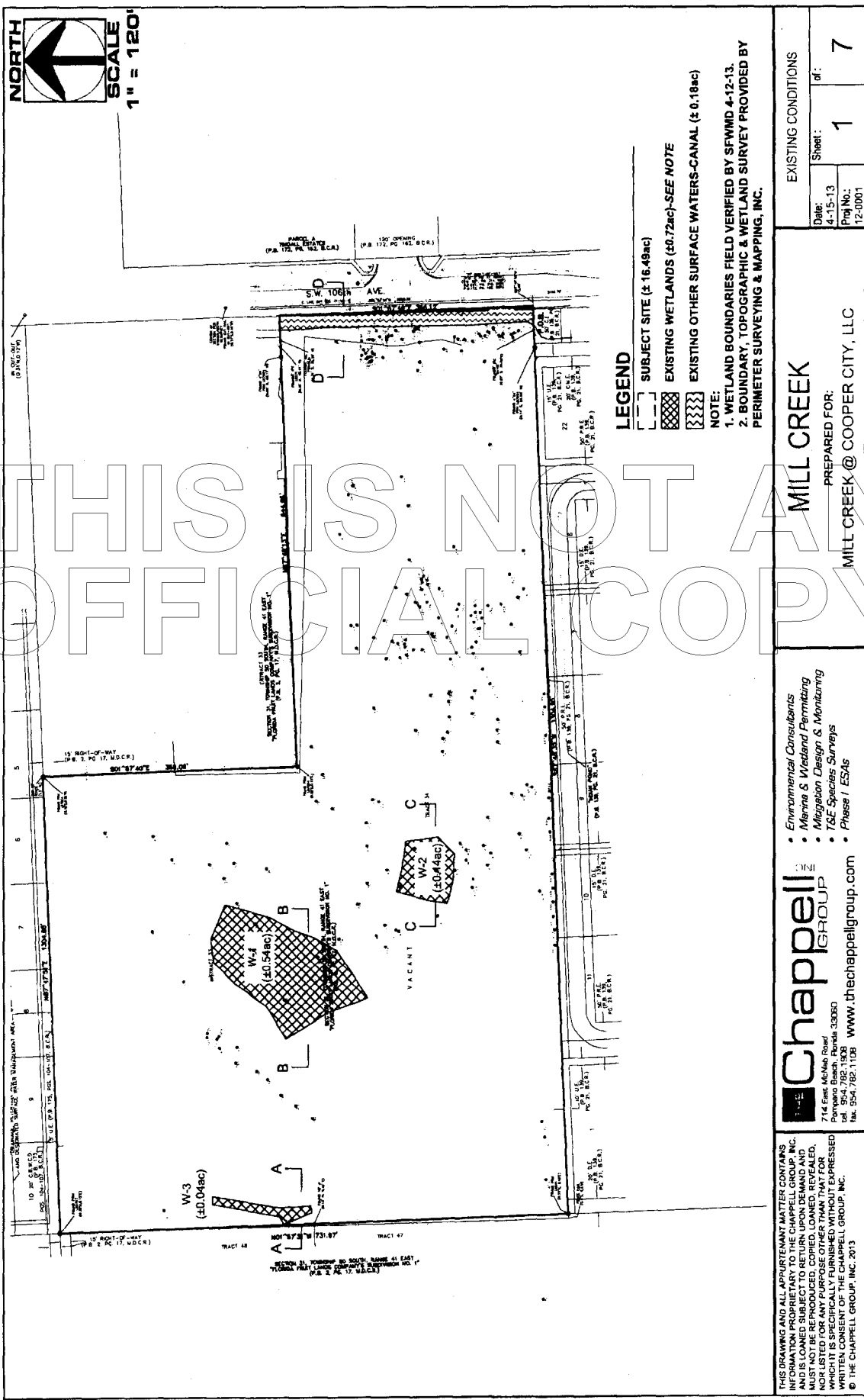


EXHIBIT 3.1

Application No. 130321-12

Page 1 of 7

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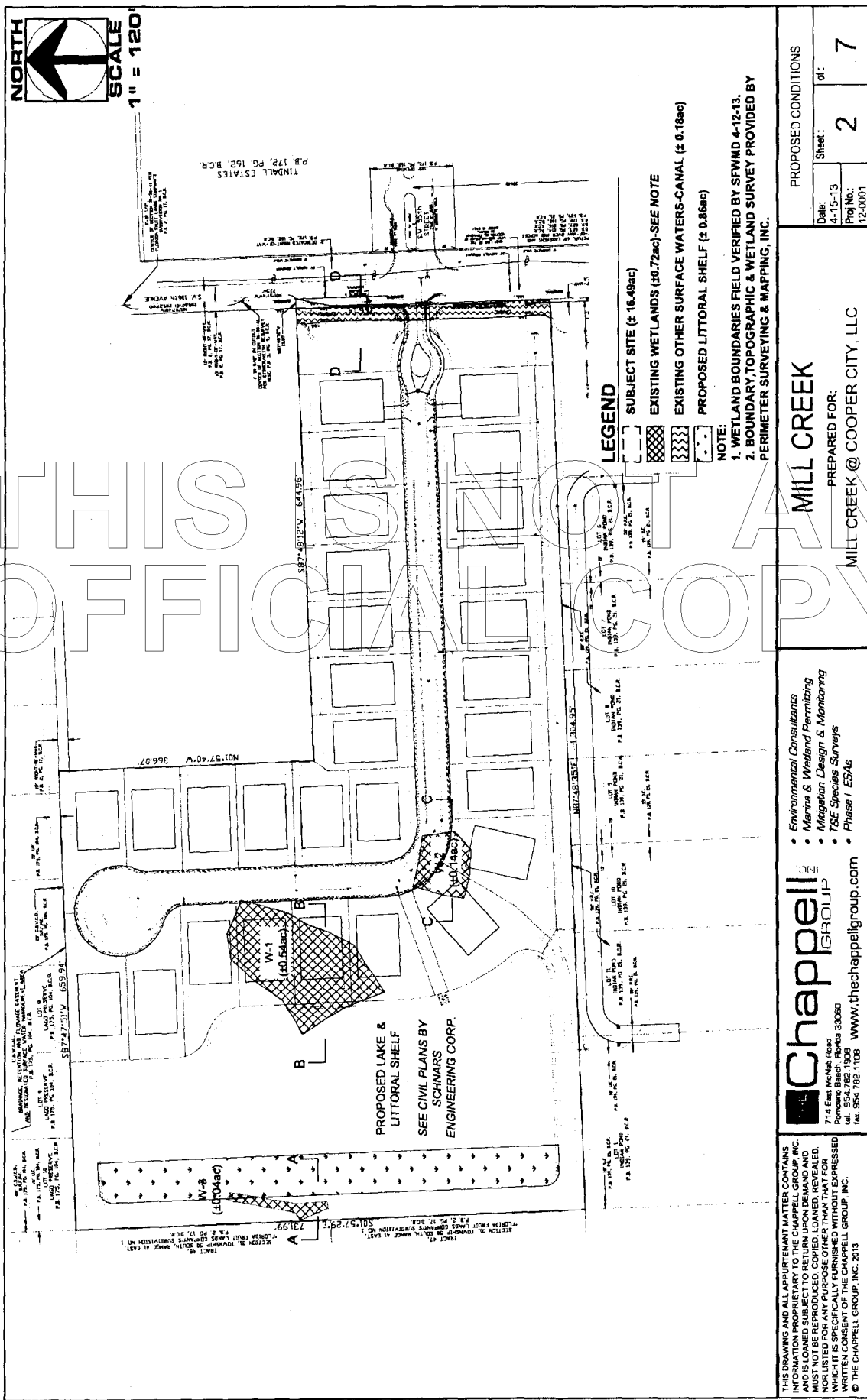


EXHIBIT 3.1

Application No. 130321-12

Page 2 of 7

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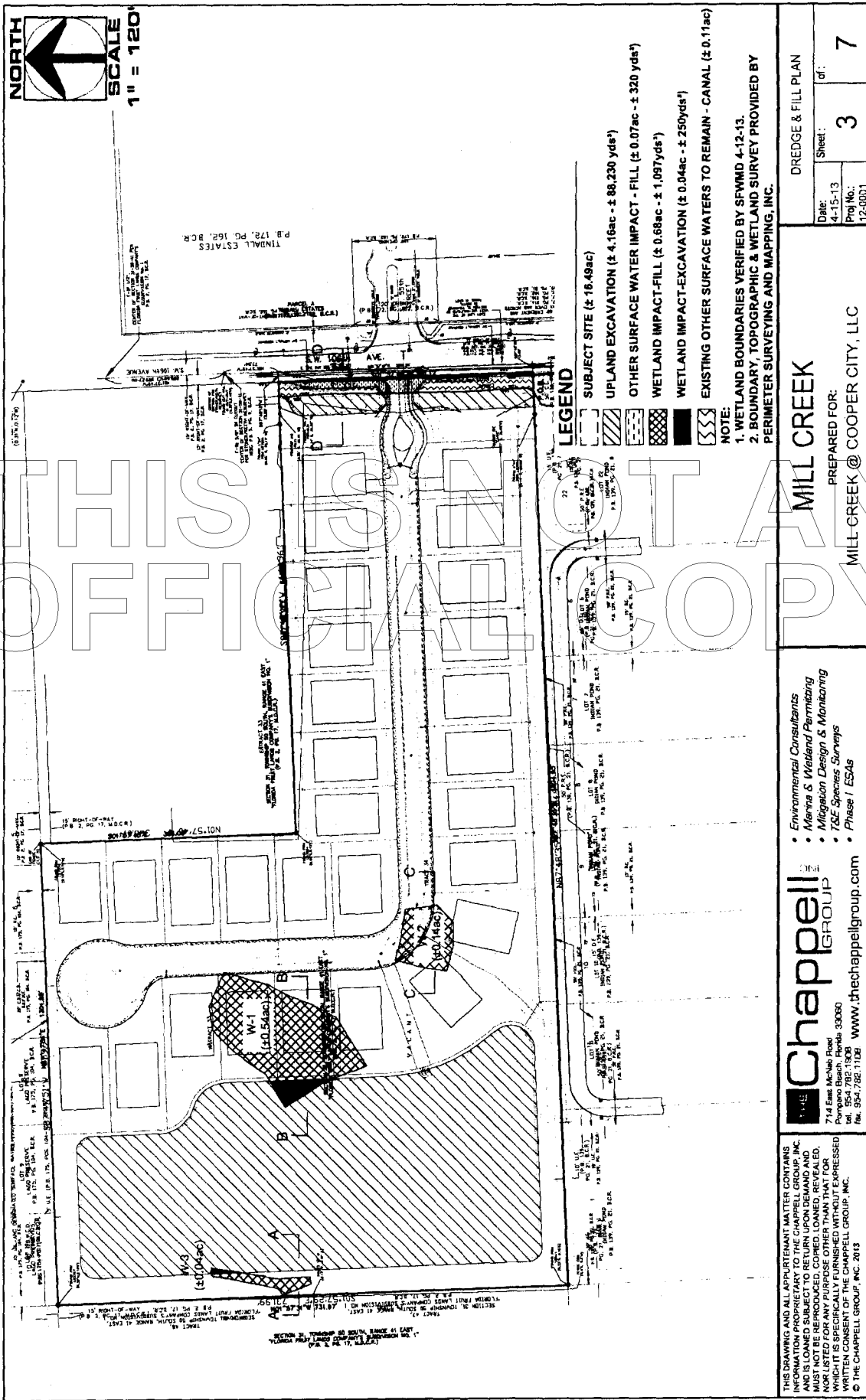


EXHIBIT 3.1

Application No. 130321-12

Page 3 of 7

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Chappell GROUP
714 East McKee Road
Pompano Beach, Florida 33060
Tel. 954-782-1100
Fax. 954-782-1108
www.thechappellgroup.com

- Environmental Consultants
- Marina & Wetland Permitting
- Mitigation Design & Monitoring
- T&E Species Surveys
- Phase I ESAs

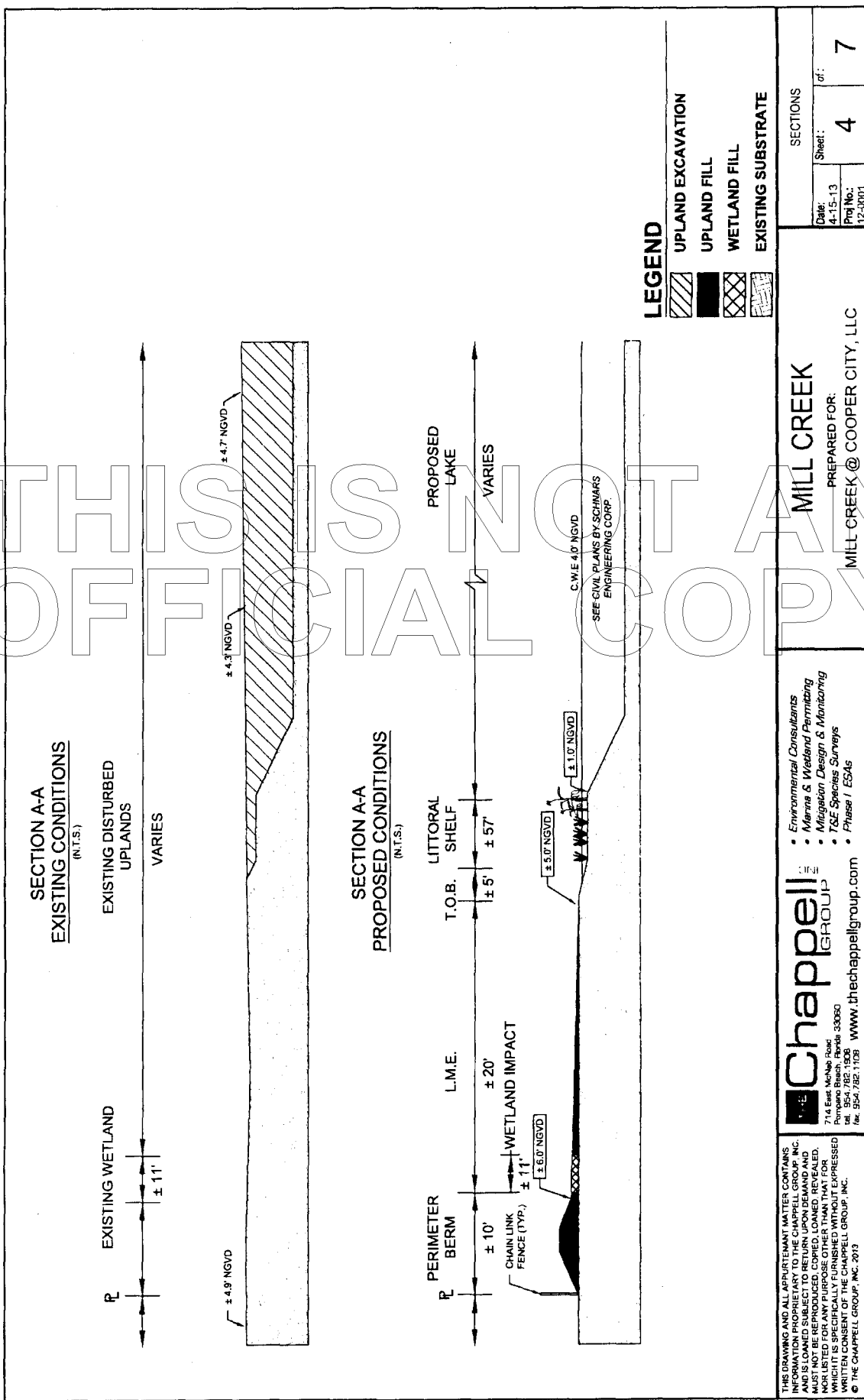


EXHIBIT 3.1

Application No. 130321-12

Page 4 of 7

Chappell GROUP
 714 East McNap Road
 Pompano Beach, Florida 33060
 Tel. 954/782-1928
 Fax. 954/782-1128
 www.thechappellgroup.com

Environmental Consultants
 Marine & Wetland Permitting
 Mitigation Design & Monitoring
 TCE Species Surveys
 Phase I ESAs

MILL CREEK
 PREPARED FOR:
 MILL CREEK @ COOPER CITY, LLC

LEGEND
 UPLAND EXCAVATION
 UPLAND FILL
 WETLAND FILL
 EXISTING SUBSTRATE

SECTIONS
 Sheet: 4 of: 7
 Date: 4-15-13
 Proj No.: 12-3001

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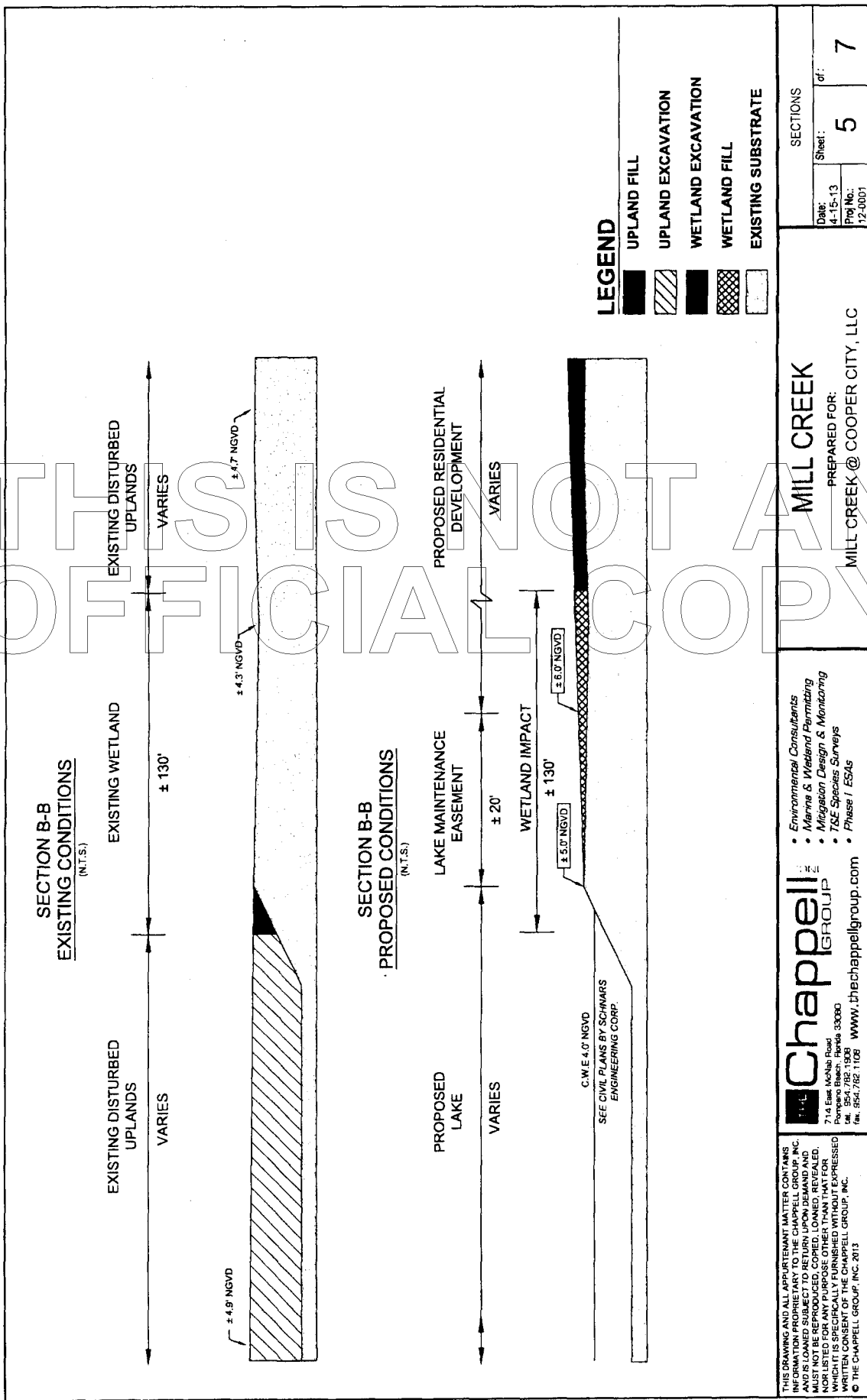


EXHIBIT 3.1

Application No. 130321-12

Page 5 of 7

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MILL CREEK
 PREPARED FOR:
 MILL CREEK @ COOPER CITY, LLC

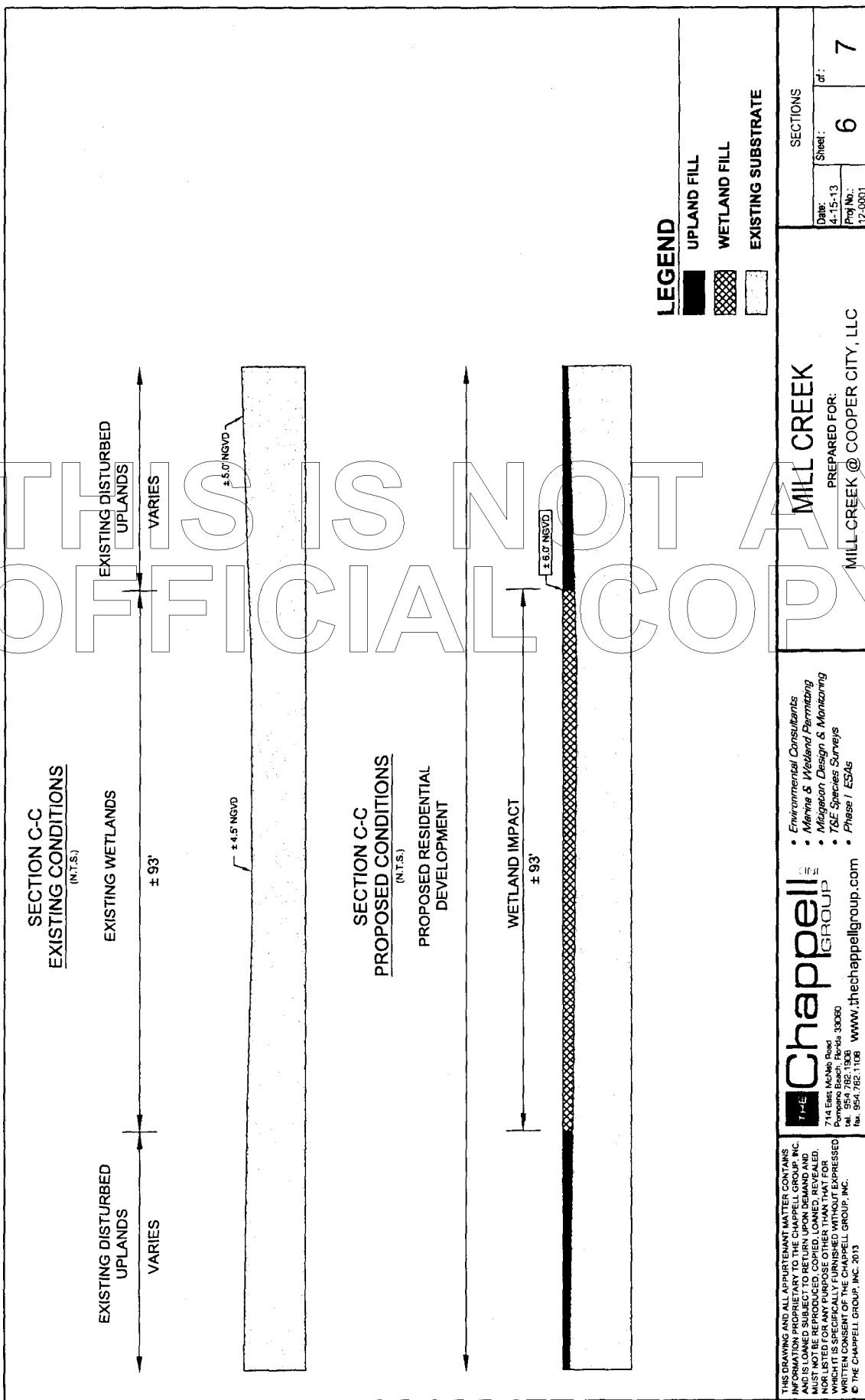


EXHIBIT 3.1

Application No. 130321-12

Page 6 of 7



EVERGLADES
MITIGATION BANK

July 25, 2013

Mr. Robert Stiegele, Vice President
Mill Creek at Cooper City, LLC
825 Coral Ridge Drive
Coral Springs, FL 33071

**Re: Everglades Mitigation Bank Credit Reservation: REVISED
U. S. Army Corps of Engineers Permit Number SAJ-2013-00309,
South Florida Water Management District Permit Number 130321-12,
and Broward County Environmental Permitting and Growth
Management Department Permit File Number DF13-1055**

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Please be advised that the Everglades Mitigation Bank (the "EMB") has reserved 0.13 Freshwater Herbaceous mitigation credits necessary to offset the unavoidable wetland impact for the above referenced project. Phase II of the EMB has a signed Mitigation Banking Instrument acknowledged by both FDEP and USACE and sufficient credits are currently available on the EMB ledger to offset the proposed impacts. **The EMB acknowledges receiving payment in full for the above referenced credits.**

Please contact me at 561-694-6388 for any additional information or questions regarding this matter.

Regards,

Joseph R. Sibaldi
Everglades Mitigation Bank

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South Florida Water Management District
Work Schedule Requirements

Application No : 130321-12

Page 1 of 1

Mitigation Plan ID: MILL CREEK

SUBMIT FDEP VERIFICATION OF WETLAND EMB MITIGATION

01-OCT-13

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**APPLICATION #130321-12
PERMIT NO. 06-06686-P
MILL CREEK AT COOPER CITY**

**EXHIBIT NUMBER 4.0
W.A.T.E.R. WETLAND ASSESSMENT
SCORESHEETS
Pages 1-6 of 6**

INCORPORATED BY REFERENCE

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Mitigation Bank Wetland Function Evaluation Matrix

W.A.T.E.R. - Wetland Assessment Technique for Environmental Reviews
 Based on WBI, WQI, WRAP, HGM and 4th Priority Project List (PPL) with technical advise from
 EPA, FDEP, ACOE, NMFS, USE & W. SWPMD & Dade County

Project: Mill Creek at Cooper City, ERP App No. 130321-12

Reviewer: Catherine Riiska
 Date: Site Inspections 2/16/13, 3/22/13, 4/12/13
 Document prepared by C. Riiska 06/26/13

Parameter/Function	Scoring Criteria			Ratings		
	W-1 Brazilian Pepper (0.54 acres)	W-2 Melaleuca (0.14 acres)	W-3 Cow Trail Area (0.04 acres)	Polygon	Polygon	Polygon

Parameter/Function	W-1 Brazilian Pepper (0.54 acres)	W-2 Melaleuca (0.14 acres)	W-3 Cow Trail Area (0.04 acres)	Polygon	Polygon	Polygon
1. Fish & Wildlife Functions Apply to freshwater, saltwater, brackish and mitigation systems						
a. Waterfowl, wading birds, wetland dependent, or aquatic birds of prey (Mit. Bank - High specie count w/ low pop. #'s score 1)	0	0	0			
b. Fish (Mit. Bank - High specie count w/ low pop. #'s score 1) Restoration that causes 12% pop. increases-higher score)	0	0	0			
c. Mammals (Mit. Bank - High specie count w/ low pop. #'s score 1) Restoration that causes 12% pop. increases-higher score)	2	2	2			
d. Aquatic macroinvertebrates, amphibians (Mit. Bank - High specie count w/ low pop. #'s score 1) Restoration that causes 12% pop. increases-higher score)	0	0	0			
e. Aquatic reptiles (Mit. Bank - High specie count w/ low pop. #'s score 1) Restoration that causes 12% pop. increases-higher score)	0	0	0			

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Mitigation Bank Wetland Function Evaluation Matrix
W.A.T.E.R. - Wetland Assessment Technique for Environmental Reviews
 Based on WBI, WQI, WRAP, HGM and 4th Priority Project List (PPL) with technical advise from
 EPA, FDEP, ACOE, NMFS, USF & W. SFWMD & Dade County

Project: Mill Creek at Cooper City, ERP App No. 130321-12
 Reviewer: Catherine Riiska
 Date: Site Inspections 2/16/13, 3/22/13, 4/12/13
 Document prepared by C. Riiska 06/26/13

Ref Exhibit 4

Application 130321-12

Page 2 of 6

Parameter Function	Scoring Criteria			Polygons		
	3	2	1	W-1 Brazilian Pepper (0.54 acres)	W-2 Melaleuca (0.14 acres)	W-3 Cow Trail Area (0.04 acres)
2. Vegetative Functions Apply to freshwater, saltwater, brackish and mitigation systems						
a. Overstory/shrub canopy	Desirable trees/shrub healthy & providing appropriate habitat (seedlings present) & no inappropriate species	Desirable trees/shrubs exhibit signs of stress (no seedlings) few inappropriate species present	Inappropriate trees/shrubs shading or overtopping desirable trees/shrubs. Very little or no desirable trees/shrubs present (evidence suggests there should be)	0	0	0
b. Vegetative ground cover	Assessment area exhibits <2% inappropriate herbaceous ground cover for specific wetland systems and groundcover is present	Assessment area contains >2% but <30% inappropriate herbaceous groundcover or lack of groundcover >2% but < 30%	Assessment area contains >30% to <70% inappropriate herbaceous groundcover or lack of ground cover >30% to <70% Assessment area >70% inappropriate herbaceous groundcover or lack of groundcover >70%	0	0	2
c. Periphyton mat coverage	Periphyton (Blue-green algae) present with average mat thickness >1 1/4 in. (measure active & dead layer)	Periphyton (Blue-green algae) present with average mat thickness between 3/4 in. to 1 1/4 in. (active & dead layer)	Periphyton (Blue-green algae) present with average mat thickness between 1/4 in. to 3/4 in. (active & dead layer) Periphyton (Blue-green algae) not present or if present with average thickness of 0.0 to 1/4 in. (active & dead layer)	0	0	0
d. Category 1 and Category 2 exotic plants or (non-native) species	< (or = to) 1 % exotic plant cover	>1 % to 10 % exotic plant cover	>10 % to 65 % exotic plant cover	0	0	2
e. Habitat diversity (vegetative) (within assessment area)	>3 native species communities on site within assessment area	2 or 3 native species communities on site within assessment area	1 native species community with 75 % to 90 % coverage within assessment area	0	0	1
f. Biological diversity within 3000 feet (approximately 1/2 mile from edge of assessment area)	1 native species community has > 90 % coverage within assessment area	> 3 alternative habitats available (including upland)	2 to 3 alternative habitats	1	1	1
	1 alternative habitat		Same habitat type, or inappropriate / impacted	0		

Mitigation Bank Wetland Function Evaluation Matrix
Project: Mill Creek at Cooper City, ERP App No. 130321-12
W.A.T.E.R. - Wetland Assessment Technique for Environmental Reviews
 Reviewer: Catherine Riiska
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 EPA, FDEP, ACOE, NMFS, USF & W, SEFWMD & Dade County
 Document prepared by C. Riiska 06/26/13

Parameter/Function	Scoring Criteria			Polygon		
	3	2	1	W-1 Brazilian Pepper (0.54 acres)	W-2 Melaleuca (0.14 acres)	W-3 Cow Trail Area (0.04 acres)
3. Hydrologic Functions						
a. Surface water hydrology / sheet flow Apply to freshwater, saltwater, brackish and mitigation systems	Major connection (Flowing water/river or floodplain uniform flow through natural systems) Moderate connection (Natural restriction of flow or Flowing water due to hydrologic engineering) Minor connection (Runoff collection point, or uneven flow due to berms, ditches, roadways etc.) Hydrologically isolated, no net lateral movement	3 2 1 0	0	0	1	
b. Hydroperiod (normal year) fresh systems	> 8 months inundated with no reversals & every year drydown >5 months < 8 months or >5 years continuous inundation (look for strong water stains on persistent vegetation) >1 month < 5 months, with possible reversals (look for soft or less distinct water stains on persistent vegetation) < 4 weeks cumulative annual inundation or < 2 weeks continuous inundation	3 2 1 0	N/A	N/A	N/A	
b-1 Alternate to b. for Short Hydroperiod (normal year) fresh systems:	>10 weeks of continuous inundation including soil saturation > 6 weeks but <10 weeks of continuous inundation including soil saturation >2 weeks but <6 weeks of inundation, including soil saturation <2 weeks of continuous inundation	3 2 1 0	1	1	1	
b-2 Alternate to b. for Saltwater, brackish (tidal) systems	Inundated by >90% high tides Inundated by "spring" high tides (bi-monthly) Inundated by "extreme high" tides only (biannually) Inundated by storm surges only	2 1 0	N/A	N/A	N/A	
b-3 Alternate to b. for High Marsh (Juncus-Distichlis)	Inundated by high "spring" tides (monthly) and flushed by fresh water sheelflow every 10 days average Inundated by high "spring" tides (monthly) and flushed by fresh water sheelflow every 30 days on the average Inundated by high "spring" tides (monthly) and exposed to rain only Inundated by >50% high tides and exposed to rain only	3 2 1 0	N/A	N/A	N/A	
b-4 Alternate to b. for Rivertine systems	Inundated by high tides (daily) and/or receives and maintains fresh water at least into first half of dry season Inundated by high tides (daily) and/or receives and maintains fresh water during rainy season only Inundated by high tides (daily) and/or receives fresh water but does not maintain (reversal) during rainy season Inundated by spring tides (bi-monthly) and/or experiences frequent reversals of fresh water (fleshy)	3 2 1 0	N/A	N/A	N/A	

Mitigation Bank Wetland Function Evaluation Matrix

W.A.T.E.R. - Wetland Assessment Technique for Environmental Reviews
 Based on WBI, WQI, WRAP, HGM and 4th Priority Project List (PPL) with technical advise from
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 Document prepared by C. Riiska 06/26/13

Parameter/Function	Scoring Criteria	Polygon		
		W-1 Brazilian Pepper (0.54 acres)	W-2 Melaleuca (0.14 acres)	W-3 Cow Trail Area (0.04 acres)
3. Hydrologic Functions continued				
c. Hydropattern (fresh system)	>1 ft water depth for at least 2.5 months and <6 in. for >1 month (measure water mark/lichen line), or water depth ideal for specific wetland system	3	0	0
	>6 in to 1 ft. for at least 2.5 months (measure water mark/lichen line) or water depth borderline over or under for specific wetland system	2	0	0
	<6 in. for at least 2.5 months (measure water mark/lichen line) or water depth incorrect for specific wetland system	1	0	0
	<6 in. in association with either canals, ditches, swales, culverts, pumps, and/or wetlands, or these factors cause water depth to be too deep for specific system	0	0	0
c-1 Alternate to c. for Saltwater, brackish (tidal) systems	>1 ft water depth <2 ft. on 90% high tides	3	N/A	N/A
	>6 in. water depth <1 ft. on >50% high tides	2	N/A	N/A
	<6 in. water depth, but > than saturated	1	N/A	N/A
	Saturated by saline water table only	0	N/A	N/A
c-2 Alternate to c. for High Marsh (Juncus-Distichlis)	>10 in. water depth <2 ft. on regular basis during growing season	3	N/A	N/A
	>5 in. to 10in. water depth on regular basis during growing season	2	N/A	N/A
	>1 in. to 5 in. water depth on regular basis during growing season	1	N/A	N/A
	>0.0 in. to 1 in. water depth sporadically during growing season	0	N/A	N/A
c-3 Alternate to c. for Riverine systems	>2 ft. water depth (main channel) <6 ft. for 8 months	3	N/A	N/A
	>2 ft. water depth (main channel) <4 ft. for 6 months	2	N/A	N/A
	>1 ft. water depth (main channel) <2.5 ft. for 4 months	1	N/A	N/A
	<1 ft. water depth, but dry for >4 weeks (dry season)	0	N/A	N/A

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Mitigation Bank Wetland Function Evaluation Matrix

Project: Mill Creek at Cooper City, ERP App No. 130321-12

Reviewer: Catherine Riiska

Date: Site Inspections 2/16/13, 3/22/13, 4/12/13

Document prepared by C. Riiska 06/26/13

W.A.T.E.R. - Wetland Assessment Technique for Environmental Reviews
Based on WBI, WQI, WRAP, HGM and 4th Priority Project List (PPL) with technical advice from
EPA, FDEP, ACOE, NMFS, USE & W, SWMD & Dade County

Parameter/Function	Polygon			Polygon
	W-1 Brazilian Pepper (0.54 acres)	W-2 Melaleuca (0.14 acres)	W-3 Cow Trail Area (0.04 acres)	
3. Hydrologic Functions continued				
d. Water Quality	No indication of poor water quality (lab testing required, all values within acceptable range)	3		
	No visual indicators of poor water quality observed (1 value just over or under acceptable range)	2	2	2
	Visual indicators of poor water quality questionable (2 values over or under acceptable range)	1		
	Visual indicators of poor water quality observed or lab verified (values are out of acceptable range)	0		
e. Intactness of historic topography (soil disturbance)	Unaltered	3		
	Slightly altered soil disturbance, < 10% of assessment area	2		
	Moderately altered soil disturbance, < 25% of assessment area	1	0	0
	Extremely altered soil disturbance, may exceed 50% of assessment area	0		
f. Soils, organic (fresh systems)	Organic soil classified hydric soil >12 in. or any thickness over bedrock/caprock with perched water table and either condition covering >90% of surface area	3		
	Organic soil classified hydric soil >6 in. but <12 in. and covering >90% of surface area	2	1	1
	Organic soil classified hydric soil >1 in. but <6 in. and covering >50% but <90% of surface area	1		
	Organic soil classified non-hydric soil <1 in. for >50% of surface area	0		
	Sandy soil classified hydric soil with distinct mottling and concretions present in greater than 40% of horizon	3		
f-1 Alternate to f. for Freshwater, saltwater systems	Sandy soil classified hydric soil with mottling and concretions present in > 20% but < 40% of horizon	2		
	Sandy soil classified hydric soil with light or sparse mottling and concretions < 2 mm diameter or < 20% of horizon	1	N/A	N/A
	Sandy soil exhibits strong evidence of disturbance or mechanical manipulations or is fill material	0		
	Calcareous loam >12 in. and >90 % of surface area	3		
f-2 Alternate to f. for Freshwater, saltwater, brackish (tidal) systems	Calcareous loam >6 in. to <12 in. and >90% of surface area	2		
	Calcareous loam >1 in. to <6 in. and covering >50% but <90% of surface area	1	N/A	N/A
	Calcareous loam <1 in. for >50% of surface area	0		

Mitigation Bank Wetland Function Evaluation Matrix

Project: Mill Creek at Cooper City, ERP App No. 130321-12

Reviewer: Catherine Riiska

Date: Site Inspections 2/16/13, 3/22/13, 4/12/13

Document prepared by C. Riiska 06/25/13

W.A.T.E.R. - Wetland Assessment Technique for Environmental Reviews
 Based on WBI, WQI, WRAP, HGM and 4th Priority Project List (PPL) with technical advice from
 EPA, FDEP, ACOE, NIMFS, USE & W. SEWMD & Dade County

Parameter/Function	Scoring Criteria	Polygon	Polygon	Polygon
4. Salinity Parameters Apply to freshwater, saltwater, brackish, hypersaline and mitigation systems - Choose 1 a. Optimum salinity for fresh systems during growing season based on mean high salinity for a normal year. Apply to freshwater systems within 5 miles of the coast a-1. Alternate to a. Optimum salinity for brackish systems during growing season based on mean high salinity for a normal year. Apply to brackish (tidal) systems only a-2. Alternate to a. Optimum salinity for saline systems during growing season based on mean high salinity for a normal year. Apply to saline marsh (tidal) systems only a-3. Alternate to a. Optimum salinity for hypersaline systems during growing season based on mean high salinity for a normal year. Apply to hypersaline (tidal) systems only a-4 Alternate to a. Optimum salinity for riverine/tidal creek system during growing season based on mean high salinity for a normal year. Apply to riverine systems only	<2 parts per thousand (ppt)			
	2 to 3 parts per thousand (ppt)			
	4 to 5 parts per thousand (ppt)	N/A	W-2 Melaleuca (0.14 acres)	W-3 Cow Trail Area (0.04 acres)
	>5 parts per thousand (ppt)			
	6 to 8 parts per thousand (ppt)			
	9 to 13 parts per thousand (ppt)			
	14 to 16 parts per thousand (ppt)			
	>16 parts per thousand (ppt)			
	17 to 19 parts per thousand (ppt)			
	20 to 22 parts per thousand (ppt)			
	23 to 25 parts per thousand (ppt)			
	>25 parts per thousand (ppt)			
	26 to 41 parts per thousand (ppt)			
42 to 46 parts per thousand (ppt)				
47 to 51 parts per thousand (ppt)				
>51 parts per thousand (ppt)				
bottom (lower) third between 12 to 25 ppt				
middle third between 5 to 11 ppt				
upper (top) third between 0 to 4 ppt				
bottom (lower) third between 25 to 32 ppt				
middle (lower) third between 6 to 24 ppt				
upper (top) third between 0 to 5 ppt				
bottom (lower) third between 30 to 40 ppt				
middle third between 8 to 29 ppt				
upper (top) third between 0 to 7 ppt				
bottom (lower) third between 35 to 50 ppt				
middle third between 10 to 34 ppt				
upper (top) third between 0 to 9 ppt				

Cumulative Score (SC)	9	7	13
Maximum Possible Score (MPS)	51.00	51.00	51.00
W.A.T.E.R. = Cumulative Score/Maximum Possible Score	0.18	0.14	0.25
Credits Required (SSI x WATER x Impact Acres)	0.10	0.02	0.01

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MILL CREEK AT COOPER CITY

Application No: 130321-12

Permit No: 06-06686-P

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- X Broward County Engineer
- X Central Broward Water Control District - Mike Crowley
- X Cooper City - Michael Bailey, P.E.
- X Div of Recreation and Park - District 5 - FDEP

OTHER INTERESTED PARTIES

- X Audubon of Florida - Charles Lee
- X Craven Thompson and Associates, Inc. - Adolfo Gonzalez, P.E., LEED AP
- X Land Aquisitions and Development - Jonathan Keith

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