PERMITTEE RESPONSIBLE OFFSITE MITIGATION AREA

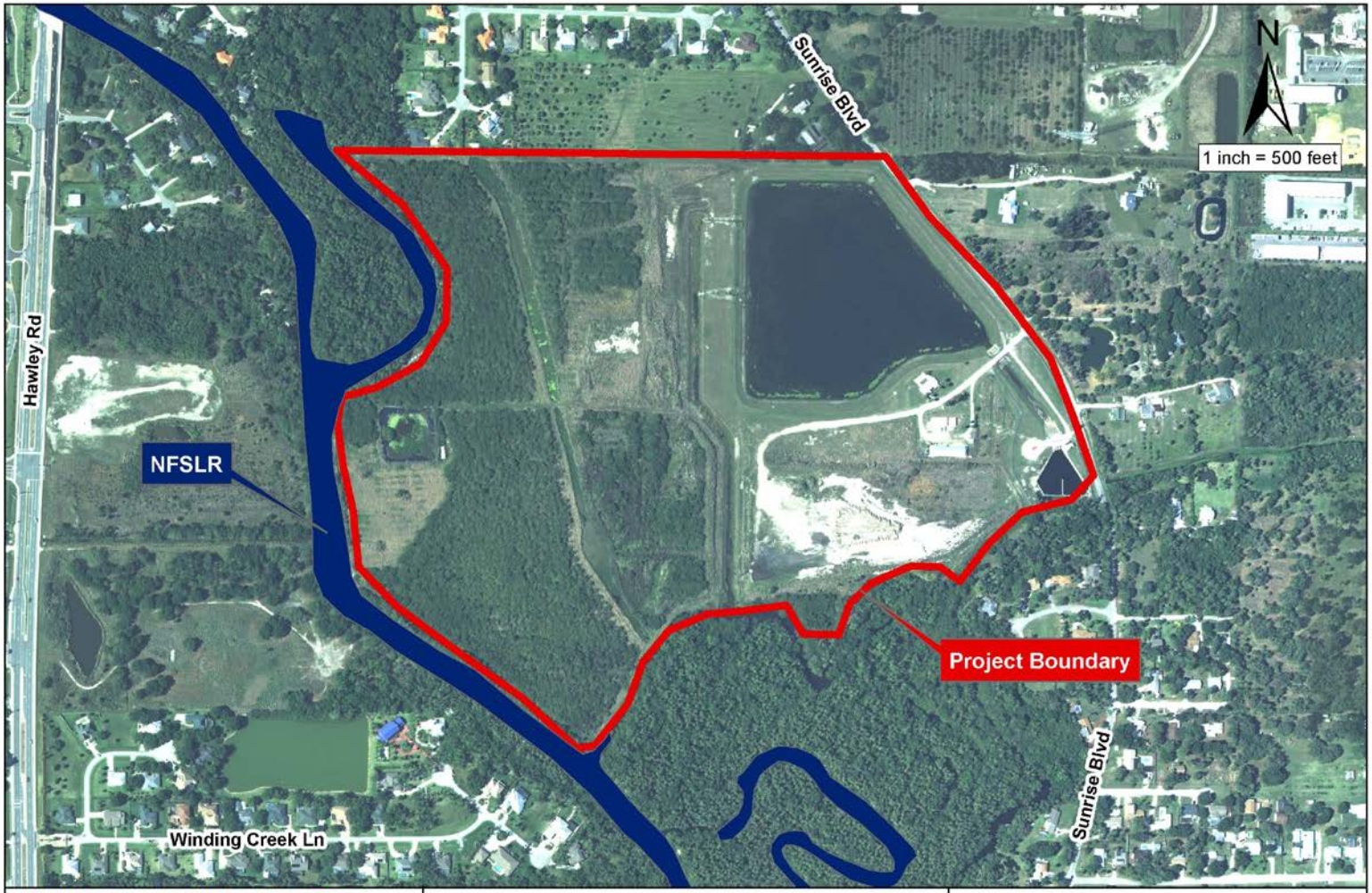
Platt's Creek Compensatory Mitigation
USACE Application No.: TBD

I. INTRODUCTION

The St. Lucie County (County), together with the City of Port St. Lucie (City), is requesting authorization of a "Permittee Responsible Offsite Mitigation Area" (PROMA) program known as the Platt's Creek Compensatory Mitigation (PCCM). The PCCM is located in the North St. Lucie drainage basin. The permittee responsible for PCCM is the St. Lucie County, whose address is 2300 Virginia Avenue, Ft. Pierce, FL 34982, with the City of Port St. Lucie as a co-permittee, whose address is 121 SW Port St. Lucie Boulevard, Port St. Lucie, FL 34984. The PCCM permittee is responsible for ensuring the overall operation and management of the PROMA is in accordance with the terms of this mitigation plan and associated US Army Corps of Engineers (USACE) and South Florida Water Management District (SFWMD) authorization.

The County initiated the Platt's Creek Water Quality and Wetland Restoration Project which, when completed, would provide water quality treatment for a 1,000+ acre drainage basin, eliminate agricultural runoff from 102 acres of active citrus groves directly adjacent to the North Fork of the St. Lucie River (NFSLR), restore/create 80+ acres of wetlands and habitat directly adjacent to Platt's Creek and the NFSLR, eliminate approximately 100 acres of developable land directly adjacent to the NFSLR, and provide natural storage and water purifying functions along the river's floodplain. The County permitted the site as a mitigation bank through the SFWMD in April 2003 (permit no. 56-0003-M) and received a permit extension in July 2008 for an additional five years (expires in July 2013). The County submitted an application to the USACE, but a construction permit was never issued. The 19.6-acre stormwater pond was constructed and is currently functioning; however, the remainder of the Platt's Creek Initiative was unfunded and the County put the project on hold for an unspecified amount of time.

The City of Port St. Lucie and St. Lucie County have entered into a Memorandum of Agreement (MOA) to establish the PCCM as a permittee responsible mitigation site (**Attachment A**). The City will use credits associated with approximately half of the site to be used towards the regulatory wetland mitigation for the Crosstown Parkway Extension should a build alternative be selected during the Environmental Impact Statement (EIS) process. The County will use the remaining credits towards future projects with unavoidable wetland impacts. Based upon discussions with the SFWMD and USACE, a permit modification to permit no. 56-00003-M with the SFWMD and a new permittee responsible permit with the USACE will create the appropriate instrument to allow the completion of the permitting, design, and construction of the PCCM and provide sufficient mitigation credits for the Crosstown Parkway Extension should a build alternative be selected.



Platt's Creek Mitigation Site
St. Lucie County
City of Port St. Lucie
56-0003-M

Aerial Map

Source: FGDL

Figure 1

American

The PCCM includes 82.4 acres of fallow citrus grove and a 19.6 acre stormwater treatment facility. This parcel is adjoined by Platt's Creek, a natural tributary of the North Fork St. Lucie River (NFSLR) to the south, the NFSLR to the west, Sunrise Boulevard to the east and Raintree Forest residential development to the north (**Figure 1**). The project is located in Section 33, Township 35S, and Range 40E. The existing topography on the site ranges from 10' to 2.5' NGVD. According to historic aerial photographs and adjacent property community types, the historical natural communities on site included bottomland forest, freshwater marsh, hydric hammock, and pine flatwood.

The PCCM site had a direct connection or formed part of the NFSLR head waters. Historic vegetative cover and topographic information of the project area indicates that the historic hydrology was fed by runoff from the surrounding parcels that sheet-flowed toward the NFSLR floodplain prior to the construction of the existing drainage features. Beginning in the 1920's, dredging activities commenced within the NFSLR and the surrounding areas to provide drainage and flood control in the basin. After the construction of the drainage systems the hydrologic regime of the site was significantly altered. The site does not receive sheet flow from adjacent parcels and the majority of the water onsite comes from rain events and/or ground water seepage. The agriculture operation set up on site has lowered the groundwater table and altered the historic hydrologic condition and native plant communities on the site.

Currently, there is a 15.83 acre wet detention system on site. The system was designed to capture and treat the "first flush" of runoff from the Platt's Creek Watershed (approximately 1,100 acres). In addition, it was designed to provide additional water to the new mitigation area. Flow from the basin passes through an 84" culvert under Sunrise Blvd. The flow is then routed into a sump through a pump station and ultimately into the storm water detention system. The sump has walls at varying elevations that act as weirs to retain low flow events and allow for bypass for higher flows. The pump station has four axial flow pumps (two 18 cfs pumps and two 67 cfs pumps) with varying on-off elevations to react with the flow from the storm event.

The system is designed to operate as follows:

- Base Flow: The sump has a 72"x4" rectangular orifice at elevation 1.40' NGVD. This orifice conveys Platt Creek base flow to pass through the sump.
- Capture of First Flush: As the flow increases from the creek, the pumps will turn on in sequence. Pump 1 (18 cfs) turns on at elevation 1.70' and turns off at 0.50'; pump 2 (18 cfs) turns on at elevation 2.0' and off at 0.80'; pump 3 (67 cfs) turns on at 2.30' and off at 0.90' and pump 4 (67 cfs) turns on at 2.50' and off at 1.0'. All referenced elevations are datum NGVD 1929. The capacity of the four pumps is 170 cfs.
- Flow exceeding pumps: A weir at elevation 3.20' allows the excess flow to bypass the system and is discharged back to Creek.
- Extreme flows: Any storm greater than the 5-year event passes over a weir at elevation 4.0'. The bypass was designed so that the upstream or downstream flood impacts are unchanged.

As designed, the system captures the first 0.66 inches of runoff from a storm event. The pond has two discharges at an elevation of 6.1 and 6.2 which discharge into an adjacent swale and

back into Platt's Creek downstream of the pump station. The required treatment volume is 59.0 acre-feet which is provided in the pond.

The proposed mitigation activities within the PCCM include a total of 47.87 acres of wetland creation. The specific habitat types to be created are the following: 13.54 acres of Hydric Hammock (FLUCCS 624), 23.10 acres of Depression Marsh (FLUCCS 641), and 12.70 acres of Floodplain Swamp (FLUCCS 615). In addition, two Mesic Flatwoods (FLUCCS 411) areas, totaling 13.65 acres, will be provided as a buffer between the mitigation site and the stormwater facility, development to the north and Sunrise Boulevard.

A ledger of available and secured (used) functional units will be kept by the County and will be submitted to the USACE and SFWMD in conjunction with annual monitoring reports for the PCCM. Once success is reached at PCCM, the County will continue to submit an updated ledger on an annual basis in accordance with the dates contained in the reporting schedule of the PCCM Mitigation Area Monitoring Plan.

Proposed habitat types are based on the Florida Natural Areas Inventory *Guide to the Natural Communities of Florida*, 2010 Edition and include Depression Marsh, Hydric Hammock, Floodplain Swamp and Mesic Flatwoods. As described in this document the Depression Marsh consists of a usually rounded depression in sand substrate with herbaceous vegetation. Characteristic species within depression marshes include, but are not limited to, longleaf threeawn, sand cordgrass, peelbark St. John's wort, maidencane, sawgrass, pickerlweek, and blue maidencane. Rare animal species include several amphibians, particularly those that require breeding sites that are free of predatory fishes including the gopher frog (*Rana capito*). More than a dozen other species of frogs and salamanders also breed regularly in depression marshes, and these constitute an important part of the food supply for wading birds and snakes, including the rare eastern indigo snake (*Drymarchon couperi*). Other rare species using this habitat include the Florida sandhill crane (*Grus canadensis pratensis*) and round-tailed muskrat (*Neofiber alleni*). Wading birds, in addition to feeding in depression marshes, use clumps of willows or other trees in the center for roosting or nesting. Additional uses by wildlife can be found in Section IX of this document.

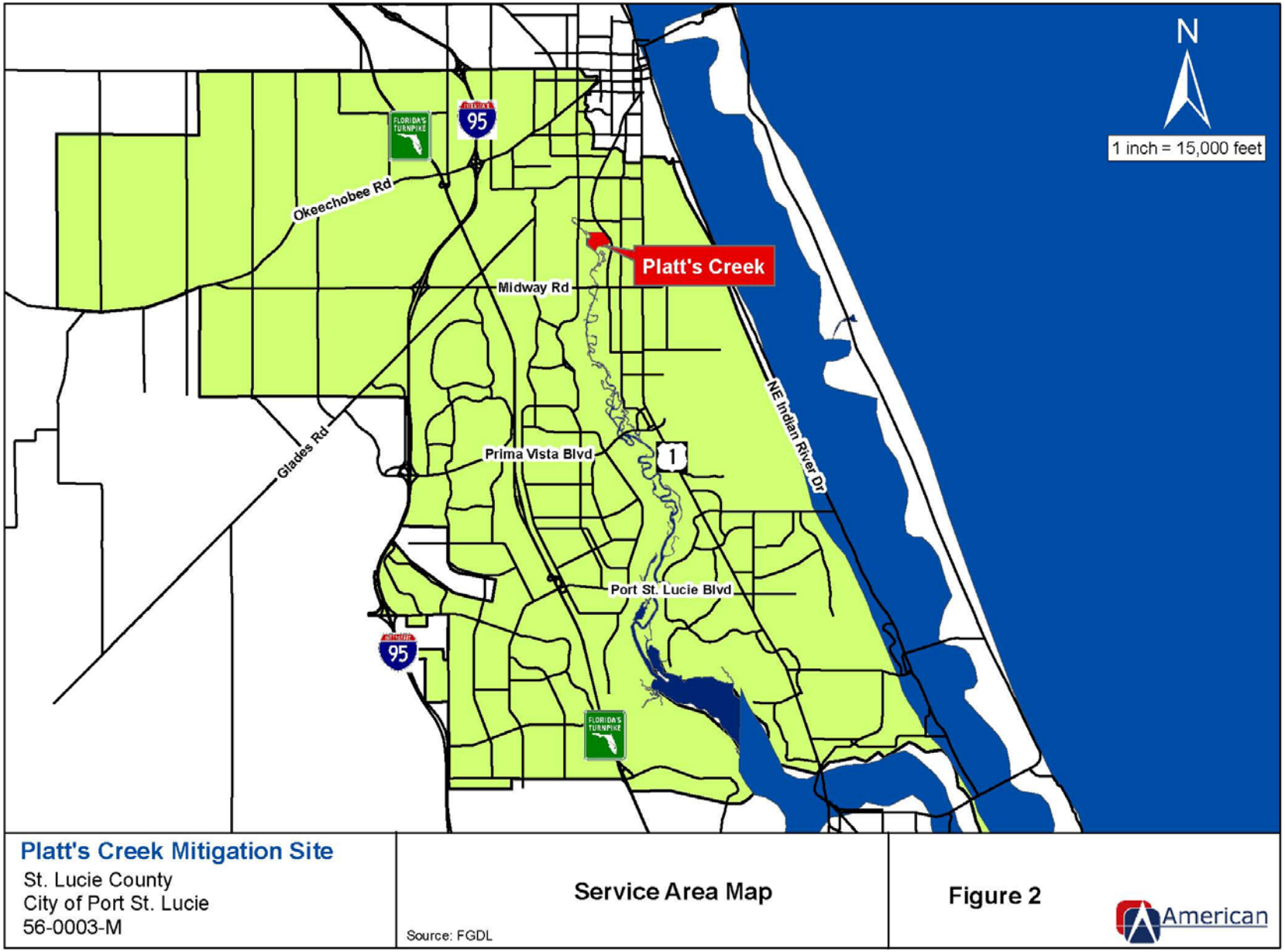
Hydric Hammock is an evergreen hardwood and/or palm forest with a variable understory typically dominated by palms and ferns occurring on moist soils. While species composition varies, the community generally has a closed canopy of oaks and palms, an open understory, and a sparse to a moderate groundcover of grasses and ferns. Characteristic species within hydric hammocks include, but are not limited to, swamp laurel oak, live oak, cabbage palm, and red cedar. Species composition is mainly influenced by flooding patterns. Hydric hammock is inundated only for short periods following heavy rains. The normal hydroperiod is seldom over 60 days per year. Hydric hammock is important habitat and foraging grounds for an array of common wildlife species as well as rare animals including eastern indigo snake, limpkin (*Aramus guarauna*), short-tailed hawk (*Buteo brachyurus*), swallow-tailed kite (*Elanoides forficatus*), yellow-crowned night-heron (*Nyctanassa violacea)*, and black-crowned night-heron (*Nycticorax nycticorax)*. These hammocks also provide valuable habitat for game animals that rely on the large production of oak mast. Additional uses by wildlife can be found in Section IX of this document.

Floodplain Swamp is a closed-canopy forest of hydrophytic trees occurring on frequently or permanently flooded hydric soils adjacent to stream and river channels and in depressions and oxbows within floodplains. Often, floodplain swamps immediately border the stream or river channel. Characteristic species within floodplain swamps include cypress and tupelo species. Though no cypress or tupelo is being proposed within the Platt's Creek site, other canopy trees often found in floodplain swamps include water hickory (*Carya aquatica*), overcup oak (*Quercus lyrata*), red maple (*Acer rubrum*), green ash (*Fraxinus pennsylvanica*), American elm (*Ulmus americana*), and swamp laurel oak (*Q. laurifolia).* A groundcover of flood tolerant ferns and herbs are found in some floodplain swamps, including lizard's tail (*Saururus cernuus)*, savannah panicum (*Phanopyrum gymnocarpon*), and royal fern (*Osmunda regalis* var. *spectabilis*). Inundation is seasonal and usually prolonged. During dry summer months when evapotranspiration rates increase, surface water may be entirely lacking. Floodplain swamp communities provide important wildlife habitat, contribute to flood attenuation, and help protect the overall water quality of streams and rivers. Rare animals that may be found in floodplain swamp include American alligator (*Alligator mississippiensis,)* yellow-crowned night-heron (*Nyctanassa violacea)*, black-crowned night-heron (*Nycticorax nycticorax)*, limpkin (*Aramus guarauna*), swallow-tailed kite (*Elanoides forficatus*), wood stork (*Mycteria americana*), and the big brown bat (*Eptesicus fuscus).* Additional uses by wildlife can be found in Section IX of this document.

Mesic flatwoods are characterized by an open canopy of tall pines and a dense, low ground layer of low shrubs, grasses, and forbs. Characteristic species within mesic flatwoods include, but are not limited to, slash pine, saw palmetto, gallberry, dwarf live oak, and wiregrass. The soils are alternately droughty during dry periods and saturated, or even inundated, after heavy rains. Mesic flatwoods are important habitat and foraging grounds for an array of common wildlife species as well as rare animals including the gopher frog, gopher tortoise (*Gopherus polyphemus*), Eastern diamondback rattlesnake (*Crotalus adamanteus*), Eastem indigo snake, Florida pine snake (*Pituophis melanoleucus mugitus*) Sherman's fox squirrel (*Sciurus niger shermani*). Additional uses by wildlife can be found in Section IX of this document.

Proposed Service Area

The proposed mitigation service area (MSA) for the PCCM consists of the North St. Lucie River Basin (**Figure 2**). The North St. Lucie River Basin is a large drainage basin and encompasses approximately 123,668.4 acres of land. The rationale for determining the proposed service area is presented later in this document. All wetlands within the Savannas Preserve State Park contained within the North St. Lucie River Basin are excluded from the MSA. The rationale for determining the proposed service area is presented later in this document.


N
1 inch = 15,000 feet
Okeechobee Rd
Midway Rd
Platt's Creek
Glades Rd
Prima Vista Blvd
NE Indian River Dr
Port St. Lucie Blvd
95
1
Platt's Creek Mitigation Site
St. Lucie County
City of Port St. Lucie
56-0003-M
Service Area Map
Source: FGDL
Figure 2
American

II. OBJECTIVES (1)

The purpose of the PCCM, as taken from the Federal Register Volume 73, No. 70, dated April 10, 2008, "Compensatory Mitigation for Losses of Aquatic Resources," is the establishment (creation) of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved. The overall goal of the PCCM is to improve the wildlife elements, vegetation, water quality, and hydrological conditions of the local watershed. This goal will be achieved by transforming a former citrus grove into a viable wetland system.

The objectives of the PCCM are as follows:

a) Provide compensatory mitigation for the Crosstown Parkway Extension Project and future improvement projects implemented by the County that impact freshwater wetlands by constructing the PCCM site to meet current and expected demands for credits within the service area. (See **Figure 2**).
b) Provide compensatory mitigation for impacts to foraging habitat for the endangered wood stork associated with the Crosstown Parkway Extension Project.
c) Minimize the temporal loss of wetlands within the service area by developing the PCCM in advance of mitigation needs.
d) Maintain a level of accountability such that mitigation obligations assumed by projects identified by St. Lucie County are met in a timely and effective manner.
e) Construct a watershed based restoration project that increases aquatic resource functions and services.
f) Improve water quality within the watershed and specifically within the NFSLR.

Wetland functions will be achieved through the restoration and creation of 49.34 acres of wetland habitat within former citrus groves while providing wildlife habitat and water quality benefits to the NFSLR.

The PCCM site had a direct connection or formed part of the NFSLR head waters. Historic vegetative cover and topographic information of the project area indicates that the historic hydrology was fed by runoff from the surrounding parcels that sheet-flowed toward the NFSLR floodplain prior to the construction of the existing drainage features. Beginning in the 1920's, dredging activities commenced within the NFSLR and the surrounding areas to provide drainage and flood control in the basin. After the construction of the drainage systems the hydrologic regime of the site was significantly altered. The site does not receive sheet flow from adjacent parcels and the majority of the water onsite comes from rain events and/or ground water seepage. The agriculture operation set up on site has lowered the groundwater table and altered the historic hydrologic condition and native plant communities on the site.

The creation of the following: 13.54 acres of Hydric Hammock (FLUCCS 624), 23.10 acres of Depression Marsh (FLUCCS 641), and 12.70 acres of Floodplain Swamp (FLUCCS 615) will help to reverse the historic trend of wetland habitat loss, reestablish wildlife habitat, and partially offset the effects of current and future transportation improvements that will occur within the North St. Lucie River Basin. In addition, a large mesic flatwoods area will be provided as a buffer between the mitigation site and adjacent development further improving the location and landscape support.

III. PROJECT SITE SELECTION (2)

The PCCM service area is proposed to include the entire North St. Lucie River Basin, with the exception of any wetlands within the Savannas Preserve State Park contained within the North St. Lucie River Basin. These wetlands are excluded from the MSA. The site was selected based on objective criteria set forth in the SFWMD site selection paramaters and federal guidelines for siting mitigation banks, as this was originally permitted as a mitigation bank. The site was evaluated based on criteria including:

- Location in a service area where the wetland impacts justify the demands for a mitigation area.
- Offers opportunities to restore the site to its historical functional condition through exotic removal, hydroperiod restoration, and re-vegetation.
- Proximity to high value habitats and significant protected areas, such as the NFSLR and Savannas Preserve State Park.
- Restores viable and sustainable ecological and hydrological functions within the proposed MSA.
- Ability to improve wildlife habitat and contribute to use by endangered and threatened species.

The PCCM was chosen for it's ability to complement ongoing natural resource programs targeting the protection, restoration, and enhancement of water quality and wildlife habitats within the St. Lucie River and the Indian River Lagoon (IRL) Systems. The PCCM would be utilized to off-set wetland impacts in an area that is regionally significant and establishes high quality, uninterrupted habitat linking other natural preserves along the NFSLR, an Outstanding Florida Water (OFW). The mitigation proposal furthers existing natural resource plans through the restoration of wetland communities and long term public management of lands bordering two natural water bodies, the NFSLR and Platt's Creek.

Benefits of using the PCCM include:

- Re-establishment of wetland and upland habitat diversity directly adjacent to the NFSLR and Platt's Creek;
- Provision of wetland habitat coverage for threatened, endangered, or species of special concern;
- Establishment of feeding, breeding and nursery habitat for fish;
- Hydroperiod restoration and re-vegetation of the NFSLR floodplain;
- Restoration of natural storage and water purifying functions of the NFSLR floodplain;
- Furtherance of the overall objectives for water management in the watershed region;
- Closure of a gap in the NFSLR greenway;
- Long term public management of a restored natural area in the ecoregion/service area of the mitigation project.

Restoration of the historical natural communities along the upper reaches of the NFSLR will assist in improving the water quality of the St. Lucie Estuary (SLE) and IRL, enhance the fisheries habitat and provide an ecologically beneficial area to off-set unavoidable wetland impacts within the service area. Without the implementation of the proposed restoration plan, the

watersheds will not benefit from the improved water quality and enhanced wetland functions this project will provide. Additionally, the waters will continue to be diverted from the floodplain and the site could potentially become urban development in the future.

Implementation of the proposed project will potentially further goals associated with the IRL Surface Water Improvement and Management (SWIM) Plan, St. Lucie County Comprehensive Plan, the IRL Comprehensive Management Plan, and the USACE Central and South Florida Study by eliminating agriculture runoff, attenuating flow, restoring wetland and upland habitat, and restoring natural storage and water purifying functions along the river's floodplain. The proposed restoration of the PCCM plays an integral part in enhancing the ecological value of the NFSLR corridor and provides mitigation that off-sets unavoidable wetland impacts in a manner that provides true ecological benefits to the region.

The PCCM site location shares various resources with the proposed Crosstown Parkway Extension Project and is in the same Hydrologic Unit Code (HUC) (North St. Lucie , HUC – 03090202) as the Crosstown Parkway Extension. The proposed Crosstown Parkway Extension crosses the NFSLR, which is directly connected to the PCCM.

The project site is located adjacent to the NFSLR and Savannas Preserve State Park and less than one mile north of the NFSLR Aquatic Preserve. The project will create habitat that supports and attracts numerous wildlife guilds that currently exist within the Aquatic Preserve. A historical bird rookery exists in the Aquatic Preserve and over fifty species of birds have been documented on the preserve, including migratory, wading and songbirds. The created forested wetlands (Hydric Hammock and Floodplain Swamp) will establish approximately 26.24 additional acres which will provide habitat for the following listed species that occupy the Aquatic Preserve located less than one mile away:

- Southeastern American kestrel (*Falco sparverius paulus*)
- Bald eagle (*Haliaeetus leucocephalus*)
- Osprey (*Pandion haliaetus*)
- Wood stork (*Mycteria americana*)
- American alligator (*Alligator mississippiensis*)
- Eastern indigo snake (*Drymarchon corais couperi*)

The created Depression Marsh system will provide approximately 23.10 additional acres of habitat support for the following listed species that occupy the Aquatic Preserve:

- Florida sandhill crane (*Grus canadensis pratensis*)
- Limpkin (*Aramus guarauna*)
- Little blue heron (*Egretta caerulea*)
- Roseate spoonbill (*Ajaia ajaja*)
- Snail kite (*Rostrhamus sociabilis plumbeus*)
- Snowy egret (*Egretta thula*)
- Tricolored Heron (*Egretta tricolor*)
- White ibis (*Eudocimus albus*)
- Wood stork (*Mycteria americana*)
- American alligator (*Alligator mississippiensis*)

The location of the PCCM, directly adjacent to the NFSLR, provides an opportunity to restore, preserve and manage a significant portion of the area's ecosystem. The proposed mitigation activities will restore the wetland functions of this parcel by recreating the natural wetland communities that historically existed and that have been eliminated as a result of the past agricultural activities onsite. The connection to the NFSLR will provide additional feeding, breeding and nursery habitat to a number of aquatic species. Also, the restoration of this parcel to native wetland communities will provide benefits to the receiving waters of the NFSLR by the elimination of any potential future agricultural runoff from citrus grove operations, restoration of the hydroperiod and re-vegetation of the floodplain habitat of the NFSLR. It will also result in the restoration of the natural storage and water purifying functions of the NFSLR floodplain.

IV. SITE PROTECTION INSTRUMENT(3)

Please see attached Warranty Deed, Deed of Conservation Easement and Memorandum of Agreement (MOA) between St. Lucie County and the City of Port St. Lucie (**Attachment B**). Attachment C contains the financial responsibility agreement of the County to demonstrate perpetual management financial assurance. The conservation easement includes the implementation of public access to the site for bird watching, hiking and other passive recreation at some time in the future.

V. BASELINE INFORMATION (4)

The PCCM includes 82.4 acres of fallow citrus grove and a 19.6-acre stormwater treatment facility. This parcel is adjoined by Platt's Creek, a natural tributary of the North Fork St. Lucie River (NFSLR) to the south, the NFSLR to the west, Sunrise Boulevard to the east and Raintree Forest residential development to the north. No wetlands exist on site though there is a lined pond system on site that will be removed. In addition, two man-made canals are located onsite running north to south. According to historic aerial photographs and adjacent property community types, the historical natural communities on site included mesic flatwood forests, wetland mixed forests, and depression marshes. The PCCM exists as uplands with a land use designation as citrus (FLUCCS 221). Currently the site is largely made up of Brazilian pepper (*Schinus terebinthifolius*) with only a few citrus trees remaining.

The soil mapping units found on the site are the following: Wabasso sand (48), Akona sand (2), Susana sand (43), Riviera fine sand (38), and Arents 0 to 5% slopes (4). All the soils onsite exhibit hydric soil characteristics and are, or have inclusions of, hydric soils. The existing topography of the site ranges from 10' to 2.5'.

The PCCM site had a direct connection or formed part of the NFSLR head waters. Historic vegetative cover and topographic information of the project area indicates that the historic hydrology was fed by runoff from the surrounding parcels that sheet-flowed toward the NFSLR floodplain prior to the construction of the existing drainage features. Beginning in the 1920's, dredging activities commenced within the NFSLR and the surrounding areas to provide drainage and flood control in the basin. Straightening of the river channel resulted in cutting off oxbows from the main channel and producing spoil banks along the edges of the dredged area. The artificially high banks prohibit the natural inundation of the floodplain and many areas have been colonized by invasive/exotic species, particularly Brazilian pepper. After the construction of the drainage systems, the hydrologic regime of the site was significantly altered. The site does not

receive sheet flow from adjacent parcels, and the majority of the water onsite comes from rain events and/or ground water seepage. The agriculture operation set up on site has lowered the groundwater table and altered the historic hydrologic condition and native plant communities on the site.

The stormwater facility onsite was designed to capture the first 0.66 inches of runoff from a storm event. The pond has two discharges at an elevation of 6.1' and 6.2' NGVD which discharge into an adjacent swale and back into Platt's Creek downstream of the pump station. The required treatment volume is 59.0 acre-feet which is provided in the pond.

VI. DETERMINATION OF FUNCTIONAL GAIN UNTIS (5)

The City of Port St. Lucie and St. Lucie County have entered into a MOA to establish the PCCM as a permittee responsible mitigation site. The City will use functional gain units associated with approximately half of the site to be used towards the regulatory wetland mitigation for the Crosstown Parkway Extension should a build alternative be selected during the EIS process. The County will use the remaining units towards future projects with unavoidable wetland impacts.

The proposed mitigation activities within the PCCM include a total of 49.34 acres of wetland creation. The specific habitat types to be created are the following: 13.54 acres of Hydric Hammock (FLUCCS 624), 23.10 acres of Depression Marsh (FLUCCS 641), and 12.70 acres of Floodplain Swamp (FLUCCS 615). In addition, two flatwoods areas, totaling 13.65 acres, will be provided as a buffer between the mitigation site and the stormwater facility, development to the north and Sunrise Boulevard.

For the original permit for the site as a mitigation bank, the Wetland Rapid Assessment Procedure (WRAP) (SFWMD Technical Publication REG-001, 2nd Edition, April 1999) was utilized as the functional assessment tool to evaluate the existing and anticipated conditions of the wetland areas. It was determined that the site would generate 69.51 credits. These 69.51 credits would offset 34.75 WRAP units of impact. The functional value, time lag and risk assessments can be viewed as part of the original permit application (56-00003-M).

This permit modification to the SFWMD permit and USACE permit application, will modify the application from a mitigation bank to a PROMA and will convert the functional gain units associated with the PCCM to the Uniform Mitigation Assessment Method (UMAM, Chapter 62-345, Florida Administrative Code).

Based on a meeting held on January 10, 2012 with the USACE, SFWMD, and NMFS, below is a description of the UMAM scores. A separate analysis was done for the USACE and the SFWMD to account for the differences in time lag between the two agencies.

USACE DETERMINATION OF FUNCTIONAL GAIN UNITS

Depression Marsh

The UMAM analysis included a perpetual Risk factor of 1.25 (low risk) and a Time lag of 3 years (1.0341). A score of 9 was given for all three categories of wetland function: location and landscape support, water environment, and community structure. Rationale for this scoring is provided below with additional information shown in the Success Criteria section discussed later in this document.

The rationale behind the score of 9 for location and landscape support includes the following:

- Assessment area bordered by floodplain swamp and hydric hammock.
- Site will enhance the NFSLR to west, Platt's Creek and SFWMD wetland property to the south, and aquatic preserve to the south.
- Wildlife access to and from the site has minimal limitations based on location adjacent to NFSLR and Platt's Creek. Also, natural wetland habitat associated with the river located to the south.
- Land uses outside the assessment area have minimal adverse impacts on fish and wildlife
- Downstream or other hydrologically connected habitats are critically or solely dependent on discharges from the assessment area and could suffer severe adverse impacts if the quality or quantity of these discharges were altered.

The rationale behind the score of 9 for water environment includes:

- Predicted water levels and flows will provide appropriate hydrologic function.
- Site will be hydrated through the pond discharge, and the NFSLR.
- The water depth will be maintained at 18 inches. The maximum elevation the water will reach in the depression marsh will be 4.0' before being discharged into the floodplain swamp via v-notched weirs.
- The bottom of each system will be over excavated by six inches and backfilled with improved soil up to an elevation of six inches above the SHWE so in times of a drought, the improved soil will retain more moisture to assist in species survival.
- The proposed site will have a minimum of 180 days of soils saturation.
- Soil erosion measures will be implemented.
- Vegetation will be monitored to ensure it shows no signs of hydrologic stress. Corrective measures will be implemented if required including planting additional trees and watering.
- Plant community composition will be monitored and maintained to ensure 80% or greater total groundcover strata made up of facultative wet and obligate wetland species at five years.

The rationale behind the score of 9 for community structure includes the following:

- Mitigation site will be maintained free of exotics and contain less than 10% nuisance species.
- Species to be planted are appropriate and desirable species for the community type.
- Land management practices are optimal for long term viability of the plant community.
- Plant community composition will be monitored and maintained to ensure 80% or greater total groundcover strata made up of facultative wet and obligate wetland species at five years.

Hydric Hammock

The UMAM analysis included a Risk factor of 2 (moderate risk) and a Time lag of 20 years (1.3654). A score of 8 was given for location and landscape support and water environment. A score of 7 was given to community structure. Rationale for this scoring is provided below with additional information shown in the Success Criteria section discussed later in this document.

The rationale behind the score of 8 for location and landscape support includes the following:

- Assessment area surrounded by depression marsh to the west.
- A buffer of pine flatwoods will be provided on the eastern portion of the site separating the mitigation area from the stormwater pond, onsite facilities, and Sunrise Boulevard.
- Site will enhance the NFSLR to west, Platt's Creek and SFWMD wetland property to the south, and aquatic preserve to the south.
- Wildlife access to and from the site has minimal limitations based on location adjacent to NFSLR and Platt's Creek. Also, natural wetland habitat associated with the river located to the south.
- Land uses outside the assessment area have minimal adverse impacts on fish and wildlife
- Downstream or other hydrologically connected habitats are critically or solely dependent on discharges from the assessment area and could suffer severe adverse impacts if the quality or quantity of these discharges were altered.
- The proposed uplands are located to provide optimal protection of wetland functions.

The rationale behind the score of 8 for water environment includes:

- Predicted water levels and flows will provide appropriate hydrologic function.
- Site will be hydrated through the pond discharge, and the NFSLR.
- The elevation within the hydric hammock varies between 3.5 and 4.6 feet. The seasonal high water elevation is set at 4.10 feet NGVD.
- The proposed site will have a minimum of 60 days of soils saturation.
- The bottom of each system will be over excavated by six inches and backfilled with improved soil up to an elevation of six inches above the SHWE so in times of a drought, the improved soil will retain more moisture to assist in species survival.
- Soil erosion measures will be implemented.
- Vegetation will be monitored to ensure it shows no signs of hydrologic stress. Corrective measures will be implemented if required including planting additional trees and watering.

The rationale behind the score of 7 for community structure includes the following:

- Mitigation site will be maintained to be free of exotics and contain less than 10% nuisance species.
- Species to be planted are appropriate and desirable species for the community types.
- Land management practices are optimal for long term viability of the plant community.
- Plant community composition will be monitored and maintained to ensure 90% survival of trees, and 50% total coverage of vegetation considered facultative wet or obligate at five years for forested systems.
- Upland buffer will also provide habitat and life history support for numerous wildlife species in the wetlands.

Floodplain Swamp

The UMAM analysis included a Risk factor of 2 (moderate risk) and a Time lag of 20 years (1.3654). A score of 9 was given for location and landscape support and water environment. A score of 8 was given to community structure. Rationale for this scoring is provided below with additional information shown in the Success Criteria section discussed later in this document.

The rationale behind the score of 9 for location and landscape support includes the following:

- Assessment area directly adjacent to the NFSLR to west and depression marsh to the east.
- A neighborhood exists to the north and is separated by a fence though only a small portion of the assessment area is adjacent to this neighborhood.
- Site will enhance the NFSLR to west, Platt's Creek and SFWMD wetland property to the south, and aquatic preserve to the south.
- Wildlife access to and from the site has minimal limitations based on location adjacent to NFSLR and Platt's Creek. Also, natural wetland habitat associated with the river located to the south.
- Land uses outside the assessment area have minimal adverse impacts on fish and wildlife
- Downstream or other hydrologically connected habitats are critically or solely dependent on discharges from the assessment area and could suffer severe adverse impacts if the quality or quantity of these discharges were altered.
- The proposed uplands are located to provide optimal protection of wetland functions.

The rationale behind the score of 9 for water environment includes:

- Predicted water levels and flows will provide appropriate hydrologic function.
- Site will be hydrated through NFSLR and pond discharge.
- The assessment area will be graded to an elevation to provide a direct connection to the NFSLR and will contain a tidal influence.
- The highest bottom elevation in the floodplain swamp has been set at 1.90 NGVD.
- The proposed creek through the system is approximately 10' wide with a bottom elevation of -0.40 feet NGVD.
- The bottom of each system will be over excavated by six inches and backfilled with improved soil up to an elevation of six inches above the SHWE so in times of a drought, the improved soil will retain more moisture to assist in species survival.
- The proposed site will have a minimum of 100 days of soils saturation.
- Soil erosion measures will be implemented.
- Vegetation will be monitored to ensure it shows no signs of hydrologic stress. Corrective measures will be implemented if required including planting additional trees and watering.

The rationale behind the score of 8 for community structure includes the following:

- Mitigation site will be maintained to be free of exotics and contain less than 10% nuisance species.
- Species to be planted are appropriate and desirable species for the community types.
- Land management practices are optimal for long term viability of the plant community.
- Plant community composition will be monitored and maintained to ensure 90% survival of trees, and 50% total coverage of vegetation considered facultative wet or obligate at five years for forested systems.

UMAM Scoring – USACE

The UMAM relative functional gain determination calculations are as follows:

Δ = change in ecological condition (with mitigation improvements UMAM score minus existing conditions UMAM score)

(Δ/(Time Lag * Risk Factor)) = Relative Functional Gain (RFG)

RFG * Acres = Functional Gain (FG)

23.10 acres x ((0.90/(1.0341*1.25)) = 16.17 for Depression Marsh
13.54 acres x ((0.77/(1.3654*2.00)) = 3.79 for Hydric Hammock
12.70 acres x ((0.87/(1.3654*2.00)) = 4.06 for Floodplain Swamp

Therefore, the total potential UMAM mitigation functional gain units available at the PCCM were determined to be 24.02. The UMAM sheets are found in **Attachment D**.

SFWMD DETERMINATION OF FUNCTIONAL GAIN UNITS

Depression Marsh

The UMAM analysis included a perpetual Risk factor of 1.25 (low risk) and a Time lag of 3 years (1.07). A score of 9 was given for all three categories of wetland function: location and landscape support, water environment, and community structure. Rationale for this scoring is provided above under the discussion for the USACE determination with additional information shown in the Success Criteria section discussed later in this document.

Hydric Hammock

The UMAM analysis included a Risk factor of 2 (moderate risk) and a Time lag of 11-15 years (1.46). A score of 8 was given for location and landscape support and water environment. A score of 7 was given to community structure. Rationale for this scoring is provided above under the discussion for the USACE determination with additional information shown in the Success Criteria section discussed later in this document.

Floodplain Swamp

The UMAM analysis included a Risk factor of 2 (moderate risk) and a Time lag of 20 years (1.68). A score of 9 was given for location and landscape support and water environment. A score of 8 was given to community structure. Rationale for this scoring is provided above under the discussion for the USACE determination with additional information shown in the Success Criteria section discussed later in this document.

UMAM Scoring – SFWMD

The UMAM relative functional gain determination calculations are as follows:

Δ = change in ecological condition (with mitigation improvements UMAM score minus existing conditions UMAM score)

(Δ/(Time Lag * Risk Factor)) = Relative Functional Gain (RFG)

RFG * Acres = Functional Gain (FG)

23.10 acres x ((0.90/(1.07*1.25)) = 15.48 for Depression Marsh
13.54 acres x ((0.77/(1.46*2.00)) = 3.52 for Hydric Hammock
12.70 acres x ((0.87/(1.68*2.00)) = 3.30 for Floodplain Swamp

Therefore, the total potential UMAM mitigation functional gain units for the SFWMD available at the PCCM were determined to be 22.30. The UMAM sheets are found in **Attachment E**.

Functional gain units available at the PCCM will be solely used for compensation for the Crosstown Parkway Extension Project and future projects indentified by the County and will not be available for purchase by private entities. These units could only be used if the SFWMD and USACE have determined the use of PCCM to be appropriate and the proposed impact site is located within the approved geographic service area of the PCCM.

The official ledger of available functional gain units will be maintained by both the USACE and SFWMD. Each permit application that proposes to use the PCCM would contain an up-to-date account of the units available, units used, and the number of units proposed to offset the project impacts. With the issuance of a SFWMD Environmental Resource Permit and Department of the Army permit authorizing wetland fill or dredge impacts and the use of the PCCM for mitigation, USACE and SFWMD would verify all changes to the credit balance.

The Ledger will contain the following information:

- ERP and Section 404 Dredge & Fill Permit numbers
- Name of project
- Date issued
- County/City Project Number
- Project location
- Amount of authorized impacts
- Amount of required compensatory mitigation
- Number of functional gain units applied toward project
- Remaining functional gain units for each habitat type

No additional mitigation values, in addition to, or above the previously identified UMAM units are available within the PCCM. Should any phase of construction of the project not be completed by the City, the City, County, SFWMD and USACE will re-evaluate the UMAM analyses, and functional gain units from the site.

For the Crosstown Parkway Extension project, below is a summary of the impacts associated with the project. Note that impacts to mangroves (FLUCCS 612) are being mitigated through credits at the Bear Point Mitigation Bank.

Direct Impacts – Crosstown Parkway Extension Project, Alternative 1C			
Assessment Area	**FLUCCS**	**Impact Acreage**	**Functional Loss**
AA2	6417	5.02	4.52
AA3	615	0.78	0.62
AA6	641	0.46	0.34
AA10	617	4.14	3.45
Total		10.58	**9.08**

Secondary Impacts – Crosstown Parkway Extension Project, Alternative 1C				
Assessment Area	**FLUCCS**	**Distance**	**Impact Acreage**	**Functional Loss**
AA2	6417	0-50'	3.21	0.64
AA2	6417	51-520'	9.51	0.63
AA3	615	0-50'	0.53	0.11
AA3	615	51-520'	1.92	0.06
AA4	615	0-50'	0.09	0.02
AA4	615	51-520'	1.86	0.06
AA6	641	0-50'	0.06	0.01
AA6	641	51-520'	0.00	0.00
AA10	617	0-50'	2.48	0.50
AA10	617	51-520'	8.82	0.29
Total			29.76	**2.38**

Total Impacts - Crosstown Parkway Extension Project – Alternative 1C				
Wetland Type	FLUCCS	Direct Impact Acreage	Secondary Impact Acreage	Functional Loss
Hydric Hammock	615	0.78	4.4	0.87
Freshwater Marsh	641	5.48	12.78	6.14
Hydric Flatwood	625	0	0	0
Floodplain Forest	617	4.14	11.3	4.24
Total				**11.25**

Functional gain units from the PCCM will be released for use upon the successful completion of construction. The as-built plans must be submitted, reviewed for compliance, and accepted in writing by the SFWMD and USACE prior to releasing the credits. The SFWMD and USACE will be notified two weeks prior to commencement of construction, and as elements of construction are completed. The City will notify the SFWMD and USACE within 30 days in writing and provide appropriate documentation when construction, planting, and baseline monitoring are complete. The SFWMD and USACE may conduct verifying site visits at any

time, although 24 hour notice shall be provided to St. Lucie County to ensure access. As-built drawings and a statement of certification will be provided to the SFWMD and USACE within 60 days of completion of construction activities. These drawings will be signed and sealed by a professional engineer registered in the State of Florida.

VII. MITIGATION WORK PLAN (6)

Geographic boundaries

The PCCM consists of 82.4 acres of former citrus grove located within the St. Lucie River Watershed. The PCCM is located within the unicorporated limits of St. Lucie County approximately 3 miles south of the City of Ft. Pierce, on the west side of Sunrise Boulevard along the waters of the NFSLR (**Figure 2**). Platt's Creek, a natural tributary of the NFSLR, forms the site's southern boundary. The Savannas Preserve State Park is also located to the south of the PCCM. A single family subdivision is adjacent to the northern boundary line, and a 6-acre Audubon Society preserve is located to the northwest. Access to the site is from the east via Sunrise Boulevard.

Construction Methods

See Platt's Creek Compensatory Mitigation Technical Specifications

Methods for Establishing Desired Plant Species

See Construction Plans

Grading Plans

See Construction Plans

Soil Management and Erosion Control Measures

See Construction Plans

Source of water

The new mitigation area will consist of the following: 13.54 acres of Hydric Hammock; 23.10 acres of Depression Marsh and 12.70 acres of Floodplain Swamp, as well as a 13.65 mesic flatwoods buffer. A geotechnical analysis was conducted for the site and provided to American in a report dated March 17, 2011. There were several hand bores done to determine the soil strata and the elevation of the ground water. The seasonal high water table was also determined to have a range of 3-4 feet below existing grade. Also, five monitoring wells were installed adjacent to the stormwater pond. Based on the information from the monitoring wells, the geotechnical report, the control elevation of the pond and the mean high water elevation (MHWE) of the NFSLR, a seasonal high water elevation (SHWE) was assigned to each area. Adjacent to the NFSLR, the SHWE was set at the elevation of the mean high tide elevation (1.40 feet NGVD), the elevation was set at 3.00 feet NGVD in the Depression Marsh, 4.10 in the Hydric Hammock and 5.51 in the perimeter flatwoods.

The discharge from the existing pond will be used to hydrate the mitigation area; however, the mitigation area will not depend on the pond discharge for hydration. When the pond discharges, the discharge will be conveyed through the mesic flatwoods and hydric hammock via overland flow. Then, it will reach a berm and discharge into the depression marsh. Once the depression

marsh reaches the designated discharge elevation of 3.5, it will discharge into the floodplain swamp. The floodplain swamp is directly connected to the NFSLR as shown on the plans.

The bottom of each system will be over excavated by six inches and backfilled with improved soil up to an elevation of six inches above the SHWE so in times of a drought, the improved soil will retain more moisture to assist in species survival. The bottom of each system will be a maximum of six inches above the seasonal high water table in each area. The highest bottom elevation in the floodplain swamp has been set at 1.90 NGVD; the elevation of the bottom of the depression marsh is 2.00 NGVD; and the elevation of the hydric hammock will vary from 3.5-4.6. The maximum elevation the water will reach in the depression marsh will be 4.5' before being discharged into the floodplain swamp via v-notched weirs.

The Floodplain Swamp will be directly connected to the NFSLR with a man made creek approximately 10' wide with a bottom elevation of -0.40' NGVD. Since the NFSLR is tidally influenced at this location, the canal will allow the river to flood the floodplain swamp at high tides and drain the floodplain swamp during low tide.

Plans to control invasives

Exotic and nuisance plant species will be controlled by physical and chemical means. Exotic plant maintenance will be performed by the permittee on a semiannual basis, and as needed, depending on conditions. Wetland and upland areas will be maintained free of listed exotic vegetation, as defined by the Exotic Pest Plant council. Nuisance vegetation will not exceed ten percent (10%) of the total vegetative coverage in any of the preserve areas after each maintenance activity and nuisance vegetation cannot exceed ten percent (10%) of coverage in any area of the mitigation site between maintenance activities. Bahia grass will be allowed within hydroseeded areas as shown on the plans to provide erosion control on the proposed berms.

VIII. MAINTENANCE PLAN (7)

The County proposes to monitor the success of the targeted community types with vegetative transects and monitoring stations. The parameters to be monitored include; desirable vegetative composition, desirable vegetative density, percent (%) of coverage of desired plant species, exotic and/or nuisance plant coverage, tree growth, wildlife utilization, fish and macroinvertebrate utilization, and performance of the hydrologic regime.

In order to measure and document the vegetative composition, ground cover, and tree growth within the PCCM, the County proposes to establish three (3) monitoring transects within the site. A vegetative sample quadrant (with a size of 10 meters x 10 meters) will be established every two hundred (200) feet. Each of the proposed transects will have a 4"x4"x24" concrete monument (hereon, monument), designed to indicate the transect's commencement point. Each monument will contain a metal plate that indicates the transect number, compass bearing, and date. All monuments will be located using a Global Positioning System (GPS) and its latitude and longitude location coordinates recorded. A panoramic photo station will be located at all monument locations. The proposed panoramic photo documentary of the mitigation areas will consist of panoramic photos (photographic capture zone will consist of no less than one hundred eighty (180) degrees of view). Each photo will contain a scaling pole designed to measure vegetative growth, and the photos will be included in the semiannual monitoring reports. The

applicant will conduct semiannual vegetation surveys of each of the transects during the five (5) year monitoring program. The results will be included in the semiannual monitoring reports and will be utilized to ensure the success criteria of the site are met.

As described above, exotic and nuisance plant species will be controlled by physical and chemical means. Exotic plant maintenance will be performed by the permittee on a semiannual basis, and as needed, depending on conditions. Wetland and upland areas will be maintained free of listed exotic vegetation, as defined by the Exotic Pest Plant council. Nuisance vegetation will not exceed ten percent (10%) of the total vegetative coverage in any of the preserve areas after each maintenance activity and nuisance vegetation cannot exceed ten percent (10%) of coverage in any area of the mitigation site between maintenance activities. Bahia grass will be allowed within hydroseeded areas as shown on the plans to provide erosion control on the proposed berms.

The wildlife utilization will be recorded via qualitative and quantitative measurements of wildlife species utilization of the mitigation areas. These measurements will be executed during the sampling iterations and will consist of the identification of observed wildlife and observed wildlife utilization (roosting, feeding, foraging, nesting and/or occasional transitory use). To perform the qualitative analysis of macroinvertebrates and aquatic wildlife species, such as fish, the applicant intends to use dip-nets, cast nets, and seines. The results of the wildlife utilization monitoring results will be included in the semiannual monitoring reports and will be utilized to ensure the success criteria of the site are met. The macroinvertebrate data will also be used to measure the success of the site in terms of hydrology.

To document the hydrologic iterations the applicant has placed data loggers within all of the proposed habitat areas. The data loggers location have been surveyed and the elevation referenced to NGVD. A rain data logger programmed to record rain events on a daily basis and equipped with a self-emptying collector bucket has also been installed within the premises. Documentation of the hydrologic information will be summarized graphically and included in the semiannual reports. Upon the completion of the five-year post-construction monitoring requirements, the project will revert to long-term site maintenance in perpetuity. The location of the data loggers can be found in the construction plans. The results will be included in the semiannual monitoring reports and will be utilized to ensure the success criteria of the site are met.

Hydrologic conditions will also be determined through the transects described above. Data will be acquired regarding plant health and hydrologic indicators per the *The Florida Wetlands Delineation Manual*. This data will also be included in the semiannual monitoring reports.

Long-Term Management:

Long-Term management of the PCCM includes the semiannual maintenance control of exotic and/or nuisance plant species. Wetland and upland areas will be maintained free of listed exotic vegetation, as defined by the Exotic Pest Plant council. Bahia grass will be allowed on the upland berms. Nuisance vegetation will not exceed ten percent (10%) of the total vegetative coverage in any of the preserve areas after each maintenance activity and nuisance vegetation cannot exceed ten percent (10%) of coverage in any area of the mitigation site between maintenance activities. Brazilian pepper, melaleuca (*Melaleuca quinquenervia*), and Australian pine (*Casuarina equisetifolia*) will be treated with an approved herbicide. The trees will be basal treated and

allowed to die in-place, or cut, stumped and removed from site. Other exotic and nuisance species will be treated with an approved herbicide (ie. rodeo) or pulled by hand. Exotic maintenance will be performed by the County on a semiannual basis, depending on the existing conditions.

St. Lucie County Board of County Commissioners is the entity responsible for the perpetual management of the mitigation areas.

IX. PERFORMANCE STANDARDS (8)

Success Criteria:

1. Wildlife Utilization:

A qualitative wildlife (birds, mammals, amphibians, and reptiles) utilization evaluation will be conducted during each monitoring iteration. Currently, the project site provides for minimal wildlife utilization since the site is an abandoned citrus grove that has been heavily encroached by Brazilian pepper. The mitigation and establishment of native vegetative communities is expected to provide support for various wildlife species that typically inhabit the NFSLR Preserve, including listed species and species of special concern. The observation, during monitoring transects, of an increase in the representation of species guilds associated with wetlands, as suggested and listed in the 'WRAP Addendum for Mitigation Banks,' will deem this parameter a success. The PCCM will also be used to offset impacts to the woodstork associated with the Crosstown Parkway Extension project. See attached Woodstork Biomass Analysis in **Attachment F**. Some of the anticipated listed wildlife species, species of special concern, and other wildlife species are listed below.

Common Name	Scientific Name	Federal/State Listing	On-Site Habitat
Tri-colored heron	Egretta tricolor	N / SSC	Depression Marsh
White ibis	Eudocimus albus	N / SSC	Depression Marsh
Woodstork	Mycteria Americana	E / E	Floodplain Swamp and Depression Marsh
Little blue heron	Egretta caerules	N / SSC	Depression Marsh
Sandhill crane	Grus canadenisis pratensis	N / T	Depression Marsh
Osprey	Pandion Haliaetus	N / SSC	Floodplain Swamp
Bald eagle	Hallaeetus leucocephalus	T / T	Floodplain Swamp and Hydric Hammock
Eastern indigo snake	Drymarchon corais couperi	T / T	Mesic Flatwoods
Pileated Woodpecker	Dryocopus pileatus	Not listed	Mesic Flatwoods and Floodplain Swamp
Sherman's fox squirrel	Sciurus niger chermani	N / SSC	Mesic Flatwoods and Floodplain Swamp
Green anole	Anolis carolinensis	Not listed	Mesic Flatwoods and Hammock
Green tree frog	Hyla gratiosa	Not listed	Mesic Flatwoods
Cotton mouse	Peromyscus	Not listed	Mesic Flatwoods

Common Name	Scientific Name	Federal/State Listing	On-Site Habitat
	gossypinus		
Raccoon	Procyon lotor	Not listed	Mesic Flatwoods and Floodplain Swamp
Warblers	Dendroica spp.	Not listed	Hydric Hammock
Flycatchers	Family tyrannidae	Not listed	Hydric Hammock
Gray squirrel	Sciurus carolinensis	Not listed	Hydric Hammock
Southern leopard frog	Rana utricularia	Not listed	Floodplain Swamp and Depression Marsh
Barred owl	Strix varia	Not listed	Floodplain Swamp
Salamander	Eurycea spp.	Not listed	Floodplain Swamp
Tree frog	Hyla spp.	Not listed	Mesic Flatwoods
Black racer	Coluber constrictor	Not listed	Mesic Flatwoods
Bobcat	Lynx rufus	Not listed	Mesic Flatwoods
Water snakes	Nerodia spp.	Not listed	Depression Marsh
Black-crowned night heron	Nycticorax nycticorax	Not listed	Depression Marsh
Yellow-crowned night heron	Nycticorax violaceus	Not listed	Depression Marsh

In addition, there are sixty-seven (67) known species of animals located in the North Fork State Buffer Preserve located north and south of the project site. In general, the increased hydroperiod is expected to benefit wading birds, including egrets, herons, wood storks, and the Florida sandhill cranes. The restored water storage and water quality functions of the project will also assist to enhance the adjacent aquatic habitats. Success criteria for wildlife utilization is described in the table below.

Success Criteria for Wildlife Utilization – All Habitats

Ecological Parameter	Year 2	Year 3	Year 4	Year 5
Qualitative evidence of wildlife utilization	Yes	Yes	Yes	Yes
Evidence of native wetland dependent amphibian/reptile species	Yes	Yes	Yes	6 species in 3 groups*
Evidence of native wetland dependent bird species	Yes	Yes	Yes	10 species in 3 groups**
Evidence of native wetland dependent mammal species	Yes	Yes	Yes	4 species
Evidence of native fish species in marsh and floodplain swamp habitat only	Yes	Yes	Yes	3 species

Wetland Overstory:

Currently, the project site consists of citrus grove and Brazilian pepper; therefore, wetland canopy is nonexistent. With the proposed project, the site is expected to establish native wetland communities: Floodplain Swamp, hydric hammock, and depression marsh. The success of the created wetland communities will be assessed during semiannual vegetation surveys and will meet the success criteria. The depression marsh area does not contain an overstory component; therefore, it will not be measured in terms of the wetland canopy. The success criteria for the wetland canopy in these communities will differ from the criteria for vegetation in the depression

marsh because the forested wetland areas will take longer to establish. Canopy in this case will be determined through tree size.

The success criteria for the wetland overstory are based on tree/plant survival, exotic/nuisance removal, wetland hydrology, ground cover, and tree growth. According to the Arbor Day Organization Tree Guide, rate of tree growth refers to the vertical increase in growth unless specified differently. The designation of slow growth rate means the plant grows 12" or less per year; medium growth rate refers to growth of 13 to 24" per year; and fast growth rate refers to growth of 25" or greater. Below is a table of typical growth rates for proposed tree species. This data was used to determine the success criteria for tree species. All proposed trees to be planted are one gallon in size. Each tree is assumed to have a height of two feet when planted.

Success Criteria for Forested Wetland Tree Growth

System/Tree Species		Growth Rate	Growth per year	Average tree size at 5 years	Trees to reach average height at 5 years
Floodplain Swamp					
	Pond Apple	Medium to Fast	25"	12.5'	50%
	Water Hickory	Slow	8" - 12"	5' - 7'	50%
	Pop Ash	Medium	13" - 24"	7.5' - 12'	50%
	Swamp Bay	Medium	13" - 24"	7.5' - 12'	50%
Hydric Hammock					
	Swamp Maple	Medium to Fast	25"	12.5'	50%
	Hackberry	Medium to Fast	25"	12.5'	50%
	Persimmon	Slow	8" - 12"	5' - 7'	50%
	Loblolly Bay	Medium	13" - 24"	7.5' - 12'	50%
	Laurel Oak	Fast	25"	12.5'	50%
	Cabbage Palm	Slow	8" - 12"	5' - 7'	50%

In addition, wetland and upland communities will be maintained free of listed exotic vegetation as defined by the Exotic Pest Plant Council. Nuisance vegetation will not exceed ten percent (10%) of the total vegetative coverage in any of the wetland communities. If the targeted coverage is not met by the specified year of monitoring, replanting of the appropriate species will occur.

Wetland groundcover:

Currently, the project site consists of citrus groves; therefore, wetland groundcover is nonexistent. With the proposed project, the site is expected to establish native wetland communities with a healthy groundcover. The success of the created wetland communities will be assessed during semiannual vegetation surveys and will meet the success criteria. These mitigation areas should attain 80% coverage of desirable obligate, facultative wet, and facultative vegetation by the end of the fifth year of monitoring. In addition, wetland communities will be maintained free of listed exotic vegetation as defined by the Exotic Pest Plant Council. Nuisance vegetation will not exceed ten percent (10%) of the total vegetative coverage in any of the wetland communities. If the targeted coverage is not met by the fifth year of monitoring, replanting of the appropriate species will occur.

Success Criteria Table for Wetland Groundcover

Interim Period	Mitigation Activity	Success Criteria
All Monitoring Periods	Exotic/Nuisance Removal	· ≤ 10% nuisance[1] vegetation cover[2] · 0% exotics[1]
First Year	Freshwater Marsh	· ≥ 20% of total groundcover strata consists of wetland vegetation[3]
	Hydric Hammock Floodplain Swamp	· ≥ 90% survival of planted trees · Herbaceous vegetation in groundcover strata ≥ 10% of total coverage
Second Year	Freshwater Marsh	· ≥ 40% of groundcover strata consists of wetland vegetation
	Hydric Hammock Floodplain Swamp	· ≥ 90% survival of planted trees · Herbaceous vegetation in groundcover strata ≥ 20% of total coverage
Third Year	Freshwater Marsh	· ≥ 70% of groundcover strata consists of wetland vegetation
	Hydric Hammock Floodplain Swamp	· ≥ 90% survival of planted trees · Herbaceous vegetation in groundcover strata ≥ 30% of total coverage
Fourth Year	Freshwater Marsh	· ≥ 70% of total groundcover strata consists of wetland vegetation
	Hydric Hammock Floodplain Swamp	· ≥ 90% survival of planted trees · Herbaceous vegetation in groundcover strata ≥ 50% of total coverage
Fifth Year	Freshwater Marsh	· Attainment of wetland vegetation conditions (≥ 80% of total groundcover strata FACW and/or OBL wetland vegetation or OBL vegetation > Upland vegetation · Evidence of natural reproduction of ground cover species
	Hydric Hammock Floodplain Swamp	· ≥ 90% survival of planted trees · Herbaceous vegetation in groundcover strata ≥ 50% of total coverage · Evidence of trees producing seed · See tree success criterion table above

[1]Exotic/nuisance vegetation shall include all Class I invasive exotic species defined by the Florida Exotic Pest Plant Council and all noxious weeds as listed in the Florida Department of Agriculture & Consumer Services' Noxious Weed List at the time of permitting. Exotic/nuisance plant species shall also include the following bahia grass (*Paspalum notatum)* and pangola grass (*Digitaria decumbens*) with the exception of the hydroseeded areas as shown on the construction plans.

[2]The maximum allowable coverage of exotic/nuisance vegetation cover applies to all areas within the mitigation site at all times, including the upland flatwoods. In addition, the vegetation cover of nuisance plant species cover shall not exceed 15% in any one ½-acre area at any time.

[3]Wetland vegetation is defined as those species with a facultative Wet or Obligate wetland status, as defined by Chapter 62-340.450 F.A.C.

Hydrology:

The Platt's Creek project site hydrology has been adversely impacted by historical dredging, ditching activities, and more recently, by adjacent and on-site development. The proposed hydrologic design was established to accomplish three goals: 1) capture and treat the first flush rainfall, 2) provide adequate water to the wetland vegetation, and 3) provide direct connection to the NFSLR. The proposed project is expected to establish adequate hydrologic conditions for the created wetland communities. To assess hydrology, water level data recorders were installed in each created wetland community type. A rain gauge data logger has also been installed on-site to accurately measure and record rainfall accumulation. In order to meet wetland criteria put forth by the state and federal governments, the data from the water level recorder and rain gauge will be evaluated to ensure that the wetland communities have adequate hydrology. For instance, the soil in each wetland community must be saturated to the surface at some time during the growing season for the dominant vegetation or soil saturation must be within twelve (12) inches (within the major portion of the root zone) in order to impact the hydrophytic vegetation, as put forth by the U.S. Army Corps of Engineers Wetlands Delineation Manual, January 1987. In addition, to meet State of Florida wetland hydrology guidelines, inundation must occur for at least seven consecutive days, or saturation for at least twenty consecutive days (F.A.C. 62-340). Field observation of hydric indicators will also be used to assess the success of hydrological function such as watermarks on vegetation, drift lines, adventitious roots, drainage patterns and other indicators. The overall health of each vegetative community will be assessed as a function of hydrology because hydrology is critical to wetland vegetation with community specific hydrologic needs. For instance, if hydrology is inadequate for the hydric hammock, this community will gradually change to more mesic conditions. Therefore, vegetative surveys will also be used as criteria to establish hydrological success of the mitigation site wetland communities, as it is the hydrology that supports the hydrophytic vegetation.

Success Criteria for Hydrology – Depression Marsh

Ecological Parameter	Year 1	Year 2	Year 3	Year 4	Year 5
Plants appear healthy with no stress resulting from an improper hydroperiod	Yes	Yes	Yes	Yes	Yes
Macroinvertebrates present	Yes	Yes	Yes	Yes	Yes
Distinct and consistent hydrologic indicators per The Florida Wetlands Delineation Manual (minimum of 2/transect)	-	Yes	Yes	Yes	Yes
Elevation of normal pool/seasonal high water indicators (NGVD) +/- 0.25 ft	-	3.5/4	3.5/4	3.5/4	3.5/4
Minimum days of inundation	240	240	240	240	240

Success Criteria for Hydrology – Floodplain Swamp

Ecological Parameter	Year 1	Year 2	Year 3	Year 4	Year 5
Plants appear healthy with no stress resulting from an improper hydroperiod	Yes	Yes	Yes	Yes	Yes
Macroinvertebrates present	Yes	Yes	Yes	Yes	Yes
Distinct and consistent hydrologic indicators per The Florida Wetlands Delineation Manual (minimum of 2/ transect)	-	Yes	Yes	Yes	Yes
Elevation of mean high water indicators (NGVD) +/- 0.25 ft		1.4	1.4	1.4	1.4
Minimum days of soil saturation (water levels within 6 inches of surface)	180	180	180	180	180

Success Criteria for Hydrology – Hydric Hammock

Ecological Parameter	Year 1	Year 2	Year 3	Year 4	Year 5
Plants appear healthy with no stress resulting from an improper hydroperiod	Yes	Yes	Yes	Yes	Yes
Distinct and consistent hydrologic indicators per The Florida Wetlands Delineation Manual (minimum of 2/transect)	-	Yes	Yes	Yes	Yes
Elevation of seasonal high water hydrologic indicators (NGVD) +/-0.5 ft	-	4	4	4	4
Minimum days of soil saturation (water levels within 6 inches of surface)	60	60	60	60	60

Water Quality Input & Treatment:

The proposed project will eliminate agricultural runoff and restore wetland systems that attenuate flows and provide water-purifying functions along the NFSLR and Platt's Creek. Establishment of hydrology will allow reintroduction of natural vegetative communities along the shoreline of the NFSLR and Platt's Creek, thereby improving water quality and enhancing the project site's capacity to filter and cleanse waters prior to reaching the NFSLR. The proposed conversion of the citrus grove to a natural area will significantly and permanently decrease nutrient (nitrogen and phosphorous) input to adjacent waters. In terms of water use, it is difficult to quantify the value of cancelling water use permits on the site. The success of the water quality parameter will be measured via the vegetation and hydrology parameters because both parameters will change with water quality.

X. MONITORING REQUIREMENTS (9)

a. *Monitoring*

St. Lucie County will monitor the created wetlands for a five-year period. A baseline monitoring report will be completed directly after to construction. Monitoring will be conducted semiannually during the end of the wet and dry seasons. Semiannual reports documenting the

results of each monitoring iteration will be prepared to document the progress of the mitigation areas located on site. The reports will include hydrologic data, vegetation analysis, wildlife utilization, macroinvertebrate and fish sampling, panoramic photographs, and conclusions.

Vegetation Sampling

Three (3) monitoring transects will be established within the PCCM. Biologists will conduct semiannual (November and May) vegetation surveys on each of the transects for a period of five years. Trees will be counted and tree growth (height and diameter base height) will be measured along the transects. A vegetative sample quadrant (with a size of 10 meters X 10 meters) will be established every two hundred (200) feet. Each of the proposed transects will have a 4"X4"X24" concrete monument (hereon, monument), designed to indicate the transect's commencement point. Each monument will contain a metal plate that indicates the transect number, compass bearing, and date. All monuments will be located using a Global Positioning System (GPS) and its latitude and longitude location coordinates recorded. Vegetation inside the quadrats will be identified down to individual species when possible. The percent coverage of each species will be covered.

Panoramic Transect Photographs

During each sample iteration, color panoramic photographics (180°) of each of the transects will be taken. The panoramic photo stations will be located at all monument locations. The proposed panoramic photo documentary of the mitigation areas will consist of panoramic photos (photographic capture zone will consist of no less than one hundred eighty (180) degrees of view). Each photo will contain a scaling pole designed to measure vegetative growth, and the photos will be included in the semiannual monitoring reports. A single photograph will be taken of each quadrant. Photographs will be included in each of the semiannual reports.

Wildlife Utilization

The wildlife utilization will be recorded via qualitative and quantitative measurements of wildlife species utilization of the mitigation areas. These measurements will be executed during the sampling iterations and will consist of the identification of observed wildlife and observed wildlife utilization (roosting, feeding, foraging, nesting and/or occasional transitory use). The results of the wildlife utilization monitoring results will be included in the semiannual monitoring reports.

Fish and Aquatic Macroinvertebrate Sampling

Qualitative sampling for the presence of fish and macroinvertebrates will be conducted by biologists during each sample iteration. The fish and macroinvertebrates may be collected with cast nets, seines, and dipnet, whichever is more applicable at the time of sampling. A species list will be included in the semiannual reports.

Hydrology

To document the hydrologic iterations the applicant will place data loggers within all of the proposed habitat areas. The data loggers were installed on 3' sch. 40 PVC pipe and have been surveyed and referenced to NGVD to document current hydrologic conditions. The same data loggers will be utilized post construction to document hydrologic conditions. A rain data logger programmed to record rain events on a daily basis and equipped with a self-emptying collector bucket was also installed within the mitigation site premises. Hydrologic conditions will also be determined through the transects described above. Data will be acquired regarding plant health

and hydrologic indicators per the *The Florida Wetlands Delineation Manual*. The elevations of the hydrologic indicators will also be recorded. This data will also be included in the semiannual monitoring reports. Documentation of the hydrologic information will be summarized graphically and included in the semiannual reports. The location of the data loggers can be found in the construction plans.

b. Monitoring / Reporting Timeline

Construction is expected to begin in January 2013, though this is dependent on a Record of Decision on the Crosstown Parkway Extension project. Construction completion is expected in January 2014. As-builts would be submitted in March 2014. The planting of plants will begin approximately 4 months after construction commencement. The baseline year would then occur in 2013, and monitoring will continue through 2019. Baseline and semiannual reports will be submitted within 30 days of sampling the mitigation areas. Semiannual monitoring reports will be submitted according to the following schedule:

Baseline sample:	Baseline Report
July 2014	Report #1
January 2015	Report #2
July 2015	Report #3
January 2016	Report #4
July 2016	Report #5
January 2017	Report #6
July 2017	Report #7
January 2018	Report #8
July 2018	Report #9
January 2019	Report #10, Final Report

XI. LONG TERM MANAGEMENT PLAN (10)

Long-Term management of the PCCM includes the semiannual maintenance control of exotic and/or nuisance plant species. Exotic and nuisance plant species will be controlled by physical and chemical means. Wetland and upland areas will be maintained free of listed exotic vegetation, as defined by the Exotic Pest Plant council. Nuisance vegetation will not exceed ten percent (10%) of the total vegetative coverage in any of the preserve areas after each maintenance activity and nuisance vegetation cannot exceed ten percent (10%) of coverage in any area of the mitigation site between maintenance activities. St. Lucie County is the entity responsible for the perpetual management of the mitigation areas.

Attachment C contains the financial responsibility agreement of the County to demonstrate perpetual management financial assurance.

XII. ADAPTIVE MANAGEMENT PLAN (11)

a. Parties and Responsibilities

St. Lucie County would assume responsibility for major corrective actions that may be required if the mitigation areas do not meet success criteria for an area sufficient to satisfy the mitigation conditions of the pending the ERP and Section 404 permit authorizations.

b. Remedial Measures

If it is determined during the monitoring period that the mitigation areas are failing to meet the minimum wetland mitigation conditions described in the ERP and Section 404 permit authorizations, St. Lucie County will coordinate with the USACE and SFWMD to accomplish the appropriate corrective measures in order to meet the permit conditions. If determined through monitoring of on-site conditions that success criteria is not being met, additional planting/re-planting of wetland vegetation and/or changes to site design to correct poor water circulation, scour, erosion, shoaling, etc., may be necessary. St. Lucie County will complete remediation measures as needed.

XIII. FINANCIAL ASSURANCES (12)

The City of Port St. Lucie and St. Lucie County have entered into a MOA to establish the PCCM as a permittee responsible mitigation site. Per the MOA, the City will contribute up to $2 million towards the construction of the PCCM in exchange for credits associated with approximately half of the site to be used to offset impacts associated with the Crosstown Parkway Extension project. The County will then monitor and maintain the site in perpetuity.

Long term management of the site will be the responsibility of St. Lucie County. The County has money budgeted for the regular maintenance of the site as shown in **Attachment C**.

ATTACHMENT A

Memorandum of Agreement between City of Port St. Lucie and St. Lucie County

EXHIBIT "A"

RESOLUTION 10-R62

C10-07-342

MEMORANDUM OF AGREEMENT
July 11, 2010

THIS MEMORANDUM OF AGREEMENT (MOA) is entered into this 27th day of July, 2010, between the CITY OF PORT ST. LUCIE (CITY) and the COUNTY OF ST LUCIE (COUNTY).

WHEREAS, the CITY is pursuing a roadway connection between Manth Lane and US 1 known as the Crosstown Parkway Extension; and

WHEREAS, the CITY is working on the Environmental Impact Statement (EIS) for the Crosstown Parkway Extension in cooperation with the Federal Highway Administration (FHWA) and the State of Florida Department of Transportation (FDOT); and

WHEREAS, the EIS is evaluating six build alternatives and a no-build alternative for the Crosstown Parkway Extension and the ultimate selection of a preferred alternative will be made with FHWA's final approval; and

WHEREAS should a build alternative be selected, regulatory wetland mitigation (mitigation) will be required by both the South Florida Water Management District (SFWMD) and the United States Army Corps of Engineers (USACE); and

WHEREAS, pursuant to the requirements of the SFWMD Conceptual Environmental Resource Permit (ERP) the CITY has developed a hybrid corridor that represents a composite of the greatest impacts from each of the six build alternatives being evaluated in the EIS and, in turn, the hybrid corridor will be used to define the impacts and mitigation requirements; and

WHEREAS, the CITY proposes to develop a mitigation project to offset the impacts of the Crosstown Parkway Extension should a build alternative be selected via the EIS process; and

WHEREAS, a mitigation project needs to be selected, available, and permitted prior to the CITY's commencement of construction of the Crosstown Parkway Extension; and

WHEREAS, the COUNTY initiated the Platt's Creek Water Quality and Wetland Restoration Project (Platt's Creek Initiative) which, when complete, will provide water quality treatment for a 1,000+ acre drainage basin, eliminate agricultural runoff from 102 acres of active citrus groves directly adjacent to the North Fork of the St. Lucie River (NFSLR), restore/create 80+ acres of wetlands and habitat directly adjacent to Platt's Creek and the NFSLR, eliminate approximately 100 acres of developable land directly adjacent to the NFSLR, and provide natural storage and water purifying functions along the river's floodplain; and

WHEREAS, the COUNTY completed permit plans for the Platt's Creek Initiative; and

WHEREAS, a SFWMD ERP for the Platt's Creek Initiative was issued in April 2003 and the COUNTY received an extension for the permit in July 2008 for an additional five years (expires in July 2013); and

WHEREAS, the COUNTY submitted an application to the USACE, but a construction permit was never issued; and.

WHEREAS, the Platt's Creek Initiative is currently unfunded; however, the COUNTY is interested in moving this project forward; and

WHEREAS, based on discussions with the SFWMD and the USACE, mitigation credits associated with 41 acres of the Platt's Creek Wetland Restoration area appears to provide sufficient mitigation credits for the Crosstown Parkway Extension; and

WHEREAS, based upon discussions with the SFWMD and USACE, a permit modification to permit no. 56-00003-M with the SFWMD and a new permittee responsible permit with the USACE and corresponding mitigation plan for the Platt's Creek Initiative will create the appropriate instrument to allow the completion of the permitting, design, and construction of the Platt's Creek Initiative and provide sufficient mitigation credits for the Crosstown Parkway Extension should a build alternative be selected; and

WHEREAS, the CITY and the COUNTY desire to enter into this MOA for the purpose of setting forth the responsibilities of the parties regarding the implementation of the Platt's Creek Initiative and mitigation credits for the Crosstown Parkway Extension should a build alternative be selected.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the CITY agrees as follows to:

1. Manage, design, permit, and construct the Platt's Creek Initiative as set out in the construction plans submitted with the ERP. The construction plans were completed by Hazen and Sawyer, Environmental Engineers and Scientists, dated August 2001 and modified in March 2008 as provided in Exhibit A.

2. Manage and develop the permittee responsible permit application and mitigation plan for the USACE by submitting a new permit application based largely on the previous mitigation bank application prepared by the COUNTY. The CITY will be responsible for paying the permit and consultant fees to complete this work.

3. Manage and develop the permit modification to permit no. 56-00003-M as a permittee responsible offiste mitigation area for the SFWMD. The CITY will be responsible for paying the permit and consultant fees to complete this work.

4. Contribute the necessary effort to advertise, bid, manage, construct and pay up to $2,000,000 for the construction of the Platt's Creek Initiative.

5. Require the contractor(s) to provide bonds and insurance that meet the COUNTY's requirements, including repair or replacement of damage to county property and facilities resulting from contractor's activities.

6. Provide a mechanism in the contract that will allow the modification of the scope to reduce costs in the event that the construction costs exceed $2,000,000. The

modified/reduced scope, as determined by SFWMD and USACE, shall not lessen the credits below those required for Crosstown Parkway Extension project mitigation available to the CITY.

7. Work with the COUNTY to ensure any construction deficiencies identified during the warrantee period are corrected which could result in the COUNTY's inability to maintain the site pursuant to SFWMD standards

8. Undertake the commitments set forth in this MOA only if a build alternative is approved by FHWA through the EIS process.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the COUNTY agrees as follows to:

1. Provide assistance to the CITY during the design, permitting, and construction phases of the Platt's Creek Initiative to ensure the project are implemented to COUNTY's satisfaction.

2. Provide access to the property for CITY and their consultants/contractors for planning, design, and construction purposes.

3. Provide, in a timely manner, information requested by the CITY for the development of the permittee responsible permit and mitigation plan.

4. Provide review and approval of the design and permit conditions of the Platt's Creek initiative prior to the onset of construction.

5. Commit to lessening the scope of the project if construction costs are greater than $2,000,000

6. Provide necessary documentation to insure that the COUNTY will fund and provide maintenance and monitoring of the site as specified in the permits.

7. Allocate mitigation credits associated with 41 acres of the wetland mitigation area to the CITY to be used towards the regulatory wetland mitigation for the Crosstown Parkway Extension should a build alternative be selected.

8. Enter discussions with the CITY to allocate more credits to the Crosstown Parkway Extension project should it be determined during the permitting process that more mitigation credits are required to offset impacts.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the CITY and COUNTY agree as follows:

1. The CITY and the COUNTY will serve as a joint permittee for the Platt's Creek Initiative with each party being responsible for the items outlined previously. The City Engineer and the County Public Works Director are designated as the CITY and COUNTY project coordinators.

2. The agreement set forth in this MOA is contingent upon the SFWMD and USACE accepting the prepared mitigation plan and allocating mitigation credits associated with 41 acres of the Platt's Creek Initiative as the regulatory wetland mitigation for the construction of the Crosstown Parkway Extension should a build alternative be selected.

3. The agreement set forth in this MOA is contingent upon the SFWMD and USACE allowing the COUNTY to use the remainder of the mitigation credits towards future projects to be completed at an unspecified time.

4. The COUNTY and/or CITY reserve(s) the right to terminate this MOA if the project does not proceed in a timely manner due to a lack of approvals on the EIS from FHWA. Construction is expected to begin within three years of permit approval and to be completed within five years.

5. The CITY reserves the right to terminate this MOA if the no build alternative is selected by the FHWA through the EIS process for the Crosstown Parkway Extension.

The parties hereto have caused this MOA to be executed through their duly authorized signatories on the day and year first above written.

"CITY"

CITY OF PORT ST. LUCIE

By: _____(SEAL)

Patricia P. Christensen
Print/Type Name

Title: Mayor
(OFFICIAL SEAL)

"COUNTY"

ATTEST:

COUNTY OF ST. LUCIE, FLORIDA

DEPUTY CLERK

By: _____(SEAL)

Charles Grande
Print/Type Name

APPROVED AS TO FORM AND CORRECTNESS

COUNTY ATTORNEY

Title: Chairman
(OFFICIAL SEAL)

ATTACHMENT B

Warranty Deed and Deed of Conservation Easement

Note: The conservation easement for the stormwater parcel has been updated and is attached at the front of this attachment.

DEED OF CONSERVATION EASEMENT

Return recorded document to:
South Florida Water Management District
3301 Gun Club Road, MSC 4210
West Palm Beach, FL 33406

THIS DEED OF CONSERVATION EASEMENT is given this 20th day of September, 2011, by St. Lucie County, a political subdivision of the State of Florida, _____ ("Grantor") whose mailing address is 2300 Virginia Avenue, Fort Pierce, Florida 34982 to the South Florida Water Management District ("Grantee"). As used herein, the term "Grantor" shall include any and all successors or assigns of the Grantor, and all subsequent owners of the "Property" (as hereinafter defined) and the term "Grantee" shall include any successor or assignee of Grantee.

WITNESSETH

WHEREAS, the Grantor is the owner of certain lands situated in St. Lucie County County, Florida, and more specifically described in Exhibit "A" attached hereto and incorporated herein ("Property"); and

WHEREAS, the Grantor desires to construct Platt's Creek Compensatory Mitigation Project ("Project") at a site in St. Lucie County County, which is subject to the regulatory jurisdiction of South Florida Water Management District ("District"); and

WHEREAS, District Permit No. 56-00003-M ("Permit") authorizes certain activities which affect surface waters in or of the State of Florida; and

WHEREAS, this Permit requires that the Grantor preserve, enhance, restore and/or mitigate wetlands and/or uplands under the District's jurisdiction; and

WHEREAS, the Grantor has developed and proposed as part of the Permit conditions, a conservation tract and maintenance buffer involving preservation of certain wetland and/or upland systems on the Property; and

WHEREAS, the Grantor, in consideration of the consent granted by the Permit, is agreeable to granting and securing to the Grantee a perpetual Conservation Easement as defined in Section 704.06, Florida Statutes, over the area described on Exhibit "A" ("Conservation Easement").

NOW, THEREFORE, in consideration of the issuance of the Permit to construct and operate the permitted activity, and as an inducement to Grantee in issuing the Permit, together with other good and valuable consideration, the adequacy and receipt of which are hereby acknowledged, Grantor hereby grants, creates, and establishes a perpetual Conservation Easement for and in favor of the Grantee upon the Property described on Exhibit "A" which shall run with the land and be binding upon the Grantor, and shall remain in full force and effect forever.

The scope, nature, and character of this Conservation Easement shall be as follows:

1. Recitals. The recitals hereinabove set forth are true and correct and are hereby incorporated into and made a part of this Conservation Easement.

2. Purpose. It is the purpose of this Conservation Easement to retain land or water areas in their natural, vegetative, hydrologic, scenic, open, agricultural or wooded condition and to retain such areas as suitable habitat for fish, plants or wildlife. Those wetland and/or upland areas included in the Conservation Easement which are to be preserved, enhanced or created pursuant to the Permit shall be retained and maintained in the enhanced or created conditions required by the Permit.

To carry out this purpose, the following rights are conveyed to Grantee by this easement:

a. To enter upon the Property at reasonable times with any necessary equipment or vehicles to enforce the rights herein granted in a manner that will not unreasonably interfere with the use and quiet enjoyment of the Property by Grantor at the time of such entry; and

b. To enjoin any activity on or use of the Property that is inconsistent with this Conservation Easement and to enforce the restoration of such areas or features of the Conservation Easement that may be damaged by any inconsistent activity or use.

3. Prohibited Uses. Except for restoration, creation, enhancement, maintenance and monitoring activities, or surface water management improvements, or other activities described herein that are permitted or required by the Permit, the following activities are prohibited in or on the Conservation Easement:

a. Construction or placing of buildings, roads, signs, billboards or other advertising, utilities, or other structures on or above the ground;

b. Dumping or placing of soil or other substance or material as landfill, or dumping or placing of trash, waste, or unsightly or offensive materials;

c. Removal or destruction of trees, shrubs, or other vegetation, except for the removal of exotic or nuisance vegetation in accordance with a District approved maintenance plan;

d. Excavation, dredging, or removal of loam, peat, gravel, soil, rock, or other material substance in such manner as to affect the surface;

e. Surface use except for purposes that permit the land or water area to remain in its natural or enhanced condition;

f. Activities detrimental to drainage, flood control, water conservation, erosion control, soil conservation, or fish and wildlife habitat preservation including, but not limited to, ditching, diking and fencing;

g. Acts or uses detrimental to such aforementioned retention of land or water areas;

h. Acts or uses which are detrimental to the preservation of the structural integrity or physical appearance of sites or properties having historical, archaeological, or cultural significance.

4. Passive Recreational Facilities. Grantor reserves all rights as owner of the Property, including the right to engage in uses of the Property that are not prohibited herein and that are not inconsistent with any District rule, criteria, the Permit and the intent and purposes of this Conservation Easement. Passive recreational uses that are not contrary to the purpose of this Conservation Easement may be permitted upon written approval by the District. Without limiting the generality of the foregoing, the following rights are expressly reserved:

a. The Grantor may conduct limited land clearing for the purpose of constructing such pervious facilities as docks, boardwalks or mulched walking trails; and

b. The Grantor may construct and maintain passive public use facilities for the purpose of educating the public or allowing public access and recreation which have minimal or no impact on natural resources; and

c. Grantor may place signs and markers as necessary to identify trails, restoration areas, or other site features related to public use and land management activities; and

d. Grantor may construct and maintain to the extent allowed by current and future permits, at grade, management roads, fire breaks, trails, walkways, piers, observation platforms or boardwalks necessary to provide public access and management activities as provided for in the site's management plan; and

e. Grantor may remove or kill by any lawful means, exotic or nuisance vegetation or animal species, conduct prescribed burns and conduct other management activities necessary to carry out management for conservation purposes; and

f. Grantor may conduct restoration and enhancement projects which do not conflict with the purpose of this easement; and

g. The construction and use of the approved passive recreational facilities shall be subject to the following conditions:

i. Grantor shall minimize and avoid, to the fullest extent possible, impact to any wetland or upland buffer areas within the Conservation Easement Area and shall avoid materially diverting the direction of the natural surface water flow in such area;

ii. Such facilities and improvements shall be constructed and maintained utilizing Best Management Practices;

iii. Adequate containers for litter disposal shall be situated adjacent to such facilities and improvements and periodic inspections shall be instituted by the maintenance entity, to clean any litter from the area surrounding the facilities and improvements;

iv. This Conservation Easement shall not constitute permit authorization for the construction and operation of the passive recreational facilities. Any such work shall be subject to all applicable federal, state, District or local permitting requirements.

5. No Dedication. No right of access by the general public to any portion of the Property is conveyed by this Conservation Easement.

6. Grantee's Liability. Grantee shall not be responsible for any costs or liabilities related to the operation, upkeep or maintenance of the Property.

7. Property Assessments. If and to the extent that the Grantor is not exempt from assessments and assessments are levied against the Easement Parcel, Grantor shall keep the assessments on the Easement Parcel current.

8. Enforcement. Enforcement of the terms, provisions and restrictions of this Conservation Easement shall be at the reasonable discretion of Grantee, and any forbearance on behalf of Grantee to exercise its rights hereunder in the event of any breach hereof by Grantor, shall not be deemed or construed to be a waiver of Grantee's

rights hereunder.

9. Assignment. Grantee will hold this Conservation Easement exclusively for conservation purposes. Grantee will not assign its rights and obligations under this Conservation Easement except to another organization or entity qualified to hold such interests under the applicable state laws.

10. Severability. If any provision of this Conservation Easement or the application thereof to any person or circumstances is found to be invalid, the remainder of the provisions of this Conservation Easement shall not be affected thereby, as long as the purpose of the Conservation Easement is preserved.

11. Terms, Conditions, Restrictions, Purpose. The terms, conditions, restrictions and purpose of this Conservation Easement shall be referenced by Official Record Book and Page Number by Grantor in any subsequent deed or other legal instrument by which Grantor divests itself of any interest in the Conservation Easement. Any future holder of the Grantor's interest in the Property shall be notified in writing by Grantor of this Conservation Easement.

12. Written Notice. All notices, consents, approvals or other communications hereunder shall be in writing and shall be deemed properly given if sent by United States certified mail, return receipt requested, addressed to the appropriate party or successor-in-interest.

13. Modifications. This Conservation Easement may be amended, altered, released or revoked only by written agreement between the parties hereto or their heirs, assigns or successors-in-interest, which shall be filed in the public records in St. Lucie County County.

TO HAVE AND TO HOLD unto Grantee forever. The covenants, terms, conditions, restrictions and purposes imposed with this Conservation Easement shall be binding upon Grantor, and shall continue as a servitude running in perpetuity with the Property.

The Grantor agrees to defend the title to the Conservation Easement property hereby conveyed against the lawful claims of all persons claiming by, through, or under the Grantor, except those claims created or arising from any act or omission of Grantee.

IN WITNESS WHEREOF,

_____
(Grantor) has hereunto set its authorized hand this
20th day of September,
20 11.

_____
A political subdivision of the State of Florida

By: _____

Chris Craft, Chairman
(Print Name and Title)

ATTEST:

BY: _____
Deputy Clerk

DATE: September 20, 2011

APPROVED AS TO FORM AND SUFFICIENCY

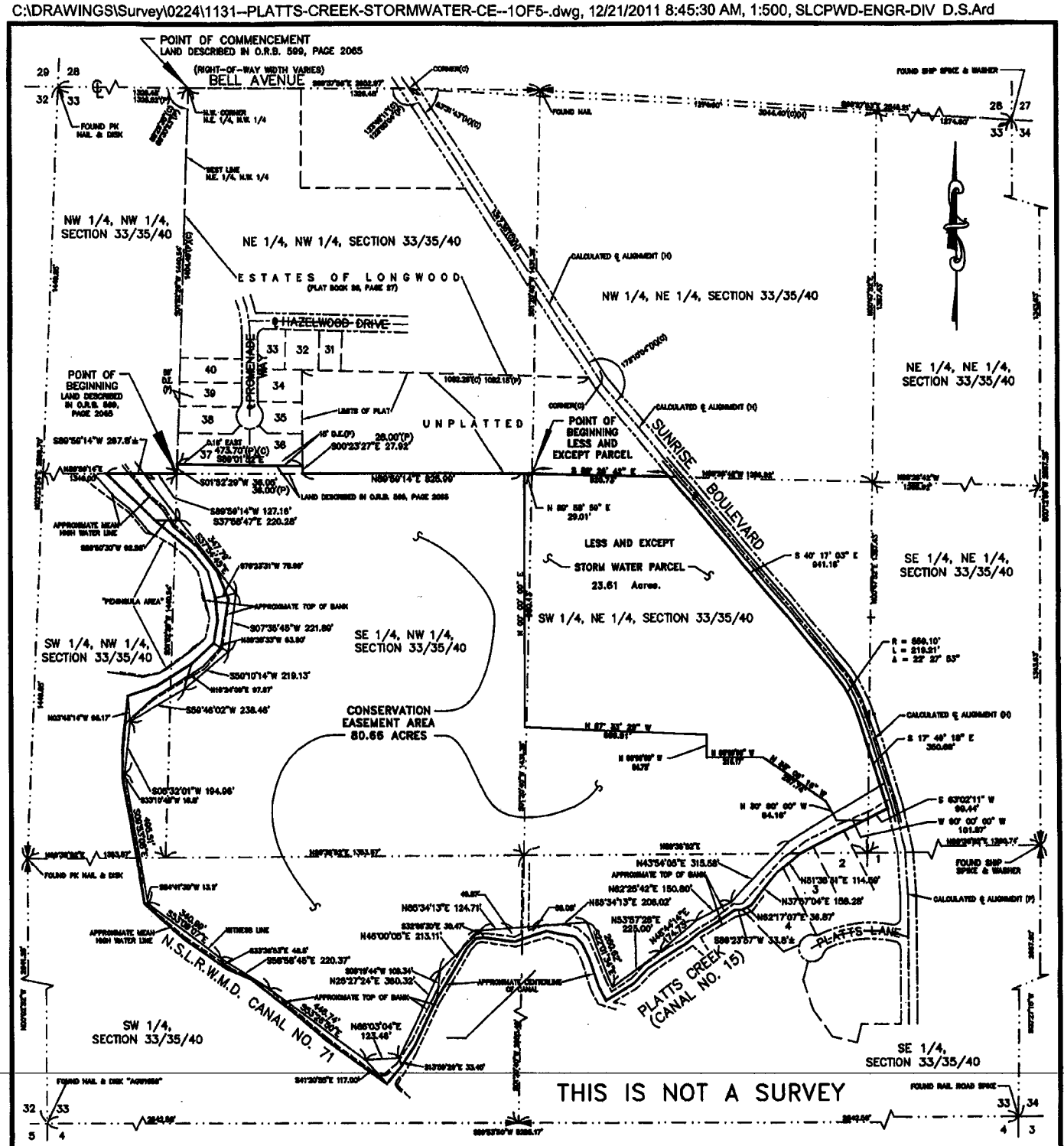
By: _____

Daniel S. McIntyre, County Attorney
(Print Name and Title)

EXHIBIT A

[DESCRIPTION OF PROPERTY] - SEE ATTACHED 5 PAGES

C:\DRAWINGS\Survey\0224\1131--PLATTS-CREEK-STORMWATER-CE--1OF5-.dwg, 12/21/2011 8:45:30 AM, 1:500, SLCPWD-ENGR-DIV D.S.Ard



LEGEND:
℄ - CENTERLINE
O.R.B.- OFFICIAL RECORDS BOOK
N.S.L.R.W.M.D.- NORTH ST. LUCIE RIVER WATER MANAGEMENT DISTRICT
(H)- MEASURE PER REFERENCED "HORTON" SURVEY
(C)- CALCULATED
(PLAT)- PLAT (SUBDIVISION)
Dc- DELTA
(MB)- PER COUNTY COMMISSION MINUTE BOOK 4, PAGE 77
D.E.- DRAINAGE EASEMENT
R/W- RIGHT-OF-WAY
(D)- DEED

AREA TABULATION

CONSERVATION EASEMENT AREA	80.66 ACRES
STORMWATER PARCEL	23.61 ACRES
TOTAL	104.27 ACRES

DATA SHOWN HEREON IS BASED ON BOUNDARY SURVEY PREPARED BY LBFH, INC. PROJECT 990224 DATED 11/18/1999.

0' 500'
SCALE: 1" = 500'

SEE SHEETS 3, 4 AND 5 OF 5 FOR LEGAL DESCRIPTION

SHEET NO. 1 OF 5
PROJECT NO. 1131

SKETCH OF PLATTS CREEK PROPERTY

CONSERVATION EASEMENT

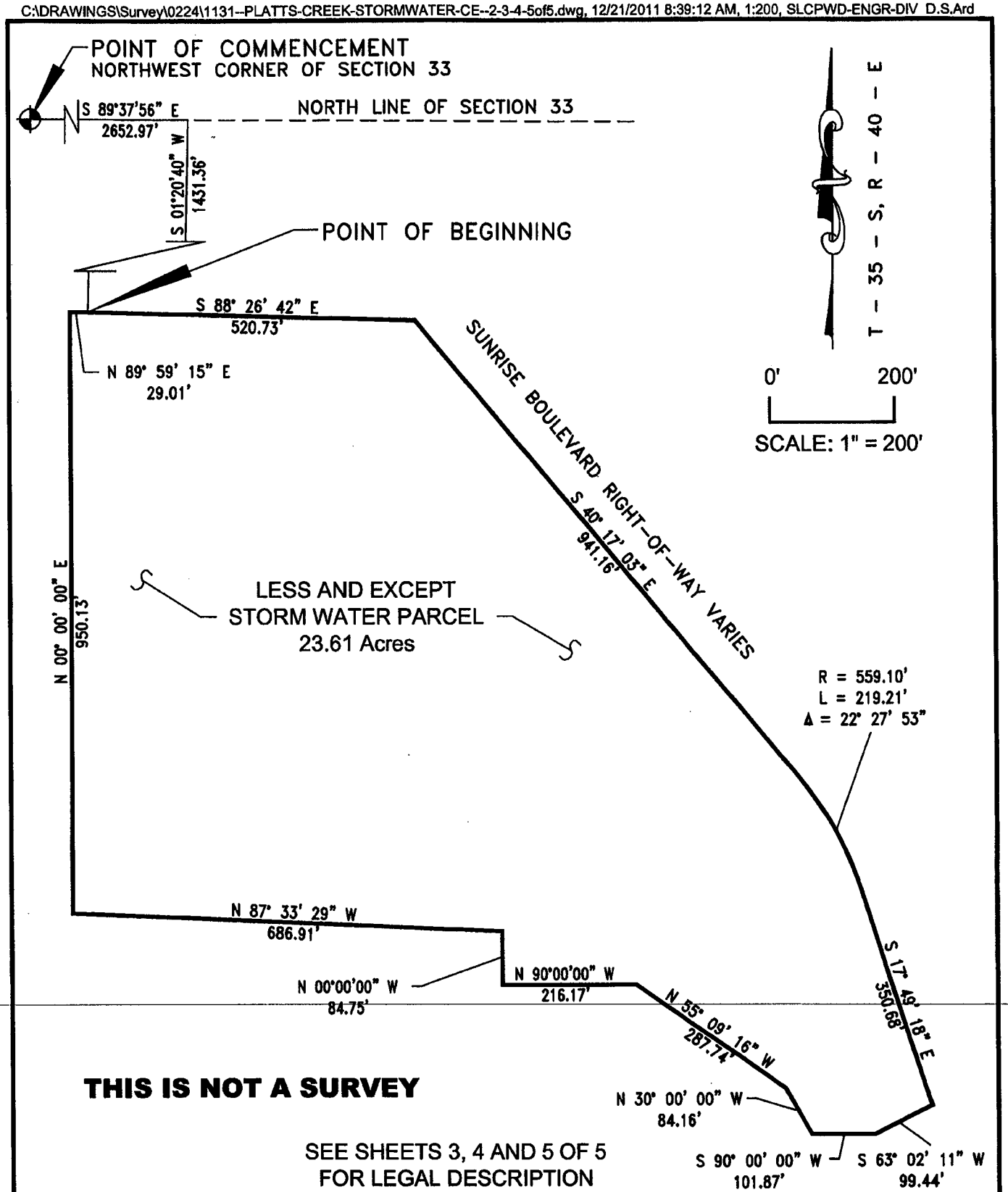
BOARD OF COUNTY COMMISSIONERS
SAINT LUCIE COUNTY, FLORIDA
PUBLIC WORKS DEPT., ENGINEERING DIVISION, SURVEY SECTION
2300 VIRGINIA AVE., FORT PIERCE, FLORIDA 34982
TELEPHONE 462 - 1707

SURVEY	RJHJR	00/00/11
SURV. CKD.	RJHJR	00/00/11
DRAWN	DSA	00/00/11

REVISIONS

NO.	DATE	SUBJECT	BY

C:\DRAWINGS\Survey\0224\1131--PLATTS-CREEK-STORMWATER-CE--2-3-4-5of5.dwg, 12/21/2011 8:39:12 AM, 1:200, SLCPWD-ENGR-DIV D.S.Ard



THIS IS NOT A SURVEY

SEE SHEETS 3, 4 AND 5 OF 5
FOR LEGAL DESCRIPTION

SHEET NO. 2 OF 5	PROJECT NO. 1131	SKETCH AND LEGAL DESCRIPTION STORM WATER PARCEL	BOARD OF COUNTY COMMISSIONERS SAINT LUCIE COUNTY, FLORIDA PUBLIC WORKS DEPT., ENGINEERING DIVISION, SURVEY SECTION 2300 VIRGINIA AVE., FORT PIERCE, FLORIDA 34982 TELEPHONE 462 - 1707	SURVEY R.H.H. 00/2011 SURV. CKD. R.H.H. 00/2011 DRAWN D.S.A. 00/2011	REVISIONS NO. DATE SUBJECT BY
		CONSERVATION EASEMENT			

DESCRIPTION: CONSERVATION EASEMENT

AN EASEMENT FOR CONSERVATION PURPOSES OVER AND ACROSS A PARCEL OF LAND AS RECORDED IN ORB 1270, PAGE 202 OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA. SAID EASEMENT BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

"ALL OF THAT REAL PROPERTY LYING IN SECTION 33, TOWNSHIP 35 SOUTH, RANGE 40 EAST AS IN OFFICIAL RECORDS BOOK 180, PAGE 2151 PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA: LESS A PARCEL OF LAND BEING A PENINSULA LYING IN THE SOUTH ONE-HALF OF THE NORTHWEST ONE-QUARTER OF SAID SECTION 30 (SIC), BOUNDED ON THE WEST BY NORTH ST. LUCIE RIVER WATER MANAGEMENT DISTRICT CANAL NUMBER 71, AND BOUNDED ON THE SOUTH AND EAST BY THE CENTERLINE OF A NATURAL BRANCH OF THE ST. LUCIE RIVER: SAID PROPERTY BEING CONVEYED BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

THAT PORTION OF THE SOUTHWEST QUARTER OF SECTION 33 LYING NORTH AND EAST OF CANAL NO. 71 AND NORTH OF THE CENTERLINE OF PLATT'S CREEK (BRANCH) AND THAT PORTION OF THE SOUTHEAST QUARTER OF SECTION 33 LYING NORTH OF THE CENTERLINE OF PLATT'S CREEK (BRANCH). SAID CENTERLINE BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE CENTERLINE INTERSECTIONS OF SUNRISE BOULEVARD AND PLATT'S CREEK AS SHOWN ON THE PLAT OF PLATT'S BRANCH, AS RECORDED IN PLAT BOOK 20, PAGE 16, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA, RUN SOUTH 63 DEGREES 14' 35" WEST, 400.74 FEET TO A POINT (FROM WHICH A REFERENCE OINT BEARS NORTH 09 DEGREES 22' 44" WEST, AND 74.91 FEET); THENCE SOUTH 51 DEGREES 49' 15" WEST, 114.59 FEET TO A POINT (FROM WHICH A REFERENCE POINT BEARS NORTH 28 DEGREES 16' 51" EAST AND 164.35 FEET); THENCE SOUTH 38 DEGREES 09' 28" WEST, 156.28 FEET TO A POINT (FROM WHICH A REFERENCE POINT BEARS NORTH 42 DEGREES 06' 21" WEST AND 105.88 FEET); THENCE SOUTH 62 DEGREES 29' 31" WEST, 36.87 FEET TO A POINT (FROM WHICH A REFERENCE POINT BEARS NORTH 21 DEGREES 49' 54" WEST AND 102.97 FEET); THENCE SOUTH 72 DEGREES 57' 20" WEST, 349.12 FEET TO A POINT (FROM WHICH A REFERENCE POINT BEARS NORTH 33 DEGREES 44' 16" WEST AND 25.0 FEET); THENCE SOUTH 56 DEGREES 15' 44" WEST, 284.13 FEET TO A POINT (FROM WHICH A REFERENCE POINT BEARS NORTH 13 DEGREES 45' 14" WEST AND 278.99 FEET); THENCE NORTH 22 DEGREES 06' 20" WEST, 280.99 FEET TO A POINT (FROM WHICH A REFERENCE POINT BEARS NORTH 75 DEGREES 07' 33" EAST AND 40.76 FEET); THENCE SOUTH 89 DEGREES 57' 10" WEST, 175.26 FEET TO A POINT (FROM WHICH A REFERENCE POINT BEARS NORTH 06 DEGREES 53' 26" EAST AND 40.6 FEET); THENCE NORTH 81 DEGREES 55'54" WEST, 201.86 FEET TO A POINT (FROM WHICH A REFERENCE POINT BEARS NORTH 21 DEGREES 28' 57" WEST AND 34.5 FEET); THENCE SOUTH 34 DEGREES 41' 36" WEST, 492.55 FEET TO A POINT (FROM WHICH A REFERENCE POINT BEARS NORTH 11 DEGREES 54' 52" EAST AND 95.4 FEET); THENCE SOUTH 29 DEGREES 01' 25" WEST, 283.93 FEET TO A POINT (FROM WHICH A REFERENCE POINT BEARS NORTH 12 DEGREES 01' 37" EAST AND 187.90 FEET); SAID POINT BEING THE CENTER OF AFOREMENTIONED CANAL 71 AND THE POINT OF TERMINATION OF THE ABOVE DESCRIBED CENTERLINE OF PLATT'S CREEK.

AND

SEE SHEET 4 OF 5 FOR
LEGAL DESCRIPTION

THAT PORTION OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 33, TOWNSHIP DESCRIBED 35 SOUTH, RANGE 40 EAST, LYING SOUTH AND WEST OF SUNRISE BOULEVARD AS IT NOW EXISTS.

AND

THAT PORTION OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 33, TOWNSHIP 35 SOUTH, RANGE 40 EAST, LYING SOUTH AND WEST OF SUNRISE BOULEVARD AS IT NOW EXISTS AND NORTH OF THE PLAT OF PLATT'S BRANCH AS RECORDED IN PLAT BOOK 20, PAGE 16,PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

AND

THAT PORTION OF THE SOUTH HALF OF THE NORTHWEST QUARTER OF SECTION 33, TOWNSHIP 35 SOUTH, RANGE 40 EAST, LYING EAST OF CANAL NO. 71, LESS A PENINSULA OF LAND LYING WEST OF THE CENTERLINE OF A FINGER OF WATER RUNNING NORTHERLY FROM CANAL 71.
ALL THE ABOVE SITUATED IN SECTION 33, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA.

AND

FROM THE POINT OF COMMENCEMENT (P.O.C.) BEING THE NORTHWEST CORNER OF THE NORTHEAST ¼ OF THE NORTHWEST ¼ OF SECTION 33, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA; RUN THENCE S 01° 55' 07" WEST (MEASURE S 01°54' 52" W), ALONG THE WEST LINE OF THE NORTHEAST ¼ OF THE NORTHWEST ¼ OF SAID SECTION 33, A DISTANCE OF 1440.83 FEET (MEASURES 1440.49 (SIC) FEET) TO A CONCRETE MONUMENT STAMPED WITH THE NUMBER 3333 LOCATED AT THE SOUTHWEST CORNER OF THE AFORESAID NORTHEAST ¼ OF THE NORTHWEST ¼ AND THE POINT OF BEGINNING (P.O.B.) OF THE HEREIN DESCRIBED PARCEL; THENCE RUN S 89° 57' 37" E (MEASURES S 89° 57' 25" E), ALONG THE SOUTH LINE OF AFORESAID NORTHEAST ¼ OF THE NORTHWEST ¼, A DISTANCE OF 475.00 FEET TO A CONCRETE MONUMENT STAMPED WITH THE NUMBER 3333 LOCATED AT THE SOUTHEAST CORNER OF HEREIN DESCRIBED PARCEL; THENCE RUN NORTH 00° 21' 04" W, A DISTANCE OF 28.00 FEET TO A CONCRETE MONUMENT STAMPED WITH THE NUMBER 3333 BEING THE SOUTHERLY MOST SOUTHEASTERLY CORNER OF A PROPOSED SUBDIVISION ENTITLED ESTATES OF LONGWOOD; THENCE RUN N 88° 59' 29" W ALONG THE SOUTHERLY LINE OF SAID ESTATES OF LONGWOOD, A DISTANCE OF 473.70 FEET TO A CONCRETE MONUMENT STAMPED WITH THE NUMBER 3333 LYING ON THE WEST LINE OF SAID NORTHEAST ¼ OF THE NORTHWEST 1/4 , SAID CONCRETE MONUMENT MARKING THE SOUTHWEST CORNER OF THE AFOREMENTIONED ESTATES OF LONGWOOD; THENCE RUN S 01° 55' 07" W (MEASURES S 01° 54' 52" W), ALONG THE WEST LINE OF THE NORTHEAST ¼ OF THE NORTHWEST ¼ OF SAID SECTION 33, A DISTANCE OF 36.00 FEET TO THE POINT OF BEGINNING."

LESS AND EXCEPT THE FOLLOWING DESCRIBED PARCEL;

SEE SHEET 5 OF 5

LESS AND EXCEPT THE FOLLOWING DESCRIBED PACREL

A PARCEL OF LAND LYING IN SECTION 33, T-35-S, R-40-E, ST. LUCIE COUNTY, FLORIDA, SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT A FOUND PK NAIL AND DISC MARKING THE NORTHWEST CORNER OF SAID SECTION 33 THENCE S 89° 37' 56" E ALONG THE NORTH LINE OF SAID SECTION 33 A DISTANCE OF 2652.97 FEET TO A FOUND NAIL MARKING THE NORTHEAST CORNER OF THE NORTHWEST 1/4 OF SECTION 33; THENCE S 01° 20' 40" W ALONG THE EAST LINE OF SAID NORTHWEST 1/4 A DISTANCE OF 1431.36 FEET TO THE POINT OF BEGINNING; THENCE S 89° 26' 42" E A DISTANCE OF 520.73 FEET TO A POINT ON THE WESTERLY RIGHT OF WAY LINE OF SUNRISE BOULEVARD; THENCE ALONG SAID RIGHT OF WAY LINE THE FOLLOWING THREE (3) CALLS;

1. THENCE S 40° 17' 03" E A DISTANCE OF 941.16 FEET TO THE POINT OF CURVATURE OF A CURVE CONCAVE TO THE WEST, HAVING A RADIUS OF 559.10 FEET;
2. THENCE SOUTHERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 22° 27' 53" A DISTANCE OF 219.21 FEET TO THE POINT OF TANGENCY;
3. THENCE S 17° 49' 18" E A DISTANCE OF 350.68 FEET;

THENCE S 63° 02' 11" W DEPARTING SAID RIGHT OF WAY LINE A DISTANCE OF 99.44 FEET; THENCE S 90° 00' 00" W A DISTANCE OF 101.87 FEET; THENCE N 30° 00' 00" W A DISTANCE OF 84.16 FEET; THENCE N 55° 09' 16" W A DISTANCE OF 287.74 FEET; THENCE N 90° 00' 00" W A DISTANCE OF 216.17 FEET; THENCE N 00° 00' 00" W A DISTANCE OF 84.75 FEET; THENCE N 87° 33' 29" W A DISTANCE OF 686.91 FEET; THENCE N 00° 00' 00" E A DISTANCE OF 950.13 FEET; THENCE N 89° 59' 15" E A DISTANCE OF 29.01 FEET TO THE POINT OF BEGINNING.

SAID EASEMENT CONTAINING 23.61 ACRES MORE OR LESS.

BEARING BASE: THE NORTH LINE OF THE NORTHWEST 1/4 OF SECTION 33, T-35-S, R-40-E, ST. LUCIE COUNTY, FLORIDA IS TAKEN TO BEAR S 89° 37' 56" E AND ALL OTHER BEARINGS ARE RELATIVE THERETO.

SURVEYOR NOTES:

1. THIS IS NOT A SURVEY.
2. SEE SHEETS 1 AND 2 OF 5 FOR SKETCH OF DESCRIPTION.
3. INFORMATION IS BASED ON THE BOUNDARY SURVEY OF PLATTS CREEK PROPERTY PREPARED BY LBFH, INC. JOB NO. 99-024, DATED NOVEMBER 18, 1999.

CERTIFICATE: I hereby certify that the sketch of legal description represented hereon, dated this 21 day of, Dec ,2011 is true and correct to the best of my knowledge and belief, and meets the Minimum Technical Standards set forth by the Florida Board of Surveyors and Mappers in Chapter 5J-17, Florida Administrative Code, pursuant to Section 472.072 Florida Statutes.

NOTE: NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER

PROFESSIONAL SURVEYOR AND MAPPER
RONALD H. HARRIS
STATE OF FLORIDA NO. 4198

SHEET NO. 5 OF 5	PROJECT NO. 1131	SKETCH AND LEGAL DESCRIPTION CONSERVATION EASEMENT	BOARD OF COUNTY COMMISSIONERS SAINT LUCIE COUNTY, FLORIDA PUBLIC WORKS DEPT., ENGINEERING DIVISION, SURVEY SECTION 2300 VIRGINIA AVE., FORT PIERCE, FLORIDA 34982 TELEPHONE 462 - 1707	SURVEY R.H.H. DEC2011 SURV. CKD. R.H.H. DEC2011 DRAWN D.S.A. DEC2011	REVISIONS NO. DATE SUBJECT BY	

AGENDA REQUEST

ITEM NO.	**VI-B-7**
DATE:	**September 20, 2011**
REGULAR	**( )**
PUBLIC HEARING	**( )**
LEG.	**( )**
QUASI-JD	**( )**
CONSENT	**(x)**

TO: **BOARD OF COUNTY COMMISSIONERS**

PRESENTED BY: JoAnn Riley, Property Acquisition Manager

SUBMITTED BY: County Attorney

SUBJECT: Platt's Creek Compensatory Mitigation Project
Deed of Conservation Easement in favor of South Florida Water Management District

BACKGROUND: See an attached Memorandum

FUNDS AVAILABLE: N/A

PREVIOUS ACTION: See an attached Memorandum

RECOMMENDATION: Staff recommends that the Board approve the Deed of Conservation Easement in favor of South Florida Water Management District, authorize the Chairman to execute the Deed of Conservation Easement and direct staff to record the Deed of Conservation Easement upon completion of the improvements in the Public Records of St. Lucie County, Florida.

COMMISSION ACTION:

(X) APPROVED ( ) DENIED
( ) OTHER

Approved 5-0

CONCURRENCE:

Dee Ann Lowery for
Faye W. Outlaw, MPA
County Administrator

Coordination/Signatures

County Attorney (x) Daniel S. McIntyre

OMB Director Budget Analyst ( ) Marie Gouin

Originating Dept. (x) JmR JoAnn Riley

Public Works (x) DSW Don West

S:\ACQ\WP\JoAnn\PLATT'S CREEK\Agenda Request and Memo for Platts Creek Mitigation Project with PSL.docx

PROPERTY ACQUISITION DIVISION

MEMORANDUM

TO: Board of County Commissioners

FROM: JoAnn Riley, Property Acquisition Manager

DATE: September 20, 2011

SUBJECT: Platt's Creek Compensatory Mitigation Project
Deed of Conservation Easement in favor of South Florida Water Management District

ITEM NO. VI-B-7

Background:

The County is partnering with the City of Port St. Lucie to construct a joint mitigation project on the Platt's Creek Property.

In 1999 the County received a $1 million grant from the St. Lucie River Issues Team to purchase the 100 acre Becker Grove Property at Platt's Creek and Sunrise Blvd. Upon purchase of the property, the County initiated design and permitting of a project to construct a combined stormwater retrofit and mitigation bank. The Project consists of a 20 acre stormwater project with an 82 acre mitigation bank project along the shoreline of the North Fork of the St. Lucie River.

Permitting of the combined project was extremely complex due to the State and Federal agency processes that were involved. Permits were obtained for the combined project in 2003.

A second grant was received from the St. Lucie River Issues Team in 2000, for the construction of the stormwater retrofit portion of the combined project.

The $2.7 million stormwater project was constructed in 2004, and is currently operational. The stormwater project provides water quality treatment for the 1000 + acre drainage basin of Platt's Creek, prior to discharging to the North Fork of the St. Lucie River. The project consists of a 16 acre wet detention lake and a quadraplex pump station that diverts water from Platt's Creek into the treatment system, prior to discharge to the River.

The remaining 82 acres is proposed as the mitigation site. Currently, the project is permitted as a mitigation bank, that involves the sale of mitigation credits. Mitigation banks are not eligible for grant funds, and they require a large capital investment up front for construction and operation.

In 2008, the County extended the permits for another 5 year term to allow for completion of the mitigation project. In November, 2009 the City of Port St. Lucie met with County Staff to discuss the concept of a joint mitigation project at Platt's Creek.

The City needs wetland or "riverine" mitigation for the environmental impacts associated with the Crosstown Parkway Extension Project, across the North Fork of the St. Lucie River. The City is currently in negotiations with the State and Federal regulatory agencies to secure a mitigation agreement that would allow the Crosstown Parkway project to be permitted.

The regulatory agencies have suggested a plan that would involve amending the Platt's Creek mitigation permits, to include the Crosstown Parkway project. A Memorandum of Agreement was approved by the County and City in 2010 that outlines the responsibilities of each to amend the permits, construct and maintain the joint mitigation project. The City is in the process of preparing the permit modification as required under the Agreement. The modification requires submittal of a Deed of Conservation Easement in favor of the South Florida Water Management District for review and to be recorded upon completion of the improvements.

Previous Action:

September 22, 1998 - Board approved work authorization for Hazen & Sawyer to prepare and present conceptual plans for the Platt's Creek Mitigation & Stormwater Improvement project to the St. Lucie River Issue Team. The Board also gave authorization to apply for St. Lucie Issues Team Grant Funds in the amount of $1,000,000 for the purchase of the 102 acre site.

December 8, 1998 - Board approved an engineering contract with Hazen & Sawyer for conceptual design in the amount of $7,020.

December 7, 1999 - Board purchased the 102 acre site in the amount of $1,070,000.

December 14, 1999 - Board approved an engineering contract with Hazen & Sawyer for design plans and permitting in the amount of $156,500.

January, 2000 - Board approved authorization to apply for St. Lucie Issues Team grant funds in the amount of $760,000 for construction of stormwater improvements.

June 25, 2001 - Board approved authorization to apply for additional EPA Section 319 grants in the amount of $380,000 for stormwater improvements.

June 25, 2002 - Board approved authorization to apply for additional EPA Section 319 grants in the amount $150,000 for Stormwater improvements.

April 13, 2004 - Board awarded the construction of the Platt's creek Stormwater project to WPC Industrial Contractors, Inc. In the amount of $2,745,740.

July 27, 2010 - Board approval of the Memorandum of Agreement for the Platt's Creek Mitigation Project with the City of Port St. Lucie.

Recommendation:

Staff recommends that the Board approve the Deed of Conservation Easement in favor of South Florida Water Management District, authorize the Chairman to execute the Deed of Conservation Easement and direct staff to record the Deed of Conservation Easement upon completion of the improvements in the Public Records of St. Lucie County, Florida.

ATTACHMENT D

UMAM Analysis

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Platt's Creek Compensatory Mitigation	090107-1	Depression Marsh

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
641	Depression Marsh - FNAI; PEM1B - USFWS	Mitigation	23.10 acres

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
North Fork St. Lucie River	Class III	

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The mitigation site is located along the North Fork of the St. Lucie River between the river and Sunrise Boulevard. The site is south of Bell Avenue. The site is connected geographically to the NFSLR to the west and a large wetland to the south. Neighborhoods exist to the north and east.

Assessment area description

Depression marsh with herbaceous vegetation along the NFSLR. Dominant vegetation includes bulrush, cordgrass, *Eleocharis* spp., pickerelweed, and arrowroot. Seasonal high water elevation within the marsh is set at 3.00 feet NGVD.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
A property owned by the SFWMD and Platt's Creek are directly to the south. Directly to the west is the NFSLR. To the north is a small neighborhood. The NFSLR Aquatic Preserve can be found approximately one mile to the south.	Regionally important as conservation area in rapidly developing area
Functions	**Mitigation for previous permit/other historic use**
Wildlife habitat, feeding and breeding. Fish nursery habitat. Hydroperiod restoration and re-vegetation within NFSLR floodplain. Improve water quality and natural storage within watershed and NFSLR.	N/A
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	**Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)**
amphibians, gopher frog, salamanders, Eastern indigo snake, Florida sandhill crane, limpkin roseate spoonbill, snail kite, round-tailed muskrat, wading birds, woodstork, osprey, raccoon, water snakes, bobcat, American alligator	Wading birds (SSC); gopher frog (SSC), Eastern indigo snake (T), Florida sandhill crane (T), wood stork (E), osprey (SSC), American alligator (T), Limpkin (SSC), roseate spoonbill (SSC), snail kite (E)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

songbirds, heron, Florida sandhill crane, American alligator,

Additional relevant factors:

Previously permitted as mitigation bank through St. Lucie County. Site was never constructed other than stormwater pond.

Assessment conducted by:	Assessment date(s):
Anna Peterfreund	1/12/2011

Form 62-345.900(1), F.A.C. [effective date 02-04-2004]

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Platt's Creek Compensatory Mitigation	090107-1	Depression Marsh
Impact or Mitigation	Assessment conducted by:	Assessment date:
Mitigation - Herbaceous	Anna Peterfreund	12-Jan-09

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	w/o pres or current: 0	with: 9	The mitigation site will be directly adjacent to the NFSLR, Platt's Creek and property owned by the SFWMD. A neighborhood exists to the north. Wetlands within the SFWMD property are to the south of the site. In the proposed conditions, the depression marsh will be surrounded by the hydric hammock to the east and the floodplain swamp to the west. This site will enhance the SFWMD property, the nearby state park, the NFSLR and Platt's Creek and the aquatic preserve to the south. A buffer of pine flatwoods will be provided on the eastern portion of the site separating the mitgation area from the stormwater pond, onsite facilities, and Sunrise Boulevard. The undeveloped portions of the area are under a perpetual conservation easement. Wildlife access to and from the site has minimal limitations based on location adjacent to NFSLR and Platt's Creek. Also, natural wetland habitat associated with the river located to the south. Functions of the proposed assessment area benefit downstream fish and wildlife. Anticipated wildlife utilization by birds, small and/or medium sized mammals, amphibians and reptiles.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 0	with: 9	The existing water environment is non-existant since the proposed mitigation site is an upland with the exception of the canals throughout the site and a large stormwater pond on the eastern side. The existing upland will be graded to an elevation that will support freshwater species and will be similar to that of the surrounding wetlands. The nearby wetlands appear to have good hydrologic functions with few exotic species as they are part of the state park and SFWMD property. Water level data recorder information supports the idea that the wetland areas will rely on natural flow. The site will by hydrated through pond discharge and the NFSLR.The water depth will be maintained at 18 inches. The maximum elevation the water will reach in the depression marsh will be 4.0' before being discharged into the floodplain swamp via v-notched weirs. The bottom of each system will be over excavated by six inches and backfilled with improved soil up to an elevation of six inches above the SHWE so in times of a drought, the improved soil will retain more moisture to assist in species survival. Project design should ensure vegetative communities are subjected to adequate hydroperiods.The proposed site will have a minimum of 180 days of soils saturation.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 0	with: 9	The community structure is currently an upland consisting of fallow citrus groves that is now dominated by Brazilian pepper and other shrubby vegetation. The mitigation area will be planted as floodplain forest near the NFSLR with a transition area to the freshwater marsh. Species planted in the marsh will include leather fern, lemon bacopa, crinum lilly, spike rush, jointed spike rush, purple lovegrass, banana lilly, fragrant water lilly, maidencane, pickerel weed, green arum, southern beakrush, lance-leaf arrowhead, duck potato, giant bulrush, soft stem bulrush, smooth cordgrass and arrowroot as shown on the planting plan. The hydrology in the area and the surrounding wetlands should support the vegetation and wetland environment to be created. Nuisance plant control will be maintained to not exceed greater than 10% of the overall vegetation. No exotic vegetation will be allowed. Land management activities are optimal for the long term viability of the plant community. Upland buffer will also provide habitat and life history support for numerous wildlife species in the wetlands.

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0	0.90

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas	
FG = RFG x acres =	15.48

Delta = [with-current]
0.90

If mitigation		
Time lag (t-factor) =	1.07	3 yrs
Risk factor =	1.25	

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.67

Form 62-345.900(2), F.A.C. [effective date 02-04-2004]

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Platt's Creek Compensatory Mitigation	090107-1	Hydric Hammock

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
617	Hydric Hammock - FNAI; PFO1C - USFWS	Mitigation	13.54 acres

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
North Fork St. Lucie River	Class III	

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The mitigation site is located along the North Fork of the St. Lucie River between the river and Sunrise Boulevard. The site is south of Bell Avenue. The site is connected geographically to the NFSLR to the west and a large wetland to the south. Neighborhoods exist to the north and east.

Assessment area description

Hydric Hammock described as a community with a closed canopy of oaks and palms, an open understory and a moderate groundcover of grasses and ferns. The hammock is only inundated for short periods following heavy rains. The seasonal high water elevation is set at 4.10 feet NGVD.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
A property owned by the SFWMD and Platt's Creek are directly to the south. Directly to the west is the NFSLR. To the north is a small neighborhood.	Regionally important as conservation area in rapidly developing area

Functions	Mitigation for previous permit/other historic use
Wildlife habitat, feeding and breeding. Hydroperiod restoration and re-vegetation within NFSLR floodplain. Restore historic ecological and hydrologic functions. Improve water quality and natural storage within watershed and NFSLR.	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
amphibians, gopher frog, salamanders, Eastern indigo snake, Florida sandhill crane, limpkin, snail kite, round-tailed muskrat, wading birds, woodstork, osprey, raccoon, bobcat, short tailed hawk, swallow-tailed kite	Wading birds (SSC); gopher frog (SSC), Eastern indigo snake (T), Florida sandhill crane (T), wood stork (E), osprey (SSC), Limpkin (SSC), snail kite,

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

songbirds, heron, Florida sandhill crane, American alligator,

Additional relevant factors:

Previously permitted as mitigation bank through St. Lucie County. Site was never constructed other than stormwater pond.

Assessment conducted by:	Assessment date(s):
Anna Peterfreund	1/12/2011

Form 62-345.900(1), F.A.C. [effective date 02-04-2004]

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Platt's Creek Compensatory Mitigation	090107-1	Hydric Hammock
Impact or Mitigation	Assessment conducted by:	Assessment date:
Mitigation - Forested	Anna Peterfreund	12-Jan-09

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	pres or curr ent: 0	with: 8	The mitigation site will be directly adjacent to the NFSLR, Platt's Creek and property owned by the SFWMD. A neighborhood exists to the north and is separated by a fence. The assessment area is located between the stormwater pond and the depression marsh. Wetlands within the SFWMD are to the south of the site. This site will enhance the state park, NFSLR and potentially the aquatic preserve to the south. This site will enhance the SFWMD property, the nearby state park, the NFSLR and Platt's Creek and the aquatic preserve to the south. A buffer of pine flatwoods will be provided on the eastern portion of the site separating the mitgation area from the stormwater pond, onsite facilities, and Sunrise Boulevard. The undeveloped portions of the area under a perpetual conservation easement. Wildlife access to and from the site has minimal limitations based on location adjacent to NFSLR and Platt's Creek. Also, natural wetland habitat associated with the river located to the south. Functions of the proposed assessment area benefit downstream fish and wildlife.
.500(6)(b)Water Environment (n/a for uplands)	pres or curr ent: 0	with: 8	The existing water environment is non-existant since the proposed mitigation site is an upland with the exception of the canals throughout the site, large stormwater pond on the eastern side and a small lined pond on the western side of the site. The existing upland will be graded to an elevation that will support species indicative of hydric hammock. The site will be hydrated through pond discharge and natural flow. The adjacent wetlands appear to have good hydrologic functions with few exotic species as they are part of the state park. Water level data recorder information supports the idea that the wetland areas will rely on natural flow. The elevation within the hydric hammock varies between 3.5 and 4.6 feet. The seasonal high water elevation is set at 4.10 feet NGVD. The bottom of each system will be over excavated by six inches and backfilled with improved soil up to an elevation of six inches above the SHWE so in times of a drought, the improved soil will retain more moisture to assist in species survival. Project design should ensure vegetative communities are subjected to adequate hydroperiods.The proposed site will have a minimum of 60 days of soils saturation.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	pres or curr ent: 0	with: 7	The community structure is currently an upland consisting of fallow citrus groves that is now dominated by Brazilian pepper and other shrubby vegetation. The mitigation area will be planted as floodplain forest near the NFSLR with a transition area to a freshwater marsh, hydric hammock and hydric flatwood. Species to be planted in the hydric hammock include swamp maple, hackberry, persimmon, loblolly bay, laurel oak, and cabbage plam in the overstory. Extensive shrub canopy and ground cover plants will be planted as well as shown on the planting plans. The hydrology in the area and the surrounding wetlands should support the vegetation and wetland environment to be created. Nuisance plant control will be maintained to not exceed greater than 10% of the overall vegetation. No exotic vegetation will be allowed. Land management activities are optimal for the long term viability of the plant community. Upland buffer will also provide habitat and life history support for numerous wildlife species in the wetlands.

Score = sum of above scores/30 (if uplands, divide by 20)

curr ent w/o pres	with
0	0.77

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas	
FG = RFG x acres =	3.52

Delta = [with-current]
0.77

If mitigation		
Time lag (t-factor) =	1.46	11-15 yrs
Risk factor =	2	

For mitigation assessment areas	
RFG = delta/(t-factor x risk)	0.26

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Platt's Creek Compensatory Mitigation	090107-1	Floodplain Swamp

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
615	Floodplain Swamp - FNAI; PFO1P - USFWS	Mitigation	12.70 acres

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
North Fork St. Lucie River	Class III	

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The mitigation site is located along the North Fork of the St. Lucie River between the river and Sunrise Boulevard. The site is south of Bell Avenue. The site is connected geographically to the NFSLR to the west and a large wetland to the south. Neighborhoods exist to the north and east.

Assessment area description

Floodplain swamp is a closed canopy forest of hydrophytic trees occuring in frequently flooded hydric soils adjacent to the NFSLR. Inundation is seasonal and prolonged. The seasonal high water elevation is set at the mean high tide elevation of 1.4 feet NGVD.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
A property owned by the SFWMD and Platt's Creek are directly to the south. Directly to the west is the NFSLR. To the north is a small neighborhood.	Regionally important as conservation area in rapidly developing area
Functions	**Mitigation for previous permit/other historic use**
Wildlife habitat, feeding and breeding. Fish nursery habitat. Hydroperiod restoration and re-vegetation within NFSLR floodplain. Restore historic ecological and hydrologic functions. Improve water quality and natural storage within watershed and NFSLR.	N/A
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	**Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)**
amphibians, gopher frog, salamanders, Eastern indigo snake, Florida sandhill crane, limpkin, roseate spoonbill, snail kite, round-tailed muskrat, wading birds, woodstork, osprey, raccoon, water snakes, bobcat, American alligator, short tailed hawk, swallow-tailed kite, tree frogs, woodpeckers, warblers, owls, southeastern American kestrel, big brown bat	Wading birds (SSC); gopher frog (SSC), Eastern indigo snake (T), Florida sandhill crane (T), wood stork (E), osprey (SSC), American alligator (T),

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

songbirds, heron, Florida sandhill crane, American alligator,

Additional relevant factors:

Previously permitted as mitigation bank through St. Lucie County. Site was never constructed other than stormwater pond.

Assessment conducted by:	Assessment date(s):
Anna Peterfreund	1/12/2011

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Platt's Creek Compensatory Mitigation	090107-1	Floodplain Swamp
Impact or Mitigation	Assessment conducted by:	Assessment date:
Mitigation - Forested	Anna Peterfreund	12-Jan-09

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	w/o pres or current: 0 / with: 9	The assessment area will be directly adjacent to the NFSLR, and the proposed depression marsh will be located directly to the east. Platt's Creek and property owned by the SFWMD are located to the south. A neighborhood exists to the north and is separated by a fence though only a small portion of the assessment area is adjacent to this neighborhood. This site will enhance the SFWMD property, the nearby state park, the NFSLR and Platt's Creek and the aquatic preserve to the south. A buffer of pine flatwoods will be provided on the eastern portion of the site separating the mitigation area from the stormwater pond, onsite facilities, and Sunrise Boulevard. The undeveloped portions of the area are under a perpetual conservation easement. Wildlife access to and from the site has minimal limitations based on location adjacent to NFSLR and Platt's Creek. Also, natural wetland habitat associated with the river located to the south. Functions of the proposed assessment area will benefit downstream fish and wildlife.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 0 / with: 9	The existing water environment is non-existent since the proposed mitigation site is an upland with the exception of the canals through the site and a large stormwater pond on the eastern side of the site. The assessment area will be graded to an elevation to provide a direct connection to the NFSLR and will contain a tidal influence. The site will be hydrated by the NFSLR and pond discharge. Once the depression marsh reaches the designated discharge elevation of 3.0, it will discharge into the floodplain swamp. The highest bottom elevation in the floodplain swamp has been set at 1.90 NGVD. The proposed creek through the system is approximately 10' wide with a bottom elevation of -0.40 feet NGVD. The bottom of each system will be over excavated by six inches and backfilled with improved soil up to an elevation of six inches above the SHWE so in times of a drought, the improved soil will retain more moisture to assist in species survival. Project design should ensure vegetative communities are subjected to adequate hydroperiods.The proposed site will have a minimum of 100 days of soils saturation.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 0 / with: 8	The community structure is currently an upland consisting of fallow citrus groves that are now dominated by Brazilian pepper and other shrubby vegetation. The mitigation area will be planted as floodplain forest near the NFSLR. Species to be planted include pond apple, water hickory, pop ash, swamp bay, groundsel bush, button bush, dahoon holly, Virginia willow, leather fern, lemon bacopa, spider-lily, muhly grass, maidencane, smartweed, royal fern, lizard's tail, netted chain fern and southern wild rice as shown on the planting plan.The hydrology in the area and the surrounding wetlands should support the vegetation and wetland environment to be created. Nuisance plant control will be maintained to not exceed greater than 10% of the overall vegetation. No exotic vegetation will be allowed. Land management activities are optimal for the long term viability of the plant community. Upland buffer will also provide habitat and life history support for numerous wildlife species in the wetlands.

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0	0.87

If preservation as mitigation,	
Preservation adjustment factor =	
Adjusted mitigation delta =	

For impact assessment areas	
FG = RFG x acres =	3.30

Delta = [with-current]
0.87

If mitigation		
Time lag (t-factor) =	1.68	16-20 yrs
Risk factor =	2	

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.26

Form 62-345.900(2), F.A.C. [effective date 02-04-2004]

Mitigation Determination Formulas
(See Section 62-345.600(3), F.A.C.)

For each impact assessment area:
(FL) Functional Loss = Impact Delta X Impact acres

For each mitigation assessment area:
(RFG) Relative Functional Gain = Mitigation Delta (adjusted for preservation, if applicable)/((t-factor)(risk))

(a) Mitigation Bank Credit Determination

The total potential credits for a mitigation bank is the sum of the credits for each assessment area where assessment area credits equal the RFG times the acres of the assessment area scored

Bank Assessment Area	RFG	X	Acres	=	Credits
example					
a.a.1					
a.a.2					
total					

(b) Mitigation needed to offset impacts, when using a mitigation bank

The number of mitigation bank credits needed, when the bank or regional offsite mitigation area is assessed in accordance with this rule, is equal to the summation of the calculated functional loss for each impact assessment area.

Impact Assessment Area	FL	=	Credits needed
example			
a.a.1			
a.a.2			
total			

(c) Mitigation needed to offset impacts, when not using a bank

To determine the acres of mitigation needed to offset impacts when not using a bank or a regional offsite mitigation area as mitigation, divide functional loss (FL) by relative functional gain (RFG). If there are more than one impact assessment area or more than one mitigation assessment area, the total functional loss and total relative functional gain is determined by summation of the functional loss (FL) and relative functional gain (RFG) for each assessment area.

	FL	/	RFG	=	Acres of Mitigation
Alternative 1C					
641 AA2	5.79				
615 AA3	0.79				
615 AA4	0.08				
641 AA6	0.35				
617 AA10	4.24				
Total	**11.25**				

	Functional Gain
641 Marsh	15.48
617 Hammock	3.52
615 Floodplain	3.30
Total	**22.30**

	FG	FL	= Remainder
Marsh	15.48	6.14	9.34
Hammock	3.52	4.24	-0.72
Floodplain	3.30	0.87	2.43
			11.05

ATTACHMENT C

Financial Assurances

BOARD OF
COUNTY
COMMISSIONERS

ST. LUCIE COUNTY FLORIDA

PUBLIC WORKS
DEPARTMENT

September 6, 2011

South Florida Water Management District
Environmental Resource Regulation Section
Attention: Mindy Parrott
3301 Gun Club Road
West Palm Beach, FL. 33406

RE: District Permit #56-00003-M Modification
Platt's Creek Compensatory Mitigation Project
St. Lucie County-Financial Responsibility

Dear Ms. Parrott:

In an effort to provide documentation for Section 4.3.7 ERP BOR, for the above proposed project. Please find the enclosed documents as requested. It is understood by St. Lucie County that Long Term Management must be adequately funded and proposed mitigation restoration will be maintained in perpetuity.

Attached is a print out of the reserve account for Platt's Creek along with a Line-to-Line transfer request to establish these funds to be annually carried over to cover the maintenance obligations as required by South Florida Water Management District. We are proposing to allocate $50,000 for the initial amount to cover the first year of operations and maintenance.

Please feel free to contact me at (772) 462-1485 if you have any question or require additional information.

Sincerely,

Donald B. West
Public Works Director
St. Lucie County

cc: Chris LeStrange, P.E. Water Quality Manager
Jason Bessey, Stormwater Program Coordinator

CHRIS DZADOVSKY, District No. 1 • TOD MOWERY, District No. 2 • PAULA A. LEWIS, District No. 3 • FRANNIE HUTCHINSON, District No. 4 • CHRIS CRAFT, District No. 5
County Administrator - Faye W. Outlaw, MPA
2300 Virginia Avenue • Ft. Pierce, FL 34982
Public Works: (772) 462-1485 • FAX (772) 462-2268
Engineering Division: (772) 462-1707 • Road & Bridge Division: (772) 462-2511
Solid Waste Division: (772) 462-1768 • Water Quality Division: (772) 462-2511 • Utilities Division: (772) 462-1150
www.stlucieco.org

LINE-TO-LINE TRANSFER REQUEST

DEPARTMENT: Water Quality **DATE:** 9/2/2011

Transfers within account types are not required if there are sufficient funds to balance the account.

	ACCOUNT NUMBER	ACCOUNT NAME	AMOUNT	ACCOUNT BALANCE	OMB VERIFY
TO:	101003-3725-546300-3112	Ground Maint-Platt's Creek	$50,000.00	$0	
FROM:	101003-3725-599300-800	Reserves	$50,000.00	$3,257,921.00	

REASON FOR TRANSFER: Grounds Maintenance for Mitgation Bank @ Platt's Creek

CONTACT PERSON: Sue **PHONE #:** 2178

DEPARTMENT DIRECTOR APPROVAL: (Required)

OMB APPROVAL: (Required)

ADMINISTRATION APPROVAL:

OMB NOTES:

INPUT DATE: **INPUT BY:**

LINE-TO-LINE TRANSFER #: [redacted] **DOCUMENT #:**

All line-to-line transfer requests must be submitted to the Office of Management & Budget.

Oracle Developer Forms Runtime - Web: Open > FGIBDST

File Edit Options Block Item Record Query Tools Help

ORACLE

Organization Budget Status FGIBDST 8.5 (PBCCC)

Chart: B

Fiscal Year: 11

Index:

Query Specific Account

Include Revenue Accounts

Commit Type: Both

Organization: 9910 Contingency and Reserve

Fund: 101003 Transportation Trust/Local Option

Program: 800 Other Uses

Account:

Account Type:

Activity:

Location:

Account	Type	Title	Adjusted Budget	YTD Activity	Commitments	Available Balance
389901	R	Funding Reserve	0.00	0.00	0.00	0.00
599300	E	Reserves	3,257,921.00	0.00	0.00	3,257,921.00
599305	E	Funding Reserve	0.00	0.00	0.00	0.00
Net Total:			-3,257,921.00	0.00	0.00	

Sort & Filter Find & Select

Editing

4.04%

85%

10:14 AM 9/2/2011

Friday, Sep 02, 2011 10:14 AM

ATTACHMENT E

Woodstork Biomass Analysis

Platt's Creek Entire Site - Wood stork Biomass Calculation

Hydroperiod	Existing Footprint		Preserve Areas				Net Change Per Hydroperiod Class	
			Pre Enhancement		Post Enhancement			
	Acres	Kgrams	Acres	Kgrams	Acres	Kgrams	Acres	Kgrams
Class 1: 0 to 60 Days							0	0
Class 2: 60 to 120 Days							0	0
Class 3: 120 to 180 Days							0	0
Class 4: 180 to 240 Days							0	0
Class 5: 240 to 300 Days							0	0
Class 6: 300 to 330 Days							0	0
Class 7: 330 to 365 Days							0	0
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

% Exotics	F.S.V	Hydroperiods	Crayfish & Fish g/m^2
0-25	1	Class 1 (0-60 days)	0.31
25-50	0.64	Class 2 (60-120 days)	0.62
50-75	0.37	Class 3 (120-180 days)	1.32
75-90	0.03	Class 4 (180-240 days)	2.34
>90	0.03	Class 5 (240-300 days)	2.93
		Class 6 (300-330 days)	3.36
		Class 7 (330-365 days)	3.63

IMPACT AREA

Hydroperiods	Acres	% exotics	F.S.V	m^2	m^2 suitable	crayfish & fish g/m^2	available biomass	32.5% consum.	Biomass (kg)
		0-25	1	0.00	0.00	FALSE	0.00	0.00	0.00
		25-50	0.64	0.00	0.00	FALSE	0.00	0.00	0.00
		0-25	1	0.00	0.00	FALSE	0.00	0.00	0.00
		25-50	0.64	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
TOTAL	**0.00**								**0.00**

PRESERVE AREA (PRE)

Hydroperiods	Acres	% exotics	F.S.V	m^2	m^2 suitable	crayfish & fish g/m^2	available biomass	32.5% consum.	Biomass (kg)
Class 5 (240-300 days)	4.56	0-25	1	18,453.74	18,453.74	2.93	54,069.46	17,572.57	17.57
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
TOTAL	**4.56**								**17.57**

Platt's Creek Entire Site - Wood stork Biomass Calculation

PRESERVE AREA (POST)

Hydroperiods	Acres	% exotics	F.S.V	m^2	m^2 suitable	crayfish & fish g/m^2	available biomass	32.5% consum.	Biomass (kg)
Class 2 (60-120 days)	13.54	0-25	1	54,794.66	54,794.66	0.62	33,972.69	11,041.12	11.04
Class 4 (180-240 days)	12.7	0-25	1	51,395.29	51,395.29	2.34	120,264.97	39,086.12	39.09
Class 5 (240-300 days)	23.1	0-25	1	93,482.77	93,482.77	2.93	273,904.51	89,018.96	89.02
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
TOTAL	**49.34**								**139.15**

Total Biomass within Existing Footprint	0.0			0.00	
Total Biomass within Preserve Area Pre-Enhancement	0.0	**Net Change**	0.0	17.57	
Total Biomass within Preserve Area Post-Enhancement	0.0			139.15	121.57

Crosstown Parkway Extension Project - Wood stork Biomass Calculation

Hydroperiod	Existing Footprint		Preserve Areas				Net Change Per Hydroperiod Class	
			Pre Enhancement		Post Enhancement			
	Acres	Kgrams	Acres	Kgrams	Acres	Kgrams	Acres	Kgrams
Class 1: 0 to 60 Days							0	0
Class 2: 60 to 120 Days							0	0
Class 3: 120 to 180 Days							0	0
Class 4: 180 to 240 Days							0	0
Class 5: 240 to 300 Days							0	0
Class 6: 300 to 330 Days							0	0
Class 7: 330 to 365 Days							0	0
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

% Exotics	F.S.V
0-25	1
25-50	0.64
50-75	0.37
75-90	0.03
>90	0.03

Hydroperiods	Crayfish & Fish g/m^2
Class 1 (0-60 days)	0.31
Class 2 (60-120 days)	0.62
Class 3 (120-180 days)	1.32
Class 4 (180-240 days)	2.34
Class 5 (240-300 days)	2.93
Class 6 (300-330 days)	3.36
Class 7 (330-365 days)	3.63

IMPACT AREA

Hydroperiods	Acres	% exotics	F.S.V	m^2	m^2 suitable	crayfish & fish g/m^2	available biomass	32.5% consum.	Biomass (kg)
Class 7 (330-365 days)	0.18	0-25	1	728.44	728.44	3.63	2,644.23	859.37	0.86
Class 5 (240-300 days)	5.02	0-25	1	20,315.30	20,315.30	2.93	59,523.84	19,345.25	19.35
Class 4 (180-240 days)	0.78	0-25	1	3,156.56	3,156.56	2.34	7,386.35	2,400.56	2.40
Class 5 (240-300 days)	0.46	0-25	1	1,861.56	1,861.56	2.93	5,454.38	1,772.67	1.77
Class 2 (60-120 days)	4.14	0-25	1	16,754.05	16,754.05	0.62	10,387.51	3,375.94	3.38
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
TOTAL	**10.58**								**27.75**

Crosstown

Assessment Area	FLUCCS	Impact Acreage	Functional Loss
AA1	612	0.18	0.16
AA2	6417	5.02	4.52
AA3	615	0.78	0.62
AA6	641	0.46	0.34
AA10	617	4.14	3.45
Total		10.58	**9.08**

PRESERVE AREA (PRE)

Hydroperiods	Acres	% exotics	F.S.V	m^2	m^2 suitable	crayfish & fish g/m^2	available biomass	32.5% consum.	Biomass (kg)
Class 5 (240-300 days)	4.56	0-25	1	18,453.74	18,453.74	2.93	54,069.46	17,572.57	17.57
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00
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TOTAL	**4.56**								**17.57**

Crosstown Parkway Extension Project - Wood stork Biomass Calculation

PRESERVE AREA (POST)

Hydroperiods	Acres	% exotics	F.S.V	m^2	m^2 suitable	crayfish & fish g/m^2	available biomass	32.5% consum.	Biomass (kg)			
Class 2 (60-120 days)	13.54	0-25	1	54,794.66	54,794.66	0.62	33,972.69	11,041.12	11.04	617	all	
Class 4 (180-240 days)	6.4	0-25	1	25,899.99	25,899.99	2.34	60,605.97	19,696.94	19.70	615	half	
Class 5 (240-300 days)	9.2	0-25	1	37,231.23	37,231.23	2.93	109,087.51	35,453.44	35.45	641		40%
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00			
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00			
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00			
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			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00			
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00			
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00			
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00			
			FALSE	0.00	0.00	FALSE	0.00	0.00	0.00			
TOTAL	**29.14**								**66.19**			

Total Biomass within Existing Footprint	0.0			27.75	
Total Biomass within Preserve Area Pre-Enhancement	0.0	**Net Change**	0.0	17.57	
Total Biomass within Preserve Area Post-Enhancement	0.0			66.19	48.62

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USD ADMINISTRATION

Form #0941
08/95

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
ENVIRONMENTAL RESOURCE
STANDARD GENERAL PERMIT NO. 56-03199-P
DATE ISSUED:April 24, 2012

PERMITTEE: ST LUCIE COUNTY BOARD OF COUNTY COMMISSIONERS
2300 VIRGINIA AVENUE
FORT PIERCE, FL 34982

CITY OF PORT ST LUCIE
121 S W PORT ST LUCIE BOULEVARD
PORT ST LUCIE, FL 34984

PROJECT DESCRIPTION: Construction and operation of a 80.66-acre offsite mitigation area known as Platt's Creek Compensatory Mitigation, and continued operation of a 16.9-acre stormwater management facility serving the Platt's Creek basin.

PROJECT LOCATION: ST LUCIE COUNTY, SEC 33 TWP 36S RGE 40E

PERMIT DURATION: See Special Condition No:1. Pursuant to Rule 40E-4.321, Florida Administrative Code.

This is to notify you of the District's agency action concerning Notice of Intent for Permit Application No. 111018-4, dated October 18, 2011. This action is taken pursuant to Rule 40E-1.603 and Chapter 40E-40 , Florida Administrative Code (F.A.C.).

Based on the information provided, District rules have been adhered to and an Environmental Resource General Permit is in effect for this project subject to:

1. Not receiving a filed request for a Chapter 120, Florida Statutes, administrative hearing.
2. the attached 19 General Conditions (See Pages : 2 - 4 of 8),
3. the attached 26 Special Conditions (See Pages : 5 - 8 of 8) and
4. the attached 7 Exhibit(s)

Should you object to these conditions, please refer to the attached "Notice of Rights" which addresses the procedures to be followed if you desire a public hearing or other review of the proposed agency action. Please contact this office if you have any questions concerning this matter. If we do not hear from you in accordance with the "Notice of Rights," we will assume that you concur with the District's action.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a "Notice of Rights" has been mailed to the Permittee (and the persons listed in the attached distribution list) no later than 5:00 p.m. on this 24th day of April, 2012, in accordance with Section 120.60(3), Florida Statutes.

BY Anita R. Bain

Anita R. Bain
Bureau Chief - Environmental Resource Permitting
Regulation Division

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UTILITY ENGINEERING DIVISION

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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 permitee 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

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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GENERAL CONDITIONS

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 April 24, 2017.

2. Operation of the surface water management system shall be the responsibility of St. Lucie County.

3. Discharge Facilities:

   11-20' W X 1' H V-NOTCH weirs with crest at elev. 3.5' NGVD 29.

   Receiving body : Floodplain Swamp
   Control elev : 2 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. Facilities other than those stated herein shall not be constructed without an approved modification of this permit.

8. 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.

9. 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.

10. 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.

11. 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.

12. 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 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

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SPECIAL CONDITIONS

encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, Florida Statutes.

13. This permit supersedes District Permit Number 56-00003-M.

14. Prior to commencement of construction and in accordance with the work schedule in Exhibit 5 the permittee shall submit an electronic or hard copy version of the certified copy of the recorded conservation easement for the mitigation area(s) and associated buffer(s). The electronic version of the recorded conservation easement, and associated GIS information described below, shall be submitted via the District's ePermitting/eCompliance website. The GIS data shall be supplied in a digital ESRI Geodatabase (mdb), ESRI Shapefile (shp) or AutoCAD Drawing Interchange (dxf) file format using Florida State Plane coordinate system, East Zone (3601), Datum NAD83, HARN with the map units in feet. A map depicting the Conservation Easement over the best available satellite or aerial imagery shall also be provided. If the information is provided via hard copy the GIS data shall reside on CD disk and be submitted to the District's Environmental Resource Compliance Division in the service area office where the application was submitted.

    The recorded easement shall utilize the form attached as Exhibit 6. Any proposed modification to the approved form must receive prior written consent from the District. The easement must be free of encumbrances or interests in the easement which the District determines are contrary to the intent of the easement. In the event it is later determined that there are encumbrances or interests in the easement which the District determines are contrary to the intent of the easement, the permittee shall be required to provide release or subordination of such encumbrances or interests.

15. Success of the mitigation activities proposed herein is heavily dependent on proper grading to achieve the design ground elevations necessary to recruit the expected vegetation or to sustain the proper hydrology for the targeted vegetation communities. The permittee shall submit as-built topography of the proposed mitigation area(s) prior to planting. The permittee shall correct any deficiencies in the project grade within 14 days of being notified of such deficiencies by District staff.

16. A mitigation program known as Platt's Creek shall be implemented in accordance with Exhibit No. 2-4. The permittee shall create 12.7 acres of floodplain forest, 23.10 acres of marsh, and 13.54 acres of hydric hammock acres and 13.65 acres of upland buffer.

17. A monitoring program for the wetland mitigation area shall be implemented in accordance with Exhibit No. 4 and 5. The monitoring program shall extend for a period of five years with semi-annual reports submitted to District Environmental Resource Compliance staff.

    Success criteria for the mitigation areas are identified on pages 21 though 26 of Exhibit 4. Monitoring reports shall include data collected during the semi-annual monitoring events as described in Exhibits 4 and 5, and an analysis of the data in comparison with the success criteria with conclusions regarding the success of the mitigation effort and any recommendations for adaptive management.

    The targeted species shall include a diverse representation of the species identified in Exhibit No. 3 . If any one species is determined by District staff to have attained a monoculture status to the detriment of the establishment of other appropriate species, the permittee shall submit a remedial plan for corrective action to District staff within 30 days of notification of such conditions.

18. The use of the mitigation units from this project shall be limited to projects undertaken by the City of Port St. Lucie or St. Lucie County Board of County Commissioners. The mitigation units obtained from this permit shall be limited to projects which fall within the geographic area identified on Exhibit 4. The

SPECIAL CONDITIONS

suitability of this mitigation area to offset impacts to any given project will be determined on a case-by-case review of the project for which impacts are proposed. Deduction of mitigation functional units for any project will require a letter modification to this permit.

19. A time zero monitoring report for Platt's Creek shall be conducted in accordance with Exhibit Nos. 4 and 5 for all created/restored wetlands. The plan shall include a survey of the areal extent, acreage and cross-sectional elevations of the created/restored areas and panoramic photographs for each habitat type. The report shall also include a description of planted species, sizes, total number and densities of each plant species within each habitat type as well as mulching methodology.

20. A maintenance program shall be implemented in accordance with Exhibit No. 4 for the restored/created wetland and upland areas on a regular basis to ensure the integrity and viability of those areas as permitted. Maintenance shall be conducted in perpetuity to ensure that the conservation areas are maintained free from Category 1 exotic vegetation (as defined by the Florida Exotic Pest Plant Council at the time of permit issuance) immediately following a maintenance activity. Maintenance in perpetuity shall also insure that conservation areas, including buffers, maintain the species and coverage of native, desirable vegetation specified in the permit. Coverage of exotic and nuisance plant species shall not exceed 10% of total cover between maintenance activities. In addition, the permittee shall manage the mitigation areas such that exotic/nuisance plant species do not dominate any one section of those areas.

21. Project construction, implementation, maintenance/monitoring and long term management shall be accomplished in accordance with the attached exhibits and in accordance with the special conditions outlined herein. Additionally, issuance of this permit is based on the District's reliance on information submitted and commitments made by the permittee that the proposed mitigation design presented in Exhibit Nos. 2-4 will be achieved and that the targeted success criteria outlined in Exhibit No. 4 will be met. If at any time, the District determines that the targeted success criteria have not or are not being met then no further use of the site to offset wetland impacts will be permitted until criteria are met.

22. The District reserves the right to require remedial measures to be taken by the permittee if monitoring or other information demonstrates that adverse impacts to onsite or offsite wetlands, upland conservation areas or buffers, or other surface waters have occurred due to project related activities.

23. The wetland conservation areas and upland buffer zones and/or upland preservation areas shown on Exhibit(s) 2-6 may in no way be altered from their natural or permitted state. Activities prohibited within the conservation areas include, but are not limited to:
(a) construction or placing of buildings, roads, signs, billboards or other advertising, utilities or other structures on or above the ground;
(b) dumping or placing soil or material as landfill or dumping or placing of trash, waste, or unsightly or offensive materials;
(c) removal or destruction of trees, shrubs, or other vegetation - with the exception of exotic and nuisance vegetation removal;
(d) excavation, dredging, or removal of loam, peat, gravel, soil, rock, or other material substances in such manner as to affect the surface;
(e) surface use except for purposes that permit the land or water area to remain predominantly in its natural condition;
(f) activities detrimental to drainage, flood control, water conservation, erosion control, soil conservation, or fish and wildlife habitat preservation, including but not limited to ditching, diking or fencing;
(g) acts or uses detrimental to such retention of land or water areas; and
(h) acts or uses detrimental to the preservation of the structural integrity or physical appearance of sites or properties of historical, architectural, archaeological, or cultural significance.

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SPECIAL CONDITIONS

24. Activities associated with the implementation of the mitigation, monitoring and maintenance plan(s) shall be completed in accordance with the work schedule attached as Exhibit No. 5. Any deviation from these time frames will require prior approval from the District's Environmental Resource Compliance staff. Such requests must be made in writing and shall include (1) reason for the change, (2) proposed start/finish and/or completion dates; and (3) progress report on the status of the project development or mitigation effort.

25. Silt screens, hay or synthetic bales, turbidity screens/barriers or other such sediment control measures shall be utilized during construction. The selected sediment control measures shall be installed prior to the commencement of construction in accordance with Exhibit No. 2 and shall remain in place until all adjacent construction is completed. All areas shall be stabilized and vegetated immediately after construction to prevent erosion into the surface waters.

26. Prior to the commencement of construction, the permittee shall conduct a pre-construction meeting with field representatives, contractors and District staff. The purpose of the meeting will be to discuss construction methods and sequencing, including type and location of turbidity and erosion controls to be implemented during construction, mobilization and staging of contractor equipment, phasing of construction, methods of vegetation clearing, and wetland/buffer protection methods, with the permittee and contractors. The permittee shall contact District Environmental Resource Compliance staff to schedule the pre-construction meeting.

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 <u>not</u> 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.

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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.

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Last Date For Agency Action: May 11, 2012

GENERAL ENVIRONMENTAL RESOURCE PERMIT STAFF REPORT

Project Name: Platts Creek Compensatory Mitigation

Permit No.: 56-03199-P

Application No.: 111018-4

Application Type: Environmental Resource (General Permit Modification)

Location: St Lucie County, S33/T36S/R40E

Permittee : St Lucie County Board Of County Commissioners
City Of Port St Lucie

Operating Entity : St Lucie County Board Of County Commissioners

Project Area: 80.66 acres

Project Land Use: Mitigation

Drainage Basin: NORTH ST LUCIE

Receiving Body: Floodplain Swamp **Class:** CLASS III

Special Drainage District: NA

Total Acres Presv/Mit Compensation Onsite: 62.99

Conservation Easement To District : Yes

Sovereign Submerged Lands: No

Modification of an Environmental Resource Permit to authorize construction and operation of an 80.66-acre offsite mitigation area known as Platt's Creek Compensatory Mitigation with continued operation of a 16.9-acre stormwater management facility serving the Platt's Creek basin.

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PROJECT EVALUATION:

The project site is located at the northwest intersection of Sunrise Boulevard and Midway Road in Section 33, Township 35S, Range 40E of St. Lucie County. Please refer to Exhibit 1 for location map. The site was previously utilized for agricultural activities and now contains a permitted stormwater treatment area and associated surface water management features. There are no existing wetlands located onsite.

On April 10, 2003, a new mitigation bank construction and operation permit was issued for a 19.6-acre stormwater treatment facility and the 82.40-acre Platt's Creek Mitigation Bank (Permit 56-00003-M). The stormwater treatment facility was to be located east of the mitigation bank parcel. The stormwater treatment facility has been constructed and is operational, receiving flow from the Platt's Creek Basin via an 84" culvert under Sunrise Boulevard. This flow enters a sump with weirs set at varying elevations to manage storm events, is then routed through a pump station (maximum flow, 170 cfs) to the detention area. The detention area discharges into an adjacent swale which connects to Platt's Creek downstream of the afore-described pump station.

The approved mitigation included a total of 82.40 acres of wetland restoration. The specific habitat types to be restored were: 10.33 acres of hydric hammock, 39.24 acres of freshwater marsh, 13.51 acres of hydric flatwoods and 19.32 acres of floodplain forest. However, due to budget constraints, none of the approved mitigation bank activities were initiated.

On April 10, 2008 the permittee submitted an application for a constructed wetland area consistent with the mitigation bank plans and to modify the outfall from the stormwater treatment facility. In a letter dated June 5, 2008, the permittee requested that the mitigation bank permit be extended five years. On July 10, 2008 an extension to Permit 56-00003-M was granted with an expiration date of July 10, 2013.

The proposed project includes construction of 62.99 acres of wetland mitigation within an 80.66-acre parcel, and changing the mitigation bank into an offsite mitigation area to be used only by the co-applicants (St. Lucie County Board of County Commissioners and the City of Port St. Lucie). As the project is no longer a mitigation bank, a new permit number has been assigned, superseding Permit Number 56-00003-M. Also included under the proposed permit is the continued operation of the previously permitted Platt's Creek stormwater treatment facilities located adjacent to the proposed mitigation area.

The proposed mitigation area is a joint effort between St. Lucie County Board of County Commissioners (County) and the City of Port St. Lucie (City). As described in a Memorandum of Agreement between the two parties (see Exhibit 7), the City will fund and construct the mitigation area, and the County will provide long- term management and operation. The mitigation will be available for use by both City and County projects requiring wetland mitigation. This site is proposed to provide mitigation for the City's Crosstown Parkway Bridge over the North Fork of the St. Lucie River, if an Environmental Resource Permit (ERP) is issued for that project. The amount of mitigation needed for that project will be determined as part of the review of the ERP application for the Crosstown Parkway Bridge.

The mitigation area is designed as a sloping system from the existing stormwater pond down to the North Fork of the St. Lucie River. A berm separates the hydric hammock and freshwater marsh systems from the tidal floodplain forest system that is directly connected to the River at three locations. Eleven weirs in the berm (at elevation 3.5' NGVD) allow for flow from the freshwater marsh into the floodplain forest and ultimately, the River. The floodplain forest system mimics an oxbow, and will have three open

connections to the River. Please see Exhibit 2 (16 pages) for the proposed construction plans.

WATER QUANTITY:

Discharge Rate :

The existing stormwater pond discharge will remain the same as previously constructed with the exception of some grading to ensure positive outfall; please refer to Exhibit 2. Discharge will then be conveyed through the mesic flatwoods, hydric hammock and the depression marsh via overland flow. Discharge into the floodplain swamp will be via eleven (11) v-notched weirs. The floodplain swamp will be directly connected to the North Fork of the St. Lucie River (NFSLR) with a canal approximately 10 feet wide with a bottom elevation of -0.40 feet NGVD.

The surface water management system for the mitigation area has not been designed to limit discharge for the design event to a specified rate. No impervious area is being added by the construction of the mitigation bank. As indicated in the initial permit (App. No. 010831-18) no significant change in discharge is expected due to the construction of the STA and the mitigation area.

Control Elevation :

Basin	Area (Acres)	Ctrl Elev (ft, NGVD 29)	WSWT Ctrl Elev (ft, NGVD 29)	Method Of Determination
Depression Marsh	23.10	2	2.00	Monitoring Data

Receiving Body :

Basin	Str.#	Receiving Body
Depression Marsh	V notch Wei	Floodplain Swamp

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

Weirs:

Basin	Str#	Count	Type	Width	Height	Length	Dia.	Elev.
Depression Marsh	V notch Weir	11	V-Notch	20'	1'			3.5 (crest)

WATER QUALITY:

No adverse water quality impacts are anticipated as a result of the proposed project. The authorization for construction of the surface water management system under Permit 56-00003-M was issued pursuant to the water quality net improvement provisions referenced in Rule Section 40E-4.303(1), Florida Administrative Code. The existing stormwater treatment facility will continue to provide treatment for approximately 0.66 inches of runoff from the Platt's Creek basin (59.0 acre-feet). Additional (unquantified) water quality treatment will be provided by flow through the mitigation area prior to discharge to the River.

The applicant has provided reasonable assurances that water quality standards will not be violated during construction as a result of the proposed work. Best Management Practices (BMPs) will be implemented and silt screens/turbidity barriers will be placed so as to contain turbidity during construction of the proposed project (please refer to Exhibit No. 2 and the Special Conditions). All erosion and turbidity control measures shall remain in place until the stabilization is achieved.

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WETLANDS

Mitigation Proposal:

Proposed is 62.99 acres of restoration/creation adjacent to the North Fork of the St. Lucie River at Platt's Creek. The mitigation plan document (Exhibit 4) describes the mitigation activities in detail. Currently, the site is upland and was formerly a citrus grove. The site will be excavated to appropriate elevations to create wetlands, and upland pine flatwoods areas will be created as buffers and habitat support.

Habitats to be created include hydric hammock, floodplain forest and freshwater marsh. Success criteria include hydrologic criteria, plant survival and coverage, wildlife utilization and tree growth. The success criteria were designed as measurable interim conditions that reflect a trend toward meeting the expectations envisioned during the evaluation and scoring of the site, since monitoring is planned for only the first five years after project construction. Please see pages 21 through 26 of Exhibit 4 for all of the success criteria and parameters.

Hydrology is supported by groundwater and rainfall and supplemented by the Platt's Creek STA. Hydrology for the floodplain forest is via direct connection to the River. Because the functioning of the mitigation site is dependent on appropriate grading and excavation, an as built survey indicating the elevations and slopes is required prior to planting (see Special Conditions). Planting plans for all of the habitat types are provided in Exhibit 3.

The mitigation value was determined using the Uniform Mitigation Assessment Method (UMAM). The table below summarizes the amount of mitigation functional gain anticipated from the project. Use of the mitigation functional units resulting from this project is contingent upon successful construction and planting, meeting the success criteria, and continued maintenance of the site. At the time of permitting of an impact for which mitigation will be provided at Platt's Creek, (including the proposed Crosstown Parkway Bridge) a letter modification to this permit shall be submitted to subtract the number of functional units needed from the total. The determination on whether the mitigation provided at Platt's Creek is appropriate and can offset the impacts for a proposed project will be made on a case-by-case basis, based on the rules in effect at the time of permit application.

Monitoring/Maintenance:

St. Lucie County will monitor the created wetlands for a five-year period. A time zero monitoring report will be completed directly after construction and planting. Monitoring will be conducted semiannually during the end of the wet and dry seasons. Semiannual reports documenting the results of each monitoring event will be prepared to document the progress of the mitigation areas. The reports will include hydrologic data, vegetation analysis, wildlife utilization, macroinvertebrate and fish sampling, panoramic photographs, and conclusions. Monitoring is described in detail in Exhibit 4, and monitoring locations are shown in Exhibit 5. The parameters to be monitored include: desirable vegetative composition, desirable vegetative density, percent (%) of coverage of desired plant species, exotic and/or nuisance plant coverage, tree growth, wildlife utilization, fish and macroinvertebrate utilization, and performance of the hydrologic regime. The reports shall provide a comparison and analysis of the collected data with the success criteria identified in Exhibit 4, and provided recommendations for adaptive management to correct any deficiencies.

Wetland Inventory :

CONSTRUCTION MOD -Platt's Creek Mitigation

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 Fluccs	Adj Delta	Functional Gain / Loss
1	ON	422	Restoration/Creation	12.70	.00	.87	16 - 20	2.00		615	.259	3.288
2	ON	422	Restoration/Creation	23.10	.00	.90	3	1.25		641	.673	15.544
3	ON	422	Restoration/Creation	13.54	.00	.76	11 - 15	2.00		617	.260	3.524
4	ON	422	Restoration/Creation	13.65						411		
			Total:	62.99								22.36

Fluccs Code	Description
411	Pine Flatwoods
411	Pine Flatwoods - Hydric
411	Pine Flatwoods - Upland
422	Brazilian Pepper-Upland
422	Brazilian Pepper-Wetland (Ff)
422	Brazilian Pepper-Wetland (Fh)
422	Brazilian Pepper-Wetland (Sf)
615	Stream And Lake Swamps (Bottomland)
617	Mixed Wetland Hardwoods
641	Freshwater Marshes

The entire mitigation area (not including the existing stormwater facilities) will be protected under a conservation easement dedicated to the District. Prior to commencement of construction, the permittees shall record the conservation easement and the sketch and legal description (see Exhibit 6) in the St. Lucie County public records and provide recorded copies (along with GPS data and a map of the easement over an aerial photograph) to Environmental Resource Compliance staff in accordance with the permit conditions.

The conservation easement allows for potential future passive recreation facilities. According to the applicants, a trail along the berm separating the freshwater marsh wetland from the floodplain forest wetland may be proposed in the future. Any future passive recreation construction will require a permit modification, as well as demonstration that the proposed uses will not adversely affect the mitigation area.

Construction of the mitigation area, planting and submittal of as-built drawings is the responsibility of the

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City of Port St. Lucie. Once constructed, operation, monitoring and long-term maintenance of the mitigation area and surface water management system shall be the responsibility of St. Lucie County Board of County Commissioners. Please reference agreement between the two parties for further information (Exhibit 7).

CERTIFICATION AND MAINTENANCE OF THE WATER MANAGEMENT SYSTEM

It is suggested that the permittee retain the services of a Professional Engineer 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.

RELATED CONCERNS:

Water Use Permit Status:

The applicant has indicated that no irrigation is required for the proposed project and that dewatering is not required for construction of 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, unless the work qualifies for a No-Notice Short-Term Dewatering permit pursuant to Chapter 40E-20.302(3) or is exempt pursuant to Section 40E-2.051, FAC.

CERP:

The project is located immediately adjacent to the North Fork Floodplain Restoration CERP component boundary. Environmental Resource Regulation staff have coordinated review of this application with the Indian River Lagoon Feasibility Study Project Manager who has determined that this application is not incompatible with the future restoration goals for this CERP project, as currently envisioned.

Potable Water Supplier:

None required.

Waste Water System/Supplier:

None required.

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 from the Florida Department of State, Division of Historical Resources indicating that no significant archaeological or historical resources are recorded in the project area and therefore is unlikely to have an effect upon any such properties.

DEO/CZM Consistency Review:

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

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.

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STAFF REVIEW:

DIVISION APPROVAL:

NATURAL RESOURCE MANAGEMENT:

Anita R. Bain

DATE: 4/23/12

SURFACE WATER MANAGEMENT:

Hugo A. Carter, P.E.

DATE: April 20, 2012

Application 111018-4 Permit 56-03199-P Platt's Creek Mitigation Area

List of Exhibits

Exhibit 1- Location Map

Exhibit 2- Construction Plans

Exhibit 3- Planting Plans

Exhibit 4- Mitigation Plan

Exhibit 5- Monitoring Locations and Schedule

Exhibit 6- Conservation Easement

Exhibit 7- MOA between St. Lucie County and the City of Port St. Lucie

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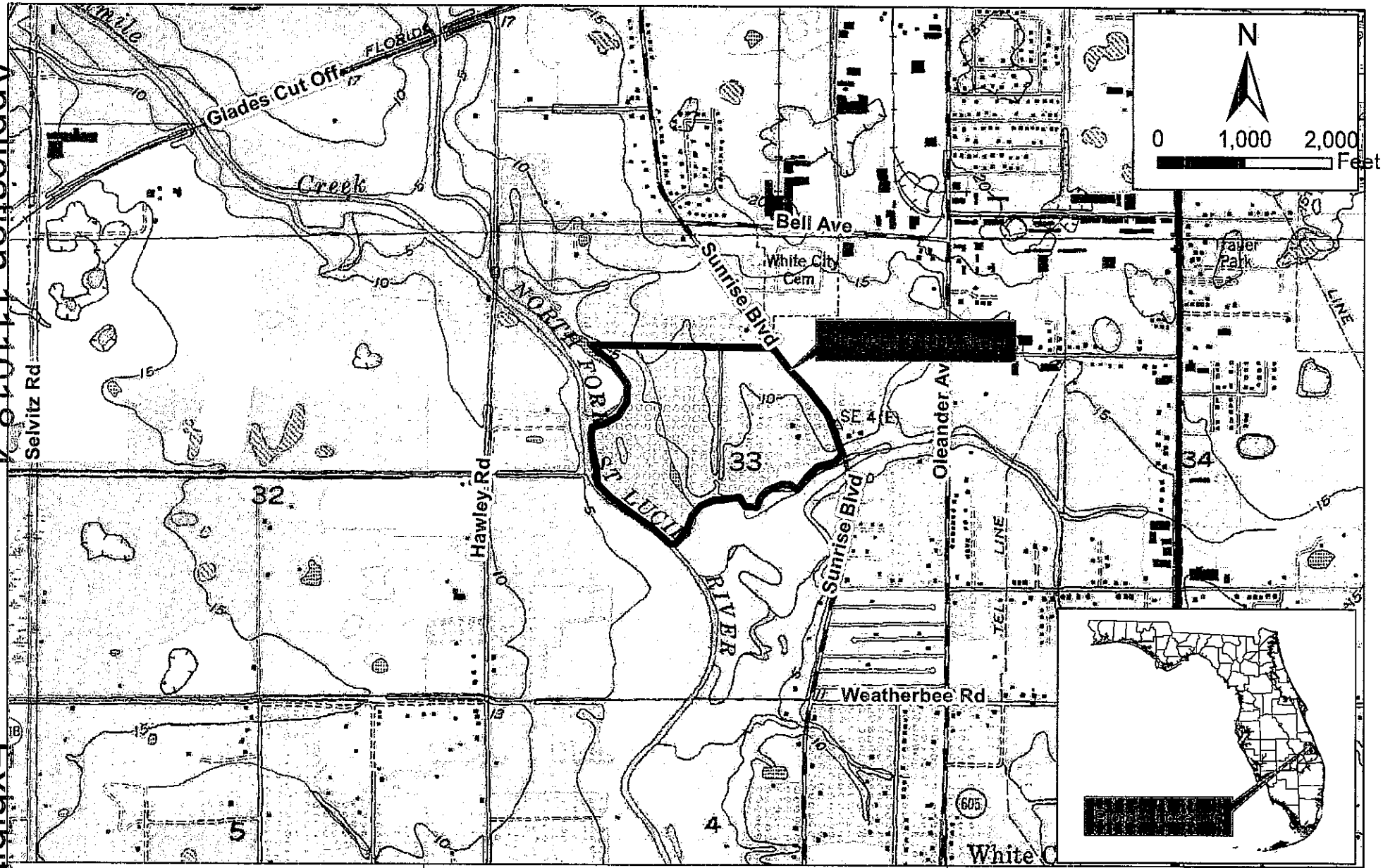


Platt's Creek Mitigation Site
St. Lucie County
City of Port St. Lucie
56-0003-M

USGS Project Location Map

Source: FGDL, UWF (Fort Pierce Quad)

Figure 1

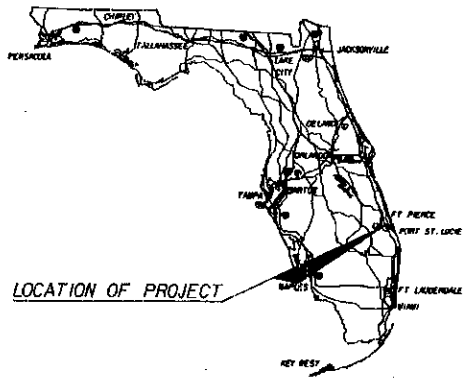
American

Application 111018-4

Exhibit 1

CITY OF PORT ST. LUCIE
ST. LUCIE COUNTY
STATE OF FLORIDA

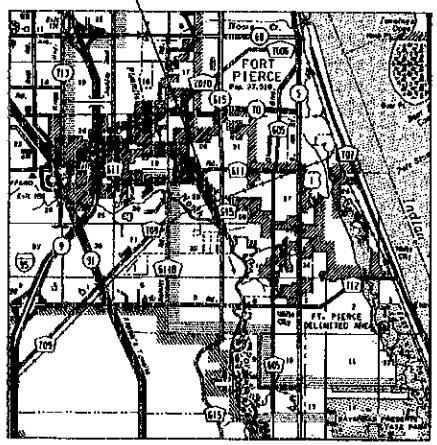
CONSTRUCTION PLANS
FOR
PLATT'S CREEK COMPENSATORY MITIGATION PROJECT
OCTOBER 2011



INDEX OF SITE PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2	GENERAL NOTES
3	STORMWATER POLLUTION PREVENTION PLAN NOTES
4-6	EXISTING CONDITIONS
7-8	EROSION CONTROL / DEMOLITION PLAN
9	SITE PLAN
10-14	GRADING PLAN
15	TYPICAL SECTION
16	DRAINAGE DETAILS

PROJECT LOCATION



CITY OF PORT ST. LUCIE FLORIDA

SHOP DRAWINGS
TO BE SUBMITTED TO:

RAYMOND D. RALLS, P.E.
c/o AMERICAN CONSULTING PROFESSIONALS, LLC
2818 CYPRESS RIDGE BLVD, SUITE 200
WESLEY CHAPEL, FLORIDA 33544
PHONE: (813) 435-2600 FAX: (813) 435-2601

PLANS PREPARED BY:

American
American Consulting Professionals
2818 Cypress Ridge Blvd, Suite 200
Wesley Chapel, Florida 33544
Phone: (813) 436-2600 Fax: (813) 435-2601
Certificate of Authorization No. 9302
Vendor No. 34565001
Contract No. 20100053

GOVERNING STANDARDS AND SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION,
DESIGN STANDARDS DATED 2010,
AND STANDARD SPECIFICATIONS FOR ROAD AND
BRIDGE CONSTRUCTION DATED 2010,
AS AMENDED BY CONTRACT DOCUMENTS.

REVISIONS
11-21-11 PER SFWMD COMMENTS

NOTE: THE SCALE OF THESE PLANS MAY
HAVE CHANGED DUE TO REPRODUCTION.

ENGINEER OF RECORD: Raymond D. Ralls, PE

P.E. NO.: 63087

FISCAL YEAR	SHEET NO.
11	1

CITY PROJECT MANAGER: ROXANNE CHESSER, PE

Application 111018-4 Exhibit 2 Page 1 of 16

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GENERAL NOTES:

1. BENCHMARK DATUM USED FOR THE PROJECT IS NGVD 1929.
2. THE LOCATION(S) OF ANY UTILITIES SHOWN IN THE PLANS ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL UTILITIES PRIOR TO ANY CONSTRUCTION ACTIVITIES. THE CONTRACTOR WILL BE RESPONSIBLE TO REPAIR, AT NO COST TO THE OWNER, ANY DAMAGE TO EXISTING UTILITIES.
3. THE CONTRACTOR SHALL NOTIFIY UTILITY OWNERS THROUGH SUNSHINE STATE ONE CALL OF FLORIDA, 1-800-432-4770 OR 811, IN ADVANCE OF BEGINNING CONSTRUCTION.
4. ALL EROSION CONTROL MEASURES AND BARRIERS (SEDIMENT BARRIER, TURBIDITY BARRIER, AND SYNTHETIC BALES, ETC.) SHALL BE INSTALLED PRIOR TO CONSTRUCTION, MAINTAINED THROUGHOUT CONSTRUCTION AND UNTIL THE SITE IS PERMANENTLY STABILIZED.
5. ALL EROSION CONTROL MEASURES AND BARRIERS (SEDIMENT BARRIER, TURBIDITY BARRIER, AND SYNTHETIC BALES, ETC.) SHALL BE REMOVED AT THE COMPLETION OF THE PROJECT, ONCE APPROVAL OF THE WORK COMPLETED IS GRANTED BY ST. LUCIE COUNTY AND THE CITY OF PORT ST. LUCIE AND PRIOR TO DEMOBILIZATION.
6. ALL EXISTING PIPES TO REMAIN SHALL BE DE-SILTED.
7. IF THE NEED FOR ON-SITE BURNING IS ANTICIPATED THEN THE CONTRACTOR WILL HAVE TO OBTAIN APPROVAL FROM ST. LUCIE COUNTY AND OBTAIN ANY AND ALL PERMITS REQUIRED FOR ON-SITE BURNING PRIOR TO ANY ON-SITE BURNING.
8. ALL DEMOLITION DEBRIS SHALL BE REMOVED FROM THE SITE AND LEGALLY DISPOSED OF BY THE CONTRACTOR.
9. CONTRACTOR SHALL CONSTRUCT ALL WORK IN ACCORDANCE WITH ALL CITY, COUNTY, AND STATE REGULATIONS.
10. ALL EXISTING STRUCTURES TO REMAIN UNLESS OTHERWISE NOTED.
11. ALL PIPES, END TREATMENTS, STRUCTURES.ECT. SHALL BE PER FDOT SPECIFICATIONS, LASTEST EDITION.

SEEDING NOTES:

MATERIALS

SEED

THE SPECIES AND APPLICATION RATES OF GRASS, LEGUME, AND COVERCROP SEED FURNISHED SHALL BE THOSE STIPULATED HEREIN.

SEED SHALL BE FURNISHED SEPARATELY OR IN MIXTURES IN STANDARD CONTAINERS WITH THE SEED NAME, LOT NUMBER, NET WEIGHT, PERCENTAGES OF PURITY AND OF GERMINATION AND HARD SEED, AND PERCENTAGE OF MAXIMUM WEED SEED CONTENT CLEARLY MARKED FOR EACH KIND OF SEED. THE CONTRACTOR SHALL FURNISH THE ENGINEER DUPLICATE SIGNED COPIES OF A STATEMENT BY THE VENDOR CERTIFYING THAT EACH LOT OF SEED HAS BEEN TESTED BY A RECOGNIZED LABORATORY FOR SEED TESTING WITHIN 6 MONTHS OF DATE OF DELIVERY. THIS STATEMENT SHALL INCLUDE: NAME AND ADDRESS OF LABORATORY, DATE OF TEST, LOT NUMBER FOR EACH KIND OF SEED, AND THE RESULTS OF TESTS AS TO NAME, PERCENTAGES OF PURITY AND OF GERMINATION, AND PERCENTAGE OF WEED CONTENT FOR EACH KIND OF SEED FURNISHED, AND, IN CASE OF A MIXTURE, THE PROPORTIONS OF EACH KIND OF SEED.

SEEDS SHALL BE APPLIED AS FOLLOWS:

SEED	MINIMUM SEED PURITY (PERCENT)	MINIMUM GERMINATION (PERCENT)	RATE OF APPLICATION LB./ACRE
BAHIA GRASS	95% (FDOT 981)	95%	80
ANNUAL TYPE RYEGRASS	95% (FDOT 981)	90%	20

SEED SHALL MEET THE REQUIREMENTS AS SPECIFIED IN THE LATEST EDITION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 981.

BAHIA SEEDING (PERMANENT EROSION CONTROL) SHALL BE INSTALLED BETWEEN MARCH AND SEPTEMBER INCLUSIVE. UNLESS OTHERWISE APPROVED BY THE ENGINEER. RYEGRASS SEEDING (TEMPORARY EROSION CONTROL) SHALL BE INSTALLED BETWEEN OCTOBER AND FEBRUARY ONLY. IF RYEGRASS IS PLACED AS TEMPORARY EROSION CONTROL, THEN THE CONTRACTOR MUST RETURN DURING THE DESIGNATED PERIOD TO PLACE THE PERMANENT EROSION CONTROL (BAHIA SEEDING).

CONSTRUCTION METHODS

ADVANCE PREPARATION AND CLEANUP

AFTER GRADING OF AREAS HAS BEEN COMPLETED, AREAS TO BE SEEDED SHALL BE RAKED OR OTHERWISE CLEARED OF STONES LARGER THAN 2 INCHES ANY DIAMETER, STICKS, STUMPS, AND OTHER DEBRIS THAT MIGHT INTERFERE WITH SOWING OF SEED, GROWTH OF GRASSES, OR SUBSEQUENT MAINTENANCE OF GRASSCOVERED AREAS. IF ANY DAMAGE BY EROSION OR OTHER CAUSES HAS OCCURRED AFTER THE COMPLETION OF GRADING, THE CONTRACTOR SHALL REPAIR SUCH DAMAGE. THIS MAY INCLUDE FILLING GULLIES, SMOOTHING IRREGULARITIES, AND REPAIRING OTHER INCIDENTAL DAMAGE.

AN AREA TO BE SEEDED SHALL BE CONSIDERED A SATISFACTORY SEEDBED WITHOUT ADDITIONAL TREATMENT IF IT HAS RECENTLY BEEN THOROUGHLY LOOSENED AND WORKED TO A DEPTH OF NOT LESS THAN 5 INCHES AS A RESULT OF GRADING OPERATIONS AND, IF IMMEDIATELY PRIOR TO SEEDING, THE TOP 3 INCHES OF SOIL IS LOOSE, FRIABLE, REASONABLY FREE FROM LARGE CLODS, ROCKS, LARGE ROOTS, OR OTHER UNDESIRABLE MATTER, AND IF SHAPED TO THE REQUIRED GRADE.

HOWEVER, WHEN THE AREA TO BE SEEDED IS SPARSELY SODDED, WEEDY, BARREN AND UNWORKED, OR PACKED AND HARD, ANY GRASS AND WEEDS SHALL FIRST BE CUT OR OTHERWISE SATISFACTORILY DISPOSED OF, AND THE SOIL THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH NOT LESS THAN 5 INCHES. CLODS SHALL BE BROKEN AND THE TOP 3 INCHES OF SOIL SHALL BE WORKED INTO A SATISFACTORY SEEDBED BY DISCING, OR BY USE OF CULTIPACKERS, ROLLERS, DRAGS, HARROWS, OR OTHER APPROPRIATE MEANS.

WET APPLICATION METHOD

A.GENERAL

THE CONTRACTOR MAY ELECT TO APPLY SEED BY SPRAYING THEM ON THE PREVIOUSLY PREPARED SEEDBED IN THE FORM OF AN AQUEOUS MIXTURE AND BY USING THE METHODS AND EQUIPMENT DESCRIBED HEREIN. THE RATES OF APPLICATION SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS.

B.SPRAYING EQUIPMENT

THE SPRAYING EQUIPMENT SHALL HAVE A CONTAINER OR WATER TANK EQUIPPED WITH A LIQUID LEVEL GAUGE CALIBRATED TO READ IN INCREMENTS NOT LARGER THAN 50 GALLONS OVER THE ENTIRE RANGE OF THE TANK CAPACITY, MOUNTED SO AS TO BE VISIBLE TO THE NOZZLE OPERATOR. THE CONTAINER OR TANK SHALL ALSO BE EQUIPPED WITH A MECHANICAL POWERDRIVEN AGITATOR CAPABLE OF KEEPING ALL THE SOLIDS IN THE MIXTURE IN COMPLETE SUSPENSION AT ALL TIMES UNTIL USED.

THE UNIT SHALL ALSO BE EQUIPPED WITH A PRESSURE PUMP CAPABLE OF DELIVERING 100 GALLONS PER MINUTE AT A PRESSURE OF 100 POUNDS PER SQUARE INCH. THE PUMP SHALL BE MOUNTED IN A LINE THAT WILL RECIRCULATE THE MIXTURE THROUGH THE TANK WHENEVER IT IS NOT BEING SPRAYED FROM THE NOZZLE. ALL PUMP PASSAGES AND PIPE LINES SHALL BE CAPABLE OF PROVIDING CLEARANCE FOR ¼INCH SOLIDS. THE POWER UNIT FOR THE PUMP AND AGITATOR SHALL HAVE CONTROLS MOUNTED SO AS TO BE ACCESSIBLE TO THE NOZZLE OPERATOR. THERE SHALL BE AN INDICATING PRESSURE GAUGE CONNECTED AND MOUNTED IMMEDIATELY AT THE BACK OF THE NOZZLE.

THE NOZZLE PIPE SHALL BE MOUNTED ON AN ELEVATED SUPPORTING STAND IN SUCH A MANNER THAT IT CAN BE ROTATED THROUGH 360 DEGREES HORIZONTALLY AND INCLINED VERTICALLY FROM AT LEAST 20 DEGREES BELOW TO AT LEAST 60 DEGREES ABOVE THE HORIZONTAL. THERE SHALL BE A QUICKACTING, THREEWAY CONTROL VALVE CONNECTING THE RECIRCULATING LINE TO THE NOZZLE PIPE AND MOUNTED SO THAT THE NOZZLE OPERATOR CAN CONTROL AND REGULATE THE AMOUNT OF FLOW OF MIXTURE DELIVERED TO THE NOZZLE. AT LEAST THREE DIFFERENT TYPES OF NOZZLES SHALL BE SUPPLIED SO THAT MIXTURES MAY BE PROPERLY SPRAYED OVER DISTANCE VARYING FROM 20 TO 100 FEET. ONE SHALL BE A CLOSERANGE RIBBON NOZZLE, ONE A MEDIUMRANGE RIBBON NOZZLE, AND ONE A LONGRANGE JET NOZZLE. FOR CASE OF REMOVAL AND CLEANING, ALL NOZZLES SHALL BE CONNECTED TO THE NOZZLE PIPE BY MEANS OF QUICKRELEASE COUPLINGS.

IN ORDER TO REACH AREAS INACCESSIBLE TO THE REGULAR EQUIPMENT, AN EXTENSION HOSE AT LEAST 50 FEET IN LENGTH SHALL BE PROVIDED TO WHICH THE NOZZLES MAY BE CONNECTED.

C.MIXTURES.

ALL WATER USED SHALL BE OBTAINED FROM FRESH WATER SOURCES AND SHALL BE FREE FROM INJURIOUS CHEMICALS AND OTHER TOXIC SUBSTANCES HARMFUL TO PLANT LIFE. BRACKISH WATER SHALL NOT BE USED AT ANY TIME. THE CONTRACTOR SHALL IDENTIFY TO THE ENGINEER ALL SOURCES OF WATER AT LEAST 2 WEEKS PRIOR TO USE. THE ENGINEER MAY TAKE SAMPLES OF THE WATER AT THE SOURCE OR FROM THE TANK AT ANY TIME AND HAVE A LABORATORY TEST THE SAMPLES FOR CHEMICAL AND SALINE CONTENT. THE CONTRACTOR SHALL NOT USE ANY WATER FROM ANY SOURCE THAT IS DISAPPROVED BY THE ENGINEER FOLLOWING SUCH TESTS.

ALL MIXTURES SHALL BE CONSTANTLY AGITATED FROM THE TIME THEY ARE MIXED UNTIL THEY ARE FINALLY APPLIED TO THE SEEDBED. ALL SUCH MIXTURES SHALL BE USED WITHIN 2 HOURS FROM THE TIME THEY WERE MIXED OR THEY SHALL BE WASTED AND DISPOSED OF AT LOCATIONS ACCEPTABLE TO THE ENGINEER.

D.SPRAYING.

MIXTURES OF SEED SHALL ONLY BE SPRAYED UPON PREVIOUSLY PREPARED SEEDBEDS. THE MIXTURES SHALL BE APPLIED BY MEANS OF A HIGHPRESSURE SPRAY THAT SHALL ALWAYS BE DIRECTED UPWARD INTO THE AIR SO THAT THE MIXTURES WILL FALL TO THE GROUND LIKE RAIN IN A UNIFORM SPRAY. NOZZLES OR SPRAYS SHALL NEVER BE DIRECTED TOWARD THE GROUND IN SUCH A MANNER AS MIGHT PRODUCE EROSION OR RUNOFF.

PARTICULAR CARE SHALL BE EXERCISED TO INSURE THAT THE APPLICATION IS MADE UNIFORMLY AND AT THE PRESCRIBED RATE AND TO GUARD AGAINST MISSES AND OVERLAPPED AREAS. PROPER PREDETERMINED QUANTITIES OF THE MIXTURE IN ACCORDANCE WITH SPECIFICATIONS SHALL BE USED TO COVER SPECIFIED SECTIONS OF KNOWN AREA. CHECKS ON THE RATE AND UNIFORMITY OF APPLICATION MAY BE MADE BY OBSERVING THE DEGREE OF WETTING OF THE GROUND OR BY DISTRIBUTING TEST SHEETS OF PAPER OR PANS OVER THE AREA AT INTERVALS AND OBSERVING THE QUANTITY OF MATERIAL DEPOSITED THEREON.

ON SURFACES THAT ARE TO BE MULCHED AS INDICATED BY THE PLANS OR DESIGNATED BY THE ENGINEER, SEED APPLIED BY THE SPRAY METHOD NEED NOT BE RAKED INTO THE SOIL OR ROLLED. HOWEVER, ON SURFACES ON WHICH MULCH IS NOT TO BE USED, THE RAKING AND ROLLING OPERATIONS WILL BE REQUIRED AFTER THE SOIL HAS DRIED.

MAINTENANCE OF SEEDED AREAS

THE CONTRACTOR SHALL PROTECT SEEDED AREAS AGAINST TRAFFIC OR OTHER USE BY WARNING SIGNS OR BARRICADES, AS APPROVED BY THE ENGINEER. SURFACES GULLIED OR OTHERWISE DAMAGED FOLLOWING SEEDING SHALL BE REPAIRED BY REGRADING AND RESEEDING AS DIRECTED. THE CONTRACTOR SHALL MOW, WATER AS DIRECTED, AND OTHERWISE MAINTAIN SEEDED AREAS IN A SATISFACTORY CONDITION UNTIL FINAL INSPECTION AND ACCEPTANCE OF THE WORK.

WHEN THE WET APPLICATION METHOD OUTLINED ABOVE IS USED FOR WORK DONE OUT OF SEASON, IT WILL BE REQUIRED THAT THE CONTRACTOR ESTABLISH A GOOD STAND OF GRASS OF UNIFORM COLOR AND DENSITY TO THE SATISFACTION OF THE ENGINEER. A GRASS STAND SHALL BE CONSIDERED ADEQUATE WHEN BARE SPOTS ARE ONE SQUARE FOOT OR LESS, RANDOMLY DISPERSED, AND DO NOT EXCEED 3% OF THE AREA SEEDED. IF AT THE TIME WHEN THE CONTRACT HAS BEEN OTHERWISE COMPLETED IT IS NOT POSSIBLE TO MAKE AN ADEQUATE DETERMINATION OF THE COLOR, DENSITY, AND UNIFORMITY OF SUCH STAND OF GRASS, PAYMENT FOR THE UNACCEPTED PORTIONS OF THE AREAS SEEDED OUT OF SEASON WILL BE WITHHELD UNTIL SUCH TIME AS THESE REQUIREMENTS HAVE BEEN MET.

SCHEDULE

THE CONTRACTOR WILL HAVE ONE YEAR FROM NOTICE TO PROCEED TO COMPLETE CONSTRUCTION OF THE PROJECT AND RECEIVE APPROVAL BY CITY OF PORT ST. LUCIE, ST. LUCIE COUNTY SOUTH FLORIDA WATER MANAGEMENT DISTRICT AND THE ENGINEER.

REVISIONS			BY	DATE
DATE	DESCRIPTION	DESIGNED	RDR	08/28/11
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		CHECKED	WLA	09/07/11

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ROAD	COUNTY
N/A	ST. LUCIE

PLATTS CREEK COMPENSATORY MITIGATION PROJECT

GENERAL NOTES

SCALE: NTS

SHEET NO. 2

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STORMWATER POLLUTION PREVENTION NOTES:

1.0 SITE DESCRIPTION:

1.A. NATURE OF CONSTRUCTION ACTIVITY:
IMPROVEMENTS TO THE EXISTING PLATTS CREEK MITIGATION BANK AREA TO UTILIZE THE AVAILABLE AREA TO CREATE A COMPENSATORY MITIGATION AREA.

1.B. SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES:
THE CONTRACTOR SHALL PROVIDE A DETAILED SEQUENCE OF CONSTRUCTION FOR ALL CONSTRUCTION ACTIVITIES.

1.C. AREA ESTIMATES:
TOTAL PROJECT AREA = 102.00 ACRES
TOTAL DISTURBED SOIL = 66.46 ACRES

1.D. RUNOFF DATA:
RUNOFF COEFFICIENTS:
BEFORE: 0.46
DURING: VARIES
AFTER: 0.60
SOILS DATA: THE SOILS CONSIST OF ANKONA AND FARMTON SANDS (2), ARENTS 0-5 PERCENT SLOPES (4), RIVIERA FINE SANDS (38), SUSANNA AND WAUCHULA SANDS (43) AND WABASSO SANDS (48).

1.E. SITE MAP:
THE CONSTRUCTION PLANS ARE BEING USED AS THE SITE MAPS. THE CONSTRUCTION PLANS PROVIDE THE LIMITS OF ALL CONSTRUCTION. THE GRADING PLAN, TYPICAL SECTION AND DRAINAGE DETAILS IDENTIFY THE LIMITS OF DISTURBED AREA. THE SHEET NUMBERS FOR THE PLAN SHEETS REFERENCED ARE IDENTIFIED ON THE KEY SHEET OF THESE CONSTRUCTION PLANS.
* APPROXIMATE SLOPES: THE SLOPES OF THE SITE CAN BE SEEN IN THE GRADING PLAN, TYPICAL SECTION AND DRAINAGE DETAILS.
* AREAS OF SOIL DISTURBANCES: 66.46 ACRES OF THE EXISTING AREA WILL BE DISTURBED DURING CONSTRUCTION.
* AREAS NOT TO BE DISTURBED: THE EXISTING DETENTION POND AND PUMP STATION ON THE EASTERN SIDE OF THE PROPERTY WILL NOT BE DISTURBED DURING CONSTRUCTION.
* LOCATIONS OF TEMPORARY CONTROLS: THESE ARE SHOWN ON THE EROSION CONTROL/DEMOLITION PLAN SHEET.
* LOCATIONS OF PERMANENT CONTROLS: THE PROPOSED V-NOTCH WEIRS WILL BE THE PRIMARY STORMWATER MANAGEMENT CONTROLS.
* AREAS TO BE STABILIZED: TEMPORARY STABILIZATION PRACTICES ARE SHOWN IN THE SAME LOCATION AS THE TEMPORARY CONTROLS MENTIONED ABOVE. PERMANENT STABILIZATION IS SHOWN ON THE TYPICAL SECTION SHEET.
* SURFACE WATERS: THERE ARE NO SURFACE WATERS (WETLANDS) LOCATED WITHIN THE PROJECT SITE. THE NORTH FORK OF THE ST. LUCIE RIVER RUNS ALONG THE WEST SIDE OF THE PROJECT AREA AND PLATTS CREEK RUNS ALONG THE SOUTHERN SIDE OF THE PROJECT AREA.
* DISCHARGE POINTS TO SURFACE WATERS: THERE ARE TWO DISCHARGE POINTS TO THE NORTH FORK OF THE ST. LUCIE RIVER AND ONE DISCHARGE POINT TO PLATTS CREEK.

1.F. RECEIVING WATERS:
THE NORTH FORK OF THE ST. LUCIE RIVER AND PLATTS CREEK ARE THE RECEIVING WATERS FOR THIS SITE.

2.0 CONTROLS:

2.A. EROSION AND SEDIMENT CONTROLS:
EROSION CONTROL ITEMS ARE ESTIMATED FOR PREVENTION, CONTROL, ABATEMENT OF EROSION, SEDIMENTATION, AND WATER POLLUTION. THESE ITEMS ARE TO BE USED AT THE LOCATIONS DESCRIBED IN THE CONTRACTOR'S APPROVED EROSION CONTROL PLAN OR AS DIRECTED BY THE PROJECT ENGINEER TO COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.

THE CONTRACTOR SHALL DESCRIBE THE PROPOSED STABILIZATION AND STRUCTURAL PRACTICES BASED ON THE CONTRACTOR'S PROPOSED TRAFFIC CONTROL PLAN. THE FOLLOWING RECOMMENDED GUIDELINES ARE BASED ON THE TRAFFIC CONTROL PLAN (TCP) OUTLINED IN THE CONSTRUCTION PLANS. THE CONTRACTOR MAY CHOSE TO ACCEPT THESE GUIDELINES OR MODIFY THEM, SUBJECT TO APPROVAL OF THE ENGINEER. AS WORK PROGRESSES, THE CONTRACTOR SHALL MODIFY THE PLAN TO ADAPT TO SEASONAL VARIATION, CHANGES IN CONSTRUCTION ACTIVITIES, AND THE NEED FOR BETTER PRACTICES.

2.A.1 STABILIZATION PRACTICES:
THE CONTRACTOR SHALL DESCRIBE THE STABILIZATION PRACTICES PROPOSED TO CONTROL EROSION. THE CONTRACTOR SHALL INITIATE ALL STABILIZATION MEASURES AS SOON AS PRACTICAL, BUT IN NO CASE MORE THAN 14 DAYS, IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. IF NECESSARY THE STABILIZATION PRACTICES SHALL INCLUDE AT LEAST THE FOLLOWING, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

TEMPORARY:
* SEED AND MULCH, AND SOD.
* INSTALL SILT FENCE, TURBIDITY BARRIERS, AND FLOATING TURBIDITY BARRIERS.

* TEMPORARY MULCHING: CHEMICAL ADHESIVE SOIL STABILIZER (POLYACRYLAMIDE) SHALL BE USED WHERE SOIL RUNOFF WILL DRAIN TO AREAS PROTECTED BY STAKED OR FLOATING TURBIDITY BARRIERS WHEN CONSTRUCTION ACTIVITY HAS TEMPORARILY CEASED AND WILL NOT BE REWORKED IN THE NEXT 24 HOURS. THE MANUFACTURER'S REPRESENTATIVE FOR THE POLYACRYLAMIDE PRODUCT SHALL BE CONSULTED PRIOR TO APPLICATION AND BE PRESENT DURING INITIAL APPLICATION TO ENSURE PROPER USE OF THE PRODUCT. APPLICATION RATES FOR SOIL SPECIFIC POLYMERS SHOULD BE USED ACCORDING TO THE MANUFACTURER'S RECOMMENDED SPECIFICATIONS.

PERMANENT:
* SOD.

2.A.2 STRUCTURAL PRACTICES:
THE CONTRACTOR SHALL DESCRIBE THE PROPOSED STRUCTURAL PRACTICES TO CONTROL OR TRAP SEDIMENT AND OTHERWISE PREVENT THE DISCHARGE OF POLLUTANTS FROM EXPOSED AREAS OF THE SITE. SEDIMENT CONTROLS SHALL BE IN PLACE BEFORE DISTURBING SOIL UPSTREAM OF THE CONTROL. IF NECESSARY, THE STRUCTURAL PRACTICES SHALL INCLUDE AT LEAST THE FOLLOWING, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
TEMPORARY: SOD.
* SILT FENCE IN ACCORDANCE WITH DESIGN STANDARD 102.
* INLET PROTECTION IN ACCORDANCE WITH DESIGN STANDARD 102.
PERMANENT:
* SOD.

2.B STORMWATER MANAGEMENT:
THE PROJECT CONSISTS OF THE CONSTRUCTION OF A MITIGATION BANK. NO IMPERVIOUS AREA WILL BE ADDED TO THE SITE.

2.C OTHER CONTROLS:
2.C.1 WASTE DISPOSAL:
THE CONTRACTOR SHALL DESCRIBE THE PROPOSED METHODS TO PREVENT THE DISCHARGE OF SOLID MATERIALS, INCLUDING BUILDING MATERIALS, TO WATERS OF THE UNITED STATES. THE PROPOSED METHODS SHALL INCLUDE AT LEAST THE FOLLOWING, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
* PROVIDING LITTER CONTROL AND COLLECTION WITHIN THE PROJECT DURING CONSTRUCTION ACTIVITIES.
* DISPOSING OF ALL FERTILIZER OR OTHER CHEMICAL CONTAINERS ACCORDING TO EPA'S STANDARD PRACTICES AS DETAILED BY THE MANUFACTURER.
* DISPOSING OF SOLID MATERIALS INCLUDING BUILDING AND CONSTRUCTION MATERIALS OFF THE PROJECT SITE BUT NOT IN SURFACE WATERS, OR WETLANDS.
* COVERING LOADED HAUL TRUCKS WITH TARPAULINS.
* REMOVING EXCESS DIRT FROM ROADS DAILY.
* USING ROADWAY SWEEPERS DURING DUST GENERATING ACTIVITIES SUCH AS EXCAVATION AND MILLING OPERATIONS.

2.C.2 STATE AND LOCAL REGULATIONS FOR WASTE DISPOSAL, SANITARY SEWER, OR SEPTIC TANK REGULATIONS:
THE CONTRACTOR SHALL DESCRIBE THE PROPOSED PROCEDURES TO COMPLY WITH APPLICABLE STATE AND LOCAL REGULATIONS FOR WASTE DISPOSAL, AND SANITARY SEWER OR SEPTIC SYSTEMS.

2.C.3 FERTILIZERS AND PESTICIDES:
THE CONTRACTOR SHALL DESCRIBE THE PROCEDURES FOR APPLYING FERTILIZERS AND PESTICIDES.

2.C.4 TOXIC SUBSTANCES:
THE CONTRACTOR SHALL PROVIDE A LIST OF TOXIC SUBSTANCES THAT ARE LIKELY TO BE USED ON THE JOB AND PROVIDE A PLAN ADDRESSING THE GENERATION, APPLICATION, MIGRATION, STORAGE, AND DISPOSAL OF THESE SUBSTANCES.

2.C.5 APPROVED STATE AND LOCAL PLANS AND PERMITS:
* THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING THE NPDES NOTICE OF INTENT (N.O.I.) WITH APPLICABLE FEE, TO FDEP AT LEAST 48 HOURS PRIOR TO INITIAL SOIL DISTURBANCE.
* NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER PROGRAM NOTICE OF INTENT.

2.C.6 OFFSITE VEHICLE TRACKING & DUST CONTROL:
THE CONTRACTOR SHALL DESCRIBE THE PROPOSED METHODS FOR MINIMIZING OFFSITE VEHICLE TRACKING OF SEDIMENTS AND GENERATING DUST. THE PROPOSED METHODS SHALL INCLUDE AT LEAST THE FOLLOWING, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

3.0 MAINTENANCE:
THE CONTRACTOR SHALL PROVIDE A PLAN FOR MAINTAINING ALL EROSION AND SEDIMENT CONTROLS THROUGHOUT CONSTRUCTION. THE MAINTENANCE PLAN SHALL AT A MINIMUM, COMPLY WITH THE FOLLOWING.
* SILT FENCE: THE CONTRACTOR SHOULD ANTICIPATE REPLACING SILT FENCE ON 12 MONTH INTERVALS.
*FLOATING TURBIDITY: MUST MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS PURSUANT TO F.A.C. 62-4.244 THROUGHOUT CONSTRUCTION.

4.0 INSPECTIONS:
QUALIFIED PERSONNEL SHALL INSPECT THE FOLLOWING ITEMS AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES OR GREATER. TO COMPLY, THE CONTRACTOR SHALL INSTALL AND MAINTAIN RAIN GAGES AND RECORD THE DAILY RAINFALL. WHERE SITES HAVE BEEN PERMANENTLY STABILIZED, INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH. THE CONTRACTOR SHALL ALSO INSPECT THAT CONTROLS INSTALLED IN THE FIELD AGREE WITH THE LATEST STORMWATER POLLUTION PREVENTION PLAN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING THE WEEKLY NPDES INSPECTION FORM AND SUBMISSION OF THE FORM TO THE ENGINEER. THIS FORM MUST BE COMPLETED EVERY 7 DAYS AND WITHIN 24 HOURS OF A 0.50 INCH RAINFALL EVENT.
* POINTS OF DISCHARGE TO WATERS OF THE UNITED STATES.
* POINTS OF DISCHARGE TO MUNICIPAL SEPARATE STORM SEWER SYSTEMS.
* DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
* AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION.
* STRUCTURAL CONTROLS.
* STORMWATER MANAGEMENT SYSTEMS.
* LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE. THE CONTRACTOR SHALL INITIATE REPAIRS WITHIN 24 HOURS OF INSPECTIONS THAT INDICATE ITEMS ARE NOT IN GOOD WORKING ORDER. IF INSPECTIONS INDICATE THAT THE INSTALLED STABILIZATION AND STRUCTURAL PRACTICES ARE NOT SUFFICIENT TO MINIMIZE EROSION, RETAIN SEDIMENT, AND PREVENT DISCHARGING POLLUTANTS, THE CONTRACTOR SHALL PROVIDE ADDITIONAL MEASURES, AS APPROVED BY THE ENGINEER.

5.0 NON-STORMWATER DISCHARGES:
THE CONTRACTOR SHALL IDENTIFY ALL ANTICIPATED NON-STORMWATER DISCHARGES (EXCEPT FLOWS FROM FIRE FIGHTING ACTIVITIES). THE CONTRACTOR SHALL DESCRIBE THE PROPOSED MEASURES TO PREVENT POLLUTION OF THESE NON-STORMWATER DISCHARGES. IF THE CONTRACTOR ENCOUNTERS CONTAMINATED SOIL OR GROUNDWATER, CONTACT DISTRICT TWO HAZARDOUS MATERIALS COORDINATOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REQUIRED PERMITS ASSOCIATED WITH DEWATERING SUCH AS THE WMD CONSUMPTIVE USE PERMIT AND THE FDEP GENERIC PERMIT FOR DISCHARGE OF PRODUCED GROUNDWATER FROM ANY NON-CONTAMINATED SITE ACTIVITY, 62-621.300(2).

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ROAD	COUNTY
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PLATTS CREEK COMPENSATORY MITIGATION PROJECT
STORMWATER POLLUTION PREVENTION PLAN NOTES

SCALE: NTS
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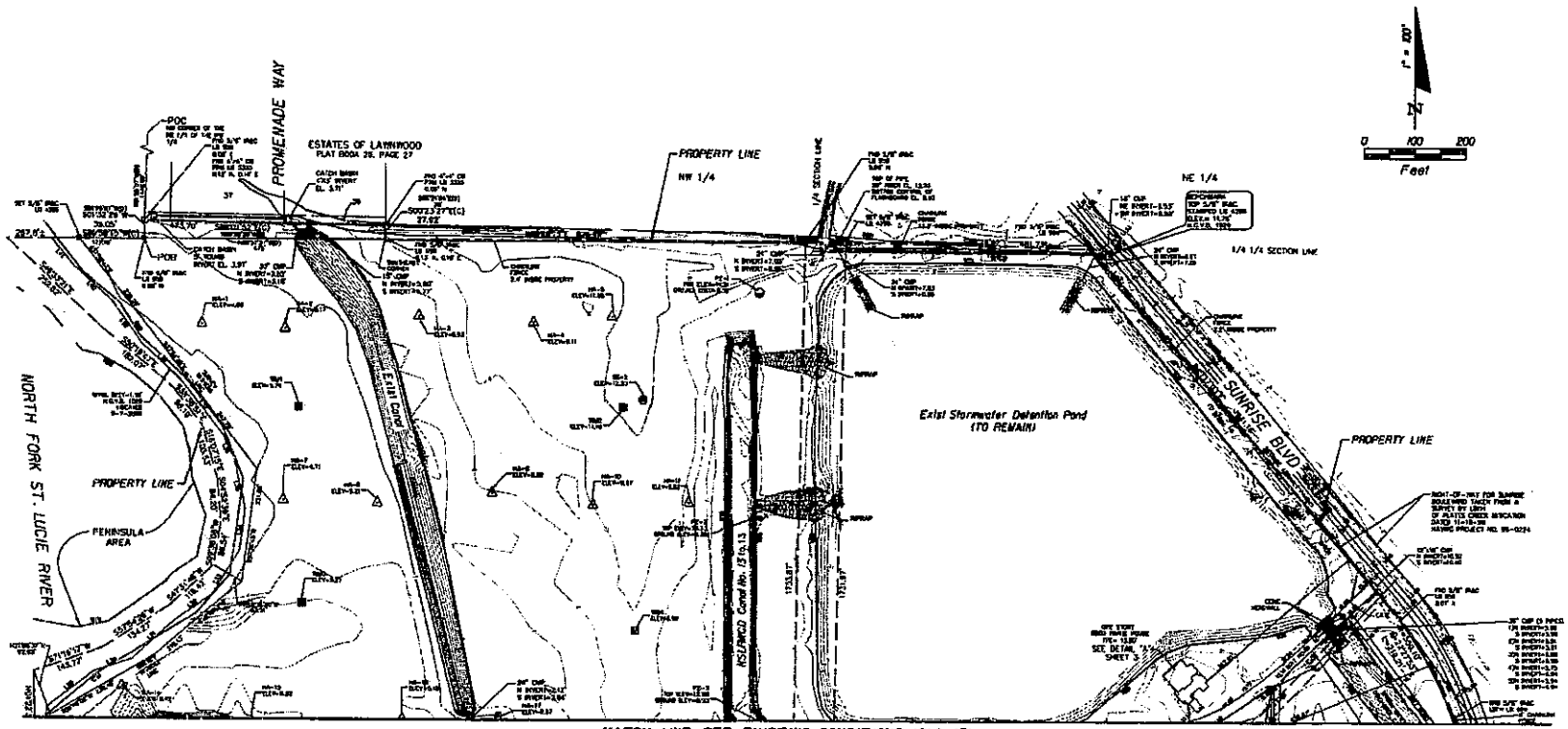

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PLATT'S CREEK COMPENSATORY MITIGATION PROJECT

EXISTING CONDITIONS (1)

SCALE: 1"=100'

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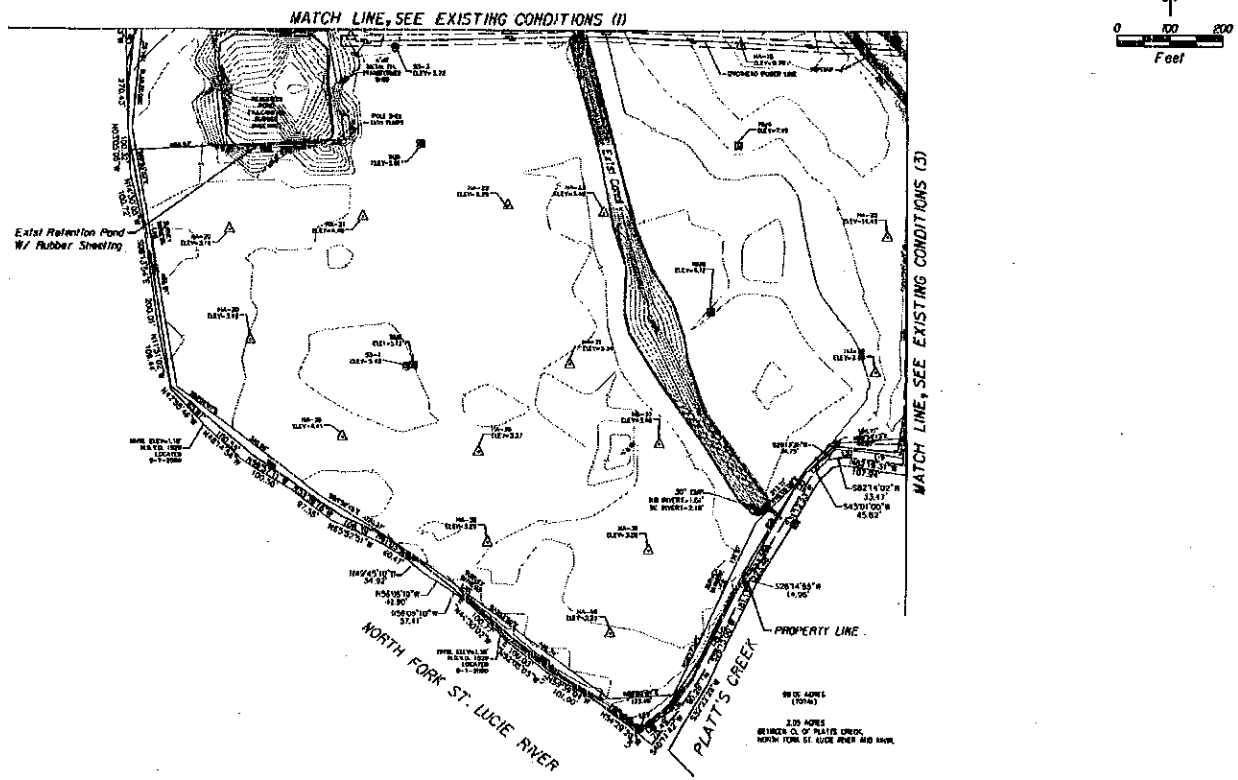

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PLATT'S CREEK COMPENSATORY MITIGATION PROJECT

EXISTING CONDITIONS (2)

SCALE: 1"=100'

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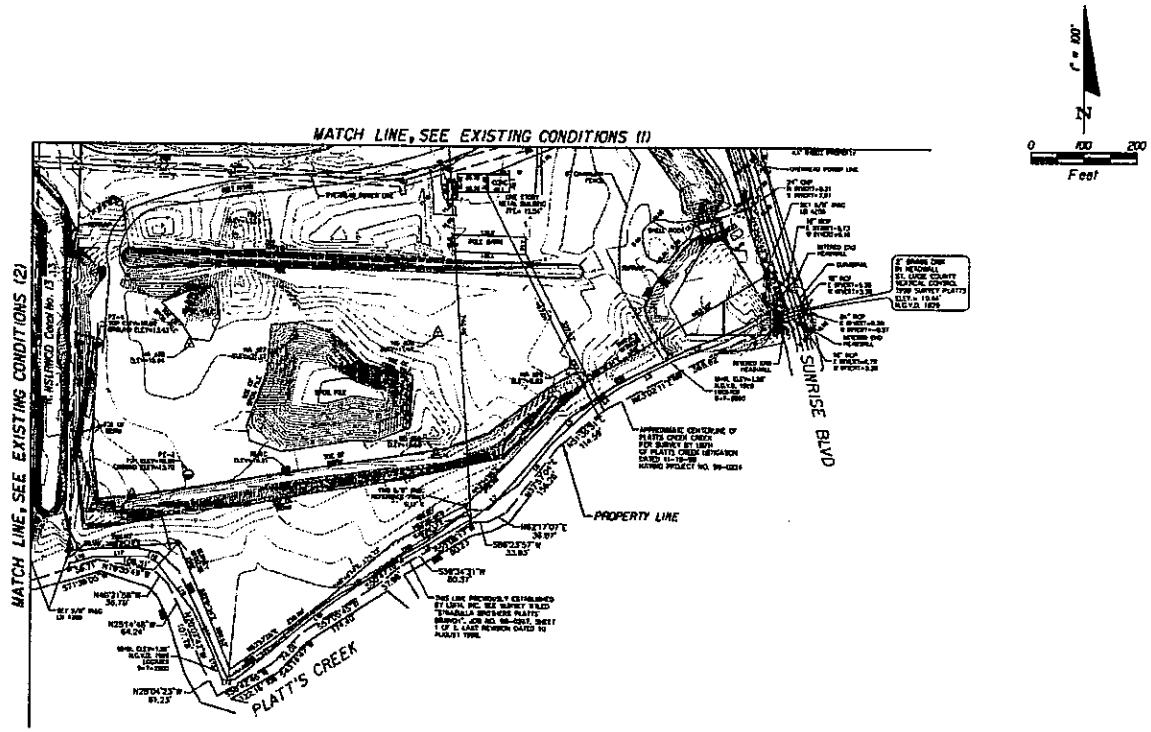

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PLATTS CREEK COMPENSATORY MITIGATION PROJECT

EXISTING CONDITIONS (3)

SCALE: 1"=100'
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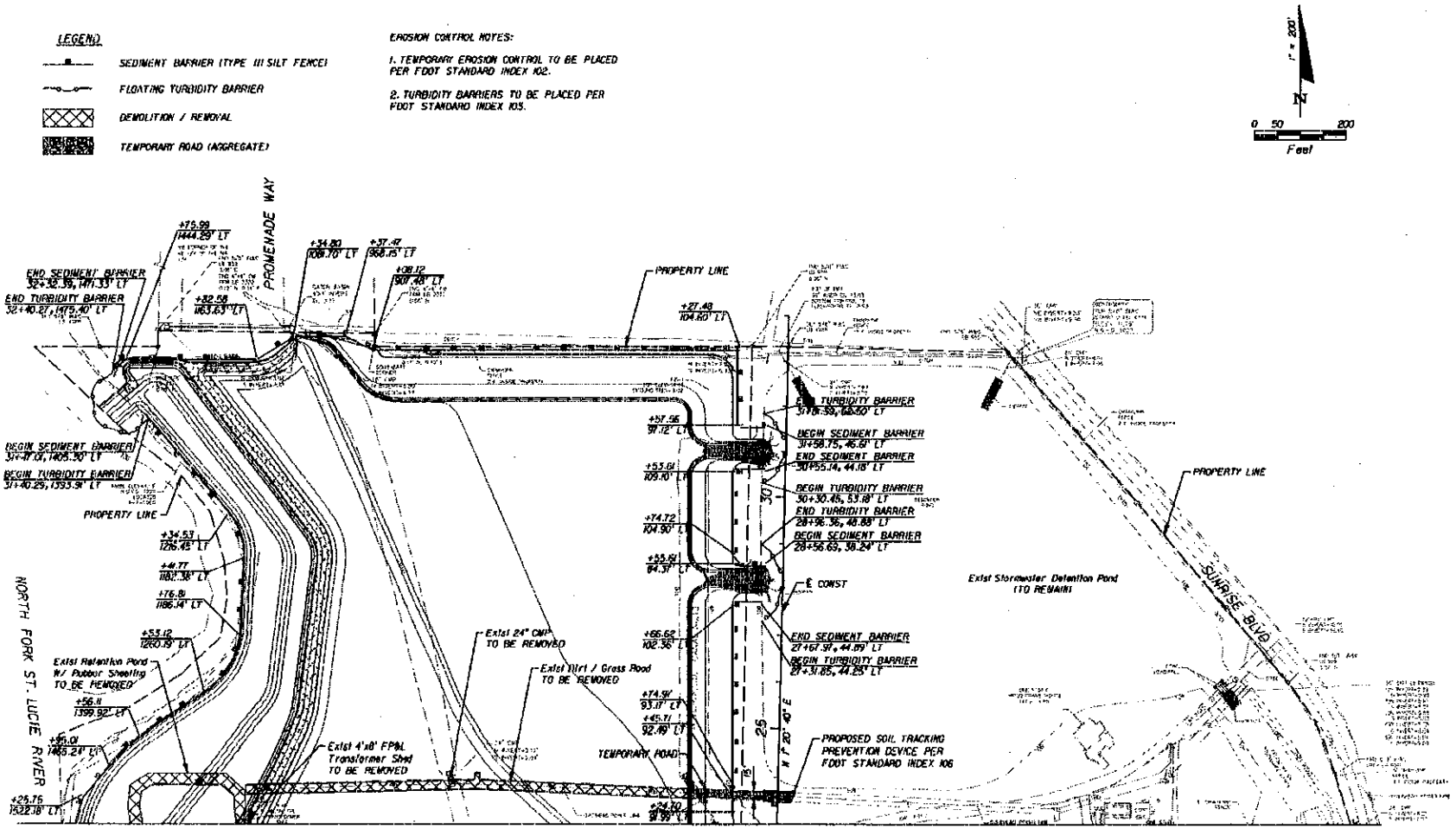
LEGEND

- SEDIMENT BARRIER (TYPE III SILT FENCE)
- FLOATING TURBIDITY BARRIER
- DEMOLITION / REMOVAL
- TEMPORARY ROAD (AGGREGATE)

EROSION CONTROL NOTES:

1. TEMPORARY EROSION CONTROL TO BE PLACED PER FDOT STANDARD INDEX 102.
2. TURBIDITY BARRIERS TO BE PLACED PER FDOT STANDARD INDEX 103.



MATCH LINE, SEE EROSION CONTROL / DEMOLITION PLAN (2)

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PLATTS CREEK COMPENSATORY MITIGATION PROJECT

EROSION CONTROL / DEMOLITION PLAN (1)

SCALE:

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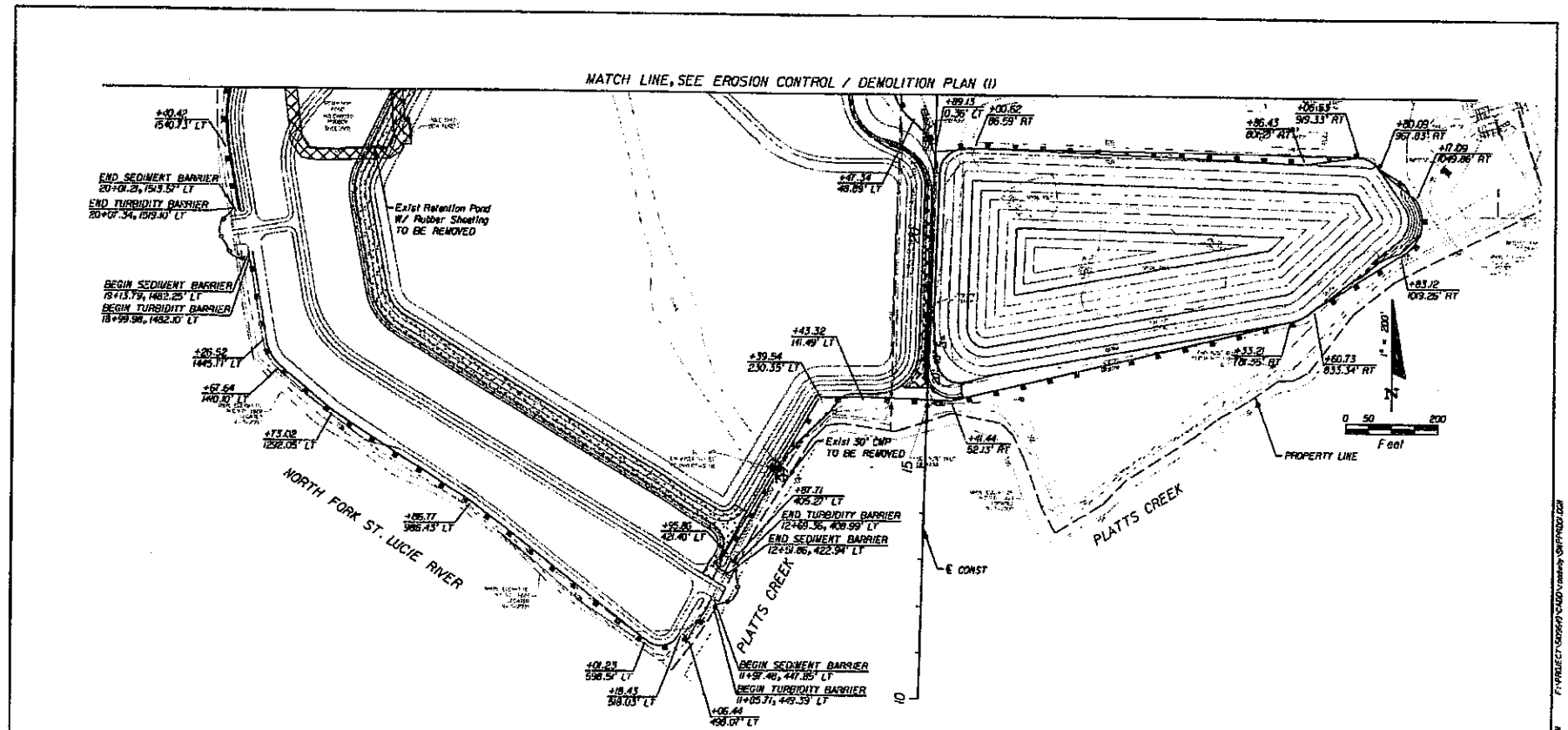

LEGEND

- SEDIMENT BARRIER (TYPE III SILT FENCE)
- FLOATING TURBIDITY BARRIER
- DEMOLITION / REMOVAL
- TEMPORARY ROAD (AGGREGATE)

EROSION CONTROL NOTES:

1. TEMPORARY EROSION CONTROL TO BE PLACED PER FDOT STANDARD INDEX 102.
2. FLOATING TURBIDITY BARRIERS TO BE PLACED PER FDOT STANDARD INDEX 105.

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PLATTS CREEK COMPENSATORY MITIGATION PROJECT

EROSION CONTROL / DEMOLITION PLAN (2)

SCALE:

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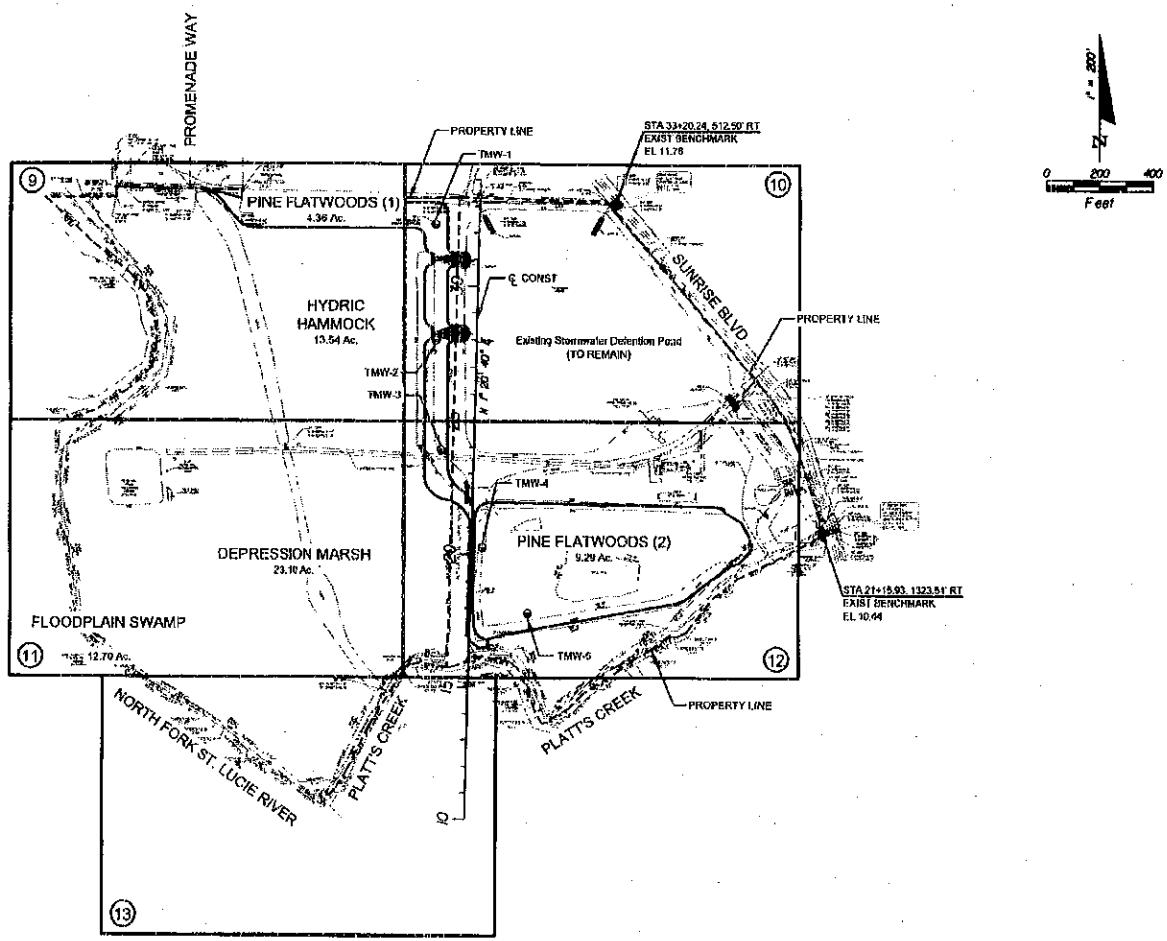

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ROAD	COUNTY
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PLATT'S CREEK COMPENSATORY MITIGATION PROJECT

SITE PLAN

SCALE: 1"=200'

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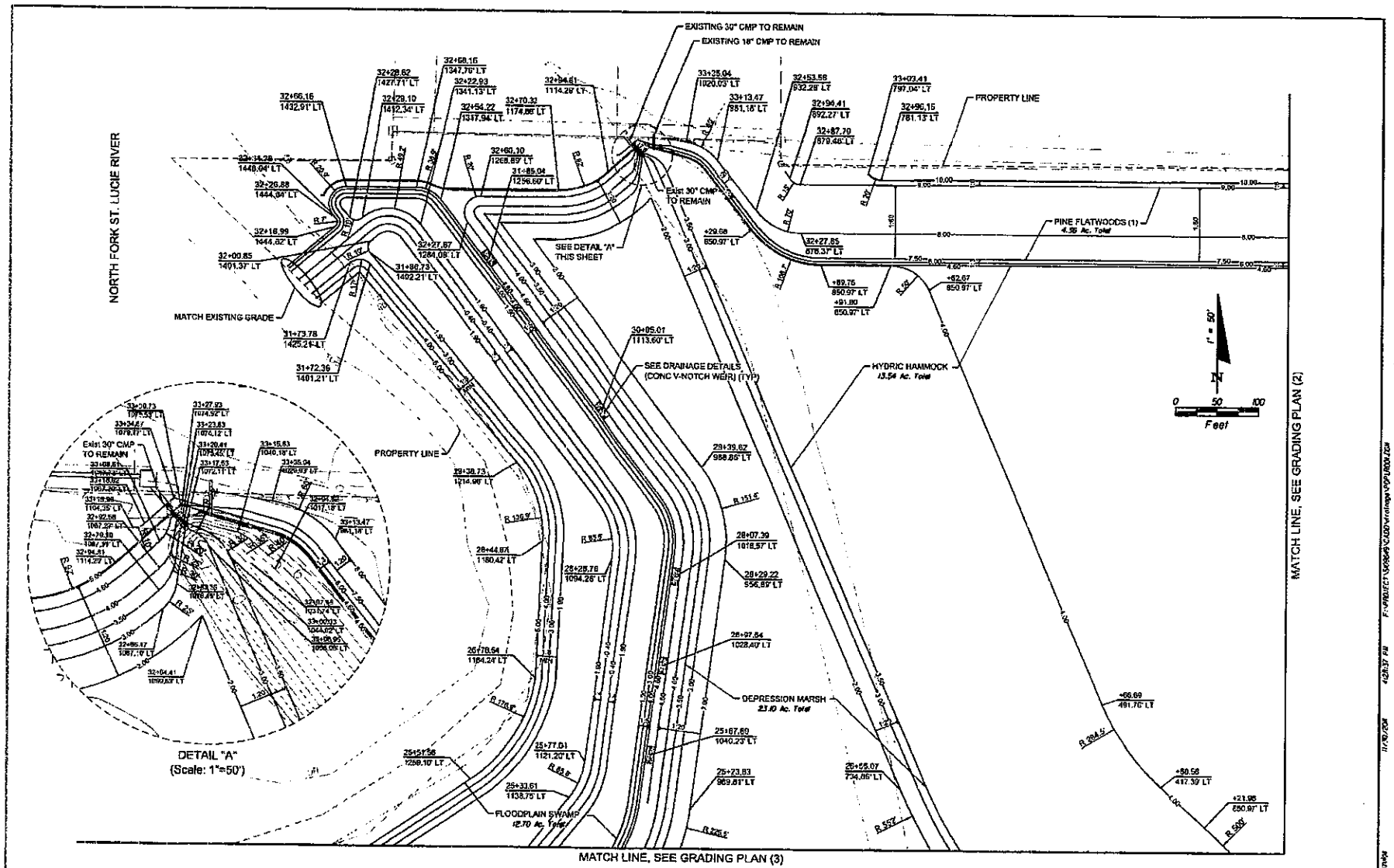

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PLATTS CREEK COMPENSATORY MITIGATION PROJECT

GRADING PLAN (1)

SCALE: 1"=50'
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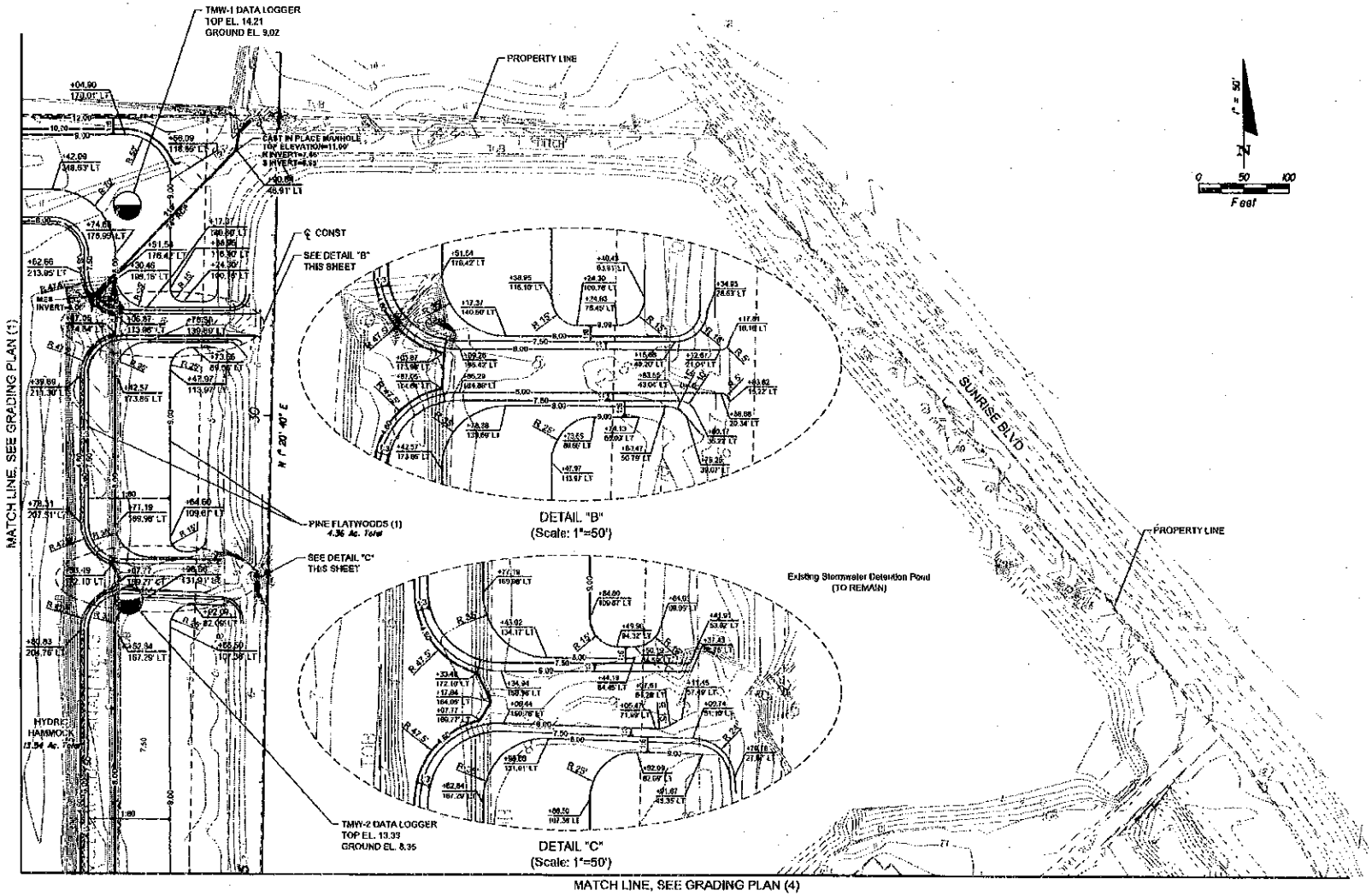

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PLATT'S CREEK COMPENSATORY MITIGATION PROJECT

GRADING PLAN (2)

SCALE: 1"=50'
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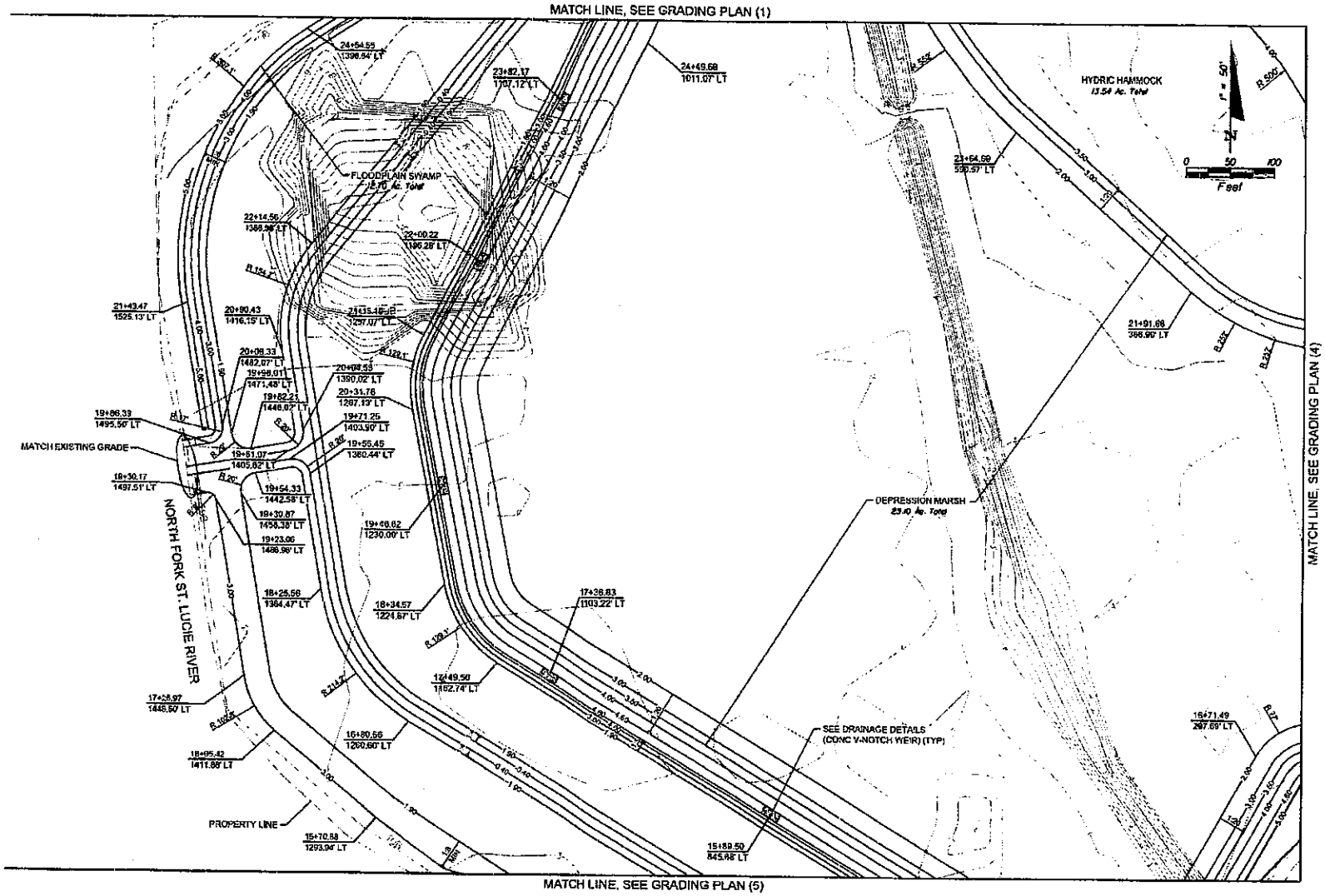

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Wesley Chapel, Florida 33544
Phone: (813) 436-2600 Fax: (813) 435-2601
Certificate of Authorization No. 9302
Raymond D. Hale, P.E. No. 53087

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

PLATT'S CREEK COMPENSATORY MITIGATION PROJECT

GRADING PLAN (3)

SCALE: 1"=50'

SHEET NO. 12

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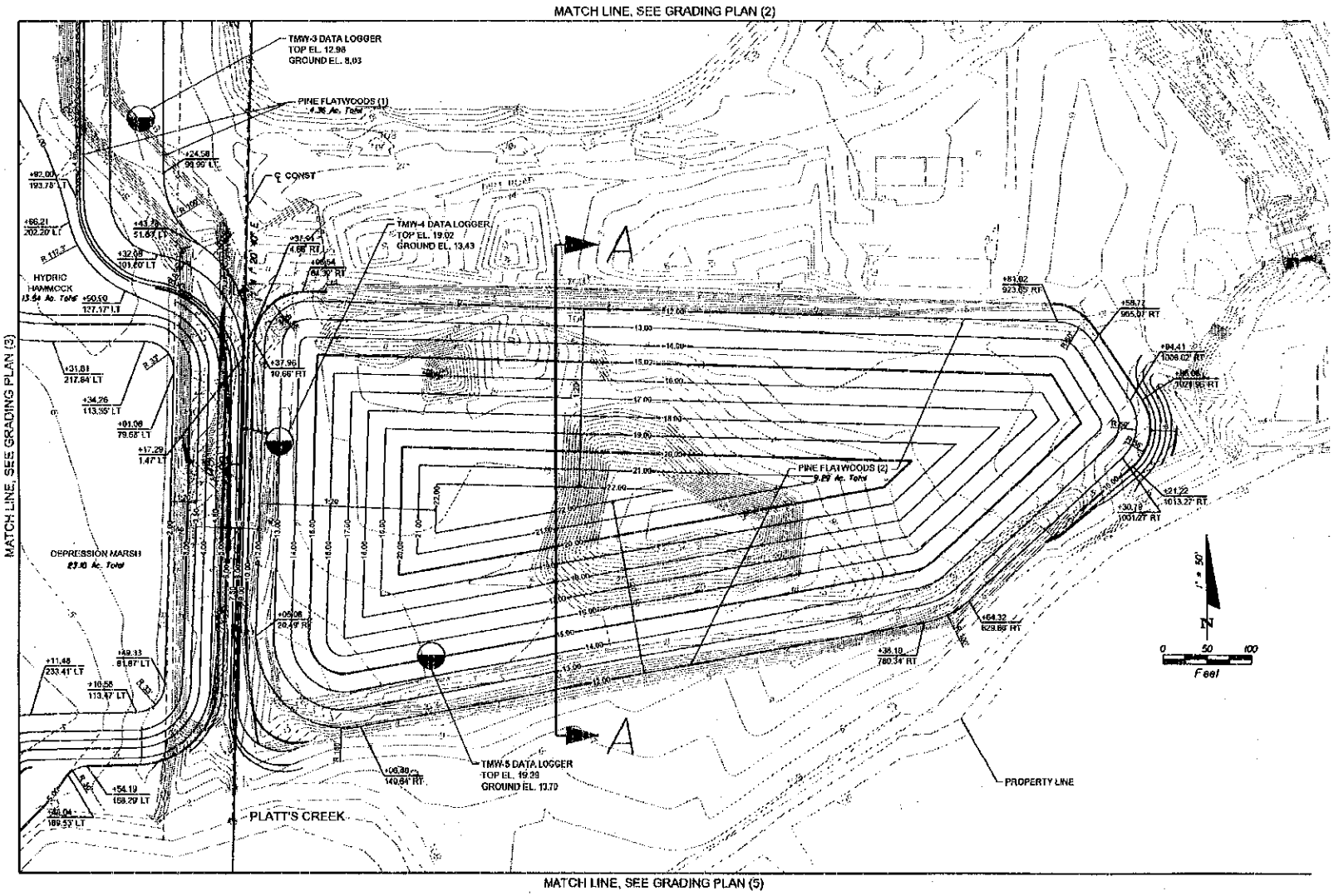

REVISIONS			BY	DATE
DATE	DESCRIPTION	DESIGNED	RDR	08/28/11
11-21-11	PER SFWMD COMMENTS	DRAWN	DAI	09/01/11
		CHECKED	WLA	09/01/11

American Consulting Engineers of Florida, LLC
2818 Cypress Ridge Blvd, Suite 200
Wesley Chapel, Florida 33544
Phone: (813) 435-2800 Fax: (813) 435-2801
Certificate of Authorization No. 3507
Raymond D. Ralls, P.E. No. 63887

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

PLATT'S CREEK COMPENSATORY MITIGATION PROJECT

GRADING PLAN (4)

SCALE: 1"=50'
SHEET NO. 13

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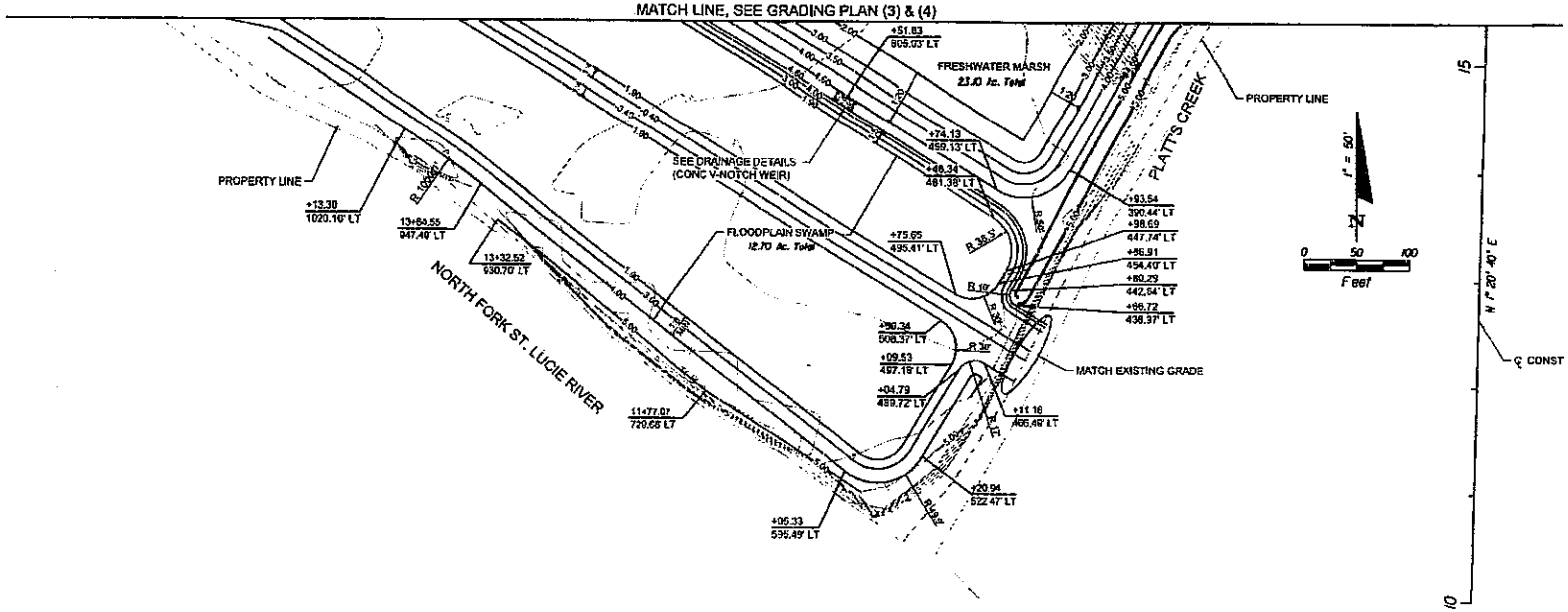

REVISIONS				
DATE	DESCRIPTION		BY	DATE
11-21-11	PER SFWMD COMMENTS	DESIGNED	RDR	08/20/11
		DRAWN	DAI	09/01/11
		CHECKED	WLA	09/07/11

American Consulting Engineers of Florida, LLC
2810 Cypress Ridge Blvd, Suite 200
Wesley Chapel, Florida 33544
Phone: (813) 435-2900 Fax: (813) 435-2901
Certificate of Authorization No. 8502
Raymond O. Reile, P.E. No. 43007

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

PLATT'S CREEK COMPENSATORY MITIGATION PROJECT

GRADING PLAN (5)

SCALE: 1"=50'
SHEET NO. 14

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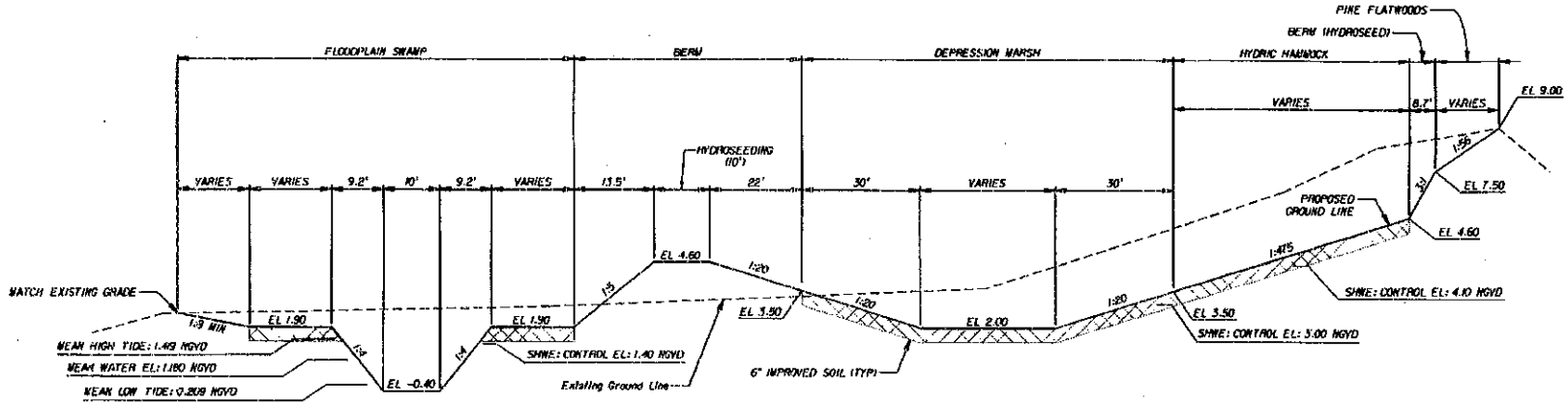

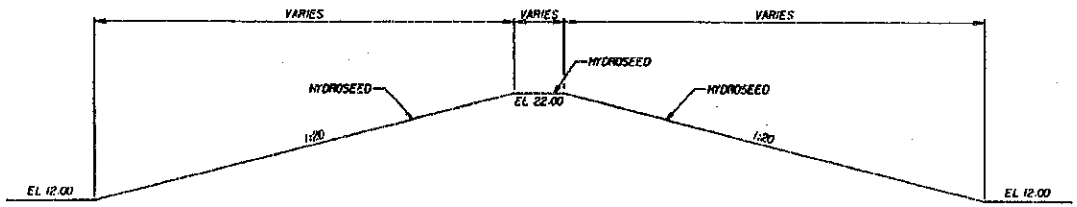

A-A
PINE FLATWOODS (2)
NTS

REVISIONS			BY	DATE
DATE	DESCRIPTION	DESIGNED	RDR	08/28/11
11-21-11	PER SFWMD COMMENTS	DRAWN	DAI	09/01/11
		CHECKED	WLA	09/07/11

American Consulting Engineers of Florida, LLC
2810 Cypress Ridge Blvd. Suite 209
Wesley Chapel, Florida 33544
Phone: (813) 435-2800 Fax: (813) 435-2801
Certificate of Authorization No. 8302
Raymond D. Rolle, P.E. No. 43687

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

PLATT'S CREEK COMPENSATORY MITIGATION PROJECT

TYPICAL SECTION

SCALE: NTS
SHEET NO. 15

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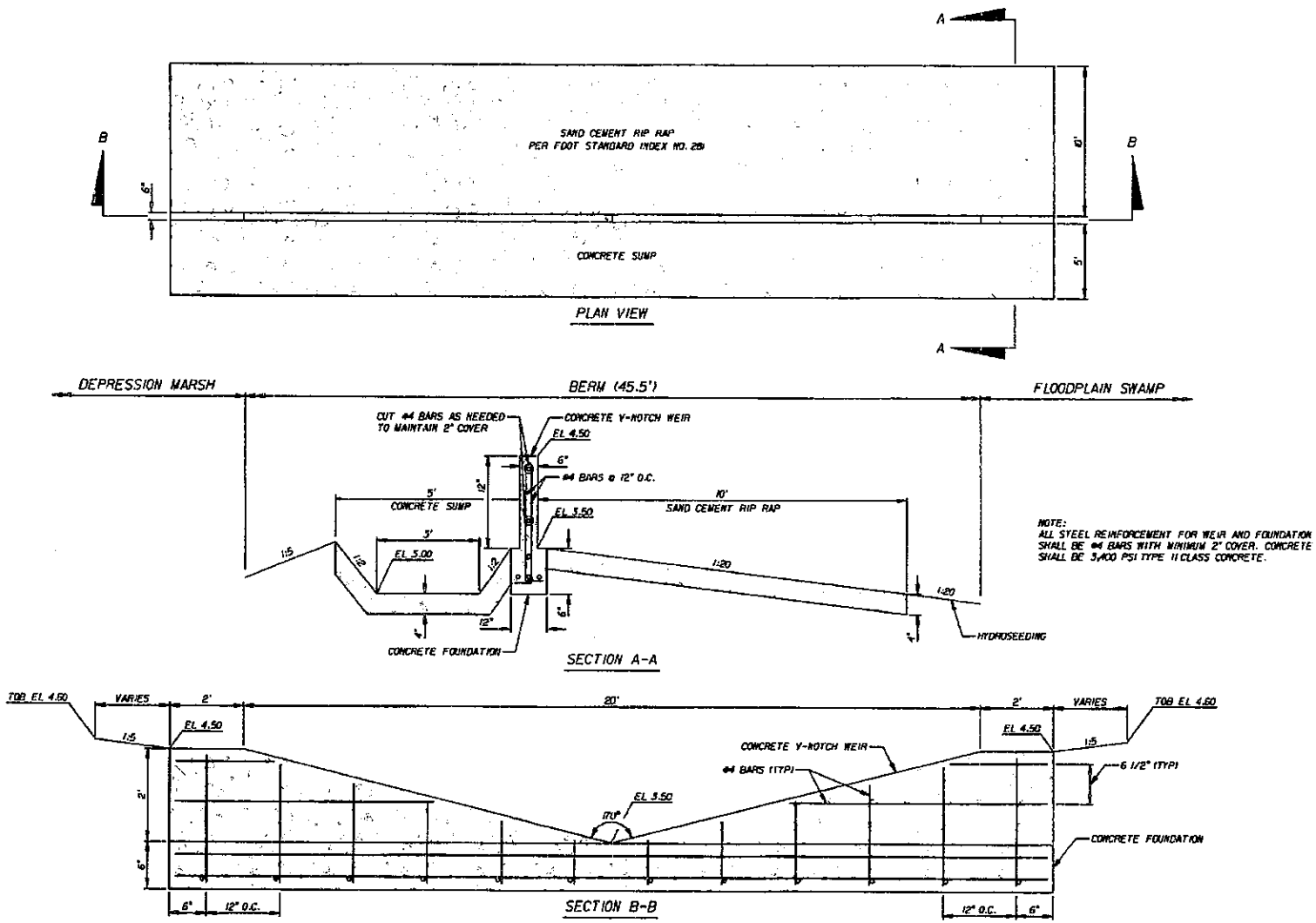

REVISIONS	
DATE	DESCRIPTION
11-21-11	PER SFWMD COMMENTS

	BY	DATE
DESIGNED	RDR	08/28/11
DRAWN	CAI	09/01/11
CHECKED	WLA	09/07/11

American Consulting Engineers of Florida, LLC
7518 Cypress Ridge Blvd, Suite 200
Wesley Chapel, Florida 33544
Phone: (813) 435-2900 Fax: (813) 435-2901
Certificate of Authorization No. 9302
Raymond D. Reilly, P.E. No. 39067

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

PLATT'S CREEK COMPENSATORY MITIGATION PROJECT

DRAINAGE DETAILS

SCALE: NTS

SHEET NO. 16

F:\PROJECT\50868\CADD\crelown\DRDT0003.DGN 2-23-12 RW 1/1/2012 USER: 50868

PLATTS CREEK COMPENSATORY MITIGATION PROJECT PLANTING PLAN

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8915 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455

REVISED:07 DECEMBER 2011

AMERICAN CONSULTING ENGINEERS OF FLORIDA, LLC
2818 CYPRESS RIDGE BOULEVARD, SUITE 200
WESLEY CHAPEL, FL 34544-6302
TELEPHONE (813) 435-2600; FAX (813)-345-2601

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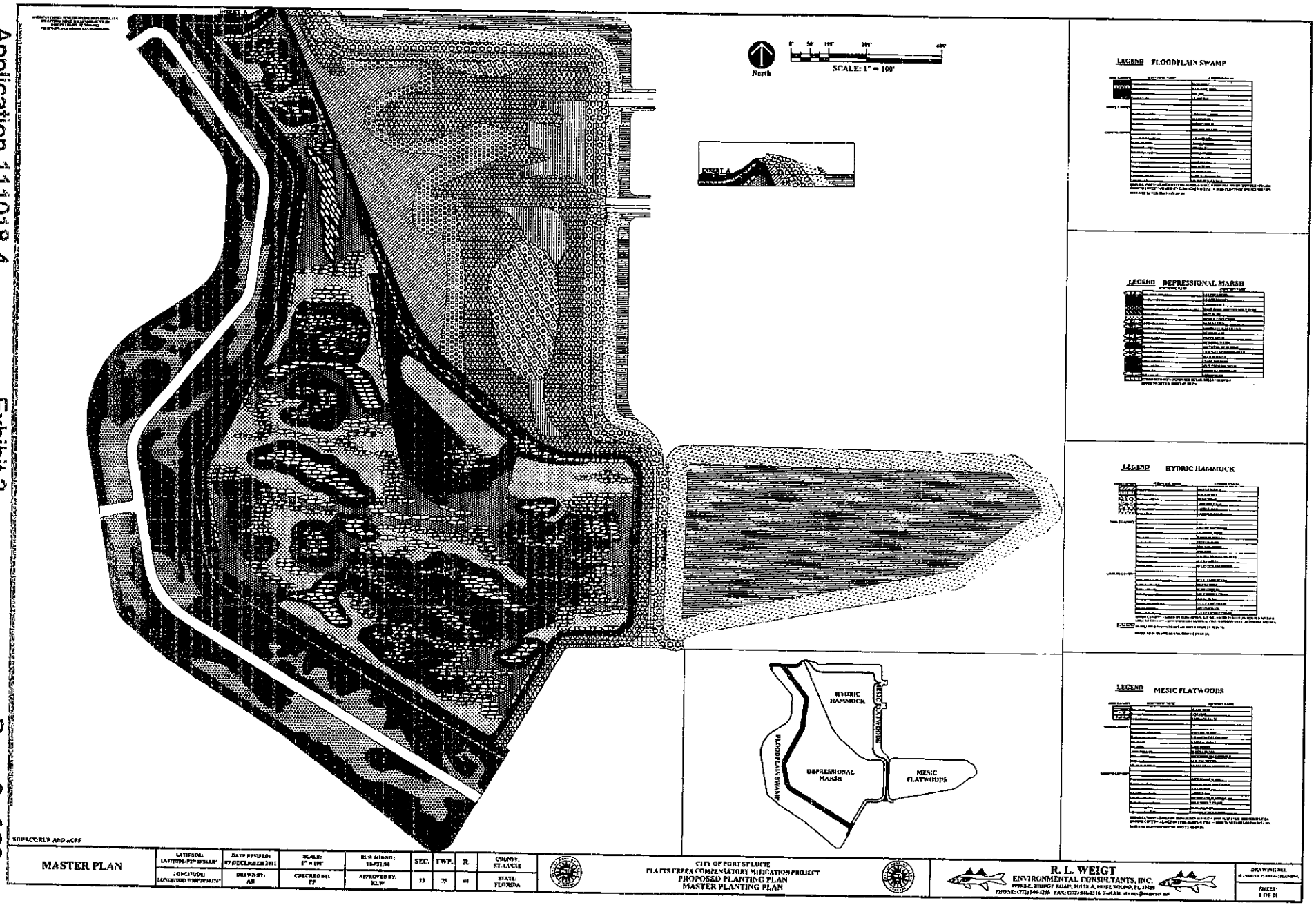
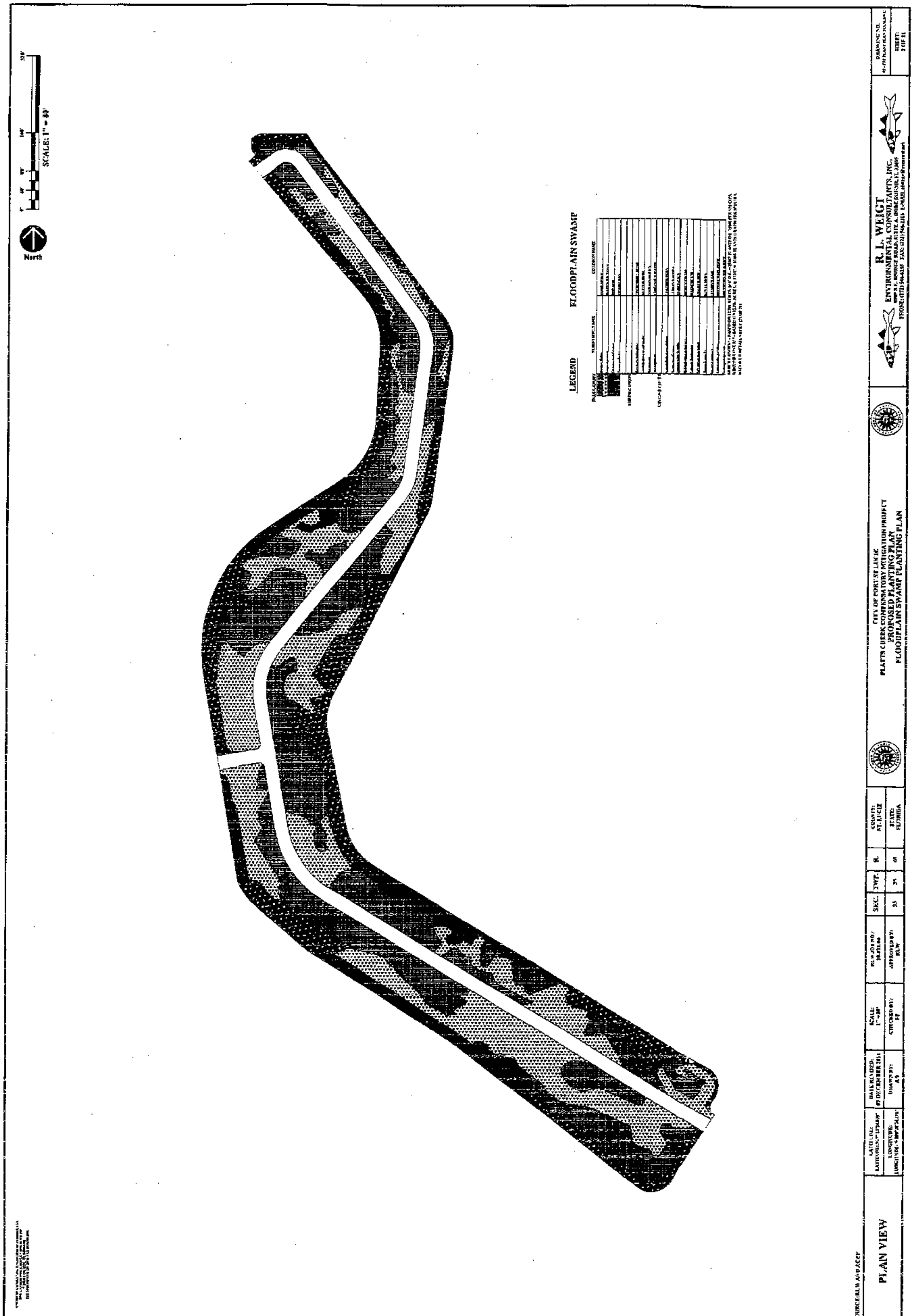

North
SCALE: 1" = 100'
LEGEND FLOODPLAIN SWAMP
LEGEND DEPRESSIONAL MARSH
LEGEND HYDRIC HAMMOCK
LEGEND MESIC FLATWOODS
HYDRIC HAMMOCK
MESIC FLATWOODS
DEPRESSIONAL MARSH
FLOODPLAIN SWAMP
MASTER PLAN
CITY OF FORT ST LUCIE
PLATS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
MASTER PLANTING PLAN
R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
ST. LUCIE
FLORIDA



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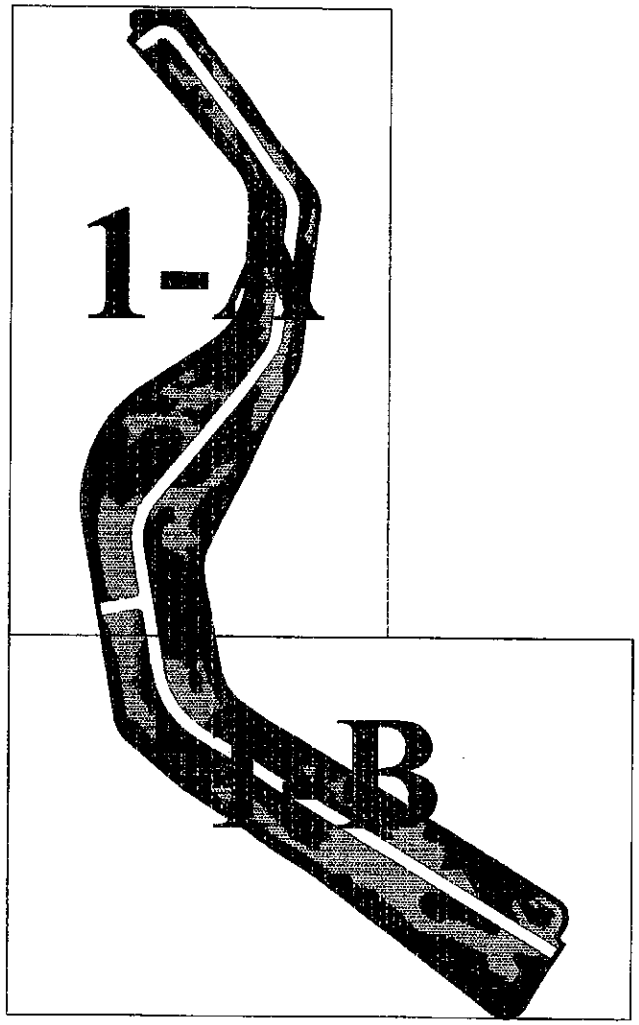


North

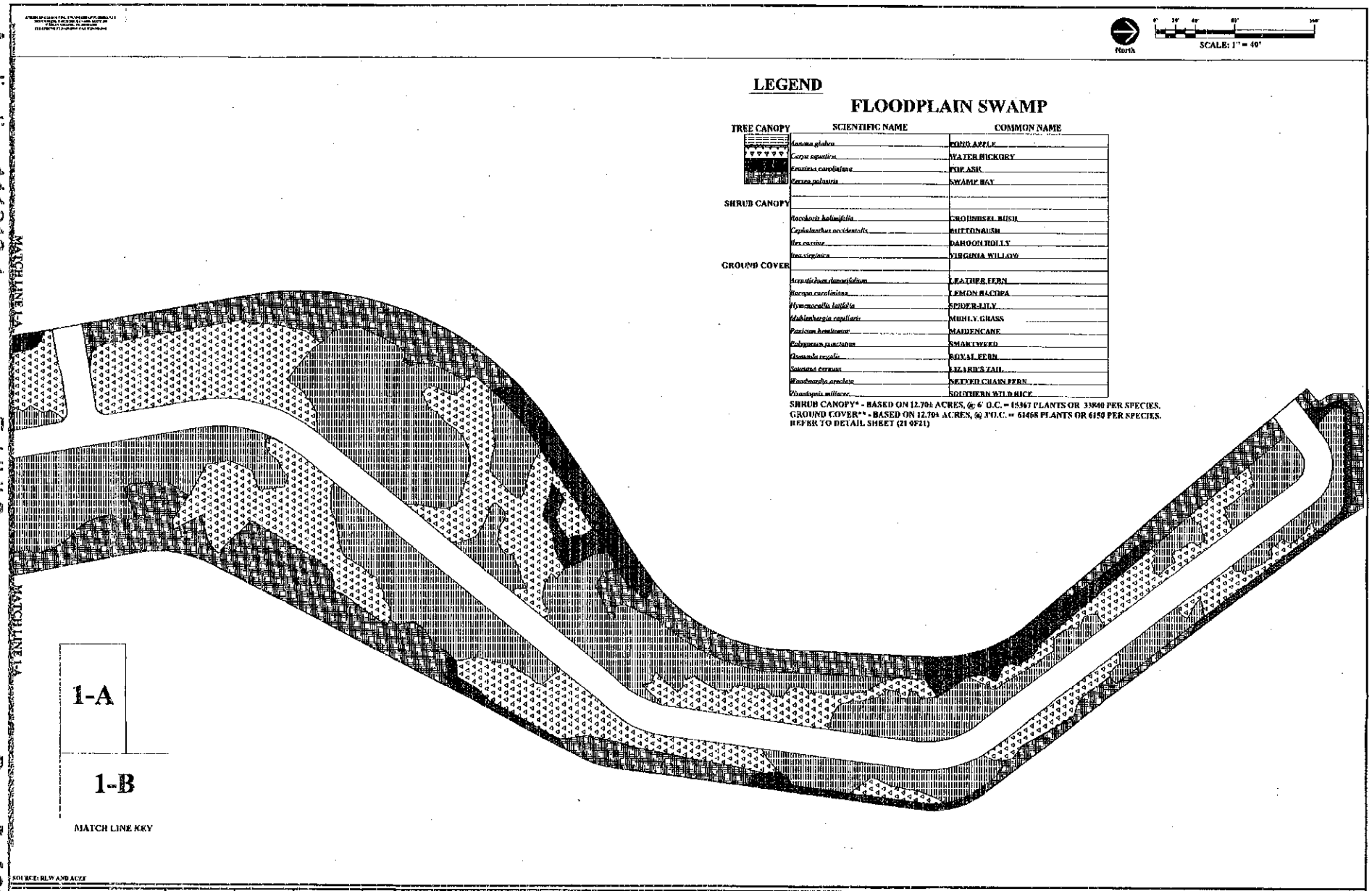
SCALE: 1" = 120'

SOURCE: RLW AND ACEF

KEY MAP	LATITUDE: LATITUDE: 27°23'30.00"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 120'	RLW JOB NO.: 10-072.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE	CITY OF PORT ST LUCIE PLATTS CREEK COMPENSATORY MITIGATION PROJECT PROPOSED PLANTING PLAN FLOODPLAIN SWAMP MATCH LINE KEY MAP	R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC.	DRAWING NO.
	LONGITUDE: LONGITUDE: 0°00'00.00"	DRAWN BY: AB	CHECKED BY: FF	APPROVED BY: RLW	33	14	40	STATE: FLORIDA			SHEET 3 OF 21

Application 111018-4 Exhibit 3 Page 4 of 22

Scanned 04/24/2012 8:13 DROD



LEGEND

FLOODPLAIN SWAMP

	SCIENTIFIC NAME	COMMON NAME
TREE CANOPY	*Annona glabra*	POND APPLE
	Carya aquatica	WATER HICKORY
	Fraxinus caroliniana	POP ASH
	Persea palustris	SWAMP BAY
SHRUB CANOPY		
	Baccharis halimifolia	GROUNDSEL BUSH
	Cephalanthus occidentalis	BUTTONBUSH
	Ilex cassine	DAHOON HOLLY
	Itea virginica	VIRGINIA WILLOW
GROUND COVER		
	Acrostichum danaeifolium	LEATHER FERN
	Bacopa caroliniana	LEMON BACOPA
	Hymenocallis latifolia	SPIDER-LILY
	Muhlenbergia capillaris	MUHLY GRASS
	Panicum hemitomon	MAIDENCANE
	Polygonum punctatum	SMARTWEED
	Osmunda regalis	ROYAL FERN
	Saururus cernuus	LIZARD'S TAIL
	Woodwardia areolata	NETTED CHAIN FERN
	Zizaniopsis miliacea	SOUTHERN WILD RICE

SHRUB CANOPY* - BASED ON 12.70± ACRES, @ 6' O.C. = 15367 PLANTS OR 3840 PER SPECIES.
GROUND COVER** - BASED ON 12.70± ACRES, @ 3' O.C. = 61468 PLANTS OR 6150 PER SPECIES.
REFER TO DETAIL SHEET (21 OF 21)

SOURCE: RLW AND ACEE

PLAN VIEW	LATITUDE: LATITUDE: 27° 27' 24.0000"	DATE PLOTTED: 07 DECEMBER 2011	SCALE: 1" = 40'	RLW JOB NO: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: 080° 21' 11.1"	DRAWN BY: AB	CHECKED BY: FF	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST. LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
FLOODPLAIN SWAMP PLANTING PLAN MATCH LINE "1-A"

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
1989 S.E. BRIDGE ROAD, SUITE A, STUART, FL 34994
PHONE: (772) 546-6266 FAX: (772) 546-2346 E-MAIL: rlweigt@rlweigt.net

DRAWING NO.
SHEET: 4 OF 21

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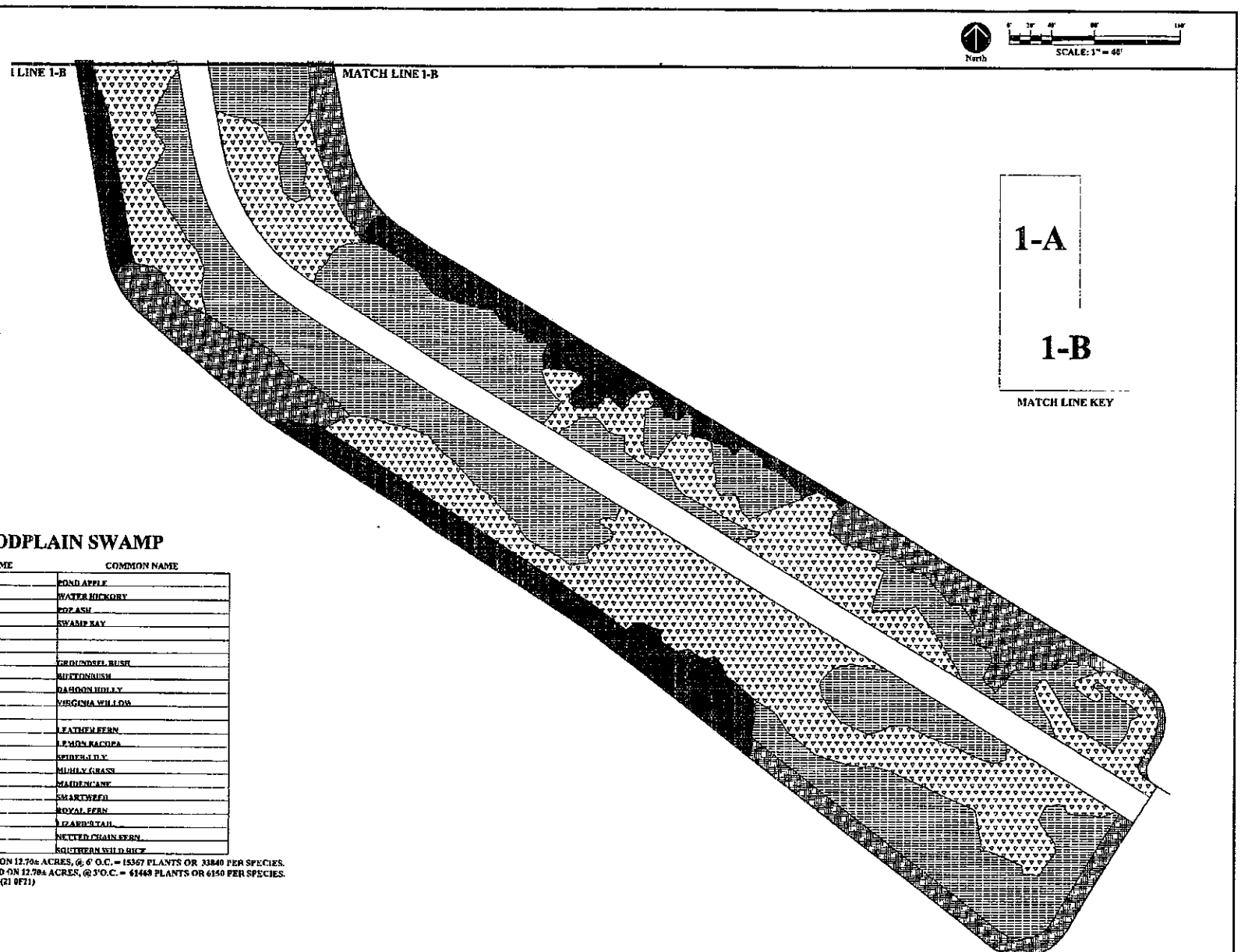

LEGEND

FLOODPLAIN SWAMP

	SCIENTIFIC NAME	COMMON NAME
TREE CANOPY	*Annona glabra*	POND APPLE
	Carya aquatica	WATER HICKORY
	Fraxinus caroliniana	POP ASH
	Persea palustris	SWAMP BAY
SHRUB CANOPY		
	Baccharis halimifolia	GROUNDSEL BUSH
	Cephalanthus occidentalis	BUTTONBUSH
	Ilex cassine	DAHOON HOLLY
	Itea virginica	VIRGINIA WILLOW
GROUND COVER		
	Acrostichum danaeifolium	LEATHER FERN
	Racopa caroliniana	LEMON RACOPA
	Hymenocallis latifolia	SPIDER-LILY
	Muhlenbergia capillaris	MUHLY GRASS
	Panicum hemitomon	MAIDENCANE
	Polygonum punctatum	SMARTWEED
	Osmunda regalis	ROYAL FERN
	Saururus cernuus	LIZARD'S TAIL
	Woodwardia areolata	NETTED CHAIN FERN
	Zizaniopsis miliacea	SOUTHERN WILD RICE

SHRUB CANOPY* - BASED ON 12.70± ACRES, @ 6' O.C. = 15367 PLANTS OR 33840 PER SPECIES.
GROUND COVER** - BASED ON 12.70± ACRES, @ 3'O.C. = 61468 PLANTS OR 6150 PER SPECIES.
REFER TO DETAIL SHEET (21 OF 21)

SOURCE: RLW AND ACEP

PLAN VIEW	LATITUDE: LONGITUDE:	DATE REVISED: 17 DECEMBER 2012	SCALE: 1" = 40'	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE	CITY OF PORT ST LUCIE PLATTS CREEK COMPENSATORY MITIGATION PROJECT PROPOSED PLANTING PLAN FLOODPLAIN SWAMP PLANTING PLAN MATCH LINE "1-B"	R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC.	DRAWING NO.
		DRAWN BY: AB	CHECKED BY: FF	APPROVED BY: RLW	35	35	40	STATE: FLORIDA			SHEET 5 OF 21

Application 111018-4 Exhibit 3 Page 6 of 22

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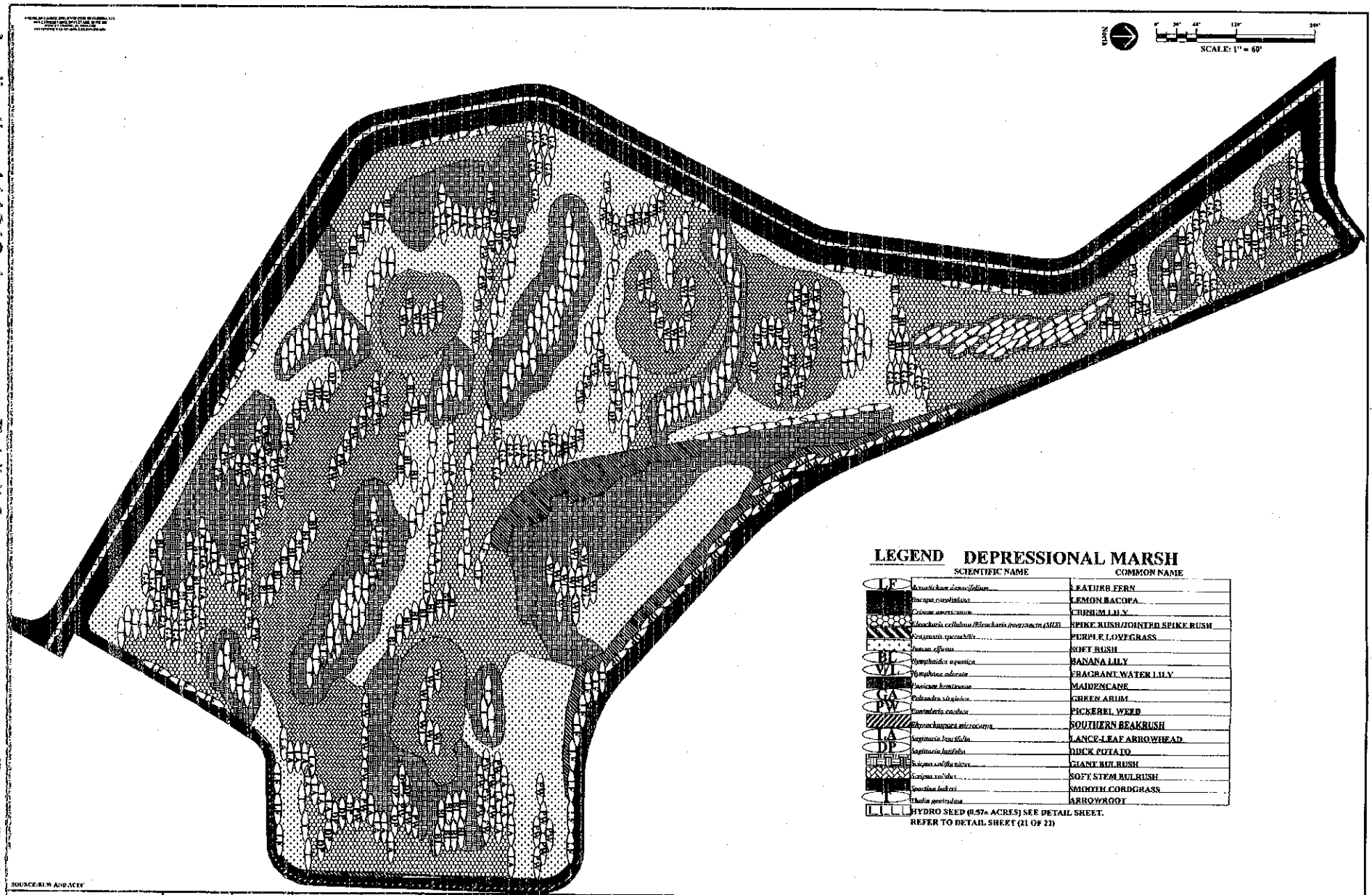

Application 111018-4 Exhibit 3 Page 7 of 22

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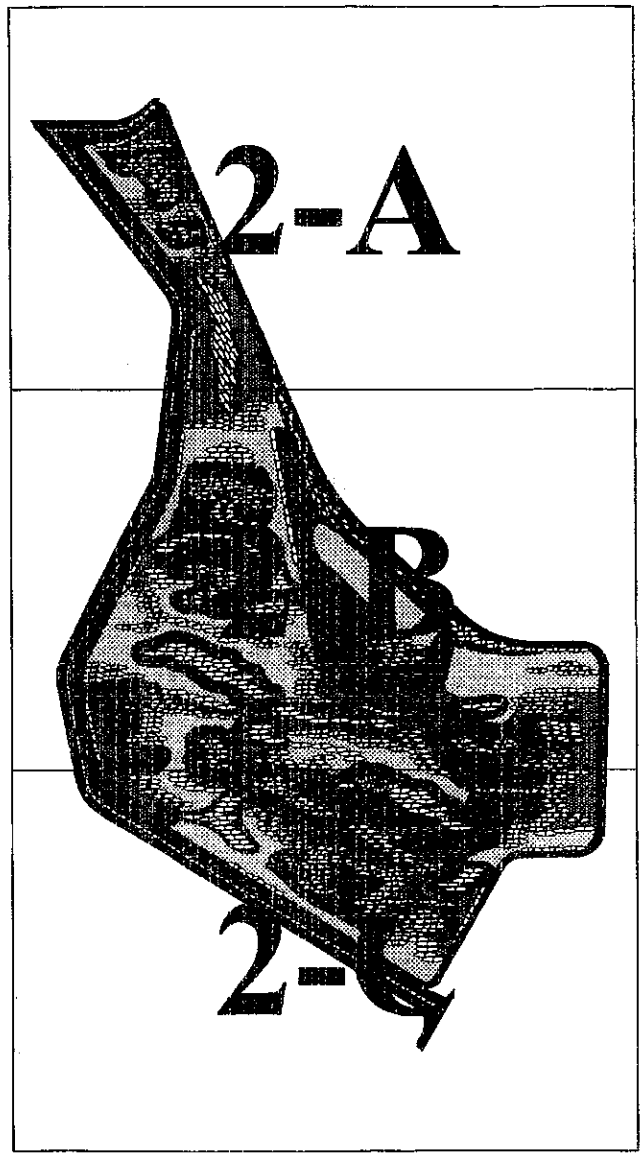

North

SCALE: 1" = 120'

SOURCE: RLW AND ACEF

KEY MAP	LATITUDE: LONGITUDE:	DATE REVISED: 01 DECEMBER 2011	SCALE: 1" = 120'	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
		DRAWN BY: AB	CHECKED BY: FF	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
DEPRESSIONAL MARSH PLANTING PLAN KEY MAP

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
[illegible] S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
PHONE: [illegible] FAX: [illegible] E-MAIL: [illegible]

DRAWING NO.

SHEET: 7 OF 21

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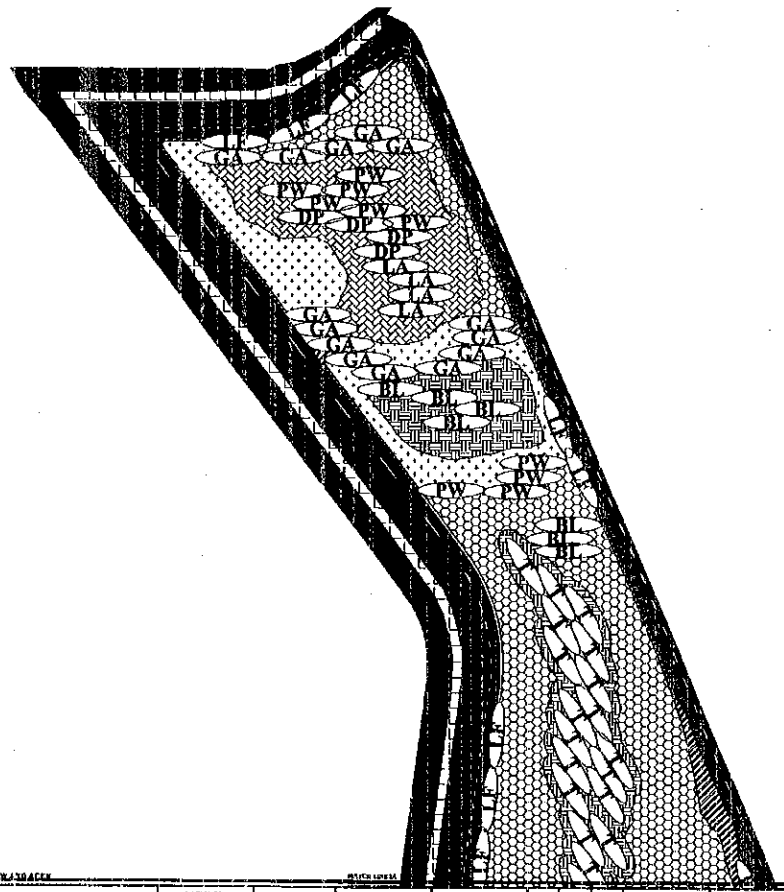

North

SCALE: 1" = 40'

2-A
2-B
2-C

MATCH LINE KEY MAP

LEGEND DEPRESSIONAL MARSH

	SCIENTIFIC NAME	COMMON NAME
LF	*Acrostichum danaeifolium*	LEATHER FERN
	Bacopa caroliniana	LEMON BACOPA
	Crinum americanum	CRINUM LILY
	Eleocharis cellulosa/Eleocharis interstincta (MIX)	SPIKE RUSH/JOINTED SPIKE RUSH
SSSS	*Juncus effusus*	SOFT RUSH
	Eragrostis spectabilis	PURPLE LOVEGRASS
BL	*Nymphoides aquatica*	BANANA LILY
WL	*Nymphaea odorata*	FRAGRANT WATER LILY
	Paedeum hematomon	MAIDENCANE
GA	*Pelandra virginica*	GREEN ARUM
PW	*Pontederia cordata*	PICKEREL WEED
	Rhynchospora microcarpa	SOUTHERN BEAKRUSH
LA	*Sagittaria lancifolia*	LANCE-LEAF ARROWHEAD
DP	*Sagittaria latifolia*	BUCK POTATO
	Scirpus californicus	GIANT BULRUSH
	Scirpus validus	SOFT STEM BULRUSH
	Spartina bakeri	SMOOTH CORDGRASS
T	*Thalia geniculata*	ARROWROOT

HYDRO SEED (0.57± ACRES) SEE DETAIL SHEET (20 OF 21)
REFER TO DETAIL SHEET (21 OF 21)

SOURCE: RLW AND ACEM

MATCH LINE 2A

PLAN VIEW	LATITUDE: LATITUDE: 27° 11' 02.5	DATE REVISED: 07 DECEMBER 2012	SCALE: 1" = 40'	RLW JOB NO: 10-012.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: 80° 28' 31.5	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	35	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
DEPRESSIONAL MARSH PLANTING PLAN MATCH LINE "2-A"

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8999 S.E. BRIDGE ROAD, SUITE 4, HOBE SOUND, FL 33455
PHONE: (772) 546-6155 FAX: (772) 546-2510 E-MAIL: rlweigt@rlweigt.net

DRAWING NO.
SHEET: 1 OF 11

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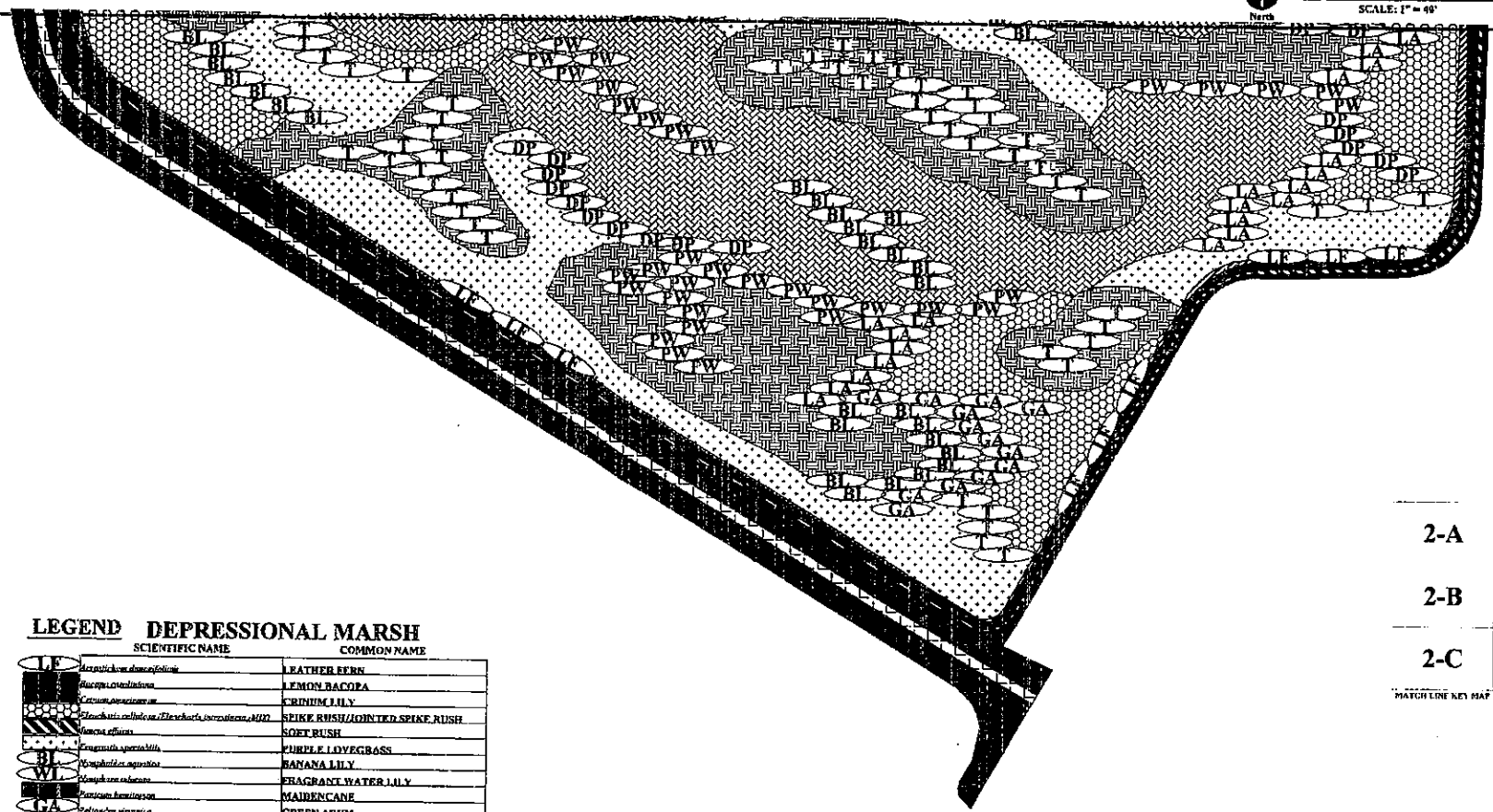

LEGEND DEPRESSIONAL MARSH

	SCIENTIFIC NAME	COMMON NAME
LF	*Acrostichum danaeifolium*	LEATHER FERN
	Bacopa caroliniana	LEMON BACOPA
	Crinum americanum	CRINIUM LILY
	Eleocharis cellulosa/Eleocharis interstincta, MIX	SPIKE RUSH/JOINTED SPIKE RUSH
	Juncus effusus	SOFT RUSH
	Fragmites australis	PURPLE LOVEGRASS
BL	*Nymphoides aquatica*	BANANA LILY
WL	*Nymphaea odorata*	FRAGRANT WATER LILY
	Panicum hemitomon	MAIDENCANE
GA	*Pelnachra virginica*	GREEN ARUM
PW	*Pontederia cordata*	PICKEREL WEED
	Rhynchospora inundata	SOUTHERN BEAKRUSH
LA	*Sagittaria lancifolia*	LANCE-LEAF ARROWHEAD
DP	*Sagittaria latifolia*	DUCK POTATO
T	*Scirpus californicus*	GIANT BULRUSH
	Scirpus validus	SOFT STEM BULRUSH
	Spartina bakeri	SMOOTH CORDGRASS
T	*Thalia geniculata*	ARROWROOT
L L L L	HYDRO SEED (0.57± ACRES) SEE DETAIL SHEET (20 OF 21)	

REFER TO DETAIL SHEET (21 OF 21)

SOURCE: RLW AND ACTY

PLAN VIEW	LATITUDE: LATITUDE 27° 27' 23.6" N	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 40'	RLW JOB NO.: 10-012.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: 080° 23' 31.31"	DRAWN BY: AS	CHECKED BY: PP	APPROVED BY: RLW	31	35	40	STATE: FLORIDA

CITY OF FORT ST. LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
DEPRESSIONAL MARSH PLANTING PLAN MATCH LINE "2-C"

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
909 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
PHONE: (772) 546-6299 FAX: (772) 546-1916 E-MAIL: rlweigt@bellsouth.net

DRAWING NO.
SHEET: 10 OF 21

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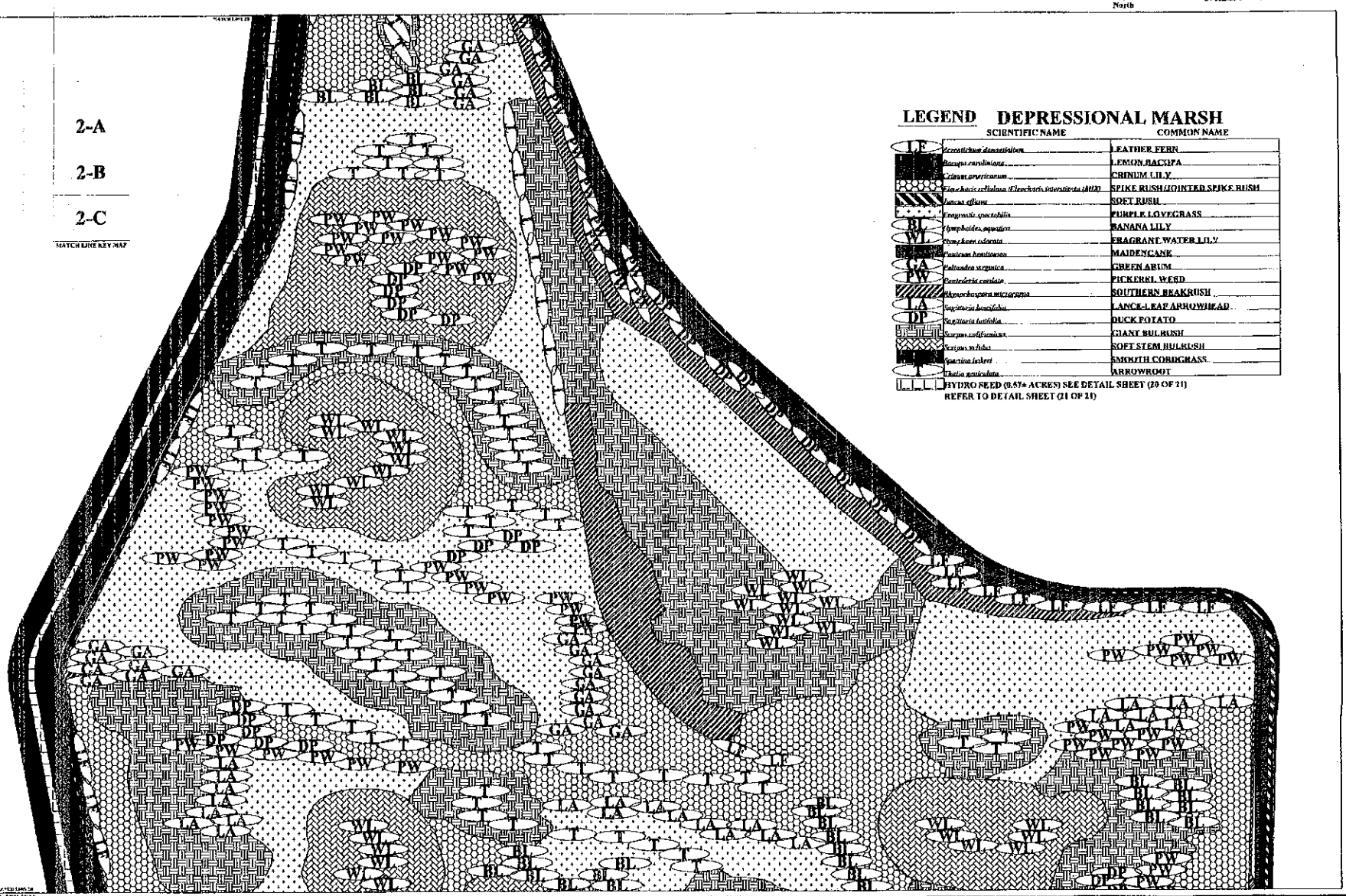
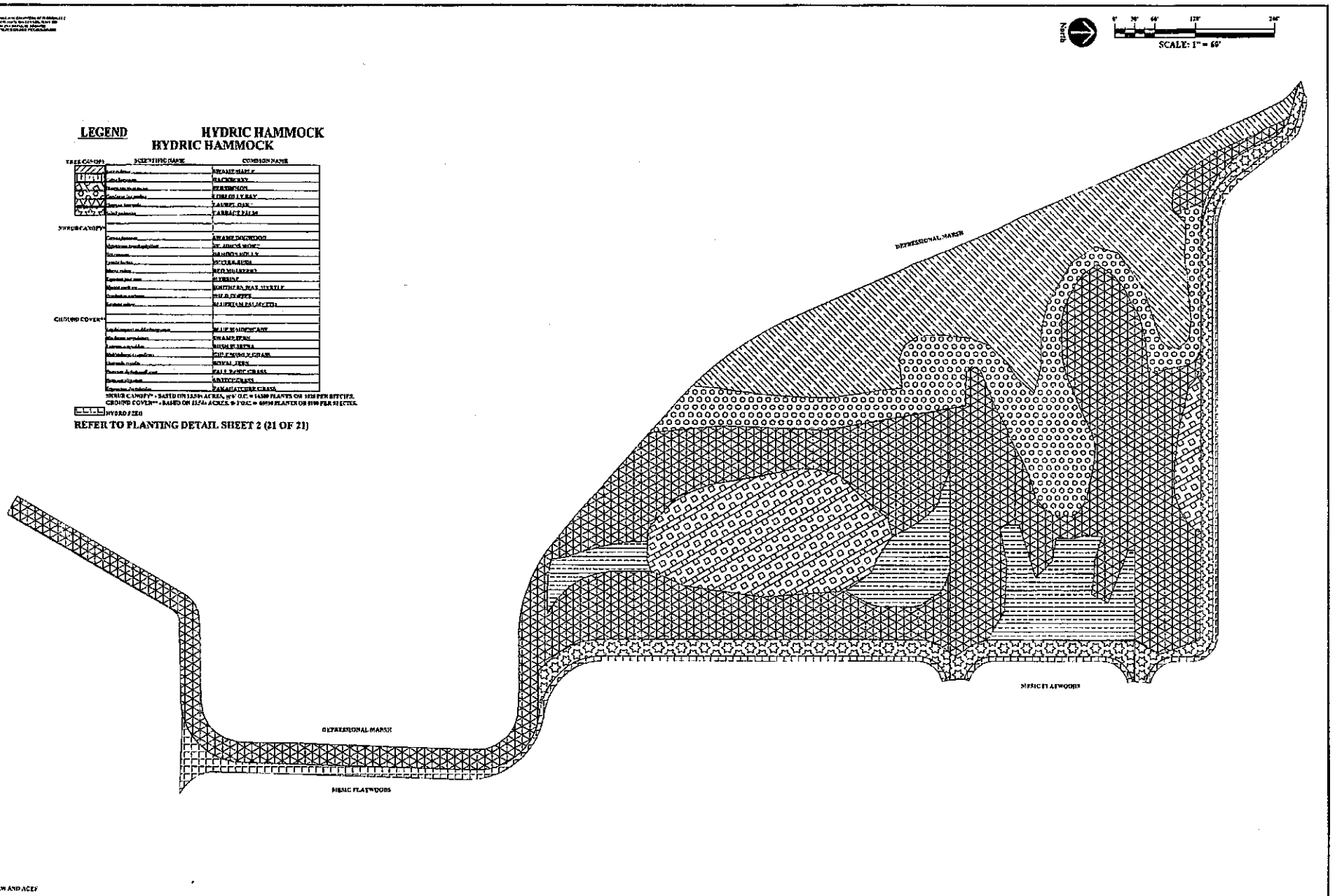


PLAN VIEW	LATITUDE: 27°21'10.00"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 40'	HLW JOB NO.: 10-612.04	SEC. 35	TWP. 35	R. 40	COUNTY: ST. LUCIE
	LONGITUDE:	DRAWN BY: AR	CHECKED BY: FF	APPROVED BY: RLW				STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
DEPRESSIONAL MARSH PLANTING PLAN MATCH LINE "2-B"

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8043 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
PHONE: (772) 546-6155 FAX: (772) 546-2316 E-MAIL: rlweigt@aol.com

DRAWING NO.
SHEET: 1 OF 21



SOURCE: RLW AND ACEF

PLAN VIEW	LATITUDE: LATITUDE=27°27'15.0"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1"=60'	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LOCATION: LOCATION=-80°20'28.0"	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	31	34	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
HYDRIC HAMMOCK

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
PHONE: (772) 546-3585 FAX: (772) 546-2316 E-MAIL: rlweigt@bellsouth.net

DRAWING NO.: 11-001-PLANTING PLAN-HAMMOCK
SHEET: 11 OF 21

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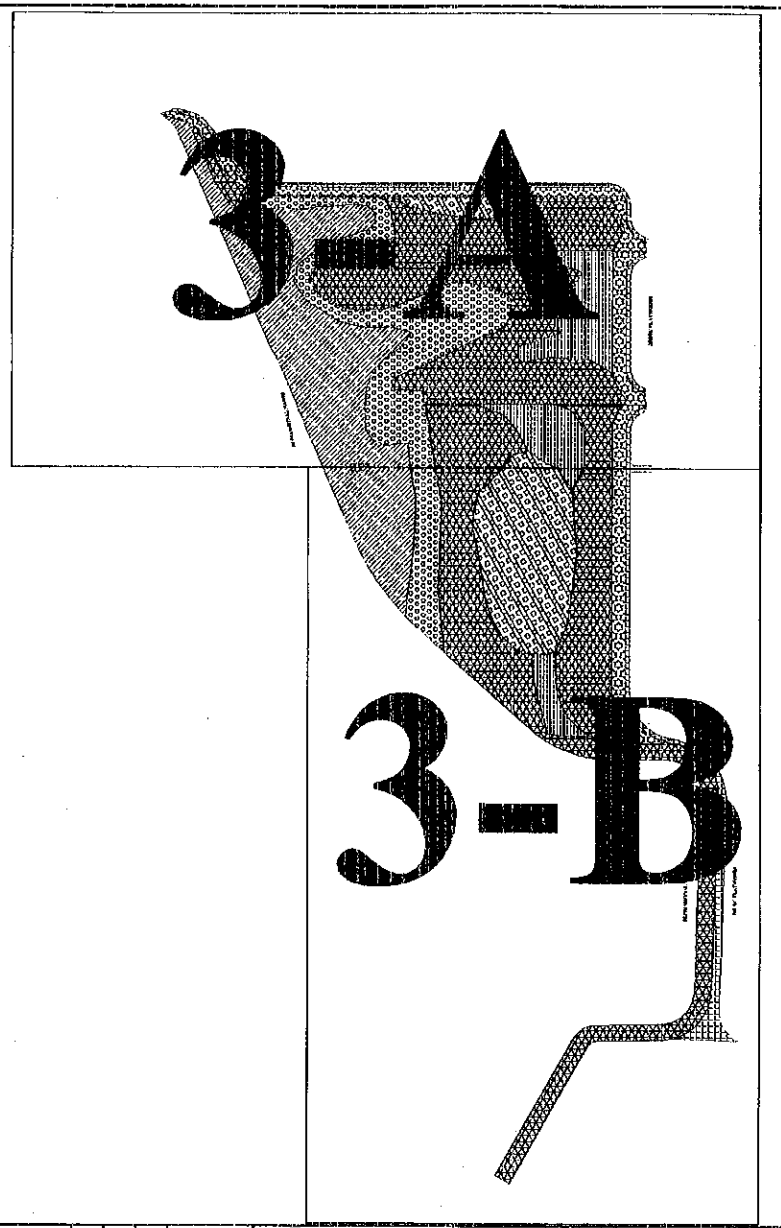

North

SCALE: 1" = 100'

SOURCE: RLW AND ALLY

PLAN VIEW	LATITUDE: LONGITUDE:	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 100'	RLW JOB NO.: 10-027.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE:	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
HYDRIC HAMMOCK PLANTING PLAN MATCH LINES

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8995 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
PHONE (877) 946-6255 FAX: (772) 546-2316 E-MAIL: rlw-ec@comcast.net

DRAWING NO.

SHEET: 12 OF 21

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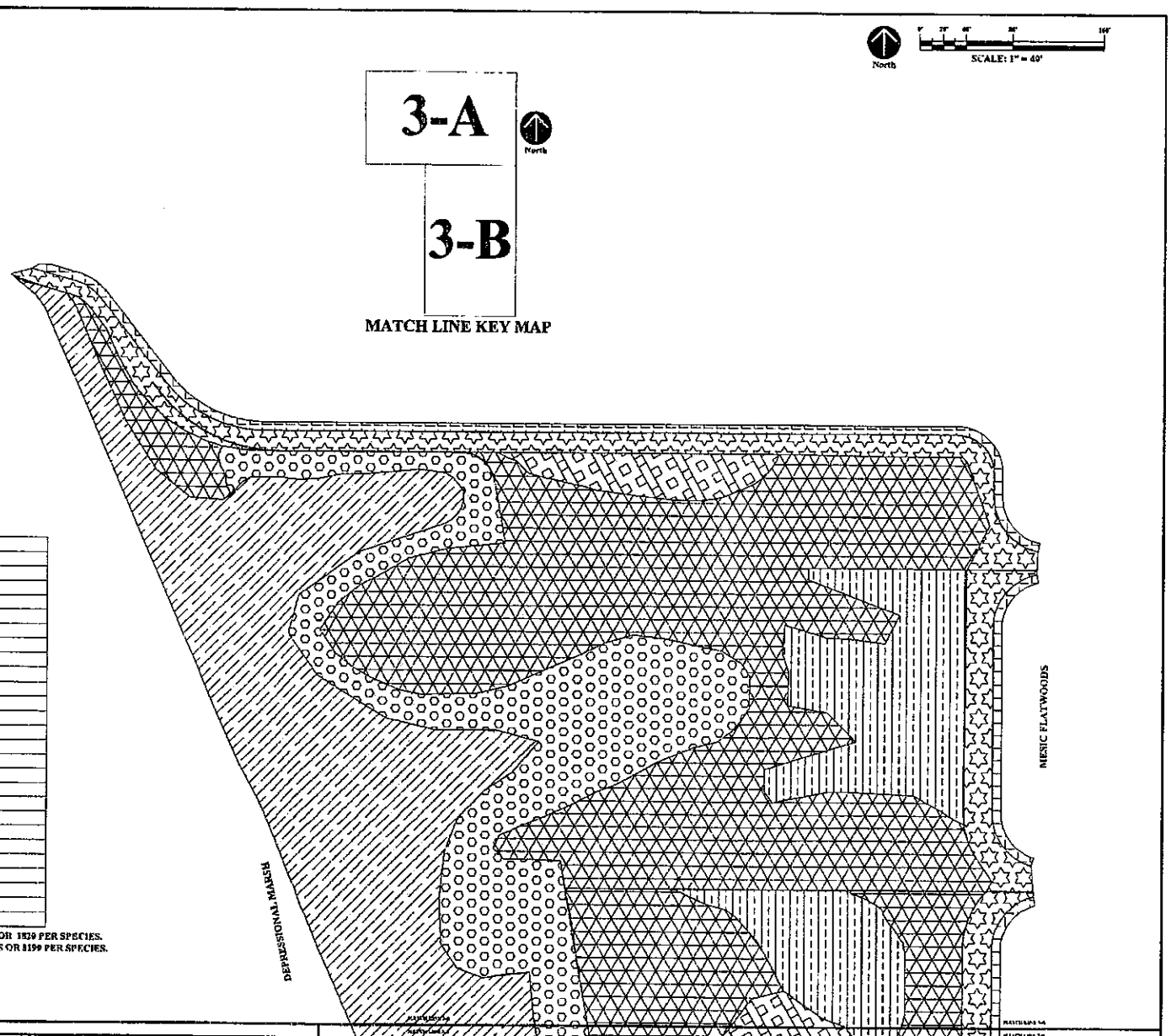

LEGEND

HYDRIC HAMMOCK

	SCIENTIFIC NAME	COMMON NAME
TREE CANOPY	*Acer rubrum*	SWAMP MAPLE
	Celtis laevigata	HACKBERRY
	Diospyros virginiana	PERSIMMON
	Gordonia lasianthus	LOBLOLLY BAY
	Quercus laurifolia	LAUREL OAK
	Sabal palmetto	CABBAGE PALM
SHRUB CANOPY*		
	Cornus foemina	SWAMP DOGWOOD
	Hypericum brachyphyllum	ST. JOHNS WORT
	Ilex cassine	DAHOON HOLLY
	Lyonia lucida	FETTER-BUSH
	Morus rubra	RED MULBERRY
	Myrsine cubana	MYRSINE
	Myrica cerifera	SOUTHERN WAX MYRTLE
	Psychotria nervosa	WILD COFFEE
	Serenoa repens	BLUESTEM PALMETTO
GROUND COVER**		
	Arundinaria gigantea	GIANT CANE
	Blechnum serrulatum	SWAMP FERN
	Eustrophus serratulus	RUSH PITRENA
	Muhlenbergia capillaris	GULF MUHLY GRASS
	Osmunda regalis	ROYAL FERN
	Panicum dichotomiflorum	FALL PANIC GRASS
	Panicum virgatum	SWITCHGRASS
	Tripsacum dactyloides	PAKAHATCHEE GRASS

SHRUB CANOPY* - BASED ON 13.546 ACRES, @ 6' O.C. = 16389 PLANTS OR 1820 PER SPECIES.
GROUND COVER** - BASED ON 13.546 ACRES, @ 3' O.C. = 65530 PLANTS OR 8190 PER SPECIES.

HYDRO SEED REFER TO DETAIL SHEET 1 (20 OF 21)

REFER TO DETAIL SHEET 2 (21 OF 21)

SOURCE: RLW AND ACEV

PLAN VIEW	LATITUDE: LATITUDE: 27°19'15.6"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 40'	RLW JOB NO: 1041128	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: 080°20'00.0"	DRAWN BY: AB	CHECKED BY: JP	APPROVED BY: RLW	33	36	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
HYDRIC HAMMOCK PLANTING PLAN MATCH LINE "3-A"

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
9985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
PHONE: (772) 546-6286 FAX: (772) 546-2916 E-MAIL: rlweigt@bellsouth.net

DRAWING NO:
SHEET: 19 OF 21

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North

SCALE: 1" = 40'

LEGEND

HYDRIC HAMMOCK

	SCIENTIFIC NAME	COMMON NAME
TREE CANOPY	*Acer rubrum*	SWAMP MAPLE
	Celtis laevigata	HACKBERRY
	Diospyros virginiana	PERSIMMON
	Gordonia lasianthus	LOBLOLLY BAY
	Quercus laurifolia	LAUREL OAK
	Sabal palmetto	CABBAGE PALM
SHRUB CANOPY*		
	Cornus foemina	SWAMP DOGWOOD
	Hypericum brachyphyllum	ST. JOHNS WORT
	Ilex cassine	DAHOON HOLLY
	Lyonia lucida	FETTER-BUSH
	Morus rubra	RED MULBERRY
	Rapanea guianensis	MYRSINE
	Myrica cerifera	SOUTHERN WAX MYRTLE
	Psychotria nervosa	WILD COFFEE
	Serenoa repens	BLUESTEM PALMETTO
GROUND COVER**		
	Amphicarpum muhlenbergianum	BLUE MAIDENCANE
	Blechnum serrulatum	SWAMP FERN
	Calamus scirpoides	BUSH FIMBRENA
	Muhlenbergia capillaris	GULF MUHLY GRASS
	Osmunda regalis	ROYAL FERN
	Panicum dichotomiflorum	FALL PANIC GRASS
	Panicum virgatum	SWITCHGRASS
	Tripsacum dactyloides	FAKAHATCHEE GRASS

SHRUB CANOPY* - BASED ON 13.54± ACRES, @ 6' O.C. = 16388 PLANTS OR 1820 PER SPECIES.
GROUND COVER** - BASED ON 13.54± ACRES, @ 3' O.C. = 65530 PLANTS OR 8190 PER SPECIES.

HYDRO SEED REFER TO DETAIL SHEET 1 (20 OF 21)

REFER TO DETAIL SHEET 2 (21 OF 21)

3-A

3-B

North

MATCH LINE KEY MAP

DEPRESSIONAL MARSH

MESIC FLATWOODS

SOURCE: RLW AND ACRF

PLAN VIEW	LATITUDE: 27°19'19.0" LONGITUDE: 80°20'49.0"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 40'	RLW JOB NO.: 10-012.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
		DRAWN BY: AB	CHECKED BY: FF	APPROVED BY: RLW	33	36	40	STATE: FLORIDA

CITY OF FORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
HYDRIC HAMMOCK PLANTING PLAN MATCH LINE "3-B"

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8989 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
PHONE: (772) 546-5725 FAX: (772) 546-5116 E-MAIL: rlweigt@bellsouth.net

DRAWING NO.
SHEET: (4 Of 21)

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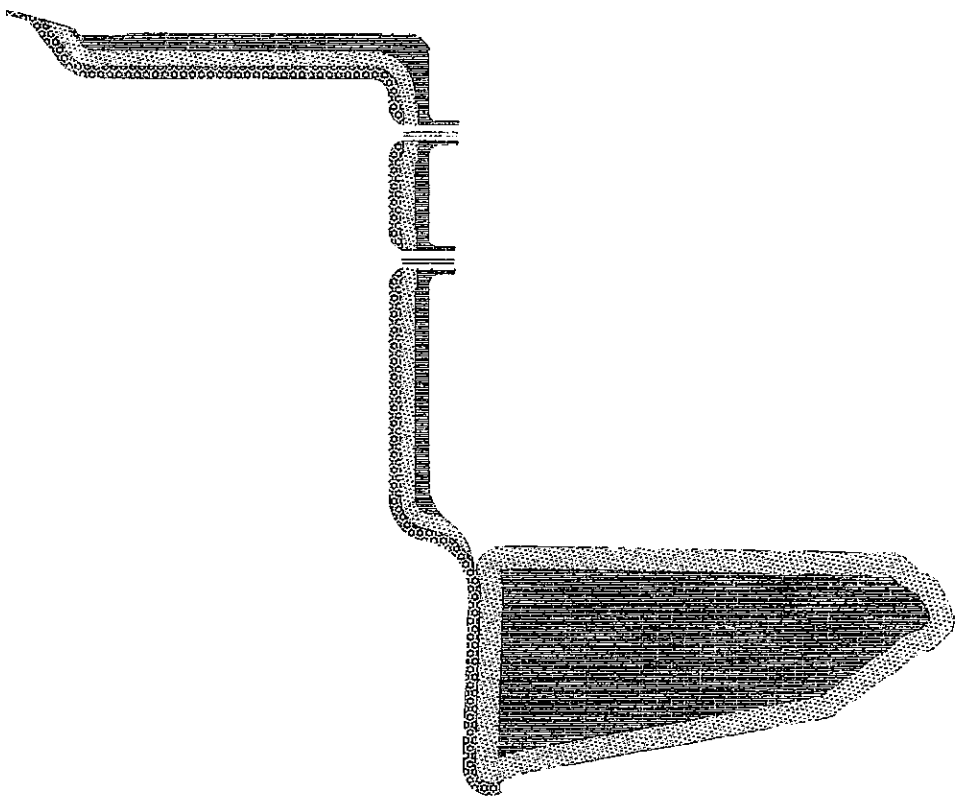

NORTH

0' 50' 100' 200' 400'

SCALE: 1" = 100'

LEGEND

MESIC FLATWOODS

	SCIENTIFIC NAME	COMMON NAME
TREE CANOPY		
	Pinus elliottii	SLASH PINE
	Quercus laurifolia	LAUREL OAK
	Sabal palmetto	CABBAGE PALM
SHRUB CANOPY*		
	Salix caroliniana	WILLOW BIRNTIC
	Gaylussacia dumosa	DWARF HUCKLEBERRY
	Ilex cassine	DAHOON HOLLY
	Ilex glabra	GALLBERRY
	Myrica cerifera	BAYBERRY
	Serenoa repens	SAW PALMETTO
	Vaccinium myrsinites	SHALLOW LEAF VIRGINSION
GROUND COVER**		
	Andropogon virginicus	BLUE MAIDENCANE
	Aristida spiciformis	SPIKED FEATHER GRASS
	Chapmannia floridana	FLAT SEDGE
	Eragrostis spectabilis	LOVEGRASS
	Eriocaulon compressum	SUGARCANE PLUMEGRASS
	Muhlenbergia capillaris	HAIR AWNLY GRASS
	Panicum virgatum	SWITCH GRASS
	Tripsacum dactyloides	PANAHATCHEE GRASS

SHRUB CANOPY* - BASED ON 13.85± ACRES, @ 6' O.C. = 13519 PLANTS OR 2705 PER SPECIES.
GROUND COVER** - BASED ON 13.85± ACRES, @ 3' O.C. = 46046 PLANTS OR 9260 PER SPECIES.
REFER TO PLANTING DETAIL SHEET 2 (21 OF 23)

SOURCE: RLW AND ACEF

PLAN VIEW	LATITUDE: 27°19'24.0" / LONGITUDE: 80°20'24.0"	DATE REVISED: 03 DECEMBER 2011	SCALE: 1" = 100'	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
		DRAWN BY: AB	CHECKED BY: EP	APPROVED BY: RLW	35	36	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
MESIC FLATWOODS (UPLAND) PLANTING PLAN

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
6900 S.E. BATHES ROAD, SUITE A, HOBE SOUND, FL 33455
PHONE: (772) 546-6333 FAX: (772) 546-3376 E-MAIL: rlweigt@comcast.net

DRAWING NO.: 11-100 PLANT PLAN TRANSITION
SHEET: 15 OF 21

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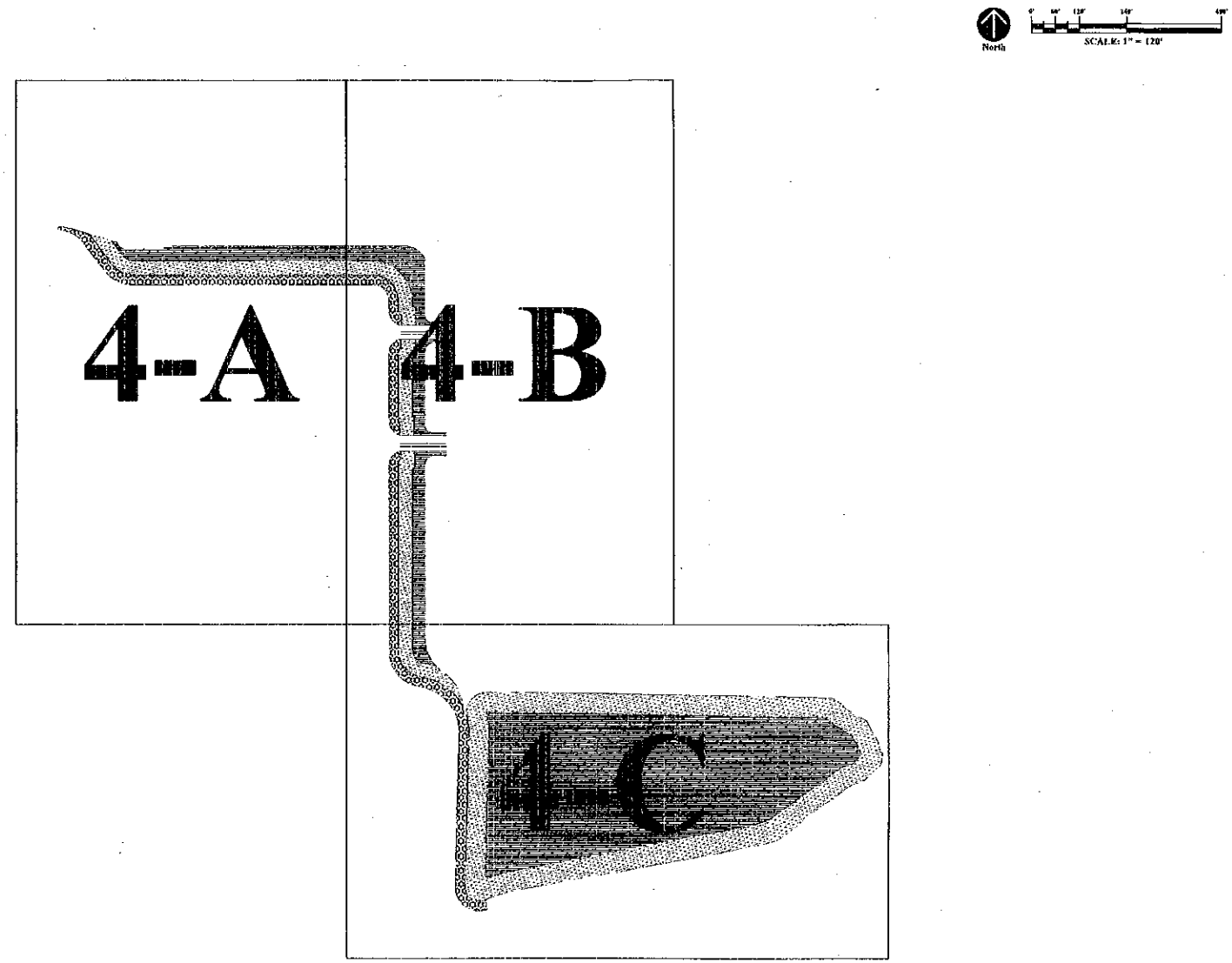

SOURCE: REW AND ACEF

KEY MAP	LATITUDE:	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 120'	RLW JOB NO.: 10-012.06	SEC.	TWP.	R.	COUNTY: ST. LUCIE	CITY OF FORT ST LUCIE PLATTS CREEK COMPENSATORY MITIGATION PROJECT PROPOSED PLANTING PLAN MESIC FLATWOODS (UPLAND) PLANTING MATCH LINE KEY MAP	R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC.	DRAWING NO.
	LONGITUDE:	DRAWN BY: AB	CHECKED BY: FF	APPROVED BY: RLW	33	35	40	STATE: FLORIDA			SHEET: 16 OF 21

Application 111018-4 Exhibit 3 Page 17 of 22

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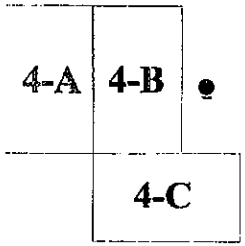
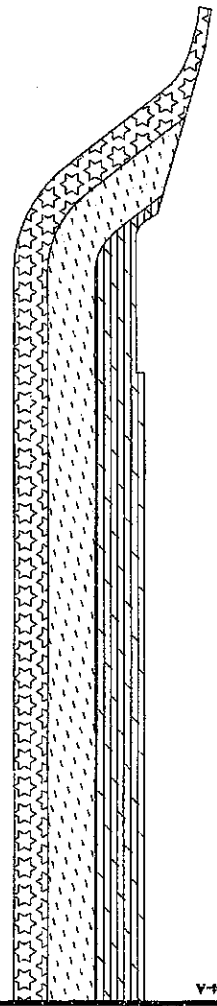
North

SCALE: 1" = 40'



MATCH LINE KEY



MATCH LINE 4-A

LEGEND

MESIC FLATWOODS

	SCIENTIFIC NAME	COMMON NAME
TREE CANOPY	*Pinus elliottii*	SLASH PINE
	Quercus virginiana	LIVE OAK
	Sabal palmetto	GARBAGE PALM
SHRUB CANOPY*		
	Sideroxylon salicifolium	WILLOW BUSTIC
	Gaylussacia dumosa	DWARF HUCKLEBERRY
	Ilex cassine	DAHOON HOLLY
	Ilex glabra	GALLBERRY
	Lyonia ferruginea	RUSTY LYONIA
	Myrica cerifera	SOUTHERN WAX MYRTLE
	Serenoa repens	SAW PALMETTO
	Viburnum obovatum	SMALL LEAF VIBURNUM
GROUND COVER**		
	Amphicarpum muhlenbergianum	BLUE MAIDENCANE
	Aristida spiciformis	ARROW FEATHER GRASS
	Cyperus odoratus	FLAT SEDGE
	Eragrostis spectabilis	LOVEGRASS
	Erianthus giganteus	SUGARCANE PLUMEGRASS
	Muhlenbergia capillaris	GULF MUHLY GRASS
	Panicum virgatum	SWITCH GRASS
	Tripsacum dactyloides	FAKAHATCHEE GRASS

SHRUB CANOPY* - BASED ON 13.65± ACRES, @ 6' O.C. = 16516 PLANTS OR 2065 PER SPECIES.
GROUND COVER** - BASED ON 13.65± ACRES, @ 3' O.C. = 66066 PLANTS OR 8260 PER SPECIES.
REFER TO PLANTING DETAIL SHEET 2 (21 OF 21)

MATCH LINE 4-A

SOURCE: RLW AND ACEF

PLANVIEW	LATITUDE: LONGITUDE:	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 40'	RLW JOB NO.: 10-032.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
		DRAWN BY: AB	CHECKED BY: SF	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
MESIC FLATWOODS (UPLAND) PLANTING MATCH LINE "4-A"

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
[illegible]

DRAWING NO.
SHEET: 17 OF 21

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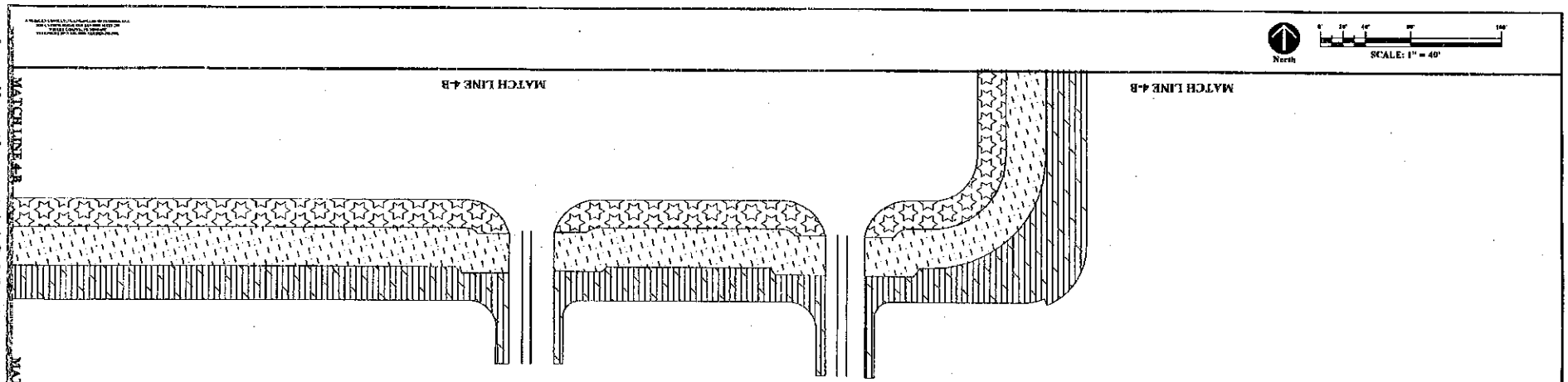
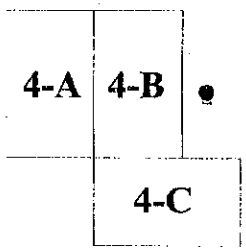


LEGEND

MESIC FLATWOODS

	SCIENTIFIC NAME	COMMON NAME
TREE CANOPY	*Pinus elliotii*	SLASH PINE
	Quercus virginiana	LIVE OAK
	Sabal palmetto	CABBAGE PALM
SHRUB CANOPY*		
	Sideroxylon salicifolium	WILLOW BUSTIC
	Gaylussacia dumosa	DWARF HUCKLEBERRY
	Ilex cassine	DAHOON HOLLY
	Ilex glabra	GALLBERRY
	Lyonia ferruginea	RUSTY LYONIA
	Myrica cerifera	SOUTHERN WAX MYRTLE
	Serenoa repens	SAW PALMETTO
	Viburnum obovatum	SMALL LEAF VIBURNUM
GROUND COVER**		
	Amphicarpum muhlenbergianum	BLUE MAIDENCANE
	Aristida spiciformis	ARROW FEATHER GRASS
	Cyperus odoratus	FLAT SEDGE
	Eragrostis spectabilis	LOVEGRASS
	Erianthus giganteus	SUGARCANE PLUMEGRASS
	Muhlenbergia capillaris	GULF MUHLY GRASS
	Panicum virgatum	SWITCH GRASS
	Tripsacum dactyloides	PAKAHATCHEE GRASS

SHRUB CANOPY* - BASED ON 13.65± ACRES, @ 6' O.C. = 16516 PLANTS OR 2065 PER SPECIES.
GROUND COVER** - BASED ON 13.65± ACRES, @ 3' O.C. = 66066 PLANTS OR 8260 PER SPECIES.
REFER TO PLANTING DETAIL SHEET 2 (21 OF 21)



MATCH LINE KEY

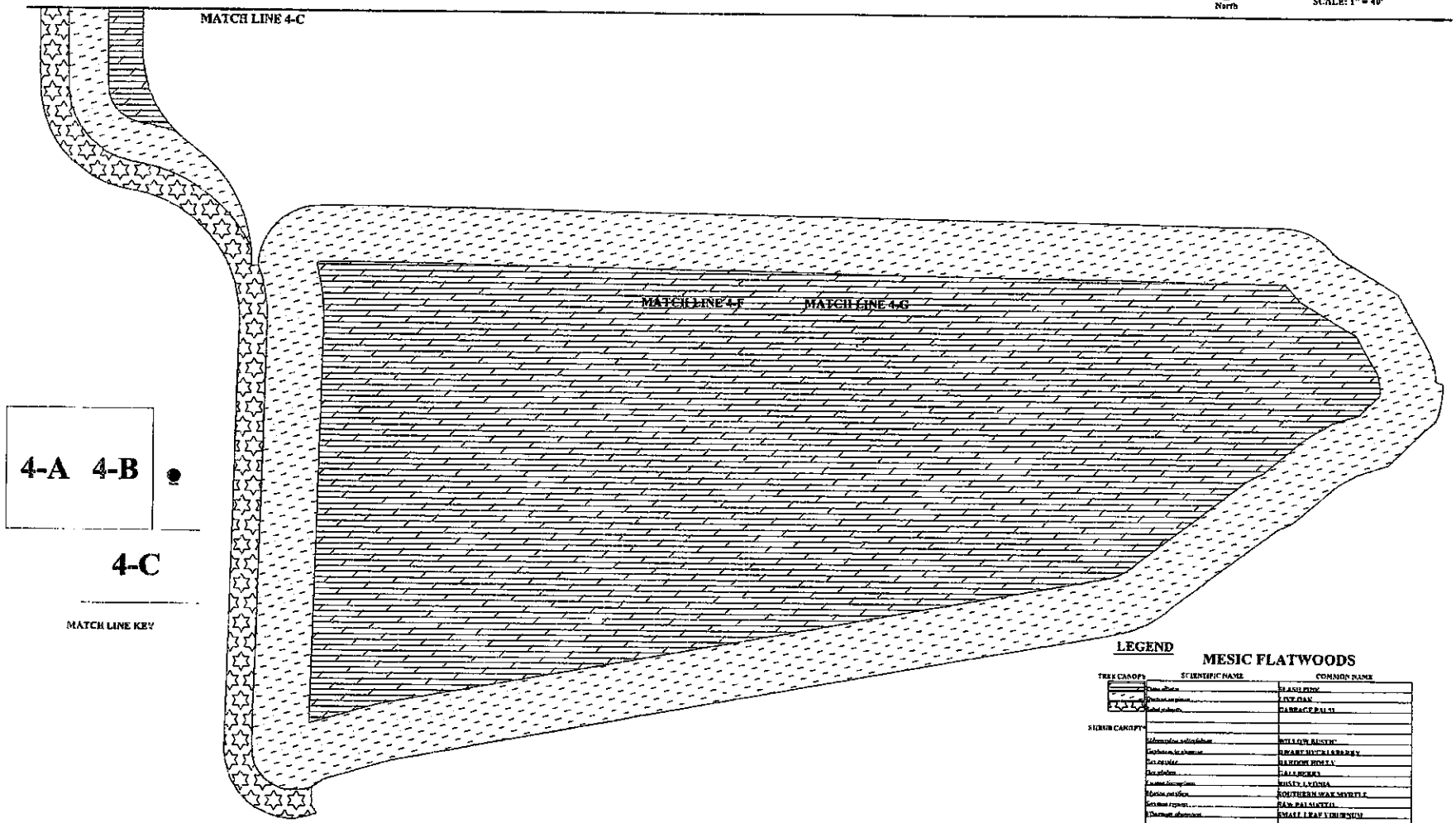
SOURCE: RLW AND ACEC

PLANVIEW	LATITUDE/ LATITUDE: 27° 19' 19.00"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 40'	RLW JOB NO.: 10-612.M	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: 80° 20' 34.01"	DRAWN BY: AS	CHECKED BY: FF	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
MESIC FLATWOODS (UPLAND) PLANTING MATCH LINE "4-B"

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8000 S.E. BRIDGE ROAD, SUITE 4, HOBE SOUND, FL 33455
PHONE: (772) 546-4958 FAX: (772) 546-7364 E-MAIL: rlweigt@rlweigt.net

DRAWING NO.
SHEET: 10 OF 21



LEGEND

MESIC FLATWOODS

	SCIENTIFIC NAME	COMMON NAME
TREE CANOPY	[illegible]	SLASH PINE
	[illegible]	LIVE OAK
	[illegible]	CABBAGE PALM
SHRUB CANOPY*		
	[illegible]	YELLOW BUTTON
	[illegible]	DWARF HUCKLEBERRY
	[illegible]	GARRIGO HOLLY
	[illegible]	GALLBERRY
	[illegible]	RUSTY LYONIA
	[illegible]	SOUTHERN WAX MYRTLE
	[illegible]	SAW PALMETTO
	[illegible]	SMALL LEAF VIBURNUM
GROUND COVER**		
	[illegible]	BLUE MAIDENCANE
	[illegible]	ARROW FEATHER GRASS
	[illegible]	FLAT SEDGE
	[illegible]	LOVEGRASS
	[illegible]	CARACRAS PLUMEGRASS
	[illegible]	CUT SHORT LOVEGRASS
	[illegible]	SWITCH GRASS
	[illegible]	PAHAHATCHEE GRASS

SHRUB CANOPY* - BASED ON 13.6% ACRES @ 6' O.C. = 16416 PLANTS OR 1065 PER SPECIES.
GROUND COVER** - BASED ON 13.6% ACRES @ 3' O.C. = 66864 PLANTS OR 8365 PER SPECIES.
REFER TO PLANTING DETAIL SHEET 2 (21 OF 21)

SOURCE: RLW AND ACEE

PLANVIEW	LATITUDE: [illegible] LONGITUDE: [illegible]	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 40'	RLW JOB NO.: 13-021.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
		DRAWN BY: AS	CHECKED BY: PP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST. LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
MESIC FLATWOODS (UPLAND) PLANTING MATCH LINE "4-C"

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
999 S.E. BRIDGE ROAD, SUITE 4, HOBE SOUND, FL 33455
PHONE: (772) 546-8355 FAX: (772) 546-1316 E-mail: [illegible]

DRAWING NO.: [illegible]
SHEET: 19 OF 21

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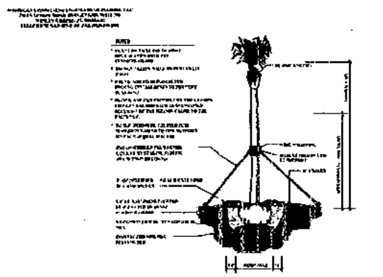
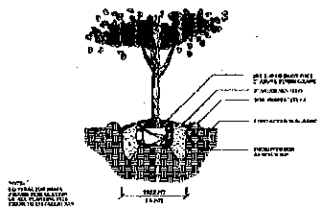
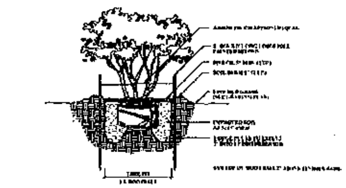


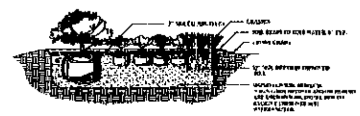
PALM PLANTING DETAIL SCALE: NTS



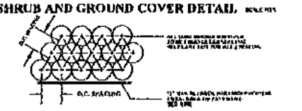
TREE PLANTING DETAIL (1 GAL.) SCALE: NTS



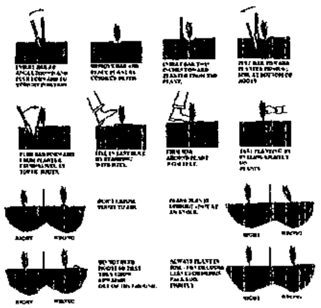
MULTI-TRUNK TREE DETAIL SCALE: NTS



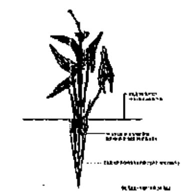
SHRUB AND GROUND COVER DETAIL SCALE: NTS



PLANT SPACING DETAIL SCALE: NTS



PLANTING BARE ROOT PLANTS



PLANTING BARE ROOT PLANTS

GENERAL NOTES

1. PLANTS NATIVE TO FLORIDA MAY BE SUBSTITUTED FOR THOSE LISTED, ACCORDING TO AVAILABILITY AND SIZE, WITH THE WRITTEN AUTHORIZATION OF THE AGENCIES AND THE CLIENT.

2. LOCATION OF PLANTS MAY BE FIELD ADJUSTED IN ORDER TO PROVIDE THE BEST GROWING CONDITIONS.

3. PLANT MATERIAL SHALL BE INSPECTED BY THE CLIENT PRIOR TO INSTALLATION.

4. ALL PLANTS SHALL BE INSTALLED IN HEALTHY AND VIGOROUS CONDITION, AND SHALL BE FREE OF WEEDS, DISEASE, AND INSECT PESTS, EGGS OR LARVAE.

5. CONTRACTOR IS RESPONSIBLE FOR THE PROPER WATERING AND FERTILIZATION OF THE INSTALLED PLANTS FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR.

6. ROOT BOUND CONTAINER PLANTS WILL NOT BE ACCEPTED.

7. USE FLORIDA GOLD NO FLOAT CYPRESS MULCH OR EQUIVALENT.

8. SHRUB CANOPY AND GROUND COVER TO BE PLACED RANDOMLY, ON SPECIFIED CENTERS. REFER TO DETAIL SHEET 21 OF 21.

CALL 48 HOURS BEFORE YOU DIG IN FLORIDA
1-800-432-4770
IT'S THE LAW!
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

GENERAL NOTES

DEFINITION OF IMPROVED SOIL

IMPROVED SOIL IS DEFINED AS A TOPSOIL MIXTURE COMPRISED OF PEAT AND SAND WITH AN ORGANIC MATTER CONTENT OF FIVE (5) PERCENT BY WEIGHT (ASTM STANDARD TEST METHOD D 2974-80) THE IMPROVED SOIL SHALL PASS A 1/2" SIEVE.
THE IMPROVED SOIL SHALL BE SUITABLE FOR AND CAPABLE OF SUPPORTING WETLAND VEGETATION AND SHALL BE FREE OF EXOTIC OR INVASIVE PLANT SEED SOURCES. ALL IMPROVED SOIL MUST BE APPROVED BY THE CLIENT BEFORE PLACEMENT IN

MITIGATION AREAS.

GRADE STANDARDS AND QUALITY

QUALITY OF ALL PLANTS SHALL BE AT LEAST EQUAL TO THAT OUTLINED AS NO. 1 IN GRADES AND STANDARDS FOR NURSERY PLANTS, PART I, 1963, REVISED EDITION AND PART I, PALMS AND TREES, BY THE STATE PLANT BOARD OF FLORIDA.
ALL PLANTS SHALL BE SOUND, HEALTHY AND VIGOROUS, WELL BRANCHED, AND DENSELY FOLIATED WHEN IN LEAF. THEY SHALL HAVE HEALTHY, WELL DEVELOPED ROOT SYSTEMS, AND SHALL BE FREE OF DISEASES AND INSECT PESTS, EGGS, OR LARVAE. ALL PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED HEREIN OR INDICATED ON THE CONTRACT DRAWINGS.

TRANSPORTATION AND INSPECTION.

PLANT TRANSPORTATION SHALL COMPLY WITH ALL FEDERAL AND STATE REGULATIONS, THEREFORE, AND UPON DELIVERY AT THE SITE. ALL PLANTS SHALL BE INSPECTED BY THE PROJECTS ENVIRONMENTAL CONSULTANT FOR CONFORMITY TO SPECIFICATIONS AND FOR HANDLING DAMAGE. THE CONTRACTOR SHALL PROVIDE THE ENVIRONMENTAL CONSULTANT WITH A 48-HOUR NOTICE BEFORE ANY REQUESTED INSPECTION. REJECTED PLANTS SHALL BE REMOVED IMMEDIATELY FROM THE SITE BY THE CONTRACTOR.
TREES THAT HAVE TO BE TRANSPORTED MORE THAN ONE (1) MILE TO REACH THE PROJECT SITE SHALL BE TREATED WITH "WILT PRUF" AND COVERED WITH A 70 % SHADE-CLOTH-TARP OR EQUIVALENT TO PREVENT WIND BURN.

SOURCE: RLW AND ACRF

SEEDING

DESCRIPTION

This item shall consist of soil preparation, seeding the areas shown on the plans or as directed by the Engineer in accordance with these specifications.

MATERIALS

SEED The species and application rates of grass, legume, and cover-crop seed furnished shall be those stipulated herein.

Seed shall be furnished separately or in mixtures in standard containers with the seed name, lot number, net weight, percentages of purity and of germination and hard seed, and percentage of maximum weed seed content clearly marked for each kind of seed. The Contractor shall furnish the Engineer duplicate signed copies of a statement by the vendor certifying that each lot of seed has been tested by a recognized laboratory for seed testing within 6 months of date of delivery. This statement shall include: name and address of laboratory, date of test, lot number for each kind of seed, and the results of tests as to name, percentages of purity and of germination, and percentage of weed content for each kind of seed furnished, and, in case of a mixture, the proportions of each kind of seed.

Seeds shall be applied as follows:

Seed	Minimum Seed Purity (Percent)	Minimum Germination (Percent)	Rate of Application lb/acre
Bahia Grass	95% (FDOT 981)	95%	90
Annual Type Ryegrass	95% (FDOT 981)	90%	20

Seed shall meet the requirements as specified in the latest edition of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction, Section 981.

Bahia seeding (permanent erosion control) shall be installed between March and September inclusive, unless otherwise approved by the Engineer. Ryegrass seeding (temporary erosion control) shall be installed between October and February only. If Ryegrass is placed as temporary erosion control, then the contractor must return during the designated period to place the permanent erosion control (Bahia seeding).

CONSTRUCTION METHODS

ADVANCE PREPARATION AND CLEANUP. After grading of areas has been completed, areas to be seeded shall be raked or otherwise cleared of stones larger than 2 inches any diameter, sticks, stumps, and other debris that might interfere with sowing of seed, growth of grasses, or subsequent maintenance of grass-covered areas. If any damage by erosion or other causes has occurred after the completion of grading, the Contractor shall repair such damage. This may include filling gullies, smoothing irregularities, and repairing other incidental damage.

An area to be seeded shall be considered a satisfactory seedbed without additional treatment if it has recently been thoroughly loosened and worked to a depth of not less than 5 inches as a result of grading operations and, if immediately prior to seeding, the top 3 inches of soil is loose, friable, reasonably free from large clods, rocks, large roots, or other undesirable matter, and if shaped to the required grade.

However, when the area to be seeded is sparsely sodded, weedy, barren and unworked, or packed and hard, any grass and weeds shall first be cut or otherwise satisfactorily disposed of, and the soil then scarified or otherwise loosened to a depth not less than 5 inches. Clods shall be broken and the top 3 inches of soil shall be worked into a satisfactory seedbed by discing, or by use of cultipackers, rollers, drags, harrows, or other appropriate means.

WET APPLICATION METHOD.

a. General. The Contractor may elect to apply seed by spraying them on the previously prepared seedbed in the form of an aqueous mixture and by using the methods and equipment described herein. The rates of application shall be as specified in the special provisions.

b. Spraying Equipment. The spraying equipment shall have a container or water tank equipped with a liquid level gauge calibrated to read in increments not larger than 50 gallons over the entire range of the tank capacity, mounted so as to be visible to the nozzle operator. The container or tank shall also be equipped with a mechanical power-driven agitator capable of keeping all the solids in the mixture in complete suspension at all times until used.

The unit shall also be equipped with a pressure pump capable of delivering 100 gallons per minute at a pressure of 100 pounds per square inch. The pump shall be mounted in a line that will recirculate the mixture through the tank whenever it is not being sprayed from the nozzle. All pump passages and pipe lines shall be capable of providing clearance for] inch solids. The power unit for the pump and agitator shall have controls mounted so as to be accessible to the nozzle operator. There shall be an indicating pressure gauge connected and mounted immediately at the back of the nozzle.

The nozzle pipe shall be mounted on an elevated supporting stand in such a manner that it can be rotated through 360 degrees horizontally and inclined vertically from at least 20 degrees below to at least 60 degrees above the horizontal. There shall be a quick-acting three-way control valve connecting the recirculating line to the nozzle pipe and mounted so that the nozzle operator can control and regulate the amount of flow of mixture delivered to the nozzle. At least three different types of nozzles shall be supplied so that mixtures may be properly sprayed over distance varying from 20 to 100 feet. One shall be a close-range ribbon nozzle, one a medium-range ribbon nozzle, and one a long-range jet nozzle. For care of removal and cleaning, all nozzles shall be connected to the nozzle pipe by means of quick-release couplings. In order to reach areas inaccessible to the regular equipment, an extension hose at least 50 feet in length shall be provided to which the nozzles may be connected.

c. Mixtures. All water used shall be obtained from fresh water sources and shall be free from injurious chemicals and other toxic substances harmful to plant life. Brackish water shall not be used at any time. The Contractor shall identify to the Engineer all sources of water at least 2 weeks prior to use. The Engineer may take samples of the water at the source or from the tank at any time and have a laboratory test the samples for chemical and saline content. The Contractor shall not use any water

All mixtures shall be constantly agitated from the time they are mixed until they are finally applied to the seedbed. All such mixtures shall be used within 2 hours from the time they were mixed or they shall be wasted and disposed of at locations acceptable to the Engineer.

d. Spraying. Mixtures of seed shall only be sprayed upon previously prepared seedbeds. The mixtures shall be applied by means of a high-pressure spray that shall always be directed upward into the air so that the mixtures will fall to the ground like rain in a uniform spray. Nozzles or sprays shall never be directed toward the ground in such a manner as might produce erosion or runoff.

Particular care shall be exercised to insure that the application is made uniformly and at the prescribed rate and to guard against misses and overlapped areas. Proper predetermined quantities of the mixture in accordance with specifications shall be used to cover specified sections of known area. Checks on the rate and uniformity of application may be made by observing the degree of wetting of the ground or by distributing test sheets of paper or pans over the area at intervals and observing the quantity of material deposited thereon.

On surfaces that are to be mulched as indicated by the plans or designated by the Engineer, seed applied by the spray method need not be raked into the soil or rolled. However, on surfaces on which mulch is not to be used, the raking and rolling operations will be required after the soil has dried.

MAINTENANCE OF SEEDED AREAS. The Contractor shall protect seeded areas against traffic or other use by warning signs or barricades, as approved by the Engineer. Surfaces gullied or otherwise damaged following seeding shall be repaired by regrading and reseeding as directed. The Contractor shall mow, water as directed, and otherwise maintain seeded areas in a satisfactory condition until final inspection and acceptance of the work.

When the wet application method outlined above is used for work done out of season, it will be required that the Contractor establish a good stand of grass of uniform color and density to the satisfaction of the Engineer. A grass stand shall be considered adequate when bare spots are one square foot or less, randomly dispersed, and do not exceed 3% of the area seeded. If at the time when the contract has been otherwise completed it is not possible to make an adequate determination of the color, density, and uniformity of such stand of grass, payment for the unaccepted portions of the areas seeded out of season will be withheld until such time as these requirements have been met.

DETAIL SHEET 1	LATITUDE:	DATE REVISED: 07 DECEMBER 2011	SCALE: NTS	RLW JOB NO.: 10-433.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE:	DRAWN BY: AB	CHECKED BY: PP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
DETAIL SHEET 1

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.

DRAWING NO.
SHEET: 21 OF 21

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LEGEND — FLOODPLAIN SWAMP

	SCIENTIFIC NAME	COMMON NAME	HABITAT	DENSITY	SIZE	TOTAL UNITS
TREE CANOPY	*Annona glabra*	POND APPLE	OBL	10' O.C.	1 GAL	1920
	Carya aquatica	WATER HICKORY	OBL	10' O.C.	1 GAL	1650
	Fraxinus caroliniana	PORE ASH	OBL	10' O.C.	1 GAL	520
	Persea palustris	SWAMP BAY	OBL	10' O.C.	1 GAL	870
SHRUB CANOPY*						
	Baccharis halimifolia	GROUNDSEL BUSH	OBL	6' O.C.	1 GAL	3840
	Cephalanthus occidentalis	BUTTONBUSH	OBL	6' O.C.	1 GAL	3840
	Ilex cassine	DAHOON HOLLY	OBL	6' O.C.	1 GAL	3840
	Itea virginica	VIRGINIA WILLOW	OBL	6' O.C.	1 GAL	3840
GROUND COVER**						
	Acrostichum danaeifolium	LEATHER FERN	OBL	3' OC	BR	6150
	Bacopa caroliniana	LEMON BACOPA	OBL	3' OC	BR	6150
	Hymenocallis latifolia	SPIDER-LILY	FACW	3' OC	BR	6150
	Muhlenbergia capillaris	MUHLY GRASS	OBL	3' OC	BR	6150
	Panicum hemitomon	MAIDENCANE	OBL	3' OC	BR	6150
	Polygonum punctatum	SMARTWEED	FACW+	3' OC	BR	6150
	Osmunda regalis	ROYAL FERN	OBL	3' OC	BR	6150
	Saururus cernuus	LIZARD'S TAIL	OBL	3' OC	BR	6150
	Woodwardia areolata	NETTED CHAIN FERN	OBL	3' OC	BR	6150
	Zizaniopsis miliacea	SOUTHERN WILD RICE	OBL	3' OC	BR	6150

SHRUB CANOPY* - BASED ON 12.70± ACRES, @ 6' O.C. = 15367 PLANTS OR 3840 PER SPECIES.
GROUND COVER** - BASED ON 12.70± ACRES, @ 3'O.C. = 61468 PLANTS OR 6150 PER SPECIES.

LEGEND — DEPRESSIONAL MARSH

	SCIENTIFIC NAME	COMMON NAME	HABITAT	DENSITY	SIZE	TOTAL UNITS
LF	*Acrostichum danaeifolium*	LEATHER FERN	OBL	3' OC	BR	1690
	Bacopa caroliniana	LEMON BACOPA	OBL	3' OC	BR	775
	Crinum americanum	CRINUM LILY	OBL	3' OC	BR	630
	Eleocharis cellulosa/Eleocharis interstincta (MIX)	SPIKE RUSH/JOINTED SPIKE RUSH	OBL	3' OC	BR	15150
	Eragrostis spectabilis	PURPLE LOVEGRASS	FAC	3' OC	BR	1260
	Juncus effusus	SOFT RUSH	OBL	3' OC	BR	21440
BL	*Nymphoides aquatica*	BANANA LILY	OBL	3' OC	BR	3150
WL	*Nymphaea odorata*	FRAGRANT WATER LILY	OBL	3' OC	BR	1690
	Panicum hemitomon	MAIDENCANE	OBL	3' OC	BR	3190
GA	*Peltandra virginica*	GREEN ARUM	OBL	3' OC	BR	2450
PW	*Pontederia cordata*	PICKEREL WEED	OBL	3' OC	BR	5240
	Rhynchospora microcarpa	SOUTHERN BEAKRUSH	OBL	3' OC	BR	3920
LA	*Sagittaria lancifolia*	LANCE-LEAF ARROWHEAD	OBL	3' OC	BR	2400
DP	*Sagittaria latifolia*	DUCK POTATO	OBL	3' OC	BR	2310
	Scirpus californicus	GIANT BULRUSH	OBL	3' OC	BR	21250
	Scirpus validus	SOFT STEM BULRUSH	OBL	3' OC	BR	15300
	Spartina bakeri	SMOOTH CORDGRASS	FACW	3' OC	BR	12782
T	*Thalia geniculata*	ARROWROOT	OBL	3' OC	BR	7880

HYDRO SEED (0.5± ACRES) SEE DETAIL SHEET1 (SHEET 20 OF 21)

LEGEND — HYDRIC HAMMOCK

	SCIENTIFIC NAME	COMMON NAME	HABITAT	DENSITY	SIZE	TOTAL UNITS
TREE CANOPY	*Acer rubrum*	SWAMP MAPLE	FACW	10' O.C.	1 GAL	1090
	Celtis laevigata	HACKBERRY	FACW	10' O.C.	1 GAL	480
	Diospyros virginiana	PERSIMMON	FAC	10' O.C.	1 GAL	610
	Gordonia lasianthus	LOBLOLLY BAY	FACW	10' O.C.	1 GAL	700
	Quercus laurifolia	LAUREL OAK	FAWC	10' O.C.	1 GAL	2560
	Sabal palmetto	CABBAGE PALM	FAC	10' O.C.	10' CT	610
SHRUB CANOPY*						
	Cornus foemina	SWAMP DOGWOOD	FACW	6' O.C.	1 GAL	1820
	Hypericum hypericoides	ST. JOHNS WORT	FACW	6' O.C.	1 GAL	1820
	Ilex cassine	DAHOON HOLLY	OBL	6' O.C.	1 GAL	1820
	Lyonia lucida	FETTER-BUSH	FACW	6' O.C.	1 GAL	1820
	Morus rubra	RED MULBERRY	FAC	6' O.C.	1 GAL	1820
	Myrsine guianensis	MYRSINE	FAC	6' O.C.	1 GAL	1820
	Myrica cerifera	SOUTHERN WAX MYRTLE	FACW	6' O.C.	1 GAL	1820
	Psychotria nervosa	WILD COFFEE	FAC	6' O.C.	1 GAL	1820
	Serenoa repens	BLUESTEM PALMETTO	FACW	6' O.C.	1 GAL	1820
GROUND COVER**						
	Amphicarpum muhlenbergianum	BLUE MAIDENCANE	FACW	3' O.C.	BR	8190
	Blechnum serrulatum	SWAMP FERN	FACW	3' O.C.	BR	8190
	Eragrostis atropoides	BUSH FIREBNA	FACW	3' O.C.	BR	8190
	Muhlenbergia capillaris	GULF MUHLY GRASS	OBL	3' O.C.	BR	8190
	Osmunda regalis	ROYAL FERN	OBL	3' O.C.	BR	8190
	Panicum dichotomiflorum	FALL PANIC GRASS	FACW	3' O.C.	BR	8190
	Panicum virgatum	SWITCHGRASS	FACW	3' O.C.	BR	8190
	Tripsacum dactyloides	FAKAHATCHEE GRASS	FAC	3' O.C.	BR	8190

SHRUB CANOPY* - BASED ON 13.54± ACRES, @ 6' O.C. = 16390 PLANTS OR 1820 PER SPECIES.
GROUND COVER** - BASED ON 13.54± ACRES. @ 3'O.C. = 65520 PLANTS OR 8190 PER SPECIES.
HYDRO SEED REFER TO DETAIL SHEET 1 (SHEET 20 OF 21)

LEGEND — MESIC FLATWOODS

	SCIENTIFIC NAME	COMMON NAME	HABITAT	DENSITY	SIZE	TOTAL UNITS
TREE CANOPY	*Pinus elliottii*	SLASH PINE	UPL	10' O.C.	1 GAL	3310
	Quercus virginica	LIVE OAK	FACW	10' O.C.	1 GAL	1370
	Sabal palmetto	CABBAGE PALM	FAC	10' O.C.	10' CT	610
SHRUB CANOPY*						
	Sideroxylon salicifolium	WILLOW BUSTIC	UPL	6' O.C.	1 GAL	2065
	Gaylussacia dumosa	DWARF HUCKLERERRY	FACW	6' O.C.	1 GAL	2065
	Ilex cassine	DAHOON HOLLY	OBL	6' O.C.	1 GAL	2065
	Ilex glabra	GALLBERRY	UPL	6' O.C.	1 GAL	2065
	Lyonia ferruginea	RUSTY LYONIA	UPL	6' O.C.	1 GAL	2065
	Myrica cerifera	SOUTHERN WAX MYRTLE	FAC	6' O.C.	1 GAL	2065
	Serenoa repens	SAW PALMETTO	UPL	6' O.C.	1 GAL	2065
	Viburnum obovatum	SMALL LEAF VIBURNUM	FACW	6' O.C.	1 GAL	2065
GROUND COVER**						
	Amphicarpum muhlenbergianum	BLUE MAIDENCANE	FACW	3' O.C.	BR	8260
	Aristida spiciformis	ARROW FEATHER GRASS	FAC	3' O.C.	BR	8260
	Cyperus odoratus	FLAT SEDGE	FACW	3' O.C.	BR	8260
	Eragrostis spectabilis	LOVEGRASS	FAC	3' O.C.	BR	8260
	Erianthus giganteus	SUGARCANE PLUMEGRASS	FACW	3' O.C.	BR	8260
	Muhlenbergia capillaris	GULF MUHLY GRASS	OBL	3' O.C.	BR	8260
	Panicum virgatum	SWITCH GRASS	FAC	3' O.C.	BR	8260
	Tripsacum dactyloides	FAKAHATCHEE GRASS	FAC	3' O.C.	BR	8260

SHRUB CANOPY* - BASED ON 13.65± ACRES, @ 6' O.C. = 16516 PLANTS OR 2065 PER SPECIES.
GROUND COVER** - BASED ON 13.65± ACRES. @ 3'O.C. = 66066 PLANTS OR 8260 PER SPECIES.

DETAIL SHEET 3	LATITUDE: LONGITUDE:	DATE REVISED: 07 DECEMBER 2011	SCALE: NTS	DEW FILE NO.: 10-02284	SEC.	TWP.	R.	COUNTY: ST. LUCIE	STATE: FLORIDA
		DRAWN BY: AR	CHECKED BY: PP	APPROVED BY: RLW	33	35	40		

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
PLANTING DETAIL SHEET 3

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DRAWING NO. 21 PLANTING DETAIL SHEET 3
SHEET: 21 OF 21

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PERMITTEE RESPONSIBLE OFFSITE MITIGATION AREA

Platt's Creek Compensatory Mitigation
USACE Application No.: TBD

I. INTRODUCTION

The St. Lucie County (County), together with the City of Port St. Lucie (City), is requesting authorization of a "Permittee Responsible Offsite Mitigation Area" (PROMA) program known as the Platt's Creek Compensatory Mitigation (PCCM). The PCCM is located in the North St. Lucie drainage basin. The permittee responsible for PCCM is the St. Lucie County, whose address is 2300 Virginia Avenue, Ft. Pierce, FL 34982, with the City of Port St. Lucie as a co-permittee, whose address is 121 SW Port St. Lucie Boulevard, Port St. Lucie, FL 34984. The PCCM permittee is responsible for ensuring the overall operation and management of the PROMA is in accordance with the terms of this mitigation plan and associated US Army Corps of Engineers (USACE) and South Florida Water Management District (SFWMD) authorization.

The County initiated the Platt's Creek Water Quality and Wetland Restoration Project which, when completed, would provide water quality treatment for a 1,000+ acre drainage basin, eliminate agricultural runoff from 102 acres of active citrus groves directly adjacent to the North Fork of the St. Lucie River (NFSLR), restore/create 80+ acres of wetlands and habitat directly adjacent to Platt's Creek and the NFSLR, eliminate approximately 100 acres of developable land directly adjacent to the NFSLR, and provide natural storage and water purifying functions along the river's floodplain. The County permitted the site as a mitigation bank through the SFWMD in April 2003 (permit no. 56-0003-M) and received a permit extension in July 2008 for an additional five years (expires in July 2013). The County submitted an application to the USACE, but a construction permit was never issued. The 19.6-acre stormwater pond was constructed and is currently functioning; however, the remainder of the Platt's Creek Initiative was unfunded and the County put the project on hold for an unspecified amount of time.

The City of Port St. Lucie and St. Lucie County have entered into a Memorandum of Agreement (MOA) to establish the PCCM as a permittee responsible mitigation site **(Attachment A)**. The City will use credits associated with approximately half of the site to be used towards the regulatory wetland mitigation for the Crosstown Parkway Extension should a build alternative be selected during the Environmental Impact Statement (EIS) process. The County will use the remaining credits towards future projects with unavoidable wetland impacts. Based upon discussions with the SFWMD and USACE, a permit modification to permit no. 56-00003-M with the SFWMD and a new permittee responsible permit with the USACE will create the appropriate instrument to allow the completion of the permitting, design, and construction of the PCCM and provide sufficient mitigation credits for the Crosstown Parkway Extension should a build alternative be selected.

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Platt's Creek Mitigation Site St. Lucie County City of Port St. Lucie 56-0003-M	**Aerial Map** Source: FGDL	**Figure 1** American

The PCCM includes 82.4 acres of fallow citrus grove and a 19.6 acre stormwater treatment facility. This parcel is adjoined by Platt's Creek, a natural tributary of the North Fork St. Lucie River (NFSLR) to the south, the NFSLR to the west, Sunrise Boulevard to the east and Raintree Forest residential development to the north (**Figure 1**). The project is located in Section 33, Township 35S, and Range 40E. The existing topography on the site ranges from 10' to 2.5' NGVD. According to historic aerial photographs and adjacent property community types, the historical natural communities on site included bottomland forest, freshwater marsh, hydric hammock, and pine flatwood.

The PCCM site had a direct connection or formed part of the NFSLR head waters. Historic vegetative cover and topographic information of the project area indicates that the historic hydrology was fed by runoff from the surrounding parcels that sheet-flowed toward the NFSLR floodplain prior to the construction of the existing drainage features. Beginning in the 1920's, dredging activities commenced within the NFSLR and the surrounding areas to provide drainage and flood control in the basin. After the construction of the drainage systems the hydrologic regime of the site was significantly altered. The site does not receive sheet flow from adjacent parcels and the majority of the water onsite comes from rain events and/or ground water seepage. The agriculture operation set up on site has lowered the groundwater table and altered the historic hydrologic condition and native plant communities on the site.

Currently, there is a 15.83 acre wet detention system on site. The system was designed to capture and treat the "first flush" of runoff from the Platt's Creek Watershed (approximately 1,100 acres). In addition, it was designed to provide additional water to the new mitigation area. Flow from the basin passes through an 84" culvert under Sunrise Blvd. The flow is then routed into a sump through a pump station and ultimately into the storm water detention system. The sump has walls at varying elevations that act as weirs to retain low flow events and allow for bypass for higher flows. The pump station has four axial flow pumps (two 18 cfs pumps and two 67 cfs pumps) with varying on-off elevations to react with the flow from the storm event.

The system is designed to operate as follows:

- Base Flow: The sump has a 72"x4" rectangular orifice at elevation 1.40' NGVD. This orifice conveys Platt Creek base flow to pass through the sump.
- Capture of First Flush: As the flow increases from the creek, the pumps will turn on in sequence. Pump 1 (18 cfs) turns on at elevation 1.70' and turns off at 0.50'; pump 2 (18 cfs) turns on at elevation 2.0' and off at 0.80'; pump 3 (67 cfs) turns on at 2.30' and off at 0.90' and pump 4 (67 cfs) turns on at 2.50' and off at 1.0'. All referenced elevations are datum NGVD 1929. The capacity of the four pumps is 170 cfs.
- Flow exceeding pumps: A weir at elevation 3.20' allows the excess flow to bypass the system and is discharged back to Creek.
- Extreme flows: Any storm greater than the 5-year event passes over a weir at elevation 4.0'. The bypass was designed so that the upstream or downstream flood impacts are unchanged.

As designed, the system captures the first 0.66 inches of runoff from a storm event. The pond has two discharges at an elevation of 6.1 and 6.2 which discharge into an adjacent swale and

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back into Platt's Creek downstream of the pump station. The required treatment volume is 59.0 acre-feet which is provided in the pond.

The proposed mitigation activities within the PCCM include a total of 47.87 acres of wetland creation. The specific habitat types to be created are the following: 13.54 acres of Hydric Hammock (FLUCCS 624), 23.10 acres of Depression Marsh (FLUCCS 641), and 12.70 acres of Floodplain Swamp (FLUCCS 615). In addition, two Mesic Flatwoods (FLUCCS 411) areas, totaling 13.65 acres, will be provided as a buffer between the mitigation site and the stormwater facility, development to the north and Sunrise Boulevard.

A ledger of available and secured (used) functional units will be kept by the County and will be submitted to the USACE and SFWMD in conjunction with annual monitoring reports for the PCCM. Once success is reached at PCCM, the County will continue to submit an updated ledger on an annual basis in accordance with the dates contained in the reporting schedule of the PCCM Mitigation Area Monitoring Plan.

Proposed habitat types are based on the Florida Natural Areas Inventory *Guide to the Natural Communities of Florida,* 2010 Edition and include Depression Marsh, Hydric Hammock, Floodplain Swamp and Mesic Flatwoods. As described in this document the Depression Marsh consists of a usually rounded depression in sand substrate with herbaceous vegetation. Characteristic species within depression marshes include, but are not limited to, longleaf threeawn, sand cordgrass, peelbark St. John's wort, maidencane, sawgrass, pickerlweek, and blue maidencane. Rare animal species include several amphibians, particularly those that require breeding sites that are free of predatory fishes including the gopher frog (*Rana capito*). More than a dozen other species of frogs and salamanders also breed regularly in depression marshes, and these constitute an important part of the food supply for wading birds and snakes, including the rare eastern indigo snake (*Drymarchon couperi*). Other rare species using this habitat include the Florida sandhill crane (*Grus canadensis pratensis*) and round-tailed muskrat (*Neofiber alleni*). Wading birds, in addition to feeding in depression marshes, use clumps of willows or other trees in the center for roosting or nesting. Additional uses by wildlife can be found in Section IX of this document.

Hydric Hammock is an evergreen hardwood and/or palm forest with a variable understory typically dominated by palms and ferns occurring on moist soils. While species composition varies, the community generally has a closed canopy of oaks and palms, an open understory, and a sparse to a moderate groundcover of grasses and ferns. Characteristic species within hydric hammocks include, but are not limited to, swamp laurel oak, live oak, cabbage palm, and red cedar. Species composition is mainly influenced by flooding patterns. Hydric hammock is inundated only for short periods following heavy rains. The normal hydroperiod is seldom over 60 days per year. Hydric hammock is important habitat and foraging grounds for an array of common wildlife species as well as rare animals including eastern indigo snake, limpkin (*Aramus guarauna*), short-tailed hawk (*Buteo brachyurus*), swallow-tailed kite (*Elanoides forficatus*), yellow-crowned night-heron (*Nyctanassa violacea)*, and black-crowned night-heron (*Nycticorax nycticorax)*. These hammocks also provide valuable habitat for game animals that rely on the large production of oak mast. Additional uses by wildlife can be found in Section IX of this document.

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Floodplain Swamp is a closed-canopy forest of hydrophytic trees occurring on frequently or permanently flooded hydric soils adjacent to stream and river channels and in depressions and oxbows within floodplains. Often, floodplain swamps immediately border the stream or river channel. Characteristic species within floodplain swamps include cypress and tupelo species. Though no cypress or tupelo is being proposed within the Platt's Creek site, other canopy trees often found in floodplain swamps include water hickory (*Carya aquatica*), overcup oak (*Quercus lyrata*), red maple (*Acer rubrum*), green ash (*Fraxinus pennsylvanica*), American elm (*Ulmus americana*), and swamp laurel oak (*Q. laurifolia).* A groundcover of flood tolerant ferns and herbs are found in some floodplain swamps, including lizard's tail (*Saururus cernuus),* savannah panicum (*Phanopyrum gymnocarpon*), and royal fern (*Osmunda regalis* var. *spectabilis*). Inundation is seasonal and usually prolonged. During dry summer months when evapotranspiration rates increase, surface water may be entirely lacking. Floodplain swamp communities provide important wildlife habitat, contribute to flood attenuation, and help protect the overall water quality of streams and rivers. Rare animals that may be found in floodplain swamp include American alligator (*Alligator mississippiensis,)* yellow-crowned night-heron (*Nyctanassa violacea)*, black-crowned night-heron (*Nycticorax nycticorax),* limpkin (*Aramus guarauna*), swallow-tailed kite (*Elanoides forficatus*), wood stork (*Mycteria americana*), and the big brown bat (*Eptesicus fuscus).* Additional uses by wildlife can be found in Section IX of this document.

Mesic flatwoods are characterized by an open canopy of tall pines and a dense, low ground layer of low shrubs, grasses, and forbs. Characteristic species within mesic flatwoods include, but are not limited to, slash pine, saw palmetto, gallberry, dwarf live oak, and wiregrass. The soils are alternately droughty during dry periods and saturated, or even inundated, after heavy rains. Mesic flatwoods are important habitat and foraging grounds for an array of common wildlife species as well as rare animals including the gopher frog, gopher tortoise (*Gopherus polyphemus*), Eastern diamondback rattlesnake (*Crotalus adamanteus*), Eastem indigo snake, Florida pine snake (*Pituophis melanoleucus mugitus*) Sherman's fox squirrel (*Sciurus niger shermani*). Additional uses by wildlife can be found in Section IX of this document.

Proposed Service Area

The proposed mitigation service area (MSA) for the PCCM consists of the North St. Lucie River Basin (**Figure 2**). The North St. Lucie River Basin is a large drainage basin and encompasses approximately 123,668.4 acres of land. The rationale for determining the proposed service area is presented later in this document. All wetlands within the Savannas Preserve State Park contained within the North St. Lucie River Basin are excluded from the MSA. The rationale for determining the proposed service area is presented later in this document.

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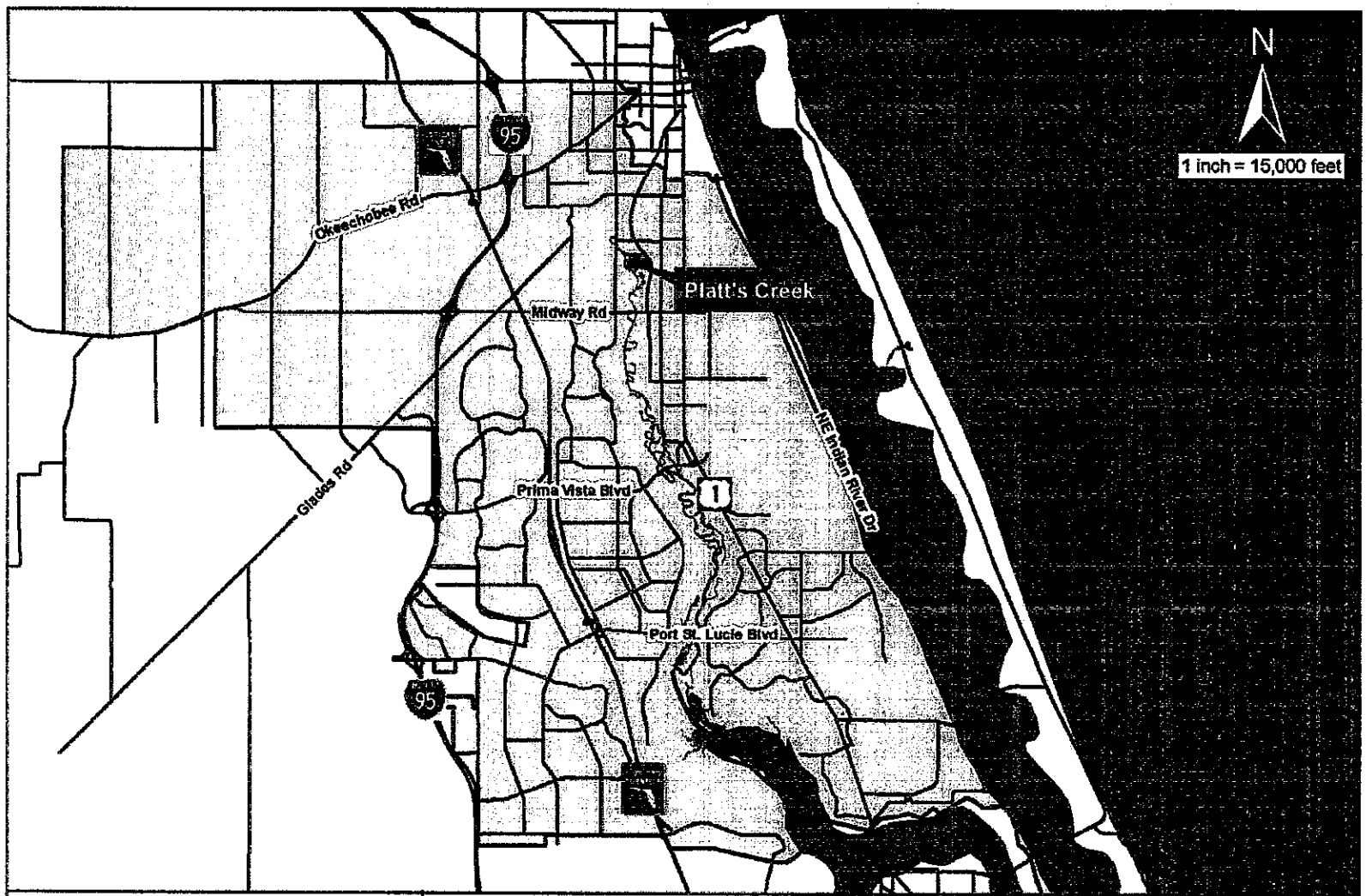

Platt's Creek Mitigation Site
St. Lucie County
City of Port St. Lucie
56-0003-M

Service Area Map

Source: FGDL

Figure 2

American

II. OBJECTIVES (1)

The purpose of the PCCM, as taken from the Federal Register Volume 73, No. 70, dated April 10, 2008, "Compensatory Mitigation for Losses of Aquatic Resources," is the establishment (creation) of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved. The overall goal of the PCCM is to improve the wildlife elements, vegetation, water quality, and hydrological conditions of the local watershed. This goal will be achieved by transforming a former citrus grove into a viable wetland system.

The objectives of the PCCM are as follows:

a) Provide compensatory mitigation for the Crosstown Parkway Extension Project and future improvement projects implemented by the County that impact freshwater wetlands by constructing the PCCM site to meet current and expected demands for credits within the service area. (See **Figure 2**).
b) Provide compensatory mitigation for impacts to foraging habitat for the endangered wood stork associated with the Crosstown Parkway Extension Project.
c) Minimize the temporal loss of wetlands within the service area by developing the PCCM in advance of mitigation needs.
d) Maintain a level of accountability such that mitigation obligations assumed by projects identified by St. Lucie County are met in a timely and effective manner.
e) Construct a watershed based restoration project that increases aquatic resource functions and services.
f) Improve water quality within the watershed and specifically within the NFSLR.

Wetland functions will be achieved through the restoration and creation of 49.34 acres of wetland habitat within former citrus groves while providing wildlife habitat and water quality benefits to the NFSLR.

The PCCM site had a direct connection or formed part of the NFSLR head waters. Historic vegetative cover and topographic information of the project area indicates that the historic hydrology was fed by runoff from the surrounding parcels that sheet-flowed toward the NFSLR floodplain prior to the construction of the existing drainage features. Beginning in the 1920's, dredging activities commenced within the NFSLR and the surrounding areas to provide drainage and flood control in the basin. After the construction of the drainage systems the hydrologic regime of the site was significantly altered. The site does not receive sheet flow from adjacent parcels and the majority of the water onsite comes from rain events and/or ground water seepage. The agriculture operation set up on site has lowered the groundwater table and altered the historic hydrologic condition and native plant communities on the site.

The creation of the following: 13.54 acres of Hydric Hammock (FLUCCS 624), 23.10 acres of Depression Marsh (FLUCCS 641), and 12.70 acres of Floodplain Swamp (FLUCCS 615) will help to reverse the historic trend of wetland habitat loss, reestablish wildlife habitat, and partially offset the effects of current and future transportation improvements that will occur within the North St. Lucie River Basin. In addition, a large mesic flatwoods area will be provided as a buffer between the mitigation site and adjacent development further improving the location and landscape support.

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III. PROJECT SITE SELECTION (2)

The PCCM service area is proposed to include the entire North St. Lucie River Basin, with the exception of any wetlands within the Savannas Preserve State Park contained within the North St. Lucie River Basin. These wetlands are excluded from the MSA. The site was selected based on objective criteria set forth in the SFWMD site selection paramaters and federal guidelines for siting mitigation banks, as this was originally permitted as a mitigation bank. The site was evaluated based on criteria including:

- Location in a service area where the wetland impacts justify the demands for a mitigation area.
- Offers opportunities to restore the site to its historical functional condition through exotic removal, hydroperiod restoration, and re-vegetation.
- Proximity to high value habitats and significant protected areas, such as the NFSLR and Savannas Preserve State Park.
- Restores viable and sustainable ecological and hydrological functions within the proposed MSA.
- Ability to improve wildlife habitat and contribute to use by endangered and threatened species.

The PCCM was chosen for it's ability to complement ongoing natural resource programs targeting the protection, restoration, and enhancement of water quality and wildlife habitats within the St. Lucie River and the Indian River Lagoon (IRL) Systems. The PCCM would be utilized to off-set wetland impacts in an area that is regionally significant and establishes high quality, uninterrupted habitat linking other natural preserves along the NFSLR, an Outstanding Florida Water (OFW). The mitigation proposal furthers existing natural resource plans through the restoration of wetland communities and long term public management of lands bordering two natural water bodies, the NFSLR and Platt's Creek.

Benefits of using the PCCM include:

- Re-establishment of wetland and upland habitat diversity directly adjacent to the NFSLR and Platt's Creek;
- Provision of wetland habitat coverage for threatened, endangered, or species of special concern;
- Establishment of feeding, breeding and nursery habitat for fish;
- Hydroperiod restoration and re-vegetation of the NFSLR floodplain;
- Restoration of natural storage and water purifying functions of the NFSLR floodplain;
- Furtherance of the overall objectives for water management in the watershed region;
- Closure of a gap in the NFSLR greenway;
- Long term public management of a restored natural area in the ecoregion/service area of the mitigation project.

Restoration of the historical natural communities along the upper reaches of the NFSLR will assist in improving the water quality of the St. Lucie Estuary (SLE) and IRL, enhance the fisheries habitat and provide an ecologically beneficial area to off-set unavoidable wetland impacts within the service area. Without the implementation of the proposed restoration plan, the

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watersheds will not benefit from the improved water quality and enhanced wetland functions this project will provide. Additionally, the waters will continue to be diverted from the floodplain and the site could potentially become urban development in the future.

Implementation of the proposed project will potentially further goals associated with the IRL Surface Water Improvement and Management (SWIM) Plan, St. Lucie County Comprehensive Plan, the IRL Comprehensive Management Plan, and the USACE Central and South Florida Study by eliminating agriculture runoff, attenuating flow, restoring wetland and upland habitat, and restoring natural storage and water purifying functions along the river's floodplain. The proposed restoration of the PCCM plays an integral part in enhancing the ecological value of the NFSLR corridor and provides mitigation that off-sets unavoidable wetland impacts in a manner that provides true ecological benefits to the region.

The PCCM site location shares various resources with the proposed Crosstown Parkway Extension Project and is in the same Hydrologic Unit Code (HUC) (North St. Lucie , HUC – 03090202) as the Crosstown Parkway Extension. The proposed Crosstown Parkway Extension crosses the NFSLR, which is directly connected to the PCCM.

The project site is located adjacent to the NFSLR and Savannas Preserve State Park and less than one mile north of the NFSLR Aquatic Preserve. The project will create habitat that supports and attracts numerous wildlife guilds that currently exist within the Aquatic Preserve. A historical bird rookery exists in the Aquatic Preserve and over fifty species of birds have been documented on the preserve, including migratory, wading and songbirds. The created forested wetlands (Hydric Hammock and Floodplain Swamp) will establish approximately 26.24 additional acres which will provide habitat for the following listed species that occupy the Aquatic Preserve located less than one mile away:

- Southeastern American kestrel (*Falco sparverius paulus*)
- Bald eagle (*Haliaeetus leucocephalus*)
- Osprey (*Pandion haliaetus*)
- Wood stork (*Mycteria americana*)
- American alligator (*Alligator mississippiensis*)
- Eastern indigo snake (*Drymarchon corais couperi*)

The created Depression Marsh system will provide approximately 23.10 additional acres of habitat support for the following listed species that occupy the Aquatic Preserve:

- Florida sandhill crane (*Grus canadensis pratensis*)
- Limpkin (*Aramus guarauna*)
- Little blue heron (*Egretta caerulea*)
- Roseate spoonbill (*Ajaia ajaja*)
- Snail kite (*Rostrhamus sociabilis plumbeus*)
- Snowy egret (*Egretta thula*)
- Tricolored Heron (*Egretta tricolor*)
- White ibis (*Eudocimus albus*)
- Wood stork (*Mycteria americana*)
- American alligator (*Alligator mississippiensis*)

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The location of the PCCM, directly adjacent to the NFSLR, provides an opportunity to restore, preserve and manage a significant portion of the area's ecosystem. The proposed mitigation activities will restore the wetland functions of this parcel by recreating the natural wetland communities that historically existed and that have been eliminated as a result of the past agricultural activities onsite. The connection to the NFSLR will provide additional feeding, breeding and nursery habitat to a number of aquatic species. Also, the restoration of this parcel to native wetland communities will provide benefits to the receiving waters of the NFSLR by the elimination of any potential future agricultural runoff from citrus grove operations, restoration of the hydroperiod and re-vegetation of the floodplain habitat of the NFSLR. It will also result in the restoration of the natural storage and water purifying functions of the NFSLR floodplain.

IV. SITE PROTECTION INSTRUMENT(3)

Please see attached Warranty Deed, Deed of Conservation Easement and Memorandum of Agreement (MOA) between St. Lucie County and the City of Port St. Lucie (**Attachment B**). Attachment C contains the financial responsibility agreement of the County to demonstrate perpetual management financial assurance. The conservation easement includes the implementation of public access to the site for bird watching, hiking and other passive recreation at some time in the future.

V. BASELINE INFORMATION (4)

The PCCM includes 82.4 acres of fallow citrus grove and a 19.6-acre stormwater treatment facility. This parcel is adjoined by Platt's Creek, a natural tributary of the North Fork St. Lucie River (NFSLR) to the south, the NFSLR to the west, Sunrise Boulevard to the east and Raintree Forest residential development to the north. No wetlands exist on site though there is a lined pond system on site that will be removed. In addition, two man-made canals are located onsite running north to south. According to historic aerial photographs and adjacent property community types, the historical natural communities on site included mesic flatwood forests, wetland mixed forests, and depression marshes. The PCCM exists as uplands with a land use designation as citrus (FLUCCS 221). Currently the site is largely made up of Brazilian pepper (*Schinus terebinthifolius*) with only a few citrus trees remaining.

The soil mapping units found on the site are the following: Wabasso sand (48), Akona sand (2), Susana sand (43), Riviera fine sand (38), and Arents 0 to 5% slopes (4). All the soils onsite exhibit hydric soil characteristics and are, or have inclusions of, hydric soils. The existing topography of the site ranges from 10' to 2.5'.

The PCCM site had a direct connection or formed part of the NFSLR head waters. Historic vegetative cover and topographic information of the project area indicates that the historic hydrology was fed by runoff from the surrounding parcels that sheet-flowed toward the NFSLR floodplain prior to the construction of the existing drainage features. Beginning in the 1920's, dredging activities commenced within the NFSLR and the surrounding areas to provide drainage and flood control in the basin. Straightening of the river channel resulted in cutting off oxbows from the main channel and producing spoil banks along the edges of the dredged area. The artificially high banks prohibit the natural inundation of the floodplain and many areas have been colonized by invasive/exotic species, particularly Brazilian pepper. After the construction of the drainage systems, the hydrologic regime of the site was significantly altered. The site does not

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receive sheet flow from adjacent parcels, and the majority of the water onsite comes from rain events and/or ground water seepage. The agriculture operation set up on site has lowered the groundwater table and altered the historic hydrologic condition and native plant communities on the site.

The stormwater facility onsite was designed to capture the first 0.66 inches of runoff from a storm event. The pond has two discharges at an elevation of 6.1' and 6.2' NGVD which discharge into an adjacent swale and back into Platt's Creek downstream of the pump station. The required treatment volume is 59.0 acre-feet which is provided in the pond.

VI. DETERMINATION OF FUNCTIONAL GAIN UNTIS (5)

The City of Port St. Lucie and St. Lucie County have entered into a MOA to establish the PCCM as a permittee responsible mitigation site. The City will use functional gain units associated with approximately half of the site to be used towards the regulatory wetland mitigation for the Crosstown Parkway Extension should a build alternative be selected during the EIS process. The County will use the remaining units towards future projects with unavoidable wetland impacts.

The proposed mitigation activities within the PCCM include a total of 49.34 acres of wetland creation. The specific habitat types to be created are the following: 13.54 acres of Hydric Hammock (FLUCCS 624), 23.10 acres of Depression Marsh (FLUCCS 641), and 12.70 acres of Floodplain Swamp (FLUCCS 615). In addition, two flatwoods areas, totaling 13.65 acres, will be provided as a buffer between the mitigation site and the stormwater facility, development to the north and Sunrise Boulevard.

For the original permit for the site as a mitigation bank, the Wetland Rapid Assessment Procedure (WRAP) (SFWMD Technical Publication REG-001, 2nd Edition, April 1999) was utilized as the functional assessment tool to evaluate the existing and anticipated conditions of the wetland areas. It was determined that the site would generate 69.51 credits. These 69.51 credits would offset 34.75 WRAP units of impact. The functional value, time lag and risk assessments can be viewed as part of the original permit application (56-00003-M).

This permit modification to the SFWMD permit and USACE permit application, will modify the application from a mitigation bank to a PROMA and will convert the functional gain units associated with the PCCM to the Uniform Mitigation Assessment Method (UMAM, Chapter 62-345, Florida Administrative Code).

Based on a meeting held on January 10, 2012 with the USACE, SFWMD, and NMFS, below is a description of the UMAM scores. A separate analysis was done for the USACE and the SFWMD to account for the differences in time lag between the two agencies.

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USACE DETERMINATION OF FUNCTIONAL GAIN UNITS

Depression Marsh

The UMAM analysis included a perpetual Risk factor of 1.25 (low risk) and a Time lag of 3 years (1.0341). A score of 9 was given for all three categories of wetland function: location and landscape support, water environment, and community structure. Rationale for this scoring is provided below with additional information shown in the Success Criteria section discussed later in this document.

The rationale behind the score of 9 for location and landscape support includes the following:

- Assessment area bordered by floodplain swamp and hydric hammock.
- Site will enhance the NFSLR to west, Platt's Creek and SFWMD wetland property to the south, and aquatic preserve to the south.
- Wildlife access to and from the site has minimal limitations based on location adjacent to NFSLR and Platt's Creek. Also, natural wetland habitat associated with the river located to the south.
- Land uses outside the assessment area have minimal adverse impacts on fish and wildlife
- Downstream or other hydrologically connected habitats are critically or solely dependent on discharges from the assessment area and could suffer severe adverse impacts if the quality or quantity of these discharges were altered.

The rationale behind the score of 9 for water environment includes:

- Predicted water levels and flows will provide appropriate hydrologic function.
- Site will be hydrated through the pond discharge, and the NFSLR.
- The water depth will be maintained at 18 inches. The maximum elevation the water will reach in the depression marsh will be 4.0' before being discharged into the floodplain swamp via v-notched weirs.
- The bottom of each system will be over excavated by six inches and backfilled with improved soil up to an elevation of six inches above the SHWE so in times of a drought, the improved soil will retain more moisture to assist in species survival.
- The proposed site will have a minimum of 180 days of soils saturation.
- Soil erosion measures will be implemented.
- Vegetation will be monitored to ensure it shows no signs of hydrologic stress. Corrective measures will be implemented if required including planting additional trees and watering.
- Plant community composition will be monitored and maintained to ensure 80% or greater total groundcover strata made up of facultative wet and obligate wetland species at five years.

The rationale behind the score of 9 for community structure includes the following:

- Mitigation site will be maintained free of exotics and contain less than 10% nuisance species.
- Species to be planted are appropriate and desirable species for the community type.
- Land management practices are optimal for long term viability of the plant community.
- Plant community composition will be monitored and maintained to ensure 80% or greater total groundcover strata made up of facultative wet and obligate wetland species at five years.

Hydric Hammock

The UMAM analysis included a Risk factor of 2 (moderate risk) and a Time lag of 20 years (1.3654). A score of 8 was given for location and landscape support and water environment. A score of 7 was given to community structure. Rationale for this scoring is provided below with additional information shown in the Success Criteria section discussed later in this document.

The rationale behind the score of 8 for location and landscape support includes the following:

- Assessment area surrounded by depression marsh to the west.
- A buffer of pine flatwoods will be provided on the eastern portion of the site separating the mitigation area from the stormwater pond, onsite facilities, and Sunrise Boulevard.
- Site will enhance the NFSLR to west, Platt's Creek and SFWMD wetland property to the south, and aquatic preserve to the south.
- Wildlife access to and from the site has minimal limitations based on location adjacent to NFSLR and Platt's Creek. Also, natural wetland habitat associated with the river located to the south.
- Land uses outside the assessment area have minimal adverse impacts on fish and wildlife
- Downstream or other hydrologically connected habitats are critically or solely dependent on discharges from the assessment area and could suffer severe adverse impacts if the quality or quantity of these discharges were altered.
- The proposed uplands are located to provide optimal protection of wetland functions.

The rationale behind the score of 8 for water environment includes:

- Predicted water levels and flows will provide appropriate hydrologic function.
- Site will be hydrated through the pond discharge, and the NFSLR.
- The elevation within the hydric hammock varies between 3.5 and 4.6 feet. The seasonal high water elevation is set at 4.10 feet NGVD.
- The proposed site will have a minimum of 60 days of soils saturation.
- The bottom of each system will be over excavated by six inches and backfilled with improved soil up to an elevation of six inches above the SHWE so in times of a drought, the improved soil will retain more moisture to assist in species survival.
- Soil erosion measures will be implemented.
- Vegetation will be monitored to ensure it shows no signs of hydrologic stress. Corrective measures will be implemented if required including planting additional trees and watering.

The rationale behind the score of 7 for community structure includes the following:

- Mitigation site will be maintained to be free of exotics and contain less than 10% nuisance species.
- Species to be planted are appropriate and desirable species for the community types.
- Land management practices are optimal for long term viability of the plant community.
- Plant community composition will be monitored and maintained to ensure 90% survival of trees, and 50% total coverage of vegetation considered facultative wet or obligate at five years for forested systems.
- Upland buffer will also provide habitat and life history support for numerous wildlife species in the wetlands.

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Floodplain Swamp

The UMAM analysis included a Risk factor of 2 (moderate risk) and a Time lag of 20 years (1.3654). A score of 9 was given for location and landscape support and water environment. A score of 8 was given to community structure. Rationale for this scoring is provided below with additional information shown in the Success Criteria section discussed later in this document.

The rationale behind the score of 9 for location and landscape support includes the following:

- Assessment area directly adjacent to the NFSLR to west and depression marsh to the east.
- A neighborhood exists to the north and is separated by a fence though only a small portion of the assessment area is adjacent to this neighborhood.
- Site will enhance the NFSLR to west, Platt's Creek and SFWMD wetland property to the south, and aquatic preserve to the south.
- Wildlife access to and from the site has minimal limitations based on location adjacent to NFSLR and Platt's Creek. Also, natural wetland habitat associated with the river located to the south.
- Land uses outside the assessment area have minimal adverse impacts on fish and wildlife
- Downstream or other hydrologically connected habitats are critically or solely dependent on discharges from the assessment area and could suffer severe adverse impacts if the quality or quantity of these discharges were altered.
- The proposed uplands are located to provide optimal protection of wetland functions.

The rationale behind the score of 9 for water environment includes:

- Predicted water levels and flows will provide appropriate hydrologic function.
- Site will be hydrated through NFSLR and pond discharge.
- The assessment area will be graded to an elevation to provide a direct connection to the NFSLR and will contain a tidal influence.
- The highest bottom elevation in the floodplain swamp has been set at 1.90 NGVD.
- The proposed creek through the system is approximately 10' wide with a bottom elevation of -0.40 feet NGVD.
- The bottom of each system will be over excavated by six inches and backfilled with improved soil up to an elevation of six inches above the SHWE so in times of a drought, the improved soil will retain more moisture to assist in species survival.
- The proposed site will have a minimum of 100 days of soils saturation.
- Soil erosion measures will be implemented.
- Vegetation will be monitored to ensure it shows no signs of hydrologic stress. Corrective measures will be implemented if required including planting additional trees and watering.

The rationale behind the score of 8 for community structure includes the following:

- Mitigation site will be maintained to be free of exotics and contain less than 10% nuisance species.
- Species to be planted are appropriate and desirable species for the community types.
- Land management practices are optimal for long term viability of the plant community.
- Plant community composition will be monitored and maintained to ensure 90% survival of trees, and 50% total coverage of vegetation considered facultative wet or obligate at five years for forested systems.

UMAM Scoring – USACE

The UMAM relative functional gain determination calculations are as follows:

Δ = change in ecological condition (with mitigation improvements UMAM score minus existing conditions UMAM score)

(Δ/(Time Lag * Risk Factor)) = Relative Functional Gain (RFG)

RFG * Acres = Functional Gain (FG)

23.10 acres x ((0.90/(1.0341*1.25)) = 16.17 for Depression Marsh
13.54 acres x ((0.77/(1.3654*2.00)) = 3.79 for Hydric Hammock
12.70 acres x ((0.87/(1.3654*2.00)) = 4.06 for Floodplain Swamp

Therefore, the total potential UMAM mitigation functional gain units available at the PCCM were determined to be 24.02. The UMAM sheets are found in **Attachment D**.

SFWMD DETERMINATION OF FUNCTIONAL GAIN UNITS

Depression Marsh

The UMAM analysis included a perpetual Risk factor of 1.25 (low risk) and a Time lag of 3 years (1.07). A score of 9 was given for all three categories of wetland function: location and landscape support, water environment, and community structure. Rationale for this scoring is provided above under the discussion for the USACE determination with additional information shown in the Success Criteria section discussed later in this document.

Hydric Hammock

The UMAM analysis included a Risk factor of 2 (moderate risk) and a Time lag of 11-15 years (1.46). A score of 8 was given for location and landscape support and water environment. A score of 7 was given to community structure. Rationale for this scoring is provided above under the discussion for the USACE determination with additional information shown in the Success Criteria section discussed later in this document.

Floodplain Swamp

The UMAM analysis included a Risk factor of 2 (moderate risk) and a Time lag of 20 years (1.68). A score of 9 was given for location and landscape support and water environment. A score of 8 was given to community structure. Rationale for this scoring is provided above under the discussion for the USACE determination with additional information shown in the Success Criteria section discussed later in this document.

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UMAM Scoring – SFWMD

The UMAM relative functional gain determination calculations are as follows:

Δ = change in ecological condition (with mitigation improvements UMAM score minus existing conditions UMAM score)

(Δ/(Time Lag * Risk Factor)) = Relative Functional Gain (RFG)

RFG * Acres = Functional Gain (FG)

23.10 acres x ((0.90/(1.07*1.25)) = 15.48 for Depression Marsh
13.54 acres x ((0.77/(1.46*2.00)) = 3.52 for Hydric Hammock
12.70 acres x ((0.87/(1.68*2.00)) = 3.30 for Floodplain Swamp

Therefore, the total potential UMAM mitigation functional gain units for the SFWMD available at the PCCM were determined to be 22.30. The UMAM sheets are found in **Attachment E.**

Functional gain units available at the PCCM will be solely used for compensation for the Crosstown Parkway Extension Project and future projects indentified by the County and will not be available for purchase by private entities. These units could only be used if the SFWMD and USACE have determined the use of PCCM to be appropriate and the proposed impact site is located within the approved geographic service area of the PCCM.

The official ledger of available functional gain units will be maintained by both the USACE and SFWMD. Each permit application that proposes to use the PCCM would contain an up-to-date account of the units available, units used, and the number of units proposed to offset the project impacts. With the issuance of a SFWMD Environmental Resource Permit and Department of the Army permit authorizing wetland fill or dredge impacts and the use of the PCCM for mitigation, USACE and SFWMD would verify all changes to the credit balance.

The Ledger will contain the following information:

- ERP and Section 404 Dredge & Fill Permit numbers
- Name of project
- Date issued
- County/City Project Number
- Project location
- Amount of authorized impacts
- Amount of required compensatory mitigation
- Number of functional gain units applied toward project
- Remaining functional gain units for each habitat type

No additional mitigation values, in addition to, or above the previously identified UMAM units are available within the PCCM. Should any phase of construction of the project not be completed by the City, the City, County, SFWMD and USACE will re-evaluate the UMAM analyses, and functional gain units from the site.

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For the Crosstown Parkway Extension project, below is a summary of the impacts associated with the project. Note that impacts to mangroves (FLUCCS 612) are being mitigated through credits at the Bear Point Mitigation Bank.

Direct Impacts – Crosstown Parkway Extension Project, Alternative 1C			
Assessment Area	**FLUCCS**	**Impact Acreage**	**Functional Loss**
AA2	6417	5.02	4.52
AA3	615	0.78	0.62
AA6	641	0.46	0.34
AA10	617	4.14	3.45
Total		10.58	**9.08**

Secondary Impacts – Crosstown Parkway Extension Project, Alternative 1C				
Assessment Area	**FLUCCS**	**Distance**	**Impact Acreage**	**Functional Loss**
AA2	6417	0-50'	3.21	0.64
AA2	6417	51-520'	9.51	0.63
AA3	615	0-50'	0.53	0.11
AA3	615	51-520'	1.92	0.06
AA4	615	0-50'	0.09	0.02
AA4	615	51-520'	1.86	0.06
AA6	641	0-50'	0.06	0.01
AA6	641	51-520'	0.00	0.00
AA10	617	0-50'	2.48	0.50
AA10	617	51-520'	8.82	0.29
Total			29.76	**2.38**

Total Impacts - Crosstown Parkway Extension Project – Alternative 1C				
Wetland Type	FLUCCS	Direct Impact Acreage	Secondary Impact Acreage	Functional Loss
Floodplain Forest	615	0.78	4.4	0.87
Freshwater Marsh	641	5.48	12.78	6.14
Hydric Flatwood	625	0	0	0
Hydric Hammock	617	4.14	11.3	4.24
Total				**11.25**

Functional gain units from the PCCM will be released for use upon the successful completion of construction. The as-built plans must be submitted, reviewed for compliance, and accepted in writing by the SFWMD and USACE prior to releasing the credits. The SFWMD and USACE will be notified two weeks prior to commencement of construction, and as elements of construction are completed. The City will notify the SFWMD and USACE within 30 days in writing and provide appropriate documentation when construction, planting, and baseline monitoring are complete. The SFWMD and USACE may conduct verifying site visits at any

time, although 24 hour notice shall be provided to St. Lucie County to ensure access. As-built drawings and a statement of certification will be provided to the SFWMD and USACE within 60 days of completion of construction activities. These drawings will be signed and sealed by a professional engineer registered in the State of Florida.

VII. MITIGATION WORK PLAN (6)

Geographic boundaries

The PCCM consists of 82.4 acres of former citrus grove located within the St. Lucie River Watershed. The PCCM is located within the unicorporated limits of St. Lucie County approximately 3 miles south of the City of Ft. Pierce, on the west side of Sunrise Boulevard along the waters of the NFSLR (**Figure 2**). Platt's Creek, a natural tributary of the NFSLR, forms the site's southern boundary. The Savannas Preserve State Park is also located to the south of the PCCM. A single family subdivision is adjacent to the northern boundary line, and a 6-acre Audubon Society preserve is located to the northwest. Access to the site is from the east via Sunrise Boulevard.

Construction Methods

See Platt's Creek Compensatory Mitigation Technical Specifications

Methods for Establishing Desired Plant Species

See Construction Plans

Grading Plans

See Construction Plans

Soil Management and Erosion Control Measures

See Construction Plans

Source of water

The new mitigation area will consist of the following: 13.54 acres of Hydric Hammock; 23.10 acres of Depression Marsh and 12.70 acres of Floodplain Swamp, as well as a 13.65 mesic flatwoods buffer. A geotechnical analysis was conducted for the site and provided to American in a report dated March 17, 2011. There were several hand bores done to determine the soil strata and the elevation of the ground water. The seasonal high water table was also determined to have a range of 3-4 feet below existing grade. Also, five monitoring wells were installed adjacent to the stormwater pond. Based on the information from the monitoring wells, the geotechnical report, the control elevation of the pond and the mean high water elevation (MHWE) of the NFSLR, a seasonal high water elevation (SHWE) was assigned to each area. Adjacent to the NFSLR, the SHWE was set at the elevation of the mean high tide elevation (1.40 feet NGVD), the elevation was set at 3.00 feet NGVD in the Depression Marsh, 4.10 in the Hydric Hammock and 5.51 in the perimeter flatwoods.

The discharge from the existing pond will be used to hydrate the mitigation area; however, the mitigation area will not depend on the pond discharge for hydration. When the pond discharges, the discharge will be conveyed through the mesic flatwoods and hydric hammock via overland flow. Then, it will reach a berm and discharge into the depression marsh. Once the depression

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marsh reaches the designated discharge elevation of 3.5, it will discharge into the floodplain swamp. The floodplain swamp is directly connected to the NFSLR as shown on the plans.

The bottom of each system will be over excavated by six inches and backfilled with improved soil up to an elevation of six inches above the SHWE so in times of a drought, the improved soil will retain more moisture to assist in species survival. The bottom of each system will be a maximum of six inches above the seasonal high water table in each area. The highest bottom elevation in the floodplain swamp has been set at 1.90 NGVD; the elevation of the bottom of the depression marsh is 2.00 NGVD; and the elevation of the hydric hammock will vary from 3.5-4.6. The maximum elevation the water will reach in the depression marsh will be 4.5' before being discharged into the floodplain swamp via v-notched weirs.

The Floodplain Swamp will be directly connected to the NFSLR with a man made creek approximately 10' wide with a bottom elevation of -0.40' NGVD. Since the NFSLR is tidally influenced at this location, the canal will allow the river to flood the floodplain swamp at high tides and drain the floodplain swamp during low tide.

Plans to control invasives

Exotic and nuisance plant species will be controlled by physical and chemical means. Exotic plant maintenance will be performed by the permittee on a semiannual basis, and as needed, depending on conditions. Wetland and upland areas will be maintained free of listed exotic vegetation, as defined by the Exotic Pest Plant council. Nuisance vegetation will not exceed ten percent (10%) of the total vegetative coverage in any of the preserve areas after each maintenance activity and nuisance vegetation cannot exceed ten percent (10%) of coverage in any area of the mitigation site between maintenance activities. Bahia grass will be allowed within hydroseeded areas as shown on the plans to provide erosion control on the proposed berms.

VIII. MAINTENANCE PLAN (7)

The County proposes to monitor the success of the targeted community types with vegetative transects and monitoring stations. The parameters to be monitored include; desirable vegetative composition, desirable vegetative density, percent (%) of coverage of desired plant species, exotic and/or nuisance plant coverage, tree growth, wildlife utilization, fish and macroinvertebrate utilization, and performance of the hydrologic regime.

In order to measure and document the vegetative composition, ground cover, and tree growth within the PCCM, the County proposes to establish three (3) monitoring transects within the site. A vegetative sample quadrant (with a size of 10 meters x 10 meters) will be established every two hundred (200) feet. Each of the proposed transects will have a 4"x4"x24" concrete monument (hereon, monument), designed to indicate the transect's commencement point. Each monument will contain a metal plate that indicates the transect number, compass bearing, and date. All monuments will be located using a Global Positioning System (GPS) and its latitude and longitude location coordinates recorded. A panoramic photo station will be located at all monument locations. The proposed panoramic photo documentary of the mitigation areas will consist of panoramic photos (photographic capture zone will consist of no less than one hundred eighty (180) degrees of view). Each photo will contain a scaling pole designed to measure vegetative growth, and the photos will be included in the semiannual monitoring reports. The

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applicant will conduct semiannual vegetation surveys of each of the transects during the five (5) year monitoring program. The results will be included in the semiannual monitoring reports and will be utilized to ensure the success criteria of the site are met.

As described above, exotic and nuisance plant species will be controlled by physical and chemical means. Exotic plant maintenance will be performed by the permittee on a semiannual basis, and as needed, depending on conditions. Wetland and upland areas will be maintained free of listed exotic vegetation, as defined by the Exotic Pest Plant council. Nuisance vegetation will not exceed ten percent (10%) of the total vegetative coverage in any of the preserve areas after each maintenance activity and nuisance vegetation cannot exceed ten percent (10%) of coverage in any area of the mitigation site between maintenance activities. Bahia grass will be allowed within hydroseeded areas as shown on the plans to provide erosion control on the proposed berms.

The wildlife utilization will be recorded via qualitative and quantitative measurements of wildlife species utilization of the mitigation areas. These measurements will be executed during the sampling iterations and will consist of the identification of observed wildlife and observed wildlife utilization (roosting, feeding, foraging, nesting and/or occasional transitory use). To perform the qualitative analysis of macroinvertebrates and aquatic wildlife species, such as fish, the applicant intends to use dip-nets, cast nets, and seines. The results of the wildlife utilization monitoring results will be included in the semiannual monitoring reports and will be utilized to ensure the success criteria of the site are met. The macroinvertebrate data will also be used to measure the success of the site in terms of hydrology.

To document the hydrologic iterations the applicant has placed data loggers within all of the proposed habitat areas. The data loggers location have been surveyed and the elevation referenced to NGVD. A rain data logger programmed to record rain events on a daily basis and equipped with a self-emptying collector bucket has also been installed within the premises. Documentation of the hydrologic information will be summarized graphically and included in the semiannual reports. Upon the completion of the five-year post-construction monitoring requirements, the project will revert to long-term site maintenance in perpetuity. The location of the data loggers can be found in the construction plans. The results will be included in the semiannual monitoring reports and will be utilized to ensure the success criteria of the site are met.

Hydrologic conditions will also be determined through the transects described above. Data will be acquired regarding plant health and hydrologic indicators per the *The Florida Wetlands Delineation Manual*. This data will also be included in the semiannual monitoring reports.

Long-Term Management:
Long-Term management of the PCCM includes the semiannual maintenance control of exotic and/or nuisance plant species. Wetland and upland areas will be maintained free of listed exotic vegetation, as defined by the Exotic Pest Plant council. Bahia grass will be allowed on the upland berms. Nuisance vegetation will not exceed ten percent (10%) of the total vegetative coverage in any of the preserve areas after each maintenance activity and nuisance vegetation cannot exceed ten percent (10%) of coverage in any area of the mitigation site between maintenance activities. Brazilian pepper, melaleuca (*Melaleuca quinquenervia*), and Australian pine (*Casuarina equisetifolia*) will be treated with an approved herbicide. The trees will be basal treated and

allowed to die in-place, or cut, stumped and removed from site. Other exotic and nuisance species will be treated with an approved herbicide (ie. rodeo) or pulled by hand. Exotic maintenance will be performed by the County on a semiannual basis, depending on the existing conditions.

St. Lucie County Board of County Commissioners is the entity responsible for the perpetual management of the mitigation areas.

IX. PERFORMANCE STANDARDS (8)

Success Criteria:

1. Wildlife Utilization:

A qualitative wildlife (birds, mammals, amphibians, and reptiles) utilization evaluation will be conducted during each monitoring iteration. Currently, the project site provides for minimal wildlife utilization since the site is an abandoned citrus grove that has been heavily encroached by Brazilian pepper. The mitigation and establishment of native vegetative communities is expected to provide support for various wildlife species that typically inhabit the NFSLR Preserve, including listed species and species of special concern. The observation, during monitoring transects, of an increase in the representation of species guilds associated with wetlands, as suggested and listed in the 'WRAP Addendum for Mitigation Banks,' will deem this parameter a success. The PCCM will also be used to offset impacts to the woodstork associated with the Crosstown Parkway Extension project. See attached Woodstork Biomass Analysis in **Attachment F**. Some of the anticipated listed wildlife species, species of special concern, and other wildlife species are listed below.

Common Name	Scientific Name	Federal/State Listing	On-Site Habitat
Tri-colored heron	Egretta tricolor	N / SSC	Depression Marsh
White ibis	Eudocimus albus	N / SSC	Depression Marsh
Woodstork	Mycteria Americana	E / E	Floodplain Swamp and Depression Marsh
Little blue heron	Egretta caerules	N / SSC	Depression Marsh
Sandhill crane	Grus canadenisis pratensis	N / T	Depression Marsh
Osprey	Pandion Haliaetus	N / SSC	Floodplain Swamp
Bald eagle	Hallaeetus leucocephalus	T / T	Floodplain Swamp and Hydric Hammock
Eastern indigo snake	Drymarchon corais couperi	T / T	Mesic Flatwoods
Pileated Woodpecker	Dryocopus pileatus	Not listed	Mesic Flatwoods and Floodplain Swamp
Sherman's fox squirrel	Sciurus niger chermani	N / SSC	Mesic Flatwoods and Floodplain Swamp
Green anole	Anolis carolinensis	Not listed	Mesic Flatwoods and Hammock
Green tree frog	Hyla gratiosa	Not listed	Mesic Flatwoods
Cotton mouse	Peromyscus	Not listed	Mesic Flatwoods

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Common Name	Scientific Name	Federal/State Listing	On-Site Habitat
	gossypinus		
Raccoon	Procyon lotor	Not listed	Mesic Flatwoods and Floodplain Swamp
Warblers	Dendroica spp.	Not listed	Hydric Hammock
Flycatchers	Family tyrannidae	Not listed	Hydric Hammock
Gray squirrel	Sciurus carolinensis	Not listed	Hydric Hammock
Southern leopard frog	Rana utricularia	Not listed	Floodplain Swamp and Depression Marsh
Barred owl	Strix varia	Not listed	Floodplain Swamp
Salamander	Eurycea spp.	Not listed	Floodplain Swamp
Tree frog	Hyla spp.	Not listed	Mesic Flatwoods
Black racer	Coluber constrictor	Not listed	Mesic Flatwoods
Bobcat	Lynx rufus	Not listed	Mesic Flatwoods
Water snakes	Nerodia spp.	Not listed	Depression Marsh
Black-crowned night heron	Nycticorax nycticorax	Not listed	Depression Marsh
Yellow-crowned night heron	Nycticorax violaceus	Not listed	Depression Marsh

In addition, there are sixty-seven (67) known species of animals located in the North Fork State Buffer Preserve located north and south of the project site. In general, the increased hydroperiod is expected to benefit wading birds, including egrets, herons, wood storks, and the Florida sandhill cranes. The restored water storage and water quality functions of the project will also assist to enhance the adjacent aquatic habitats. Success criteria for wildlife utilization is described in the table below.

Success Criteria for Wildlife Utilization – All Habitats

Ecological Parameter	Year 2	Year 3	Year 4	Year 5
Qualitative evidence of wildlife utilization	Yes	Yes	Yes	Yes
Evidence of native wetland dependent amphibian/reptile species	Yes	Yes	Yes	6 species in 3 groups*
Evidence of native wetland dependent bird species	Yes	Yes	Yes	10 species in 3 groups**
Evidence of native wetland dependent mammal species	Yes	Yes	Yes	4 species
Evidence of native fish species in marsh and floodplain swamp habitat only	Yes	Yes	Yes	3 species

Wetland Overstory:

Currently, the project site consists of citrus grove and Brazilian pepper; therefore, wetland canopy is nonexistent. With the proposed project, the site is expected to establish native wetland communities: Floodplain Swamp, hydric hammock, and depression marsh. The success of the created wetland communities will be assessed during semiannual vegetation surveys and will meet the success criteria. The depression marsh area does not contain an overstory component; therefore, it will not be measured in terms of the wetland canopy. The success criteria for the wetland canopy in these communities will differ from the criteria for vegetation in the depression

marsh because the forested wetland areas will take longer to establish. Canopy in this case will be determined through tree size.

The success criteria for the wetland overstory are based on tree/plant survival, exotic/nuisance removal, wetland hydrology, ground cover, and tree growth. According to the Arbor Day Organization Tree Guide, rate of tree growth refers to the vertical increase in growth unless specified differently. The designation of slow growth rate means the plant grows 12" or less per year; medium growth rate refers to growth of 13 to 24" per year; and fast growth rate refers to growth of 25" or greater. Below is a table of typical growth rates for proposed tree species. This data was used to determine the success criteria for tree species. All proposed trees to be planted are one gallon in size. Each tree is assumed to have a height of two feet when planted.

Success Criteria for Forested Wetland Tree Growth

System/Tree Species	Growth Rate	Growth per year	Average tree size at 5 years	Trees to reach average height at 5 years
Floodplain Swamp				
Pond Apple	Medium to Fast	25"	12.5'	50%
Water Hickory	Slow	8" - 12"	5' - 7'	50%
Pop Ash	Medium	13" - 24"	7.5' - 12'	50%
Swamp Bay	Medium	13" - 24"	7.5' - 12'	50%
Hydric Hammock				
Swamp Maple	Medium to Fast	25"	12.5'	50%
Hackberry	Medium to Fast	25"	12.5'	50%
Persimmon	Slow	8" - 12"	5' - 7'	50%
Loblolly Bay	Medium	13" - 24"	7.5' - 12'	50%
Laurel Oak	Fast	25"	12.5'	50%
Cabbage Palm	Slow	8" - 12"	5' - 7'	50%

In addition, wetland and upland communities will be maintained free of listed exotic vegetation as defined by the Exotic Pest Plant Council. Nuisance vegetation will not exceed ten percent (10%) of the total vegetative coverage in any of the wetland communities. If the targeted coverage is not met by the specified year of monitoring, replanting of the appropriate species will occur.

Wetland groundcover:

Currently, the project site consists of citrus groves; therefore, wetland groundcover is nonexistent. With the proposed project, the site is expected to establish native wetland communities with a healthy groundcover. The success of the created wetland communities will be assessed during semiannual vegetation surveys and will meet the success criteria. These mitigation areas should attain 80% coverage of desirable obligate, facultative wet, and facultative vegetation by the end of the fifth year of monitoring. In addition, wetland communities will be maintained free of listed exotic vegetation as defined by the Exotic Pest Plant Council. Nuisance vegetation will not exceed ten percent (10%) of the total vegetative coverage in any of the wetland communities. If the targeted coverage is not met by the fifth year of monitoring, replanting of the appropriate species will occur.

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Success Criteria Table for Wetland Groundcover

Interim Period	Mitigation Activity	Success Criteria
All Monitoring Periods	Exotic/Nuisance Removal	· ≤ 10% nuisance[1] vegetation cover[2] · 0% exotics[1]
First Year	Freshwater Marsh	· ≥ 20% of total groundcover strata consists of wetland vegetation[3]
	Hydric Hammock Floodplain Swamp	· ≥ 90% survival of planted trees · Herbaceous vegetation in groundcover strata ≥ 10% of total coverage
Second Year	Freshwater Marsh	· ≥ 40% of groundcover strata consists of wetland vegetation
	Hydric Hammock Floodplain Swamp	· ≥ 90% survival of planted trees · Herbaceous vegetation in groundcover strata ≥ 20% of total coverage
Third Year	Freshwater Marsh	· ≥ 70% of groundcover strata consists of wetland vegetation
	Hydric Hammock Floodplain Swamp	· ≥ 90% survival of planted trees · Herbaceous vegetation in groundcover strata ≥ 30% of total coverage
Fourth Year	Freshwater Marsh	· ≥ 70% of total groundcover strata consists of wetland vegetation
	Hydric Hammock Floodplain Swamp	· ≥ 90% survival of planted trees · Herbaceous vegetation in groundcover strata ≥ 50% of total coverage
Fifth Year	Freshwater Marsh	· Attainment of wetland vegetation conditions (≥ 80% of total groundcover strata FACW and/or OBL wetland vegetation or OBL vegetation > Upland vegetation · Evidence of natural reproduction of ground cover species
	Hydric Hammock Floodplain Swamp	· ≥ 90% survival of planted trees · Herbaceous vegetation in groundcover strata ≥ 50% of total coverage · Evidence of trees producing seed · See tree success criterion table above

[1]Exotic/nuisance vegetation shall include all Class I invasive exotic species defined by the Florida Exotic Pest Plant Council and all noxious weeds as listed in the Florida Department of Agriculture & Consumer Services' Noxious Weed List at the time of permitting. Exotic/nuisance plant species shall also include the following bahia grass (*Paspalum notatum)* and pangola grass (*Digitaria decumbens*) with the exception of the hydroseeded areas as shown on the construction plans.

[2]The maximum allowable coverage of exotic/nuisance vegetation cover applies to all areas within the mitigation site at all times, including the upland flatwoods. In addition, the vegetation cover of nuisance plant species cover shall not exceed 15% in any one ½-acre area at any time.

[3]Wetland vegetation is defined as those species with a facultative Wet or Obligate wetland status, as defined by Chapter 62-340.450 F.A.C.

Hydrology:

The Platt's Creek project site hydrology has been adversely impacted by historical dredging, ditching activities, and more recently, by adjacent and on-site development. The proposed hydrologic design was established to accomplish three goals: 1) capture and treat the first flush rainfall, 2) provide adequate water to the wetland vegetation, and 3) provide direct connection to the NFSLR. The proposed project is expected to establish adequate hydrologic conditions for the created wetland communities. To assess hydrology, water level data recorders were installed in each created wetland community type. A rain gauge data logger has also been installed on-site to accurately measure and record rainfall accumulation. In order to meet wetland criteria put forth by the state and federal governments, the data from the water level recorder and rain gauge will be evaluated to ensure that the wetland communities have adequate hydrology. For instance, the soil in each wetland community must be saturated to the surface at some time during the growing season for the dominant vegetation or soil saturation must be within twelve (12) inches (within the major portion of the root zone) in order to impact the hydrophytic vegetation, as put forth by the U.S. Army Corps of Engineers Wetlands Delineation Manual, January 1987. In addition, to meet State of Florida wetland hydrology guidelines, inundation must occur for at least seven consecutive days, or saturation for at least twenty consecutive days (F.A.C. 62-340). Field observation of hydric indicators will also be used to assess the success of hydrological function such as watermarks on vegetation, drift lines, adventitious roots, drainage patterns and other indicators. The overall health of each vegetative community will be assessed as a function of hydrology because hydrology is critical to wetland vegetation with community specific hydrologic needs. For instance, if hydrology is inadequate for the hydric hammock, this community will gradually change to more mesic conditions. Therefore, vegetative surveys will also be used as criteria to establish hydrological success of the mitigation site wetland communities, as it is the hydrology that supports the hydrophytic vegetation.

Success Criteria for Hydrology – Depression Marsh

Ecological Parameter	Year 1	Year 2	Year 3	Year 4	Year 5
Plants appear healthy with no stress resulting from an improper hydroperiod	Yes	Yes	Yes	Yes	Yes
Macroinvertebrates present	Yes	Yes	Yes	Yes	Yes
Distinct and consistent hydrologic indicators per The Florida Wetlands Delineation Manual (minimum of 2/transect)	-	Yes	Yes	Yes	Yes
Elevation of normal pool/seasonal high water indicators (NGVD) +/- 0.25 ft	-	3.5/4	3.5/4	3.5/4	3.5/4
Minimum days of inundation	240	240	240	240	240

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Success Criteria for Hydrology – Floodplain Swamp

Ecological Parameter	Year 1	Year 2	Year 3	Year 4	Year 5
Plants appear healthy with no stress resulting from an improper hydroperiod	Yes	Yes	Yes	Yes	Yes
Macroinvertebrates present	Yes	Yes	Yes	Yes	Yes
Distinct and consistent hydrologic indicators per The Florida Wetlands Delineation Manual (minimum of 2/ transect)	-	Yes	Yes	Yes	Yes
Elevation of mean high water indicators (NGVD) +/- 0.25 ft		1.4	1.4	1.4	1.4
Minimum days of soil saturation (water levels within 6 inches of surface)	180	180	180	180	180

Success Criteria for Hydrology – Hydric Hammock

Ecological Parameter	Year 1	Year 2	Year 3	Year 4	Year 5
Plants appear healthy with no stress resulting from an improper hydroperiod	Yes	Yes	Yes	Yes	Yes
Distinct and consistent hydrologic indicators per The Florida Wetlands Delineation Manual (minimum of 2/transect)	-	Yes	Yes	Yes	Yes
Elevation of seasonal high water hydrologic indicators (NGVD) +/-0.5 ft	-	4	4	4	4
Minimum days of soil saturation (water levels within 6 inches of surface)	60	60	60	60	60

Water Quality Input & Treatment:

The proposed project will eliminate agricultural runoff and restore wetland systems that attenuate flows and provide water-purifying functions along the NFSLR and Platt's Creek. Establishment of hydrology will allow reintroduction of natural vegetative communities along the shoreline of the NFSLR and Platt's Creek, thereby improving water quality and enhancing the project site's capacity to filter and cleanse waters prior to reaching the NFSLR. The proposed conversion of the citrus grove to a natural area will significantly and permanently decrease nutrient (nitrogen and phosphorous) input to adjacent waters. In terms of water use, it is difficult to quantify the value of cancelling water use permits on the site. The success of the water quality parameter will be measured via the vegetation and hydrology parameters because both parameters will change with water quality.

X. MONITORING REQUIREMENTS (9)

a. *Monitoring*

St. Lucie County will monitor the created wetlands for a five-year period. A baseline monitoring report will be completed directly after to construction. Monitoring will be conducted semiannually during the end of the wet and dry seasons. Semiannual reports documenting the

results of each monitoring iteration will be prepared to document the progress of the mitigation areas located on site. The reports will include hydrologic data, vegetation analysis, wildlife utilization, macroinvertebrate and fish sampling, panoramic photographs, and conclusions.

Vegetation Sampling

Three (3) monitoring transects will be established within the PCCM. Biologists will conduct semiannual (November and May) vegetation surveys on each of the transects for a period of five years. Trees will be counted and tree growth (height and diameter base height) will be measured along the transects. A vegetative sample quadrant (with a size of 10 meters X 10 meters) will be established every two hundred (200) feet. Each of the proposed transects will have a 4"X4"X24" concrete monument (hereon, monument), designed to indicate the transect's commencement point. Each monument will contain a metal plate that indicates the transect number, compass bearing, and date. All monuments will be located using a Global Positioning System (GPS) and its latitude and longitude location coordinates recorded. Vegetation inside the quadrats will be identified down to individual species when possible. The percent coverage of each species will be covered.

Panoramic Transect Photographs

During each sample iteration, color panoramic photographics (180°) of each of the transects will be taken. The panoramic photo stations will be located at all monument locations. The proposed panoramic photo documentary of the mitigation areas will consist of panoramic photos (photographic capture zone will consist of no less than one hundred eighty (180) degrees of view). Each photo will contain a scaling pole designed to measure vegetative growth, and the photos will be included in the semiannual monitoring reports. A single photograph will be taken of each quadrant. Photographs will be included in each of the semiannual reports.

Wildlife Utilization

The wildlife utilization will be recorded via qualitative and quantitative measurements of wildlife species utilization of the mitigation areas. These measurements will be executed during the sampling iterations and will consist of the identification of observed wildlife and observed wildlife utilization (roosting, feeding, foraging, nesting and/or occasional transitory use). The results of the wildlife utilization monitoring results will be included in the semiannual monitoring reports.

Fish and Aquatic Macroinvertebrate Sampling

Qualitative sampling for the presence of fish and macroinvertebrates will be conducted by biologists during each sample iteration. The fish and macroinvertebrates may be collected with cast nets, seines, and dipnet, whichever is more applicable at the time of sampling. A species list will be included in the semiannual reports.

Hydrology

To document the hydrologic iterations the applicant will place data loggers within all of the proposed habitat areas. The data loggers were installed on 3' sch. 40 PVC pipe and have been surveyed and referenced to NGVD to document current hydrologic conditions. The same data loggers will be utilized post construction to document hydrologic conditions. A rain data logger programmed to record rain events on a daily basis and equipped with a self-emptying collector bucket was also installed within the mitigation site premises. Hydrologic conditions will also be determined through the transects described above. Data will be acquired regarding plant health

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and hydrologic indicators per the *The Florida Wetlands Delineation Manual.* The elevations of the hydrologic indicators will also be recorded. This data will also be included in the semiannual monitoring reports. Documentation of the hydrologic information will be summarized graphically and included in the semiannual reports. The location of the data loggers can be found in the construction plans.

b. Monitoring / Reporting Timeline

Construction is expected to begin in January 2013, though this is dependent on a Record of Decision on the Crosstown Parkway Extension project. Construction completion is expected in January 2014. As-builts would be submitted in March 2014. The planting of plants will begin approximately 4 months after construction commencement. The baseline year would then occur in 2013, and monitoring will continue through 2019. Baseline and semiannual reports will be submitted within 30 days of sampling the mitigation areas. Semiannual monitoring reports will be submitted according to the following schedule:

Baseline sample:	Baseline Report
July 2014	Report #1
January 2015	Report #2
July 2015	Report #3
January 2016	Report #4
July 2016	Report #5
January 2017	Report #6
July 2017	Report #7
January 2018	Report #8
July 2018	Report #9
January 2019	Report #10, Final Report

XI. LONG TERM MANAGEMENT PLAN (10)

Long-Term management of the PCCM includes the semiannual maintenance control of exotic and/or nuisance plant species. Exotic and nuisance plant species will be controlled by physical and chemical means. Wetland and upland areas will be maintained free of listed exotic vegetation, as defined by the Exotic Pest Plant council. Nuisance vegetation will not exceed ten percent (10%) of the total vegetative coverage in any of the preserve areas after each maintenance activity and nuisance vegetation cannot exceed ten percent (10%) of coverage in any area of the mitigation site between maintenance activities. St. Lucie County is the entity responsible for the perpetual management of the mitigation areas.

Attachment C contains the financial responsibility agreement of the County to demonstrate perpetual management financial assurance.

XII. ADAPTIVE MANAGEMENT PLAN (11)

a. Parties and Responsibilities

St. Lucie County would assume responsibility for major corrective actions that may be required if the mitigation areas do not meet success criteria for an area sufficient to satisfy the mitigation conditions of the pending the ERP and Section 404 permit authorizations.

b. Remedial Measures

If it is determined during the monitoring period that the mitigation areas are failing to meet the minimum wetland mitigation conditions described in the ERP and Section 404 permit authorizations, St. Lucie County will coordinate with the USACE and SFWMD to accomplish the appropriate corrective measures in order to meet the permit conditions. If determined through monitoring of on-site conditions that success criteria is not being met, additional planting/re-planting of wetland vegetation and/or changes to site design to correct poor water circulation, scour, erosion, shoaling, etc., may be necessary. St. Lucie County will complete remediation measures as needed.

XIII. FINANCIAL ASSURANCES (12)

The City of Port St. Lucie and St. Lucie County have entered into a MOA to establish the PCCM as a permittee responsible mitigation site. Per the MOA, the City will contribute up to $2 million towards the construction of the PCCM in exchange for credits associated with approximately half of the site to be used to offset impacts associated with the Crosstown Parkway Extension project. The County will then monitor and maintain the site in perpetuity.

Long term management of the site will be the responsibility of St. Lucie County. The County has money budgeted for the regular maintenance of the site as shown in **Attachment C**.

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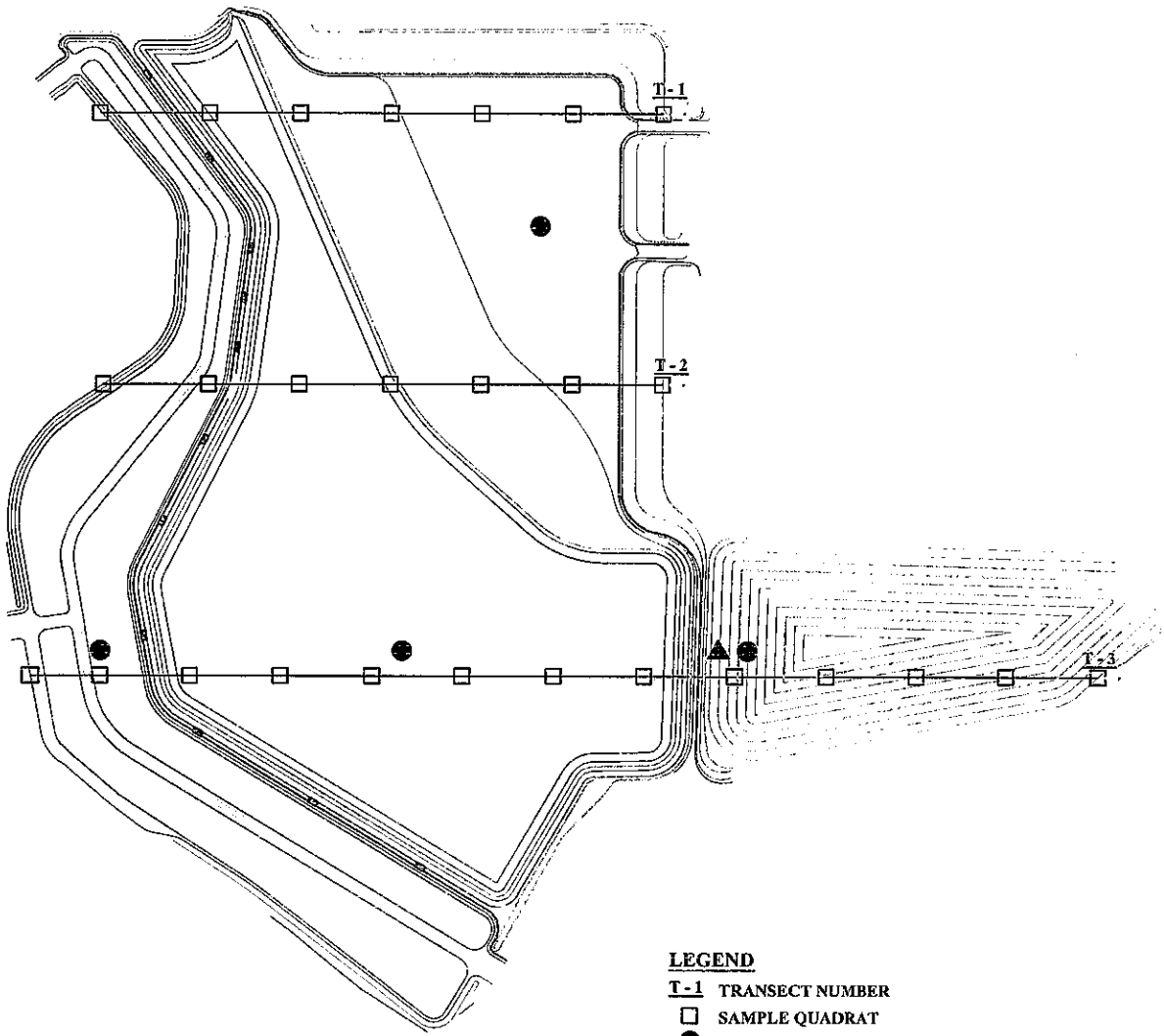
NOT A SURVEY

AMERICAN CONSULTING ENGINEERS OF FLORIDA, LLC
2818 CYPRESS RIDGE BOULEVARD, SUITE 200
WESLEY CHAPEL, FL 34544-6302
TELEPHONE (813) 435-2600; FAX (813)-345-2601

NORTH

0' 200' 400' 800' 1600'

SCALE: 1" = 400'



LEGEND

- T - 1 TRANSECT NUMBER
- SAMPLE QUADRAT
- WATER LEVEL DATA LOGGER (4)
- RAIN GAUGE DATA LOGGER (1)
- PANORAMIC PHOTOGRAPH LOCATION

SOURCE: ACEF PROPOSED TOPOGRAPHY

ST LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	RLW JOB NO.:	DRAWING NAME:	DATE:	FIGURE:
	33	35	40	10-022.06	01 - MONITORING PLAN.DWG	05 DECEEMBER 2011	1 OF 1
LATITUDE: N27° 23'24.939"	LONGITUDE: W080°20'34.176"				DESIGNED BY: RLW	DRAWN BY: AB	CHECKED BY: RLW

CITY OF PORT ST LUCIE
PLATTS CREEK MITIGATION
PROPOSED MONITORING PLAN

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL rlwenv@comcast.net

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South Florida Water Management District

Work Schedule Requirements

Application No : 111018-4

Mitigation Plan ID: PLATT'S CREEK

Activity	Due Date
SUBMIT RECORDED CONSERVATION EASEMENT	30-JAN-13
SUBMIT GPS DISK OF BOUNDARIES OF CONSERVATION EASEMENT	30-JAN-13
SUBMIT PAPER MAP OF CONSERVATION EASEMENT OVER AERIAL IMAGERY	30-JAN-13
EXCAVATION AND GRADING MITIGATION AREA	30-DEC-13
SUBMIT AS- BUILTS OF MITIGATION AREA	30-JAN-14
SUBMIT TIME ZERO MONITORING REPORT	30-MAR-14
COMPLETE PLANTING MITIGATION AREA	30-MAR-14
SUBMIT FIRST MONITORING REPORT	30-JUL-14
SUBMIT SECOND MONITORING REPORT	30-JAN-15
SUBMIT FOURTH MONITORING REPORT	30-JAN-15
SUBMIT THIRD MONITORING REPORT	30-JUL-15
SUBMIT SIXTH MONITORING REPORT	30-JAN-16
SUBMIT FIFTH MONITORING REPORT	30-JUL-16
SUBMIT EIGHTH MONITORING REPORT	30-JAN-17
SUBMIT SEVENTH MONITORING REPORT	30-JUL-17
SUBMIT TENTH MONITORING REPORT	30-JAN-18
SUBMIT NINTH MONITORING REPORT	30-JUL-18

Exhibit No :

DEED OF CONSERVATION EASEMENT

Return recorded document to:
South Florida Water Management District
3301 Gun Club Road, MSC 4210
West Palm Beach, FL 33406

THIS DEED OF CONSERVATION EASEMENT is given this 20th day of September, 2011, by St. Lucie County, a political subdivision of the State of Florida, _____ ("Grantor") whose mailing address is 2300 Virginia Avenue, Fort Pierce, Florida 34982 to the South Florida Water Management District ("Grantee"). As used herein, the term "Grantor" shall include any and all successors or assigns of the Grantor, and all subsequent owners of the "Property" (as hereinafter defined) and the term "Grantee" shall include any successor or assignee of Grantee.

WITNESSETH

WHEREAS, the Grantor is the owner of certain lands situated in St. Lucie County County, Florida, and more specifically described in Exhibit "A" attached hereto and incorporated herein ("Property"); and

WHEREAS, the Grantor desires to construct Platt's Creek Compensatory Mitigation Project ("Project") at a site in St. Lucie County County, which is subject to the regulatory jurisdiction of South Florida Water Management District ("District"); and

WHEREAS, District Permit No. 56-00003-M ("Permit") authorizes certain activities which affect surface waters in or of the State of Florida; and

WHEREAS, this Permit requires that the Grantor preserve, enhance, restore and/or mitigate wetlands and/or uplands under the District's jurisdiction; and

WHEREAS, the Grantor has developed and proposed as part of the Permit conditions, a conservation tract and maintenance buffer involving preservation of certain wetland and/or upland systems on the Property; and

WHEREAS, the Grantor, in consideration of the consent granted by the Permit, is agreeable to granting and securing to the Grantee a perpetual Conservation Easement as defined in Section 704.06, Florida Statutes, over the area described on Exhibit "A" ("Conservation Easement").

NOW, THEREFORE, in consideration of the issuance of the Permit to construct and operate the permitted activity, and as an inducement to Grantee in issuing the Permit, together with other good and valuable consideration, the adequacy and receipt of which are hereby acknowledged, Grantor hereby grants, creates, and establishes a perpetual Conservation Easement for and in favor of the Grantee upon the Property described on Exhibit "A" which shall run with the land and be binding upon the Grantor, and shall remain in full force and effect forever.

The scope, nature, and character of this Conservation Easement shall be as follows:

1. Recitals. The recitals hereinabove set forth are true and correct and are hereby incorporated into and made a part of this Conservation Easement.

2. Purpose. It is the purpose of this Conservation Easement to retain land or water areas in their natural, vegetative, hydrologic, scenic, open, agricultural or wooded condition and to retain such areas as suitable habitat for fish, plants or wildlife. Those wetland and/or upland areas included in the Conservation Easement which are to be preserved, enhanced or created pursuant to the Permit shall be retained and maintained in the enhanced or created conditions required by the Permit.

To carry out this purpose, the following rights are conveyed to Grantee by this easement:

a. To enter upon the Property at reasonable times with any necessary equipment or vehicles to enforce the rights herein granted in a manner that will not unreasonably interfere with the use and quiet enjoyment of the Property by Grantor at the time of such entry; and

b. To enjoin any activity on or use of the Property that is inconsistent with this Conservation Easement and to enforce the restoration of such areas or features of the Conservation Easement that may be damaged by any inconsistent activity or use.

3. Prohibited Uses. Except for restoration, creation, enhancement, maintenance and monitoring activities, or surface water management improvements, or other activities described herein that are permitted or required by the Permit, the following activities are prohibited in or on the Conservation Easement:

a. Construction or placing of buildings, roads, signs, billboards or other advertising, utilities, or other structures on or above the ground;

b. Dumping or placing of soil or other substance or material as landfill, or dumping or placing of trash, waste, or unsightly or offensive materials;

c. Removal or destruction of trees, shrubs, or other vegetation, except for the removal of exotic or nuisance vegetation in accordance with a District approved maintenance plan;

d. Excavation, dredging, or removal of loam, peat, gravel, soil, rock, or other material substance in such manner as to affect the surface;

e. Surface use except for purposes that permit the land or water area to remain in its natural or enhanced condition;

f. Activities detrimental to drainage, flood control, water conservation, erosion control, soil conservation, or fish and wildlife habitat preservation including, but not limited to, ditching, diking and fencing;

g. Acts or uses detrimental to such aforementioned retention of land or water areas;

h. Acts or uses which are detrimental to the preservation of the structural integrity or physical appearance of sites or properties having historical, archaeological, or cultural significance.

4. Passive Recreational Facilities. Grantor reserves all rights as owner of the Property, including the right to engage in uses of the Property that are not prohibited herein and that are not inconsistent with any District rule, criteria, the Permit and the intent and purposes of this Conservation Easement. Passive recreational uses that are not contrary to the purpose of this Conservation Easement may be permitted upon written approval by the District. Without limiting the generality of the foregoing, the following rights are expressly reserved:

a. The Grantor may conduct limited land clearing for the purpose of constructing such pervious facilities as docks, boardwalks or mulched walking trails; and

b. The Grantor may construct and maintain passive public use facilities for the purpose of educating the public or allowing public access and recreation which have minimal or no impact on natural resources; and

c. Grantor may place signs and markers as necessary to identify trails, restoration areas, or other site features related to public use and land management activities; and

d. Grantor may construct and maintain to the extent allowed by current and future permits, at grade, management roads, fire breaks, trails, walkways, piers, observation platforms or boardwalks necessary to provide public access and management activities as provided for in the site's management plan; and

e. Grantor may remove or kill by any lawful means, exotic or nuisance vegetation or animal species, conduct prescribed burns and conduct other management activities necessary to carry out management for conservation purposes; and

f. Grantor may conduct restoration and enhancement projects which do not conflict with the purpose of this easement; and

g. The construction and use of the approved passive recreational facilities shall be subject to the following conditions:

i. Grantor shall minimize and avoid, to the fullest extent possible, impact to any wetland or upland buffer areas within the Conservation Easement Area and shall avoid materially diverting the direction of the natural surface water flow in such area;

ii. Such facilities and improvements shall be constructed and maintained utilizing Best Management Practices;

iii. Adequate containers for litter disposal shall be situated adjacent to such facilities and improvements and periodic inspections shall be instituted by the maintenance entity, to clean any litter from the area surrounding the facilities and improvements;

iv. This Conservation Easement shall not constitute permit authorization for the construction and operation of the passive recreational facilities. Any such work shall be subject to all applicable federal, state, District or local permitting requirements.

5. No Dedication. No right of access by the general public to any portion of the Property is conveyed by this Conservation Easement.

6. Grantee's Liability. Grantee shall not be responsible for any costs or liabilities related to the operation, upkeep or maintenance of the Property.

7. Property Assessments. If and to the extent that the Grantor is not exempt from assessments and assessments are levied against the Easement Parcel, Grantor shall keep the assessments on the Easement Parcel current.

8. Enforcement. Enforcement of the terms, provisions and restrictions of this Conservation Easement shall be at the reasonable discretion of Grantee, and any forbearance on behalf of Grantee to exercise its rights hereunder in the event of any breach hereof by Grantor, shall not be deemed or construed to be a waiver of Grantee's

rights hereunder.

9. Assignment. Grantee will hold this Conservation Easement exclusively for conservation purposes. Grantee will not assign its rights and obligations under this Conservation Easement except to another organization or entity qualified to hold such interests under the applicable state laws.

10. Severability. If any provision of this Conservation Easement or the application thereof to any person or circumstances is found to be invalid, the remainder of the provisions of this Conservation Easement shall not be affected thereby, as long as the purpose of the Conservation Easement is preserved.

11. Terms, Conditions, Restrictions, Purpose. The terms, conditions, restrictions and purpose of this Conservation Easement shall be referenced by Official Record Book and Page Number by Grantor in any subsequent deed or other legal instrument by which Grantor divests itself of any interest in the Conservation Easement. Any future holder of the Grantor's interest in the Property shall be notified in writing by Grantor of this Conservation Easement.

12. Written Notice. All notices, consents, approvals or other communications hereunder shall be in writing and shall be deemed properly given if sent by United States certified mail, return receipt requested, addressed to the appropriate party or successor-in-interest.

13. Modifications. This Conservation Easement may be amended, altered, released or revoked only by written agreement between the parties hereto or their heirs, assigns or successors-in-interest, which shall be filed in the public records in St. Lucie County County.

TO HAVE AND TO HOLD unto Grantee forever. The covenants, terms, conditions, restrictions and purposes imposed with this Conservation Easement shall be binding upon Grantor, and shall continue as a servitude running in perpetuity with the Property.

The Grantor agrees to defend the title to the Conservation Easement property hereby conveyed against the lawful claims of all persons claiming by, through, or under the Grantor, except those claims created or arising from any act or omission of Grantee.

IN WITNESS WHEREOF,

_____
(Grantor) has hereunto set its authorized hand this
20th day of September,
20 11.

_____
A political subdivision of the State of Florida

By: _____

Chris Craft, Chairman
(Print Name and Title)

ATTEST:

BY: _____
Deputy Clerk

DATE: September 20, 2011

APPROVED AS TO FORM AND SUFFICIENCY

By: _____

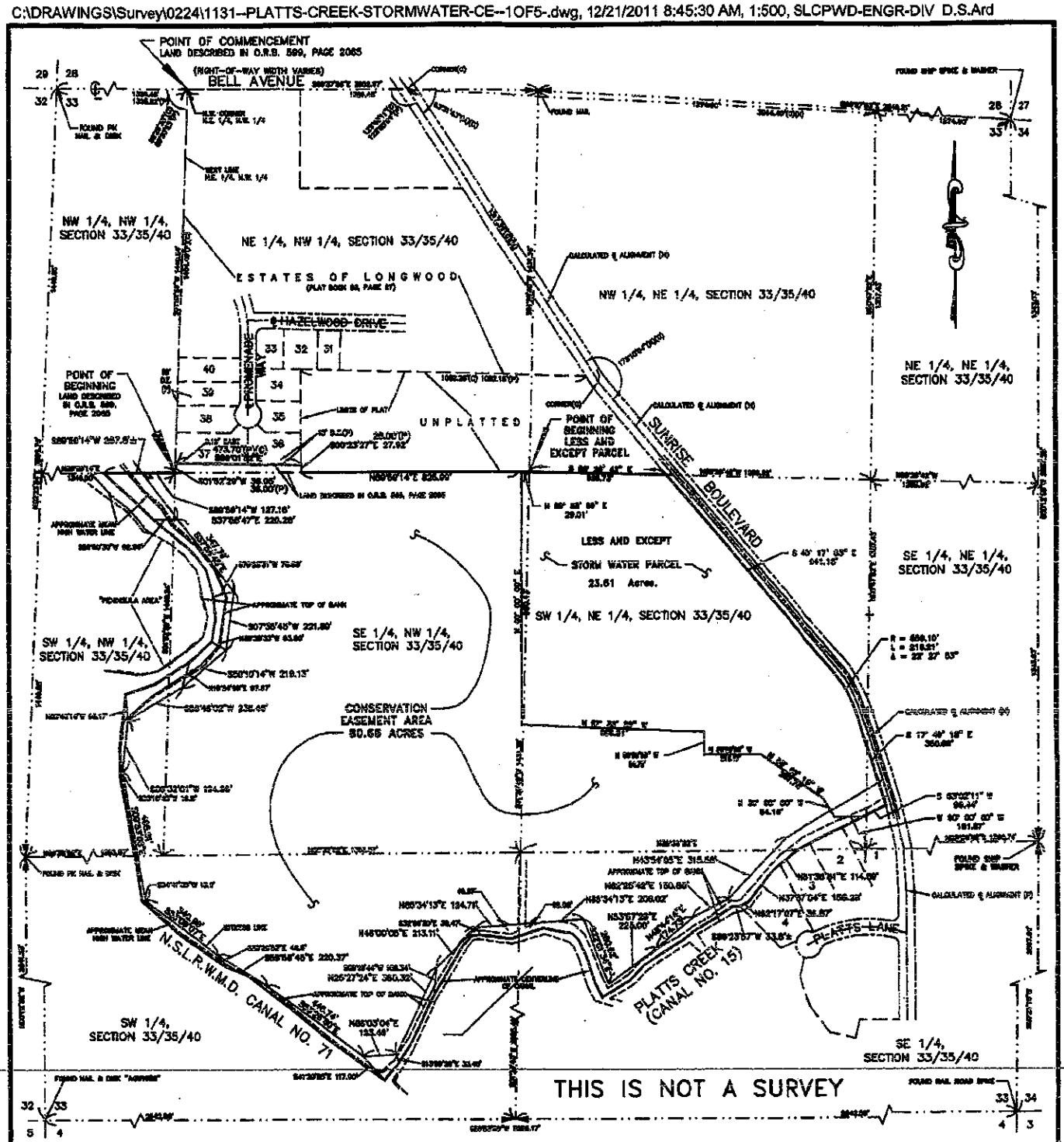
Daniel S. McIntyre, County Attorney
(Print Name and Title)

Deed of Conservation Easement – Local Governments. Incorporated by reference in Section 4.3.8, Basis of Review for Environmental Resource Permit Applications within the South Florida Water Management District, incorporated by reference in Rule 40E-4.091, F.A.C.

EXHIBIT A

[DESCRIPTION OF PROPERTY] - SEE ATTACHED 5 PAGES

C:\DRAWINGS\Survey\0224\1131--PLATTS-CREEK-STORMWATER-CE--1OF5-.dwg, 12/21/2011 8:45:30 AM, 1:500, SLCPWD-ENGR-DIV D.S.Ard



LEGEND:
- ℄ - CENTERLINE
- O.R.B. - OFFICIAL RECORDS BOOK
- N.S.L.R.W.M.D. - NORTH ST. LUCIE RIVER WATER MANAGEMENT DISTRICT
- (M) - MEASURE PER REFERENCED "HORTON" SURVEY
- (C) - CALCULATED
- (PLAT) - PLAT (SUBDIVISION)
- Δ - DELTA
- (M.B.) - PER COUNTY COMMISSION MINUTE BOOK 4, PAGE 77
- D.E. - DRAINAGE EASEMENT
- R/W - RIGHT-OF-WAY
- (D) - DEED

AREA TABULATION

CONSERVATION EASEMENT AREA	50.66 ACRES
STORMWATER PARCEL	23.61 ACRES
TOTAL	104.27 ACRES

DATA SHOWN HEREON IS BASED ON BOUNDARY SURVEY PREPARED BY LSFH, INC. PROJECT 990224 DATED 11/18/1999.

0' 500'

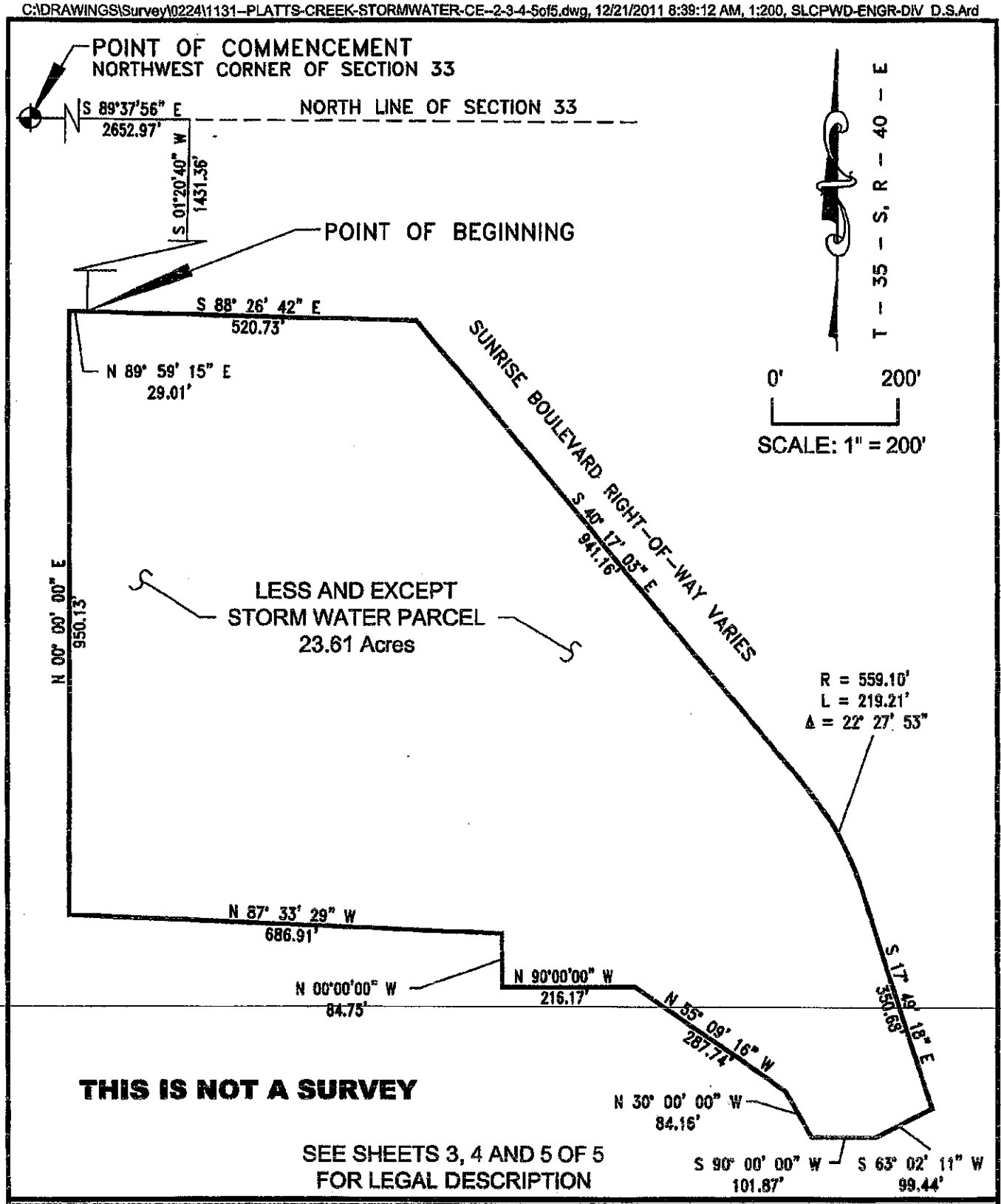
SCALE: 1" = 500'

SEE SHEETS 3, 4 AND 5 OF 5 FOR LEGAL DESCRIPTION

SHEET NO. 1 OF 5	PROJECT NO. 1131	SKETCH OF PLATTS CREEK PROPERTY	BOARD OF COUNTY COMMISSIONERS SAINT LUCIE COUNTY, FLORIDA PUBLIC WORKS DEPT., ENGINEERING DIVISION, SURVEY SECTION 2300 VIRGINIA AVE., FORT PIERCE, FLORIDA 34982 TELEPHONE 462-1707
		CONSERVATION EASEMENT	

REVISIONS

C:\DRAWINGS\Survey\0224\1131--PLATTS-CREEK-STORMWATER-CE--2-3-4-5of5.dwg, 12/21/2011 8:39:12 AM, 1:200, SLCPWD-ENGR-DIV D.S.Ard



THIS IS NOT A SURVEY

SEE SHEETS 3, 4 AND 5 OF 5
FOR LEGAL DESCRIPTION

SHEET NO. 3 OF 5	PROJECT NO. 1131	SKETCH AND LEGAL DESCRIPTION STORM WATER PARCEL CONSERVATION EASEMENT	BOARD OF COUNTY COMMISSIONERS SAINT LUCIE COUNTY, FLORIDA PUBLIC WORKS DEPT., ENGINEERING DIVISION, SURVEY SECTION 5500 VIRGINIA AVE., FORT PIERCE, FLORIDA 34982 TELEPHONE 462 - 1707	REVISIONS NO. DATE SUBJECT BY

DESCRIPTION: CONSERVATION EASEMENT

AN EASEMENT FOR CONSERVATION PURPOSES OVER AND ACROSS A PARCEL OF LAND AS RECORDED IN ORB 1270, PAGE 202 OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA. SAID EASEMENT BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

"ALL OF THAT REAL PROPERTY LYING IN SECTION 33, TOWNSHIP 35 SOUTH, RANGE 40 EAST AS IN OFFICIAL RECORDS BOOK 180, PAGE 2151 PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA: LESS A PARCEL OF LAND BEING A PENINSULA LYING IN THE SOUTH ONE-HALF OF THE NORTHWEST ONE-QUARTER OF SAID SECTION 30 (SIC), BOUNDED ON THE WEST BY NORTH ST. LUCIE RIVER WATER MANAGEMENT DISTRICT CANAL NUMBER 71, AND BOUNDED ON THE SOUTH AND EAST BY THE CENTERLINE OF A NATURAL BRANCH OF THE ST. LUCIE RIVER: SAID PROPERTY BEING CONVEYED BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

THAT PORTION OF THE SOUTHWEST QUARTER OF SECTION 33 LYING NORTH AND EAST OF CANAL NO. 71 AND NORTH OF THE CENTERLINE OF PLATT'S CREEK (BRANCH) AND THAT PORTION OF THE SOUTHEAST QUARTER OF SECTION 33 LYING NORTH OF THE CENTERLINE OF PLATT'S CREEK (BRANCH). SAID CENTERLINE BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE CENTERLINE INTERSECTIONS OF SUNRISE BOULEVARD AND PLATT'S CREEK AS SHOWN ON THE PLAT OF PLATT'S BRANCH, AS RECORDED IN PLAT BOOK 20, PAGE 16, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA, RUN SOUTH 63 DEGREES 14' 35" WEST, 400.74 FEET TO A POINT (FROM WHICH A REFERENCE OINT BEARS NORTH 09 DEGREES 22' 44" WEST, AND 74.91 FEET); THENCE SOUTH 51 DEGREES 49' 15" WEST, 114.59 FEET TO A POINT (FROM WHICH A REFERENCE POINT BEARS NORTH 28 DEGREES 16' 51" EAST AND 164.35 FEET); THENCE SOUTH 38 DEGREES 09' 28" WEST, 156.28 FEET TO A POINT (FROM WHICH A REFERENCE POINT BEARS NORTH 42 DEGREES 06' 21" WEST AND 105.88 FEET); THENCE SOUTH 62 DEGREES 29' 31" WEST, 36.87 FEET TO A POINT (FROM WHICH A REFERENCE POINT BEARS NORTH 21 DEGREES 49' 54" WEST AND 102.97 FEET); THENCE SOUTH 72 DEGREES 57' 20" WEST, 349.12 FEET TO A POINT (FROM WHICH A REFERENCE POINT BEARS NORTH 33 DEGREES 44' 16" WEST AND 25.0 FEET); THENCE SOUTH 56 DEGREES 15' 44" WEST, 284.13 FEET TO A POINT (FROM WHICH A REFERENCE POINT BEARS NORTH 13 DEGREES 45' 14" WEST AND 278.99 FEET); THENCE NORTH 22 DEGREES 06' 20" WEST, 280.99 FEET TO A POINT (FROM WHICH A REFERENCE POINT BEARS NORTH 75 DEGREES 07' 33" EAST AND 40.76 FEET); THENCE SOUTH 89 DEGREES 57' 10" WEST, 175.26 FEET TO A POINT (FROM WHICH A REFERENCE POINT BEARS NORTH 06 DEGREES 53' 26" EAST AND 40.6 FEET); THENCE NORTH 81 DEGREES 55'54" WEST, 201.86 FEET TO A POINT (FROM WHICH A REFERENCE POINT BEARS NORTH 21 DEGREES 28' 57" WEST AND 34.5 FEET); THENCE SOUTH 34 DEGREES 41' 36" WEST, 492.55 FEET TO A POINT (FROM WHICH A REFERENCE POINT BEARS NORTH 11 DEGREES 54' 52" EAST AND 95.4 FEET); THENCE SOUTH 29 DEGREES 01' 25" WEST, 283.93 FEET TO A POINT (FROM WHICH A REFERENCE POINT BEARS NORTH 12 DEGREES 01' 37" EAST AND 187.90 FEET); SAID POINT BEING THE CENTER OF AFOREMENTIONED CANAL 71 AND THE POINT OF TERMINATION OF THE ABOVE DESCRIBED CENTERLINE OF PLATT'S CREEK.

AND

SEE SHEET 4 OF 5 FOR
LEGAL DESCRIPTION

SHEET NO. 3 OF 5	PROJECT NO. 1131	SKETCH AND LEGAL DESCRIPTION	BOARD OF COUNTY COMMISSIONERS SAINT LUCIE COUNTY, FLORIDA PUBLIC WORKS DEPT., ENGINEERING DIVISION, SURVEY SECTION 8800 VIRGINIA AVE., FORT PIERCE, FLORIDA 34982 TELEPHONE 462 - 1707
		CONSERVATION EASEMENT	

REVISIONS

NO.	DATE	SUBJECT	BY

THAT PORTION OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 33, TOWNSHIP DESCRIBED 35 SOUTH, RANGE 40 EAST, LYING SOUTH AND WEST OF SUNRISE BOULEVARD AS IT NOW EXISTS.

AND

THAT PORTION OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 33, TOWNSHIP 35 SOUTH, RANGE 40 EAST, LYING SOUTH AND WEST OF SUNRISE BOULEVARD AS IT NOW EXISTS AND NORTH OF THE PLAT OF PLATT'S BRANCH AS RECORDED IN PLAT BOOK 20, PAGE 16,PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

AND

THAT PORTION OF THE SOUTH HALF OF THE NORTHWEST QUARTER OF SECTION 33, TOWNSHIP 35 SOUTH, RANGE 40 EAST, LYING EAST OF CANAL NO. 71, LESS A PENINSULA OF LAND LYING WEST OF THE CENTERLINE OF A FINGER OF WATER RUNNING NORTHERLY FROM CANAL 71.
ALL THE ABOVE SITUATED IN SECTION 33, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA.

AND

FROM THE POINT OF COMMENCEMENT (P.O.C.) BEING THE NORTHWEST CORNER OF THE NORTHEAST ¼ OF THE NORTHWEST ¼ OF SECTION 33, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA; RUN THENCE S 01° 55' 07" WEST (MEASURE S 01°54' 52" W), ALONG THE WEST LINE OF THE NORTHEAST ¼ OF THE NORTHWEST ¼ OF SAID SECTION 33, A DISTANCE OF 1440.83 FEET (MEASURES 1440.49 (SIC) FEET) TO A CONCRETE MONUMENT STAMPED WITH THE NUMBER 3333 LOCATED AT THE SOUTHWEST CORNER OF THE AFORESAID NORTHEAST ¼ OF THE NORTHWEST ¼ AND THE POINT OF BEGINNING (P.O.B.) OF THE HEREIN DESCRIBED PARCEL; THENCE RUN S 89° 57' 37" E (MEASURES S 89° 57' 25" E), ALONG THE SOUTH LINE OF AFORESAID NORTHEAST ¼ OF THE NORTHWEST ¼, A DISTANCE OF 475.00 FEET TO A CONCRETE MONUMENT STAMPED WITH THE NUMBER 3333 LOCATED AT THE SOUTHEAST CORNER OF HEREIN DESCRIBED PARCEL; THENCE RUN NORTH 00° 21' 04" W, A DISTANCE OF 28.00 FEET TO A CONCRETE MONUMENT STAMPED WITH THE NUMBER 3333 BEING THE SOUTHERLY MOST SOUTHEASTERLY CORNER OF A PROPOSED SUBDIVISION ENTITLED ESTATES OF LONGWOOD; THENCE RUN N 88° 59' 29" W ALONG THE SOUTHERLY LINE OF SAID ESTATES OF LONGWOOD, A DISTANCE OF 473.70 FEET TO A CONCRETE MONUMENT STAMPED WITH THE NUMBER 3333 LYING ON THE WEST LINE OF SAID NORTHEAST ¼ OF THE NORTHWEST 1/4 , SAID CONCRETE MONUMENT MARKING THE SOUTHWEST CORNER OF THE AFOREMENTIONED ESTATES OF LONGWOOD; THENCE RUN S 01° 55' 07" W (MEASURES S 01° 54' 52" W), ALONG THE WEST LINE OF THE NORTHEAST ¼ OF THE NORTHWEST ¼ OF SAID SECTION 33, A DISTANCE OF 36.00 FEET TO THE POINT OF BEGINNING."

LESS AND EXCEPT THE FOLLOWING DESCRIBED PARCEL;

SEE SHEET 5 OF 5

SHEET NO. 4 OF 5	PROJECT NO. 1131	SKETCH AND LEGAL DESCRIPTION	BOARD OF COUNTY COMMISSIONERS SAINT LUCIE COUNTY, FLORIDA PUBLIC WORKS DEPT., ENGINEERING DIVISION, SURVEY SECTION 2300 VIRGINIA AVE., FORT PIERCE, FLORIDA 34982 TELEPHONE 462 - 1707	REVISIONS NO. DATE SUBJECT BY
		CONSERVATION EASEMENT		

LESS AND EXCEPT THE FOLLOWING DESCRIBED PACREL

A PARCEL OF LAND LYING IN SECTION 33, T-35-S, R-40-E, ST. LUCIE COUNTY, FLORIDA, SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT A FOUND PK NAIL AND DISC MARKING THE NORTHWEST CORNER OF SAID SECTION 33 THENCE S 89° 37' 56" E ALONG THE NORTH LINE OF SAID SECTION 33 A DISTANCE OF 2652.97 FEET TO A FOUND NAIL MARKING THE NORTHEAST CORNER OF THE NORTHWEST 1/4 OF SECTION 33; THENCE S 01° 20' 40" W ALONG THE EAST LINE OF SAID NORTHWEST 1/4 A DISTANCE OF 1431.36 FEET TO THE POINT OF BEGINNING; THENCE S 89° 26' 42" E A DISTANCE OF 520.73 FEET TO A POINT ON THE WESTERLY RIGHT OF WAY LINE OF SUNRISE BOULEVARD; THENCE ALONG SAID RIGHT OF WAY LINE THE FOLLOWING THREE (3) CALLS;

1. THENCE S 40° 17' 03" E A DISTANCE OF 941.16 FEET TO THE POINT OF CURVATURE OF A CURVE CONCAVE TO THE WEST, HAVING A RADIUS OF 559.10 FEET;
2. THENCE SOUTHERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 22° 27' 53" A DISTANCE OF 219.21 FEET TO THE POINT OF TANGENCY;
3. THENCE S 17° 49' 13" E A DISTANCE OF 350.68 FEET;

THENCE S 63° 02' 11" W DEPARTING SAID RIGHT OF WAY LINE A DISTANCE OF 99.44 FEET; THENCE S 90° 00' 00" W A DISTANCE OF 101.87 FEET; THENCE N 30° 00' 00" W A DISTANCE OF 84.16 FEET; THENCE N 55° 09' 16" W A DISTANCE OF 287.74 FEET; THENCE N 90° 00' 00" W A DISTANCE OF 216.17 FEET; THENCE N 00° 00' 00" W A DISTANCE OF 84.75 FEET; THENCE N 87° 33' 29" W A DISTANCE OF 686.91 FEET; THENCE N 00° 00' 00" E A DISTANCE OF 950.13 FEET; THENCE N 89° 59' 15" E A DISTANCE OF 29.01 FEET TO THE POINT OF BEGINNING.

SAID EASEMENT CONTAINING 23.61 ACRES MORE OR LESS.

BEARING BASE: THE NORTH LINE OF THE NORTHWEST 1/4 OF SECTION 33, T-35-S, R-40-E, ST. LUCIE COUNTY, FLORIDA IS TAKEN TO BEAR S 89° 37' 56" E AND ALL OTHER BEARINGS ARE RELATIVE THERETO.

SURVEYOR NOTES:

1. THIS IS NOT A SURVEY.
2. SEE SHEETS 1 AND 2 OF 5 FOR SKETCH OF DESCRIPTION.
3. INFORMATION IS BASED ON THE BOUNDARY SURVEY OF PLATTS CREEK PROPERTY PREPARED BY LBFH, INC. JOB NO. 99-024, DATED NOVEMBER 18, 1999.

CERTIFICATE: I hereby certify that the sketch of legal description represented hereon, dated this 21 day of, DEC ,2011 is true and correct to the best of my knowledge and belief, and meets the Minimum Technical Standards set forth by the Florida Board of Surveyors and Mappers in Chapter 5J-17, Florida Administrative Code, pursuant to Section 472.072 Florida Statutes.

NOTE: NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER

PROFESSIONAL SURVEYOR AND MAPPER
RONALD H. HARRIS
STATE OF FLORIDA NO. 4198

SHEET NO. 5 OF 5	PROJECT NO. 1131	SKETCH AND LEGAL DESCRIPTION	BOARD OF COUNTY COMMISSIONERS SAINT LUCIE COUNTY, FLORIDA PUBLIC WORKS DEPT., ENGINEERING DIVISION, SURVEY SECTION 2300 VIRGINIA AVE., FORT PIERCE, FLORIDA 34982 TELEPHONE 462 - 1707	SURVEY RAUL DEC/01 SURV. CHK RAUL DEC/01 DRAWN DSA DEC/01	REVISIONS NO. DATE SUBJECT BY
		CONSERVATION EASEMENT			

EXHIBIT "A"

RESOLUTION 10-R62

MEMORANDUM OF AGREEMENT
July 11, 2010

C10-07-342

THIS MEMORANDUM OF AGREEMENT (MOA) is entered into this 27th day of July, 2010, between the CITY OF PORT ST. LUCIE (CITY) and the COUNTY OF ST LUCIE (COUNTY).

WHEREAS, the CITY is pursuing a roadway connection between Manth Lane and US 1 known as the Crosstown Parkway Extension; and

WHEREAS, the CITY is working on the Environmental Impact Statement (EIS) for the Crosstown Parkway Extension in cooperation with the Federal Highway Administration (FHWA) and the State of Florida Department of Transportation (FDOT); and

WHEREAS, the EIS is evaluating six build alternatives and a no-build alternative for the Crosstown Parkway Extension and the ultimate selection of a preferred alternative will be made with FHWA's final approval; and

WHEREAS should a build alternative be selected, regulatory wetland mitigation (mitigation) will be required by both the South Florida Water Management District (SFWMD) and the United States Army Corps of Engineers (USACE); and

WHEREAS, pursuant to the requirements of the SFWMD Conceptual Environmental Resource Permit (ERP) the CITY has developed a hybrid corridor that represents a composite of the greatest impacts from each of the six build alternatives being evaluated in the EIS and, in turn, the hybrid corridor will be used to define the impacts and mitigation requirements; and

WHEREAS, the CITY proposes to develop a mitigation project to offset the impacts of the Crosstown Parkway Extension should a build alternative be selected via the EIS process; and

WHEREAS, a mitigation project needs to be selected, available, and permitted prior to the CITY's commencement of construction of the Crosstown Parkway Extension; and

WHEREAS, the COUNTY initiated the Platt's Creek Water Quality and Wetland Restoration Project (Platt's Creek Initiative) which, when complete, will provide water quality treatment for a 1,000+ acre drainage basin, eliminate agricultural runoff from 102 acres of active citrus groves directly adjacent to the North Fork of the St. Lucie River (NFSLR), restore/create 80+ acres of wetlands and habitat directly adjacent to Platt's Creek and the NFSLR, eliminate approximately 100 acres of developable land directly adjacent to the NFSLR, and provide natural storage and water purifying functions along the river's floodplain; and

WHEREAS, the COUNTY completed permit plans for the Platt's Creek Initiative; and

WHEREAS, a SFWMD ERP for the Platt's Creek Initiative was issued in April 2003 and the COUNTY received an extension for the permit in July 2008 for an additional five years (expires in July 2013); and

WHEREAS, the COUNTY submitted an application to the USACE, but a construction permit was never issued; and.

WHEREAS, the Platt's Creek Initiative is currently unfunded; however, the COUNTY is interested in moving this project forward; and

WHEREAS, based on discussions with the SFWMD and the USACE, mitigation credits associated with 41 acres of the Platt's Creek Wetland Restoration area appears to provide sufficient mitigation credits for the Crosstown Parkway Extension; and

WHEREAS, based upon discussions with the SFWMD and USACE, a permit modification to permit no. 56-00003-M with the SFWMD and a new permittee responsible permit with the USACE and corresponding mitigation plan for the Platt's Creek Initiative will create the appropriate instrument to allow the completion of the permitting, design, and construction of the Platt's Creek Initiative and provide sufficient mitigation credits for the Crosstown Parkway Extension should a build alternative be selected; and

WHEREAS, the CITY and the COUNTY desire to enter into this MOA for the purpose of setting forth the responsibilities of the parties regarding the implementation of the Platt's Creek Initiative and mitigation credits for the Crosstown Parkway Extension should a build alternative be selected.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the CITY agrees as follows to:

1. Manage, design, permit, and construct the Platt's Creek Initiative as set out in the construction plans submitted with the ERP. The construction plans were completed by Hazen and Sawyer, Environmental Engineers and Scientists, dated August 2001 and modified in March 2008 as provided in Exhibit A.

2. Manage and develop the permittee responsible permit application and mitigation plan for the USACE by submitting a new permit application based largely on the previous mitigation bank application prepared by the COUNTY. The CITY will be responsible for paying the permit and consultant fees to complete this work.

3. Manage and develop the permit modification to permit no. 56-00003-M as a permittee responsible offiste mitigation area for the SFWMD. The CITY will be responsible for paying the permit and consultant fees to complete this work.

4. Contribute the necessary effort to advertise, bid, manage, construct and pay up to $2,000,000 for the construction of the Platt's Creek Initiative.

5. Require the contractor(s) to provide bonds and insurance that meet the COUNTY's requirements, including repair or replacement of damage to county property and facilities resulting from contractor's activities.

6. Provide a mechanism in the contract that will allow the modification of the scope to reduce costs in the event that the construction costs exceed $2,000,000. The

modified/reduced scope, as determined by SFWMD and USACE, shall not lessen the credits below those required for Crosstown Parkway Extension project mitigation available to the CITY.

7. Work with the COUNTY to ensure any construction deficiencies identified during the warrantee period are corrected which could result in the COUNTY's inability to maintain the site pursuant to SFWMD standards

8. Undertake the commitments set forth in this MOA only if a build alternative is approved by FHWA through the EIS process.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the COUNTY agrees as follows to:

1. Provide assistance to the CITY during the design, permitting, and construction phases of the Platt's Creek Initiative to ensure the project are implemented to COUNTY's satisfaction.

2. Provide access to the property for CITY and their consultants/contractors for planning, design, and construction purposes.

3. Provide, in a timely manner, information requested by the CITY for the development of the permittee responsible permit and mitigation plan.

4. Provide review and approval of the design and permit conditions of the Platt's Creek initiative prior to the onset of construction.

5. Commit to lessening the scope of the project if construction costs are greater than $2,000,000

6. Provide necessary documentation to insure that the COUNTY will fund and provide maintenance and monitoring of the site as specified in the permits.

7. Allocate mitigation credits associated with 41 acres of the wetland mitigation area to the CITY to be used towards the regulatory wetland mitigation for the Crosstown Parkway Extension should a build alternative be selected.

8. Enter discussions with the CITY to allocate more credits to the Crosstown Parkway Extension project should it be determined during the permitting process that more mitigation credits are required to offset impacts.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the CITY and COUNTY agree as follows:

1. The CITY and the COUNTY will serve as a joint permittee for the Platt's Creek Initiative with each party being responsible for the items outlined previously. The City Engineer and the County Public Works Director are designated as the CITY and COUNTY project coordinators.

2. The agreement set forth in this MOA is contingent upon the SFWMD and USACE accepting the prepared mitigation plan and allocating mitigation credits associated with 41 acres of the Platt's Creek Initiative as the regulatory wetland mitigation for the construction of the Crosstown Parkway Extension should a build alternative be selected.

3. The agreement set forth in this MOA is contingent upon the SFWMD and USACE allowing the COUNTY to use the remainder of the mitigation credits towards future projects to be completed at an unspecified time.

4. The COUNTY and/or CITY reserve(s) the right to terminate this MOA if the project does not proceed in a timely manner due to a lack of approvals on the EIS from FHWA. Construction is expected to begin within three years of permit approval and to be completed within five years.

5. The CITY reserves the right to terminate this MOA if the no build alternative is selected by the FHWA through the EIS process for the Crosstown Parkway Extension.

The parties hereto have caused this MOA to be executed through their duly authorized signatories on the day and year first above written.

"CITY"

CITY OF PORT ST. LUCIE

By: _____ (SEAL)

Patricia P. Christensen
Print/Type Name

Title: Mayor
(OFFICIAL SEAL)

"COUNTY"

COUNTY OF ST. LUCIE, FLORIDA

By: _____ (SEAL)

Charles Grande
Print/Type Name

Title: Chairman
(OFFICIAL SEAL)

ATTEST:

DEPUTY CLERK

APPROVED AS TO FORM AND CORRECTNESS

COUNTY ATTORNEY

STAFF REPORT DISTRIBUTION LIST

PLATTS CREEK COMPENSATORY MITIGATION

Application No: 111018-4

Permit No: 56-03199-P

INTERNAL DISTRIBUTION

X Carolyn McCreedy
X Melinda Parrott
X Anita R. Bain
X Hugo A. Carter, P.E.
X ERC Martin/St. Lucie
X Permit File

EXTERNAL DISTRIBUTION

X Permittee - St Lucie County Board Of County Commissioners
X Permittee - City Of Port St Lucie
X Agent - American Consulting Engineers Of Florida
X Env Consultant - American Consulting

GOVERNMENT AGENCIES

X City of Port St Lucie - Planning Div
X St. Lucie County Engineer
X St. Lucie County Planning and Development Services
Mark Satterlee, AICP, Director

OTHER INTERESTED PARTIES

X George Jones -Indian Riverkeeper

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RECEIVED
JUN 10 2011
ENGINEERING

C11-05-1606

MITIGATION BANK CREDIT RESERVATION AGREEMENT

THIS AGREEMENT made and entered into this 3 day of May, 2011, by and between **ST. LUCIE COUNTY,** a political subdivision of the State of Florida, ("COUNTY"), whose address is 2300 Virginia Avenue, Fort Pierce, Florida, 34982, and **CITY OF PORT ST. LUCIE**, a Florida municipal corporation, ("CITY"), whose address is 121 S.W. Port St. Lucie Boulevard, Port St. Lucie, Florida 34984-5099.

WITNESSETH

WHEREAS, COUNTY owns and operates the 317-acre Bear Point Mitigation Bank, ("Bear Point") located in St. Lucie County Mosquito Control District Impoundment 1, south of the Ft. Pierce Inlet, in Sections 12 and 13, Township 35 South, Range 40 East, St. Lucie County; and,

WHEREAS, the mitigation service area for Bear Point includes a contiguous mangrove-dominated estuarine ecosystem in the Indian River Lagoon and the St. Lucie River Lagoon and the St. Lucie River, from the Brevard/Indian River County line to the St. Lucie Inlet in Martin County; and,

WHEREAS, CITY is working to permit a new bridge crossing of the North Fork of the St. Lucie River for the Crosstown Parkway roadway project ("Project"), which will serve to extend the Crosstown Parkway from Manth Lane to U.S. Highway 1; and,

WHEREAS, the permitting process for the new bridge falls under the National Environmental Policy Act ("NEPA") which requires the development of an Environmental Impact Statement ("EIS"). The draft EIS has identified six (6) build alternative corridors and a no-build alternative. The selection of a no-build or a specific build-alternative roadway alignment has yet to be determined through the permitting process; and.

WHEREAS, in a parallel effort for the Project, CITY is currently pursuing a Conceptual Environmental Resource Permit ("CERP") from the South Florida Water Management District in the event that a build alternative emerges from the NEPA permitting process. The CERP requires mitigation of impacts to mangroves within the North St. Lucie River Drainage Basin. This mitigation can be through the purchase of mitigation credits from Bear Point under Section 373.413 of the Florida Statues; and,

WHEREAS, CITY and its consultants, together with staff from the permitting agencies, have determined that five tenths (0.50) of a Federal/State Dual Mitigation Credit is the maximum credit needed to mitigate for unavoidable mangrove impacts; and,

WHEREAS, CITY desires to reserve the right to purchase from COUNTY five tenths (0.5) of a Federal/State Dual Mitigation Credit ("Reserved Credit") in order to complete the CERP; and,

WHEREAS, COUNTY is willing to agree to CITY'S request and set aside for future purchase and transfer the Reserved Credit for CITY, which may be transferred or allocated by CITY for a different project if the Project is not permitted.

NOW, THEREFORE, in consideration of the foregoing premises, payment to COUNTY of deposit monies as hereinafter described, the mutual promises and covenants of the parties hereto, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, COUNTY and CITY intending to legally bind the respective entities and successors and assigns, hereby covenant and mutual promises contained herein, the parties agree as follows:

1. **Recitations.** The foregoing recitations are true and correct and are incorporated herein by reference.

2. **Credit Reservation**. COUNTY agrees to reserve five tenths (0.5) Federal/State Dual Credits for the Project as set forth in this Agreement as set forth in the Reserved Credit Allocation attached hereto and incorporated herein as Exhibit "A."

3. **Reservation Period.** The term of this reservation shall begin on the date first written above and shall continue for a period of three (3) years from the date of this Agreement, subject to annual extension based upon the prior written agreement of the parties.

4. **Reservation Fee and Reserved Credit Purchase Price**. In consideration of such reservation, the parties acknowledge that CITY has paid COUNTY a non-refundable reservation fee ("Reservation Fee") in the total amount of SIXTEEN THOUSAND TWO HUNDRED FIFTY AND 00/100 DOLLARS ($16,250.00) based upon twenty-five percent (25%) of the current price of the Reserved Credit upon the date of this Agreement as set forth in the Reserved Credit Allocation and Bear Point has provided CITY with a receipt for such payment.

5. **Notice of Credit Reservation**. It shall be the responsibility of CITY to provide the regulatory agencies with a copy of the receipt or other acceptable proof indicating reservation of the Credits.

6. **CITY'S Exercise of Right to Purchase Reserved Credit.** In the event the permits for the Property are issued, the parties shall enter into a Mitigation Bank Credit Purchase Agreement for the required number of Credits. The amount of the Reservation Fee shall be credited against the Credit purchase price. The parties agree that the Reserved Credit will be available for use by CITY in connection with mitigating the anticipated mangrove impacts that may arise because of the construction of the CITY'S proposed Project. However, if the Project is not permitted, then the parties agree that CITY retains the right, under the same terms and conditions set forth herein, to purchase the Reserved Credit for mitigation of any other CITY project that can be mitigated through Bear Point under Section 371.413 of the Florida Statues or, at the CITY's discretion, sell to another qualifying entity.

7. **Disputes.** Any disputes relating to interpretation of the terms of this Agreement or a question of fact or arising under this Agreement shall be resolved through good faith efforts upon the part of CITY and COUNTY. Prior to initiating any litigation concerning this Agreement, the parties agree to submit the disputed issue or issues to a mediator for non-binding mediation. The parties shall agree on a mediator chosen from a list of certified mediators available from the Clerk of Court for St. Lucie County. The mediator's fee shall be shared equally by the parties. To the extent allowed by law, the mediation process shall be confidential and the results of the mediation or any testimony or argument introduced at the mediation shall not be admissible as evidence in any subsequent proceeding concerning the disputed issue. In the

event it is necessary for either party to initiate legal action regarding this Agreement, venue shall be in the Nineteenth Judicial Circuit for St. Lucie County, Florida, for claims under state law and the Southern District of Florida for any claims, which are justifiable in federal court.

8. **Amendment** This Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior verbal or written agreements between the parties with respect thereto. This Agreement may only be amended by written document, properly authorized, executed and delivered by both parties hereto. This Agreement shall be interpreted as a whole unit. All interpretations shall be governed by the laws of the State of Florida.

9. **Notices.**

COUNTY:	County Administration Annex 2300 Virginia Avenue Fort Pierce, FL 34982 Attn: County Attorney	County Administration Annex 2300 Virginia Avenue Fort Pierce, FL 34982 Attn: County Administrator
CITY	City of Port St Lucie 121 SW Port St Lucie Boulevard Port St Lucie, FL 34984 Attn: City Attorney	City of Port St Lucie 121 SW Port St Lucie Boulevard Port St Lucie, FL 34984 Attn: City Manager

[*THE REMAINER OF THIS PAGE IS INTENTIONALLY LEFT BLANK*]

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed on behalf of the respective entities, their successors and assigns, on the day first above written.

ATTEST:

DEPUTY CLERK

BOARD OF COUNTY COMMISSIONERS
ST. LUCIE COUNTY, FLORIDA

BY:

CHAIRMAN

APPROVED AS TO FORM AND CORRECTNESS:

COUNTY ATTORNEY

ATTEST:

CITY CLERK

CITY OF PORT ST. LUCIE,
A Florida Municipal Corporation

BY:

MAYOR

APPROVED AS TO FORM AND CORRECTNESS:

CITY ATTORNEY

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EXHIBIT "A"

RESERVED CREDIT ALLOCATION

Federal/State Dual Credits	Reservation Price	Total Price
0.5	$16,250.00	$65,000.00

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
4400 PGA BOULVARD, SUITE 500
PALM BEACH GARDENS, FLORIDA 33410

REPLY TO ATTENTION OF

June 8, 2010

Palm Beach Gardens Regulatory Office
SAJ 1998-6236(IP-GGL)

Jerry Bentrott
City Manager
City of Port St. Lucie
121 S.W. Port St. Lucie Blvd.
Port St. Lucie, FL 34984

Dear Mr. Bentrott:

The U.S. Army Corps of Engineers (Corps) is aware that the City of Port St. Lucie is in the process of entering into a Memorandum of Agreement with St. Lucie County to design, permit, construct, and manage the Platt's Creek Water Quality and Wetland Restoration Project as a permittee responsible offsite mitigation area (PROMA). This project was previously reviewed under file application number SAJ 1998-6236, but was withdrawn due to lack of applicant response. We request that all future inquiries or correspondences refer to this application number. The project is located at Section 33 Township 35 South Range 40 East.

It is the Corps understanding that the construction of the Platt's Creek site as a PROMA would likely be appropriate to offset unavoidable adverse effects to wetlands within the North Fork of the St. Lucie River watershed, Hydrologic Unit Code number 03090206. Please be aware that impacts to aquatic resources that are jurisdictional for the Department of the Army (DA) may also be identified as essential fish habitat (EFH), such as mangroves, and/or used by endangered species such as wood storks (*Mycteria americana*). In these cases, the use of a permitted mitigation site may require coordination with, and prior approval from the National Marine Fisheries Service or the United States Fish and Wildlife Service.

The Corps, in general, prefers PROMAs to be located strategically within a watershed to optimize and enhance the ecological functions and services related to the up- and

downstream aquatic resources, transient wildlife, fish and wildlife habitat, and nutrient cycling, among many others. The Corps is aware that this proposed PROMA is adjacent to aquatic resources such as the North Fork of the St. Lucie River (NFSLR) and Savannas Preserve State Park. Therefore, the Corps anticipates that the Platt's Creek site would enhance the wildlife habitat and wetland connectivity within the watershed and would be appropriate mitigation for future unavoidable and permittable impacts to wetlands proposed by the City of Port St. Lucie and St. Lucie County.

The Corps looks forward to reviewing the design plans and providing feedback on the mitigation plan for the Platt's Creek PROMA. Please contact Garett Lips at the letterhead address, or by telephone at (561) 472-3519 if any additional information or clarification is needed.

Sincerely,

Garett Lips
Project Manager

cc: Patricia Roebling, P.E. - City Engineer
Donald West - St. Lucie County
Brian Mirson, P.E, Anna Peterfreund, ACE
Mindy Parrott, Anita Bain - SFWMD
Brandon Howard, NMFS
John Wrublik, USFWS
Ron Miedema, USEPA

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Environmental Resource Regulation Department

June 9, 2010

Jerry A. Bentrott, City Manager
City of Port St. Lucie
121 SW Port St. Lucie Blvd.
Port St. Lucie, FL 34984-5099

Dear Mr. Bentrott:

Subject: Crosstown Parkway Extension and Platt's Creek Water Quality and Wetland Restoration Projects ERP Application Number 090107-1

In response to your May 18, 2010 letter (copy attached), I can confirm that District staff supports the use of the Platt's Creek Wetland Restoration Project (also known as Platt's Creek Mitigation Bank) as mitigation for the City's Crosstown Parkway project if, as a result of the Environmental Impact Statement, a build alternative is selected. However, final agency approval will be a decision for the Executive Director.

To accomplish the use of the Platt's Creek site for mitigation, the Platt's Creek Mitigation Bank Permit (Permit No. 56-00003-M) would need to be modified to change it from a mitigation bank to an offsite mitigation area, to add the City of Port St. Lucie as a co-permittee, and to change the mitigation assessment method to the Uniform Mitigation Assessment Method (UMAM, Rule 62-345, F.A.C.). Because UMAM is being used to determine the loss of function due to the proposed impacts, the gain in function when mitigation is conducted must be evaluated using this method as well.

District staff conducted a desk-top, preliminary UMAM based on the information within the existing mitigation bank permit. Based on that information, the Platt's Creek project could generate approximately 13.77 herbaceous and 11.28 forested credits. Approximately half of that total appears to be sufficient to offset any wetland impacts associated with the Crosstown Parkway project using a worst-case alternative.

If you have any further questions, please contact me at (561) 682-6866 or at abain@sfwmd.gov.

Sincerely,

Anita R. Bain

Anita R. Bain, Director
Environmental Resource Permitting Division

ARB/mp
Attachment

Harry Fulwood

From: Kristine Stewart
Sent: Thursday, September 27, 2012 12:42 PM
To: John P. Krane
Cc: Barry Ehrlich; Harry Fulwood
Subject: FW: Platts Creek wood stork mitigation (UNCLASSIFIED)

-----Original Message-----
From: Peterfreund, Anna L. [mailto:Anna.Peterfreund@acp-ga.com]
Sent: Thursday, September 27, 2012 12:28 PM
To: FKnott@cityofpsl.com; patr@cityofpsl.com; Roxanne Chesser; RDorfmeister@cityofpsl.com; Mirson, Brian J.; besseyj@stlucieco.org; Kristine Stewart; Salicco, Christopher
Subject: FW: Platts Creek wood stork mitigation (UNCLASSIFIED)

FYI - please see below the response from USFWS regarding wood stork mitigation at Platt's Creek. Thanks!

Anna Peterfreund, CWB
American Consulting Professionals, LLC
243 N. Hamilton Street, Suite 2
Dalton, GA 30720
706-508-4029
706-523-2520 Cell
706-529-2746 Fax
anna.peterfreund@acp-ga.com

-----Original Message-----
From: Lips, Garett G SAJ [mailto:Garett.G.Lips@usace.army.mil]
Sent: Thursday, September 27, 2012 12:24 PM
To: Peterfreund, Anna L.
Subject: FW: Platts Creek wood stork mitigation (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Anna,
see FWS email below

Thank you,

Garett Lips
Biologist
U.S. Army Corps of Engineers
4400 PGA Boulevard, Suite 500

Palm Beach Gardens, FL 33410
Office 561-472-3519

Please use the link below to find a map to our office, FAQ's, Contact info, Our Statutes, Regulations, AVATAR Guide To Filling Out Our Applications, Public Notices & More.

http://www.saj.usace.army.mil/Divisions/Regulatory/index.htm

Please assist us in better serving you! Please complete the stakeholder survey by clicking on the following link: http://per2.nwp.usace.army.mil/survey.html

-----Original Message-----
From: John_Wrublik@fws.gov [mailto:John_Wrublik@fws.gov]
Sent: Wednesday, September 19, 2012 2:50 PM
To: Lips, Garett G SAJ
Subject: Platts Creek wood stork mitigation

Garrett, I have reviewed the wood stork forage information provided by the applicant's consultant for the Platt Creek PROMA, and it is acceptable to the Service.

For your records:

The 49.34 acres of wetlands to be created at the site will consist of 13.45 acres of short hydroperiod wetlands and 35.8 acres of long hydroperiod wetlands providing 11.04 Kilograms (Kg) and 110.54 Kg of wood stork forage, respectively.

The 29.14 acres of wetlands mitigation at the Platts Creek PROMA to be used as mitigation for the Crosstown Parkway project consists of 13.54 acres of short hydroperiod wetlands and 15.6 acres of long hydroperiod wetlands providing 11.04 Kg and 55.15 Kg of wood stork forage, respectively.

As such, the Platts Creek Proma will have the following wood stork forage available for future projects:

0 acres of short hydroperiod wetlands providing 0 Kg of wood stork forage

20.2 acres of long hydroperiod wetlands providing 55.39 Kg of wood stork forage

If you have any questions, please let me know.

John M. Wrublik
U.S. Fish and Wildlife Service
Vero Beach Ecological Services Office
1339 20th Street
Vero Beach, Florida 32960
Phone: 772-469-4282
Fax: 772-562-4288

cc: Patricia Roebling, P.E.—City Engineer
Brian Mirson, P. E.—American Consulting Engineers of Florida, LLC
Garrett Lips—USACE (electronic copy)

Bc: Electronic copies only:

Bob Brown – 2410
Tony Waterhouse - 2410
Mindy Parrott-2460
Hugo Carter – 2460

CITY OF PORT ST. LUCIE

"A City for All Ages"

May 18, 2010

Anita Bain
Director
South Florida Water Management District
P.O. Box 24680
West Palm Beach, FL 33416-4680

Re: Crosstown Parkway Extension and Platt's Creek Water Quality and Wetland Restoration Projects
Draft Memorandum of Agreement

Dear Ms. Bain:

Thank you and your staff for meeting with us to discuss the comments within the third RAI for the Crosstown Parkway Extension Project. As you are aware, the City is very interested in pursuing St. Lucie County's Platt's Creek Water Quality and Wetland Restoration Project as mitigation for this project. We are currently pursuing a Memorandum of Agreement (MOA) with the County for use of this property whereby the City would utilize half (41 acres) of the project as mitigation for the Crosstown project and the remaining part of the Platt's Creek mitigation area would be available for the County to use on future projects. We also understand that there will be no expiration date for the County to use the remaining credits.

Our consultants and City Staff have had numerous conversations with the United States Army Corps of Engineers (USACE) and your staff and we believe that both agencies support the concept of using Platt's Creek for wetland mitigation should a build alternative be selected for the Crosstown Parkway Extension. In the latest advisory comments for the project, your staff indicated that "a desk-top preliminary UMAM based on the existing permit estimates that it could generate 13.77 herbaceous and 11.28 forested credits, half of which appears to be sufficient to offset the alternative with the worst-case impacts." Per our latest conversation, the City would like some assurances from the SFWMD that 41 acres of the Platt's Creek mitigation initiative will be sufficient to mitigate wetland impacts for the Crosstown project. We are requesting that you send a letter or provide other written documentation regarding the use of the Platt's Creek property in order that we may present the MOA to the City Council and County Commission for their consideration. We appreciate your prompt response on this matter and your help to date. If you have any questions or need additional information, please do not hesitate to contact me.

Sincerely,

Jerry A. Bentrott
City Manager

JB/rr
Enclosure

RECEIVED
MAY 20 2010
ENV RES REGULATION

cc: Patricia Roebling, P.E. – City Engineer
Brian Mirson, P.E. – American Consulting Engineers of Florida, LLC
Garett Lips – USACE
Mindy Parrott – SFWMD

S:\projects\Crosstown Parkway Extension\2.0 Studies\2.3 CERP\2.3.1 Mitigation\Platt's Creek Mitigation\LET_City_to_SFWMD_request_letter_Platts_Creek_100510 (4) with Letterhead.doc

FLORIDA DEPARTMENT OF STATE
Kurt S. Browning
Secretary of State
DIVISION OF HISTORICAL RESOURCES

South Florida Water Management District
P.O. Box 24680
West Palm Beach, Florida 33416-4680

November 10, 2011

Re: Projects Reviewed by the Florida State Historic Preservation Office
No Historic Properties Likely Affected – **See Page 2**

Dear Mr. Waterhouse:

Our office received and reviewed the referenced projects in accordance with Chapters 267 and 373, *Florida Statutes*, Florida's Coastal Management Program, and implementing state regulations, for possible impact to historic properties listed, or eligible for listing, in the *National Register of Historic Places*, or otherwise of historical, architectural or archaeological value. The State Historic Preservation Officer is to advise and assist state and federal agencies when identifying historic properties, assessing effects upon them, and considering alternatives to avoid or minimize adverse effects.

Our review of the Florida Master Site File indicates that no significant archaeological or historical resources are recorded within the project areas. Furthermore, because of the location and/or nature of the projects it is unlikely that any such sites will be affected.

For any questions concerning our comments, please contact Robin Jackson, Historic Sites Specialist, at 850.245.6333, or by electronic mail at robin.jackson@dos.myflorida.com. We appreciate your continued interest in protecting Florida's historic properties.

Sincerely,

Laura A. Kammerer

Laura A. Kammerer
Historic Preservationist Supervisor
Compliance Review Section
Bureau of Historic Preservation

DHR NO.	App. No.	Project/Applicant Name	County
2011-4615	111013-8	DCT Commerce Center at Pan American West	Dade
2011-4616	111014-8	Airglades Industrial Park	Hendry
2011-4621	111018-4	Platt's Creek Compensatory Mitigation	St. Lucie
2011-4623	111017-1	US Special Operations Command Head Quarters Facility	Dade
2011-4624	111017-4	Gama Global LLC	Dade
2011-4628	111018-6	9120 Kilgore Road Pipe Replacement	Orange

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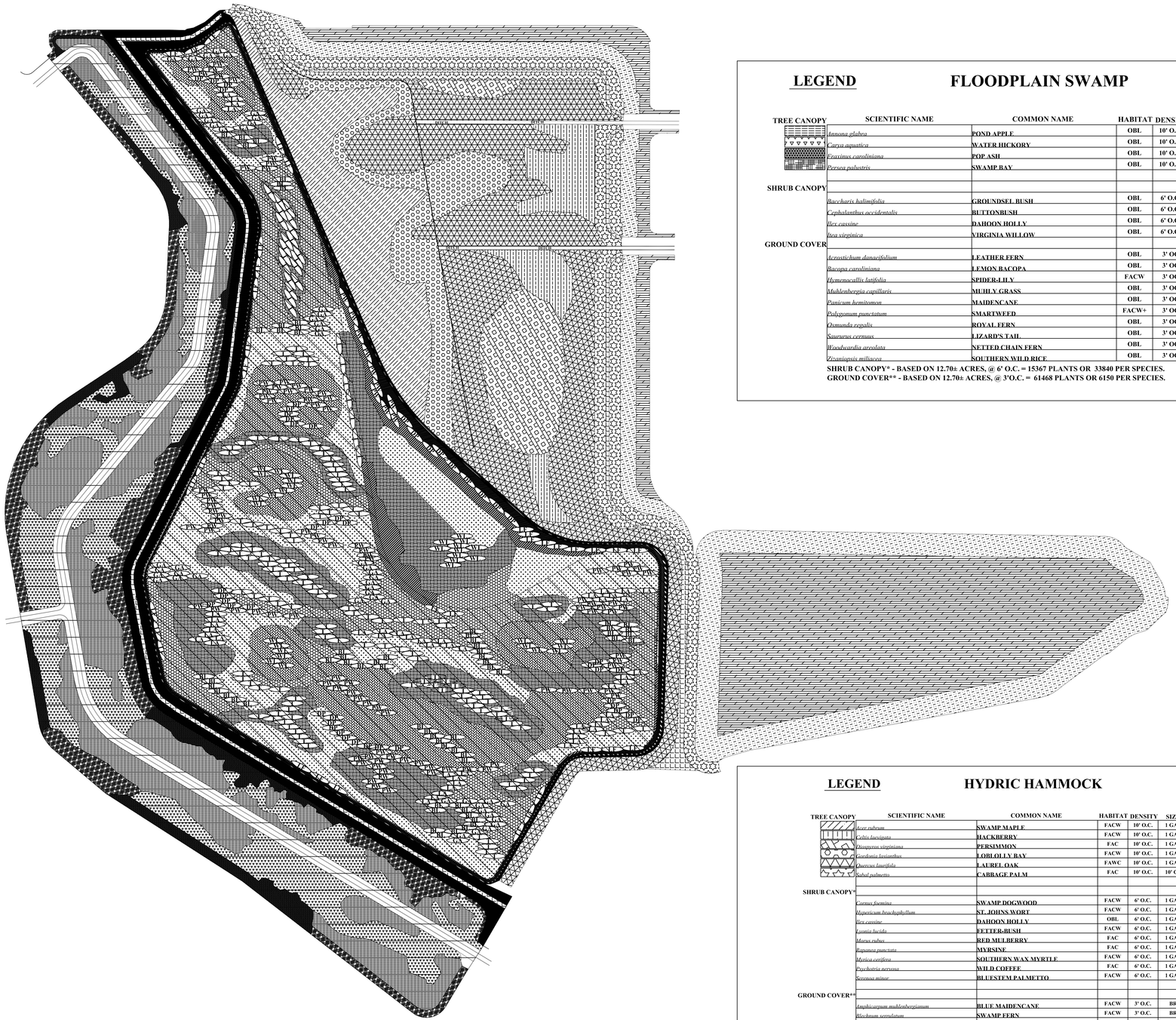
AMERICAN CONSULTING ENGINEERS OF FLORIDA, LLC
2818 CYPRESS RIDGE BOULEVARD, SUITE 200
WESLEY CHAPEL, FL 34544-8302
TELEPHONE (813) 435-2600; FAX (813)-345-2601

THIS DRAWING, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DRAWING, WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY R.L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. SHALL BE WITHOUT LIABILITY TO R.L. WEIGT ENVIRONMENTAL CONSULTANTS, INC.

North

0' 60' 120' 240 480'

SCALE: 1" = 120'



LEGEND — FLOODPLAIN SWAMP

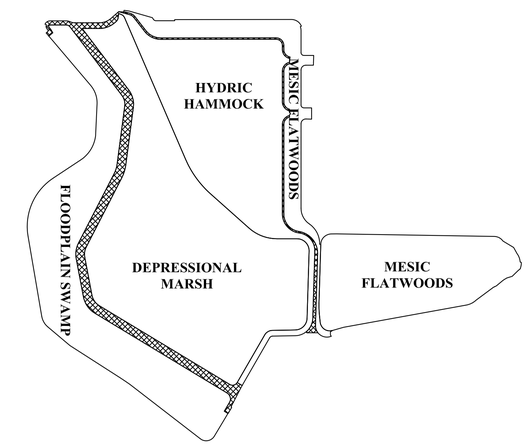
	SCIENTIFIC NAME	COMMON NAME	HABITAT	DENSITY	SIZE	TOTAL UNITS
TREE CANOPY	*Annona glabra*	POND APPLE	OBL	10' O.C.	1 GAL	1920
	Carya aquatica	WATER HICKORY	OBL	10' O.C.	1 GAL	1650
	Fraxinus caroliniana	POP ASH	OBL	10' O.C.	1 GAL	520
	Persea palustris	SWAMP BAY	OBL	10' O.C.	1 GAL	870
SHRUB CANOPY						
	Baccharis halimifolia	GROUNDSEL BUSH	OBL	6' O.C.	1 GAL	3840
	Cephalanthus occidentalis	BUTTONBUSH	OBL	6' O.C.	1 GAL	3840
	Ilex cassine	DAHOON HOLLY	OBL	6' O.C.	1 GAL	3840
	Itea virginica	VIRGINIA WILLOW	OBL	6' O.C.	1 GAL	3840
GROUND COVER						
	Acrostichum danaeifolium	LEATHER FERN	OBL	3' OC	BR	6150
	Bacopa caroliniana	LEMON BACOPA	OBL	3' OC	BR	6150
	Hymenocallis latifolia	SPIDER-LILY	FACW	3' OC	BR	6150
	Muhlenbergia capillaris	MUHLY GRASS	OBL	3' OC	BR	6150
	Panicum hemitomon	MAIDENCANE	OBL	3' OC	BR	6150
	Polygonum punctatum	SMARTWEED	FACW+	3' OC	BR	6150
	Osmunda regalis	ROYAL FERN	OBL	3' OC	BR	6150
	Saururus cernuus	LIZARD'S TAIL	OBL	3' OC	BR	6150
	Woodwardia areolata	NETTED CHAIN FERN	OBL	3' OC	BR	6150
	Zizaniopsis miliacea	SOUTHERN WILD RICE	OBL	3' OC	BR	6150

SHRUB CANOPY* - BASED ON 12.70± ACRES, @ 6' O.C. = 15367 PLANTS OR 33840 PER SPECIES.
GROUND COVER** - BASED ON 12.70± ACRES, @ 3'O.C. = 61468 PLANTS OR 6150 PER SPECIES.

LEGEND — DEPRESSIONAL MARSH

	SCIENTIFIC NAME	COMMON NAME	HABITAT	DENSITY	SIZE	TOTAL UNITS
LF	*Acrostichum danaeifolium*	LEATHER FERN	OBL	3' OC	BR	1690
	Bacopa caroliniana	LEMON BACOPA	OBL	3' OC	BR	775
	Crinum americanum	CRINUM LILY	OBL	3' OC	BR	630
	Eleocharis cellulosa	SPIKE RUSH	OBL	3' OC	BR	15150
	Eleocharis interstincta	JOINTED SPIKE RUSH	OBL	3' OC	BR	21440
	Eragrostis spectabilis	PURPLE LOVEGRASS	FAC	3' OC	BR	1260
BL	*Nymphaides aquatica*	BANANA LILY	OBL	3' OC	BR	3150
WL	*Nymphaea odorata*	FRAGRANT WATER LILY	OBL	3' OC	BR	1600
	Panicum hemitomon	MAIDENCANE	OBL	3' OC	BR	3190
GA	*Peltandra virginica*	GREEN ARUM	OBL	3' OC	BR	2450
PW	*Pontederia cordata*	PICKEREL WEED	OBL	3' OC	BR	5240
	Rhynochospora microcarpa	SOUTHERN BEAKRUSH	OBL	3' OC	BR	3920
LA	*Sagittaria lancifolia*	LANCE-LEAF ARROWHEAD	OBL	3' OC	BR	2400
DP	*Sagittaria latifolia*	DUCK POTATO	OBL	3' OC	BR	2310
	Scirpus californicus	GIANT BULRUSH	OBL	3' OC	BR	21250
	Scirpus validus	SOFT STEM BULRUSH	OBL	3' OC	BR	15390
	Spartina bakeri	SMOOTH CORDGRASS	FACW	3' OC	BR	12782
T	*Thalia geniculata*	ARROWROOT	OBL	3' OC	BR	7880

HYDRO SEED (0.5± ACRES) SEE DETAIL SHEET.



LEGEND — HYDRIC HAMMOCK

	SCIENTIFIC NAME	COMMON NAME	HABITAT	DENSITY	SIZE	TOTAL UNITS
TREE CANOPY	*Acer rubrum*	SWAMP MAPLE	FACW	10' O.C.	1 GAL	1090
	Celtis laevigata	HACKBERRY	FACW	10' O.C.	1 GAL	480
	Diospyros virginiana	PERSIMMON	FAC	10' O.C.	1 GAL	610
	Gordonia lasianthus	LOBLOLLY BAY	FACW	10' O.C.	1 GAL	700
	Quercus laurifola	LAUREL OAK	FAWC	10' O.C.	1 GAL	2560
	Sabal palmetto	CABBAGE PALM	FAC	10' O.C.	10' CT	410
SHRUB CANOPY*						
	Cornus foemina	SWAMP DOGWOOD	FACW	6' O.C.	1 GAL	1820
	Hypericum brachyphyllum	ST. JOHNS WORT	FACW	6' O.C.	1 GAL	1820
	Ilex cassine	DAHOON HOLLY	OBL	6' O.C.	1 GAL	1820
	Lyonia lucida	FETTER-BUSH	FACW	6' O.C.	1 GAL	1820
	Morus rubus	RED MULBERRY	FAC	6' O.C.	1 GAL	1820
	Rapanea punctata	MYRSINE	FAC	6' O.C.	1 GAL	1820
	Myrica cerifera	SOUTHERN WAX MYRTLE	FACW	6' O.C.	1 GAL	1820
	Psychotria nervosa	WILD COFFEE	FAC	6' O.C.	1 GAL	1820
	Serenoa minor	BLUESTEM PALMETTO	FACW	6' O.C.	1 GAL	1820
GROUND COVER**						
	Amphicarpum muhlenbergianum	BLUE MAIDENCANE	FACW	3' O.C.	BR	8190
	Blechnum serrulatum	SWAMP FERN	FACW	3' O.C.	BR	8190
	Eusirena scirpoidea	RUSH FUIRENA	FACW	3' O.C.	BR	8190
	Muhlenbergia capillaris	GULF MUHLY GRASS	OBL	3' O.C.	BR	8190
	Osmunda regalis	ROYAL FERN	OBL	3' O.C.	BR	8190
	Panicum dichotomiflorum	FALL PANIC GRASS	FACW	3' O.C.	BR	8190
	Panicum virgatum	SWITCHGRASS	FACW	3' O.C.	BR	8190
	Tripsacum dactyloides	FAKAHATCHEE GRASS	FAC	3' O.C.	BR	8190

SHRUB CANOPY* - BASED ON 13.54± ACRES, @ 6' O.C. = 16380 PLANTS OR 1820 PER SPECIES.
GROUND COVER** - BASED ON 13.54± ACRES, @ 3'O.C. = 65530 PLANTS OR 8190 PER SPECIES.

HYDRO SEED

LEGEND — MESIC FLATWOODS

	SCIENTIFIC NAME	COMMON NAME	HABITAT	DENSITY	SIZE	TOTAL UNITS
TREE CANOPY	*Pinus elliottii*	SLASH PINE	UPL	10' O.C.	1 GAL	3310
	Quercus virginica	LIVE OAK	FACW	10' O.C.	1 GAL	1370
	Sabal palmetto	GABBAGE PALM	FAC	10' O.C.	10' CT	610
SHRUB CANOPY*						
	Sideroxylon salicifolium	WILLOW BUSTIC	UPL	6' O.C.	1 GAL	2065
	Gaylussacia dumosa	DWARF HUCKLEBERRY	FACW	6' O.C.	1 GAL	2065
	Ilex cassine	DAHOON HOLLY	OBL	6' O.C.	1 GAL	2065
	Ilex glabra	GALLBERRY	UPL	6' O.C.	1 GAL	2065
	Lyonia ferruginea	RUSTY LYONIA	UPL	6' O.C.	1 GAL	2065
	Myrica cerifera	SOUTHERN WAX MYRTLE	FAC	6' O.C.	1 GAL	2065
	Serenoa repens	SAW PALMETTO	UPL	6' O.C.	1 GAL	2065
	Viburnum obovatum	SMALL LEAF VIBURNUM	FACW	6' O.C.	1 GAL	2065
GROUND COVER**						
	Amphicarpum muhlenbergianum	BLUE MAIDENCANE	FACW	3' O.C.	BR	8260
	Aristida spiciformis	ARROW FEATHER GRASS	FAC	3' O.C.	BR	8260
	Cyperus odoratus	FLAT SEDGE	FACW	3' O.C.	BR	8260
	Eragrostis spectabilis	LOVEGRASS	FAC	3' O.C.	BR	8260
	Erianthus giganteus	SUGARCANE PLUMEGRASS	FACW	3' O.C.	BR	8260
	Muhlenbergia capillaris	GULF MUHLY GRASS	OBL	3' O.C.	BR	8260
	Panicum virgatum	SWITCH GRASS	FAC	3' O.C.	BR	8260
	Tripsacum dactyloides	FAKAHATCHEE GRASS	FAC	3' O.C.	BR	8260

SHRUB CANOPY* - BASED ON 3.65± ACRES, @ 6' O.C. = 16516 PLANTS OR 2065 PER SPECIES.
GROUND COVER** - BASED ON 13.65± ACRES, @ 3'O.C. = 66066 PLANTS OR 8260 PER SPECIES.

SOURCE:RLW AND ACEF

PLAN VIEW	LATITUDE: LATITUDE: N27° 23'24.939"	DATE: 28 NOVEMBER 2011	SCALE: 1" = 120'	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: W080°20'34.176"	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK MITIGATION
PROPOSED PLANTING PLAN
MASTER PLANTING PLAN

R. L. WEIGT
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DRAWING NO. 01 - MASTER PLAN.DWG

FIGURE: 1 OF 43

PLATTS CREEK COMPENSATORY MITIGATION PROJECT PLANTING PLAN

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REVISED:07 DECEMBER 2011

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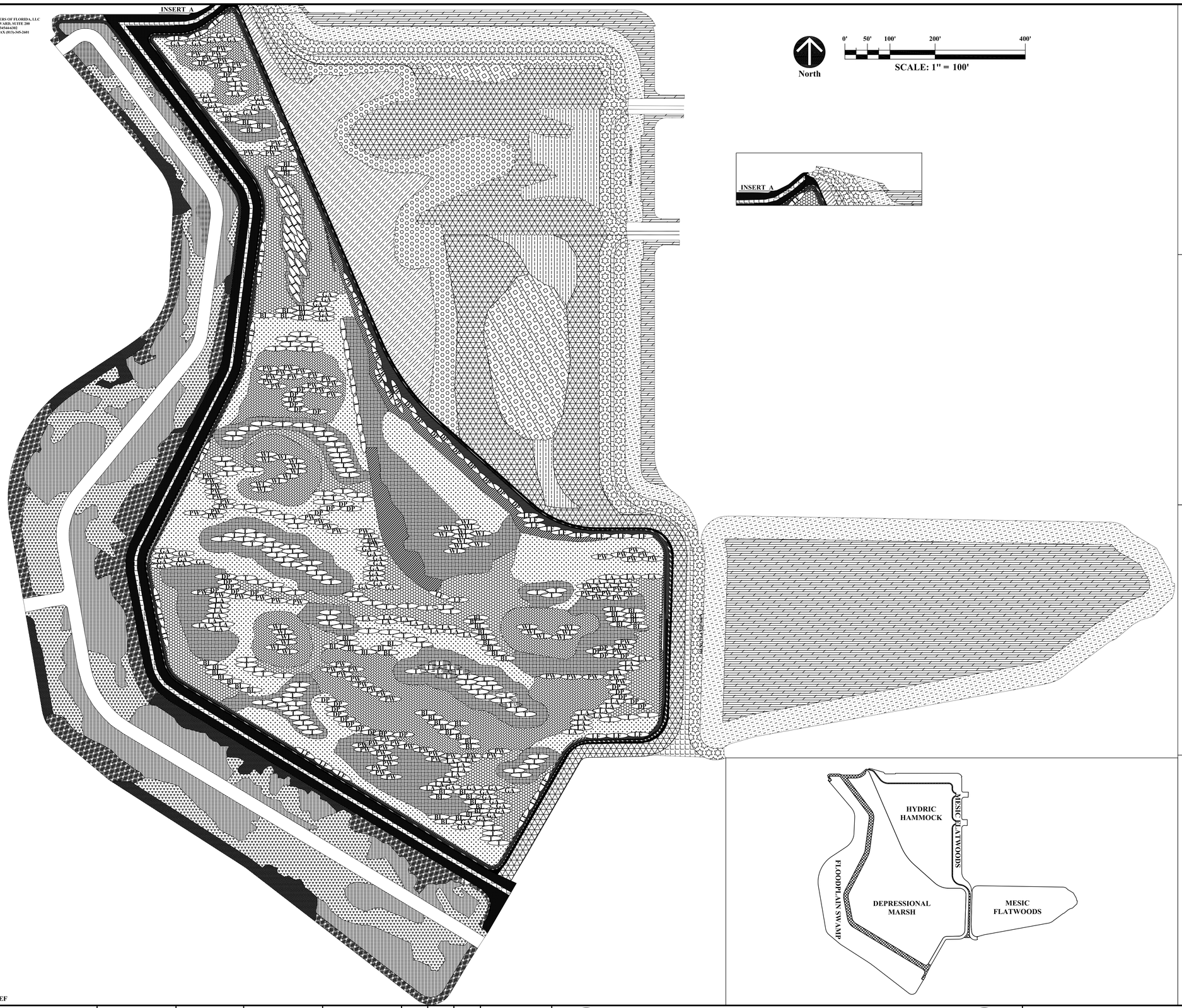

SOURCE:RLW AND ACEF

LEGEND — FLOODPLAIN SWAMP

	SCIENTIFIC NAME	COMMON NAME
TREE CANOPY	*Annona glabra*	POND APPLE
	Carya aquatica	WATER HICKORY
	Gordonia lasianthus	LOBLOLLY BAY
	Nyssa sylvatica	SWAMP BAY
SHRUB CANOPY		
	Baccharis halimifolia	CROUNDSEL BUSH
	Cephalanthus occidentalis	BUTTONBUSH
	Ilex cassine	DAHOON HOLLY
	Itea virginica	VIRGINIA WILLOW
GROUND COVER		
	Acrostichum danaeifolium	LEATHER FERN
	Bacopa caroliniana	LEMON BACOPA
	Hymenocallis latifolia	SPIDER LILY
	Muhlenbergia capillaris	MUHLY GRASS
	Panicum hemitomon	MAIDENCANE
	Polygonum punctatum	KNARTWEED
	Osmunda regalis	ROYAL FERN
	Saururus cernuus	LIZARDS TAIL
	Woodwardia areolata	NETTED CHAIN FERN
	Zizaniopsis miliacea	SOUTHERN WILD RICE

SHRUB CANOPY* = BASED ON 12.70± ACRES, @ 6' O.C. = 15367 PLANTS OR 3060 PER SPECIES.
GROUND COVER** = BASED ON 12.70± ACRES, @ 3'O.C. = 61468 PLANTS OR 6150 PER SPECIES.
REFER TO DETAIL SHEET (21 OF 21)

LEGEND — DEPRESSIONAL MARSH

	SCIENTIFIC NAME	COMMON NAME
LF	*Acrostichum danaeifolium*	LEATHER FERN
	Bacopa caroliniana	LEMON BACOPA
	Boehmeria cylindrica	CHINEM LILY
	Juncus aemoricanus / Juncus effusus / Eleocharis interstincta (left)	SPIKE RUSH / JOINTED SPIKE RUSH
	Juncus effusus	SOFT RUSH
BL	*Iris virginica var. caroliniana*	PURPLE LOUSIEGRASS
WL	*Crinum americanum*	BANANA LILY
	Nymphaea odorata	FRAGRANT WATER LILY
	Panicum hemitomon	MAIDENCANE
GA	*Orontium aquaticum*	GREEN AREUM
PW	*Pontederia cordata*	PICKEREL WEED
	Saururus cernuus / Rhynchospora decurvatrata	SOUTHERN BEARGRASS
LA	*Sagittaria lancifolia*	LANCE-LEAF ARROWHEAD
DP	*Sagittaria latifolia*	DUCK POTATO
	Spartina cynosuroides	GIANT RUBRUSH
	Scirpus validus	SOFT STEM BULRUSH
	Vallisneria americana	VIRGINIA CORDGRASS
	Pontederia lancifolia	ARROWROOT

HYDRO SEED (0.57+ ACRES) SEE DETAIL SHEET1 (20 OF 21)
REFER TO DETAIL SHEET (21 OF 21)

LEGEND — HYDRIC HAMMOCK

	SCIENTIFIC NAME	COMMON NAME
TREE CANOPY	*Acer rubrum*	SWAMP MAPLE
	Celtis laevigata	HACKBERRY
	Diospyros virginiana	PERSIMMON
	Gordonia lasianthus	LOBLOLLY BAY
	Persea palustris	LAUREL OAK
	Sabal palmetto	CABBAGE PALM
SHRUB CANOPY*		
	Cornus foemina	SWAMP DOGWOOD
	Hypericum fasciculatum	ST. JOHNS WORT
	Ilex cassine	DAHOON HOLLY
	Lyonia lucida	FETTER-BUSH
	Morus rubra	RED MULBERRY
	Myrsine punctata	MYRSINE
	Myrica cerifera	SOUTHERN WAX MYRTLE
	Symplocos tinctoria	WILD COFFEE
	Serenoa repens	BLUESTEM PALMETTO
GROUND COVER**		
	Amphicarpum muhlenbergianum	BLUE MAIDENCANE
	Boehmeria cylindrica	SWAMP FERN
	Fuirena scirpoidea	RUSH FUIRENA
	Muhlenbergia capillaris	GULF MUHLY GRASS
	Osmunda regalis	ROYAL FERN
	Panicum dichotomiflorum	FALL PANIC GRASS
	Panicum virgatum	SWITCHGRASS
	Tripsacum dactyloides	KAKAWATCHEE GRASS

SHRUB CANOPY* = BASED ON 13.54± ACRES, @ 6' O.C. = 16380 PLANTS OR 1820 PER SPECIES.
GROUND COVER** = BASED ON 13.54± ACRES, @ 3'O.C. = 60530 PLANTS OR 8190 PER SPECIES.

HYDRO SEED REFER TO DETAIL SHEET 1 (SHEET 20 OF 21)

REFER TO PLANTING DETAIL SHEET 2 (21 OF 21)

LEGEND — MESIC FLATWOODS

	SCIENTIFIC NAME	COMMON NAME
TREE CANOPY	*Pinus elliottii*	SLASH PINE
	Quercus virginiana	LIVE OAK
	Sabal palmetto	CABBAGE PALM
SHRUB CANOPY*		
	Dalbergia sericifolium	WILLOW BUSTIC
	Gaylussacia dumosa	DWARF HUCKLEBERRY
	Ilex cassine	DAHOON HOLLY
	Ilex glabra	GALLBERRY
	Lyonia ferruginea	RUSTY LYONIA
	Myrica cerifera	SOUTHERN WAX MYRTLE
	Serenoa repens	SAW PALMETTO
	Viburnum obovatum	SMALL LEAF VIBURNUM
GROUND COVER**		
	Amphicarpum muhlenbergianum	BLUE MAIDENCANE
	Aristida spiciformis	ARROW FEATHER GRASS
	Cyperus odoratus	FLAT SEDGE
	Eragrostis spectabilis	LOVEGRASS
	Crinathus elegantulus	MEGARGANE PLUMEGRASS
	Muhlenbergia capillaris	GULF MUHLY GRASS
	Panicum virgatum	SWITCH GRASS
	Tripsacum dactyloides	KAKAWATCHEE GRASS

SHRUB CANOPY* = BASED ON 13.65± ACRES, @ 6' O.C. = 16516 PLANTS OR 2065 PER SPECIES.
GROUND COVER** = BASED ON 13.65± ACRES, @ 3'O.C. = 66066 PLANTS OR 8260 PER SPECIES.
REFER TO PLANTING DETAIL SHEET 2 (21 OF 21)

MASTER PLAN	LATITUDE: LATITUDE: N27° 23'24.939"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 100'	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: W080°20'34.176"	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
MASTER PLANTING PLAN

R. L. WEIGT
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DRAWING NO.
01 - MASTER PLANTING PLAN.DWG

SHEET:
1 OF 21

AMERICAN CONSULTING ENGINEERS OF FLORIDA, LLC
2818 CYPRESS RIDGE BOULEVARD, SUITE 200
WESLEY CHAPEL, FL 34544-6302
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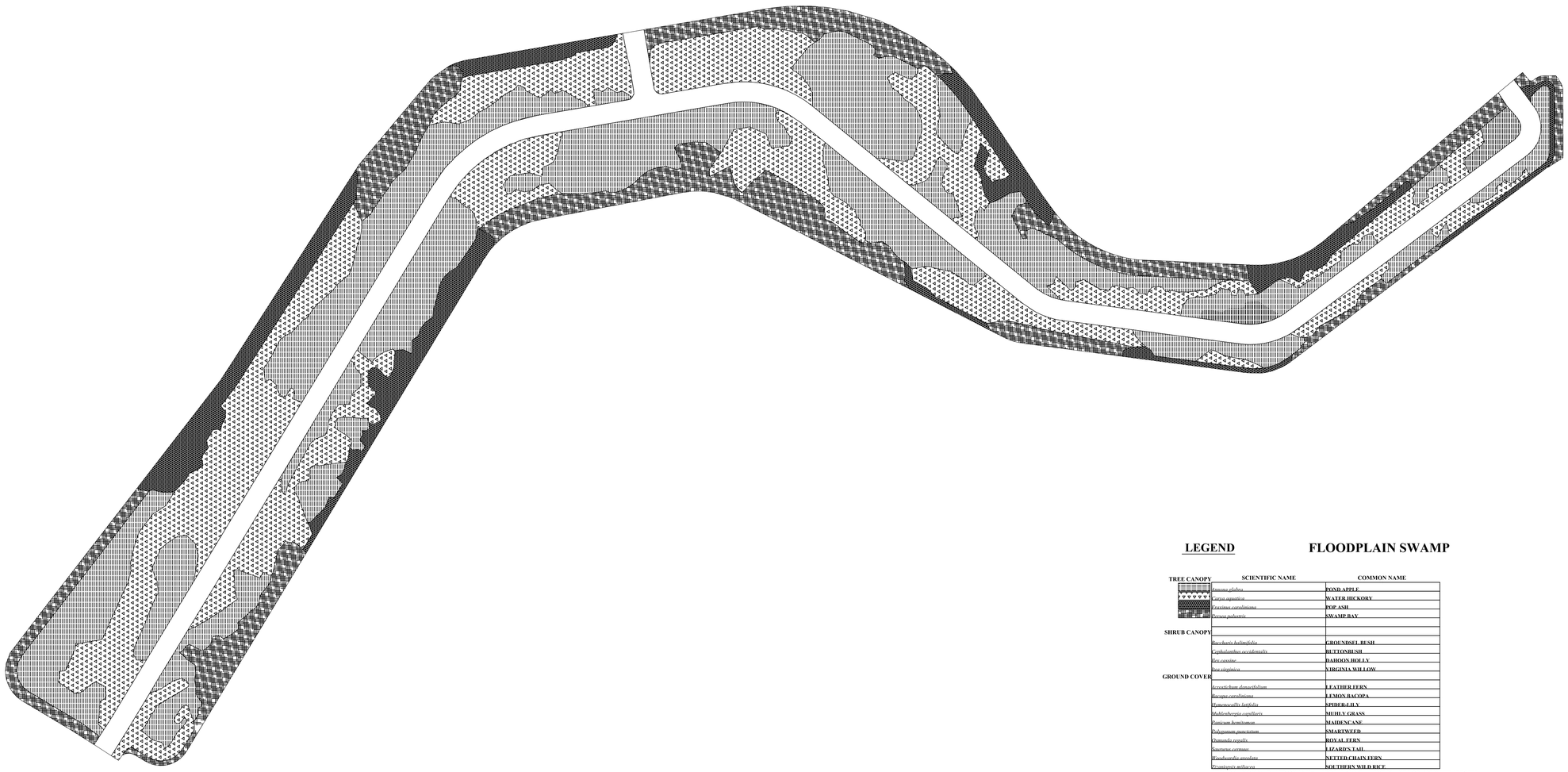
North

0' 40' 80' 160' 320'

SCALE: 1" = 80'



LEGEND

FLOODPLAIN SWAMP

	SCIENTIFIC NAME	COMMON NAME
TREE CANOPY		
	Annona glabra	POND APPLE
	Carya aquatica	WATER HICKORY
	Fraxinus caroliniana	POP ASH
	Persea palustris	SWAMP BAY
SHRUB CANOPY		
	Baccharis halimifolia	GROUNDSEL BUSH
	Cephalanthus occidentalis	BUTTONBUSH
	Ilex cassine	DAHOON HOLLY
	Iva virginica	VIRGINIA WILLOW
GROUND COVER		
	Acrostichum danaeifolium	LEATHER FERN
	Bacopa caroliniana	LEMON BACOPA
	Hymenocallis latifolia	SPIDER-LILY
	Muhlenbergia capillaris	MUHLY GRASS
	Panicum hemitomon	MAIDENCANE
	Polygonum punctatum	SMARTWEED
	Osmunda regalis	ROYAL FERN
	Saururus cernuus	LIZARD'S TAIL
	Woodwardia areolata	NETTED CHAIN FERN
	Zizaniopsis miliacea	SOUTHERN WILD RICE

SHRUB CANOPY* - BASED ON 12.70± ACRES, @ 6' O.C. = 15367 PLANTS OR 33840 PER SPECIES.
GROUND COVER** - BASED ON 12.70± ACRES, @ 3'O.C. = 61468 PLANTS OR 6150 PER SPECIES.
REFER TO DETAIL SHEET (21 OF 21)

SOURCE:RLW AND ACEF

PLAN VIEW	LATITUDE: LATITUDE: N27° 23'24.939"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 80'	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: W080°20'34.176"	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
FLOODPLAIN SWAMP PLANTING PLAN

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
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DRAWING NO.
02 - FPF PLANT PLAN 24X36.DWG

SHEET:
2 OF 21

AMERICAN CONSULTING ENGINEERS OF FLORIDA, LLC
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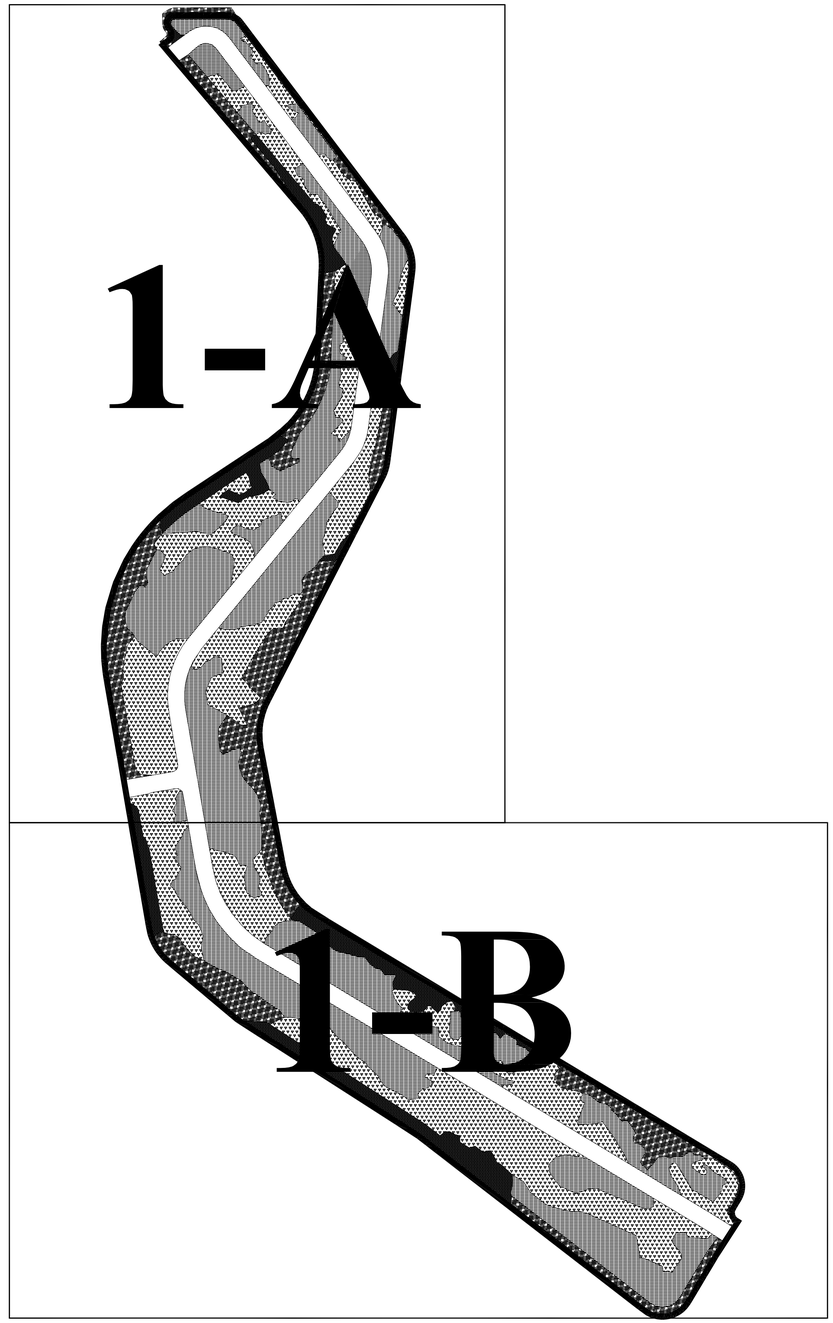
North

0' 60' 120' 240' 480'

SCALE: 1" = 120'



SOURCE:RLW AND ACEF

KEY MAP	LATITUDE: LATITUDE: N27° 23'24.939"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 120'	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: W080°20'34.176"	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
FLOODPLAIN SWAMP MATCH LINE KEY MAP

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DRAWING NO.
03-FPC PLANT PLAN MATCHLINES KEY MAP.DWG

SHEET:
3 OF 21

AMERICAN CONSULTING ENGINEERS OF FLORIDA, LLC
2818 CYPRESS RIDGE BOULEVARD, SUITE 200
WESLEY CHAPEL, FL 34544-6302
TELEPHONE (813) 435-2600; FAX (813)-345-2601

North

0' 20' 40' 80' 160'

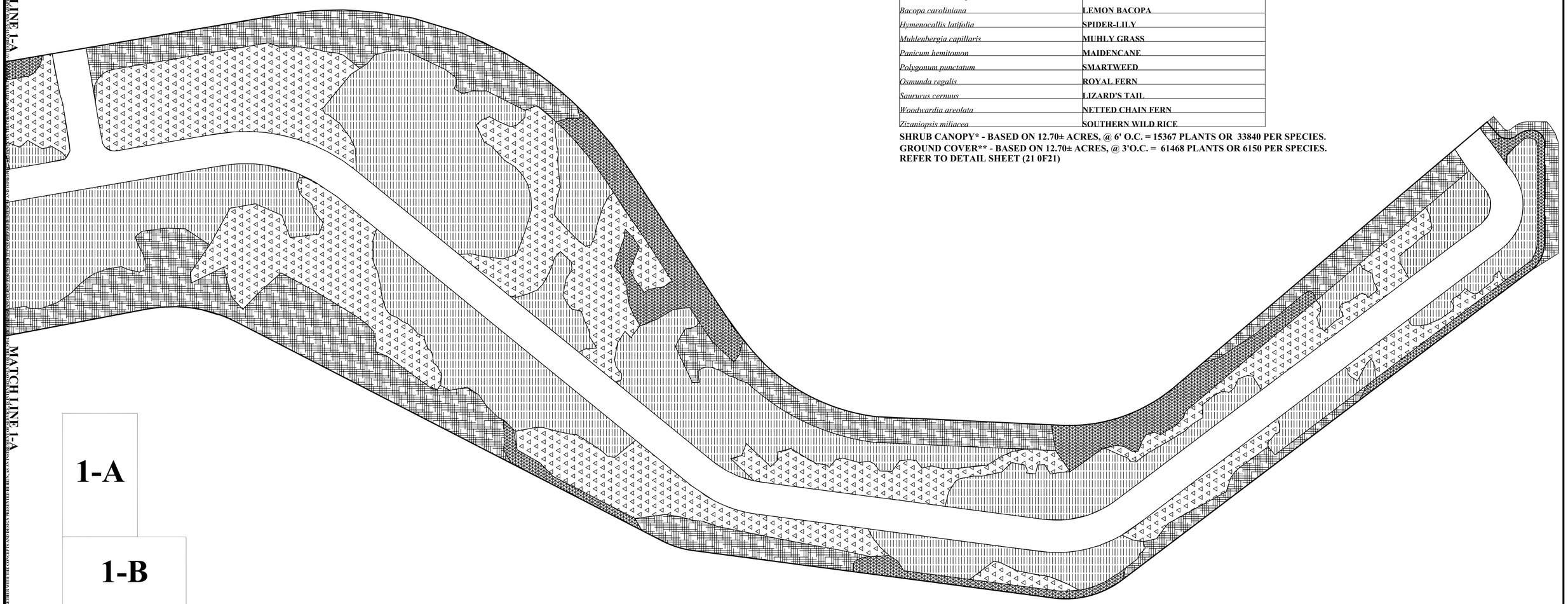
SCALE: 1" = 40'

LEGEND

FLOODPLAIN SWAMP

	SCIENTIFIC NAME	COMMON NAME
TREE CANOPY		
	Annona glabra	POND APPLE
	Carya aquatica	WATER HICKORY
	Fraxinus caroliniana	POP ASH
	Persea palustris	SWAMP BAY
SHRUB CANOPY		
	Baccharis halimifolia	GROUNDSEL BUSH
	Cephalanthus occidentalis	BUTTONBUSH
	Ilex cassine	DAHOON HOLLY
	Itea virginica	VIRGINIA WILLOW
GROUND COVER		
	Acrostichum danaeifolium	LEATHER FERN
	Bacopa caroliniana	LEMON BACOPA
	Hymenocallis latifolia	SPIDER-LILY
	Muhlenbergia capillaris	MUHLY GRASS
	Panicum hemitomon	MAIDENCANE
	Polygonum punctatum	SMARTWEED
	Osmunda regalis	ROYAL FERN
	Saururus cernuus	LIZARD'S TAIL
	Woodwardia areolata	NETTED CHAIN FERN
	Zizaniopsis miliacea	SOUTHERN WILD RICE

SHRUB CANOPY* - BASED ON 12.70± ACRES, @ 6' O.C. = 15367 PLANTS OR 33840 PER SPECIES.
GROUND COVER** - BASED ON 12.70± ACRES, @ 3'O.C. = 61468 PLANTS OR 6150 PER SPECIES.
REFER TO DETAIL SHEET (21 0F21)



SOURCE: RLW AND ACEF

PLAN VIEW	LATITUDE: LATITUDE: N27° 23'24.939"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 40'	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: W080°20'34.176"	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
FLOODPLAIN SWAMP PLANTING PLAN MATCH LINE "1-A"

R. L. WEIGT
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DRAWING NO.
06+00+FPP PLANT PLAN MATCH LINES 1A+1G 24X36.DWG

SHEET:
4 OF 21

AMERICAN CONSULTING ENGINEERS OF FLORIDA, LLC
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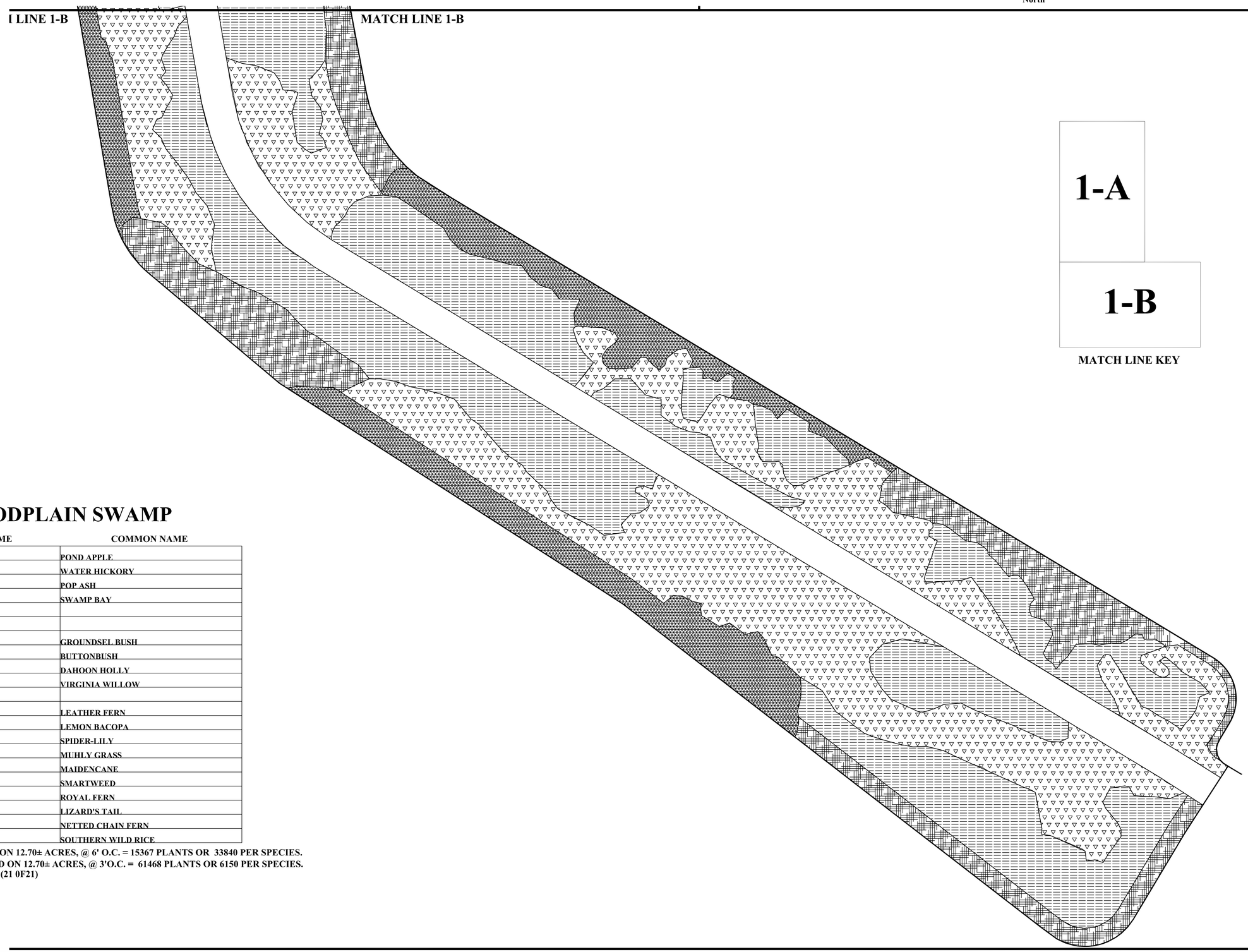
North

0' 20' 40' 80' 160'

SCALE: 1" = 40'



1-A

1-B

MATCH LINE KEY

LEGEND

FLOODPLAIN SWAMP

	SCIENTIFIC NAME	COMMON NAME
TREE CANOPY		
	Annona glabra	POND APPLE
	Carya aquatica	WATER HICKORY
	Fraxinus caroliniana	POP ASH
	Persea palustris	SWAMP BAY
SHRUB CANOPY		
	Baccharis halimifolia	GROUNDSEL BUSH
	Cephalanthus occidentalis	BUTTONBUSH
	Ilex cassine	DAHOON HOLLY
	Itea virginica	VIRGINIA WILLOW
GROUND COVER		
	Acrostichum danaeifolium	LEATHER FERN
	Bacopa caroliniana	LEMON BACOPA
	Hymenocallis latifolia	SPIDER-LILY
	Muhlenbergia capillaris	MUHLY GRASS
	Panicum hemitomon	MAIDENCANE
	Polygonum punctatum	SMARTWEED
	Osmunda regalis	ROYAL FERN
	Saururus cernuus	LIZARD'S TAIL
	Woodwardia areolata	NETTED CHAIN FERN
	Zizaniopsis miliacea	SOUTHERN WILD RICE

SHRUB CANOPY* - BASED ON 12.70± ACRES, @ 6' O.C. = 15367 PLANTS OR 33840 PER SPECIES.
GROUND COVER - BASED ON 12.70± ACRES, @ 3'O.C. = 61468 PLANTS OR 6150 PER SPECIES.**
REFER TO DETAIL SHEET (21 0F21)

SOURCE: RLW AND ACEF

PLAN VIEW	LATITUDE: LATITUDE: N27° 23'24.939"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 40'	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: W080°20'34.176"	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
FLOODPLAIN SWAMP PLANTING PLAN MATCH LINE "1-B"

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL rlwenv@comcast.net

DRAWING NO.
R4-01-FP PLANT PLAN MATCHLINES 1A-1B(20X20.DWG)

SHEET:
5 OF 21

AMERICAN CONSULTING ENGINEERS OF FLORIDA, LLC
2818 CYPRESS RIDGE BOULEVARD, SUITE 200
WESLEY CHAPEL, FL 34544-8302
TELEPHONE (813) 435-2600; FAX (813)-345-2601

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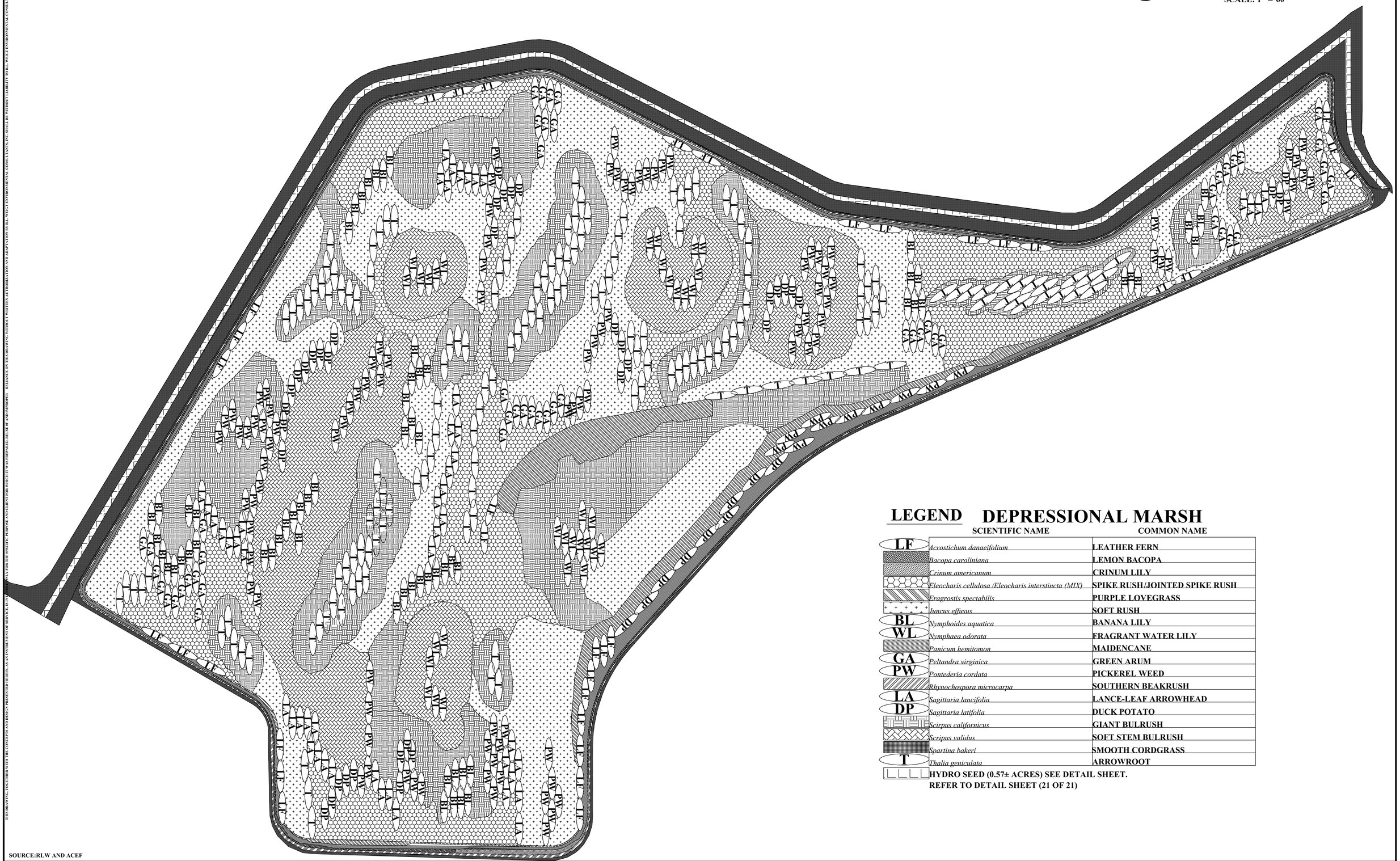

LEGEND DEPRESSIONAL MARSH

	SCIENTIFIC NAME	COMMON NAME
LF	*Acrostichum danaeifolium*	LEATHER FERN
	Bacopa caroliniana	LEMON BACOPA
	Crinum americanum	CRINUM LILY
	Eleocharis cellulosa /Eleocharis interstincta (MIX)	SPIKE RUSH/JOINTED SPIKE RUSH
	Eragrostis spectabilis	PURPLE LOVEGRASS
	Juncus effusus	SOFT RUSH
BL	*Nymphoides aquatica*	BANANA LILY
WL	*Nymphaea odorata*	FRAGRANT WATER LILY
	Panicum hemitomon	MAIDENCANE
GA	*Peltandra virginica*	GREEN ARUM
PW	*Pontederia cordata*	PICKEREL WEED
	Rhynochospora microcarpa	SOUTHERN BEAKRUSH
LA	*Sagittaria lancifolia*	LANCE-LEAF ARROWHEAD
DP	*Sagittaria latifolia*	DUCK POTATO
	Scirpus californicus	GIANT BULRUSH
	Scripus validus	SOFT STEM BULRUSH
	Spartina bakeri	SMOOTH CORDGRASS
T	*Thalia geniculata*	ARROWROOT
	HYDRO SEED (0.57± ACRES) SEE DETAIL SHEET. REFER TO DETAIL SHEET (21 OF 21)	

SOURCE:RLW AND ACEF

PLAN VIEW	LATITUDE: LATITUDE: N27° 23'24.939"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 60'	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: W080°20'34.176"	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
DEPRESSIONAL MARSH

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL rlwenv@comcast.net

DRAWING NO.
06 - DM PLANTING PLAN 2SX8.DWG

SHEET:
6 OF 21

AMERICAN CONSULTING ENGINEERS OF FLORIDA, LLC
2818 CYPRESS RIDGE BOULEVARD, SUITE 200
WESLEY CHAPEL, FL 34544-6302
TELEPHONE (813) 435-2600; FAX (813)-345-2601

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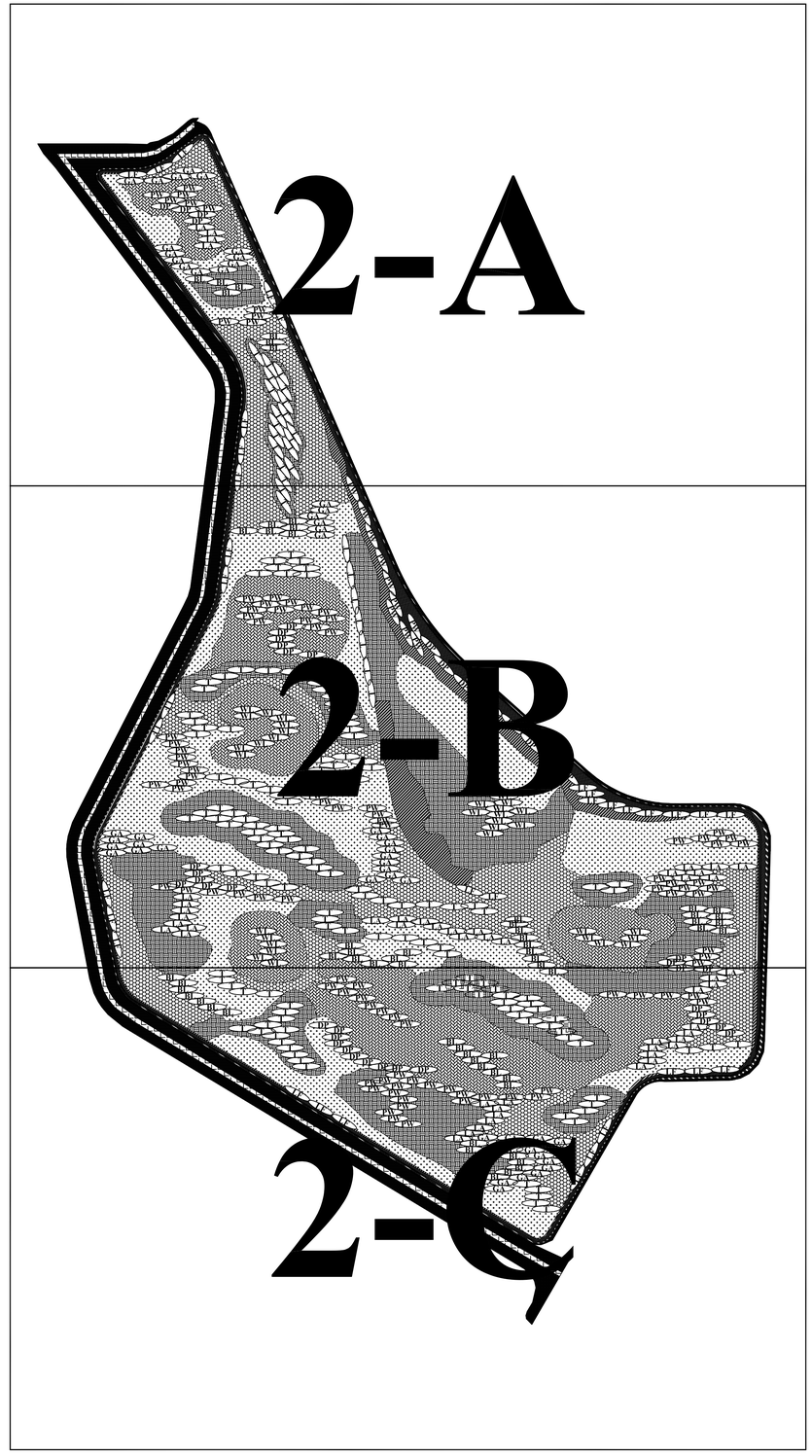
North

0' 60' 120' 240' 480'

SCALE: 1" = 120'



SOURCE:RLW AND ACEF

KEY MAP	LATITUDE: LATITUDE: N27° 23'24.939"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 120'	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: W080°20'34.176"	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
DEPRESSIONAL MARSH PLANTING PLAN KEY MAP

R. L. WEIGT
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DRAWING NO.
07-DEPRESSIONAL MARSH MATCH LINE KEY MAP.DWG

SHEET:
7 OF 21

AMERICAN CONSULTING ENGINEERS OF FLORIDA, LLC
2818 CYPRESS RIDGE BOULEVARD, SUITE 200
WESLEY CHAPEL, FL 34544-6302
TELEPHONE (813) 435-2600; FAX (813)-345-2601

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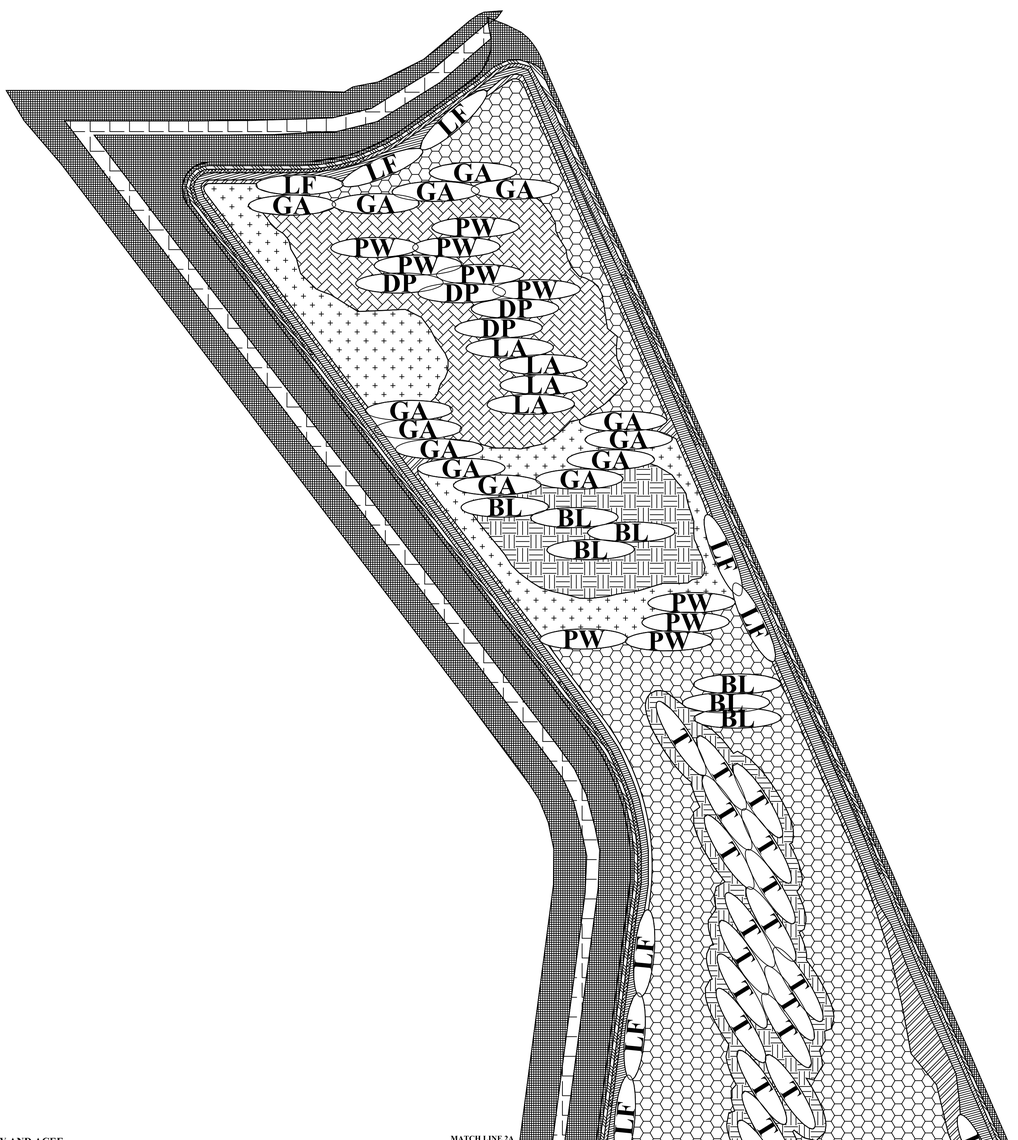
North

0' 20' 40' 80' 160'

SCALE: 1" = 40'

2-A
2-B
2-C

MATCH LINE KEY MAP



SOURCE: RLW AND ACEE

MATCH LINE 2A

LEGEND

DEPRESSIONAL MARSH

	SCIENTIFIC NAME	COMMON NAME
LF	*Acrostichum danaeifolium*	LEATHER FERN
	Bacopa caroliniana	LEMON BACOPA
	Crinum americanum	CRINUM LILY
	Eleocharis cellulosa /Eleocharis interstincta (MIX)	SPIKE RUSH/JOINTED SPIKE RUSH
	Juncus effusus	SOFT RUSH
	Eragrostis spectabilis	PURPLE LOVEGRASS
BL	*Nymphoides aquatica*	BANANA LILY
WL	*Nymphaea odorata*	FRAGRANT WATER LILY
	Panicum hemitomon	MAIDENCANE
GA	*Peltandra virginica*	GREEN ARUM
PW	*Pontederia cordata*	PICKEREL WEED
	Rhynochospora microcarpa	SOUTHERN BEAKRUSH
LA	*Sagittaria lancifolia*	LANCE-LEAF ARROWHEAD
DP	*Sagittaria latifolia*	DUCK POTATO
	Scirpus californicus	GIANT BULRUSH
	Scripus validus	SOFT STEM BULRUSH
	Spartina bakeri	SMOOTH CORDGRASS
T	*Thalia geniculata*	ARROWROOT

HYDRO SEED (0.57± ACRES) SEE DETAIL SHEET (20 OF 21)
REFER TO DETAIL SHEET (21 OF 21)

PLAN VIEW	LATITUDE: LATITUDE: N27° 23'24.939"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 40'	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: W080°20'34.176"	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
DEPRESSIONAL MARSH PLANTING PLAN MATCH LINE "2-A"

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL rlwenv@comcast.net

DRAWING NO.
08 x 10 x 050 PLANT PLAN MATCHLINES 2A x 20 DESIGN.DWG

SHEET:
8 OF 21

AMERICAN CONSULTING ENGINEERS OF FLORIDA, LLC
2818 CYPRESS RIDGE BOULEVARD, SUITE 200
WESLEY CHAPEL, FL 34544-8302
TELEPHONE (813) 435-2600; FAX (813)-345-2601

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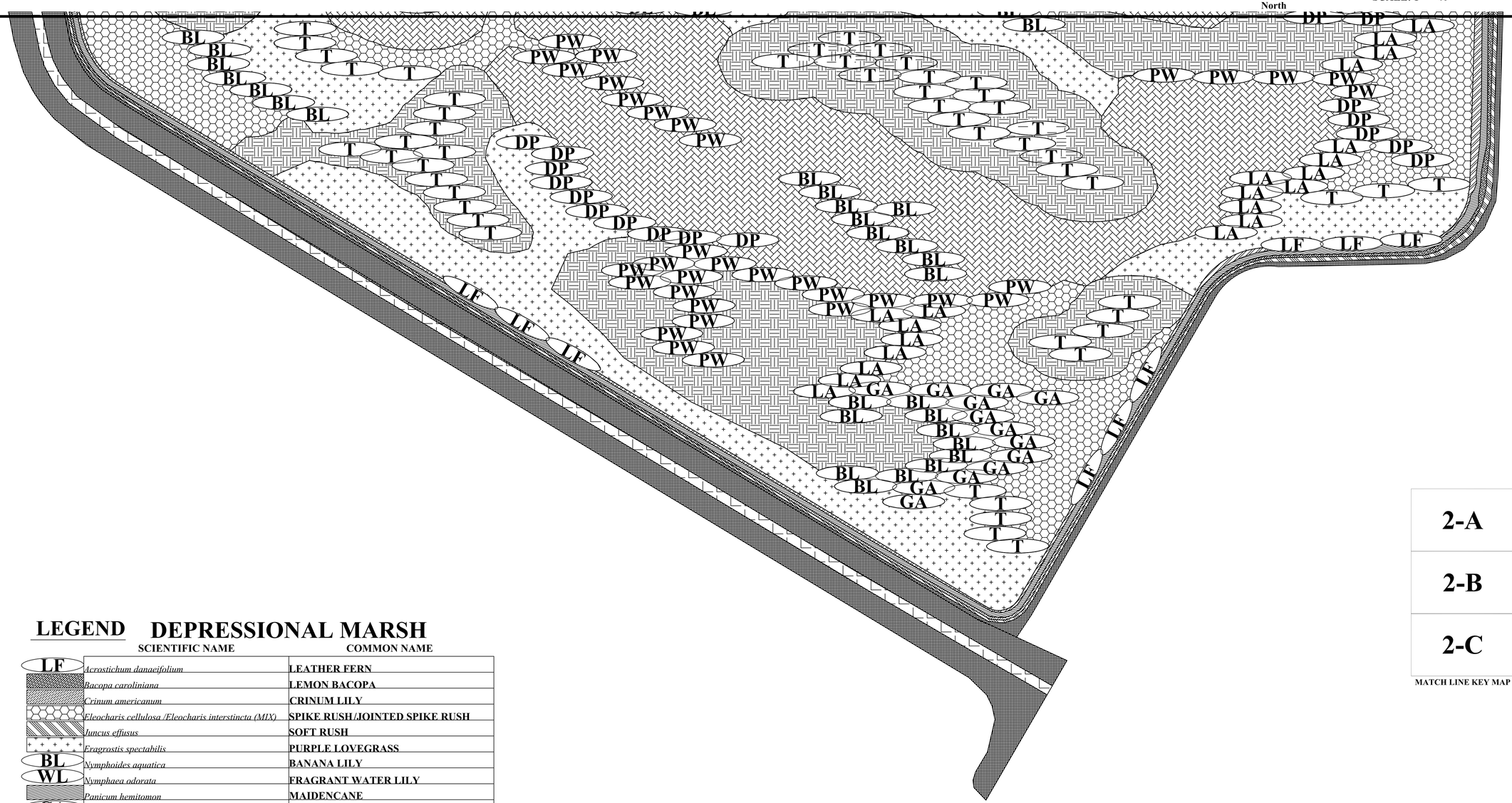

LEGEND

DEPRESSIONAL MARSH

	SCIENTIFIC NAME	COMMON NAME
LF	*Acrostichum danaeifolium*	LEATHER FERN
	Bacopa caroliniana	LEMON BACOPA
	Crinum americanum	CRINUM LILY
	Eleocharis cellulosa /Eleocharis interstincta (MIX)	SPIKE RUSH/JOINTED SPIKE RUSH
	Juncus effusus	SOFT RUSH
	Eragrostis spectabilis	PURPLE LOVEGRASS
BL	*Nymphoides aquatica*	BANANA LILY
WL	*Nymphaea odorata*	FRAGRANT WATER LILY
	Panicum hemitomon	MAIDENCANE
GA	*Peltandra virginica*	GREEN ARUM
PW	*Pontederia cordata*	PICKEREL WEED
	Rhynochospora microcarpa	SOUTHERN BEAKRUSH
LA	*Sagittaria lancifolia*	LANCE-LEAF ARROWHEAD
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	Scripus validus	SOFT STEM BULRUSH
	Spartina bakeri	SMOOTH CORDGRASS
T	*Thalia geniculata*	ARROWROOT

HYDRO SEED (0.57± ACRES) SEE DETAIL SHEET (20 OF 21)
REFER TO DETAIL SHEET (21 OF 21)

2-A
2-B
2-C

MATCH LINE KEY MAP

SOURCE: RLW AND ACEF

PLAN VIEW	LATITUDE: LATITUDE: N27° 23'24.939"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 40'	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: W080°20'34.176"	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
DEPRESSIONAL MARSH PLANTING PLAN MATCH LINE "2-C"

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL rlwenv@comcast.net

DRAWING NO.
10-022.04 - DSM PLANT PLAN MATCH LINES 2A + 2B 12X36.DWG

SHEET:
10 OF 21

AMERICAN CONSULTING ENGINEERS OF FLORIDA, LLC
2818 CYPRESS RIDGE BOULEVARD, SUITE 200
WESLEY CHAPEL, FL 34544-6302
TELEPHONE (813) 435-2600; FAX (813)-345-2601

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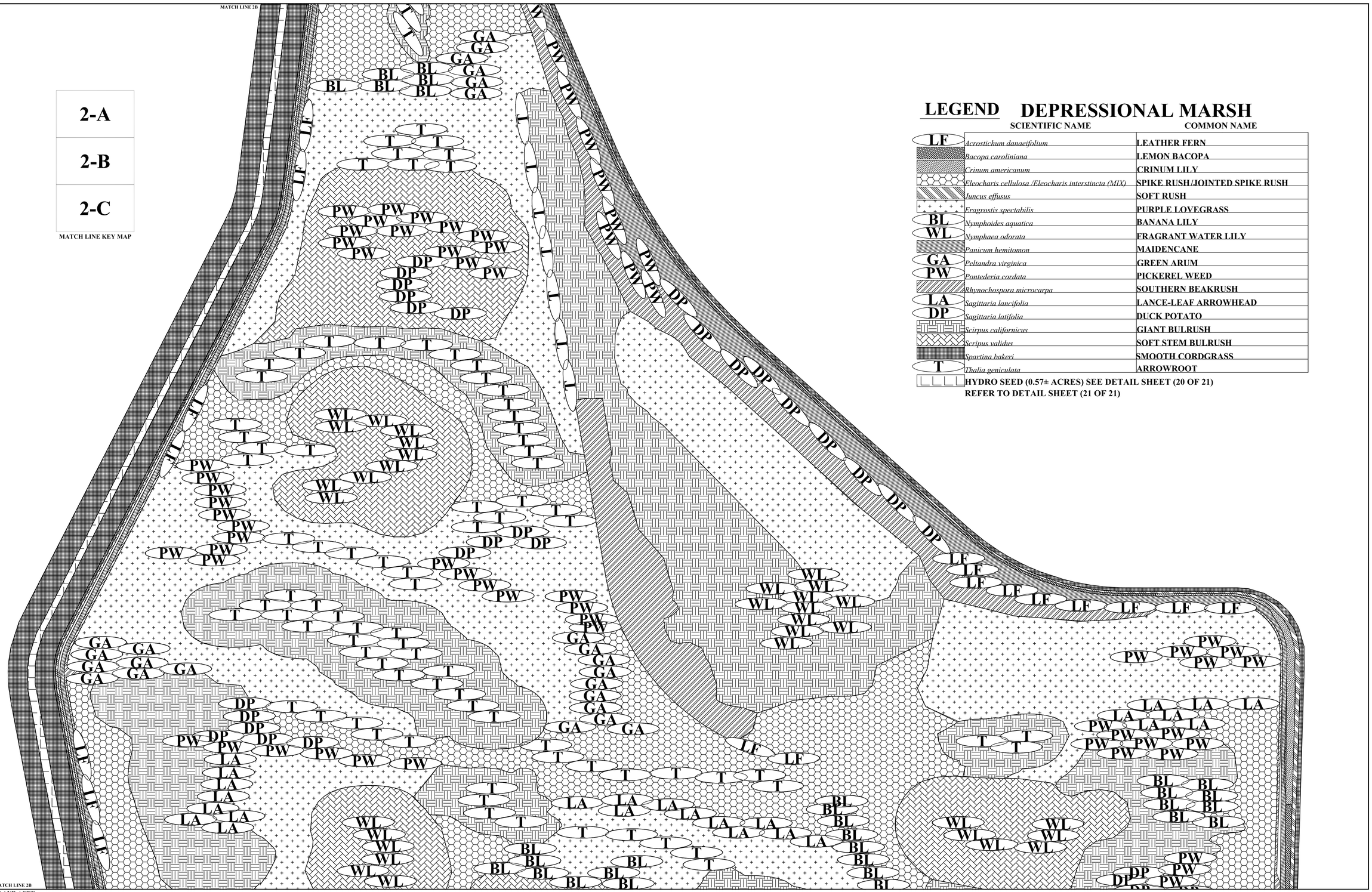
North

0' 10' 20' 40' 80'

SCALE: 1" = 40'



LEGEND DEPRESSIONAL MARSH

	SCIENTIFIC NAME	COMMON NAME
LF	*Acrostichum danaeifolium*	LEATHER FERN
	Bacopa caroliniana	LEMON BACOPA
	Crinum americanum	CRINUM LILY
	Eleocharis cellulosa /Eleocharis interstincta (MIX)	SPIKE RUSH/JOINTED SPIKE RUSH
	Juncus effusus	SOFT RUSH
	Eragrostis spectabilis	PURPLE LOVEGRASS
BL	*Nymphoides aquatica*	BANANA LILY
WL	*Nymphaea odorata*	FRAGRANT WATER LILY
	Panicum hemitomon	MAIDENCANE
GA	*Peltandra virginica*	GREEN ARUM
PW	*Pontederia cordata*	PICKEREL WEED
	Rhynochospora microcarpa	SOUTHERN BEAKRUSH
LA	*Sagittaria lancifolia*	LANCE-LEAF ARROWHEAD
DP	*Sagittaria latifolia*	DUCK POTATO
	Scirpus californicus	GIANT BULRUSH
	Scripus validus	SOFT STEM BULRUSH
	Spartina bakeri	SMOOTH CORDGRASS
T	*Thalia geniculata*	ARROWROOT

HYDRO SEED (0.57± ACRES) SEE DETAIL SHEET (20 OF 21)
REFER TO DETAIL SHEET (21 OF 21)

SOURCE: RLW AND ACEF

PLAN VIEW	LATITUDE: LATITUDE: N27° 23'24.939"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 40'	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: W080°20'34.176"	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
DEPRESSIONAL MARSH PLANTING PLAN MATCH LINE "2-B"

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
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DRAWING NO.
08 - 10 - 100 PLANT PLAN MATCH LINES 2A - 2B 2A36.DWG

SHEET:
9 OF 21

AMERICAN CONSULTING ENGINEERS OF FLORIDA, LLC
2818 CYPRESS RIDGE BOULEVARD, SUITE 200
WESLEY CHAPEL, FL 34544-8302
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North

0' 30' 60' 120' 240'

SCALE: 1" = 60'

LEGEND

HYDRIC HAMMOCK

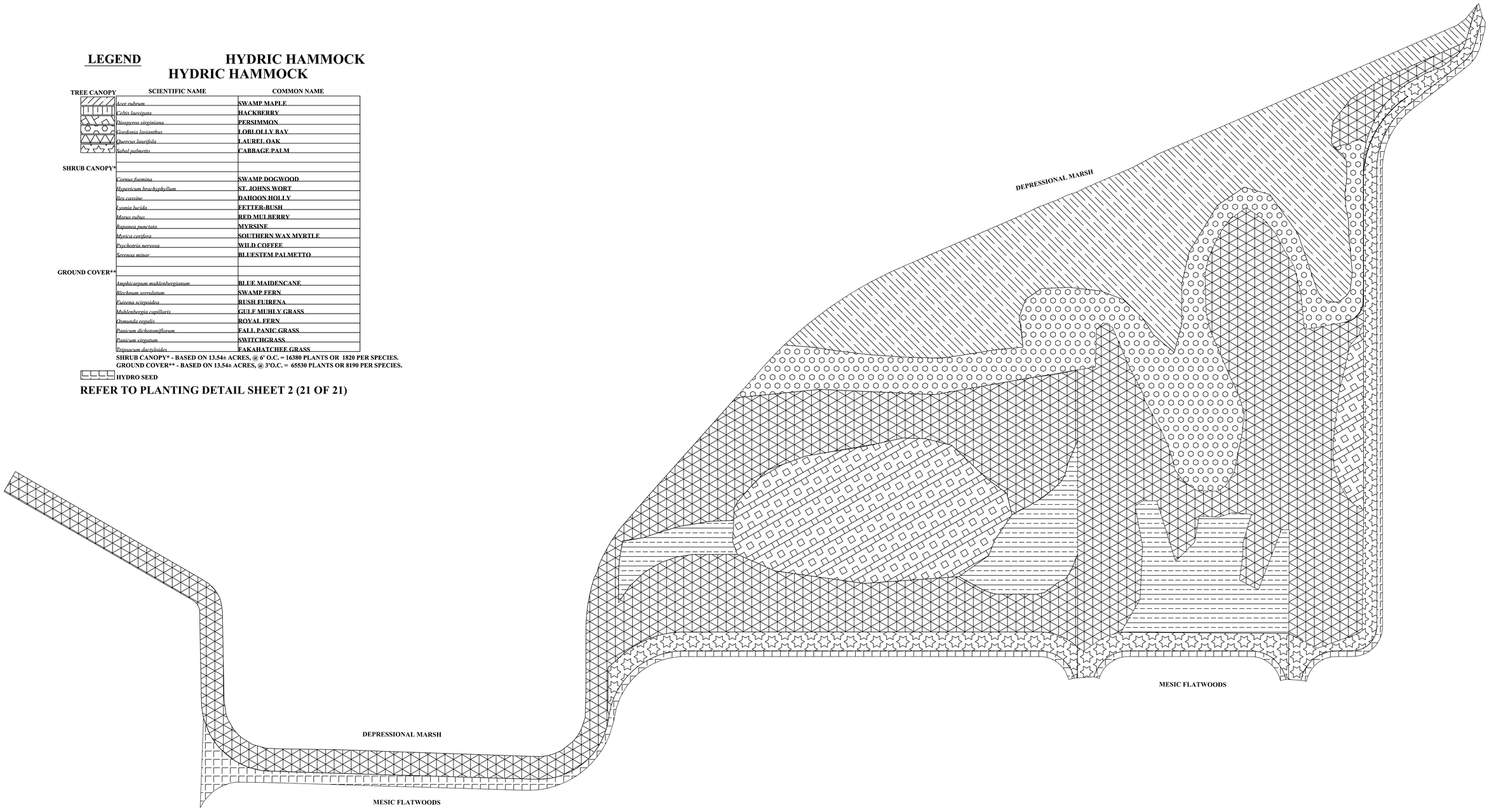
HYDRIC HAMMOCK

	SCIENTIFIC NAME	COMMON NAME
TREE CANOPY		
	Acer rubrum	SWAMP MAPLE
	Celtis laevigata	HACKBERRY
	Diospyros virginiana	PERSIMMON
	Gordonia lasianthus	LOBLOLLY BAY
	Quercus laurifola	LAUREL OAK
	Sabal palmetto	CABBAGE PALM
SHRUB CANOPY*		
	Cornus foemina	SWAMP DOGWOOD
	Hypericum brachyphyllum	ST. JOHNS WORT
	Ilex cassine	DAHOON HOLLY
	Lyonia lucida	FETTER-BUSH
	Morus rubus	RED MULBERRY
	Rapanea punctata	MYRSINE
	Myrica cerifera	SOUTHERN WAX MYRTLE
	Psychotria nervosa	WILD COFFEE
	Serenoa minor	BLUESTEM PALMETTO
GROUND COVER**		
	Amphicarpum muhlenbergianum	BLUE MAIDENCANE
	Blechnum serrulatum	SWAMP FERN
	Fuirena scirpoidea	RUSH FUIRENA
	Muhlenbergia capillaris	GULF MUHLY GRASS
	Osmunda regalis	ROYAL FERN
	Panicum dichotomiflorum	FALL PANIC GRASS
	Panicum virgatum	SWITCHGRASS
	Tripsacum dactyloides	FAKAHATCHEE GRASS

SHRUB CANOPY* - BASED ON 13.54± ACRES, @ 6' O.C. = 16380 PLANTS OR 1820 PER SPECIES.
GROUND COVER** - BASED ON 13.54± ACRES, @ 3'O.C. = 65530 PLANTS OR 8190 PER SPECIES.

HYDRO SEED

REFER TO PLANTING DETAIL SHEET 2 (21 OF 21)



SOURCE: RLW AND ACEF

PLAN VIEW	LATITUDE: LATITUDE: N27° 23'24.939"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 60'	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: W080°20'34.176"	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
HYDRIC HAMMOCK

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL rlwenv@comcast.net

DRAWING NO.
11 - HH PLANTING PLAN 24X36.DWG

SHEET:
11 OF 21

AMERICAN CONSULTING ENGINEERS OF FLORIDA, LLC
2818 CYPRESS RIDGE BOULEVARD, SUITE 200
WESLEY CHAPEL, FL 34544-6302
TELEPHONE (813) 435-2600; FAX (813)-345-2601

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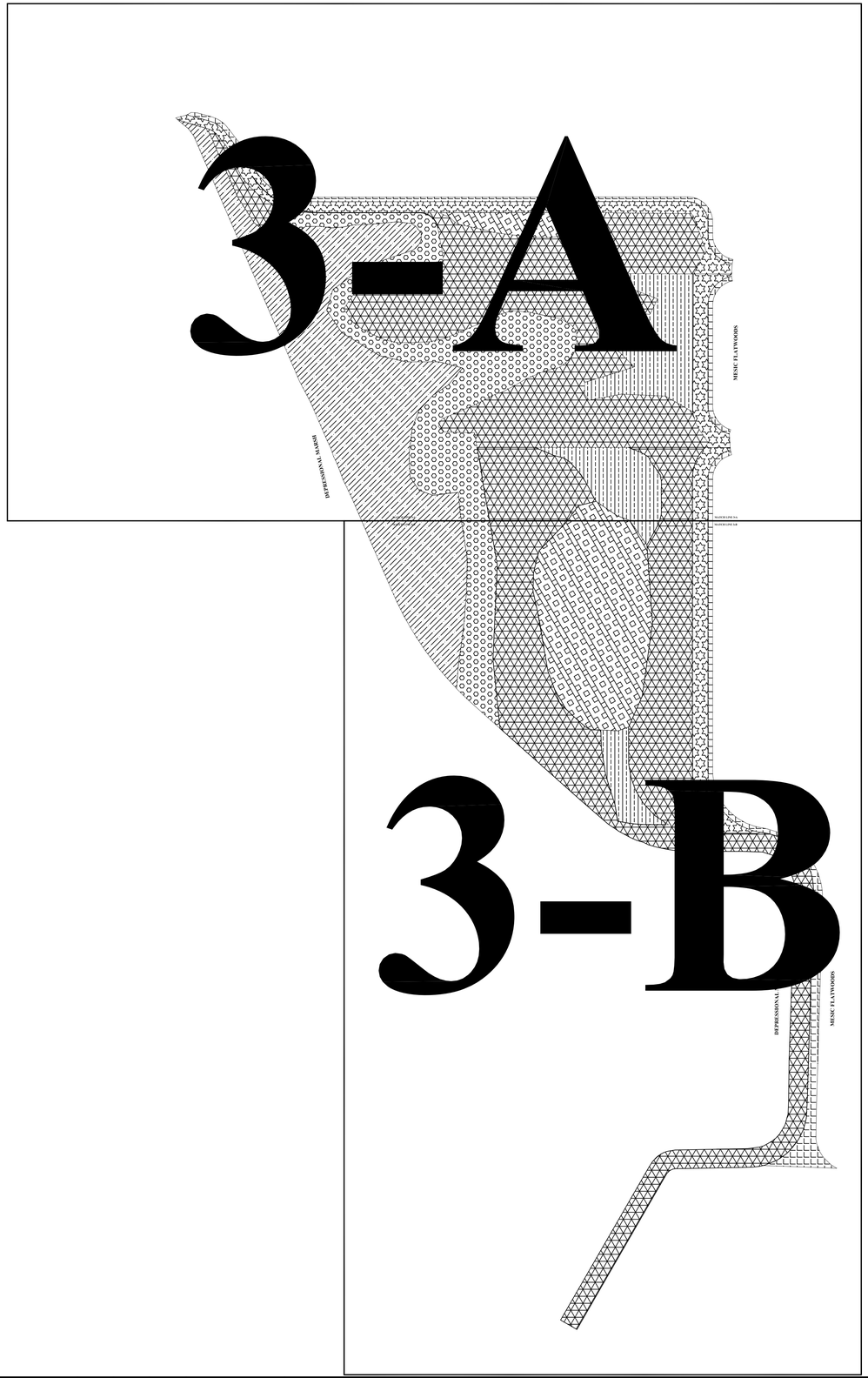
North

0' 50' 100' 200' 400'

SCALE: 1" = 100'



SOURCE: RLW AND ACEF

PLAN VIEW	LATITUDE: LATITUDE: N27° 23'24.939"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 100'	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: W080°20'34.176"	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
HYDRIC HAMMOCK PLANTING PLAN MATCH LINES

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
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DRAWING NO.
13-108 PLANT PLAN MATCH LINES .DWG

SHEET:
12 OF 21

AMERICAN CONSULTING ENGINEERS OF FLORIDA, LLC
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WESLEY CHAPEL, FL 34544-6302
TELEPHONE (813) 435-2600; FAX (813)-345-2601

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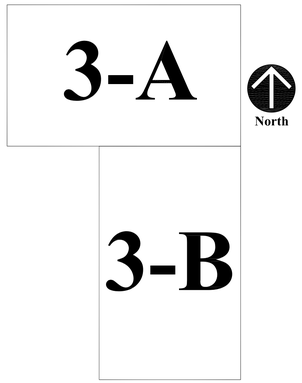
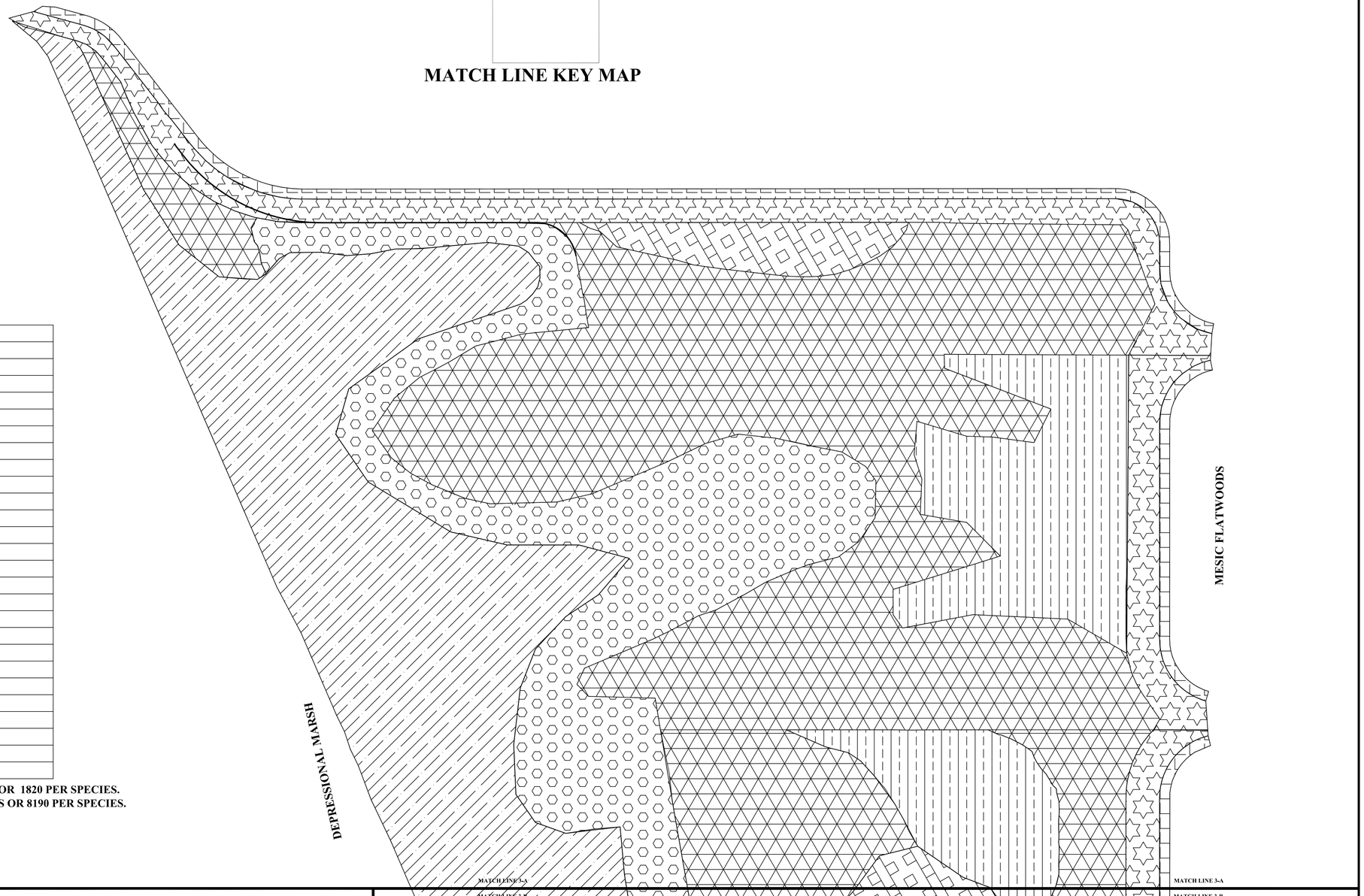
North

0' 20' 40' 80' 160'

SCALE: 1" = 40'



MATCH LINE KEY MAP



LEGEND

HYDRIC HAMMOCK

	SCIENTIFIC NAME	COMMON NAME
TREE CANOPY		
	Acer rubrum	SWAMP MAPLE
	Celtis laevigata	HACKBERRY
	Diospyros virginiana	PERSIMMON
	Gordonia lasianthus	LOBLOLLY BAY
	Quercus laurifola	LAUREL OAK
	Sabal palmetto	CABBAGE PALM
SHRUB CANOPY*		
	Cornus foemina	SWAMP DOGWOOD
	Hypericum brachyphyllum	ST. JOHNS WORT
	Ilex cassine	DAHOON HOLLY
	Lyonia lucida	FETTER-BUSH
	Morus rubus	RED MULBERRY
	Rapanea punctata	MYRSINE
	Myrica cerifera	SOUTHERN WAX MYRTLE
	Psychotria nervosa	WILD COFFEE
	Serenoa minor	BLUESTEM PALMETTO
GROUND COVER**		
	Amphicarpum muhlenbergianum	BLUE MAIDENCANE
	Blechnum serrulatum	SWAMP FERN
	Fuirena scirpoidea	RUSH FUIRENA
	Muhlenbergia capillaris	GULF MUHLY GRASS
	Osmunda regalis	ROYAL FERN
	Panicum dichotomiflorum	FALL PANIC GRASS
	Panicum virgatum	SWITCHGRASS
	Tripsacum dactyloides	FAKAHATCHEE GRASS

SHRUB CANOPY* - BASED ON 13.54± ACRES, @ 6' O.C. = 16380 PLANTS OR 1820 PER SPECIES.
GROUND COVER** - BASED ON 13.54± ACRES, @ 3'O.C. = 65530 PLANTS OR 8190 PER SPECIES.

HYDRO SEED REFER TO DETAIL SHEET 1 (20 OF 21)

REFER TO DETAIL SHEET 2 (21 OF 21)

SOURCE: RLW AND ACEF

PLAN VIEW	LATITUDE: LATITUDE: N27° 23'24.939"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 40'	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: W080°20'34.176"	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
HYDRIC HAMMOCK PLANTING PLAN MATCH LINE "3-A"

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL rlwenv@comcast.net

DRAWING NO.
13 - 14 - 800 PLANT PLAN MATCH LINES 3A - 3B 24X36.DWG

AMERICAN CONSULTING ENGINEERS OF FLORIDA, LLC
2818 CYPRESS RIDGE BOULEVARD, SUITE 200
WESLEY CHAPEL, FL 34544-6302
TELEPHONE (813) 435-2600; FAX (813)-345-2601

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North

0' 20' 40' 80' 160'

SCALE: 1" = 40'

LEGEND

HYDRIC HAMMOCK

	SCIENTIFIC NAME	COMMON NAME
TREE CANOPY		
	Acer rubrum	SWAMP MAPLE
	Celtis laevigata	HACKBERRY
	Diospyros virginiana	PERSIMMON
	Gordonia lasianthus	LOBLOLLY BAY
	Quercus laurifola	LAUREL OAK
	Sabal palmetto	CABBAGE PALM
SHRUB CANOPY*		
	Cornus foemina	SWAMP DOGWOOD
	Hypericum brachyphyllum	ST. JOHNS WORT
	Ilex cassine	DAHOON HOLLY
	Lyonia lucida	FETTER-BUSH
	Morus rubus	RED MULBERRY
	Rapanea punctata	MYRSINE
	Myrica cerifera	SOUTHERN WAX MYRTLE
	Psychotria nervosa	WILD COFFEE
	Serenoa minor	BLUESTEM PALMETTO
GROUND COVER**		
	Amphicarpum muhlenbergianum	BLUE MAIDENCANE
	Blechnum serrulatum	SWAMP FERN
	Fuirena scirpoidea	RUSH FUIRENA
	Muhlenbergia capillaris	GULF MUHLY GRASS
	Osmunda regalis	ROYAL FERN
	Panicum dichotomiflorum	FALL PANIC GRASS
	Panicum virgatum	SWITCHGRASS
	Tripsacum dactyloides	FAKAHATCHEE GRASS

SHRUB CANOPY* - BASED ON 13.54± ACRES, @ 6' O.C. = 16380 PLANTS OR 1820 PER SPECIES.
GROUND COVER** - BASED ON 13.54± ACRES, @ 3'O.C. = 65530 PLANTS OR 8190 PER SPECIES.

HYDRO SEED REFER TO DETAIL SHEET 1 (20 OF 21)

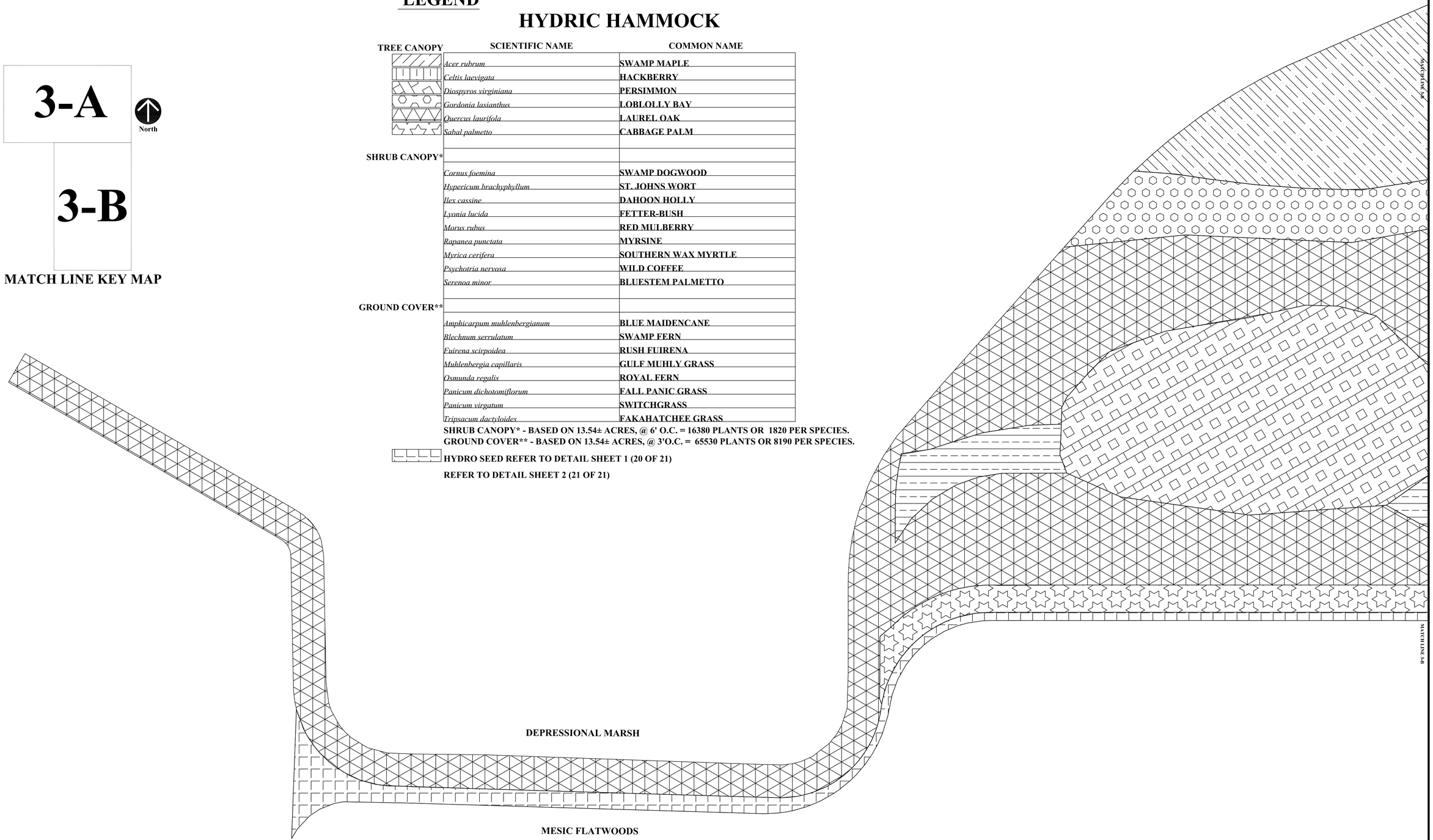
REFER TO DETAIL SHEET 2 (21 OF 21)

3-A

3-B

North

MATCH LINE KEY MAP



SOURCE: RLW AND ACEF

PLAN VIEW	LATITUDE: LATITUDE: N27° 23'24.939"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 40'	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: W080°20'34.176"	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
HYDRIC HAMMOCK PLANTING PLAN MATCH LINE "3-B"

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL rlwenv@comcast.net

DRAWING NO.
13-14 +400 PLANT PLAN MATCH LINES 3A + 3B 24X36.DWG

SHEET:
14 OF 21

AMERICAN CONSULTING ENGINEERS OF FLORIDA, LLC
2818 CYPRESS RIDGE BOULEVARD, SUITE 200
WESLEY CHAPEL, FL 34544-6302
TELEPHONE (813) 435-2600; FAX (813)-345-2601

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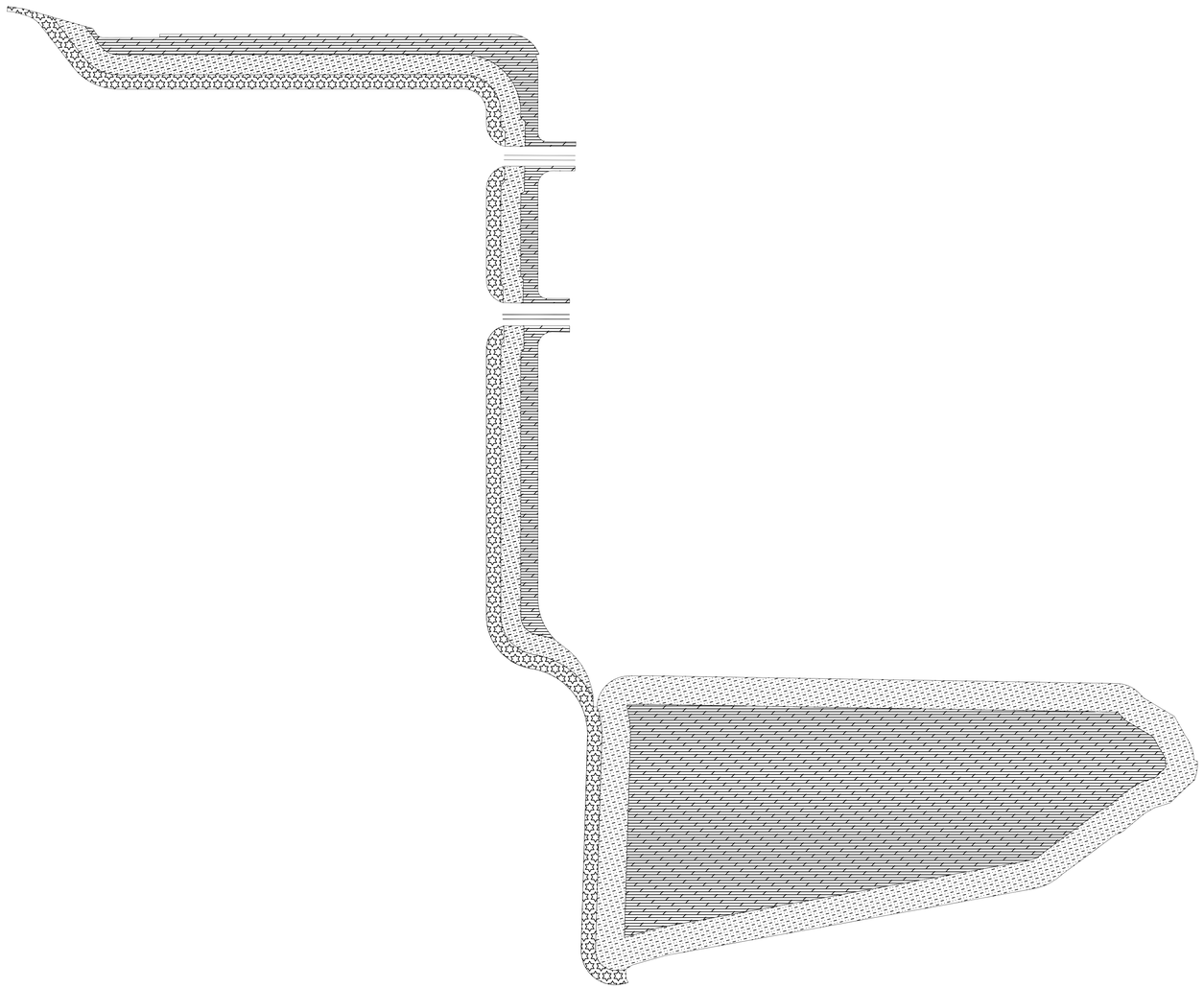

North

0' 50' 100' 200' 400'

SCALE: 1" = 100'

LEGEND

MESIC FLATWOODS

	SCIENTIFIC NAME	COMMON NAME
TREE CANOPY		
	Pinus elliottii	SLASH PINE
	Quercus virginica	LIVE OAK
	Sabal palmetto	GABBAGE PALM
SHRUB CANOPY*		
	Sideroxylon salicifolium	WILLOW BUSTIC
	Gaylussacia dumosa	DWARF HUCKLEBERRY
	Ilex cassine	DAHOON HOLLY
	Ilex glabra	GALLBERRY
	Lyonia ferruginea	RUSTY LYONIA
	Myrica cerifera	SOUTHERN WAX MYRTLE
	Serenoa repens	SAW PALMETTO
	Viburnum obovatum	SMALL LEAF VIBURNUM
GROUND COVER**		
	Amphicarpum muhlenbergianum	BLUE MAIDENCANE
	Aristida spiciformis	ARROW FEATHER GRASS
	Cyperus odoratus	FLAT SEDGE
	Eragrostis spectablis	LOVEGRASS
	Erianthus giganteus	SUGARCANE PLUMEGRASS
	Muhlenbergia capillaris	GULF MUHLY GRASS
	Panicum virgatum	SWITCH GRASS
	Tripsacum dactyloides	FAKAHATCHEE GRASS

SHRUB CANOPY* - BASED ON 13.65± ACRES, @ 6' O.C. = 16516 PLANTS OR 2065 PER SPECIES.
GROUND COVER** - BASED ON 13.65± ACRES, @ 3'O.C. = 66066 PLANTS OR 8260 PER SPECIES.
REFER TO PLANTING DETAIL SHEET 2 (21 OF 21)

SOURCE:RLW AND ACEF

PLAN VIEW	LATITUDE: LATITUDE: N27° 23'24.939"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 100'	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: W080°20'34.176"	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
MESIC FLATWOODS (UPLAND) PLANTING PLAN

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL rlwenv@comcast.net

DRAWING NO.
15 - MF PLANT PLAN 24X36.DWG

SHEET:
15 OF 21

AMERICAN CONSULTING ENGINEERS OF FLORIDA, LLC
2818 CYPRESS RIDGE BOULEVARD, SUITE 200
WESLEY CHAPEL, FL 34544-6302
TELEPHONE (813) 435-2600; FAX (813)-345-2601

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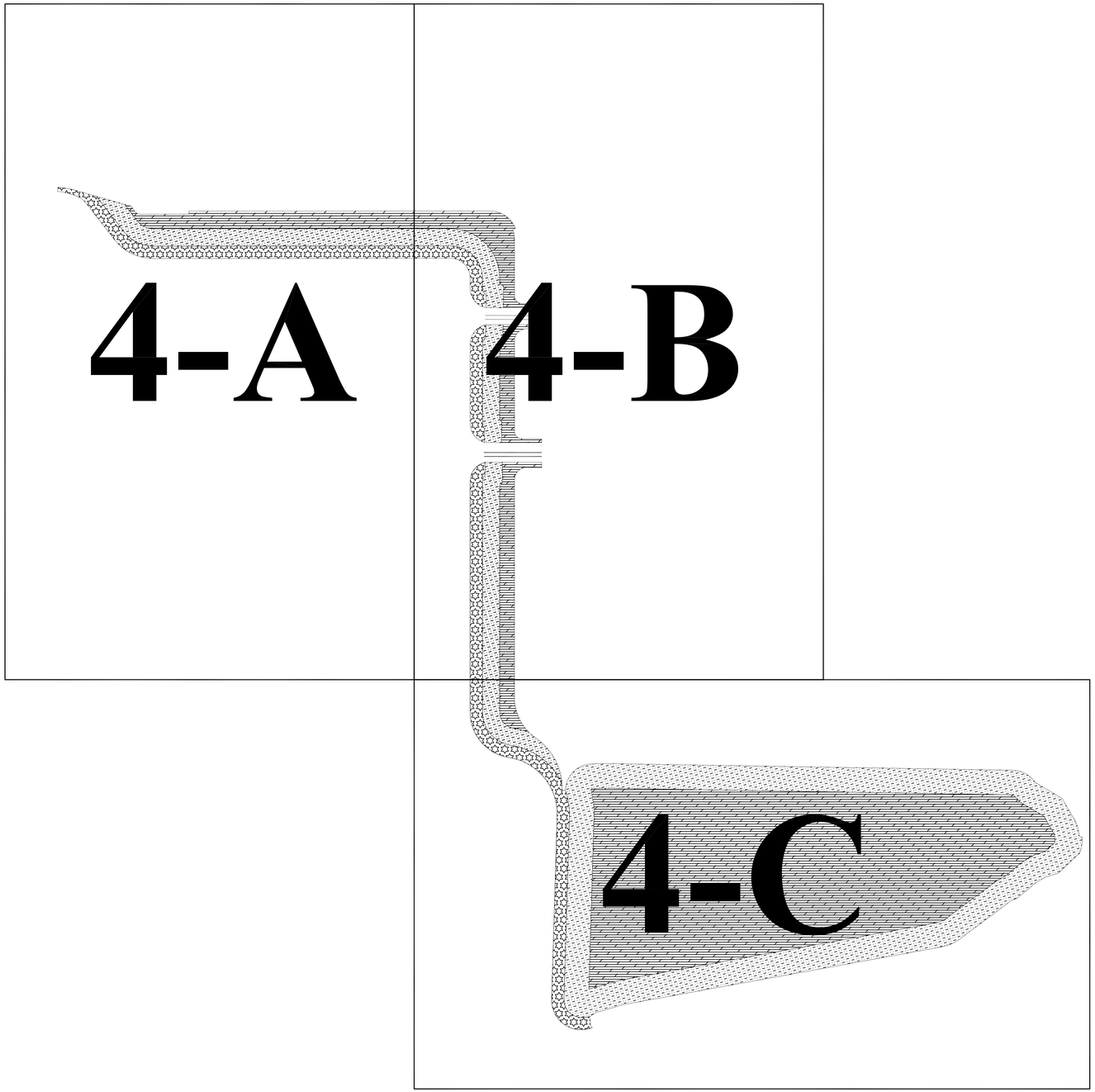
North

0' 60' 120' 240' 480'

SCALE: 1" = 120'



SOURCE:RLW AND ACEF

KEY MAP	LATITUDE: LATITUDE: N27° 23'24.939"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 120'	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: W080°20'34.176"	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
MESIC FLATWOODS (UPLAND) PLANTING MATCH LINE KEY MAP

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
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DRAWING NO.
16 - MF MATCH LINE KEY MAP.DWG

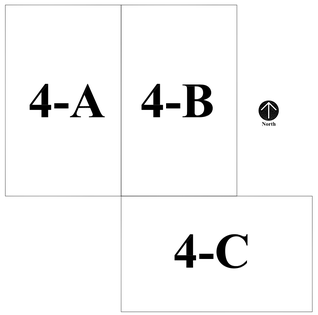
AMERICAN CONSULTING ENGINEERS OF FLORIDA, LLC
2818 CYPRESS RIDGE BOULEVARD, SUITE 200
WESLEY CHAPEL, FL 34544-6302
TELEPHONE (813) 435-2600; FAX (813)-345-2601

North

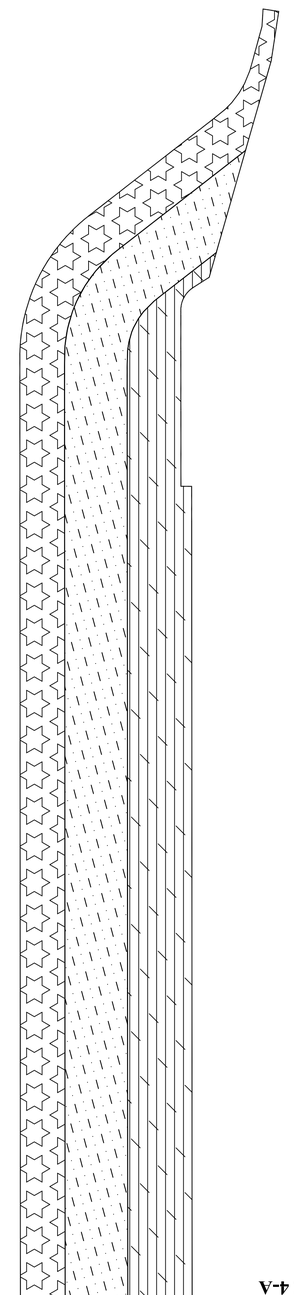
0' 20' 40' 80' 160'

SCALE: 1" = 40'

"CONSTRUCTION PLANS NOT FOR CONSTRUCTION UNLESS SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER. THE ACCEPTANCE OF THESE PLANS BY THE APPROPRIATE GOVERNMENTAL AGENCY IS A PRERequisite TO CONSTRUCTION. ANY REPRODUCTION OF THESE PLANS WITHOUT THE WRITTEN CONSENT OF AMERICAN CONSULTING ENGINEERS OF FLORIDA, LLC IS PROHIBITED."



MATCH LINE KEY



MATCH LINE 4-A

MATCH LINE 4-A

LEGEND

MESIC FLATWOODS

	SCIENTIFIC NAME	COMMON NAME
TREE CANOPY		
	Pinus elliottii	SLASH PINE
	Quercus virginica	LIVE OAK
	Sabal palmetto	GABBAGE PALM
SHRUB CANOPY*		
	Sideroxylon salicifolium	WILLOW BUSTIC
	Gaylussacia dumosa	DWARF HUCKLEBERRY
	Ilex cassine	DAHOON HOLLY
	Ilex glabra	GALLBERRY
	Lyonia ferruginea	RUSTY LYONIA
	Myrica cerifera	SOUTHERN WAX MYRTLE
	Serenoa repens	SAW PALMETTO
	Viburnum obovatum	SMALL LEAF VIBURNUM
GROUND COVER**		
	Amphicarpum muhlenbergianum	BLUE MAIDENCANE
	Aristida spiciformis	ARROW FEATHER GRASS
	Cyperus odoratus	FLAT SEDGE
	Eragrostis spectablis	LOVEGRASS
	Erianthus giganteus	SUGARCANE PLUMEGRASS
	Muhlenbergia capillaris	GULF MUHLY GRASS
	Panicum virgatum	SWITCH GRASS
	Tripsacum dactyloides	FAKAHATCHEE GRASS

SHRUB CANOPY* - BASED ON 13.65± ACRES, @ 6' O.C. = 16516 PLANTS OR 2065 PER SPECIES.
GROUND COVER** - BASED ON 13.65± ACRES, @ 3'O.C. = 66066 PLANTS OR 8260 PER SPECIES.
REFER TO PLANTING DETAIL SHEET 2 (21 OF 21)

MATCH LINE 4-A

SOURCE:RLW AND ACEF

PLANVIEW	LATITUDE: LATITUDE: N27° 23'24.939"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 40'	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: W080°20'34.176"	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
MESIC FLATWOODS (UPLAND) PLANTING MATCH LINE "4-A"

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
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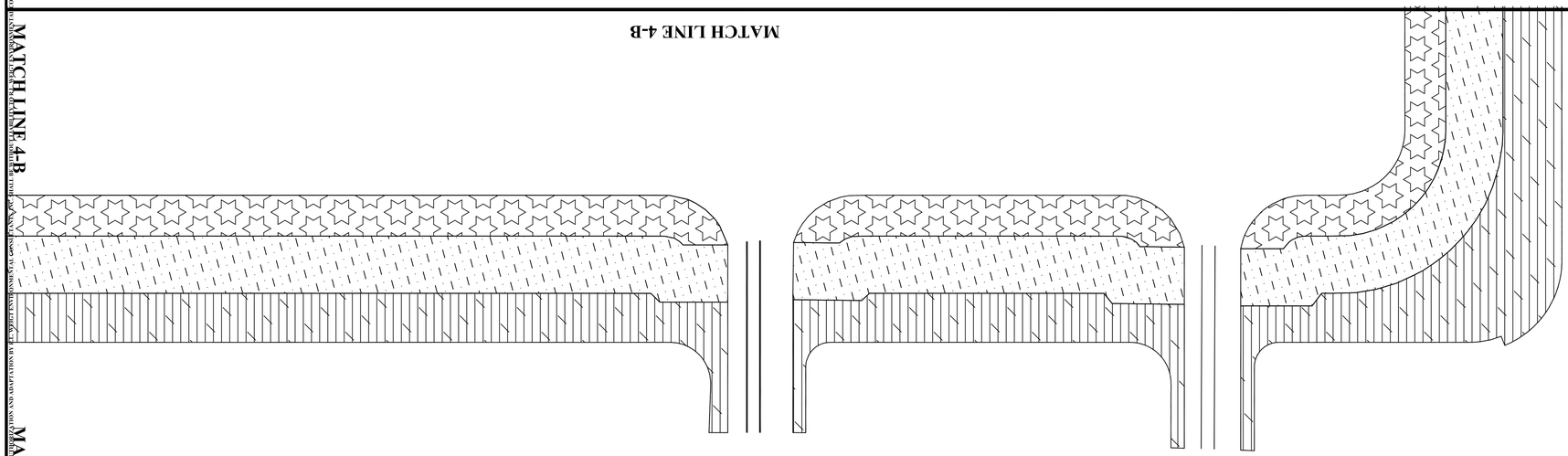
DRAWING NO.
17-19 - MI MATCH LINES 4A - 4B.DWG

SHEET:
17 0F 21

AMERICAN CONSULTING ENGINEERS OF FLORIDA, LLC
2818 CYPRESS RIDGE BOULEVARD, SUITE 200
WESLEY CHAPEL, FL 34544-6302
TELEPHONE (813) 435-2600; FAX (813)-345-2601

North

0' 20' 40' 80' 160'
SCALE: 1" = 40'



LEGEND

MESIC FLATWOODS

	SCIENTIFIC NAME	COMMON NAME
TREE CANOPY		
	Pinus elliottii	SLASH PINE
	Quercus virginica	LIVE OAK
	Sabal palmetto	GABBAGE PALM
SHRUB CANOPY*		
	Sideroxylon salicifolium	WILLOW BUSTIC
	Gaylussacia dumosa	DWARF HUCKLEBERRY
	Ilex cassine	DAHOON HOLLY
	Ilex glabra	GALLBERRY
	Lyonia ferruginea	RUSTY LYONIA
	Myrica cerifera	SOUTHERN WAX MYRTLE
	Serenoa repens	SAW PALMETTO
	Viburnum obovatum	SMALL LEAF VIBURNUM
GROUND COVER**		
	Amphicarpum muhlenbergianum	BLUE MAIDENCANE
	Aristida spiciformis	ARROW FEATHER GRASS
	Cyperus odoratus	FLAT SEDGE
	Eragrostis spectablis	LOVEGRASS
	Erianthus giganteus	SUGARCANE PLUMEGRASS
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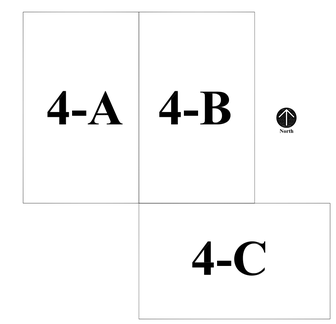
SHRUB CANOPY* - BASED ON 13.65± ACRES, @ 6' O.C. = 16516 PLANTS OR 2065 PER SPECIES.
GROUND COVER** - BASED ON 13.65± ACRES, @ 3'O.C. = 66066 PLANTS OR 8260 PER SPECIES.
REFER TO PLANTING DETAIL SHEET 2 (21 OF 21)



MATCH LINE KEY

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SOURCE:RLW AND ACEF

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	LONGITUDE: LONGITUDE: W080°20'34.176"	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
MESIC FLATWOODS (UPLAND) PLANTING MATCH LINE "4-B"

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL rlwenv@comcast.net

DRAWING NO.
17 - 19 - MF MATCH LINES 4A - 4B.DWG

SHEET:
18 OF 21

AMERICAN CONSULTING ENGINEERS OF FLORIDA, LLC
2818 CYPRESS RIDGE BOULEVARD, SUITE 200
WESLEY CHAPEL, FL 34544-6302
TELEPHONE (813) 435-2600; FAX (813)-345-2601

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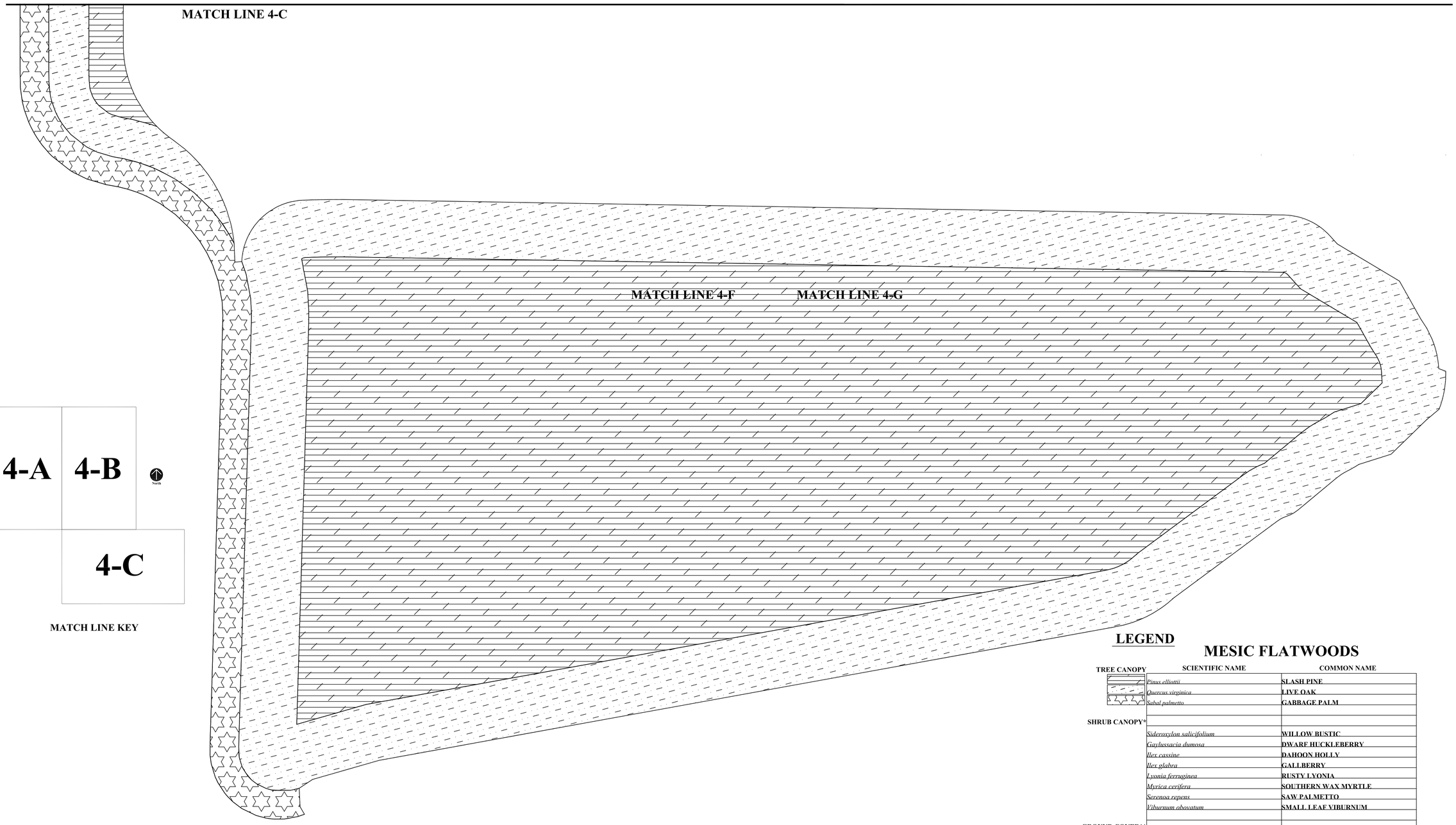
North

0' 20' 40' 80' 160'

SCALE: 1" = 40'



LEGEND

MESIC FLATWOODS

	SCIENTIFIC NAME	COMMON NAME
TREE CANOPY		
	Pinus elliottii	SLASH PINE
	Quercus virginica	LIVE OAK
	Sabal palmetto	GABBAGE PALM
SHRUB CANOPY*		
	Sideroxylon salicifolium	WILLOW BUSTIC
	Gaylussacia dumosa	DWARF HUCKLEBERRY
	Ilex cassine	DAHOON HOLLY
	Ilex glabra	GALLBERRY
	Lyonia ferruginea	RUSTY LYONIA
	Myrica cerifera	SOUTHERN WAX MYRTLE
	Serenoa repens	SAW PALMETTO
	Viburnum obovatum	SMALL LEAF VIBURNUM
GROUND COVER**		
	Amphicarpum muhlenbergianum	BLUE MAIDENCANE
	Aristida spiciformis	ARROW FEATHER GRASS
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	Erianthus giganteus	SUGARCANE PLUMEGRASS
	Muhlenbergia capillaris	GULF MUHLY GRASS
	Panicum virgatum	SWITCH GRASS
	Tripsacum dactyloides	FAKAHATCHEE GRASS

SHRUB CANOPY* - BASED ON 13.65± ACRES, @ 6' O.C. = 16516 PLANTS OR 2065 PER SPECIES.
GROUND COVER** - BASED ON 13.65± ACRES, @ 3'O.C. = 66066 PLANTS OR 8260 PER SPECIES.
REFER TO PLANTING DETAIL SHEET 2 (21 OF 21)

SOURCE:RLW AND ACEF

PLANVIEW	LATITUDE: LATITUDE: N27° 23'24.939"	DATE REVISED: 07 DECEMBER 2011	SCALE: 1" = 40'	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: W080°20'34.176"	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
MESIC FLATWOODS (UPLAND) PLANTING MATCH LINE "4-C"

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
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DRAWING NO.
19 OF 21 - MF MATCH LINES 4A - 4B,4F4G

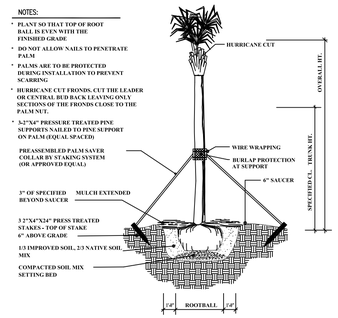
SHEET:
19 OF 21

AMERICAN CONSULTING ENGINEERS OF FLORIDA, LLC
2818 CYPRESS RIDGE BOULEVARD, SUITE 200
WESLEY CHAPEL, FL 34544-6302
TELEPHONE (813) 435-2600; FAX (813)-345-2601

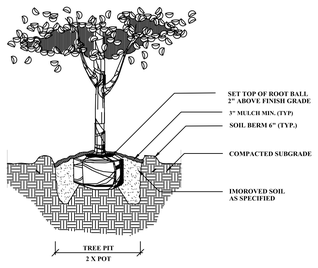
THIS DRAWING, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DRAWING WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY R.L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. SHALL BE WITHOUT LIABILITY TO R.L. WEIGT ENVIRONMENTAL CONSULTANTS, INC.

NOTES:

- PLANT SO THAT TOP OF ROOT BALL IS EVEN WITH THE FINISHED GRADE
- DO NOT ALLOW NAILS TO PENETRATE PALM
- PALMS ARE TO BE PROTECTED DURING INSTALLATION TO PREVENT SCARRING
- HURRICANE CUT FRONDS. CUT THE LEADER OR CENTRAL BUD BACK LEAVING ONLY SECTIONS OF THE FRONDS CLOSE TO THE PALM NUT.
- 3-2"X4" PRESSURE TREATED PINE SUPPORTS NAILED TO PINE SUPPORT ON PALM (EQUAL SPACED)

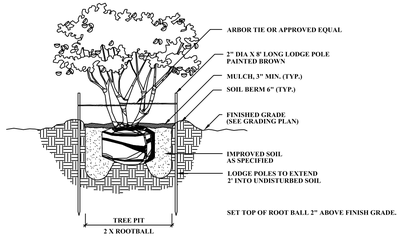


PALM PLANTING DETAIL SCALE: NTS

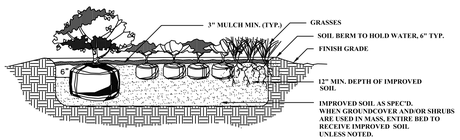


NOTE:
CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION

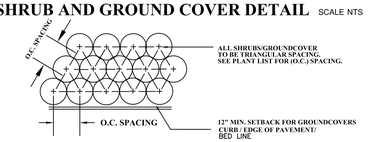
TREE PLANTING DETAIL (1 GAL.) SCALE: NTS



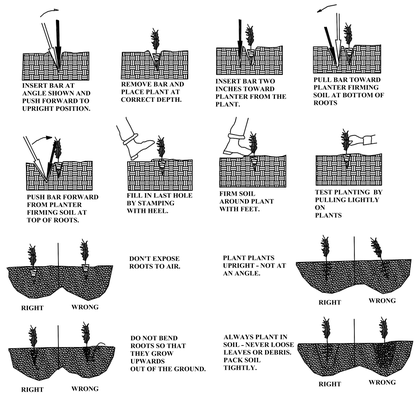
MULTI-TRUNK TREE DETAIL SCALE: NTS



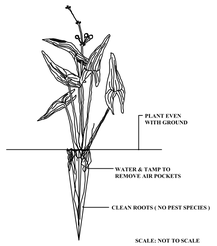
SHRUB AND GROUND COVER DETAIL SCALE NTS



PLANT SPACING DETAIL SCALE: NTS



PLANTING BARE ROOT PLANTS



PLANTING BARE ROOT PLANTS

GENERAL NOTES

1. PLANTS NATIVE TO FLORIDA MAY BE SUBSTITUTED FOR THOSE LISTED, ACCORDING TO AVAILABILITY AND SIZE, WITH THE WRITTEN AUTHORIZATION OF THE AGENCIES AND THE CLIENT.

2. LOCATION OF PLANTS MAY BE FIELD ADJUSTED IN ORDER TO PROVIDE THE BEST GROWING CONDITIONS.

3. PLANT MATERIAL SHALL BE INSPECTED BY THE CLIENT PRIOR TO INSTALLATION.

4. ALL PLANTS SHALL BE INSTALLED IN HEALTHY AND VIGOROUS CONDITION, AND SHALL BE FREE OF WEEDS, DISEASE, AND INSECT PESTS, EGGS OR LARVAE.

5. CONTRACTOR IS RESPONSIBLE FOR THE PROPER WATERING AND FERTILIZATION OF THE INSTALLED PLANTS FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR.

6. ROOT BOUND CONTAINER PLANTS WILL NOT BE ACCEPTED.

7. USE FLORIDA GOLD NO FLOAT CYPRESS MULCH OR EQUIVALENT.

8. SHRUB CANOPY AND GROUND COVER TO BE PLACED RANDOMLY, ON SPECIFIED CENTERS. REFER TO DETAIL SHEET 21 OF 21.

CALL 48 HOURS BEFORE YOU DIG IN FLORIDA
1-800-432-4770
IT'S THE LAW!
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

GENERAL NOTES

DEFINITION OF IMPROVED SOIL

IMPROVED SOIL IS DEFINED AS A TOPSOIL MIXTURE COMPRISED OF PEAT AND SAND WITH AN ORGANIC MATTER CONTENT OF FIVE (5) PEPCENT BY WEIGHT (ASTM STANDARD TEST METHOD D 2974-00) THE IMPROVED SOIL SHALL PASS A 1/2" SIEVE.
THE IMPROVED SOIL SHALL BE SUITABLE FOR AND CAPABLE OF SUPPORTING WETLAND VEGETATION AND SHALL BE FREE OF EXOTIC OR INVASIVE PLANT SEED SOURCES. ALL IMPROVED SOIL MUST BE APPROVED BY THE CLIENT BEFORE PLACEMENT IN

MITIGATION AREAS.

GRADE STANDARDS AND QUALITY

QUALITY OF ALL PLANTS SHALL BE AT LEAST EQUAL TO THAT OUTLINED AS NO. 1 IN GRADES AND STANDARDS FOR NURSERY PLANTS, PART 1, 1963, REVISED EDITION AND PART 1, PALMS AND TREES, BY THE STATE PLANT BOARD OF FLORIDA.
ALL PLANTS SHALL BE SOUND, HEALTHY AND VIGOROUS, WELL BRANCHED, AND DENSELY FOLIATED WHEN IN LEAF. THEY SHALL HAVE HEALTHY, WELL DEVELOPED ROOT SYSTEMS, AND SHALL BE FREE OF DISEASES AND INSECT PESTS, EGGS, OR LARVAE. ALL PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED HEREIN OR INDICATED ON THE CONTRACT DRAWINGS.

TRANSPORTATION AND INSPECTION

PLANT TRANSPORTATION SHALL COMPLY WITH ALL FEDERAL AND STATE REGULATIONS, THEREFORE, AND UPON DELIVERY AT THE SITE, ALL PLANTS SHALL BE INSPECTED BY THE PROJECTS ENVIRONMENTAL CONSULTANT FOR CONFORMITY TO SPECIFICATIONS AND FOR HANDLING DAMAGE. THE CONTRACTOR SHALL PROVIDE THE ENVIRONMENTAL CONSULTANT WITH A 48-HOUR NOTICE BEFORE ANY REQUESTED INSPECTION. REJECTED PLANTS SHALL BE REMOVED IMMEDIATELY FROM THE SITE BY THE CONTRACTOR.
TREES THAT HAVE TO BE TRANSPORTED MORE THAN ONE (1) MILE TO REACH THE PROJECT SITE SHALL BE TREATED WITH "WILT PRUF" AND COVERED WITH A 70 % SHADE-CLOTH-TARP OR EQUIVALENT TO PREVENT WIND BURN.

SOURCE:RLW AND ACEF

SEEDING

DESCRIPTION

This item shall consist of soil preparation, seeding the areas shown on the plans or as directed by the Engineer in accordance with these specifications.

MATERIALS

SEED The species and application rates of grass, legume, and cover-crop seed furnished shall be those stipulated herein.

Seed shall be furnished separately or in mixtures in standard containers with the seed name, lot number, net weight, percentages of purity and of germination and hard seed, and percentage of maximum weed seed content clearly marked for each kind of seed. The Contractor shall furnish the Engineer duplicate signed copies of a statement by the vendor certifying that each lot of seed has been tested by a recognized laboratory for seed testing within 6 months of date of delivery. This statement shall include: name and address of laboratory, date of test, lot number for each kind of seed, and the results of tests as to name, percentages of purity and of germination, and percentage of weed content for each kind of seed furnished, and, in case of a mixture, the proportions of each kind of seed.

Seeds shall be applied as follows:

Seed	Minimum Seed Purity (Percent)	Minimum Germination (Percent)	Rate of Application lb./acre
Bahia Grass	95% (FDOT 981)	95%	80
Annual Type Ryegrass	95% (FDOT 981)	90%	20

Seed shall meet the requirements as specified in the latest edition of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction, Section 981.

Bahia seeding (permanent erosion control) shall be installed between March and September inclusive, unless otherwise approved by the Engineer. Ryegrass seeding (temporary erosion control) shall be installed between October and February only. If Ryegrass is placed as temporary erosion control, then the contractor must return during the designated period to place the permanent erosion control (Bahia seeding).

CONSTRUCTION METHODS

ADVANCE PREPARATION AND CLEANUP. After grading of areas has been completed, areas to be seeded shall be raked or otherwise cleared of stones larger than 2 inches any diameter, sticks, stumps, and other debris that might interfere with sowing of seed, growth of grasses, or subsequent maintenance of grass-covered areas. If any damage by erosion or other causes has occurred after the completion of grading, the Contractor shall repair such damage. This may include filling gullies, smoothing irregularities, and repairing other incidental damage.

An area to be seeded shall be considered a satisfactory seedbed without additional treatment if it has recently been thoroughly loosened and worked to a depth of not less than 5 inches as a result of grading operations and, if immediately prior to seeding, the top 3 inches of soil is loose, friable, reasonably free from large clods, rocks, large roots, or other undesirable matter, and if shaped to the required grade.

However, when the area to be seeded is sparsely sodded, weedy, barren and unworked, or packed and hard, any grass and weeds shall first be cut or otherwise satisfactorily disposed of, and the soil then scarified or otherwise loosened to a depth not less than 5 inches. Clods shall be broken and the top 3 inches of soil shall be worked into a satisfactory seedbed by discing, or by use of cultipackers, rollers, drags, harrows, or other appropriate means.

WET APPLICATION METHOD.

a. General. The Contractor may elect to apply seed by spraying them on the previously prepared seedbed in the form of an aqueous mixture and by using the methods and equipment described herein. The rates of application shall be as specified in the special provisions.

b. Spraying Equipment. The spraying equipment shall have a container or water tank equipped with a liquid level gauge calibrated to read in increments not larger than 50 gallons over the entire range of the tank capacity, mounted so as to be visible to the nozzle operator. The container or tank shall also be equipped with a mechanical power-driven agitator capable of keeping all the solids in the mixture in complete suspension at all times until used.

The unit shall also be equipped with a pressure pump capable of delivering 100 gallons per minute at a pressure of 100 pounds per square inch. The pump shall be mounted in a line that will recirculate the mixture through the tank whenever it is not being sprayed from the nozzle. All pump passages and pipe lines shall be capable of providing clearance for $\frac{5}{8}$ inch solids. The power unit for the pump and agitator shall have controls mounted so as to be accessible to the nozzle operator. There shall be an indicating pressure gauge connected and mounted immediately at the back of the nozzle.

The nozzle pipe shall be mounted on an elevated supporting stand in such a manner that it can be rotated through 360 degrees horizontally and inclined vertically from at least 20 degrees below to at least 60 degrees above the horizontal. There shall be a quick-acting,three-way control valve connecting the recirculating line to the nozzle pipe and mounted so that the nozzle operator can control and regulate the amount of flow of mixture delivered to the nozzle. At least three different types of nozzles shall be supplied so that mixtures may be properly sprayed over distance varying from 20 to 100 feet. One shall be a close-range ribbon nozzle, one a medium-range ribbon nozzle, and one a long-range jet nozzle. For case of removal and cleaning, all nozzles shall be connected to the nozzle pipe by means of quick-release couplings.In order to reach areas inaccessible to the regular equipment, an extension hose at least 50 feet in length shall be provided to which the nozzles may be connected.

c. Mixtures. All water used shall be obtained from fresh water sources and shall be free from injurious chemicals and other toxic substances harmful to plant life. Brackish water shall not be used at any time. The Contractor shall identify to the Engineer all sources of water at least 2 weeks prior to use. The Engineer may take samples of the water at the source or from the tank at any time and have a laboratory test the samples for chemical and saline content. The Contractor shall not use any water

All mixtures shall be constantly agitated from the time they are mixed until they are finally applied to the seedbed. All such mixtures shall be used within 2 hours from the time they were mixed or they shall be wasted and disposed of at locations acceptable to the Engineer.

d. Spraying. Mixtures of seed shall only be sprayed upon previously prepared seedbeds. The mixtures shall be applied by means of a high-pressure spray that shall always be directed upward into the air so that the mixtures will fall to the ground like rain in a uniform spray. Nozzles or sprays shall never be directed toward the ground in such a manner as might produce erosion or runoff.

Particular care shall be exercised to insure that the application is made uniformly and at the prescribed rate and to guard against misses and overlapped areas. Proper predetermined quantities of the mixture in accordance with specifications shall be used to cover specified sections of known area. Checks on the rate and uniformity of application may be made by observing the degree of wetting of the ground or by distributing test sheets of paper or pans over the area at intervals and observing the quantity of material deposited thereon.

On surfaces that are to be mulched as indicated by the plans or designated by the Engineer, seed applied by the spray method need not be raked into the soil or rolled. However, on surfaces on which mulch is not to be used, the raking and rolling operations will be required after the soil has dried.

MAINTENANCE OF SEEDED AREAS. The Contractor shall protect seeded areas against traffic or other use by warning signs or barricades, as approved by the Engineer. Surfaces gullied or otherwise damaged following seeding shall be repaired by regrading and reseeding as directed. The Contractor shall mow, water as directed, and otherwise maintain seeded areas in a satisfactory condition until final inspection and acceptance of the work.

When the wet application method outlined above is used for work done out of season, it will be required that the Contractor establish a good stand of grass of uniform color and density to the satisfaction of the Engineer. A grass stand shall be considered adequate when bare spots are one square foot or less, randomly dispersed, and do not exceed 3% of the area seeded. If at the time when the contract has been otherwise completed it is not possible to make an adequate determination of the color, density, and uniformity of such stand of grass, payment for the unaccepted portions of the areas seeded out of season will be withheld until such time as these requirements have been met.

DETAIL SHEET 1	LATITUDE: LATITUDE: N27° 23'24.939"	DATE REVISED: 07 DECEMBER 2011	SCALE: NTS	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: W080°20'34.176"	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
DETAIL SHEET 1

R. L. WEIGT
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DRAWING NO. 20 - PLANTING DETAIL SHEET.DWG

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LEGEND — FLOODPLAIN SWAMP

	SCIENTIFIC NAME	COMMON NAME	HABITAT	DENSITY	SIZE	TOTAL UNITS
TREE CANOPY						
	Annona glabra	POND APPLE	OBL	10' O.C.	1 GAL	1920
	Carya aquatica	WATER HICKORY	OBL	10' O.C.	1 GAL	1650
	Fraxinus caroliniana	POP ASH	OBL	10' O.C.	1 GAL	520
	Persea palustris	SWAMP BAY	OBL	10' O.C.	1 GAL	870
SHRUB CANOPY						
	Baccharis halimifolia	GROUNDSEL BUSH	OBL	6' O.C.	1 GAL	3840
	Cephalanthus occidentalis	BUTTONBUSH	OBL	6' O.C.	1 GAL	3840
	Ilex cassine	DAHOON HOLLY	OBL	6' O.C.	1 GAL	3840
	Itea virginica	VIRGINIA WILLOW	OBL	6' O.C.	1 GAL	3840
GROUND COVER						
	Acrostichum danaeifolium	LEATHER FERN	OBL	3' OC	BR	6150
	Bacopa caroliniana	LEMON BACOPA	OBL	3' OC	BR	6150
	Hymenocallis latifolia	SPIDER-LILY	FACW	3' OC	BR	6150
	Muhlenbergia capillaris	MUHLY GRASS	OBL	3' OC	BR	6150
	Panicum hemitomon	MAIDENCANE	OBL	3' OC	BR	6150
	Polygonum punctatum	SMARTWEED	FACW+	3' OC	BR	6150
	Osmunda regalis	ROYAL FERN	OBL	3' OC	BR	6150
	Saururus cernuus	LIZARD'S TAIL	OBL	3' OC	BR	6150
	Woodwardia areolata	NETTED CHAIN FERN	OBL	3' OC	BR	6150
	Zizaniopsis miliacea	SOUTHERN WILD RICE	OBL	3' OC	BR	6150

SHRUB CANOPY* - BASED ON 12.70± ACRES, @ 6' O.C. = 15367 PLANTS OR 33840 PER SPECIES.
GROUND COVER** - BASED ON 12.70± ACRES, @ 3'O.C. = 61468 PLANTS OR 6150 PER SPECIES.

LEGEND — DEPRESSIONAL MARSH

	SCIENTIFIC NAME	COMMON NAME	HABITAT	DENSITY	SIZE	TOTAL UNITS
LF	*Acrostichum danaeifolium*	LEATHER FERN	OBL	3' OC	BR	1690
	Bacopa caroliniana	LEMON BACOPA	OBL	3' OC	BR	775
	Crinum americanum	CRINUM LILY	OBL	3' OC	BR	630
	Eleocharis cellulosa /Eleocharis interstincta (MIX)	SPIKE RUSH/JOINTED SPIKE RUSH	OBL	3' OC	BR	15150
	Eragrostis spectabilis	PURPLE LOVEGRASS	FAC	3' OC	BR	1260
	Juncus effusus	SOFT RUSH	OBL	3' OC	BR	21440
BL	*Nymphoides aquatica*	BANANA LILY	OBL	3' OC	BR	3150
WL	*Nymphaea odorata*	FRAGRANT WATER LILY	OBL	3' OC	BR	1600
	Panicum hemitomon	MAIDENCANE	OBL	3' OC	BR	3190
GA	*Peltandra virginica*	GREEN ARUM	OBL	3' OC	BR	2450
PW	*Pontederia cordata*	PICKEREL WEED	OBL	3' OC	BR	5240
	Rhynochospora microcarpa	SOUTHERN BEAKRUSH	OBL	3' OC	BR	3920
LA	*Sagittaria lancifolia*	LANCE-LEAF ARROWHEAD	OBL	3' OC	BR	2400
DP	*Sagittaria latifolia*	DUCK POTATO	OBL	3' OC	BR	2310
	Scirpus californicus	GIANT BULRUSH	OBL	3' OC	BR	21250
	Scripus validus	SOFT STEM BULRUSH	OBL	3' OC	BR	15390
	Spartina bakeri	SMOOTH CORDGRASS	FACW	3' OC	BR	12782
T	*Thalia geniculata*	ARROWROOT	OBL	3' OC	BR	7880

HYDRO SEED (0.5± ACRES) SEE DETAIL SHEET1 (SHEET 20 OF 21)

LEGEND — HYDRIC HAMMOCK

	SCIENTIFIC NAME	COMMON NAME	HABITAT	DENSITY	SIZE	TOTAL UNITS
TREE CANOPY						
	Acer rubrum	SWAMP MAPLE	FACW	10' O.C.	1 GAL	1090
	Celtis laevigata	HACKBERRY	FACW	10' O.C.	1 GAL	480
	Diospyros virginiana	PERSIMMON	FAC	10' O.C.	1 GAL	610
	Gordonia lasianthus	LOBLOLLY BAY	FACW	10' O.C.	1 GAL	700
	Quercus laurifola	LAUREL OAK	FAWC	10' O.C.	1 GAL	2560
	Sabal palmetto	CABBAGE PALM	FAC	10' O.C.	10' CT	410
SHRUB CANOPY*						
	Cornus foemina	SWAMP DOGWOOD	FACW	6' O.C.	1 GAL	1820
	Hypericum brachyphyllum	ST. JOHNS WORT	FACW	6' O.C.	1 GAL	1820
	Ilex cassine	DAHOON HOLLY	OBL	6' O.C.	1 GAL	1820
	Lyonia lucida	FETTER-BUSH	FACW	6' O.C.	1 GAL	1820
	Morus rubus	RED MULBERRY	FAC	6' O.C.	1 GAL	1820
	Rapanea punctata	MYRSINE	FAC	6' O.C.	1 GAL	1820
	Myrica cerifera	SOUTHERN WAX MYRTLE	FACW	6' O.C.	1 GAL	1820
	Psychotria nervosa	WILD COFFEE	FAC	6' O.C.	1 GAL	1820
	Serenoa minor	BLUESTEM PALMETTO	FACW	6' O.C.	1 GAL	1820
GROUND COVER**						
	Amphicarpum muhlenbergianum	BLUE MAIDENCANE	FACW	3' O.C.	BR	8190
	Blechnum serrulatum	SWAMP FERN	FACW	3' O.C.	BR	8190
	Fuirena scirpoidea	RUSH FUIRENA	FACW	3' O.C.	BR	8190
	Muhlenbergia capillaris	GULF MUHLY GRASS	OBL	3' O.C.	BR	8190
	Osmunda regalis	ROYAL FERN	OBL	3' O.C.	BR	8190
	Panicum dichotomiflorum	FALL PANIC GRASS	FACW	3' O.C.	BR	8190
	Panicum virgatum	SWITCHGRASS	FACW	3' O.C.	BR	8190
	Tripsacum dactyloides	FAKAHATCHEE GRASS	FAC	3' O.C.	BR	8190

SHRUB CANOPY* - BASED ON 13.54± ACRES, @ 6' O.C. = 16380 PLANTS OR 1820 PER SPECIES.
GROUND COVER** - BASED ON 13.54± ACRES, @ 3'O.C. = 65530 PLANTS OR 8190 PER SPECIES.

HYDRO SEED REFER TO DETAIL SHEET 1 (SHEET 20 OF 21)

SOURCE:RLW AND ACEF

LEGEND — MESIC FLATWOODS

	SCIENTIFIC NAME	COMMON NAME	HABITAT	DENSITY	SIZE	TOTAL UNITS
TREE CANOPY						
	Pinus elliottii	SLASH PINE	UPL	10' O.C.	1 GAL	3310
	Quercus virginica	LIVE OAK	FACW	10' O.C.	1 GAL	1370
	Sabal palmetto	GABBAGE PALM	FAC	10' O.C.	10' CT	610
SHRUB CANOPY*						
	Sideroxylon salicifolium	WILLOW BUSTIC	UPL	6' O.C.	1 GAL	2065
	Gaylussacia dumosa	DWARF HUCKLEBERRY	FACW	6' O.C.	1 GAL	2065
	Ilex cassine	DAHOON HOLLY	OBL	6' O.C.	1 GAL	2065
	Ilex glabra	GALLBERRY	UPL	6' O.C.	1 GAL	2065
	Lyonia ferruginea	RUSTY LYONIA	UPL	6' O.C.	1 GAL	2065
	Myrica cerifera	SOUTHERN WAX MYRTLE	FAC	6' O.C.	1 GAL	2065
	Serenoa repens	SAW PALMETTO	UPL	6' O.C.	1 GAL	2065
	Viburnum obovatum	SMALL LEAF VIBURNUM	FACW	6' O.C.	1 GAL	2065
GROUND COVER**						
	Amphicarpum muhlenbergianum	BLUE MAIDENCANE	FACW	3' O.C.	BR	8260
	Aristida spiciformis	ARROW FEATHER GRASS	FAC	3' O.C.	BR	8260
	Cyperus odoratus	FLAT SEDGE	FACW	3' O.C.	BR	8260
	Eragrostis spectablis	LOVEGRASS	FAC	3' O.C.	BR	8260
	Erianthus giganteus	SUGARCANE PLUMEGRASS	FACW	3' O.C.	BR	8260
	Muhlenbergia capillaris	GULF MUHLY GRASS	OBL	3' O.C.	BR	8260
	Panicum virgatum	SWITCH GRASS	FAC	3' O.C.	BR	8260
	Tripsacum dactyloides	FAKAHATCHEE GRASS	FAC	3' O.C.	BR	8260

SHRUB CANOPY* - BASED ON 13.65± ACRES, @ 6' O.C. = 16516 PLANTS OR 2065 PER SPECIES.
GROUND COVER** - BASED ON 13.65± ACRES, @ 3'O.C. = 66066 PLANTS OR 8260 PER SPECIES.

DETAIL SHEET 3	LATITUDE: LATITUDE: N27° 23'24.939"	DATE REVISED: 07 DECEMBER 2011	SCALE: NTS	RLW JOB NO.: 10-022.04	SEC.	TWP.	R.	COUNTY: ST. LUCIE
	LONGITUDE: LONGITUDE: W080°20'34.176"	DRAWN BY: AB	CHECKED BY: FP	APPROVED BY: RLW	33	35	40	STATE: FLORIDA

CITY OF PORT ST LUCIE
PLATTS CREEK COMPENSATORY MITIGATION PROJECT
PROPOSED PLANTING PLAN
PLANTING DETAIL SHEET 3

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DRAWING NO. 21 - PLANTING DETAIL SHEET A.DWG

United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Florida Ecological Services Office
1339 20th Street
Vero Beach, Florida 32960

October 15, 2012

Ann Broadwell
Florida Department of Transportation
3400 West Commercial Boulevard
Fort Lauderdale, Florida 33309

Service Federal Activity Code: 41420-2006-CPA-1400
Service Consultation Code: 41420-2006-I-1031
Date Received: June 19, 2012
Project: Crosstown Parkway Extension from Manth Lane to U.S. Highway 1
County: St. Lucie

Dear Ms. Broadwell:

The U.S. Fish and Wildlife Service (Service) has reviewed your letter dated June 19, 2012, and other information submitted by the Florida Department of Transportation (FDOT), on behalf of the Federal Highway Administration, for the project referenced above. This letter is submitted in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 *et seq.*).

PROJECT DESCRIPTION

The FDOT, in cooperation with the City of Port St. Lucie, proposes to extend the existing Crosstown Parkway from its eastern terminus at Manth Lane to U.S. Highway 1 in Port St. Lucie, Florida. The proposed new roadway segment will consist of a six-lane highway with a bridge over the North Fork of the St. Lucie River (NFSLR). The preferred alternative for the project commences at Manth Lane, extends eastward along West Virginia Drive and crosses over the NFSLR, and terminates at the existing intersection of U.S. Highway 1 and Village Green Drive.

The purpose of the project is to provide additional vehicle capacity to meet current and projected traffic needs. The project will require use of public conservation lands (as defined by Section 4(f) of the Department of Transportation Act of 1966) located in the State of Florida's NFSLR Aquatic Preserve (AP) and the Savannas Preserve State Park (SPSP). The project site is located in Saint Lucie County, Florida.

Information provided with your June 10, 2012, letter indicated that the project will impact 10.58 acres (ac) of freshwater wetlands and 0.29 ac of mangrove wetlands. However, after meeting with representatives of the FDOT and the City of Port St. Lucie on September 10, 2012, we are

aware that the freshwater wetland impacts have been reduced to 6.8 ac, based on a redesign of the bridge structure.

To compensate for impacts to wetlands and State conservation lands, the FDOT proposes the following:

1. Improvement to water quality within the NFSLR AP through restoration projects proposed at Evans Creek, Site 5 West, Riverplace Upstream, and Otter Trail. Restoration activities include dredging shoals or berms, and widening or deepening portions of the waterway. These projects are anticipated to improve approximately 22.16 ac of open water and reconnect about 28.05 ac of wetlands to flows from the NFSLR.

2. Acquisition of 110 ac of currently unprotected lands adjacent to the NFSLR. All acquired lands will be enhanced by the removal of invasive exotic vegetation and ownership will be transferred to the State for inclusion within the NFSLR AP.

3. Enhancements to the SPSP, including the construction of a 2.5-mile multiuse trail within the park from Savannah Road to Midway Road, improvements to the Halpatiokee Canoe Access Trail, and improvements to the existing Education Center.

4. Acquisition of 29.14 ac of wetland mitigation at the City of Port St. Lucie's proposed 82-ac Platt's Creek Mitigation Site (PCMS), which is a Permittee-Responsible Offsite Mitigation Area (PROMA).

5. Purchase of an adequate number of credits from the Bear Point Mitigation Bank to offset the loss of 0.29 ac of mangrove wetlands.

THREATENED AND ENDANGERED SPECIES

Eastern indigo snake

The project occurs within the geographic range of the threatened eastern indigo snake (*Drymarchon corais couperi*). To minimize adverse impacts to this species, the applicant has agreed to implement the Service's *Standard Protection Measures for the Eastern Indigo Snake* (Service 2004a) during construction. The FDOT determined the project "may affect, but is not likely to adversely affect" the eastern indigo snake. Based on the adherence to the indigo snake protection measures, the Service concurs with this determination.

Wood stork

The project site is located within the core foraging area (CFA) (within 18.6 miles) of one active breeding colony of the endangered wood stork (*Mycteria americana*). The Service believes the loss of wetlands within a CFA may reduce foraging opportunities for wood storks. To minimize adverse effects to the wood stork, the Service's Draft Supplemental Habitat Management

Guidelines for the Wood Stork in the South Florida Ecological Services Consultation Area (Service 2004b) recommends the applicant replace wetlands lost due to the action. The compensation plan should include a temporal lag factor, if necessary, to ensure wetlands provided as compensation adequately replace the wetland functions lost due to the project. Moreover, wetlands offered as compensation should be of the same hydroperiod, and located within the CFA of the affected wood stork colony.

The Service does not consider the preservation of wetlands, by itself, as adequate compensation for impacts to wood stork foraging habitat, because the habitat lost is not replaced. Accordingly, any wetland mitigation plan that includes the preservation of wetlands should include a restoration, enhancement, or creation component. In some cases, the Service accepts wetlands compensation located outside the CFA of the affected wood stork nesting colony. Specifically, wetland credits purchased from a "Service Approved" mitigation bank located outside the CFA would be acceptable to the Service, provided the impacted wetlands occur within the permitted service area of the bank.

For projects that impact 5 or more acres of wood stork foraging habitat, the Service requires a functional assessment be conducted using our "Wood Stork Foraging Analysis Methodology" (Methodology) on the foraging habitat to be impacted and the foraging habitat provided as mitigation. The Methodology can found in the Service's May 18, 2010, wood stork determination key (Service Federal Activity Code Number 41420-2007-FA-1494) provided to the Corps.

The FDOT determined that the project "may affect, but is not likely to adversely affect" the wood stork. The applicant applied the Service's Methodology to the 10.58 ac of originally proposed impacts to stork foraging habitat. Using those values, the 4.14 ac of short-hydroperiod wetlands (inundated ≤ 180 days per year) and 6.44 ac of long-hydroperiod wetlands (inundated > 180 days per year) to be impacted provide 3.38 kilograms (kg) and 24.37 kg of wood stork forage biomass, respectively. To compensate for the loss of wood stork foraging habitat, the applicant has proposed to provide 29.14 ac of wetland mitigation at the proposed PCMS PROMA. The 29.14 ac of wetlands consist of 13.54 ac of short-hydroperiod wetlands and 15.6 ac of long-hydroperiod wetlands, which provide 11.04 kg and 55.15 kg of wood stork forage biomass, respectively. The Service finds that the proposed wetland mitigation will offset the loss of wood stork forage resulting from the project. Based on the minor impacts to wood stork foraging habitat, the Service concurs with the FDOT's determination for the wood stork.

West Indian manatee

The project is located within waters accessible to the endangered West Indian manatee (*Trichechus manatus*). The FDOT determined that the project will have "no effect" on the manatee. The Service notes that the project includes in-water work that could potentially affect the manatee. To minimize the likelihood that that project will affect manatees, the applicant has agreed to follow the Florida Fish and Wildlife Conservation Commission's (FWC) "Standard Manatee Conditions for In-water Work" (FWC 2011). Based on the protection measures proposed, the Service finds that the project "may affect, but is not likely to adversely affect" the

manatee. Should the FDOT wish to change their determination for the manatee from "no effect" to "may affect, not likely to adversely affect," this letter can be used as concurrence for that finding.

This letter fulfills the requirements of section 7 of the Act and further action is not required. If modifications are made to the project, if additional information involving potential effects to listed species becomes available, or if a new species is listed, reinitiation of consultation may be necessary.

FISH AND WILDLIFE RESOURCES

We are concerned that the measures identified to protect lands proposed as mitigation for wetland impacts (*i.e.*, transfer from the County to Florida Department of Environmental Protection [FDEP] ownership) may not be adequate to protect the lands for conservation purposes in perpetuity. As such, we request that the proposed mitigation lands (consisting of the 110 ac of lands adjacent to the NLSLR AP and the 29.14 ac within the PCMS PROMA) be placed under a conservation easement that lists the Service as a third party with rights. Specifically, the rights would allow the Service to maintain the conservation values of the properties by enjoining any activity or use of the mitigation property that is inconsistent with the purposes of this Conservation Easement. Such activities could not go forward without written permission from the Service. Please indicate if the City of Port St. Lucie, Saint Lucie County, and FDEP are willing to place a conservation easement on the mitigation lands that contains rights for the Service.

Thank you for your cooperation in the effort to protect federally listed species. If you have any questions regarding this project, please contact John Wrublik at 772-469-4282.

Sincerely yours,

Craig Aubrey

for Larry Williams
Field Supervisor
South Florida Ecological Services Office

cc:
FWC, Tallahassee, Florida (FWC-CPS)
NOAA Fisheries Service, West Palm Beach, Florida (Brandon Howard)
Corps, Palm Beach Gardens, Florida (Garett Lips)

LITERATURE CITED

Florida Fish and Wildlife Conservation Commission. 2011. Standard Manatee Conditions for In-water Work. Tallahassee, Florida. http://myfwc.com/docs/WildlifeHabitats/Manatee_StdCondIn_waterWork.pdf

U.S. Fish and Wildlife Service. 2004a. Standard protection measures for the eastern indigo snake. Fish and Wildlife Service, South Florida Ecological Services Office; Vero Beach, Florida.

U.S. Fish and Wildlife Service. 2004b. Draft Supplemental Habitat Management Guidelines for the Wood Stork in the South Florida Ecological Services Consultation Area. Fish and Wildlife Service, South Florida Ecological Services Office; Vero Beach, Florida.

E-Wraps Platts

ESTUARINE WETLAND RAPID ASSESSMENT PROCEDURE FIELD DATA SHEET

Permit Number	Project	Date	Evaluator	Wetland Type
5079986	Crosstown Parkway Extension	12/8/10	A. Peterfreund	612 - Mangroves

Land Use	Wildlife Utilization (WU)	Wetland Canopy (O/S)	WL Grndcver (GC)
810	2.5	2.5	2.5

Habitat Support/Buffer	Field Hydrology (HYD)	WQ Input & Trtmnt (WQ)
3.0	3.0	2.5

E-WRAP Score	Wetland ID
16/18 = 0.89	Direct

Comments	
WU	abundant food sources and connected habitat within state park and adjacent to aquatic preserve, negligible evidence of human disturbance within 300 feet, abundant cover and habitat, adjacent uplands highly developed
O/S	Few exotics and nuisance species, good habitat support provided by wetland canopy, evidence of recruitment of native canopy species, few snags
GC	less than 10% nuisance species and exotics, minimal disturbances to ground cover, prescribed burning unlikely in this area due to adjacent residential areas
BUFFER	buffer greater than 300 feet wide, less than 10% nuisance species and exotics, large contiguous area of wetlands within state park and adjacent to aquatic preserve
HYD	plants healthy with little stress; wetlands exhibit natural hydroperiod; wetlands not adjacent to canal, ditches, swales, berms, wellfields
WQ	land use 50% 1.5 (SF Residential) 50% 3.0 (natural undeveloped) Total- 2.25 Average- 2.5 pre-treatment 50% 2.5 (wet detention with swales) 50% 3.0 (natural undeveloped) Total - 2.75

ESTUARINE WETLAND RAPID ASSESSMENT PROCEDURE FIELD DATA SHEET

Permit Number	Project	Date	Evaluator	Wetland Type
5079986	Crosstown Parkway Extension	12/8/10	A. Peterfreund	612 - Mangroves

Land Use	Wildlife Utilization (WU)	Wetland Canopy (O/S)	WL Grndcver (GC)
810	2.0	2.0	2.0

Habitat Support/Buffer	Field Hydrology (HYD)	WQ Input & Trtmnt (WQ)
2.0	3.0	2.5

E-WRAP Score	Wetland ID
13.5/18 = 0.75	Secondary 0-50’

Comments	
WU	Similar to direct impacts but will be impacted due to proximity to bridge and potential impacts to vegetation, food sources, and cover.
O/S	Similar to direct impacts but will be impacted due to proximity to bridge and potential for exotic and invasive species to invade. Wetland canopy reduced directly adjacent to bridge.
GC	Similar to direct impacts. Ground cover will be disturbed directly adjacent to the proposed bridge.
BUFFER	Similar to direct impacts with encroachment on buffer from proposed bridge.
HYD	plants healthy with little stress; wetlands exhibit natural hydroperiod; wetlands not adjacent to canal, ditches, swales, berms, wellfields
WQ	land use 50% 1.5 (SF Residential) 50% 3.0 (natural undeveloped) Total- 2.25 Average- 2.5 pre-treatment 50% 2.5 (wet detention with swales) 50% 3.0 (natural undeveloped) Total - 2.75

ESTUARINE WETLAND RAPID ASSESSMENT PROCEDURE FIELD DATA SHEET

Permit Number	Project	Date	Evaluator	Wetland Type
5079986	Crosstown Parkway Extension	12/8/10	A. Peterfreund	612 - Mangroves

Land Use	Wildlife Utilization (WU)	Wetland Canopy (O/S)	WL Grndcver (GC)
810	2.0	2.5	2.5

Habitat Support/Buffer	Field Hydrology (HYD)	WQ Input & Trtmnt (WQ)
2.5	3.0	2.5

E-WRAP Score	Wetland ID
15/18 = 0.83	Secondary 51' – 250'

Comments	
WU	Similar to direct impacts but will be impacted due to proximity to bridge and potential impacts to vegetation, food sources, and cover.
O/S	Few exotics and nuisance species, good habitat support provided by wetland canopy, evidence of recruitment of native canopy species, few snags.
GC	less than 10% nuisance species and exotics, minimal disturbances to ground cover, prescribed burning unlikely in this area due to adjacent residential areas
BUFFER	Similar to direct impacts with encroachment on buffer from proposed bridge.
HYD	plants healthy with little stress; wetlands exhibit natural hydroperiod; wetlands not adjacent to canal, ditches, swales, berms, wellfields
WQ	land use 50% 1.5 (SF Residential) 50% 3.0 (natural undeveloped) Total- 2.25 Average- 2.5 pre-treatment 50% 2.5 (wet detention with swales) 50% 3.0 (natural undeveloped) Total - 2.75

CITY OF PORT ST. LUCIE

ENGINEERING . . .

"The art of applying scientific and mathematical principals, experience, judgement, and common sense to make things that benefit people." - A.S.E.E.

January 11, 2011

James David
St. Lucie County Mosquito Control and Coastal Management Services
3150 Will Fee Road
Fort Pierce, FL 34982

RE: Letter Requesting Reservation of credits at Bear Point Mitigation Bank for the Crosstown Parkway Extension Project

Dear Mr. David:

The City of Port St. Lucie is working to permit a new crossing of the North Fork of the St Lucie River (NFSLR) called the Crosstown Parkway Extension. The proposed Crosstown Parkway Extension project includes the construction of a bridge over the NFSLR to extend Crosstown Parkway from Manth Lane to US 1.

There are six (6) build-alternative corridors and a no-build alternative included in the Environmental Impact Statement (EIS). At this time, the specific corridor alternative ("alignment") for the roadway and bridge crossing has not been determined. The selection of a no-build or a specific build alignment will be determined through the EIS process.

In a parallel effort, the City is pursuing a Conceptual Environmental Resource Permit (ERP) from the South Florida Water Management District (SFWMD). As part of Conceptual ERP, the City will need to mitigate for the unavoidable impacts to mangroves within the North St. Lucie River Drainage Basin. Should a build-alternative be selected, a maximum of 0.50 credits will be needed to mitigate for unavoidable mangrove impacts.

Our consultants, American Consulting Professionals, LLC, calculated the compensatory credits as follows:

- Determined the highest impact to mangroves:
  - Direct – 0.27 acres
  - Secondary (0-50')
  - Secondary (51'-250')

- Calculated a separate E-WRAP for each of the impacts (attached)

- Calculated that 0.37 credits are needed based upon the impacts and E-Wrap Scores (see Table Below)

Credits Needed Based on Impacts and E-Wrap Scores				
Impacts	***Acres***	***E-WRAP Score***	***Equation***	***Credits***
Direct	0.27	0.89	0.89 * 0.27	0.2403
Secondary (0-50')	0.31	0.75	(0.89-0.75) * 0.31	0.0434
Secondary (51'-250')	1.39	0.83	(0.89-0.83) * 1.39	0.0834
			Total	***0.37***

- Completed the Proximity Factor Worksheet (attached) to calculate a proximity factor of 1.3 to account for the fact that the Bear Point Mitigation Bank is outside of the North St. Lucie River Drainage Basin.

- Calculated the total credits needed to mitigation for unavoidable impacts to the mangroves as 0.48 credits (0.37 * 1.3).

The City would like to request a reservation of 0.50 credits at the Bear Point Mitigation Bank for the Crosstown Parkway Extension in the event a build-alternative is selected. Should the no-build alternative be selected, the City of Port St. Lucie will either sell or allocate the reserved credits for a different project.

It is our understanding that the fee for one credit at the Bear Point Mitigation Bank is $130,000; therefore, the fee for 0.5 credits will be $65,000. Furthermore, the mitigation bank requires 25% of the fee ($16,250) to reserve the credits.

As discussed with the Assistant County Attorney, Heather Young, our City Council will need to review, consider, and authorize the reservation and purchase agreements as well as the expenditure of funds. For this reason, we are asking that the County prepare and transmit a reservation agreement that we will take to our City Council for their review, consideration, and execution. Upon City Council approval, we will provide the County with the executed reservation agreement along with a check for the reservation deposit fee.

If you have any questions or need additional information, please do not hesitate to call me at 772-871-5175.

PR/rmc
Sincerely,

Patricia Roebling, P.E.
City Engineer

C: Jerry Bentrott – City Manager
Jesus Merejo – Director of Utility Systems
Kim Graham, P.E. - Acting Assistant City Engineer
Roberta Richards, Manager Engineering Operations
Heather Young – Asst. St. Lucie County Attorney
Brian Mirson, P.E. – American Consulting Professionals, LLC
Anna Peterfreund - American Consulting Professionals, LLC
Roxanne M. Chesser, P.E. – Civil Engineer

Proximity Worksheet:

Purpose is to take into account distance from impact area to mitigation area. Two components; one based on wildlife and one based on watershed.

Assumption: Mitigation is best in the same watershed.

a. Enter an identification number in the upper right corner
b. Fish and Wildlife:
   1) In line X1, answers a series of questions on wildlife. Assign yes or no to each question. Is the guild found on the impact site? (y or n) Question A. Does the location of the mitigation site relative to the impact site reduce the ability to mitigate for that guild (e.g. impact site within foraging range of woodstork rookery; however mitigation site is outside that range therefore the answer would be yes - Question B)
   2) Total the number of yes's and no's for each guild. Place number of each into block (X2.2)
   3) In line X2.3, follow instructions for division to determine the fish and wildlife score :

c. Watershed (Diminishing Relevance): (Do only if outside waters of impact area)
   1) In line X3.1, enter the name and acreage of the impact site watershed.
   2) In line X3.2, enter the name and acreage of the mitigation site watershed
   3) In line X3.3, enter names and acreage of watersheds between impact and mitigation site.
   4) In line X3.4, add watershed acreages.
   5) In line X3.5, enter the name and acreage of the standardized mitigation service areas (for individual projects – already defined by State). Banks have own service areas defined.
   6) In line X3.6, follow instruction for addition and division to determine the watershed number (WN).
d. Final Calculation: Block X3.0. Enter in column X of Project Worksheet

Crosstown Parkway Extension

Proximity Worksheet

version 4.0

Proximity # X 0.30

X1.0 Location of mitigation (place): Bear Point Mitigation Bank

X2.0 Fish and Wildlife Component

Question A: Is the guild represented at the impact site? Answer either "Yes" or "No" for each guild

Question B: Does the location of the mitigation site relative to the impact site reduce the ability to mitigate for that guild? If answer to A is "No", then enter "N/A". If answer to A is "Yes", answer either "Yes" or "No"

X2.1 Guilds	Question A Present?	Question B Reduced?		Question A Present?	Question B Reduced?
Neotropical Migrants:	A Y	B N	Reptiles:	A Y	B N
Wading Birds:	A Y	B Y	Freshwater Fish:	A Y	B Y
Raptors:	A Y	B N	Small Mammals:	A Y	B N
Waterfowl:	A Y	B N	Large Mammals:	A N	B N
Amphibians:	A Y	B N	Invertebrates:	A Y	B N

X2.2 Number of yes's for Question B: B1 2 Number yes's for A: A1 9

X2.3 Fish and Wildlife Component Score = FN = B1 divided by A1: FN 0.22

X3.0 Diminishing Relevance Component. (If mitigation in same watershed as impact: skip steps X3.1 to X3.4 and write WN=0.0 in line X3.6. If mitigation bank, use WN from table if Mitigation Bank Instrument includes table.)

	Name of Watersheds		Acres
X3.1 Mitigation site is located within:	South Indian River	Size = W1:	W1 31,685
X3.2 Impact site is located within:	North St. Lucie	Size = W1:	W2 124,322
X3.3 Watersheds separating/between the	0	Size = W1:	W3
mitigation and impact sites.		Size = W1:	W4
		Size = W1:	W5

X3.4 W1 + W2 + W3 + W4 + W5 = W6: W6 156,007 acre W6 divided by W1=W7: W7 4.92

X3.5 Name and size of Standard Mitigation Service Area in which mitigation and impact sites are located.
(Note: If mitigation provided by a Mitigation Bank, then use the service area designated for that bank.)
(Note: If sites are not in same standard area, define a service area appropriate to the mitigation site.)

Bear Point Mitigation Bank Size = W8: W8 60,200 W8 divided by W1=W9: W9 1.90

X3.6 Diminishing Relevance Score = [(W7 - 1.0) divided by (W9 - 1.0)] = WN WN 4.36

X4.0 **Proximity Factor = X = { 1.0 } divided by { [(FN + WN) divided by (2.0)] + [1.0] } =** **X** 0.30

Copy this number into the Proximity Factor column of the Project Worksheet. Use the same number for all of the "off-site mitigation" polygons located in the location (place) described at line X1.0 above.

UMAM Platts

Crosstown Parkway Corridor Extension (Segment 1)
Assessment Area Functional Loss by Alternative
Direct Impacts

Alternative 1C			
Assessment Area	**FLUCCS**	**Impact Acreage**	**Functional Loss**
AA1	612	0.18	0.16
AA2	6417	5.02	4.52
AA3	615	0.78	0.62
AA6	641	0.46	0.34
AA10	617	4.14	3.45
Total		10.58	**9.08**

Alternative 6A			
Assessment Area	**FLUCCS**	**Impact Acreage**	**Functional Loss**
AA1	612	0.17	0.15
AA3	615	0.26	0.21
AA4	615	2.01	1.41
AA5	6417	4.38	3.65
AA12	618	0.3	0.16
Total		7.12	**5.57**

Alternative 1F			
Assessment Area	**FLUCCS**	**Impact Acreage**	**Functional Loss**
AA1	612	0.16	0.14
AA2	6417	3.05	2.75
AA4	615	2.87	2.01
Total		6.08	**4.90**

Alternative 6B			
Assessment Area	**FLUCCS**	**Impact Acreage**	**Functional Loss**
AA1	612	0.25	0.22
AA2	6417	1.6	1.44
AA3	615	0.13	0.10
AA4	615	3.21	2.25
Total		5.19	**4.01**

Alternative 2A/2D			
Assessment Area	**FLUCCS**	**Impact Acreage**	**Functional Loss**
AA1	612	0.27	0.23
AA7	615	0.97	0.84
AA8	641	1.02	0.58
AA9	6417	2.7	2.25
AA11	641	1.37	0.87
AA13	617	0.45	0.36
AA14	615	0.14	0.10
Total		6.92	**5.24**

FLUCCS	Wetland Type
612	Mangrove Swamps
615	Stream and Lake Swamps
617	Mixed Wetland Hardwoods
618	Willow and Elderberry
641	Freshwater Marshes
6417	Freshwater Marsh with shrubs, brush, and vines

Crosstown Parkway Corridor Extension (Segment 1)
Wetland Functional Loss by Alternative

Alternative 1C	
Impact	**Functional Loss**
Direct	9.08
Secondary	2.38
Total	**11.46**

Alternative 6A	
Impact	**Functional Loss**
Direct	5.57
Secondary	1.66
Total	**7.23**

Alternative 1F	
Impact	**Functional Loss**
Direct	4.90
Secondary	1.79
Total	**6.69**

Alternative 6B	
Impact	**Functional Loss**
Direct	4.01
Secondary	1.44
Total	**5.45**

Alternative 2A/2D	
Impact	**Functional Loss**
Direct	5.24
Secondary	1.71
Total	**6.95**

Crosstown Parkway Corridor Extension (Segment 1)
Wetland Functional Loss by Alternative

Alternative 1C	
Impact	**Functional Loss**
Direct	8.93
Secondary	2.32
Total	**11.25**

Alternative 6A	
Impact	**Functional Loss**
Direct	5.43
Secondary	1.59
Total	**7.02**

Alternative 1F	
Impact	**Functional Loss**
Direct	4.76
Secondary	1.72
Total	**6.48**

Alternative 6B	
Impact	**Functional Loss**
Direct	3.79
Secondary	1.38
Total	**5.17**

Alternative 2A/2D	
Impact	**Functional Loss**
Direct	5.00
Secondary	1.60
Total	**6.61**

Crosstown Parkway Corridor Extension (Segment 1)
Assessment Area Functional Loss by Alternative
Secondary Impacts

Alternative 1C				
Assessment Area	**FLUCCS**	**Distance**	**Impact Acreage**	**Functional Loss**
AA1	612	0-50'	0.11	0.02
AA1	612	51-250'	1.17	0.04
AA2	6417	0-50'	3.21	0.64
AA2	6417	51-250'	9.51	0.63
AA3	615	0-50'	0.53	0.11
AA3	615	51-250'	1.92	0.06
AA4	615	0-50'	0.09	0.02
AA4	615	51-250'	1.86	0.06
AA6	641	0-50'	0.06	0.01
AA6	641	51-250'	0	0.00
AA10	617	0-50'	2.48	0.50
AA10	617	51-250'	8.82	0.29
Total			29.76	**2.38**

Alternative 6A				
Assessment Area	**FLUCCS**	**Distance**	**Impact Acreage**	**Functional Loss**
AA1	612	0-50'	0.15	0.03
AA1	612	51-250'	1.04	0.04
AA2	6417	0-50'	0	0.00
AA2	6417	51-250'	0.21	0.01
AA3	615	0-50'	0.19	0.04
AA3	615	51-250'	1.55	0.05
AA4	615	0-50'	1.37	0.27
AA4	615	51-250'	4.1	0.14
AA5	6417	0-50'	2.78	0.56
AA5	6417	51-250'	7.57	0.50
AA12	618	0-50'	0.06	0.01
AA12	618	51-250'	0.42	0.01
Total			19.44	**1.66**

Alternative 1F				
Assessment Area	**FLUCCS**	**Distance**	**Impact Acreage**	**Functional Loss**
AA1	612	0-50'	0.17	0.03
AA1	612	51-250'	1.29	0.04
AA2	6417	0-50'	1.97	0.39
AA2	6417	51-250'	8.85	0.59
AA3	615	0-50'	0	0
AA3	615	51-250'	0.08	0.003
AA4	615	0-50'	2.48	0.5
AA4	615	51-250'	7.28	0.24
Total			**22.12**	**1.79**

Alternative 6B				
Assessment Area	**FLUCCS**	**Distance**	**Impact Acreage**	**Functional Loss**
AA1	612	0-50'	0.17	0.03
AA1	612	51-250'	0.99	0.03
AA2	6417	0-50'	1.09	0.22
AA2	6417	51-250'	4.27	0.28
AA3	615	0-50'	0.08	0.02
AA3	615	51-250'	0.3	0.01
AA4	615	0-50'	2.82	0.56
AA4	615	51-250'	8.64	0.29
Total			18.36	**1.44**

Crosstown Parkway Corridor Extension (Segment 1)
Assessment Area Functional Loss by Alternative
Secondary Impacts

Alternative 2A/2D				
Assessment Area	**FLUCCS**	**Distance**	**Impact Acreage**	**Functional Loss**
AA1	612	0-50'	0.31	0.06
AA1	612	51-250'	1.39	0.05
AA7	615	0-50'	0.68	0.14
AA7	615	51-250'	2.65	0.09
AA8	641	0-50'	0.64	0.13
AA8	641	51-250'	0.92	0.06
AA9	6417	0-50'	1.95	0.39
AA9	6417	51-250'	10.09	0.67
AA13	617	0-50'	0.24	0.05
AA13	617	51-250'	0.12	0.004
AA14	615	0-50'	0.18	0.04
AA14	615	51-250'	0.75	0.03
Total			19.92	**1.71**

FLUCCS	Wetland Type
612	Mangrove Swamps
615	Stream and Lake Swamps
617	Mixed Wetland Hardwoods
618	Willow and Elderberry
641	Freshwater Marshes
6417	Freshwater Marsh with shrubs, brush, and vines

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Platt's Creek Compensatory Mitigation	090107-1	Floodplain Swamp

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
615	Floodplain Swamp - FNAI; PFO1P - USFWS	Mitigation	12.70 acres

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
North Fork St. Lucie River	Class III	

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The mitigation site is located along the North Fork of the St. Lucie River between the river and Sunrise Boulevard. The site is south of Bell Avenue. The site is connected geographically to the NFSLR to the west and a large wetland to the south. Neighborhoods exist to the north and east.

Assessment area description

Floodplain swamp is a closed canopy forest of hydrophytic trees occuring in frequently flooded hydric soils adjacent to the NFSLR. Inundation is seasonal and prolonged. The seasonal high water elevation is set at the mean high tide elevation of 1.4 feet NGVD.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
A property owned by the SFWMD and Platt's Creek are directly to the south. Directly to the west is the NFSLR. To the north is a small neighborhood.	Regionally important as conservation area in rapidly developing area

Functions	Mitigation for previous permit/other historic use
Wildlife habitat, feeding and breeding. Fish nursery habitat. Hydroperiod restoration and re-vegetation within NFSLR floodplain. Restore historic ecological and hydrologic functions. Improve water quality and natural storage within watershed and NFSLR.	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
amphibians, gopher frog, salamanders, Eastern indigo snake, Florida sandhill crane, limpkin, roseate spoonbill, snail kite, round-tailed muskrat, wading birds, woodstork, osprey, raccoon, water snakes, bobcat, American alligator, short tailed hawk, swallow-tailed kite, tree frogs, woodpeckers, warblers, owls, southeastern American kestrel, big brown bat	Wading birds (SSC); gopher frog (SSC), Eastern indigo snake (T), Florida sandhill crane (T), wood stork (E), osprey (SSC), American alligator (T),

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

songbirds, heron, Florida sandhill crane, American alligator,

Additional relevant factors:

Previously permitted as mitigation bank through St. Lucie County. Site was never constructed other than stormwater pond.

Assessment conducted by:	Assessment date(s):
Anna Peterfreund	1/12/2011

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Platt's Creek Compensatory Mitigation	090107-1	Floodplain Swamp
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Mitigation - Forested	Anna Peterfreund	12-Jan-09

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500(6)(a) Location and Landscape Support	0	9	The assessment area will be directly adjacent to the NFSLR, and the proposed depression marsh will be located directly to the east. Platt's Creek and property owned by the SFWMD are located to the south. A neighborhood exists to the north and is separated by a fence though only a small portion of the assessment area is adjacent to this neighborhood. This site will enhance the SFWMD property, the nearby state park, the NFSLR and Platt's Creek and the aquatic preserve to the south. A buffer of pine flatwoods will be provided on the eastern portion of the site separating the mitigation area from the stormwater pond, onsite facilities, and Sunrise Boulevard. The undeveloped portions of the area are under a perpetual conservation easement. Wildlife access to and from the site has minimal limitations based on location adjacent to NFSLR and Platt's Creek. Also, natural wetland habitat associated with the river located to the south. Functions of the proposed assessment area will benefit downstream fish and wildlife.
.500(6)(b)Water Environment (n/a for uplands)	0	9	The existing water environment is non-existent since the proposed mitigation site is an upland with the exception of the canals through the site and a large stormwater pond on the eastern side of the site. The assessment area will be graded to an elevation to provide a direct connection to the NFSLR and will contain a tidal influence. The site will be hydrated by the NFSLR and pond discharge. Once the depression marsh reaches the designated discharge elevatio of 3.0, it will discharge into the floodplain swamp. The highest bottom elevation in the floodplain swamp has been set at 1.90 NGVD. The proposed creek through the system is approximately 10' wide with a bottom elevation of -0.40 fee NGVD. The bottom of each system will be over excavated by six inches and backfilled with improved soil up to an elevation of six inches above the SHWE so in times of a drought, the improved soil will retain more moisture to assist in species survival. Project design should ensure vegetative communities are subjected to adequate hydroperiods.The proposed site will have a minimum of 100 days of soils saturation.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	0	8	The community structure is currently an upland consisting of fallow citrus groves that are now dominated by Brazilian pepper and other shrubby vegetation. The mitigation area will be planted as floodplain forest near the NFSLR. Species to be planted include pond apple, water hickory, pop ash, swamp bay, groundsel bush, button bush, dahoon holly, Virginia willow, leather fern, lemon bacopa, spider-lily, muhly grass, maidencane, smartweed, royal fern, lizard's tail, netted chain fern and southern wild rice as shown on the planting plan.The hydrology in the area and the surrounding wetlands should support the vegetation and wetland environment to be created. Nuisance plant control will be maintained to not exceed greater than 10% of the overall vegetation. No exotic vegetation will be allowed. Land management activities are optimal for the long term viability of the plant community. Upland buffer will also provide habitat and life history support for numerous wildlife species in the wetlands.

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0	0.87

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas	
FG = RFG x acres =	3.30

Delta = [with-current]
0.87

If mitigation		
Time lag (t-factor) =	1.68	16-20 yrs
Risk factor =	2	

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.26

Form 62-345.900(2), F.A.C. [effective date 02-04-2004]

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Platt's Creek Compensatory Mitigation	090107-1	Hydric Hammock

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
617	Hydric Hammock - FNAI; PFO1C - USFWS	Mitigation	13.54 acres

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
North Fork St. Lucie River	Class III	

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The mitigation site is located along the North Fork of the St. Lucie River between the river and Sunrise Boulevard. The site is south of Bell Avenue. The site is connected geographically to the NFSLR to the west and a large wetland to the south. Neighborhoods exist to the north and east.

Assessment area description

Hydric Hammock described as a community with a closed canopy of oaks and palms, an open understory and a moderate groundcover of grasses and ferns. The hammock is only inundated for short periods following heavy rains. The seasonal high water elevation is set at 4.10 feet NGVD.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
A property owned by the SFWMD and Platt's Creek are directly to the south. Directly to the west is the NFSLR. To the north is a small neighborhood.	Regionally important as conservation area in rapidly developing area

Functions	Mitigation for previous permit/other historic use
Wildlife habitat, feeding and breeding. Hydroperiod restoration and re-vegetation within NFSLR floodplain. Restore historic ecological and hydrologic functions. Improve water quality and natural storage within watershed and NFSLR.	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
amphibians, gopher frog, salamanders, Eastern indigo snake, Florida sandhill crane, limpkin, snail kite, round-tailed muskrat, wading birds, woodstork, osprey, raccoon, bobcat, short tailed hawk, swallow-tailed kite	Wading birds (SSC); gopher frog (SSC), Eastern indigo snake (T), Florida sandhill crane (T), wood stork (E), osprey (SSC), Limpkin (SSC), snail kite,

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

songbirds, heron, Florida sandhill crane, American alligator,

Additional relevant factors:

Previously permitted as mitigation bank through St. Lucie County. Site was never constructed other than stormwater pond.

Assessment conducted by:	Assessment date(s):
Anna Peterfreund	1/12/2011

Form 62-345.900(1), F.A.C. [effective date 02-04-2004]

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Platt's Creek Compensatory Mitigation	090107-1	Hydric Hammock
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Mitigation - Forested	Anna Peterfreund	12-Jan-09

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support		The mitigation site will be directly adjacent to the NFSLR, Platt's Creek and property owned by the SFWMD. A neighborhood exists to the north and is separated by a fence. The assessment area is located between the stormwater pond and the depression marsh. Wetlands within the SFWMD are to the south of the site. This site will enhance the state park, NFSLR and potentially the aquatic preserve to the south. This site will enhance the SFWMD property, the nearby state park, the NFSLR and Platt's Creek and the aquatic preserve to the south. A buffer of pine flatwoods will be provided on the eastern portion of the site separating the mitgation area from the stormwater pond, onsite facilities, and Sunrise Boulevard. The undeveloped portions of the area under a perpetual conservation easement. Wildlife access to and from the site has minimal limitations based on location adjacent to NFSLR and Platt's Creek. Also, natural wetland habitat associated with the river located to the south. Functions of the proposed assessment area benefit downstream fish and wildlife.
b pres or curre nt	with	
0	8	
.500(6)(b)Water Environment (n/a for uplands)		The existing water environment is non-existant since the proposed mitigation site is an upland with the exception of the canals throughout the site, large stormwater pond on the eastern side and a small lined pond on the western side of the site. The existing upland will be graded to an elevation that will support species indicative of hydric hammock. The site will be hydrated through pond discharge and natural flow. The adjacent wetlands appear to have good hydrologic functions with few exotic species as they are part of the state park. Water level data recorder information supports the idea that the wetland areas will rely on natural flow. The elevation within the hydric hammock varies between 3.5 and 4.6 feet. The seasonal high water elevation is set at 4.10 feet NGVD. The bottom of each system will be over excavated by six inches and backfilled with improved soil up to an elevation of six inches above the SHWE so in times of a drought, the improved soil will retain more moisture to assist in species survival. Project design should ensure vegetative communities are subjected to adequate hydroperiods.The proposed site will have a
b pres or curre nt	with	
0	8	
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community		The community structure is currently an upland consisting of fallow citrus groves that is now dominated by Brazilian pepper and other shrubby vegetation. The mitigation area will be planted as floodplain forest near the NFSLR with a transition area to a freshwater marsh, hydric hammock and hydric flatwood. Species to be planted in the hydric hammock include swamp maple, hackberry, persimmon, loblolly bay, laurel oak, and cabbage plam in the overstory. Extensive shrub canopy and ground cover plants will be planted as well as shown on the planting plans. The hydrology in the area and the surrounding wetlands should support the vegetation and wetland environment to be created. Nuisance plant control will be maintained to not exceed greater than 10% of the overall vegetation. No exotic vegetation will be allowed. Land management activities are optimal for the long term viability of the plant community. Upland buffer will also provide habitat and life history support for numerous wildlife species in the wetlands.
b pres or curre nt	with	
0	7	

Score = sum of above scores/30 (if uplands, divide by 20)	
curre nt w/o pres	with
0	0.77

If preservation as mitigation,	
Preservation adjustment factor =	
Adjusted mitigation delta =	

For impact assessment areas	
FG = RFG x acres =	3.52

Delta = [with-current]
0.77

If mitigation		
Time lag (t-factor) =	1.46	11-15 yrs
Risk factor =	2	

For mitigation assessment areas	
RFG = delta/(t-factor x risk)	0.26

Form 62-345.900(2), F.A.C. [effective date 02-04-2004]

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Platt's Creek Compensatory Mitigation	090107-1	Depression Marsh
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Mitigation - Herbaceous	Anna Peterfreund	12-Jan-09

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500(6)(a) Location and Landscape Support	0	9	The mitigation site will be directly adjacent to the NFSLR, Platt's Creek and property owned by the SFWMD. A neighborhood exists to the north. Wetlands within the SFWMD property are to the south of the site. In the proposed conditions, the depression marsh will be surrounded by the hydric hammock to the east and the floodplain swamp to the west. This site will enhance the SFWMD property, the nearby state park, the NFSLR and Platt's Creek and the aquatic preserve to the south. A buffer of pine flatwoods will be provided on the eastern portion of the site separating the mitgation area from the stormwater pond, onsite facilities, and Sunrise Boulevard. The undeveloped portions of the area are under a perpetual conservation easement. Wildlife access to and from the site has minimal limitations based on location adjacent to NFSLR and Platt's Creek. Also, natural wetland habitat associated with the river located to the south. Functions of the proposed assessment area benefit downstream fish and wildlife. Anticipated wildlife utilization by birds, small and/or medium sized mammals, amphibians and reptiles.
.500(6)(b)Water Environment (n/a for uplands)	0	9	The existing water environment is non-existant since the proposed mitigation site is an upland with the exception of the canals throughout the site and a large stormwater pond on the eastern side. The existing upland will be graded to an elevation that will support freshwater species and will be similar to that of the surrounding wetlands. The nearby wetlands appear to have good hydrologic functions with few exotic species as they are part of the state park and SFWMD property. Water level data recorder information supports the idea that the wetland areas will rely on natural flow. The site will by hydrated through pond discharge and the NFSLR.The water depth will be maintained at 18 inches. The maximum elevation the water will reach in the depression marsh will be 4.0' before being discharged into the floodplain swamp via v-notched weirs. The bottom of each system will be over excavated by six inches and backfilled with improved soil up to an elevation of six inches above the SHWE so in times of a drought, the improved soil will retain more moisture to assist in species survival. Project design should ensure vegetative communities are s
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	0	9	The community structure is currently an upland consisting of fallow citrus groves that is now dominated by Brazilian pepper and other shrubby vegetation. The mitigation area will be planted as floodplain forest near the NFSLR with a transition area to the freshwater marsh. Species planted in the marsh will include leather fern, lemon bacopa, crinum lilly, spike rush, jointed spike rush, purple lovegrass, banana lilly, fragrant water lilly, maidencane, pickerel weed, green arum, southern beakrush, lance-leaf arrowhead, duck potato, giant bulrush, soft stem bulrush, smooth cordgrass and arrowroot as shown on the planting plan. The hydrology in the area and the surrounding wetlands should support the vegetation and wetland environment to be created. Nuisance plant control will be maintained to not exceed greater than 10% of the overall vegetation. No exotic vegetation will be allowed. Land management activities are optimal for the long term viability of the plant community. Upland buffer will also provide habitat and life history support for numerous wildlife species in the wetlands.

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0	0.90

If preservation as mitigation,	
Preservation adjustment factor =	
Adjusted mitigation delta =	

For impact assessment areas	
FG = RFG x acres =	15.48

Delta = [with-current]
0.90

If mitigation		
Time lag (t-factor) =	1.07	3 yrs
Risk factor =	1.25	

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.67

Form 62-345.900(2), F.A.C. [effective date 02-04-2004]

Mitigation Determination Formulas
(See Section 62-345.600(3), F.A.C.)

For each impact assessment area:
(FL) Functional Loss = Impact Delta X Impact acres

For each mitigation assessment area:
(RFG) Relative Functional Gain = Mitigation Delta (adjusted for preservation, if applicable)/((t-factor)(risk))

(a) Mitigation Bank Credit Determination

The total potential credits for a mitigation bank is the sum of the credits for each assessment area where assessment area credits equal the RFG times the acres of the assessment area scored

Bank Assessment Area	RFG	X	Acres	=	Credits
example					
a.a.1					
a.a.2					
total					

(b) Mitigation needed to offset impacts, when using a mitigation bank

The number of mitigation bank credits needed, when the bank or regional offsite mitigation area is assessed in accordance with this rule, is equal to the summation of the calculated functional loss for each impact assessment area.

Impact Assessment Area	FL	=	Credits needed
example			
a.a.1			
a.a.2			
total			

(c) Mitigation needed to offset impacts, when not using a bank

To determine the acres of mitigation needed to offset impacts when not using a bank or a regional offsite mitigation area as mitigation, divide functional loss (FL) by relative functional gain (RFG). If there are more than one impact assessment area or more than one mitigation assessment area, the total functional loss and total relative functional gain is determined by summation of the functional loss (FL) and relative functional gain (RFG) for each assessment area.

	FL	/	RFG	=	Acres of Mitigation	
Alternative 1C						
641 AA2	5.79					
615 AA3	0.79					0.87
615 AA4	0.08					
641 AA6	0.35					
617 AA10	4.24					
Total	**11.25**					

	Functional Gain
641 Marsh	15.48
617 Hammock	3.52
615 Floodplain	3.30
Total	**22.30**

	FG	FL	= Remainder
Marsh	15.48	6.14	9.34
Hammock	3.52	4.24	-0.72
Floodplain	3.30	0.87	2.43
			11.05

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Platt's Creek Compensatory Mitigation	090107-1	Floodplain Swamp

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
615	Floodplain Swamp - FNAI; PFO1P - USFWS	Mitigation	12.70 acres

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
North Fork St. Lucie River	Class III	

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The mitigation site is located along the North Fork of the St. Lucie River between the river and Sunrise Boulevard. The site is south of Bell Avenue. The site is connected geographically to the NFSLR to the west and a large wetland to the south. Neighborhoods exist to the north and east.

Assessment area description

Floodplain swamp is a closed canopy forest of hydrophytic trees occuring in frequently flooded hydric soils adjacent to the NFSLR. Inundation is seasonal and prolonged. The seasonal high water elevation is set at the mean high tide elevation of 1.4 feet NGVD.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
A property owned by the SFWMD and Platt's Creek are directly to the south. Directly to the west is the NFSLR. To the north is a small neighborhood.	Regionally important as conservation area in rapidly developing area

Functions	Mitigation for previous permit/other historic use
Wildlife habitat, feeding and breeding. Fish nursery habitat. Hydroperiod restoration and re-vegetation within NFSLR floodplain. Restore historic ecological and hydrologic functions. Improve water quality and natural storage within watershed and NFSLR.	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
amphibians, gopher frog, salamanders, Eastern indigo snake, Florida sandhill crane, limpkin, roseate spoonbill, snail kite, round-tailed muskrat, wading birds, woodstork, osprey, raccoon, water snakes, bobcat, American alligator, short tailed hawk, swallow-tailed kite, tree frogs, woodpeckers, warblers, owls, southeastern American kestrel, big brown bat	Wading birds (SSC); gopher frog (SSC), Eastern indigo snake (T), Florida sandhill crane (T), wood stork (E), osprey (SSC), American alligator (T),

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

songbirds, heron, Florida sandhill crane, American alligator,

Additional relevant factors:

Previously permitted as mitigation bank through St. Lucie County. Site was never constructed other than stormwater pond.

Assessment conducted by:	Assessment date(s):
Anna Peterfreund	1/12/2011

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Platt's Creek Compensatory Mitigation	090107-1	Floodplain Swamp
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Mitigation - Forested	Anna Peterfreund	12-Jan-09

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500(6)(a) Location and Landscape Support	0	9	The assessment area will be directly adjacent to the NFSLR, and the proposed depression marsh will be located directly to the east. Platt's Creek and property owned by the SFWMD are located to the south. A neighborhood exists to the north and is separated by a fence though only a small portion of the assessment area is adjacent to this neighborhood. This site will enhance the SFWMD property, the nearby state park, the NFSLR and Platt's Creek and the aquatic preserve to the south. A buffer of pine flatwoods will be provided on the eastern portion of the site separating the mitigation area from the stormwater pond, onsite facilities, and Sunrise Boulevard. The undeveloped portions of the area are under a perpetual conservation easement. Wildlife access to and from the site has minimal limitations based on location adjacent to NFSLR and Platt's Creek. Also, natural wetland habitat associated with the river located to the south. Functions of the proposed assessment area will benefit downstream fish and wildlife.
.500(6)(b)Water Environment (n/a for uplands)	0	9	The existing water environment is non-existent since the proposed mitigation site is an upland with the exception of the canals through the site and a large stormwater pond on the eastern side of the site. The assessment area will be graded to an elevation to provide a direct connection to the NFSLR and will contain a tidal influence. The site will be hydrated by the NFSLR and pond discharge. Once the depression marsh reaches the designated discharge elevatio of 3.0, it will discharge into the floodplain swamp. The highest bottom elevation in the floodplain swamp has been set at 1.90 NGVD. The proposed creek through the system is approximately 10' wide with a bottom elevation of -0.40 fee NGVD. The bottom of each system will be over excavated by six inches and backfilled with improved soil up to an elevation of six inches above the SHWE so in times of a drought, the improved soil will retain more moisture to assist in species survival. Project design should ensure vegetative communities are subjected to adequate hydroperiods.The proposed site will have a minimum of 100 days of soils saturation.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	0	8	The community structure is currently an upland consisting of fallow citrus groves that are now dominated by Brazilian pepper and other shrubby vegetation. The mitigation area will be planted as floodplain forest near the NFSLR. Species to be planted include pond apple, water hickory, pop ash, swamp bay, groundsel bush, button bush, dahoon holly, Virginia willow, leather fern, lemon bacopa, spider-lily, muhly grass, maidencane, smartweed, royal fern, lizard's tail, netted chain fern and southern wild rice as shown on the planting plan.The hydrology in the area and the surrounding wetlands should support the vegetation and wetland environment to be created. Nuisance plant control will be maintained to not exceed greater than 10% of the overall vegetation. No exotic vegetation will be allowed. Land management activities are optimal for the long term viability of the plant community. Upland buffer will also provide habitat and life history support for numerous wildlife species in the wetlands.

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0	0.87

If preservation as mitigation,	
Preservation adjustment factor =	
Adjusted mitigation delta =	

For impact assessment areas	
FG = RFG x acres =	4.06

Delta = [with-current]
0.87

If mitigation		
Time lag (t-factor) =	1.3654	16-20 yrs
Risk factor =	2	

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.32

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Platt's Creek Compensatory Mitigation	090107-1	Hydric Hammock

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
617	Hydric Hammock - FNAI; PFO1C - USFWS	Mitigation	13.54 acres

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
North Fork St. Lucie River	Class III	

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The mitigation site is located along the North Fork of the St. Lucie River between the river and Sunrise Boulevard. The site is south of Bell Avenue. The site is connected geographically to the NFSLR to the west and a large wetland to the south. Neighborhoods exist to the north and east.

Assessment area description

Hydric Hammock described as a community with a closed canopy of oaks and palms, an open understory and a moderate groundcover of grasses and ferns. The hammock is only inundated for short periods following heavy rains. The seasonal high water elevation is set at 4.10 feet NGVD.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
A property owned by the SFWMD and Platt's Creek are directly to the south. Directly to the west is the NFSLR. To the north is a small neighborhood.	Regionally important as conservation area in rapidly developing area

Functions	Mitigation for previous permit/other historic use
Wildlife habitat, feeding and breeding. Hydroperiod restoration and re-vegetation within NFSLR floodplain. Restore historic ecological and hydrologic functions. Improve water quality and natural storage within watershed and NFSLR.	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
amphibians, gopher frog, salamanders, Eastern indigo snake, Florida sandhill crane, limpkin, snail kite, round-tailed muskrat, wading birds, woodstork, osprey, raccoon, bobcat, short tailed hawk, swallow-tailed kite	Wading birds (SSC); gopher frog (SSC), Eastern indigo snake (T), Florida sandhill crane (T), wood stork (E), osprey (SSC), Limpkin (SSC), snail kite,

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

songbirds, heron, Florida sandhill crane, American alligator,

Additional relevant factors:

Previously permitted as mitigation bank through St. Lucie County. Site was never constructed other than stormwater pond.

Assessment conducted by:	Assessment date(s):
Anna Peterfreund	1/12/2011

Form 62-345.900(1), F.A.C. [effective date 02-04-2004]

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Platt's Creek Compensatory Mitigation	090107-1	Hydric Hammock
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Mitigation - Forested	Anna Peterfreund	12-Jan-09

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support o pres or curre nt: 0 with: 8	The mitigation site will be directly adjacent to the NFSLR, Platt's Creek and property owned by the SFWMD. A neighborhood exists to the north and is separated by a fence. The assessment area is located between the stormwater pond and the depression marsh. Wetlands within the SFWMD are to the south of the site. This site will enhance the state park, NFSLR and potentially the aquatic preserve to the south. This site will enhance the SFWMD property, the nearby state park, the NFSLR and Platt's Creek and the aquatic preserve to the south. A buffer of pine flatwoods will be provided on the eastern portion of the site separating the mitgation area from the stormwater pond, onsite facilities, and Sunrise Boulevard. The undeveloped portions of the area under a perpetual conservation easement. Wildlife access to and from the site has minimal limitations based on location adjacent to NFSLR and Platt's Creek. Also, natural wetland habitat associated with the river located to the south. Functions of the proposed assessment area benefit downstream fish and wildlife.	
.500(6)(b)Water Environment (n/a for uplands) o pres or curre nt: 0 with: 8	The existing water environment is non-existant since the proposed mitigation site is an upland with the exception of the canals throughout the site, large stormwater pond on the eastern side and a small lined pond on the western side of the site. The existing upland will be graded to an elevation that will support species indicative of hydric hammock. The site will be hydrated through pond discharge and natural flow. The adjacent wetlands appear to have good hydrologic functions with few exotic species as they are part of the state park. Water level data recorder information supports the idea that the wetland areas will rely on natural flow. The elevation within the hydric hammock varies between 3.5 and 4.6 feet. The seasonal high water elevation is set at 4.10 feet NGVD. The bottom of each system will be over excavated by six inches and backfilled with improved soil up to an elevation of six inches above the SHWE so in times of a drought, the improved soil will retain more moisture to assist in species survival. Project design should ensure vegetative communities are subjected to adequate hydroperiods.The proposed site will have a	
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community o pres or curre nt: 0 with: 7	The community structure is currently an upland consisting of fallow citrus groves that is now dominated by Brazilian pepper and other shrubby vegetation. The mitigation area will be planted as floodplain forest near the NFSLR with a transition area to a freshwater marsh, hydric hammock and hydric flatwood. Species to be planted in the hydric hammock include swamp maple, hackberry, persimmon, loblolly bay, laurel oak, and cabbage plam in the overstory. Extensive shrub canopy and ground cover plants will be planted as well as shown on the planting plans. The hydrology in the area and the surrounding wetlands should support the vegetation and wetland environment to be created. Nuisance plant control will be maintained to not exceed greater than 10% of the overall vegetation. No exotic vegetation will be allowed. Land management activities are optimal for the long term viability of the plant community. Upland buffer will also provide habitat and life history support for numerous wildlife species in the wetlands.	

Score = sum of above scores/30 (if uplands, divide by 20)
curre nt w/o pres: 0
with: 0.77

If preservation as mitigation,	
Preservation adjustment factor =	
Adjusted mitigation delta =	

For impact assessment areas	
FG = RFG x acres =	3.79

Delta = [with-current]
0.77

If mitigation		
Time lag (t-factor) =	1.3654	20 years
Risk factor =	2	

For mitigation assessment areas	
RFG = delta/(t-factor x risk)	0.28

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Platt's Creek Compensatory Mitigation	090107-1	Depression Marsh

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
641	Depression Marsh - FNAI; PEM1B - USFWS	Mitigation	23.10 acres

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
North Fork St. Lucie River	Class III	

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The mitigation site is located along the North Fork of the St. Lucie River between the river and Sunrise Boulevard. The site is south of Bell Avenue. The site is connected geographically to the NFSLR to the west and a large wetland to the south. Neighborhoods exist to the north and east.

Assessment area description

Depression marsh with herbaceous vegetation along the NFSLR. Dominant vegetation includes bulrush, cordgrass, *Eleocharis* spp., pickerelweed, and arrowroot. Seasonal high water elevation within the marsh is set at 3.00 feet NGVD.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
A property owned by the SFWMD and Platt's Creek are directly to the south. Directly to the west is the NFSLR. To the north is a small neighborhood. The NFSLR Aquatic Preserve can be found approximately one mile to the south.	Regionally important as conservation area in rapidly developing area

Functions	Mitigation for previous permit/other historic use
Wildlife habitat, feeding and breeding. Fish nursery habitat. Hydroperiod restoration and re-vegetation within NFSLR floodplain. Improve water quality and natural storage within watershed and NFSLR.	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
amphibians, gopher frog, salamanders, Eastern indigo snake, Florida sandhill crane, limpkin roseate spoonbill, snail kite, round-tailed muskrat, wading birds, woodstork, osprey, raccoon, water snakes, bobcat, American alligator	Wading birds (SSC); gopher frog (SSC), Eastern indigo snake (T), Florida sandhill crane (T), wood stork (E), osprey (SSC), American alligator (T), Limpkin (SSC), roseate spoonbill (SSC), snail kite (E)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

songbirds, heron, Florida sandhill crane, American alligator,

Additional relevant factors:

Previously permitted as mitigation bank through St. Lucie County. Site was never constructed other than stormwater pond.

Assessment conducted by:	Assessment date(s):
Anna Peterfreund	1/12/2011

Form 62-345.900(1), F.A.C. [effective date 02-04-2004]

Mitigation Determination Formulas
(See Section 62-345.600(3), F.A.C.)

For each impact assessment area:
(FL) Functional Loss = Impact Delta X Impact acres

For each mitigation assessment area:
(RFG) Relative Functional Gain = Mitigation Delta (adjusted for preservation, if applicable)/((t-factor)(risk))

(a) Mitigation Bank Credit Determination

The total potential credits for a mitigation bank is the sum of the credits for each assessment area where assessment area credits equal the RFG times the acres of the assessment area scored

Bank Assessment Area	RFG	X	Acres	=	Credits
example					
a.a.1					
a.a.2					
total					

(b) Mitigation needed to offset impacts, when using a mitigation bank

The number of mitigation bank credits needed, when the bank or regional offsite mitigation area is assessed in accordance with this rule, is equal to the summation of the calculated functional loss for each impact assessment area.

Impact Assessment Area	FL	=	Credits needed
example			
a.a.1			
a.a.2			
total			

(c) Mitigation needed to offset impacts, when not using a bank

To determine the acres of mitigation needed to offset impacts when not using a bank or a regional offsite mitigation area as mitigation, divide functional loss (FL) by relative functional gain (RFG). If there are more than one impact assessment area or more than one mitigation assessment area, the total functional loss and total relative functional gain is determined by summation of the functional loss (FL) and relative functional gain (RFG) for each assessment area.

	FL	/	RFG	=	Acres of Mitigation
Alternative 1C					
641 AA2	5.79				
615 AA3	0.79				
615 AA4	0.08				
641 AA6	0.35				
617 AA10	4.24				
Total	**11.25**				

	Functional Gain
641 Marsh	16.17
617 Hammock	3.79
615 Floodplain	4.06
Total	**24.02**

	FG	FL	= Remainder
Marsh	16.17	6.14	10.03
Hammock	3.79	4.24	-0.45
Floodplain	4.06	0.87	3.19
			12.77