

MARTIN COUNTY, FLORIDA
BANYAN BAY
AMENDED
PRESERVE AREA MANAGEMENT PLAN

For:

Banyan Bay Phase 3

Hanson Grant, Township 38S, Range 41E

Martin County

Florida

Prepared by:

EW Consultants, Inc.

Approved by/Date: _____

A Preserve Area Management Plan (PAMP) is required of all applicants for development approval on sites which contain wetland or upland preserve areas, pursuant to provisions of Section 4.36.A.1 of the Martin County Land Development Regulations, Martin County Code.

This Amended PAMP for the Banyan Bay Phase 3 project site has been developed in accordance with current Martin County PAMP standards and reflects the specific uses, conditions, and managing entity responsible for the preserve areas associated with Phase 3 as shown on the approved site plan included with this PAMP. This PAMP will not supersede or replace the previously approved PAMP for Banyan Bay, recorded on 3/9/2022 (O.R. B.k 3298 Pg. 913) but rather be a separate PAMP specifically for the property owner of Phase 3 to be managed independently from Phases 1&2.

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1.0 GENERAL

The owner of the lands to be preserved/maintained by this Preserve Area Management Plan (PAMP) and the developer of Banyan Bay Phase 3, successors and assigns, and their environmental consultants and contractors, will implement and comply with all portions of this PAMP.

Compliance with the terms of this PAMP includes submittal of all Monthly Monitoring Reports on PAMP compliance throughout all phases of project construction and submittal of all Annual Monitoring Reports following completion of project construction, pursuant to Section 10.17 of the Martin County Land Development Regulations. The owner of the lands to be preserved/maintained shall have ultimate responsibility for the submittal of all Monthly and Annual Monitoring Reports, according to the format and schedule requirements of Section 10 of this PAMP.

As noted in Section 9 of this PAMP, the Martin County Environmental Planning Administrator shall be notified in writing within thirty (30) days of transfer of ownership of any lands to be preserved/maintained under the terms of this PAMP. Failure to notify shall be considered as non-compliance with the terms of this PAMP. This amended PAMP for Phase 3 of the Banyan Bay development will serve as the transfer of Phase 3 from the previous owners of the approved and recorded PAMP (Banyan Bay Macks, LLC) to the future owners (Farrell Building Company).

This PAMP will not be altered or amended by either Martin County or the owner/developer of Banyan Bay Phase 3, except by an alteration or amendment agreed to by both the Martin County Environmental Planning Administrator and the owner/developer of Banyan Bay Phase 3. Such alterations and amendments shall be inserted into the PAMP and the final revised document shall be recorded by the Martin County Clerk of Courts. The revised PAMP will be labeled with the appropriate O.R. Book and Page Number. Three copies of the revised document shall be provided to the Martin County Environmental Planning Administrator within thirty (30) days of the Recording date.

The attached Environmental Assessment includes the entire ± 251.01 -acre Banyan Bay site located at the western terminus of Pomeroy Street at its intersection with S.R. 76/SW Kanner Highway in the Hanson Grant, Township 38 South, and Range 41 East. The Environmental Assessment includes a detailed inventory of the vegetative communities present, as well as an analysis of the presence, potential impacts, and management provisions for wildlife on the site with special emphasis on listed species. This environmental assessment report is based on field reconnaissance on the subject property performed over the past decade, as well as an update in December 2021 where the Phase 3 property was re- reviewed for the presence of listed species.

This amended PAMP for Phase 3 of the Banyan Bay development is necessary to clarify which portions of the Banyan Bay preservation areas are the responsibility of the Phase 3 ownership, Farrell Building Company. The Phase 3 property includes 1.62 acres of wetland preserve and 2.30 acres of upland preserve for a total preservation area of 3.92 acres, as shown on the site plan. It is also necessary to reflect areas of temporary impacts to wetland and buffer areas that will result from the Phase 3 development. there are three buffer temporary impact areas totaling approximately 7,552 square feet (0.17 acre) that are necessary for lake excavation and surface water management infrastructure placement. Finally, this amended PAMP also

includes details for restoration of the southern access road that currently exists in wetland and buffer areas. Graphics depicting the detail of the impact areas as well as a planting plan for the restoration of these are included in the Appendix of this PAMP.

Exotic vegetation was eradicated from all preserve areas on-site (as shown on the originally-approved master plan) approximately 10 years ago. In addition, an aggressive anti-trespassing program, which included the installation of several thousand feet of fencing along the property boundaries, installation of bollards at numerous off-road vehicle trails, coordination with the Martin County Sheriff's Department to conduct routine patrols, and the installation of No Trespassing signs throughout the site, was implemented during the five years of preserve monitoring. Such measures were closely coordinated with ERP Compliance staff from the South Florida Water Management District as well as Environmental Division staff from Martin County. Soils and vegetation within many of the wetlands, in particular the large marshes along the southern boundary of the property, were destroyed by off-road trespassing activities over the years. As a result of the anti-trespassing campaign, the on-site wetlands were able to recover and flourish once surface water levels stabilized and native wetland vegetation re-established. Subsequently, five years of follow-up exotic vegetative maintenance followed (from 2007 to 2011), as did five years of preserve monitoring (the January, 2012 SFWMD letter acknowledging the completion of such activities is included in this PAMP).

A program to eradicate re-established exotic and nuisance vegetation in remaining preservation areas will begin after site plan approval for Phase 3, with Phase 3 being the responsibility of Farrell Building Company as described above. A regularly scheduled maintenance program will be implemented for effective control of exotic and nuisance species.

2.0 ENVIRONMENTAL ASSESSMENT

The Environmental Assessment (EA) includes maps and text which accurately depict the site's location, soils, wetlands, uplands, listed species, previous impacts, and any other significant environmental features. It is attached to this Preserve Area Management Plan.

2.1 Location – A location map is included in the EA.

2.2 Soils – Soil types on the property were classified using the Soil Survey of Martin County Area, Florida. A soils report generated by the Natural Resource Conservation Service is included in the EA.

2.3 Habitats – A summary of the vegetative communities which currently exist on the subject site can be found in the EA. Vegetative community classifications were mapped based on the Florida Land Use, Cover and Forms Classification System (FLUCCS) developed by the Florida Department of Transportation.

2.4 Protected Species – Various listed species surveys have been conducted on-site. Details are included in the attached EA.

2.5 Previous Impacts - Previous impacts to the project site, mainly the improvements within Phase 1, are discussed in the EA.

2.6 Agency Correspondence - The attached EA contains information and mapping downloaded from state and federal agency databases.

3.0 IDENTIFICATION OF PRESERVE AREAS

- 3.1 **Site Plan - All Preserve Areas, right-of-ways and easements are shown on the Banyan Bay Phase 3 Site Plan (Litterick Landscape Architecture), a copy of which is included in this PAMP. The Site Plan includes a summary of the following: acreage of wetlands under preservation; acreage of native upland habitat under preservation; total acreage under preservation; and total acreage of the Site.**

The Site Plan will contain the notation: "PRESERVE AREAS ARE NOT TO BE ALTERED WITHOUT WRITTEN PERMISSION OF THE MARTIN COUNTY BOARD OF COUNTY COMMISSIONERS."

- 3.2 **Legal Recording - The final Banyan Bay Phase 3 Site Plan will be recorded with the PAMP by the Martin County Clerk of Courts. The Site Plan and the PAMP will be labeled with the appropriate O.R. Book and Page Number and copies of each recorded document will be provided to the Martin County Environmental Planning Administrator within thirty (30) days of the Recording date.**

4.0 SURVEYING, MARKING AND BARRICADING REQUIREMENTS

All Preserve Areas shown on the Site Plan for Banyan Bay Phase 3 will be surveyed and marked in the field with appropriate survey markers and signage. During the clearing and construction phases of the project, Preserve Area boundaries will be marked by physical barriers. No plant material will be removed from the Preserve Areas to facilitate surveying, fencing or soil boring/sampling without prior permission from the Martin County Environmental Planning Administrator.

- 4.1 **Preserve Area Surveying Requirements – Each Preserve Area will be surveyed and marked with permanent capped iron rod markers, as part of the boundary survey, at each corner and at other sites necessary for locating the boundary of the Preserve Area. These permanent monuments will be constructed under the supervision of a Registered Land Surveyor and will be shown on the Site Plan. Map coordinates of each Preserve Area will be provided to the Martin County Environmental Planning Administrator, in a form compatible for use in the County’s GIS mapping system.**

- 4.2 **Preserve Area Boundary Survey and Signs - Preserve Areas will be posted with permanent signs (see Preserve Area Marker figure). Signs will be at least 11 x 14 inches in size and will be posted in conspicuous locations along the Preserve Area boundary, at a frequency of no less than one (1) sign per 500 feet. All boundary signs will be approved by the Martin County Environmental Planning Administrator and they will be in place prior to issuance of a building permit for construction on the site. Illustrations of the sign graphics to be used for this project are included as an Appendix to this PAMP.**

- 4.3 **Barricading Requirements - Prior to clearing, the developer will ensure that all Preserve Areas are protected with physical barriers during all clearing and construction activities in accordance with the following guidelines. Barricades will be inspected by County Environmental Division staff prior to work approval. Removal of the barricade materials will be done upon issuance of the final Certificate of Occupancy with authorization from appropriate County staff.**

Barricades (not including turbidity screens) will be high-visibility orange safety fence extending from the ground to a height of at least 4 feet. Barricades will not be attached to vegetation.

All barricades and turbidity screens will be upright and maintained intact for the duration of construction.

Where areas are proposed for clearing (i.e. building envelope, utilities, drainage, road right-of-way, etc.) the bright orange barricades will be offset outside the Preserve Area or placed at the dripline of the canopy trees, whichever is greater. Erosion control devices (e.g., silt fences) shall be constructed at least 5 feet outside the perimeter of preserve areas to prevent encroachment into the mandatory construction setback area.

All native vegetation not slated for removal as part of the development plans will be retained in their undisturbed state and will be barricaded at or outside the dripline of the trees.

Cut or fill will meet existing grade without encroaching into Preserve Areas.

Wetlands will be protected from possible surface water and sediment runoff by the placement of silt screens, hay bales or other turbidity control measures, at or beyond the delineation line prior to any land clearing or construction.

It is the responsibility of the owner and developer of Banyan Bay Phase 3 to inform all contractors of these Marking and Barricading Requirements. Failure to comply with these Marking and Barricading Requirements will be considered a violation of the Site Plan approval. Further work on the project may be stopped until compliance with the Marking and Barricading Requirements is achieved, and the owner or developer may be required to appear before the Code Enforcement Board.

5.0 USE OF PRESERVE AREAS

5.1 Activities Allowed in Preserve Areas – Activities allowed in preserve areas are bird watching and nature enjoyment, as well as a pedestrian mulched nature trail as shown on the Approved Site Plan. Where the nature trail crosses into the preserve, it will be carefully located so that no native vegetation is impacted. It will be located in an area that will have temporary impacts for lake construction so no additional disturbance will be necessary and the area surrounding the nature trail will be completely restored.

Activities Prohibited in Preserve Areas - Activities prohibited in Preserve Areas or easements within Preserve Areas include (other than permitted impacts and nature trail), but are not limited to: construction or placing of building materials on or above the ground; dumping or placing soil or other substances such as garbage, trash, and cuttings; removal or destruction of native trees, shrubs or other native vegetation; excavation, dredging or removal of soil materials; diking or fencing; vehicular traffic including use by non- motorized vehicles, recreational vehicles and off-road vehicles; permanent irrigation; trimming, pruning, or fertilization; and any other activities detrimental to drainage, flood control, water conservation, erosion control or fish and wildlife conservation and preservation.

No hazardous material other than fuel for refueling on-site heavy equipment will be stored during the construction phases. On-site fuel tanks shall not be located within twenty-five (25) feet of any Preserve Areas and shall be removed upon completion of construction work.

Buildings proposed to be located adjacent to Preserve Areas shall be set back a minimum of ten (10) feet to allow for construction and maintenance without encroaching into the Preserve Area. All other structures (e.g. pools, sheds, decks, fences) shall be set back a minimum of five (5) feet from the Preserve Area boundary.

Development activities such as the construction of building pads for associated structures, swales, or culverts for surface water management shall not alter the hydrology of adjacent Preserve Areas. Nor shall any activities increase non-point source pollution in Preserve Areas.

6.0 RESTORATION AND MAINTENANCE ACTIVITIES

Except for approved impacts, restoration and maintenance activities, Preserve Areas will be left undisturbed. All maintenance of Preserve Areas will be in accordance with this PAMP for *Banyan Bay Phase 3*. Maintenance and management activities will be performed by or under the supervision of a qualified environmental professional and must be approved by the Martin County Environmental Planning Administrator. The following restoration and maintenance activities may be allowed within Preserve Areas with prior written approval from the Environmental Planning Administrator: exotic plant removal, revegetation or planting native vegetation, and removal of dead, diseased, or safety hazard plant material.

- 6.1 Exotic Vegetation Removal – Exotic vegetation was eradicated from preserve areas on-site approximately 10 years ago. Five years of follow-up exotic vegetative maintenance followed, as did five years of preserve monitoring (the SFWMD letter acknowledging such activities is included in this PAMP). Since that time, re-growth of exotic plant species, especially along the property boundaries, has occurred. Efforts began in January of 2017 to re-treat the preserve areas throughout all phases.**

Such exotic vegetation eradication efforts within the Preserve Areas will be conducted by the least ecologically-damaging method available. Such methods may include but are not limited to: hand pulling, hand spading, cutting manually or with chain saws and in-situ treatment with appropriate herbicides. No debris, plant clippings or wood scraps, shall be disposed of within Preserve Areas. In addition, all plant material and exotic plant debris removed from Preserve Areas shall be disposed of in a County-approved recycling facility.

- 6.2 Revegetation – Any revegetation which might be necessary as a result of exotic vegetation eradication or site construction activities shall consist of native plant species representative of the existing native plant communities on-site. This will ensure that the Preserve Areas maintain indigenous plant associations. Revegetation plans shall be submitted to the Martin County Environmental Planning Administrator for approval prior to implementation.**

- 6.3 Native Vegetation Removal - Dead or diseased native plant material shall be removed from Preserve Areas at the discretion of the applicant and only upon approval by the Martin County Environmental Planning Administrator. Revegetation may be required for any removed native plant material. No native vegetative debris shall be allowed to remain in Preserve Areas. All native dead plant material and debris removed from Preserve Areas shall be disposed of in a County-approved recycling facility.**

- 6.4 Prescribed Burns - Martin County considers prescribed burns an acceptable habitat management tool. When approved by the Martin County Environmental Planning Administrator and the Martin County Fire Marshall, they will be conducted by a certified burn manager (either a consultant or Florida Forestry Service employee) who will be responsible for obtaining all appropriate permits from State and local agencies.**

- 6.5 Hydrology - Previous or potential drainage impacts will be corrected to the extent technically feasible. Water quality and the rate, timing, and volume of run-off shall recreate natural conditions for the benefit of onsite wetlands and other waterbodies. Wetlands and waterbodies on adjacent properties shall be protected from adverse impacts.**

- 6.6 Mitigation Plan – The approved Banyan Bay Master Plan includes two wetland crossings for access to uplands in Phase 1 which have been constructed.**

Banyan Bay Phase 3 will include temporary impacts associated with three surface water management system pipe locations. Temporary impacts will be restored prior to completion of the project.

7.0 PROTECTIVE MEASURES FOR LISTED SPECIES

7.1 Gopher Tortoises – In Florida, gopher tortoises are protected as a Threatened Species. Under Florida law, no person may take, possess, transport or sell a Threatened Species. No land clearing or construction shall occur until all tortoises which are in harm's way are relocated in accordance with current Florida Fish and Wildlife Conservation Commission (FWC) rules. A certified gopher tortoise agent registered with the state of Florida shall supervise the relocation of the gopher tortoises on-site. Tortoises inhabiting burrows in areas to be developed will be captured and relocated following guidelines set forth below. Tortoise burrows may be bucket trapped or excavated using methodology approved by the FWC and conducted by a registered gopher tortoise agent possessing a valid relocation permit. During clearing and grubbing operations, equipment operators will be notified of the occurrence of gopher tortoises on-site and instructed to observe for roaming and foraging individuals.

Should gopher tortoises be seen during clearing and grubbing, all equipment operations will be stopped and the gopher tortoises will be captured and relocated in accordance with the FWC relocation permit. Once the tortoise(s) have been relocated, equipment operation can resume.

7.2 Endemic Species - All gopher tortoise relocation efforts will include trapping of endemic species that may live in the burrow. These endemic species include but are not limited to the Florida mouse (*Peromyscus floridana*), gopher frog (*Rana aerolata*) and Eastern indigo snake (*Drymarchon corias couperi*).

7.3 Relocation of Tortoises - All relocations shall be carried out by an environmental professional licensed for gopher tortoise relocations. The responsible party shall have access to literature pertaining to gopher tortoise preservation and shall be encouraged to preserve additional areas and to landscape with native vegetation.

8.0 MISCELLANEOUS PROVISIONS AND RESTRICTIONS

The development will comply with the Martin County/State of Florida “Firewise” program. Details of this program can be seen on the revised master/final plan developed by Lucido and Associates. The “Firewise” defensible space shown on this plan can be managed to reduce fuel loads and protect adjacent structures as outlined on the Florida Department of Agricultural and Consumer Services website (fdacs.gov) under Firewise USA.

9.0 TRANSFER OF RESPONSIBILITIES

The property owner(s) and developers of *Banyan Bay Phase 3* are responsible for implementation of all requirements of this Preserve Area Management Plan until such time as the developer transfers responsibility to the owners or a successor. The Martin County Environmental Planning Administrator will be notified in writing within thirty (30) days of transfer of ownership of any lands to be preserved under this PAMP. Failure to notify will be considered as non-compliance with the terms of this PAMP. The developer will pay his share of total cost of management activities or fines on a per lot basis if he retains ownership of lots. At such time as the developer is ready to transfer control of the *Banyan Bay Phase 3* to the property owners, whether the developer retains ownership of the lots in the project or not, an environmental professional shall certify, in writing, to the Martin County Environmental Planning Administrator, that the Preserve Areas are in full compliance with this PAMP.

The developer and/or successor will be responsible for maintaining the Preserve Areas in their existing natural condition with the periodic eradication of invasive exotic vegetation. After transfer of responsibilities, funding for all maintenance and management programs will be the responsibility of all successors.

10.0 MONITORING, REPORTING AND INSPECTIONS

10.1 Annual Monitoring Reports -

Monitoring and reporting will be conducted annually by a qualified environmental professional for a period of five years from the date of completion of the project or project phase encompassing the monitored area. Annual monitoring will be conducted at the end of the wet season (usually by November 30) and a report of the monitoring will be submitted to the Martin County Environmental Planning Administrator within 30 days of the completion of the monitoring.

The Annual Monitoring Reports will document changes in vegetation including encroachment and/or overgrowth of noxious or exotic vegetation. Fixed-point panoramic photos of all Preserve Areas will be included in each report. The reports will include recommendations for exotic vegetation eradication, revegetation, and any additional enhancement activities necessary to maintain the Preserve Area. A timetable for action within 90 days of the report will be prepared and followed.

A copy of the proposed Annual Monitoring Report format is attached to this PAMP as an Appendix. This format may be modified separately from the PAMP, as necessary, upon written approval from the Martin County Environmental Planning Administrator.

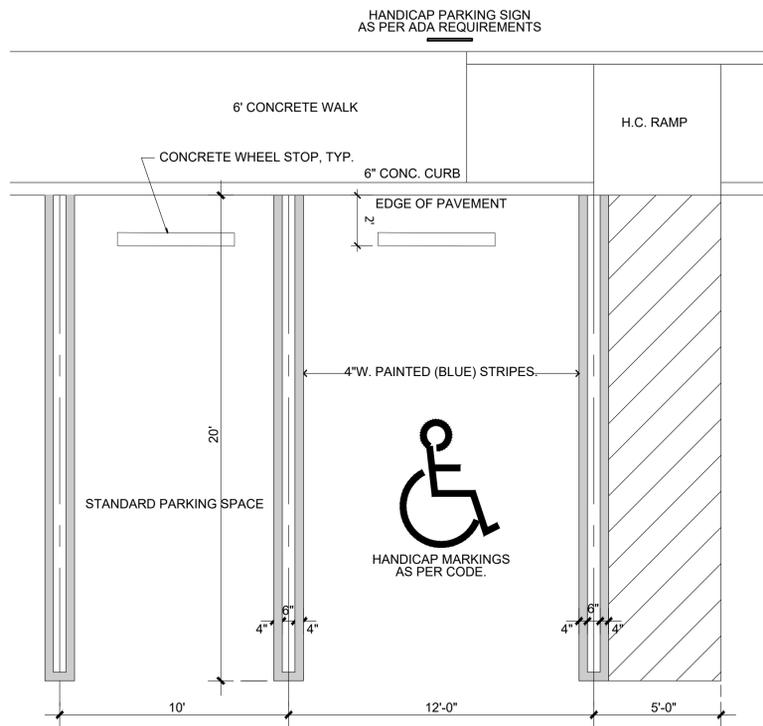
Upon request, Martin County Environmental Planning staff may meet with the responsible parties to review the annual monitoring report findings and supply technical assistance and support for stewardship.

After the initial five-year monitoring period, the Preserve Areas may be subject to periodic review and, if conditions warrant, will be subject to further monitoring and maintenance to ensure environmental integrity, consistent with the provisions of this Plan.

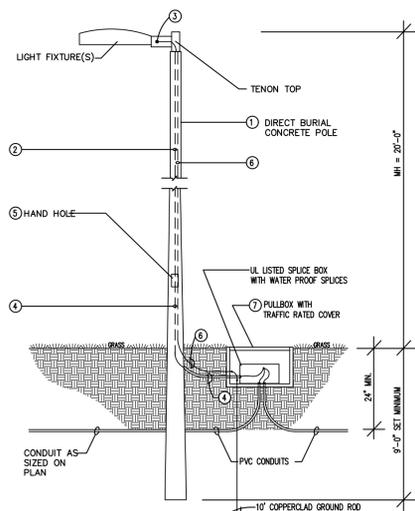
10.2 Inspections - Martin County is authorized to inspect any County regulated site or appurtenance. Duly authorized representatives of Martin County may, at any time, upon presenting proper identification, enter upon and shall be given access to any premises for the purpose of such inspection.

11.0 ENFORCEMENT

Martin County shall have the right to enforce the provisions of this PAMP through any available administrative or civil proceeding, which may result in penalties. Restoration of habitat and other remedies, such as fines and fees covering staff time, may be required of any person, corporation or other entity found in violation of any of the provisions of this PAMP or of Article 10 of the Martin County Land Development Regulations.



STANDARD & HANDICAP PARKING LAYOUT
N.T.S.

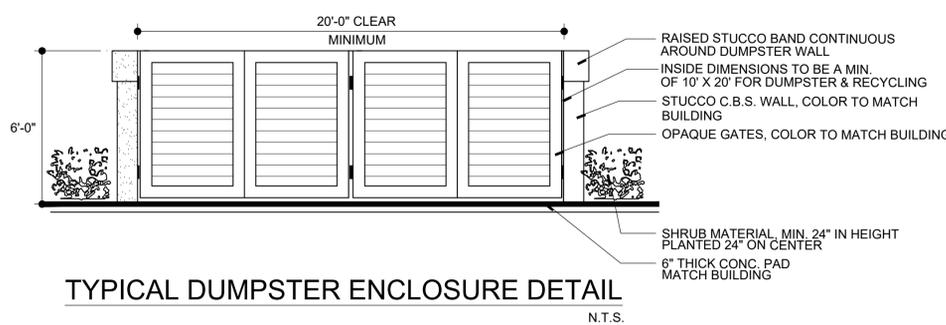


CONCRETE LIGHT POLE DETAIL
TO BE USED ON ALL PARKING LOT LIGHTING (20' MOUNTING HEIGHT)
N.T.S.

STANDARD LIGHTING POLE DETAIL

- (1) LIGHTING POLE: THE MANUFACTURER IS TO PROVIDE CERTIFICATION BY FLORIDA PE, SHOWING WIND LOAD RATING OF 170 MPH WITH SPECIFIED FIXTURES INSTALLED. THE FINAL POLE SET IS TO BE DETERMINED BY THE PROFESSIONAL ENGINEER.
- (2) INTERNAL WIRING: INTERNAL WIRING TO BE IN UL LISTED CONDUITS, INSIDE POLE. SEE NOTE 3.
- (3) LIGHT FIXTURE CONNECTIONS: REFER TO LIGHT MANUFACTURER FOR REQUIREMENTS, INCLUDING TEMPERATURE REQUIREMENTS (COMMONLY 150C), CONDUCTORS TO BE UL LISTED "FIXTURE" CONDUCTORS. (UL "RECOGNIZED" APPLIANCE WIRES NOT PERMITTED.) OBTAIN BUILDING DEPARTMENT APPROVAL FOR CONDUCTORS, CONNECTORS, AND ACCESSIBILITY.
- (4) CONDUITS: CONDUITS BELOW HAND HOLE IN POLE TO BE UL LISTED WITH "BRANCH CIRCUIT" THIN CONDUCTORS.
- (5) HAND HOLE: HAND HOLE WITH UL LISTED BOX CAST IN POLE WITH WATERPROOF SPLICES.
- (6) GROUND WIRE IN POLE: CONNECT BOTTOM TO #4 BARE GROUND CONDUCTOR. CONNECT TOP TO GROUND LUG IN FIXTURES.
- (7) TRAFFIC RATED PULL BOX: HIGH STRENGTH COMPOSITE CONSTRUCTION RATED FOR DESIGN LOAD OF 5,000 LBS OVER A 10" SQUARE. COVER LETTERING = LIGHTING. DO NOT PLACE IN PAVED AREA, KEEP IN GRASSED AREAS. QUARTZ COMPOSITE PK STYLE. 1-800-346-3067.
- (8) MUCK: IF SOFT SOILS ARE FOUND ON THE PROPERTY, THIS POLE DESIGN WILL BE MODIFIED TO ACCOMMODATE. NOTIFY ENGINEER IMMEDIATELY.
- (9) SITE CONDITIONS: IF SITE CONDITIONS ARE DISCOVERED WHICH REQUIRE ANY POLE (S) TO BE MOVED OVER 4 FEET, NOTIFY THE ENGINEER IMMEDIATELY.

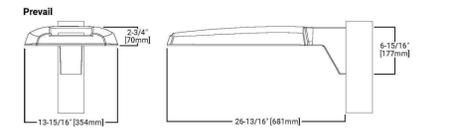
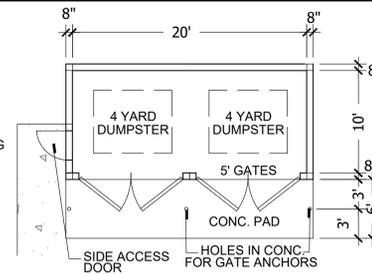
Site Details



BLACK POWDER COATED "U-SHAPED" BIKE RACK
QTY: 4 (FOUR)
BIKE RACK DETAIL
N.T.S.



"PARC VUE" BENCH BY LANDSCAPEFORMS (6' BENCH)
COLOR: BRONZE
BENCH DETAIL
N.T.S.

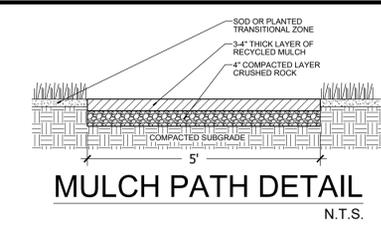
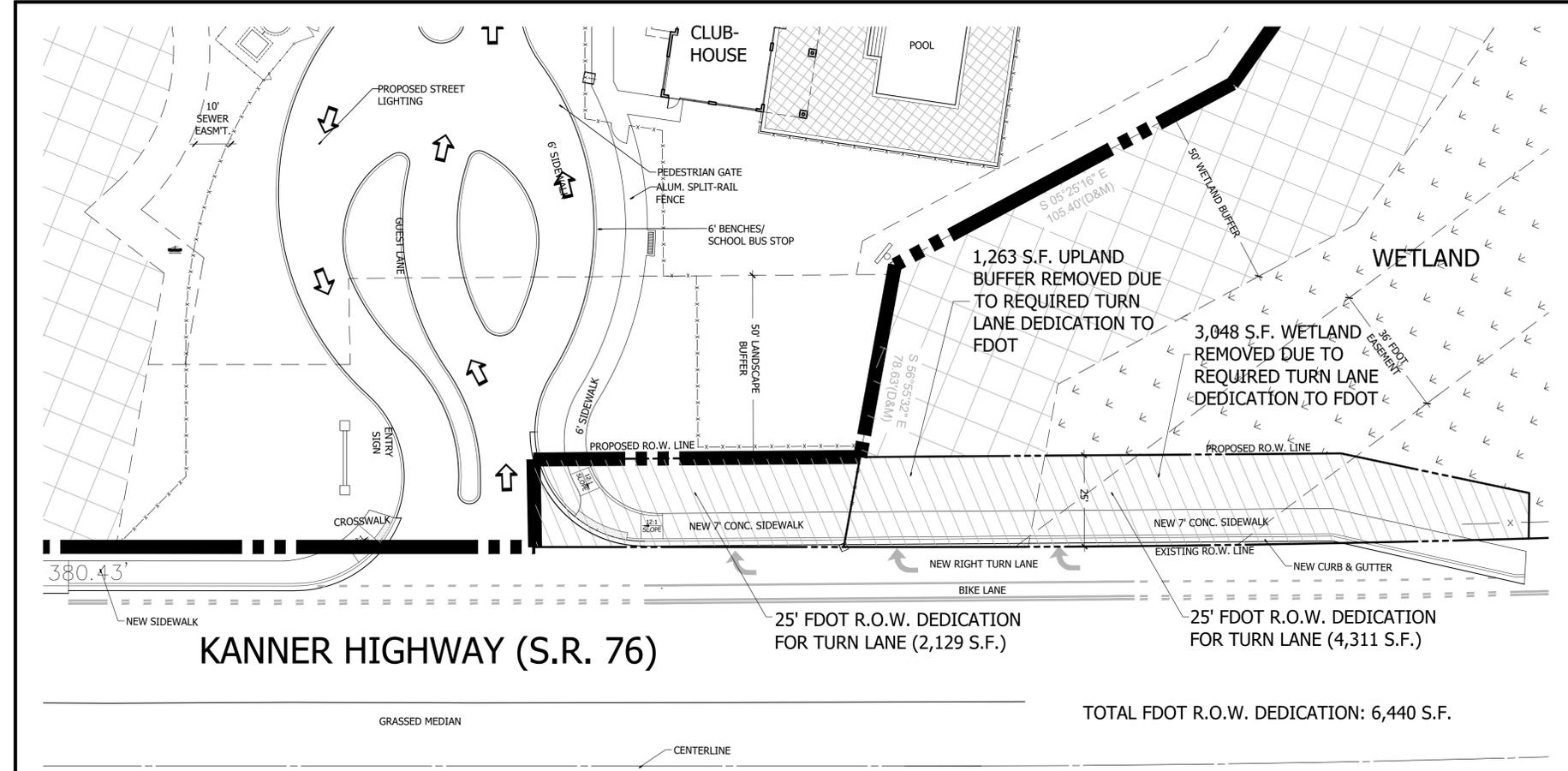


VALMONT STRUCTURES, INC.
DIRECT BURIAL CONCRETE POLE
PARKING LOT LIGHTING FIXTURE
TO BE USED ON ALL PARKING LOT LIGHTING (20' MOUNTING HEIGHT)
N.T.S.

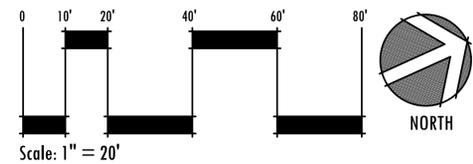
MANAGED LAND ENTITLEMENTS
3710 BUCKEY STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8045



GWC GALLEON WALL
1-2 Light Squares
Solid State LED
WALL MOUNT LUMINAIRE
WaveLinx
MCGRAW - EDISON WALL MOUNT LED LUMIERE
BUILDING MOUNTED LIGHTING
N.T.S.



Detail of R.O.W. Dedication



LQ
Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, FL 34990
561-719-3876
JasonLA1677@yahoo.com

Project Name

PHASE 3
Banyan Bay P.U.D.
Martin County, Florida

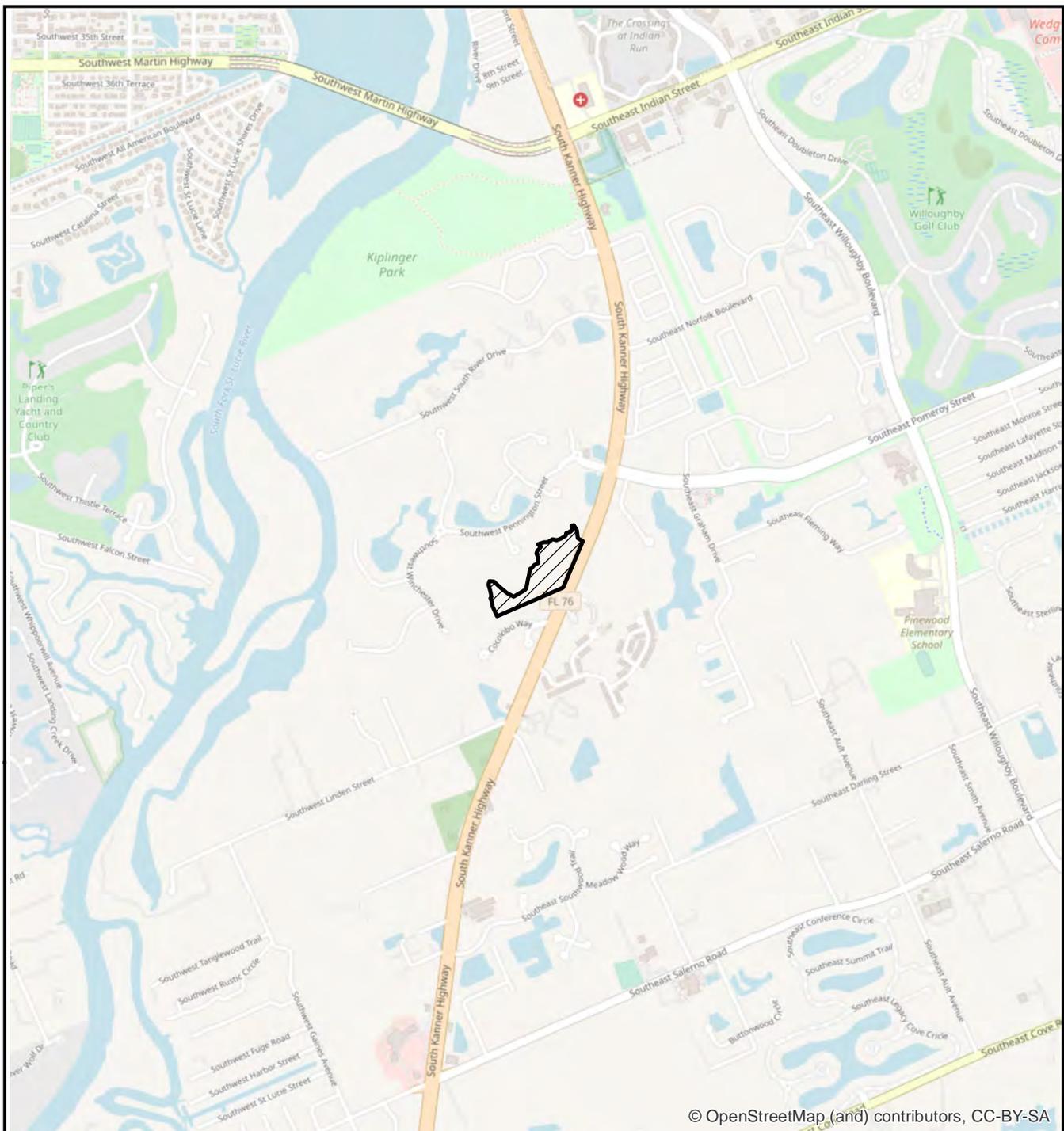
Landscape Architect of Record

Jason M. Litterick, RLA (LA0001677)

Scale: As Noted

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	8/19/21
Job no.:	
Revisions:	2/4/22
	5/13/22

Sheet No.
SP-2



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LEGEND

 - SITE (12.0+/- AC)

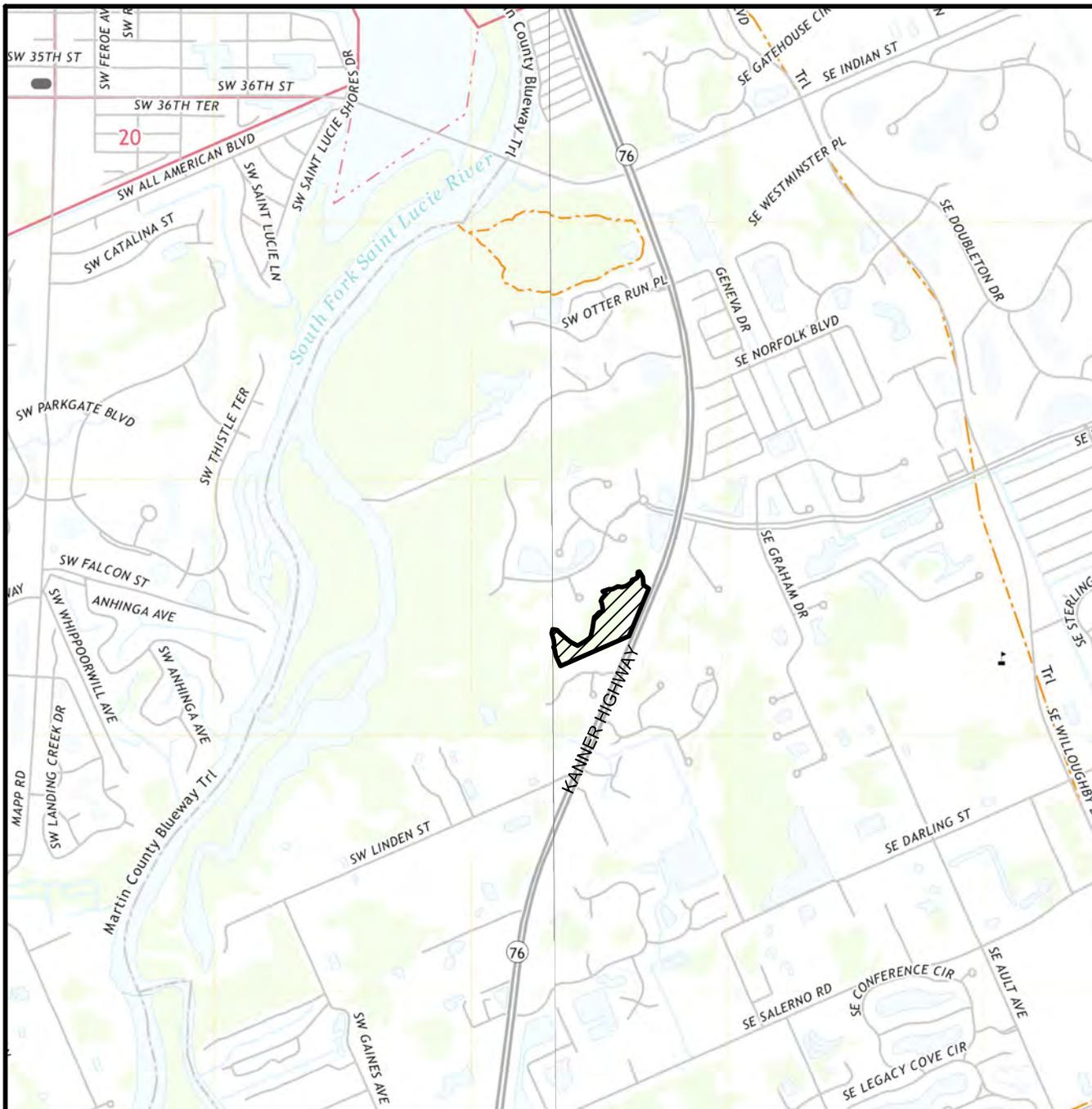


**BANYAN BAY - PHASE 3
LOCATION MAP**



EW CONSULTANTS, INC.
 2581 METROCENTRE BLVD., SUITE 1
 WEST PALM BEACH, FL 33407
 561-291-7950 PHONE 561-530-4908 FAX
 WWW.EWCONSULTANTS.COM

NOV 2021
FIGURE
1



USGS QUAD MAP "ST LUCIE INLET", HANSON GRANT, CITY OF STUART, MARTIN COUNTY, FLORIDA, LATITUDE 27°08'31.73" LONGITUDE -80°14'52.24"

LEGEND

 - SITE (12.0± AC)



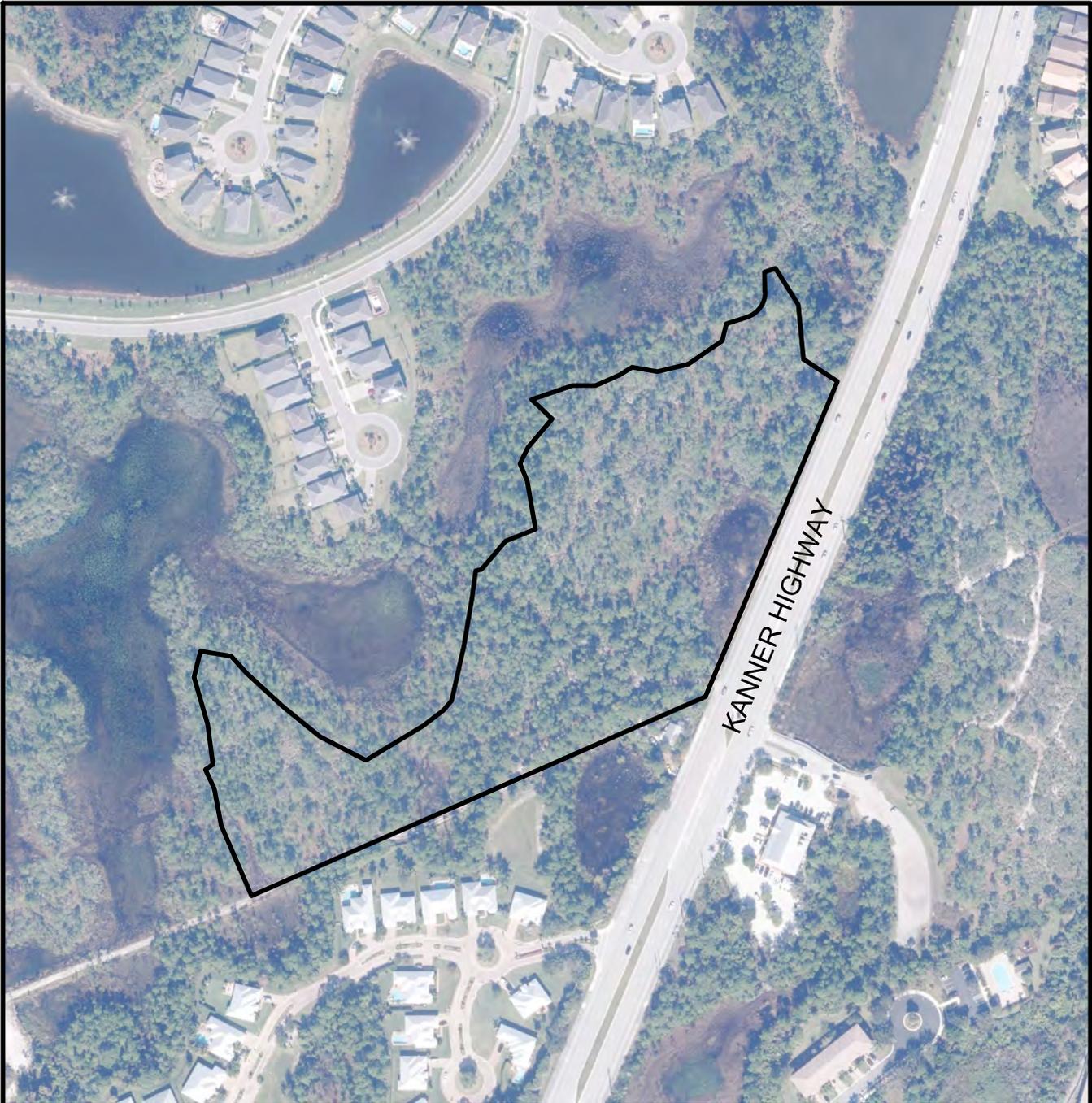
**BANYAN BAY - PHASE 3
QUAD**

Banyan Bay Phase 3.dwg QUAD



EW CONSULTANTS, INC.
2581 METROCENTRE BLVD., SUITE 1
WEST PALM BEACH, FL 33407
561-291-7950 PHONE 561-530-4908 FAX
WWW.EWCONSULTANTS.COM

NOV 2021
FIGURE
2



MARTIN COUNTY AERIALS DATED 2021



BANYAN BAY - PHASE 3

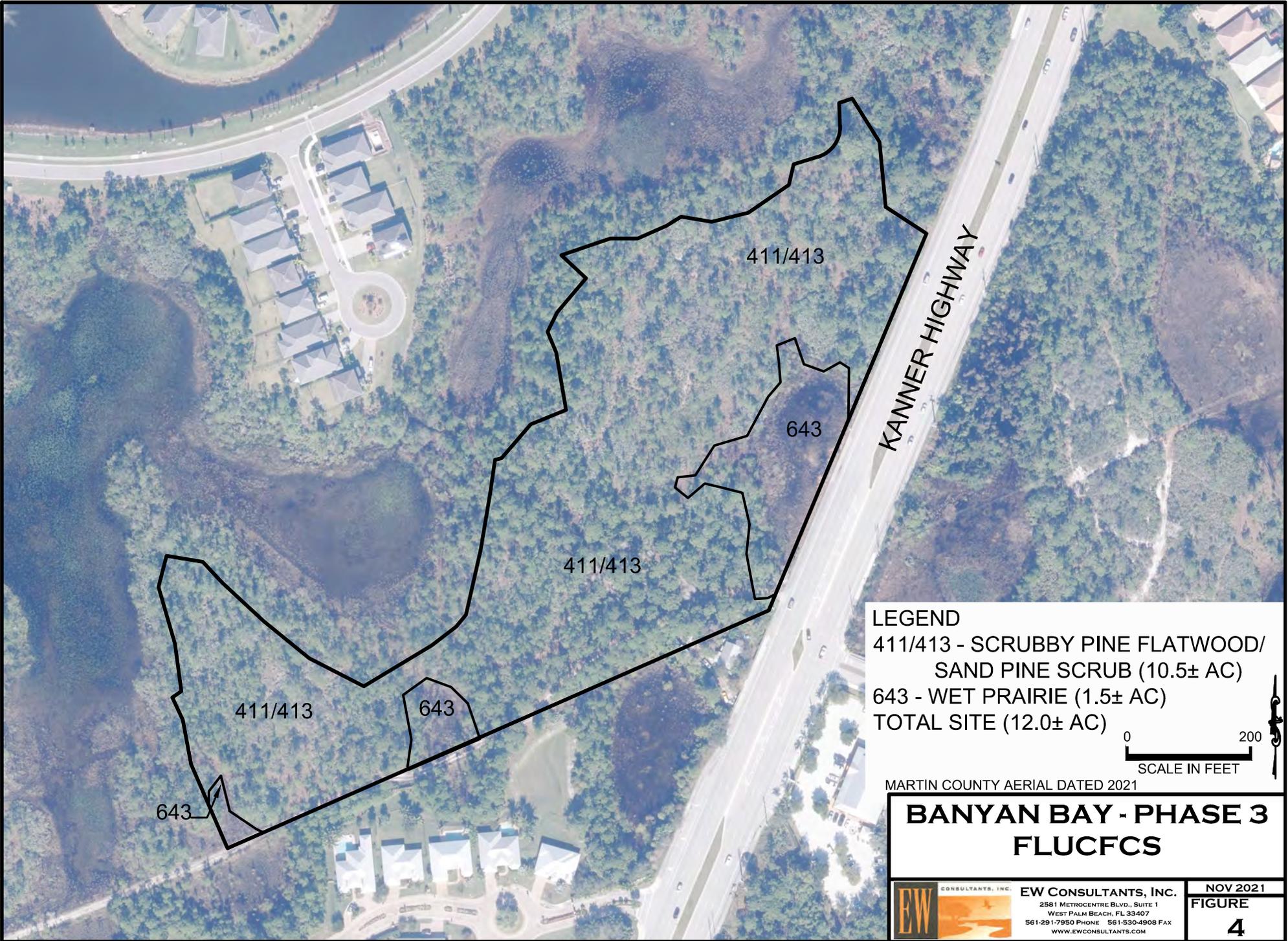
AERIAL

Banyan Bay Phase 3.dwg AERIAL



EW CONSULTANTS, INC.
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WEST PALM BEACH, FL 33407
561-291-7950 PHONE 561-530-4908 FAX
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NOV 2021
FIGURE
3



LEGEND

411/413 - SCRUBBY PINE FLATWOOD/
SAND PINE SCRUB (10.5± AC)

643 - WET PRAIRIE (1.5± AC)

TOTAL SITE (12.0± AC)



MARTIN COUNTY AERIAL DATED 2021

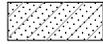
**BANYAN BAY - PHASE 3
FLUCFCS**

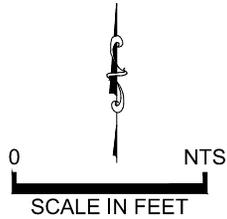


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NOV 2021
FIGURE
4

LEGEND

-  - UPLAND BUFFER TEMPORARY IMPACT (0.17± AC)
-  - WETLAND RESTORATION (0.01± AC)
-  - UPLAND BUFFER RESTORATION (0.07± AC)



TEMPORARY IMPACT AREA TO BE RESTORED TO ADJACENT ELEVATIONS & REPLANTED IN ACCORDANCE WITH THE CONSTRUCTION PLANS & PAMP

EXISTING ACCESS ROAD TO BE REMOVED & RESTORED TO ADJACENT ELEVATIONS & REPLANTED IN ACCORDANCE WITH PAMP. FILL TO BE SCRAPED & REMOVED THROUGH DEVELOPMENT AREA

EXISTING ACCESS ROAD CONSISTENT WITH ADJACENT ELEVATIONS TO BE REPLANTED IN ACCORDANCE WITH PAMP.

**BANYAN BAY - PHASE 3
WETLAND & UPLAND BUFFER
IMPACT & RESTORATION MAP**



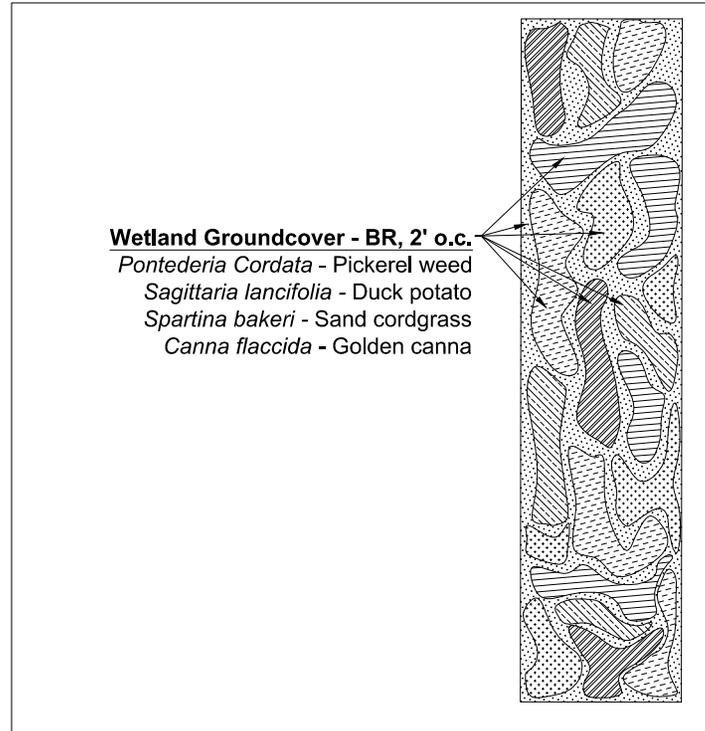
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MAY 2022
FIGURE
5

SITE PLAN BY OTHERS

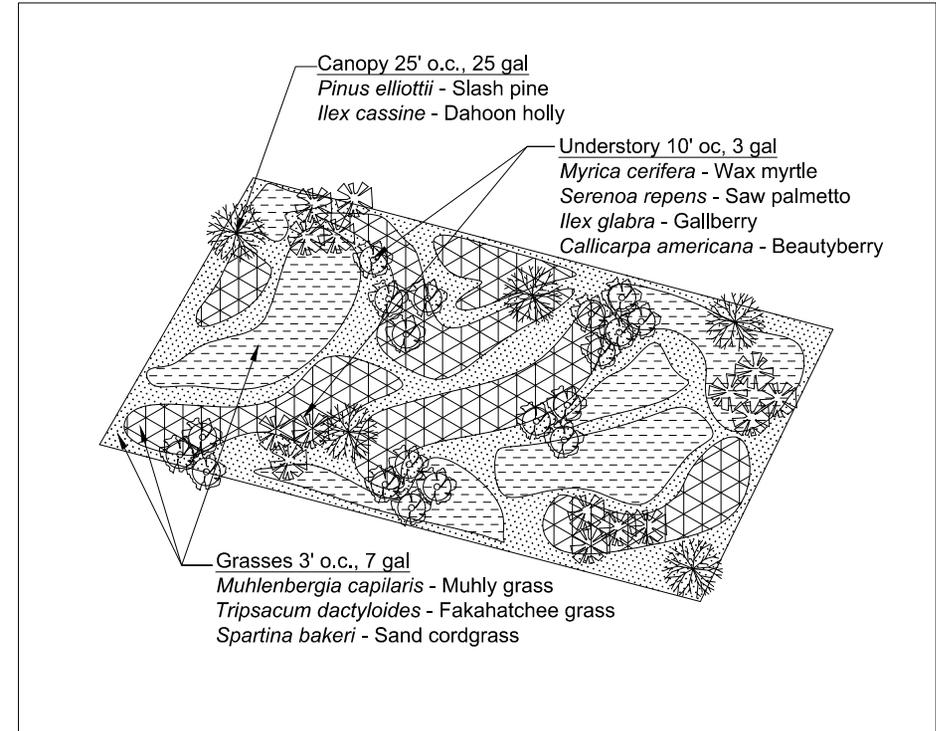
TYPICAL WETLAND RESTORATION
PLANTING PLAN

NTS



TYPICAL UPLAND BUFFER RESTORATION
PLANTING PLAN

NTS



NOTE: PLANTS TO BE INSTALLED AS TO MIMIC NATURAL OCCURENCE.
MATERIAL MAY BE SUBSTITUTED WITH NATIVE LIKE MATERIAL.

**BANYAN BAY - PHASE 3
RESTORATION PLAN**



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MAY 2022
FIGURE
6



**BANYAN BAY PHASE 3
LISTED SPECIES UPDATE SURVEY
December, 2021**

This memo is provided as a listed species survey update to the Environmental Assessment and Listed Species Report for the Banyan Bay (All Phases 2017). In December 2021, EWC conducted a listed species survey in proposed development areas of the Phase 3 Parcel.

The proposed development areas are comprised of scrubby pine flatwoods with varying levels of disturbance and exotic species encroachment. The purpose of this survey was to identify the potential presence of listed species of flora and fauna with a focus on the gopher tortoises and eastern indigo snake, which are known to occur in the area. A gopher tortoise survey was also previously conducted in May 2021 on the Phase 3 parcel which resulted in no gopher tortoises found.

Pedestrian transects were conducted across parcel to observe for listed species or signs of listed species during this December update survey. No listed species of animals were observed in proposed development areas of the Phase 3 parcel.

Listed species of plants observed included several species of air plants (*Tillandsia spp.*) that were found growing mainly on pine and dahoon holly species. While the air plants were observed in scattered locations within the development areas, it also appeared that these plants were even more abundant within the wetland buffer areas that will be preserved. The specific species of airplants observed included:

Tillandsia fasciculata – Common wild pine

Tillandsia utriculata – Giant wild pine

Tillandsia balbisiana – Inflated wild pine

No other listed species of plants were observed within proposed development areas of the Banyan Bay Phase 3 Parcel.

EW Consultants, Inc.

Natural Resource Management, Wetland, and Environmental Permitting Services



BANYAN BAY (ALL PHASES)

ENVIRONMENTAL ASSESSMENT AND LISTED SPECIES REPORT

Prepared for:

BANYAN BAY MACKS, LLC

Prepared by:

EW CONSULTANTS, INC.

February 2017

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INTRODUCTION –

This report provides an environmental assessment of a 251.01+/- acre residential project located in unincorporated Martin County, Florida. The property is located in the Hanson Grant, Township 38S, and Range 41E. It is bounded on the west by the South Fork of the St. Lucie River, on the north by the South River condominium development, on the east by S.R. 76/Kanner Highway, and on the south by the Osprey Ridge single-family residential development near S.R. 76 and by large-lot single family residences closer to the South Fork of the St. Lucie River. The Location Map and USGS Quadrangle Map provided as Figures 1 and 2 in Appendix A displays the site location in relation to the surrounding area. Additionally, a 2016 aerial photograph of the site is included as Figure 3 in Appendix A.

This report includes an inventory of the soil types and vegetative communities present, as well as an analysis of the presence and potential presence of listed species within the boundaries of the project site. This environmental assessment is based on field reconnaissance on the subject property performed numerous times over the past decade.

SOILS -

A Soils Report generated by the Natural Resources Conservation Service is included in Appendix B of this report. Soils types on-site vary greatly, and range from sandy well-drained soils to poorly drained soils of the flatwoods, to depressional wetland soils and muck soils. Each soil is identified and detailed within the soils report in Appendix B.

LAND COVER CLASSIFICATIONS -

The site contains native wetland and upland habitats, as well as several previously impacted and/or cleared areas. The following is a summary of the land cover found on the subject site. Land cover classifications are mapped based on the Florida Land Use, Cover and Forms Classification System (FLUCCS) developed by the Florida Department of Transportation. Recent fieldwork and aerial photo interpretation were used in developing the land cover map. A description of each land cover type is below and such areas are shown on Figure 4, FLUCCS Map, in Appendix A.

Wetland Communities –

The jurisdictional limits of all wetlands on-site have been verified by applicable regulatory agencies. Such wetland types include:

#611 Bay Swamp –

The site contains four wetland areas consisting of bay/maple swamp, two located along the South Fork of the St. Lucie River (north and south ends of the project site), and two along the north property line adjacent to the South River development.

These sloughs are dominated by freshwater hardwood tree species such as red bay, loblolly bay and red maple. These areas are in good to excellent ecological condition, with some re-infestation of nuisance exotic plants such as *Lygodium* vine, melaleuca and Brazilian pepper occurring along their edges, in particular along the north property line. The recently-observed vegetation in these swamps predominantly includes the following species of note as well as others that may not be specifically noted:

Loblolly bay	<i>Gordonia lasianthus</i>
Red bay	<i>Persea borbonia</i>
Dahoon holly	<i>Ilex cassine</i>
Red maple	<i>Acer rubrum</i>
Wax myrtle	<i>Myrica cerifera</i>
Gallberry	<i>Ilex glabra</i>
Smilax	<i>Smilax</i> spp.
Grapevine	<i>Vitis</i> spp.
Swamp fern	<i>Blechnum</i> spp.
Cinnamon fern	<i>Osmunda cinnamomea</i>
Strawberry guava	<i>Psidium cattleianum</i>
Red root	<i>Lachnanthes caroliniana</i>
Cabbage palm	<i>Sabal palmetto</i>
Leather fern	<i>Acrostichum</i> spp.
Brazilian pepper	<i>Schinus terebinthifolius</i>
Melaleuca	<i>Melaleuca quinquenervia</i>

#641 Freshwater Marsh –

There are several areas within south-central portion of the project site that are considered freshwater marshes. Such marshes typically possess a longer hydroperiod during a typical year than wet prairies, but may not be inundated or saturated the entire year like the bay swamps on-site. A partial list of species observed within the freshwater marshes includes:

Sawgrass <i>Cladium jamaicense</i>	Glades Lobelia <i>Lobelia glandulosa</i>
St. John's wort <i>Hypericum fasciculatum</i>	Flat Sedge <i>Cyperus odoratus</i>
Maidencane <i>Panicum hemitomon</i>	Swamp Lily <i>Crinum americanus</i>

Myrsine *Myrsine guaianensis*
Yellow-eyed grass *Xyris* spp.
Redroot *Lachnanthes caroliniana*
Pickerelweed *Pontederia cordata*
Swamp Fern *Blechnum serrulatum*
Lizard tail *Saururus cernuus*

Water lily *Nymphaea odorata*
Royal Fern *Osmunda regalis*
Chain Fern *Woodwardia virginica*
Duck Potato *Sagittaria lancifolia*
Beak Rush *Rhynchospora* spp.
Mermaid Weed *Proserpinaca* spp.

#643 Wet Prairies –

There are several wet prairie wetlands scattered throughout the project site. Such wetlands typically possess a shorter hydroperiod during a typical year than freshwater marshes, and may dry out completely during the dry season, making them attractive for off-roader vehicle operators. A partial list of plant species observed within the wet prairies includes:

St. John's wort *Hypericum fasciculatum*
Wax Myrtle *Myrica cerifera*
Yellow-eyed grass *Xyris* spp.
Redroot *Lachnanthes caroliniana*
Hat pins *Eriocaulon compressum*
Swamp Fern *Blechnum serrulatum*

Flat Sedge *Cyperus odoratus*
Maidencane *Panicum hemitomon*
Royal Fern *Osmunda regalis*
Chain Fern *Woodwardia virginica*
Wild coffee *Psychotria nervosa*
Beak Rush *Rhynchospora* spp.

#510 Creeks and Ditches –

The project site contains channelized connections from wetlands in the northeast portion of the site to wetlands in the east-central portion of the site. There is also a small sliver of Fern Creek which is located in the southwestern corner of the property. Such areas typically contain Carolina willow, pond apple, red bay, loblolly bay, red maple, swamp fern, royal fern, among other wetland species.

Native Upland Communities -

There are common and rare/unique native upland vegetative community types found within the project area boundaries. A description of the upland habitat types follows:

#411 Pine Flatwoods –

The flatwoods on-site are located generally along S.R.76/Kanner Highway between the wetland systems. These areas contain a canopy of slash pines and bay trees with a dense understory of saw palmetto, gallberry and fetterbush. The ground cover generally consists of various broomsedge grasses and wiregrasses, or may be dominated by saw palmetto. Some exotic vegetation is present in this area of flatwoods including Brazilian pepper, climbing fern, downy rose myrtle, earleaf acacia and strawberry guava.

The observed vegetation in the pine flatwoods predominantly include the following species:

Slash pine	<i>Pinus elliottii</i>
Saw palmetto	<i>Serenoa repens</i>
Loblolly bay	<i>Gordonia lasianthus</i>
Red bay	<i>Persea borbonia</i>
Dahoon holly	<i>Ilex cassine</i>
Sand live oak	<i>Quercus virginiana var. geminata</i>
Chapman oak	<i>Quercus chapmanii</i>
Climbing fern	<i>Lygodium spp.</i>
Gallberry	<i>Ilex glabra</i>
Fetterbush	<i>Lyonia lucida</i>
Rusty lyonia	<i>Lyonia ferruginea.</i>
Smilax	<i>Smilax spp.</i>
Grapevine	<i>Vitis spp.</i>
Swamp fern	<i>Blechnum serrulatum</i>
Tar flower	<i>Befaria racemosa</i>
Brazilian pepper	<i>Schinus terebinthifolius</i>
Wax myrtle	<i>Myrica cerifera</i>
Strawberry guava	<i>Psidium cattleianum</i>
Red root	<i>Lachnanthes caroliniana</i>
Earleaf acacia	<i>Acacia auriculiformis</i>

#413/412 Sand Pine/Scrubby Flatwoods –

This hybrid of two rare/unique upland habitat types occurs throughout the entire site. These areas are characterized by a canopy of sand and slash pines (although many were felled as a result of the 2004 and 2005 hurricanes), and contain a dense understory of scrub oaks, saw palmetto, gallberry and fetterbush. The groundcover consists of open sand, rosemary, cactus, reindeer lichens, and wiregrass. The following vegetation exists within this habitat:

Slash pine	<i>Pinus elliottii</i>
Sand pine	<i>Pinus clausa</i>
Saw palmetto	<i>Serenoa repens</i>
Sand live oak	<i>Quercus virginiana var. geminata</i>
Chapman oak	<i>Quercus chapmanii</i>
Reindeer moss	<i>Cladina evansii</i>
Rosemary	<i>Ceratiola ericoides</i>
Prickly pear	<i>Opuntia humifusa</i>
Gopher apple	<i>Licania michauxii</i>
Wire grass	<i>Aristida spp.</i>
Blazing star	<i>Liatrus spp.</i>
Deer tongue	<i>Carphephorus paniculatis</i>
Gallberry	<i>Ilex glabra</i>
Fetterbush	<i>Lyonia lucida</i>

Rusty lyonia	<i>Lyonia</i> spp.
Love vine	<i>Cassytha filiformis</i>
Grapevine	<i>Vitis</i> spp.

Impacted Areas –

#190 Open Lands -

This land cover classification is used for the previous improvements made within Phase 1 as well as for stockpile areas associated with Phase 1. At the time of this report, the lots within Phase 1 were being prepped for housepads. In addition, this FLUCCS category includes a block of land north of the main entrance at Pomeroy Street adjacent to S.R. 76/Kanner Highway. This area is currently under construction and will ultimately serve as a part of the stormwater management system associated with the future widening of S.R. 76. At the time of this report, this area was under construction and the slopes of the stormwater facility had been sodded.

#524 – Lakes Less than 10 Acres -

This category is used to identify the three lakes within Phase 1 and the small flow-through marsh in the northern portion of Phase 1, as well. The lakes were excavated as a fill source for the Phase 1 lots and roadways, and are now part of the site's stormwater management system. The flow-through marsh contains a minimal amount of standing water, which is ideal for the upcoming installation of native wetland species.

LISTED SPECIES SURVEYS -

During the course of numerous site visits beginning in 2002 and continuing through 2016, observations were made for the potential presence of listed species on-site. With the diversity and ecological condition of the habitats on the subject site, as well as the recent addition of open water bodies (lakes) in Phase 1, there is a potential for the presence of several listed species on-site.

Wetland Species -

There are several listed animal species that are dependent on the types of wetland habitat present on-site and adjacent to the site. Field reconnaissance on the site included observations of little blue heron (state threatened), roseate spoonbill (state threatened), and wood stork (state and federally threatened). Such species were observed both within the natural wetlands as well as within the lakes' shorelines. As there are no proposed impacts to wetlands on-site (other than previously constructed roadway crossings within Phase 1), no impacts to wading birds, listed or non-listed, are anticipated.

A map showing recorded wading bird rookeries is provided as Figure 5 in Appendix A. Information for this map was obtained from Florida Fish & Wildlife Conservation Commission databases. Since the foraging range of the protected wood stork is considered to be approximately 18.7 miles, the project site, and thus its wetlands and other surface water features, are within the foraging range of numerous identified wading bird rookeries located in the St. Lucie and Indian Rivers, the Savannas State Park, and the DuPuis Reserve/Hungryland/Corbett Wildlife Management Area complex.

Upland Species -

The presence of gopher tortoises, a state threatened species, has been confirmed throughout the upland portions of the site. In December of 2016, a survey was conducted covering all of the Phase 1 lots. The potentially occupied gopher tortoise burrows were subsequently excavated in February of 2017. The captured tortoises were relocated off-site in accordance with new Florida Fish and Wildlife Conservation Commission (FWC) guidelines.

As each portion of the project is slated for clearing, the limits of the approved clearing must be surveyed for gopher tortoises and the relocation of individuals in harm's way must occur prior to land alteration.

There are several other species that may be associated with the upland habitats found on the site which are dependent on gopher tortoise burrows, including the Eastern indigo snake (state and federally threatened). There were no individuals of this species observed during the field surveys.

Other listed faunal species associated with the upland habitat types on-site include the bald eagle (no longer listed but protected under the Bald and Golden Eagle Protection Act), Florida pine snake (state threatened), and the Florida Scrub Jay (state and federally threatened). Bald eagles were observed on-site near the constructed lakes several years ago. There were no bald eagle nests observed within the property boundaries. An active nest has been identified on Martin County's Kiplinger conservation parcel to the north. This nest is located approximately 600 feet from the northern property line of the project site (Figure 6 in Appendix A). A large raptor nest was observed several hundred feet (estimate) south of the project site south of Fern Creek near the South Fork of the St. Lucie River shoreline during site investigations of the proposed Fern Creek Flow-Through Marsh area in January of 2017. No birds were spotted in the nest at that time, nor observed in flight near the nest.

Based on the upland habitats present, formal scrub jay surveys per U.S. Fish & Wildlife guidelines were conducted on-site prior to master plan approval over ten years ago. No scrub jays or scrub jay activity was observed during the survey events.

PREVIOUS IMPACTS –

The project site possesses impacted areas resulting from improvements made within and adjacent to Phase 1 as shown on the updated FLUCCS map. Other impacts outside of Phase 1 include old stockpile areas, the FDOT stormwater pond (under construction), and a series of off-road trails through the upland habitats leading to the South Fork of the St. Lucie River.

AGENCY CORRESPONDENCE -

The results of database searches of state and federal listed species are included in Figure 5 for wading bird rookeries and Figure 6 for eagle nest locations. The entire limits of the master plan has been permitted for over a decade with the South Florida Water Management District; therefore coordination with state agencies such as Florida State Historic Preservation Office (SHPO) have been completed.

APPENDIX A

Figure 1: Location Map

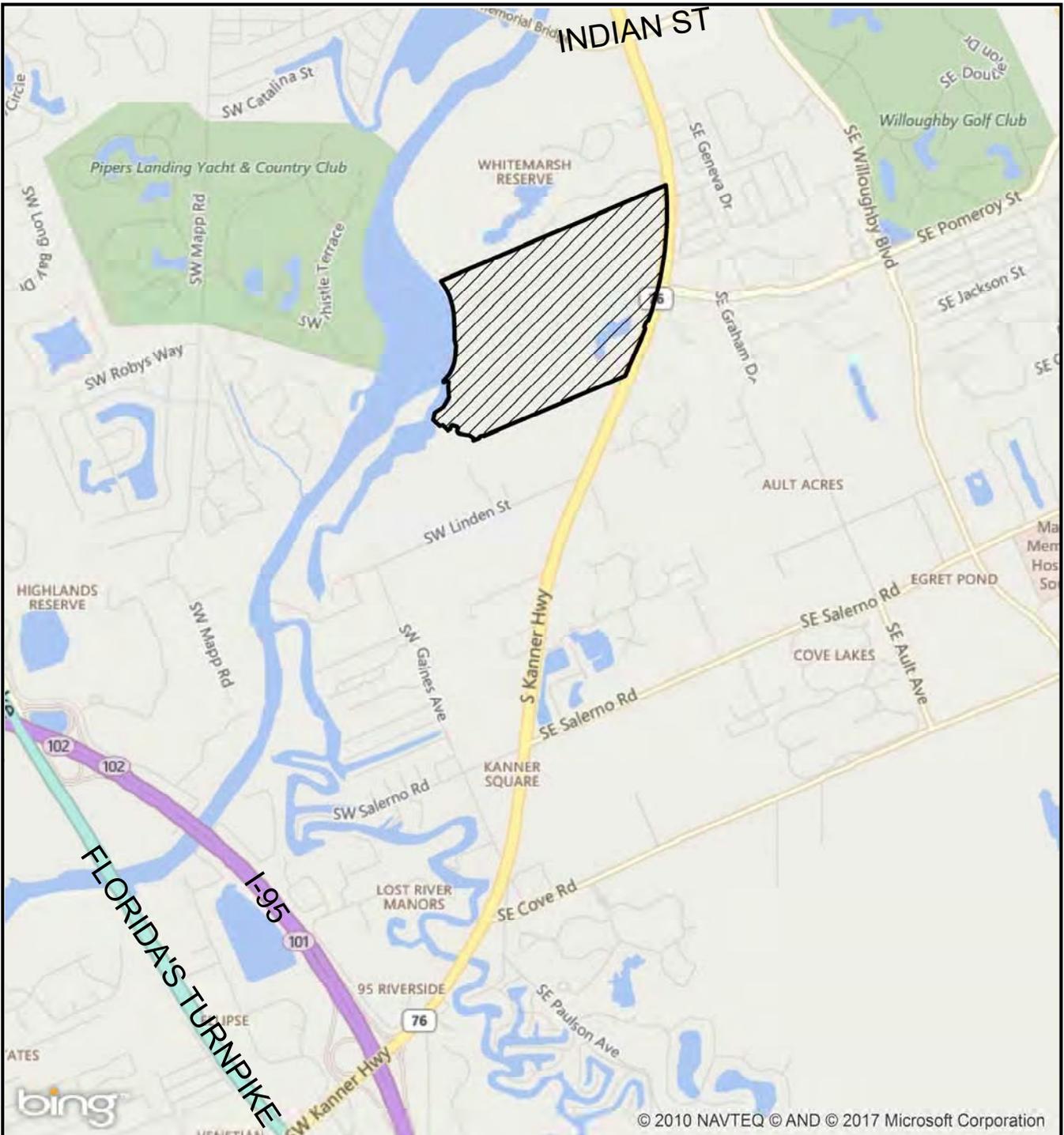
Figure 2: USGS Quadrangle Map

Figure 3: 2016 Aerial Photograph

Figure 4: FLUCCS Land Cover Map

Figure 5: FWC Wading Bird Rookeries

Figure 6: FWC Bald Eagle Nest Locations



LEGEND

 - SITE (251+/- AC)

0 3,000 Feet

**BANYAN BAY
LOCATION MAP**

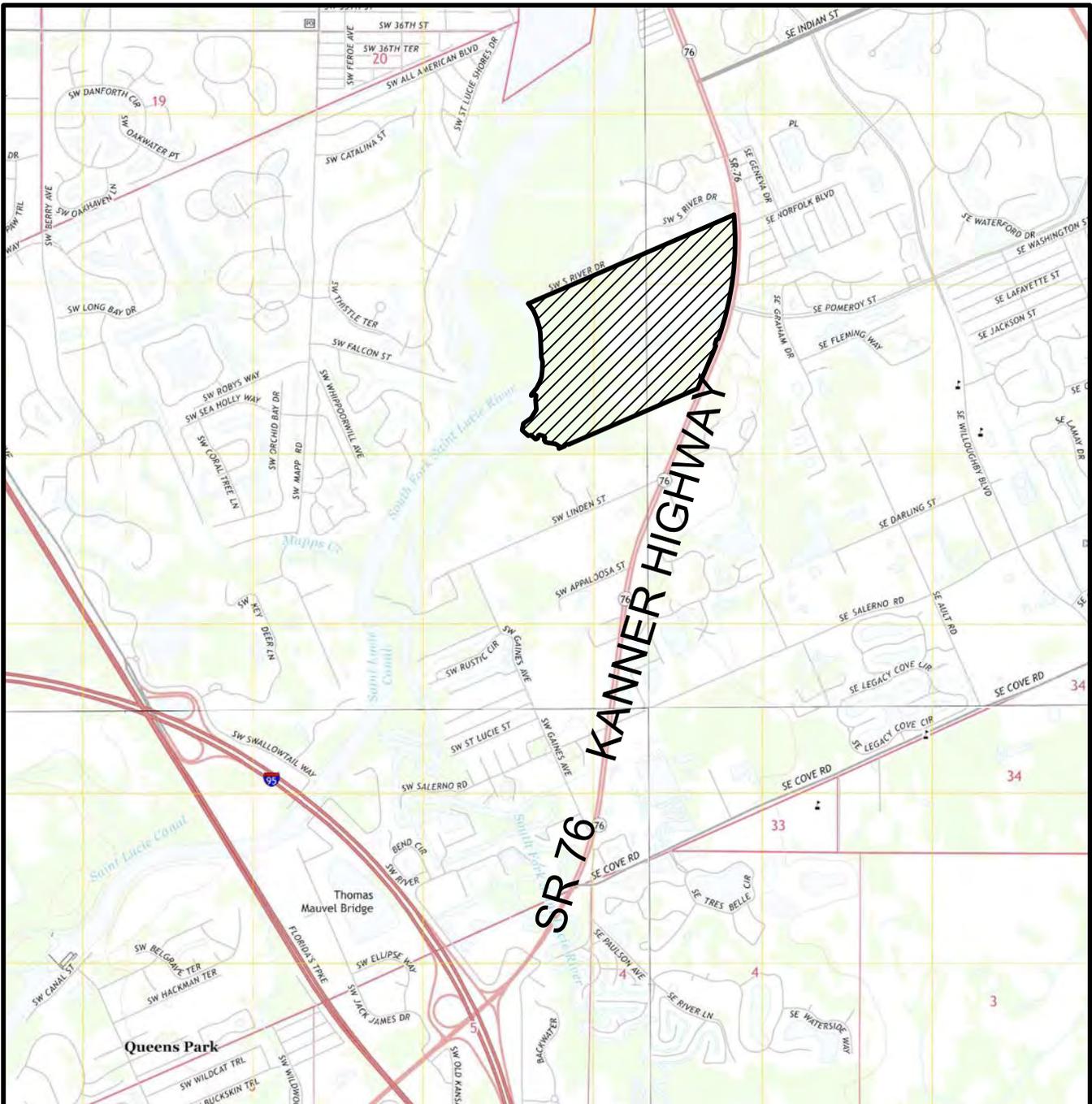


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FEB 2017

FIGURE

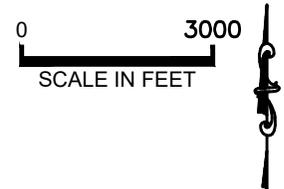
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USGS 2015 QUAD MAP "ST. LUCIE INLET" & "PALM CITY", HANSON GRANT, TOWNSHIP 38 SOUTH, RANGE 41 EAST, STUART MARTIN COUNTY, FLORIDA, LATITUDE 27°08'41" LONGITUDE -80°15'03"

LEGEND

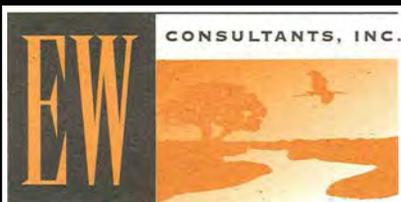
 - SITE (251± AC)



BANYAN BAY

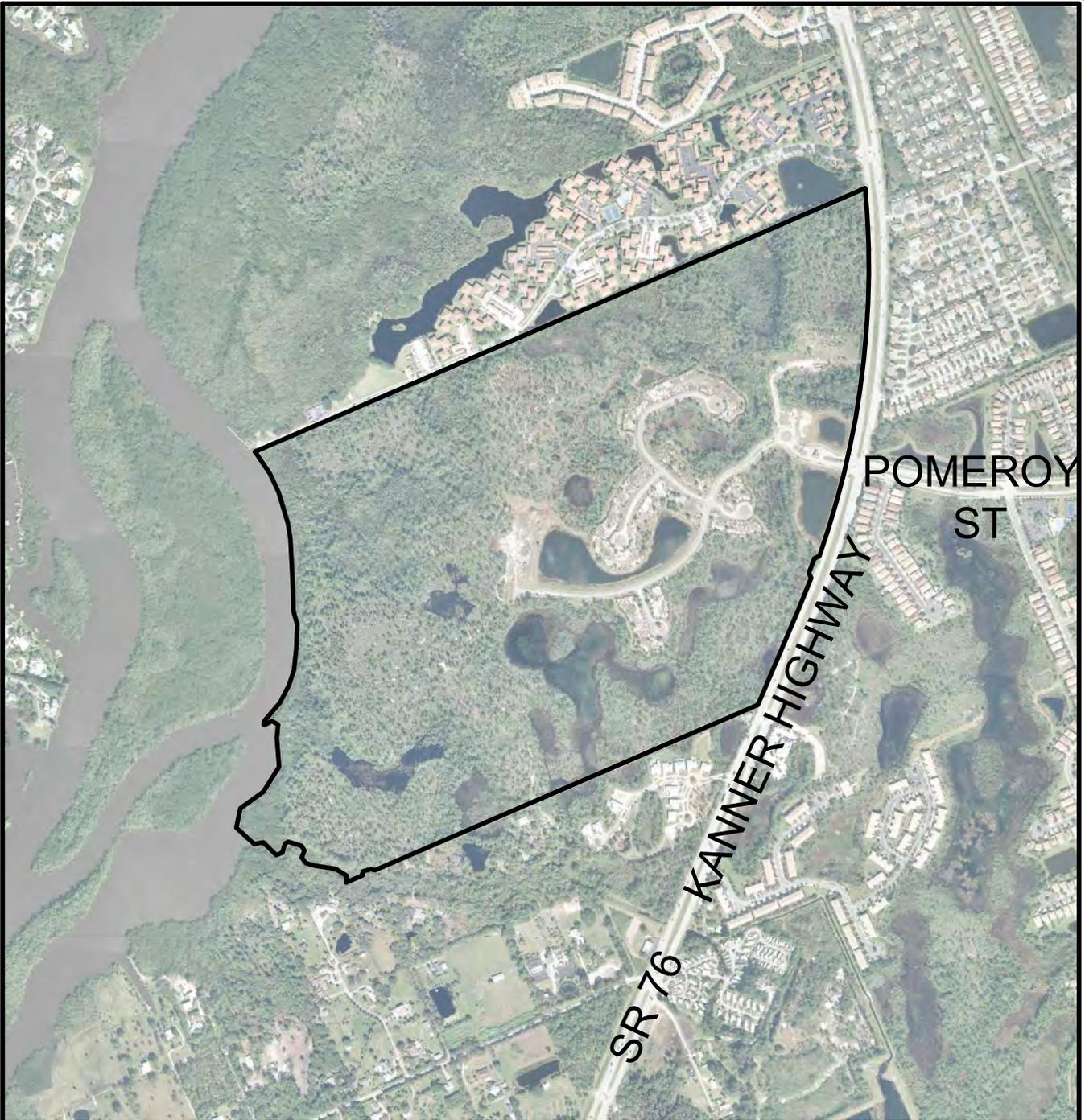
QUAD

BANYAN BAY.dwg QUAD

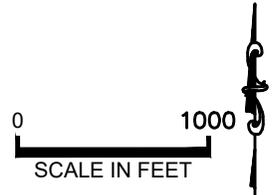


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 FIGURE
2



FDOT AERIAL DATED 2016



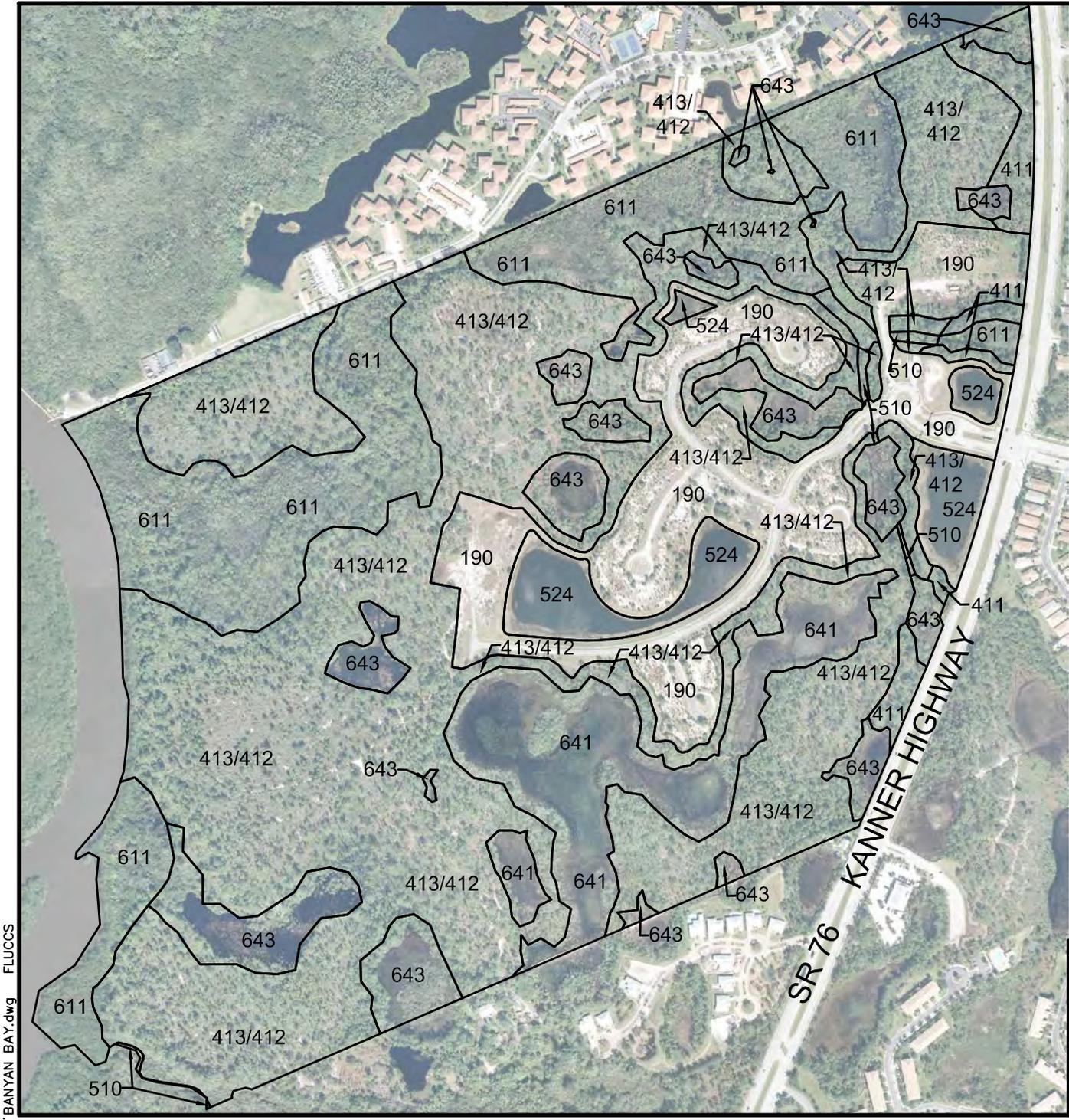
BANYAN BAY AERIAL

BANYAN_BAY.dwg AERIAL

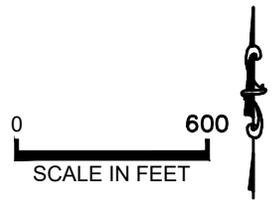


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FEB 2017
FIGURE
3



- LEGEND**
- 190 - OPEN LANDS
 - 411 - PINE FLATWOODS
 - 413/412 - SAND PINE SCRUB /
SCRUBBY FLATWOODS
 - 510 - DITCHES
 - 611 - BAY SWAMP
 - 641 - FRESHWATER MARSHES
 - 643 - WET PRAIRIE

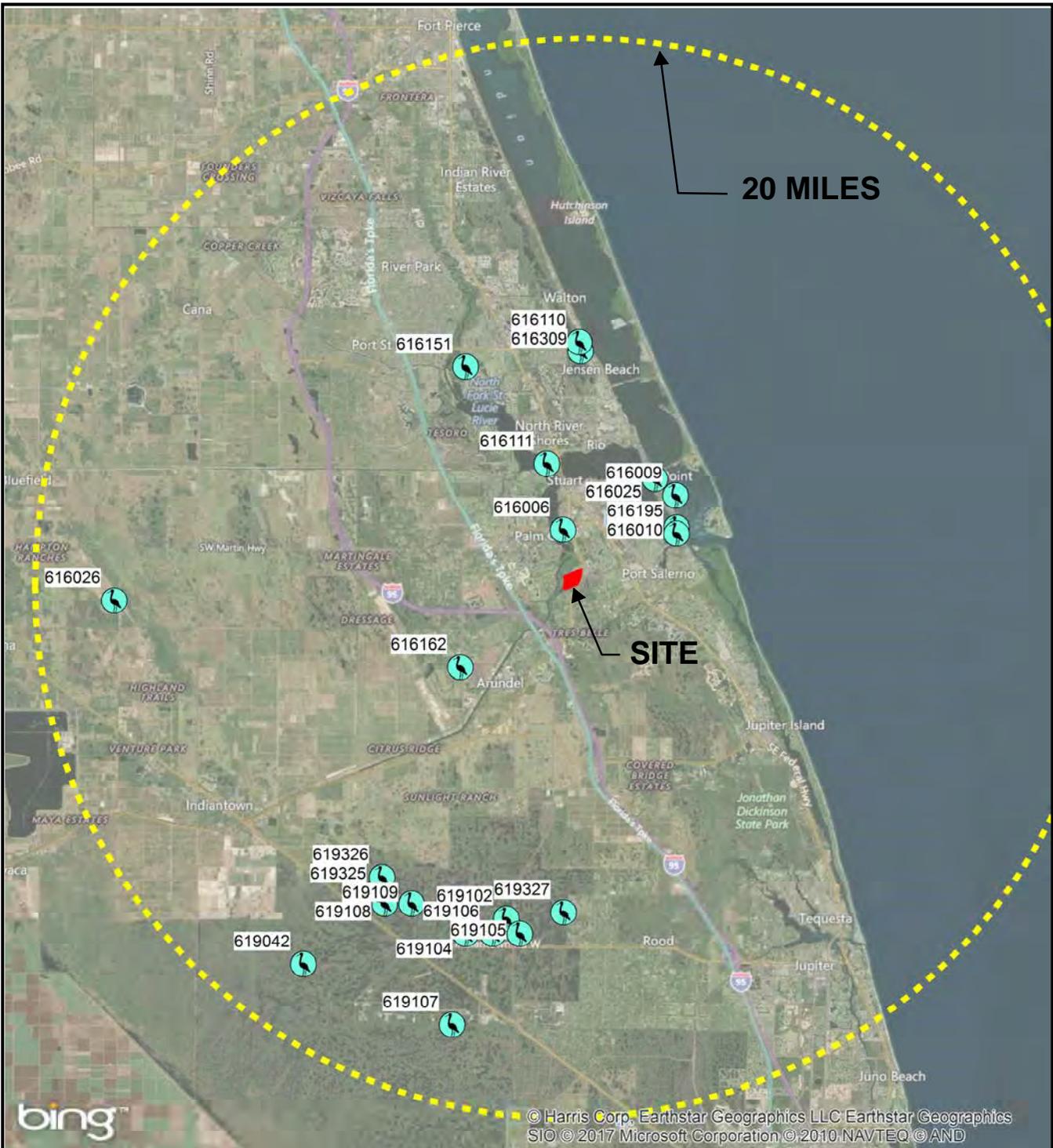


MARTIN COUNTY AERIALS DATED 2016

**BANYAN BAY
FLUCCS MAP**

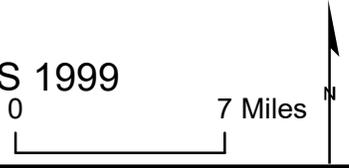
BANYAN BAY.dwg FLUCCS

	EW CONSULTANTS, INC. <small>1000 SE MONTEREY COMMONS BLVD., SUITE 208 STUART, FL 34996 772-287-8771 FAX 772-287-2988 WWW.EWCONSULTANTS.COM</small>	FEB 2017 FIGURE 4A



LEGEND

 FFWCC WADING BIRD ROOKERIES 1999



BANYAN BAY
FFWCC WADING BIRD ROOKERIES



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FEB 2017
FIGURE
5



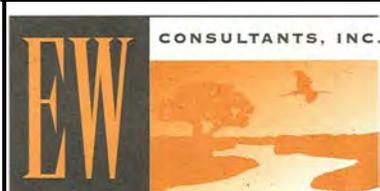
LEGEND

 FFWCC EAGLE NESTING 2015



BANYAN BAY

FFWCC EAGLE NESTING 2015



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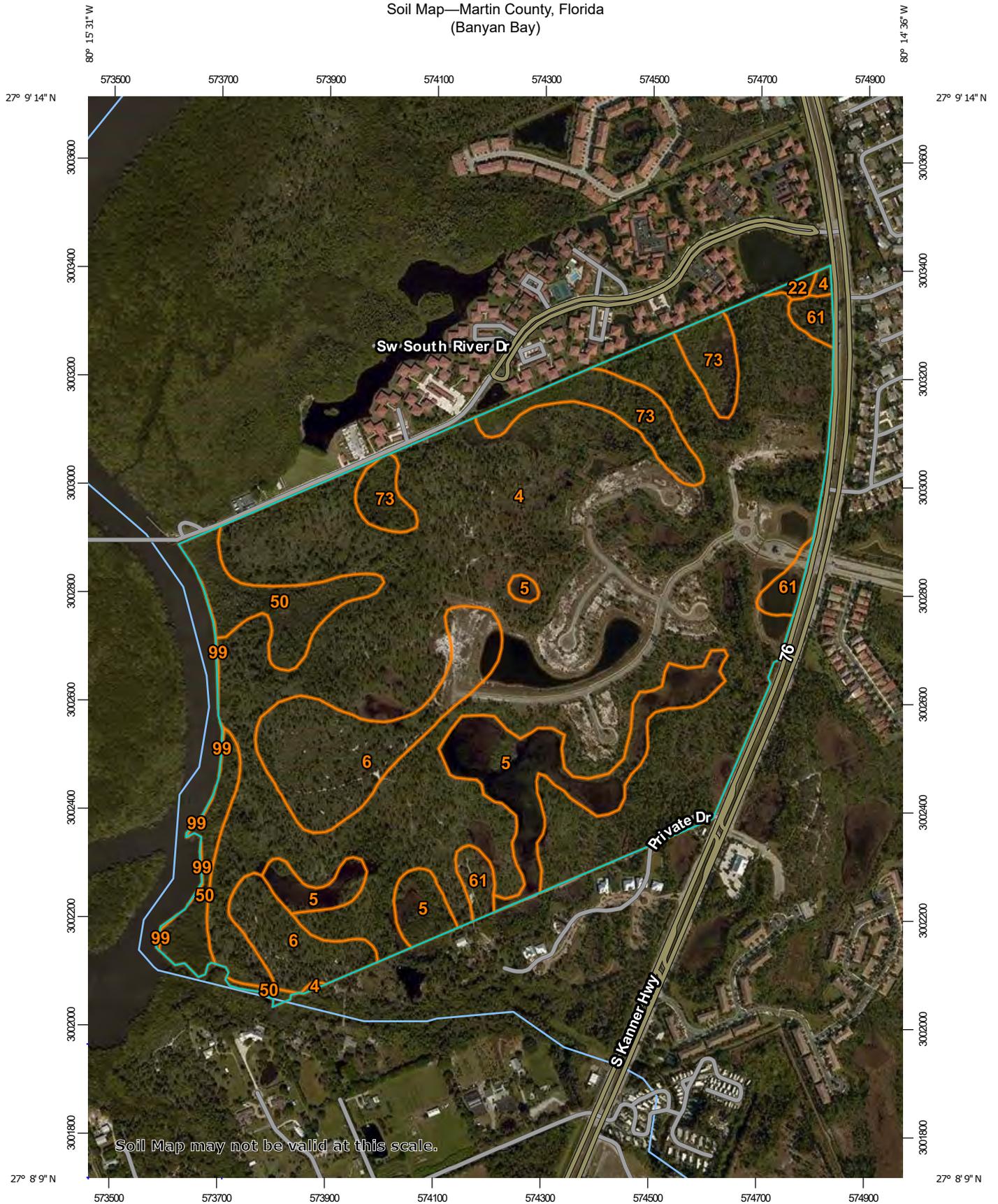
FIGURE

6

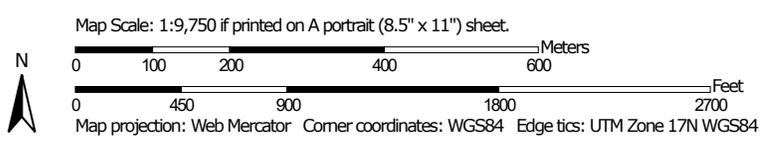
APPENDIX B

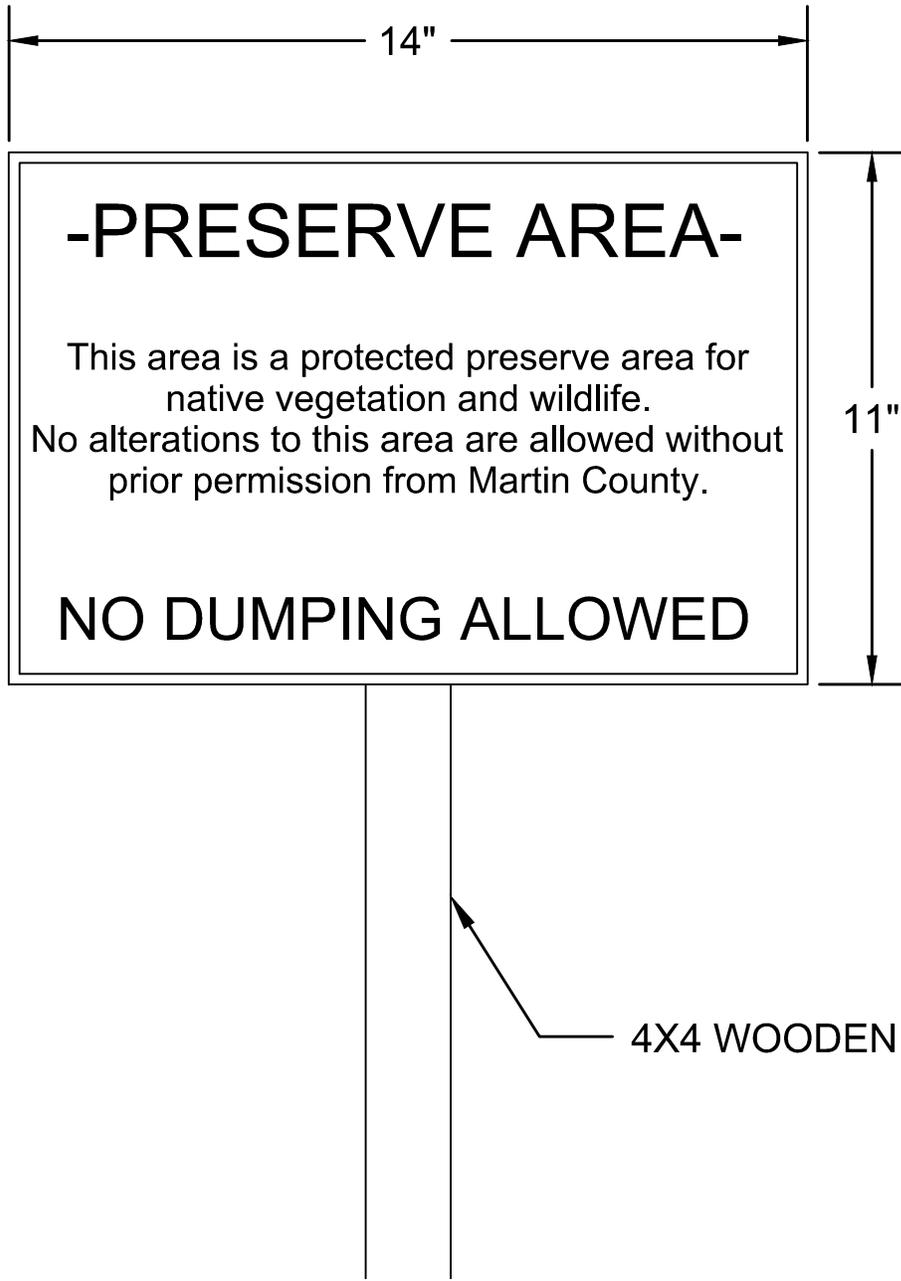
NRCS Soil Survey Report

Soil Map—Martin County, Florida
(Banyan Bay)



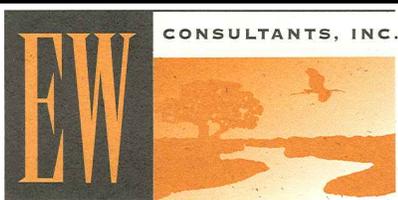
Soil Map may not be valid at this scale.





PRESERVE AREA SIGN

PRESERVE_SIGN_STANDARD (2).dwg Layout1



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FIGURE

SCANNED 01 19 2012 10:11



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

District Headquarters: 3301 GunClub Road, West Palm Beach, Florida 33406 (561) 686-8800 www.sfwmd.gov

January 19, 2012

JOHN GAVENAS
AVATAR PROPERTIES, INC.
201 ALHAMBRA CIR
CORAL GABLES, FL 33134

Dear Mr. Gavenas:

**Subject : Notice Of Inspection, Environmental
BANYAN BAY PHASE 1
Permit No. 43-00258-S, Application No. 050412-15
Martin County, S28,29,32,33/T38S/R41E**

This letter is written to inform you that the Fifth Annual Monitoring Report has been received (January 11, 2012) and reviewed, and of a January 13, 2012 inspection for Permit No. 43-00258-S. The monitoring report provides information as to the condition of the mitigation preserve areas.

The inspection revealed the wetland preserve areas are in good condition. Vegetative coverage is good and nuisance and exotic vegetation is under control. Although nuisance and exotic vegetation is not a problem at the time of inspection, continued maintenance is required to keep the project in compliance with permit requirements.

Once home construction is initiated on the current approved phase of the project and when future phases come online, preserve areas must be protected from adjacent activities. This includes sediment and erosion control, control of construction debris, equipment encroachment or impacts of any type.

Since the fifth monitoring report has been submitted and the wetland preserve areas are in compliance with mitigation requirements of the permit, no additional monitoring is required at this time. However, maintenance and management of the wetland preserve areas is perpetual and is to be continued on a frequent and regular basis by the operating entity. Regular inspections will be conducted in the future to document that wetland mitigation areas are being properly maintained and managed. Monitoring may be re-instituted if future inspections reveal that maintenance and management is not being conducted or construction activities are having an impact on the wetland preserve areas.

The District appreciates your efforts to maintain compliance with the environmental conditions of the permit. Please be advised that this notice pertains only to the environmental condition(s) of your permit.

SCANNED 01 19 2012 LDD

JOHN GAVENAS
AVATAR PROPERTIES, INC.
January 19, 2012
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Please be advised that the District now has the capability of receiving wetland monitoring reports, conservation easements, conversion/transfer documents, etc. electronically via the District's ePermitting website at <http://my.sfwmd.gov/ePermitting>, please click on "Getting Started" for first time users.

Should you have any questions or require further assistance, please contact me at (561) 682-6738.

Sincerely,



R. Brent Nicholas, PWS, Sr. Environmental Analyst
Environmental Resource Compliance
Okeechobee/Martin St. Lucie Service Center
South Florida Water Management District

c: Jose Rivera, ACOE Palm Beach Gardens
Paul Ezzo, EW Consultants, Inc.



BANYAN BAY (PHASE 3)

LAKE AREA MANAGEMENT PLAN

**Martin County, Florida
(January 2022)**

The following Lake Area Management Plan is provided for the wet retention lakes and flow-through marshes within Phase 3 of the Banyan Bay development site. It is to be used in conjunction with the master site plan, lake planting plans and flow-through marsh planting plans provided for prior phases. This plan addresses standards set forth in the Martin County Excavation and Fill Ordinance.

Erosion Control and Water Management Provisions –

The operator shall use Best Management Practices to minimize erosion. The use of native top-soils is encouraged, especially in areas reclaimed for aquatic or wildlife habitats. Where topsoil is not used, the operator shall use a soil or growing medium, including amendments, suitable for the type of vegetative communities planned. Should washes or rills develop after re-vegetation and before final release of the area, the operator shall repair the eroded areas and stabilize the slopes.

Best Management Practices also apply to water quality within the lakes so as to protect the health of the plant material. Turbid water will be kept to a minimum so that sunlight may reach the littoral shelf floor promoting aquatic grass recruitment. The water levels within the lakes have been designed to a specific elevation. Such elevations will be staked along the littoral shelf in order to provide the plant installation contractor a reference from which to install the appropriate plant material. Should water levels within the completed lakes drop to elevations potentially harmful to the planted littoral plants, temporary irrigation will be established by using a small pump and spray-rig situated within the lake(s). Water from the lake(s) will be sprayed onto the planted littoral zones as needed in order to keep such plants healthy.

Installation of Native Plant Material –

The installation of the native plant material within the littoral zones and upland transition zones will be in accordance with approved landscape and planting plans. Planting of such material will be conducted at the appropriate time after the lake banks are sloped in accordance with the approved Construction Drawings. Plants are to be installed in accordance with the spacing and quantities detailed on the approved landscape and planting plans. All plant material will be of appropriate type for the soils found on site. An Environmental Professional familiar with aquatic plant installation will oversee this activity.

Maintenance of Littoral and Upland Transition Zone Areas -

The littoral zone and upland transition zone planting areas as shown on the approved landscape and planting plans will be kept free of nuisance and exotic vegetation in perpetuity. All Category I and II nuisance and exotic vegetation as listed by the Florida Exotic Pest Plant Council (Rule 5B-57.007 FAC) will be treated within such areas. All treatment will be through the application of the appropriate herbicide approved for use within aquatic environments. The criterion for acceptance of eradication for Category I and II exotic vegetation will be 100 percent treatment/kill and 95 percent treatment/kill for nuisance species. If initial efforts do not achieve this criterion, follow up treatments will be conducted.

Transport of vegetative debris from the lake area to the staging area will be conducted in a fashion that minimizes the distribution and dispersal of seeds from such debris. No exotic or nuisance woody vegetative material will be left in the littoral and upland transition zone areas. All herbicide application activity will be conducted under the supervision of a Florida Department of Agriculture certified applicator, licensed for application of aquatic herbicides. All herbicide applied within aquatic systems on-site must be properly labeled for such use. All herbicide applied must include a visible tracer dye in the mix to facilitate observation of treated vegetation. Within the littoral zones, the areal extent of desirable native plants shall cover at least 80% of the surface area by the end of the second year of monitoring after installation.

Prohibition of Alteration to Lake Slopes –

It shall be unlawful to alter the approved slopes, contours, or cross-sections, or to chemically, mechanically, or manually remove, damage, or destroy any plants in the littoral or upland transition zone buffer areas of constructed lakes except upon the written approval of the Growth Management Department Director, as applicable. It is the responsibility of the owner or property owners' association, its successors or assigns, to maintain the required survivorship and coverage of the reclaimed and planted littoral and upland transition zone areas and to ensure ongoing removal and/or herbicide treatment of prohibited and invasive non-native plant species from these areas.

MARTIN COUNTY, FLORIDA

PRESERVE AREA MANAGEMENT PLAN

ANNUAL MONITORING REPORT FOR (Year)

- **Name and address of current owner of Preserve Area;**
- **Location of Preserve Area**
- **Date PAMP approved;**
- **Documentation of vegetation changes, including encroachment of exotic vegetation;**
- **Fixed-point panoramic photos of all Preserve Areas;**
- **Synopsis of maintenance activities conducted in compliance with the PAMP requirements such as exotic vegetation removal, revegetation, and additional enhancement activities necessary to maintain the Preserve Area;**
- **A timetable for action within 90 days of the report;**
- **A list of all violations of the PAMP; and**
- **Recommendations for remedial actions, with a proposed schedule for the coming year.**

Signature/Date : _____

Typed Name/Title : _____

Company Name (if applicable) : _____