

GORDY CREEK RESIDENTIAL

PRESERVE AREA MANAGEMNT PLAN

ST. LUCIE COUNTY, FLORIDA

**Prepared for:
Swanson Investment LLC
1548 SE 6th Street
Deerfield Beach, Florida 33441**

**Parcel Nos:
2326-130-0000-000-7
2326-130-0000-010-0**

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I. INTRODUCTION

The intent of the Preserve Area Management Plan (PAMP) is to provide an outline of methods to provide the long-term protection and maintenance of the viability, values and functions of the preserve areas, as required by the City of Fort Pierce.

II. OBJECTIVES

- A. To preserve the existing wetlands and adjacent upland buffers, including canopy, understory, and groundcover. Define habitat types and species.
- B. Enhance the viability of the preserve through the removal and control of invasive exotic plant species and the as needed supplemental planting of native plant material into the preserve areas.
- C. Prevent potentially destructive uses or activities within the preserve area.
- D. Sustain areas of viable habitat for regional flora and fauna through the implementation of regular maintenance and monitoring programs.
- E. Other community objectives for passive use, community enhancement, education as applicable.

III. SITE DESCRIPTION

All Preserve Areas, right-of-ways and easements are shown on the Gordy Creek Site Plan, a copy of which is included in this PAMP. The Site Plan includes a summary of the acreage of wetland preservation, acreage of upland buffer preservation and total acreage of the site.

- A. The Gordy Creek site consists of approximately 76-acres located in the City of Fort Pierce, directly on the west side of Gordy Road, approximately 0.3 mile south of the intersection of Okeechobee Road and the Florida Turnpike within Section 26, Township 35 South, Range 39 East, St. Lucie County, Florida. The site currently supports four (4) land use types/vegetative communities. The on-site upland land use types/vegetative communities are classified as Open Land (190) and Woodland Pastures (213). The on-site wetland land use types/vegetative communities are classified as Streams and Waterways (510) and Streams and Lake Swamps (Bottomland) (615).
- B. Soil types within the overall site include Fluvaquents, frequently flooded (#14), Riviera fine sand, 0 to 2 percent slopes (#38), Susanna and Wauchula sands (#43), and Wabasso sand, 0 to 2 percent slopes (#48).
- C. One ditch is present within the site boundaries along the western boundary of the wetland, through the middle of the site. The surface water (± 0.35 acres) is to be filled. Three wet ponds will provide stormwater treatment for the site.
- D. Two (2) wetlands, W-1 and W-2, are present within the site boundaries and will remain post development. Additionally, a 25-foot average, 15-foot minimum upland buffer adjacent to the remaining preserved wetlands will remain post development.

- E. Exotic and non-native species within the PAMP and adjacent areas include Brazilian pepper (*Schinus terebinthifolia*), guinea grass (*Panicum maximum*), cogon grass (*Imperata cylindrica*) and Caesar's weed (*Urena lobata*).
- F. Animal species present or adjacent to the site include African redhead agama lizard (*Agama agama*), brown anole (*Norops sagrei*), curly-tailed lizard (*Leiocephalidae carinatus*), brown anole (*Anolis sagrei*), American Crow (*Corvus brachyrhynchos*), American Robin (*Turdus migratorius*), Blue Jay (*Cyanocitta cristata*), Common Grackle (*Quiscalus quiscula*), Mourning Dove (*Zenaida macroura*), Northern Mockingbird (*Mimus polyglottos*), Red-bellied Woodpecker (*Melanerpes carolinus*), Turkey Vulture (*Cathartes aura*), eastern cottontail (*Sylvilagus floridanus*), eastern gray squirrel (*Sciurus carolinensis*), nine-banded armadillo (*Dasypus novemcinctus*), North American raccoon (*Procyon lotor*), and opossum (*Didelphis virginiana*).
- G. An original aerial photo is attached (Fig 1)
- H. Color photograph showing vegetative communities is attached (Figure 4)
- I. The proposed PAMP consists of 17.49 acres of wetlands and 1.31 acres of upland buffer, totaling 18.80 acres.

IV. CONSTRUCTION PHASE

A. PROTECTION

1. All Preserve Areas shown on the Site Plan for Gordy Creek 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.
2. Prohibited activities to include but not limited to staging of construction materials, 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.
3. Exotic vegetation shall be removed from Preserve Areas by the least ecologically-damaging method available. Such methods include hand pulling, hand spading, cutting by hand, brush axe or chain saws paired with treatment of appropriate herbicides. No debris, including dead plants, plant clippings or wood scraps, shall be allowed in Preserve Areas. In addition, all dead plant material and exotic plant debris removed from Preserve Areas shall be disposed of in a County-approved recycling facility.

Herbicidal treatment shall be performed by a Florida Class 21 Natural Areas Licensed Herbicide Applicator.

4. Prior to beginning construction, the developer will ensure that all Preserve Areas are protected with physical barriers during all clearing and construction activities.

B. ENHANCEMENT

1. The preserve consists of undeveloped wetlands consisting of bald cypress (*Taxodium distichum*), pond pine (*Pinus serotina*), red maple (*Acer rubrum*), dahoon holly (*Ilex cassine*), saw palmetto (*Serenoa repens*), common buttonbush (*Cephalanthus occidentalis*), water oak (*Quercus nigra*), laurel oak (*Quercus laurifolia*), cinnamon fern (*Osmundastrum cinnamomeum*), swamp fern (*Blechnum serrulatum*), marsh pennywort, (*Hydrocotyle verticillata*), and spade leaf (*Centella asiatica*). Additionally, the preserve consists of an undeveloped upland community consisting of live oak (*Quercus virginiana*), laurel oak (*Quercus laurifolia*), dogfennel (*Eupatorium capillifolium*), John Charles's (*Hyptis verticillata*), cabbage palm (*Sabal palmetto*), prickly pear cactus (*Opuntia humifusa*), Greenbriar (*Smilax spp.*) and Virginia creeper (*Parthenocissus quinquefolia*).
2. Relocation of vegetation is not proposed with the PAMP. All native vegetation not slated for removal as part of the development plan will be retained in their undisturbed state. Enhancement plantings will be installed on an as needed basis. All cut or fill will meet existing preserve area grade without encroaching into the preserve areas.
3. Enhancement plantings may be needed over time to ensure the success of the preserve area, as well as to replace void space left by the removal of Invasive Non-Native Plant species.
4. Enhancement may be needed due to the loss of established individuals due natural damage (hurricane, lightning, etc). Initial enhancement of the shrub layer will be needed with approximately 75 individuals per acre installed after the first treatment of exotic vegetation.
5. No irrigation will be needed for the enhancement plan, instead the woody plantings will be installed at the optimal time of year for success. Additionally, grass plugs and sod planting will be coated with a root gel such as Terra-Sorb® when being planted in the warmer months on an as needed basis.
6. As needed plantings may be needed to ensure the integrity of the preserve. Attached is the as needed supplemental planting plan (Attachment 9). The species list for the as needed supplemental planting can be found in Attachment 10.

C. PROHIBITED EXOTIC INVASIVE SPECIES CONTROL

1. All Prohibited and Invasive Non-Native Plant Species as defined in the most current Vegetation Protection Section of the ULDC and FEPPC Category I Plant List (target species) shall be removed and eradicated from the preserve areas, as well as the entire subject parcel. These plant species shall be removed or eradicated in entirety prior to the final vegetation inspection and the issuance of the Certificate of Occupancy, as required by the Standard Vegetation Permit. The entire subject parcel shall be maintained free from Invasive and non-native vegetation.
2. All chemicals shall be handled and applied by a Florida Class 21 Natural Areas Licensed Herbicide Applicator.
3. Exotic vegetation Brazilian pepper (*Schinus terebinthifolia*), grass (*Panicum maximum*), cogon grass (*Imperata cylindrica*) and Caesar's weed (*Urena lobata*) shall be removed or eradicated as necessary. The following methodology will be used to accomplish removal:
 - Cut larger, woody exotic plant species to a stump near flush with existing ground level using hand tools (chain saw, brush axe, or machete).
 - Remove large trunks and limbs by hand (or gabled to equipment) to be pulled out of the preserve avoiding damage/impacts to existing native plant species.
 - Girdle/Hack and spray, with a machete or chainsaw and appropriate herbicide, larger diameter individuals where damage to nearby native species may be caused from felling.
 - Treat the stumps of the removed exotic plants with the appropriate herbicide (Garlon 4®, Rodeo ® etc.).
 - Cut exotic and nuisance vines at the base of the tree, palm, or shrub. Leave the vine in the tree canopy so as not to damage the tree by pulling on the vine to remove it. Treat the base of the vine and the cut portion on both side of the cut, rhizome, and root mat with the appropriate herbicide.
 - Remove all debris from the preserve areas to be chipped and hauled off site for proper disposal. The work area of the chipping should be re-inspected a month after chipping and treated with the appropriate herbicide as needed.
 - Perform a follow-up treatment of any resprouting or newly seeded exotic and nuisance plant species prior to application to ERM for the final inspection.

V. MAINTENANCE AND MONITORING

A. COMMUNITY MAINTENANCE

1. Property owners are encouraged to enjoy the natural beauty of their Preserve Areas. Although development of Preserve Areas is not allowed, passive uses, such as bird-

watching and other non-destructive uses of natural areas are encouraged, as long as they do not affect the hydrology or vegetative cover of a Preserve Area.

2. Preserve areas will be posted with signs marked “Preserve Area” and a wooden fence will be installed around the preserve area (Attachment 11).
3. Native vegetation is to remain in its natural condition, with supplemental plantings occurring on an as needed basis. Plantings will replace trees lost to storm damage or any natural occurrence and fill void space left by the removal of invasive species. This replacement method will consist of grass plugs, shrubs no larger than 3 gallon in size, and trees no larger than the 7 in gallon size (Attachment 9).
4. The preserve areas will be maintained quarterly for the first year, then in perpetuity to ensure compliance for the permanent eradication of invasive non-native vegetation as listed in the most current Vegetation Protection Section of the ULDC and FEPPC Category I Plant List (target species).

B. PROHIBITED ACTIVITIES

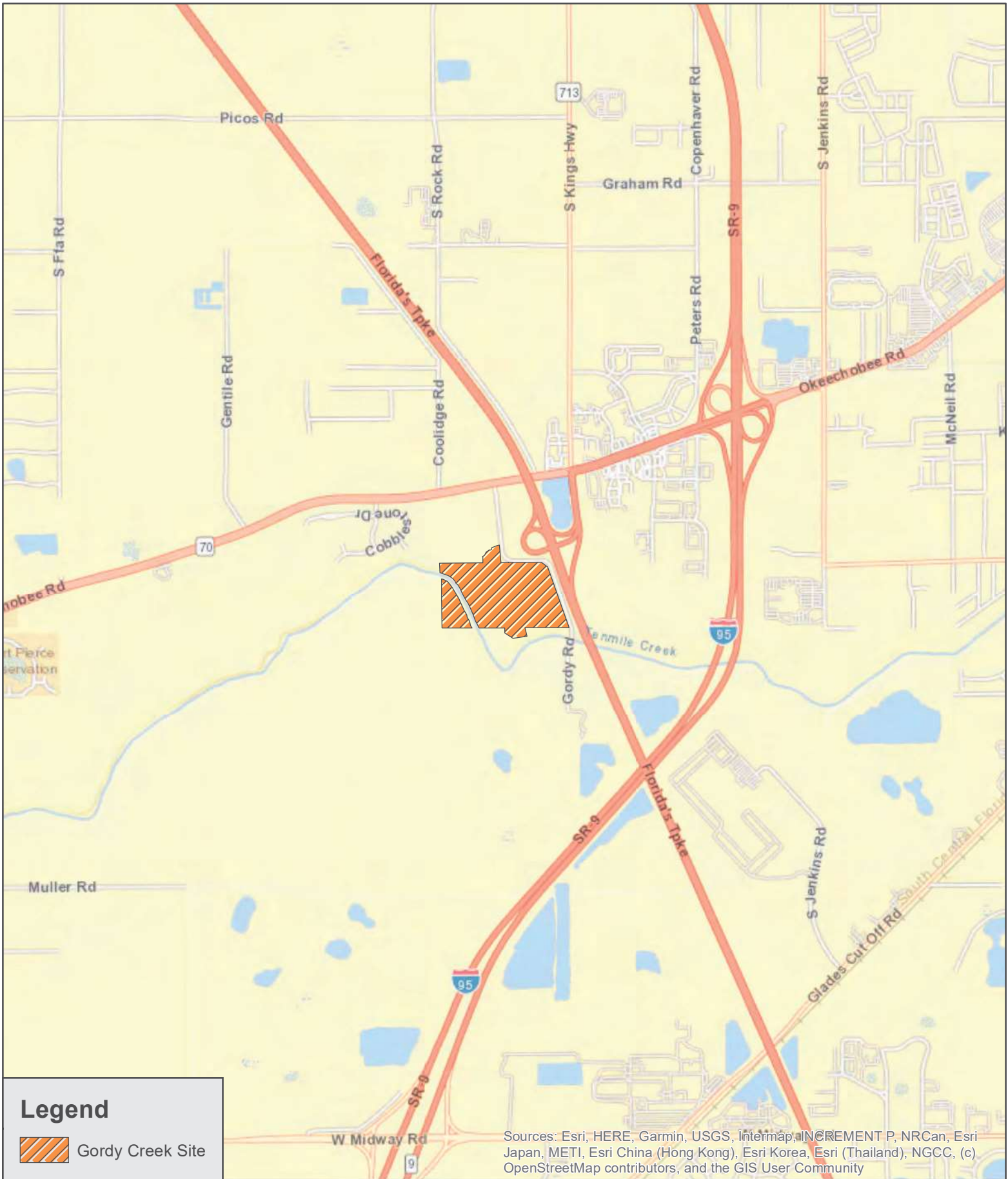
1. Prohibited activities within the PAMP include but are not limited to construction or placing of building materials on or above the ground; dumping or placing soil or other substances such as garbage, trash, and cuttings; removal or destruction of native trees, shrubs or other native vegetation; excavation, 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.

C. MONITORING


1. The preserve area monitoring will be conducted on an annual basis, with an annual monitoring report to document the maintenance, success, and general activities done within the preserve for the first five years.
2. Monitoring shall include, but not limited to: removal of trash and debris, identification of prohibited activities, identification and eradication of invasive non-native species, ensure compliance with the standards for survivorship of the relocated plant material, replacement tree plantings or any other supplemental planting as specified in the approved PAMP.
3. Each monitoring report will include recommendations for maintenance, if necessary. Vegetative maintenance of the preserve areas will be provided in perpetuity by the permittee and successors in accordance with permit requirements and this plan.

VI. CONCLUSION

- A. The proposed site use is residential with associated recreational areas, parking and stormwater management system(s).
- B. Failure to comply with these guidelines will be considered a violation of the permit and approved PAMP. Further work on the project may be stopped until compliance is achieved with the guidelines of the approved PAMP is achieved.
- C. Upon attainment of the Certificate of Occupancy and the final sign off by the City of Fort Pierce, annual maintenance will be performed in perpetuity.
- D. Property which changes ownership is subject to disclosure laws notifying new owners of this management plan and any outstanding code enforcement issues. Results of code enforcement violations will be assumed by the owner of the property on which the violation occurs. Failure to disclose in writing the existence and nature of a proceeding to the prospective transferee creates a rebuttable presumption of fraud.
- E. The City of Fort Pierce shall have the right to enforce the provisions of the PAMP through any available administrative or civil proceeding which may result in penalties. Appropriate revegetation and other remedies may be required of any person, corporation or other entity found in violation of any of the provisions of the PAMP.



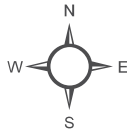
Legend

 Gordy Creek Site

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

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Gordy Creek Site
 St. Lucie County, Florida
 Figure 1
 Location Map



0.5 Miles

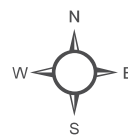
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 Date: 2/8/2024



Legend


 Gordy Creek Site (± 75.98 Ac.)

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community










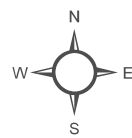
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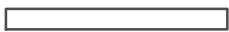
 Gordy Creek Site

St. Lucie County Soils

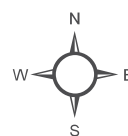
-  14: Fluvaquents, frequently flooded
-  38: Riviera fine sand, 0 to 2 percent slopes
-  43: Susanna and Wauchula sands
-  48: Wabasso sand, 0 to 2 percent slopes
-  99: Water

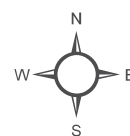
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



 750 Feet







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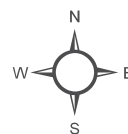




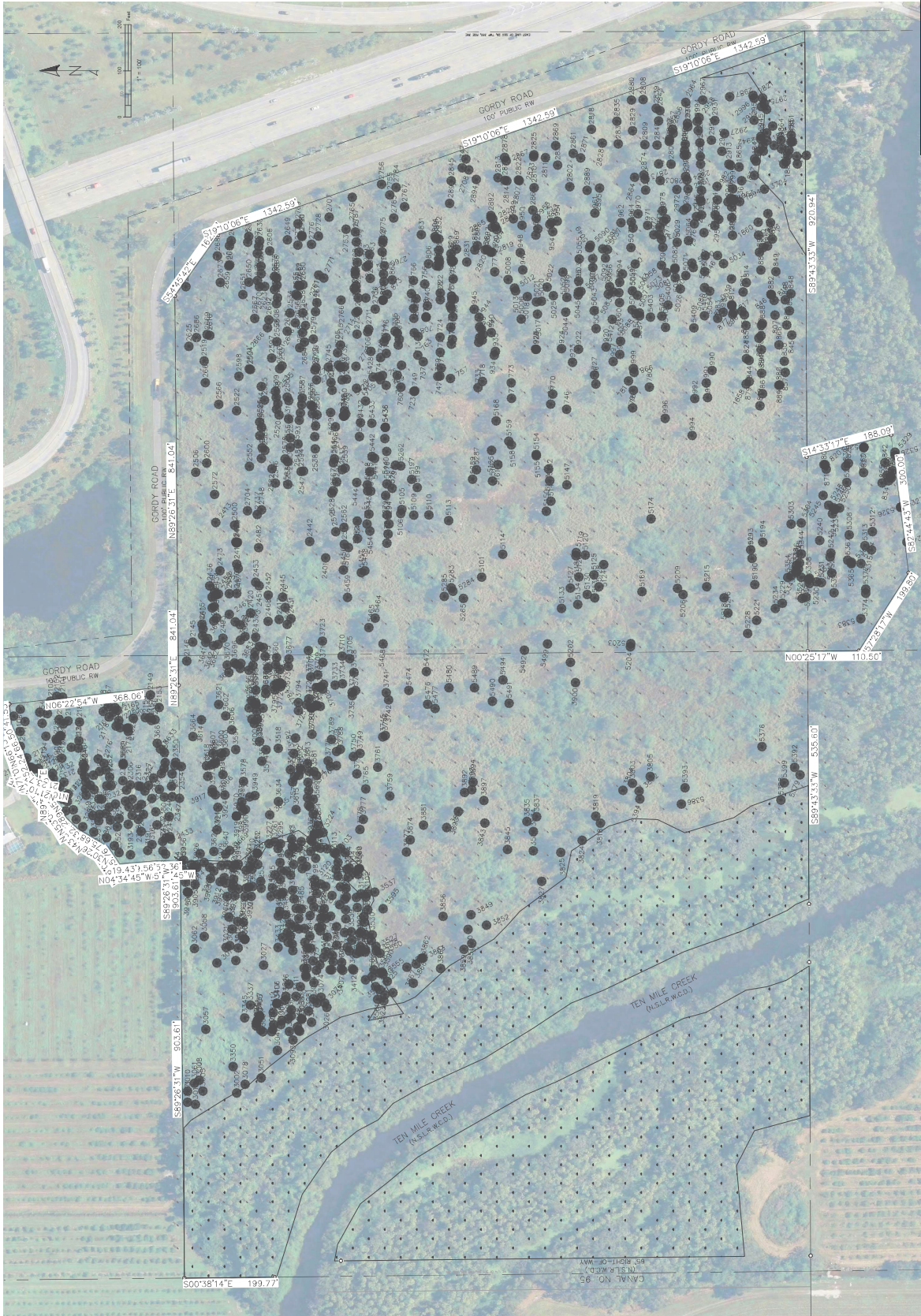
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-  Gordy Creek Site
-  25ft Upland Buffers (± 1.31 ac. Total)
- Surface Water Impact
-  SW-1, 0.35 ac.
- Preserved Wetlands
-  W-1A, 8.35 ac.
-  W-1B, 8.2 ac.
-  W-2, 0.94 ac.

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



ISSUE	DATE	COMMENTS



BENCHMARK:

ALL ELEVATIONS REFER TO NORTH AMERICAN VERTICAL DATUM OF 1988

NOTES:

- REFER TO FREE SURVEY PREPARED BY BCD DATED 08/02/2023 FOR TREE TYPES AND SIZES
- ALL UNDESIRABLE EXOTIC VEGETATION EXISTING WITHIN PROPERTY BOUNDARIES SHALL BE REMOVED AND REPLACED WITH NATIVE PLANT SPECIES AT THE DEVELOPER'S CONSTRUCTION WITH SITE DEVELOPMENT.
- ANY WETLANDS IDENTIFIED BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION SHALL BE PROTECTED THROUGHOUT THE PROJECT'S LIFETIME.

LEGEND:

- EXISTING WETLAND BOUNDARY
- EXISTING WETLAND
- EXISTING SPOT ELEVATION
- EXISTING ROAD CENTERLINE
- EXISTING TOP OF BANK
- EXISTING SWALE
- EXISTING CONTOUR LINE
- EXISTING TREE
- EXISTING WETLAND BOUNDARY
- EXISTING WETLAND
- EXISTING SPOT ELEVATION
- EXISTING ROAD CENTERLINE
- EXISTING TOP OF BANK
- EXISTING SWALE
- EXISTING CONTOUR LINE
- EXISTING TREE

AS NEEDED SUPPLEMENTAL PLANTING PLAN

The preserve area is to be maintained in its current state. After the removal of invasive plant species to encourage the growth in these newly cleared areas, supplemental plantings may need to occur. The ratio of replacement is based on the diameter at breast height (DBH) of the trees lost. The canopy's range between 18 and 30 inches in DBH. For each tree lost at the canopy level four trees of up to 7-gallon containers will be used to replace them. The size of the planting will be based on the species for example a lost 22" DBH live oak will be replaced with 4 plantings of 7-gallon live oaks with an average caliper size of 4" to 5". The reason for the height discrepancy is that canopy trees are not viable to replace at comparable heights and diameters with high success rates. The as needed supplemental plantings will occur from December to March.

Sub-Canopy trees will be replaced at a rate of 3:1 with plantings being 3 gallons in size. This will be based on availability, tree type, and location of the plantings. The sub-canopy's range between 8" and 18" in diameter at breast height (DBH). For each tree lost at the sub-canopy level 3 trees of up to 3-gallon containers will be used to replace them. The size of the planting will be based on the species for example a lost 11" DBH live oak will be replaced with 3 plantings of 3-gallon live oaks with an average caliper size of 3" to 5". Plantings should occur from December to March.

Shrub cover will be replaced at a rate of 2:1 with plantings being up to 3 gallons in size. This will be based on availability, tree type, and location of the plantings. Plantings should occur from December to March.

Herbaceous vegetation will be replaced when a barren area of 10'x 10' void of any herbaceous cover is discovered. Examples of this could be a fallen or uprooted tree or some type of debris blown into the preserve through natural causes. This area will be replanted using plugs or sod if applicable. The spacing for plugs should be 6"x 6" on center or complete coverage of the barren area with sod of the appropriate species. The herbaceous plantings can be done at any time of year. If planting in the hot and dry months it is advisable to use a root gel product, such as Terra- Sorb®, on the plugs/sod in order to give them the best chance of survival.

The planting plans overall conclusion is to maintain the preserve in its current state by replacing the lost diameter at breast height of lost individuals and to take advantage of the removed invasive species while encouraging native species to naturally recruit. The replacement of lost individuals and supplemental planting will be included in the annual report. This report will include the lost individual's species, DBH, and approximate height as well as the replacement individual's species, DBH, and approximate height. In the case of sod or grass plug plantings the number of individuals and coverage will be noted in the report.

Table 1: As needed planting plan overview.

Vegetation Type	DBH Range	Replacement Rate	Size of Replacements
Herbaceous	N/A	Barren Areas 10'x10'	plugs/sod
Shrub	2" to 8"	2 to 1	1-3 gallon
Sub Canopy	8" to 18"	3 to 1	3 gallon
Canopy	18" to 30"	4 to 1	3 to 7 gallon

Upland Buffer Planting Plan

Canopy: up to 7-gallon plantings

<u>Common Name</u>	<u>Scientific Name</u>	<u>Designation</u>
Live Oak	<i>Quercus virginiana</i>	Native
Sable Palm	<i>Sabal palmetto</i>	Native
Laurel Oak	<i>Quercus laurifolia</i>	Native

Sub-Canopy: up to 3-gallon plantings

<u>Common Name</u>	<u>Scientific Name</u>	<u>Designation</u>
Sabal Palm	<i>Sabal palmetto</i>	Native
Laurel Oak	<i>Quercus laurifolia</i>	Native

Herbaceous: plugs, sod, up to 1-gallon plantings.

<u>Common Name</u>	<u>Scientific Name</u>	<u>Designation</u>
Saw Palmetto	<i>Serenoa repens</i>	Native
Wire Grass	<i>Aristida stricta</i>	Native
Cocoplum	<i>Chrysobalanus icaco</i>	Native
American Beauty Berry	<i>Callicarpa americana</i>	Native

*Species selection will be based on availability, existing seed source and seasonal growing conditions.

Wetland Preservation Planting Plan

Canopy: up to 7-gallon plantings

<u>Common Name</u>	<u>Scientific Name</u>	<u>Designation</u>
Red maple	<i>Acer rubrum</i>	Native
Sabal Palm	<i>Sabal palmetto</i>	Native
Sweet bay	<i>Magnolia virginiana</i>	Native
Laurel Oak	<i>Quercus laurifolia</i>	Native

Sub-Canopy: up to 3-gallon plantings

<u>Common Name</u>	<u>Scientific Name</u>	<u>Designation</u>
Red maple	<i>Acer rubrum</i>	Native
Laurel Oak	<i>Quercus laurifolia</i>	Native
Dahoon holly	<i>Ilex cassine</i>	Native
Wax myrtle	<i>Morella cerifera</i>	Native

Herbaceous: plugs, sod, up to 1-gallon plantings.

<u>Common Name</u>	<u>Scientific Name</u>	<u>Designation</u>
Cinnamon fern	<i>Osmundastrum cinnamomeum</i>	Native
Cocoplum	<i>Chrysobalanus icaco</i>	Native
Common buttonbush	<i>Cephalanthus occidentalis</i>	Native

*Species selection will be based on availability, existing seed source and seasonal growing conditions.



Example of signage to be placed around preserve area