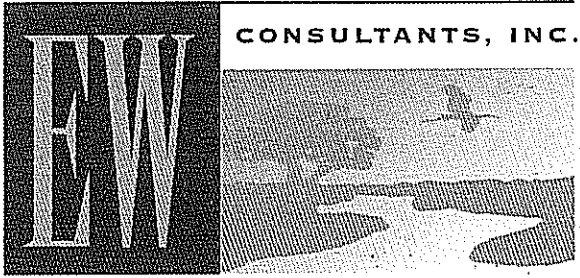


EW CONSULTANTS, INC.

NATURAL RESOURCE MANAGEMENT, WETLAND, AND ENVIRONMENTAL PERMITTING SERVICES



FT. PIERCE PRECAST & CONCRETE FACILITY

ENVIRONMENTAL IMPACT REPORT

Prepared by:

EW CONSULTANTS, INC.

August 2016

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INTRODUCTION

The 75± acre-property covered by this Environmental Impact Report is located within Section 32, Township 35 South, Range 40 East, St. Lucie County, Florida (Figures 1&2). The property is bordered to the north by unimproved pasture, to the east by Fort Pierce Central High School, to the south by improved and unimproved pasture as well as single family residential development, and to the west by a mixed use commercial/industrial yard.

PURPOSE AND INTENT

This report has been prepared to document potential environmental impacts on a 75 ± acre property referred to as the Precast & Concrete Facility. The subject property is currently undeveloped and managed as improved pasture with associated features including ditches and a storm-water retention basin.

This report has been prepared in accordance with City of Ft. Pierce, Code of Ordinances, Chapter 22 and Section 11.02.09.A.5 “Environmental Impact Report” of the St. Lucie County Land Development Code. The review of the applicability criteria and thresholds listed under Section 11.02.09.A.5.a.1 reveals that the following criteria apply to this property

- The property is more than ten (10) acres
- The property contains surface waters in the form of man-made ditches and a storm-water retention basin

The following requirements of the St. Lucie County Land Development Code are not applicable to this project:

- The proposed development is not located within the One Hundred Year Flood Plain
- The property is not identified on the Native Habitat Inventory Final Report dated 2004 (Inventory of Native Ecosystems for St. Lucie County)

PROPERTY DESCRIPTION

The subject property is currently undeveloped and managed as improved pasture. Management practices and the presence of livestock have retained the land in its current condition. Historical aerial imagery from c.1999 indicates that at least half of the property was previously planted with row crops which was likely citrus. The pastures are now vegetated with typical pasture grasses and ruderal weeds.

Surface waters in the form of man-made ditches and a retention basin are present on the property. Native and exotic wetland vegetation occur scattered within the ditches and retention basin, but does not constitute an intact native habitat.

SOILS

A soils map obtained from the USDA Web Soil Survey and with the property boundary is attached in Appendix A of this report. According to the soil map, seven soil types are found on the subject property. The description of these soils, in their natural state, according to the St. Lucie County Soil Survey is provided below:

Ankona and Farmton sands – This poorly drained, nearly level soil is on broad flatwoods. Slopes are smooth to concave and are less than 1 percent in most places, but they range to 2 percent along the edges of depressional areas. Included with this soil in mapping are small areas of Electra, Lawnwood, and Waveland soils. The included soils make up about 15 percent of any mapped area. The water table is within a depth of 10 inches for 1 to 4 months and between depths of 10 to 40 inches for 6 months or more during most years. Permeability is rapid in the surface and subsurface layers, very slow to slow in the upper part of the subsoil, and moderately rapid to rapid in the lower part of the subsoil and substratum. In most areas, typical natural vegetation is south Florida slash pine and an understory of saw palmetto, wax myrtle, pawpaw, inkberry, fetterbush, lopsided indiagrass, creeping bluestem, chalky bluestem, Florida threeawn and pineland threeawn.

Floridana sand, depressional – This very poorly drained, nearly level soil is in wet depressional areas and on broad low flats. Slopes are smooth to concave and are less than 1 percent in most places, but they range from 0 to 2 percent. Included with this soil in mapping are small areas of Pineda, Riviera, and Winder soils. The included areas make up less than 15 percent of the map unit. Floridana sand is ponded for more than 6 months annually. Available water capacity is medium in the surface layer and subsoil and low in the subsurface layer. Permeability is rapid in the surface and subsurface layers and slow to very slow in the subsoil. Internal drainage is slow because of a shallow water table. Typical natural vegetation is sandweed and sand cordgrass in the depressional areas and wax myrtle on broad low flats.

Oldsmar sand, depressional – This nearly level soil is typically found in depressional areas in flatwoods. These areas are more poorly drained than surrounding flatwoods. Slopes are smooth to concave and range from nearly level in the center of the depression to 2 percent toward the edge. Included with this mapping are small areas of Riviera soil and soils which have a dark surface layer 10 or more inches thick. Also included are a few areas that do not have a dark sandy subsoil and a few areas that have a dark subsoil at a depth of less than 30 inches. The included soils make up 25 percent or less of any mapped area. The water table in Oldsmar sand is above the surface for 6 to 9 months or more in most years. Available water capacity is very low in the surface and subsurface layers and medium in the rest of the soil. Permeability is rapid in the surface and subsurface layers, moderate to moderately rapid in the sandy part of the subsoil, and slow to very slow in the loamy part of the subsoil. In most of the acreage, typical natural vegetation is scattered to dense sandweed, stillingia, longleaf threeawn, maidencane, and sand cordgrass.

Riviera fine sand, 0 to 2 percent slopes – This poorly drained, nearly level soil is typically found in hammocks and along drainage ways. Slopes are smooth to convex and range from 0 to 2 percent. Included with this soil in mapping are small areas of Wabasso, Wabasso Variant,

Floridana, Hallandale, Pineda, Winder Variant and Winder soils. The included areas make up less than 20 percent of any mapped area. This Riviera soil has a water table at a depth of less than 10 inches for 2 to 4 months in most years, and at a depth of 10 to 30 inches for most of the rest of the year. Only for short periods in dry seasons is the water table below a depth of 40 inches. Available water capacity is low in the surface and subsurface layers and moderate in the subsoil and substratum. Permeability is rapid in the surface and subsurface layers, slow to very slow in the subsoil, and rapid in the substratum. Nearly all of the acreage has been cleared and is planted to citrus. Typical natural vegetation is cabbage palms and scattered longleaf pine and slash pine and an understory of wax myrtle and saw palmetto.

Susanna and Wauchula sands – This poorly drained, nearly level soil is on the flatwoods. Slopes are smooth to convex and range from 0 to 2 percent. Included with this soil in mapping are small areas of Ankona, Chobee, Nettles, Pepper, Pineda, Riviera, Tantile, Wabasso, and Winder soils. The included soils make up less than 20 percent of any mapped area. The water table is at a depth of less than 10 inches for 1 to 4 months and within a depth of 40 inches for about 6 months in most years. It is perched above the soil during the summer rainy seasons and after periods of heavy rainfall. During the dry seasons, the water table may recede to a depth of below 40 inches. Available water capacity is low in the surface layer, very low in the subsurface layers, and medium in the layers below. Permeability is rapid in the surface and subsurface layers, very slow to moderately slow in the subsoil, and moderately rapid to rapid in the substratum. In a large part of the acreage, typical natural vegetation is open forest of south Florida slash pine and an understory of saw palmetto, running oak, inkberry, and fetterbush. The most common native grasses are pineland threeawn and Florida threeawn.

NATURAL COMMUNITIES AND LAND COVER

The following is a summary of the land cover and vegetation communities found on the subject site. Land cover and vegetative community classifications were mapped based on the Florida Land Use, Cover and Forms Classification System (FLUCFCS) developed by the Florida Department of Transportation. Field reconnaissance and aerial photograph interpretation were employed in the mapping effort of the vegetative communities on the subject property. Observed and potential listed wildlife species presence and usage of the habitat is further discussed in the subsequent section of this report.

There are three different FLUCFCS classifications currently present on the site including improved pasture (211), the ditches that network throughout the site are classified as streams and waterways (510), and the water retention basin is categorized as a reservoir less than 10 acres (534).

A land cover map of the observed community types is included as Figure 3 in the appendix of this report. The land cover types observed on the property are described as follows:

211 Improved Pasture – 68.1 ± acres

This land cover accounts for the upland portions of the property. Vegetation assemblages within this land cover type is predominantly short, herbaceous grass and ruderal weeds with dominant species including bahia grass (*Paspalum notatum*), dropseed grass (*Sporobolus* spp.),

guinea grass (*Panicum maximum*), dog fennel (*Eupatorium* spp.), ragweed (*Ambrosia*), shrubby false buttonweed (*Spermacoce verticillata*), pepperweed (*Lepidium* sp.), Caesar weed (*Urena lobata*) and sandspur grass (*Cenchrus* sp.). Taller vegetation consisted of Brazilian pepper (*Schinus terebinthifolius*), earleaf acacia (*Acacia auriculiformis*) and sabal palms (*Sabal palmetto*) which was observed most commonly as seedlings.

510 Ditches – 3.2 ± acres

A system of drainage ditches extends throughout the property. The ditches are approximately 10-15 feet wide and are typically vegetated with scattered Carolina willow (*Salix caroliniana*), primrose willow (*Ludwigia peruviana*), Caesar weed (*Urena lobata*), cattail (*Typha* spp.), swamp fern (*Blechnum serrulatum*), Brazilian pepper and Old-world climbing fern (*Lygodium microphyllum*). Some of these ditches are connected and extend beyond the limits of the property. The sides of the ditches have steep slopes with no littoral shelves.

534 Reservoir less than 10 acres – 3.7 ± acres

A water retention basin is located within the central-southern half of the property. The reservoir is surrounded by an earthen levee and contains surface water. Vegetation within the reservoir consists of jointed spike rush (*Eleocharis interstincta*), soft rush (*Juncus effusus*), flat sedges (*Cyperus* spp.), dropseed grass (*Sporobolus* spp.), wax myrtle (*Myrica cerifera*), guinea grass and primrose willow.

NON LISTED WILDLIFE SPECIES

The pasture, ditch network and retention basin provide habitat for numerous non-listed wildlife species. Observations from the site visit conducted in August, 2016 included sightings of or observations of signs of the following wildlife:

Black bellied whistling duck with juveniles
Marsh hawk (Hen harrier)
Chimney swifts
Mocking bird
Marsh rabbit
Wild hog
Black racer

LISTED SPECIES

No listed plant or animal species nor sign of listed species were observed on the property. The absence of native habitat combined with active agricultural and land management practices has left the property very degraded and inappropriate for most listed plant and animal species.

PROPOSED IMPACTS FROM DEVELOPMENT

The majority of the 75-acre site will be occupied by the proposed concrete plant. The plant development will include an office building, parking areas, large storage and loading areas, production and finishing areas, and a large retention pond. Because there is no native upland or wetland habitat present on the site, the environmental impacts are minimal. There are surface waters in the form of drainage ditches and an existing retention area that will be filled for the development. However, there is no significant wetland habitat and no listed wildlife species utilizing these areas. Permits will be obtained from South Florida Water Management District (SFWMD) and the U.S. Army Corps of Engineers (COE) that will address impacts to surface waters. If any compensatory mitigation is required for surface water impacts, it will be provided through purchase of credits at an off-site mitigation bank.

LIST OF FIGURES


1. LOCATION MAP
2. QUAD MAP
3. AERIAL MAP
4. FLUCFCS MAP

ATTACHMENT

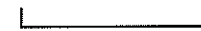
1. SOILS REPORT



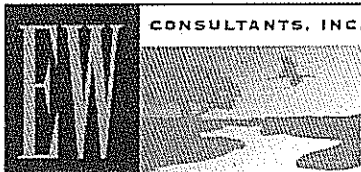
LEGEND

 - SITE (75.0+/- AC)

0 2,000 Feet



**FORT PIERCE PRE-CAST FACILITY
LOCATION MAP**



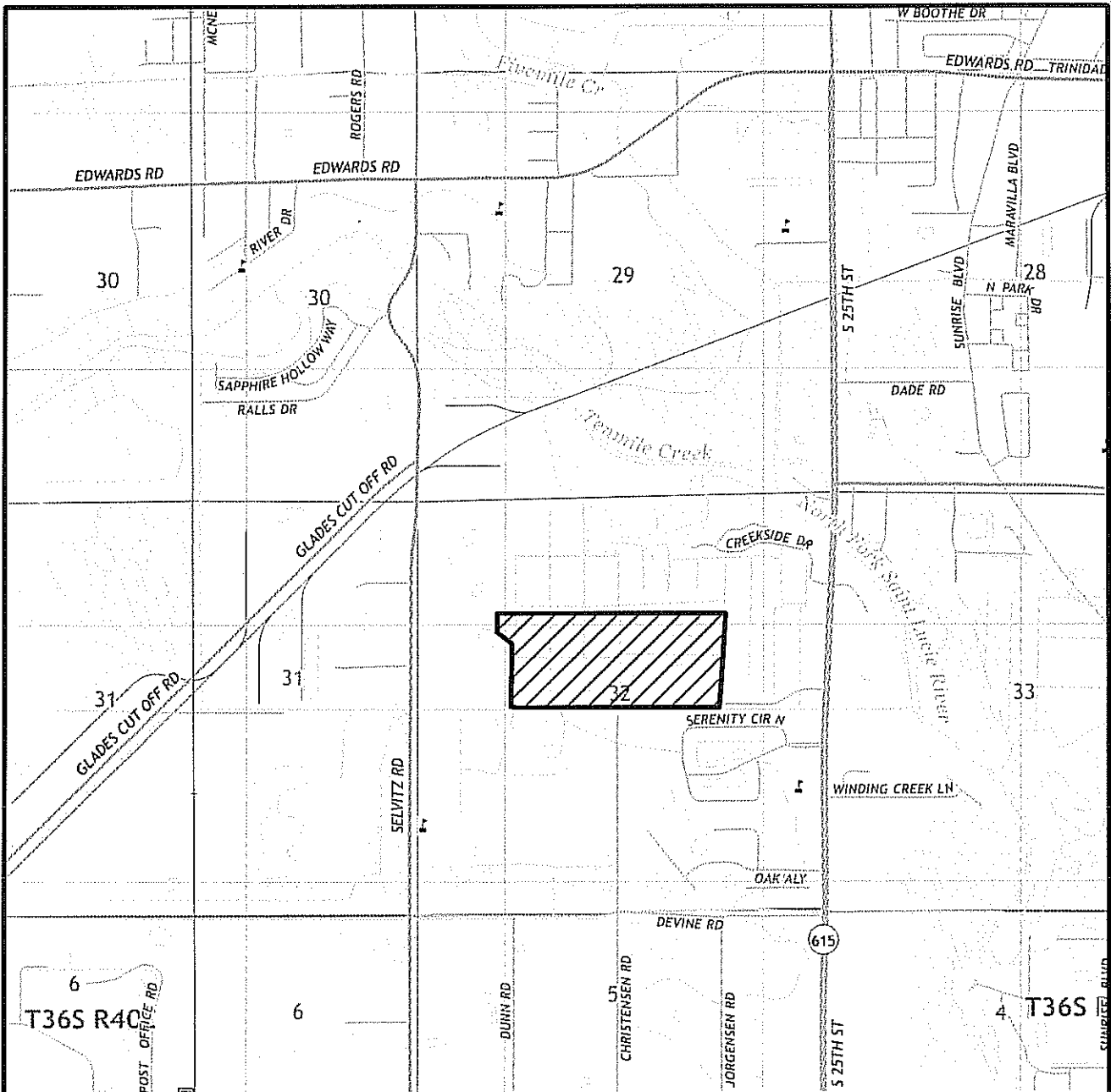
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601 HERITAGE DRIVE, SUITE 124
JUPITER, FLORIDA 33458
561-623-5475 FAX 561-623-5481
WWW.EWCONSULTANTS.COM

DATE: AUG 2016

FIGURE

1



USGS 2015 QUAD MAP "FORT PIERCE", SECTION 32, TOWNSHIP 35 SOUTH, RANGE 40 EAST, FORT PIERCE, CITY OF FORT PIERCE, ST LUCIE COUNTY, FLORIDA, LATITUDE 27°23'26" LONGITUDE -80°21'31"

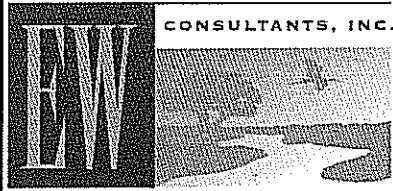
LEGEND

 - SITE (75.0± AC)



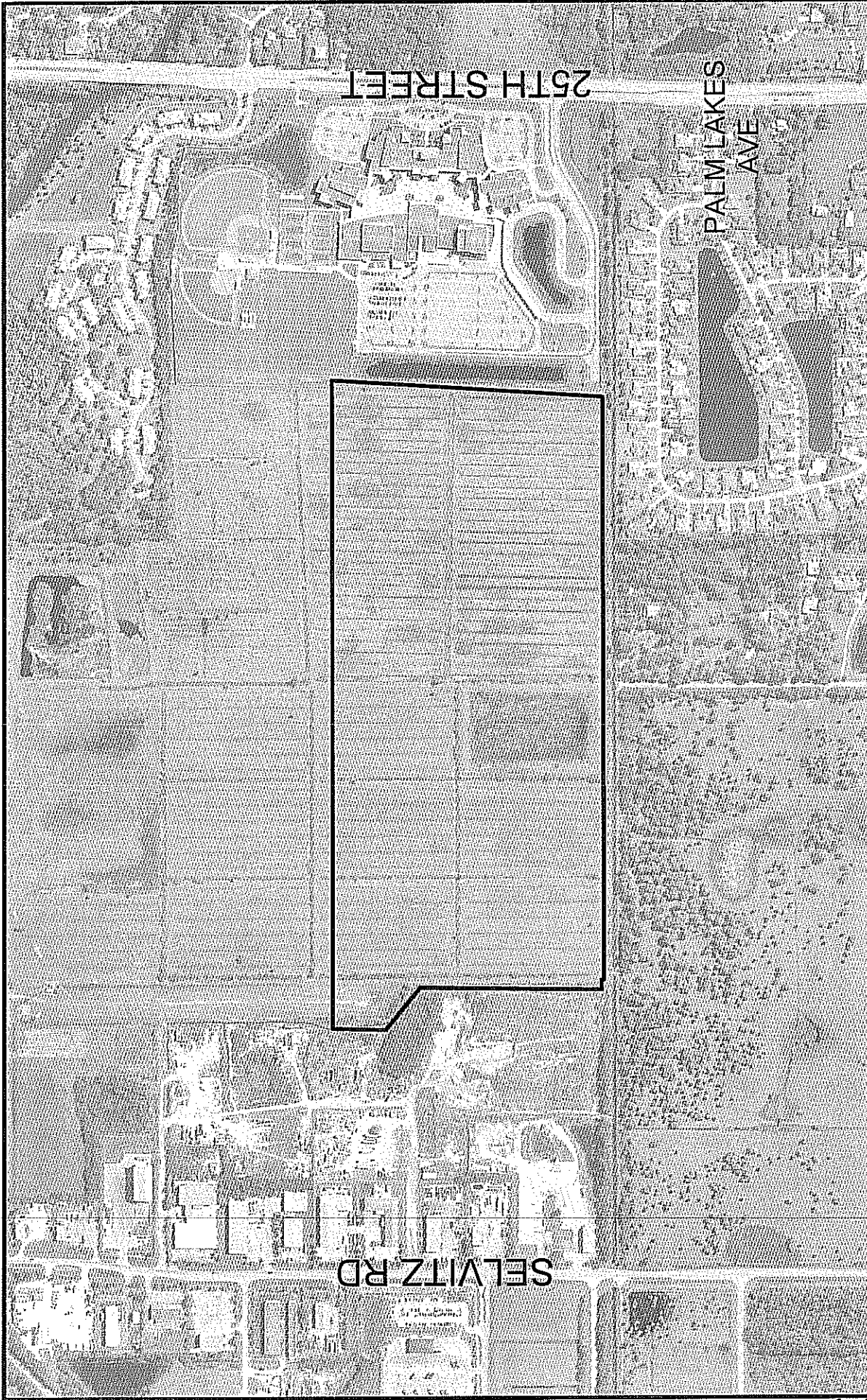
**FORT PIERCE PRE-CAST FACILITY
QUAD**

Fort Pierce Precast Facility.dwg QUAD



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AUG 2016
FIGURE
2

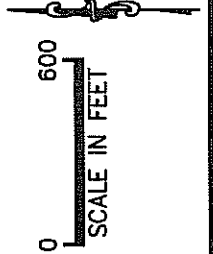


DOT AERIALS DATED 2016

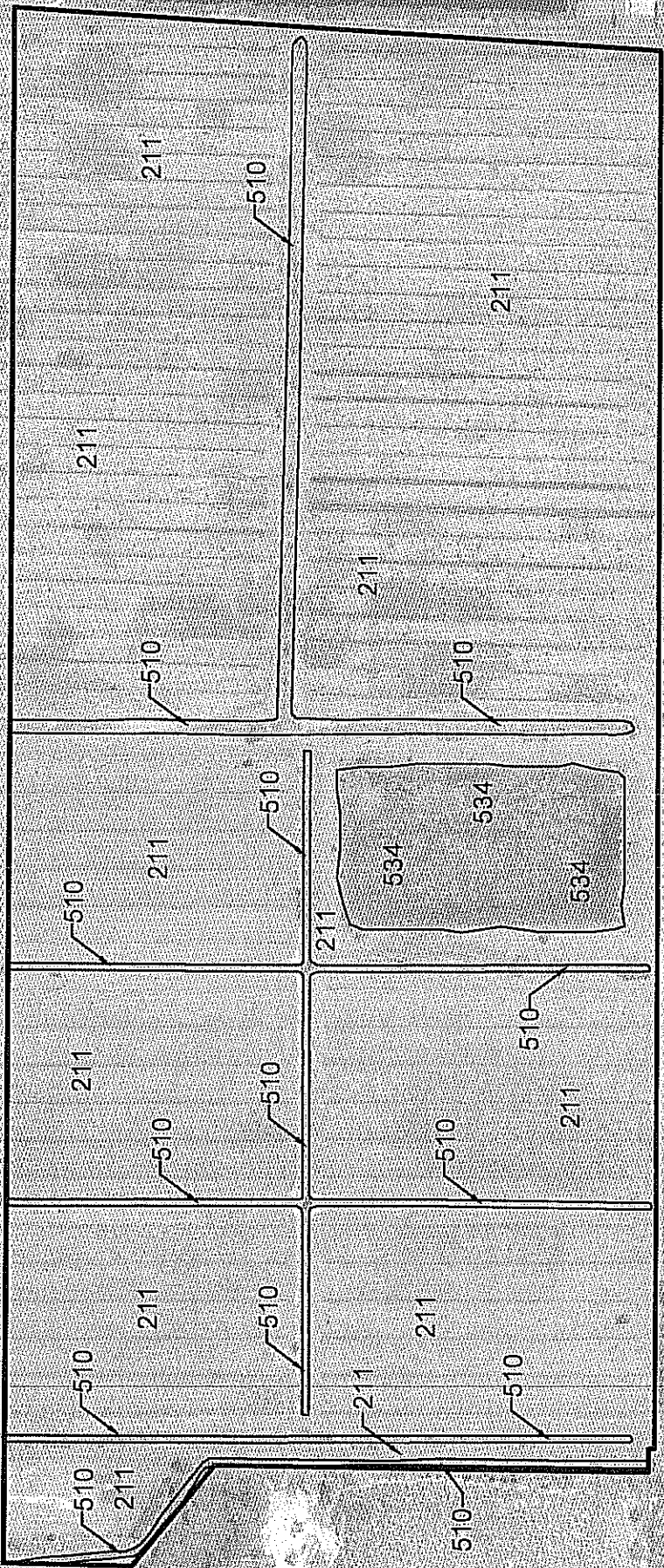
FORT PIERCE PRE-CAST FACILITY AERIAL

AUG 20 16
FIGURE
3

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DOT AERIALS DATED 2016



LEGEND

- 211 - IMPROVED PASTURE (68.1± AC)
 - 510 - DITCHES (3.2± AC)
 - 534 - RESERVOIRS LESS THAN 10 ACRES (3.7± AC)
- TOTAL SITE (75.0± AC)**



**FORT PIERCE
PRE-CAST FACILITY**

FLUCFCS

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GENERALIST, INC.
 801 HERRING DRIVE, SUITE 124
 JUPITER, FLORIDA 33408
 561.763.4444
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AUG 2016
FIGURE 4

Soil Map—St. Lucie County, Florida
(FORT PIERCE PRE-CAST FACILITY)



Map Scale: 1:4,850 if printed on A landscape (11" x 8.5") sheet









































Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

MAP LEGEND

 Area of Interest (AOI)	 Spoil Area
 Soils	 Stony Spot
 Soil Map Unit Polygons	 Very Stony Spot
 Soil Map Unit Lines	 Wet Spot
 Soil Map Unit Points	 Other
Special Point Features	Special Line Features
 Blowout	 Streams and Canals
 Borrow Pit	 Transportation
 Clay Spot	 Rails
 Closed Depression	 Interstate Highways
 Gravel Pit	 US Routes
 Gravelly Spot	 Major Roads
 Landfill	 Local Roads
 Lava Flow	 Background
 Marsh or swamp	 Aerial Photography
 Mine or Quarry	
 Miscellaneous Water	
 Perennial Water	
 Rock Outcrop	
 Saline Spot	
 Sandy Spot	
 Severely Eroded Spot	
 Sinkhole	
 Slide or Slip	
 Sodic Spot	

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.
Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: St. Lucie County, Florida
Survey Area Data: Version 8, Nov 19, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 15, 2010—Mar 13, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

St. Lucie County, Florida (FL111)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2	Ankona and Farnton sands	27.6	36.9%
13	Floridana sand, depressional	1.7	2.3%
26	Oldsmar sand, depressional	3.0	4.0%
38	Riviera fine sand, 0 to 2 percent slopes	18.0	23.9%
43	Susanna and Wauchula sands	24.7	32.8%
Totals for Area of Interest		75.0	100.0%