



Alachua County Board of County Commissioners
Department of Growth Management

10 SW 2nd Ave., Gainesville, FL 32601
Website: <https://growth-management.alachuacounty.us>

Submit application to: **Development Review**

Tel. 352.374.5249

Email: developmentreview@alachuacounty.us

ENVIRONMENTAL RESOURCES ASSESSMENT CHECKLIST

Pursuant to Alachua County Comprehensive Plan 2002, as amended, Conservation Open Space Element Policy 3.4.1, applications for land use change, zoning change, and development approval shall be required to submit an inventory of natural resource information. The inventory shall include site specific identification, analysis and mapping of each resource present on or adjacent to the site. The identification and analysis shall indicate information sources consulted.

Natural Resources Checklist:

Check "Yes" for each resource or resource characteristic identified and discuss and provide supporting material.

Check "N/A" for each resource or resource characteristic not present or otherwise relevant to the application.

Yes	☐	N/A	☒	Surface Waters (ponds, lakes, streams, springs, etc.)
Yes	☒	N/A	☐	Wetlands
Yes	☒	N/A	☐	Surface Water or Wetland Buffers
Yes	☐	N/A	☒	Floodplains (100-year)
Yes	☐	N/A	☒	Special Area Study Resource Protection Areas (Cross Creek, Idylwild/Serenola, etc.)
Yes	☒	N/A	☐	Strategic Ecosystems (within or adjacent to mapped areas)
Yes	☒	N/A	☐	Significant Habitat (biologically diverse natural areas)
Yes	☐	N/A	☒	Listed Species/Listed Species Habitats (FNAI S1, S2, & S3; State or Federally E, T, SSC)
Yes	☐	N/A	☒	Non-native Invasive Species
Yes	☐	N/A	☒	Recreation/Conservation/Preservation Lands
Yes	☒	N/A	☐	Significant Geological Features (caves, springs, sinkholes, etc.)
Yes	☒	N/A	☐	High Aquifer Recharge Areas
Yes	☐	N/A	☒	Wellfield Protection Areas
Yes	☐	N/A	☒	Wells
Yes	☒	N/A	☐	Soils
Yes	☐	N/A	☒	Mineral Resources Areas
Yes	☒	N/A	☐	Topography/Steep Slopes
Yes	☐	N/A	☒	Historical and Paleontological Resources
Yes	☐	N/A	☒	Hazardous Materials Storage Facilities
Yes	☐	N/A	☒	Contamination (soil, surface water, ground water)

Signed: Claudia Vega, P.E. **Project #:** _____ **Date:** 10-25-23

For assistance in completing this form, please visit the Alachua County Environmental Protection Department (ACEPD) website at <http://alachuacounty.us/Depts/EPD/Pages/EPD.aspx> or contact ACEPD at (352) 264-6800.



833 Highland Avenue, Suite 101
Orlando, Florida 32803
321-277-0826
kaley@floraviedesign.com

October 1, 2023

Ken McMurry, AICP
Planner
Alachua County, Growth Management
10 SW 2nd Avenue
Gainesville, FL 32604

RE: Preliminary Development Checklist
Trees & Native Vegetation Health Evaluation
South Pointe

The approximate 47.36 acre property is located on the northern side of NW 17th Avenue at NW 118th Drive.

The site was surveyed by EDA Consultants, Inc on April 13, 2023. The tree survey has been included on pages 2 through 9.

The Tree Canopy and Preservation Plan was created by EDA Consultants, Inc and has been included on page 10.

A comprehensive table of the individually surveyed regulated and heritage sized trees are provided on pages 11 through 16. Table definitions are provided below.

Table Definitions

Tree #: Numeric Survey Tag Number

Abbr: Tree Species Abbreviation

Tree Species: Botanical Name/Common Name of Identified Tree Species

Trunks: Surveyed Diameter of Identified Tree at Breast Height (DBH)

Classification: Regulated and Heritage Tree Status, per Alachua County ULI

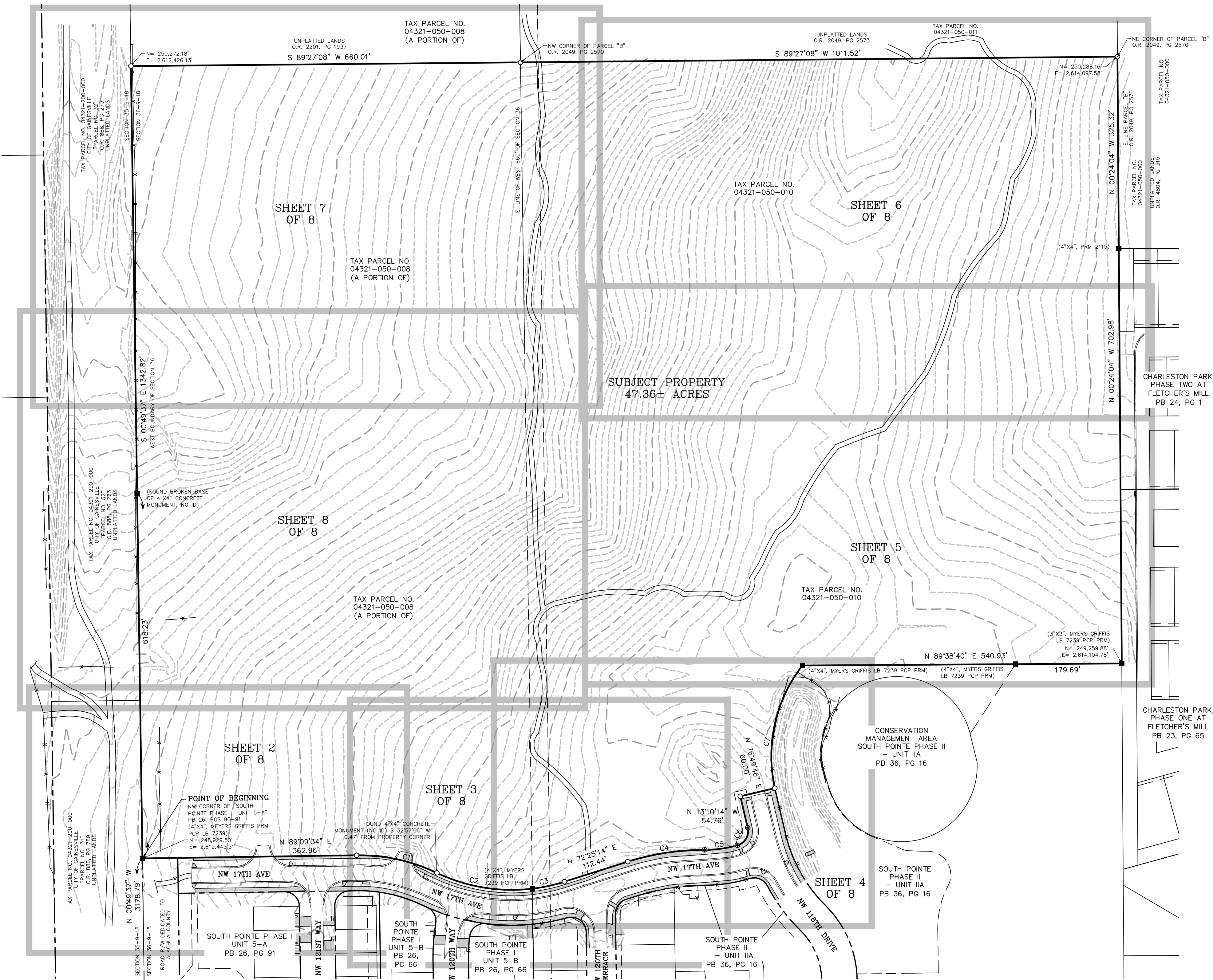
Potential Mitigation: Mitigation Potential per Alachua County ULI and DBH

Sincerely,

Kaley Dunlap
PLA #6667256

BOUNDARY AND TOPOGRAPHIC SURVEY

IN
SECTION 36, TOWNSHIP 09 SOUTH, RANGE 18 EAST,
ALACHUA COUNTY, FLORIDA
FOR
NEW GENERATION HOMES



CURVE	DELTA	RADIUS	ARC	CHORD	TANGENT	CHORD BEARING
C1	26° 22' 27"	305.00'	140.40'	139.16'	71.46°	7° 37' 39" 12" E
C2	32° 16' 26"	295.00'	166.17'	163.98'	85.35°	S 80° 36' 12" E
C3	10° 50' 21"	295.00'	55.81'	55.72'	27.99°	N 77° 50' 25" E
C4	17° 37' 47"	430.00'	132.31'	131.79'	66.68°	N 81° 14' 08" E
C5	16° 06' 32"	200.00'	56.23'	56.05'	28.30°	N 81° 59' 45" E
C6	87° 06' 43"	25.00'	38.01'	34.45'	23.77°	N 30° 23' 08" E
C7	58° 28' 12"	250.00'	220.22'	213.17'	117.83°	N 12° 42' 50" E

TREE LEGEND:

ONLY TREES WITH A DIAMETER 8" AND GREATER WERE LOCATED FOR THIS SURVEY (EXCEPT LAUREL OAKS & WATER OAKS WERE ONLY LOCATED AT 30" DIAMETER AND GREATER; PINES & SWEETGUMS WERE ONLY LOCATED AT 20" DIAMETER AND GREATER) (DIAMETER MEASURED 4.5' ABOVE GRADE) TREES WERE MARKED WITH AN ALUMINUM TAG AND A UNIQUE NUMBER

LOCATION
SPECIES
DIAMETER AT
1.5 ABOVE
GRADE
TAG NUMBER

SIZE=COMMON NAME *Genus species*

- * oak1(2,7) = 16 "12" CAMPHOR *Cinnamomum camphora*
- * oak1(29) = 10" CHINABERRY *Melia azedarach*
- * oak1(233) = 10" SOUTHERN REEDCED *Rhus copallina*
- * oak1(233) = 11" BAYBERRY *Lonicera caroliniana*
- * oak19 = 9" CHINESE TALLOW *Triadica sebifera*
- * oak1(240) = 12" HICKORY *Carya* sp.
- * oak1(303) = 31" LAUREL OAK *Quercus hemisphaerica*
- * oak1(77) = 10" LIGUSTRUM *Ligustrum* sp.
- * oak1(206) = 14" LIVE OAK *Quercus virginiana*
- * oak1(613) = 16" RED MAPLE *Rhus Morus rubra*
- * oak1(260) = 16" RED MAPLE *Acer grandiflorus*
- * oak1(260) = 9" RED MAPLE *Acer rubrum*
- * oak1(267) = 14" PALM *Sabal palmetto*
- * oak1(291) = 20" PINE *Pinus* sp.
- * oak1(291) = 14" SUMMER HEMLOCK *Cedrus laevigata*
- * oak1(321) = 10" SWEETGUM *Liquidambar styraciflua*
- * oak1(0,45) = 10" UNIDENTIFIED TREE

NOTES:

- 1) ELEVATIONS SHOWN HEREON WERE BASED ON AN ELEVATION OF 98.48 FEET (NGVD 1929 DATUM) ON U.S. COASTAL GEODETIC SURVEY BENCHMARK BA 37 FOR THE PURPOSES OF THIS SURVEY. THIS ELEVATION WAS CONVERTED TO AN ELEVATION OF 97.68 FEET (NAVD 1988 DATUM) USING CORPSSON v6.0.1, U.S. ARMY CORPS OF ENGINEERS.
- 2) BEARINGS AS SHOWN HEREON WERE PROJECTED FROM A BEARING OF N 00°49'37" W ON THE WEST BOUNDARY OF SECTION 36, TOWNSHIP 9 SOUTH, RANGE 18 EAST.
- 3) THE COORDINATES SHOWN HEREON ARE IN REFERENCE TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, NORTH ZONE (SPC, FL N) REFERENCE TO THE NORTH AMERICAN DATUM OF 1983 (NAD 83), 1986 ADJUSTMENT, [NAD 83 (1986)], USING THE U.S. SURVEY FOOT.
- 4) DISTANCES SHOWN HEREON ARE EXPRESSED IN U.S. SURVEY FEET AND WERE MEASURED ON A HORIZONTAL PLANE.
- 5) ALL CURB TYPES AS SHOWN ARE PER FLORIDA DEPARTMENT OF TRANSPORTATION INDEX 300.
- 6) THIS SURVEY CONSISTS OF 8 SHEETS AND IS NOT VALID WITHOUT ALL SHEETS.
- 7) NO SEARCH OF THE PUBLIC RECORDS WAS MADE BY THE SURVEYOR, THEREFORE, THERE MAY BE RESTRICTIONS OTHER THAN THOSE SHOWN HEREON WHICH MAY BE FOUND IN THE PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA. EASEMENTS AND BUILDING SETBACK REQUIREMENTS, OTHER THAN THOSE SHOWN, WERE NOT PROVIDED TO THIS SURVEYOR.
- 8) THE SCIENTIFIC NAMES OF THE TREES SHOWN HEREON ARE TO THE BEST ABILITY OF THIS SURVEYOR, BUT THIS SURVEYOR DOES NOT PURPORT TO BE A CERTIFIED ARBORIST. THE LOCATION OF THE TREES SHOWN HEREON IS THE APPROXIMATE CENTER OF THE TREE AT GROUND LEVEL AND THE DIAMETER MEASURED AT BREAST HEIGHT - THE EXTENT OF THE TREE CANOPY OR ROOT SYSTEM WAS NOT DETERMINED BY THIS SURVEYOR. IF THE LOCATION OF TREES IN RELATION TO NEARBY PROPERTY LINES IS CRITICAL A MORE DETAILED SURVEY MAY BE REQUIRED.

UTILITY LOCATION NOTE

THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN WERE BASED ON ABOVE GROUND FIXTURES, UTILITY COMPANY MAPS AVAILABLE TO THE SURVEYOR, AND ELECTRONIC DETECTION METHODS. UNLESS NOTED OTHERWISE ON THE GRAPHIC PORTION OF THIS SURVEY, NO UTILITIES WERE UNCOVERED TO VERIFY THEIR LOCATION.

NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED BY THE SURVEYOR THAT THE LOCATIONS SHOWN REPRESENT THE ACTUAL LOCATIONS OF THOSE UTILITIES, THE UTILITY TYPE, OR THAT NO OTHER UTILITIES EXIST ON THE SITE.

PRIOR TO THE DESIGN OF UTILITY CONNECTIONS, THE PROPOSED CONNECTION POINTS SHOULD BE EXCAVATED AS NECESSARY TO CONFIRM THEIR EXACT LOCATION, DEPTH AND CHARACTERISTICS.

IN ACCORDANCE WITH FLORIDA STATUTE CHAPTER 556, PRIOR TO ANY EXCAVATION, THE EXCAVATOR SHALL CONTACT SUNSHINE STATE ONE CALL OF FLORIDA AT 1-800-432-4770.

LEGAL DESCRIPTION:

A PORTION OF SECTION 36, TOWNSHIP 9 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA; BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS.

COMMENCE AT THE SOUTHWEST CORNER OF SECTION 36, TOWNSHIP 9 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA AND RUN THENCE NORTH 00°49'37" WEST, ALONG THE WEST BOUNDARY OF SAID SECTION, 3178.79 FEET TO THE NORTHEAST CORNER OF "SOUTH POINTE PHASE I UNIT 5-A", A PLANNED DEVELOPMENT AS PER PLAT THEREOF, RECORDED IN PLAT BOOK 26, PAGES 90 AND 91 OF THE PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA AND THE NORTHERLY EXTENSION OF SAID BOUNDARY, THROUGH A CENTRAL ANGLE OF 32°16'26", AN ARC DISTANCE OF 166.17 FEET TO THE BEGINNING OF A CURVE, CONCAVE SOUTHWESTERLY, HAVING A RADIUS OF 350.00 FEET; THENCE SOUTHEASTERLY, ALONG SAID NORTHERLY BOUNDARY AND ALONG THE ARC OF SAID CURVE, THROUGH A CENTRAL ANGLE OF 26°22'27", AN ARC DISTANCE OF 140.40 FEET TO THE END OF SAID CURVE, SAID ARC BEING SUBTENDED BY A CHORD HAVING A BEARING AND DISTANCE OF SOUTH 73°39'12" EAST, 139.16 FEET, THE END OF SAID CURVE BEING THE BEGINNING OF A CURVE, CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 200.00 FEET, THROUGH A CENTRAL ANGLE OF 32°16'26", AN ARC DISTANCE OF 166.17 FEET TO THE NORTHEAST CORNER OF SAID "SOUTH POINTE PHASE I UNIT 5-A", SAID ARC BEING SUBTENDED BY A CHORD HAVING A BEARING AND DISTANCE OF SOUTH 80°36'12" EAST, 163.98 FEET, SAID NORTHEAST CORNER BEING THE NORTHERN CORNER ON THE WEST MOST BOUNDARY OF "SOUTH POINTE PHASE II - UNIT II-A", A PLANNED DEVELOPMENT AS PER PLAT THEREOF, RECORDED IN PLAT BOOK 36, PAGES 15 AND 16 OF SAID PUBLIC RECORDS, THENCE CONTINUE NORTHEASTERLY ALONG THE ADJACENT SAID CURVE AND ALONG THE NORTHERLY EXTENSION OF SAID BOUNDARY, THROUGH A CENTRAL ANGLE OF 16°06'32", AN ARC DISTANCE OF 56.23 FEET TO THE END OF SAID CURVE, SAID ARC BEING SUBTENDED BY A CHORD HAVING A BEARING AND DISTANCE OF NORTH 77°50'25" EAST, 55.72 FEET; THENCE NORTH 72°25'14" EAST, ALONG SAID LAST AFOREMENTIONED NORTHERLY BOUNDARY, 112.44 FEET TO THE BEGINNING OF A CURVE, CONCAVE SOUTHERLY, HAVING A RADIUS OF 430.00 FEET, THENCE EASTERLY, ALONG SAID NORTHERLY BOUNDARY AND ALONG THE ARC OF SAID CURVE, THROUGH A CENTRAL ANGLE OF 17°37'47", AN ARC DISTANCE OF 51.31 FEET TO THE END OF SAID CURVE, SAID ARC BEING SUBTENDED BY A CHORD HAVING A BEARING AND DISTANCE OF NORTH 75°59'45" EAST, 51.79 FEET, THE END OF SAID CURVE BEING THE BEGINNING OF A CURVE, CONCAVE NORTHERLY, HAVING A RADIUS OF 200.00 FEET, THENCE EASTERLY, ALONG SAID NORTHERLY BOUNDARY AND ALONG THE ARC OF SAID CURVE, THROUGH A CENTRAL ANGLE OF 16°06'32", AN ARC DISTANCE OF 56.23 FEET TO THE END OF SAID CURVE, SAID ARC BEING SUBTENDED BY A CHORD HAVING A BEARING AND DISTANCE OF NORTH 81°59'45" EAST, 56.05 FEET, THE END OF SAID CURVE BEING THE BEGINNING OF A CURVE, CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 250.00 FEET, THENCE NORTHEASTERLY, ALONG SAID NORTHERLY BOUNDARY AND ALONG THE ARC OF SAID CURVE, THROUGH A CENTRAL ANGLE OF 17°06'32", AN ARC DISTANCE OF 54.45 FEET, THE END OF SAID CURVE, SAID ARC BEING SUBTENDED BY A CHORD HAVING A BEARING AND DISTANCE OF NORTH 30°23'08" EAST, 34.45 FEET; THENCE NORTH 13°10'14" WEST, ALONG SAID NORTHERLY BOUNDARY, 54.76 FEET; THENCE NORTH 76°49'46" EAST, ALONG SAID NORTHERLY BOUNDARY, 60.00 FEET TO A POINT LYING ON THE ARC OF A CURVE, CONCAVE EASTERLY, HAVING A RADIUS OF 250.00 FEET, THENCE NORTHERLY, ALONG THE WEST BOUNDARY OF SAID "SOUTH POINTE PHASE II - UNIT II-A", AND ALONG THE ARC OF SAID CURVE, THROUGH A CENTRAL ANGLE OF 50°28'12", AN ARC DISTANCE OF 220.22 FEET TO THE WEST CORNER OF SAID "CHARLESTON PARK, PHASE ONE AT FLETCHER'S MILL"; THENCE CONTINUE NORTHEASTERLY, ALONG THE ADJACENT SAID BOUNDARY AND ALONG THE LINE OF DISTANCE OF NORTH 12°42'50" EAST, 213.17 FEET, THENCE NORTH 89°38'40" EAST, 540.93 FEET TO THE NORTHEAST CORNER OF SAID "SOUTH POINTE PHASE II - UNIT II-A", SAID NORTHEAST CORNER LYING ON THE WEST BOUNDARY OF "CHARLESTON PARK, PHASE ONE AT FLETCHER'S MILL", A PLANNED UNIT DEVELOPMENT, AS PER PLAT THEREOF, RECORDED IN PLAT BOOK 23, PAGE 65 OF SAID PUBLIC RECORDS; THENCE NORTH 00°24'04" WEST, ALONG SAID WEST BOUNDARY OF "CHARLESTON PARK, PHASE ONE AT FLETCHER'S MILL AND ALONG THE WEST BOUNDARY OF "CHARLESTON PARK, PHASE TWO AT FLETCHER'S MILL", BOTH LOCATED IN ALACHUA COUNTY, FLORIDA, 100.00 FEET TO THE NORTHEAST CORNER OF SAID "CHARLESTON PARK, PHASE TWO AT FLETCHER'S MILL"; THENCE CONTINUE NORTH 00°24'04" WEST, WITH THE NORTHERLY EXTENSION OF SAID WEST BOUNDARY OF "CHARLESTON PARK, PHASE TWO AT FLETCHER'S MILL" AND ALONG THE EAST LINE OF PARCEL "B" AS DESCRIBED IN OFFICIAL RECORDS BOOK 2049, PAGE 2570 OF SAID PUBLIC RECORDS, A DISTANCE OF 325.32 FEET TO THE NORTHEAST CORNER OF SAID PARCEL "B" AS DESCRIBED IN OFFICIAL RECORDS BOOK 8972, PAGE 152 FEET TO THE NORTHEAST CORNER OF PARCEL "B"; THENCE CONTINUE NORTH 89°27'08" WEST, ALONG THE EASTERLY EXTENSION OF THE NORTHERLY LINE OF SAID PARCEL "B", A DISTANCE OF 160.01 FEET TO A POINT ON SAID BOUNDARY OF SECTION 36; THENCE SOUTH 00°49'37" EAST, ALONG SAID WEST BOUNDARY OF SECTION 36, A DISTANCE OF 1342.82 FEET TO THE POINT OF BEGINNING.

CONTAINING 47.36 ACRES (2,062,806 SQUARE FEET), MORE OR LESS

LEGEND OF SYMBOLS & ABBREVIATIONS:

cmp = CORRUGATED METAL PIPE
 CONC = CONCRETE
 DWS = DETECTABLE WARNING STRIP
 D = DELTA (CENTRAL) ANGLE
 R = RADIUS
 A = ARC
 T = TANGENT
 CB = CHORD BEARING
 CD = CHORD DISTANCE
 DIP = DUCTILE IRON PIPE
 ECO = EMPTY CONDUIT ONLY
 EJB = ELECTRICAL JUNCTION BOX
 ELEV = ELEVATION
 FOC-B = FIBER OPTIC CABLE JUNCTION BOX
 hspc = HIGH DENSITY POLYETHYLENE
 ID = IDENTIFICATION
 Inv = INVERT
 M.E.S. = MITERED END SECTION
 MGRKALL = UNDERGROUND UTILITY MARKER BALL
 No. = NUMBER
 OR. = OFFICIAL RECORDS BOOK
 P(S) = PAGE OR PAGES
 PVC = POLY-VINYL CHLORIDE
 RCP = REINFORCED CONCRETE PIPE
 R/W = RIGHT OF WAY
 SECTION 36-9-18 = SECTION 36, TOWNSHIP 9 SOUTH, RANGE 18 EAST
 W = WITH
 ANCH = GUY ANCHOR
 BO = WATER BLOW OFF
 CO = SANITARY OR STORM SEWER CLEAN-OUT
 ELECHH = ELECTRICAL HANDHOLE
 TELH = TELEPHONE HANDHOLE
 FH = FIRE HYDRANT
 ■ = FOUND CONCRETE MONUMENT (size, ID)
 * = FOUND NAIL & DISK (MYERS GRIFFIS LB 7239 PCP FRM)
 ○ = FOUND REBAR & CAP (size, ID)
 X = LIGHT POLE
 X TL PL = NAIL BOX
 X SANMRK = SANITARY SEWER MARKER POST
 P = MANHOLE
 ○ = POWER POLE
 PB = PLAT BOOK
 PUE = PUBLIC UTILITIES EASEMENT
 SET 5/8" REBAR & CAP (P.R.M. LB 2389)
 SION = SIGN
 [] TELPED = TELEPHONE PEDESTAL
 [] TYPED = CABLE TELEVISION PEDESTAL
 [] WM = WATER METER
 X W = WATER VALVE
 -90 = ELEVATION CONTOUR LINE
 — = FENCE LINE
 —HWP— = OVERHEAD POWER LINE
 —USE— = UNDERGROUND ELECTRIC LINE
 —GAS— = UNDERGROUND GAS LINE
 —UT— = UNDERGROUND TELEPHONE LINE
 —UTV— = UNDERGROUND CABLE TELEVISION LINE
 —W— = UNDERGROUND WATER LINE
 88.95 X = SPOT ELEVATION
 [] = CONCRETE
 338,662,262 = STATE PLANE COORDINATES (NAD 83 DATUM)
 338,662,262

FLOOD INSURANCE RATE MAP STATEMENT

THE REAL PROPERTY SHOWN HEREON LIES WITHIN
ZONE(S) x (NO SCREEN) AS DESIGNATED ON THE FLOOD
INSURANCE RATE MAP NUMBER 12001C0290E; COMMUNITY
NUMBER: 120001; PANEL: 0290E; EFFECTIVE DATE: 09/24/21
SAID MAP DESCRIBES ZONE(S) xNO SCREEN

eda consultants inc.

Project No.	2021-0182.S00	eda consultants inc. Corporate Authorization No. LB 2389	4239
Person	100	ROBERT W. GRAVER	

07/00 Release	Page	Survey Date	Drawing Completed	Revised
PREPARED FOR: 1) NEW GENERATION HOMES				
	2)			
	3)			
	4)			

Sheet No.

V-001

Comment

Date _____

||

--	--

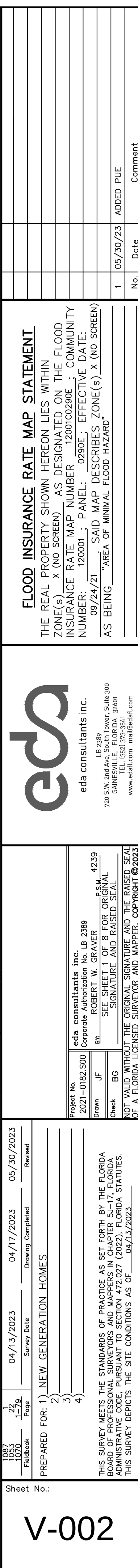
--	--

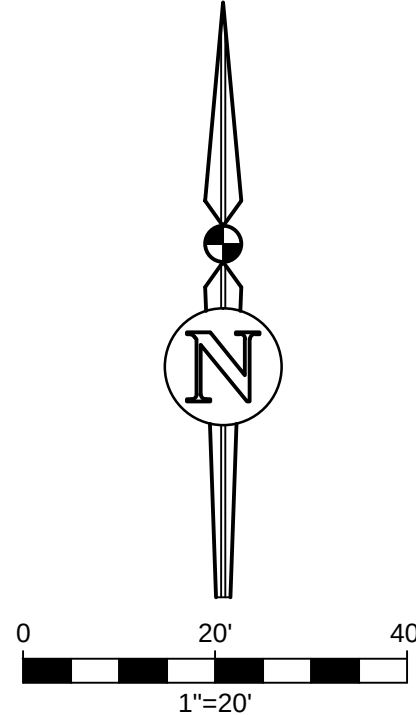
--	--

--	--

--	--

--	--





SHEET 3 OF 8

Sheet No.: **V-003**

Survey No.	Survey Date	Drawings Completed	Reviewed
1083	04/13/2023		05/20/2023
1084			
1085			
1086			
1087			
1088			
1089			
1090			

PREPARED FOR: **1) NEW GENERATION HOMES**

1) _____

2) _____

3) _____

4) _____

THIS SURVEY MEETS THE STANDARDS OF PRACTICE AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS CHAPTER 1000, F.S. AND THE FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 475.027 (2022), FLORIDA STATUTES.

THIS SURVEY DEPICTS THE SITE CONDITIONS AS OF: **04/13/2023**

edra consultants inc.
 2024-0825-500
 10001
 ROBERT W. GRAVER
 04/13/2023

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

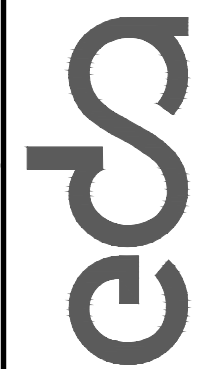
edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

edra consultants inc.
 10001
 720 S.W. 2nd Ave, South Tower, Suite 300
 GAINESVILLE, FL 32601
 TEL: (352) 372-5504
 www.edra.com mail@edra.com

FLOOD	INSURANCE	RATE	MAP	STATEMENT
-------	-----------	------	-----	-----------

THE REAL PROPERTY SHOWN HEREON LIES WITHIN
ZONE(S) x (NO SCREEN) AS DESIGNATED ON THE FLOOD
INSURANCE RATE MAP NUMBER 12001C0290E; COMMUNITY
NUMBER: 120001; PANEL: 0290E; EFFECTIVE DATE:
09/24/21 SAID MAP DESCRIBES ZONE(S) x (NO SCREEN)



eda consultants inc.
LB 2389
720 S.W. 2nd Ave, South Tower, Suite 300
GAINESVILLE, FLORIDA 32601
TEL 352/373-3541
www.edafl.com mailedafl.com

Project No.	2021-0182.500		eda consultants inc.	
			Corporate Authorization No. LB 2389	
Drawn	JF	BY:	ROBERT W. GRAVER P.S.W. 4239	
Check	BG	SEE SHEET 1 OF 8 FOR ORIGINAL SIGNATURE AND RAISED SEAL		

NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND THE RAISED SEAL
OF A FLORIDA LICENSED SURVEYOR AND MAPPER. COPYRIGHT © 2023

THIS SURVEY MEETS THE STANDARDS OF PRACTICE AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYING AND MAPPING, INC. (FBS&M) UNDER THE ADMINISTRATIVE CODE PURSUANT TO SECTION 472.027 (2022), FLORIDA STATUTES. THIS SURVEY DEPICTS THE SITE CONDITIONS AS OF 04/13/2023

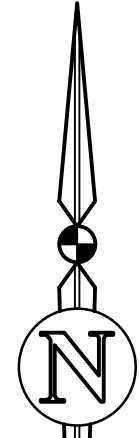
Sheet No.:
V-003

Plotted May 30, 2023 - 10:22:31 - I:\tonton

\\SERVER3\survey\Projects\2021\2021-0182 (South Pointe) DWS-2021-0182-500.dwg - SHEET 4



SHEET 4 OF 8



0 20' 40'
1"=20'

FLOOD INSURANCE RATE MAP STATEMENT

THE REAL PROPERTY SHOWN HEREON LIES WITHIN THE FLOOD INSURANCE RATE MAP NUMBER 02080E, EFFECTIVE DATE 09/24/21. SAID MAP DESCRIBES ZONE(S) X (NO SCREEN) AS BEING AREA OF MINIMAL FLOOD HAZARD.



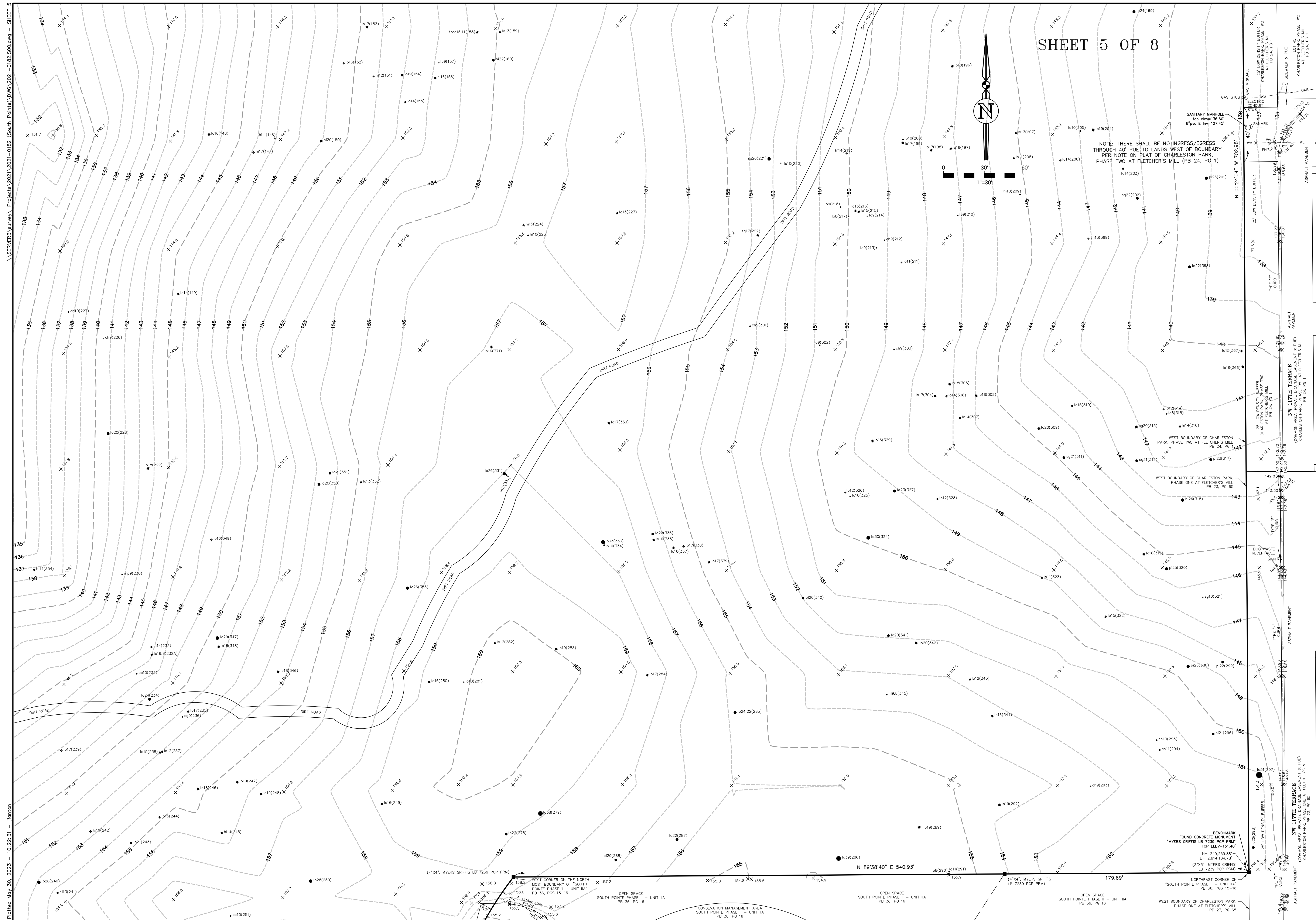
eda consultants inc.
720 S.W. 2nd Ave., Suite 300
Gainesville, Florida 32601
www.eda.com

Project No.	2021-0182-500
Client	NEW GENERATION HOMES
Drawn by	ROBERT M. CRANER
Check by	ROBERT M. CRANER
Scale	AS SHOWN
Notes	SEE SHEET 1 OF 8 FOR ORIGINAL SIGNATURE AND RAISED SEAL
Not Valid Without	ORIGINAL SIGNATURE AND THE RAISED SEAL
By a Licensed Surveyor and Mapper	CONTRACT # 2021

Prepared for	1) NEW GENERATION HOMES
Survey Date	04/13/2023
Drawn/Completed	04/17/2023
Reviewed	05/30/2023
Page	1 of 1

THIS SURVEY MEETS THE STANDARDS OF PRACTICE AS SET FORTH BY THE FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027 (2022), FLORIDA STATUTES. THIS SURVEY DEPICTS THE SITE CONDITIONS AS OF 04/13/2023.

Sheet No.: V-004



SHEET 5 OF 8

NOTE: THERE SHALL BE NO INGRESS/EGRESS
THROUGH 40' PUE TO LANDS WEST OF BOUNDAR
PER NOTE ON PLAT OF CHARLESTON PARK,
PHASE TWO AT FLETCHER'S MILL (PB 24, PG 1)

FLOOD INSURANCE RATE MAP STATEMENT

THE REAL PROPERTY SHOWN HEREON LIES WITHIN
ZONE(S) X (NO SCREEN) AS DESIGNATED ON THE FLOOD
INSURANCE RATE MAP NUMBER 12001C0290E, COMMUNITY
NUMBER: 120001, PANEL: 0290E, EFFECTIVE DATE:
09/24/21, SAID MAP DESCRIBES ZONE(S) X (NO SCREEN)

AS BEING "AREA OF MINIMAL FLOOD HAZARD"

No.	Date	Comment
1	03/30/23	ADDED F.O.E.



eda consultants inc.

LB 2389
S.W. 2nd Ave, South Tower, Suite

GAINESVILLE, FLORIDA 32601
TEL. (352) 373-3541

Project No.	eda consultants inc.
-------------	----------------------

2021-0182.S00	BY	ROBERT W. GRAVER	4239
	IF		

SEE SHEET 1 OF 8 FOR ORIGINAL
SIGNATURE AND RAISED SEAL

NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND THE RAISED SEAL

IF A FLORIDA LICENSED SURVEYOR AND MAPPER. COPYRIGHT © 2023

	04/13/2023	04/17/2023	05/30/2023
1087	1		
1053	22		
1070	1-79		

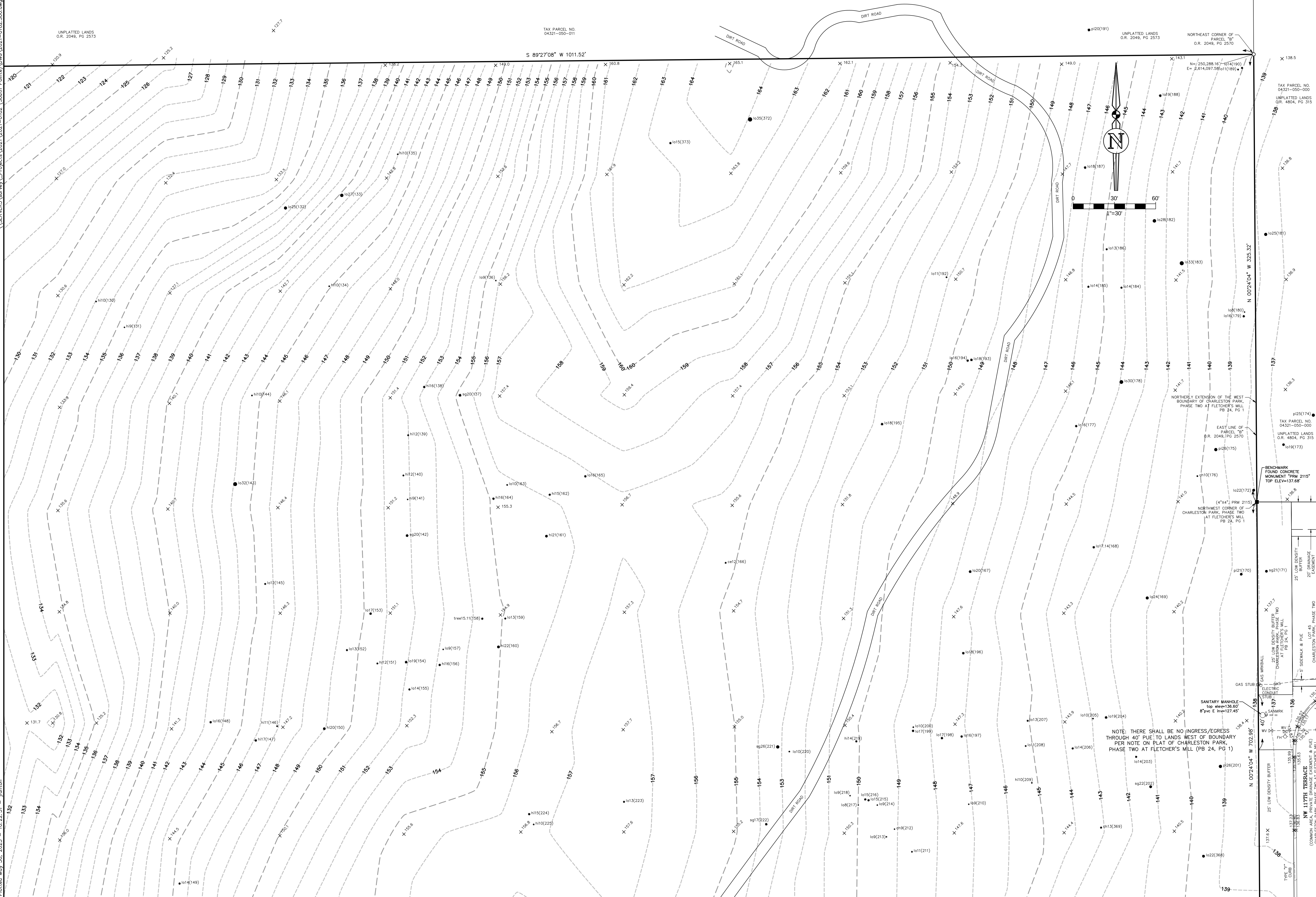
Fieldbook	Page	Survey Date	Drawing Completed	Revised
PREPARED FOR: 1) NEW GENERATION HOMES				

PREPARED FOR: 1) NEW GENERATION HOMES
2)

THIS SURVEY MEETS THE STANDARDS OF PRACTICE AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5A-17, FLORIDA

ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027 (2022), FLORIDA STATUTES.
THIS SURVEY DEPICTS THE SITE CONDITIONS AS OF 04/13/2023

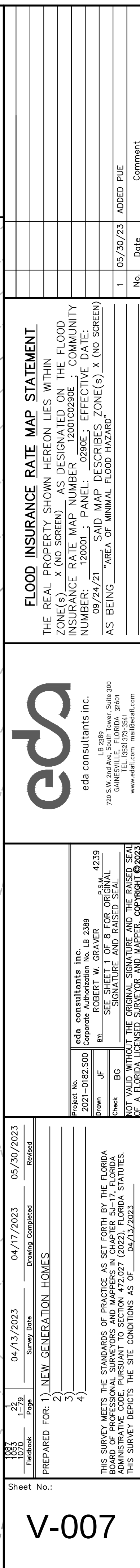
V-005



FLOOD INSURANCE RATE MAP STATEMENT

THE REAL PROPERTY SHOWN HEREON LIES WITHIN
ZONE(S) (X) (NO SCREEN) AS DESIGNATED ON THE FLOOD
INSURANCE RATE MAP NUMBER 0292E - EFFECTIVE COMMUNITY
NO. 06/01/2001. SAID MAP DESCRIBES ZONE(S) X (NO SCREEN)
ON 09/24/21 AS BEING "AREA OF MINIMAL FLOOD HAZARD".

[illegible]



\\server3\engprojects\South Pointe PD 2021\Plans\Current DWG\PRELIMINARY DEVELOPMENT PLAN\S21182PDP1.dwg, C130 - TREE - 8/16/2023 3:15:44 PM, AutoCAD PDF (General Documentation).pc3, NUG



TREE CLEARING DATA

EXISTING CANOPY TOTAL:	30.17 AC.	100.0%
EXISTING CANOPY TO REMAIN:	6.04 AC.	20.0%

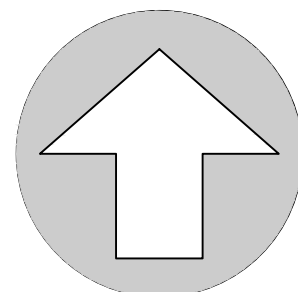
LEGEND

-  EXISTING TREE CANOPY TO REMAIN
-  EXISTING TREE CANOPY
-  EXISTING TREE TO REMAIN

TREE LEGEND:

ONLY TREES WITH A DIAMETER 8" AND GREATER WERE LOCATED FOR THIS SURVEY. (DIAMETER MEASURED 4.5' ABOVE GRADE) MARKED WITH AN ALUMINUM TAG AND A UNIQUE NUMBER

LOCATION	SPECIES	DIAMETER AT 4.5' ABOVE GRADE	ALUMINUM TAG NUMBER	SIZE /COMMON NAME
•	cb11	(445)		= 11" CHINABERRY
•	ca21	(207)		= 21" SOUTHERN RED CEDAR
•	ch16	(294)		= 16" BLACK CHERRY
•	hi33	(112)		= 33" HICKORY
•	loo23	(56)		= 23" LAUREL OAK
•	lo23	(43)		= 23" LIVE OAK
•	mm21	(215)		= 12" MIMOSA
•	pc20	(70)		= 20" PECAN
•	pi20	(78)		= 20" PINE
•	rs23	(55)		= 23" SOUTHERN RED OAK
•	sb23	(1)		= 23" SUGARBERRY
•	sy15	(69)		= 15" SYCAMORE
•	wo27	(8)		= 27" WATER OAK



NORTH

SCALE: 1" = 80'

0 40 80 160

GRAPHIC SCALE

No.	Date	Comment

Professional Engineer of Record:

Engineer Certificate No.

Project No: 21-182

Project phase: PRELIMINARY DEVELOPMENT PLAN

Project title:

SOUTH POINTE
ALACHUA COUNTY,
FLORIDA

Sheet title:
TREE CANOPY AND
PRESERVATION PLAN

Designed: CSV	Sheet No.: C130
Drawn: NJG	
Checked: TAR	
Date: 08/16/23	

Tree#	Abbr.	Common Name/Scientific name	1st trunk	2nd trunk	3rd trunk	4th trunk	Classification	Potential Mitigation
1	lo	LIVE OAK/Quercus virginiana	35				Heritage	38"
2	lo	LIVE OAK/Quercus virginiana	43				Heritage	56"
3	lo	LIVE OAK/Quercus virginiana	42				Heritage	53"
4	lo	LIVE OAK/Quercus virginiana	9				Regulated	1 tree
5	lo	LIVE OAK/Quercus virginiana	12				Regulated	1 tree
6	ch	BLACK CHERRY/Prunus serotina	9				Regulated	1 tree
7	ca	CAMPHOR/Cinnamomum camphora	16	12			Invasive	-
8	sg	SWEETGUM/Liquidambar styraciflua	22				Regulated	1 tree
9	lo	LIVE OAK/Quercus virginiana	35				Heritage	38"
10	lo	LIVE OAK/Quercus virginiana	48				Heritage	71"
11	lo	LIVE OAK/Quercus virginiana	24				Heritage	24"
12	mb	RED MULBERRY/Morus rubra	9				Invasive	-
13	mb	RED MULBERRY/Morus rubra	16				Invasive	-
14	mb	RED MULBERRY/Morus rubra	10				Invasive	-
15	mb	RED MULBERRY/Morus rubra	8				Invasive	-
16	hi	HICKORY/Carya sp.	8				Regulated	1 tree
17	lig	LIGUSTRUM/Ligustrum sp.	10				Regulated	1 tree
18	lo	LIVE OAK/Quercus virginiana	18				Regulated	1 tree
19	sb	SUGARBERRY/Celtis laevigata	8				Regulated	1 tree
20	sb	SUGARBERRY/Celtis laevigata	9				Regulated	1 tree
21	lo	LIVE OAK/Quercus virginiana	32				Heritage	33.5"
22	sb	SUGARBERRY/Celtis laevigata	11				Regulated	1 tree
23	sb	SUGARBERRY/Celtis laevigata	11				Regulated	1 tree
24	sb	SUGARBERRY/Celtis laevigata	11				Regulated	1 tree
25	sb	SUGARBERRY/Celtis laevigata	10				Regulated	1 tree
26	hi	HICKORY/Carya sp.	15				Regulated	1 tree
27	lo	LIVE OAK/Quercus virginiana	17				Regulated	1 tree
28	sb	SUGARBERRY/Celtis laevigata	9				Regulated	1 tree
29	sb	SUGARBERRY/Celtis laevigata	12				Regulated	1 tree
30	sb	SUGARBERRY/Celtis laevigata	11				Regulated	1 tree
31	hi	HICKORY/Carya sp.	12				Regulated	1 tree
32	lo	LIVE OAK/Quercus virginiana	26				Heritage	26"
33	sb	SUGARBERRY/Celtis laevigata	10				Regulated	1 tree
34	sb	SUGARBERRY/Celtis laevigata	9				Regulated	1 tree
35	sb	SUGARBERRY/Celtis laevigata	8				Regulated	1 tree
36	lo	LIVE OAK/Quercus virginiana	21				Heritage	21"
37	lo	LIVE OAK/Quercus virginiana	10				Regulated	1 tree
38	lo	LIVE OAK/Quercus virginiana	16				Regulated	1 tree
39	pa	PALM/Sabal palmetto	18				Regulated	1 tree
40	lo	LIVE OAK/Quercus virginiana	30				Heritage	30.5"
41	lig	LIGUSTRUM/Ligustrum sp.	9				Regulated	1 tree
42	lo	LIVE OAK/Quercus virginiana	16				Regulated	1 tree
43	tree	UNIDENTIFIED TREE/	10				Regulated	1 tree
44	lo	LIVE OAK/Quercus virginiana	43				Heritage	56"
45	lo	LIVE OAK/Quercus virginiana	21				Heritage	21"
46	lo	LIVE OAK/Quercus virginiana	14				Regulated	1 tree
47	lo	LIVE OAK/Quercus virginiana	20				Heritage	20"
48	lo	LIVE OAK/Quercus virginiana	53				Heritage	85"
49	lo	LIVE OAK/Quercus virginiana	31				Heritage	32"
50	ch	BLACK CHERRY/Prunus serotina	10				Regulated	1 tree
51	lo	LIVE OAK/Quercus virginiana	18				Regulated	1 tree
52	lo	LIVE OAK/Quercus virginiana	11				Regulated	1 tree
53	lo	LIVE OAK/Quercus virginiana	18				Regulated	1 tree
54	lo	LIVE OAK/Quercus virginiana	8				Regulated	1 tree
55	lo	LIVE OAK/Quercus virginiana	14				Regulated	1 tree
56	lo	LIVE OAK/Quercus virginiana	8				Regulated	1 tree
57	sg	SWEETGUM/Liquidambar styraciflua	23	19			Regulated	2 trees
58	lo	LIVE OAK/Quercus virginiana	13				Regulated	1 tree
59	tree	UNIDENTIFIED TREE/	8				Regulated	1 tree
60	hi	HICKORY/Carya sp.	8				Regulated	1 tree
61	lo	LIVE OAK/Quercus virginiana	11				Regulated	1 tree
62	lo	LIVE OAK/Quercus virginiana	19				Regulated	1 tree
63	hi	HICKORY/Carya sp.	8				Regulated	1 tree
64	lo	LIVE OAK/Quercus virginiana	14				Regulated	1 tree

65	lo	LIVE OAK/Quercus virginiana	37	28	Heritage	69"
66	lo	LIVE OAK/Quercus virginiana	13		Regulated	1 tree
67	lo	LIVE OAK/Quercus virginiana	10		Regulated	1 tree
68	lo	LIVE OAK/Quercus virginiana	15		Regulated	1 tree
69	lo	LIVE OAK/Quercus virginiana	23		Heritage	23"
70	lo	LIVE OAK/Quercus virginiana	26		Heritage	26"
71	lo	LIVE OAK/Quercus virginiana	10		Regulated	1 tree
72	lo	LIVE OAK/Quercus virginiana	11		Regulated	1 tree
73	ch	BLACK CHERRY/Prunus serotina	11		Regulated	1 tree
74	lo	LIVE OAK/Quercus virginiana	11		Regulated	1 tree
75	ch	BLACK CHERRY/Prunus serotina	9		Regulated	1 tree
76	lo	LIVE OAK/Quercus virginiana	10		Regulated	1 tree
77	lo	LIVE OAK/Quercus virginiana	10		Regulated	1 tree
78	lo	LIVE OAK/Quercus virginiana	14		Regulated	1 tree
79	lo	LIVE OAK/Quercus virginiana	12		Regulated	1 tree
80	lo	LIVE OAK/Quercus virginiana	14		Regulated	1 tree
81	sb	SUGARBERRY/Celtis laevigata	20		Heritage	20"
82	sb	SUGARBERRY/Celtis laevigata	8		Regulated	1 tree
83	sb	SUGARBERRY/Celtis laevigata	12		Regulated	1 tree
84	lo	LIVE OAK/Quercus virginiana	23		Heritage	23"
85	lo	LIVE OAK/Quercus virginiana	14		Regulated	1 tree
86	lo	LIVE OAK/Quercus virginiana	12		Regulated	1 tree
87	lo	LIVE OAK/Quercus virginiana	22		Heritage	22"
88	lo	LIVE OAK/Quercus virginiana	24		Heritage	24"
89	lo	LIVE OAK/Quercus virginiana	14		Regulated	1 tree
90	lo	LIVE OAK/Quercus virginiana	12		Regulated	1 tree
91	lo	LIVE OAK/Quercus virginiana	39		Heritage	44"
92	lo	LIVE OAK/Quercus virginiana	28		Heritage	28"
93	lo	LIVE OAK/Quercus virginiana	23		Heritage	23"
94	ch	BLACK CHERRY/Prunus serotina	11		Regulated	1 tree
95	lo	LIVE OAK/Quercus virginiana	29		Heritage	29"
96	lo	LIVE OAK/Quercus virginiana	10		Regulated	1 tree
97	lo	LIVE OAK/Quercus virginiana	12		Regulated	1 tree
98	lo	LIVE OAK/Quercus virginiana	21		Heritage	21"
99	lo	LIVE OAK/Quercus virginiana	30		Heritage	30.5"
100	lo	LIVE OAK/Quercus virginiana	14		Regulated	1 tree
101	lo	LIVE OAK/Quercus virginiana	15	14	Regulated	2 trees
102	lo	LIVE OAK/Quercus virginiana	13		Regulated	1 tree
103	lao	LAUREL OAK/Quercus hemisphaerica	31		Regulated	1 tree
104	lo	LIVE OAK/Quercus virginiana	50		Heritage	77"
105	lo	LIVE OAK/Quercus virginiana	53		Heritage	85"
106	lo	LIVE OAK/Quercus virginiana	8		Regulated	1 tree
107	lo	LIVE OAK/Quercus virginiana	35		Heritage	38"
108	lo	LIVE OAK/Quercus virginiana	23		Heritage	23"
109	lo	LIVE OAK/Quercus virginiana	8		Regulated	1 tree
110	ch	BLACK CHERRY/Prunus serotina	9		Regulated	1 tree
111	lo	LIVE OAK/Quercus virginiana	10		Regulated	1 tree
112	lo	LIVE OAK/Quercus virginiana	26		Heritage	26"
113	lo	LIVE OAK/Quercus virginiana	32		Heritage	33.5"
114	lo	LIVE OAK/Quercus virginiana	31		Heritage	32"
115	ch	BLACK CHERRY/Prunus serotina	8		Regulated	1 tree
116	lo	LIVE OAK/Quercus virginiana	23		Heritage	23"
117	cht	CHINESE TALLOW/Triadica sebifera	8		Invasive	-
118	lo	LIVE OAK/Quercus virginiana	18		Regulated	1 tree
119	lo	LIVE OAK/Quercus virginiana	21		Heritage	21"
120	ch	BLACK CHERRY/Prunus serotina	9		Regulated	1 tree
121	lo	LIVE OAK/Quercus virginiana	21		Heritage	21"
122	lo	LIVE OAK/Quercus virginiana	29		Heritage	29"
123	sb	SUGARBERRY/Celtis laevigata	10		Regulated	1 tree
124	lo	LIVE OAK/Quercus virginiana	15		Regulated	1 tree
125	lo	LIVE OAK/Quercus virginiana	9		Regulated	1 tree
126	lo	LIVE OAK/Quercus virginiana	9		Regulated	1 tree
127	hi	HICKORY/Carya sp.	11		Regulated	1 tree
128	tree	UNIDENTIFIED TREE/	9		Regulated	1 tree
129	lo	LIVE OAK/Quercus virginiana	23		Heritage	23"
130	hi	HICKORY/Carya sp.	10		Regulated	1 tree

131	hi	HICKORY/Carya sp.	9		Regulated	1 tree
132	lo	LIVE OAK/Quercus virginiana	25		Heritage	24"
133	lo	LIVE OAK/Quercus virginiana	27		Heritage	27"
134	hi	HICKORY/Carya sp.	10		Regulated	1 tree
135	hi	HICKORY/Carya sp.	10		Regulated	1 tree
136	lo	LIVE OAK/Quercus virginiana	9		Regulated	1 tree
137	sg	SWEETGUM/Liquidambar styraciflua	20		Regulated	1 tree
138	hi	HICKORY/Carya sp.	16		Regulated	1 tree
139	hi	HICKORY/Carya sp.	12		Regulated	1 tree
140	hi	HICKORY/Carya sp.	12		Regulated	1 tree
141	hi	HICKORY/Carya sp.	9		Regulated	1 tree
142	sg	SWEETGUM/Liquidambar styraciflua	20		Regulated	1 tree
143	lo	LIVE OAK/Quercus virginiana	32		Heritage	33.5"
144	hi	HICKORY/Carya sp.	10		Regulated	1 tree
145	lo	LIVE OAK/Quercus virginiana	12		Regulated	1 tree
146	hi	HICKORY/Carya sp.	11		Regulated	1 tree
147	hi	HICKORY/Carya sp.	17		Regulated	1 tree
148	lo	LIVE OAK/Quercus virginiana	16		Regulated	1 tree
149	lo	LIVE OAK/Quercus virginiana	14		Regulated	1 tree
150	hi	HICKORY/Carya sp.	20		Heritage	20"
151	hi	HICKORY/Carya sp.	12		Regulated	1 tree
152	lo	LIVE OAK/Quercus virginiana	13		Regulated	1 tree
153	lo	LIVE OAK/Quercus virginiana	17		Regulated	1 tree
154	lo	LIVE OAK/Quercus virginiana	19		Regulated	1 tree
155	lo	LIVE OAK/Quercus virginiana	14		Regulated	1 tree
156	hi	HICKORY/Carya sp.	16		Regulated	1 tree
157	lo	LIVE OAK/Quercus virginiana	9		Regulated	1 tree
158	tree	UNIDENTIFIED TREE/	15	11	Regulated	2 trees
159	lo	LIVE OAK/Quercus virginiana	13		Regulated	1 tree
160	hi	HICKORY/Carya sp.	22		Heritage	22"
161	hi	HICKORY/Carya sp.	21		Heritage	21"
162	hi	HICKORY/Carya sp.	15		Regulated	1 tree
163	lo	LIVE OAK/Quercus virginiana	10		Regulated	1 tree
164	hi	HICKORY/Carya sp.	16		Regulated	1 tree
165	lo	LIVE OAK/Quercus virginiana	16		Regulated	1 tree
166	ce	SOUTHERN REDCEDAR/Juniperus silicicola	12		Regulated	1 tree
167	lo	LIVE OAK/Quercus virginiana	20		Heritage	20"
168	lo	LIVE OAK/Quercus virginiana	17	14	Regulated	2 trees
169	lo	LIVE OAK/Quercus virginiana	24		Heritage	24"
170	pi	PINE/Pinus sp.	21		Regulated	1 tree
171	sg	SWEETGUM/Liquidambar styraciflua	21		Regulated	1 tree
172	lo	LIVE OAK/Quercus virginiana	22		Heritage	22"
173	lo	LIVE OAK/Quercus virginiana	19		Regulated	1 tree
174	pi	PINE/Pinus sp.	25		Regulated	1 tree
175	pi	PINE/Pinus sp.	26		Regulated	1 tree
176	ch	BLACK CHERRY/Prunus serotina	10		Regulated	1 tree
177	lo	LIVE OAK/Quercus virginiana	16		Regulated	1 tree
178	lo	LIVE OAK/Quercus virginiana	30		Heritage	30.5"
179	lo	LIVE OAK/Quercus virginiana	16		Regulated	1 tree
180	lo	LIVE OAK/Quercus virginiana	8		Regulated	1 tree
181	lo	LIVE OAK/Quercus virginiana	25		Heritage	24"
182	lo	LIVE OAK/Quercus virginiana	28		Heritage	28"
183	lo	LIVE OAK/Quercus virginiana	33		Heritage	35"
184	lo	LIVE OAK/Quercus virginiana	14		Regulated	1 tree
185	lo	LIVE OAK/Quercus virginiana	14		Regulated	1 tree
186	lo	LIVE OAK/Quercus virginiana	13		Regulated	1 tree
187	lo	LIVE OAK/Quercus virginiana	18		Regulated	1 tree
188	lo	LIVE OAK/Quercus virginiana	19		Regulated	1 tree
189	lo	LIVE OAK/Quercus virginiana	11		Regulated	1 tree
190	lo	LIVE OAK/Quercus virginiana	14		Regulated	1 tree
191	pi	PINE/Pinus sp.	20		Regulated	1 tree
192	lo	LIVE OAK/Quercus virginiana	11		Regulated	1 tree
193	lo	LIVE OAK/Quercus virginiana	18		Regulated	1 tree
194	lo	LIVE OAK/Quercus virginiana	16		Regulated	1 tree
195	lo	LIVE OAK/Quercus virginiana	18		Regulated	1 tree
196	lo	LIVE OAK/Quercus virginiana	18		Regulated	1 tree

197	lo	LIVE OAK/Quercus virginiana	16		Regulated	1 tree
198	lo	LIVE OAK/Quercus virginiana	17		Regulated	1 tree
199	lo	LIVE OAK/Quercus virginiana	17		Regulated	1 tree
200	lo	LIVE OAK/Quercus virginiana	10		Regulated	1 tree
201	pi	PINE/Pinus sp.	26		Regulated	1 tree
202	sg	SWEETGUM/Liquidambar styraciflua	22		Regulated	1 tree
203	lo	LIVE OAK/Quercus virginiana	14		Regulated	1 tree
204	lo	LIVE OAK/Quercus virginiana	19		Regulated	1 tree
205	lo	LIVE OAK/Quercus virginiana	10		Regulated	1 tree
206	lo	LIVE OAK/Quercus virginiana	14		Regulated	1 tree
207	lo	LIVE OAK/Quercus virginiana	13		Regulated	1 tree
208	lo	LIVE OAK/Quercus virginiana	11		Regulated	1 tree
209	hi	HICKORY/Carya sp.	10		Regulated	1 tree
210	lo	LIVE OAK/Quercus virginiana	9		Regulated	1 tree
211	lo	LIVE OAK/Quercus virginiana	11		Regulated	1 tree
212	ch	BLACK CHERRY/Prunus serotina	9		Regulated	1 tree
213	lo	LIVE OAK/Quercus virginiana	9		Regulated	1 tree
214	lo	LIVE OAK/Quercus virginiana	9		Regulated	1 tree
215	lo	LIVE OAK/Quercus virginiana	15		Regulated	1 tree
216	lo	LIVE OAK/Quercus virginiana	15		Regulated	1 tree
217	lo	LIVE OAK/Quercus virginiana	8		Regulated	1 tree
218	lo	LIVE OAK/Quercus virginiana	9		Regulated	1 tree
219	hi	HICKORY/Carya sp.	14		Regulated	1 tree
220	lo	LIVE OAK/Quercus virginiana	10		Regulated	1 tree
221	sg	SWEETGUM/Liquidambar styraciflua	26		Regulated	1 tree
222	sg	SWEETGUM/Liquidambar styraciflua	17		<i>Unregulated</i>	-
223	lo	LIVE OAK/Quercus virginiana	13		Regulated	1 tree
224	hi	HICKORY/Carya sp.	15		Regulated	1 tree
225	hi	HICKORY/Carya sp.	10		Regulated	1 tree
226	ch	BLACK CHERRY/Prunus serotina	9		Regulated	1 tree
227	ch	BLACK CHERRY/Prunus serotina	10		Regulated	1 tree
228	lo	LIVE OAK/Quercus virginiana	20		Heritage	20"
229	lo	LIVE OAK/Quercus virginiana	18		Regulated	1 tree
230	mp	RED MAPLE/Acer rubrum	9		Regulated	1 tree
232	lo	LIVE OAK/Quercus virginiana	14		Regulated	1 tree
233	ce	SOUTHERN REDCEDAR/Juniperus silicicola	10		Regulated	1 tree
234	lo	LIVE OAK/Quercus virginiana	24		Heritage	24"
235	lo	LIVE OAK/Quercus virginiana	17		Regulated	1 tree
236	sg	SWEETGUM/Liquidambar styraciflua	9		Regulated	1 tree
237	lo	LIVE OAK/Quercus virginiana	12		Regulated	1 tree
238	lo	LIVE OAK/Quercus virginiana	15		Regulated	1 tree
239	lo	LIVE OAK/Quercus virginiana	17		Regulated	1 tree
240	lo	LIVE OAK/Quercus virginiana	28		Heritage	28"
241	hi	HICKORY/Carya sp.	13		Regulated	1 tree
242	lo	LIVE OAK/Quercus virginiana	19		Regulated	1 tree
243	lo	LIVE OAK/Quercus virginiana	21		Heritage	21"
244	lo	LIVE OAK/Quercus virginiana	15		Regulated	1 tree
245	hi	HICKORY/Carya sp.	14		Regulated	1 tree
246	lo	LIVE OAK/Quercus virginiana	18		Regulated	1 tree
247	lo	LIVE OAK/Quercus virginiana	19		Regulated	1 tree
248	lo	LIVE OAK/Quercus virginiana	19		Regulated	1 tree
249	lo	LIVE OAK/Quercus virginiana	16		Regulated	1 tree
250	lo	LIVE OAK/Quercus virginiana	28		Heritage	28"
251	cb	CHINABERRY/Melia azedarach	10		<i>Invasive</i>	-
252	cb	CHINABERRY/Melia azedarach	9		<i>Invasive</i>	-
253	cb	CHINABERRY/Melia azedarach	11	8	<i>Invasive</i>	-
254	hi	HICKORY/Carya sp.	12		Regulated	1 tree
255	hi	HICKORY/Carya sp.	12		Regulated	1 tree
256	hi	HICKORY/Carya sp.	12		Regulated	1 tree
257	pa	PALM/Sabal palmetto	14		Regulated	1 tree
258	lo	LIVE OAK/Quercus virginiana	28		Heritage	28"
259	lo	LIVE OAK/Quercus virginiana	31		Heritage	32"
260	mg	MAGNOLIA/Magnolia grandiflora	9		Regulated	1 tree
261	lo	LIVE OAK/Quercus virginiana	41		Heritage	50"
262	lo	LIVE OAK/Quercus virginiana	49		Heritage	74"
263	lo	LIVE OAK/Quercus virginiana	29		Heritage	29"

264	lo	LIVE OAK/Quercus virginiana	58		Heritage	101"
265	lo	LIVE OAK/Quercus virginiana	26		Heritage	26"
266	lo	LIVE OAK/Quercus virginiana	24		Heritage	24"
267	lo	LIVE OAK/Quercus virginiana	28		Heritage	28"
268	lo	LIVE OAK/Quercus virginiana	43		Heritage	56"
269	lo	LIVE OAK/Quercus virginiana	24		Heritage	24"
270	sb	SUGARBERRY/Celtis laevigata	13		Regulated	1 tree
271	sb	SUGARBERRY/Celtis laevigata	17		Regulated	1 tree
272	sb	SUGARBERRY/Celtis laevigata	14		Regulated	1 tree
273	sb	SUGARBERRY/Celtis laevigata	10		Regulated	1 tree
274	lo	LIVE OAK/Quercus virginiana	32		Heritage	33.5"
275	lo	LIVE OAK/Quercus virginiana	22		Heritage	22"
276	sb	SUGARBERRY/Celtis laevigata	14		Regulated	1 tree
277	lo	LIVE OAK/Quercus virginiana	16		Regulated	1 tree
278	lo	LIVE OAK/Quercus virginiana	22		Heritage	22"
279	lo	LIVE OAK/Quercus virginiana	38		Heritage	42.5"
280	lo	LIVE OAK/Quercus virginiana	16		Regulated	1 tree
281	lo	LIVE OAK/Quercus virginiana	10		Regulated	1 tree
282	lo	LIVE OAK/Quercus virginiana	12		Regulated	1 tree
283	lo	LIVE OAK/Quercus virginiana	19		Regulated	1 tree
284	lo	LIVE OAK/Quercus virginiana	17		Regulated	1 tree
285	lo	LIVE OAK/Quercus virginiana	24	22	Heritage	24"
286	lo	LIVE OAK/Quercus virginiana	39		Heritage	44"
287	lo	LIVE OAK/Quercus virginiana	22		Heritage	22"
288	pi	PINE/Pinus sp.	20		Regulated	1 tree
289	lo	LIVE OAK/Quercus virginiana	19		Regulated	1 tree
290	lo	LIVE OAK/Quercus virginiana	8		Regulated	1 tree
291	lo	LIVE OAK/Quercus virginiana	11		Regulated	1 tree
292	lo	LIVE OAK/Quercus virginiana	19		Regulated	1 tree
293	ch	BLACK CHERRY/Prunus serotina	9		Regulated	1 tree
294	ch	BLACK CHERRY/Prunus serotina	11		Regulated	1 tree
295	ch	BLACK CHERRY/Prunus serotina	10		Regulated	1 tree
296	pi	PINE/Pinus sp.	21		Regulated	1 tree
297	lo	LIVE OAK/Quercus virginiana	51		Heritage	80"
298	lo	LIVE OAK/Quercus virginiana	22		Heritage	22"
299	pi	PINE/Pinus sp.	22		Regulated	1 tree
300	pi	PINE/Pinus sp.	26		Regulated	1 tree
301	ch	BLACK CHERRY/Prunus serotina	9		Regulated	1 tree
302	lo	LIVE OAK/Quercus virginiana	9		Regulated	1 tree
303	ch	BLACK CHERRY/Prunus serotina	9		Regulated	1 tree
304	lo	LIVE OAK/Quercus virginiana	17		Regulated	1 tree
305	lo	LIVE OAK/Quercus virginiana	18		Regulated	1 tree
306	lo	LIVE OAK/Quercus virginiana	14		Regulated	1 tree
307	lo	LIVE OAK/Quercus virginiana	14		Regulated	1 tree
308	lo	LIVE OAK/Quercus virginiana	18		Regulated	1 tree
309	lo	LIVE OAK/Quercus virginiana	20		Heritage	20"
310	lo	LIVE OAK/Quercus virginiana	15		Regulated	1 tree
311	sg	SWEETGUM/Liquidambar styraciflua	21		Regulated	1 tree
312	sg	SWEETGUM/Liquidambar styraciflua	21		Regulated	1 tree
313	sg	SWEETGUM/Liquidambar styraciflua	20		Regulated	1 tree
314	lo	LIVE OAK/Quercus virginiana	12		Regulated	1 tree
315	lo	LIVE OAK/Quercus virginiana	8		Regulated	1 tree
316	hi	HICKORY/Carya sp.	14		Regulated	1 tree
317	pi	PINE/Pinus sp.	23		Regulated	1 tree
318	hi	HICKORY/Carya sp.	26		Heritage	26"
319	lo	LIVE OAK/Quercus virginiana	16		Regulated	1 tree
320	pi	PINE/Pinus sp.	25		Regulated	1 tree
321	sg	SWEETGUM/Liquidambar styraciflua	10		<i>Unregulated</i>	-
322	lo	LIVE OAK/Quercus virginiana	15		Regulated	1 tree
323	lo	LIVE OAK/Quercus virginiana	11		Regulated	1 tree
324	lo	LIVE OAK/Quercus virginiana	30		Heritage	30.5"
325	lo	LIVE OAK/Quercus virginiana	10		Regulated	1 tree
326	lo	LIVE OAK/Quercus virginiana	12		Regulated	1 tree
327	lo	LIVE OAK/Quercus virginiana	23		Heritage	23"
328	lo	LIVE OAK/Quercus virginiana	12		Regulated	1 tree
329	lo	LIVE OAK/Quercus virginiana	16		Regulated	1 tree

330	lo	LIVE OAK/Quercus virginiana	17		Regulated	1 tree
331	lo	LIVE OAK/Quercus virginiana	26		Heritage	26"
332	lo	LIVE OAK/Quercus virginiana	10		Regulated	1 tree
333	lo	LIVE OAK/Quercus virginiana	33		Heritage	35"
334	lo	LIVE OAK/Quercus virginiana	10		Regulated	1 tree
335	lo	LIVE OAK/Quercus virginiana	16		Regulated	1 tree
336	lo	LIVE OAK/Quercus virginiana	22		Heritage	22"
337	lo	LIVE OAK/Quercus virginiana	16		Regulated	1 tree
338	lo	LIVE OAK/Quercus virginiana	17		Regulated	1 tree
339	lo	LIVE OAK/Quercus virginiana	17		Regulated	1 tree
340	pi	PINE/Pinus sp.	20		Regulated	1 tree
341	lo	LIVE OAK/Quercus virginiana	20		Heritage	20"
342	lo	LIVE OAK/Quercus virginiana	20		Heritage	20"
343	lo	LIVE OAK/Quercus virginiana	12		Regulated	1 tree
344	lo	LIVE OAK/Quercus virginiana	16		Regulated	1 tree
345	hi	HICKORY/Carya sp.	9	8	Regulated	2 trees
346	lo	LIVE OAK/Quercus virginiana	18		Regulated	1 tree
347	lo	LIVE OAK/Quercus virginiana	29		Heritage	29"
348	lo	LIVE OAK/Quercus virginiana	16		Regulated	1 tree
349	lo	LIVE OAK/Quercus virginiana	16		Regulated	1 tree
350	lo	LIVE OAK/Quercus virginiana	20		Heritage	20"
351	lo	LIVE OAK/Quercus virginiana	21		Heritage	21"
352	lo	LIVE OAK/Quercus virginiana	13		Regulated	1 tree
353	lo	LIVE OAK/Quercus virginiana	26		Heritage	26"
354	hi	HICKORY/Carya sp.	14		Regulated	1 tree
355	sb	SUGARBERRY/Celtis laevigata	13		Regulated	1 tree
356	sb	SUGARBERRY/Celtis laevigata	9		Regulated	1 tree
357	sb	SUGARBERRY/Celtis laevigata	10		Regulated	1 tree
358	sb	SUGARBERRY/Celtis laevigata	12		Regulated	1 tree
359	sb	SUGARBERRY/Celtis laevigata	16		Regulated	1 tree
360	sb	SUGARBERRY/Celtis laevigata	10		Regulated	1 tree
361	cb	CHINABERRY/Melia azedarach	9		Invasive	-
362	lo	LIVE OAK/Quercus virginiana	9		Regulated	1 tree
363	lo	LIVE OAK/Quercus virginiana	12		Regulated	1 tree
364	lo	LIVE OAK/Quercus virginiana	8		Regulated	1 tree
365	sb	SUGARBERRY/Celtis laevigata	9		Regulated	1 tree
366	lo	LIVE OAK/Quercus virginiana	19		Regulated	1 tree
367	lo	LIVE OAK/Quercus virginiana	15		Regulated	1 tree
368	lo	LIVE OAK/Quercus virginiana	22		Heritage	22"
369	ch	BLACK CHERRY/Prunus serotina	13		Regulated	1 tree
370	cb	CHINABERRY/Melia azedarach	8		Invasive	-
371	lo	LIVE OAK/Quercus virginiana	16		Regulated	1 tree
372	lo	LIVE OAK/Quercus virginiana	35		Heritage	38"
373	lo	LIVE OAK/Quercus virginiana	15		Regulated	1 tree
374	sb	SUGARBERRY/Celtis laevigata	9		Regulated	1 tree
375	cht	CHINESE TALLOW/Triadica sebifera	9		Invasive	-
376	hi	HICKORY/Carya sp.	9		Regulated	1 tree
232A	lo	LIVE OAK/Quercus virginiana	16	8	Regulated	2 trees

Environmental Resource Assessment

South Pointe Planned Development Expansion Site
Alachua County, Florida



30 July 2022

Environmental Resource Assessment

South Pointe Planned Development Expansion Site
Alachua County, Florida

Prepared for

Scot Ross
New Generation Home Builders, Inc.
14245 SW 4th Place, Unit 20
Newberry, Florida 32669

Prepared by

Ecosystem Research Corporation
2906 NW 142nd Avenue
Gainesville, FL 32609
386-462-5005



30 July 2022

***Environmental Resource Assessment in Support of a Development
Plan Submittal for the South Pointe PD and Expansion Site***

Development Location & Description:

Alachua County, Florida-South Pointe Planned Development Expansion Area

Geographic Location:

Fractional Section 36, Township 9 South, Range 18 East

Gainesville West USGS Quadrangle Map

Alachua County, Florida

Landowner

Scot Ross

New Generation Home Builders, Inc.

14245 SW 4th Place, Unit 20

Newberry, Florida 32669

Engineer/Planner

Sergio Reyes, P.E., President

eda

720 SW 2nd Avenue, Suite 300

Gainesville, FL 32601

Contents

Tables.....	v
Figures.....	v
Introduction.....	1
Project Description	2
Environmental Resource Assessment Methodology.....	2
Field Survey	2
Data Search.....	3
Results of Data Review	4
Published Geographic, Hydrologic, Ecological, and Historical Data Review	4
USGS Gainesville West Topographic Quadrangle Maps	4
Geographic Setting of the Planning Parcel	5
NRCS Soils Mapping.....	8
FEMA Flood Zone	9
National Wetlands Inventory (NWI) and Alachua County Composite Wetlands Database.....	9
High Aquifer Recharge Areas	9
Published Listed Species Occurrence Data	10
Federal Review Pursuant to Section 7 of the Clean Water Act (CWA)	10
Requirements for Listed Species Review and Critical Habitat Impact Review	14
Summary Information Regarding Threatened & Endangered Species in Florida	15
Results of County, State, and Federal Listed and Imperiled Species Database Reviews.....	17
Eagle Nest Locator and Wading and Waterbird Rookery Databases	17
Federally Listed Species Occurrence Range Database	18
Federally Listed Bird Species.....	18
Federally Listed Reptile Species	19
Federally Listed Amphibian Species.....	21
Federally Listed Crustacean Species	22
Migratory Birds.....	22
Additional Imperiled Species Listed by the State of Florida and the Florida Natural Areas Inventory (FNAI) Element Occurrence Database for Federal, State, and Non-Listed Imperiled Species.....	25
Results of Field Survey	32
Plant Communities, Regulated Resources and Non-Regulated Resources Occurring within the Project Sit.....	33
Mapping of Plant Communities and Regulated and Non-Regulated Resources.....	33
Previous Set-aside Determination	33
Listed Species	35
Landscape Depressions	35
Wetlands and Surface Waters	35

Plant Community Descriptions.....	36
<i>Mowed Pasture Grasses</i>	36
<i>Successional Mixed Upland Shrubs and Vines-Oldfield</i>	36
<i>Successional Oak-Mixed Hardwoods</i>	37
<i>Successional Pine-Oaks-Mixed Hardwoods and Pine-Oak Mixed Hardwoods</i>	37
<i>Successional Sweetgum-Mixed Hardwoods</i>	37
<i>Disturbed Mesic Woods</i>	38
<i>Surface Water Drainages</i>	38
<i>Non-Wetland Surface Water Drainages</i>	38
<i>Coverage of Exotic Vegetation</i>	39
Summary	39
Appendix A: Photographic Atlas	76
ATTACHMENT 1: IPaC Report	86

Tables

Table 1.	Alachua County Tax Parcel and Acreages within the Planning Parcel	3
Table 2.	Description of Soil Mapping Units within the Planning Parcel	8
Table 3.	Plant species recorded at the South Pointe Planning Parcel, Alachua County, during field surveys conducted 2012 and January–February 2022.....	40

Figures

Figure 1.	Project location map showing the Project Site in relation to local access roads.	46
Figure 2.	Alachua County tax parcels shown in relation to the Project Site.	47
Figure 3.	South Pointe Planned Development Site Plan (2016).	48
Figure 4.	South Pointe Planned Development Site Plan (2021–2022).....	49
Figure 5.	South Pointe Planning Parcel shown in relation to recently approved Planned Development Zoning, North Un-developed Expansion Site, and south area of existing development.	50
Figure 6.	USGS Gainesville West topographic quadrangle showing the Project Site and surrounding areas.	51
Figure 7.	2001 LiDAR topography shown in relation to the Project Site and surrounding area.....	52
Figure 8.	Surficial geology of Alachua County shown in relation to the Project Site and surrounding area.....	53

Figure 9.	Physiographic subdivisions of Alachua County shown in relation to the Project Site and surrounding area.	54
Figure 10.	Physiographic zones of Alachua County shown in relation to the Project Site (approximate location shown).	55
Figure 11.	Elevation profiles 1 and 2 showing topographic changes in relation to Alachua County Physiographic Zones.	56
Figure 12.	Cross-County fracture zone shown in relation to the Project Site (approximate location of Project Site and labeling of roadways added for reference).	57
Figure 13.	NRCS soils map shown in relation to the Project Site and surrounding area.....	58
Figure 14.	NRCS feature points shown in relation to the Project Site and surrounding area.....	59
Figure 15.	FEMA flood zone areas shown in relation to the Project Site and surrounding area.....	60
Figure 16.	National Wetlands Inventory wetlands and Alachua County Composite Wetlands shown in relation to the Project Site and surrounding area.....	61
Figure 17.	Aquifer recharge areas shown in relation to the Project Site and surrounding area.....	62
Figure 18.	Drastic vulnerability areas of the Surficial and Floridan aquifers shown in relation to the Project Site and surrounding area.	63
Figure 19.	General schematic showing mechanisms of surface water flows to Florida aquifer within unconfined, semi-confined, and confined zones of aquifer (source: https://images.app.goo.gl/yGNKd5VKvsWA2eWXA).....	64
Figure 20.	Locations of bald eagle nests and wading bird rookeries in relation to the Project Site.....	65
Figure 21.	Red-cockaded woodpecker consultation area and observation locations shown in relation to the Project Site and surrounding area.....	66
Figure 22.	Florida Scrub-Jay consultation area, observation locations, and habitat shown in relation to the Project Site and surrounding area.....	67
Figure 23.	Florida Natural Areas Inventory element occurrence records shown in relation to the Project Site and surrounding area.	68
Figure 24.	Black bear foraging areas and nuisance records shown in relation to the Project Site and surrounding area.	69
Figure 25.	GPS locations where site-specific data were collected within the Project Site.....	70
Figure 26.	Plant communities within the Project Site and associated acreages.	71

Figure 27.	Strategic Ecosystem Overlay shown in relation to the Project Site and surrounding area.....	72
Figure 28.	KBN-Golder Ecological Inventory shown in relation to the Project Site and surrounding area.....	73
Figure 29.	Delineation of the high diversity area within the Project Site.....	74
Figure 30.	Suggested modified set-aside.	75

Introduction

Ecosystem Research Corporation (**ERC**) was retained by Mr. Scot Ross, representing New Generation Home Builders, Inc. (Newberry, Florida) to prepare an updated *Environmental Resource Assessment (ERA)* to include a *Listed Species Survey* for a recently approved South Pointe Planned Development (PD) and an Expansion Area designated for new development located north of the PD. The South Pointe development is between Jonesville and Gainesville in west-central Alachua County, Florida.

Currently, there are developed and undeveloped areas of a recently approved PD. A PD was approved for the South Pointe Development in July 2016 and this PD was modified late 2021 to early 2022. The current PD is within the north end of a previously developed section of South Pointe and includes a portion of the previous development. North of the approved PD is an undeveloped area that will be proposed for development in the future. Because the South Pointe Project is within the delineated limits of the Pine Hill Forest Strategic Ecosystem, previous environmental studies established a set-aside within the PD and delineated future potential set-aside areas within the undeveloped areas outside the PD. These studies were performed from 2006 to 2008. The set-aside was accepted by Alachua County and partially incorporated within the limits of the PD. At the request of the County, the undeveloped areas were re-evaluated as part of this ERA effort to determine the existing conditions of the undeveloped PD and NON-PD areas remaining on the South Pointe Development Site. The **ERA** report defined in this document is provided to define the existing environmental conditions on the site and address environmental issues related to *County Development Review* and review related to an *Environmental Resource Permit* application.

Several investigations have been performed by various Professional Consultants in support of this Application. For easy reference, the titles of these investigation reports are

- 1) *Environmental Inventory Report*
South Pointe Phase II, Unit 6
Alachua County, Florida
Environmental Consulting and Design, Inc.
Date: October 2006
- 2) *Environmental Resource Inventory Report*
South Pointe Phase II, Unit 6
Alachua County, Florida
Environmental Consulting and Design, Inc.
Date: July 2007

- 3) *Environmental Resource Inventory Report*
South Pointe Planning Parcel
Alachua, County, Florida
Environmental Consulting and Design, Inc.
Date: April 2008
- 4) Environmental Inventory Report
Addendum 1
South Pointe Planning Parcel
Alachua County, Florida
Environmental Consulting and Design, Inc.
Date: October 2008
- 5) Notice of Violation No. 05-03-11-05
South Pointe Subdivision
Remediation Plan for Recovering Un-authorized Land Clearing and Tree Removal
Robert A. Garren, Ecologist
Date: June 2012
- 6) Notice of Violation No. 05-03-11-05
South Pointe Subdivision
Results of July 2013 Site Inspection
Robert A. Garren, Ecologist
Date: July 2013

Project Description

The Project Site lies within the northeast quadrant of the intersection of West Newberry Road (State Road 26) and NW 122nd Street (**Figure 1**). Access to the Project Site and study area is provided via NW 118th Drive, which extends from Newberry Road north to the southeast corner of the Project Area (Figure 1). The Project Site is represented by an aggregated set of Parcels that comprises the **Planning Parcel**. The Developed and Non-Developed PD areas and the undeveloped North Expansion Site are composed of 34 individual Tax Parcels, which total **88.70** acres. The Tax Parcels are tabulated in **Table 1** and shown on **Figure 2**. The Tax Parcel acreages are defined according to the data within the on-line Tax Parcel database. No survey for the delineated **Planning Parcel** is currently available to establish exact acreages.

Table 1. Alachua County Tax Parcel and Acreages within the Planning Parcel

Parcel No.	Acres	Parcel No.	Acres	Parcel No.	Acres
04321-050-014	7.54	04321-202-004	0.16	04321-202-014	0.17
04321-050-016	2.26	04321-202-005	0.16	04321-202-013	0.17
04321-050-012	1.58	04321-202-006	0.16	04321-202-012	0.18
04321-050-013	4.35	04321-202-007	0.17	04321-202-011	0.18
04321-050-011	7.37	04321-202-021	0.18	04321-202-010	0.18
04321-050-008	23.30	04321-202-022	0.18	04321-202-008	0.19
04321-050-006	1.67	04321-202-023	0.18	04321-202-018	0.22
04321-050-010	29.31	04321-202-024	0.17	04321-202-017	0.20
04321-202-025	0.21	04321-202-020	0.20	04321-202-009	0.18
04321-202-001	0.16	04321-202-019	0.23	04321-202-000	6.79
04321-202-002	0.16	04321-202-016	0.18	TOTAL	88.70
04321-202-003	0.16	04321-202-015	0.18		

As previously mentioned, these tax parcels represent the “**Planning Parcel**” as defined within the *Alachua County Land Development Code*. The Planning Parcel as described represents the “Project Site or Project Area” where all activities described in this report and Development Plan are proposed. For this assessment the Planning Parcel is equivalent to the **Resource Assessment Area (RAA)**. The 2016 and 2021–2022 PD Zoning Maps for the South Pointe Development are shown in **Figures 3** and **4**, respectively. A schematic showing the Planning Parcel in relation to the developed areas of South Pointe and the undeveloped PD areas is shown on **Figure 5**. The boundaries shown on this map indicate the North undeveloped Expansion Site totals **39.84** acres. The undeveloped and developed areas within the approved PD total **52.77** acres, and previously developed areas south of the PD total **57.18** acres.

Alachua County, by authority of **Article 3, Significant Plant and Wildlife Habitat**, and **Article 4, Listed Plant and Animal Species Habitat**, of Chapter **406.-Natural and Historic Resources Protection** the *Unified Land Development Code (ULDC)* regulates development in habitats where listed species occur or could potentially occur. Provisions within *Articles 3 and 4* allow the County to require up to 25% of the upland portion be protected and set aside as primary conservation areas. Areas protected under *Articles 3 and 4* are designated as *Conservation Management Areas* and are further regulated via rules outlined in **Article 17, Conservation Management Areas (ULDC)** and potentially require that the property owner establish a conservation easement for the specific areas within the parcel. The owner is further responsible for development of a management plan and perpetual management of the area. The regulations that are related to the **Strategic Ecosystem (SE)** were addressed in the previous reports and the set-aside based

on the **SE** analysis has been incorporated into the prior approved PD. Therefore, an **SE** set-aside is not specifically addressed in this ERA.

To this end, this report is provided to describe the occurrence of Non-Regulated and Regulated Natural Resources within the Planning Parcel and describe characteristics of the resources consistent with the requirements outlined in **Chapter 406**. An extensive field review of the onsite resources was conducted, and results are included in this report. In addition, an extensive GIS data review was conducted, and results of this analysis are provided for the Planning Parcel and surrounding areas in context with the ground verification of the on-site resources.

Environmental Resource Assessment Methodology

Field Survey

Field surveys of the Planning Parcel were performed 20 and 27 January 2022, 1 February 2022, and 15 March 2022 to determine the general ecological condition of the area and determine if any listed plant or animal species or other environmental constraints were present within the boundaries of the Planning Parcel or immediately adjacent habitat areas. Surveys were performed by Peter M. Wallace, MS (Certified Gopher Tortoise Agent #GTA-14-00037A), and Robert A. Garren, MS, of ERC. Surveys were performed by repeatedly traversing the site with a series of pedestrian transects. Observations regarding plant species composition were recorded at **1,145** locations within the Project Site and adjacent areas. At each location, plant species, plant habitat type, observations of animal occurrences, and GPS position coordinates were recorded with a hand-held Garmin GPSmap 76CSx unit. Photographs were taken to document the general plant communities, land uses, and historical activities within the Project Site as determined during the survey. Photographs that show the general physical appearance of the Project Site are contained within **Appendix A**.

ERC conducted a survey of the site with multiple members of Alachua County Environmental Protection Department (EPD) staff on 15 March 2022 to review the site, specifically where ERC had identified landscape depressions, slopes with associated drainages, and other habitats that may occur within the set-aside for the Expansion Area and the existing PD area. The current set-aside more or less corresponds to very steep slope features that due to the associated drainages may be classified as **Significant Geologic Features or Significant Habitat**. However, these areas have undergone significant historical perturbations and alterations that have severely altered the habitat.

Pursuant to **Section 406.89** of the Alachua County ULDC, **Significant geologic features include but are not limited to “point source features such as sinkholes, caves, and limestone outcrops; lineal features such as lineaments, ridges, escarpments, and springs;**

and areal features such as steep slopes and springsheds. The onsite slopes provide seepage and runoff to downslope areas. These slopes are generally impervious being underlain by dense clays. This geologic formation is associated with the **Cody Escarpment**, which runs northwest to southeast through the western area of the County and has historical and geologic landscape development significance. This feature substantially affects groundwater and surface water runoff and infiltration in this area of the County and specifically within the area of the Planning Parcel.

Data Search

To complement the data obtained from the field surveys, GIS databases were queried to obtain site-specific information for the Project Site and surrounding areas. These databases include:

1. USGS Gainesville West Quadrangle Maps
2. Geologic Regions of Florida
3. Physiographic Divisions of Florida
4. Surficial Geologic Formations of Florida
5. Alachua County 2001 LiDAR Topography (NAVD 88)
6. Natural Resource Conservation Service (NRCS) Soils
7. NRCS Soils Feature Point Database
8. Federal Emergency Management Agency (FEMA) database
9. National Wetland Inventory (NWI) Database and Alachua County Composite Wetlands Database
10. Alachua County Aquifer Recharge Areas Database
11. Floridan Aquifer Drastic Vulnerability Areas within Alachua County
12. Alachua County Sinkholes and Stream-to-Sink GIS Coverage
13. Florida Fish and Wildlife Conservation Commission (FWC) Eagle Nest Locator
14. FWC Water Bird and Wading Bird Rookery and Nest Sites Locator
15. United States Fish & Wildlife Service (FWS) Federally Listed Species Database
16. FWS Wood Stork Regulated Buffers Database
17. FWS Red-cockaded Woodpecker Consultation Area and Observation Locations Database
18. FWS Scrub-Jay Consultation Area, Habitat, and Observation Locations Database
19. FWC 2016 Florida Black Bear Forage Range and Habitat Database and Bear Nuisance Report records
20. Florida Natural Areas Inventory (FNAI) Element Occurrence Database

The field assessment and data review assessment performed for the Planning Parcel addresses the specific requirement of the Alachua County and City of Gainesville Comprehensive Plan and ULDCs. As part of this survey, the entire limits of the Planning Parcel were evaluated. For the **ERA** described, the total Project Area as described on Figure 2 represents the entire holdings proposed for evaluation by the Applicant. Therefore, the Planning Parcel represents the **RAA** and the Planning Parcel evaluated in the field as part of this assessment.

Results of Data Review

Published Geographic, Hydrologic, Ecological, and Historical Data Review

USGS Gainesville West Topographic Quadrangle Maps

The Planning Parcel lies within the geographic area defined by the USGS Gainesville West Quadrangle map (**Figure 6**). The Planning Parcel lies within Section 36, Township 9 South, and Range 18 East. The USGS quad maps show that the Planning Parcel is located along a very high ridge and along the east side of a large topographic depression that, in part, occupies the west half of the Planning Parcel. The west side of the Planning parcel lies on the west facing slope of the ridge. The top of the ridge is represented by the 155-ft USGS contour interval (NGVD 29) and the ridge slopes west to the 85-ft contour interval in the bottom of the offsite depression. This represents a 70-ft east-to-west drop in elevation across the Planning Parcel. The USGS topo intervals show the site is located along a west facing slope of the Cody Escarpment (Scarp), which is defined as occurring between the 100-ft and 150-ft contour intervals in Alachua County. There are No intermittent or permanent surface water drainages indicated on the site or adjacent to the Project. In addition, there are No topographic depressions indicated as wetlands or ponds in the vicinity or within the Project Site boundaries.

The 2-ft LiDAR topography for the site is provided on **Figure 7** and represents aerial topography obtained from May 2001. This topography database shows a high elevation of 172 ft (NAVD 88) on the ridge within the northeast corner of the site and a low elevation of 92 ft (NAVD 88) within the northwest corner of the Planning Parcel. Therefore, these data show there is an 80-ft drop in elevation across the Project Site. On Figure 7 several contours are shown as bold colors to emphasize the location of the Cody Scarp that extends from 100–150-ft and the 130–132-ft contour intervals where several small surface drainages originate on the west facing slope.

Geographic Setting of the Planning Parcel

Geologically, Alachua County is covered with variable surface deposits that reflect the geologic period and ancient sea level terraces (**Figure 8**). The Coosawhatchee Formation overlays the Project Site and adjacent areas and typically occurs at elevations extending higher than 90–100 ft and overlies the Hawthorn Formation. This layer is of Miocene origin (24 million to 5 million years ago) and consists of unconsolidated clayey and phosphatic sands. The Coosawhatchie Formation lies beneath a thin veneer of overburden on the eastern extent of the Ocala Platform that extends from southern Columbia County to southern Marion County. The Coosawhatchie Formation is poorly consolidated strata with variable clayey and phosphatic sand to moderately consolidated, sandy, silty clays.

Along the western boundary of the Coosawhatchee Formation and within other regions of these formations, there may be a thin surficial geologic formation defined as Undifferentiated Tertiary/Quaternary Sediments, which are more recent sediments of Pliocene/Pleistocene origin (5 million to 1.8 million years ago to present). Since the Pleistocene shoreline of the Wicomico Terrace is believed to have extended to 100 ft in elevation, these sands are believed to be older in origin, possibly extending into the Pliocene Epoch. South of the Project Site, these sands are mapped extending from less than 75 ft to greater than 150 ft in elevation. These sediments can be associated with historical floodplains or ancient beach ridges. When these surface veneer quartz sands exceed 20 ft in thickness, they are delineated as discrete geologic units such as the Coosawhatchee Formation. In the area of the Project Site, the Coosawhatchee Formation is mapped as being at its western extent within Alachua County.

In the area of the Project Site, the underlying geologic formation is the westward erosional boundary of the Hawthorn Formation, which is composed of dense, variously layered silts and clays. The western boundary of the Coosahatchee Formation (as shown on Figure 8) more or less corresponds to the western base of the slope of the Cody Scarp. This area corresponds to the upper erosional boundary of the Wicomico Sea Level Terrace that covered Florida from 1.8 million to 11,800 years ago. So, generally if you were standing at the northwest corner of the Project Site 11,800 years ago you may have been standing at the shoreline of the Gulf of Mexico!

Traveling west of the western boundary of the Coosawhatchee Formation, the surficial geology is delineated as Ocala Limestone, which is of Eocene Origin. In these geological areas, the Crystal River Formation of the Ocala Limestone Group is overlain by a thin veneer of undifferentiated Pliocene and Pleistocene sandy sediments. This geologic area typically extends westward from elevations of ± 100 ft to elevations of 60 ft or below. However, the surficial geology in the County extending from 100 ft west to 70–80 ft is highly variable, and the extent of dense underlying clays from one site to another is

highly variable and unpredictable. Typically, at elevations below 80 ft, there are often open sinkholes where the underlying clays have eroded and direct surface connections to the Floridan aquifer occur. These open connections often have very steep side slopes composed of limerock and clay.

The overburden covering the limestone layer, which generally occurs at ± 50 ft and extends to greater depths in elevation, is highly variable and can consist of coarse sands as well as having discontinuous layers of dense clays. In many areas, dense clay and limerock pinnacles extend upward from the limerock base of 50 ft to the ground surface. These dense clays are remnants of the Hawthorn Formation, which historically extended westward across the entire County prior to the Pleistocene Sea Level Rise. There is a remnant Hawthorne Ridge along the southwest corner of the County that is associated with the Brooksville Ridge (Newberry Sandhills). This ridge often has a cover of coarse, deep sands associated with old sand ridges that gives rise to the Longleaf Pine-Turkey Oak Sandhills and Rosemary Scrub Communities west of Archer and extends towards Bronson. Within the County, the Cody Scarp extends generally from elevations of 100 to 150 ft. Along this Scarp, the overlying sands cover a perforated zone of dense clays that often have several relic sinkhole depressions either filled with sand or underlain by dense to minimal thicknesses of clays of varying densities. These depressions may perch waters for various periods or percolate very quickly to the underlying Floridan aquifer. *This is the general condition within the Project Site.*

To describe subsurface and surface geology in relation to the distribution of the ecological areas of the County, Alachua County is subdivided into several well-defined Physiographic Subdivisions. The Planning Parcel lies just west of the western mapped extent of the San Felasco Hammock Subdivision and along the boundary of the Haile Limestone Plain. As previously explained, due to the extensive subsurface perforated clays, the Project Site lies on the erosional boundary of the Cody Scarp (100–150 ft), where numerous active sinkholes, caves, and stream-to-sink systems occur (**Figure 9**). In addition, NO surface streams in the county flow west across the Cody Scarp without disappearing into the ground (Figure 9). Most of the large streams that originate in the county have the headwater source within the Northern Highlands Zone (>175 ft) and flow west across the San Felasco Zone (>150 ft) where they disappear into the ground.

Alachua County is divided into several well-defined Physiographic Sections, Districts, and Subdivisions (based on H. K. Brooks, 1981¹) as shown on Figure 9. In this coverage, the Project Site lies within the Florida Section of the Ocala District and within the San Felasco Hammock Subdivision. The San Felasco Subdivision transitions into the High Flatwoods Subdistrict (Northern Highlands), which is the final delineated nomenclature

¹ Brooks, H. K. 1981. *Physiographic subdivisions of Florida*. Map. IFAS, University of Florida.

used by Brooks (1981) within the published GIS database shown on Figure 9, Moving east from the Project Area, the geology of the San Felasco Hammock Subdivision forms the eastern extent of the Ocala Uplift District. This area then intersects a geologic area defined by the Sea Island District, which is part of the Atlantic Coastal Plain Section. In general, the two sections are related to the development history associated with the Gulf of Mexico and Atlantic Ocean, respectively. On Figure 9, **ERC** has additionally labeled the Sea Island District as the Northern Highlands, which is the Physiographic Subdivision used by Williams et al. (1977)² to describe this region extending through northeast Alachua County. Brooks (1981) did not define the Subdivisions in northeast Alachua County or any within the Sea Island District but did define Subdistricts in this area. The area labeled Northern Highlands on Figure 9 is defined as the High Flatwoods Subdistrict by Brooks (1981). In the map coverages shown on Figure 9, no Subdivisions are defined in the Sea Island District in the northeast area of the County. This is the area of the well-defined Pine Flatwoods communities.

Within the County, the High Flatwoods Subdistrict (Northern Highlands) generally extends from US 441 and 39th Avenue, east to US 301, and north to the Santa Fe River. This area is most distinguished by the extensive coverage of the Mixed Pine-Saw Palmetto Flatwoods Community that dominates throughout this region. The entire area is underlain by dense clays of various thicknesses and semi-permeable Spodic Horizons both of which give rise to the numerous flowing stream and interconnected Cypress Domes and Marshes distributed throughout this geologic feature.

As previously mentioned, historically Williams et al. (1977) divided Alachua County into physiographic zones or provinces to define geologic development. A generalized schematic of their classification from their geologic investigation is provided as **Figure 10**. Unfortunately, this Figure only includes the western part of the County but does show the Northern Highlands western boundary in relation to the Northern Highlands Transition Zone (Cody Scarp) and the Western Vally where the overlying Hawthorn Formation was eroded as a result of Pleistocene Sea Level Rises that exposed the underlying Ocala Limestone. Within this classification, the western boundary of the Northern Highlands is defined as the Northern Highlands Marginal Zone. *This is where the Planning Parcel occurs.* This zone represents the western facing slope of the Cody Scarp and where the majority of the large surface streams in the County disappear.

The elevation profiles that represent west-to-east cross-sections through the County provided by Williams et al. (1977) are shown on **Figure 11**. These show the significant

² Williams, Kenneth E., David Nicol, and Anthony F. Randazzo. 1977. *Report of Investigation No. 85, The Geology of the Western Part of Alachua County, Florida*. Bureau of Geology. Florida Department of Natural Resources, Tallahassee.

elevation changes along the Cody Scarp represented by the Northern Highlands Marginal Zone that separates the Northern Highlands to the east and the Western Valley to the west. The Cross County Fracture Zone within the Marginal Zone travels northwest to southeast through the entire County (**Figure 12**). In this area, large stream-to-sink systems are found, which were previously defined on Figure 9 in relation to the Project Site. **No** streams in Alachua County flow across this fracture zone without disappearing into the ground, including the Santa Fe River.

NRCS Soils Mapping

The NRCS soils mapping unit coverage for the Planning Parcel and surrounding area is provided as **Figure 13**. Based on this coverage, the Planning Parcel is underlain by well-drained to poorly drained soils represented by six (6) mapping units (**Table 2**). With the exception of Bivans Sand, which is an Alfisol, the remaining soil series are Ultisols. All soils have a shallow subsurface Argillic (clay) horizon that begins within 15 inches below the surface and extends throughout the profile depth of 80+ inches, dependent on the unit. All onsite soils would tend to perch rainfall at the surface for short periods of time. There are some undefined mapping units on site that have dense clay exposed at the surface and others have limerock within 2 ft of the surface. The areal extent of these soils is small but can locally affect the drainage in the immediate area. It should be stressed that within any of the given mapping units, the subsoil horizons can be highly variable, which is characteristic of lands contained within the geographical extent of the Cody Scarp. Typically, on sites within this area of the County, soils that have a deep clay layer or no clay within the upper soil profile are dominated by or were historically dominated by Sandhill Communities or Mesic Hammock Communities. However, on this site these historical communities have been removed. On sites or in areas of sites that have clay near the surface, clay-loving tree species such as sweetgum can become dominant with other clay-loving species to include box elder, winged elm, hackberry, live oak, pignut hickory, and southern magnolia also being present and being a large part of the canopy cover. So, in undisturbed habitats, the plant community will describe the characteristics of the underlying soil mapping units. The slopes of this site have clay at or near the surface and generally are mapped as Bivans Sand, 5 to 8 or 8 to 12 percent slopes. These areas have a preponderance of sweetgum cover.

Table 2. Description of Soil Mapping Units within the Planning Parcel

Mapping Unit No.	Mapping Unit Name	Drainage Class	Depth (in.) to Confining Layer
8	Millhopper Sand, 0 to 5 Percent Slopes	Moderately Well Drained	59–86"
30	Kendrick Sand, 2 to 5 Percent Slopes	Well Drained	26–73"
73	Kendrick Sand, 5 to 8 Percent Slopes	Well Drained	26–73"

Mapping Unit No.	Mapping Unit Name	Drainage Class	Depth (in.) to Confining Layer
75	Blichton Sand, 5 to 8 Percent Slopes	Poorly Drained	28–62"
76	Bivans Sand, 5 to 8 Percent Slopes	Poorly Drained	15–45"
77	Bivans Sand, 8 to 12 Percent Slopes	Poorly Drained	15–45"

The results of the data obtained from the NRCS Feature Point Database are provided on **Figure 14**. These data points indicate surface water depression areas or sinkholes that were shown within the original NRCS soil survey published for Alachua County. The onsite data shows several landscape depression data points on the Planning Parcel that are included in this database. The areas indicated on the map were observed in the field and all areas are ancient, relic, sand- and clay-filled closed depressions. *The only open onsite depression is within a designated Conservation Management Area (CMA) along the east side of the terminus of NW 118th Drive. This is an open sink that was part of a small stream-to-sink drainage that existed prior to development.*

FEMA Flood Zone

The FEMA coverage for the Project Site and surrounding area is shown on **Figure 15**. The mapped coverage shows that the locally occurring FEMA Flood Plain area is designated as Zone “X” and overlays the entire upland area of the Planning Parcel. Zone “X” lies outside of the modeled 100-year flood event. However, the small onsite relic depressions may flood for short periods during intense and prolonged rain events. On the Planning Parcel, there is one area designated within the flood zone that corresponds to the sinkhole area described above. This area is currently within a protected CMA and will not be disturbed.

National Wetlands Inventory (NWI) and Alachua County Composite Wetlands Database

The **NWI** and Alachua County Composite Wetlands database coverages are provided on **Figure 16**. Both these database coverages indicate **NO** wetlands or surface waters on the site or within vicinity of the Project Site. In the aerial view of Figure 16, the mapped surface waters may correspond to stormwater features that occasionally flood or historical rock mines that have water levels that generally reflect the surface of the Floridan aquifer.

High Aquifer Recharge Areas

The Planning Parcel shown in relation to the perforated and unconfined areas of the Floridan aquifer is shown on **Figure 17** and in relation to the vulnerability to contamination of the aquifer on **Figure 18**. The Planning Parcel occurs within the

perforated zones of the Floridan aquifer where varying layers of clayey surface sands and dense Hawthorn clays overlay the Floridan and surficial aquifers. The general area of the Project Site is shown to be in a High Aquifer Recharge Area of greater than 12 inches per year (Figure 17). Due to the underlying clays throughout the parcel, rainwater would tend to run downhill and percolate into the aquifer in the relic sinkhole depression, or waters will flow across the clays until the clay lens disappears and then downward percolation of water is facilitated. In these depression areas where surface waters can potentially have direct contact with the underlying limestone, recharge rates would be expected to be greater. However, regardless of how this is interpreted, in areas where dense clay occurs, lateral flow on this site to downstream areas would potentially be greater than vertical percolation rates through dense surface and subsurface clays.

Within the unconfined area of the Floridan aquifer where Pleio–Pleistocene sands overlay the Ocala Limestone group, Hawthorn erosional clays are present, but clay coverage is discontinuous allowing some flows through sand to occur directly to the aquifer. Within the perforated zone shown on Figures 17 and 18, the clay layers associated with the dense Hawthorn clay formation are perforated; however, pinnacles of limerock and clay reach the surface. In those areas, sinkholes quite often form, and surface water steadily flows directly to the Floridan aquifer. The perforated zone that is, in part, associated with the western sloping face of the Hawthorn Formation (Cody Scarp) gives rise to a number of large stream-to-sink systems such as the Santa Fe River, Hogtown Creek, and Mill Creek, among others. Due to the general absence of continuous clay within the unconfined area (Western Valley Region), characteristic streams do not form but sinkholes are numerous. In these areas, drastic vulnerability to detrimental surface inflows or runoff, precipitation, and other direct inflows occur. A schematic showing the general recharge conditions within the unconfined, perforated, and confined areas of the County is shown on **Figure 19**. The locations of large known sinkholes and stream-to-sink systems in the region are shown on Figure 9, but this coverage does **NOT** by any means include all the features in the area.

Published Listed Species Occurrence Data

Federal Review Pursuant to Section 7 of the Clean Water Act (CWA)

There are **No** Wetlands on site that will be affected by development. There are intermittent and ephemeral surface water drainages that flow only in response to rainfall and do not represent drainages that have an average water table at or above the surface. So, these features do not represent habitats that do or would support life cycles of species that depend on wetlands or surface waters for survival or reproduction. If Federal Wetland review of this site were required pursuant to **Section 404 of the Clean Water Act (CWA)**, then review of the impacts would historically have been required by the

U.S. Army Corp of Engineers (ACOE), and the ACOE would have requested consultation with the U.S. Fish and Wildlife Service (FWS) through **Section 7 of the Endangered Species Act (ESA)** to address possible effects on Federally Listed Wildlife species. Since the passage of the **State 404 Assumption Program**, it is not exactly clear how the **Section 7** process will be initiated by the State.

The Project Site will not affect any federally or state listed species; however, a comprehensive site review was conducted to determine if species were present, and an extensive data review was performed to determine the historical or extant reported species occurrences for this area of the County. Therefore, the following report format specifically addresses Endangered Species review of the Project Site and adjacent areas that would be specifically required by **Section 7**. For Projects that may require alterations to the **FEMA** floodplain and subsequent map revision, the Listed Species review employed in this report also addresses the requirements that would satisfy **FEMA** if floodplain alterations were required for Map Revisions; therefore, the procedure provided below has multiple applications for federal and state development applications.

The following report format also specifically addresses Endangered Species review of the Project Site and adjacent areas that would be required by **HUD** for applications requiring federal assistance for low-income housing, etc. This Project has no planned low-income housing provisions, but the **HUD** review procedure provides a template for Listed Species review of Projects of this size and ecological location. No City in Alachua County nor the County itself have a specific procedure outlined for review of Listed Species Impacts. The procedure followed here, and the summary information provided, has been used by **ERC** for successful permitting review of many Projects within Alachua County and other counties in North Florida.

With respect to the requirements for Listed Species Review defined by **FWS**, the Florida Fish and Wildlife Conservation Commission (**FWC**), and the Development Regulations of the City of Gainesville and Alachua County, most listed species regulations involve occurrence and protection of unique, high-quality, undisturbed native habitats or habitats that retain the characteristic of the historical native plant communities. As such it can be stated that,

The Project Site or any Parcels directly adjacent to the Project Site do not contain any remaining Native or Natural Plant Communities or associated habitats that do support or could support any long-term viable populations for any large range requiring endangered or imperiled species known to occur within Alachua County, Florida, that would be adversely affected by the proposed Project Development. This does not mean that transient use of the site by Listed Species does not occur. However, the site does not contain suitable forage or nesting habitat to support

populations that have very specific habitat requirements or have large ranges for mating or forage. The Site and all habitats have been significantly altered by agricultural management and various development activities since prior to 1937 based on historical aerial photographic review. All habitats have been significantly altered by drainage, development, and conversion to silviculture and agriculture such that **NO** true resemblance to the native habitat and species occurrence exists.

The Project Site and areas surrounding the Project Site were historically dominated by two Native Plant community Types, described briefly as follows:

- (1) **Xeric Longleaf Pine-Turkey Oak-Wiregrass Community:** This is a Xeric High Pine habitat that is maintained by natural fire occurrence on a 2–3-year cycle. The historical extent of this community more-or-less corresponds to the present mapping distribution of the Candler Fine Sand, Gainesville Sands, and parts of the Tavares Sand soil mapping units or similar mapping units having deep sands underlain by no sub-surface clay layers. Soils having a confining layer that is sufficiently deep to allow for rapid percolation of rains with minimal times of having a water table near the surface may provide for maintenance of these Xeric habitats. Generally High Pine soils are deep, dry, sandy Entisols. This habitat type has historically been removed from this site and the surrounding area by past construction activities as well as clearing for pasture and silvicultural activities. In Alachua County, once the plow layer is disturbed and the roots of the historical vegetation are cleared and burned, these historical habitats never return to their native form. Instead, the sites become invaded by laurel oak (*Quercus hemisphaerica*), which is a native nuisance species that becomes the dominant canopy, subcanopy, and groundcover component of the vegetation cover and excludes colonization of the more desirable native species. Loblolly pine (*Pinus taeda*) replaces longleaf pine (*Pinus palustris*) as the dominant pine species. The groundcover is almost 100% covered by seedlings and saplings of the woody canopy species; therefore, there are **NO** areas of diverse herbaceous cover present. These successional communities are the dominant plant communities that now exist in the County. Their succession and persistence are evident by examination of historical aerial photo coverages and have been verified by performance of field surveys that confirm the successional, persistent, and widespread distribution of this community.
- (2) **Mesic-Calcareous Hammock:** This is natural native mixed Hardwood Mesic plant community that is characterized by a diverse mix of deciduous hardwood species to include swamp chestnut oak (*Quercus michauxii*), pignut hickory (*Carya glabra*), sweetgum (*Liquidambar styraciflua*), black cherry (*Prunus serotina*), sugar hackberry (*Celtis laevigata*), box elder (*Acer negundo*), American hornbeam (*Carpinus caroliniana*), eastern hop hornbeam (*Ostrya virginiana*), Carolina holly (*Ilex ambigua*), and eastern roughleaf dogwood (*Cornus asperifolia*). Evergreen canopy species are present but at low densities and include redbay (*Persea*

borbonia), sweetbay (*Magnolia virginiana*), cabbage palm (*Sabal palmetto*), and spruce pine (*Pinus glabra*). These communities rarely burn, are mesic in nature, and often occur on slopes. Often the water table may be very near the surface for short periods and flows across the surface clays often characterizes these communities that may be on shallow to very steep slopes. Within Alachua County, these communities are uniquely associated with the Hawthorn Formation along the Cody Scarp extending from elevations of 75 to 150 ft. Typical soils include the Arredondo fine sand and Bonneau fine sand, which are Ultisols and have a discontinuous subsurface clay layer. In addition, Cadillac, and Jonesville soils (Alfisols), which have subsurface clay layers, occur within this plant community. The Pedro soils (Ultisols), which have limestone exposed at the surface or is close to the surface mixed with clay, occur in these habitat areas south of the Project Area. These soils are in areas of limerock outcrops, sinkholes, caves, and chimneys and support Mesic-Calcareous Hammock vegetation. Similar to Sandhill habitats, when these areas are plowed and converted to pasture or silviculture, the historical community does not regenerate. Along the slopes of the creeks in east Alachua County this habitat type is found on soils with defined Argillic horizons that slope from the flatwoods to the creek channels. In areas where the water table is near the surface the habitat is best described as Hydric Hammock and the dominant groundcover generally changes from wiregrass (*Aristida stricta*) to slender woodoats (*Chasmanthium laxum*).

Many of the imperiled reptile species in Alachua County are associated with native Sandhill habitats or fire-maintained Flatwood habitats, which are now only very rarely found in historical pristine condition. These natural historical habitats have been totally removed from the immediate area of the Project Site; however, they did historically occur within the boundaries of the Project Sites, but NOT now.

“Therefore, development of the site as proposed will not disturb or destroy any Critical Habitat in this area or adversely affect any naturally occurring native habitat.”

The remaining sections of this Listed Species review will provide documentation to support this conclusion. The documentation includes onsite pedestrian review of all areas of the Project Site on multiple field days as well as extensive review of all Listed Species GIS databases prepared by the local, state, and federal governments for Alachua County, Florida. In addition, a list of the potentially occurring listed species on the site and surrounding areas as well as a list of Migratory Birds known for the area was obtained via an online **IPaC** (*Information for Planning and Consultation*) consultation performed for the Project area on 21 February 2022. The results of this consultation are discussed in this report and are provided in its entirety as received from the **FWS** in **Attachment 1**.

Requirements for Listed Species Review and Critical Habitat Impact Review

Section 7 of the Endangered Species Act of 1973 (ESA) requires all Federal agencies to use their authorities to conserve endangered and threatened species in consultation with the **USFWS**. This ‘proactive conservation mandate’ for Federal agencies is articulated in **Section 7(a)(1)**. **Section 7(a)(2)** contains a complementary consultation mandate for Federal agencies, as follows:

Section 7(a)(2) Mandate

This section directs all Federal agencies to insure that the actions they authorize, fund, or carry out do not jeopardize the continued existence of endangered or threatened species or destroy or adversely modify critical habitat. The **Section 7** implementing regulations (50 CFR Part 402) specify how Federal agencies are to fulfill their **Section 7(a)(2)** consultation requirements.

Section 7(a)(2) Responsibilities

Under the **Section 7** implementing regulations (50 CFR Part 402), Federal agencies must review their actions to determine whether they may affect endangered or threatened species or critical habitat. To accomplish this, Federal agencies must determine whether any listed species may be present in the Project Area and whether that area overlaps with critical habitat. If one or more listed species may be present in the action area or if critical habitat overlaps with the action area, agencies must evaluate the potential effects of their action. If no species or their critical habitat are present or affected, no consultation is required. Consultation will be either informal, ending with written concurrence from USFWS, or formal. Formal consultation concludes when USFWS delivers its biological opinion to the Federal agency.

Federal agencies must confer with the **USFWS** per **Section 7(a)(4)** of the **ESA** if any action is likely to jeopardize a species proposed for listing or to destroy or adversely modify proposed critical habitat. Critical habitat is a term used to define specific geographic areas that contain habitat features essential to the survival and conservation of Endangered or Threatened Species. Critical habitat areas often require specific management strategies to maintain or establish an existing habitat in a condition that supports or potentially supports an imperiled species. To determine whether either of these are likely, agencies may follow the same approach used for listed species and designated critical habitat (that is, evaluate the likely effects of their actions on any proposed species that may be present in the Project Area and on any proposed critical habitat that lies within or adjacent to the Project Area).

To this end, this report is provided to evaluate the potential effects that the Project may have on listed species using extensive field analysis integrated with multiagency GIS data

review of the Project Area and the vicinity surrounding the Project Area. In addition, online consultations were performed based on criteria outlined within an **IPaC** Consultation procedure (see **Attachment 1**).

Summary Information Regarding Threatened & Endangered Species in Florida

There are several agencies that have been delegated the authority to protect and preserve the threatened and endangered flora and fauna within the State of Florida. USFWS maintains a list of species afforded special protection by the ***Endangered Species Act of 1973 (16 U.S.C. 1531)***. The list is published in the ***List of Endangered and Threatened Wildlife and Plants, 50 CFR 17.11-12***. FWC maintains a list of the protected animals occurring within the state by authority of the ***Florida Endangered and Threatened Species Act of 1977 (Section 372.072, Florida Statutes [FS])*** and ***Chapter 68A-27, Florida Administrative Code (FAC), Rules Relating to Endangered and Threatened Species***. The specific policy of the Florida Endangered and Threatened Species Act of 1977 is declared as follows:

Subsection 2: Declaration of Policy—The Legislature recognizes that the State of Florida harbors a wide diversity of fish and wildlife and that it is the policy of this state to conserve and wisely manage these resources, with particular attention to those species defined by the Florida Fish and Wildlife Conservation Commission, the Department of Environmental Protection, or the U.S. Department of Interior, or successor agencies, as being endangered or threatened. As Florida has more endangered and threatened species than any other continental state, it is the intent of the Legislature to provide for research and management to conserve and protect these species as a natural resource.

The list of threatened and endangered animals protected by these laws is published in ***Section 68-27.003, .004, and .005, FAC***. The regulation of listed marine animals was historically delegated to the Florida Department of Natural Resources (FDNR); however, has since been reorganized into the Florida DEP. The ***Preservation of Native Flora of Florida Act (Sections 581.185, 581.186 [in part] and 581.201, FS)*** passed in 1978 declares a public policy of the State of Florida regarding native flora, as follows:

Subsection 1: Legislative Declaration—The Legislature finds and declares that it shall be the public policy of this state to: provide recognition of those plant species native to the state that are endangered, threatened, or commercially exploited; protect the native flora from unlawful harvesting on both public and privately owned lands; provide an orderly and controlled procedure for restricted harvesting of native flora from the wild, thus preventing wanton exploitation or destruction of native plant populations; encourage the propagation of native species of flora; and provide the people of this state with the information necessary to legally harvest native plants so as to ultimately transplant those plants with the greatest possible chance of survival.

To this end, the Florida Department of Agriculture and Consumer Services (FDACS) regulates the threatened and endangered plant species occurring within the state. As specifically authorized by **Chapter 5B-40, Preservation of Native Flora of Florida, FAC**, the **Regulated Plant Index** is published in **Section 5B-40.0055**. The Game Commission periodically releases a publication that summarizes animal species regulated by FWC and the USFWS. The publication is titled *Florida's Endangered Species, Threatened Species, and Species of Special Concern*. The federal lists of plants and animals are published in **50CFR 17.11-12** and the list of Florida's federally listed plant species is also published by the Florida Division of Forestry.

Alachua County, by authority of **Article 3, Significant Plant and Wildlife Habitat**, and **Article 4, Listed Plant and Animal Species Habitat**, of the ULDC regulates development in habitats where listed species occur or could potentially occur. Provisions within Articles 3 and 4 allow the County to require up to 25% of the upland portion be protected and set aside as primary conservation areas. Areas protected under Articles 3 and 4 are designated as CMAs and are further regulated via rules outlined in **Article 17, Conservation Management Areas (ULDC)** and potentially require that the property owner establish a conservation easement for the specific areas within the parcel. The owner is further responsible for development of a management plan and perpetual management of the area.

The City of Gainesville via provisions of **Sections 30-8.12(C)(11) and 30-8.11(E)** (2 February 2019) has adopted the County's template for listed species protection and provides protection of listed species and listed species habitats. Protective mechanisms include provision of CMAs with associated management plans as described in **Section 30-8.14**, LDC. Neither the County's nor the City's land development codes describe the protections warranted for individual species or habitats. These protections are defined on a case-by-case basis often in cooperation with the responsible federal or state regulatory entity.

Several other lists of the endangered and threatened fauna and flora are maintained for the State of Florida. The Florida Natural Areas Inventory (FNAI) maintains a list that summarizes the status and distribution of plant and animal species and natural communities within Florida. The FNAI is managed by The Nature Conservancy in cooperation with DEP. The lists compiled by the FNAI contain many species that do not occur on the State or Federal lists. The FNAI list as compiled is not subjected to the time-consuming administrative process required for listing for State and Federal protection. Therefore, these lists often reflect the up-to-date true status of species that may be in immediate peril. The FNAI species that are not State or Federally listed are not given legal protection.

An inventory of the statewide distribution of potentially threatened and endangered species was initiated in 1973 by the Florida Committee on Rare and Endangered Plants and Animals (FCREPA). The group published a several-volume series that contains detailed descriptions, distributions, and academic evaluations of species considered to be in peril. The FCREPA list contains many species in addition to the State and Federal lists; however, these additional species are afforded no legal protection. The FCREPA series offers the best compiled review of the biology of the imperiled biota of Florida to date. Beginning in 1986, revisions of the FCREPA volumes were initiated and continue to date.

To aid in review of the imperiled species that occur in Florida and the State and Federal Regulations that govern their management, these publications are available:

- Endangered and Threatened Species Act of Florida, Chapter 372.072, FS
- Rules Relating to Endangered and Threatened Species, Chapter 68A-27, FAC
- The Preservation of Native Flora of Florida, Chapter 581.185, FS
- Preservation of Native Flora of Florida, Chapter 5B-40, FAC
- Florida's Endangered and Threatened Species, December 2018

Results of County, State, and Federal Listed and Imperiled Species Database Reviews

Eagle Nest Locator and Wading and Waterbird Rookery Databases

- *American Bald Eagle (FNAI G5/S3)*

The results of the query of the Eagle Nest Locator and Water and Wading Bird Rookery Sites databases are provided on **Figure 20**. The results show that there are **NO** nests or extant rookeries within many miles of the Project Area. Construction of the site will **NOT** disturb any primary or secondary protective buffers for these features. There are **NO** wetlands or surface waters on site; therefore, there will be **NO** impacts to wetlands or surface waters that provide forage habitat for listed wading or waterbirds. Development of the site will have **NO** adverse effects on any eagle nesting site and **NO** adverse impact on water or wading birds.

Bald Eagles Nesting Sites—Project Effect: “No Effect”

Wading and Waterbirds, Rookeries / Forage Areas—Project Effect: “No Effect”

Federally Listed Species Occurrence Range Database

Federally Listed Bird Species

- Red-cockaded Woodpecker (Federally Endangered; FNAI G3/S2)
- Florida Scrub-Jay (Federally Threatened; FNAI G2?/S2)
- Wood Stork (Federally Threatened; FNAI G4/S2)
- Eastern Black Rail (Federally Threatened; FNAI G3G4/S2)

Results of the USFWS Federally Listed Bird Species database search for the Project Site and surrounding area are presented in the following sections and effects determinations are provided for each species.

Red-cockaded Woodpecker

The known existing and historical ranges of the red-cockaded woodpecker (RCW) in relation to the Project Site are shown on **Figure 21**. RCWs require well-managed, fire-maintained old growth pine flatwoods habitats for nesting and forage. In addition, relatively large expanses of this habitat type are required to support a breeding population. RCWs require large mature trees with red heart fungus within the heartwood for successful nesting. There are large pine trees in the area that may provide a suitable nesting area; however, the habitat to support this species, which is typically very specific, **DOES NOT** occur within the Planning Parcel or adjacent areas. Both the data from the FWS Observation Database and the FNAI Element Occurrence Tracking List indicate **NO** RCWs have been observed on the Planning Parcel or in this area of the County. The existing USFWS RCW occurrence observations are shown in relation to the Project Site on Figure 21. The database shows that RCWs historically occurred in areas of the County north of the airport and south of Waldo. However, these are historical colonies that have been extirpated. There are **NO** known colonies remaining in Alachua County. There is **NO** habitat on site to support this species. These data show that the current range of RCWs lies a considerable distance from the Project Site with a population occurring on Fort Blanding in Bradford and Clay counties northeast of Alachua County.

Red-cockaded Woodpecker—Project Effect: “No Effect”

Florida Scrub-Jay

The Florida Scrub-Jay Consultation Area along with delineated habitats and known observation locations is provided as **Figure 22**. The observations provided refer to studies performed from a 1992–1993 statewide survey. With respect to the Project Site, the closest historical known location lies within the Cedar Key Scrub ±70 miles southwest from the Project Site (not shown on Figure 22). There is a large population within the Ocala National Forest within Marion County southeast of Alachua County.

There is **NO** scrub-jay habitat on the Project Site and the Project will **NOT** affect any scrub-jay roosting or nesting habitat.

Florida Scrub-Jay—Project Effect: “No Effect”

Wood Stork

There were **NO** wood storks seen foraging on the site or any area around the site. There is No wood stork habitat in the vicinity of the Project Site. The Planning Parcel lies west of the Historical Regulated Forage Buffer for the River Styx Wood Stork Colony. However, this colony is **NO** longer active and is considered extirpated. There are **NO** wetlands or surface waters on site or on adjacent sites that support wood stork nesting or foraging. Therefore, there is **NO** forage or nesting habitat on site for wood storks that will be affected by Project Site development.

Wood Stork—Project Effect: “No Effect”

Eastern Black Rail

The eastern black rail was listed as a Federally Threatened Species on 9 November 2020. This species is distributed within the eastern and southeastern United States and requires wetland habitats and transitional habitats between wetland and upland grasslands for forage and reproduction. The eastern black rail has been reported in Alachua County in the past, primarily associated with Paynes Prairie and adjacent emergent ponds and wet prairies. The most recent reports of eastern black rail sightings in Alachua County are summarized in the “Checklist of the Birds of Alachua County” maintained by the Alachua Audubon Society, which contains results through 21 September 2020 and contains the following summary:

BLACK RAIL—Unknown status, possibly rare resident, e.g., Paynes Prairie, 9 Apr 1986, 1 Jun 1988, 18 Dec 1991, 5 Sep 1997. One breeding report, early 1900s: adult with three young, Paynes Prairie, early June.

There are **NO** reported listings after September 1997. There are **NO wetlands** located on the Project Site or immediately adjacent site that would support this species; therefore, there is **NO onsite habitat** to support this species.

Eastern Black Rail—Project Effect: “No Effect”

Project Effect: “No Effect” on Federally Listed Bird Species.

Federally Listed Reptile Species

- Eastern Indigo Snake (Federally Threatened, State Threatened; FNAI G3/S3)
- Gopher Tortoise (Federally Listed as Candidate Species in Florida Range, State Threatened; FNAI G3/S3)

Eastern Indigo Snake

The Project Site is within the historical and extant distribution range of the eastern indigo snake. The indigo snake inhabits a broad range of habitats in Florida but prefers gopher tortoise burrows or pocket gopher burrows within xeric habitats. There are **NO** gopher tortoise burrows or pocket gopher burrows on the site. There is **NO** natural native Xeric habitat within the Project Site with all historical Mesic to Xeric areas within and adjacent to the Project Area being significantly disturbed, and the native habitat type **NO** longer exists. Indigo snakes will use armadillo burrows for refuge; however, due to the high-water table, these are often filled with water for various periods. The Project Site is surrounded on the east, south, and west by high-density residential and commercial development, and development in several areas in the vicinity is on-going or planned in the near future. The Project Site is surrounded by residential access roads as well as a high-volume regional access road along the south perimeter designated as West Newberry Road. The north and west boundaries are large, cleared power line easements.

The site consists of very disturbed successional habitat with little readily available surface water, use of the site by large mammals is rare, and due to the absence of a well-defined diverse groundcover community, the site provides relatively poor habitat for small mammals, snakes, or other reptiles or amphibians. There is a minimal likelihood that indigo snakes may be transient occupants on this site, but the site only provides minimal forage or nest habitat. Within the Project Area it is possible but not probable that indigo snakes will be encountered at the time of site development; however, these populations are transient and very difficult to census. Therefore, the site should be developed consistent with the ***Standard Protection Measures for the Eastern Indigo Snake*** (USFWS August 13, 2013). To determine the probable EFFECT that development of the Project would have on the eastern indigo snake, the FWS “**Eastern Indigo Snake Programmatic Effect Determination Key**” was consulted. Use of the key indicates that the Project would “Not Likely Adversely Affect” (NLAA) the eastern indigo snake. The Project is covered with relatively poor successional habitat that has substantially less than 25 acres of natural Xeric Habitat and **NO** Potentially Occupied gopher tortoise burrows; therefore, the potential effects on the population are minimal or insignificant.

Eastern Indigo Snake—Project Effect: “Not Likely to Adversely Affect” (NLAA)

Gopher Tortoise (*Gopherus polyphemus*)

In Florida, the gopher tortoise and its burrow are protected under state law. This species has now been designated as a Candidate Species for Listing in its range located east of the Mobile River and Tombigbee River in Alabama. West of these rivers, the gopher tortoise is listed as Threatened in areas of Alabama, Mississippi, and Louisiana. Gopher tortoises generally occur in sandy, dry habitats with sparse canopy and abundant low growing herbaceous vegetation. They are commonly found in sandhills, pine flatwoods,

scrub, scrubby flatwoods, dry prairies, and several other generally dry habitats. On sites where natural fire has been suppressed, growth of dense woody trees and shrubs make it difficult for gopher tortoises to move about and find suitable food sources. Because gopher tortoises share their burrows with over 350 other species of animals, they are considered a keystone species.

There were **NO** gopher tortoise burrows found on site. The Project Site would not be considered Listed Species Habitat or Gopher Tortoise Habitat by the County due to the degraded condition of the habitat. Development of the site will have “**NO Effect**” on any gopher tortoise burrow or gopher tortoise population.

Gopher Tortoise—Project Effect: “No Effect”

Federally Listed Amphibian Species

- Striped Newt (*Notophthalmus perstriatus*) (FNAI G2G3/S2)
- Frosted Flatwoods Salamander (*Ambystoma cingulatum*) (Federal Threatened, FNAI G2; S1/S2)

Striped Newt

The Project Site occurs within the historical range of the striped newt and has historically been reported in Alachua County and adjacent counties. The striped newt is a Xeric-adapted species that typically inhabits fire-maintained scrubby flatwoods, sandhill, and scrub habitats. The striped newt is commonly associated with gopher tortoise habitat and is frequently found within burrows. This species depends on natural, ephemeral, isolated wetlands for breeding and reproduction and is extremely sensitive to the impacts that are cosmopolitan in this area, which include extensive soil disturbance, fire suppression, road construction, and disturbance of gopher tortoise burrows. It is unlikely this species occurs on site due to the absence of natural, ephemeral, emergent wetlands on the site or in adjacent areas due to the past disturbance in the area.

Striped Newt—Project Effect: “No Effect”

Frosted Flatwoods Salamander

The frosted flatwoods salamander is not shown to occur within Alachua County or adjacent counties in any State or Federal Database for Alachua County or the Project Area. There are **NO** historical reported species occurrences shown on any database within the Project Site boundaries and **NO** known occurrences have been reported in the area of the Project Site. The habitat for this species does not occur in the Project Area.

The frosted flatwoods salamander is a federally listed threatened species. The salamander inhabits Slash and Longleaf Pine Flatwoods having a wiregrass (*Aristida stricta*) groundcover with breeding occurring in small ephemeral ponds. Historically, two (2)

occurrences reported closest to Project Site have occurred in Bradford County, which is many miles north of the Site north of the Santa Fe River. The frosted flatwoods salamander was reported from Cypress Domes in Bradford County on 5 May and 1 December 1979. Subsequent sampling of the site where the species was reported occurred in 1993; however, **NO** individuals of the species could be found. Although the historical distribution of the species included Alachua and Bradford counties, currently the species is considered as extirpated from these counties with **NO** known extant populations occurring within Alachua, Marion, Duval, or Bradford counties. Within Florida, the current known distribution is believed to only include Franklin, Wakulla, Liberty, Jefferson, and Baker counties. Regardless of the current distribution, there is currently **NO** onsite habitat that will be disturbed that is suitable to maintain this species.

Frosted Flatwoods Salamander—Project Effect: “No Effect”

Federally Listed Crustacean Species

- Squirrel Chimney Cave Shrimp (Federally Threatened; FNAI G1/S1)

The squirrel chimney cave shrimp is a transparent cave-dwelling crustacean that is about 1.2 inches long. It was found in Squirrel Chimney in Alachua County in 1953. Since that time, it has been collected less than a dozen times and was last collected in 1973. Collection efforts in 1994–1996 of Squirrel Cave and several local cave systems revealed no sign or traces of the shrimp. Squirrel Chimney is a nearly vertical limerock chimney within the Haile Limestone Plain geographic subdivision in northwestern Alachua County. This chimney has several possible undocumented connections to other underground systems. This habitat is very specialized in the County and requires surface connections to subterranean caves. There are **NO** comparable habitats in the vicinity of the Project Site.

Squirrel Chimney Cave Shrimp—Project Effect: “No Effect”

Migratory Birds

The following migratory birds were documented within the **IPaC** consultation provided as **Attachment 1**. Migratory birds are designated for USFWS consultation and require protection for HUD and other Federal Related or Funded Projects. In addition, wetland impacts and impacts to critical habitats require oversight by the USFWS. During Section 7 consultation, the USFWS must evaluate the potential effects the project may have on migratory birds that potentially use the areas in and surrounding the Project Site. The birds that occur on this list are of particular concern because either (1) the birds are listed on the USFWS “Birds of Conservation Concern list” or (2) they warrant special concern in the area of the Proposed Project Site. Based on the information contained within the **IPaC** Consultation Report, there are **NO** Critical Habitats in the area of the Project Site under the jurisdiction of the USFWS. Brief comments related to the potential occurrence

of the Migratory Species that potentially occur in the County are provide within each species' section, as follows:

- **American Kestrel (*Falco sparverius paulus*) (State Threatened, FNAI G5S2):** This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA. Breeds Apr 1 to Aug 31.

Comment: The southeastern American kestrel is a State-listed species, and a permit is required to take a nesting location; it has a 450-ft Protective No Disturbance Buffer extending from nesting locations. The kestrel was not seen on or adjacent to the Project Site. Onsite habitats provide dead snags, but **NO** large oldfield areas exist that would support forage for this species. There are **NO** open habitats that provide for forage of this species. The only adjacent undeveloped properties surrounding the Project Site are currently being developed.

American Kestrel—Project Effect: “No Effect”

- **Bachman’s Sparrow (*Aimophila aestivalis*) (FNAI G3S3):** This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. Breeds May 1 to Sep 30.

Comment: from the “Checklist of the Birds of Alachua County,” Bachman’s sparrow is an uncommon resident of Alachua County that is considered vulnerable in the State of Florida. This habitat specialist generally requires fire-maintained mature to old growth natural longleaf pine forests that are not significantly affected by forest management. Sites that have mature well-maintained pine forests both on the site and in adjacent areas are the required preferred habitat. These birds also require a well-developed mature herbaceous groundcover with limited shrub and hardwood groundcover and mid-story components. This habitat type does **NOT** occur on the Project Site or in surrounding areas however habitat is available farther to the south within the Hickory Sink Strategic Ecosystem area.

Bachman’s Sparrow—Project Effect: “No Effect”

- **Bald Eagle (*Haliaeetus leucocephalus*) (FNAI G5S3):** This is not a Bird of Conservation Concern (BCC) in this area but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. Breeds Sep 1 to Jul 31.

Comment: there are **NO** eagle nests that will be affected by the project. There is **NO** forage habitat on the Project Site that support feeding and foraging of eagles. See discussion in Bald Eagle Nest section above.

Bald Eagle—Project Effect: “No Effect”

- **Great Blue Heron (*Ardea herodias occidentalis*):** This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA. Breeds Jan 1 to Dec 31.

Comment: The great blue heron is commonly found throughout wetland habitats in Alachua County. It requires wet habitats for forage and nesting. There are **NO** wetlands on the Project Site or in the vicinity of the Project Site that support forage or nesting of this species.

Great Blue Heron—Project Effect: “No Effect”

- **Henslow’s Sparrow (*Ammodramus henslowii*):** This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. Breeds elsewhere.

Comment: Henslow’s sparrow is a rare winter visitor in Alachua County and requires well-developed coastal marshes for breeding. In addition, the sparrow may use natural uncultivated grasslands for forage and breeding. The habitat requirements for this species do not exist on the Project Site.

Henslow’s Sparrow—Project Effect: “No Effect”

- **Lesser Yellowlegs (*Tringa flavipes*):** This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. Breeds elsewhere.

Comment: This species is a waterbird that forages and breeds in brackish and freshwater wetlands. Additionally, the species will use wet ponds, mud flats, and a wide variety of wetland habitats. There is **NO** wetland habitat on the Project Site that provides habitat for this species.

Lesser Yellowlegs—Project Site: “No Effect”

- **Prairie Warbler (*Dendroica discolor*) (G5T3S3):** This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. Breeds May 1 to Jul 31.

Comment: This species is defined as a common fall transient that is uncommon in spring and rare in winter in Alachua County. This species prefers upland shrub habitats or other successional habitats such as oldfield; however, open space appears to be the significant requirement of the habitat. The project does not provide this habitat type.

Prairie Warbler—Project Effect: “No effect”

- **Red-headed Woodpecker (*Melanerpes erythrocephalus*):** This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. Breeds May 10 to Sep 10.

Comment: The red-headed woodpecker prefers open savannah type deciduous woodlands with open understories as its primary nesting and foraging habitat. In Alachua County it is defined as a common summer resident but is uncommon in winter. The Project Site has small areas of mature deciduous canopy that escaped logging in the early 2000s; however, the understory in this area is comparatively

dense and not open or covered with natural native groundcover species. This species was not seen on site and not reported in previous studies.

Red-headed Woodpecker—Project Effect: “No Effect”

- **Short-billed Dowitcher (*Limnodromus griseus*):** This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. Breeds elsewhere.

Comment: This species is described in Alachua County as a rare spring transient and irregular transient in late summer and fall. These are primarily salt water and brackish waterbirds that do not breed in Alachua County. These birds prefer habitats unavailable on the Project Site or within the County.

Short-billed Dowitcher—Project Effect: “No Effect”

- **Swallow-tailed Kite (*Elanoides forficatus*):** This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. Breeds Mar 10 to Jun 30.

Comment: The swallow-tailed kite is described in Alachua County as a rare spring resident. In Alachua County, the kite prefers nesting and hunting along riparian systems with tall mature trees and is often in competition in these areas with red-shouldered hawks and barred owls. They frequently visit and nest at the same sites from year to year with several pairs nesting in proximity. The Project Site provides **NO** forage or nesting habitat for this species. There are **NO** wetlands on the site that provide habitat for this species.

Swallow-tailed Kite—Project Effect: “No Effect”

Additional Imperiled Species Listed by the State of Florida and the Florida Natural Areas Inventory (FNAI) Element Occurrence Database for Federal, State, and Non-Listed Imperiled Species

To provide for additional and more thorough review of imperiled species not listed by the Federal Government, additional data resources are evaluated to provide potential “Effects” analysis that the Project Development may have on locally occurring imperiled species. The Alachua County “**Summary of Rare and Regulated Plants**” provides habitat and listing information. It should be noted that in addition to species listed by the State and Federal governments, Alachua County through **Chapter 406** and **Chapter 78** and the City of Gainesville also consider species designated as **S1, S2 and S3** by **FNAI** to be regulated pursuant to the Listed Species and Listed Species Habitats Land Development Regulations. **FWC** periodically publishes a comprehensive list of all State regulated plant and animal species. This publication is entitled “**Florida’s Endangered and Threatened Species.**”

The FNAI maintains a list of all animals and plants that are listed or considered as imperiled in the State of Florida. This list, which includes all Federal and State Listed Species, is designated as the “Element Occurrence Database.” The graphical results of the FNAI Element Occurrence Database search for the Project Site and adjacent areas is shown on **Figure 23**. The database shows **NO** listed species have historically been reported from the designated Project Site except for the RCW notation that is described above. There is **NO** onsite habitat that supports species with requirements for large ranges of native habitat or require very specific native habitat types. **NO** significant habitat areas occur on site that are known to support imperiled species. From the data collected throughout the State, FNAI has created probability polygons that show the potential ranges of species occurring in the area (Figure 23). These ranges of occurrence should only be interpreted considering that the required habitat for the species exists in the area of interest (e.g., the Project Site). A Project Site may occur within a designated probability area but if the habitat does not occur then there is reduced chance of encounters with or occurrence of the designated species.

The FNAI database (Figure 23) shows that several listed species occur in west Alachua County in the vicinity of the Project Site. On the FNAI maps, they indicate that two (2) data sensitive elements occur southwest of the Project Site south of West Newberry Road and west of CR 241. These elements relate to **Grants’ Cave** and **Saviour Caves**, which are part of a contiguous cave system occupied by the largest Southeastern Brown Bat population in Florida. Grants’ Cave is a maternity cave established and currently maintained by the Brown Bat population. Development of the Project Site will have **NO** adverse effects on these caves.

There are several imperiled species that may have been historically present within the general area of the Project Site and adjacent areas or may be potentially present as transient visitors to the site. However, the habitat requirements for these species no longer exist in the area. Species that may have historically occurred on the Planning Parcel or in adjacent areas are briefly described, as follows:

Mammals

- **Sherman’s Fox Squirrel (*Sciurus niger shermani*) (State Species of Special Concern, FNAI G5T5/S3):** The fox squirrel typically occupies Xeric areas that are frequently burned and that have numerous mature oaks and pines distributed throughout the habitat. They can also inhabit residential yards with large oaks and pines. They will move to avoid the direct impacts of development. Fox squirrels in disturbed Xeric habitats such as pastures are often found in large fence row trees where water troughs are located for cattle. If the water source is removed the squirrels will vacate the area. Fox squirrels **DO NOT** occur on sites located in the

vicinity of the Project Site or within the Project Site. None were seen during the site survey.

Sherman's Fox Squirrel—Project Effect: “No Effect”

- **Florida Black Bear (FNAI G5T4/S4):** The general forage range of the Florida black bear in and around the Project Site is provided on **Figure 24**. Within the area, due to the large areas of undeveloped habitats north of the Project Area, encounters with black bears would be considered as occasional to common. Areas where nuisance encounters with black bears have been reported are also shown on Figure 24. Several nuisance reports are shown east of the general Project Area. On the Project Site, it is likely that chance encounters with transient black bears may occur but there is **NO** black bear habitat present, and the development of the parcels will not adversely affect Black Bears.

Florida Black Bear—Project Effect: “No Effect”

Reptiles

- **Eastern Diamondback Rattlesnake (*Crotalus adamanteus*) (FNAI G4/S3):** The eastern diamondback rattlesnake is found throughout Florida and generally may occur anywhere on the Project Site, especially within armadillo or other mammal burrows. There is a lack of suitable habitat on site to support growth and reproduction of this species. There is a paucity of fruit-producing blackberry vines that attract ground-dwelling birds like quail that are prey for this species. There is **NO** habitat to effectively support small to medium size mammals as there is **NO** surface water on site. In addition, the site is relatively devoid of a groundcover of herbaceous species that provide food for small mammals and birds.

Eastern Diamondback Rattlesnake—Project Effect: “No Effect”

- **Short-tailed Snake (*Stilosoma extenuatum*) (State Threatened, FNAI G3/S3):** The short-tailed snake inhabits xeric habitats, primarily Longleaf Pine-Turkey Oak Sandhills. The Project Site does **NOT** have native Xeric habitat types with open sandy soil. It is unlikely this species occurs on site or that a population can be sustained on site given the present and past land management practices. The species has not been documented on site (FNAI database), but the snakes live primarily underground and are difficult to census. They have historically been reported in the vicinity of the existing Proposed Development. There is currently **NO** onsite habitat to support this species and significant residential, commercial, and road development within the local area precludes the maintenance of a viable reproducing population in the area.

Short-tailed Snake—Project Effect: “No Effect”

- **Florida Pine Snake (*Pituophis melanoleucus mugitus*) (State Threatened, FNAI G4/S3):** The pine snake is a rare inhabitant of xeric communities. There are

NO preferred natural habitat types for this species remaining on site and there are **NO** areas of the site that have a population of gopher tortoise and pocket gopher burrows. Pine snakes prefer pocket gopher burrows and, less frequently, gopher tortoise burrows for refuge. There is **NO** onsite habitat to support this species. A historical sighting of a pine snake was reported southeast of the site in the FNAI database. However, **NO** sightings have been reported on this site. There is **NO** habitat on site for this species and all historical habitats on adjacent sites have been altered.

Florida Pine Snake—Project Effect: “No Effect”

- **Southern Hognose Snake (*Heterodon simus*) (FNAI G2/S2S3):** The primary habitat for the southern hognose snake is sandhill and sandy soil, open hammocks, and scrub. These native habitat types **DO NOT** occur on site or remains in areas surrounding the Project Site. This species has not been reported for the immediate area of the site and it is unlikely that a breeding population is present near the proposed development.

Southern Hognose Snake—Project Effect: “No Effect”

- **Striped Newt (*Notophthalmus perstriatus*) (FNAI G2G3/S2)**
- **Gopher Frog (*Rana capito*) (FNAI G3/S3)**

The Project Area occurs within the historical range of the striped newt and gopher frog. The striped newt and gopher frog are Xeric-adapted species that typically inhabit scrubby flatwoods, sandhill, and scrub habitats. These species are commonly associated with gopher tortoise habitat and are frequently found within burrows. Both species depend on natural, ephemeral, isolated wetlands for breeding and reproduction. These species are extremely sensitive to the impacts that are cosmopolitan in this area, which include extensive soil disturbance, fire suppression, road construction, and disturbance of gopher tortoise burrows. It is unlikely these species occur on site due to the absence of natural ephemeral emergent wetlands on the site or in adjacent areas and the absence of suitable fire maintained xeric habitat and minimal occurrence of gopher tortoise burrows.

Striped Newt—Project Effect: “No Effect”

Gopher Frog—Project Effect: “No Effect”

Birds

- **Little Blue Heron (*Egretta caerulea*) (State Threatened, FNAI G5/S4):** This wading bird uses wetland emergent or wet prairies for habitats but is commonly found in excavated ponds or roadside ditches. There are **NO** wading bird habitats within the site or immediately adjacent areas. Stormwater ponds on adjacent developments or on the South Pointe previously developed area may provide transient habitat for this species. In addition, newly created storm ponds as a result

of development of the Project Site may provide additional minimal habitat for this species.

Little Blue Heron—Project Effect: “No Effect”

- **Florida Sandhill Crane (*Grus canadensis pratensis*) (State Threatened, FNAI G5T2/S2):** Sandhill cranes are seen frequently around lakes, wetlands, and storm ponds in residential areas or roadside areas with maintained yard grass perimeters. There is nesting habitat for this species in the regional area but not on the site or adjacent properties. There is **NO** natural habitat for this species on the Project Site.

Florida Sandhill Crane—Project Effect: “No Effect”

- **Southeastern American Kestrel (*Falco sparverius paulus*) (State Threatened, FNAI G5T4/S3):** The southeastern American kestrel is a State-listed species that requires a permit to take a nesting location and has a 450-ft Protective No Disturbance Buffer from nesting locations. The kestrel was not seen on or adjacent to the Project Site and not reported in previous studies. Onsite habitats provide dead snags, but **NO** large oldfield areas exist that would support this species. The only adjacent cleared, undeveloped properties surrounding the Project Site are currently being developed.

Southeastern American Kestrel—Project Effect: “No Effect”

Plants

- **Godfrey’s Swampprivet (*Forestiera godfreyi*) (FNAI G2S2; State Endangered):** This is an endangered shrub to small subcanopy tree that is found within the historical extent of Sugarfoot Hammock within the County. Remnants of this Mesic-Calcareous Hammock still exist but the areal extent has been substantially reduced in recent years. Godfrey’s swampprivet is found within several mesic to hydric habitats within the Hogtown Prairie section of the Hogtown Creek drainage. Extensive searches were performed of the Project Site as part of this ERA and **NO** individuals were found.

Godfrey’s Swampprivet—Project Effect: “No Effect”

- **Variable-leaf Crownbeard (*Verbesina heterophylla*) (G2/S2; State Endangered):** This listed plant species, a member of the Asteraceae (composite) family, is found in mesic flatwoods and dry woods in several north-central and northeast Florida counties and is considered endemic to northeast Florida. It is listed as Facultative Wet by the USFWS and FDEP. This species occurs within the Northern Highlands Province of the County. There is **NO** mesic or wet habitat on site to support this species and none were seen during the site survey.

Variable-leaf Crownbeard—Project Effect: “No Effect”

- **Florida Spiny-pod (*Matelea floridana*) (G2/S2; State Endangered):** This vine species, a member of the dogbane family (Apocynaceae), is typically found in mesic habitats. Florida spiny-pod may be encountered within various habitats throughout the County. This species is relatively common in Alachua County and occurs in the area of the Project Site, but none were observed during the field survey.

Florida Spiny-pod—Project Effect: “No Effect”

- **Angularfruit Milkvine (*Gonolobus suberosus*) (State Threatened):** This species is in the dogbane family and is a vine often found in the same habitats as Florida spiny-pod (they are, in fact, both very morphologically similar when not in flower). This species occurs within various habitats throughout the County generally in drier sites than Florida spiny-pod. This species occurs in the area of the Planning Parcel, but none were observed during the field survey.

Angularfruit Milkvine—Project Effect: “No Effect”

- **Cardinalflower (*Lobelia cardinalis*) (State Threatened):** This species is found in wetland areas and is listed as Facultative Wet (USFWS) and Obligate (FDEP). This imperiled species is rare within Alachua County but occurs within the northern areas of the Northern Highlands Province. The plant has not been reported as far south as the Project Site in the County. It is a rare inhabitant of herbaceous and forested wetlands located in the Pine Flatwoods area in the north and east part of the County.

Cardinalflower—Project Effect: “No Effect”

- **Hooded Pitcherplant (*Sarracenia minor*) (State Threatened):** This species is a wetland taxon and is listed as Obligate (USFWS) and Facultative Wet (FDEP) by the federal and state regulatory agencies. This species occurs within the Flatwoods of the Northern Highlands Province located in the north and eastern areas of the County.

Hooded Pitcherplant—Project Effect: “No Effect”

- **Florida Toothachegrass (*Ctenium floridanum*) (G2/S2; State Endangered):** This grass has been recorded and vouchered in several northeast Florida counties including Alachua County, which appears to be the southwestern limit of its range. It is a wetland species and is classified as Facultative Wet by both the USFWS and FDEP.

Florida Toothachegrass—Project Effect: “No Effect”

- **Eastern Sweetshrub (*Calycanthus floridus*) (G5/S2; State Endangered):** This small shrub has been found in the county within the Northern Highlands Marginal

Zone. It is also identified around residential areas where it is planted for ornamental use. This plant species was not encountered on the Project Site.

Eastern Sweetshrub—Project Effects: “No Effect”

- **Silver Buckthorn (*Sideroxylon alachuense*) (G1/S1; State Endangered):** Silver buckthorn occurs in upland hardwood forests around limerock sinks and on shell mounds. Lack of suitable habitat greatly reduces the probability of this species occurring in the area of the Planning Parcel. It was not seen during the Site surveys nor has been encountered during adjacent site surveys conducted in the past.

Silver Buckthorn—Project Effect: “No Effect”

- **Flyr’s Nemesis (*Brickellia cordifolia*) (G2G3/S2; State Endangered):** This upland species has been recorded within several miles of the Planning Parcel on the Spring Hill Properties; however, it has not been observed on site. It grows in dry, upland pine-oak woods but it does not thrive in areas that have been clear-cut and converted to pine plantations as are common on the Project Site.

Flyr’s Nemesis—Project Effect: “No Effect”

- **Red-margin Zephyrlily (*Zephyranthes simpsonii*) (G2G3/S2S3; State Threatened):** This species is a central and south Florida species and has not been vouchered for Alachua County; however, it has the potential to occur along roadside ditches and other damp grassy areas and has been reported as far north as Marion County. It is listed as Facultative by the USFWS.

Red-margin Zephyrlily—Project Effect: “No Effect”

- **Rainlily (*Zephyranthes atamasca* var. *treatiae*) (State Threatened):** This wetland species is classified as Facultative Wet by the USFWS and FDEP and has been vouchered in Alachua County; however, it has not been recorded in the area of the Planning Parcel. This taxon also includes the formerly separate species Treat’s rainlily (*Z. treatiae*), which has been taxonomically subsumed into *Z. atamasca* var. *treatiae*.

Rainlily—Project Effect: “No Effect”

- **Cinnamon Fern (*Osmundastrum cinnamomeum*) (State Commercially Exploited):** Cinnamon fern is found in many of the wetland areas throughout the County and is a commonly found plant species in north Florida wetlands and wet flatwoods. This is not an imperiled species; however, it is listed as Commercially Exploited in the Regulated Plant Index (Chapter 5B-40.0055 FAC). It is not found on this site.

Cinnamon Fern—Project Effect: “No Effect”

- **Royal Fern (*Osmunda regalis* var. *spectabilis*) (State Commercially Exploited):** Royal fern is equally as common as cinnamon fern and occurs in wetland areas throughout Florida. This is not an imperiled species; however, it is listed as Commercially Exploited in the Regulated Plant Index (Chapter 5B-40.0055 FAC). It is not found on this site.
Royal Fern—Project Effect: “No Effect”
- **Needle Palm (*Rhapidophyllum hystrix*) (State Commercially Exploited):** Needle palm is a wetland taxon that occurs in Hydric Hammocks, Mesic Hammocks, and Forested Wetlands. It is classified as Facultative Wet by the USFWS and FDEP. This is not an imperiled species; however, it is listed as Commercially Exploited in the Regulated Plant Index (Chapter 5B-40.0055 FAC). It has not been recorded on the Project Site.
Needle Palm—Project Effect: “No Effect”
- **Woodland Poppy Mallow (*Callirhoe papaver*) (G2/S2; State Endangered):** Woodland poppy mallow is a listed endangered species in Florida and occurs in Alachua County in a restricted area that includes the Project Area. This plant was previously reported at South Pointe in 2007 but the location it was found has since been developed. The habitat for this species no longer exists in the Project Area and it was not encountered during the field survey.
Woodland Poppy Mallow—Project Effect: “No Effect”

Invertebrates

- **Sugarfoot Moth Fly (*Nemopalpus nearcticus*):** This is an unlisted but very rare insect originally found in the Sugarfoot Hammock area and hence named for the site. Sugarfoot Hammock was a large expanse of Mesic Hammock habitat that historically occurred within and surrounding the Project Site. This habitat no longer exists on site. This moth has not been found in the area since it was originally described; however, it has subsequently been reported in the Gulf Hammock area.
Sugarfoot Moth Fly—Project Effect: “No Effect”

Results of Field Survey

The general results of the field survey are provided on **Figure 25** showing the GPS locations where site-specific data were recorded and categorized with respect to the general type of data collected. The GPS icons represent data collected at **1,145** locations within the Project Site. The general conditions found on the proposed Project Site are shown in **Appendix A (Photos 1 through 13)** as referenced to photo stations provided on **Figures A-1 and A-2**. The common and botanical names of all plant species encountered

during the survey are provided in **Table 3**. Listed species surveys to include gopher tortoise surveys were performed in all areas where GPS icons are shown on Figure 25.

Plant Communities, Regulated Resources and Non-Regulated Resources Occurring within the Project Sit

Mapping of Plant Communities and Regulated and Non-Regulated Resources

The distribution of Plant Communities to include Regulated and Non-Regulated Resources on the Project Site are shown on the Plant Community map provided as **Figure 26**. The Project Site lies within the mapped extent of the *Pine Hill Forest Strategic Ecosystem (Figure 27)*. KBN Golder (1996) had originally mapped the Plant Communities as homogeneous and composed of one (1) plant community designation defined as Upland Pine Forest (Mesic Uplands) (**Figure 28**). This terminology is loosely and generally based on the FNAI classifications that are based on natural undisturbed habitats. The KBN map differs substantially from the map provided as Figure 26, which is based on ground verified delineation of habitats. The general nature of the habitats defined by KBN Golder (1996) simply indicates that the map was constructed from review of aerial photography indicating they probably did not visit this site when preparing the Pine Hill Forest Strategic Ecosystem Overlay.

Previous Set-aside Determination

The site was previously reviewed by other consultants to establish the occurrence of regulated resources to be conserved pursuant to the **SE** regulations defined in **Chapter 406**. Because this has been done by other consultants and approved by the County, ERC will not provide an in-depth review of the rules with respect to any previous site review effort. A previous set-aside was indicated (**Figure 29**), and the southern section of the set-aside was included as a **CMA** within the most recent **PD**. This set-aside, within the previous reports, is defined as an area of “*Higher Diversity*.” The reports do not identify this area as a significant habitat or Strategic Ecosystem Resource and argue against that designation, but it was considered for a **CMA** and designated as such.

Based on the results of the ERC field review, this area would not be defined as Significant Habitat as defined in **Chapter 406**, nor would this area be considered as an area of “*higher plant diversity*”. Other onsite habitats have the same species in similar occurrences. What this mapped area defines is a clayey Steep Seepage Slope dominated for the most part by deciduous species to include sweetgum (*Liquidambar styraciflua* L.), winged elm (*Ulmus alata* Michx.), box elder (*Acer negundo* L.), hackberry (*Celtis laevigata* Willd.), pignut hickory (*Carya glabra* [Mill.] Sweet), and Walter viburnum (*Viburnum obovatum* Walter). Clay is exposed at the surface throughout this habitat. This

area looks differently than surrounding areas primarily due to the groundcover of slender woodoats (*Chasmanthium laxum* var. *laxum* [L.] Yates), which is extensive or more prominent in these clay-dominated slopes. This area looks different, but this is primarily due to the relative paucity of oaks that dominate in the sandier areas of the site.

The mapped extent of this area (Figure 29) more or less defines the sweetgum-dominated clay slopes but not quite. The coverage missed two (2) intermittent drainages that are certainly part of this habitat and would be considered more significant areas of this drainage. On **Figure 30**, a modification of this habitat is shown that shows these two (2) drainages east and adjoining the set-aside area within the PD boundary. The north area is a landscape depression that is slightly separated from the original set-aside by a small ridge, but this receives intermittent surface runoff from the uplands to the east. The south added drainage is a well-defined steep slope and landscape depression that receives upland runoff and directs this flow to downhill areas where water eventually percolates into the ground. All drainages that have been defined on the maps presented here originate from stormwater runoff from the uplands that have eroded the clay slopes over time to create well-defined drainages. These drainages only flow during extreme rain events and are ephemeral. When it stops raining, they quit flowing. Under normal rain events, flow is not realized.

There are probably four (4) reasons why these drainages were not included in the original set-aside designation, as follows:

1. The original mapping was done in 2006 to 2008 when the site had been recently logged. Mechanical disturbance of the ground probably obstructed the visual view of the drainages and confused personnel doing the surveys.
2. The most recent site surveys for this analysis were conducted in January through March 2022 when there was an enormous amount of rainfall so wetlands and flow-ways that have not been wet for years were wet and flowing. So, these areas where water had recently flowed down the hill were apparent. The previous surveys were conducted within a 12-year drought period that extended from 2000 to 2012 so these areas were not wet, and no flow had occurred for years. There was nothing to see.
3. Handheld GPS technology at that time was in its infancy and not used by all consultants so it was difficult to tell exactly where you were on a site. This makes mapping of features where there is no apparent aerial signature very difficult.
4. The 2001 LiDAR topo was not readily available for digital use in ArcGIS prior to 2007, so the reviewers had no digital map references to see where the contours occurred. It is hard enough to map these resources and without LiDAR a major tool was missing in this effort. On **Figure 30** these drainages have been indicated as optional additional areas since the boundaries of the set-aside have already been

memorialized within the approved PD. However, the district could potentially claim these as surface waters.

The modified set-aside shown in Figure 30 as compared to that shown in Figure 29 shows a Significant Geologic Feature designated within the north end of the set-aside. This is a large sloping depression that has several obvious flow-ways within the mapped limits of the delineated polygon. These flow-ways are best defined as non-wetland surface waters. Flows in these areas are intermittent and ephemeral in response to very intense rain events. This is a sweetgum (*Liquidambar styraciflua* L.)-dominated drainage that eventually disappears into deeper sands at the west terminus of the delineated polygon. The northern geologic feature is shown connected to the southern CMA areas but a linear polygon (green color on map). This area represents the footprint of an existing forest road and is only included to provide a connection between the two areas. This is provided as an option for discussion as there is no significant habitat or prominent slope feature in this area that would define it as a Special Habitat.

Listed Species

There were **NO** listed Plant or Animal species seen during the field survey. **NO** gopher tortoise burrows were seen. Florida spiny pod (*Matelea floridana* [Vail] Woodson) was previously reported on the site; however, the most recent survey was conducted in winter when this species is not apparent due to die-back of aboveground foliage. It is expected that this species occurs on this site as it is common on similar sites throughout the County. Woodland poppy mallow (*Callirhoe papaver* [Cav.] A. Gray) had also been previously reported from an area south of the present site, which has now been developed. There is **NO** habitat for this species remaining within the Proposed Project Area.

Landscape Depressions

Several landscape depressions were found on site as shown on Figures 25 and 26. The depressions are relic ancient sinks and do not directly connect to the Floridan aquifer. Most of the depressions are incorporated into drainage polygons as defined on Figure 26. The only depressional feature that appears to be an open stream-to-sink system is within the current **PD** and is incorporated into a **CMA**. This area is designated as *Polygon 14* on Figure 26.

Wetlands and Surface Waters

The plant community map shows the distribution of one (1) small wetland area (*Polygon 22*) and one (1) man-made surface water area (*Polygon 2*) that would be delineated pursuant to **Chapter 62-340, FAC**. There are also two (2) very small wet spots each within *Polygons 12 and 21* that have wetland soils but are too small for delineation on the

scale of this map. *Polygon 2*, from the LiDAR topo, appears to be excavated from the hillside of a prominent sloping depression in the northwest corner of the site. This appears to have been constructed potentially in conjunction with the power line easement to the north or with an old road that runs south to north along the east side of the power line that runs along the entire western edge of the undeveloped areas of the Planning Parcel. The documentation of these resources does not specifically indicate that they are required to be set-aside and conserved. However, the resources delineated by ERC are provided for planning purposes. The man-made surface water features are currently exempt from regulation via **Chapter 406** providing certain conditions are satisfied.

Plant Community Descriptions

Mowed Pasture Grasses

The habitat occurs along the perimeter of the site, within the storm basin area, and in the roads and power line areas that extend through and around the site, which appear to be mowed at some frequency. It is routinely mowed to keep the existing yard grasses in a low-profile groundcover. The area is covered primarily by bahiagrass (*Paspalum notatum* Flugge) and bermudagrass (*Cynodon dactylon* L.]Pers.) but other grasses and ruderal herbs including beggarticks (*Bidens alba* [L.] DC.), Canada goldenrod (*Solidago canadensis* L. var. *scabra* T. & G.), common yellow woodsorrel (*Oxalis corniculata* L.), tall redtop (*Tridens flavus* var. *flavus* [L.] Hitchc.), chamber bitter (*Phyllanthus urinaria* L.), and creeping beggarweed (*Desmodium incanum* DC.) are distributed associated with Oldfield habitat where Oldfield herbs have overgrown the pasture grasses. This habitat has primarily been incorporated into the Developed Area mapped on the Plant Community Map.

Successional Mixed Upland Shrubs and Vines-Oldfield

The south-central area of the Planning Parcel has been cleared and filled with stockpiled overburden and topsoil and is characterized by having a paucity of canopy trees. These upland areas have been colonized by a host of upland herbs, sedges, and grasses. Groundcover is dominated by sawtooth blackberry (*Rubus pensilvanicus* Poir.), muscadine grape (*Vitis rotundifolia* Michx.), cabbage palm (*Sabal palmetto* [Walter] Lodd. ex Schult. & Schult. f.), broomsedge (*Andropogon virginicus* L. var. *virginicus*), dog fennel (*Eupatorium capillifolium* [Lam.] Small), bushy bluestem (*Andropogon glomeratus* [Walt.] BSP var. *pumilus* [Vasey] Vasey ex L.H. Dewey), wax myrtle (*Morella cerifera* [L.] Small), and several exotic trees and shrubs that are primarily dominated by paper mulberry (*Broussonetia papyrifera* [L.] Vent.). There is an extensive cover of elderberry (*Sambucus nigra* subsp. *canadensis* [L.] Bolli) that has colonized the exposed clay and silts within the stockpiled soils in this area. The vegetative cover is

impassable in many areas, requiring chopping of vegetation for pedestrian travel to avoid being injured by the briars.

Successional Oak-Mixed Hardwoods

This is the dominant plant community type occurring on the Planning Parcel. In this upland habitat slash pine (*Pinus elliottii* Engelm.) and loblolly pine (*Pinus taeda* L.) are substantially reduced in coverage with the canopy being dominated by many canopy and subcanopy sized oaks and hardwoods to include laurel oak (*Quercus hemisphaerica* Bartr.), water oak (*Quercus nigra* L.), small live oak (*Quercus virginiana* Mill.), sand live oak (*Quercus geminata* Small), sweetgum (*Liquidambar styraciflua* L.), box elder (*Acer negundo* L.), and black cherry (*Prunus serotina* var. *serotina* Ehrh.) with some southern magnolia (*Magnolia grandiflora* L.) being present. The groundcover in this habitat is dense, being composed of seedlings and re-sprouts of the existing canopy species in addition to having a host of vine, shrub, canopy, and groundcover species present. Greenbrier (*Smilax bona-nox* L.) and yellow jessamine (*Gelsemium sempervirens* [L.] J. St. Hil) are common components of the groundcover stratum. In the areas of the site associated with clay soils surrounding the landscape depressions, the oaks become less dominant, and the canopy consists of more hackberry (*Celtis laevigata* Willd.), sweetgum (*Liquidambar styraciflua* L.), box elder (*Acer negundo* L.), and pignut hickory (*Carya glabra* [Mill.] Sweet). Large live oaks (*Quercus virginiana* Mill.) are also found in association with the relic sinkholes, and these trees have been in place for a long period.

Successional Pine-Oaks-Mixed Hardwoods and Pine-Oak Mixed Hardwoods

These plant associations occur in various areas of the site. This is a successional community that developed on areas previously cleared for pasture or silviculture. In this habitat type, large canopy slash pine (*Pinus elliottii* Engelm.) and loblolly pine (*Pinus taeda* L.) have escaped logging activities and form a component of the canopy cover. Large live oak (*Quercus virginiana* Mill.), laurel oak (*Quercus hemisphaerica* Bartr.), and water oak (*Quercus nigra* L.) are present along with other hardwood species to include sweetgum (*Liquidambar styraciflua* L.), hackberry (*Celtis laevigata* Willd.), black cherry (*Prunus serotina* var. *serotina* Ehrh.), and southern magnolia (*Magnolia grandiflora* L.). Groundcover is composed primarily of re-sprouts and seedlings of woody species. Small oaks and vines and pine straw densely cover areas of the ground.

Successional Sweetgum-Mixed Hardwoods

These community areas are dominated by a deciduous canopy cover that is easy to identify on aerial photographs. The trees in this habitat are dominated by sweetgum (*Liquidambar styraciflua* L.), box elder (*Ace negundo* L.), hackberry (*Celtis laevigata*

Willd.), pignut hickory (*Carya glabra* [Mill.] Sweet), and winged elm (*Ulmus alata* Michx.). The understory has substantial coverage of rusty blackhaw (*Viburnum rufidulum* Raf.), and roughleaf dogwood (*Cornus asperifolia* Michx.) with beautyberry (*Callicarpa americana* L.) being distributed throughout. The difference in distribution of this community type compared to the Successional Oak Community is primarily related to the distribution of surface and sub-surface clays and the slope of the land. The oak-dominated areas that appear as evergreen or tardily deciduous on aerial photos are on sandy soils and flatter topography. The sweetgum (*Liquidambar styraciflua* L.)-dominated areas also have a more well developed herbaceous and grass understory composed of slender woodoats (*Chasmanthium laxum* var. *laxum* [L.] Yates) and longleaf Chasmanthium (*Chasmanthium laxum* var. *sessiliflorum* [Poir.] Wipff & S.D. Jones).

Disturbed Mesic Woods

This habitat type is the most structurally intact habitat on site and has a canopy, subcanopy, and groundcover characteristic of more natural habitats. These habitats generally were not included in the most recent logging activities and have larger trees and a more diverse canopy. In addition to the deciduous hardwood and oak species that have been described above, this area has large individuals of southern magnolia (*Magnolia grandiflora* L.), southern red oak (*Quercus falcata* Michx.), pignut hickory (*Carya glabra* [Mill.] Sweet), and mockernut hickory (*Carya tomentosa* Nutt.) as well as bastard white oak (*Quercus austrina* Small). These areas resemble intact Mesic Hammock Habitats but have been disturbed by past logging and land clearing activities; however, they represent the most natural forested areas on site. There is a large expanse of this habitat within the southeast area of the Planning Parcel (*Polygon 5*).

Surface Water Drainages

Several surface water drainages have been defined on the plant community map represented as *Polygons 12, 15, 17, and 21*. This designation is used to indicate that recent and historical surface water flows could be identified within the mapped area. These may be in the form of sloping drainages or well-defined landscape depressions. The dominant canopy or subcanopy in the area is defined in the specific polygon nomenclature but the dominant species can either be oaks or deciduous species.

Non-Wetland Surface Water Drainages

This habitat designation is used to define a group of excavated surface waters and natural landscape depressions that have evidence of flows; however, the underlying soils and vegetation is predominantly upland. These areas include *Polygons 2, 16, 18, 19, 20, and 23*. In these areas flows percolate into the ground and the upstream flow channels can only be observed during periods of extreme rainfall that is far above the normal rainfall

for a given period. The canopy and subcanopy are highly variable but consists of a mix of the habitats previously described.

Coverage of Exotic Vegetation

Exotic trees, shrubs, and herbs are distributed in various densities in several areas of the site. The general species distribution is summarized within **Table 3**. The most commonly occurring invasive groundcover species is scratchthroat (*Ardisia crenata* Sims). Also, there is a coverage of mimosa (*Albizia julibrissin* Durazz.), Japanese climbing fern (*Lygodium japonicum* [Thunb.] Sw.), and kudzu (*Pueraria montana* [Lour.] Merr. var. *lobata* [Willd.] Maesen & S.M. Almeida). No exotic species were noted to comprise a significant coverage in any area of the site.

Summary

The **ERA** conducted for this site has identified the ecological communities as well as potential Regulated Natural Resources. Development of this Project Site as proposed will be consistent with the rules and regulations defined within **Chapter 406** of the **ULDC**. **No** naturally occurring native regulated plant communities or listed species habitats will be adversely affected by the Project. The report addresses previously established set-aside areas and describes these in context of the existing condition. The intent of this report is not to re-define any previous work done on this site but describe the current condition of the site as related to local ecological, geological, and hydrological conditions.

Table 3. Plant species recorded at the South Pointe Planning Parcel, Alachua County, during field surveys conducted 2012 and January–February 2022.

Species Code	Scientific Name	Common Name	USFWS ¹ Classif.	FDEP ² Classif.	Floristic ³ Classif.
ACE RUB	<i>Acer rubrum</i> L.	Red maple	FAC	FACW	NC
ACE NEG	<i>Acer negundo</i> L.	Box elder	FACW	FACW	NC
AMB ART	<i>Ambrosia artemisiifolia</i> L.	Common ragweed	FACU	UPL	NW
AND PUM	<i>Andropogon glomeratus</i> (Walt.) BSP var. <i>pumilus</i> (Vasey) Vasey ex L.H. Dewey	Bushy bluestem	FACW+	FACW	NP
AND VIR	<i>Andropogon virginicus</i> L. var. <i>virginicus</i>	Broomsedge	FAC-	FAC	NP
API AME	<i>Apios americana</i> Medik.	Groundnut	FACW	---	NC
ARA SPI	<i>Aralia spinosa</i> L.	Devil's walkingstick	FAC	UPL	NC
ARD CRE	<i>Ardisia crenata</i> Sims	Scratchthroat	NL	FAC	EA
ASP PLA	<i>Asplenium platyneuron</i> (L.) Britton et al.	Ebony spleenwort	FACU	UPL	NC
BAC HAL	<i>Baccharis halimifolia</i> L.	Sea myrtle	FAC	FAC	NP
BID ALB	<i>Bidens alba</i> (L.) DC.	Beggarticks	NL	UPL	NW
BOT VIR	<i>Botrychium virginianum</i> (L.) Sw.	Rattlesnake fern	FACU	UPL	NC
CAL AME	<i>Callicarpa americana</i> L.	Beautybush	FACU-	UPL	NC
CAR cf DEB	<i>Carex cf debilis</i> Michx. (sterile)	White-edge sedge	FACW	FACW	NC
CAR LON	<i>Carex longii</i> Mack.	Long's sedge	OBL	FACW	NP
CAR GLA	<i>Carya glabra</i> (Mill.) Sweet	Pignut hickory	FACU	UPL	NC
CAR TOM	<i>Carya tomentosa</i> Nutt.	Mockernut hickory	NL	UPL	NC
CEL LAE	<i>Celtis laevigata</i> Willd.	Hackberry	FACW	FACW	NC
CHA TAN	<i>Chaerophyllum tainturieri</i> Hook.	Hairyfruit chervil	FAC	UPL	NC
CHA MAC	<i>Chamaesyce maculata</i> (L.) Small	Spotted sandmat	FACU	UPL	NW
CHA LAX	<i>Chasmanthium laxum</i> var. <i>laxum</i> (L.) Yates	Slender woodoats	FACW-	FACW	NC
CHA SES	<i>Chasmanthium laxum</i> var. <i>sessiliflorum</i> (Poir.) Wipff & S.D. Jones	Longleaf chasmanthium	FAC+	FAC	NC
CIN CAM	<i>Cinnamomum camphora</i> (L.) J.Presl	Camphortree	FACU	UPL	EA

Species Code	Scientific Name	Common Name	USFWS ¹ Classif.	FDEP ² Classif.	Floristic ³ Classif.
CIR HOR	<i>Cirsium horridulum</i> Michx.	Yellow thistle	FAC+	UPL	NP
CLE CAT	<i>Clematis catesbyana</i> Pursh	Satincurls	FAC+	---	NC
CNI STI	<i>Cnidioscolus stimulosus</i> (Michx.) Engelm. & A. Gray	Tread-softly	NL	UPL	NC
CON CAN	<i>Conyza canadensis</i> (L.) Cronq.	Dwarf horseweed	FACU	UPL	NW
COR ASP	<i>Cornus asperifolia</i> Michx.	Roughleaf dogwood	FACW-	UPL	NC
CRN FLO	<i>Cornus florida</i> L.	Flowering dogwood	FACU	UPL	NC
CYP OVA	<i>Cyperus ovatus</i> Baldwin	Pinebarren flatsedge	FACU+	FAC	NP
DIC ACU	<i>Dichanthelium acuminatum</i> (Swartz) Gould & Clark	Tapered witchgrass	FAC	UPL	NC
DIC BOS	<i>Dichanthelium boscii</i> (Poir.) Gould & C.A. Clark	Bosc's witchgrass	NL	UPL	NC
DIC COM	<i>Dichanthelium commutatum</i> (Schultes) Gould	Variable witchgrass	FAC	FAC	NC
DIC LAX	<i>Dichanthelium laxiflorum</i> (Lam.) Gould	Openflower witchgrass	FAC	UPL	NC
DIC POR	<i>Dichanthelium portoricense</i> (Desvaux ex Hamilton) B.F. Hansen & Wunderlin	Hemlock witchgrass	NL	UPL	NP
DIC CAR	<i>Dichondra caroliniensis</i> Michx.	Pony-foot	FACW-	FAC	NP
DIG ERI	<i>Digitaria eriantha</i> Steud.	Pangolagrass	FACU	UPL	EW
DIO BUL	<i>Dioscorea bulbifera</i> L.	Air-potato	NL	---	EA
DIO VRG	<i>Diospyros virginiana</i> L.	Common persimmon	FAC	FAC	NC
ELE ELA	<i>Elephantopus elatus</i> Bertol.	Florida elephant's-foot	NL	UPL	NC
ELE IND	<i>Eleusine indica</i> (L.) Gaertn.	Goosegrass	FACU	UPL	EW
ERA SP.	<i>Eragrostis</i> sp. (sterile)	Lovegrass	---	FAC	---
ERE HIE	<i>Erechtites hieracifolia</i> (L.) Raf.	Fireweed	FAC-	FAC	NW
ERI STR	<i>Erigeron strigosus</i> Muhl.	Daisy fleabane	FAC	UPL	NC
ERY HER	<i>Erythrina herbacea</i> L.	Coralbean	NL	UPL	NC
EUP CAP	<i>Eupatorium capillifolium</i> (Lam.) Small	Dog fennel	FACU	FAC	NW
EUP COM	<i>Eupatorium compositifolium</i> Walter	Yankeeweed	FAC-	FAC	NP
FRA AME	<i>Fraxinus americana</i> L.	White ash	FACU	UPL	NC

Species Code	Scientific Name	Common Name	USFWS ¹ Classif.	FDEP ² Classif.	Floristic ³ Classif.
GAL APA	<i>Galium aparine</i> L.	Spring cleavers	FACU	UPL	NC
GAL PIL	<i>Galium pilosum</i> Aiton	Hairy bedstraw	NL	UPL	NC
GAM PEN	<i>Gamochaeta pensylvanica</i> (Willd.) Cabrera	Pennsylvania everlasting	FACU-	UPL	EW
GEL SEM	<i>Gelsemium sempervirens</i> (L.) J. St. Hil.	Yellow jessamine	FAC	---	NC
HYP HYP	<i>Hypericum hypericoides</i> (L.) Crantz	St. Andrew's-cross	FAC	FAC	NC
ILE OPA	<i>Ilex opaca</i> var. <i>opaca</i> Aiton	American holly	FAC-	FAC	NC
IPO COR	<i>Ipomoea cordatotrilobata</i> Dennst.	Tievine	NL	---	NW
IPO PAN	<i>Ipomoea pandurata</i> (L.) G. Meyer	Man-of-the-earth	FACU	---	NC
JUN DIC	<i>Juncus dichotomus</i> Ell.	Forked rush	FACW	OBL	NP
JUN VIR	<i>Juniperus virginiana</i> L.	Red cedar	FACU-	UPL	NC
KUM STR	<i>Kummerowia striata</i> (Thunb.) Schindler	Japanese clover	FACU	UPL	EW
KYL BRE	<i>Kyllinga brevifolia</i> Rottb.	Shortleaf spikesedge	FACW	FACW	EW
LAC GRA	<i>Lactuca graminifolia</i> Michx.	Grassleaf lettuce	FACU	UPL	NW
LEP VIR	<i>Lepidium virginicum</i> L.	Poorman's pepper	FACU	UPL	NW
LIQ STY	<i>Liquidambar styraciflua</i> L.	Sweetgum	FAC+	FACW	NC
LON SEM	<i>Lonicera sempervirens</i> L.	Coral honeysuckle	FAC	---	NC
LUD MAR	<i>Ludwigia maritima</i> Harper	Seaside seedbox	FACW	FACW	NP
LYG JAP	<i>Lygodium japonicum</i> (Thunb.) Sw.	Japanese climbing fern	FAC	---	EA
MAG GRA	<i>Magnolia grandiflora</i> L.	Southern magnolia	FAC+	UPL	NC
MEL NIV	<i>Melanthera nivea</i> (L.) Small	Snow squarestem	FACU	FACW	NC
MIM STR	<i>Mimosa strigillosa</i> Torr. & A. Gray	Powderpuff	FAC	UPL	NC
MOR CER	<i>Morella cerifera</i> (L.) Small	Wax myrtle	FAC+	FAC	NP
MOR RUB	<i>Morus rubra</i> L.	Red mulberry	FAC	FAC	NC
NAN DOM	<i>Nandina domestica</i> Thunb.	Heavenly bamboo	NL	UPL	EA
NYS SYL	<i>Nyssa sylvatica</i> Marshall	Blackgum	FAC	UPL	NC

Species Code	Scientific Name	Common Name	USFWS ¹ Classif.	FDEP ² Classif.	Floristic ³ Classif.
OPL SET	<i>Opismenus setarius</i> (Lam.) Roem. & Schult.	Woodsgrass	FACU+	FAC	NC
OST VIR	<i>Ostrya virginiana</i> (Mill.) K. Koch	Eastern hophornbeam	FACU-	UPL	NC
OXA COR	<i>Oxalis corniculata</i> L.	Common yellow woodsorrel	FACU	UPL	NW
PAR QUI	<i>Parthenocissus quinquefolia</i> (L.) Planch.	Virginia creeper	FAC	---	NC
PAS NOT	<i>Paspalum notatum</i> Flugge	Bahiagrass	FACU+	UPL	EA
PAS SET	<i>Paspalum setaceum</i> Michx.	Thin paspalum	FAC	FAC	NP
PAS INC	<i>Passiflora incarnata</i> L.	Maypop	NL	---	NC
PHL DRU	<i>Phlox drummondii</i> Hook.	Annual phlox	NL	UPL	EW
PHY AME	<i>Phytolacca americana</i> L.	American pokeweed	FACU+	UPL	NW
PIN CLA	<i>Pinus clausa</i> (Chapm. ex Engelm.) Vasey ex Sarg.	Sand pine	NL	UPL	NC
PIN ELL	<i>Pinus elliottii</i> Engelm.	Slash pine	FACW	UPL	NC
PIN TAE	<i>Pinus taeda</i> L.	Loblolly pine	FAC	UPL	NC
POL PRO	<i>Polypremum procumbens</i> L.	Rustweed	FACU-	FAC	NP
PRU CAR	<i>Prunus caroliniana</i> (Mill.) Aiton	Carolina laurelcherry	NL	UPL	NC
PRU SER	<i>Prunus serotina</i> var. <i>serotina</i> Ehrh.	Black cherry	FACU	UPL	NC
PRU UMB	<i>Prunus umbellata</i> Elliott	Flatwoods plum	NL	UPL	NC
PTE AQU	<i>Pteridium aquilinum</i> (L.) Kuhn. var. <i>pseudocaudatum</i> (Clute) Clute ex. A. Heller	Tailed bracken	FACU	UPL	NC
PUE MON	<i>Pueraria montana</i> (Lour.) Merr. var. <i>lobata</i> (Willd.) Maesen & S.M. Almeida	Kudzu	NL	---	EA
PYR CAR	<i>Pyrrhopappus carolinianus</i> (Walter) DC.	Carolina desertchicory	NL	UPL	NW
QUE AUS	<i>Quercus austrina</i> Small	Bastard white oak	NL	UPL	NC
QUE FAL	<i>Quercus falcata</i> Michx.	Southern red oak	FACU-	UPL	NC
QUE GEM	<i>Quercus geminata</i> Small	Sand live oak	NL	UPL	NC
QUE HEM	<i>Quercus hemisphaerica</i> Bartr.	Laurel oak	NL	UPL	NC
QUE NIG	<i>Quercus nigra</i> L.	Water oak	FAC	FACW	NC
QUE VIR	<i>Quercus virginiana</i> Mill.	Live oak	FACU+	UPL	NC

Species Code	Scientific Name	Common Name	USFWS ¹ Classif.	FDEP ² Classif.	Floristic ³ Classif.
RHU COP	<i>Rhus copallinum</i> L.	Winged sumac	NI	UPL	NC
RIC BRA	<i>Richardia brasiliensis</i> (Moq.) Gomez	Brazil pusley	NL	UPL	EW
RUB CUN	<i>Rubus cuneifolius</i> Pursh	Sand blackberry	FACU	---	NP
RUB PEN	<i>Rubus pensilvanicus</i> Poir.	Sawtooth blackberry	FACU+	---	NP
RUB TRI	<i>Rubus trivialis</i> Michx.	Southern dewberry	FAC	---	NC
RUE CAR	<i>Ruellia caroliniensis</i> (J.F. Gmel.) Steud.	Carolina wild petunia	NL	FAC	NC
RUM HAS	<i>Rumex hastatulus</i> Baldw.	Hastate-leaved dock	FAC-	FACW	NW
SAB PAL	<i>Sabal palmetto</i> (Walter) Lodd. ex Schult. & Schult. f.	Cabbage palm	FAC	FAC	NC
SAM CAN	<i>Sambucus nigra</i> L. subsp. <i>canadensis</i> (L.) Bolli	Elderberry	FACW-	FAC	NC
SAN CAN	<i>Sanicula canadensis</i> L.	Canadian blacksnakeroot	FACU	UPL	NC
SCL TRI	<i>Scleria triglomerata</i> Michx.	Tall nutgrass	FACU+	FACW	NC
SEN OBT	<i>Senna obtusifolia</i> (L.) H.S. Irwin & Barneby	Sicklepod	NL	UPL	NW
SER REP	<i>Serenoa repens</i> (Bartr.) Small	Saw palmetto	FACU	UPL	NC
SET PAR	<i>Setaria parviflora</i> (Poir.) Kerguelen	Knotroot foxtail	FAC	FAC	NP
SID RHO	<i>Sida rhombifolia</i> L.	Cuban jute	FACU	UPL	NW
SID LAN	<i>Sideroxylon lanuginosum</i> Michx.	Gum bully	FACU	UPL	NC
SMI AUR	<i>Smilax auriculata</i> Walter	Earleaf greenbrier	FACU	---	NC
SMI BON	<i>Smilax bona-nox</i> L.	Greenbrier	FAC	---	NC
SMI GLA	<i>Smilax glauca</i> Walt.	Wild sarsaparilla	FAC	---	NC
SMI LAU	<i>Smilax laurifolia</i> L.	Bamboo vine	FACW+	---	NC
SMI SMA	<i>Smilax smallii</i> Morong	Jackson vine	FACU	---	NC
SOL CHE	<i>Solanum chenopodioides</i> Lam.	Black nightshade	NL	UPL	NC
SOL VIA	<i>Solanum viarum</i> Dunal	Tropical soda apple	NL	UPL	EW
SOL SCA	<i>Solidago canadensis</i> L. var. <i>scabra</i> T. & G.	Canada goldenrod	FACU	UPL	NP
SOL LEA	<i>Solidago leavenworthii</i> Torr. & A.Gray	Leavenworth's goldenrod	FAC+	FACW	NC

Species Code	Scientific Name	Common Name	USFWS ¹ Classif.	FDEP ² Classif.	Floristic ³ Classif.
SPO IND	<i>Sporobolus indicus</i> (L.) R. Br.	Smutgrass	FACU+	UPL	EW
THE DEN	<i>Thelypteris dentata</i> (Forsk.) E. St. John	Downy shield fern	FACW	FACW	NC
THE KUN	<i>Thelypteris kunthii</i> (Desv.) C.V. Morton	Southern shield fern	FACW	FACW	NC
TOX RAD	<i>Toxicodendron radicans</i> (L.) Kuntze	Poison ivy	FAC	---	NC
TRI SEB	<i>Triadica sebifera</i> (L.) Small	Popcorn tree	FAC	FAC	EA
TRI DAC	<i>Tripsacum dactyloides</i> (L.) L.	Eastern gamagrass	FAC+	FAC	NC
URE LOB	<i>Urena lobata</i> L.	Caesar-weed	FACU	UPL	EW
VER BRA	<i>Verbena brasiliensis</i> Vell.	Brazilian vervain	FAC-	UPL	EW
VER SCA	<i>Verbena scabra</i> Vahl.	Harsh vervain	FACW+	FACW	NC
VER VIR	<i>Verbesina virginica</i> L.	White crownbeard	FACU	FAC	NC
VIB RUF	<i>Viburnum rufidulum</i> Raf.	Rusty blackhaw	FACU	UPL	NC
VIT AES	<i>Vitis aestivalis</i> Michx.	Summer grape	FAC-	---	NC
VIT CIN	<i>Vitis cinerea</i> (Engelm.) Engelm. ex Millardet var. <i>floridana</i> Munson	Florida grape	FAC+	---	NC
VIT ROT	<i>Vitis rotundifolia</i> Michx.	Muscadine	FAC	---	NP
WAH MAR	<i>Wahlenbergia marginata</i> (Thunb.) DC.	Asiatic bellflower	NL	UPL	EW

¹ USFWS (United States Fish and Wildlife Service) Classifications: OBL = obligate wetland species; FACW = facultative wetland species; FAC = facultative species (neither wetland nor upland); UPL = upland species; NL = not listed in the federal list; NI = non-indicator species

² FDEP (Florida Department of Environmental Protection) Classifications: OBL = obligate wetland species; FACW = facultative wetland species; FAC = facultative species (neither wetland nor upland); UPL = upland species; "----" = vine (non-indicator species)

³ Floristic Classifications (a measure of relative desirability): NC = Native Characteristic species (highly desirable); NP = Native Pioneer species (highly desirable); NW = Native Weedy species (slightly desirable); EW = Exotic Weedy species (undesirable); EA = Exotic Aggressive species (very undesirable)





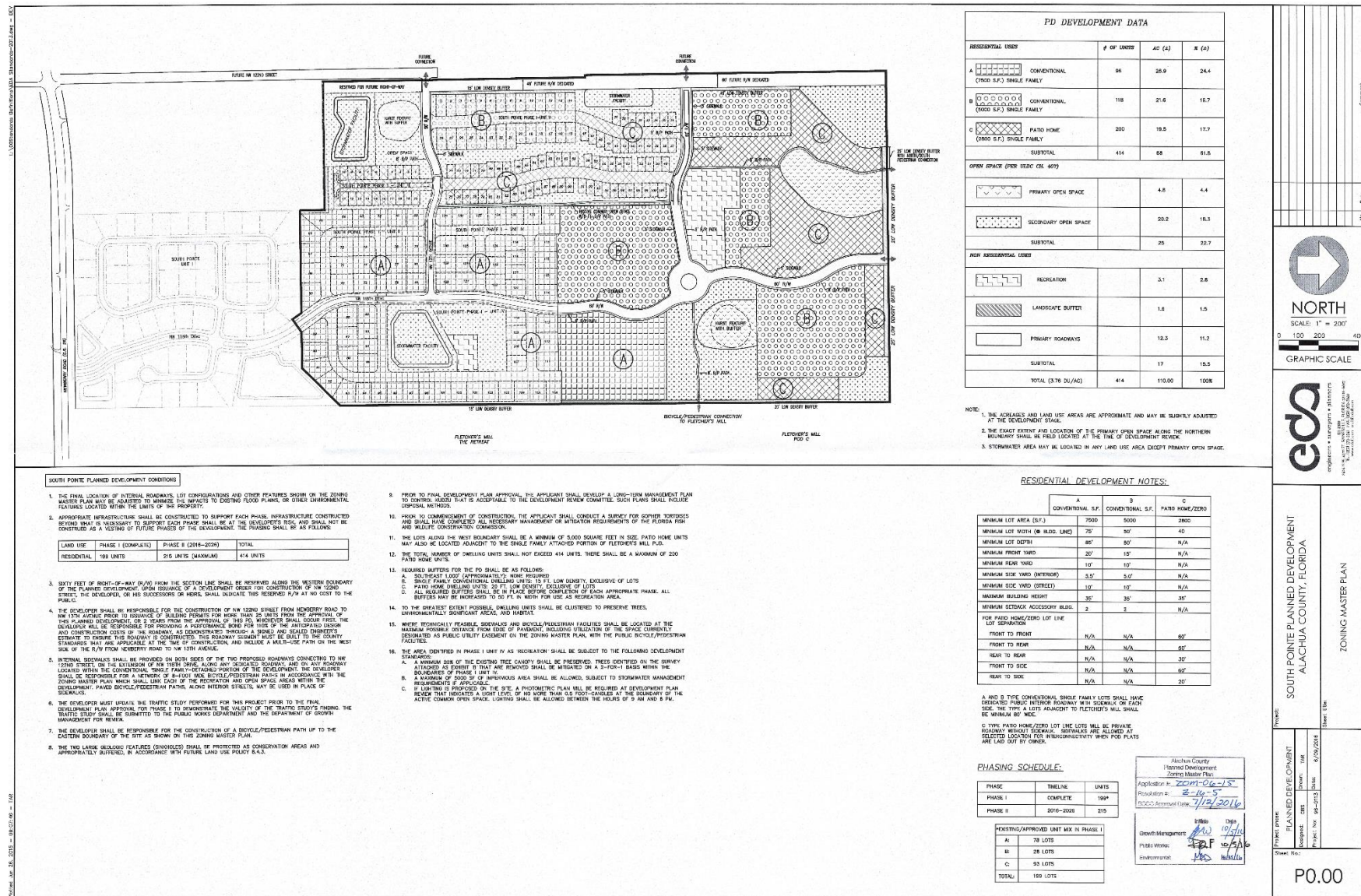


Figure 3. South Pointe Planned Development Site Plan (2016).

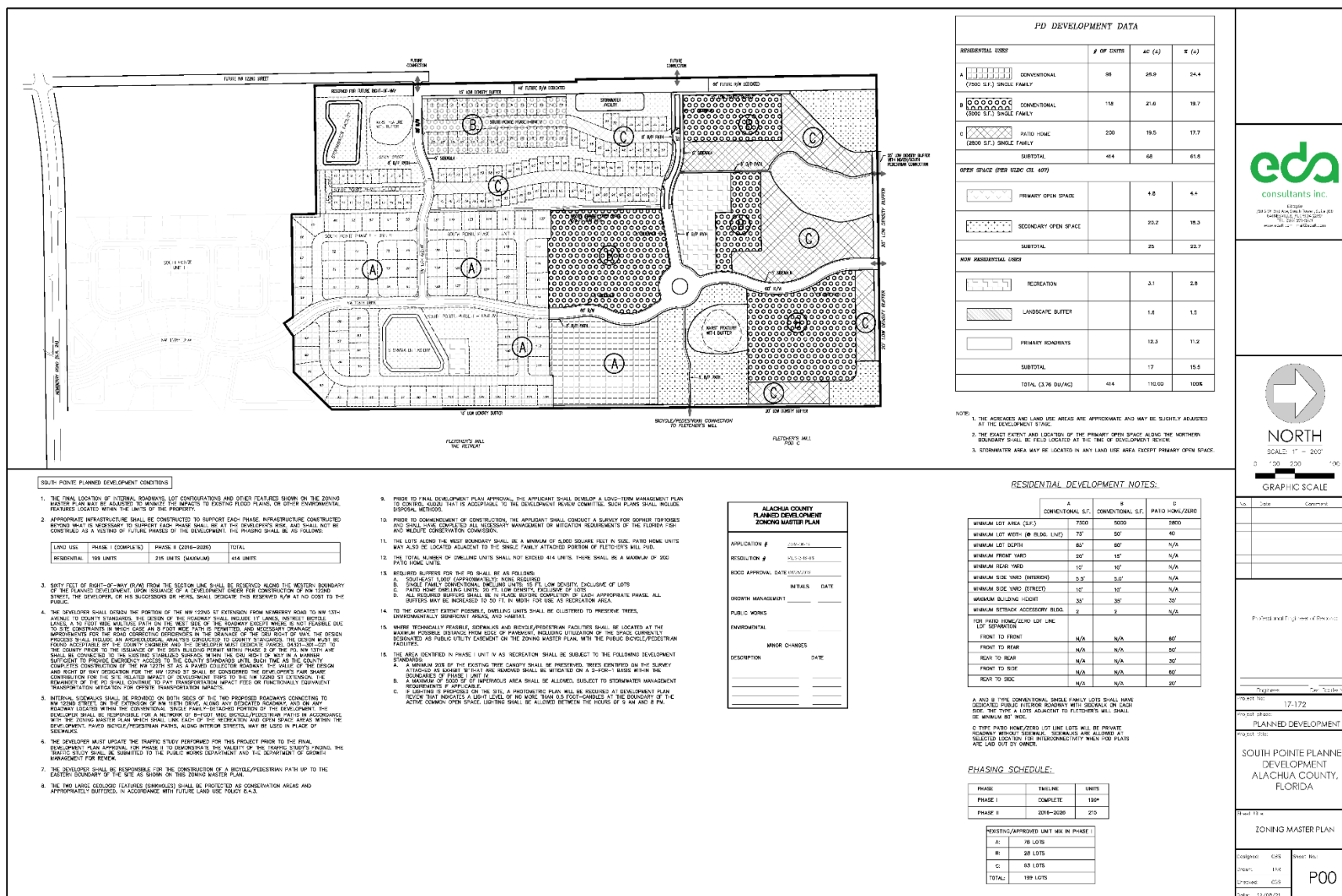


Figure 4. South Pointe Planned Development Site Plan (2021–2022).

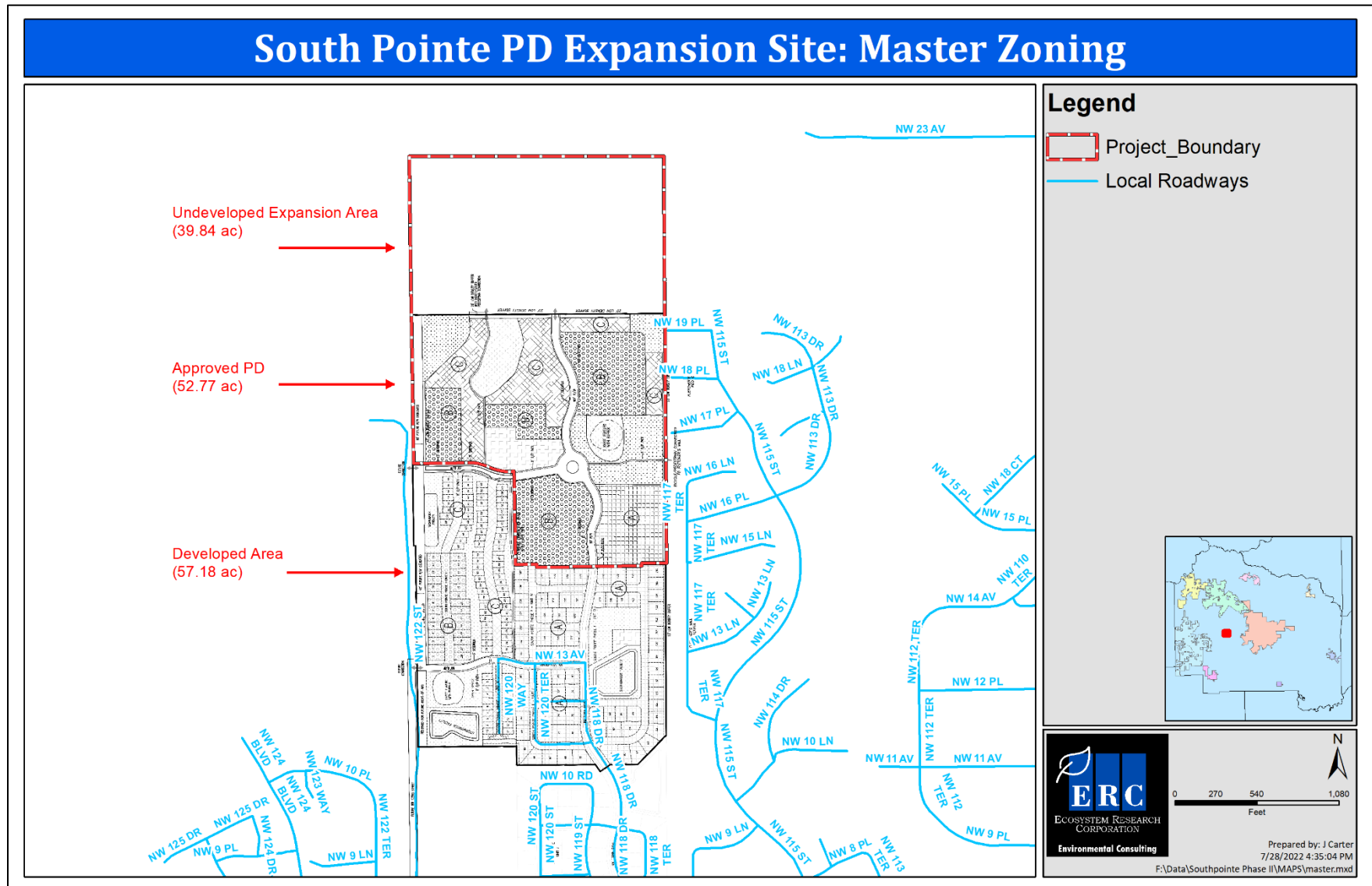


Figure 5. South Pointe Planning Parcel shown in relation to recently approved Planned Development Zoning, North Undeveloped Expansion Site, and south area of existing development.

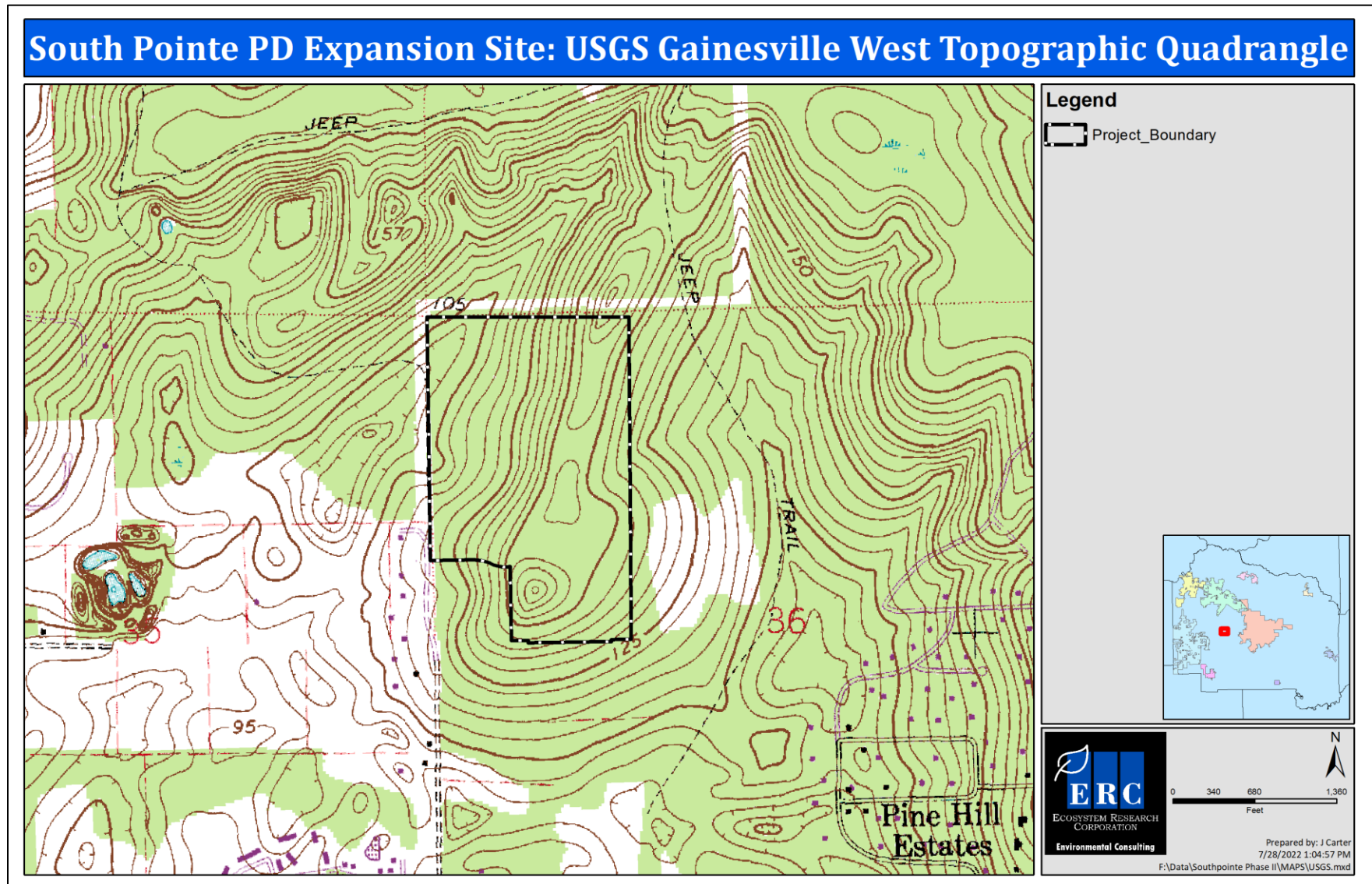


Figure 6. USGS Gainesville West topographic quadrangle showing the Project Site and surrounding areas.

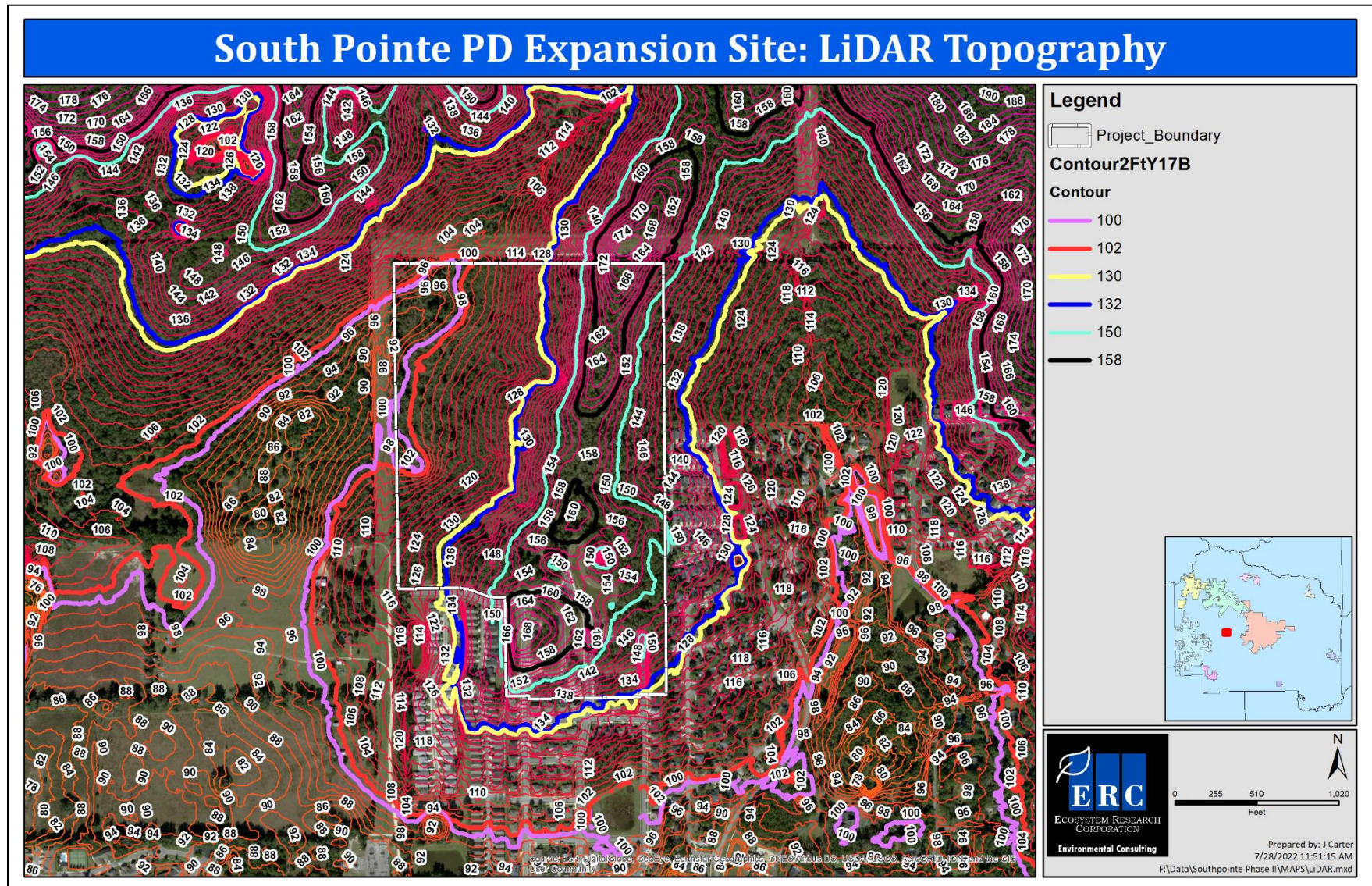


Figure 7. 2001 LiDAR topography shown in relation to the Project Site and surrounding area.

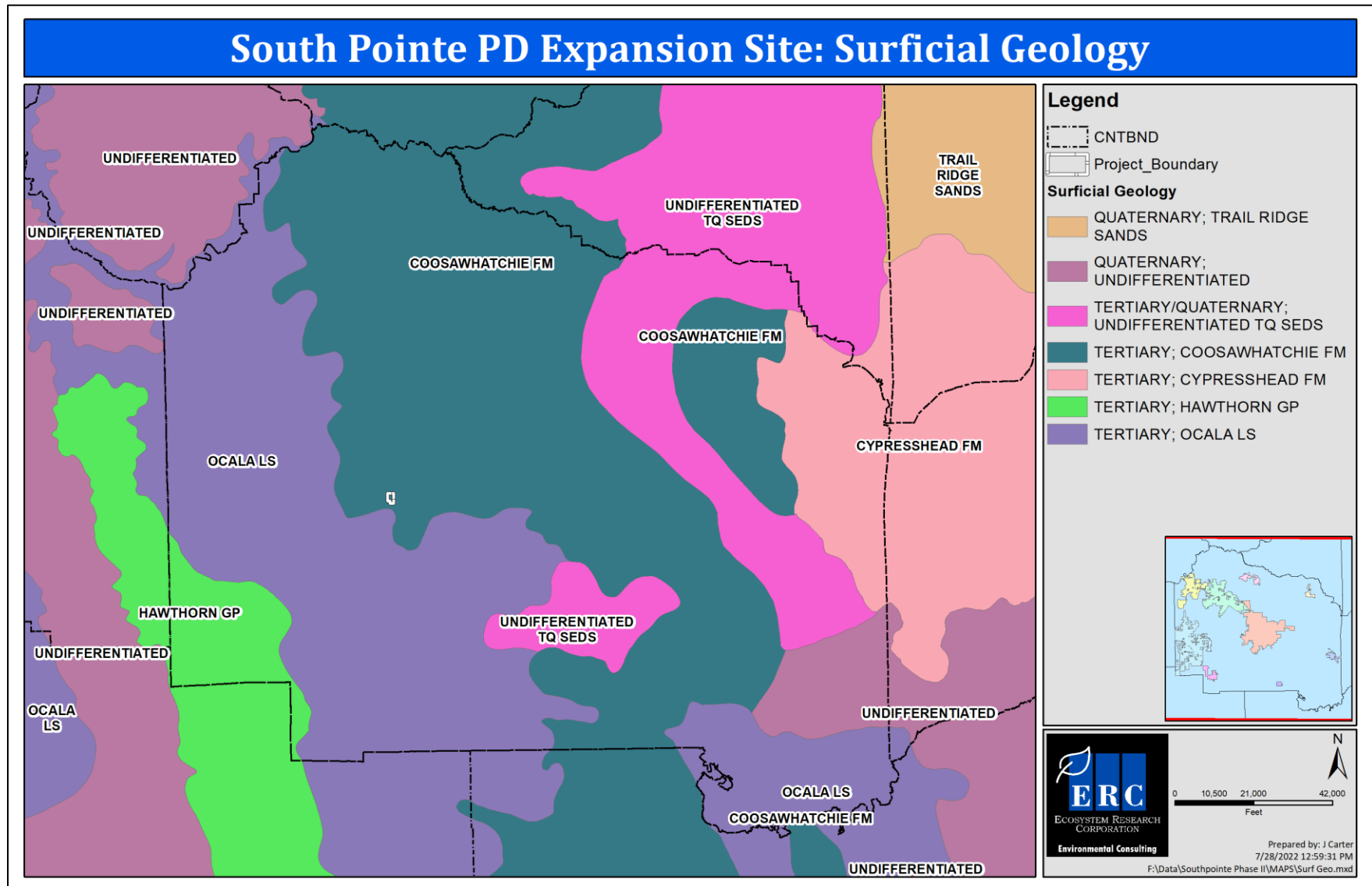


Figure 8. Surficial geology of Alachua County shown in relation to the Project Site and surrounding area.

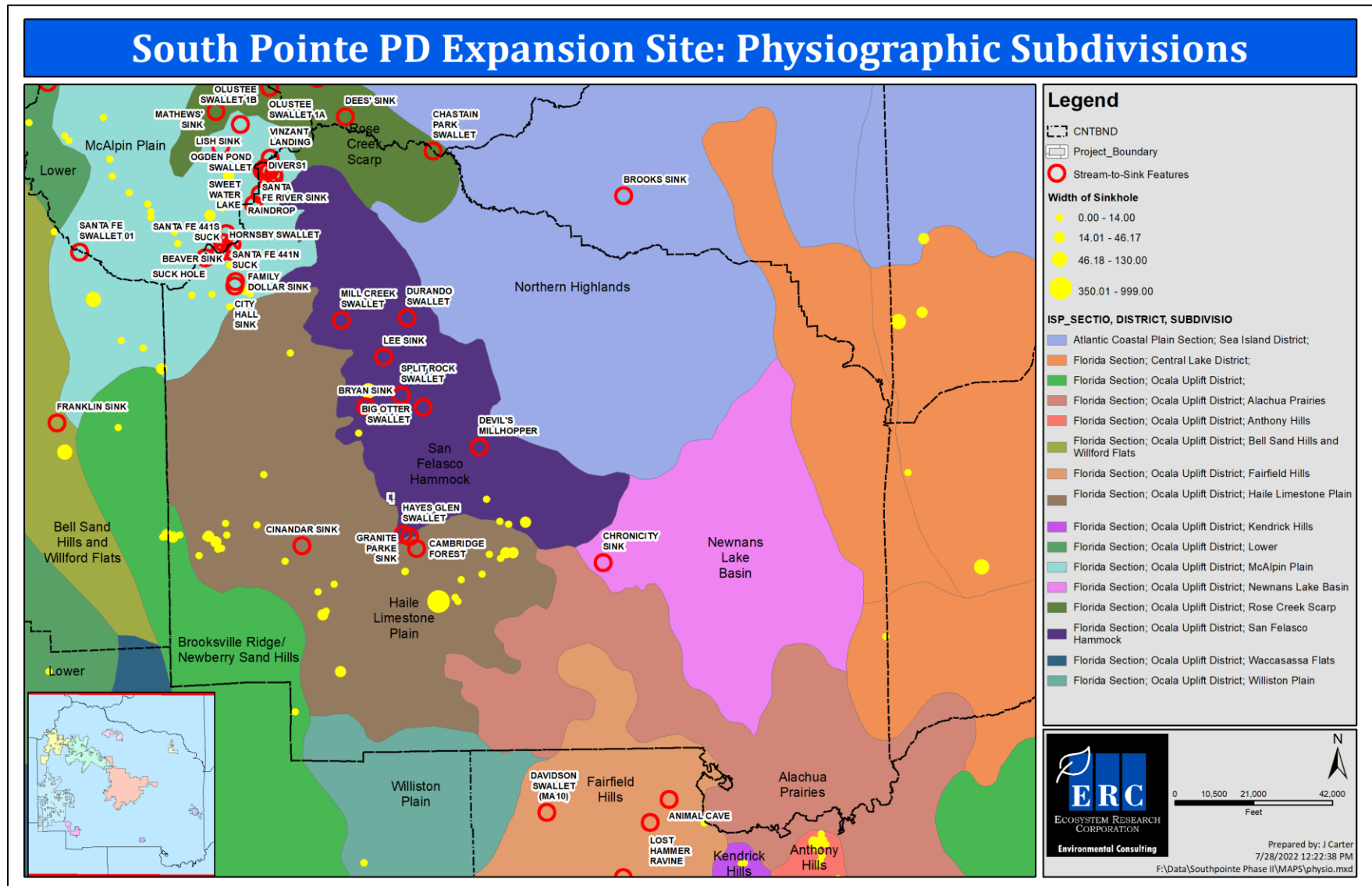


Figure 9. Physiographic subdivisions of Alachua County shown in relation to the Project Site and surrounding area.

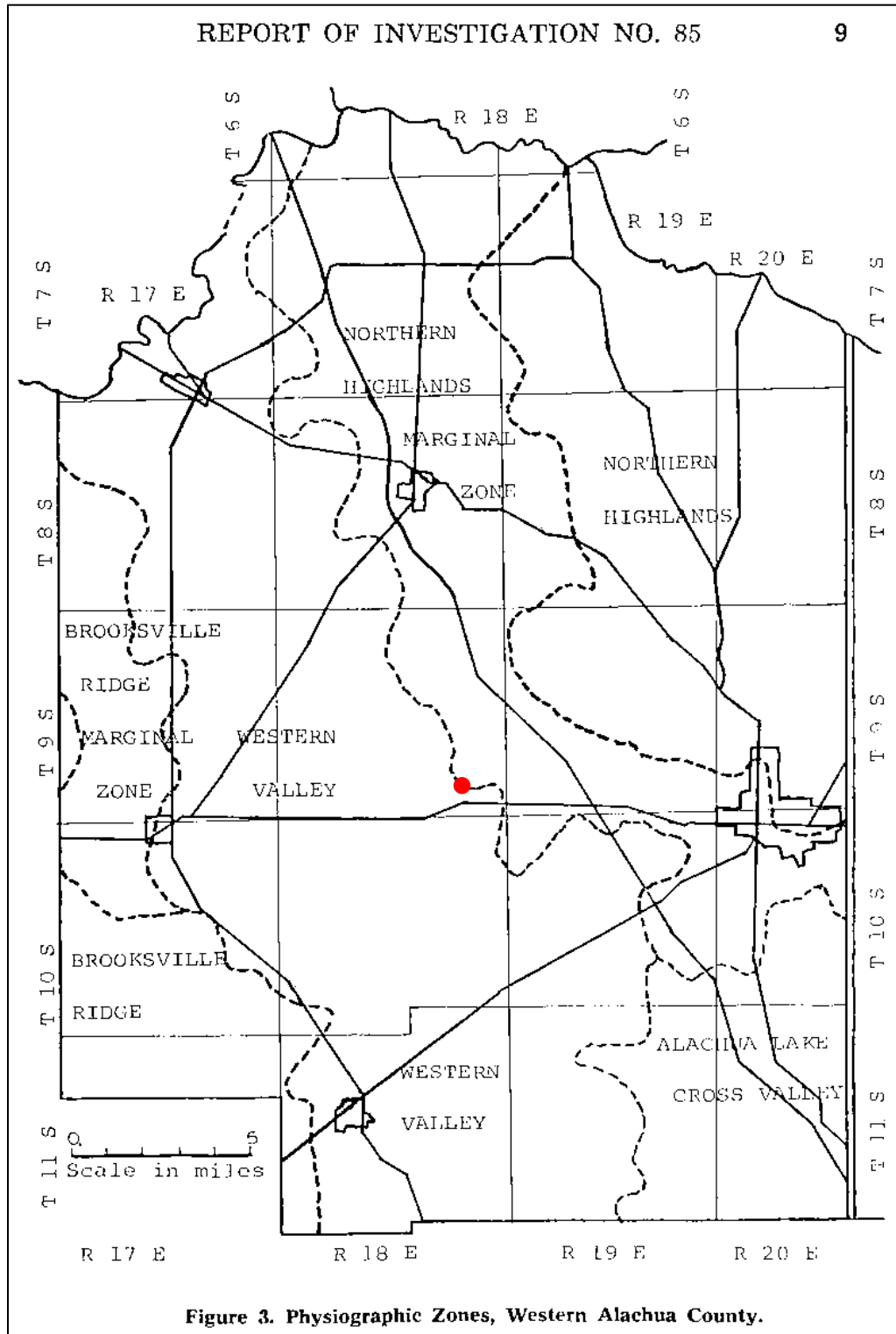


Figure 10. Physiographic zones of Alachua County shown in relation to the Project Site (approximate location shown).

Source: Williams, K. E., D. Nicol, and A. F. Randazzo. 1977. The Geology of the Western Part of Alachua County, Florida. Prepared for Bureau of Geology, Division of Resource Management, Florida Department of Natural Resources. Report of Investigations No. 85. Tallahassee, FL.).

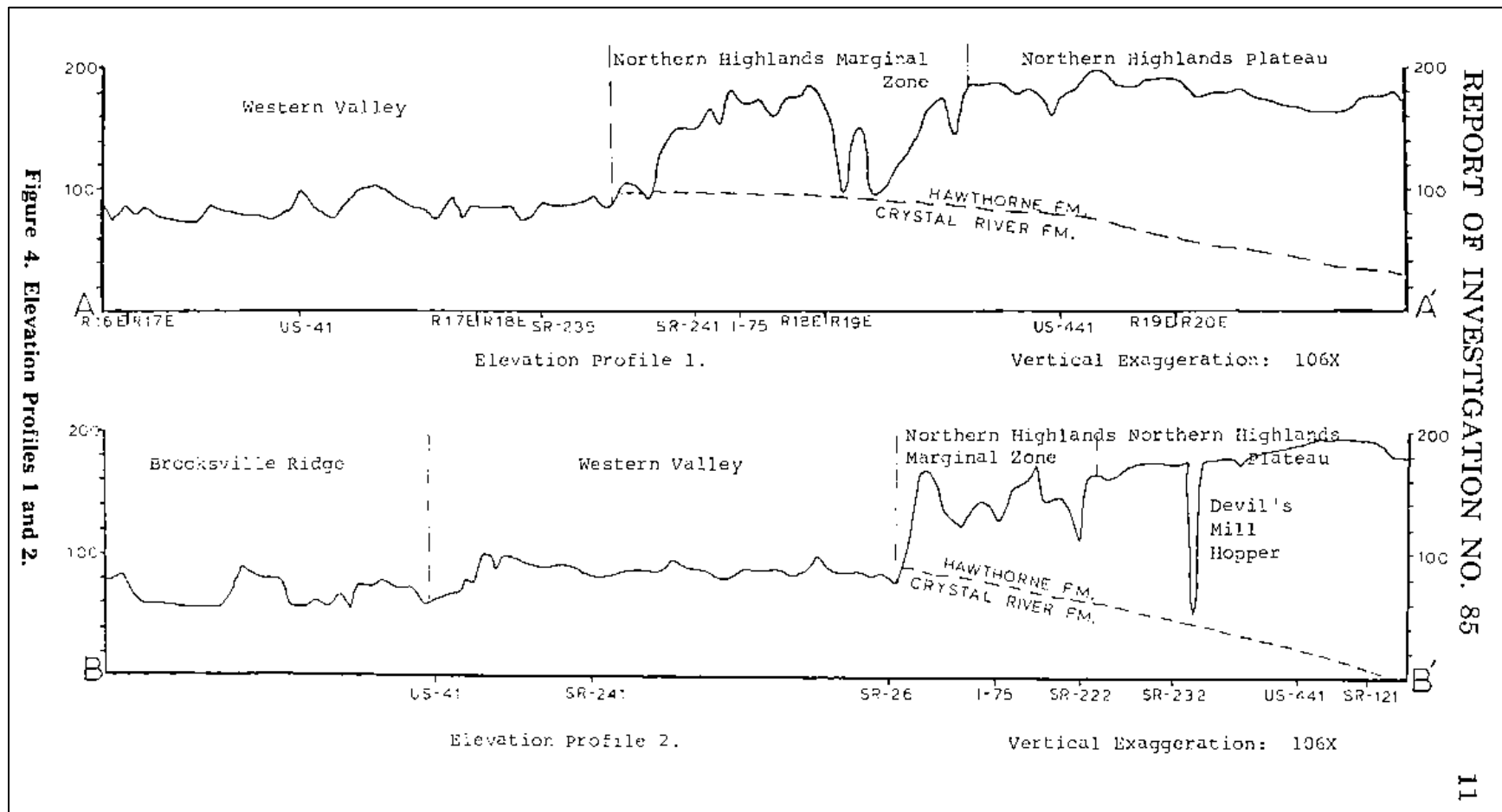


Figure 11. Elevation profiles 1 and 2 showing topographic changes in relation to Alachua County Physiographic Zones.

Source: Williams, K. E., D. Nicol, and A. F. Randazzo. 1977. The Geology of the Western Part of Alachua County, Florida. Prepared for Bureau of Geology, Division of Resource Management, Florida Department of Natural Resources. Report of Investigations No. 85. Tallahassee, FL.).

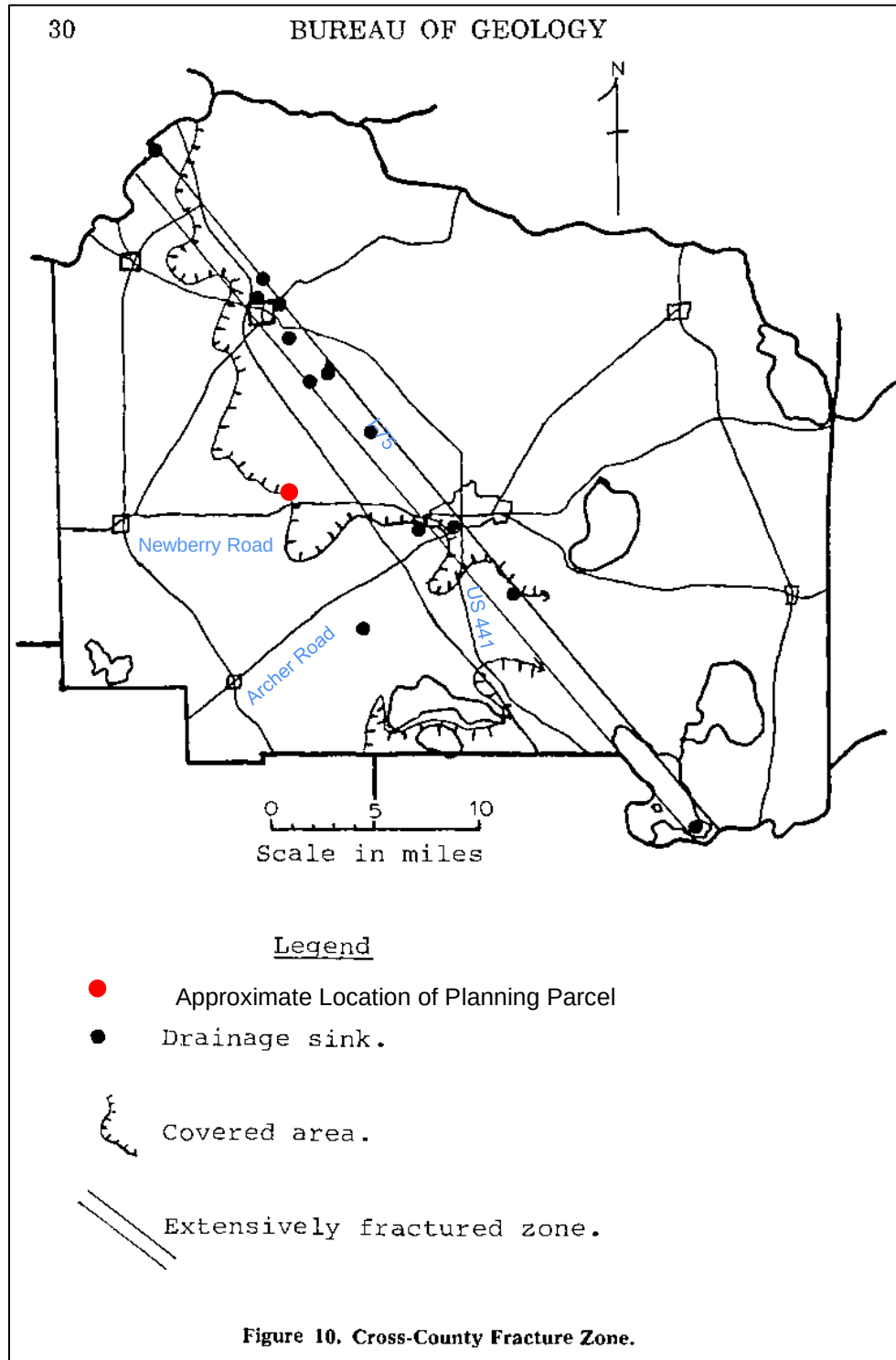


Figure 12. Cross-County fracture zone shown in relation to the Project Site (approximate location of Project Site and labeling of roadways added for reference).

Source: Williams, K. E., D. Nicol, and A. F. Randazzo. 1977. The Geology of the Western Part of Alachua County, Florida. Prepared for Bureau of Geology, Division of Resource Management, Florida Department of Natural Resources. Report of Investigations No. 85. Tallahassee, FL.).

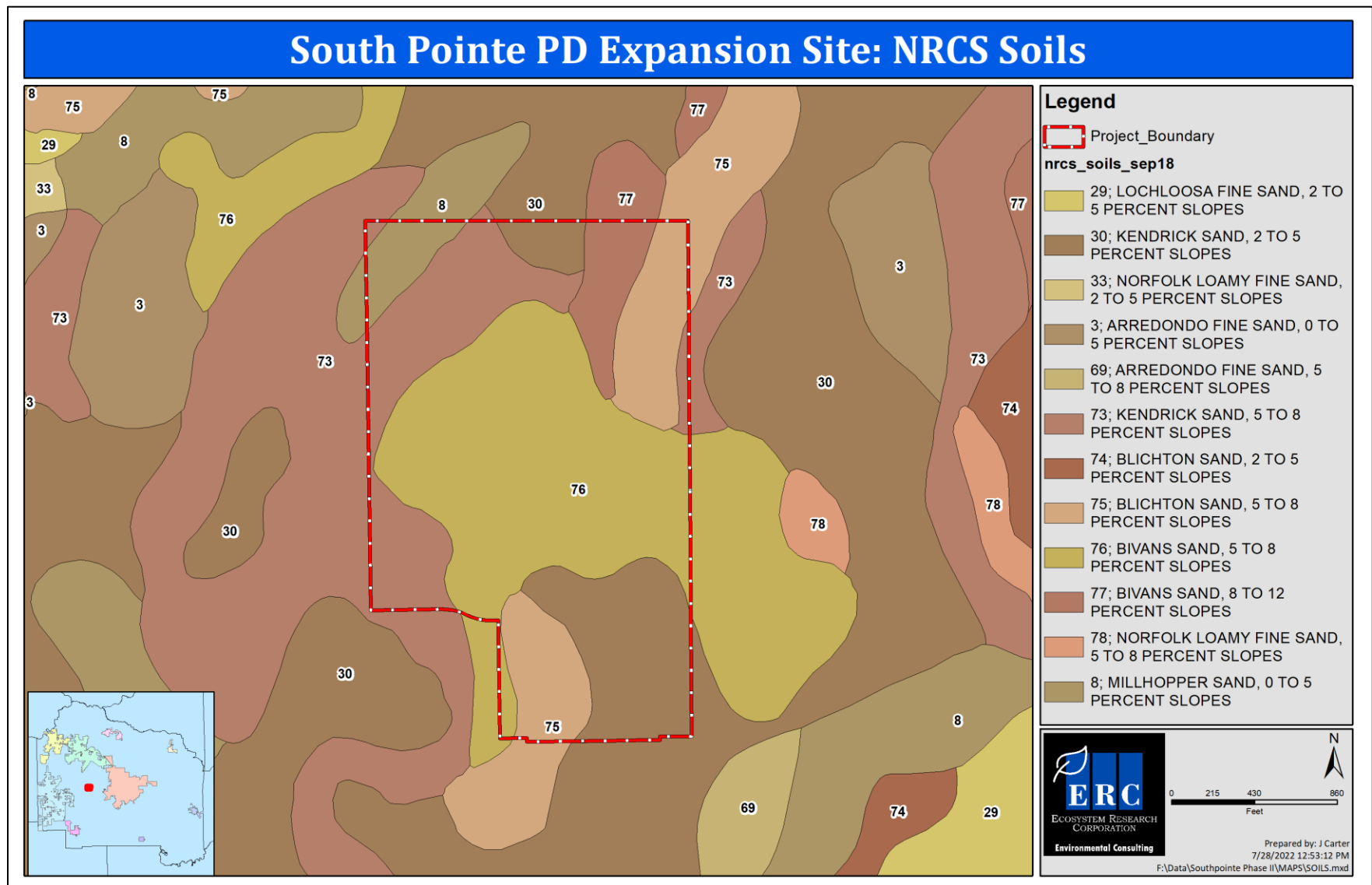


Figure 13. NRCS soils map shown in relation to the Project Site and surrounding area.

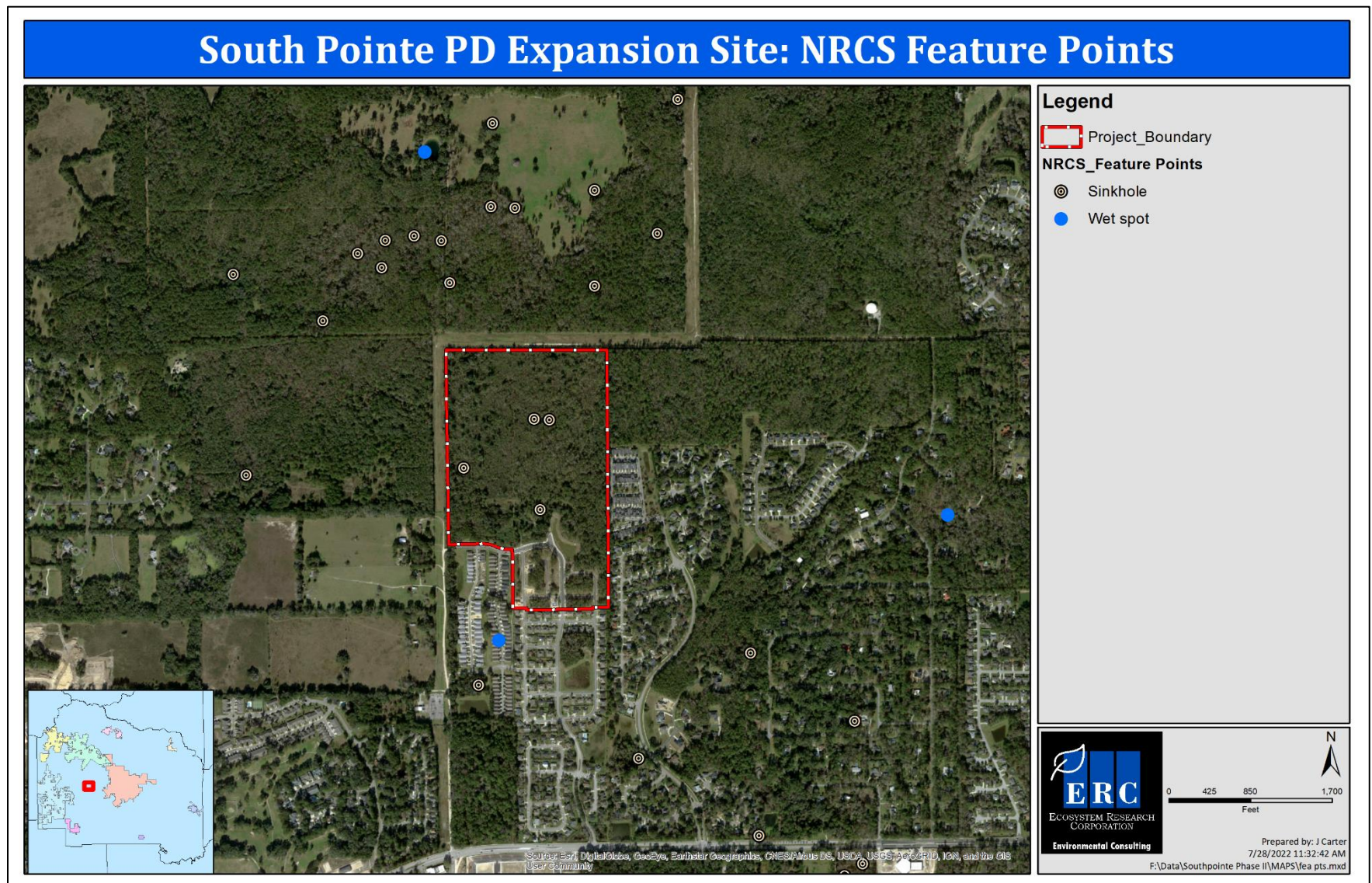


Figure 14. NRCS feature points shown in relation to the Project Site and surrounding area.

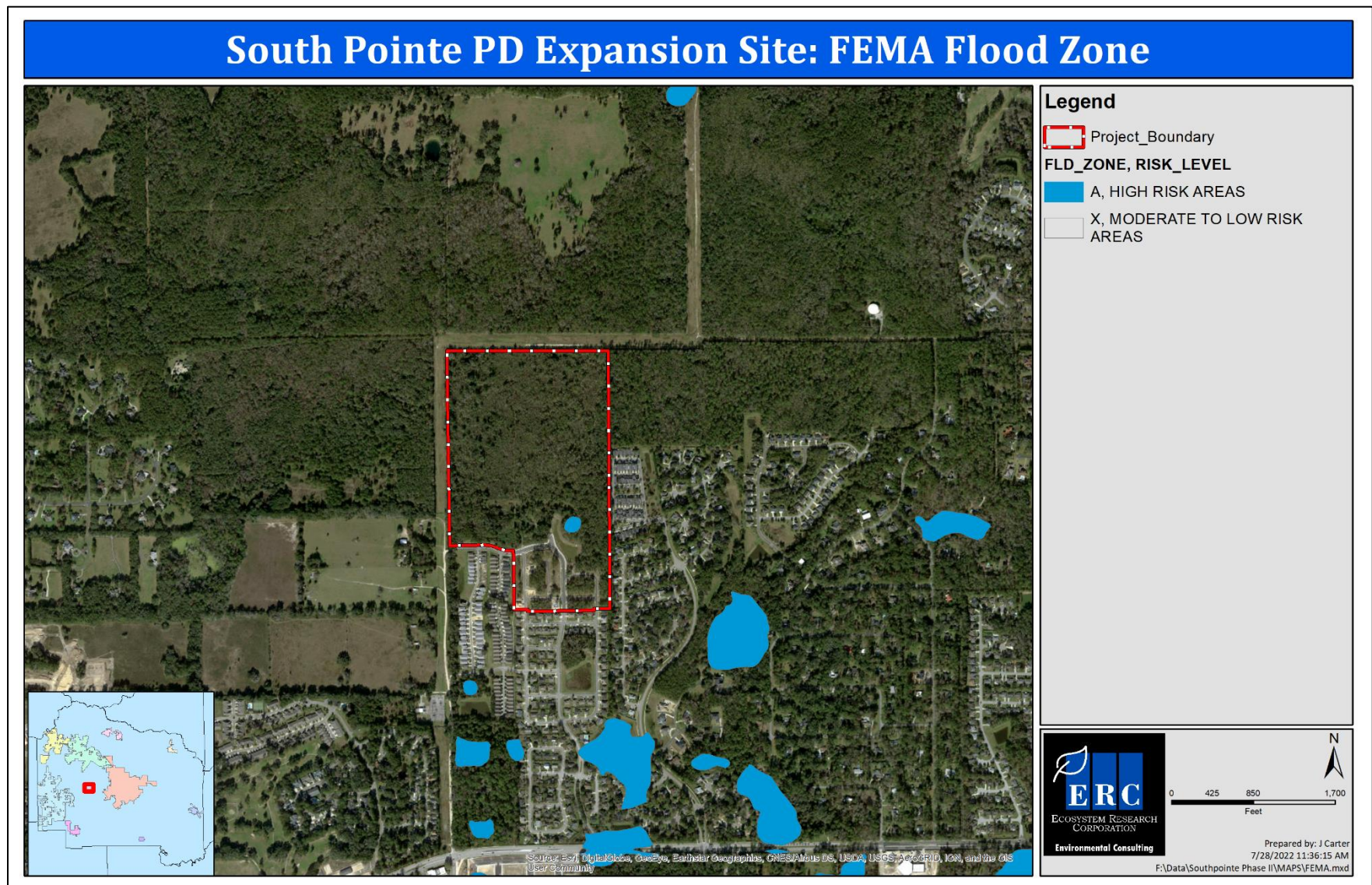


Figure 15. FEMA flood zone areas shown in relation to the Project Site and surrounding area.

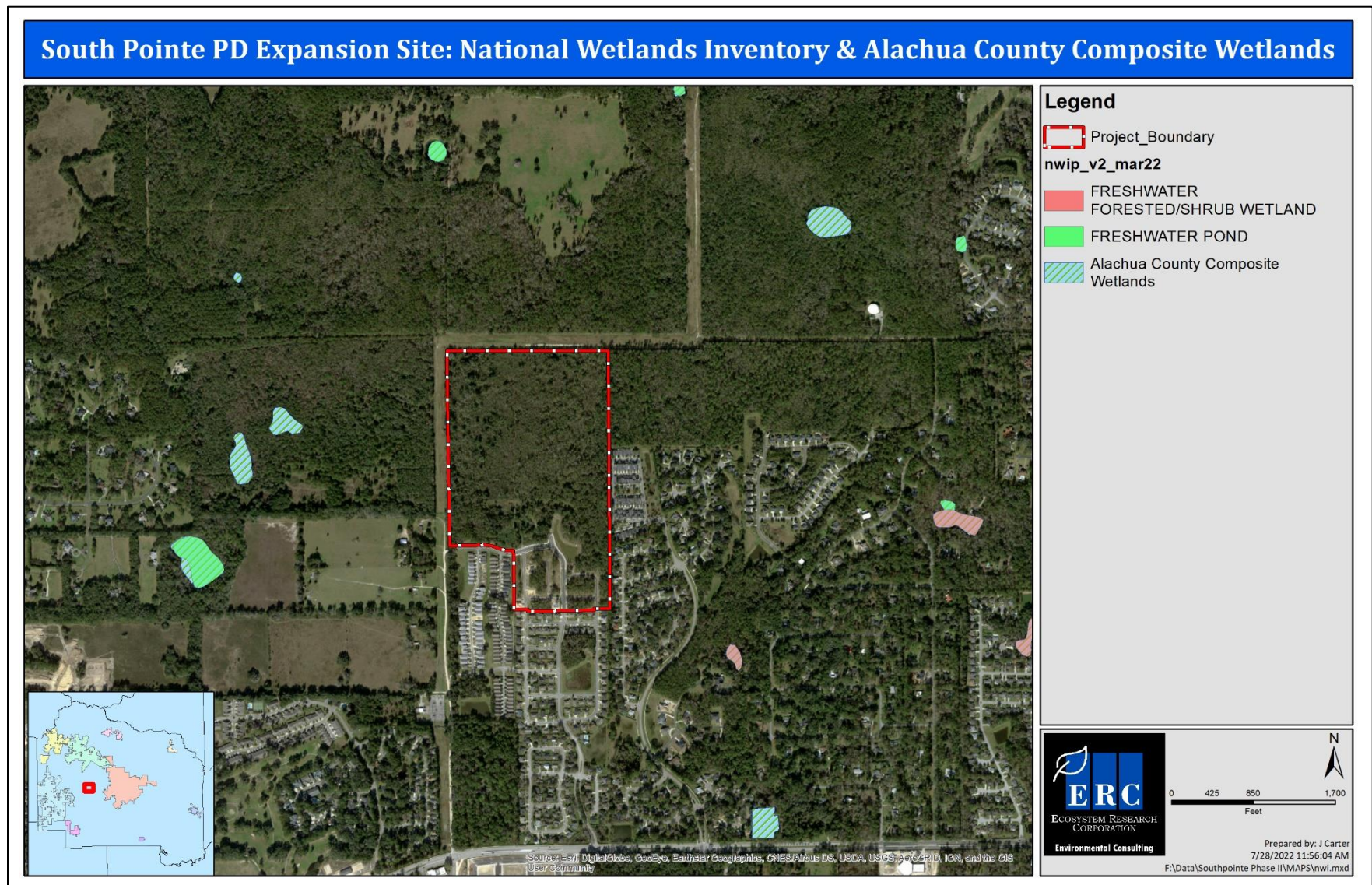


Figure 16. National Wetlands Inventory wetlands and Alachua County Composite Wetlands shown in relation to the Project Site and surrounding area.

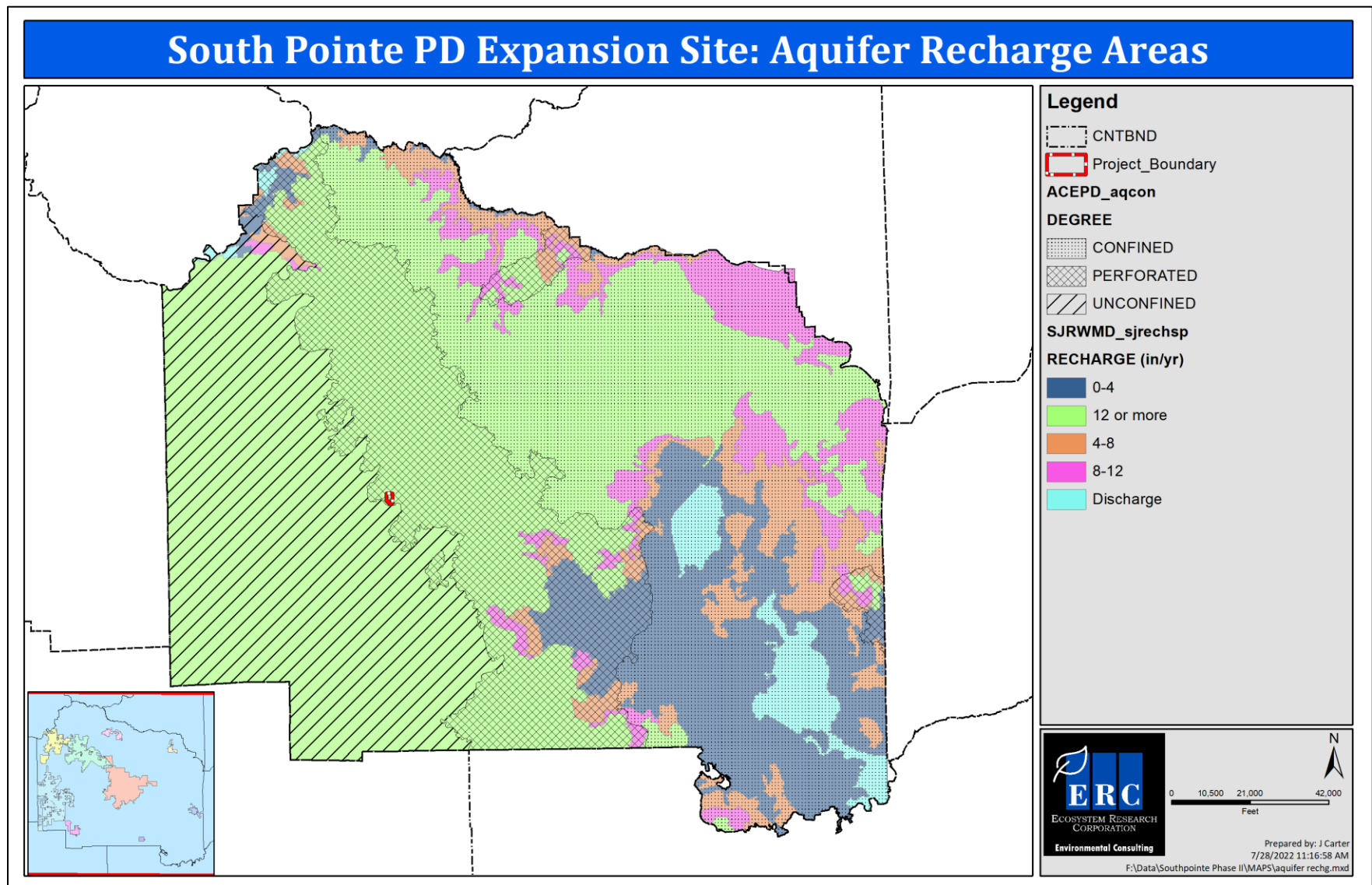


Figure 17. Aquifer recharge areas shown in relation to the Project Site and surrounding area.

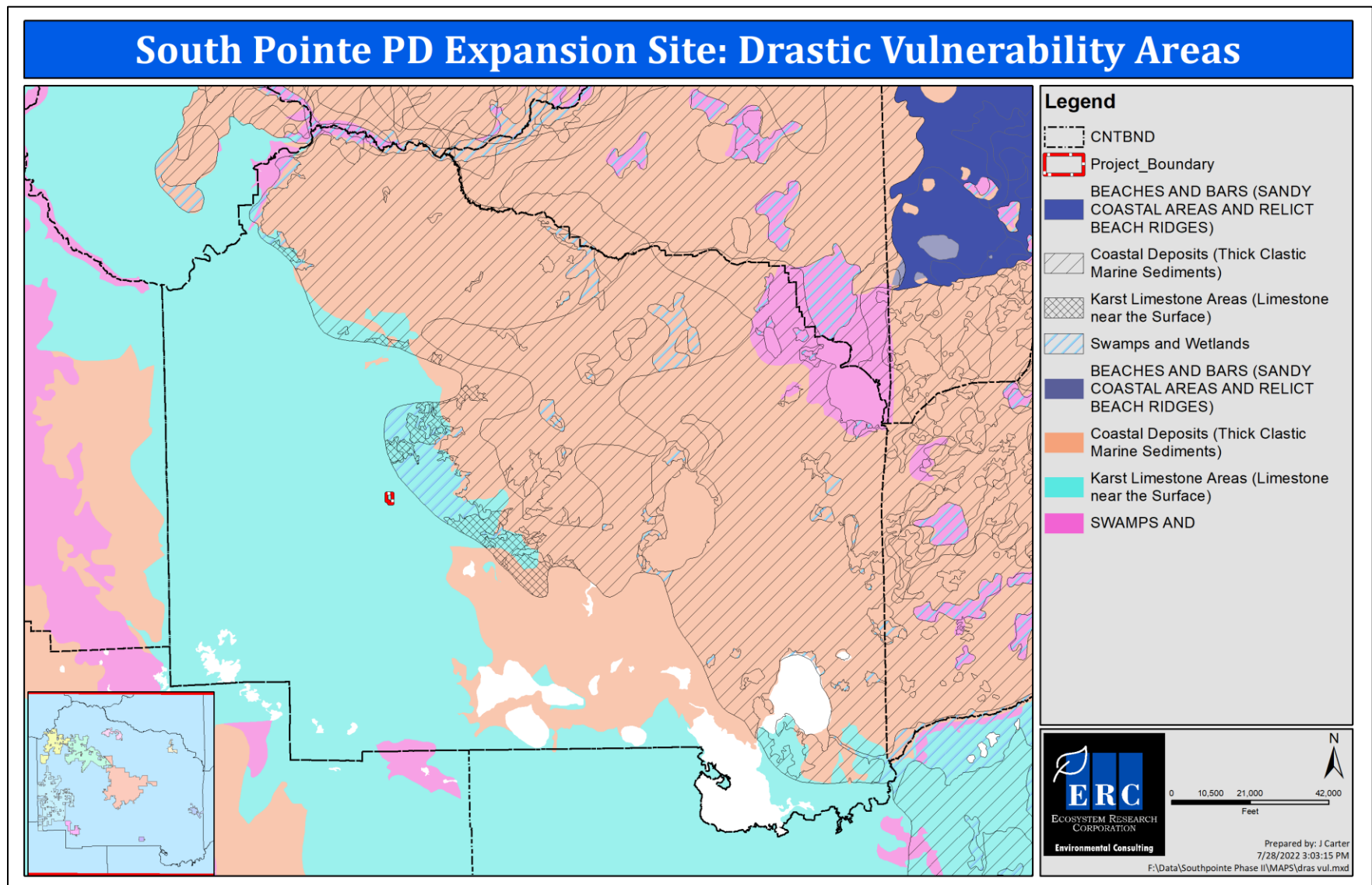


Figure 18. Drastic vulnerability areas of the Surficial and Floridan aquifers shown in relation to the Project Site and surrounding area.

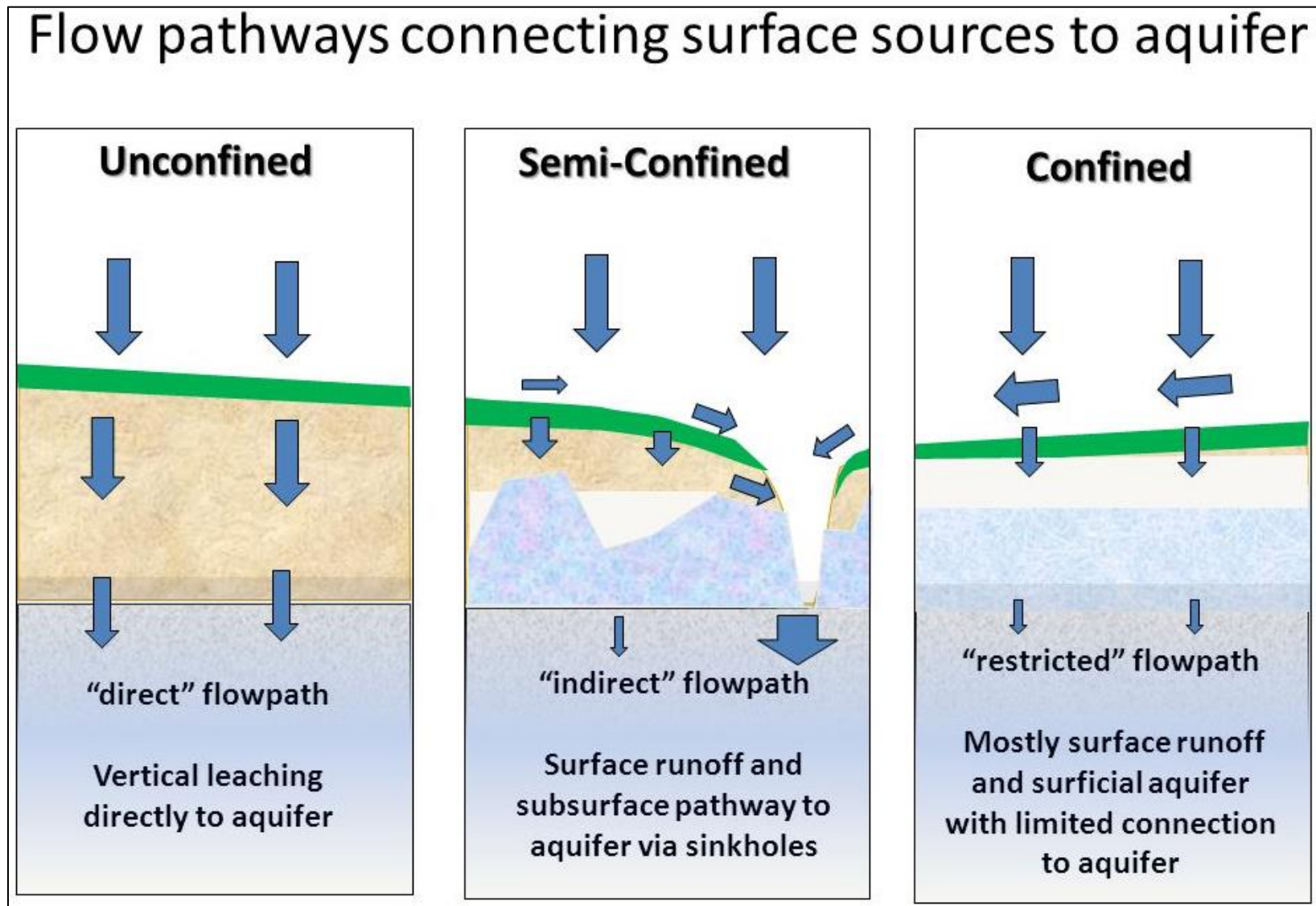


Figure 19. General schematic showing mechanisms of surface water flows to Florida aquifer within unconfined, semi-confined, and confined zones of aquifer (source: <https://images.app.goo.gl/yGNKd5VKvsWA2eWXA>).

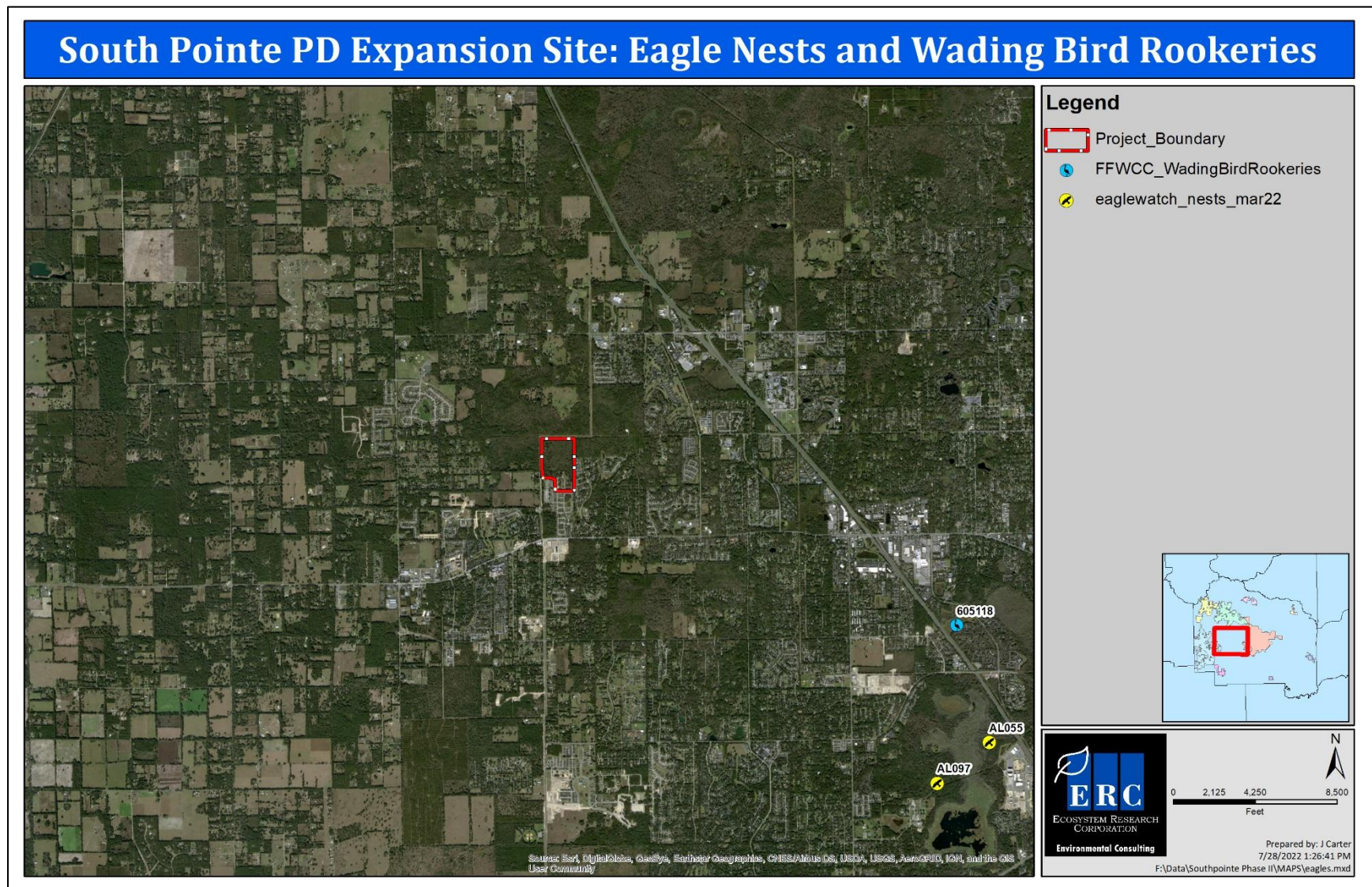


Figure 20. Locations of bald eagle nests and wading bird rookeries in relation to the Project Site.

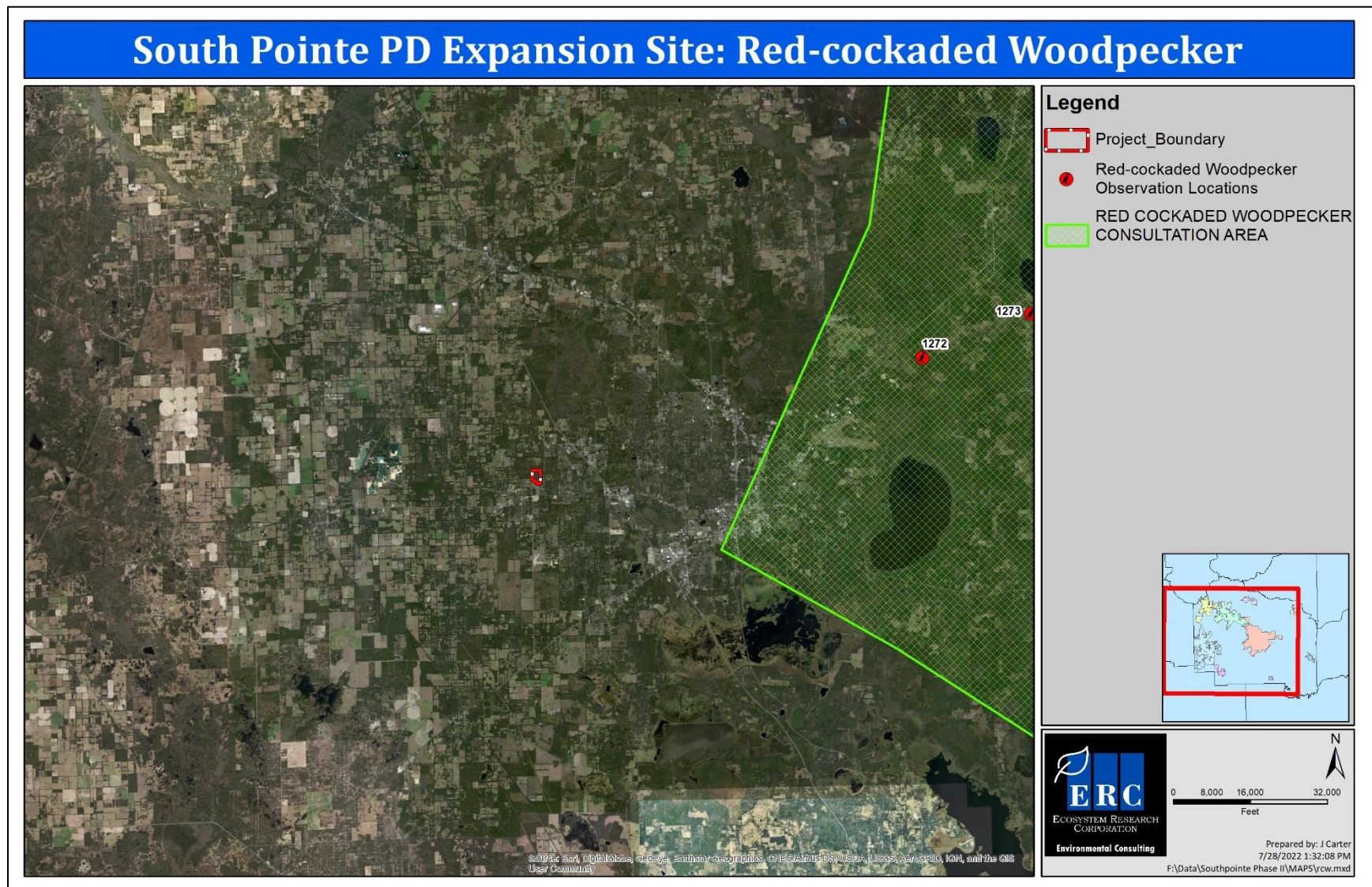


Figure 21. Red-cockaded woodpecker consultation area and observation locations shown in relation to the Project Site and surrounding area.

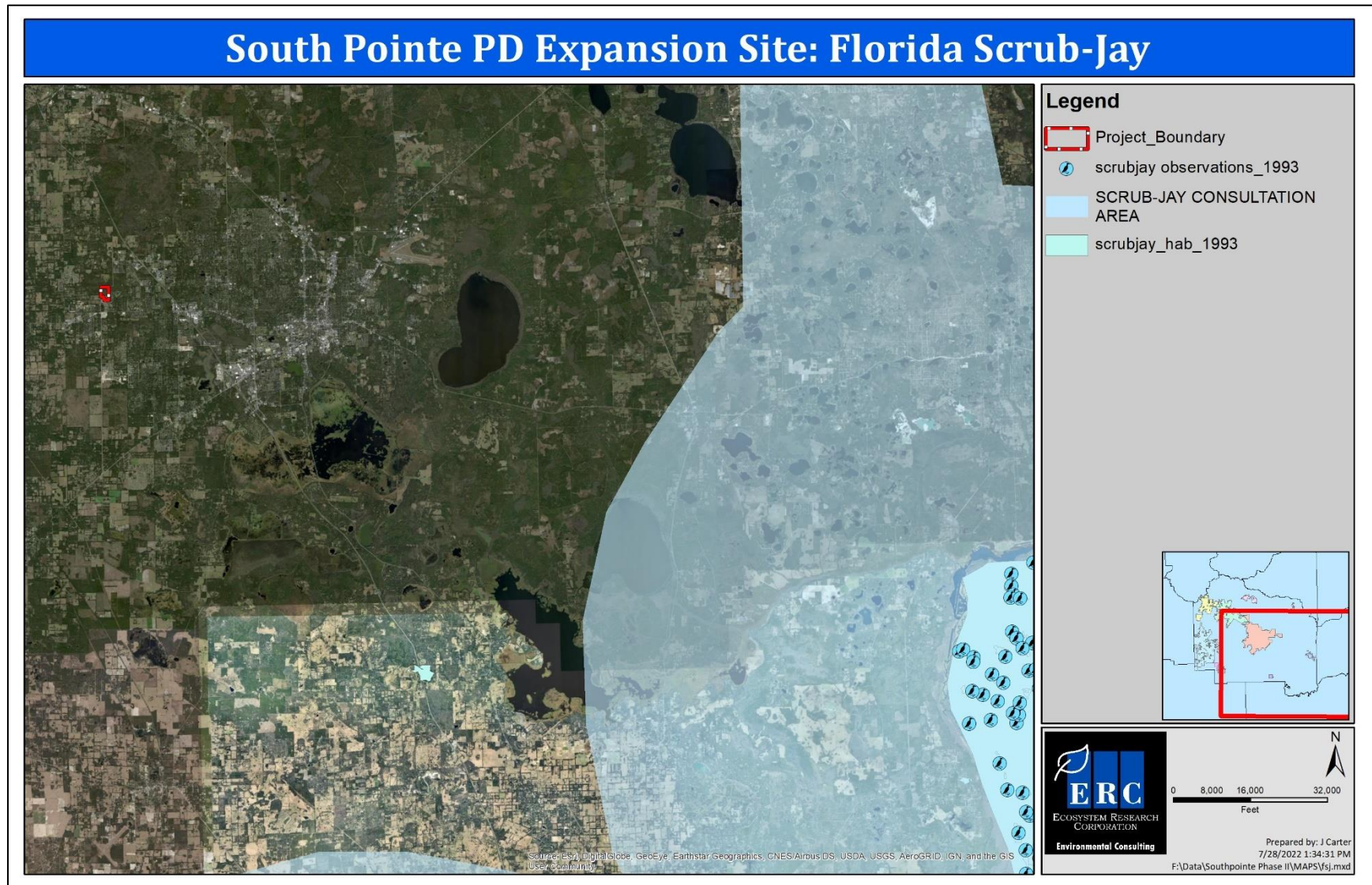


Figure 22. Florida Scrub-Jay consultation area, observation locations, and habitat shown in relation to the Project Site and surrounding area.

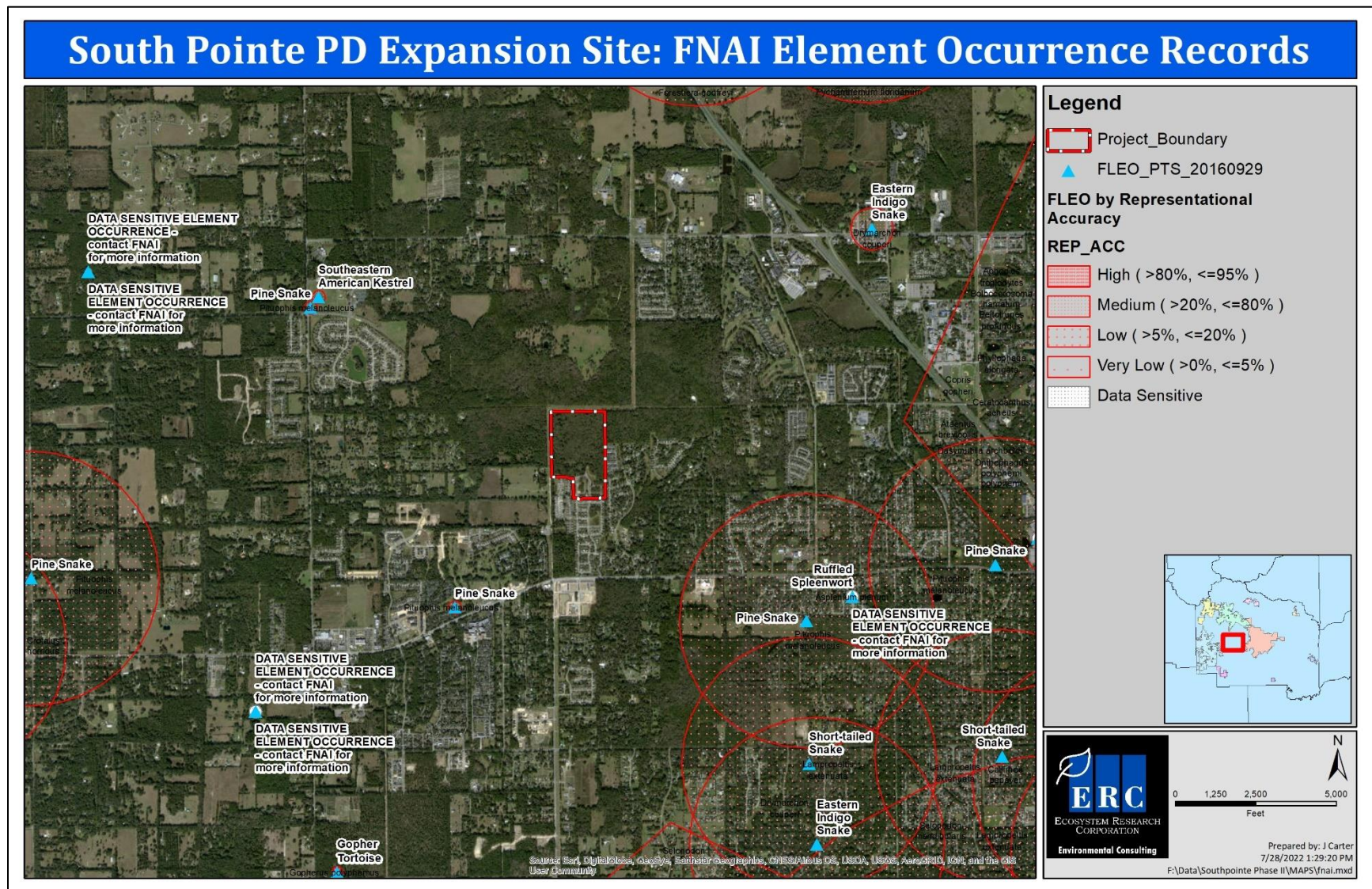


Figure 23. Florida Natural Areas Inventory element occurrence records shown in relation to the Project Site and surrounding area.

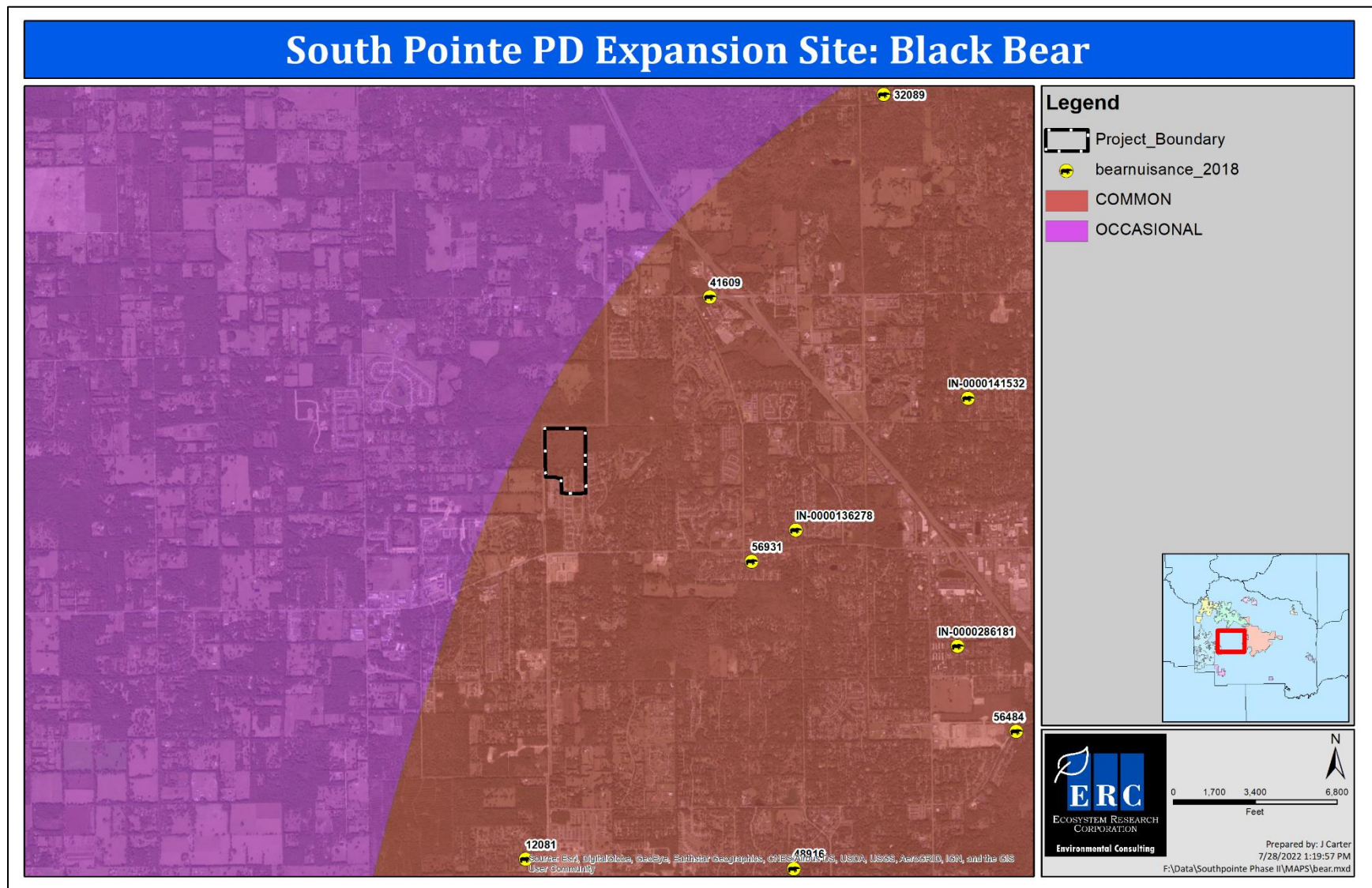


Figure 24. Black bear foraging areas and nuisance records shown in relation to the Project Site and surrounding area.

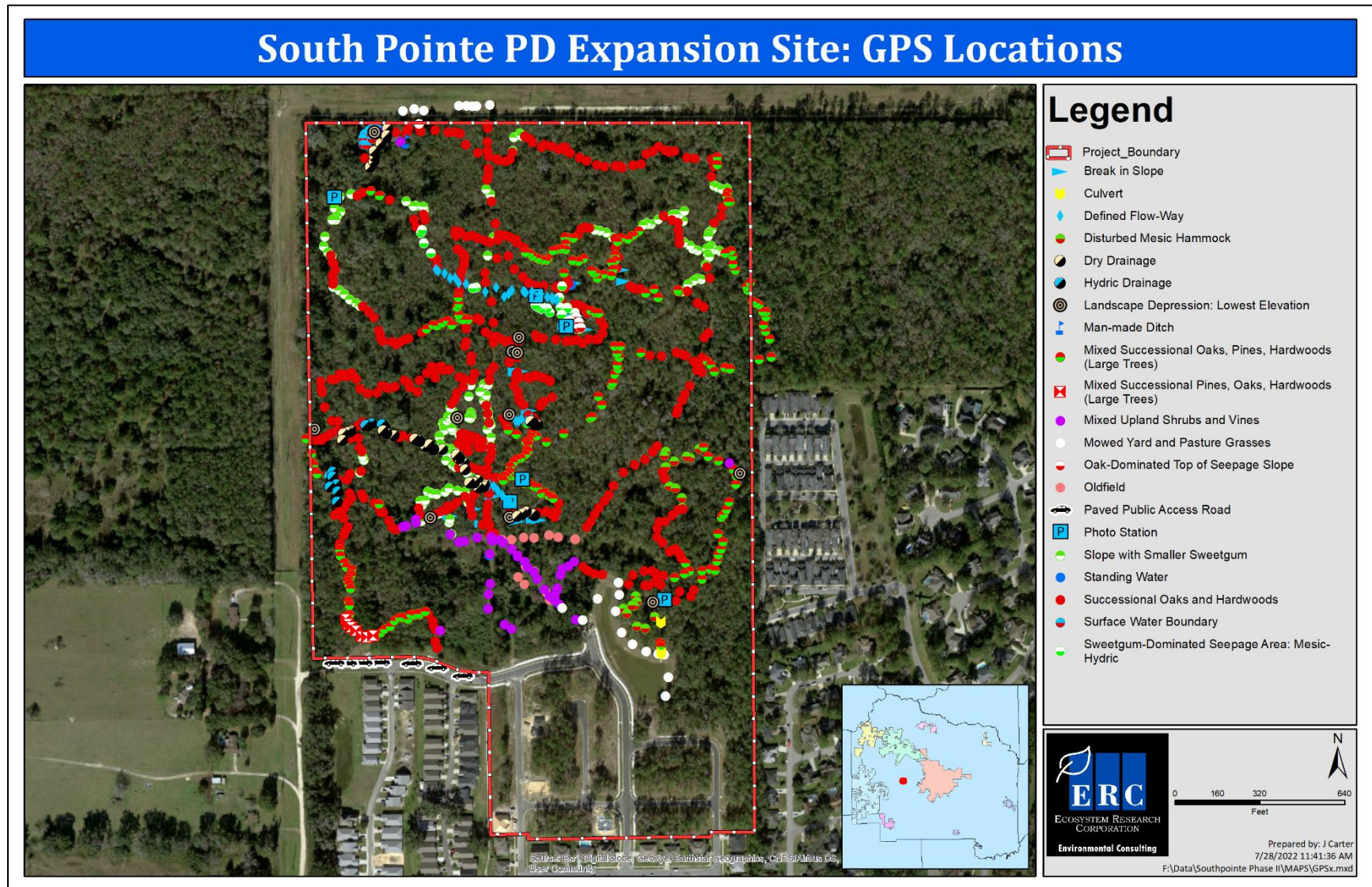


Figure 25. GPS locations where site-specific data were collected within the Project Site.

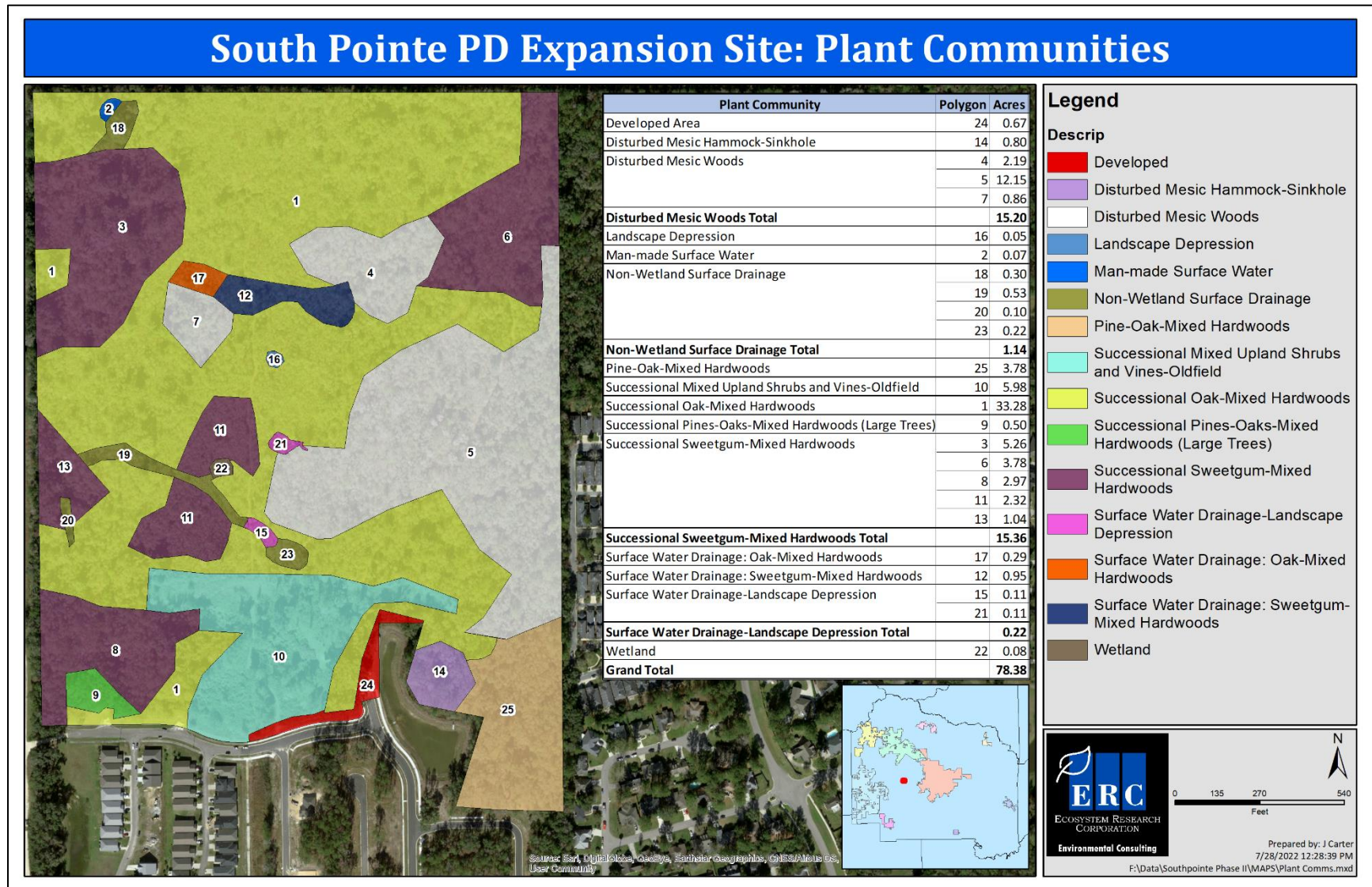
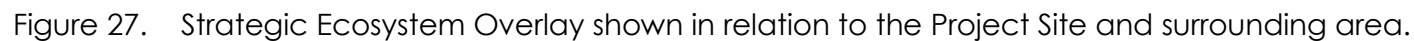
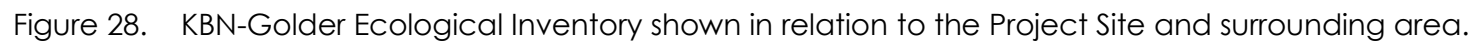


Figure 26. Plant communities within the Project Site and associated acreages.





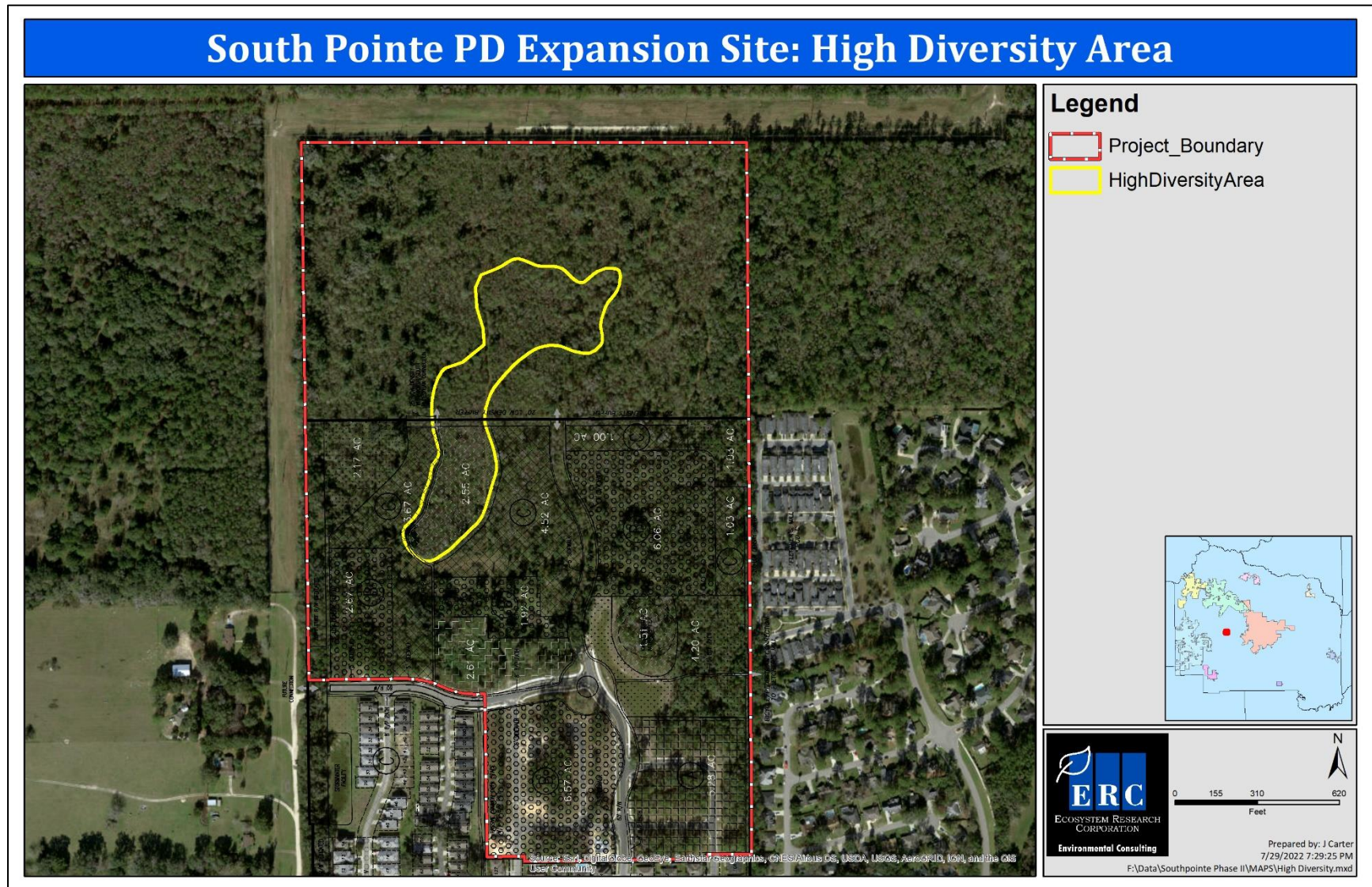


Figure 29. Delineation of the high diversity area within the Project Site.

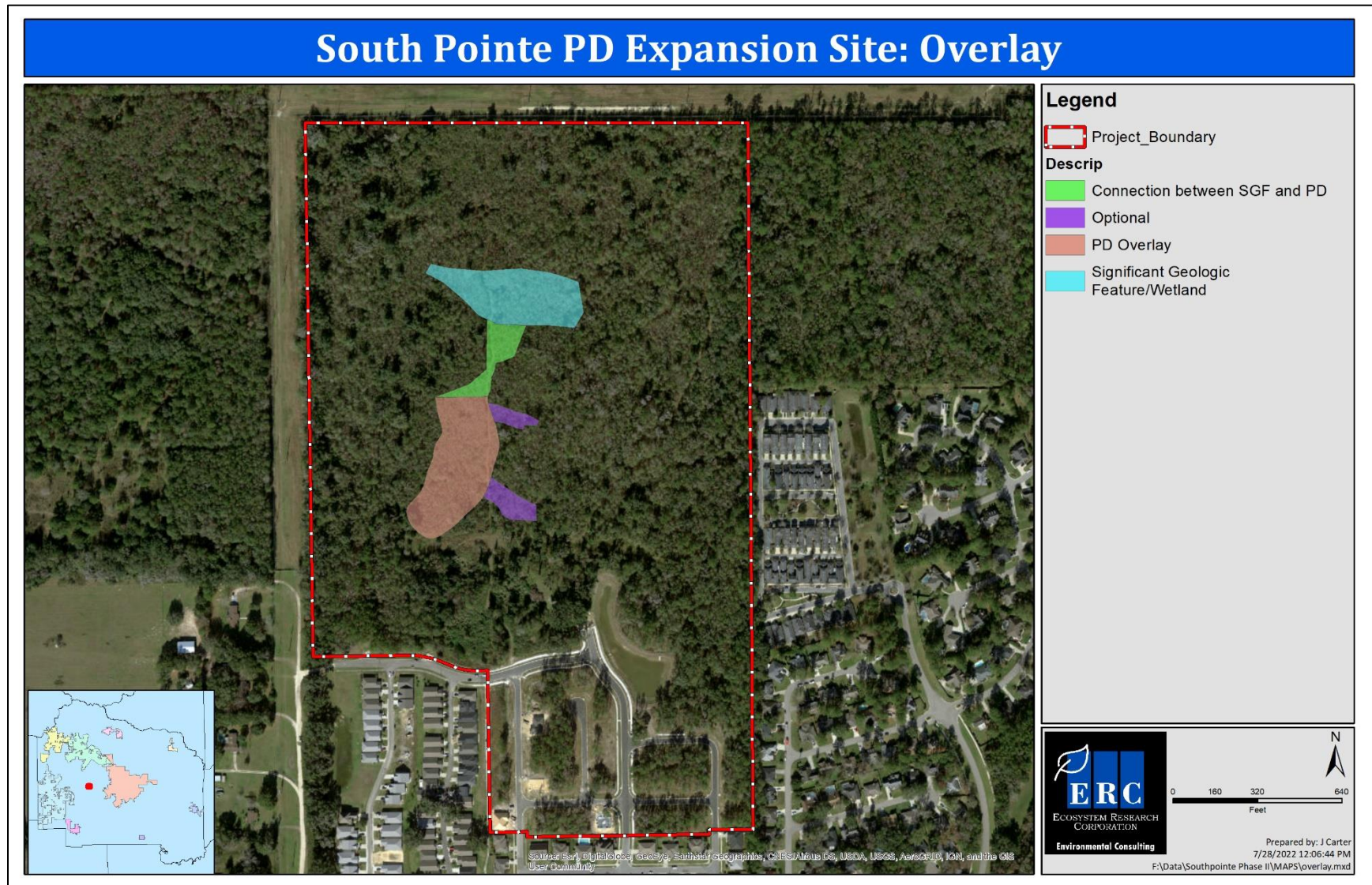


Figure 30. Suggested modified set-aside.

Appendix A: Photographic Atlas

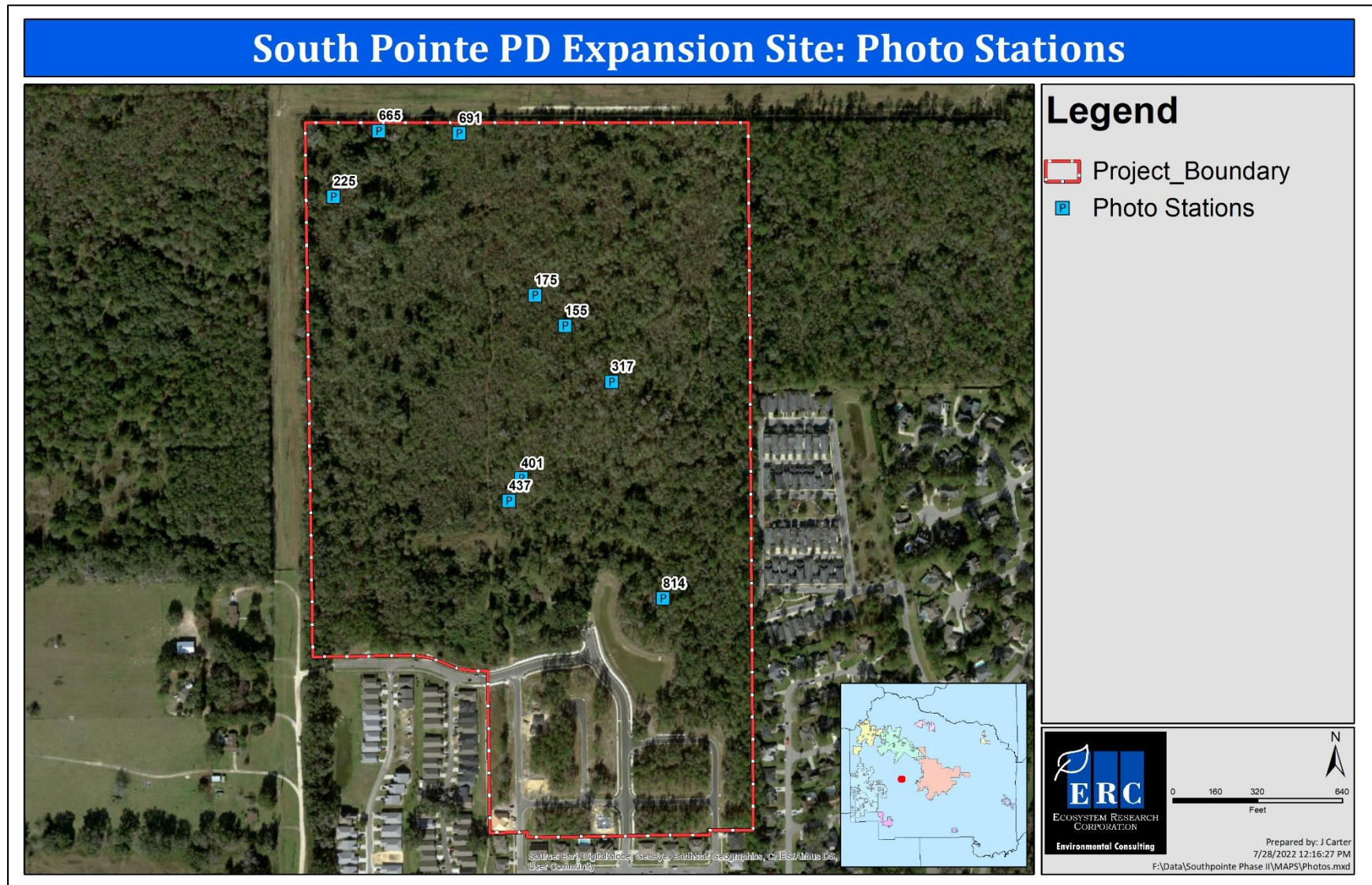


Figure A-1. GPS locations where site-specific photos were taken.

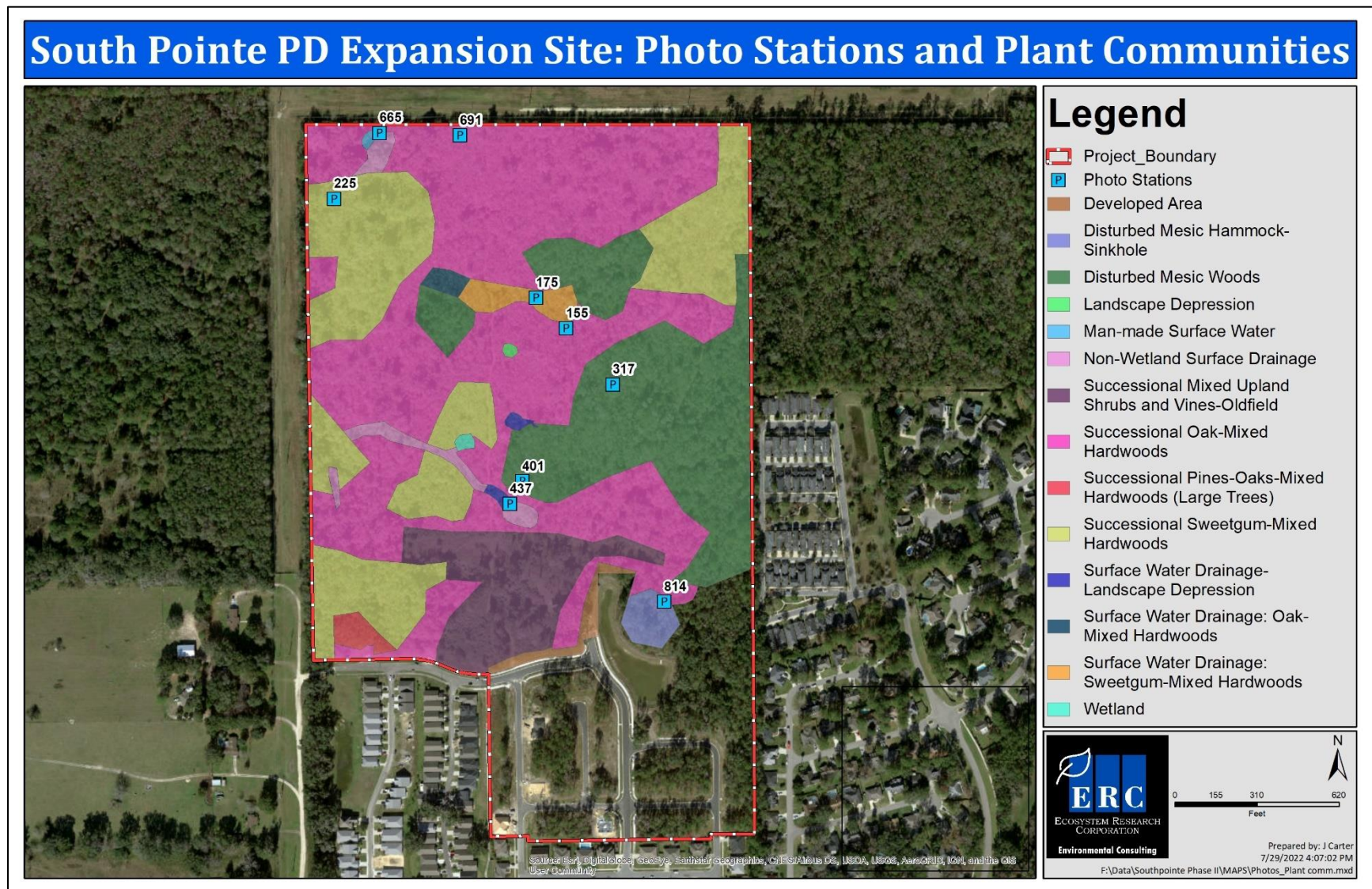


Figure A-2. Photo station locations shown in relation to the plant communities within the Project Site.



Photo 1. View of Sweetgum-Mixed Hardwood Surface Water Drainage (*Polygon 12*) as seen looking north from GPS location 155 on 28 January 2022.



Photo 2. View of litter-covered flow channel within the Sweetgum-Hardwood Surface Water Drainage (*Polygon 12*) as seen looking west-northwest (downstream) from GPS location 175 on 20 January 2022.



Photo 3. View of litter-covered flow channel within the Sweetgum-Hardwood Surface Water Drainage (Polygon 12) as seen looking east-southeast (upstream) from GPS location 175 on 20 January 2022.



Photo 4. View of low elevation area within Polygon 3, which is a Successional Sweetgum-Mixed Hardwood Habitat, as seen looking west-northwest from GPS location 225 on 28 January 2022.



Photo 5. View of Disturbed Mesic Woods habitat found within *Polygon 5* as seen looking southeast from GPS location 317 on 28 January 2022.



Photo 6. View of Disturbed Mesic Woods habitat found within *Polygon 5* as seen looking east-northeast from GPS location 317 on 28 January 2022.



Photo 7. View of Disturbed Mesic Woods habitat found within *Polygon 5* as seen looking northeast from GPS location 401 on 28 January 2022.



Photo 8. View of Surface Water Drainage found in *Polygon 15* as seen looking northwest from GPS location 437 on 27 January 2022.



Photo 9. View of Man-made Surface Water habitat (*Polygon 2*) as seen looking southwest from GPS location 665 on 28 January 2022.



Photo 10. View of water marks on tree boles as seen at GPS location 665 (*Polygon 2*) on 28 January 2022.



Photo 11. View of clay hydric soil (depleted matrix) core as seen at GPS location 665 on 28 January 2022.



Photo 12. View of Successional Oaks-Mixed Hardwoods Habitat (*Polygon 1*) as seen looking east from GPS location 691 on 28 January 2022.



Photo 13. View of CMA-Sinkhole Habitat found within *Polygon 14* as seen looking west from GPS location 814 on 28 January 2022.

ATTACHMENT 1: IPaC Report



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Florida Ecological Services Field Office

FL

Email Address: fw4filesregs@fws.gov

<https://www.fws.gov/office/florida-ecological-services>



In Reply Refer To:

July 24, 2022

Project Code: 2022-0066905

Project Name: Southpointe Planned Development Expansion Site

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat.

Please include your Project Code, listed at the top of this letter, in all subsequent correspondence regarding this project. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

07/24/2022

2

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of

07/24/2022

3

this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

07/24/2022

1

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Florida Ecological Services Field Office
, FL

07/24/2022

2

Project Summary

Project Code: 2022-0066905

Event Code: None

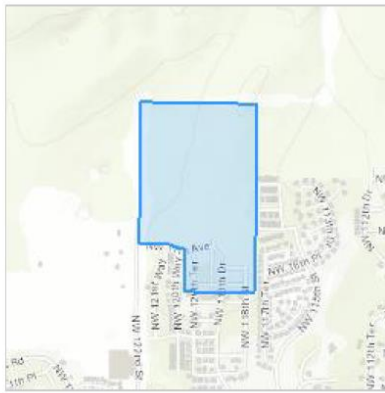
Project Name: Southpointe Planned Development Expansion Site

Project Type: New Constr - Above Ground

Project Description: A 93-acre Project Site in Alachua County, Florida, being planned for expansion of the Southpointe Planned Development.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@29.67055945,-82.46970420770049,14z>



Counties: Alachua County, Florida

07/24/2022

3

Endangered Species Act Species

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Eastern Black Rail <i>Laterallus jamaicensis ssp. jamaicensis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10477	Threatened
Wood Stork <i>Mycteria americana</i> Population: AL, FL, GA, MS, NC, SC No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8477 General project design guidelines: https://ipac.ecosphere.fws.gov/project/4L3GHHIARFF55OCWEH3ZD7UY3Q/documents/generated/6954.pdf	Threatened

Reptiles

NAME	STATUS
Eastern Indigo Snake <i>Drymarchon couperi</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/646	Threatened
Gopher Tortoise <i>Gopherus polyphemus</i> Population: eastern No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6994	Candidate

07/24/2022

4

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

07/24/2022

1

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

07/24/2022

1

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USEWS Birds of Conservation Concern \(BCC\) list](#) or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Kestrel <i>Falco sparverius paulus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9587	Breeds Apr 1 to Aug 31
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Sep 1 to Jul 31

07/24/2022

2

NAME	BREEDING SEASON
Great Blue Heron <i>Ardea herodias occidentalis</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Jan 1 to Dec 31
Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Magnificent Frigatebird <i>Fregata magnificens</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Oct 1 to Apr 30
Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Swallow-tailed Kite <i>Elanoides forficatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8938	Breeds Mar 10 to Jun 30

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

07/24/2022

3

2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

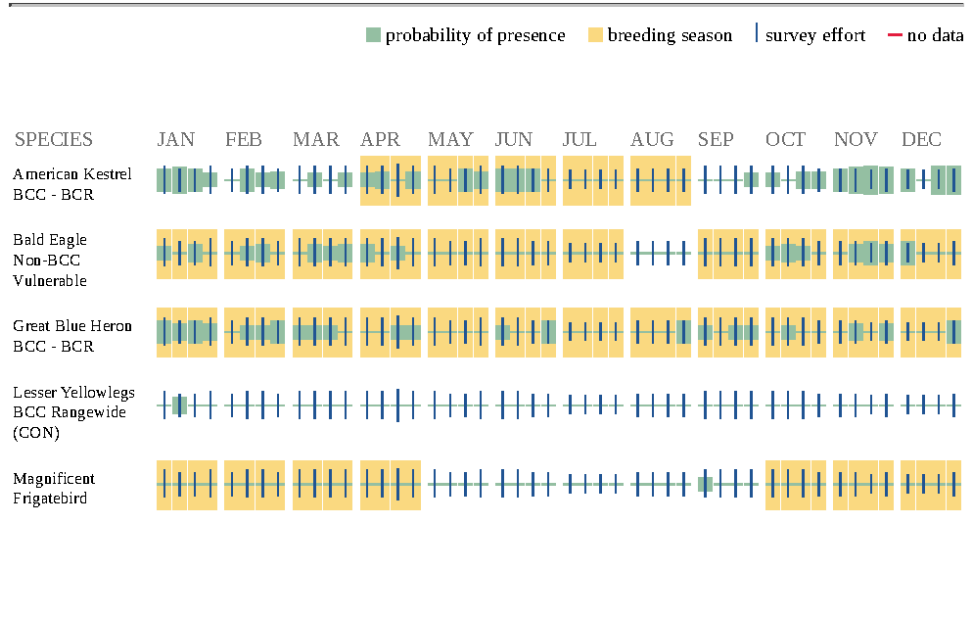
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

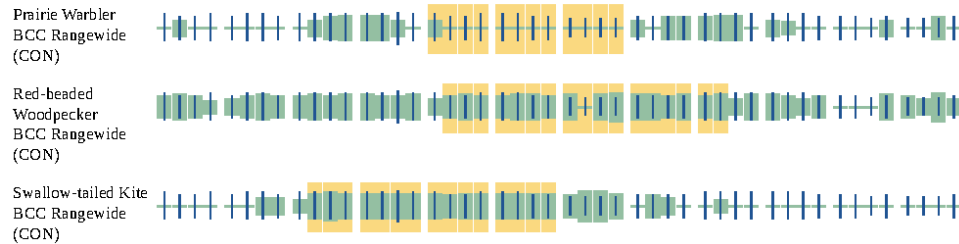
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



07/24/2022

4

BCC - BCR



Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

07/24/2022

5

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides

07/24/2022

6

birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

07/24/2022

1

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

07/24/2022

2

IPaC User Contact Information

Agency: Ecosystem Research Corporation

Name: Peter Wallace

Address: 2906 NW 142ND AVE

City: GAINESVILLE

State: FL

Zip: 32609

Email: pete@ecosysfl.com

Phone: 3525380755