

UNPLATTED WEST 1/2 OF
SECTION 16, T1N, R1E, S1W
(ORB 1205, PG 487)

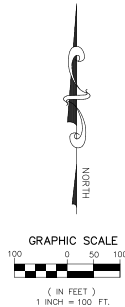
POINT OF COMMENCEMENT PARCEL H
POINT OF BEGINNING
THE SOUTHWEST CORNER OF
CONSERVATION AREA TRACT C-2
N00°53'56"W
10.01'

THE SOUTH LINE OF CONSERVATION
AREA TRACT C-2
(BEARING 84.00°)
S88°54'50"E 1319.43'

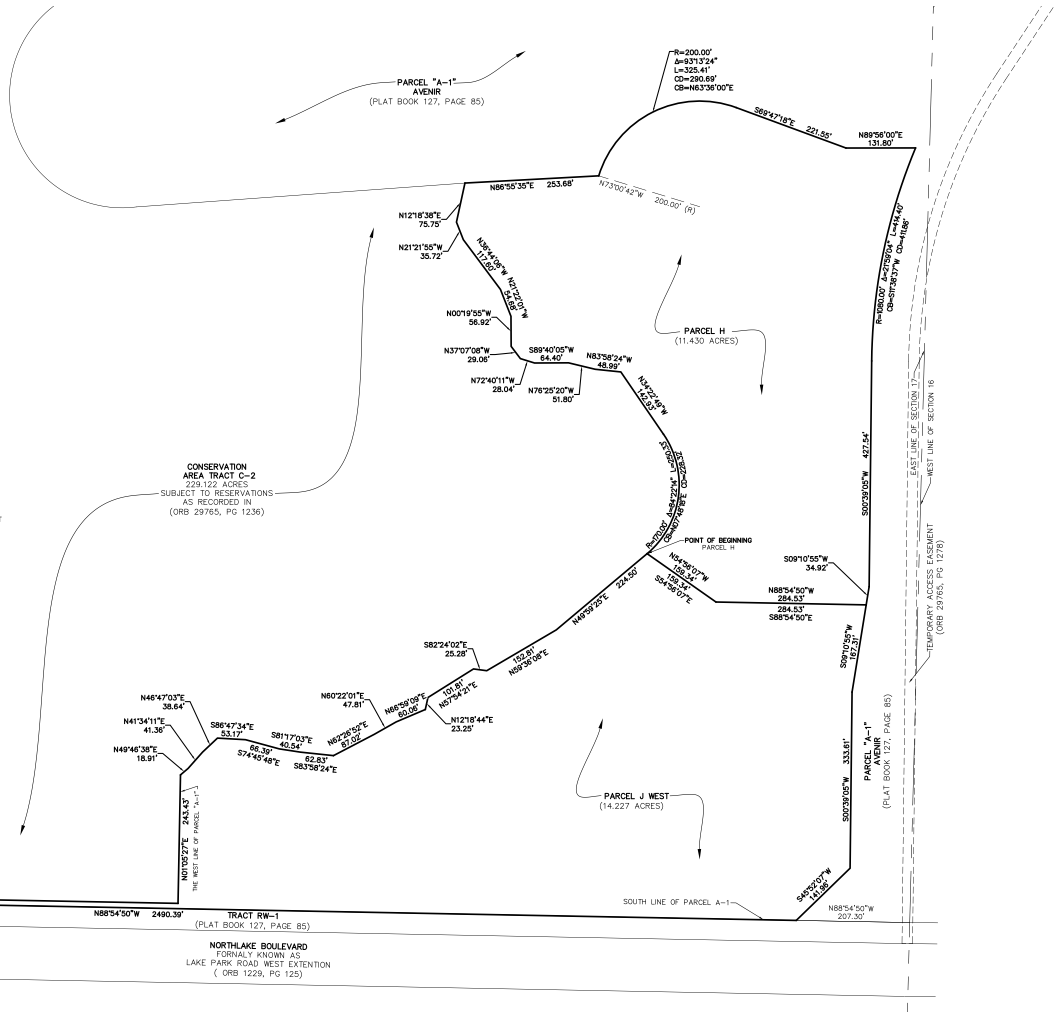
N48°47'03"E 38.64'
N41°34'11"E 41.36'
N49°46'38"E 18.91'

TRACT RW-1
(PLAT BOOK 127, PAGE 85)

NORTH LAKE BOULEVARD
FORMALLY KNOWN AS
LAKE PARK ROAD WEST EXTENSION
(ORB 1229, PG 125)



- LEGEND/ABBREVIATIONS
- CL - CENTERLINE
 - Δ - DELTA (CENTRAL ANGLE)
 - AC - ACRES
 - CB - CHORD BEARING
 - CD - CHORD DISTANCE
 - DE - DRAINAGE EASEMENT
 - ARC - ARC LENGTH
 - LAL - LIMITED ACCESS EASEMENT
 - LB - LICENSED BUSINESS
 - LAL - LANDSCAPE BUFFER EASEMENT
 - LSE - LEFT STATION EASEMENT
 - ORB - OFFICIAL RECORD BOOK
 - FND - FOUND PALM BEACH COUNTY SURVEY MONUMENT
 - R - RADIUS
 - RW - RIGHT-OF-WAY
 - SF - SQUARE FEET
 - SUAE - SEACAST UTILITY AUTHORITY EASEMENT
 - UE - UTILITY EASEMENT
 - ⊙ - DENOTES SET 5/8" IRON ROD & CAP STAMPED "183591"
 - ✱ - INDICATES SECTION CORNER
 - ✱ - INDICATES 1/4 SECTION CORNER



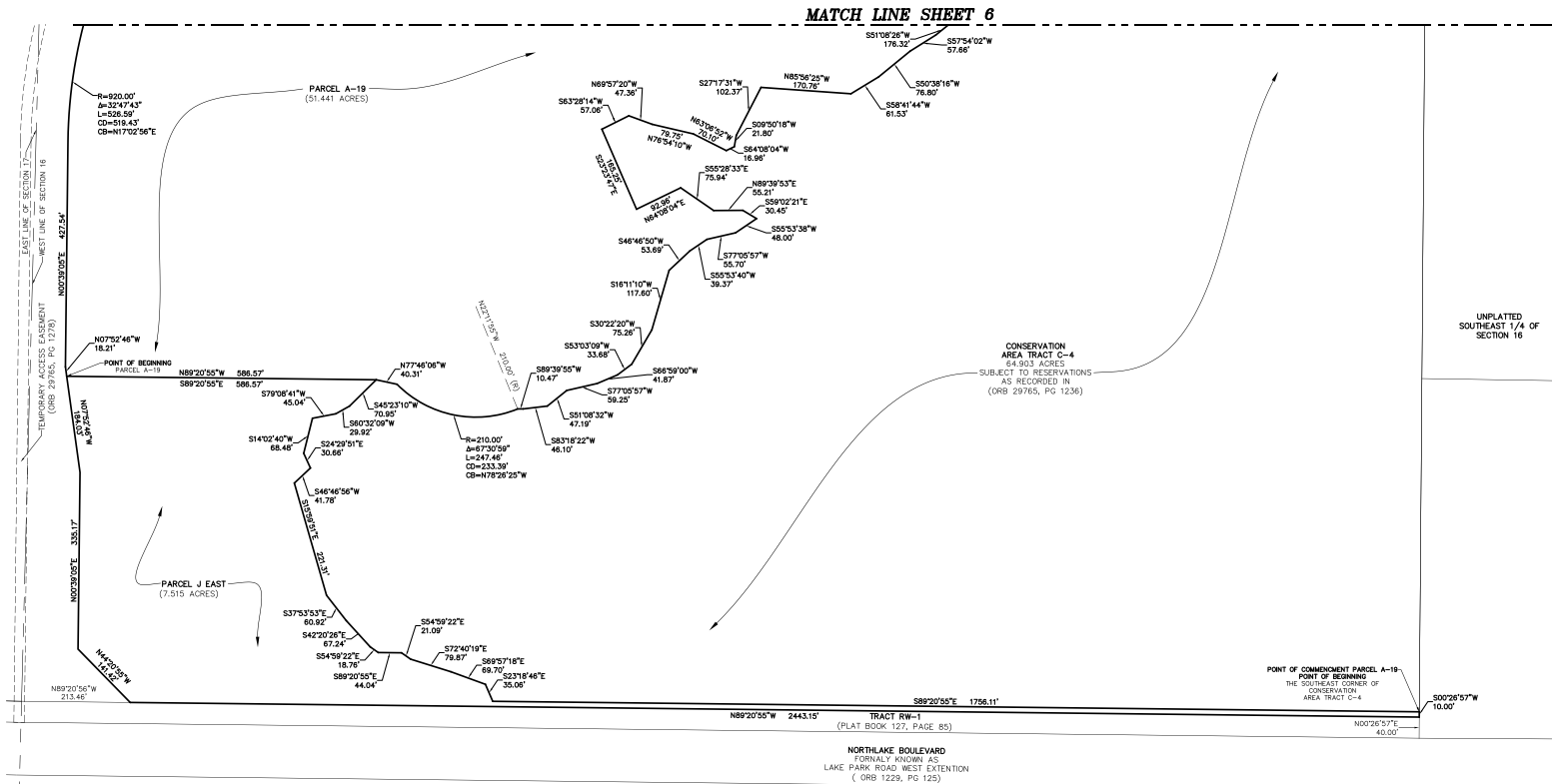
BY:	
DATE:	
REVISIONS:	
FILE NAME:	255-ARL-CDD ASSESSMENT AREA # 12-252

CAULFIELD & WHEELER, INC.
LANDSCAPE ARCHITECTURE & SURVEYING
7000 GLADES ROAD, SUITE 100
FORT LAUDERDALE, FL 33309
PHONE (561) 392-1991 / FAX (561) 750-1452

AVENIR CDD ASSESSMENT
AREA 3
LEGAL DESCRIPTION

DATE 11/30/2022
DRAWN BY BLF
F.B./PG. ELECT
SCALE AS SHOWN

JOB # 7955
SHT. NO.
4
OF 10 SHEETS



- LEGEND/ABBREVIATIONS**
- C - CENTERLINE
 - DA - DELTA (CENTRAL ANGLE)
 - AC - ACRES
 - CB - CHORD BEARING
 - CD - CHORD DISTANCE
 - DE - DRAINAGE EASEMENT
 - L - ARC LENGTH
 - LAE - LIMITED ACCESS EASEMENT
 - LB - LICENSED BUSINESS
 - LSE - LANDSCAPE BUFFER EASEMENT
 - LSE - LIFT STATION EASEMENT
 - ORB - OFFICIAL RECORD BOOK
 - FND PBC - FOUND PALM BEACH COUNTY SURVEY MONUMENT
 - R - RADIUS
 - RW - RIGHT-OF-WAY
 - SF - SQUARE FEET
 - SUAE - SEACOAST UTILITY AUTHORITY EASEMENT
 - UE - UTILITY EASEMENT
 - Ø - DENOTES SET 5/8" IRON ROD & CAP
 - STAMPED "183591"
 - ✕ - INDICATES SECTION CORNER
 - ✕ - INDICATES 1/4 SECTION CORNER

BY:	
DATE:	
REVISIONS:	
FILE NAME:	7955-AREA-001-ASSESSMENT AREA # 11-2022

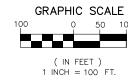
CAULFIELD & WHEELER, INC.
LAND SURVEYING
7000 GLADES ROAD, SUITE 100
FORT LAUDERDALE, FL 33309
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AVENIR CDD ASSESSMENT
AREA 3
LEGAL DESCRIPTION

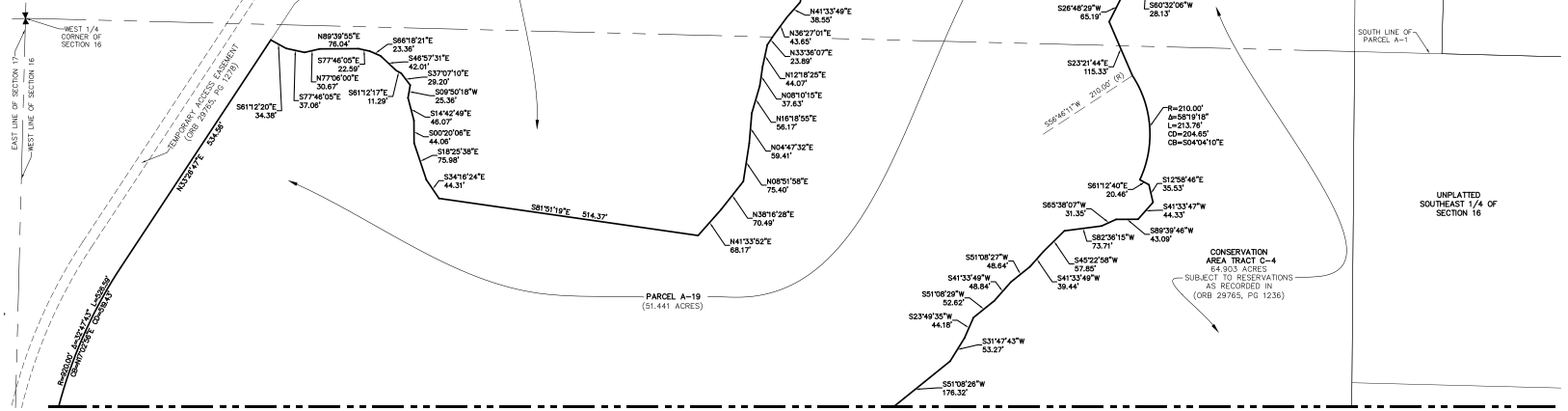
DATE 11/30/2022
DRAWN BY RLF
F.B./PG. ELECT
SCALE AS SHOWN

JOB # 7955
SHEET NO.
5
OF 10 SHEETS

- LEGEND/ABBREVIATIONS**
- CL - CENTERLINE
 - Δ - DELTA (CENTRAL ANGLE)
 - AC - ACRES
 - CB - CHORD BEARING
 - CD - CHORD DISTANCE
 - DE - DRAINAGE EASEMENT
 - LA - LANDSCAPE ACCESS EASEMENT
 - LB - LICENSED BUSINESS
 - LBE - LANDSCAPE BUFFER EASEMENT
 - LSE - LICENSED BUSINESS EASEMENT
 - ORB - OFFICIAL RECORD BOOK
 - PC - POINT
 - PR - PALM BEACH COUNTY SURVEY MONUMENT
 - R - RADIUS
 - RF - RIGHT-OF-WAY
 - SF - SQUARE FEET
 - SE - SEACAST UTILITY AUTHORITY EASEMENT
 - UE - UTILITY EASEMENT
 - ⊙ - DENOTES SET 5/8" IRON ROD & CAP
 - ⊙ - STAMPED "103551"
 - ✱ - INDICATES SECTION CORNER
 - ✱ - INDICATES 1/4 SECTION CORNER



EAST LINE OF SECTION 17
WEST LINE OF SECTION 16



MATCH LINE SHEET 5

DATE	11/30/2022
DRAWN BY	RLP
F.B./P.G. ELECT	
SCALE	AS SHOWN
JOB #	7955
SHT. NO.	6
OF 10 SHEETS	

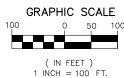
CAULFIELD & WHEELER, INC.
LAND SURVEYING
7000 GLADES ROAD, SUITE 100
PALM BEACH, FL 33411
PHONE (561) 392-1991 / FAX (561) 750-1452

**AVENIR CDD ASSESSMENT
AREA 3
LEGAL DESCRIPTION**



DATE 11/30/2022
DRAWN BY RLP
F.B./P.G. ELECT
SCALE AS SHOWN

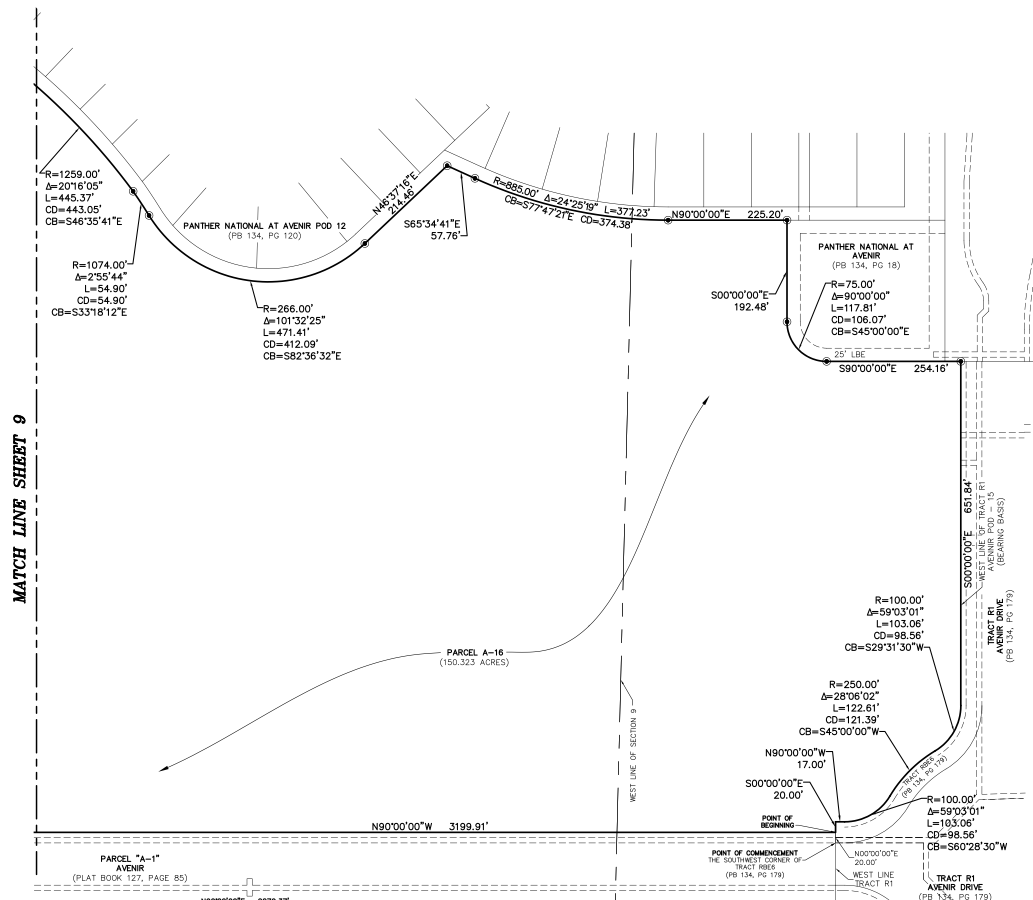


JOB # 7955
SHT. NO. 6
OF 10 SHEETS



LEGEND/ABBREVIATIONS

C = CENTERLINE
 Δ = DELTA (CENTRAL ANGLE)
 AC = ACRES
 CB = CHORD BEARING
 CD = CHORD DISTANCE
 DE = DRAINAGE EASEMENT
 L = ARC LENGTH
 LAE = LIMITED ACCESS EASEMENT
 LB = LICENSED BUSINESS
 LSE = LANDSCAPE BUFFER EASEMENT
 LSE = LIFT STATION EASEMENT
 OR = OPTICAL RECORD BOOK
 FND PBC = FOUND PALM BEACH COUNTY SURVEY MONUMENT
 R = RADIUS
 RW = RIGHT-OF-WAY
 SF = SQUARE FEET
 SUAE = SEACOAST UTILITY AUTHORITY EASEMENT
 UE = "UTILITY EASEMENT"
 * = DENOTES SET "1/4" IRON ROD & CAP
 STAMPED "LB3591"
 = INDICATES SECTION CORNER
 = INDICATES 1/4 SECTION CORNER



REVISIONS	DATE	BY

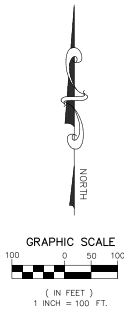


CAULFIELD & WHEELER, INC.
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE - SURVEYING
7900 GLADES ROAD - SUITE 100
BOCA RATON, FLORIDA 33434
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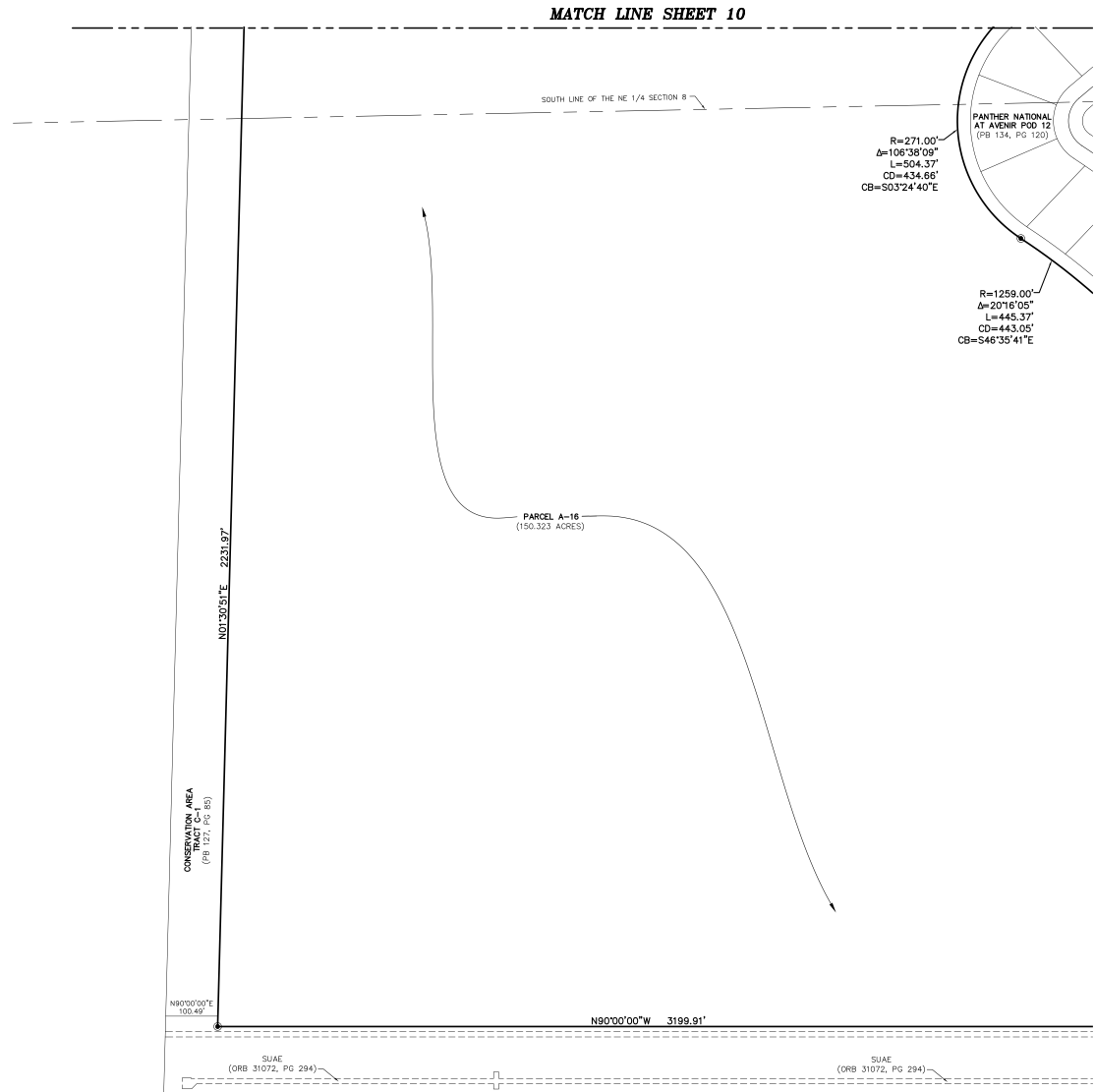
AVENIR CDD ASSESSMENT AREA 3 LEGAL DESCRIPTION

DATE 11/30/202
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F.B./ PG. ELEC
SCALE AS SHOW

JOB # 7955
SHT. NO. 8
OF 10 SHEETS



- LEGEND/ABBREVIATIONS
- C - CENTERLINE
 - Δ - DELTA (CENTRAL ANGLE)
 - AC - ACRES
 - CB - CHORD BEARING
 - CD - CHORD DISTANCE
 - DE - DRAINAGE EASEMENT
 - L - ARC LENGTH
 - LAE - LIMITED ACCESS EASEMENT
 - LB - LICENSED BUSINESS
 - LAE - LANDSCAPE BUFFER EASEMENT
 - LSE - LIFT STATION EASEMENT
 - ORB - OFFICIAL RECORD BOOK
 - FND - FOUND PALM BEACH COUNTY SURVEY MONUMENT
 - R - RADIUS
 - RM - RIGHT-OF-WAY
 - SF - SQUARE FEET
 - SUAE - SEACOAST UTILITY AUTHORITY EASEMENT
 - UE - UTILITY EASEMENT
 - - INDICATES SET 5/8" IRON ROD & CAP STAMPED "LB2591"
 - ✱ - INDICATES SECTION CORNER
 - ✱ - INDICATES 1/4 SECTION CORNER



BY:	
DATE:	
REVISIONS:	
FILE NAME:	7955-AREA-03-ASSESSMENT AREA 3 11-2022

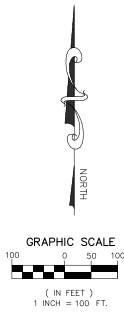
CAULFIELD & WHEELER, INC.
LANDSCAPE ARCHITECTS & SURVEYORS
7000 GLADES ROAD, SUITE 100
PALM BEACH, FL 33411
PHONE (561) 392-1991 / FAX (561) 750-1452

AVENIR CDD ASSESSMENT
AREA 3
LEGAL DESCRIPTION

DATE 11/30/2022
DRAWN BY BLF
F.B. / PG. ELECT
SCALE AS SHOWN



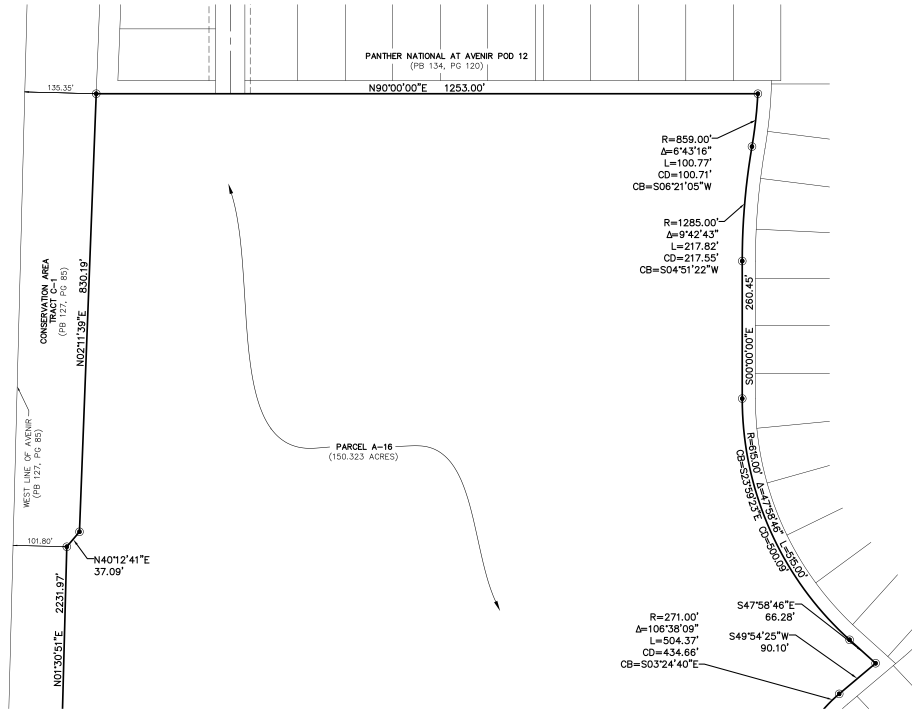
JOB # 7955
SHEET NO. 9
OF 10 SHEETS



LEGEND/ABBREVIATIONS

C - CENTERLINE
D - DELTA (CENTRAL ANGLE)
L - LENGTH
CB - CHORD BEARING
CD - CHORD DISTANCE
DE - DRAINAGE EASEMENT
L - ARC LENGTH
LAE - LIMITED ACCESS EASEMENT
LBE - LICENSED BUSINESS EASEMENT
LSE - LANDSCAPE BUFFER EASEMENT
LSE - LIFT STATION EASEMENT
ORB - OFFICIAL RECORD BOOK
FND - FOUND PALM BEACH COUNTY SURVEY MONUMENT
R - RADIUS
RW - RIGHT-OF-WAY
SF - SQUARE FEET
SUE - SEACOAST UTILITY AUTHORITY EASEMENT
UE - UTILITY EASEMENT
• - INDICATES SET 5/8" IRON ROD & CAP
STAMPED "LB2591"
+ - INDICATES SECTION CORNER
+ - INDICATES 1/4 SECTION CORNER

PALM BEACH COUNTY
BIOTECHNOLOGY
RESEARCH PARK
(PB 103, PG 108)
(ORB 17922, PG 820)



MATCH LINE SHEET 9

BY	
DATE	
REVISIONS	
DATE	
BY	

CAULFIELD & WHEELER, INC.
LANDSCAPE ARCHITECTURE & SURVEYING
7000 GLADES ROAD, SUITE 100
FORT LAUDERDALE, FL 33309
PHONE (561) 392-1991 / FAX (561) 750-1452

AVENIR CDD ASSESSMENT
AREA 3
LEGAL DESCRIPTION

DATE 11/30/2022
DRAWN BY RLF
F.B. / PG. ELECT
SCALE AS SHOWN



JOB # 7955
SHEET NO
10
OF 10 SHEETS

ASSESSMENT AREA THREE LEGAL DESCRIPTION

POD D DESCRIPTION:

A PORTION OF PARCEL "A-1", AVENIR, AS RECORDED IN PLAT BOOK 127, PAGES 85 THROUGH 109 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA. BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF PARCEL A-1, AVENIR, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 127, PAGES 85 THROUGH 109, PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, ; THENCE, NORTH 23° 34' 16" WEST FOR A DISTANCE OF 106.74 FEET TO THE POINT OF BEGINNING; THENCE, NORTH 01° 33' 47" WEST FOR A DISTANCE OF 657.27 FEET TO THE BEGINNING OF A CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 04° 44' 53", HAVING A RADIUS OF 1280.00 FEET, HAVING AN ARC DISTANCE OF 106.07 FEET, AND WHOSE LONG CHORD BEARS NORTH 03° 56' 13" WEST FOR A DISTANCE OF 106.04 FEET; THENCE, NORTH 32° 01' 18" WEST FOR A DISTANCE OF 96.55 FEET; THENCE, NORTH 89° 59' 58" WEST FOR A DISTANCE OF 27.91 FEET; THENCE, NORTH 00° 00' 00" EAST FOR A DISTANCE OF 71.00 FEET; THENCE, SOUTH 89° 59' 58" EAST FOR A DISTANCE OF 17.34 FEET; THENCE, NORTH 36° 12' 44" EAST FOR A DISTANCE OF 44.63 FEET TO THE BEGINNING OF A NON-TANGENT CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 05° 36' 02", HAVING A RADIUS OF 1280.00 FEET, HAVING AN ARC DISTANCE OF 125.12 FEET, AND WHOSE LONG CHORD BEARS NORTH 17° 43' 15" WEST FOR A DISTANCE OF 125.07 FEET; THENCE, N20° 31' 16" W FOR A DISTANCE OF 1026.66 FEET; THENCE, S24° 28' 43" W FOR A DISTANCE OF 56.57 FEET; THENCE, S69° 28' 44" W FOR A DISTANCE OF 58.90 FEET TO THE BEGINNING OF A CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 21° 37' 59", HAVING A RADIUS OF 100.00 FEET, HAVING AN ARC DISTANCE OF 37.76 FEET, AND WHOSE LONG CHORD BEARS SOUTH 80° 17' 43" WEST FOR A DISTANCE OF 37.53 FEET; THENCE, NORTH 88° 53' 17" WEST FOR A DISTANCE OF 1130.47 FEET; THENCE, NORTH 01° 06' 43" EAST FOR A DISTANCE OF 446.35 FEET TO THE BEGINNING OF A NON-TANGENT CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 16° 29' 43", HAVING A RADIUS OF 1130.00 FEET, HAVING AN ARC DISTANCE OF 325.32 FEET, AND WHOSE LONG CHORD BEARS SOUTH 66° 12' 37" WEST FOR A DISTANCE OF 324.20 FEET; THENCE, S01° 06' 43" W FOR A DISTANCE OF 556.49 FEET; THENCE, N88° 34' 05" W FOR A DISTANCE OF 174.00 FEET; THENCE, S01° 06' 43" W FOR A DISTANCE OF 1859.46 FEET; THENCE, N86° 54' 02" E FOR A DISTANCE OF 2216.49 FEET TO THE POINT OF BEGINNING.

CONTAINING 97.442 ACRES MORE OR LESS.

SUBJECT TO EASEMENTS, RESERVATIONS, AND/OR RIGHTS-OF-WAY OF RECORD.

TOGETHER WITH:

PARCEL J WEST:

A PORTION OF PARCEL "A-1", AVENIR, AS RECORDED IN PLAT BOOK 127, PAGES 85 THROUGH 109 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA. BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF CONSERVATION AREA TRACT C-2, AVENIR, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 127, PAGES 85 THROUGH 109, PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, THENCE S88°54'50"E, A DISTANCE OF 1319.43 FEET; THENCE N01°05'27"E, A DISTANCE OF 243.43 FEET; THENCE N49°46'38"E, A DISTANCE OF 18.91 FEET; THENCE N41°34'11"E, A DISTANCE OF 41.36 FEET; THENCE N46°47'03"E, A DISTANCE OF 38.64 FEET; THENCE S86°47'34"E, A DISTANCE OF 53.17 FEET; THENCE S74°45'48"E, A DISTANCE OF 66.39 FEET; THENCE S81°17'03"E, A DISTANCE OF 40.54 FEET; THENCE S83°58'24"E, A DISTANCE OF 62.83 FEET; THENCE N62°26'52"E, A DISTANCE OF 87.02 FEET; THENCE N60°22'01"E, A DISTANCE OF 47.81 FEET; THENCE N66°59'09"E, A DISTANCE OF 60.06 FEET; THENCE N12°18'44"E, A DISTANCE OF 23.25 FEET; THENCE N57°54'21"E, A DISTANCE OF 101.81 FEET; THENCE S82°24'02"E, A DISTANCE OF 25.28 FEET; THENCE N59°36'08"E, A DISTANCE OF 152.81 FEET; THENCE N49°59'25"E, A DISTANCE OF 224.50 FEET; THENCE S54°56'07"E, A DISTANCE OF 159.34 FEET; THENCE S88°54'50"E, A DISTANCE OF 284.53 FEET; THENCE S09°10'55"W, A DISTANCE OF 167.31 FEET; THENCE S00°39'05"W, A DISTANCE OF 333.61 FEET; THENCE S45°52'07"W, A DISTANCE OF 141.96 FEET; THENCE N88°54'50"W, A DISTANCE OF 2490.39 FEET; THENCE N00°53'56"W, A DISTANCE OF 10.01 FEET TO THE POINT OF BEGINNING.

CONTAINING 14.227 ACRES, MORE OR LESS.

SUBJECT TO EASEMENTS, RESERVATIONS, AND/OR RIGHTS-OF-WAY OF RECORD.

TOGETHER WITH:

PARCEL J EAST:

A PORTION OF PARCEL "A-1", AVENIR, AS RECORDED IN PLAT BOOK 127, PAGES 85 THROUGH 109 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA. BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF CONSERVATION AREA TRACT C-4, AVENIR, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 127, PAGES 85 THROUGH 109, PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, THENCE S00°26'57"W, A DISTANCE OF 10.00 FEET; THENCE N89°20'55"W, A DISTANCE OF 2443.15 FEET; THENCE N44°20'55"W, A DISTANCE OF 141.42 FEET; THENCE N00°39'05"E, A DISTANCE OF 335.17 FEET; THENCE N07°52'46"W, A DISTANCE OF 184.03 FEET; THENCE S89°20'55"E, A DISTANCE OF 586.57 FEET; THENCE S45°23'10"W, A DISTANCE OF 70.95 FEET; THENCE S60°32'09"W, A DISTANCE OF 29.92 FEET; THENCE S79°08'41"W, A DISTANCE OF 45.04 FEET; THENCE S14°02'40"W, A DISTANCE OF 68.48 FEET; THENCE S24°29'51"E, A DISTANCE OF 30.66 FEET; THENCE S46°46'56"W, A DISTANCE OF 41.78 FEET; THENCE S15°59'51"E, A DISTANCE OF 221.31 FEET; THENCE

S37°53'53"E, A DISTANCE OF 60.92 FEET; THENCE S42°20'26"E, A DISTANCE OF 67.24 FEET; THENCE S54°59'22"E, A DISTANCE OF 18.76 FEET; THENCE S89°20'55"E, A DISTANCE OF 44.04 FEET; THENCE S54°59'22"E, A DISTANCE OF 21.09 FEET; THENCE S72°40'19"E, A DISTANCE OF 79.87 FEET; THENCE S69°57'18"E, A DISTANCE OF 69.70 FEET; THENCE S23°18'46"E, A DISTANCE OF 35.06 FEET; THENCE S89°20'55"E, A DISTANCE OF 1756.11 FEET TO THE POINT OF BEGINNING.

CONTAINING 7.515 ACRES, MORE OR LESS.

SUBJECT TO EASEMENTS, RESERVATIONS, AND/OR RIGHTS-OF-WAY OF RECORD.

TOGETHER WITH:

PARCEL H:

A PORTION OF PARCEL "A-1", AVENIR, AS RECORDED IN PLAT BOOK 127, PAGES 85 THROUGH 109 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA. BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF CONSERVATION AREA TRACT C-2, AVENIR, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 127, PAGES 85 THROUGH 109, PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, THENCE S88°54'50"E, A DISTANCE OF 1319.43 FEET; THENCE N01°05'27"E, A DISTANCE OF 243.43 FEET; THENCE N49°46'38"E, A DISTANCE OF 18.91 FEET; THENCE N41°34'11"E, A DISTANCE OF 41.36 FEET; THENCE N46°47'03"E, A DISTANCE OF 38.64 FEET; THENCE S86°47'34"E, A DISTANCE OF 53.17 FEET; THENCE S74°45'48"E, A DISTANCE OF 66.39 FEET; THENCE S81°17'03"E, A DISTANCE OF 40.54 FEET; THENCE S83°58'24"E, A DISTANCE OF 62.83 FEET; THENCE N62°26'52"E, A DISTANCE OF 87.02 FEET; THENCE N60°22'01"E, A DISTANCE OF 47.81 FEET; THENCE N66°59'09"E, A DISTANCE OF 60.06 FEET; THENCE N12°18'44"E, A DISTANCE OF 23.25 FEET; THENCE N57°54'21"E, A DISTANCE OF 101.81 FEET; THENCE S82°24'02"E, A DISTANCE OF 25.28 FEET; THENCE N59°36'08"E, A DISTANCE OF 152.81 FEET; THENCE N49°59'25"E, A DISTANCE OF 224.50 FEET TO THE POINT OF BEGINNING AND A POINT OF CURVATURE OF A CURVE CONCAVE TO THE WEST, HAVING A RADIUS OF 170.00 FEET; THENCE NORTHERLY, ALONG SAID CURVE TO THE LEFT, THROUGH A CENTRAL ANGLE OF 84°22'14", A DISTANCE OF 250.33 FEET TO A POINT OF TANGENCY; THENCE N34°22'49"W, A DISTANCE OF 142.93 FEET; THENCE N83°58'24"W, A DISTANCE OF 48.99 FEET; THENCE N76°25'20"W, A DISTANCE OF 51.80 FEET; THENCE S89°40'05"W, A DISTANCE OF 64.40 FEET; THENCE N72°40'11"W, A DISTANCE OF 28.04 FEET; THENCE N37°07'08"W, A DISTANCE OF 29.06 FEET; THENCE N00°19'55"W, A DISTANCE OF 56.92 FEET; THENCE N21°22'01"W, A DISTANCE OF 54.68 FEET; THENCE N36°44'06"W, A DISTANCE OF 117.60 FEET; THENCE N21°21'55"W, A DISTANCE OF 35.72 FEET; THENCE N12°18'38"E, A DISTANCE OF 75.75 FEET; THENCE N86°55'35"E, A DISTANCE OF 253.68 FEET TO THE BEGINNING OF A NON-TANGENT CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 93° 13' 24", HAVING A RADIUS OF 200.00 FEET, HAVING AN ARC DISTANCE OF 325.41 FEET, AND WHOSE LONG CHORD BEARS NORTH 63° 36' 00" EAST FOR A DISTANCE OF 290.69 FEET; THENCE S69°47'18"E, A DISTANCE OF 221.55 FEET; THENCE N89°56'00"E, A DISTANCE OF 131.80 FEET TO THE BEGINNING OF A NON-TANGENT CURVE TO THE LEFT

THROUGH A CENTRAL ANGLE OF 21° 59' 04", HAVING A RADIUS OF 1080.00 FEET, HAVING AN ARC DISTANCE OF 414.40 FEET, AND WHOSE LONG CHORD BEARS SOUTH 11° 38' 37" WEST FOR A DISTANCE OF 411.86 FEET; THENCE S00°39'05"W, A DISTANCE OF 427.54 FEET; THENCE S09°10'55"W, A DISTANCE OF 34.92 FEET; THENCE N88°54'50"W, A DISTANCE OF 284.53 FEET; THENCE N54°56'07"W, A DISTANCE OF 159.34 FEET TO THE POINT OF BEGINNING.

CONTAINING 11.430 ACRES, MORE OR LESS.

SUBJECT TO EASEMENTS, RESERVATIONS, AND/OR RIGHTS-OF-WAY OF RECORD.

TOGETHER WITH:

PARCEL A-19:

A PORTION OF PARCEL "A-1", AVENIR, AS RECORDED IN PLAT BOOK 127, PAGES 85 THROUGH 109 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA. BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF CONSERVATION AREA TRACT C-4, AVENIR, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 127, PAGES 85 THROUGH 109, PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, THENCE S00°26'57"W, A DISTANCE OF 10.00 FEET; THENCE N89°20'55"W, A DISTANCE OF 2443.15 FEET; THENCE N44°20'55"W, A DISTANCE OF 141.42 FEET; THENCE N00°39'05"E, A DISTANCE OF 335.17 FEET; THENCE N07°52'46"W, A DISTANCE OF 184.03 FEET TO THE POINT OF BEGINNING; THENCE N07°52'46"W, A DISTANCE OF 18.21 FEET; THENCE N00°39'05"E, A DISTANCE OF 427.54 FEET TO THE BEGINNING OF A CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 32° 47' 43", HAVING A RADIUS OF 920.00 FEET, HAVING AN ARC DISTANCE OF 526.59 FEET, AND WHOSE LONG CHORD BEARS NORTH 17° 02' 56" EAST FOR A DISTANCE OF 519.43 FEET; THENCE N33°26'47"E, A DISTANCE OF 534.56 FEET; THENCE S61°12'20"E, A DISTANCE OF 34.38 FEET; THENCE S77°46'05"E, A DISTANCE OF 37.06 FEET; THENCE N77°06'00"E, A DISTANCE OF 30.67 FEET; THENCE N89°39'55"E, A DISTANCE OF 76.04 FEET; THENCE S77°46'05"E, A DISTANCE OF 22.59 FEET; THENCE S66°18'21"E, A DISTANCE OF 23.36 FEET; THENCE S46°57'31"E, A DISTANCE OF 42.01 FEET; THENCE S61°12'17"E, A DISTANCE OF 11.29 FEET; THENCE S37°07'10"E, A DISTANCE OF 29.20 FEET; THENCE S09°50'18"W, A DISTANCE OF 25.36 FEET; THENCE S14°42'49"E, A DISTANCE OF 46.07 FEET; THENCE S00°20'06"E, A DISTANCE OF 44.06 FEET; THENCE S18°25'38"E, A DISTANCE OF 75.98 FEET; THENCE S34°16'24"E, A DISTANCE OF 44.31 FEET; THENCE S81°51'19"E, A DISTANCE OF 514.37 FEET; THENCE N41°33'52"E, A DISTANCE OF 68.17 FEET; THENCE N38°16'28"E, A DISTANCE OF 70.49 FEET; THENCE N08°51'58"E, A DISTANCE OF 75.40 FEET; THENCE N04°47'32"E, A DISTANCE OF 59.41 FEET; THENCE N16°18'55"E, A DISTANCE OF 56.17 FEET; THENCE N08°10'15"E, A DISTANCE OF 37.63 FEET; THENCE N12°18'25"E, A DISTANCE OF 44.07 FEET; THENCE N33°36'07"E, A DISTANCE OF 23.89 FEET; THENCE N36°27'01"E, A DISTANCE OF 43.65 FEET; THENCE N41°33'49"E, A DISTANCE OF 38.55 FEET; THENCE N09°50'15"E, A DISTANCE OF 68.66 FEET; THENCE N09°50'13"E, A DISTANCE OF 26.79 FEET; THENCE N27°57'36"E, A DISTANCE OF 34.41 FEET; THENCE N09°50'12"E, A DISTANCE OF 24.14 FEET; THENCE N55°53'36"E, A DISTANCE OF 25.21 FEET; THENCE N41°33'45"E, A DISTANCE OF 38.68 FEET; THENCE N27°57'39"E, A DISTANCE OF 34.40 FEET; THENCE N41°33'49"E, A DISTANCE OF 19.58 FEET TO THE POINT

OF CURVATURE OF A CURVE CONCAVE TO THE EAST, HAVING A RADIUS OF 210.00 FEET FROM WHICH A RADIAL LINE BEARS NORTH 84°44'28" EAST; THENCE NORTHERLY, ALONG SAID CURVE TO THE RIGHT, THROUGH A CENTRAL ANGLE OF 68°03'25", A DISTANCE OF 249.44 FEET; THENCE N36°02'21"E, A DISTANCE OF 47.78 FEET; THENCE N77°05'51"E, A DISTANCE OF 24.23 FEET; THENCE N57°10'15"E, A DISTANCE OF 44.32 FEET; THENCE N80°37'01"E, A DISTANCE OF 35.82 FEET; THENCE N69°17'03"E, A DISTANCE OF 32.78 FEET; THENCE N89°39'51"E, A DISTANCE OF 24.84 FEET; THENCE S23°49'35"W, A DISTANCE OF 53.06 FEET; THENCE S00°20'14"E, A DISTANCE OF 23.41 FEET TO THE POINT OF CURVATURE OF A CURVE CONCAVE TO THE SOUTHWEST, HAVING A RADIUS OF 210.00 FEET FROM WHICH A RADIAL LINE BEARS SOUTH 17°19'16" WEST; THENCE SOUTHERLY, ALONG SAID CURVE TO THE RIGHT, THROUGH A CENTRAL ANGLE OF 33°32'29", A DISTANCE OF 122.94 FEET; THENCE N55°53'30"E, A DISTANCE OF 33.34 FEET; THENCE N45°58'21"E, A DISTANCE OF 47.10 FEET; THENCE S16°59'18"E, A DISTANCE OF 31.19 FEET; THENCE N78°12'30"E, A DISTANCE OF 77.83 FEET; THENCE S74°45'59"E, A DISTANCE OF 65.13 FEET; THENCE N89°39'46"E, A DISTANCE OF 72.29 FEET; THENCE N49°46'18"E, A DISTANCE OF 9.00 FEET; THENCE S43°30'23"E, A DISTANCE OF 25.02 FEET; THENCE S00°03'55"W, A DISTANCE OF 97.60 FEET; THENCE S12°18'21"W, A DISTANCE OF 63.63 FEET; THENCE S00°20'15"E, A DISTANCE OF 60.20 FEET; THENCE S14°02'31"W, A DISTANCE OF 52.60 FEET; THENCE S37°07'17"E, A DISTANCE OF 42.65 FEET; THENCE S23°49'30"W, A DISTANCE OF 44.23 FEET; THENCE N42°14'12"W, A DISTANCE OF 24.96 FEET; THENCE N82°24'20"W, A DISTANCE OF 61.43 FEET; THENCE S60°32'06"W, A DISTANCE OF 28.13 FEET; THENCE N27°57'31"W, A DISTANCE OF 36.15 FEET; THENCE S53°03'02"W, A DISTANCE OF 20.58 FEET; THENCE S26°48'29"W, A DISTANCE OF 65.19 FEET; THENCE S23°21'44"E, A DISTANCE OF 115.33 FEET TO THE POINT OF CURVATURE OF A CURVE CONCAVE TO THE WEST, HAVING A RADIUS OF 210.00 FEET FROM WHICH A RADIAL LINE BEARS SOUTH 56°46'11" WEST; THENCE SOUTHERLY, ALONG SAID CURVE TO THE LEFT, THROUGH A CENTRAL ANGLE OF 58°19'18", A DISTANCE OF 213.76 FEET; THENCE S61°12'40"E, A DISTANCE OF 20.46 FEET; THENCE S12°58'46"E, A DISTANCE OF 35.53 FEET; THENCE S41°33'47"W, A DISTANCE OF 44.33 FEET; THENCE S89°39'46"W, A DISTANCE OF 43.09 FEET; THENCE S65°38'07"W, A DISTANCE OF 31.35 FEET; THENCE S82°36'15"W, A DISTANCE OF 73.71 FEET; THENCE S45°22'58"W, A DISTANCE OF 57.85 FEET; THENCE S41°33'49"W, A DISTANCE OF 39.44 FEET; THENCE S51°08'27"W, A DISTANCE OF 48.64 FEET; THENCE S41°33'49"W, A DISTANCE OF 48.84 FEET; THENCE S51°08'29"W, A DISTANCE OF 52.62 FEET; THENCE S23°49'35"W, A DISTANCE OF 44.18 FEET; THENCE S31°47'43"W, A DISTANCE OF 53.27 FEET; THENCE S51°08'26"W, A DISTANCE OF 176.32 FEET; THENCE S57°54'02"W, A DISTANCE OF 57.66 FEET; THENCE S50°38'16"W, A DISTANCE OF 76.80 FEET; THENCE S58°41'44"W, A DISTANCE OF 61.53 FEET; THENCE N85°56'25"W, A DISTANCE OF 170.76 FEET; THENCE S27°17'31"W, A DISTANCE OF 102.37 FEET; THENCE S09°50'18"W, A DISTANCE OF 21.80 FEET; THENCE S64°08'04"W, A DISTANCE OF 16.96 FEET; THENCE N63°06'52"W, A DISTANCE OF 70.10 FEET; THENCE N76°54'10"W, A DISTANCE OF 79.75 FEET; THENCE N69°57'20"W, A DISTANCE OF 47.36 FEET; THENCE S63°28'14"W, A DISTANCE OF 57.06 FEET; THENCE S23°23'47"E, A DISTANCE OF 165.25 FEET; THENCE N64°08'04"E, A DISTANCE OF 92.96 FEET; THENCE S55°28'33"E, A DISTANCE OF 75.94 FEET; THENCE N89°39'53"E, A DISTANCE OF 55.21 FEET; THENCE S59°02'21"E, A DISTANCE OF 30.45 FEET; THENCE S55°53'38"W, A DISTANCE OF 48.00 FEET; THENCE S77°05'57"W, A DISTANCE OF 55.70 FEET; THENCE S55°53'40"W, A DISTANCE OF 39.37 FEET; THENCE S46°46'50"W, A DISTANCE OF 53.69 FEET; THENCE S16°11'10"W, A DISTANCE OF 117.60 FEET; THENCE S30°22'20"W, A DISTANCE OF 75.26 FEET; THENCE S53°03'09"W, A DISTANCE OF 33.68 FEET; THENCE S66°59'00"W, A DISTANCE OF 41.87 FEET; THENCE S77°05'57"W, A DISTANCE OF 59.25 FEET; THENCE S51°08'32"W, A DISTANCE OF 47.19 FEET; THENCE S83°18'22"W, A DISTANCE OF 46.10 FEET; THENCE S89°39'55"W, A DISTANCE OF 10.47 FEET; FEET TO THE POINT OF

CURVATURE OF A CURVE CONCAVE TO THE NORTH, HAVING A RADIUS OF 210.00 FEET FROM WHICH A RADIAL LINE BEARS NORTH 22°11'55" WEST; THENCE WESTERLY, ALONG SAID CURVE TO THE RIGHT, THROUGH A CENTRAL ANGLE OF 67°30'59", A DISTANCE OF 247.46 FEET; THENCE N77°46'06"W, A DISTANCE OF 40.31 FEET; THENCE N89°20'55"W, A DISTANCE OF 586.57 FEET TO THE POINT OF BEGINNING.

CONTAINING 51.441 ACRES, MORE OR LESS.

SUBJECT TO EASEMENTS, RESERVATIONS, AND/OR RIGHTS-OF-WAY OF RECORD.

TOGETHER WITH:

PARCEL A-17:

A PORTION OF PARCEL "A-1", AVENIR, AS RECORDED IN PLAT BOOK 127, PAGES 85 THROUGH 109 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA. BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF TRACT RBE5, AVENIR - POD 15, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 134, PAGE 179, PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, THENCE S00°00'00"E, A DISTANCE OF 702.74 FEET; THENCE N76°54'04"W, A DISTANCE OF 61.66 FEET; THENCE N61°12'17"W, A DISTANCE OF 23.36 FEET; THENCE N69°57'09"W, A DISTANCE OF 41.20 FEET; THENCE S89°39'53"W, A DISTANCE OF 25.18 FEET; THENCE N61°12'13"W, A DISTANCE OF 61.48 FEET; THENCE N31°13'10"W, A DISTANCE OF 44.45 FEET; THENCE N69°57'11"W, A DISTANCE OF 77.99 FEET; THENCE S41°33'52"W, A DISTANCE OF 77.38 FEET; THENCE S29°46'56"W, A DISTANCE OF 102.67 FEET; THENCE S10°56'28"W, A DISTANCE OF 48.49 FEET; THENCE S64°07'57"W, A DISTANCE OF 74.67 FEET; THENCE S51°08'33"W, A DISTANCE OF 58.86 FEET; THENCE S18°15'42"W, A DISTANCE OF 52.35 FEET; THENCE S45°58'26"W, A DISTANCE OF 39.81 FEET; THENCE S75°45'14"W, A DISTANCE OF 34.79 FEET; THENCE N64°48'04"W, A DISTANCE OF 28.22 FEET; THENCE N42°13'57"W, A DISTANCE OF 37.50 FEET; THENCE N50°26'22"W, A DISTANCE OF 57.91 FEET; THENCE N66°18'16"W, A DISTANCE OF 86.11 FEET; THENCE N74°45'47"W, A DISTANCE OF 42.98 FEET; THENCE N34°16'18"W, A DISTANCE OF 35.51 FEET; THENCE N12°58'33"W, A DISTANCE OF 15.09 FEET; THENCE N09°50'26"E, A DISTANCE OF 21.75 FEET; THENCE N27°57'39"E, A DISTANCE OF 64.26 FEET; THENCE N32°31'02"E, A DISTANCE OF 56.10 FEET; THENCE N00°19'57"W, A DISTANCE OF 38.63 FEET; THENCE N23°49'35"E, A DISTANCE OF 39.84 FEET; THENCE N00°19'58"W, A DISTANCE OF 39.30 FEET; THENCE N16°59'03"W, A DISTANCE OF 62.21 FEET; THENCE N24°29'35"W, A DISTANCE OF 44.00 FEET; THENCE N36°00'12"W, A DISTANCE OF 82.68 FEET; THENCE N61°12'07"W, A DISTANCE OF 38.75 FEET; THENCE N42°13'54"W, A DISTANCE OF 24.42 FEET; THENCE N59°52'00"W, A DISTANCE OF 88.26 FEET; THENCE N16°59'01"W, A DISTANCE OF 31.18 FEET; THENCE N28°37'37"W, A DISTANCE OF 32.32 FEET; THENCE N07°38'11"W, A DISTANCE OF 51.67 FEET; THENCE N64°30'42"W, A DISTANCE OF 66.09 FEET; THENCE N55°01'27"W, A DISTANCE OF 67.51 FEET; THENCE N66°18'49"W, A DISTANCE OF 86.86 FEET; THENCE N76°52'32"W, A DISTANCE OF 123.56 FEET; THENCE S66°23'02"W, A DISTANCE OF 78.71 FEET; THENCE S37°43'00"W, A DISTANCE OF 58.63 FEET; THENCE S31°46'54"W, A DISTANCE OF 43.18 FEET; THENCE S47°08'30"W, A DISTANCE OF 39.89 FEET; THENCE S10°37'59"W, A DISTANCE OF 43.68 FEET; THENCE S14°39'33"E, A DISTANCE OF 74.46 FEET;

THENCE S32°41'23"E, A DISTANCE OF 128.59 FEET; THENCE S00°19'58"E, A DISTANCE OF 52.88 FEET; THENCE S10°30'19"E, A DISTANCE OF 59.29 FEET; THENCE S09°50'25"W, A DISTANCE OF 30.57 FEET; THENCE S08°32'27"E, A DISTANCE OF 154.84 FEET; THENCE S00°19'56"E, A DISTANCE OF 90.53 FEET; THENCE S06°01'34"E, A DISTANCE OF 48.17 FEET; THENCE S28°56'55"W, A DISTANCE OF 43.10 FEET; THENCE S49°46'26"W, A DISTANCE OF 20.81 FEET; THENCE N88°20'38"W, A DISTANCE OF 326.99 FEET; THENCE N20°04'26"W, A DISTANCE OF 72.96 FEET; THENCE N28°37'35"W, A DISTANCE OF 42.25 FEET; THENCE N24°29'36"W, A DISTANCE OF 53.12 FEET; THENCE N28°37'29"W, A DISTANCE OF 32.76 FEET; THENCE N16°59'06"W, A DISTANCE OF 22.02 FEET; THENCE N42°13'47"W, A DISTANCE OF 36.82 FEET; THENCE N72°40'02"W, A DISTANCE OF 48.62 FEET; THENCE N81°17'06"W, A DISTANCE OF 42.39 FEET; THENCE S89°40'03"W, A DISTANCE OF 50.90 FEET; THENCE S89°40'09"W, A DISTANCE OF 45.46 FEET; THENCE S80°37'16"W, A DISTANCE OF 36.84 FEET; THENCE N50°26'18"W, A DISTANCE OF 125.08 FEET; THENCE S79°08'44"W, A DISTANCE OF 49.04 FEET; THENCE S60°32'13"W, A DISTANCE OF 25.65 FEET; THENCE S75°45'26"W, A DISTANCE OF 51.44 FEET; THENCE S55°53'47"W, A DISTANCE OF 39.24 FEET; THENCE S45°58'32"W, A DISTANCE OF 58.18 FEET; THENCE S30°33'15"W, A DISTANCE OF 43.33 FEET; THENCE S41°34'00"W, A DISTANCE OF 72.59 FEET; THENCE S38°34'25"W, A DISTANCE OF 77.47 FEET; THENCE S72°00'17"W, A DISTANCE OF 21.09 FEET; THENCE N56°33'35"W, A DISTANCE OF 25.80 FEET; THENCE N79°48'27"W, A DISTANCE OF 44.11 FEET; THENCE S80°03'10"W, A DISTANCE OF 40.08 FEET; THENCE N50°37'10"W, A DISTANCE OF 79.29 FEET; THENCE S77°06'13"W, A DISTANCE OF 36.50 FEET; THENCE N83°58'18"W, A DISTANCE OF 42.56 FEET; THENCE N48°36'29"W, A DISTANCE OF 23.11 FEET; THENCE N24°29'29"W, A DISTANCE OF 27.74 FEET; THENCE N53°42'58"W, A DISTANCE OF 44.64 FEET; THENCE N42°13'42"W, A DISTANCE OF 54.83 FEET; THENCE N79°48'29"W, A DISTANCE OF 76.43 FEET; THENCE N53°42'58"W, A DISTANCE OF 13.90 FEET; THENCE N61°11'57"W, A DISTANCE OF 47.99 FEET; THENCE S79°08'44"W, A DISTANCE OF 64.76 FEET; THENCE N69°57'02"W, A DISTANCE OF 4.12 FEET; THENCE N00°45'13"E, A DISTANCE OF 406.07 FEET; THENCE N53°23'37"W, A DISTANCE OF 30.62 FEET; THENCE N01°16'44"E, A DISTANCE OF 25.48 FEET; THENCE N90°00'00"E, A DISTANCE OF 550.00 FEET; THENCE N01°16'44"E, A DISTANCE OF 380.00 FEET; THENCE N90°00'00"E, A DISTANCE OF 2270.37 FEET TO THE BEGINNING OF A CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 59° 03' 01", HAVING A RADIUS OF 100.00 FEET, HAVING AN ARC DISTANCE OF 103.06 FEET, AND WHOSE LONG CHORD BEARS SOUTH 60° 28' 30" EAST FOR A DISTANCE OF 98.56 FEET TO THE BEGINNING OF A CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 28° 06' 02", HAVING A RADIUS OF 250.00 FEET, HAVING AN ARC DISTANCE OF 122.61 FEET, AND WHOSE LONG CHORD BEARS SOUTH 45° 00' 00" EAST FOR A DISTANCE OF 121.39 FEET TO THE BEGINNING OF A CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 59° 03' 01", HAVING A RADIUS OF 100.00 FEET, HAVING AN ARC DISTANCE OF 103.06 FEET, AND WHOSE LONG CHORD BEARS SOUTH 29° 31' 30" EAST FOR A DISTANCE OF 98.56 FEET; THENCE, SOUTH 00° 00' 00" EAST FOR A DISTANCE OF 17.00 FEET TO THE POINT OF BEGINNING.

CONTAINING 53.175 ACRES, MORE OR LESS.

SUBJECT TO EASEMENTS, RESERVATIONS, AND/OR RIGHTS-OF-WAY OF RECORD.

TOGETHER WITH:

PARCEL A-16:

A PORTION OF PARCEL "A-1", AVENIR, AS RECORDED IN PLAT BOOK 127, PAGES 85 THROUGH 109 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA. BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

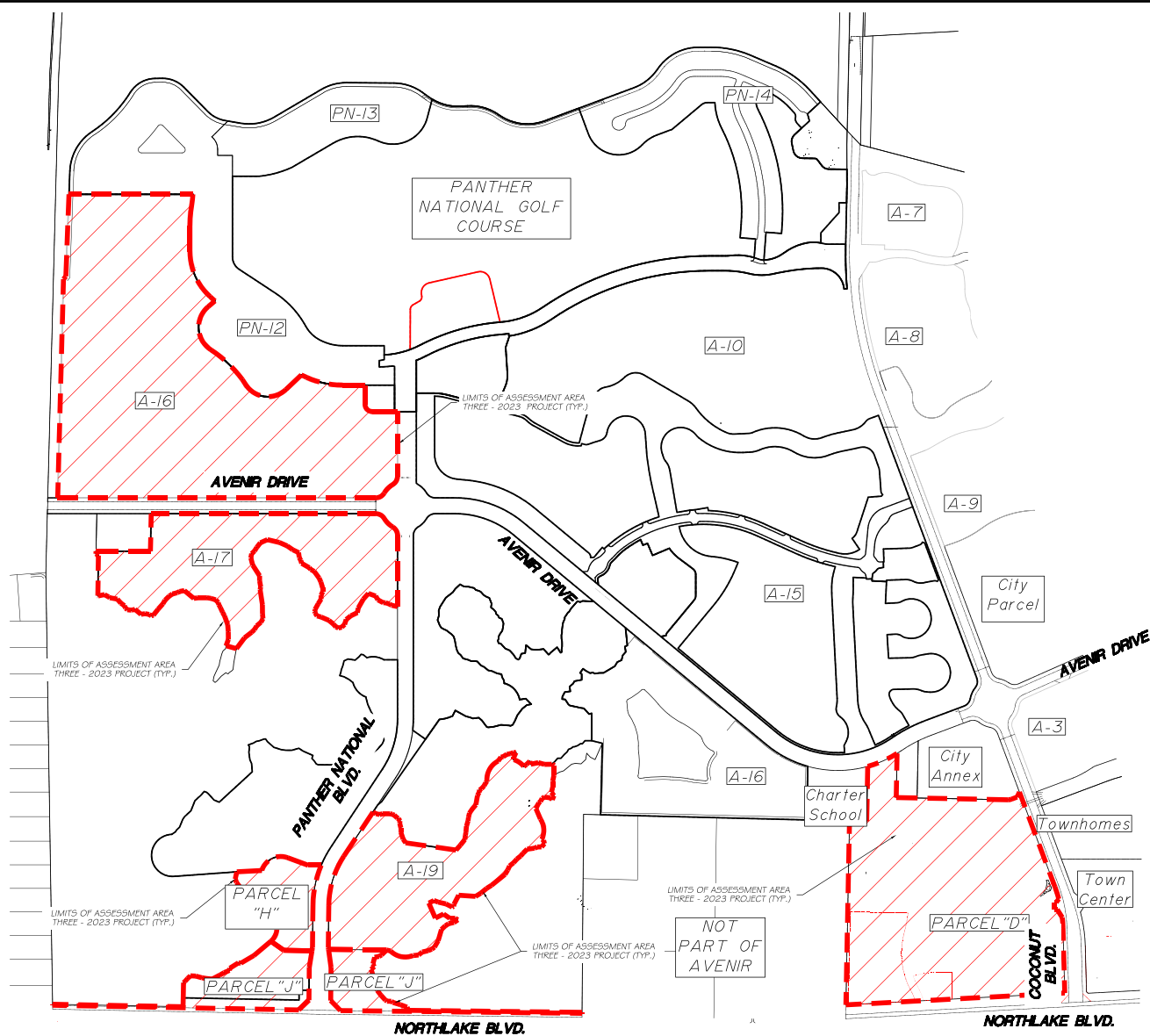
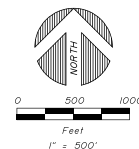
COMMENCING AT THE SOUTHWEST CORNER OF PARCEL TRACT RBE6, AVENIR - POD 15, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 134, PAGE 179, PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA; THENCE, NORTH 00° 00' 00" EAST FOR A DISTANCE OF 20.00 FEET TO THE POINT OF BEGINNING; THENCE, NORTH 90° 00' 00" WEST FOR A DISTANCE OF 3199.91 FEET; THENCE, NORTH 01° 30' 51" EAST FOR A DISTANCE OF 2231.97 FEET; THENCE, NORTH 40° 12' 41" EAST FOR A DISTANCE OF 37.09 FEET; THENCE, NORTH 02° 11' 39" EAST FOR A DISTANCE OF 830.19 FEET; THENCE, NORTH 90° 00' 00" EAST FOR A DISTANCE OF 1253.00 FEET TO THE BEGINNING OF A NON-TANGENT CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 06° 43' 16", HAVING A RADIUS OF 859.00 FEET, HAVING AN ARC DISTANCE OF 100.77 FEET, AND WHOSE LONG CHORD BEARS SOUTH 06° 21' 05" WEST FOR A DISTANCE OF 100.71 FEET TO THE BEGINNING OF REVERS CURVETURE OF A CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 09° 42' 43", HAVING A RADIUS OF 1285.00 FEET, HAVING AN ARC DISTANCE OF 217.82 FEET, AND WHOSE LONG CHORD BEARS SOUTH 04° 51' 22" WEST FOR A DISTANCE OF 217.55 FEET; THENCE, SOUTH 00° 00' 00" EAST FOR A DISTANCE OF 260.45 FEET TO THE BEGINNING OF A CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 47° 58' 46", HAVING A RADIUS OF 615.00 FEET, HAVING AN ARC DISTANCE OF 515.00 FEET, AND WHOSE LONG CHORD BEARS SOUTH 23° 59' 23" EAST FOR A DISTANCE OF 500.09 FEET; THENCE, SOUTH 47° 58' 46" EAST FOR A DISTANCE OF 66.28 FEET; THENCE, SOUTH 49° 54' 25" WEST FOR A DISTANCE OF 90.10 FEET TO THE BEGINNING OF A CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 106° 38' 09", HAVING A RADIUS OF 271.00 FEET, HAVING AN ARC DISTANCE OF 504.37 FEET, AND WHOSE LONG CHORD BEARS SOUTH 03° 24' 40" EAST FOR A DISTANCE OF 434.66 FEET TO THE BEGINNING OF REVERS CURVETURE OF A CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 20° 16' 05", HAVING A RADIUS OF 1259.00 FEET, HAVING AN ARC DISTANCE OF 445.37 FEET, AND WHOSE LONG CHORD BEARS SOUTH 46° 35' 41" EAST FOR A DISTANCE OF 443.05 FEET TO THE BEGINNING OF A COMPOUND CURVETURE OF A CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 02° 55' 44", HAVING A RADIUS OF 1074.00 FEET, HAVING AN ARC DISTANCE OF 54.90 FEET, AND WHOSE LONG CHORD BEARS SOUTH 33° 18' 12" EAST FOR A DISTANCE OF 54.90 FEET TO THE BEGINNING OF REVERS CURVETURE OF A CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 101° 32' 25", HAVING A RADIUS OF 266.00 FEET, HAVING AN ARC DISTANCE OF 471.41 FEET, AND WHOSE LONG CHORD BEARS SOUTH 82° 36' 32" EAST FOR A DISTANCE OF 412.09 FEET; THENCE, NORTH 46° 37' 16" EAST FOR A DISTANCE OF 214.46 FEET; THENCE, SOUTH 65° 34' 41" EAST FOR A DISTANCE OF 57.76 FEET TO THE BEGINNING OF A CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 24° 25' 19", HAVING A RADIUS OF 885.00 FEET, HAVING AN ARC DISTANCE OF 377.23 FEET, AND WHOSE LONG CHORD BEARS SOUTH 77° 47' 21" EAST FOR A DISTANCE OF 374.38 FEET; THENCE, NORTH 90° 00' 00" EAST FOR A DISTANCE OF 225.20 FEET; THENCE, SOUTH 00° 00' 00" EAST FOR A DISTANCE OF 192.48 FEET TO THE BEGINNING OF A CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 90° 00' 00", HAVING A RADIUS OF 75.00 FEET, HAVING AN ARC DISTANCE OF 117.81 FEET, AND WHOSE LONG CHORD BEARS SOUTH 45° 00' 00" EAST

FOR A DISTANCE OF 106.07 FEET; THENCE, SOUTH 90° 00' 00" EAST FOR A DISTANCE OF 254.16 FEET; THENCE, SOUTH 00° 00' 00" EAST FOR A DISTANCE OF 651.84 FEET TO THE BEGINNING OF A CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 59° 03' 01", HAVING A RADIUS OF 100.00 FEET, HAVING AN ARC DISTANCE OF 103.06 FEET, AND WHOSE LONG CHORD BEARS SOUTH 29° 31' 30" WEST FOR A DISTANCE OF 98.56 FEET TO THE BEGINNING OF A CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 28° 06' 02", HAVING A RADIUS OF 250.00 FEET, HAVING AN ARC DISTANCE OF 122.61 FEET, AND WHOSE LONG CHORD BEARS SOUTH 45° 00' 00" WEST FOR A DISTANCE OF 121.39 FEET TO THE BEGINNING OF A CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 59° 03' 01", HAVING A RADIUS OF 100.00 FEET, HAVING AN ARC DISTANCE OF 103.06 FEET, AND WHOSE LONG CHORD BEARS SOUTH 60° 28' 30" WEST FOR A DISTANCE OF 98.56 FEET; THENCE, NORTH 90° 00' 00" WEST FOR A DISTANCE OF 17.00 FEET; THENCE, SOUTH 00° 00' 00" EAST FOR A DISTANCE OF 20.00 FEET TO THE POINT OF BEGINNING.

CONTAINING 150.323 ACRES MORE OR LESS.

SUBJECT TO EASEMENTS, RESERVATIONS, AND/OR RIGHTS-OF-WAY OF RECORD.

<i>PART II - GENERAL INFORMATION</i>	
Exhibit 4	Assessment Area Three – 2023 Project Area Plan



ASSESSMENT AREA THREE
2023 PROJECT

										Designed by: <u>N/A</u> Date: _____		 2737 Northeast 30th Place Fort Lauderdale, Florida 33306 Phone: (954) 491-7811 Authorization No. CA26426 Civil Engineering • Planning • Surveying	Engineer of Record: <u>CARLOS J. BALLBÉ</u>		ASSESSMENT AREA THREE 2023 PROJECT AREA PLAN		Project Number: <u>201622</u>	
										Drawn by: <u>C.J.B</u> Date: <u>3/2/2020</u>			Registered Engineer Number: State of Florida <u>4181</u> Date: <u>01/12/2023</u>		AVENIR COMMUNITY DEVELOPMENT DISTRICT		Sheet Number: <u>1 OF 1</u>	
NO.		DATE		BY		REVISION		NO.		DATE			BY		REVISION			

<i>PART III: PLANNED IMPROVEMENTS</i>	
Exhibit 5	Conceptual Mitigation Plan ("CMP")

EW Consultants, Inc.
Natural Resource Management, Wetland, and Environmental Permitting Services



AVENIR

CONCEPTUAL WETLAND MITIGATION PLAN

**Prepared For:
AVENIR**

**Prepared By:
EW Consultants, Inc.**

August 2016

Revised February 2017

Revised July 2017

Revised August 2017

INTRODUCTION

The following Conceptual Compensatory Wetland Mitigation Plan has been prepared in support of the Environmental Resource Permit application for the construction of the Avenir project in Palm Beach Gardens. The proposed project is located on agricultural lands north of Northlake Boulevard, west of the North County General Aviation Airport, south of Beeline Highway (SR 710), and east of the Mecca Farms property and the Acreage. The property is approximately 4.5 miles in its longest north-south dimension and 2.5 miles in its longest east-west dimension. A Site Location Map (Figure 1) and Aerial Photo dated 2015 (Figure 2) are provided in Appendix A.

The property is 4,763 +/- acres, of which the project proposes the development of 2,337 +/- acres (the "Development Area") for a mixed use residential, commercial, and institutional community. The remainder of the property, 2,426 +/- acres (the "Conservation Area"), will remain undeveloped including 1,052 +/- acres of existing wetlands that will constitute the basis of the compensatory mitigation for proposed impacts within the Development Area. A map depicting the Conservation Area and the Mitigation Areas is included in Appendix A as Figure 3. This Conceptual Compensatory Wetland Mitigation Plan provides the details and specifications for the restoration of the wetlands and associated wetland buffer areas on the site.

The proposed Conservation Area entails approximately 2,400 acres. It is helpful to understand the magnitude of this habitat restoration and preservation program by putting it into context with other better known or similar projects. For instance, the Palm Beach County Unit 11 Regional Off-Site Mitigation Area directly adjacent to the west is an area of approximately 1,700 acres and thus smaller than the Conservation Area proposed for Avenir. A Corps of Engineers Regional General Permit for The Acreage allows for impacts on up to 1,627 acres of wetlands in The Acreage to be offset by the acquisition, restoration, and management program in Unit 11 while the Avenir plan proposes impacts to approximately 940 +/- acres of wetlands, approximately 690 fewer acres than what is mitigated by the 1,700 acre Unit 11 project.

Another example is the Loxahatchee Mitigation Bank which totals 1,250 +/- acres and is permitted to provide 641 wetland mitigation credits. This amount of mitigation credit could offset the entire wetland impact proposed by Avenir on nearly 1,000 acres less land than the proposed Conservation Area. A third example is the Sandhill Crane restoration project just north of the Avenir property. It is comprised of 1,425 acres of wetland and upland habitat restoration of a very similar nature to that proposed for the Conservation Area. Coincidentally, historic aerial photography indicates that the area of the Sandhill Crane restoration project was cleared, ditched, and drained for agriculture at the same time (early 1950s) as much of the Avenir property. At about two thirds the size of the Avenir Conservation Area, the Sandhill Crane project is considered a critical element in the efforts to restore the Loxahatchee Slough. Clearly the size, location, and habitat restoration proposed for the Avenir Conservation Area will provide an important additional contribution towards achieving this critical function.

MITIGATION WORK PLAN

There are two distinct elements to the mitigation plan based on the geography of the site as well as the approach to surrounding activities and existing external features (please refer to Figure 3):

The smaller of the two elements is comprised of approximately 278 acres of wetlands located in the southwest portion of the Avenir property. This area, unlike the remainder of the Conservation Area is contained within/surrounded by the proposed development area, existing roadway (Northlake Boulevard), and existing development (the Acreage). As a result of these factors, this area will be hydrologically separate from the larger Conservation Area and will be managed independently. For ease of reference throughout this plan, this area is referred to as the Southwest Mitigation Area.

The second and larger element of the mitigation program is located north of the proposed development boundary. This area will be a stand-alone restoration, mitigation, and conservation area which currently includes 773+/- acres of existing wetlands. This area will be hydrologically separate from all development and is designed to operate as a rainfall driven wetland system. For ease of reference, this area is described as the Northern Mitigation Area throughout this plan. Within the Northern Mitigation Area there are two distinct zones that are separated by the proposed north-south road from the development area to Beeline Highway. These two areas will have differing control elevations however, the mitigation and restoration actions in these areas will be consistent.

Overall, the compensatory mitigation will consist of the restoration of 1,052 +/- acres of existing wetlands as well as an increased wetland area (rehydration of areas that are currently upland pasture) of approximately 800 +/- acres that occur within the Northern Mitigation Area. These restored wetlands will benefit from the restoration and preservation of 455 +/- acres of contiguous upland areas that occur within the Northern and Southwest Mitigation Areas. Please refer to Figure 4 of the Mitigation Work Plan drawings provided as Appendix B for a depiction of the post-restoration conditions anticipated within the Conservation Areas.

Virtually all of the 1,052 +/- acres of existing wetlands that are subject to the proposed mitigation activities have been altered in some fashion by agricultural and/or silviculture activities. The clearing, ditching, and crop rotation of the past 50 plus years of row crop production, timber harvest, and cattle grazing on the site have resulted in long term effects and changes that have altered the composition of natural systems. The additional 800 +/- acres of wetlands proposed for restoration from existing upland pasture areas are currently non-native upland areas that have resulted from the long term agricultural drainage system on the property.

The compensatory wetland mitigation activities to be implemented in accordance with this Conceptual Mitigation Plan will entail four main categories of activity which will include preservation through conservation easement, hydrologic restoration, invasive species eradication and control, and long term habitat management. Each of these activity areas is described in further detail as follows.

Preservation –

The entire 2,381.91 +/- acres of the Conservation Area will be preserved through recording of a conservation easement. The conservation easement will be granted to South Florida Water Management District (SFWMD) with third party enforcement rights to the U.S. Army Corps of Engineers. Survey, legal descriptions, sketches, and other required documentation will be completed to the satisfaction of the SFWMD after which the conservation easement will be recorded in the public records of Palm Beach County. A fully recorded copy of the conservation easement will be provided to SFWMD upon completion of recordation.

Hydrologic Restoration–

The primary driver in the success of this Conceptual Compensatory Wetland Mitigation Plan is to restore a more natural hydrological regime to the wetlands located throughout the Mitigation Areas. The means of achieving this will differ between the Southwest Mitigation Area and the Northern Mitigation Area. The ultimate goal is to raise the prevailing water table elevation to the maximum extent practical to more closely mimic historic natural conditions, re-establish surface water flows to follow natural topographic contours, slow the rate of runoff, and increase depth and duration of inundation in the wetlands.

Southwest Mitigation Area –

The existing constraints of Northlake Boulevard to the south (controlled at elevation 17.0 NGVD) and the Acreage to the west (controlled at 17.0 NGVD) limit the opportunities for hydrologic restoration in this area. However, this area benefits from not having had significant agricultural drainage in the past, and the current wetland hydroperiods (field measured normal pool elevations ranging from 20.5' to 21' NGVD) are generally supportive of continued existence of the wetlands in this area. The proposed development adjacent to these wetlands in the Southwest Mitigation Area will have a control elevation of 19.0' NGVD and thus will also limit the upper range of hydrologic restoration in these wetlands.

Given the surrounding constraints, the hydrologic restoration in the Southwest Mitigation Area will entail provision of impermeable barriers as necessary for the areas of wetland that may otherwise be adversely affected by the proposed lakes and associated control elevation in the on site development. In addition, provision of a perimeter berm at a minimum elevation of 23.0' NGVD will eliminate areas where there are currently connections to the agricultural drainage system to the east and north.

Northern Mitigation Area –

The wetlands that will benefit most from the hydrologic restoration are those that have been subjected to the effects of the on site agricultural drainage system. Wetlands located throughout the Northern Mitigation Area typically exhibit a highly disturbed vegetative composition that is the result of adaptation to these altered hydrological conditions along with grazing activity. The implementation of the hydrologic restoration will increase the average water depth throughout the Northern Mitigation Area and will lengthen the duration of the inundated conditions (the

hydroperiod). The restored natural hydroperiod will support the vegetative community restoration effort by controlling undesirable transitional and upland vegetation while supporting existing wetland vegetation and the natural recruitment and propagation of desirable wetland plant species. These effects will be achieved in the areas that are currently jurisdictional wetlands as well as the areas that are currently disturbed uplands but will transition to jurisdictional wetlands as a result of the hydrologic restoration activities.

In order to accomplish this goal, the hydrologic restoration plan for the Northern Mitigation Area will include the implementation of the following three components:

- 1) Intercept/backfill the existing agricultural drainage infrastructure within the site in order to slow the rate of runoff and increase depth and duration of inundation,
- 2) Backfilling and re-grading of existing canals and roads to redirect surface water flows to follow natural topographic contours within the site, and
- 3) Increase the effective control elevation within the Northern Mitigation Area in order to raise the prevailing water table elevation to more closely mimic historic natural conditions.

Slowing the rate of runoff and increase depth and duration of inundation:

Intercepting the agricultural drainage infrastructure within the Northern Mitigation Area will entail plugging, backfilling, and potentially installing control structures at the locations where the main internal agricultural canals connect to the primary outfall canal(s). This initial step in the hydrologic restoration plan will slow the rate of runoff and increase depth and duration of inundation. A control elevation of 20.5' NGVD will be established west of the proposed north-south road.

The use of earthen ditch blocks as temporary measures followed by backfilling of agricultural ditches and canals will allow for the elimination of artificial surface water connections that were created to accelerate drainage and lower the prevailing ground water levels for agriculture. The spoil material that resulted from the excavation of the canals, ditches, and swales used for historical agricultural drainage was typically deposited along the excavated canals, ditches, or swales, and used as a berm or elevated farm road to facilitate the maintenance of those surface waters and access throughout the property.

The installation of earthen ditch blocks will be used on a temporary basis to facilitate backfilling of canal and ditch sections, which will be filled in their entirety and graded to match surrounding natural elevations. Fill material will be generated from a combination of the existing berms created by the material originally excavated from the canals and ditches as well as material generated from the scrape down of existing upland pasture areas. Please refer to Figure 5 of the Mitigation Work Plan drawings provided as Appendix B, depicting the proposed backfilling of the agricultural canal network.

If necessary, the installation of control structures (typical culvert and riser systems) in appropriate locations will allow for establishment of the initial control elevation of 20.5' NGVD west of the proposed north-south road as well as adaptive management variation of the effective water levels at strategic hydrologic connection points. These control structures will allow the implementation of adaptive hydrologic management, based on the observed or required changes over time in the mitigation area. The hydrologic restoration will be a primary driver in the invasive nuisance and

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exotic vegetation eradication effort as well as the desirable native wetland vegetation enhancement effort.

Restoring surface water flows:

Backfilling and re-grading of existing roads and canals within the mitigation area will be undertaken in a strategic fashion in order to redirect flows to more natural, “overland” flow patterns. The historic agricultural activities and the creation of ditches and resultant spoil banks on the site have fragmented the landscape to facilitate the management of surface water flows and the ground water table. The systematic creation of conveyance canals, drainage ditches, and swales in a “grid” pattern has accelerated drainage to accommodate agricultural uses leading to isolation and severing of wetland systems as well as altering their upland contributing areas.

The entire Mitigation Area has been recently mapped using LIDAR technology, which provides relative elevation data from which natural flow patterns can be derived. In combination with historic and current aerial photography, flow way patterns will be developed based on actual ground elevations and historic flow patterns. When combined with the detailed mapping of existing canals, ditches and elevated dirt roads, the interruptions to the natural flow patterns have been identified. This approach will function in a rainfall driven system to move water along natural flow paths and follow the underlying topographic contours of the Northern Mitigation Area. In the event that external sources of additional water become available, this systematic natural approach will provide for a functional flow way that can accommodate additional flows with little or no modification.

In general, the hydrologic restoration activities will progress from the higher elevation areas toward the lower elevation areas in order to maximize opportunity to work in “drier” conditions for the backfilling of canals and ditches. Temporary earthen plugs may be used to isolate sections of ditches or canals to prevent runoff of turbid canal water as well as allow for drying out of sections to facilitate earthwork.

Raising the prevailing water table elevation:

The current normal pool elevation in most wetlands within the Northern Mitigation Area is lower than the expected natural condition for these wetlands. During the wetland delineation efforts for the overall property, select wetland systems were analyzed for indicators of seasonal high water elevations as well as normal pool elevations. For the wetlands throughout the property, the seasonal high water elevation indicators (where indicators were available) showed inundation at levels generally consistent with the wetland systems and expected depth. This observation indicates that there is sufficient precipitation input to fully hydrate wetland systems on a regular basis. The normal pool elevations however, where inundation generally occurs for extended periods, ranged from 12 to 18 inches lower than what would be expected for the given wetland systems. This indicates a “flashy” hydrologic system where otherwise normal inundation levels do not have sufficient duration within the system to support the areal extent and type of wetland systems expected.

The primary cause of this condition is a prevailing water table level below the otherwise natural conditions, which in this case is the result of a control elevation for the overall site that is set to

achieve agricultural drainage rather than natural wetland conditions. The restoration design approach anticipates an increase in effective control elevation for the Northern Mitigation Area on the order of 18 inches as a result of backfilling ditches, modifications to outfall structures, and the surface water management system within the Development Area. The Northern Mitigation Area consists of two separate basins, one east of the north-south road and one west of the road. For the area east of the north-south road, a control elevation of 18.5' NGVD will be established. For the basin west of the north-south road, a control elevation of 20.5' NGVD will be established. The hydrologic restoration will result in a more consistent continuum of wetland conditions whereby deep water (freshwater marsh and open water) conditions occur in the central portions of wetland systems and transition to shallow water shorter hydroperiod (wet prairie) conditions in the outer limits of the wetlands.

Please refer to Figure 6 of the Mitigation Work Plan drawings provided as Appendix B for the locations and data from wetlands where seasonal high water and normal pool water elevations were marked and measured by survey. The initial survey data was collected in NAVD however, since the surface water management design and surrounding areas are all documented in NGVD, these elevations have been converted to NGVD to facilitate comparison.

Habitat Restoration–

As a result of the hydrologic and vegetative restoration, the vegetation associations found within the mitigation area will be enhanced and restored to desirable native habitats. The major habitat types to be restored within the mitigation area include pine flatwoods, dry prairies, flatwoods marshes, depression marshes, wet prairies, ponds, and strands. This nomenclature follows the descriptions of the ecological communities presented in Ecosystems of Florida (Myers, 1990).

Pine Flatwoods and Dry Prairies

These upland habitat types are common in South Florida and are characterized by low, flat topography, and relatively poorly drained soils. These habitats are naturally dependent on a frequent fire regime and occasional inundation. Pine flatwoods can exhibit sparse to dense canopy coverage, usually the result of the fire regime, or lack thereof. The pine flatwoods understory is typically low to the ground and dominated by a mosaic of low shrubs (saw palmettos, gallberry, wax myrtle, and fetterbush) and the ground cover is comprised of grasses and forbs (wiregrasses, broomsedge, and love grasses).

The pine flatwoods found on site typically suffer from the lack of a natural fire regime, usually due to fire suppression. Due to the conversion of the land to pastures and agricultural fields, and the lack of regular fires, there are currently no dry prairie habitats on site. The pine flatwoods found within the mitigation area exhibit signs of fire suppression that include:

- a high tree density per acre, overgrown understory,
- limited ground cover by graminoids and forbs,
- a dense accumulation of dead vegetation creating excess fuel accumulation,
- the presence of invasive exotic vegetation.

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The proposed vegetation management activities will aim at promoting an increase in vegetation diversity and provide greater foraging opportunities for wildlife. The thinning of native vegetation such as slash pines and saw palmettos in the canopy and subcanopy through mechanical removal and prescribed burns will allow for a greater groundcover vegetation diversity. The eradication of invasive exotic vegetation (e.g. Brazilian pepper) will create openings and further opportunities for greater groundcover vegetation diversity. Some improved pastures will also be restored to pine flatwoods and dry prairies through the mechanical removal of pasture and forage grasses, the replanting of desirable native vegetation, and the implementation of prescribed burns.

The proposed hydrologic restoration will also raise the prevailing water table and create short period of inundation in the lower elevations of the pine flatwoods and dry prairies. These short inundation periods will provide additional opportunities for increased vegetation diversity, particularly for graminoids and forbs that can respond rapidly to changes in hydrology in both the pine flatwoods and the dry prairies.

Native upland plants to be installed as part of the upland re-vegetation effort will be selected from the following plant list:

Pine Flatwoods Supplemental Native Wetland Vegetation Planting List–

Common name (Scientific name)

Slash pine (*Pinus elliottii*)
Myrsine (*Myrsine guianensis*)
Dahoon holly (*Ilex cassine*)
Saw palmetto (*Serenoa repens*)
Gallberry (*Ilex glabra*)
Fetterbush (*Lyonia lucida*)
Rusty staggerbush (*Lyonia ferruginea*)
Wild coffee (*Psychotria nervosa*)
Elliott's lovegrass (*Eragrostis elliottii*)
Purple lovegrass (*Eragrostis spectabilis*)
Wiregrass (*Aristida stricta*)
Fakahatcheegrass (*Tripsacum dactyloides*)
Hairawn muhly (*Muhlenbergia capillaris*)

Dry Prairie Supplemental Native Wetland Vegetation Planting List–

Common name (Scientific name)

Gallberry (*Ilex glabra*)
Fetterbush (*Lyonia lucida*)
Elliott's lovegrass (*Eragrostis elliottii*)
Purple lovegrass (*Eragrostis spectabilis*)
Wiregrass (*Aristida stricta*)
Fakahatcheegrass (*Tripsacum dactyloides*)
Hairawn muhly (*Muhlenbergia capillaris*)

Hydric Pine flatwood / Wet Flatwoods

This forested wetland habitat type is an ecotonal community found between the drier pine flatwoods and wet prairies. This community is also naturally dependent on a frequent fire regime and regular inundation. While slash pines will dominate areas with short hydroperiods and frequent fires, cypress trees are more adapted to frequently inundated areas that are naturally fire-suppressed and may be the dominant species in some areas of hydric pine flatwoods. Hydric pine flatwoods are differentiated from pine flatwoods/dry prairies by differences in the subcanopy and groundcover with the hydric pine flatwoods exhibiting understory and groundcover strata dominated by wetland plant species.

The hydric pine flatwoods found on site typically suffer from the lack of a natural fire regime and lowered ground water table that have allowed plants that are less tolerant of frequent inundated conditions to dominate this habitat. The slash pine canopy has been crowded by numerous young pines and the subcanopy has become dominated by tall saw palmettos, gallberry, and wax myrtle.

The proposed vegetation management activities will aim at promoting an increase in vegetation diversity and provide greater foraging opportunities for wildlife. The thinning of native vegetation such as slash pines and saw palmettos in the canopy and subcanopy through mechanical removal and prescribed burns will allow for a greater groundcover vegetation diversity. The eradication of invasive exotic vegetation (e.g. Melaleuca and Brazilian pepper) will create openings and further opportunities for greater groundcover vegetation diversity.

In addition, the proposed hydrologic restoration will raise the prevailing water table and convert upland pine flatwoods into hydric pine flatwoods. The inundated conditions will shift the understory vegetation composition towards species that are tolerant of inundated conditions and provide opportunities for increased vegetation diversity, particularly for graminoids and forbs that can respond rapidly to changes in hydrology.

Native hydrophytic plants to be installed as part of the wetland restoration will be selected from the following plant list:

Hydric Pine flatwood / Wet Flatwoods Supplemental Native Wetland Vegetation Planting List–

Common name (Scientific name)

Slash pine (*Pinus elliottii*)
Myrsine (*Myrsine cubana*)
Cocoplum (*Chrysobalanus icaco*)
Button bush (*Cephalanthus occidentalis*)
Fetterbush (*Lyonia lucida*)
Cord grass (*Spartina bakeri*)
Gama grass (*Tripsacum floridana*)
Beak rush (*Rhynchospora* spp.)
Sawgrass (*Cladium jamaicense*)
St. John's wort (*Hypericum* spp.)
Wiregrass (*Aristida stricta*)
Swamp fern (*Blechnum serrulatum*)
Purple lovegrass (*Eragrostis spectabilis*)
Elliott's lovegrass (*Eragrostis elliottii*)

Depression Marshes and Wet Prairies

These herbaceous wetland communities typically occur in conjunction with one another. The wet prairie plant community occurs typically at the fringes of the wetlands, on sandy substrate, where the hydroperiod ranges from a few weeks to several months during normal years. The depression marsh plant community typically corresponds with the deeper center areas of those wetlands, where organic soils (peat or muck) are present, as organic material accumulation occurs under nearly constant inundation conditions.

The vegetation diversity and density is dependent on the variations of the hydrologic regime. While inundated conditions favor nearly exclusively hydrophytic plant species, temporary dry downs are necessary to allow seed germination and promote plant diversity. If prolonged inundation conditions occur, diversity diminishes as annual plant species die off (e.g. maidencane and beakrush) and do not re-generate while short-lived perennials (e.g. St. John's Wort) persist. Finally, in the center of those marshes that exhibit near continuous inundation over several growing seasons, perennials such as pickerel weed or arrowhead tend to dominate.

The fire regime will also dictate the vegetation composition by limiting the invasion by woody species growth (e.g. slash pine and wax myrtle), controlling the herbaceous and forbs growth, and affecting (burning off) peat accumulation.

As a result, while dominated by herbs and forbs plant species, these habitats can experience highly variable plant composition year over year, in response to recent and extreme changes in hydrology, whether temporary or prolonged, and the occurrence of fires.

The proposed vegetation management activities will aim at promoting an increase in vegetation diversity and provide greater foraging opportunities for wildlife. The thinning of native vegetation such as wax myrtle and saltbush through mechanical removal and prescribed burns will allow for a greater groundcover vegetation diversity. The eradication of invasive exotic vegetation (e.g. Melaleuca and Brazilian pepper) will create openings and further opportunities for greater groundcover vegetation diversity.

In addition, the proposed hydrologic restoration will raise the prevailing water table and promote the accumulation of organic soils in the deeper depressional marsh. This will provide opportunities for increased vegetation diversity, particularly for graminoids and forbs that can respond rapidly to changes in hydrology in the higher elevations of the wet prairies.

Native hydrophytic plants to be installed as part of the wetland restoration will be selected from the following plant list:

Wet Prairies Native Wetland Vegetation Planting List –

Cord grass (*Spartina bakeri*)
Eastern gamagrass (*Tripsacum dactyloides*)
Beak rush (*Rhynchospora* spp.)
Sawgrass (*Cladium jamaicense*)
Spikerush (*Eleocharis cellulosa*)

Depression Marshes Native Wetland Vegetation Planting List –

Common Name (Scientific name)

Button bush (*Cephalanthus occidentalis*)
Arrowhead (*Sagittaria lancifolia*)
Pickerel weed (*Pontederia cordata*)
Golden canna (*Canna flaccida*)
Sawgrass (*Cladium jamaicense*)
Spikerush (*Eleocharis cellulosa*)
Giant bulrush (*Scirpus californicus*)
Fire flag (*Thalia geniculata*)
White water lily (*Nymphaea odorata*)

Ponds and Strands

These forested wetland communities typically occur in wetland areas that experience prolonged periods of inundation, infrequent to rare fires, and a significant accumulation of organic matter. These systems are typically considered stillwater swamps, where there is no discernible surface water flow due to a lack of gradient. Several of these cypress ponds and bay swamps are found within the mitigation area and are usually located in isolated depressions.

Under rare circumstances such as after unusually high rainfall events, these isolated ponds may become hydrologically connected and create strand systems. The mitigation area exhibits one large strand system dominated by Carolina willow, dahoon holly, pond apple, and bay trees.

The proposed vegetation management activities will aim at promoting an increase in vegetation diversity and provide greater foraging opportunities for wildlife. The eradication of invasive exotic vegetation (e.g. Brazilian pepper, melaleuca, and old world climbing fern) will create openings and further opportunities for greater groundcover vegetation diversity. The prescribed burn cycles will also limit the recruitment of hardwood species at the fringe of these wetland systems.

The proposed hydrologic restoration will also raise the prevailing water table and provide a more natural fluctuation of water levels. The variations in the areal extent of the inundated areas will provide opportunities for greater seed dispersal for species like cypress trees and red maples, thus enhancing the vegetation regeneration.

Native hydrophytic plants to be installed as part of the wetland restoration will be selected from the following plant list:

Ponds and Strands Native Wetland Vegetation Planting List –

Cypress (*Taxodium* spp.)
Sweetbay magnolia (*Magnolia virginiana*)
Swamp bay (*Persea palustris*)
Laurel oak (*Quercus laurifolia*)
Pond apple (*Annona glabra*)
Strangler fig (*Ficus aurea*)
Myrsine (*Myrsine cubana*)
Cocoplum (*Chrysobalanus icaco*)

Button bush (*Cephalanthus occidentalis*)
Wax myrtle (*Myrica cerifera*)
Lizard tail (*Saururus cernuus*)

Invasive Nuisance and Exotic Species Eradication and Control –

The current conditions in the wetland mitigation area and surrounding upland areas located throughout the Conservation Area can be characterized as severely invaded by non-native invasive vegetation species. The wetland systems exhibit a varying degree of invasion by non-native vegetation, with some areas near monocultures of melaleuca and others with only occasional occurrence of invasive non-native species. Upland areas range from improved pastures to relic pine flatwoods and also exhibit a varying degree of invasion by non-native vegetation. Improved pastures are typically dominated by smut grass as well as non-native forage grasses such as bahia grass, and exhibit Brazilian pepper and wax myrtle thickets ranging from scattered to near monocultures.

This range of conditions along with the relatively large area of wetland and upland restoration (>2,400 acres) will require a stepwise process for initial eradication of invasive non-native vegetation tailored to the landscape conditions within different habitat regimes. Although examples of typical invasive species are prescribed for eradication in the following sections, eradication and control of invasive species will include all Category I and II invasive species in accordance with the most recent edition of the Florida Exotic Pest Plant Council (FLEPPC) listing.

Southwest Mitigation Area -

The exotic and nuisance vegetation occurrence in the Southwest Mitigation Area is almost exclusively invasion by melaleuca within the wetlands. Although there are minor occurrences of other invasive non-native species (especially old world climbing fern), melaleuca is the primary species in need of eradication. It occurs in densities that vary from individual trees within an otherwise native area to monoculture stands within portions of the wetlands. Although typical measures for eradication of all invasive and nuisance species will be completed in this area (refer to detailed approach provided below), site specific techniques for eradication of the melaleuca and old world climbing fern (typically growing on the melaleuca) in the Southwest Mitigation Area will be implemented as follows.

- In the majority of the wetlands, the melaleuca coverage occurs as occasional single trees or small groupings. In these areas, the eradication will take place through hand pulling or cutting with herbicide treatment of any cut stumps.
- There are approximately 25 acres of these wetland areas that are essentially monocultures of melaleuca tightly growing at canopy coverages exceeding 75%. This melaleuca density, along with several heavy occurrences of old world climbing fern has shaded out all or nearly all native species. In order to achieve successful restoration and native recruitment in these areas, this melaleuca and the associated old world climbing fern will be removed by mechanical means. Although field conditions will dictate the final equipment and methods, the proposed approach is to use a “feller/buncher” which will harvest trunks leaving stumps cut off less than 12” from the

ground surface. The stumps will be treated with herbicide to prevent re-growth and the trunks will be removed and hauled off site.

Please refer to Figure 7 of the Mitigation Work Plan drawings provided as Appendix B for a depiction of the areas in the Southwest Mitigation Area wetlands where coverage densities of melaleuca exceed 75% canopy closure, which will be the guide for proceeding with the methods of eradication described above.

Northern Mitigation Area –

The exotic and nuisance species occurrence in the Northern Mitigation Area is more highly variable in type and coverage than that in the Southwest Mitigation Area. In addition, several native species that can reach nuisance levels (cattail, Carolina willow, wax myrtle, salt bush, dog fennel) occur in dense or monotypic stands that will be subjected to selective thinning activities to promote desirable wetland and upland vegetation diversity and density. Nuisance level native vegetation coverage reduction will be achieved through the approach detailed below.

Initial Invasive Exotic Vegetation Eradication -

The primary species of concern in the wetland systems is melaleuca. Because the density of melaleuca trees varies so widely within and between wetland systems, several different approaches to eradication will be necessary.

Where it occurs in deeper areas of wetlands, depending on the trunk size, either girdling with herbicide treatment (for larger trees) or cut and stump treatment (for smaller diameter trees) will be utilized for eradication of melaleuca. Tree trunks will be left in place to decay and fall naturally, as any efforts at manual removal would likely result in significant collateral damage to the wetland substrate and remaining native vegetation. In addition, the decaying melaleuca trees will return biomass to the wetland systems where they occur, provide snags, and micro-topographic relief that will be beneficial to the establishment of an increasingly diverse fauna and flora. In areas where inundation is shallower and generally shorter, cutting and stump treatment will be employed in order to create open canopy which will allow for more rapid recruitment of native species.

Where practical, mechanical clearing will be utilized to remove trunks in high density areas of melaleuca. This approach will be utilized when substrate and native vegetation disturbance would be minimal and/or the benefit of the mechanical removal will outweigh potential vegetation and soil disturbance.

Herbaceous invasive species occurring in the wetlands (primarily torpedo grass and cattail) will be treated through foliar application of appropriate herbicides. The cypress swamp wetlands (as well as areas with stands of melaleuca) exhibit considerable invasion by old world climbing fern. Eradication of this species will be through foliar application of herbicide.

The initial eradication phase is anticipated to take approximately 12 months for completion. The various herbicide application methods must be spread over a sufficient amount of time and space to prevent “system collapse” that can occur when natural systems are overwhelmed by application of herbicides and their attendant effects. Rapid die off of biomass in a given time and space can result in excessive nutrient release that can overcome the assimilative capacity of individual

wetlands and connected wetland systems. As such, a systematic approach of treatment in distinct separate areas over specific time periods will be employed to prevent undesirable system wide effects.

All exotic vegetation as listed by the Florida Exotic Pest Plant Council (as amended from time to time) will be eradicated from the on-site mitigation areas.

- All eradication will be through herbicide application, hand clearing, and where appropriate, removal of dead material off-site.
- All eradication of woody exotics will through the cutting/treatment of the trunk and/or stump with an appropriately labeled herbicide.
- All eradication of non-woody exotic vegetation will be through application of appropriately labeled herbicide.
- The criterion for acceptance of eradication of nuisance and exotic vegetation will be 100 percent kill immediately after the completion of the eradication activity. If initial eradication efforts do not achieve this criterion, follow up treatment will be conducted.
- Any 0.25 acre portion of the wetland mitigation area exhibiting nuisance and exotic vegetation coverage of five percent or more will trigger the need for additional exotic vegetation control activities for this particular portion of the wetland mitigation area.

Herbicides are required for the treatment of all stumps/trunks of woody vegetation to prevent regrowth, and for eradication of non-woody exotic and nuisance vegetation.

- All herbicide application activity will be conducted under the supervision of a Florida Department of Agriculture licensed applicator, licensed for application of aquatic herbicides.
- All herbicides applied within the wetland area must be properly labeled for application in wetlands.
- All herbicide applied must include a visible tracer dye in the mix to facilitate observation of treated vegetation.

Invasive Native Nuisance Vegetation Management –

The selected approach will vary with the species targeted for thinning. As previously indicated, the primary driver of the mitigation plan is the overall hydrologic restoration. The hydrologic improvements will increase the hydroperiod throughout the Northern Mitigation Area. As a result, native nuisance species such as wax myrtle, saltbush, and dog fennel that are not tolerant of prolonged inundation and have invaded the mitigation wetlands due to past drained conditions will be controlled by the improved hydrology. These species are anticipated to die off and thin out due to extended flooding conditions.

For obligate wetland species such as Carolina willow and cattail, herbicide application techniques will be employed, as detailed in the above section for exotic species eradication.

Alternatively, where soil substrate and native vegetation allow, mechanical thinning through roller chopping or bush hog mowing may be employed to rapidly reduce above ground biomass.

Wetland Native Vegetation Restoration –

The mitigation areas exhibit three general habitat conditions that will require native vegetation restoration including; 1) areas dominated by invasive exotic vegetation, 2) areas that currently exhibit low or sparse desirable native vegetation coverage, and 3) areas that currently exhibit a dense native vegetation coverage that is monotypic or significantly less diverse than the expected natural system. In all of these cases, increasing density and diversity of the native vegetation composition will be required to restore or enhance wetland functions to achieve the ecological lift proposed by this mitigation plan.

Southwest Mitigation Area –

The mitigation wetlands in the Southwest Mitigation Area currently exhibit most or all of the expected native vegetation assemblage in a wet prairie/freshwater marsh wetland system. The occurrence of melaleuca and old world climbing fern is either in high density monocultures or sparsely distributed. In locations where these invasive exotic species are sparsely distributed, spot treatment for eradication will allow for open canopy and natural recruitment to restore the appropriate native wetland vegetation assemblage. In areas where monoculture of melaleuca and associated old world climbing fern occur, the eradication approach will entail cutting and removal of these species which will eliminate shading and open these areas to recruitment of native wetland species from surrounding wetland habitats. In the event that native recruitment has not re-populated these areas within 24 months of completing the eradication, a native wetland planting plan will be implemented to supplement species that have recruited naturally. The planting plan will utilize and where appropriate expand on the proposed planting list presented in the previous section on habitat restoration.

Northern Mitigation Area –

As restored hydrology is the primary driver of restoration of wetland conditions and functions in the Northern Mitigation Area, the mitigation area will rely on the hydrological restoration to create hydrologic conditions for the increased density and diversity of native vegetation. Given the abundant native vegetation seed source in the mitigation wetlands, the mitigation will allow natural recruitment of native species from existing and adjacent wetland systems.

The hydrologic restoration will result in increased hydroperiod throughout the Conservation Area, and as such, a shift in the native vegetation composition and distribution is anticipated resulting in the concentric wetland habitat characteristic typical of basin marsh wetlands. Vegetation with higher tolerance for deeper and longer duration inundation will establish in the deeper portions of the wetlands while those with less tolerance will shift toward the outer fringes of the wetlands.

Although natural recruitment is the proposed approach, it is reasonable to assume that there will be locations and circumstances under which this approach is not sufficient or the time to achieve the appropriate level of vegetative cover exceeds the time lag provided for in the calculation of functional gain.

In the event that native recruitment has not re-populated certain areas within the projected time lag period, a native wetland planting plan will be implemented to supplement species that have

recruited naturally. The planting plan will utilize and where appropriate expand on the proposed planting list presented in the previous section on habitat restoration.

Upland Native Vegetation Restoration –

The Northern Mitigation Area is comprised of a mosaic of wetland and upland areas. In addition to the restoration efforts that will take place in the wetland mitigation areas and the conversion of upland areas into wetlands, upland areas will remain as part of the Northern Mitigation Area mosaic. Those uplands will be managed so as to provide supporting habitat and buffer for the wetlands.

In general, areas that currently exhibit most or all of the components of an intact native upland vegetation association will be prioritized in order to re-establish ecotone habitat opportunities at the boundaries of existing wetland communities. Upland habitat restoration in areas that are currently cleared grassland/pasture will follow along with the completion of hydrologic restoration activities that will re-establish more natural boundaries of upland and wetland systems. In contrast to the wetland restoration progression, the upland restoration segments and chronology will follow existing habitat and vegetative conditions rather than topographic and existing drainage infrastructure factors.

Pine flatwoods restoration-

Areas that currently exhibit the expected canopy, understory, and ground cover vegetation typical of mesic pine flatwoods habitat will receive spot treatments to eradicate of any occurrence of existing invasive nuisance or exotic vegetation. In some areas, slash pine density is too high for sustained flatwoods habitat function, and thus thinning of existing pines, primarily in younger year classes will also be implemented to establish the canopy cover percentages typical of this habitat type. The thinning of the of the pine canopy and sub-canopy will also reduce the fuel load thus allowing future prescribed burns to be implemented with reduced risks of crown fire.

After the completion of the initial invasive nuisance and exotic vegetation eradication, and the completion of the hydrologic restoration activities, relic pine flatwoods areas will initially be left to revegetate naturally to identify the available seed source. Upon seed emergence, these areas will be surveyed and areas exhibiting any invasive nuisance and exotic vegetation seed source will receive the appropriate maintenance treatment. Once the invasive nuisance and exotic vegetation seed source have been brought under control, sufficient canopy, subcanopy, and ground cover is expected to remain in most areas. Barren areas requiring supplemental native vegetation will be evaluated and replanted with an assortment of native plant species selected from the upland planting list. The exact replanting plan (quantity and composition) will be tailored to site conditions. For instance, areas currently exhibiting an appropriate tree canopy and understory will only receive supplemental ground cover plantings. The planting plan will utilize and where appropriate expand on the proposed planting list presented in the previous section on habitat restoration.

Woodland pasture restoration-

Woodland pastures are those areas that were improved pastures up until approximately 15 years ago, and due to the absence of recent vegetation management activities to promote forage production and cattle grazing, are currently exhibiting an immature tree and shrub layer. These areas are dominated by invasive exotic vegetation (Brazilian pepper) and native nuisance species (wax myrtle). The vegetation also includes a varying cover of immature native trees (slash pines, scattered cabbage palms and oaks). Ground cover vegetation is generally absent or comprised of remnant forage grasses.

Restoration of these areas will require mechanical removal of the invasive exotic vegetation (Brazilian pepper), and mechanical removal (roller chopping and/or bush hogging) of undesirable shrubs to thin out the subcanopy. These areas are anticipated to require seeding and/or re-planting, in accordance with the proposed planting list presented in the previous section on habitat restoration.

Improved pasture restoration-

Improved pastures are those areas dominated by invasive species such as smut grass along with forage grasses, primarily bahia grass. These areas are generally devoid of any trees with the exception of scattered oaks, slash pine, and cabbage palms. The shrub layer density varies from scattered to dense clusters and is comprised of Brazilian pepper, wax myrtle, and salt bush.

Restoration of improved pastures to native upland will require a stepwise process. Shrub overgrowth will be reduced through mechanical processes (root raking, mowing, roller-chopping, and/or bush hogging) to remove or lower the above ground biomass of the exotic shrub and tree vegetation before systemic herbicide treatment.

In areas where invasive exotic grasses and forage grasses are the dominant cover, the top two to six inches of soil will be mechanically removed to obtain a weed, seed, and rhizome free soil surface. This overburden will be used in the perimeter berm and to backfill ditches and swales. The barren areas will initially be left to revegetate naturally to identify the available seed source. Upon seed emergence, these areas will be surveyed and areas exhibiting any invasive nuisance and exotic vegetation seed source will receive the appropriate maintenance treatment. Once it is determined that the exotic vegetation seed source has been significantly depleted, these areas will be seeded with a native seed mix. For the first three years, the site will be maintained by herbicide treatment. Prescribed burns will be subsequently used to maintain the site by reducing overgrowth and triggering seed germination. Containerized tree and shrub species will be planted following the first prescribed burns and will be completed in accordance with the above plant list, to re-establish a native pine flatwoods habitat.

In areas where invasive exotic grasses and forage grasses are not the dominant cover, one or more spot herbicide treatments will be employed to preserve the otherwise desirable native ground cover and seed source. Once it is determined that the exotic vegetation seed source has been brought under control, these areas will be seeded and/or re-planted, in accordance with the proposed planting list presented in the previous section on habitat restoration.

Created upland buffer -

Where wetlands are avoided, a minimum 25 foot-wide upland buffer is provided within the restoration area. In some areas, the development of the site will result in partial impacts to several wetlands. The remaining portion of these wetlands will therefore be abutting the proposed development site. Functional loss due to secondary impacts has been assessed in the functional analysis and is fully offset by the proposed restoration activities. In order to further offset and prevent secondary impacts, 25 foot-wide upland buffers will be created within the development limits, from the toe of slope of the development (where it meets the wetland limit) and extend 25 feet towards the development site.

As most areas of the future development site will likely be cleared and re-graded, a full replanting of the created upland buffers will be necessary. The planting plan will utilize, and where appropriate, expand on the proposed planting list for pine flatwoods restoration, as presented in the previous section on pine flatwood habitat restoration.

Seeding-

Areas requiring seeding will be disked with deep cuts to break up the remaining bahia grass rhizomes. The site will be disked a second time as shallow cuts to smooth the site and rolled to compact the soils in order to improve moisture retention. Further herbicide treatments may be required if exotic vegetation regrowth is observed prior to the seeding of the site.

Burn plan-

An important management tool for the restoration and long term management of the restored uplands will be the implementation of a prescribed burn plan. Once fuel loads have been managed and reduced to acceptable levels to reduce the risk of canopy fires, prescribed burns will be conducted to promote the growth of desirable ground cover grasses and limit the canopy and sub-canopy closure.

The property will be divided into burn management units. The boundaries of these burn management units will be established to follow existing habitats (pine flatwoods, woodland pastures, and improve pastures) and take advantage of existing berms and dirt roads to be used as fire breaks. This will allow the use of prescribed burns as a management tool to reduce vegetation coverage, and stimulate flowering and seed germination.

The specifics of each prescribed burn will be prepared specifically for the burn unit targeted and the specific vegetation management objective, taking into consideration weather and climatic conditions at the time of the prescribed burn. Each prescribed burn plan prepared will be submitted to the Florida Forest Service.

Conveyance Canal-

The north-south conveyance canal will carry excess treated stormwater generated by the development area to the permitted outfall points and based on hydrologic conditions, will have free exchange with the Northern Mitigation Area. This conveyance feature will be planted with native vegetation and will serve as a buffer between the mitigation area and the north-south

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thoroughfare. Please refer to Figure 8 of the Mitigation Work Plan drawings provided as Appendix B for a planting plan. Native hydrophytic plants to be installed as part of the conveyance feature re-vegetation effort and will be selected from the following plant list:

Native Wetland Vegetation Planting –

(Common Name Scientific name)

Cord grass *Spartina bakeri*
Gama grass *Tripsacum floridana*
Cocoplum *Chrysobalanus icaco*
Button bush *Cephalanthus occidentalis*
Arrowhead *Sagittaria lancifolia*
Pickerel weed *Pontederia cordata*
Golden canna *Canna flaccida*
Beak rush *Rhynchospora* spp.
Sawgrass *Cladium jamaicense*
Spikerush *Eleocharis cellulosa*
Giant bulrush *Scirpus californicus*
Fire flag *Thalia geniculata*
White water lily *Nymphaea odorata*

Invasive Native Nuisance Vegetation Management –

The north-south conveyance feature will be maintained following the invasive native nuisance and exotic vegetation control treatments specifications of this plan.

Fencing and Signage –

Fencing and signage will be installed and maintained along the perimeter of the Northern Mitigation Area to prevent activities detrimental to the restoration and enhancement of native vegetation and wildlife habitat.

The Northern Mitigation Area is surrounded by Palm Beach County natural areas (Hungryland Slough and Sweetbay Natural Areas) and is bordered by large drainage canals that will create effective barriers to reduce access for trespassing in the mitigation area. Nevertheless, the adjacent proposed Avenir development and the connector road that will link Northlake Boulevard to SR710/Beeline will cross the mitigation area and follow most of its eastern border, thus providing potential opportunities for trespassing or impacts. Perimeter fencing and signage will be installed to educate the public about the purpose of the mitigation areas and restrict access and activities in the Northern Mitigation Area to the allowed public access points.

The posting of “No Trespassing” signs will follow the requirements of Florida Statutes and will typically result in signs being posted at an interval no greater than 500 feet. Where the potential for trespassing is the greatest such as access gates, along roads, publicly accessible spaces, and developments, signs will be posted at a greater frequency as deemed appropriate.

The need for construction of fences, barriers, and/or walls will be determined by the land use adjacent to the mitigation area and the intended goal. For instance, where canals or other bodies of water will border the mitigation areas, the installation of fences may be limited to cutting off access to the shoreline and thus will maintain wildlife access to those bodies of water. Wildlife fencing or barriers will also be installed to prevent wildlife from entering or crossing roadways, and will safely guide wildlife to specifically designed wildlife crossings.

PERFORMANCE STANDARDS/SUCCESS CRITERIA

The following ecological performance standards/success criteria are based on attributes that are objective and verifiable, and aim at tracking the success of the mitigation work plan. A series of mitigation milestones and restoration goals have been established to objectively evaluate whether the ecological restoration is trending towards success and attaining its objectives. They are comprised of ecological, administrative, and adaptive management standards.

The achievement of these performance standards/success criteria will also allow for the discreet quantification of the compensatory wetland mitigation functional gains provided by the restoration activities throughout the duration of the restoration and subsequent monitoring and maintenance activities.

These performance standards/success criteria are applicable to this conceptual wetland mitigation plan and may be further refined or superseded by future performance standards/success criteria established by future permit modifications, including construction permits.

The performance standards/success criteria are divided in two major categories: Activity-based and Performance-based:

Activity Based- (Complete/Incomplete)

Official recording of the site protection instrument (Conservation Easement)

Submittal of the financial assurance

Termination of the cattle lease

Construction of the perimeter fencing

Removal of internal pasture fences

Installation of Conservation Area boundary signs

Mechanical removal of undesirable vegetation

Initial invasive nuisance / exotic vegetation eradication treatment

Restoration area earthwork (ditch blocks and backfill, installation of control structures)

Begin prescribed fire cycle

Performance Based-

Wetland determination-

The upland areas to be converted to wetland areas within the Mitigation Areas must meet the definition of a wetland as defined by Chapter 62-340 FAC.

Hydrology-

The success criteria for hydrology establishes minimum water depth, duration, and frequency of occurrence of inundated condition for the different habitat types that are to exist on site in the post-restoration condition. The proposed hydroperiods and inundation levels are based on the SFWMD study of the Southern Golden Gate Estates Watershed (2003), itself based on the work of Dr. Michael Duever (SFWMD) (Duever, et al., (1975) and Duever (1984)).

Given the current disturbed and drained nature of the site, those criteria aim at re-establishing longer hydroperiods, natural overland flows, and appropriate water depths for specific wetland communities:

Ponds and Strands - 180-240 days of water levels between 12 and 18 inches.

Freshwater Marsh - 180-300 days of water levels between 12 and 24 inches.

Wet Prairie/Hydric Pine- 30-180 days of water levels between 2 and 12 inches.

Transitional - Saturated soils and/or a water table within six inches of the surface elevation for at least 20 consecutive days during a normal wet season.

A detailed hydrological monitoring program will be provided with the first construction permit.

Vegetative community-

The Mitigation Areas are to be maintained with less than 1% invasive exotic vegetation as defined by the Florida Exotic Pest Plant Council List of Invasive Plant, as amended from time to time.

The Mitigation Areas are to be maintained with less than 5% invasive native nuisance vegetation.

No portion of the mitigation wetland area 0.25 acre or larger exhibiting nuisance and exotic vegetation coverage above the maintenance threshold.

Vegetation community is consistent with the community described/native plant community.

The vegetative community must meet the quantitative vegetation cover criteria as defined by Chapter 62-340 FAC for a wetland determination.

Forested wetlands canopy must remain the dominant stratum with >10% cover.

Non- forested wetlands must maintain a tree or shrub cover that is <10%.

Functional analysis-

The total number of acres of wetland areas that meet the performance standards/success criteria described above must provide sufficient compensatory wetland mitigation for the permitted wetland impacts.

Post-Restoration Habitat Plan –

The wetlands that are currently drained by the agricultural drainage activities exhibit an altered hydrologic regime with a flashy hydroperiod. Based on the proposed restoration activities and the achievement of the above-listed success criteria, the surficial extent of wetlands within the Northern Mitigation Area is anticipated to increase, the normal pool will be raised, and the length of inundation will increase. As a result, current upland pasture areas will be converted to wet prairies or flow-ways between existing depressional wetlands, the remnant depressional wetlands will experience longer hydroperiods thus allowing for a greater dominance of hydrophytic vegetation and increased organic matter accumulation typical of freshwater marshes. The existing forested wetlands will also benefit from the hydrologic improvements with longer hydroperiod promoting organic matter accumulation and allowing greater lateral expansion as a result of wider seed dispersal.

Please refer to Figure 4 of the Mitigation Work Plan drawings provided as Appendix B for a map of the Northern Mitigation Area depicting the anticipated increase in extent of jurisdictional wetlands as a result of the hydrologic restoration. This mapping is based on the proposed control elevations of 20.5' NGVD for the western portion of the Northern Mitigation Area and 18.5' NGVD for the eastern portion of the Northern Mitigation Area. These control elevations were established based on LIDAR mapping conducted for the property, hydrologic modeling, and field observations over the past several years, and are the basis for the projected increases in wetland area.

Hydrologic modeling of projected inundation and saturation levels has been conducted for selected representative portions of the Northern Mitigation Area. A total of five sub-basins comprising approximately 600 acres were modeled using a hydrologic model recommended by SFWMD staff (modeling conducted by Jonathan T. Ricketts, P.E.). The sub basins varied in acreage from 87 to 174 acres. The modelled hydrology was tested (existing hydrologic conditions/control elevation) against existing delineated wetlands and the model projected acreage of 198 acres of wetlands compared favorably with the 191 +/- acres of actual delineated wetlands. Within each basin the variance was between 0% and 10%.

When the model was run using the proposed post restoration control elevations, an increased wetland of approximately 30% was projected. Within the same sub basins, the proposed restoration plan projected an increase of approximately 25%. The conclusion from the modeling is that the projected wetland area increase provided for in the restoration plan maps is generally less than what the model predicts, thus the proposed increase in wetland acreage can be considered conservative.

The hydrologic modeling concluded that a control elevation of 20.0' NGVD would result in adequate hydrologic restoration. At the request of the SFWMD staff, the proposed control

elevation was raised six inches to 20.5' NGVD for further assurance that sufficient hydrology would be maintained within the Northern Mitigation Area.

MAINTENANCE PLAN

As the initial eradication and habitat restoration is completed, each discrete area will come under the maintenance control criteria for invasive species. The maintenance control techniques involve systematic surveillance through all areas under maintenance control to identify; 1) concentrations of invasive species that may not have been fully eradicated in the initial treatment, and 2) re-growth from seed, roots, or other remnants of treated plants. As the entire Mitigation Areas come under maintenance control, maintenance units will be developed based on field observations of problem areas as well as areas requiring less intense ongoing maintenance. The restored hydrologic conditions will likely result in otherwise unexpected areas that require additional maintenance control as well as those requiring little if any. An adaptive management approach will be undertaken based on field observations to apply maintenance control resources in the areas most in need throughout the Mitigation Areas. Included in the adaptive management approach will be evaluation of distinct areas and their new hydrologic regime. In the event that excessive inundation or insufficient hydrology is noted, modifications to control structures such as culverts and risers will be made to adapt to the observed conditions.

MONITORING PLAN

The following data collection procedures will be undertaken at each of the established vegetative cover and photo documentation stations established within the onsite Mitigation Areas. As part of the baseline monitoring data collection, each data collection station will be marked in the field with a PVC pipe field marker and coordinates documented through use of hand held GPS.

Vegetative Cover/Ecological Conditions Data Collection –

Vegetative coverage will be documented at each data collection station. The coverage will be measured by visual observation in each of four quadrants from a fixed monitoring point. Observations will extend approximately 25 feet from the observer in each direction thus covering approximately 2,500 square feet at each station.

The vegetation will be measured in percent coverage and total percent cover will not exceed 100 percent. Each species documented will be reported in both common and Latin names as well as wetland indicator status. The data from each quadrant observation will be combined to calculate the vegetative coverage. In addition to quantifying vegetative coverage, observations of standing water and/or soil saturation at each station will be reported, as well as any observed wildlife utilization or indicators of wildlife (i.e. tracks, scat, etc.).

Photographic Data Collection –

A representative photograph will be collected from each of the established data collection stations to provide documentation of vegetative coverage. These photos will provide broad perspective view of the wetland vegetative conditions to supplement the site specific tabular data collection station information.

Hydrologic Data Collection –

A system of water level monitoring devices will be installed throughout the Mitigation Areas. The water level monitoring devices will be equipped with data loggers to record water level variation on a daily basis. Water level monitoring locations will include the interior of representative wetlands along the topographic gradients of the Mitigation Areas. The data collected will help to measure the effectiveness of the hydrologic restoration activities and identify where modifications may be necessary.

In addition to the network of water level monitoring stations, a rain gage station will be established for the Northern Mitigation Area so that rainfall can be measured on a consistent basis for comparison with water level monitoring data.

Monitoring Frequency -

The field data collection for the baseline monitoring will be conducted within 60 days of the completion of each segment of mitigation activities. The purpose of the baseline evaluation will be to document the results and completion of the hydrologic restoration and invasive species eradication activities. Subsequent monitoring reports will be provided annually, for a period of five years (six reports total: one baseline and five annual reports) to evaluate the long term success of the hydrologic restoration, exotic vegetation eradication, and maintenance control.

Reporting –

Subsequent to collection of the field data and wetland conditions described above, the information will be compiled into a monitoring report to document the onsite mitigation wetland ecological conditions. The report will provide a tabular compilation of the observed vegetation species, wetland indicator status, percent cover in canopy where applicable as well as ground cover of all species noted. The report will include all photographic documentation collected at the monitoring stations as well as hydrologic and rainfall data. Observations of wildlife utilization as well as standing water and/or soil saturation will also be reported.

Wetland Determination -

The extent of the wetland restoration within the Northern Mitigation Area will be validated by selecting representative field sampling points and assessing whether these sample points meet the technical criteria for a wetland as defined by Chapter 62-340 FAC for a wetland determination.

Field sampling points will be distributed across the Northern Mitigation Area and will be selected so as to be representative of the surrounding habitat.

LONG-TERM MANAGEMENT PLAN

The long term management approach will entail continuation of the land management techniques developed and applied during the initial monitoring and maintenance period of five years. The primary variable in long term management is maintenance of hydrologic restoration and continued control of invasive exotic and nuisance species. If left without maintenance, invasive species will reestablish in wetlands and upland buffer/conservation areas resulting in progressive reduction in native vegetative species composition.

The long term management approach will entail regular surveillance of all wetlands for invasion by exotic and/or nuisance species. Observed concerns with hydrologic restoration infrastructure or recurrence of invasive species will be followed by any necessary repairs and in place treatment with appropriate herbicides for control of such species. In addition, annual evaluations of the overall vegetative composition of all mitigation areas will be compiled in order to identify any year over year trends in vegetative succession. In the event that native species (for instance, Carolina willow) are reaching coverage levels that result in localized monoculture, thinning through hand cutting and/or herbicide application will be prescribed in order to maintain the target wetland type as per the mitigation plan.

ADAPTIVE MANAGEMENT PLAN

Adaptive management, by definition, provides parameters for addressing outcomes that were not anticipated in the original mitigation design and thus require adaptation to observed conditions in order to sustain success in achieving the mitigation objectives. In this case, the primary anticipated objectives are hydrologic restoration and eradication and control of invasive nuisance and exotic vegetation. The standard long term management protocols discussed above are intended to address these reasonably foreseeable management requirements.

From an adaptive management perspective, the most likely wetland ecological driver to change over time is related to hydrological conditions. In the near term, ongoing development activity both in the Development Area as well as on surrounding properties may alter hydrologic conditions, after which a new and potentially altered equilibrium may be established based on external drainage and watershed alterations.

The adaptive management evaluation for addressing these potential perturbations will be comparison of water level data from before and after the external activity along with evaluation of any changes in vegetative composition that may be observed subsequent to the change. In the event that measurable changes are identified, the adaptive management protocol will entail progressive alterations of control structure elevations in order to re-establish the appropriate hydroperiod conditions in the wetlands. Often changes of one to several inches in either direction are sufficient to address observed changes in wetland composition and such changes can be achieved without undermining the overall system functions.

In addition to addressing adaptation to hydrologic conditions as the project develops, a common wetland ecology effect in the longer term is delivery of increased nutrients in surface waters that

reach the wetland systems. The result is a measurable shift in vegetative composition toward species such as cattails that may be more tolerant of elevated nutrient levels. The vegetation management implemented in the long term management plan will address preventing nuisance levels of vegetative cover, however, adaptive protocols will be necessary in the event that nutrient deliveries begin to undermine the overall sustainability of the mitigation areas. Should this be the case, the adaptive protocol will be a combination of increased regulation of supplemental fertilization throughout the Development Area as well as provision of vegetated “pre-treatment” areas to effect removal of excess nutrients before they are delivered to wetlands. These pre-treatment areas would be designed to temporarily store runoff flows in vegetated locations prior to delivery to the Mitigation Areas.

FINANCIAL ASSURANCE

The proposed mitigation work will be completed by the permittee. Once the mitigation work is satisfactorily completed, the Avenir Community Development District (CDD), an independent special-purpose unit of local government, will take responsibility for long term monitoring and maintenance obligations for the mitigation.

Financial assurance for the completion of the mitigation work will be provided with the construction approval of the first phase of development.

CONSERVATION EASEMENT

The mitigation area(s) will be protected by conservation easement in favor of SFWMD, a draft form of which is provided in Appendix C.

PHASING

As described in this plan, the mitigation program is composed of a group of specific elements rather than “phases” in a geographic sense. The initial project construction area (in the development area) will result in approximately 120 units of functional loss due to wetland impacts. This includes the initial stages of development as well as the north-south connector road.

As the first element of the mitigation program, the entire Conservation Area acreage will be encumbered by a conservation easement. Applying only the preservation value of the wetlands and uplands within the Conservation Area, more than 250 units of functional gain are generated. This is more than sufficient to compensate for the impacts associated with the initial project construction elements.

As specified below, the first application for construction approval will provide for detailed analysis of timing of proposed functional loss in the Development Area along with the projected functional gain in the Conservation Area.

CONSTRUCTION APPROVAL

The following will be provided with the first application for construction approval:

- i. Locations for internal structures, hydrologic barriers or other methods to needed to achieve the hydrologic restoration proposed.
- ii. Locations where uplands will be scraped down to achieve wetland conditions.
- iii. Measurable success criteria based on habitat types and proposed UMAM scores.
- iv. Include prescribed burn cycles and initial burn(s) as a performance- based criterion.
- v. Draft conservation easement with sketches and legal descriptions, a demonstration that the proposed easement is free of encumbrances that would conflict with the purpose of the conservation easement and a title policy.
- vi. Monitoring plan with methods and locations to collect the data needed to support the success criteria.
- vii. Work schedule detailing mitigation and monitoring activities.
- viii. Financial Assurance draft documents, naming the permittee, financial institution and the amount based on 110% of the cost estimate.

SOURCES AND REFERENCES

Bisset, J Nancy, 2006. Land of Fire and Water: The Florida Dry Prairie Ecosystem. Proceedings of the Florida Dry Prairie Conference . Reed F. Noss, editor.

Duever, M.J., J.E. Carlson, and L.A. Riopelle. 1975. Ecosystem analyses at Corkscrew Swamp. Pages 627-725 in Cypress Wetlands for Water Management, Recycling and Conservation. H.T. Odum, K.C. Ewel, J.W. Ordway, and M.K. Johnston (Eds.). Center for Wetlands, University of Florida, Gainesville.

Duever, M.J. 1984. Environmental factors controlling plant communities of the Big Cypress Swamp. Pages 127-137 in Environments of South Florida: Past and Present II. P.J. Gleason (Ed.). Miami Geological Society, Coral Gables, Florida.

Myers, R. L., & Ewel, J. J. (1990). Ecosystems of Florida. Orlando: University of Central Florida Press.

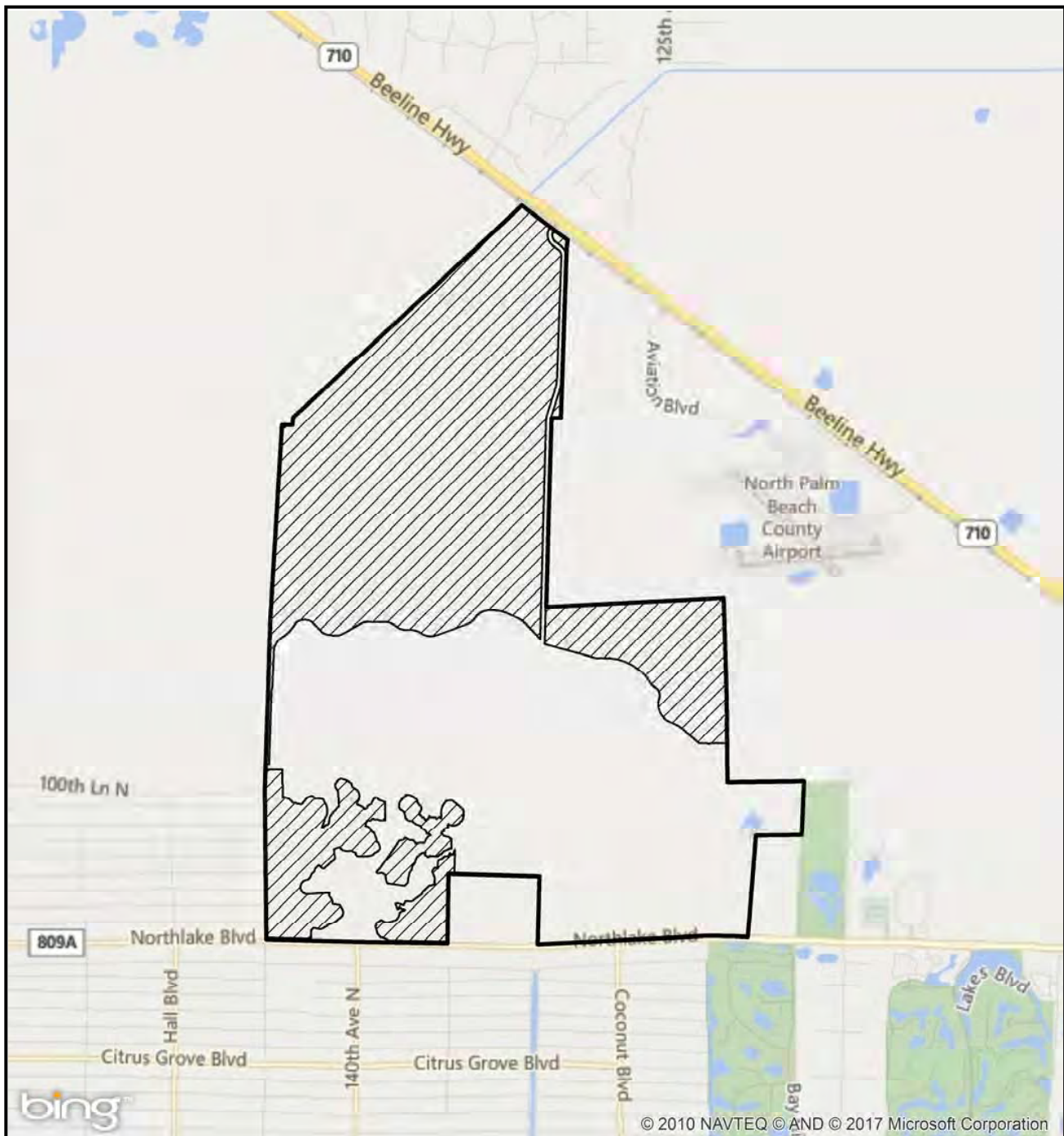
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APPENDIX A

Figure 1: Location Map

Figure 2: Aerial Map

Figure 3: Conservation Area Map



LEGEND

 - CONSERVATION EASEMENT

0 5,000 Feet

AVENIR LOCATION MAP



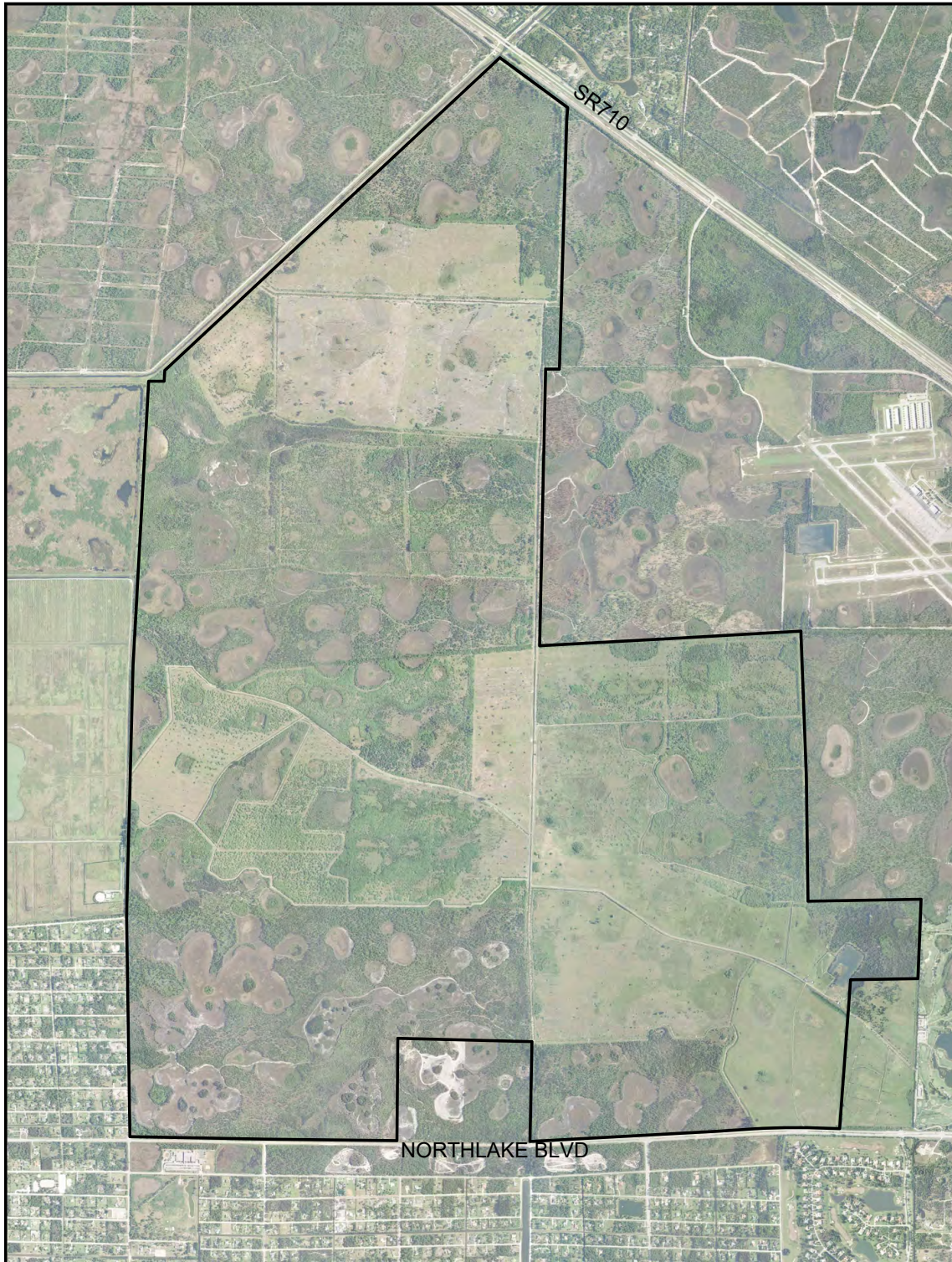
EW CONSULTANTS, INC.

1000 SE MONTEREY COMMONS BLVD., SUITE 208
STUART, FL 34996
772-287-8771 FAX 772-287-2988
WWW.EWCONSULTANTS.COM

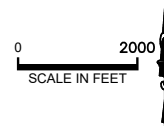
FEB 2017

FIGURE

1



PALM BEACH COUNTY AERIALS DATED 2015

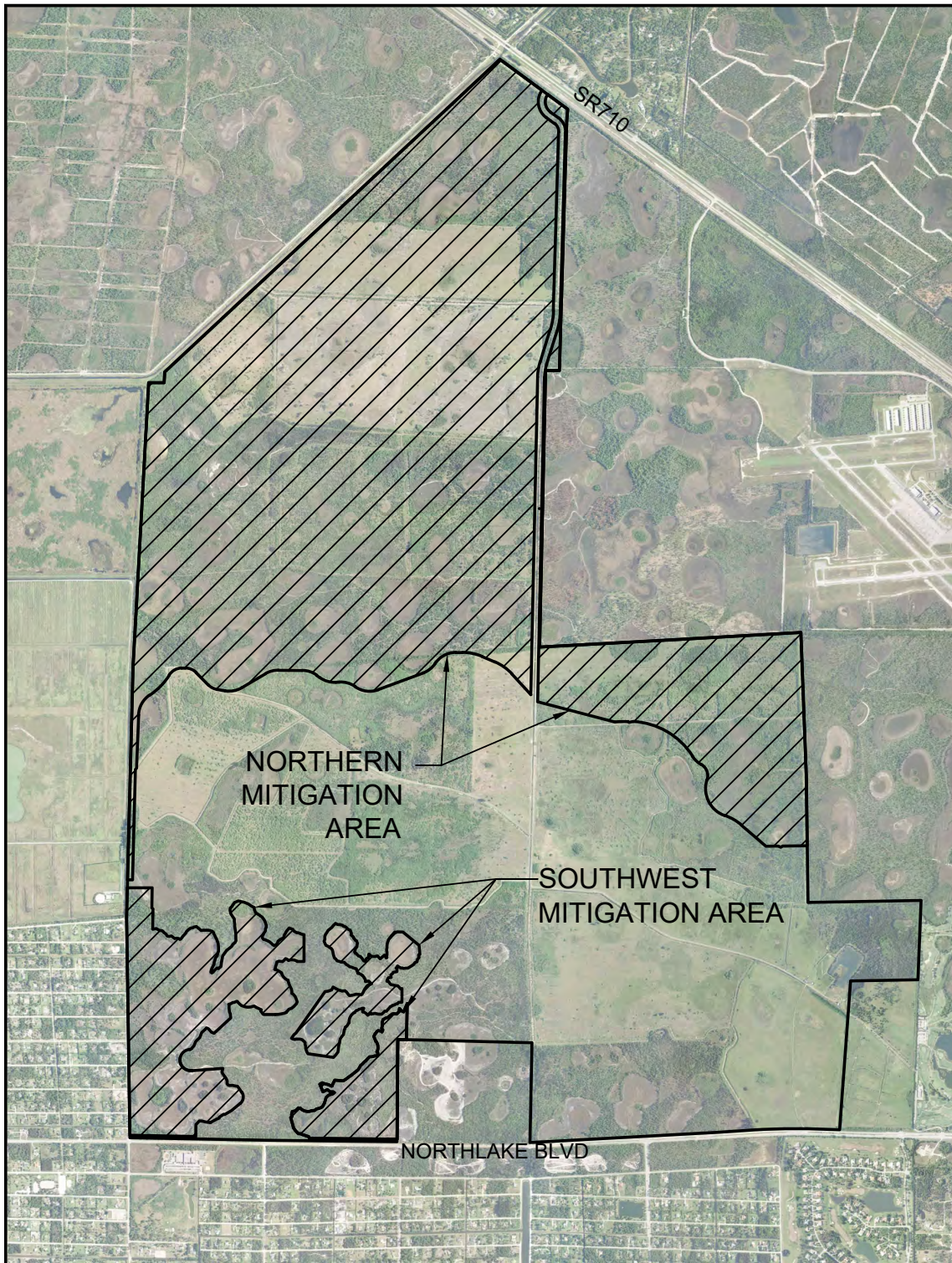


AVENIR AERIAL PHOTO



EW CONSULTANTS, INC.
1000 SE MONTEREY COMMONS BLVD., SUITE 208
STUART, FL 34996
772-287-8771 FAX 772-287-2988
WWW.EWCONSULTANTS.COM

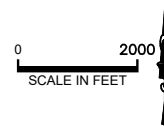
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FIGURE
2



PALM BEACH COUNTY AERIALS DATED 2015

LEGEND

 - CONSERVATION AREA



AVENIR CONSERVATION AREA MAP



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1000 SE MONTEREY COMMONS BLVD., SUITE 208
STUART, FL 34996
772-287-8771 FAX 772-287-2988
WWW.EWCONSULTANTS.COM

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FIGURE
3**

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APPENDIX D

ASSESSMENT METHODOLOGY

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MASTER SPECIAL ASSESSMENT METHODOLOGY REPORT

**MASTER INFRASTRUCTURE PROJECT SPECIAL ASSESSMENT
BONDS FOR ASSESSMENT AREA THREE – 2023 PROJECT**

PREPARED FOR THE

AVENIR

COMMUNITY DEVELOPMENT DISTRICT

BOARD OF SUPERVISORS

December 15, 2022

SPECIAL DISTRICT SERVICES, INC.
2501A Burns Road
Palm Beach Gardens, Florida 33410
561.630.4922 Telephone
877.737.4922 Toll Free
561.630.4923 Facsimile

1.0 INTRODUCTION

The Avenir Community Development District (the “District”) is a local unit of special purpose government located in the City of Palm Beach Gardens (the “City”) in Palm Beach County, Florida (the “County”). The District was established on January 5, 2017, by Ordinance No.17-2016 enacted by the Council of the City to provide for the construction, and/or acquisition, financing, long-term administration and management of certain infrastructure of the Development, as defined below.

The Avenir PUD (the “Development”) is a planned Development containing approximately 2,427 gross acres and is located in the City. The District is co-terminus with the Development and is planned for the following land uses:

Table 1 – Proposed Land Uses for the District

Land Use Category	Unit
Single Family Residential	2,690 Dwelling units
Age Restricted	960 Dwelling units
Multi-Family	250 Dwelling units
Commercial	400,000 S.F.
Medical Office	200,000 S.F.
Professional Office	1,800,000 S.F.
Hotel	300 Rooms
Park (land dedication)	55 Acres
Police/Fire/City Annex (land dedication)	15 Acres
Civic/Recreation (land dedication)	60 Acres
Public School (land dedication)	15 Acres
Agricultural	20 Acres

The District intends to finance and construct the Development in phases. **Table 2** below shows the planned uses for the third phase known as “Assessment Area Three – 2023 Project”. Assessment Area Three is a subset of the District boundaries and contains approximately 385.61 acres which represents the whole of Assessment Area Three. See **Appendix 7** for a legal description of the property.

Table 2 – Proposed Land Uses for Assessment Area Three-2023 Project Area

<u>Residential Parcel</u>	<u>Product Type (Lot Size)</u>	<u># of Units</u>
A-16	50	283
A-16	60	208
A-17	65	125
A-19	65	135
TOTAL UNITS		751
<u>Commercial</u>		<u># of Acres</u>
Parcel J	Office	16.68
Parcel H	Agriculture	14.43
Parcel D	Office / Medical	97.44
TOTAL ACRES		128.55

This Master Special Assessment Methodology Report - Infrastructure Project Special Assessment Bonds for Assessment Area Three – 2023 Project (the “Master Report”) will provide the allocation of special assessments as it relates to the sale and issuance of Special Assessment Bonds in one or more series (collectively the “Bonds”) for the financing of public infrastructure improvements in the Development located in the District’s Assessment Area Three, including the public roadway improvements including acquisition of land relating thereto, the surface water management and drainage system including acquisition of land relating thereto, the water distribution system, the wastewater collection system, the recreation facilities, the landscaping, irrigation, entrance features and hardscapes, conservation and mitigation areas; and other related public improvements (collectively, the “2023 Project”).

This Master Report equitably allocates the costs being incurred by the District to provide the benefits of the 2023 Project to the developable lands within the 2023 Project Area as identified herein on **Appendix 7**. The 2023 Project improvements are described herein and are more particularly described in the Fourth Amendment to the Fifth Supplemental Engineer’s Report dated October 17, 2022 as may be revised (the “Engineer’s Report”), prepared by Ballbé & Associates, Inc. (the “District’s Engineer”).

The District intends to issue Bonds in one or more series. Supplemental Assessment Methodologies will be prepared in accordance with each issue of Bond which will set forth the specific components of the 2023 Project to be funded.

2.0 PROJECT TO BE FUNDED BY THE DISTRICT

The District anticipates issuing Bonds to finance all or portion of the construction and/or acquisition of all or a portion of the 2023 Project. The total cost of the 2023 Project is estimated to be approximately \$75,000,000. A detail of the 2023 Project costs is included herein on **Appendix 1**. The Bonds will be repaid through the levy of non-ad valorem special assessments on assessable property within Assessment Area Three. The 2023 Project has been designed to be functional and confer special benefits to the landowners within Assessment Area Three. Any portion of the 2023 Project not financed through the issuance of Bonds will be paid for by Avenir Development, LLC (herein the “Landowner”).

Construction and/or acquisition and maintenance obligations for the District’s proposed infrastructure improvements constituting the 2023 Project are described in summary as follows (a detailed description is included in the Engineer’s Report):

The District will be constructing and/or acquiring all or a portion of certain roadway improvements as required by the local authorities within publicly dedicated land or easements, consisting of but not limited to, road subgrade, rock base and asphalt, curbing and sidewalks, asphalt paths, turn lanes, and traffic control devices. These improvements will be constructed by the Landowner or the District and if constructed by the Landowner will be acquired by the District upon certification of construction for operation and maintenance. Certain public roadways will be conveyed to the City.

All or a portion of the surface water management and drainage system will be constructed by the Landowner or the District, and, if constructed by the Landowner, will be acquired by the District. The District will be responsible for the operation and maintenance of the 2023 Project retained by the District and which serve the District.

The water distribution and wastewater collection sewer systems will be constructed by the Landowner or the District, and if constructed by the Landowner, will be acquired by the District and dedicated to the Seacoast Utility Authority (SUA) upon certification of construction. Upon such transfer by the District, the ownership, operation and maintenance of these systems will be the responsibility of SUA. In the event the connection charges are paid by the Landowner these charges are being paid for and on behalf of the District.

Other construction items such as open space and recreation, landscaping, irrigation, entrance features, hardscapes and conservation mitigation areas will be constructed by the Landowner or the District, and, if constructed by the Landowner, will be acquired by the District. The District

will be responsible for the operation and maintenance of the portion of the system retained by the District which serves Assessment Area Three.

The construction costs identified in this Master Report were provided by the District Engineer. Special District Services, Inc., as District Manager, makes no representation regarding the accuracy or validity of those costs and did not undertake any analysis or verification regarding such costs.

3.0 FUNDING OF IMPROVEMENTS

To defray the costs of construction and/or acquisition of all or a portion of the 2023 Project, the District will impose non-ad valorem special assessments on benefited real property in Assessment Area Three. These assessments are based on the special and peculiar benefits accruing to such property from the improvements comprising the 2023 Project. The use of non-ad valorem special assessments has an advantage in that the properties that receive the direct and special benefits from the 2023 Project are the only properties that are obligated to pay for those facilities and services. Without these improvements, development of the property would not be possible. The capital facilities which will be funded through these special assessments include only facilities which may be undertaken by a community development district under Chapter 190, F.S. This Master Report is designed to meet the requirements of Chapters 170, 190 and 197, F.S. and will describe the expected terms and conditions of the Bonds.

In summary, special assessments may be made only: (1) for facilities which provide direct and special benefits to property as distinct from general benefits, (2) against property which receives that direct and special benefit, (3) in proportion to the benefits received by such properties, and (4) only if allocated according to fair and reasonable methods that the governing body of the jurisdiction determines. The special assessments (both capital special assessments and operation and maintenance special assessments) placed upon various benefited properties in Assessment Area Three must be sufficient to cover the debt service of the Bonds that will be issued for financing all or a portion of the 2023 Project and to pay the costs to maintain those portions of the infrastructure that remain under the ownership of the District. The assessments must be fairly and reasonably allocated to the properties being assessed.

4.0 ALLOCATION OF DEBT AND ASSESSMENTS

In developing the methodology used for special assessments for the Development in Assessment Area Three, two (2) interrelated factors were used:

- A. Allocation of Benefit: Each parcel of assessable land within Assessment Area Three benefits from the proposed improvements.

- B. Cost/Benefit: The special assessments imposed on each assessable parcel of land within Assessment Area Three cannot exceed the allocation of benefit provided to each parcel.

The planned improvements comprising the 2023 Project is an integrated system of facilities designed to provide benefits to the assessable property within Assessment Area Three as a whole. The 2023 Project is intended to work as a total system which will provide special benefits for each unit type. The fair and reasonable method of allocating the benefit to each planned residential unit and each commercial acre has been accomplished by assigning an *equivalent residential unit* (“ERU”) to each unit or commercial acre. Therefore, for the purpose of this Master Report each 50 foot single family residential unit will be assigned one (1) ERU. The other proposed land uses will be assigned as follows in **Table 3**. The Commercial Parcels receive benefits on a per acre basis.

Table 3 – Equivalent Residential Unit (ERU)

<u>Residential Parcel</u>	<u>Product Type</u>	<u># of Units</u>	<u>ERU Factor</u>
A-16	50	283	1.00
A-16	60	208	1.20016
A-17	65	125	1.30024
A-19	65	135	1.30024
TOTAL UNITS		751	
<u>Commercial</u>		<u># of Acres</u>	<u>ERU per Acre</u>
Parcel J	Office	16.68	1.24228
Parcel H	Agriculture	14.43	0.26114
Parcel D	Office / Medical	97.44	1.24228
TOTAL ACRES		128.55	

The lien will shift to the Parcels in Assessment Area Three, as represented in **Appendix 6** upon the following events:

- Land is platted within Assessment Area Three
- Land is sold in Assessment Area Three prior to platting

The amount of the assessments that will shift to platted lots is based on the schedule in **Appendix 6**. Land that is sold in Assessment Area Three prior to platting will have a lien amount attached to the Parcel that is equal to the development rights (defined herein as the number of planned units or planned commercial use determined by the Landowner) conveyed with such parcel and type of

planned use. Assessment will then be assigned in accordance with **Appendix 6**. As platting occurs the debt assessment will be assigned on a first platted first assigned basis to platted lots receiving property folio numbers, and allocated on an ERU basis as shown herein on **Appendix 6**.

In addition to the special assessments imposed for debt service on the Bonds, the District will also levy an annual administrative assessment to fund the costs of operating and managing the District. As each residential dwelling unit and non-residential parcel will benefit equally from the operation and management of the District and the 2023 Project, the annual operation and management assessments will be allocated equally to each assessable lot or unit on an ERU basis as shown herein on **Appendix 6**.

Given the District's land use plan and the type of infrastructure to be funded by the special assessments, this method will result in a fair allocation of benefits and services and an equitable allocation of costs for the proposed Bonds. However, if the future platting results in changes in land use or proportion of benefit per unit, this allocation methodology may not be applicable and it may be necessary for the District to revise this methodology.

5.0 COLLECTION OF SPECIAL ASSESSMENTS

The proposed special assessments relating to the 2023 Project will be collected through the Uniform Method of Collection described in Chapter 197, Section 197.3632; F.S. or any other legal means available to the District.

Since there are costs associated with the collection of the special assessments (whether by uniform method of collection as authorized under Chapter 197.3632, F.S. or other methods allowed by Florida law), these costs must also be included in the special assessment levy. These costs generally include the 1% collection fee of the County Tax Collector, a 1% service fee of the County Property Appraiser and a 4% discount for early payment of taxes. These additional costs may be reflected by dividing the annual debt service and operation and maintenance assessment amounts by 0.94.

6.0 FINANCING STRUCTURE

The estimated cost of the 2023 Project is approximately \$75,000,000. The construction program and the costs associated therewith are identified herein on **Appendix 1**.

All or a portion of the capital improvements comprising the 2023 Project is to be financed by the Bonds and when issued which will be payable from and secured by special assessments levied annually on all assessable properties in Assessment Area Three-2023 Project Area. The total aggregate principal amount of the Bonds that may be issued by the District for the 2023 Project is approximately \$100,000,000. The proceeds of the Bonds will provide approximately \$75,000,000 for construction and/or acquisition related costs. The sizing of the Bonds includes funding reserve

accounts, capitalized interest and issuance costs as shown on **Appendix 2**. Please note the above referenced Bond sizing is a maximum amount used for this Master Report and the Landowner may request the District to issue a lesser amount of Bonds that are less than those presented. The Bond debt allocations are shown on **Appendix 4**.

7.0 MODIFCATIONS, REVISIONS AND TRUE-UP MECHANISM

Allocation of costs and benefits, shown herein on **Appendix 3**, for the 2023 Project financed by the District is initially based on the estimated number of dwelling units and commercial space projected to be developed and benefited by the infrastructure improvements comprising the the 2023 Project. Based on a Bond size of \$100,000,000, at an assumed interest rate of 7.5%, the maximum annual debt service for the Bonds as shown herein on **Appendix 5**, will be approximately \$8,467,124 which has **not** been grossed up to include the 1% County Tax Collector fee, 1% County Property Appraiser fee, and 4% discount for early payment of taxes.

To ensure that each residential lot or non-residential parcel is assessed no more than its pro-rata amount of the annual non-ad valorem assessments shown herein on **Appendix 6**, the District will be required to perform a “True-Up” analysis, which requires a computation at the time of submission of each plat or re-plat to determine the potential remaining ERUs. The District shall, at the time a plat or re-plat is submitted to the City:

- A. Assume that the total number of ERUs, within each parcel, utilized as a basis for this assessment methodology is as described in **Table 4** (“Total Assessable ERUs”).
- B. Ascertain the number of assessable ERUs, within each parcel, in the proposed plat or re-plat and all prior plats (“Planned Assessable ERUs”).
- C. Ascertain the current amount of potential remaining ERUs within each Parcel (“Remaining Assessable ERUs”).

If the Planned Assessable ERUs are equal to the Total Assessable ERUs, no action would be required at that time. However, if the sum of the Planned Assessable ERUs and the Remaining Assessable ERUs are less than the Total Assessable ERUs, the applicable landowner will be obligated by the District to remit to the District an amount of money sufficient to enable the District to retire an amount of Bonds, plus accrued interest, such that the amount of non-ad valorem assessments allocated to each Planned Assessable ERU does not exceed the amount of debt service that would have been allocated thereto, had the total number of Planned Assessable ERUs not changed from what is represented in **Table 4**. Conversely, if the Planned Assessable ERUs is greater than the Total Assessable ERUs, then there will be a pro-rata decrease in the annual non-ad valorem assessments to all of the benefited properties.

Table 4 – Total Assessable Lots/Units/ERUs

<u>Residential Parcel</u>	<u>Product Type</u>	<u># of Units</u>	<u>ERU Factor</u>	<u>ERUs</u>
A-16	50	283	1.0000	283.0
A-16	60	208	1.2002	249.6
A-17	65	125	1.3002	162.5
A-19	65	135	1.3002	175.5
SUB TOTAL		751		870.70
<u>Commercial</u>		<u># of Acres</u>	<u>ERU per Acre</u>	<u>ERUs</u>
Parcel D	Office/Medical	97.44	1.2423	121.0
Parcel H	Agriculture	14.43	0.2611	3.8
Parcel J	Office	16.68	1.2423	20.7
SUB TOTAL		128.55		145.5
TOTAL				1,016.23

All assessments levied run with the land. A determination of a true-up payment shall be based on the terms and provisions of a true-up agreement entered into between the District and the Landowner. It is the responsibility of the landowner of record (other than end-users) to make any required true-up payments that are due. The District will not release any liens on the property for which true-up payments are due until provision for such payment has been satisfied.

In the event that additional land is annexed into Assessment Area Three which is currently not subject to the assessments and is developed in such a manner as to receive special benefit from the 2023 Project described herein, it will be necessary for this assessment methodology to be re-applied to include such parcels. The additional land will, as a result of re-applying this allocation methodology, then be allocated an appropriate share of the special assessments while all currently assessed parcels will receive a relative reduction in their assessments.

8.0 PRELIMINARY ASSESSMENT ROLL

When fully developed, the current site plan for Assessment Area Three will include the land uses in **Table 4**.

9.0 ADDITIONAL STIPULATIONS

Certain financing, development, and engineering data was provided by members of District staff, consultants and/or the Landowner. The allocation methodology described herein was based on

information provided by those professionals. Special District Services, Inc. makes no representations regarding said information beyond restatement of the factual information necessary for compilation of this Master Report.

Special District Services, Inc. does not represent the Avenir Community Development District as a Municipal Advisor or Securities Broker nor is Special District Services, Inc. registered to provide such services as described in Section 15B of the Securities and Exchange Act of 1934, as amended. Similarly, Special District Services, Inc. does not provide the Avenir Community Development District with financial advisory services or offer investment advice in any form.

APPENDIX 1

AVENIR COMMUNITY DEVELOPMENT DISTRICT

PROJECT COST ESTIMATES FOR MASTER ASSESSMENT METHODOLOGY

INFRASTRUCTURE PROJECT FOR ASSESSMENT AREA THREE

	Total
Wastewater Collection System	\$4,500,000
Water Distribution System	\$4,500,000
Surface Water Management and Drainage Improvements	\$10,000,000
Master Drainage System and Drainage Pump Station	\$8,500,000
Roadway Improvements	\$16,500,000
Open Space and Recreation (clubhouse not included)	\$6,500,000
Landscaping, Irrigation, Entrance Features, Hardscapes	\$10,000,000
Conservation Area Mitigation	\$3,594,000
Surface water management, road rights-of-way, buffers, recreation tracts and open space related land acquisition (Approximately 70 acres of land to be purchase)	\$10,906,000
TOTAL	\$75,000,000

APPENDIX 2

AVENIR COMMUNITY DEVELOPMENT DISTRICT

BOND SIZING FOR MASTER ASSESSMENT METHODOLOGY

INFRASTRUCTURE PROJECT FOR ASSESSMENT AREA THREE

	BOND SIZING
Par Amount	\$100,000,000
Debt Service Reserve Fund	(\$8,467,124)
Capitalized Interest	(\$15,000,000)
Underwriters Discount and Issuance Costs	(\$1,532,876)
Construction Funds	\$75,000,000

APPENDIX 3

AVENIR COMMUNITY DEVELOPMENT DISTRICT

PROJECT ALLOCATION (BENEFIT) FOR MASTER ASSESSMENT METHODOLOGY FOR INFRASTRUCTURE PROJECT FOR ASSESSMENT AREA THREE

Residential Parcel	Lot Type	# of Units	ERU	Total ERU	Total Project Cost Allocation Per Type	Total Project Cost Allocation Per Unit
A-16	50	283	1.0000	283.0	\$20,885,942	\$73,802
A-16	60	208	1.2002	249.6	\$18,423,446	\$88,574
A-17	65	125	1.3002	162.5	\$11,995,054	\$95,960
A-19	65	135	1.3002	175.5	\$12,954,659	\$95,960
Subtotal		751		870.70		
Commercial Parcels	Product Type	Acres	ERU Per Acre	Total ERU	Total Project Cost Allocation Per Land Use Type	Total Project Cost Allocation Per Land Use
Parcel "D"	Office/Medical	97.44	1.2423	121.0	\$8,933,534	\$91,682
Parcel "H"	Agriculture	14.43	0.2611	3.8	\$278,101	\$19,272
Parcel "J"	Office	16.68	1.2423	20.7	\$1,529,263	\$91,682
Subtotal		128.55		145.5		
Total				1,016.23	\$75,000,000	

APPENDIX 4

AVENIR COMMUNITY DEVELOPMENT DISTRICT

ALLOCATION OF BOND DEBT PER UNIT FOR MASTER ASSESSMENT METHODOLOGY

INFRASTRUCTURE PROJECT FOR ASSESSMENT AREA THREE

Residential Parcel	Lot Type	# of Units	ERU	Total ERU	Bond Debt Allocation Per Unit Type	Bond Debt Allocation Per Unit
A-16	50	283	1.0000	283.0	\$27,847,923	\$98,403
A-16	60	208	1.2002	249.6	\$24,564,595	\$118,099
A-17	65	125	1.3002	162.5	\$15,993,406	\$127,947
A-19	65	135	1.3002	175.5	\$17,272,878	\$127,947
Subtotal		751		870.70		
Commercial Parcels	Product Type	Acres	ERU Per Acre	Total ERU	Bond Debt Allocation Per Land Use Type	Bond Debt Allocation Per Land Use
Parcel "D"	Office/Medical	97.44	1.2423	121.0	\$11,911,379	\$122,243
Parcel "H"	Agriculture	14.43	0.2611	3.8	\$370,801	\$25,697
Parcel "J"	Office	16.68	1.2423	20.7	\$2,039,017	\$122,243
Subtotal		128.55		145.5		
Total				1,016.23	\$100,000,000	

APPENDIX 5

AVENIR COMMUNITY DEVELOPMENT DISTRICT

CALCULATION OF ANNUAL DEBT SERVICE FOR MASTER ASSESSMENT METHODOLOGY

INFRASTRUCTURE PROJECT FOR ASSESSMENT AREA THREE

1	Maximum Annual Debt Service Assessment to be Collected (Net of Discounts and Fees)	\$8,467,124
2	Maximum Annual Debt Service Assessment to be Collected (Grossed Up)*	\$9,007,578
3	Total Number of Residential Units Planned	751
4	Total Number of Residential Acres	257.06
5	Maximum Annual Debt Service per Unit Type	See Appendix 6
6	Total Number of Non-residential Acres Planned	128.55
7	Maximum Annual Debt Service per Non-residential Acre Type	See Appendix 6

*Grossed up to include 1% collection fee of the County Tax Collector, 1% service fee of the County Property Appraiser and 4% for early payment of taxes. These costs are not applicable if the landowner is directly billed for the assessments.

APPENDIX 6

AVENIR COMMUNITY DEVELOPMENT DISTRICT

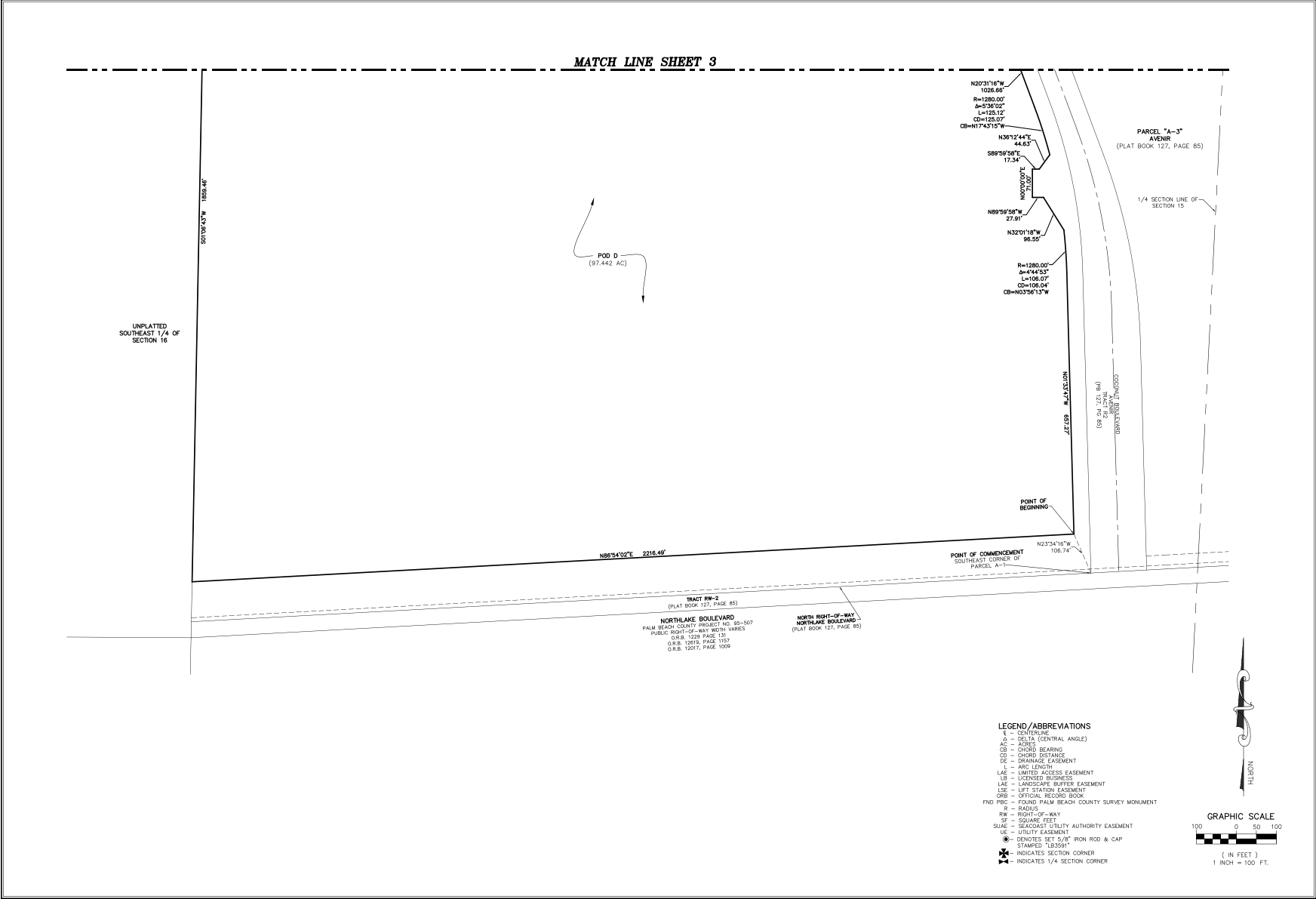
ALLOCATION OF DEBT SERVICE ASSESSMENTS

MASTER ASSESSMENT METHODOLOGY INFRASTRUCTURE PROJECT FOR
ASSESSMENT AREA THREE

Residential Parcel	Lot Size	Acres	# of Units	ERU Factor	Total ERU	Maximum Annual Debt Assessment Per Unit Type*	Maximum Annual Debt Assessment Per Unit*
A-16	50	79.87	283	1.0000	283.00	\$2,508,423	\$8,864
A-16	60	70.45	208	1.2002	249.63	\$2,212,675	\$10,638
A-17	65	55.30	125	1.3002	162.53	\$1,440,619	\$11,525
A-19	65	51.44	135	1.3002	175.53	\$1,555,868	\$11,525
Subtotal		257.06	751		870.70	\$7,717,585	
Commercial Parcel	Product Type	Acres	ERU Per Acre	Total ERU	Maximum Annual Debt Assessment Per Land Use Type*	Maximum Annual Debt Assessment Per Land Use Acre*	
Parcel "D"	Office/Medical	97.44	1.2423	121.05	\$1,072,927	\$11,011	
Parcel "H"	Agriculture	14.43	0.2611	3.77	\$33,400	\$2,315	
Parcel "J"	Office	16.68	1.2423	20.72	\$183,666	\$11,011	
Subtotal		128.55		145.54	\$1,289,993		
Total		385.61		1,016.23	\$9,007,578		

* This has been grossed up to include a 4% discount for early payment of assessments, a 1% fee for the Tax Collector, and a 1% service fee for the Property Appraiser.

Appendix 7



DATE	11/30/2022
DRAWN BY	RLP
SCALE	AS SHOWN

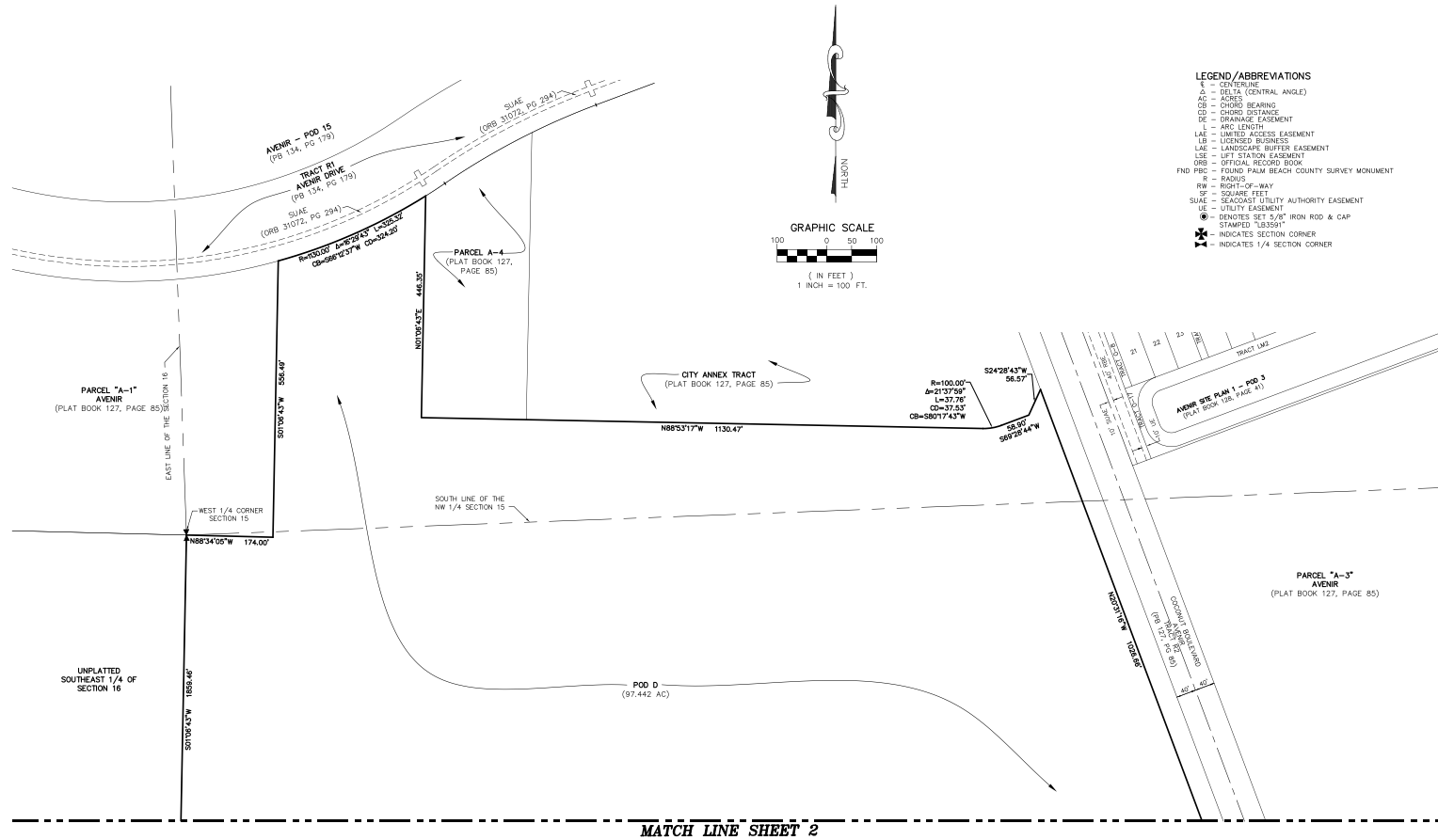
CAULFIELD & WHEELER, INC.
LANDSCAPE ARCHITECTS & SURVEYING
7000 GLADES ROAD, SUITE 100
PALM BEACH, FL 33411
PHONE (561) 392-1991 / FAX (561) 750-1452

AVENIR CDD ASSESSMENT
AREA 3
LEGAL DESCRIPTION

DATE 11/30/2022
DRAWN BY RLP
F.B. / PG. ELECT
SCALE AS SHOWN

JOB # 7955
SHEET NO. 2
OF 10 SHEETS

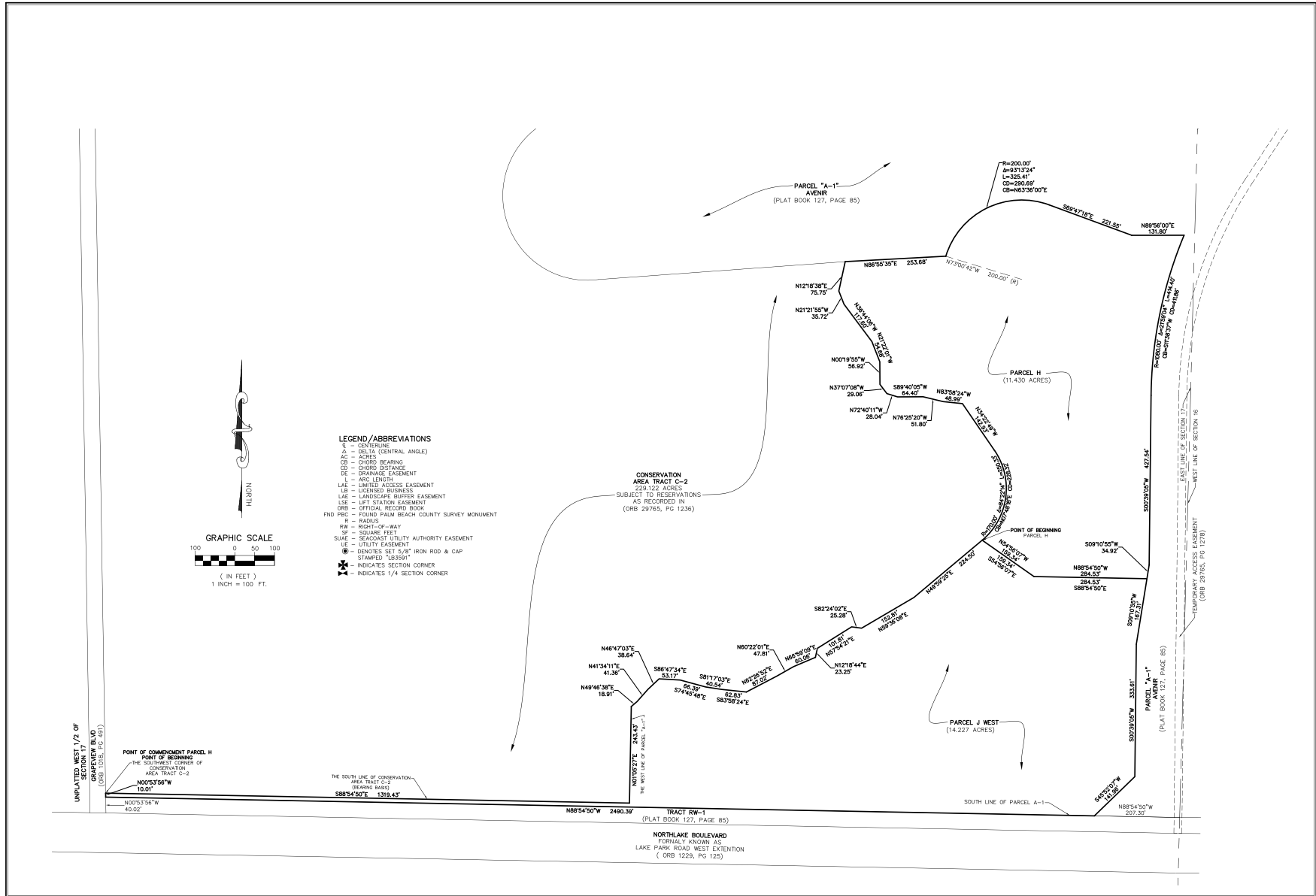
Appendix 7



CAULFIELD & WHEELER, INC.
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE - SURVEYING
7900 GLADES ROAD - SUITE 100
BOCA RATON, FLORIDA 33434
PHONE (561) 392-1991 / FAX (561) 350-1152

DATE 11/30/2022
DRAWN BY RLF
F.B./ PG. ELECT
SCALE AS SHOWN

JOB # 7955
SHT. NO. 3
OF 10 SHEETS



CAULFIELD & WHEELER, INC.
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE - SURVEYING
7900 GLADES ROAD - SUITE 100
BOCA RATON, FLORIDA 33434
PHONE (561) 392-1991 / FAX (561) 750-1452

DATE 11/30/2022
DRAWN BY RLF
F.B./ PG. ELECT
SCALE AS SHOWN

JOB # 7955
SHT. NO. 4
OF 10 SHEETS