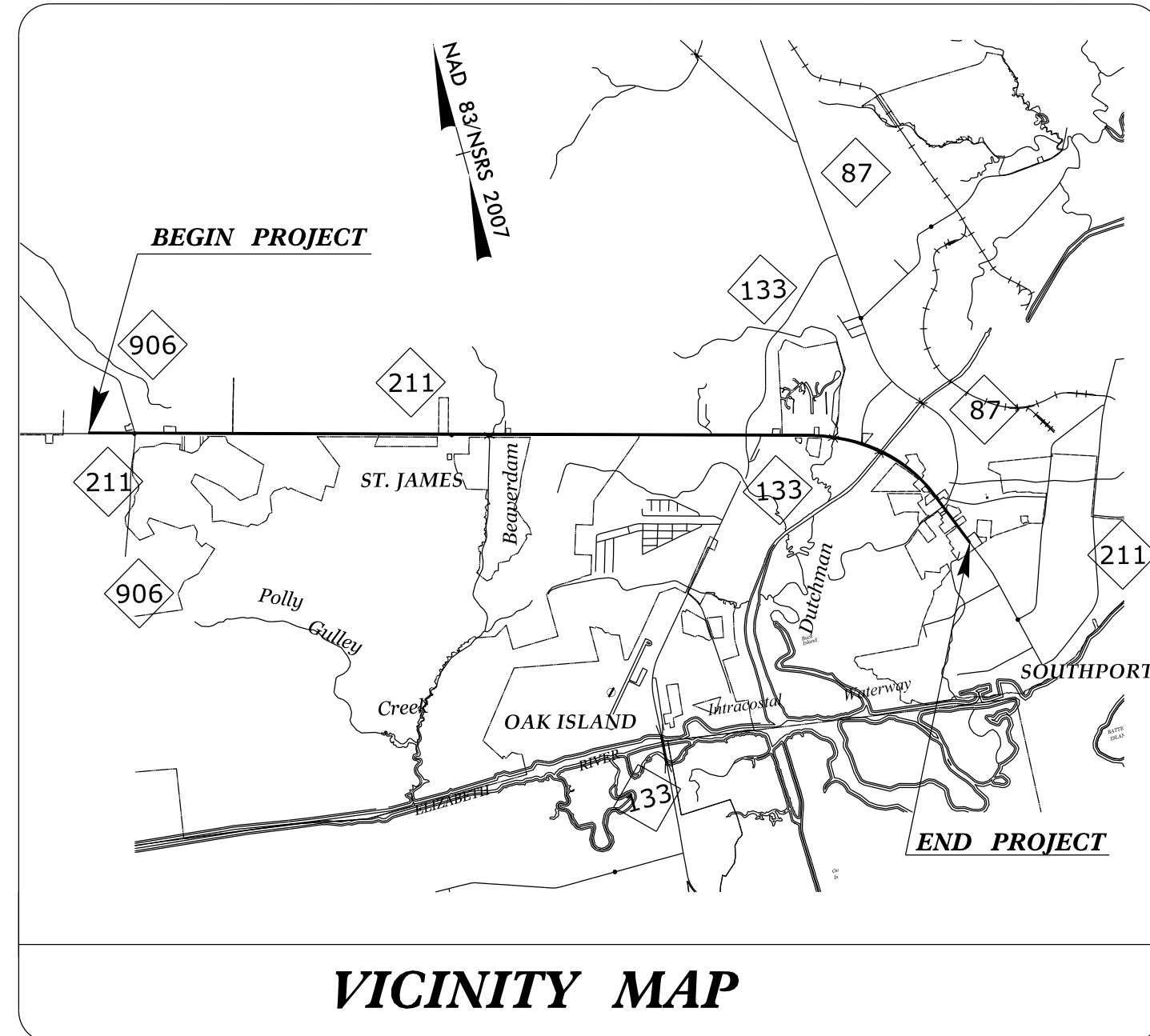


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5021	RW01	61

TIP PROJECT: R-5021

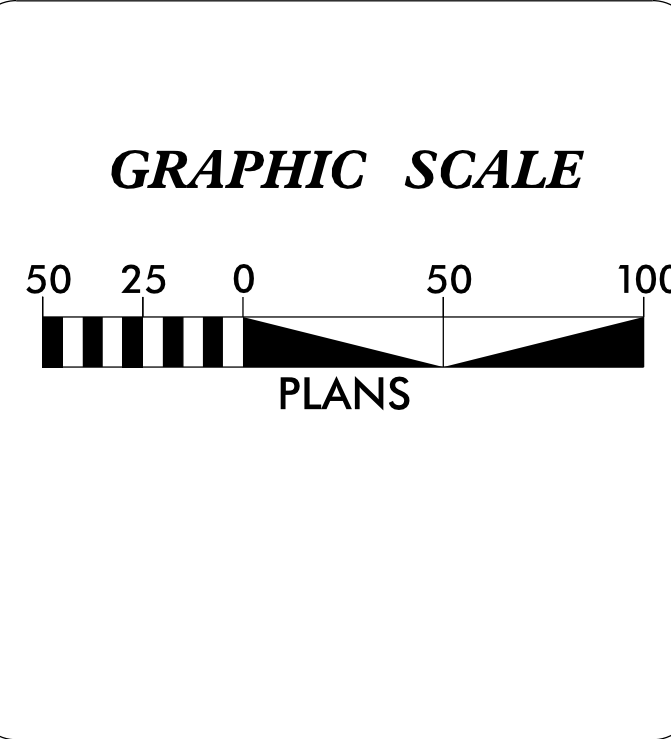
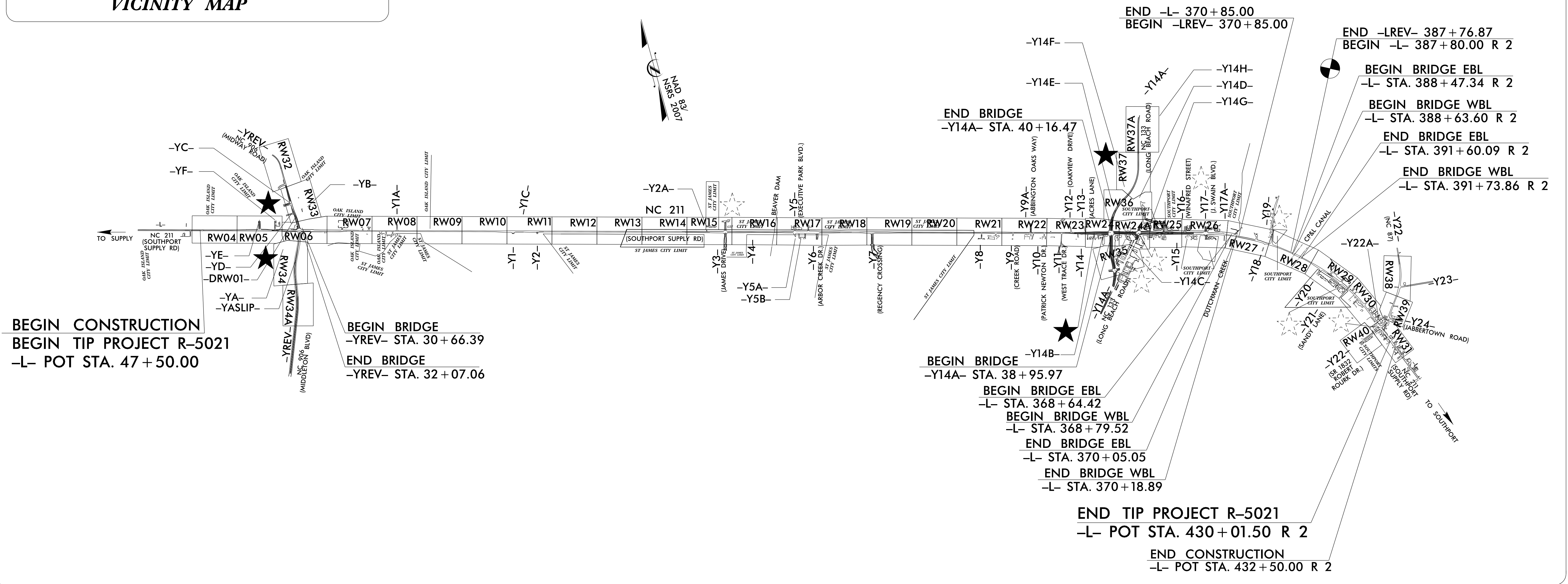


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SURVEY CONTROL, EXISTING CENTERLINES,
RIGHT OF WAY, EASEMENTS AND PROPERTY TIES

BRUNSWICK COUNTY

- EXISTING TRAFFIC SIGNAL
- PROPOSED TRAFFIC SIGNAL



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "SOUTHPORT EAST BASE RESET 1981" WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 74,895.985(ft) EASTING: 2,288,816.370(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.00012636797

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "SOUTHPORT EAST BASE RESET 1981" TO -L- STATION 28+09.51 IS N 74-19'31.6" W 31,169.39(ft)

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES

VERTICAL DATUM USED IS NAVD 88

Prepared in the Office of:

ESP ASSOCIATES, INC
211 RACINE DRIVE, SUITE 101
WILMINGTON, NC 28403

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: 01/28/2016	LETTING DATE: 11/16/2021
---	------------------------------------

PROFESSIONAL LAND SURVEYOR

Donal E. Thomas 9/27/2021

SIGNATURE: _____ Date: _____

09/08/99
 \$\$\$SYTIME\$\$\$\$
 \$\$\$DGN\$\$\$\$
 \$\$\$USERNAME\$\$\$

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

I, CHRISTOPHER J. SAWYER, PLS, certify that the Project Control was [performed/verified] under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

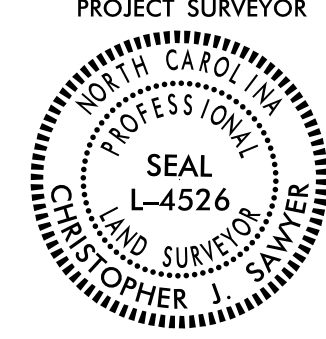
Class of survey: **AA**
 Type of GPS field procedure: NC-VRS-RTN
 Dates of survey: NOVEMBER 2009 TO SEPTEMBER 2021
 Datum/Epoch: NAD 83/NSRS 2007
 Published/Fixed-control use: [Project_Control_NA_for_RTN]
 Localized around: SOUTHPORT EAST BASE RESET 1981
 Northing: 74895.9850
 Easting: 2288816.3700
 Combined grid factor: 1.00012636797
 Geoid model: G09NC
 Units: US SURVEY FEET

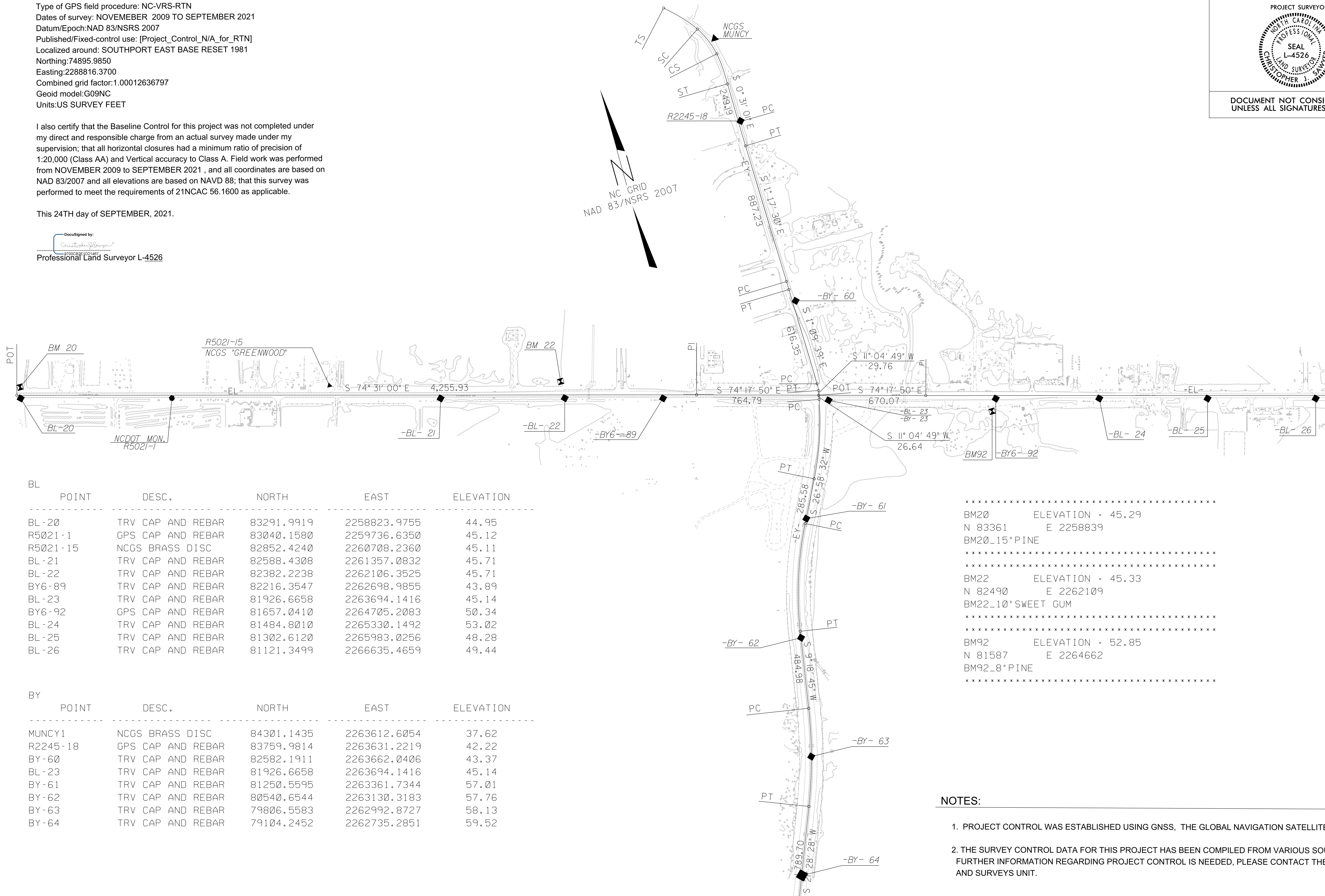
I also certify that the Baseline Control for this project was not completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed from NOVEMBER 2009 to SEPTEMBER 2021, and all coordinates are based on NAD 83/2007 and all elevations are based on NAVD 88; that this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 24TH day of SEPTEMBER, 2021.

DocuSigned by:

 Christopher J. Sawyer
 Professional Land Surveyor L-4526

PROJECT REFERENCE NO.	SHEET NO.
R-5021	RW02C-1
Location and Surveys	
LOCATION & SURVEYS DIVISION 3 5310 BARBADOS BLVD. #102 CASTLE HAYNE, NC 28429 (910) 341-2280	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



BL	POINT	DESC.	NORTH	EAST	ELEVATION
	BL-20	TRV CAP AND REBAR	83291.9919	2258823.9755	44.95
	R5021-1	GPS CAP AND REBAR	83040.1580	2259736.6350	45.12
	R5021-15	NCGS BRASS DISC	82852.4240	2260708.2360	45.11
	BL-21	TRV CAP AND REBAR	82588.4308	2261357.0832	45.71
	BL-22	TRV CAP AND REBAR	82382.2238	2262106.3525	45.71
	BY6-89	TRV CAP AND REBAR	82216.3547	2262698.9855	43.89
	BL-23	TRV CAP AND REBAR	81926.6658	2263694.1416	45.14
	BY6-92	GPS CAP AND REBAR	81657.0410	2264705.2083	50.34
	BL-24	TRV CAP AND REBAR	81484.8010	2265330.1492	53.02
	BL-25	TRV CAP AND REBAR	81302.6120	2265983.0256	48.28
	BL-26	TRV CAP AND REBAR	81121.3499	2266635.4659	49.44

BY	POINT	DESC.	NORTH	EAST	ELEVATION
	MUNCY1	NCGS BRASS DISC	84301.1435	2263612.6054	37.62
	R2245-18	GPS CAP AND REBAR	83759.9814	2263631.2219	42.22
	BY-60	TRV CAP AND REBAR	82582.1911	2263662.0406	43.37
	BL-23	TRV CAP AND REBAR	81926.6658	2263694.1416	45.14
	BY-61	TRV CAP AND REBAR	81250.5595	2263361.7344	57.01
	BY-62	TRV CAP AND REBAR	80540.6544	2263130.3183	57.76
	BY-63	TRV CAP AND REBAR	79806.5583	2262992.8727	58.13
	BY-64	TRV CAP AND REBAR	79104.2452	2262735.2851	59.52

 BM20 ELEVATION = 45.29
 N 83361 E 2258839
 BM20_15" PINE

 BM22 ELEVATION = 45.33
 N 82490 E 2262109
 BM22_10" SWEET GUM

 BM92 ELEVATION = 52.85
 N 81587 E 2264662
 BM92_8" PINE

NOTES:

- PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
- THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

REVISIONS

27-SEP-2021 11:48 S:\Units\033\Projects\RURAL\Brunswick Co\RW021\Working\RW Sheets\210907 revised rw sheets\REVISED 210924\RW021.LS.RW02C-1.dgn
 m.judval At LS-258896

MATCHLINE
 SEE SHEET RW02C-2

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
R-5021	RW02C-2
Location and Surveys	
LOCATION & SURVEYS DIVISION 3 5310 BARBADOS BLVD. #102 CASTLE HAYNE, NC 28429 (910) 341-2280	
PROJECT SURVEYOR	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, CHRISTOPHER J. SAWYER, PLS, certify that the Project Control was [performed/verified] under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

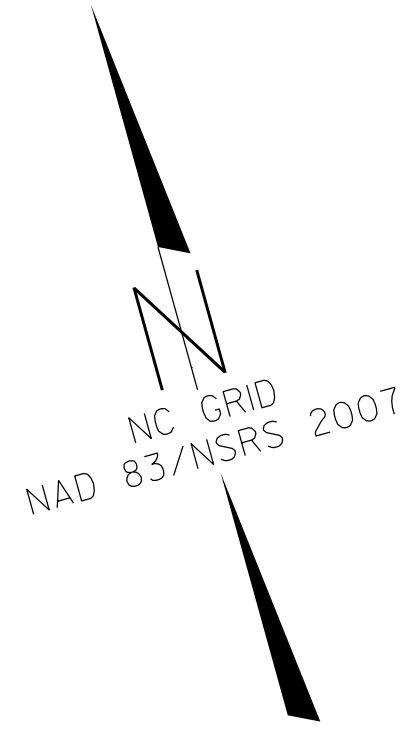
Class of survey: **AA**
 Type of GPS field procedure: NC-VRS-RTN
 Dates of survey: NOVEMBER 2009 TO SEPTEMBER 2021
 Datum/Epoch: NAD 83/NSRS 2007
 Published/Fixed-control use: Project_Control_N/A_for_RTN
 Localized around: SOUTHPORT EAST BASE RESET 1981
 Northing: 74895.9850
 Easting: 2288816.3700
 Combined grid factor: 1.00012636797
 Geoid model: G09NC
 Units: US SURVEY FEET

I also certify that the Baseline Control for this project was not completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed from NOVEMBER 2009 to SEPTEMBER 2021, and all coordinates are based on NAD 83/2007 and all elevations are based on NAVD 88; that this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

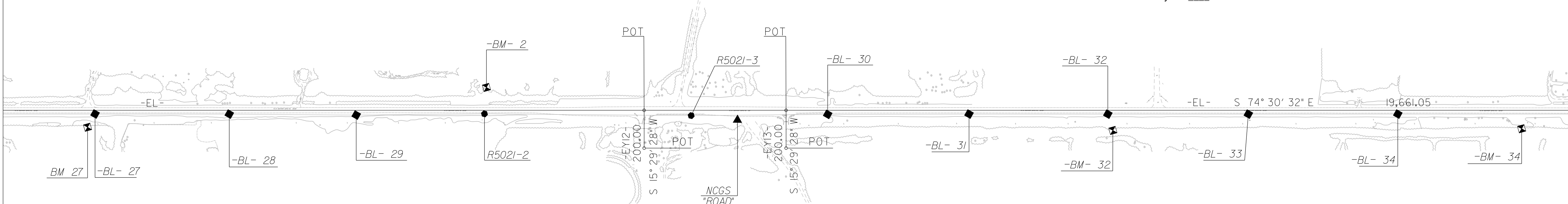
This 24TH day of SEPTEMBER, 2021.

DocuSigned by:

 9700C82E1D21467
 Professional Land Surveyor L-4526



MATCHLINE
SEE SHEET RW02C-1



MATCHLINE
SEE SHEET RW02C-3

```

*****
BM2      ELEVATION = 49.89
N 80531  E 2269291
BM2_12" PINE
*****
BM27     ELEVATION = 52.30
N 80893  E 2267199
BM27_12" PINE
*****
BM32     ELEVATION = 50.41
N 79426  E 2272428
BM32_14" PINE
*****
BM34     ELEVATION = 48.29
N 78856  E 2274518
BM34_14" PINE
*****
ROAD12   ELEVATION = 51.40
N 80010  E 2270527
NCGS MON ROAD
*****
  
```

BL POINT	DESC.	NORTH	EAST	ELEVATION
BL-27	TRV CAP AND REBAR	80949.6541	2267255.8214	50.32
BL-28	TRV CAP AND REBAR	80759.3351	2267940.8712	50.12
BL-29	TRV CAP AND REBAR	80574.8111	2268587.5074	49.28
R5021-2	GPS CAP AND REBAR	80399.7030	2269244.1360	50.39
R5021-3	GPS CAP AND REBAR	80098.2660	2270296.8920	53.34
BL-30	TRV CAP AND REBAR	79911.3117	2270995.2105	48.74
BL-31	TRV CAP AND REBAR	79712.9196	2271717.1650	48.75
BL-32	TRV CAP AND REBAR	79516.1196	2272425.6304	48.30
BL-33	TRV CAP AND REBAR	79317.4354	2273142.9540	48.72
BL-34	TRV CAP AND REBAR	79106.2881	2273905.9757	48.31

NOTES:


- PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
- THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

REVISIONS

27-SEP-2021 11:54 S:\Units\03\Projects\RURAL\Brunswick Co\RW021\Work\RW Sheets\210907 revised rw sheets\REVISED 210924\RW021.LS_RW02C-2.dgn
 m.jduval At LS-29896

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

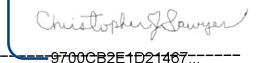
PROJECT REFERENCE NO.	SHEET NO.
R-5021	RW02C-3
Location and Surveys	
LOCATION & SURVEYS DIVISION 3 5310 BARBADOS BLVD. #102 CASTLE HAYNE, NC 28429 (910) 341-2280	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

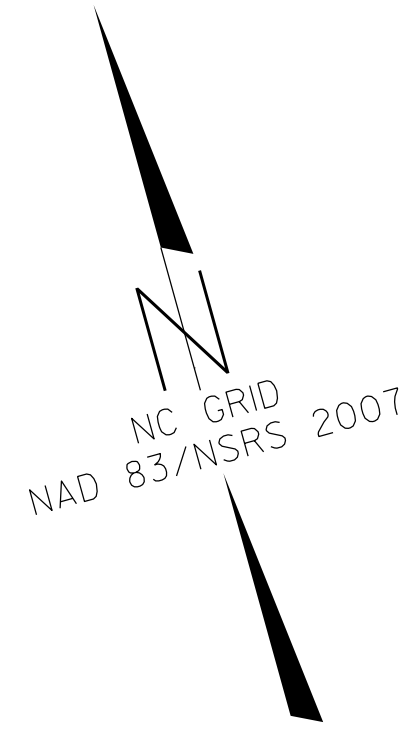
I, CHRISTOPHER J. SAWYER, PLS, certify that the Project Control was [performed/verified] under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

Class of survey: **AA**
 Type of GPS field procedure: NC-VRS-RTN
 Dates of survey: NOVEMBER 2009 TO SEPTEMBER 2021
 Datum/Epoch: NAD 83/NSRS 2007
 Published/Fixed-control use: Project_Control_N/A_for_RTN
 Localized around: SOUTHPORT EAST BASE RESET 1981
 Northing: 74895.9850
 Easting: 2288816.3700
 Combined grid factor: 1.00012636797
 Geoid model: G09NC
 Units: US SURVEY FEET

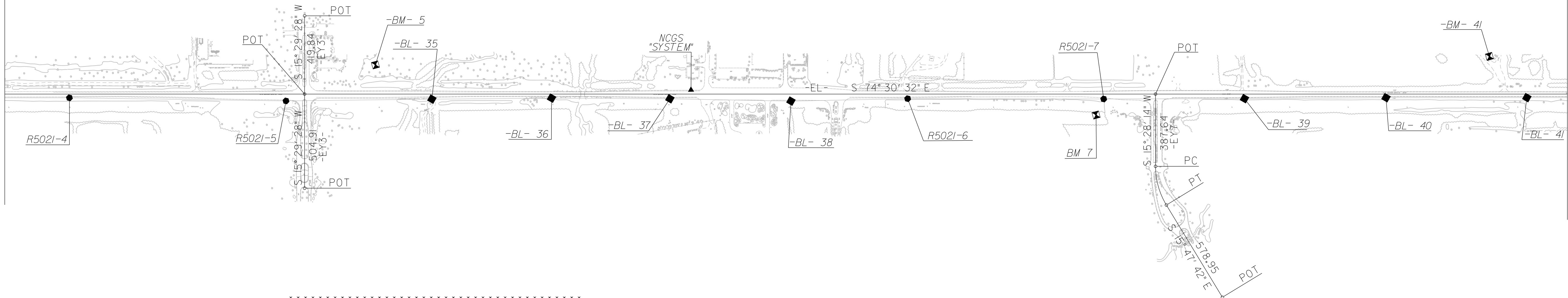
I also certify that the Baseline Control for this project was not completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed from NOVEMBER 2009 to SEPTEMBER 2021, and all coordinates are based on NAD 83/2007 and all elevations are based on NAVD 88; that this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 24TH day of SEPTEMBER, 2021.

DocuSigned by:

 Professional Land Surveyor L-4526



MATCHLINE
SEE SHEET RW02C-2



MATCHLINE
SEE SHEET RW02C-4

```

.....
BM5      ELEVATION = 45.55
N 78478   E 2276834
BM5_9*PINE
.....
BM7      ELEVATION = 42.95
N 77186   E 2280490
BM7_9*PINE
.....
BM41     ELEVATION = 42.16
N 76925   E 2282609
BM41_12*PINE
.....
SYSTEM1  ELEVATION = 43.38
N 77896   E 2278431
NCGS MON SYSTEM
.....
  
```

BL	POINT	DESC.	NORTH	EAST	ELEVATION
R5021-4		GPS CAP AND REBAR	78746.6700	2275204.0760	47.56
R5021-5		GPS CAP AND REBAR	78420.1800	2276319.9310	45.79
BL-35		TRV CAP AND REBAR	78219.9253	2277076.9963	44.56
BL-36		TRV CAP AND REBAR	78053.7357	2277697.3186	39.88
BL-37		TRV CAP AND REBAR	77880.5670	2278308.6558	43.18
BL-38		TRV CAP AND REBAR	77695.1310	2278931.5463	44.04
R5021-6		GPS CAP AND REBAR	77540.4450	2279539.0060	42.39
R5021-7		GPS CAP AND REBAR	77257.7380	2280552.7630	41.47
BL-39		TRV CAP ANDREBAR	77057.5700	2281281.1511	40.93
BL-40		TRV CAP AND REBAR	76859.5256	2282014.5704	40.61
BL-41		TRV CAP AND REBAR	76657.9680	2282743.2962	40.60

NOTES:

- PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
- THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

REVISIONS

27-SEP-2021 11:59 S:\Units\03\Projects\RURAL\Brunswick Co\RW021\Working\RW Sheets\210907 revised rw sheets\REVISED 210924\RW021.LS_RW02C-3.dgn
 m.jduval At LS-298996

SURVEY CONTROL SHEET

MATCHLINE
SEE SHEET RW02C-6

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

I, CHRISTOPHER J. SAWYER, PLS, certify that the Project Control was [performed/verified] under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:


Class of survey: **AA**
 Type of GPS field procedure: NC-VRS-RTN
 Dates of survey: NOVEMBER 2009 TO SEPTEMBER 2021
 Datum/Epoch: NAD 83/NSRS 2007
 Published/Fixed-control use: Project_Control_NA_for_RTN
 Localized around: SOUTHPORT EAST BASE RESET 1981
 Northing: 74895.9850
 Easting: 2288816.3700
 Combined grid factor: 1.00012636797
 Geoid model: G09NC
 Units: US SURVEY FEET

I also certify that the Baseline Control for this project was not completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed from NOVEMBER 2009 to SEPTEMBER 2021, and all coordinates are based on NAD 83/2007 and all elevations are based on NAVD 88; that this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

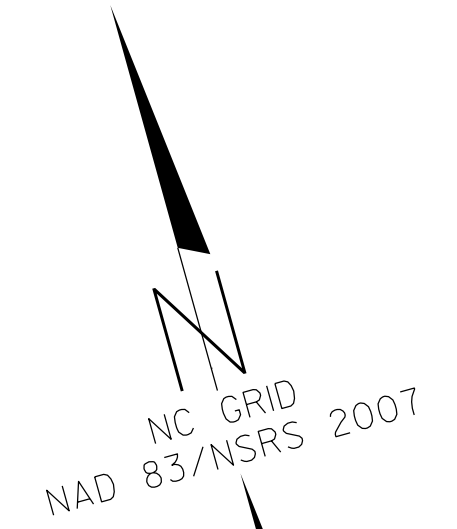
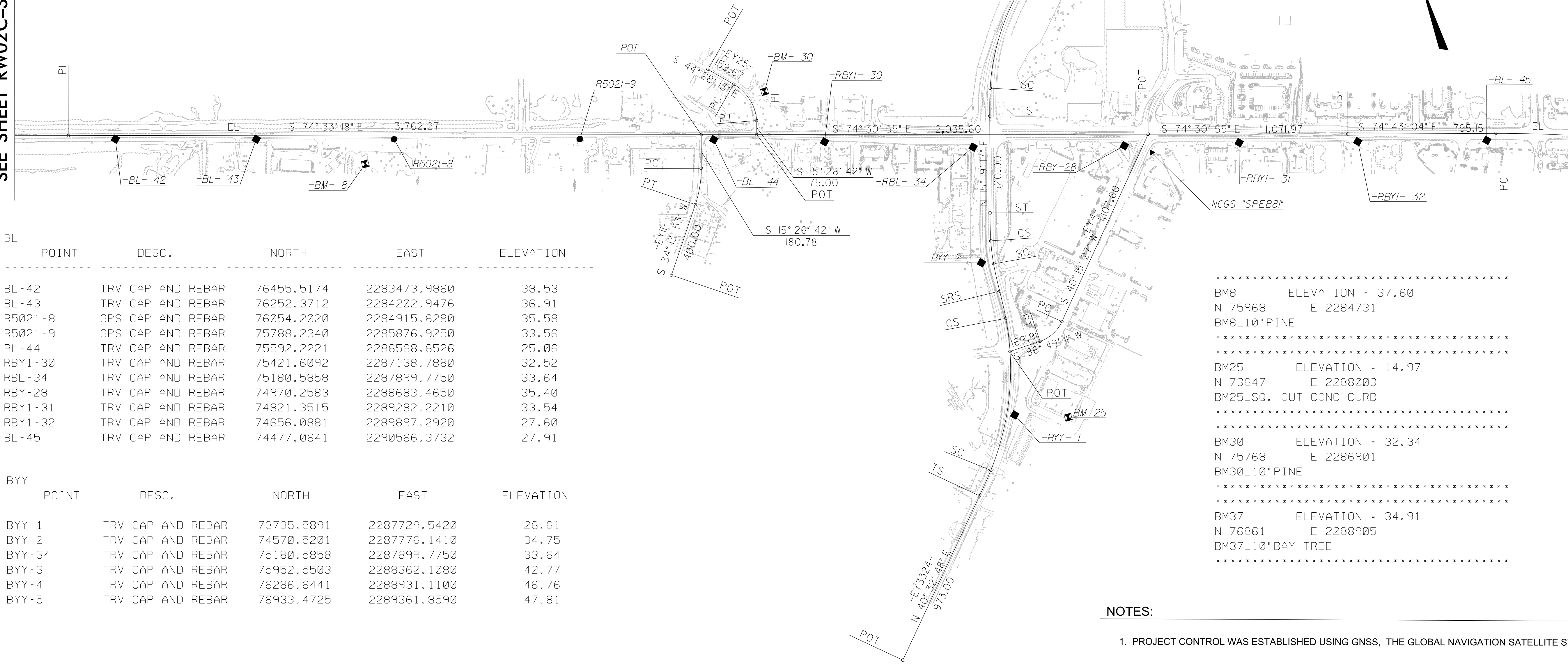
This 24TH day of SEPTEMBER, 2021.

DocuSigned by:

 0700C8261021487
 Professional Land Surveyor L-4526

PROJECT REFERENCE NO. R-5021	SHEET NO. RW02C-4
Location and Surveys	
LOCATION & SURVEYS DIVISION 3 5310 BARBADOS BLVD. #102 CASTLE HAYNE, NC 28429 (910) 341-2280	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

MATCHLINE
SEE SHEET RW02C-3



BL POINT	DESC.	NORTH	EAST	ELEVATION
BL-42	TRV CAP AND REBAR	76455.5174	2283473.9860	38.53
BL-43	TRV CAP AND REBAR	76252.3712	2284202.9476	36.91
R5021-8	GPS CAP AND REBAR	76054.2020	2284915.6280	35.58
R5021-9	GPS CAP AND REBAR	75788.2340	2285876.9250	33.56
BL-44	TRV CAP AND REBAR	75592.2221	2286568.6526	25.06
RBY1-30	TRV CAP AND REBAR	75421.6092	2287138.7880	32.52
RBL-34	TRV CAP AND REBAR	75180.5858	2287899.7750	33.64
RBY-28	TRV CAP AND REBAR	74970.2583	2288683.4650	35.40
RBY1-31	TRV CAP AND REBAR	74821.3515	2289282.2210	33.54
RBY1-32	TRV CAP AND REBAR	74656.0881	2289897.2920	27.60
BL-45	TRV CAP AND REBAR	74477.0641	2290566.3732	27.91

BYY POINT	DESC.	NORTH	EAST	ELEVATION
BYY-1	TRV CAP AND REBAR	73735.5891	2287729.5420	26.61
BYY-2	TRV CAP AND REBAR	74570.5201	2287776.1410	34.75
BYY-34	TRV CAP AND REBAR	75180.5858	2287899.7750	33.64
BYY-3	TRV CAP AND REBAR	75952.5503	2288362.1080	42.77
BYY-4	TRV CAP AND REBAR	76286.6441	2288931.1100	46.76
BYY-5	TRV CAP AND REBAR	76933.4725	2289361.8590	47.81

 BM8 ELEVATION = 37.60
 N 75968 E 2284731
 BM8_10" PINE

 BM25 ELEVATION = 14.97
 N 73647 E 2288003
 BM25_SQ. CUT CONC CURB

 BM30 ELEVATION = 32.34
 N 75768 E 2286901
 BM30_10" PINE

 BM37 ELEVATION = 34.91
 N 76861 E 2288905
 BM37_10" BAY TREE

NOTES:

- PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
- THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

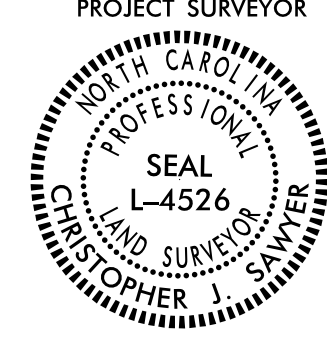
REVISIONS

27-SEP-2021 12:05 S:\Units\01\03\Projects\RURAL\Brunswick Co\RW021\Work\RW Sheets\210907 revised rw sheets\REVISED 210924\RW021.L.S._RW02C-4.dgn
 m.j.daval At LS-258896

MATCHLINE
SEE SHEET RW02C-5

SURVEY CONTROL SHEET

W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

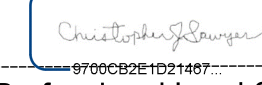
PROJECT REFERENCE NO.	SHEET NO.
R-5021	RW02C-7
Location and Surveys	
LOCATION & SURVEYS DIVISION 3 5310 BARBADOS BLVD. #102 CASTLE HAYNE, NC 28429 (910) 341-2280	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, CHRISTOPHER J. SAWYER, PLS, certify that the Project Control was [performed/verified] under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

Class of survey: **AA**
 Type of GPS field procedure: NC-VRS-RTN
 Dates of survey: NOVEMBER 2009 TO SEPTEMBER 2021
 Datum/Epoch: NAD 83/NSRS 2007
 Published/Fixed-control use: [Project_Control_N/A_for_RTN]
 Localized around: SOUTHPORT EAST BASE RESET 1981
 Northing: 74895.9850
 Easting: 2288816.3700
 Combined grid factor: 1.00012636797
 Geoid model: G09NC
 Units: US SURVEY FEET

I also certify that the Baseline Control for this project was not completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed from NOVEMBER 2009 to SEPTEMBER 2021, and all coordinates are based on NAD 83/2007 and all elevations are based on NAVD 88; that this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 24TH day of SEPTEMBER, 2021.

DocuSigned by:

 Professional Land Surveyor L-4526

EL POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	83317.187	2258805.945	S 74°31'00.0" E	4255.93					
LINE									
POT	82181.031	2262907.423	S 74°17'49.6" E	764.79					
LINE									
POT	81974.041	2263643.673	S 74°17'49.6" E	670.07					
LINE									
POT	81792.686	2264288.738	S 74°30'32.0" E	19661.05					
LINE									
POT	76541.437	2283235.542	S 74°33'17.9" E	3762.27					
LINE									
POT	75539.493	2286861.942	S 74°30'54.8" E	2035.60					
LINE									
POT	74996.023	2288823.657	S 74°30'54.8" E	1071.97					
LINE									
POT	74709.825	2289856.720	S 74°43'04.1" E	795.15					
LINE									
PC	74500.244	2290623.755	S 68°17'38.2" E	1602.81	12°30'23.6"(RT)	00°46'43.5"	1606.00	806.20	7357.50
CURVE									
PCC	73907.452	2292112.919	S 62°01'53.2" E	1.14	00°01'06.4"(RT)	01°36'43.5"	1.14	0.57	3554.17
CURVE									
PCC	73906.915	2292113.930	S 59°05'19.7" E	703.68	05°51'59.7"(RT)	00°50'00.0"	703.99	352.30	6875.50
CURVE									
PC	73545.428	2292717.663	S 55°00'34.8" E	274.99	02°17'30.3"(RT)	00°50'00.0"	275.01	137.52	6875.50
CURVE									
PT	73387.736	2292942.951	S 54°36'12.5" E	0.15					
LINE									
PC	73387.650	2292943.073	S 45°37'50.0" E	1969.21	16°28'00.0"(RT)	00°50'00.0"	1976.00	994.86	6875.50
CURVE									
PT	72010.617	2294350.753	S 37°23'49.8" E	338.59					
LINE									
PC	71741.630	2294556.388	S 29°24'45.9" E	916.77	15°58'08.2"(RT)	01°44'10.4"	919.75	462.87	3300.00
CURVE									
PT	70943.026	2295006.613	S 21°25'41.8" E	831.37					
LINE									
POT	70169.126	2295310.341	S 21°25'41.8" E	2001.87					
LINE									
POT	68305.631	2296041.698							

EY POINT	N	E	BEARING	DIST	DELTA	D	L	T	R	DELTA S	Ls	LT	ST
TS	84570.412	2263356.924	S 42°27'20.4" E	249.36						13°45'00.0"(RT)	250.00	167.17	83.79
SPIRAL													
SC	84386.433	2263525.248	S 22°24'06.7" E	196.72	21°46'11.3"(RT)	11°00'00.0"	197.91	100.16	520.87				
CURVE													
CS	84204.560	2263600.217	S 04°10'56.9" E	199.67						11°00'00.0"(RT)	200.00	133.59	66.90
SPIRAL													
ST	84005.419	2263614.780	S 00°31'01.0" E	249.19									
LINE													
PC	83756.240	2263617.028	S 00°54'15.5" E	154.94	00°46'29.0"(LT)	00°30'00.0"	154.94	77.47	11459.16				
CURVE													
PT	83601.317	2263619.474	S 01°17'30.0" E	887.23									
LINE													
PC	82714.310	2263639.474	S 01°13'34.4" E	52.36	00°07'51.3"(RT)	00°15'00.0"	52.36	26.18	22918.31				
CURVE													
PT	82661.960	2263640.594	S 01°09'38.7" E	616.35									
LINE													
PC	82045.739	2263653.080	S 04°57'35.3" W	42.65	12°14'28.1"(RT)	28°38'52.4"	42.73	21.45	200.00				
CURVE													
PT	82003.250	2263649.393	S 11°04'49.3" W	29.76									
LINE													
POT	81974.041	2263643.673	S 11°04'49.3" W	26.64									
LINE													
PC	81947.897	2263638.553	S 19°01'40.5" W	497.76	15°53'42.3"(RT)	03°10'59.2"	499.36	251.29	1800.00				
CURVE													
PT	81477.336	2263476.269	S 26°58'31.7" W	285.58									
LINE													
PC	81222.830	2263346.729	S 18°08'38.2" W	675.53	17°39'46.9"(LT)	02°36'15.7"	678.21	341.82	2200.00				
CURVE													
PT	80580.889	2263136.365	S 09°18'44.7" W	484.98									
LINE													
PC	80102.296	2263057.886	S 15°23'36.3" W	614.42	12°09'43.1"(RT)	01°58'32.6"	615.57	308.95	2900.00				
CURVE													
PT	79509.920	2262894.792	S 21°28'27.8" W	1789.70									
LINE													
PC	77844.454	2262239.607											

EY12 POINT	N	E	BEARING	DIST
POT	80191.969	2270064.217		
LINE			S 15°29'28.0" W	200.00
POT	79999.234	2270010.799		

EY13 POINT	N	E	BEARING	DIST
POT	79991.169	2270788.715		
LINE			S 15°29'28.0" W	200.00
POT	79798.434	2270735.298		

EY3 POINT	N	E	BEARING	DIST
POT	78833.362	2276538.047		
LINE			S 15°29'28.0" W	419.84
POT	78428.777	2276425.913		
LINE			S 15°29'28.0" W	504.91
POT	77942.209	2276291.057		

EY7 POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	77208.783	2280827.720							
LINE			S 15°28'14.0" W	387.64					
PC	76835.190	2280724.320							
CURVE			S 00°09'44.0" E	215.58	31°15'57.8"(LT)	14°19'26.2"	218.28	111.93	400.00
PT	76619.611	2280724.931							
LINE			S 15°47'42.0" E	578.95					
POT	76062.521	2280882.519							

NOTES:

- PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
- THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

REVISIONS

27-SEP-2021 13:45 S:\Units\Projects\RURAL\Brunswick Co\RS021\Working\RW Sheets\210907 revised rw sheets\R-5021.LS_RW02C-7.dgn
 m.jduval At LS-29896

SURVEY CONTROL SHEET

W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
R-5021	RW02C-8
Location and Surveys	
LOCATION & SURVEYS DIVISION 3 5310 BARBADOS BLVD. #102 CASTLE HAYNE, NC 28429 (910) 341-2280	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, CHRISTOPHER J. SAWYER, PLS, certify that the Project Control was [performed/verified] under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

Class of survey: **AA**
 Type of GPS field procedure: NC-VRS-RTN
 Dates of survey: NOVEMBER 2009 TO SEPTEMBER 2021
 Datum/Epoch: NAD 83/NSRS 2007
 Published/Fixed-control use: [Project_Control_N/A_for_RTN]
 Localized around: SOUTHPORT EAST BASE RESET 1981
 Northing: 74895.9850
 Easting: 2288816.3700
 Combined grid factor: 1.00012636797
 Geoid model: G09NC
 Units: US SURVEY FEET

I also certify that the Baseline Control for this project was not completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed from NOVEMBER 2009 to SEPTEMBER 2021, and all coordinates are based on NAD 83/2007 and all elevations are based on NAVD 88; that this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 24TH day of SEPTEMBER, 2021.

DocuSigned by:

 970062E4D2467
 Professional Land Surveyor L-4526

NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

EY11									
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	75636.418	2286511.137							
LINE			S 15°26'42.1" W	180.78					
PC	75462.167	2286462.993							
CURVE			S 24°50'17.6" W	197.32	18°47'11.0"(RT)	09°28'41.6"	198.21	100.00	604.50
PT	75283.100	2286380.107							
LINE			S 34°13'53.1" W	400.00					
POT	74952.391	2286155.093							

EY25									
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	75964.228	2286639.489							
LINE			S 44°28'13.3" E	159.67					
PC	75850.287	2286751.343							
CURVE			S 16°52'30.4" E	230.88	55°36'20.9"(RT)	23°08'59.3"	240.20	130.51	247.50
PT	75629.346	2286818.365							
LINE			S 15°26'42.3" W	75.00					
POT	75557.052	2286798.391							

EY4									
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	74995.985	2288823.793							
LINE			S 40°15'27.0" W	1107.60					
PC	74150.725	2288108.037							
CURVE			S 63°32'18.8" W	158.10	46°33'43.7"(RT)	28°38'52.4"	162.53	86.06	200.00
PT	74080.278	2287966.503							
LINE			S 86°49'10.7" W	169.91					
POT	74070.851	2287796.850							

EY1									
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
PC	74965.227	2293339.613							
CURVE			S 33°47'30.0" W	255.54	01°55'00.0"(LT)	00°45'00.0"	255.56	127.79	7639.44
PCC	74752.853	2293197.486							
CURVE			S 29°27'30.0" W	299.83	06°45'00.0"(LT)	02°15'00.0"	300.00	150.17	2546.48
PCC	74491.790	2293050.034							
CURVE			S 24°14'45.0" W	104.98	03°40'30.0"(LT)	03°30'00.0"	105.00	52.52	1637.02
PCC	74396.068	2293006.923							
CURVE			S 20°14'55.0" W	287.89	04°19'10.0"(LT)	01°30'00.0"	287.96	144.05	3819.72
PT	74125.965	2292907.284							
LINE			S 18°05'18.8" W	610.72					
POT	73545.428	2292717.663							

EY3324													
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R	DELTA S	Ls	LT	ST
POT	72628.494	2286798.644											
LINE			N 40°32'47.6" E	973.00									
TS	73367.855	2287431.158											
SPIRAL			N 39°33'31.4" E	149.98						02°57'48.9"(LT)	150.00	100.01	50.01
SC	73483.487	2287526.677											
CURVE			N 21°09'33.2" E	819.94	32°50'51.0"(LT)	03°57'05.2"	831.28	427.41	1450.00				
CS	74248.151	2287822.644											
SPIRAL			N 02°45'35.1" E	149.98						02°57'48.9"(LT)	150.00	100.01	50.01
SS	74397.959	2287829.866											
SPIRAL			N 03°00'24.1" E	149.97						03°42'16.1"(RT)	150.00	100.02	50.02
SC	74547.725	2287837.732											
CURVE			N 08°32'47.9" E	124.26	06°08'25.8"(RT)	04°56'21.4"	124.32	62.22	1160.00				
CS	74670.605	2287856.199											
SPIRAL			N 14°05'11.7" E	149.97						03°42'16.1"(RT)	150.00	100.02	50.02
ST	74816.067	2287892.701											
LINE			N 15°19'16.9" E	520.00									
TS	75317.586	2288030.101											
SPIRAL			N 16°30'53.9" E	149.97						03°34'51.6"(RT)	150.00	100.02	50.02
SC	75461.373	2288072.734											
CURVE			N 37°54'08.4" E	781.36	38°00'00.0"(RT)	04°46'28.7"	795.87	413.19	1200.00				
CS	76077.915	2288552.739											
SPIRAL			N 59°17'23.0" E	149.97						03°34'51.6"(RT)	150.00	100.02	50.02
SS	76154.506	2288681.681											
SPIRAL			N 59°21'48.4" E	149.98						03°21'35.3"(LT)	150.00	100.02	50.02
SC	76230.933	2288810.724											
CURVE			N 37°50'00.9" E	845.03	38°34'47.6"(LT)	04°28'47.0"	861.21	447.65	1279.00				
CS	76898.335	2289329.041											
SPIRAL			N 16°18'13.5" E	149.98						03°21'35.3"(LT)	150.00	100.02	50.02
ST	77042.281	2289371.144											
LINE			N 15°11'01.9" E	1177.00									
TS	78178.193	2289679.421											
SPIRAL			N 16°15'35.0" E	149.98						03°13'39.7"(RT)	150.00	100.02	50.02
SC	78322.173	2289721.414											
CURVE			N 36°07'43.5" E	810.31	35°26'04.0"(RT)	04°18'12.9"	823.37	425.33	1331.35				
CS	78976.656	2290199.175											
SPIRAL			N 55°59'52.1" E	149.98						03°13'39.7"(RT)	150.00	100.02	50.02
ST	79060.528	2290323.509											
LINE			N 57°04'25.2" E	549.50									
PC	79359.215	2290784.743											
CURVE			N 51°24'30.7" E	454.09	11°19'49.1"(LT)	02°29'28.0"	454.83	228.16	2300.00				
PT	79642.457	2291139.664											
LINE			N 45°44'36.1" E	2396.81									
TS	81315.127	2292856.309											
SPIRAL			N 47°04'32.8" E	149.97						03°59'50.6"(RT)	150.00	100.03	50.02
SC	81417.259	2292966.123											
CURVE			N 65°53'16.0" E	597.92	32°17'38.7"(RT)	05°19'47.4"	605.91	311.24	1075.00				
CS	81661.525	2293511.875											
SPIRAL			N 84°41'59.3" E	149.97						03°59'50.6"(RT)	150.00	100.03	50.02
ST	81675.379	2293661.201											
LINE			N 86°01'55.9" E	167.53									
POT	81686.971	2293828.333											

REVISIONS

27-SEP-2021 13:33 S:\Units\033\Projects\RURAL\Brunswick Co\R5021\Working\FW Sheets\210907 revised fw sheets\R-5021.LS_FW02C-8.dgn
 E:\jduval

PROPOSED ALIGNMENT CONTROL SHEET

PROJECT REFERENCE NO.	SHEET NO.
R-5021	RW02D-1
Location and Surveys	

6/2/99

REVISIONS

22 JUN 2000 12:54 P55021\Working\RW Sheets\5021\1s_rw02d-1_190213.dgn
 C:\Users\A.L.S.205904

DRW01

TYPE	STATION	NORTH	EAST
POT	10+00.00	82542.4671	2263630.8624
POT	11+50.00	82392.4913	2263633.5579

L & LREV

TYPE	STATION	NORTH	EAST
POT	28+09.51	83317.1867	2258805.9453
PC	48+47.52	82773.1217	2260769.9986
PRC	53+83.26	82642.6146	2261289.5443
PT	59+20.51	82511.7051	2261810.5420
PC	224+69.70	78091.6000	2277758.5336
PRC	228+49.19	77984.4775	2278122.5732
PT	232+28.68	77877.3550	2278486.6127
PC	240+39.40	77660.8188	2279267.8877
PRC	244+18.89	77565.2604	2279635.1323
PT	247+98.38	77469.7020	2280002.3769
PC	309+33.64	75831.0443	2285914.7474
PT	312+68.77	75733.4223	2286235.3141
PC	314+88.28	75664.1980	2286443.6168
PT	318+29.05	75565.0716	2286769.6202
PC	360+45.46	74442.3703	2290833.8022
PCC	370+85.00	74086.5551	2291809.3705
PT	373+86.26	73943.4327	2292074.2197
PC	384+78.27	73362.5145	2292998.8900
EOB	387+76.87	73187.7219	2293240.7285
EQA	387+80.00	73187.7219	2293240.7285
PCC	406+87.50	71799.5182	2294541.4469
PT	416+36.46	70968.8559	2294995.0788
POT	444+97.96	68305.1559	2296040.4880

Y1

TYPE	STATION	NORTH	EAST
POT	10+00.00	80221.5447	2270073.5713
POT	13+00.00	79932.4432	2269993.4447

Y1A

TYPE	STATION	NORTH	EAST
POT	10+00.00	81395.9556	2266644.9351
POT	12+16.00	81187.4245	2266588.6221

Y1C

TYPE	STATION	NORTH	EAST
POT	9+00.00	80581.6519	2270460.3489
PC	10+37.46	80459.6873	2270396.9413
PRC	12+06.19	80400.9325	2270253.3291
PT	14+00.00	80318.8756	2270100.5473
POT	14+50.00	80270.6920	2270087.1928
POT	15+01.00	80221.5447	2270073.5713

Y2

TYPE	STATION	NORTH	EAST
POT	10+00.00	80020.7499	2270798.0504
POT	12+50.00	79780.5079	2270728.8856

Y2A

TYPE	STATION	NORTH	EAST
POT	10+00.00	78847.9243	2275931.9935
POT	12+41.00	78615.6794	2275867.6251

Y3

TYPE	STATION	NORTH	EAST
POT	9+00.00	78870.0445	2276547.0749
POT	19+31.99	77875.3719	2276272.0480

Y4

TYPE	STATION	NORTH	EAST
POT	10+00.00	78272.8683	2277104.5070
POT	12+49.30	78031.5945	2277041.7430

Y5

TYPE	STATION	NORTH	EAST
POT	10+00.00	78050.1864	2278565.3416
POT	11+87.69	77871.1061	2278509.1592

Y5A

TYPE	STATION	NORTH	EAST
POT	10+00.00	77838.7184	2278626.0157
PC	11+25.85	77722.6818	2278577.2902
PT	11+75.63	77688.8907	2278542.5687
POT	12+50.00	77661.9692	2278473.2404

Y5B

TYPE	STATION	NORTH	EAST
POT	10+00.00	77722.6818	2278577.2902
PC	10+11.89	77711.7181	2278572.6864
PT	11+17.17	77627.9661	2278613.2915
POT	11+50.00	77619.1965	2278644.9327

Y6

TYPE	STATION	NORTH	EAST
POT	10+00.00	77685.4281	2279179.0958
POT	12+50.00	77444.1214	2279113.7426

Y7

TYPE	STATION	NORTH	EAST
POT	10+00.00	77238.9316	2280835.0098
POT	12+50.00	76997.9194	2280768.5780

Y8

TYPE	STATION	NORTH	EAST
POT	10+00.00	76327.8498	2284122.2448
POT	12+50.00	76089.7516	2284046.0264

Y9

TYPE	STATION	NORTH	EAST
POT	10+00.00	76065.8995	2285067.3766
POT	12+50.00	75832.1069	2284978.8270

Y9A

TYPE	STATION	NORTH	EAST
POT	10+00.00	76175.7479	2285657.0170
PC	10+61.23	76116.7697	2285640.5683
PRC	11+01.50	76077.1016	2285634.1612
PT	11+41.47	76037.7132	2285627.8320
POT	12+64.00	75919.6354	2285595.1058

Y10

TYPE	STATION	NORTH	EAST
POT	10+00.00	75840.7396	2285879.7663
POT	12+00.00	75648.0052	2285826.3486

Y11

TYPE	STATION	NORTH	EAST
POT	10+00.00	75640.6968	2286515.7069
PC	12+49.71	75403.4278	2286437.8783
PT	14+35.92	75237.1618	2286355.4613
POT	16+63.03	75050.1606	2286226.5821

Y12

TYPE	STATION	NORTH	EAST
POT	10+00.00	75892.5846	2286707.2908
PC	10+64.70	75846.2474	2286752.4519
PT	12+59.77	75669.8271	2286823.4101
POT	13+79.13	75550.4671	2286822.4884

Y13

TYPE	STATION	NORTH	EAST
POT	10+00.00	75659.3497	2287217.1619
POT	12+10.05	75457.5026	2287159.0205

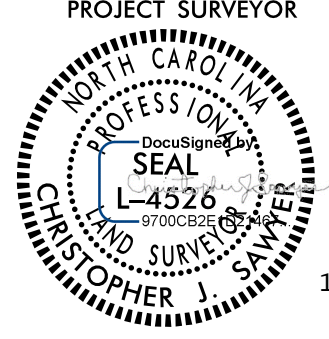
Y14

TYPE	STATION	NORTH	EAST
POT	10+00.00	75420.6657	2287292.3701
POT	12+09.59	75219.0812	2287235.0086

NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE PROPOSED ALIGNMENT CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

PROPOSED ALIGNMENT CONTROL SHEET

PROJECT REFERENCE NO. R-5021	SHEET NO. RW02D-2-REV
Location and Surveys	
LOCATION AND SURVEYS DIVISION 3 5310 BARBADOS BLVD., SUITE 102 CASTLE HAYNE, NC 28429	
PROJECT SURVEYOR  11/2/2021	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

YAREV

TYPE	STATION	NORTH	EAST
POT	10+03.00	82224.9871	2262845.0371
PC	11+15.13	82116.9261	2262815.0872
PCC	15+59.24	81690.1595	2262877.9461
PT	21+34.55	81281.2871	2263276.6584
POT	23+19.75	81178.5568	2263430.7511

-YAREV- SUPERCEDES -YA-

RAB

TYPE	STATION	NORTH	EAST
PC	10+00.00	81544.5792	2262983.7754
PCC	12+01.06	81453.1053	2263073.3105
PT	14+02.12	81544.5792	2262983.7754

YG

TYPE	STATION	NORTH	EAST
POT	10+00.00	81496.4673	2263025.7714
POT	16+00.00	81106.0604	2262570.1592

-RAB- AND -YG- ARE COMPLETELY NEW ALIGNMENTS

REVISIONS

C:\NOV-2021\05-02\Projects\RIURAL\Brunswick Co\F5021\Working\FW Sheets\211022 revised r.w sheets\R-5021.L.S.-rw02d-2-REV.dgn
 11/2/2021 10:33 AM
 m.judva

NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE PROPOSED ALIGNMENT CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATINO REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

PROPOSED ALIGNMENT CONTROL SHEET

PROJECT REFERENCE NO.	SHEET NO.
R-5021	RW02D-3
Location and Surveys	

YB

TYPE	STATION	NORTH	EAST
POT	11+83.47	82856.7914	2263718.5635
PC	12+32.43	82856.2986	2263767.5202
PCC	16+61.88	82616.0219	2264089.1497
PT	22+10.00	82075.2919	2264096.5195
POT	24+00.00	81892.1942	2264045.7726

YC

TYPE	STATION	NORTH	EAST
POT	10+00.00	82857.7222	2263517.4325
POT	12+00.00	82861.5516	2263717.3959

YD

TYPE	STATION	NORTH	EAST
POT	10+00.00	82538.5079	2263472.2152
POT	13+00.00	82545.9924	2263772.1219

YE

TYPE	STATION	NORTH	EAST
POT	10+00.00	82622.7086	2262544.4577
POT	13+03.00	82330.1225	2262465.7023

YF

TYPE	STATION	NORTH	EAST
POT	10+00.00	82494.6620	2263006.4749
POT	13+03.00	82202.7095	2262925.4156

YREV

TYPE	STATION	NORTH	EAST
TS	4+36.64	84570.4115	2263356.9244
SC	6+86.64	84386.4333	2263525.2477
CS	8+84.55	84204.5599	2263600.2174
ST	10+84.55	84005.4191	2263614.7802
PC	14+33.16	83656.8199	2263617.9255
PRC	22+46.88	82851.3828	2263719.8988
PRC	40+05.11	81169.3149	2263424.5926
PT	49+07.97	80336.0740	2263095.1803
PC	51+49.47	80097.7605	2263056.1019
PT	57+65.04	79505.3843	2262893.0076
POT	75+49.87	77844.4540	2262239.6069

REVISIONS

22 JUN 2020 12:59 P5021\Working\FW Sheets\5021\1s.rw02d-3-190213.dgn
 C:\Users\A.L.S.205904

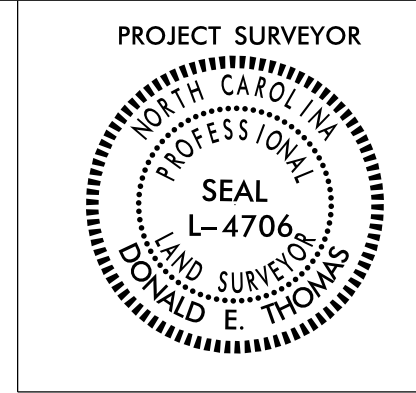
6/2/19

NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE PROPOSED ALIGNMENT CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATINO REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

RIGHT OF WAY CONTROL SHEET

PROJECT REFERENCE NO. R-5021	SHEET NO. RW03E-1
ESP ASSOCIATES, INC 211 RACINE DRIVE, SUITE 101 WILMINGTON, NC 28403	



I, Donald E. Thomas, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision, that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from 01/08/2020 to 04/24/2020, and all coordinates are based on NAD83/2011. That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 24th day of April, 2020.
 Donald E. Thomas
 Professional Land Surveyor L-4706

ROW MARKER IRON PIN AND CAP-E				
ALIGN	STATION	OFFSET	NORTH	EAST
L	48+25.52	84.00	82698.0435	2260726.3717
L	48+27.51	40.00	82739.9155	2260740.0355
L	48+48.29	-50.00	82821.1036	2260784.0812
L	48+50.22	-136.00	82903.4739	2260808.8742
L	59+20.51	110.00	82405.7012	2261781.1622
L	65+45.00	-110.00	82450.9138	2262441.7285
L	66+55.00	-80.00	82392.6239	2262539.7197
L	69+02.54	110.00	82143.4110	2262727.5204
L	72+71.26	110.00	82044.9308	2263082.8424
L	77+18.37	110.00	81925.5112	2263513.7152
L	77+53.15	-80.00	82099.3213	2263597.9722
L	77+63.63	155.51	81869.5670	2263545.1689
L	83+60.00	-100.00	81956.5108	2264188.1221
L	87+78.06	-100.00	81844.8526	2264590.9910
L	88+37.76	-90.00	81819.2701	2264645.8534
L	90+38.08	-51.00	81728.1823	2264828.4847
L	90+38.11	-90.00	81765.7590	2264838.9247
L	91+37.00	-51.00	81701.7628	2264923.8078
L	91+97.00	-51.00	81685.7374	2264981.6281
L	93+75.40	-51.00	81638.0892	2265153.5457
L	94+14.40	-90.00	81665.2560	2265201.5453
L	100+85.00	-90.00	81486.1457	2265847.7852
L	124+00.00	-90.00	80867.8350	2268078.6857
L	135+00.00	-90.00	80574.0372	2269138.7248
L	148+00.00	-90.00	80226.8217	2270391.4982
L	149+50.00	-102.00	80198.3235	2270539.2503
L	151+55.00	-102.00	80143.5701	2270736.8038
L	153+50.00	-95.00	80084.7406	2270922.8551
L	160+50.00	-95.00	79897.7800	2271597.4197
L	161+00.00	-102.00	79891.1697	2271647.4787
L	168+00.00	-102.00	79704.2075	2272322.0489
L	172+50.00	-96.00	79578.2352	2272754.0996
L	186+00.00	-120.00	79240.7934	2274061.4665
L	191+50.00	-120.00	79093.8944	2274591.4866
L	203+50.00	-102.00	78756.0421	2275743.0840
L	204+87.64	-102.00	78719.2802	2275875.7227
L	205+47.64	-107.00	78708.0733	2275934.8785
L	213+00.00	-107.00	78507.1267	2276659.9051
L	213+50.00	-112.00	78498.5903	2276709.4251
L	218+00.00	-112.00	78378.4004	2277143.0775
L	218+25.00	-90.00	78350.5223	2277161.2933
L	224+69.70	-90.00	78178.3304	2277782.5716
L	224+69.70	106.00	77989.4507	2277730.2222
L	228+49.19	-90.00	78070.4045	2278149.3415
L	231+39.00	-90.00	77988.1779	2278424.9690
L	232+20.96	-105.00	77980.5863	2278507.2853
L	233+05.11	-61.00	77915.7249	2278576.5604
L	237+94.78	-61.00	77784.9382	2279048.4463
L	237+95.29	-90.00	77812.7505	2279056.6760
L	238+00.00	94.00	77612.8088	2279089.1678
L	240+39.40	-90.00	77747.5493	2279291.9257
L	244+18.89	-90.00	77652.7076	2279656.4160
L	247+98.38	-90.00	77556.4325	2280026.4149
L	254+50.00	-90.00	77382.3928	2280654.3602
L	255+50.00	-120.00	77384.5940	2280758.7400
L	256+50.00	-120.00	77357.8851	2280855.1072
L	257+50.00	-90.00	77302.2661	2280943.4617
L	270+00.00	-90.00	76968.4050	2282148.0516
L	271+00.00	106.00	76752.8164	2282192.0694
L	271+00.00	-120.00	76970.6063	2282252.4315
L	271+75.00	140.00	76700.0199	2282255.2638
L	272+00.00	-120.00	76943.8974	2282348.7987
L	272+50.00	140.00	76679.9882	2282327.5392
L	273+00.00	-90.00	76888.2783	2282437.1532
L	273+25.00	106.00	76692.7214	2282408.8956
L	288+00.00	-90.00	76487.6450	2283882.6610
L	296+49.93	115.00	76063.0850	2284646.9630
L	296+50.58	104.80	76072.7378	2284650.3134
L	302+00.00	115.00	75916.1679	2285177.0485
L	304+50.00	-90.00	76046.9484	2285472.7197
L	305+00.00	-100.00	76043.2307	2285523.5742
L	308+49.82	110.00	75747.4262	2285804.5984
L	309+33.64	110.00	75725.0404	2285885.3677
L	310+22.50	-108.00	75910.4184	2286030.4583

L	312+68.77	110.00	75629.0356	2286200.6237
L	312+89.47	-100.00	75821.7930	2286286.4890
L	314+88.28	-100.00	75759.0949	2286475.1535
L	314+88.28	127.00	75543.6788	2286403.5652
L	316+30.00	130.00	75496.7287	2286540.2195
L	317+00.00	120.00	75485.6167	2286611.3721
L	317+00.00	-100.00	75696.4958	2286674.0617
L	317+50.00	-100.00	75682.6412	2286721.3173
L	318+29.05	95.00	75473.5013	2286744.3245
L	318+87.75	-100.00	75645.8330	2286852.8223
L	322+03.40	-90.00	75552.1458	2287154.4142
L	322+62.04	-95.00	75541.3518	2287212.2665
L	323+46.26	95.00	75335.7858	2287242.8550
L	324+07.19	110.00	75305.1030	2287297.5930
L	325+36.08	-95.00	75468.3814	2287476.4195
L	325+50.00	110.00	75267.0766	2287435.2487
L	325+90.00	140.00	75227.5088	2287465.8165
L	327+07.35	140.00	75196.2620	2287578.9300
L	327+07.35	75.71	75258.2292	2287596.0480
L	332+50.00	-95.00	75278.2867	2288164.5629
L	339+33.09	-90.00	75091.5808	2288821.6609
L	348+18.33	77.71	74694.2120	2289630.2820
L	350+00.00	100.00	74624.3539	2289799.4626
L	352+00.00	-73.10	74737.9507	2290038.3336
L	352+80.00	100.00	74549.7977	2290069.3560
L	353+49.05	-98.53	74722.7727	2290188.7710
L	354+37.64	-84.93	74686.0732	2290270.5419
L	354+50.00	-73.80	74672.0573	2290279.4945
L	356+44.53	90.04	74462.3336	2290423.3802
L	356+46.89	75.65	74475.5783	2290429.4785
L	358+74.20	83.77	NOT SET IN POWER BOX	
L	358+75.73	75.31	74414.9706	2290650.1467
L	359+48.57	-73.85	74539.3504	2290760.0800
L	360+12.03	80.00	74374.1576	2290780.2854
L	361+26.11	95.00	74329.1623	2290884.9772
L	361+32.40	-80.00	74495.4774	2290939.7835
L	365+00.00	95.00	74216.5052	2291235.6834
L	365+03.51	-80.92	74381.1915	2291297.6434
L	365+03.60	-80.00	74380.2931	2291297.4201
L	365+30.22	-88.01	74378.7876	2291325.5146
L	365+40.37	-59.14	74348.1497	2291325.4042
L	367+00.00	110.00	74134.0087	2291415.0177
L	369+00.00	110.00	74059.9993	2291597.1524
L	369+00.00	-105.00	74257.9104	2291681.1536
L	370+00.00	98.34	74031.5529	2291692.0603
LREV	373+42.66	-104.58	74055.8664	2292091.0224
LREV	374+39.29	85.00	73843.2485	2292073.9041
LREV	374+76.00	-67.94	73953.2247	2292186.3493
LREV	382+06.97	-115.05	73604.2591	2292830.3733
LREV	384+37.13	85.00	73312.4260	2292918.8350
LREV	385+28.32	-94.07	73413.9747	2293092.7393
LREV	387+41.70	-115.19	73299.8197	2293285.4758
L	392+00.00	-115.00	72995.6077	2293634.9051
L	393+00.00	-100.00	72915.2737	2293698.6233
L	396+00.00	-100.00	72701.4718	2293914.7075
L	398+20.00	-90.00	72532.5285	2294060.2685
L	401+59.48	-55.00	72251.5339	2294259.6036
L	401+59.48	-90.00	72273.9772	2294286.4606
L	405+73.20	-55.00	71924.5362	2294517.8866
L	405+85.25	-68.25	71922.7070	2294535.7700
L	406+50.00	-68.25	71870.1053	2294574.5289
L	406+65.00	-55.00	71850.0797	2294572.7265
L	407+94.66	-55.76	71743.1428	2294649.0715
L	424+09.25	-76.30	70277.3566	2295348.4340
L	426+75.11	37.00	69988.4839	2295340.0931
L	426+93.45	-60.00	70006.8531	2295437.0868
L	428+07.00	-60.00	69901.1478	2295478.5724
L	429+23.78	-46.50	69787.5047	2295508.6709
L	430+02.82	-40.63	69711.7841	2295532.0850
L	430+03.16	-46.50	69713.6106	2295537.6717
L	430+11.05	37.00	69675.7675	2295462.8233

ROW MARKER IRON PIN AND CAP-E				
ALIGN	STATION	OFFSET	NORTH	EAST
YREV	10+16.74	-85.52	84075.8806	2263699.1479
YREV	10+20.32	-29.96	84070.5055	2263643.7242
YREV	10+84.55	-85.00	84006.1860	2263699.7767
YREV	10+84.55	30.04	84005.1481	2263584.7423
YREV	10+84.55	70.00	84004.7875	2263544.7830
YREV	10+84.55	-29.96	84005.6894	2263644.7398
YREV	12+61.41	-85.00	83829.3346	2263701.3724
YREV	12+61.41	70.00	83827.9361	2263546.3787
YREV	13+97.39	-86.88	83693.3724	2263704.4807
YREV	14+42.91	66.76	83646.2812	2263551.2745
YREV	16+67.00	75.00	83417.5305	2263553.1043
YREV	18+11.07	-107.51	83292.4705	2263748.5938
YREV	18+49.06	74.14	83232.6510	2263572.9620
YREV	20+13.46	-82.48	83094.0878	2263752.6134
YREV	20+20.64	-115.84	83093.0894	2263786.6777
YREV	22+01.30	-123.00	82923.7133	2263828.9948
YREV	27+12.73	190.00	82386.3454	2263590.7491
YREV	27+15.79	165.76	82384.0792	2263572.6361
YREV	37+09.51	182.57	81505.0389	2263407.0754
YREV	38+51.28	-53.75	81273.5091	2263552.2074
YREV	40+05.11	-53.75	81139.3913	2263469.2428
YREV	45+91.31	-53.75	80627.0237	2263220.7797

ROW MARKER IRON PIN AND CAP-E				
ALIGN	STATION	OFFSET	NORTH	EAST
YA	12+57.65	-70.00	81902.9774	2263045.2339
YA	15+58.70	85.00	81599.4627	2262900.4457
YA	19+40.63	-70.00	81380.6674	2263242.9667
YA	19+40.63	85.00	81251.7003	2263156.9871
YA	20+2			

6/2/19

RIGHT OF WAY CONTROL SHEET

PROJECT REFERENCE NO.	SHEET NO.
R-5021	RW03E-2

ESP ASSOCIATES, INC
 211 RACINE DRIVE, SUITE 101
 WILMINGTON, NC 28403



I, Donald E. Thomas, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from 01/08/2020 to 04/24/2020, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 24th day of April, 2020.
 Donald E. Thomas
 Professional Land Surveyor L-4706

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y14A	28+52.63	-103.05	74160.7902	2287706.5593
Y14A	29+00.00	-115.00	74205.7868	2287699.6037
Y14A	30+10.00	71.41	74300.6521	2287893.1995
Y14A	31+69.83	78.54	74459.5839	2287907.8705
Y14A	32+00.00	-145.00	74503.7261	2287686.6174
Y14A	32+18.52	79.85	74506.7149	2287912.2212
Y14A	32+29.83	69.22	74518.4235	2287902.4593
Y14A	34+50.00	-130.00	74770.1825	2287739.0617
Y14A	35+00.00	-97.04	74814.5996	2287783.8559
Y14A	44+50.50	91.84	75645.1740	2288265.9129
Y14A	44+54.97	109.37	75640.3962	2288283.2460
Y14A	45+66.73	79.91	75741.6613	2288311.2197
Y14A	47+30.00	-63.48	75957.3566	2288304.8856
Y14A	48+56.58	-66.16	76049.0881	2288403.8157
Y14A	49+02.29	80.11	75959.2040	2288527.8195
Y14A	52+92.14	-70.29	76289.7218	2288772.7258
Y14A	54+35.73	-96.63		
Y14A	54+35.73	-70.00		
Y14A	55+44.34	-98.62		
Y14A	56+13.52	135.00	76346.3107	2289155.7401
Y14A	57+83.59	-98.62		
Y14A	57+94.27	-72.64		
Y14A	59+00.00	135.00	76601.1098	2289342.7423
Y14A	61+52.59	115.00	76861.7622	2289438.0707
Y14A	63+50.00	99.79	77061.9011	2289479.8722
Y14A	64+50.00	93.88	77159.9600	2289500.3531
Y14A	65+50.00	-100.72	NOT SET AREA UNDER CONSTRUCTION	
Y14A	66+00.00	85.00	77307.0483	2289531.0744
Y14A	66+50.00	-79.43	NOT SET AREA UNDER CONSTRUCTION	
Y14A	66+50.00	74.10	77358.1583	2289533.6486

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
DRW01	11+02.04	43.07	82439.6721	2263589.6365
DRW01	11+03.70	18.26	82438.4606	2263614.4650

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y16	11+00.00	29.86	74731.6158	2290210.7274
Y16	11+00.00	-30.11	74715.4764	2290268.4910
Y16	11+00.00	-40.00	74712.8157	2290278.0139

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y17	10+73.21	50.28	74573.2933	2290821.3147
Y17	10+76.88	-49.77	74542.2217	2290916.4855

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y17A	11+45.71	21.37	74374.4764	2291375.4994
Y17A	11+49.11	6.68	74373.1742	2291390.5975
Y17A	11+95.65	27.65	74328.7894	2291375.3347

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y19REV	11+32.79	-50.00	73721.8919	2292827.9013
Y19REV	12+12.62	-50.00	73646.0053	2292803.1145
Y19REV	11+32.79	-30.00	73728.1017	2292808.8898

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y22	14+00.00	85.00	71922.1868	2296313.4692
Y22	14+00.00	50.00	71917.9953	2296348.2174
Y22	14+39.48	85.00	71882.9912	2296308.7413
Y22	15+18.88	-50.00	71786.1537	2296431.3330
Y22	15+66.70	-70.00	71734.1186	2296442.4845
Y22	18+00.00	85.00	71546.9049	2296235.5495
Y22	19+00.00	70.00	71451.3765	2296218.1723
Y22	20+00.00	-70.00	71305.9306	2296309.9861
Y22	23+35.96	-95.00	70987.0362	2296163.5575
Y22	24+27.99	70.00	71006.2797	2295975.3616
Y22	24+27.99	-70.00	70922.9390	2296087.8531
Y22	29+00.00	70.00	70627.0138	2295694.3779
Y22	30+00.00	80.00	70552.6156	2295626.8138
Y22	30+51.16	-70.00	70422.2145	2295716.8854
Y22	31+39.46	55.00	70425.6747	2295563.8816
Y22	31+39.62	80.00	70440.4300	2295543.6998
Y22	31+84.00	55.00	70392.3981	2295538.4416
Y22	31+86.13	-65.00	70314.5836	2295629.8169
Y22	32+87.67	-65.00	70234.1943	2295551.2469
Y22	33+99.56	55.00	70266.1400	2295390.1664
Y22	41+87.64	29.96	69955.2435	2294675.0430
Y22	42+29.09	60.90	69969.1222	2294625.2201
Y22	42+36.76	66.62	69971.6918	2294615.9953
Y22	42+50.00	60.00	69960.7374	2294606.0487
Y22	43+10.00	29.96	69911.0581	2294560.9396

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y14E	10+97.85	-68.00	76071.8200	2288386.0605
Y14E	10+98.14	-50.00	76059.9407	2288372.5341
Y14E	11+00.00	68.00	75982.0652	2288283.8613
Y14E	10+99.72	50.00	75993.9445	2288297.3877

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y14D	13+19.61	63.13	75217.5197	2289072.1184
Y14D	13+49.69	-47.57	75296.3146	2288988.6535
Y14D	13+82.50	52.62	75284.6803	2289093.4319
Y14D	15+39.27	30.06	75452.7682	2289113.5950
Y14D	16+03.03	-55.00	75526.2825	2289036.8088
Y14D	16+40.41	29.96	75553.1860	2289125.6407
Y14D	19+74.82	40.00	75883.9653	2289175.7775
Y14D	19+88.70	-55.00	75909.1626	2289083.1333
Y14D	21+17.15	-57.72	76023.7505	2289080.4198
Y14D	21+50.00	70.00	76075.8450	2289201.6112
Y14D	23+35.78	-93.73	76188.9325	2288987.4315
Y14D	23+51.19	106.50	76306.1005	2289150.5209


REVISIONS

SECTION 56.1600 CONSTRUCTION PERMITS

NOTES:

- IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
- PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.

RIGHT OF WAY CONTROL SHEET

PROJECT REFERENCE NO. R-5021	SHEET NO. RW03E-5
Location and Surveys	
LOCATION AND SURVEYS DIVISION 3 5310 BARBADOS BLVD., SUITE 102 CASTLE HAYNE, NC 28429	
<div style="display: flex; justify-content: center; align-items: center;"> <div style="text-align: center; margin-right: 10px;">PROJECT SURVEYOR</div>  </div>	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
LREV	318+86.09	-100.05	75646.3265	2286851.2337
LREV	310+22.50	-120.00	75921.9385	2286033.8179
LREV	306+35.97	-113.92	76020.3287	2285658.3205
LREV	305+56.53	-100.80	76028.9010	2285578.2640

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y14A	48+47.77	79.91	75928.9613	2288487.3667

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y14H	20+32.20	-50.00	78449.2060	2290272.0977
Y14H	17+54.78	-50.00	78478.3832	2290011.0130
Y14H	19+70.62	74.94	78324.5327	2290209.3387
Y14H	18+78.17	58.04	78349.2736	2290112.4476
Y14H	23+66.07	-50.00	78301.6112	2290604.6371
Y14H	18+78.17	-50.00	78456.4531	2290126.0919
Y14H	19+78.17	-50.00	78449.1852	2290220.7738
Y14H	23+44.59	-50.00	78317.2416	2290589.8934

ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
LREV	424+33.74	73.70	70199.7575	2295217.7503
LREV	310+22.50	-135.00	75936.3387	2286038.0173
LREV	306+36.27	-128.92	76034.7069	2285662.6158

I, Christopher J. Sawyer, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from August 2021 to September 2021, and all coordinates are based on NAD83/2007; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 24 day of September, 2021.


 Professional Land Surveyor L-4526

NOTES:

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED _____ TO _____.

REVISIONS

27-SEP-2021 10:55 AM C:\Users\mjudva\Documents\Projects\RURAL_Brunswick Co\15021\Working\RW_Sheets\210907_revised_rw_sheets\15021.LS.RW03E-5.dgn

REVISIONS

BEGIN CONSTRUCTION
BEGIN TIP PROJECT R-5021
-L- POT STA 47+50.00

-L-

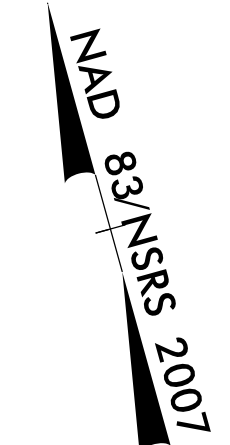
PI Sta 51+15.44	PI Sta 56+51.94
$\Delta = 2^\circ 45' 55.3" (LT)$	$\Delta = 2^\circ 46' 23.3" (RT)$
$D = 0^\circ 30' 58.2"$	$D = 0^\circ 30' 58.2"$
$L = 535.74'$	$L = 537.25'$
$T = 267.92'$	$T = 268.67'$
$R = 11,000.00'$	$R = 11,000.00'$
SE = NC	SE = NC

I, Christopher J. Sawyer, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from August 2021 to September 2021, and all coordinates are based on NAD83/NSRS 2007; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

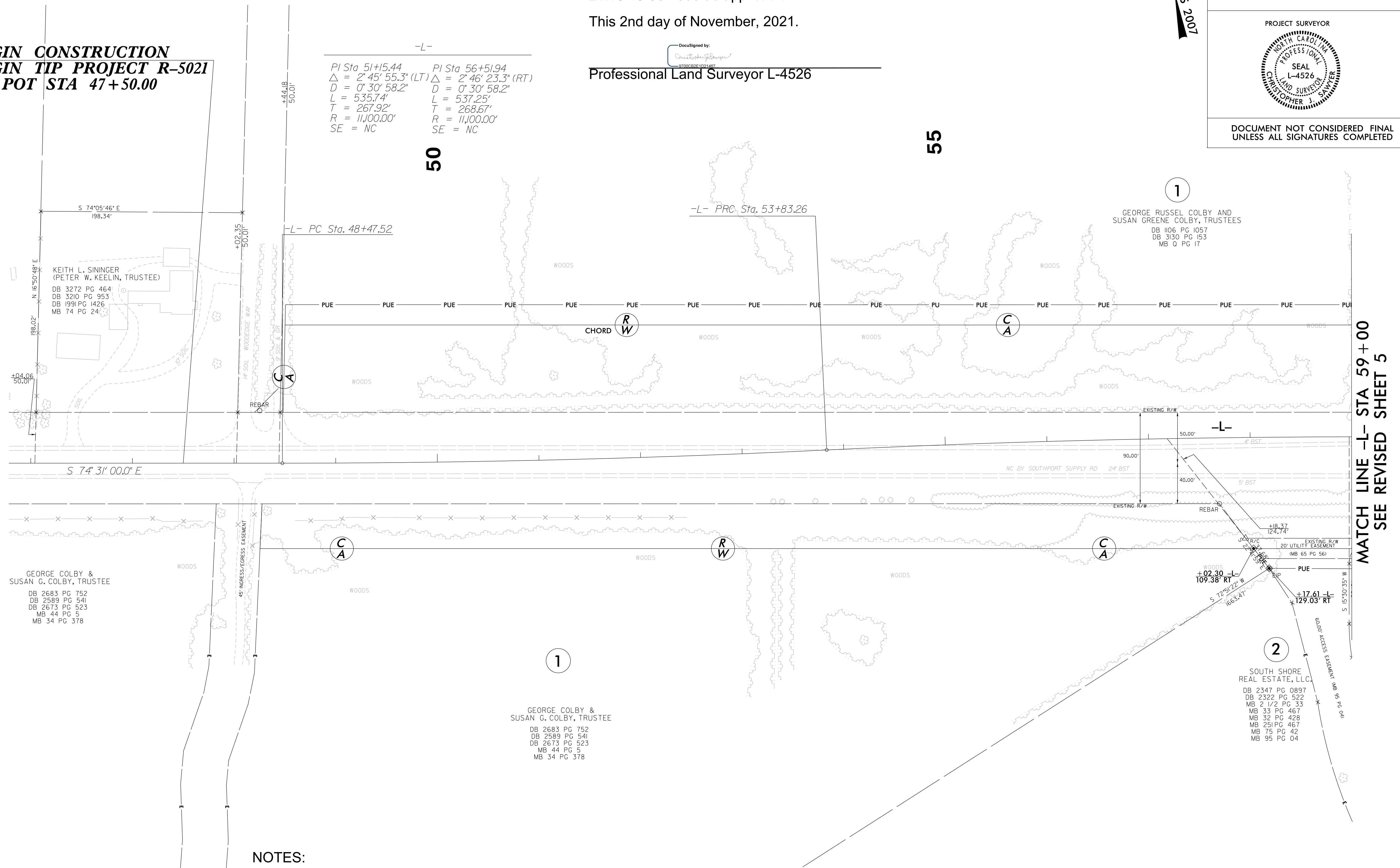
This 2nd day of November, 2021.

DocuSigned by:
Christopher J Sawyer
7006B2E10148E

Professional Land Surveyor L-4526



PROJECT REFERENCE NO. R-5021	SHEET NO. RW04-REV
Location and Surveys	
LOCATION AND SURVEYS DIVISION 3 5310 BARBADOS BLVD., SUITE 102 CASTLE HAYNE, NC 28429	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

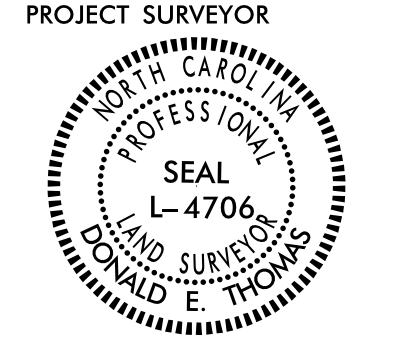


NOTES:

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED _____ TO _____.

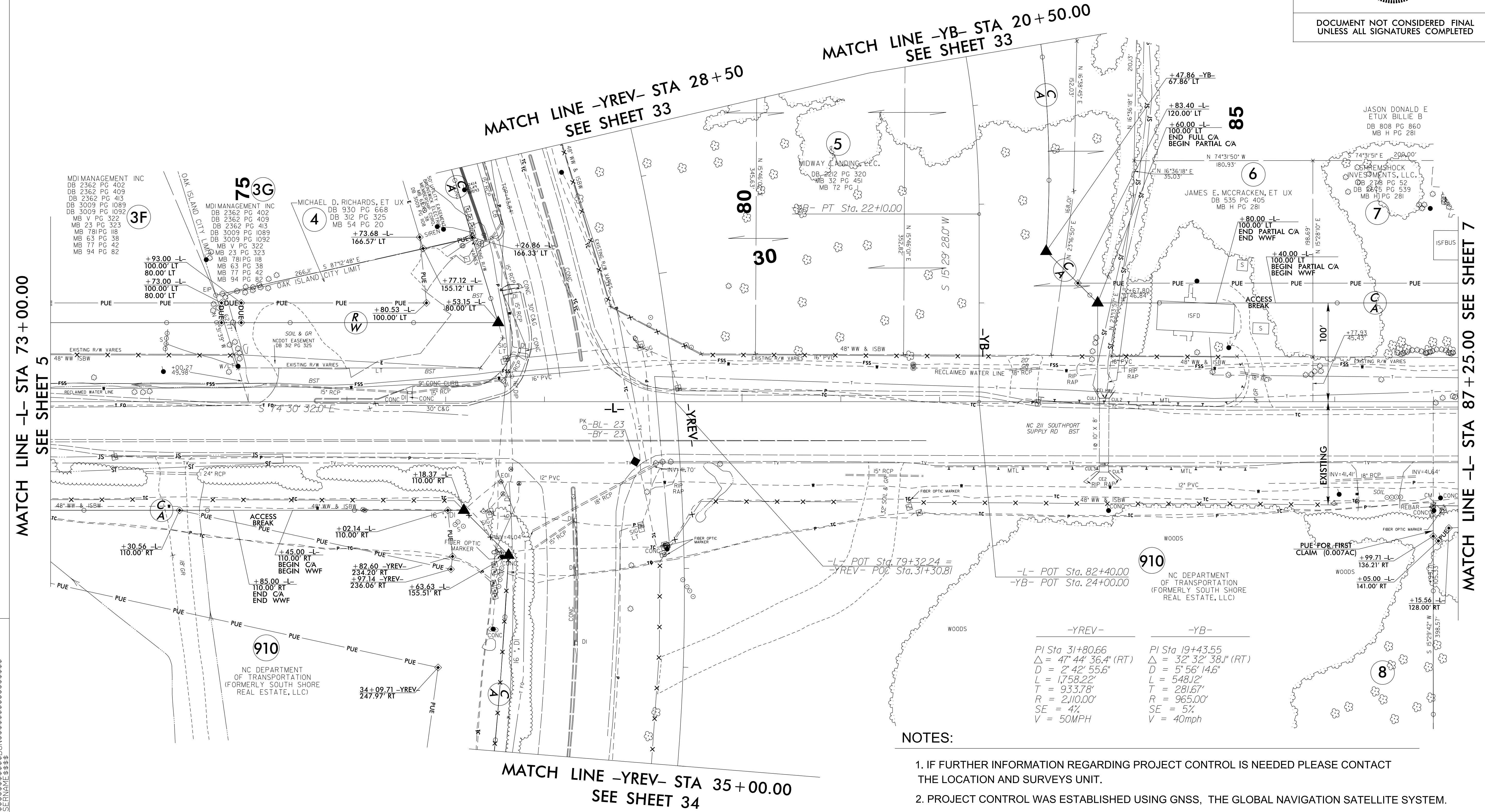
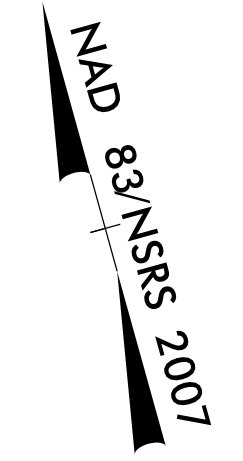
**MATCH LINE -L- STA 59+00
SEE REVISED SHEET 5**

6/2/19

PROJECT REFERENCE NO.	SHEET NO.
R-5021	RW06
Location and Surveys	
ESP ASSOCIATES, INC. 211 RACINE DRIVE, SUITE 101 WOLMINGTON, NC 28403	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, Donald E. Thomas, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from 01/08/2020 to 04/24/2020, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 24th day of April, 2020.
 Donald E. Thomas
 Professional Land Surveyor L-4706



-YREV-	-YB-
PI Sta 31+80.66	PI Sta 19+43.55
Δ = 47' 44" 36.4" (RT)	Δ = 32' 32" 38.1" (RT)
D = 2' 42" 55.6"	D = 5' 56" 14.6"
L = 1,758.22'	L = 548.12'
T = 933.78'	T = 281.67'
R = 2,110.00'	R = 965.00'
SE = 4%	SE = 5%
V = 50MPH	V = 40mph

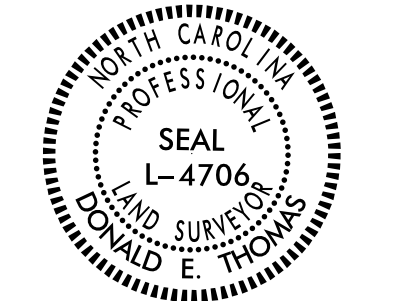
NOTES:

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED ____ TO ____.

REVISIONS

SYSTEM: 11.00
 DATE: 06/2/2019
 USER: DONALD THOMAS
 PROJECT: R-5021

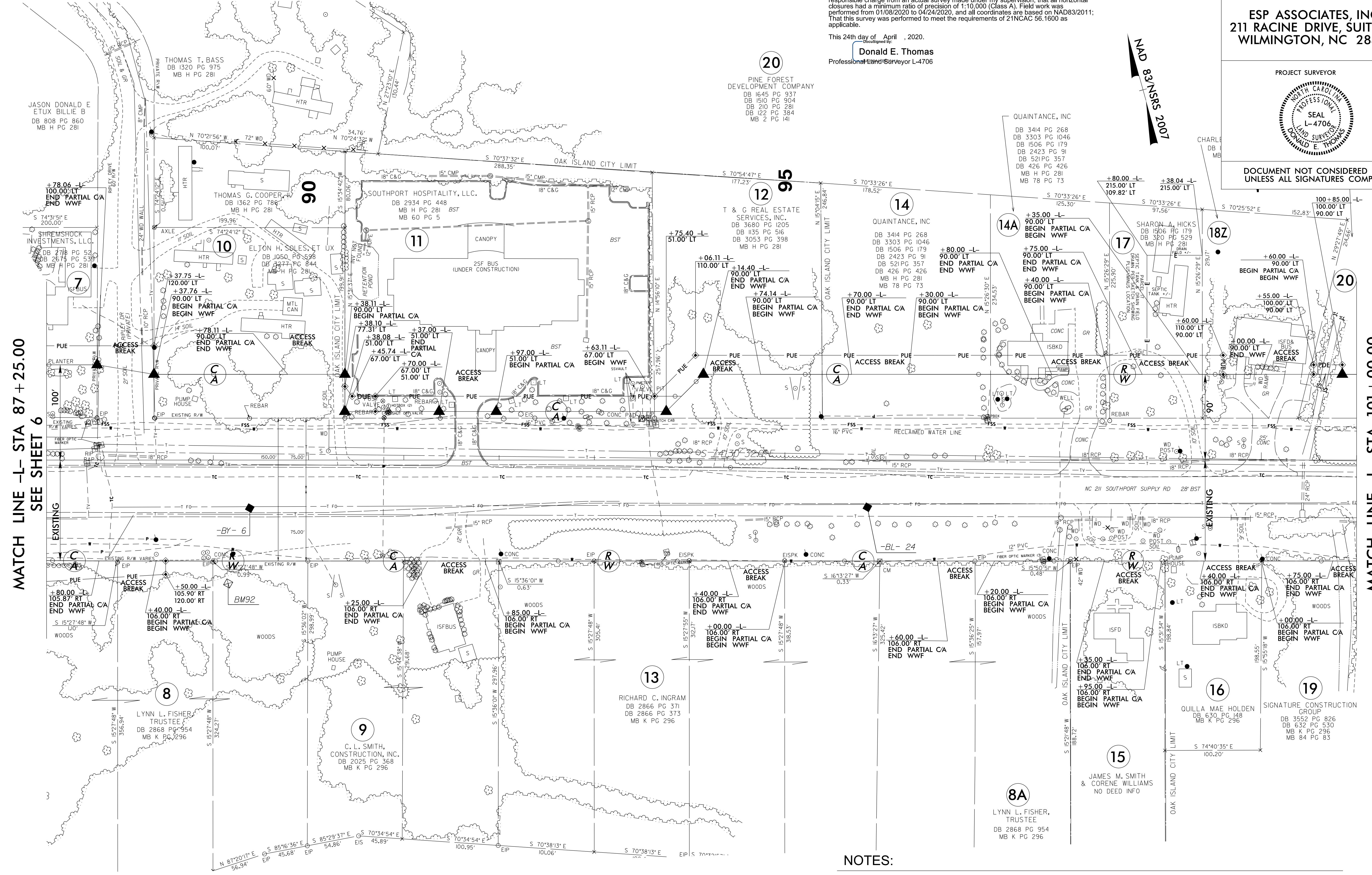
6/2/19

PROJECT REFERENCE NO.	SHEET NO.
R-5021	RW07
Location and Surveys	
ESP ASSOCIATES, INC. 211 RACINE DRIVE, SUITE 101 WILMINGTON, NC 28403	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, Donald E. Thomas, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from 01/08/2020 to 04/24/2020, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 24th day of April, 2020.
 Donald E. Thomas
 Professional Land Surveyor L-4706

NAD 83 GNSS 2007



MATCH LINE -L- STA 87 + 25.00
SEE SHEET 6

MATCH LINE -L- STA 101 + 00.00
SEE SHEET 8

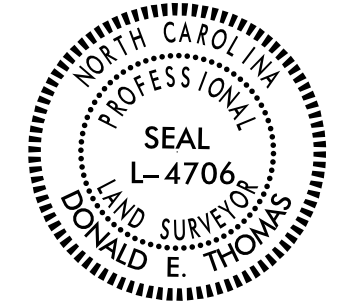
REVISIONS

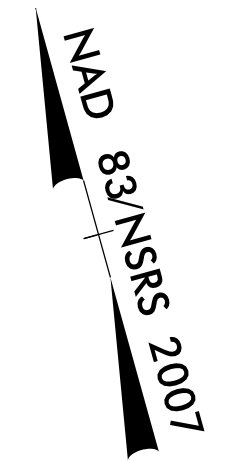
NOTES:

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED ____ TO ____.

SYSTEM: 11.00
 DATE: 06/02/19
 DRAWN BY: DONALD THOMAS
 CHECKED BY: DONALD THOMAS

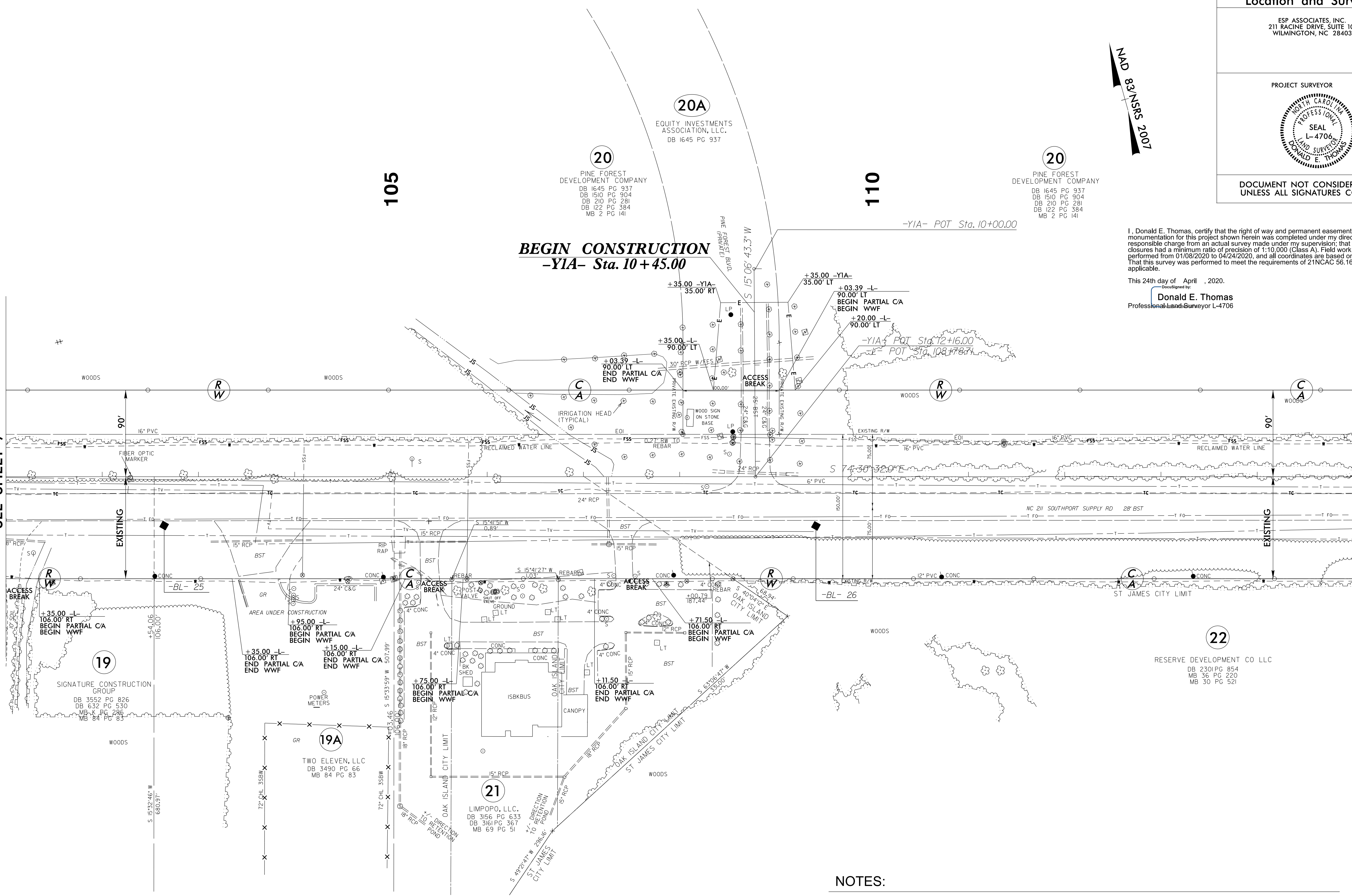
6/2/19

PROJECT REFERENCE NO.	SHEET NO.
R-5021	RW08
Location and Surveys	
ESP ASSOCIATES, INC. 211 RACINE DRIVE, SUITE 101 WILMINGTON, NC 28403	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



MATCH LINE -L- STA 101+00.00
SEE SHEET 7

MATCH LINE -L- STA 115+00.00
SEE SHEET 9



I, Donald E. Thomas, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from 01/08/2020 to 04/24/2020, and all coordinates are based on NAD83/2011. That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 24th day of April, 2020.
 DocuSigned by:
Donald E. Thomas
 Professional Land Surveyor L-4706

NOTES:

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED ____ TO ____.

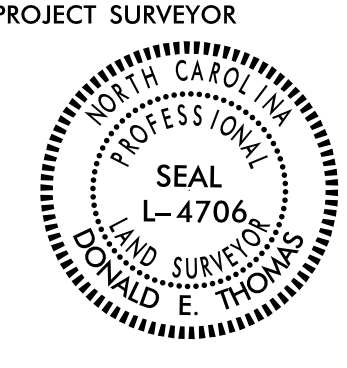
REVISIONS

SYSTEM: 11/11/2019 10:00 AM
 USER: DONALD.E.THOMAS
 FILENAME: R-5021-RW08.DWG

6/2/19

REVISIONS

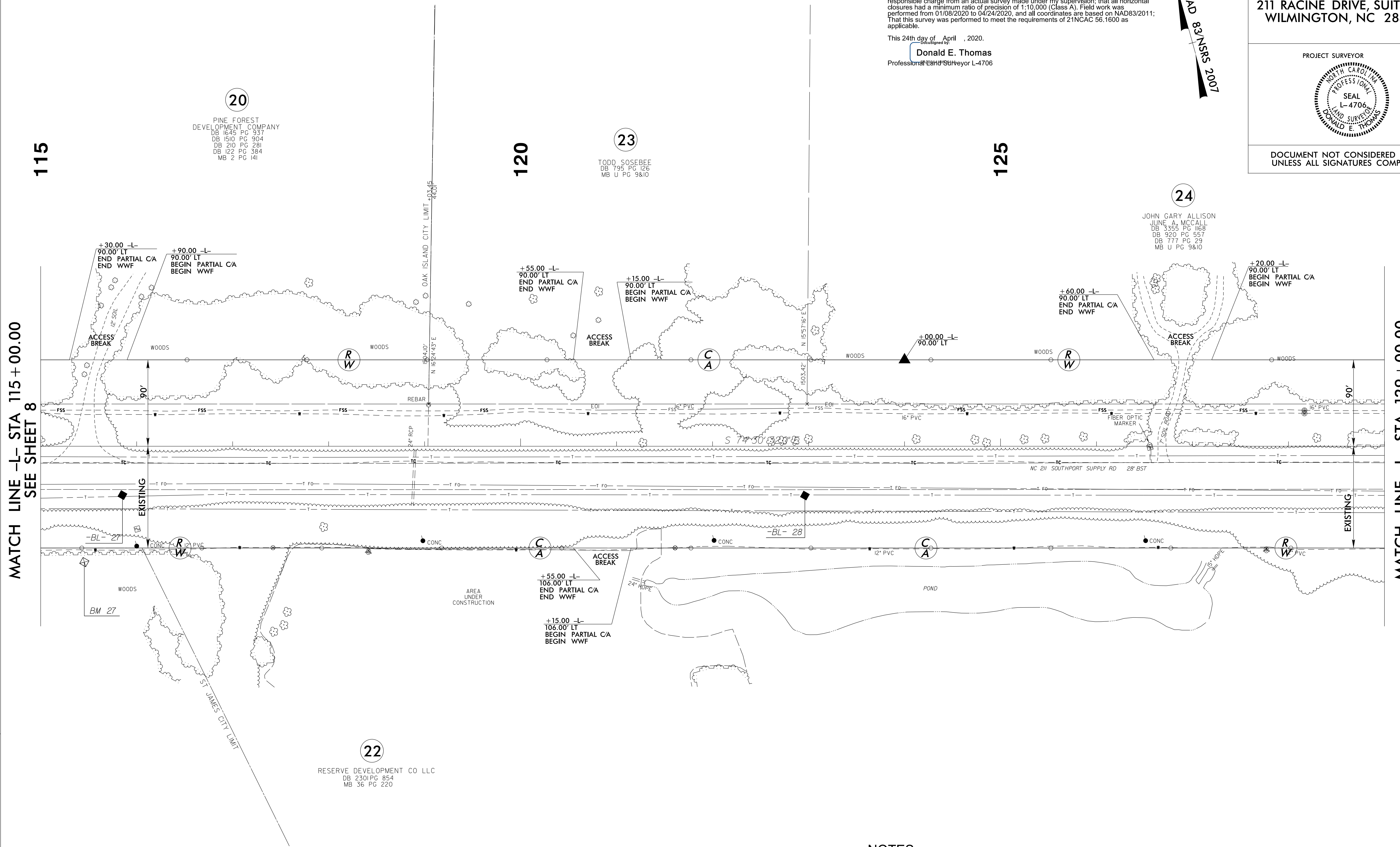
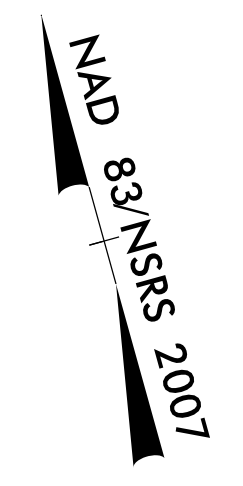
DATE TIME BY
DESCRIPTION
REVISION

PROJECT REFERENCE NO.	SHEET NO.
R-5021	RW09
Location and Surveys	
ESP ASSOCIATES, INC. 211 RACINE DRIVE, SUITE 101 WILMINGTON, NC 28403	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, Donald E. Thomas, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from 01/08/2020 to 04/24/2020, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 24th day of April, 2020.

Donald E. Thomas
Professional Surveyor L-4706



MATCH LINE -L- STA 115 + 00.00
SEE SHEET 8

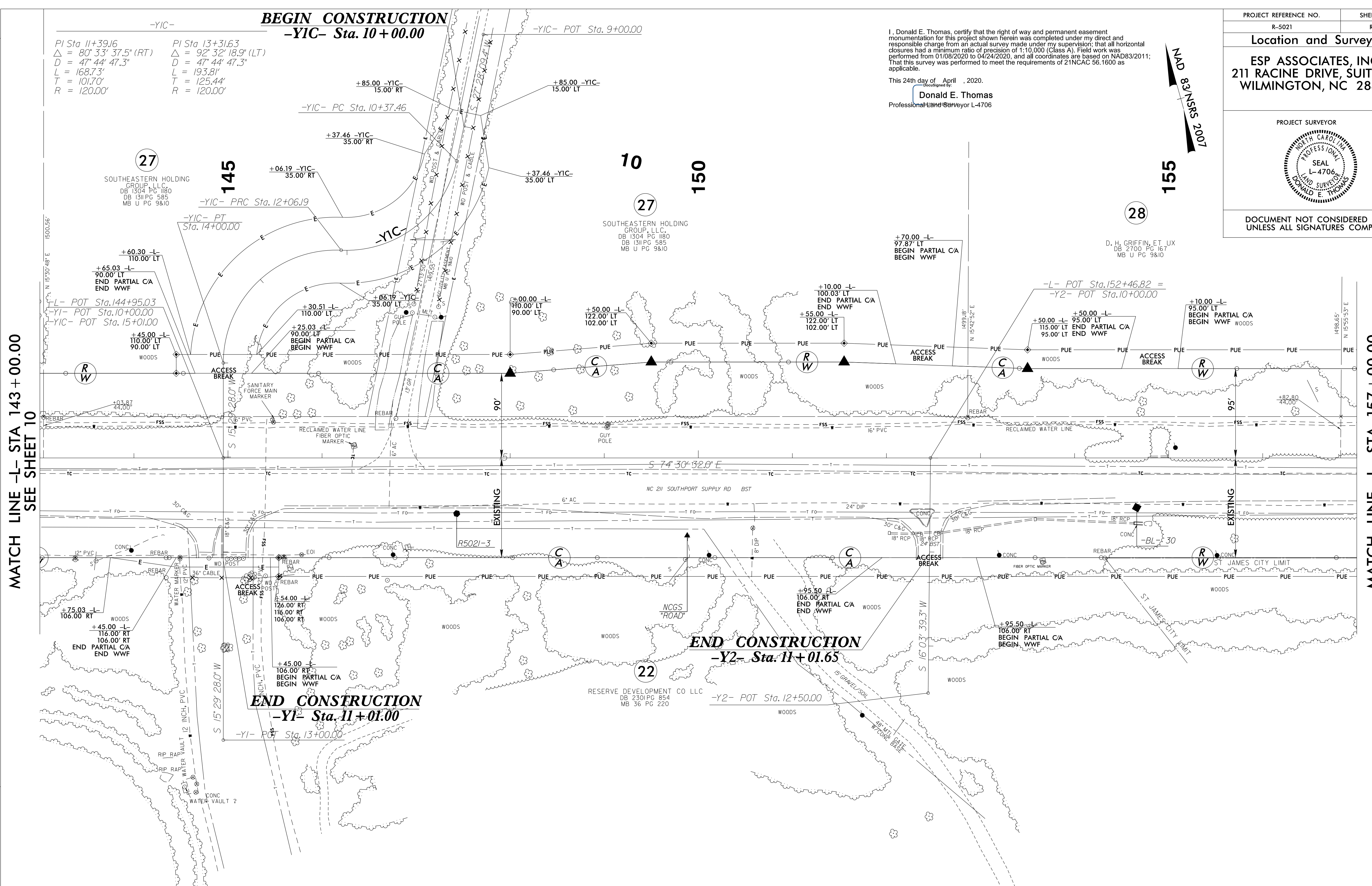
MATCH LINE -L- STA 129 + 00.00
SEE SHEET 10

NOTES:

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED ____ TO ____.

6/2/19

SYTIME
D:\PROJECTS\2019\190521\190521.dwg
S:\ADMIN\ADMIN



PROJECT REFERENCE NO. R-5021	SHEET NO. RW11
Location and Surveys	
ESP ASSOCIATES, INC. 211 RACINE DRIVE, SUITE 101 WILMINGTON, NC 28403	
PROJECT SURVEYOR	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, Donald E. Thomas, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from 01/08/2020 to 04/24/2020, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 24th day of April, 2020.
 Donald E. Thomas
 Professional Land Surveyor L-4706

MATCH LINE -L- STA 143+00.00
SEE SHEET 10

MATCH LINE -L- STA 157+00.00
SEE SHEET 12

NOTES:

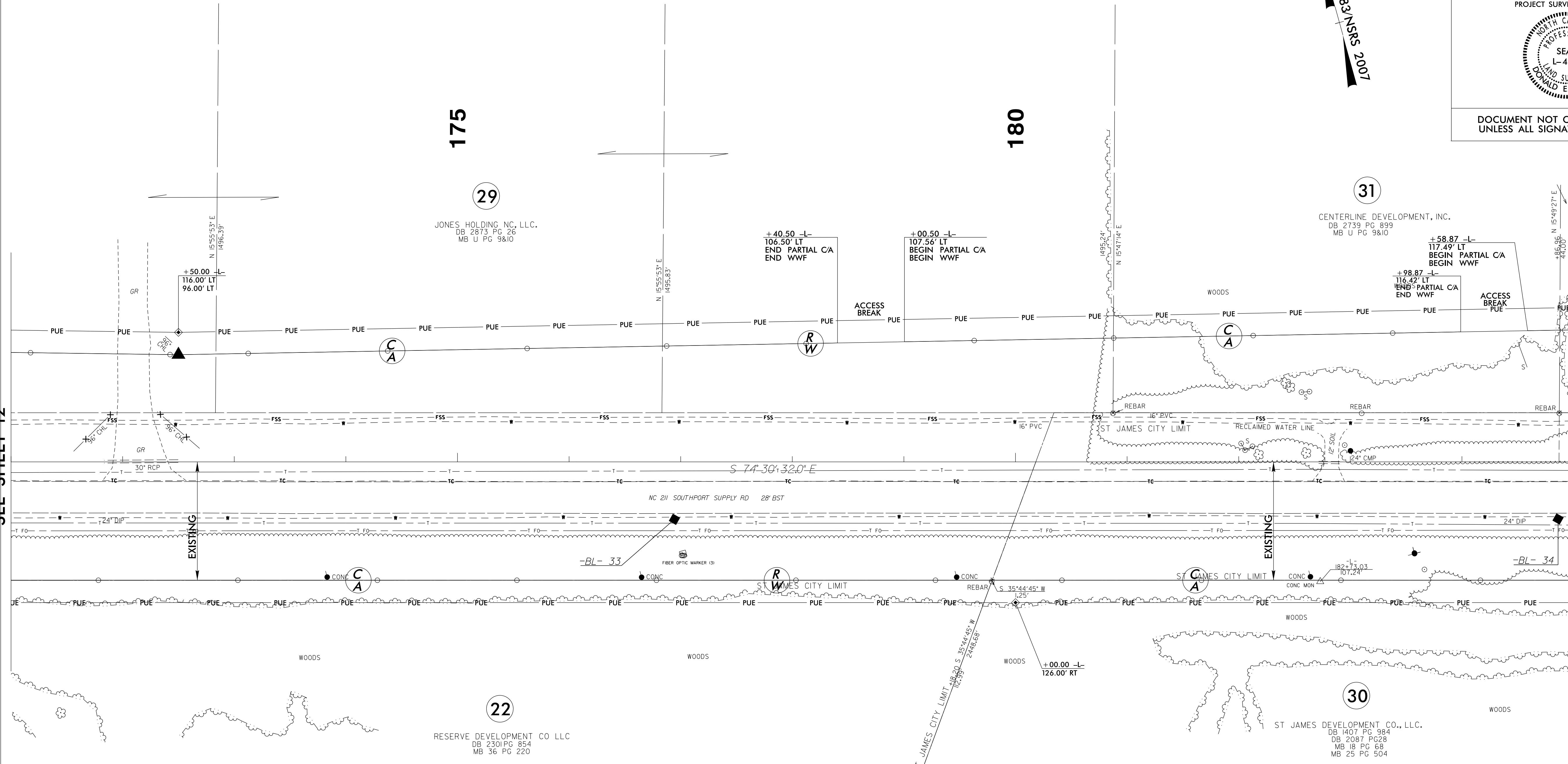
1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED ____ TO ____.

6/2/19

REVISIONS

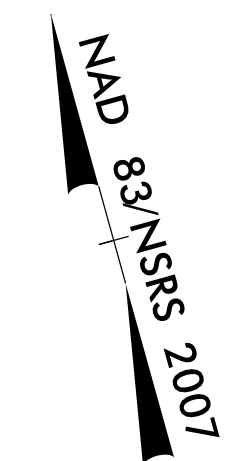
MATCH LINE -L- STA 171 + 00.00
SEE SHEET 12

MATCH LINE -L- STA 185 + 00.00
SEE SHEET 14



I, Donald E. Thomas, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from 01/08/2020 to 04/24/2020, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 24th day of April, 2020.
 Donald E. Thomas
 Professional Land Surveyor L-4706



PROJECT REFERENCE NO.	SHEET NO.
R-5021	RW13
Location and Surveys	
ESP ASSOCIATES, INC. 211 RACINE DRIVE, SUITE 101 WILMINGTON, NC 28403	
PROJECT SURVEYOR	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

NOTES:

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED ____ TO ____.

1. DATE OF SURVEY
 2. PROJECT NAME
 3. SHEET NO.
 4. SCALE
 5. DRAWN BY
 6. CHECKED BY
 7. APPROVED BY
 8. DATE OF PLOTTING

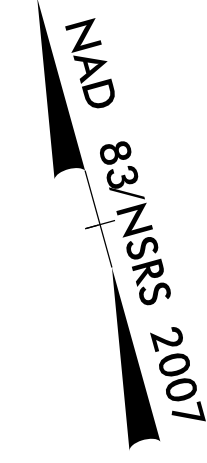
6/2/19

REVISIONS

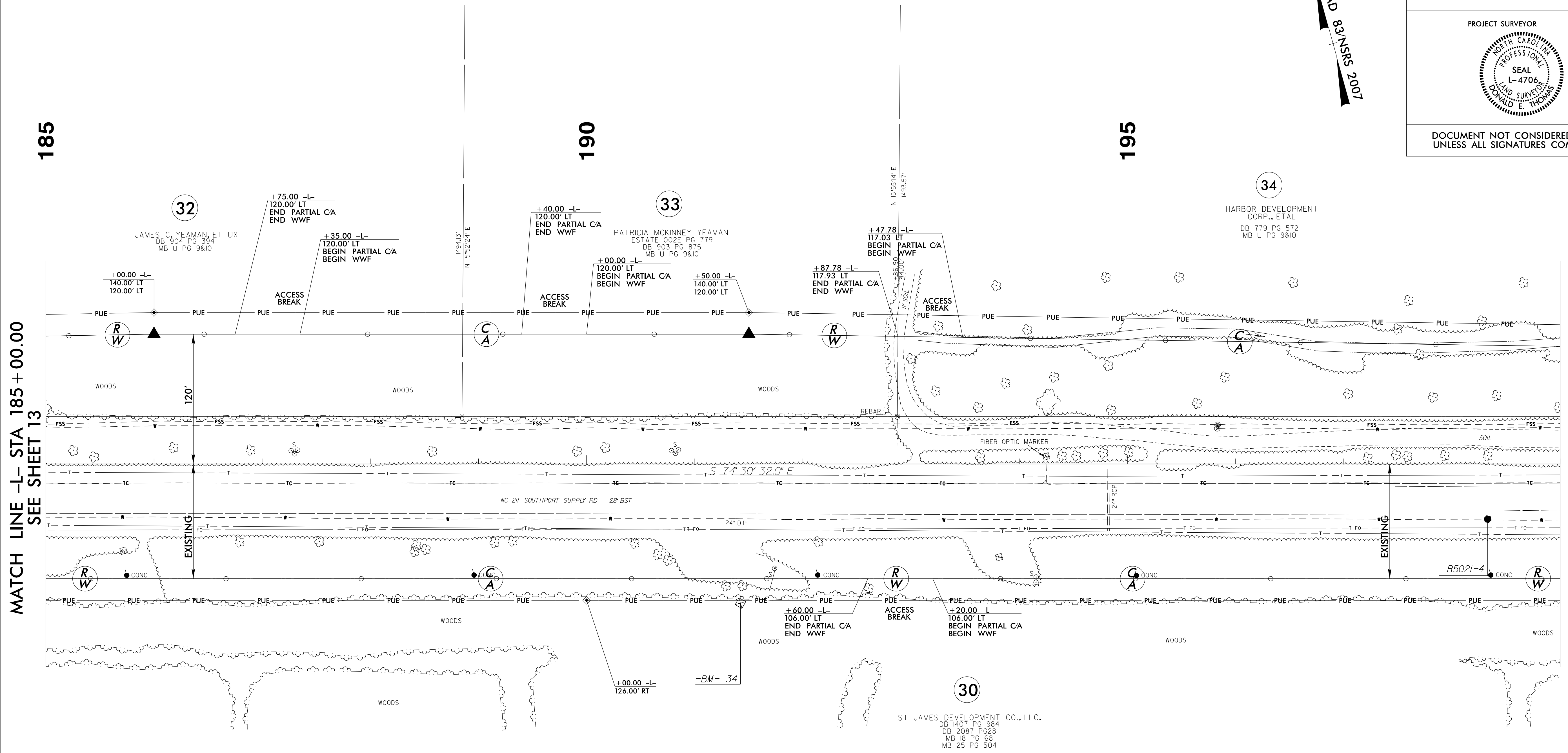
DATE TIME BY
19/06/2020 10:00 AM D:\PROJECTS\2020\1901\1901.dwg

I, Donald E. Thomas, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from 01/08/2020 to 04/24/2020, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 24th day of April, 2020.
Donald E. Thomas
Professional Land Surveyor L-4706



PROJECT REFERENCE NO.	SHEET NO.
R-5021	RW14
Location and Surveys	
ESP ASSOCIATES, INC. 211 RACINE DRIVE, SUITE 101 WILMINGTON, NC 28403	
PROJECT SURVEYOR	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



MATCH LINE -L- STA 185 + 00.00
SEE SHEET 13

MATCH LINE -L- STA 199 + 00.00
SEE SHEET 15

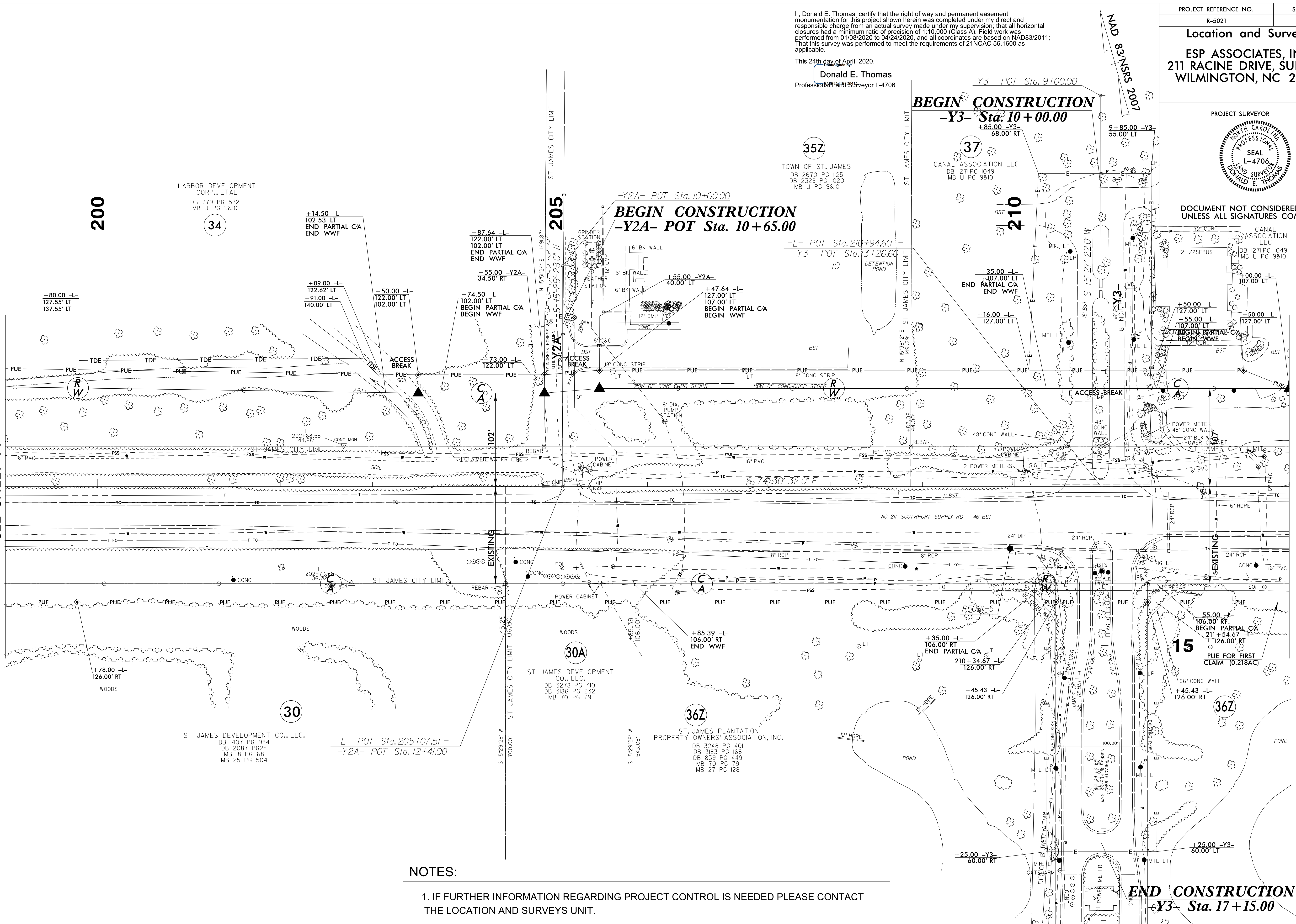
NOTES:

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED ____ TO ____.

6/2/19

REVISIONS

MATCH LINE -L- STA 199 + 00.00
SEE SHEET 14



I, Donald E. Thomas, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from 01/08/2020 to 04/24/2020, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 24th day of April, 2020.

Donald E. Thomas
Professional Land Surveyor L-4706

PROJECT REFERENCE NO.	SHEET NO.
R-5021	RW15
Location and Surveys	
ESP ASSOCIATES, INC. 211 RACINE DRIVE, SUITE 101 WILMINGTON, NC 28403	
PROJECT SURVEYOR	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

SYSTEM: 11/20/2019 10:58:58 AM
DRAWN: DONALD E. THOMAS
CHECKED: DONALD E. THOMAS

MATCH LINE -L- STA 213 + 00.00
SEE SHEET 16

NOTES:

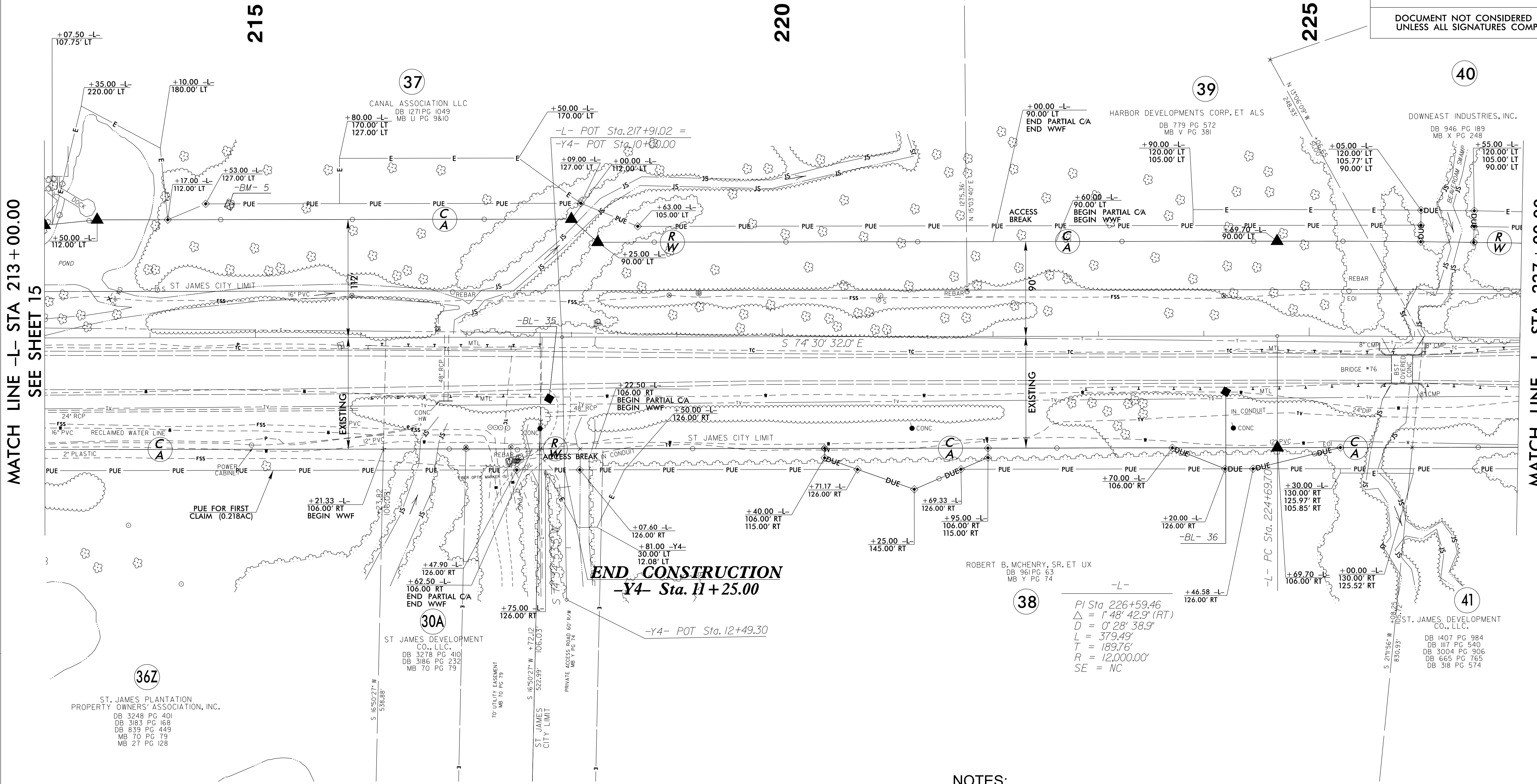
1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED ____ TO ____.

6/2/19

REVISIONS

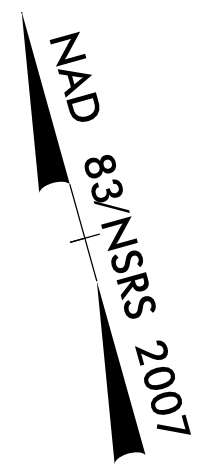
MATCH LINE -L- STA 213+00.00
SEE SHEET 15

MATCH LINE -L- STA 227+00.00
SEE SHEET 17



I, Donald E. Thomas, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from 01/08/2020 to 04/24/2020, and all coordinates are based on NAD83/2011; that this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 24th day of April, 2020.
 Donald E. Thomas
 Professional Land Surveyor L-4706



PROJECT REFERENCE NO.	SHEET NO.
R-5021	RW16
Location and Surveys	
ESP ASSOCIATES, INC. 211 RACINE DRIVE, SUITE 101 WILMINGTON, NC 28403	
PROJECT SURVEYOR	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

END CONSTRUCTION
 -Y4- Sta. 11+25.00

PI Sta 226+59.46
 $\Delta = 1^{\circ} 48' 42.9''$ (RT)
 $D = 0^{\circ} 28' 38.9''$
 $L = 379.49'$
 $T = 189.76'$
 $R = 12,000.00'$
 $SE = NC$

NOTES:

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED ____ TO ____.

SYSTEM: 2019
 DATE: 6/2/19
 DRAWN BY: [illegible]
 CHECKED BY: [illegible]

36Z
 ST. JAMES PLANTATION
 PROPERTY OWNERS' ASSOCIATION, INC.
 DB 3248 PG 401
 DB 3183 PG 168
 DB 839 PG 449
 MB 70 PG 79
 MB 27 PG 128

30A
 ST. JAMES DEVELOPMENT
 CO., LLC.
 DB 3278 PG 410
 DB 3166 PG 232
 MB 70 PG 79

38
 ROBERT B. MCHENRY, SR. ET UX
 DB 961 PG 63
 MB Y PG 74

41
 ST. JAMES DEVELOPMENT
 CO., LLC.
 DB 1407 PG 984
 DB 1117 PG 540
 DB 3004 PG 306
 DB 665 PG 765
 DB 318 PG 574