

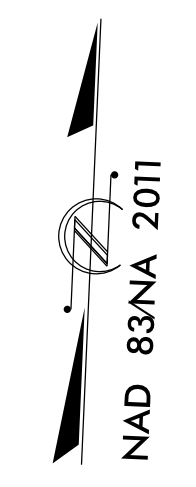
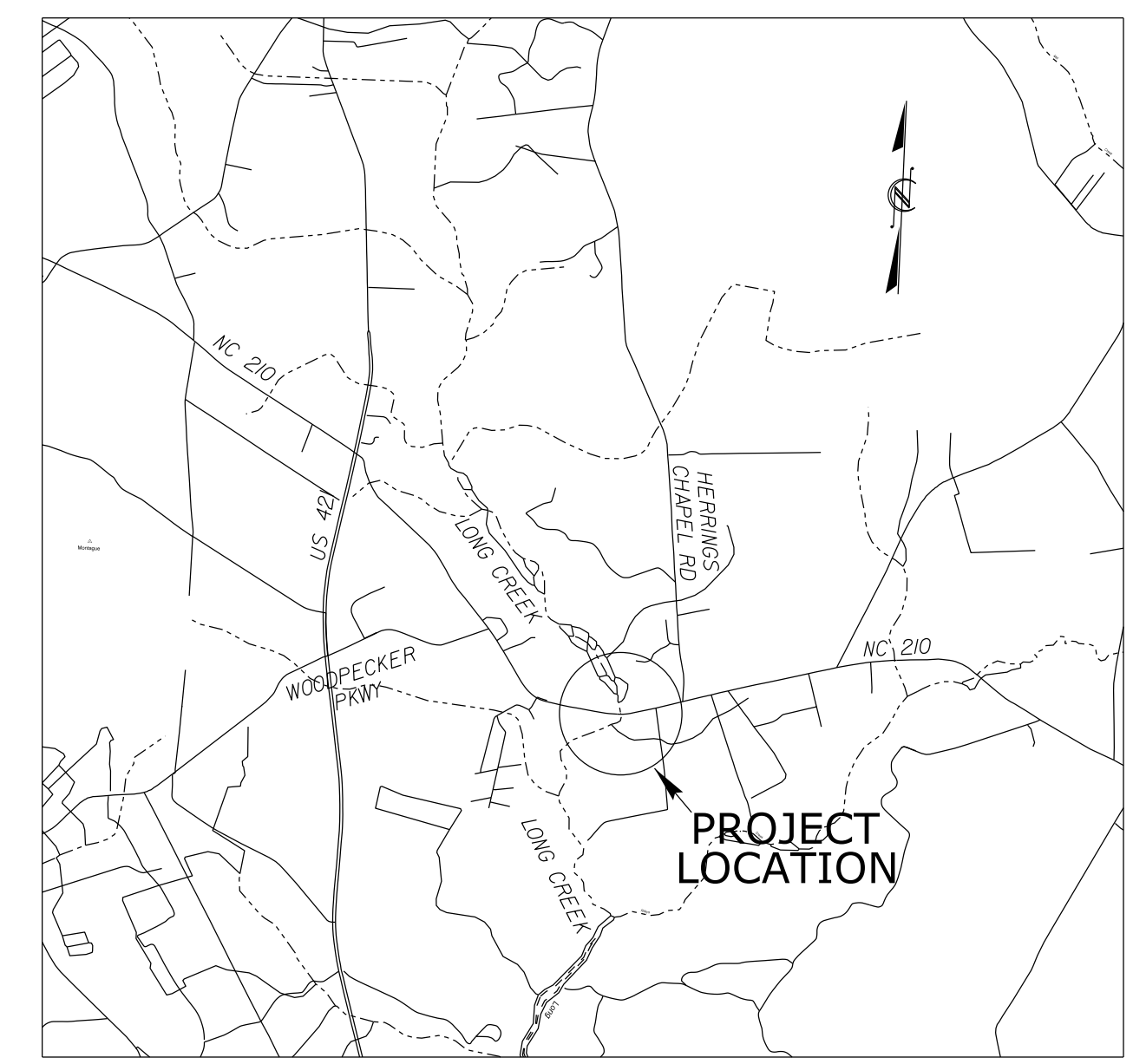
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5156	RW01	6

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

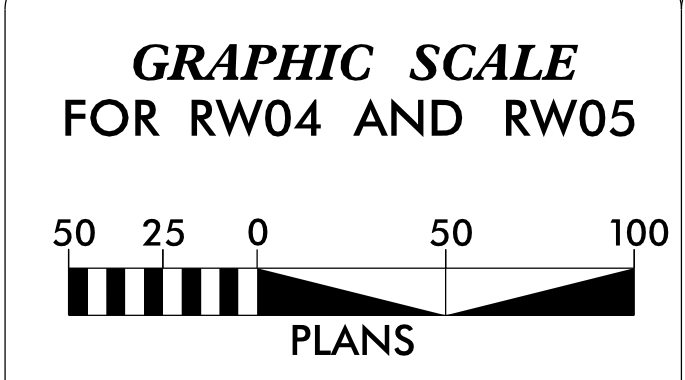
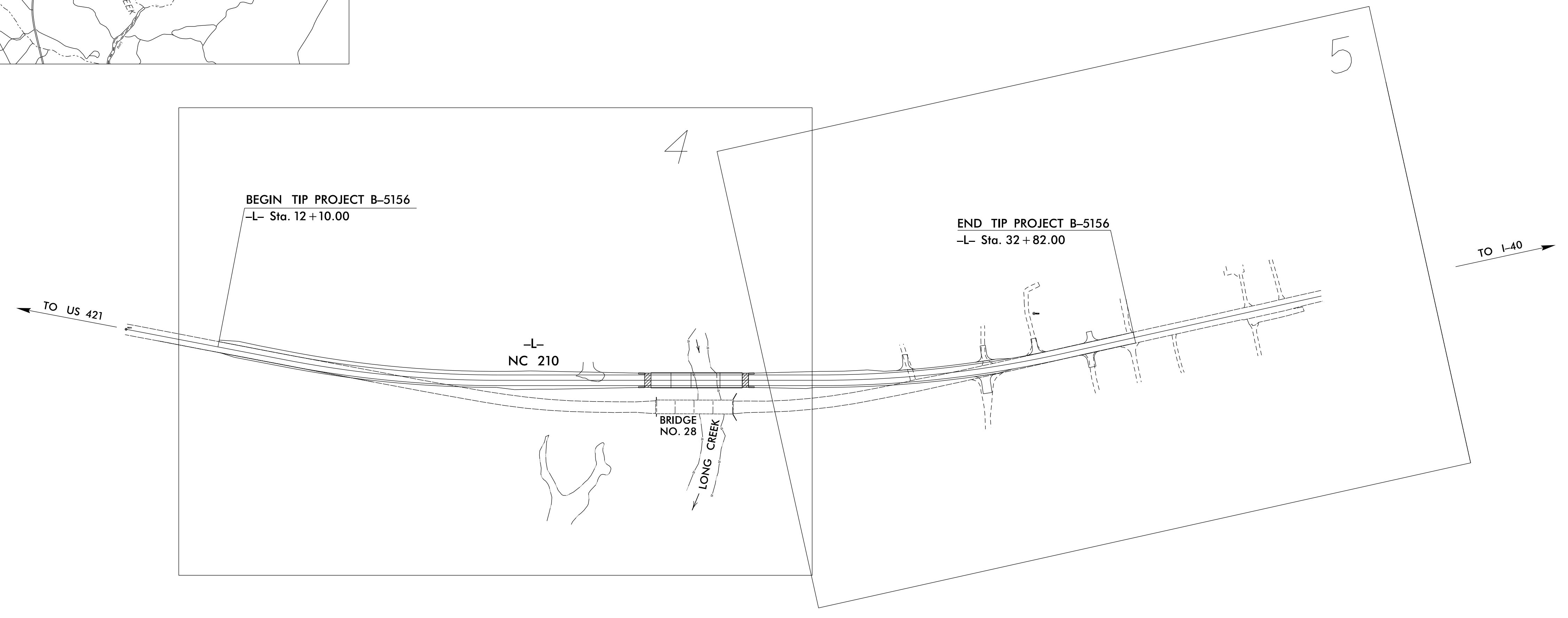
SURVEY CONTROL, EXISTING CENTERLINES,
RIGHT OF WAY, EASEMENTS AND PROPERTY TIES

PENDER COUNTY

BRIDGE NO. 28 OVER LONG CREEK ON NC 210



TIP PROJECT: B-5156



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "B5156-2" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF
NORTHING: 252680.919(ft) EASTING: 2295286.023(ft)
ELEVATION: 20.206(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999976799

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B5156-2" TO -L- STATION 10+00.00 IS
S 84-37'00.1" W 2,892.28(ft)

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

Prepared in the Office of:

**LOCATION AND SURVEYS UNIT
DIVISION 3
5310 BARBADOS BLVD, SUITE 102
CASTLE HAYNE, NORTH CAROLINA 28429**

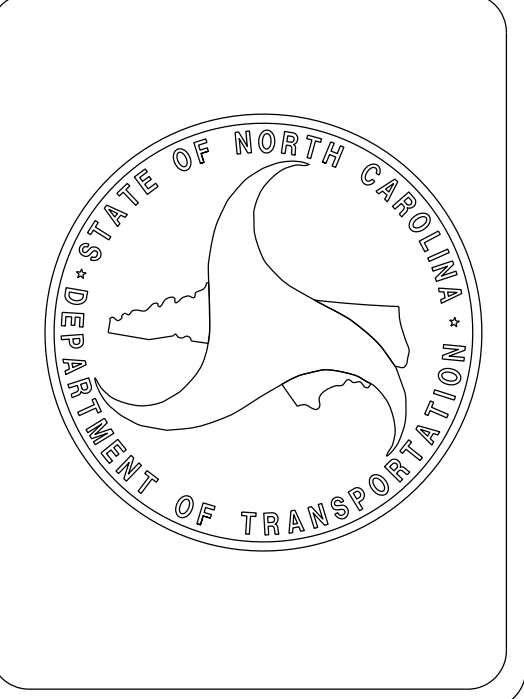
2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: <u>AUGUST 28, 2019</u>	LETTING DATE: <u>SEPTEMBER 19, 2023</u>
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PROFESSIONAL LAND SURVEYOR

DocuSigned by:
Christopher J Sawyer 06/09/2023

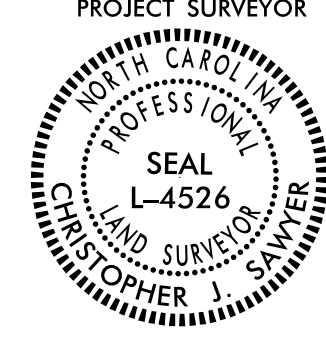
SIGNATURE: _____ Date: _____



07-JUN-2023 10:42 SA:\Units\Div03\Projects\Pender\B5156-LongCreek\Working\150 series sheets\B5156_ls_rw01.dgn mduval AT LS-328725L 09/08/99

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. B-5156	SHEET NO. RW02C-1
Location and Surveys	
LOCATIONS AND SURVEYS UNIT DIVISION 3 5310 BARBADOS BLVD, SUITE 102 CASTLE HAYNE, NORTH CAROLINA 28429	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

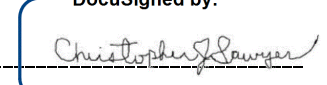
EL POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	252409.571	2292406.501	S 81°38'18.4" E	252.02					
LINE									
PC	252372.923	2292655.839	S 81°52'40.7" E	536.15	00°28'44.5"(LT)	00°05'21.6"	536.15	268.08	64128.93
CURVE									
PT	252297.175	2293186.612	N 82°07'02.9" W	0.00					
LINE									
PC	252297.175	2293186.610	S 87°18'26.3" E	312.44	10°22'46.8"(LT)	03°19'03.3"	312.87	156.86	1727.04
CURVE									
PT	252282.497	2293498.707	N 87°30'10.3" E	308.40					
LINE									
PC	252295.933	2293806.810	N 81°37'54.8" E	293.89	11°44'31.0"(LT)	03°59'18.0"	294.41	147.72	1436.59
CURVE									
PT	252338.704	2294097.574	N 75°45'39.3" E	22.46					
LINE									
PC	252344.228	2294119.341	N 75°21'38.4" E	339.25	00°48'01.8"(LT)	00°14'09.5"	339.25	169.63	24281.69
CURVE									
PT	252429.967	2294447.575	N 74°57'37.5" E	661.27					
LINE									
POT	252601.557	2295086.190							

I, Christopher J. Sawyer, PLS, certify that the Project Control was performed 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: RTN
 Dates of survey: August 3, 2017
 Datum/Epoch: NAD 83/ NA 2011
 Published/Fixed-control use: N/A for RTn
 Localized around: B5156-2
 Northing: 252680.919
 Easting: 2295286.023
 Combined grid factor: 0.999976799
 Geoid model: G12NC
 Units: Survey feet

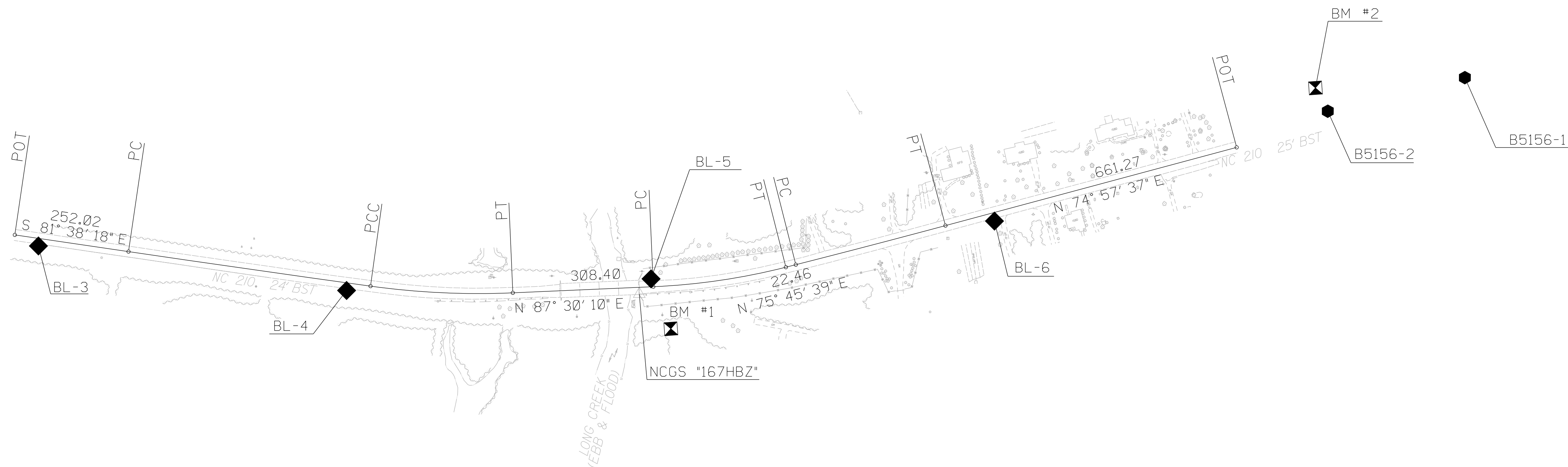
I also certify that the Baseline Control for this project was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed from August 2, 2017 to August 3, 2017, and all coordinates are based on NAD 83/2011 and all elevations are based on NAVD 88; that this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 9th day of June, 2023.

DocuSigned by:

 Christopher Sawyer
 Professional Land Surveyor L-4526



BL POINT	DESC.	NORTH	EAST	ELEVATION
BL3	TRV CAP & REBAR	252385.2650	2292458.1750	11.56
BL4	TRV CAP & REBAR	252287.5870	2293133.9900	14.25
BL5	TRV CAP & REBAR	252313.0980	2293801.7460	15.30
BL6	TRV CAP & REBAR	252439.8180	2294554.9180	14.96
B51562	GPS CAP & REBAR	252680.9190	2295286.0230	20.21
B51561	GPS CAP & REBAR	252989.7490	2296546.4690	22.51



 BM1 ELEVATION = 8.20
 N 252204 E 2293845
 TIE SPIKE IN 24" PINE


 BM2 ELEVATION = 23.72
 N 252732 E 2295259
 TIE SPIKE IN 24" OAK

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.

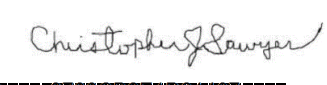
REVISIONS

PROPOSED ALIGNMENT CONTROL SHEET

PROJECT REFERENCE NO. B-5156	SHEET NO. RW02D-1
Location and Surveys	
LOCATION AND SURVEYS UNIT DIVISION 3 5310 BARBADOS BLVD, SUITE 102 CASTLE HAYNE, NORTH CAROLINA 28429	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, Christopher J. Sawyer, PLS, certify that the data compiled came from available surveys/mapping performed by others and provided to me by NCDOT and do not certify to the accuracy or quality of the individual data sources.

This 9th day of June, 2023.

DocuSigned by:

9700CB2E1D21467
Professional Land Surveyor L-4526

L


TYPE	STATION	NORTH	EAST
POT	10+00.00	252409.5712	2292406.5011
PC	13+70.39	252355.7088	2292772.9585
PT	18+44.19	252331.5082	2293245.4298
PC	25+68.04	252363.0457	2293968.5872
PT	31+15.31	252446.3048	2294508.3793
POT	37+12.00	252601.1387	2295084.6343

REVISIONS

NOTES:

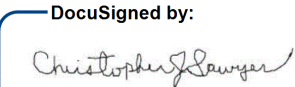
1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE PROPOSED ALIGNMENT CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

RIGHT OF WAY CONTROL SHEET

PROJECT REFERENCE NO. B-5156	SHEET NO. RW03E-1
Location and Surveys	
LOCATION AND SURVEYS UNIT DIVISION 3 5310 BARBADOS BLVD, SUITE 102 CASTLE HAYNE, NORTH CAROLINA 28429	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, Christopher J. Sawyer, PLS, 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 September 15 and December 5, 2022 and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 9th day of June, 2023.

DocuSigned by:

 Christopher Sawyer
 Professional Land Surveyor L-4526

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
L	10+00.00	-30.00	252439.2523	2292410.8637
L	10+00.00	30.00	252379.8901	2292402.1385
L	12+15.00	-30.00	252407.9872	2292623.5783
L	12+16.00	30.00	252348.4796	2292615.8425
L	12+40.00	-50.00	252424.1391	2292651.2209
L	12+42.00	50.00	252324.9113	2292638.6577
L	13+70.39	-50.00	252405.1773	2292780.2294
L	13+70.39	50.00	252306.2403	2292765.6875
L	16+00.00	-50.00	252382.7179	2293004.0396
L	16+95.82	50.00	252279.4511	2293096.3036
L	18+44.19	-60.00	252391.4512	2293242.8156
L	21+30.00	-70.00	252413.8941	2293527.9145
L	25+00.00	-70.00	252430.0148	2293897.5631
L	25+68.04	-38.00	252401.0097	2293966.9316
L	30+53.10	30.78	252400.9949	2294455.3595
L	31+15.31	-38.00	252483.0032	2294498.5188
L	32+82.00	-30.00	252518.5319	2294661.5786
L	37+12.00	-30.00	252630.1111	2295076.8497
L	37+12.00	30.00	252572.1662	2295092.4189

NOT SET

NOT SET

NOTES:

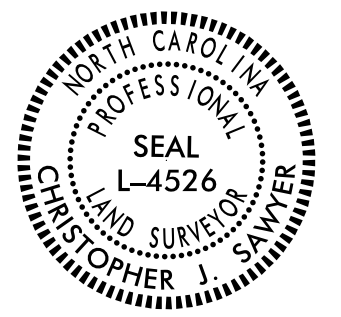
1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED SEPTEMBER 15 and DECEMBER 5, 2022.

REVISIONS

Location and Surveys

LOCATION AND SURVEYS UNIT
 DIVISION 3
 5310 BARBADOS BLVD, SUITE 102
 CASTLE HAYNE, NORTH CAROLINA 28429

PROJECT SURVEYOR

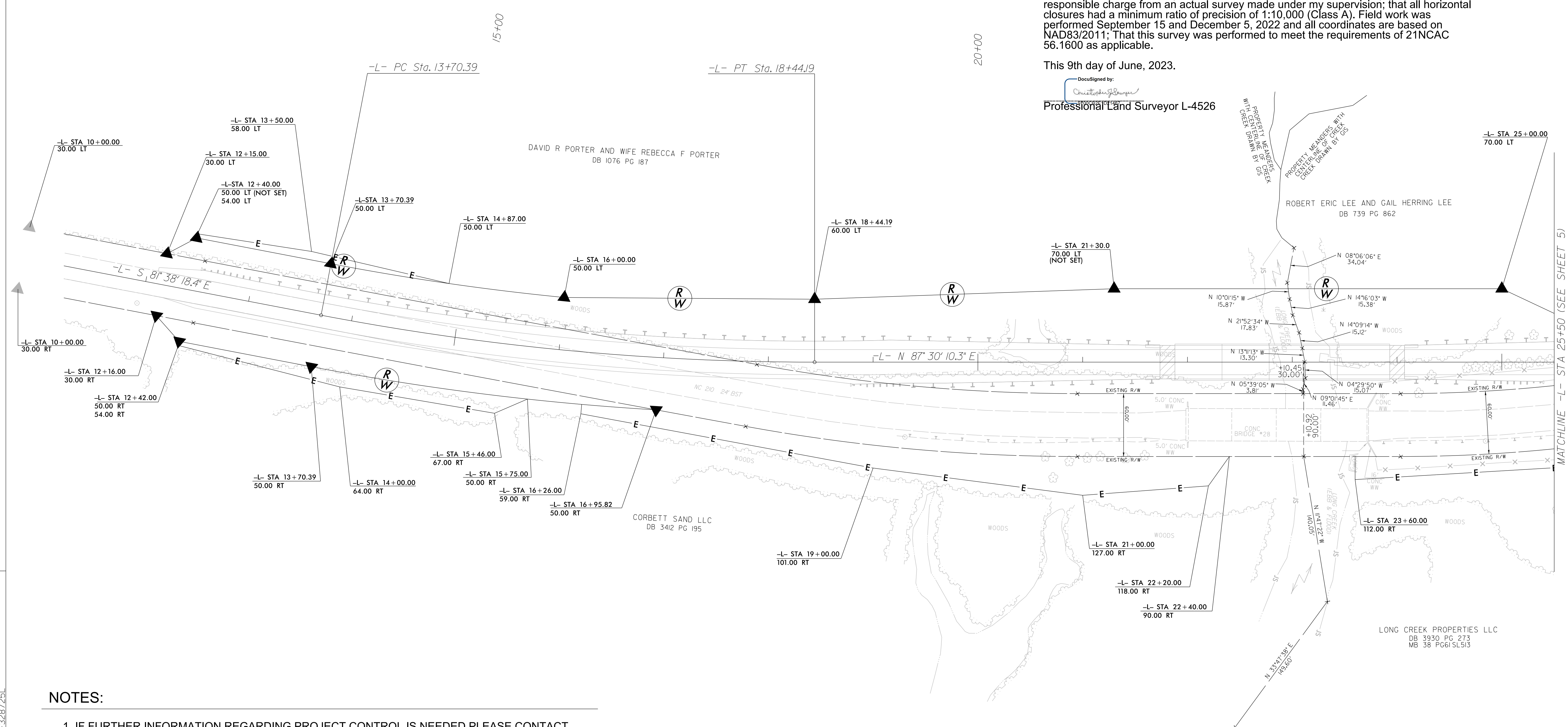


DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

-L-
 PI Sta 16+08.01
 $\Delta = 10^{\circ} 51' 31.3" (LT)$
 $D = 2' 17" 30.6"$
 $L = 473.80'$
 $T = 237.61'$
 $R = 2,500.00'$
 $SE = 0.035$
 $RO = 105'$

NAD 83/NA 2011

REVISIONS



I, Christopher J. Sawyer, PLS, 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 September 15 and December 5, 2022 and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 9th day of June, 2023.

DocuSigned by:
 Christopher J Sawyer
 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 SEPTEMBER 15 and DECEMBER 5, 2022.

07-JUN-2023 10:06
 S:\Units\Projects\BRIDGE\Pender\B5156.L\LongCreek\Working\150 series sheets\B5156.L.s_rw04.dgn
 m.j.d.w.a.

MATCHLINE -L- STA 25+50 (SEE SHEET 5)

REVISIONS


NAD 83/NA 2011

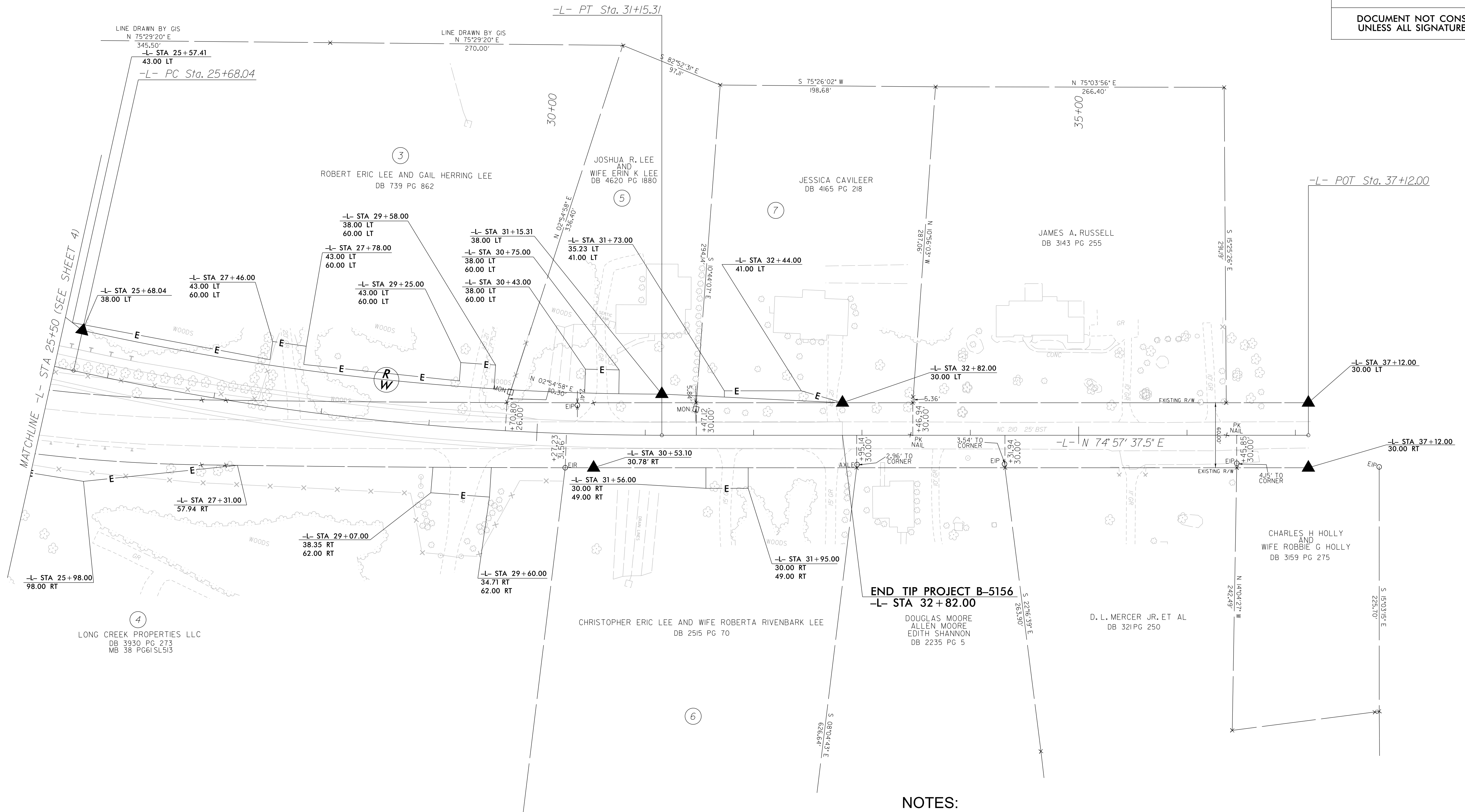
-L-
PI Sta 28+42.77
 $\Delta = 12' 32'' 32.8'' (LT)$
 $D = 2' 17'' 30.6''$
 $L = 547.27'$
 $T = 274.73'$
 $R = 2,500.00'$
 $SE = 0.035$
 $RO = 105'$

I, Christopher J. Sawyer, PLS, 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 September 15 and December 5, 2022, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 9th day of June, 2023.

DocuSigned by:
Christopher Sawyer
Professional Land Surveyor L-4526

PROJECT REFERENCE NO.	SHEET NO.
B-5156	RW05
Location and Surveys	
LOCATION AND SURVEYS UNIT DIVISION 3 5310 BARBADOS BLVD, SUITE 102 CASTLE HAYNE, NORTH CAROLINA 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 SEPTEMBER 15 and DECEMBER 5, 2022.