

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5642	RW01	05

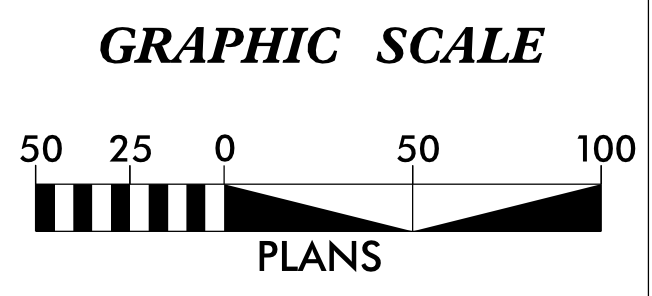
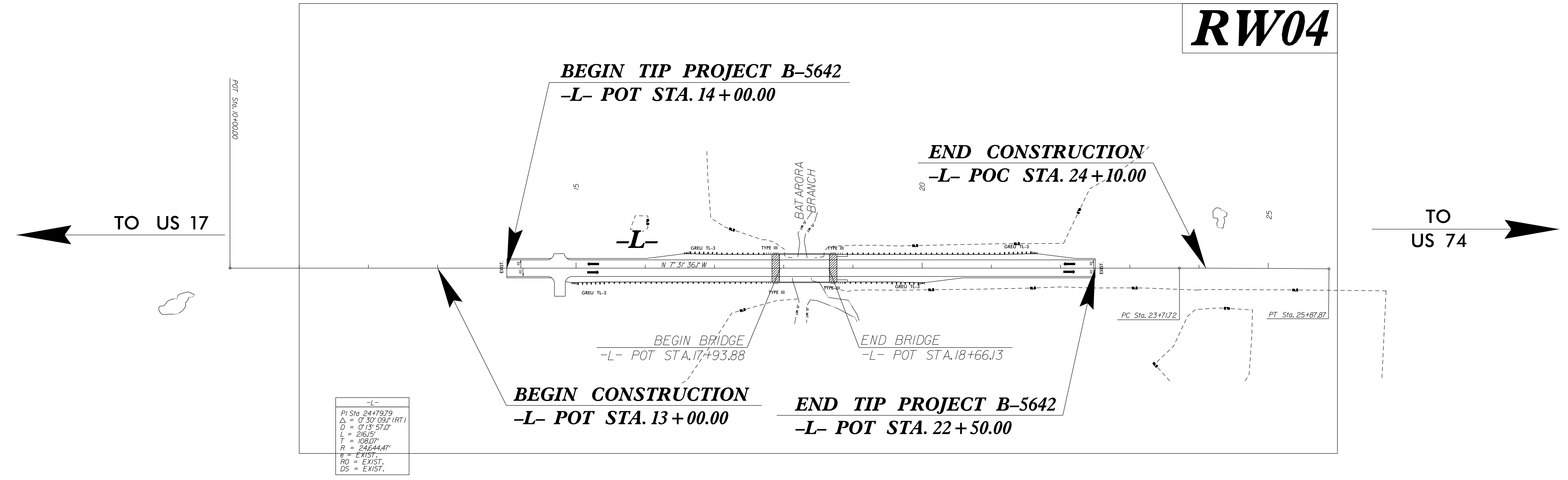
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

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

**BRUNSWICK COUNTY**

LOCATION: REPLACE BRIDGE NO. 65 OVER BATARORA BRANCH  
ON NC 87 (MACO ROAD)

**TIP PROJECT: B-5642**



**DATUM DESCRIPTION**

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "GPS-2" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 181,932.401(ft) EASTING: 2,258,203.863(ft) ELEVATION: 44.227(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.0000286300 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS-2" TO -L- STATION 10+00.00 IS S 10-35'17" E 313.88(ft) ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

Prepared in the Office of:

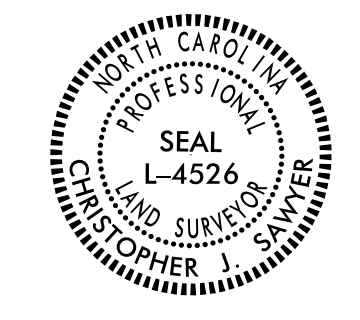
**DIVISION 3  
LOCATION & SURVEY**

2018 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
NOVEMBER 3, 2020

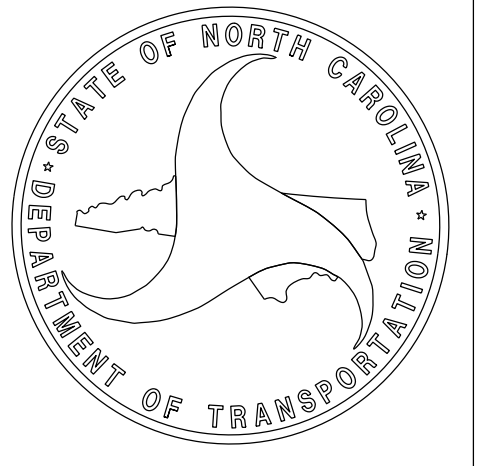
**LETTING DATE:**  
JULY 20, 2021

**PROFESSIONAL LAND  
SURVEYOR**



DocuSigned by:  
SIGNATURE


4/7/2021  
Date:



29-MAR-2021 11:52  
N:\BRIDGE\JOBS\B-5642\BRunswick\RW Sheets\B5642-1s.rw01.dgn  
micrhodes1 AT LS-299167

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

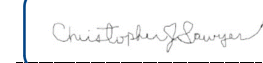
PROJECT REFERENCE NO. B-5642	SHEET NO. RW02C-1
Location and Surveys	
DIVISION 3 LOCATION & SURVEYS	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

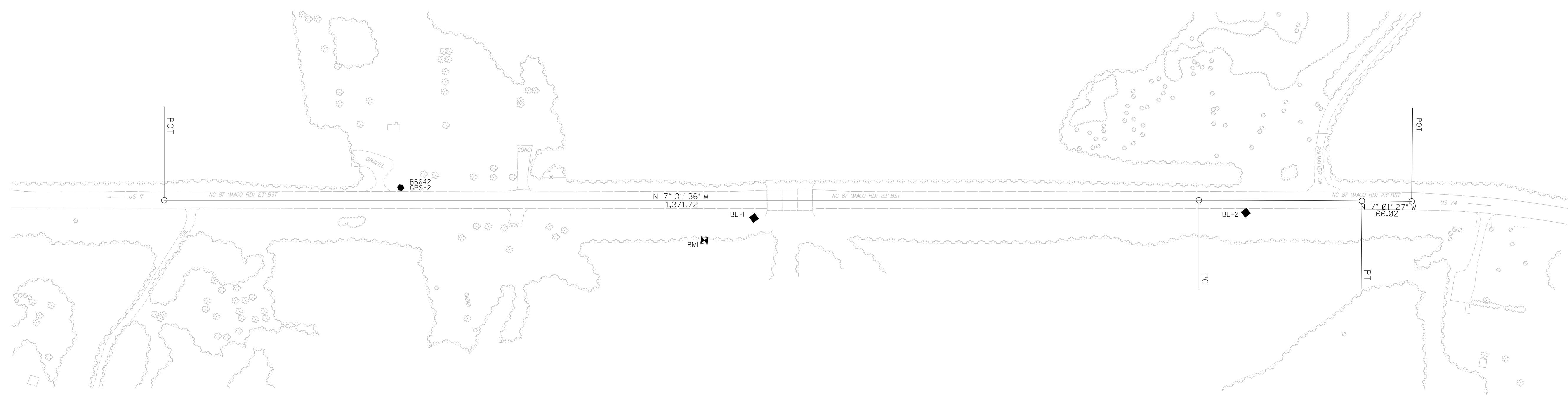
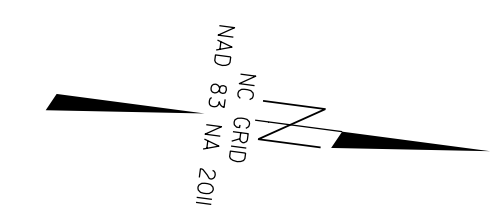
I, Christopher J. Sawyer, PLS, certify that the Project Control was performed/verified under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

Class of survey: AA  
 Type of GPS field procedure: NC-VRS-RTN  
 Dates of survey: October 2016  
 Datum/Epoch: NAD 1983/NA2011  
 Published/Fixed-control use: Project Control  
 Localized around: GPS-2  
 Northing: 181932.401  
 Easting: 2258503.863  
 Combined grid factor: 1.0000286300  
 Geoid model: G12NC  
 Units: US 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 January 2017 to March 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 17th day of February, 2021.

DocuSigned by:  
  
 Christopher J. Sawyer  
 Professional Land Surveyor L-4526



BASELINE					
BL	POINT	DESC.	NORTH	EAST	ELEVATION
	GPS1	GPS CAP & REBAR	181013.2230	2258656.5690	56.76
	GPS2	GPS CAP & REBAR	181932.4010	2258503.8630	44.23
	BL1	TRV CAP & REBAR	182402.0830	2258482.4780	36.60
	BL2	TRV CAP & REBAR	183047.5660	2258390.1150	37.95

BENCHMARK		
.....		
BM1	ELEVATION = 35.73'	
N 182341	E 2258521	
R/R SPIKE SET IN BASE OF 28' GUM		
.....		

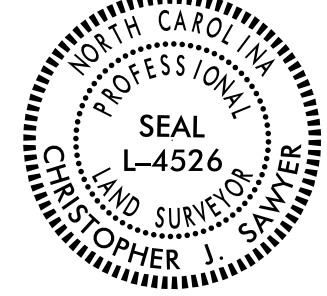
EXISTING ALIGNMENT										
EL	POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT		181623.859	2258561.537							
LINE				N 07°31'36.1" W	1371.72					
PC		182482.769	2258381.858							
CURVE				N 07°16'31.5" W	216.15	00°30'09.1" R11	00°13'57.0"	216.15	108.07	24644.47
PT		183196.176	2258354.486							
LINE				N 07°01'27.8" W	66.02					
POT		183263.705	2258346.412							

- 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

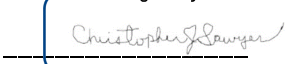
07-APR-2021 15:37 N:\BRTDGE\088\B-5642 (B\unswack)\RW Sheets\b5642-LS-rw02c-.dgn merhodes1 AT LS-299767

# PROPOSED ALIGNMENT CONTROL SHEET

PROJECT REFERENCE NO. B-5642	SHEET NO. RW02D-1
<b>Location and Surveys</b>	
DIVISION 3 LOCATION & SURVEYS	
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 17th day of February, 2021.

DocuSigned by:  
  
Professional Land Surveyor L-4526


REVISIONS

POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
PDT	181623.869	2258561.537							
LINE			N 07°31'36.1" W	1371.72					
PC	182983.769	2258381.858							
CURVE			N 07°16'31.5" W	216.15	00°30'09.1"(RT)	00°13'57.0"	216.15	108.07	24644.47
PT	183198.176	2258354.486							

### 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. B-5642	SHEET NO. RW02E-1
<b>Location and Surveys</b>	
DIVISION 3 LOCATION & SURVEYS	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

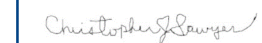
ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	16+75.00	50.00	182299.6026	2258522.6892
L	16+75.00	30.00	182296.9828	2258502.8615
L	18+23.72	50.00	182447.0386	2258503.2090

NO POINT SET (UNDER WATER)

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 February 15, 2021 to February 16, 2021, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 17th day of February, 2021.

  
Professional Land Surveyor L-4526

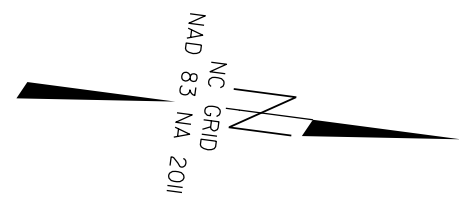
ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	13+00.78	30.00	181925.9918	2258551.8792
L	13+10.99	63.00	181940.4283	2258583.2585
L	13+30.00	49.00	181957.4441	2258566.8886
L	13+30.00	64.00	181959.4089	2258581.7594
L	14+00.00	30.00	182024.3522	2258538.8832
L	14+00.00	46.00	182026.4480	2258554.7453
L	14+67.00	58.00	182094.4426	2258557.8657
L	14+74.00	61.00	182101.7753	2258559.9230
L	14+74.00	58.00	182101.3823	2258556.9488
L	14+90.00	73.00	182119.2093	2258569.7238
L	15+02.00	58.00	182129.1410	2258553.2812
L	15+90.00	58.00	182216.3828	2258541.7542
L	16+35.00	66.00	182262.0430	2258543.7908
L	16+39.00	58.00	182264.9607	2258535.3358
L	16+54.00	75.00	182282.0582	2258550.2245
L	16+62.00	59.00	182287.8935	2258533.3145
L	16+75.00	59.00	182300.7815	2258531.6116
L	16+89.00	-50.00	182300.3832	2258421.7170
L	16+97.00	-73.00	182305.3015	2258397.8672
L	17+12.00	-50.00	182323.1850	2258418.7042
L	17+19.00	-65.00	182328.1599	2258402.9166
L	23+71.72	59.00	182991.4972	2258440.3500
L	24+10.00	50.00	183028.1967	2258426.4527
L	24+10.00	59.00	183029.3617	2258435.3770

REVISIONS

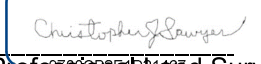
**NOTES:**

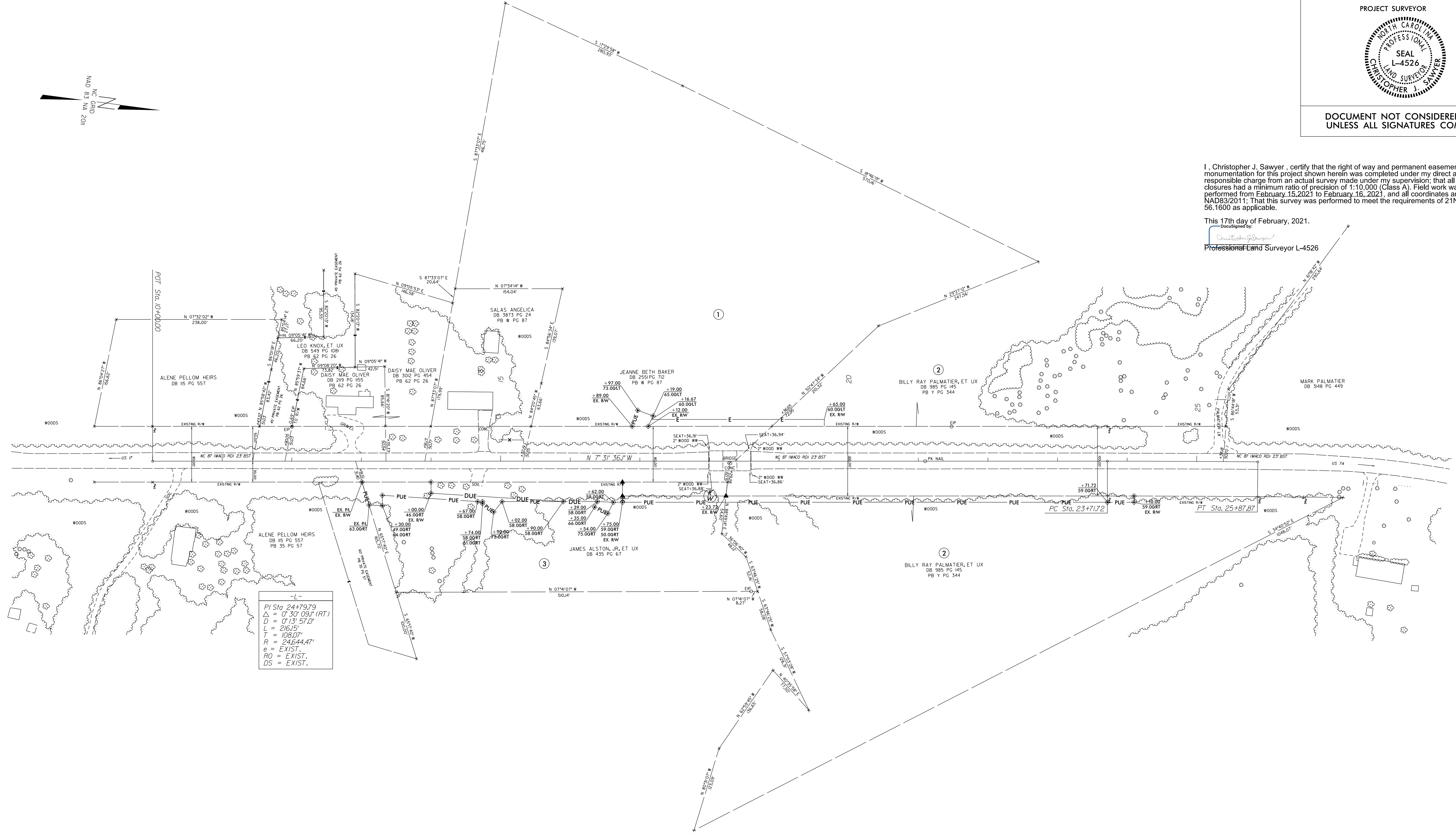
1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED February 15, 2021 TO February 16, 2021.



REVISIONS

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 February 15, 2021 to February 16, 2021, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 17th day of February, 2021.  
 Documented by:  
  
 Christopher J. Sawyer  
 Professional Land Surveyor L-4526



-L-
PI Sta. 24+79.79
Δ = 0° 30' 09.1" (RT)
D = 0' 13' 57.0"
L = 216.15'
T = 108.07'
R = 24644.41'
ø = EXIST.
RO = EXIST.
DS = EXIST.

**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 February 15, 2021 TO February 16, 2021.

6/2/19