

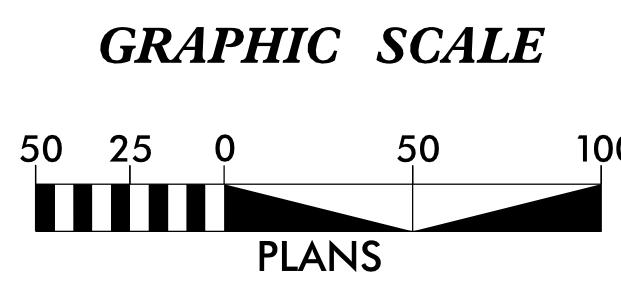
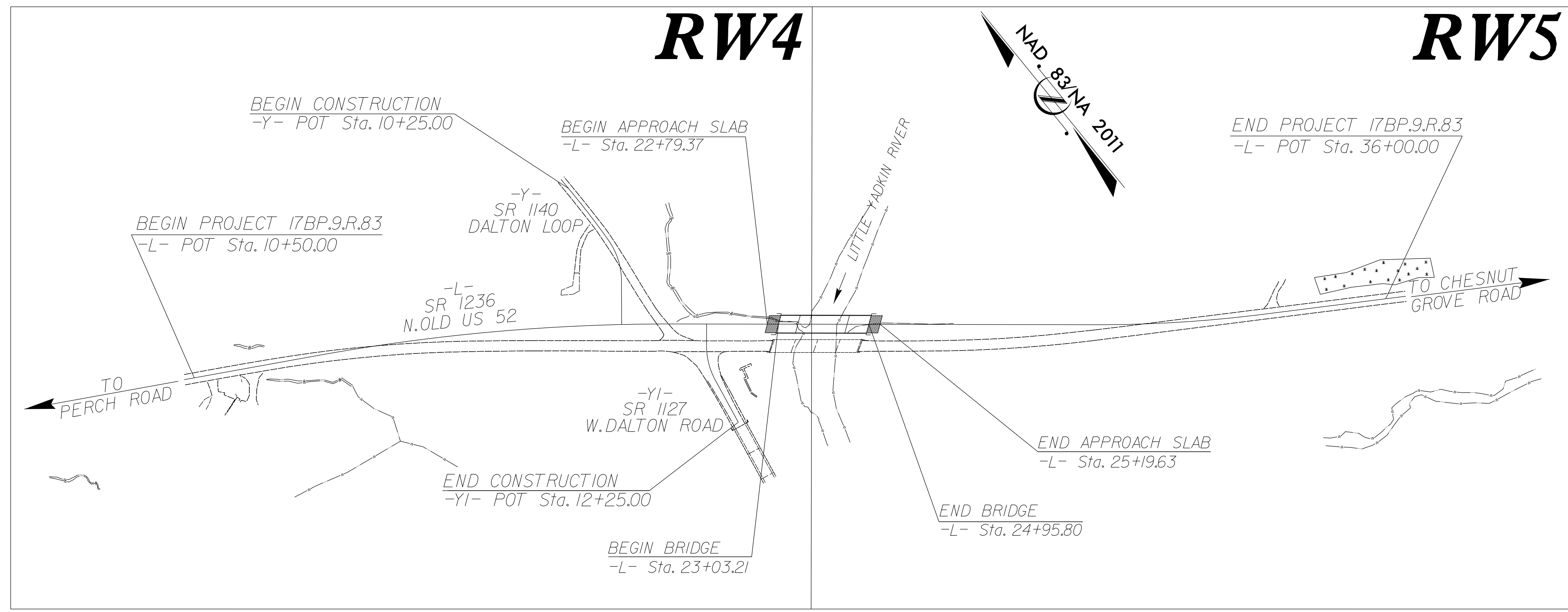
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.9.R.83	RW01	07

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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

STOKES COUNTY

TIP PROJECT: 17BP.9.R.83



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "840286-2" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 935,681.548(ft) EASTING: 1,587,402.718(ft) ELEVATION: 855.89(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.000008391 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "840286-2" TO -L- STATION 10+00.00 IS N 53°10'24.85" W 1476.23(ft) ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

Prepared in the Office of:

2024 STANDARD SPECIFICATIONS

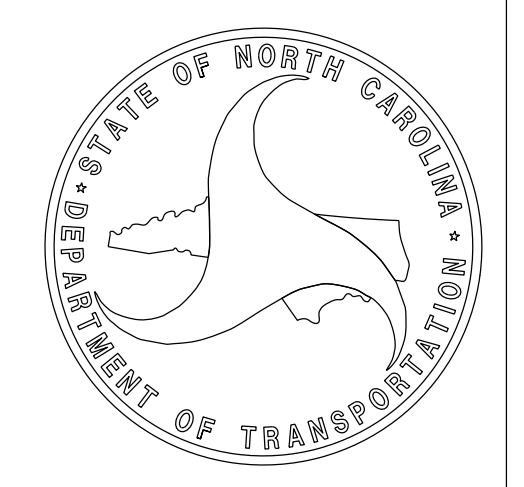
RIGHT OF WAY DATE:

LETTING DATE:

PROFESSIONAL LAND SURVEYOR

DocuSigned by:
M.L. Molsinger
SIGNATURE

01/26/2023
Date:



26-JAN-2023 08:25 F:\Bridge\Division\Lowmpac\84-0286\Right of Way Staking\survey control\sheet\to be checked\84-0286_ls_rw01.dgn mmo\molsinger AT LS-3286.rtl

Location and Surveys

SURVEY CONTROL SHEET

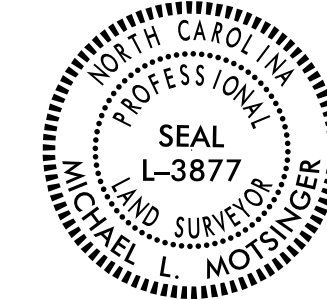
W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION



I, Michael L. Molsinger, PLS, certify that the Project Control was 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: RTN
 Dates of survey: 12-05-2017
 Datum/Epoch: NAD 83/2011
 Published/Fixed-control use: [Project Control if applicable, N/A for RTN]
 Localized around: 840286-2
 Northing: 935681.5475
 Easting: 1587402.718
 Combined grid factor: 1.000008391
 Geoid model: G12BNC
 Units: English

PROJECT SURVEYOR



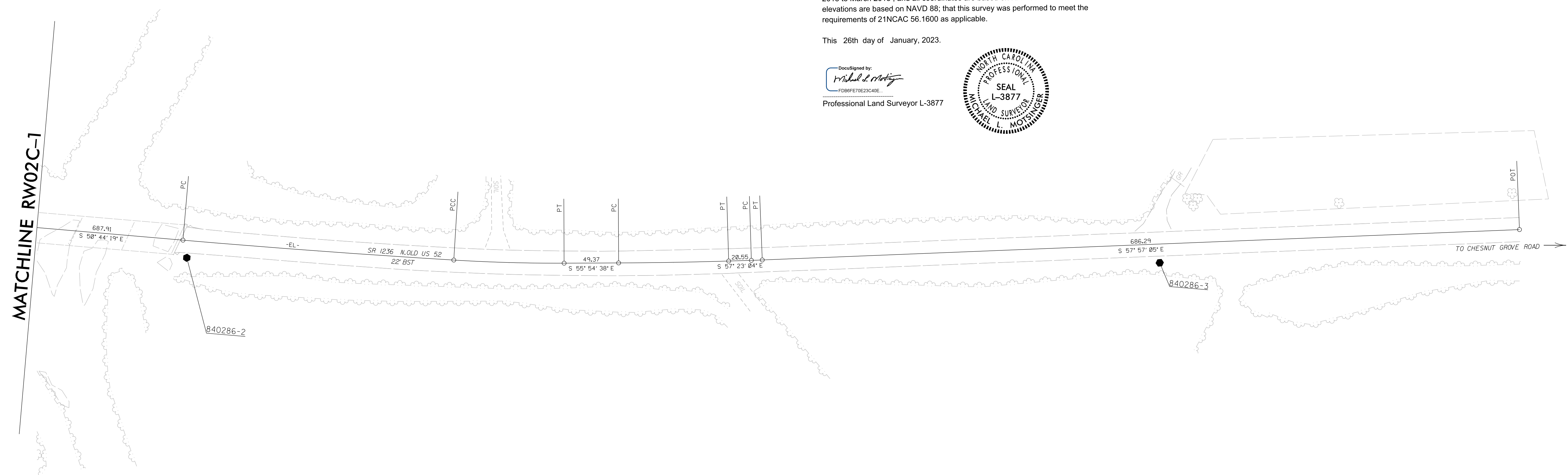
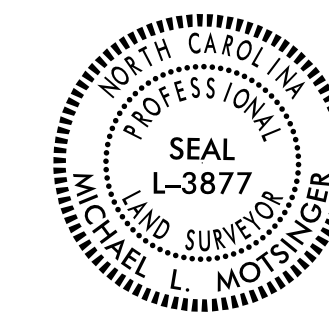
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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 February 2018 to March 2018, 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 26th day of January, 2023.

DocuSigned by:

 F0B6F7E7E23C4DE
 Professional Land Surveyor L-3877



SEE SHEET RW02C-3 FOR FURTHER ALIGNMENT DETAILS

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.

SURVEY CONTROL SHEET

BASELINE AND BENCHMARKS

BL	POINT	DESC.	NORTH	EAST	ELEVATION
1		BL - 1	936223.8854	1586788.3736	893.77
2		840286-2	935681.5475	1587402.7180	855.89
3		840286-3	935180.7097	1588127.6854	855.66

.....
 BM1 ELEVATION = 900.06
 N 936294 E 1586718
 RR SPIKE IN A 20" POPLAR

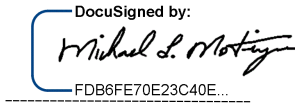
 BM2 ELEVATION = 844.92
 N 935643 E 1587181
 RR SPIKE IN A 20" HICKORY

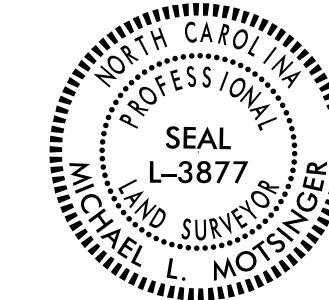
I, Michael L. Motsinger, PLS, certify that the Project Control was verified under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:


Class of survey: **AA**
 Type of GPS field procedure: RTN
 Dates of survey: 12-05-2017
 Datum/Epoch: NAD 83/2011
 Published/Fixed-control use: [Project Control if applicable, N/A for RTN]
 Localized around: 840286-2
 Northing: 935681.5475
 Easting: 1587402.718
 Combined grid factor: 1.000008391
 Geoid model: G12BNC
 Units: English

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 February 2018 to March 2018, 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 26th day of January, 2023.

DocuSigned by:

 FDB8FE70E23C40E
 Professional Land Surveyor L-3877



PROJECT REFERENCE NO.	SHEET NO.
17BP-9.R.83	RW02C-3
Location and Surveys	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

REVISIONS

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

EL	POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT		936584.802	1586186.986							
LINE				S 61°02'31.4" E	208.20					
PC		936483.998	1586369.156	S 55°53'25.0" E	538.77	10°18'12.8"(RT)	01°54'35.5"	539.49	270.48	3000.00
CURVE										
PT		936181.868	1586815.236	S 50°44'18.6" E	78.78					
LINE				S 50°44'18.6" E	687.91					
POT		936132.013	1586876.231							
LINE				S 50°44'18.6" E	687.91					
PC		935696.660	1587408.859	S 51°27'23.2" E	245.93	01°26'09.3"(LT)	00°35'01.9"	245.93	122.97	9813.22
CURVE										
PCC		935543.420	1587601.207	S 54°02'33.0" E	99.94	03°44'10.2"(LT)	03°44'15.4"	99.96	50.00	1532.95
CURVE										
PT		935484.735	1587682.107	S 55°54'38.1" E	49.37					
LINE				S 55°54'38.1" E	49.37					
PC		935457.066	1587722.990	S 56°38'51.2" E	99.68	01°28'26.2"(LT)	01°28'42.8"	99.69	49.85	3875.10
CURVE										
PT		935402.260	1587806.257	S 57°23'04.3" E	20.55					
LINE				S 57°23'04.3" E	20.55					
PC		935391.184	1587823.567	S 57°40'04.8" E	9.90	00°34'01.1"(LT)	05°43'46.5"	9.90	4.95	1000.00
CURVE										
PT		935385.891	1587831.928	S 57°57'05.4" E	686.29					
LINE				S 57°57'05.4" E	686.29					
POT		935021.718	1588413.631							

EY1	POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT		936375.505	1587137.463	S 00°08'48.3" W	112.22					
LINE				S 00°08'48.3" W	112.22					
PC		936263.287	1587137.176	S 03°51'14.0" W	64.66	07°24'51.4"(RT)	11°27'33.0"	64.70	32.40	500.00
CURVE										
PT		936198.777	1587132.830	S 07°33'39.7" W	141.39					
LINE				S 07°33'39.7" W	141.39					
PC		936058.621	1587114.226	S 04°17'47.7" W	45.56	06°31'44.0"(LT)	14°19'26.2"	45.58	22.81	400.00
CURVE										
PT		936013.193	1587110.813	S 01°01'55.7" W	71.87					
LINE				S 01°01'55.7" W	71.87					
POT		935941.331	1587109.519							

EY2	POINT	N	E	BEARING	DIST
POT		935918.766	1587137.125	S 10°28'49.0" W	325.74
LINE				S 10°28'49.0" W	325.74
POT		935598.462	1587077.875		

PROPOSED ALIGNMENT

		L	
TYPE	STATION	NORTH	EAST
POT	10+00.00	936566.3882	1586221.0639
PC	13+17.90	936412.5956	1586499.2904
PT	20+77.48	935987.1817	1587127.3144
PC	29+78.24	935416.7286	1587824.4170
PT	33+37.35	935207.6576	1588116.0885
POT	36+85.00	935023.5759	1588411.0019

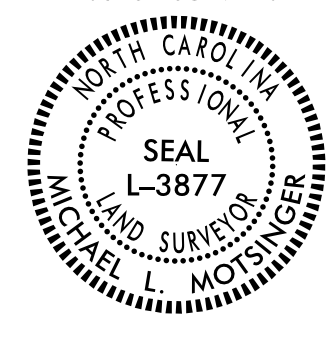
		Y	
TYPE	STATION	NORTH	EAST
POT	10+00.00	936376.2994	1587137.7003
PC	10+38.75	936337.5539	1587137.9711
PCC	11+64.65	936211.7406	1587134.1907
PT	12+56.47	936127.5639	1587101.2363
POT	13+50.00	936054.7923	1587042.4811

		Y1	
TYPE	STATION	NORTH	EAST
POT	10+00.00	935941.2565	1587183.4358
PC	10+46.88	935904.9722	1587153.7436
PT	11+22.05	935837.5244	1587122.3806
POT	12+25.00	935736.3272	1587103.4741

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.

RIGHT OF WAY CONTROL SHEET

PROJECT REFERENCE NO. 17BP.9.R.83	SHEET NO. RW03E-1
Location and Surveys	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	10+50.00	-50.00	936585.9592	1586289.0122
L	10+50.00	-29.59	936568.0960	1586279.1382
L	11+40.00	30.45	936472.0093	1586328.8596
L	11+40.00	50.00	936454.9003	1586319.4024
L	12+10.00	-95.00	936547.9394	1586450.8130
L	13+00.00	110.00	936324.9851	1586430.4071
L	13+45.00	-65.00	936456.0938	1586554.7749
L	13+45.00	-50.00	936443.0130	1586547.4338
L	13+60.00	105.00	936300.6642	1586484.3164
L	14+40.00	50.00	936308.9454	1586579.8253
L	15+71.63	50.00	936240.9974	1586690.7257
L	17+06.84	60.86	936158.6405	1586796.2507
L	17+75.00	-50.00	936211.0266	1586915.3272
L	17+86.59	67.02	936108.7852	1586857.2455
L	19+03.13	-60.00	936142.7415	1587026.1641
L	20+23.10	-105.00	936103.4651	1587150.4421
L	20+77.48	-105.00	936068.4417	1587193.8111
L	21+10.67	76.74	935906.7708	1587104.3975
L	21+79.13	76.70	935863.4471	1587157.4012
L	24+10.00	-105.00	935857.8580	1587451.1477
L	24+79.38	76.53	935673.4316	1587389.8732
L	27+20.00	-80.00	935642.1868	1587675.2257
L	27+20.00	-50.00	935618.9696	1587656.2266
L	27+26.03	73.30	935519.7236	1587582.0095
L	28+27.76	67.37	935459.8897	1587665.2924
L	28+76.92	62.89	935432.2207	1587706.1756
L	29+76.84	52.49	935376.9911	1587790.0872
L	29+78.24	-50.00	935455.4239	1587856.0821
L	29+98.40	50.00	935365.0966	1587808.6770
L	33+37.35	-50.00	935250.0730	1588142.5637
L	33+37.35	50.00	935165.2423	1588089.6133
L	36+00.00	-29.93	935093.9769	1588354.7460
L	36+00.00	-50.00	935110.9991	1588365.3711
L	36+00.00	30.07	935043.0784	1588322.9757
L	36+00.00	50.00	935026.1684	1588312.4206

ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	29+40.00	56.63	935397.1210	1587758.9561
L	29+40.00	80.00	935379.0356	1587744.1564
L	29+65.00	80.00	935363.2030	1587763.5041

ROW MARKER PERMANENT EASEMENT-E

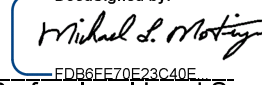
ALIGN	STATION	OFFSET	NORTH	EAST
Y	10+80.00	50.00	936297.1657	1587087.7664
Y	10+80.00	30.50	936296.8288	1587107.2618
Y	10+90.00	-29.68	936285.6166	1587167.2333
Y	10+90.00	-55.00	936285.0303	1587192.5421
Y	11+05.00	29.96	936272.2677	1587107.1989
Y	11+05.00	50.00	936272.9085	1587087.1689
Y	11+15.00	-30.39	936260.1655	1587167.1594
Y	11+15.00	-55.00	936259.2338	1587191.7547

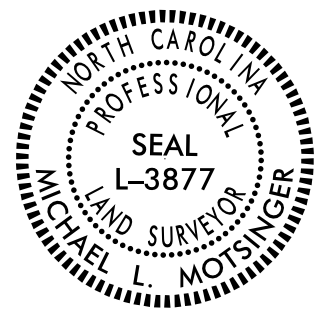
ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y	11+35.36	29.28	936242.4355	1587106.6562

I, Michael L. Molsinger, certify that the right of way and permanent easement monumentation for this project shown herein was verified 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 January 2023, and all coordinates are based on NAD83/2011. That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 26th day of January, 2023.

DocuSigned by:

 Professional Land Surveyor L-3877



REVISIONS

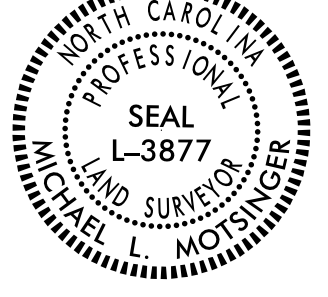
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 mmo@molsinger.com

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 _____.

Location and Surveys

PROJECT SURVEYOR



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NOTES:

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2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED ____ TO ____.

I, Michael L. Motsinger, certify that the right of way and permanent easement monumentation for this project shown herein was verified 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 January 2023, and all coordinates are based on NAD83/2011. That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 26th day of January, 2023.

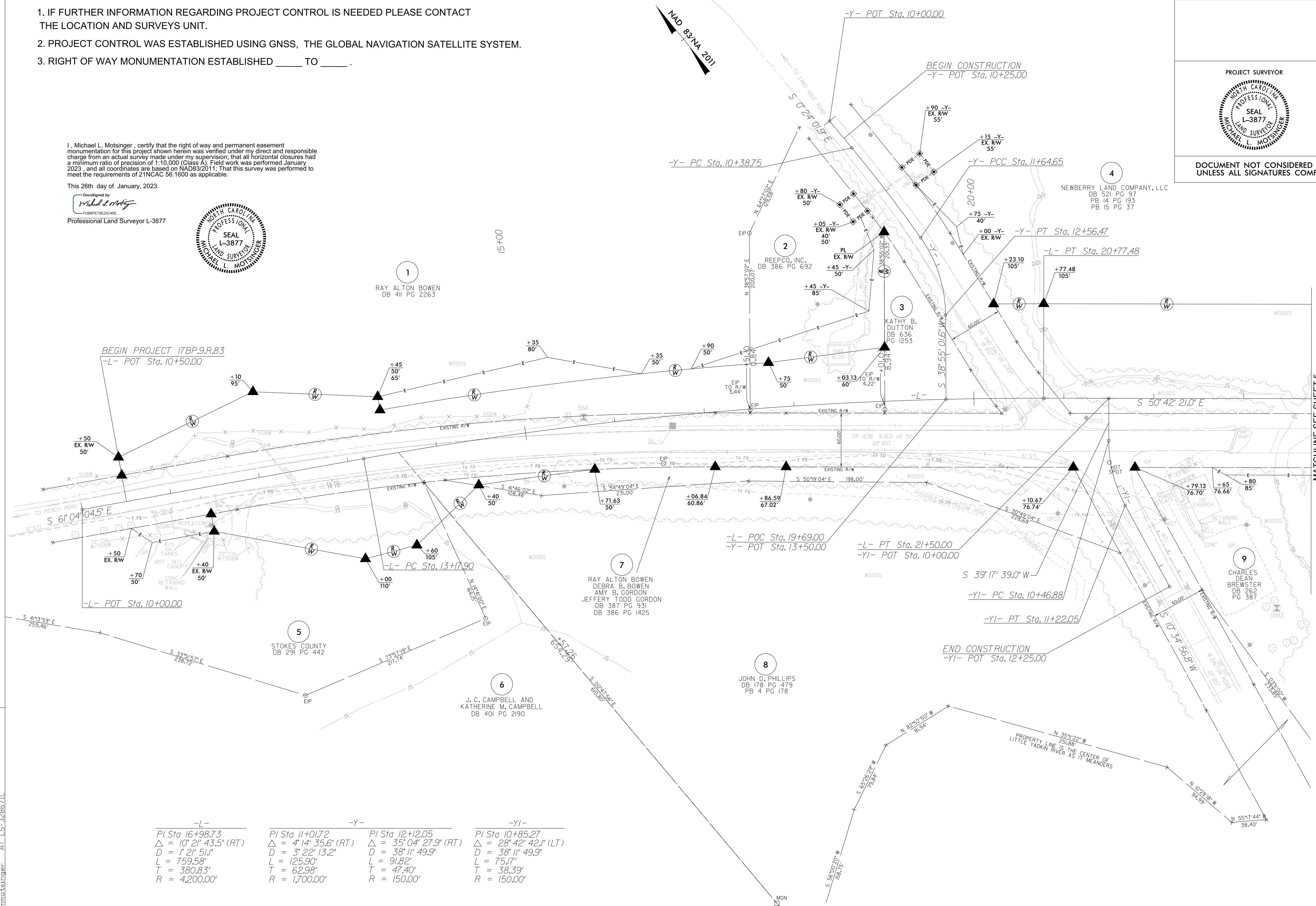
DocuSigned by: Michael L. Motsinger

Professional Land Surveyor L-3877



REVISIONS

6/2/09 17BP.9.R.83 RW04.dgn
F:\B\2009\17BP.9.R.83\Right of Way Staking\survey control sheet\to be checked\84-0286-LS-rw04.dgn
L-3877
mmotsinger



-L-	-Y-	-YI-
PI Sta 16+98.73	PI Sta 11+01.72	PI Sta 12+2.05
Δ = 10° 21' 43.5" (RT)	Δ = 4° 14' 35.6" (RT)	Δ = 35° 04' 27.9" (RT)
D = 1' 21' 51.1"	D = 3' 22' 13.2"	D = 38' 11' 49.9"
L = 759.58'	L = 125.90'	L = 91.82'
T = 380.83'	T = 62.98'	T = 47.40'
R = 4,200.00'	R = 1,700.00'	R = 150.00'

MATCHLINE SEE SHEET 5 -L- STA 23+75.00

