

3/2021

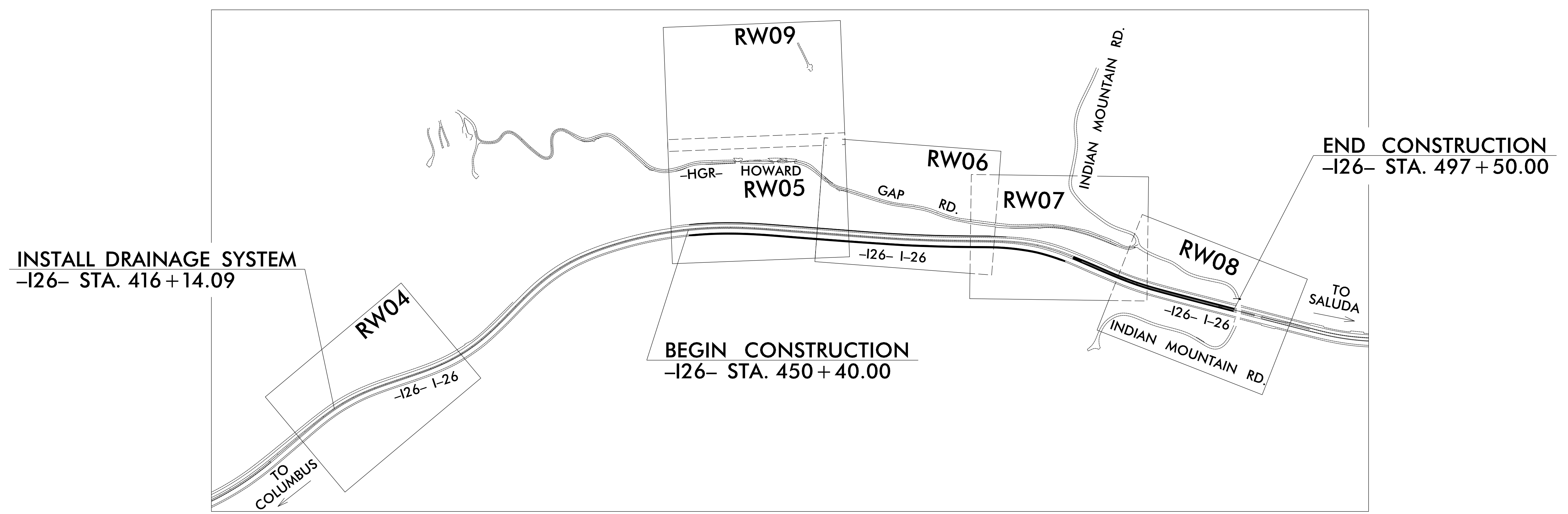
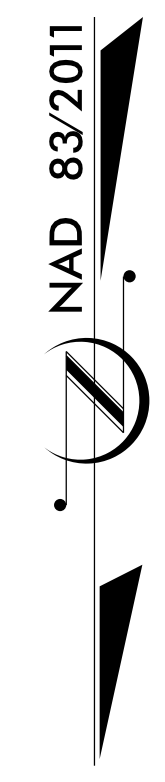
TIP PROJECT: 15614.1075010

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	15614.1075010	RW01	12

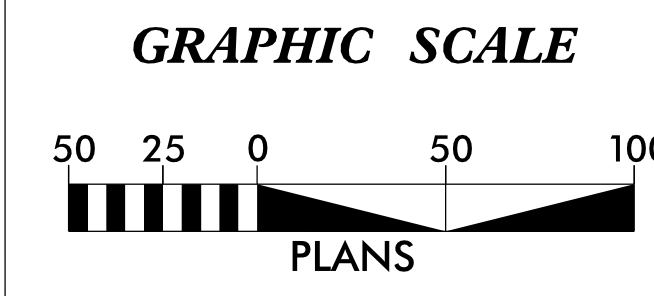
STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

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

POLK COUNTY



\$\$\$\$\$ SYSTEM \$\$\$\$\$\$
 \$\$\$ DDN \$\$\$
 \$\$\$ USERNAME \$\$\$



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "G100" WITH NAD 83/NSRS 2011 STATE PLANE GRID COORDINATES OF NORTHING: 560,422.485(ft) EASTING: 1,027,149.221(ft) ELEVATION: 1,377.740(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999794074

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "G100" TO -L- STATION 450+40.00 IS N 7°44'45.0" E 592.24(ft)

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

Prepared in the Office of:

TGS ENGINEERS
 804-C N. LAFAYETTE ST
 SHELBY, NC 28150
 PH: (704) 476-0003
 CORP. LICENSE NO.: C-0275

2018 STANDARD SPECIFICATIONS

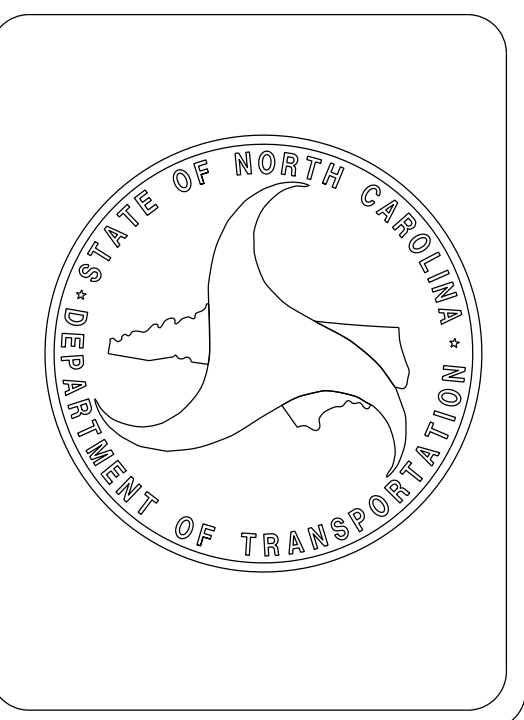
RIGHT OF WAY DATE: 3/1/2021
LETTING DATE: 6/22/2021

PROFESSIONAL LAND SURVEYOR

DocuSigned by:
 Matthew Cornwell
 EID038F11473E475




3/11/2021

Signature: _____ Date: _____



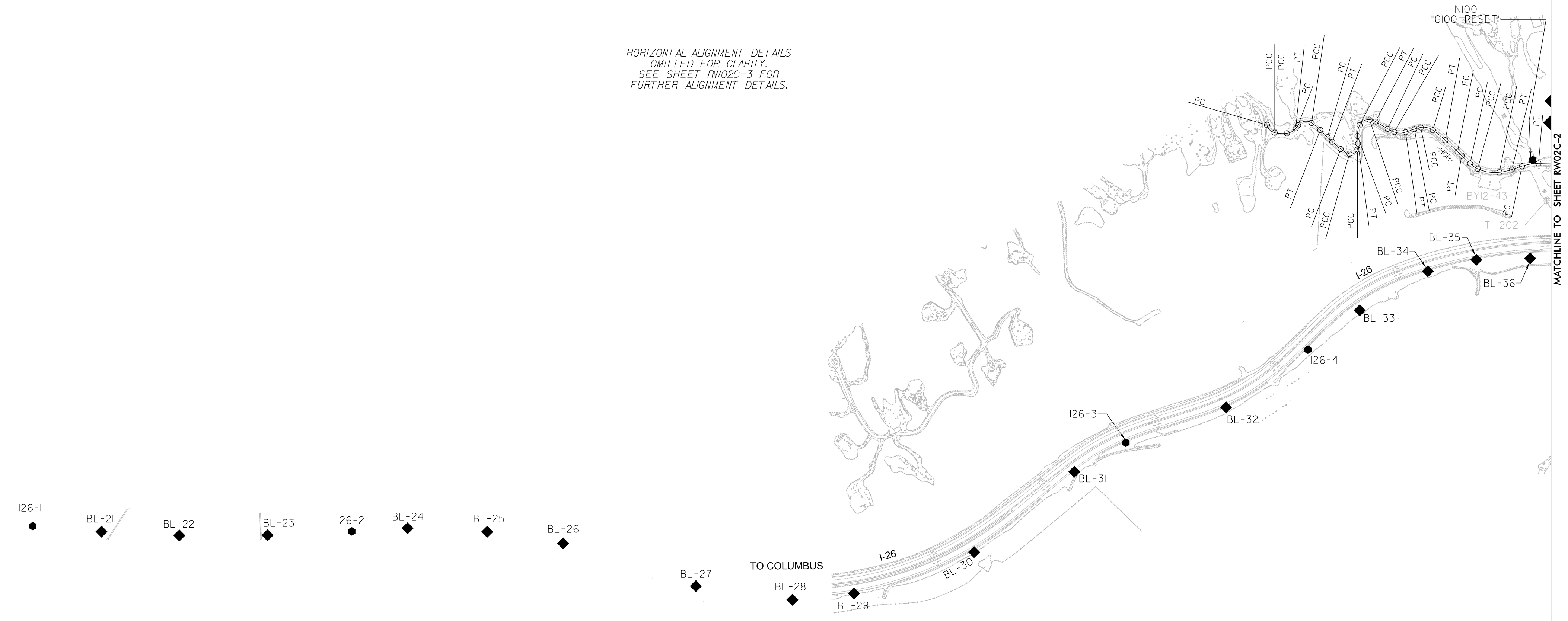
SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. 15614.1075010	SHEET NO. RW02C-1
Location and Surveys	
 TGS ENGINEERS 804-C N. LAFAYETTE ST SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275	
PROJECT SURVEYOR	
 SEAL L-4775 LAND SURVEYOR MATTHEW T. CORNWELL	
Documented by:  EB0369-11473E475 3/11/2021	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



HORIZONTAL ALIGNMENT DETAILS
 OMITTED FOR CLARITY.
 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

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. 15614.1075010	SHEET NO. RW02C-2
Location and Surveys	
 TGS ENGINEERS 804-C N. LAFAYETTE ST SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275	
PROJECT SURVEYOR	
 SEAL L-4775 MATTHEW T. CORNWELL LAND SURVEYOR NORTH CAROLINA PROFESSIONAL	
DocuSigned by: Matthew Cornwell E8036F11473E475... 3/11/2021	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



HORIZONTAL ALIGNMENT DETAILS
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SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

EXISTING HORIZONTAL ALIGNMENT

HGR POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
PC	560188.141	1029009.129							
CURVE			N 45°07'43.9" W	77.02	66°45'02.0"(L.T)	81°51'04.0"	81.55	46.11	70.00
PCC	560242.478	1028954.548							
CURVE			N 87°33'54.8" W	85.04	18°07'19.7"(L.T)	21°13'14.4"	85.40	43.06	270.00
PCC	560246.091	1028869.582							
CURVE			S 59°59'51.6" W	71.42	46°45'07.5"(L.T)	63°39'43.1"	73.44	38.90	90.00
PT	560210.379	1028807.734							
LINE			S 36°37'17.9" W	26.98					
PC	560188.726	1028791.639							
CURVE			S 80°03'01.3" W	96.24	86°51'26.8"(R.T)	81°51'04.0"	106.12	66.26	70.00
PCC	560172.096	1028696.844							
CURVE			N 50°54'52.2" W	78.16	11°12'46.1"(R.T)	14°19'26.2"	78.28	39.27	400.00
PT	560221.372	1028636.179							
LINE			N 45°18'29.2" W	71.63					
PC	560271.745	1028585.261							
CURVE			N 47°23'21.7" W	45.76	04°09'45.1"(L.T)	09°05'40.4"	45.77	22.89	630.00
PT	560302.725	1028551.583							
LINE			N 49°28'14.3" W	78.71					
PC	560353.875	1028491.756							
CURVE			N 61°56'47.4" W	69.13	24°57'06.1"(L.T)	35°48'35.5"	69.68	35.40	160.00
PCC	560386.386	1028430.749							
CURVE			S 60°28'32.3" W	63.75	90°12'14.6"(L.T)	127°19'26.2"	70.85	45.16	45.00
PCC	560354.969	1028375.275							
CURVE			S 05°35'45.4" W	40.76	19°33'19.2"(L.T)	47°44'47.3"	40.96	20.68	120.00
PT	560314.405	1028371.300							
LINE			S 04°10'54.2" E	53.07					
PC	560261.477	1028375.170							
CURVE			S 10°39'17.2" W	76.82	29°40'22.8"(R.T)	38°11'49.9"	77.68	39.73	150.00
PCC	560185.983	1028360.967							
CURVE			S 60°16'12.5" W	79.86	69°33'27.8"(R.T)	81°51'04.0"	84.98	48.61	70.00
PCC	560146.381	1028291.621							
CURVE			N 72°15'35.4" W	43.94	25°22'56.5"(R.T)	57°17'44.8"	44.30	22.52	100.00
PT	560159.769	1028249.771							
LINE			N 59°34'07.1" W	98.68					
PC	560209.752	1028164.684							
CURVE			N 64°29'38.5" W	51.52	09°51'02.8"(L.T)	19°05'54.9"	51.58	25.85	300.00
PCC	560231.935	1028118.190							
CURVE			N 89°34'37.7" W	79.26	40°18'55.6"(L.T)	49°49'20.7"	80.92	42.22	115.00
PT	560232.520	1028038.933							
LINE			S 70°15'54.5" W	65.05					
PC	560210.555	1027977.705							
CURVE			S 75°10'29.7" W	46.22	09°49'10.5"(R.T)	21°13'14.4"	46.27	23.19	270.00
PCC	560198.729	1027933.027							
CURVE			N 77°39'46.7" W	87.10	44°30'16.6"(R.T)	49°49'20.7"	89.33	47.05	115.00
PCC	560217.339	1027847.940							
CURVE			N 51°24'45.7" W	111.55	07°59'45.4"(R.T)	07°09'43.1"	111.64	55.91	800.00
PT	560286.916	1027760.743							
LINE			N 47°24'53.0" W	117.29					
PC	560366.281	1027674.389							
CURVE			N 47°02'16.6" W	39.46	00°45'12.8"(R.T)	01°54'35.5"	39.46	19.73	3000.00
PT	560393.171	1027645.515							
LINE			N 46°39'40.2" W	81.62					
PC	560449.187	1027586.153							
CURVE			N 55°59'46.3" W	64.88	18°40'12.1"(L.T)	28°38'52.4"	65.17	32.88	200.00
PCC	560485.473	1027532.365							
CURVE			N 81°11'13.6" W	153.00	31°42'42.5"(L.T)	20°27'46.0"	154.97	79.53	280.00
PCC	560508.914	1027381.168							
CURVE			S 77°15'05.1" W	89.47	11°24'40.2"(L.T)	12°43'56.6"	89.62	44.96	450.00
PT	560489.170	1027293.899							
LINE			S 71°32'45.0" W	74.52					
PC	560465.582	1027223.216							
CURVE			S 79°59'11.0" W	117.43	16°52'52.1"(R.T)	14°19'26.2"	117.85	59.36	400.00
PT	560445.164	1027107.578							
LINE			S 88°25'37.1" W	176.17					
PC	560440.328	1026931.479							
CURVE			S 89°36'22.0" W	94.66	02°21'29.9"(R.T)	02°29'28.0"	94.67	47.34	2300.00
PT	560439.677	1026836.820							
LINE			N 89°12'53.1" W	489.11					
PC	560446.380	1026347.760							
CURVE			N 68°29'24.3" W	212.33	41°26'57.4"(R.T)	19°05'54.9"	217.03	113.51	300.00
PT	560524.232	1026150.221							
LINE			N 47°45'55.6" W	134.44					
PC	560614.595	1026050.685							
CURVE			N 59°46'09.6" W	120.63	24°00'28.0"(L.T)	19°45'25.8"	121.51	61.66	290.00
PT	560675.329	1025946.462							
LINE			N 71°46'23.6" W	344.55					
PC	560783.097	1025619.201							
CURVE			N 76°50'46.0" W	198.07	10°08'44.8"(L.T)	05°06'56.5"	198.33	99.42	1120.00
PT	560828.170	1025426.331							
LINE			N 81°55'08.4" W	86.46					
PC	560840.324	1025340.730							
CURVE			N 75°15'55.2" W	196.97	13°18'26.3"(R.T)	06°44'26.4"	197.42	99.16	850.00
PT	560890.423	1025150.233							
LINE			N 68°36'42.1" W	64.96					
PC	560914.113	1025089.747							
CURVE			N 75°01'45.8" W	228.02	12°50'07.5"(L.T)	05°37'02.0"	228.50	114.73	1020.00
PT	560973.017	1024869.463							
LINE			N 81°26'49.6" W	228.52					
PC	561007.003	1024643.484							
CURVE			N 86°16'59.4" W	247.86	09°40'19.5"(L.T)	03°53'51.6"	248.15	124.37	1470.00
PT	561023.071	1024396.149							
LINE			S 88°52'50.9" W	115.42					
PC	561020.816	1024280.750							
CURVE			N 77°58'01.8" W	596.14	26°18'14.6"(R.T)	04°22'25.4"	601.41	306.10	1310.00
PT	561145.095	1023697.705							
LINE			N 64°48'54.5" W	125.07					
PC	561198.317	1023584.525							
CURVE			N 69°49'15.9" W	52.36	10°00'42.7"(L.T)	19°05'54.9"	52.42	26.28	300.00
PCC	561216.377	1023535.384							
CURVE			S 85°31'05.3" W	67.27	39°18'35.0"(L.T)	57°17'44.8"	68.61	35.72	100.00
PT	561211.121	1023468.319							

BASELINE

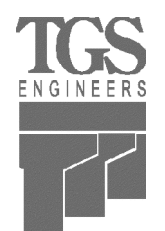
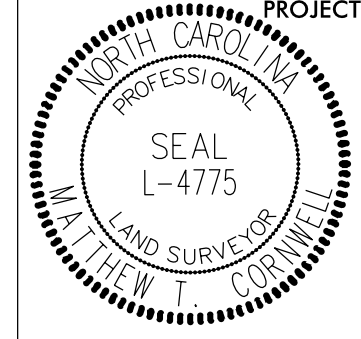
BL POINT	DESC.	NORTH	EAST	ELEVATION
1	126-1	563053.2380	1037625.5170	1103.60
21	BL-21	563088.6831	1037144.2949	1075.52
22	BL-22	563111.9522	1036599.4046	1062.15
23	BL-23	563106.3041	1035982.5083	1069.68
2	126-2	563075.7080	1035393.6320	1085.99
24	BL-24	563051.1640	1035003.2507	1097.81
25	BL-25	563072.0313	1034445.6950	1126.72
26	BL-26	563149.4385	1033914.0504	1158.56
27	BL-27	563442.4633	1032982.9792	1224.35
28	BL-28	563533.6013	1032307.1627	1264.87
29	BL-29	563486.6831	1031877.3962	1286.55
30	BL-30	563191.6827	1031038.3292	1341.96
31	BL-31	562624.3958	1030340.5281	1389.22
3	126-3	562419.7250	1029981.8730	1416.91
32	BL-32	562166.4912	1029282.2296	1474.74
4	126-4	561759.8920	1028712.2610	1527.06
33	BL-33	561482.0258	1028351.8529	1563.43
34	BL-34	561204.7182	1027876.3957	1590.37
35	BL-35	561121.9750	1027537.6720	1615.74
36	BL-36	561110.2335	1027161.3131	1650.74
37	BL-37	561102.6527	1026746.4193	1675.67
38	BL-38	561126.1756	1026140.9867	1700.26
5	126-5	561170.2020	1025647.0670	1722.77
39	BL-39	561214.5076	1024659.5274	1763.45
40	BL-40	561267.5415	1024274.2802	1778.30
41	BL-41	561622.2142	1023404.1576	1825.02
42	BL-42	561830.6760	1022579.9980	1874.07

BY10 POINT	DESC.	NORTH	EAST	ELEVATION
E051	BY12-51	561215.7114	1023448.1750	1909.70
52	BY10-52	561392.5926	1023102.0605	1896.90
53	BY10-53	561562.6468	1022625.8603	1870.70
E042	BL-42	561830.6760	1022579.9980	1874.07

BY12 POINT	DESC.	NORTH	EAST	ELEVATION
43	BY12-43	560479.1999	1027286.9305	1357.10
N100	G100 RESET	560422.4790	1027149.4440	1377.77
G101	G101	560465.9310	1026199.4780	1509.16
44	BY12-44	560620.2530	1026030.1822	1540.60
45	BY12-45	560749.3953	1025721.5288	1586.60
46	BY12-46	560855.9227	1025293.7854	1643.70
47	BY12-47	560960.2347	1024913.7825	1699.00
48	BY12-48	561012.5801	1024529.9573	1753.60
49	BY12-49	561019.0481	1024277.5041	1788.80
50	BY12-50	561111.4171	1023753.2849	1864.30
51	BY12-51	561215.7114	1023448.1750	1909.70

BY12A POINT	DESC.	NORTH	EAST	ELEVATION
EUN100	G100 RESET	560422.4790	1027149.4440	1377.77
54	BY12A-54	560311.7990	1026970.9069	1360.60
55	BY12A-55	560159.7940	1027023.9648	1342.10
56	BY12A-56	560007.6623	1027015.7466	1290.30
57	BY12A-57	559855.4244	1026834.5535	1193.10
58	BY12A-58	559579.1494		

PROPOSED ALIGNMENT CONTROL SHEET

PROJECT REFERENCE NO. 15614.1075010	SHEET NO. RW02D-1
Location and Surveys	
 <p>TGS ENGINEERS 804-C N. LAFAYETTE ST SHELBY, NC 28150 PH. (704) 476-0003 CORP. LICENSE NO.: C-0275</p>	
PROJECT SURVEYOR	
	<p>DocuSigned by: <i>Matthew Cornwell</i> EB030F1473E475...</p> <p>3/11/2021</p>
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

REVISIONS

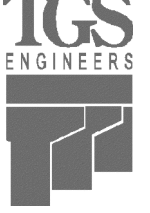
TYPE	STATION	HGR	
		NORTH	EAST
POT	10+00.00	560148.9800	1029017.2775
PC	10+40.00	560188.1413	1029009.1294
PCC	11+21.55	560242.4779	1028954.5479
PCC	12+06.95	560246.0907	1028869.5816
PT	12+80.39	560210.3794	1028807.7337
PC	13+07.37	560188.7256	1028791.6395
PCC	14+13.48	560172.0964	1028696.8437
PT	14+91.76	560221.3717	1028636.1791
PC	15+63.39	560271.7452	1028585.2609
PT	16+09.16	560302.7249	1028551.5833
PC	16+87.87	560353.8752	1028491.7561
PCC	17+57.55	560386.3863	1028430.7491
PCC	18+28.40	560354.9693	1028375.2749
PT	18+69.35	560314.4055	1028371.3004
PC	19+22.42	560261.4771	1028375.1703
PCC	20+00.11	560185.9831	1028360.9672
PCC	20+85.09	560146.3809	1028291.6211
PT	21+29.39	560159.7692	1028249.7713
PC	22+28.07	560209.7520	1028164.6845
PCC	22+79.65	560231.9346	1028118.1900
PT	23+60.57	560232.5196	1028038.9329
PC	24+25.61	560210.5548	1027977.7053
PCC	24+71.89	560198.7293	1027933.0267
PCC	25+61.21	560217.3388	1027847.9402
PT	26+72.86	560286.9156	1027760.7433
PC	27+90.14	560366.2814	1027674.3890
PT	28+29.60	560393.1710	1027645.5151
PC	29+11.22	560449.1875	1027586.1525
PCC	29+76.39	560485.4730	1027532.3647
PCC	31+31.36	560508.9143	1027381.1685
PT	32+20.99	560489.1695	1027293.8993
PC	32+95.50	560465.5820	1027223.2158
PT	34+13.35	560445.1636	1027107.5779
PC	35+89.52	560440.3277	1026931.4792
PT	36+84.19	560439.6769	1026836.8200
PC	41+73.29	560446.3801	1026347.7597
PT	43+90.32	560524.2321	1026150.2210
PC	45+24.76	560614.5955	1026050.6848
PT	46+46.27	560675.3292	1025946.4622
PC	49+90.82	560783.0966	1025619.2013
PT	51+89.15	560828.1703	1025426.3307
PC	52+75.61	560840.3241	1025340.7302
PT	54+73.02	560890.4232	1025150.2333
PC	55+37.98	560914.1134	1025089.7468
PT	57+66.48	560973.0171	1024869.4629
PC	59+95.01	561007.0033	1024643.4835
PT	62+43.16	561023.0707	1024396.1490
PC	63+58.58	561020.8162	1024280.7502
PT	69+59.99	561145.0955	1023697.7052
PC	70+85.06	561198.3173	1023584.5254
PCC	71+37.48	561216.3774	1023535.3836
PT	72+06.09	561211.1207	1023468.3186
POT	72+52.45	561192.1602	1023426.0047

TYPE	STATION	I26	
		NORTH	EAST
POT	381+00.00	563209.3622	1033456.9886
TS	381+95.92	563239.0102	1033365.7655
SC	383+95.92	563299.1643	1033175.0326
CS	389+51.71	563417.8013	1032632.5530
SC	391+51.71	563439.8625	1032433.8145
CS	407+33.08	563022.9992	1030940.7303
ST	410+33.08	562838.8863	1030703.9431
TS	412+78.30	562684.1747	1030513.6837
SC	416+78.30	562446.7297	1030192.2140
CS	418+15.80	562381.4267	1030071.2705
ST	422+15.80	562242.8846	1029696.3985
TS	422+69.81	562226.5388	1029644.9223
SC	426+69.81	562087.9967	1029270.0503
CS	429+56.48	561939.1029	1029025.6436
ST	433+56.48	561669.5275	1028730.5978
TS	433+57.34	561668.9192	1028729.9913
SC	437+57.34	561399.3438	1028434.9455
CS	439+86.43	561276.3776	1028241.9380
SC	443+86.43	561130.4764	1027870.1786
CS	454+20.88	560998.3658	1026848.5313
ST	458+20.88	561026.3801	1026449.5800
TS	464+79.68	561085.8977	1025793.4774
SC	466+79.68	561103.3867	1025594.2442
CS	471+93.01	561133.8281	1025081.8573
ST	473+93.01	561140.0521	1024881.9549
TS	475+12.21	561143.4150	1024762.8027
SC	479+12.21	561173.2615	1024364.2653
CS	480+81.80	561211.4112	1024199.1306
ST	484+81.80	561359.4006	1023827.8866
TS	485+91.18	561404.5890	1023728.2694
SC	488+91.18	561521.2945	1023451.9897
CS	488+92.85	561521.8611	1023450.4224
ST	491+92.85	561608.7970	1023163.3809
POT	504+14.35	561932.1460	1021985.4558

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.

PERMANENT EASEMENT CONTROL SHEET

PROJECT REFERENCE NO.	SHEET NO.
15614.1075010	RW03E-1
Location and Surveys	
 TGS ENGINEERS 804-C N. LAFAYETTE ST SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275	

PROJECT SURVEYOR

3/25/2021

DocuSigned by:
Matthew Cornwell
EBD36F11473E475...

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ALIGN	STATION	OFFSET	NORTH	EAST
HGR	33+89.00	-470.00	559978.4054	1027173.3532
HGR	33+92.00	-138.00	560308.7699	1027140.0419
HGR	34+04.00	-330.00	560115.9561	1027133.6946
HGR	34+30.66	-87.25	560357.4736	1027092.6727
HGR	34+57.00	-333.00	560111.0910	1027073.0897
HGR	34+98.00	-184.00	560258.9093	1027028.0149
HGR	35+17.00	-431.00	560011.4808	1027015.8025
HGR	35+51.00	70.38	560511.7406	1026968.0518
HGR	36+10.00	-439.00	560000.9321	1026919.1468
HGR	36+21.00	-250.00	560189.7026	1026903.4470
HGR	36+31.00	110.74	560550.2971	1026888.9629
HGR	36+42.00	-746.00	559693.4936	1026882.4654
HGR	36+57.00	-856.00	559583.4665	1026862.3929
HGR	36+57.00	-43.15	560396.3143	1026863.9250
HGR	37+35.00	-959.00	559481.4634	1026772.8690
HGR	37+84.00	-672.00	559769.1080	1026727.8069
HGR	38+15.00	-962.00	559479.5601	1026692.8354
HGR	38+63.00	-861.00	559581.2084	1026646.2241
HGR	43+67.10	-49.66	560470.0600	1026137.5671
HGR	44+43.00	-104.00	560482.6393	1026041.3125
HGR	46+69.49	-116.56	560571.8799	1025887.9472
HGR	52+58.00	-153.51	560685.8625	1025336.5812
HGR	53+13.00	-213.00	560637.0292	1025264.6467
HGR	53+19.00	-115.88	560733.7739	1025275.8186
HGR	53+64.00	-186.00	560676.8301	1025208.8949

EXISTING CONCRETE MONUMENT

COULD NOT SET - FALLS IN TREE

EXISTING CONCRETE MONUMENT

MAGNAIL SET IN BOULDER

ALIGN	STATION	OFFSET	NORTH	EAST
I26	453+30.00	-186.54	560810.4144	1026939.0990
I26	453+54.00	-217.00	560780.0927	1026913.4593
I26	453+91.00	-178.50	560819.1634	1026874.7911
I26	453+94.00	-309.00	560688.7556	1026868.8659
I26	454+46.00	-313.00	560686.4099	1026811.9100

I, Matthew T. Cornwell, 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 3/1/2021 to 3/8/2021, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 25th day of March, 2021.

3/25/2021
Professional Land Surveyor L-4775

DocuSigned by:
Matthew Cornwell
EBD36F11473E475...

REVISIONS

25-MAR-2021 08:21
C:\Users\mccornwell\AppData\Local\Temp\25-MAR-2021 08:21\25-MAR-2021 08:21-26-Howard Gap-Is-rw03e-1.dgn

I, Matthew T. Cornwell, a Professional Land Surveyor in the state of North Carolina hereby certify to the best of my knowledge and belief that the following work item(s) (Base map Compilation, R/W Staking) performed under my responsible charge meet NCDOT Survey Standards as directed in the NCDOT Location & Surveys guidelines and procedures.

If further 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.

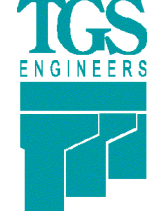

If further certify that the right of way and permanent easement points shown herein and outlined in the tables shown hereon (localized coordinates, station/offset) have been checked and are accurate representations of the right of way and permanent easement points depicted on the corresponding highway plans. I also certify that the right of way and permanent easement points shown herein have been field monumented under my supervision from existing survey control provided by others; that the depicted property data shown herein were surveyed by others; and these monuments denote the right of way and easement boundaries at the time of staking which may be subject to change due to right of way revisions (See deeds for final determination).

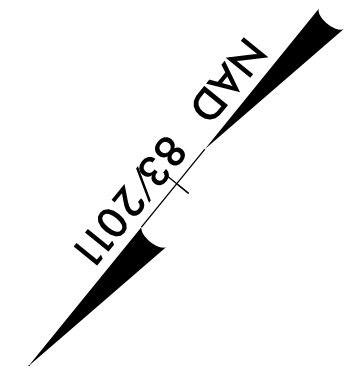
Witness my original signature, registration number and seal this 25th day of March, 2021.

DocuSigned by:
Matthew Cornwell
EBD36F11473E475...
3/25/2021
Professional Land Surveyor L-4775
PLS # Seal

NOTES:

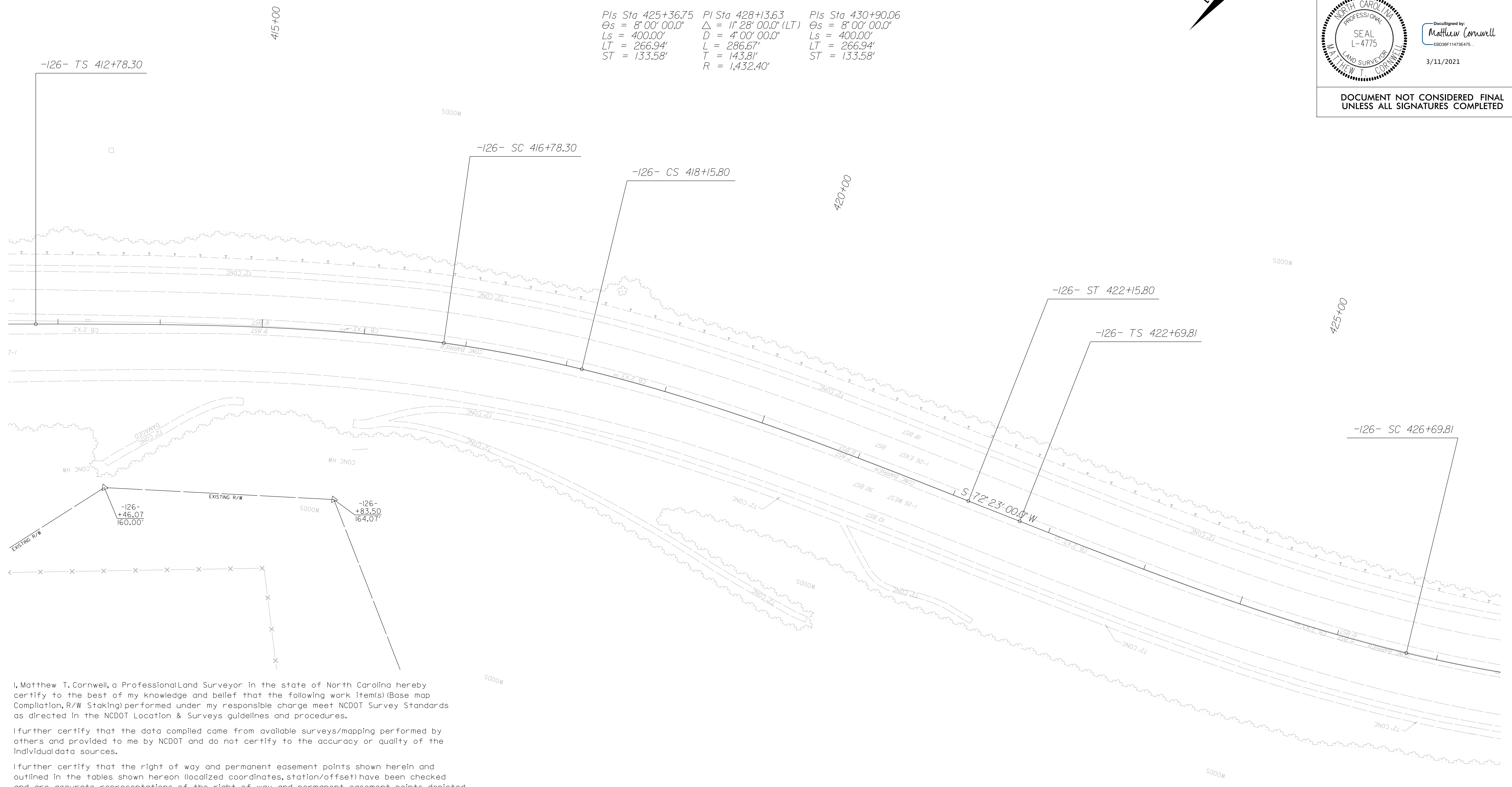
1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED 3/1/2021 TO 3/25/2021.

PROJECT REFERENCE NO. 15614.1075010	SHEET NO. RW04
Location and Surveys	
 TGS ENGINEERS 804-C N. LAFAYETTE ST SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275	
PROJECT SURVEYOR	
 NORTH CAROLINA PROFESSIONAL SEAL L-4775 LAND SURVEYOR MATTHEW T. CORNWELL	DocuSigned by: Matthew Cornwell E8036F11473E475 3/11/2021
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



-I26- CURVE DATA

PIs Sta 415+45.24 Os = 8' 00' 00.0" Ls = 400.00' LT = 266.94' ST = 133.58'	PI Sta 417+47.11 Δ = 5° 30' 00.0" (RT) D = 4' 00' 00.0" L = 137.50' T = 68.80' R = 1,432.40'	PIs Sta 419+49.38 Os = 8' 00' 00.0" Ls = 400.00' LT = 266.94' ST = 133.58'
PIs Sta 425+36.75 Os = 8' 00' 00.0" Ls = 400.00' LT = 266.94' ST = 133.58'	PI Sta 428+13.63 Δ = 11° 28' 00.0" (LT) D = 4' 00' 00.0" L = 286.67' T = 143.81' R = 1,432.40'	PIs Sta 430+90.06 Os = 8' 00' 00.0" Ls = 400.00' LT = 266.94' ST = 133.58'



REVISIONS

I, Matthew T. Cornwell, a Professional Land Surveyor in the state of North Carolina hereby certify to the best of my knowledge and belief that the following work item(s) (Base map Compilation, R/W Staking) performed under my responsible charge meet NCDOT Survey Standards as directed in the NCDOT Location & Surveys guidelines and procedures.

I further 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.

I further certify that the right of way and permanent easement points shown herein and outlined in the tables shown hereon (localized coordinates, station/offset) have been checked and are accurate representations of the right of way and permanent easement points depicted on the corresponding highway plans. I also certify that the right of way and permanent easement points shown herein have been field monumented under my supervision from existing survey control provided by others; that the depicted property data shown herein were surveyed by others; and these monuments denote the right of way and easement boundaries at the time of staking which may be subject to change due to right of way revisions (See deeds for final determination).

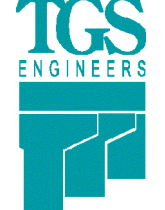

Witness my original signature, registration number and seal this 11th day of March, 2021.

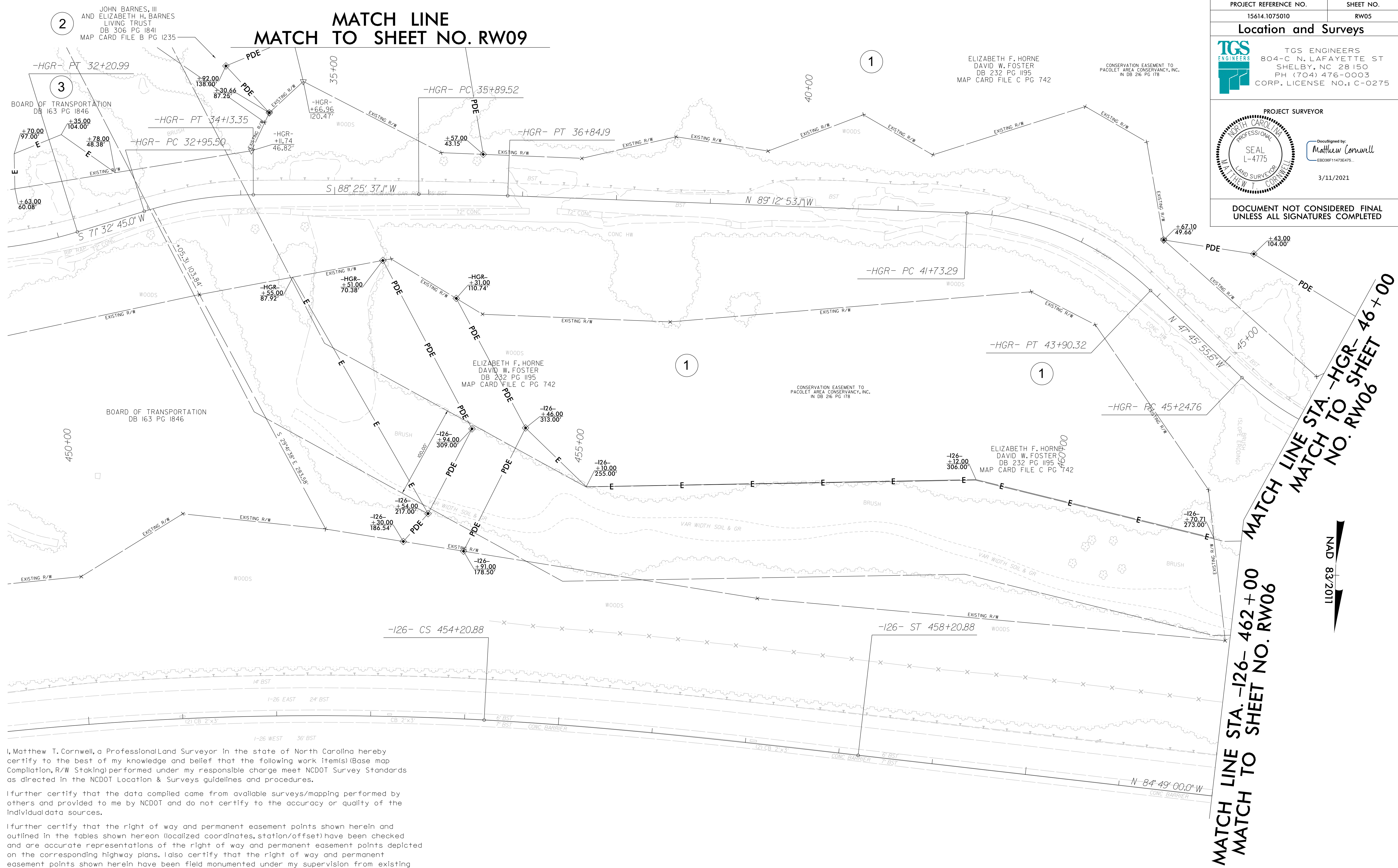
DocuSigned by:
Matthew Cornwell
 E8036F11473E475
 Professional Land Surveyor L-4775
 Seal PLS #

- 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 3/1/2021 TO 3/8/2021.

I:\MAR_2021\1103
 L:\Users\mccornwell\OneDrive\TGS\Projects\126\1-26-Howard Gap\1s_r\04.dgn
 mccornwell AT MTCORNWELL LLP

3/2021

PROJECT REFERENCE NO. 15614.1075010	SHEET NO. RW05
Location and Surveys	
 TGS ENGINEERS 804-C N. LAFAYETTE ST SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275	
PROJECT SURVEYOR	
 DocuSigned by: Matthew Cornwell E8038F11473E475 3/11/2021	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



REVISIONS

I:\MAR_2021\1105
 C:\Users\mccornwell\OneDrive\Documents\126\1-26-Howard Gap.ls.rw05.dgn
 MATTHEW CORNWELL

I, Matthew T. Cornwell, a Professional Land Surveyor in the state of North Carolina hereby certify to the best of my knowledge and belief that the following work item(s) (Base map Compilation, R/W Staking) performed under my responsible charge meet NCDOT Survey Standards as directed in the NCDOT Location & Surveys guidelines and procedures.

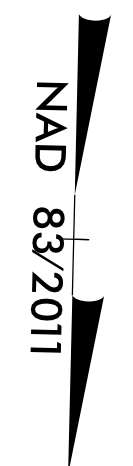
I further certify that the data compiled came from available surveys/mapping performed by others and provided to me by NCDOT and do not certify to the accuracy or quality of the individual data sources.

I further certify that the right of way and permanent easement points shown herein and outlined in the tables shown hereon (localized coordinates, station/offset) have been checked and are accurate representations of the right of way and permanent easement points depicted on the corresponding highway plans. I also certify that the right of way and permanent easement points shown herein have been field monumented under my supervision from existing survey control provided by others; that the depicted property data shown herein were surveyed by others; and these monuments denote the right of way and easement boundaries at the time of staking which may be subject to change due to right of way revisions (See deeds for final determination).

Witness my original signature, registration number and seal this 11th day of March, 2021.

DocuSigned by:
Matthew Cornwell
 E8038F11473E475
 Professional Land Surveyor
 3/11/2021
 L-4775
 PLS #
 Seal

- 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 3/1/2021 TO 3/8/2021.




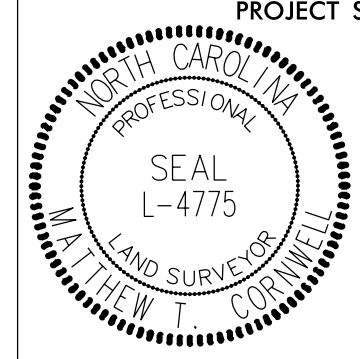
-HGR- CURVE DATA

PI Sta 45+86.42	PI Sta 50+90.24	PI Sta 53+74.76	PI Sta 56+52.71
$\Delta = 24^\circ 00' 28.0''$ (LT)	$\Delta = 10^\circ 08' 44.8''$ (LT)	$\Delta = 13^\circ 18' 26.3''$ (RT)	$\Delta = 12^\circ 50' 07.5''$ (LT)
D = 19' 45' 25.8"	D = 5' 06' 56.5"	D = 6' 44' 26.4"	D = 5' 37' 02.0"
L = 121.51'	L = 198.33'	L = 197.42'	L = 228.50'
T = 61.66'	T = 99.42'	T = 99.16'	T = 114.73'
R = 290.00'	R = 1,120.00'	R = 850.00'	R = 1,020.00'

-I26- CURVE DATA

PIs Sta 466+13.01	PI Sta 469+36.39	PIs Sta 472+59.68
$\Theta_s = 0^\circ 30' 00.0''$	$\Delta = 2^\circ 34' 00.0''$ (LT)	$\Theta_s = 0^\circ 30' 00.0''$
Ls = 200.00'	D = 0' 30' 00.0"	Ls = 200.00'
LT = 133.33'	L = 513.33'	LT = 133.33'
ST = 66.67'	T = 256.71'	ST = 66.67'
	R = 11,459.16'	

NE
TR
G 742

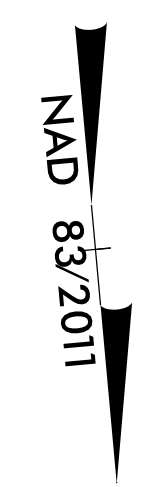
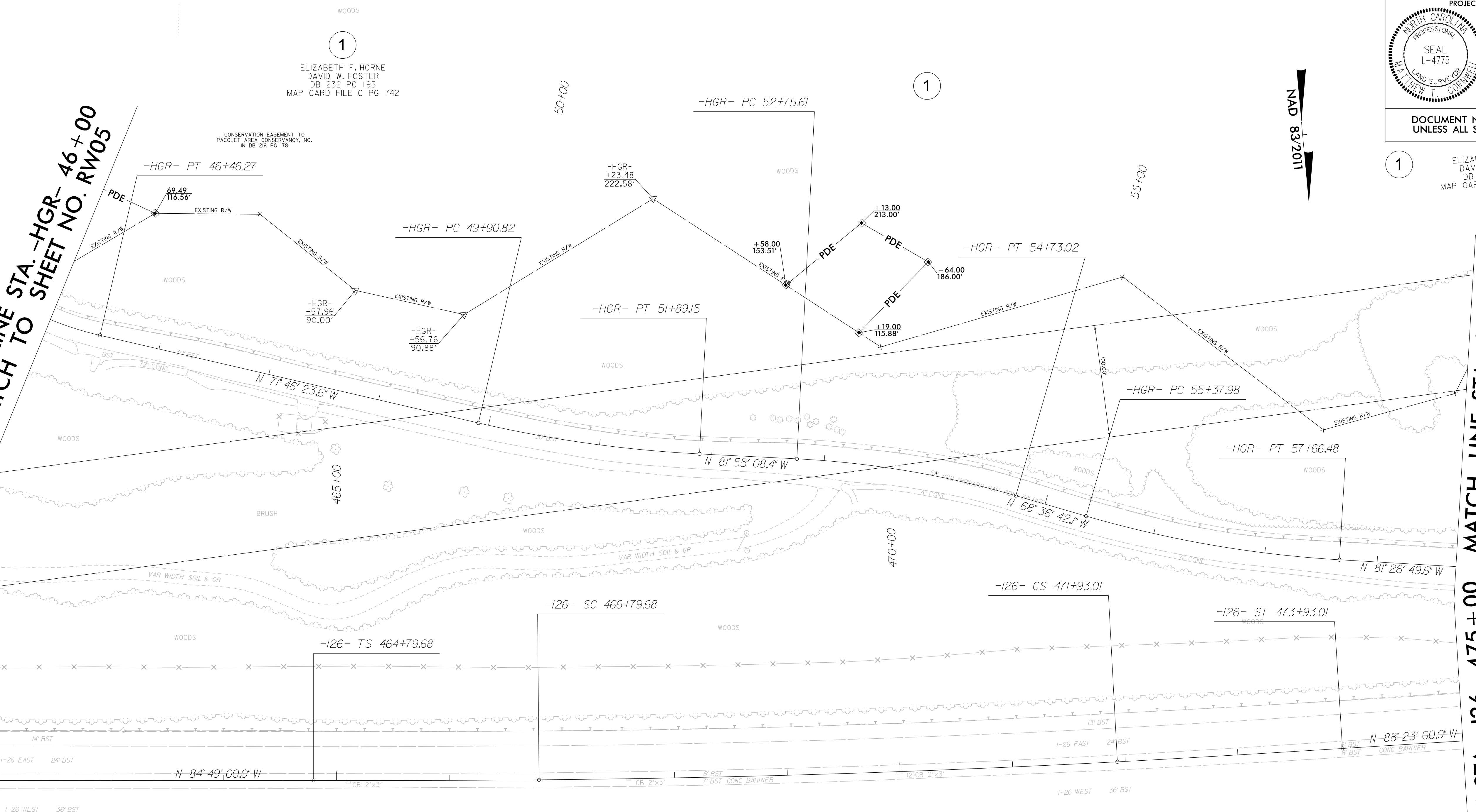
PROJECT REFERENCE NO. 15614.1075010	SHEET NO. RW06
Location and Surveys	
 TGS ENGINEERS 804-C N. LAFAYETTE ST SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275	
PROJECT SURVEYOR	
 SEAL L-4775 NORTH CAROLINA PROFESSIONAL LAND SURVEYOR MATTHEW T. CORNWELL	Documented by: Matthew Cornwell EBO36F11473E475... 3/11/2021
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

MATCH LINE STA. -HGR- 46+00
 MATCH TO SHEET NO. RW05

MATCH LINE STA. -I26- 462+00
 MATCH TO SHEET NO. RW05

MATCH LINE STA. -HGR- 58+70
 MATCH TO SHEET NO. RW07

MATCH LINE STA. -I26- 475+00
 MATCH TO SHEET NO. RW07



I, Matthew T. Cornwell, a Professional Land Surveyor in the state of North Carolina hereby certify to the best of my knowledge and belief that the following work item(s) (Base map compilation, R/W Staking) performed under my responsible charge meet NCDOT Survey Standards as directed in the NCDOT Location & Surveys guidelines and procedures.

I further 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.

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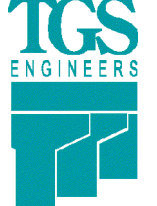
Witness my original signature, registration number and seal this 11th day of March, 2021.

Documented by: **Matthew Cornwell** 3/11/2021
 EBO36F11473E475... L-4775
 Professional Land Surveyor PLS Seal

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 3/1/2021 TO 3/8/2021 .

Location and Surveys



TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

PROJECT SURVEYOR



DocuSigned by:
Matthew Cornwell
EBO36F11473E475

3/11/2021

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

NAD
83/2011

-I26- CURVE DATA				-HGR- CURVE DATA			
Pls Sta 477+79.15	Pls Sta 479+97.10	Pls Sta 482+15.38	Pls Sta 487+91.25	Pls Sta 61+19.38	Pls Sta 66+64.68	Pls Sta 71+11.33	Pls Sta 71+73.19
$\Theta_s = 8^{\circ} 00' 00.0"$	$\Delta = 6^{\circ} 47' 00.0" (RT)$	$\Theta_s = 8^{\circ} 00' 00.0"$	$\Theta_s = 4^{\circ} 30' 00.0"$	$\Delta = 9^{\circ} 40' 19.5" (LT)$	$\Delta = 26^{\circ} 18' 14.6" (RT)$	$\Delta = 10^{\circ} 00' 42.7" (LT)$	$\Delta = 39^{\circ} 18' 35.0" (LT)$
Ls = 400.00'	D = 4' 00' 00.0"	Ls = 400.00'	Ls = 300.00'	D = 3' 53' 51.6"	D = 4' 22' 25.4"	D = 19' 05' 54.9"	D = 57' 17' 44.8"
LT = 266.94'	L = 169.58'	LT = 266.94'	LT = 200.06'	L = 248.15'	L = 601.41'	L = 52.42'	L = 68.61'
ST = 133.58'	T = 84.89'	ST = 133.58'	ST = 100.06'	T = 124.37'	T = 306.10'	T = 26.28'	T = 35.72'
	R = 1,432.39'			R = 1,470.00'	R = 1,310.00'	R = 300.00'	R = 100.00'

MATCH LINE STA. -I26- 475+00 MATCH LINE STA. -HGR- 58+70
 MATCH TO SHEET NO. RW06 MATCH TO SHEET NO. RW06

MATCH LINE STA. -I26- 488+00
 MATCH TO SHEET NO. RW08



REVISIONS

I, Matthew T. Cornwell, a Professional Land Surveyor in the state of North Carolina hereby certify to the best of my knowledge and belief that the following work item(s) (Base map Compilation, R/W Staking) performed under my responsible charge meet NCDOT Survey Standards as directed in the NCDOT Location & Surveys guidelines and procedures.

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Witness my original signature, registration number and seal this 11th day of March, 2021.

DocuSigned by:
Matthew Cornwell
EBO36F11473E475
Professional Land Surveyor

3/11/2021

L-4775
PLS #

Seal

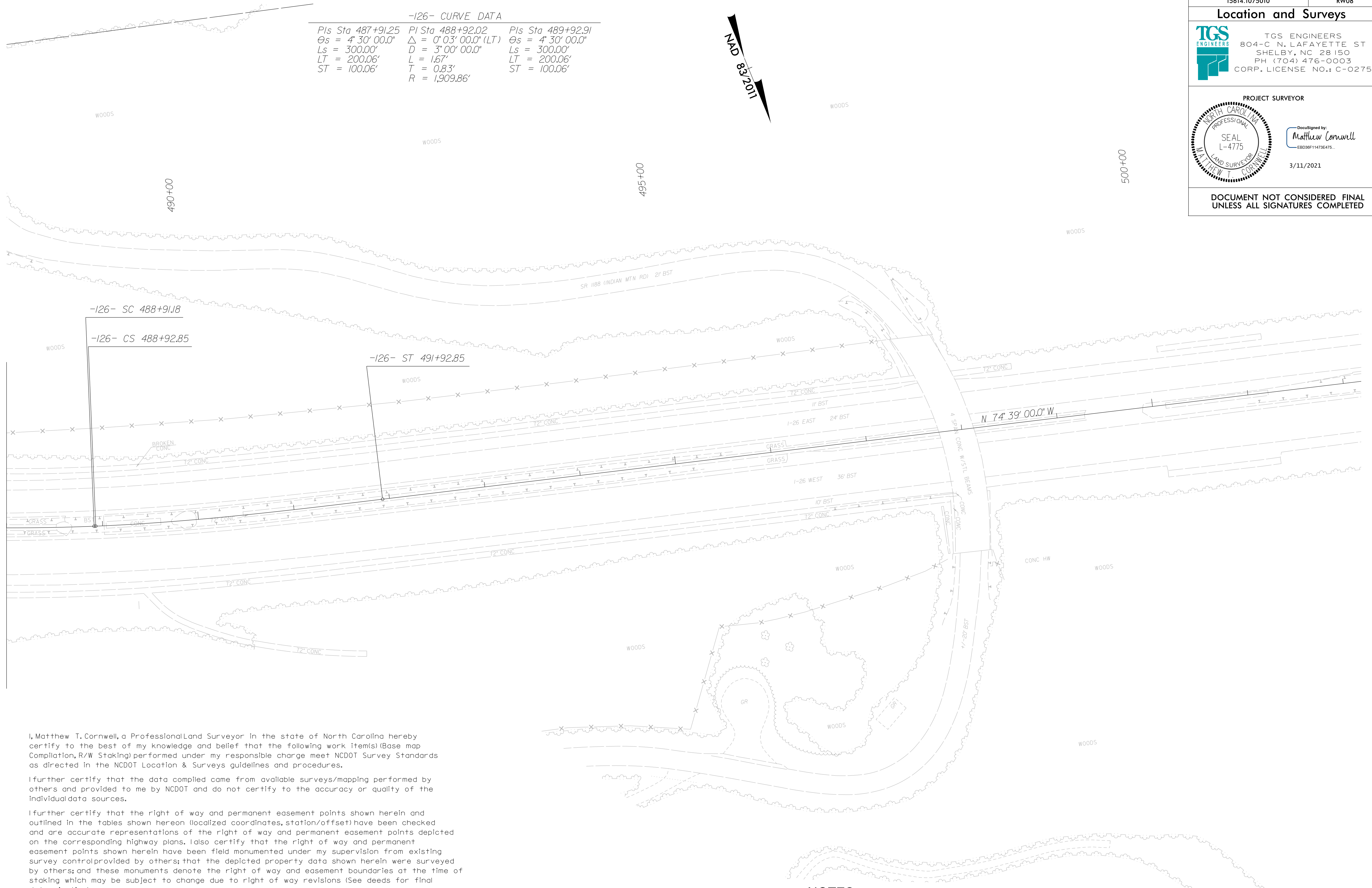
NOTES:

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 3/1/2021 TO 3/8/2021.

I:\MAR_2021\1100_C:\Users\mccornwell1\TGSSE\Desktop\I26\N1-26-Howard Gap.1s_rw07.dgn
 MAT MCCRORNEWELL
 mccornwell

REVISIONS

**MATCH LINE STA. -126- 488+00
MATCH TO SHEET NO. RW07**



-126- CURVE DATA


<i>Pls Sta</i> 487+91.25	<i>Pls Sta</i> 488+92.02	<i>Pls Sta</i> 489+92.91
$\Theta_s = 4^\circ 30' 00.0''$	$\Delta = 0^\circ 03' 00.0''$ (LT)	$\Theta_s = 4^\circ 30' 00.0''$
$L_s = 300.00'$	$D = 3^\circ 00' 00.0''$	$L_s = 300.00'$
$LT = 200.06'$	$L = 1.67'$	$LT = 200.06'$
$ST = 100.06'$	$T = 0.83'$	$ST = 100.06'$
	$R = 1,909.86'$	

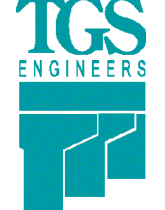
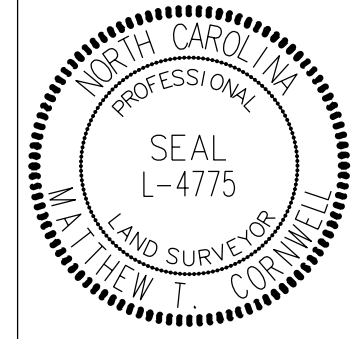
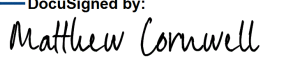
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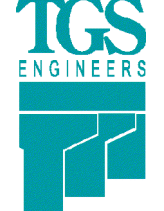

Witness my original signature, registration number and seal this 11th day of March, 2021.

DocuSigned by:

 3/11/2021
 L-4775
 Professional Land Surveyor PLS * Seal

PROJECT REFERENCE NO. 15614.1075010	SHEET NO. RW08
Location and Surveys	
 TGS ENGINEERS 804-C N. LAFAYETTE ST SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275	
PROJECT SURVEYOR	
	DocuSigned by:  EB038F11473E475 3/11/2021
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

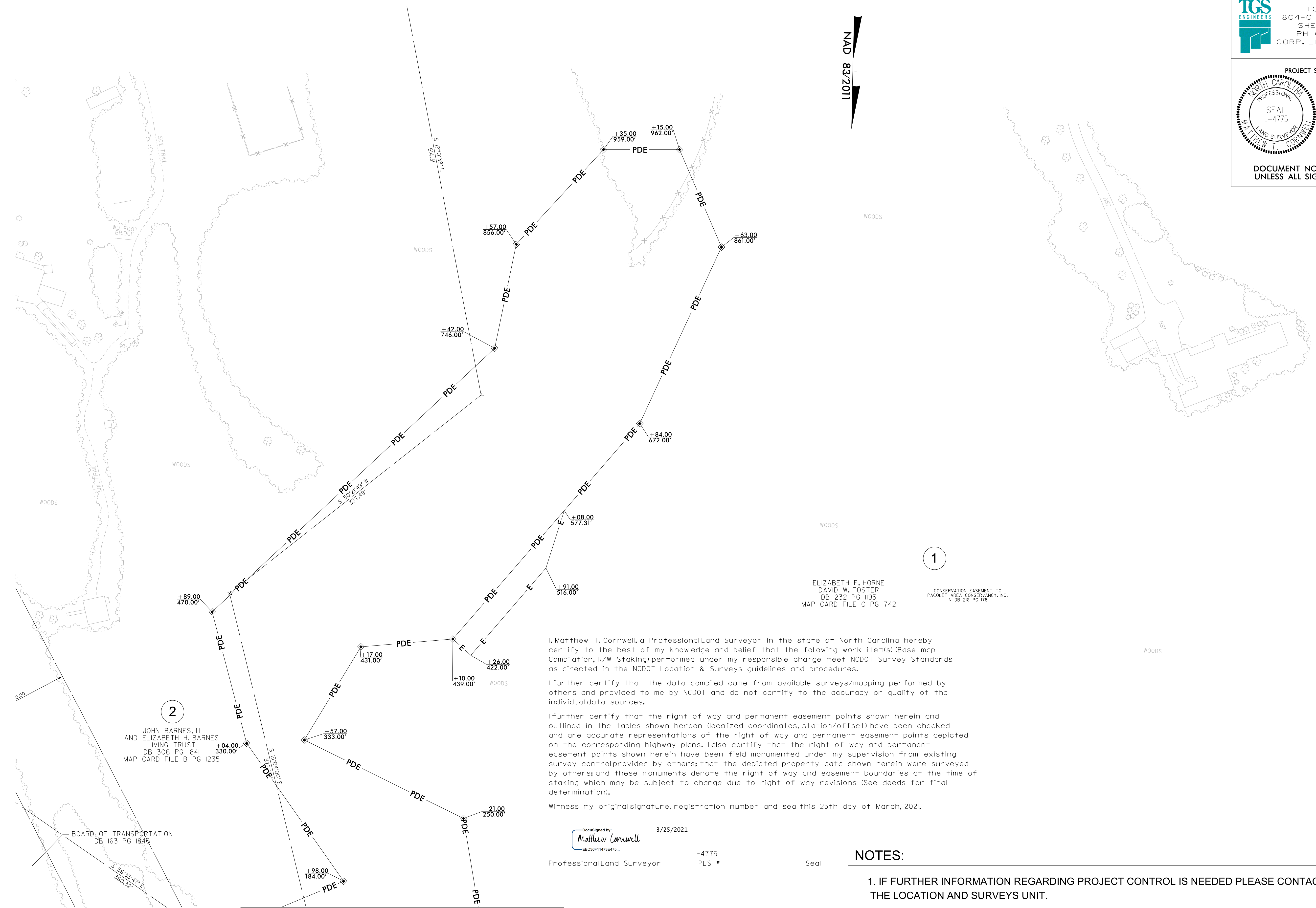
NOTES:

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 3/1/2021 TO 3/8/2021.

PROJECT REFERENCE NO.	SHEET NO.
15614.1075010	RW09
Location and Surveys	
 TGS ENGINEERS 804-C N. LAFAYETTE ST SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275	
PROJECT SURVEYOR  3/25/2021 DocuSigned by: Matthew Cornwell EBO39F11473E475...	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

REVISIONS

25-MAR-2021 09:20
S:\Survey\Projects\ncdot\1-26-HoGap\RW Staking\REVISED_210325\1-26-HoGap\RW Staking\1-26-HoGap.rw09.dgn
Matthew Cornwell
Map



NAD 83/2011

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JOHN BARNES, III
AND ELIZABETH H. BARNES
LIVING TRUST
DB 306 PG 1841
MAP CARD FILE B PG 1235

BOARD OF TRANSPORTATION
DB 163 PG 1845

ELIZABETH F. HORNE
DAVID W. FOSTER
DB 232 PG 1195
MAP CARD FILE C PG 742

CONSERVATION EASEMENT TO
FACOLET AREA CONSERVANCY, INC.
IN DB 216 PG 178

I, Matthew T. Cornwell, a Professional Land Surveyor in the state of North Carolina hereby certify to the best of my knowledge and belief that the following work item(s) (Base map Compilation, R/W Staking) performed under my responsible charge meet NCDOT Survey Standards as directed in the NCDOT Location & Surveys guidelines and procedures.

I further 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.

I further certify that the right of way and permanent easement points shown herein and outlined in the tables shown hereon (localized coordinates, station/offset) have been checked and are accurate representations of the right of way and permanent easement points depicted on the corresponding highway plans. I also certify that the right of way and permanent easement points shown herein have been field monumented under my supervision from existing survey control provided by others; that the depicted property data shown herein were surveyed by others; and these monuments denote the right of way and easement boundaries at the time of staking which may be subject to change due to right of way revisions (See deeds for final determination).

Witness my original signature, registration number and seal this 25th day of March, 2021.

DocuSigned by:
Matthew Cornwell
EBO39F11473E475...
Professional Land Surveyor

3/25/2021

L-4775
PLS #

Seal

NOTES:

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MATCH LINE
MATCH TO SHEET NO. RW05