

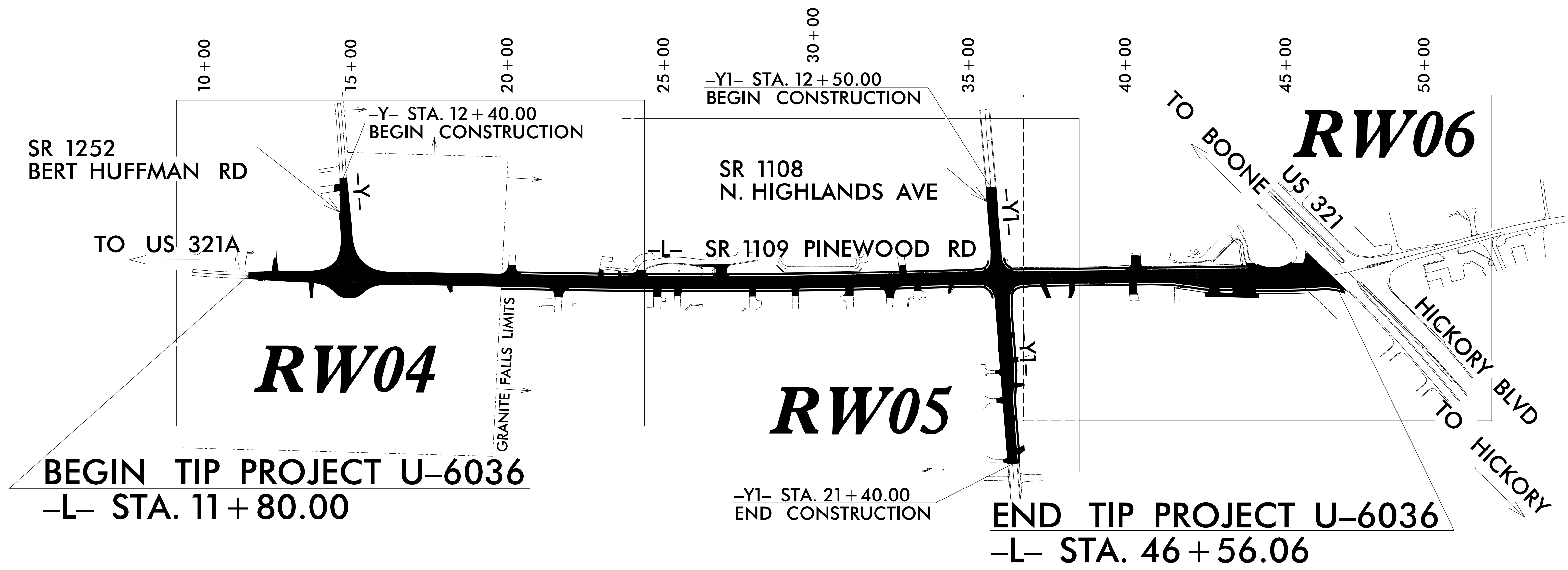
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-6036	RW01	

**TIP PROJECT: U-6036**

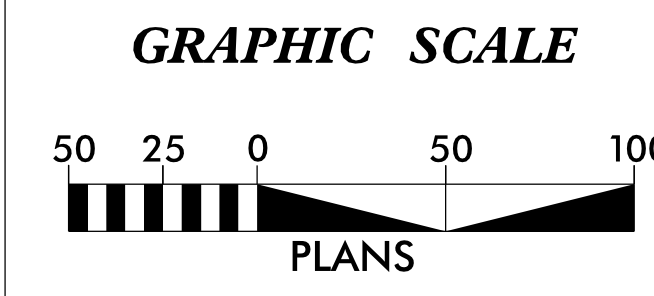
STATE OF NORTH CAROLINA  
 DIVISION OF HIGHWAYS

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

**CALDWELL 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 "GPS 5" WITH NAD 83/NSRS 2011 STATE PLANE GRID COORDINATES OF NORTHING: 759,566.8280(ft) EASTING: 1,278,457.627(ft) ELEVATION: 1,162.15(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999869711

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS 5" TO -L- STATION 11+80.00 IS S 84°32'57.8" W 3,118.70(ft)

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

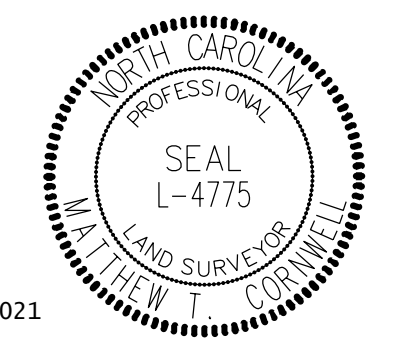
Prepared in the Office of:

**TGS ENGINEERS**  
 201 WEST MARION STREET  
 SUITE 200  
 SHELBY, NC 28150  
 PH (704) 476-0003  
 CORP. LICENSE NO.: C-0275

2024 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:** 6/26/2019  
**LETTING DATE:** 5/28/2024

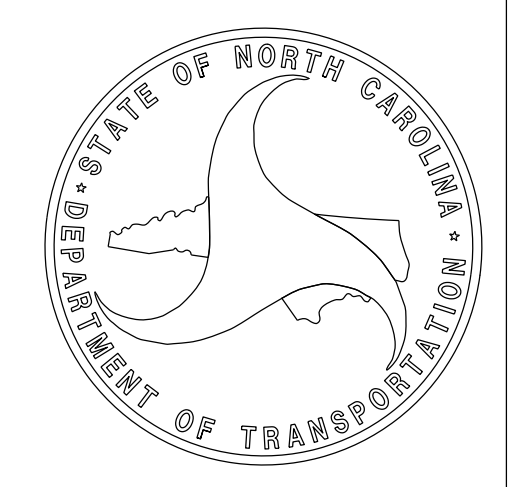
**PROFESSIONAL LAND SURVEYOR**



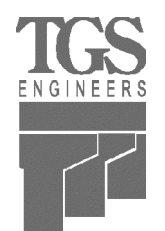
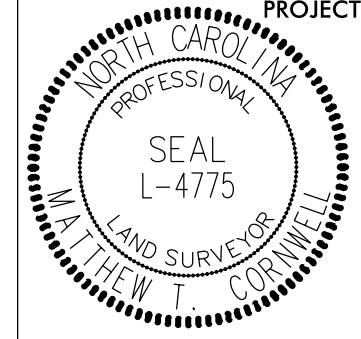

DocuSigned by:  
 Matthew Cornwell  
 EB038F11473E475...

2/9/2021

SIGNATURE: Date:



# PROPOSED ALIGNMENT CONTROL SHEET

PROJECT REFERENCE NO. U-6036	SHEET NO. RW02D-1
<b>Location and Surveys</b>	
 TGS ENGINEERS 201 WEST MARION STREET SUITE 200 SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275	
PROJECT SURVEYOR	
 DocuSigned by:  EBD36F11473E475... 2/9/2021	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

REVISIONS

L

TYPE	STATION	NORTH	EAST
POT	10+00.00	759289.9557	1275174.1109
PC	10+50.86	759283.3461	1275224.5429
PT	11+58.15	759272.2633	1275331.2443
PC	21+44.73	759196.6930	1276314.9204
PT	32+96.30	759135.4955	1277464.7653
PC	34+26.99	759131.6186	1277595.3927
PT	34+99.57	759128.9389	1277667.9246
PC	43+27.22	759092.3794	1278494.7673
PRC	45+84.32	759073.8292	1278751.1624
PT	47+10.87	759079.9579	1278877.1002
POT	52+19.55	759179.7762	1279375.8871

Y

TYPE	STATION	NORTH	EAST
POT	10+00.00	759805.2012	1275669.6584
PC	10+64.59	759740.6495	1275671.8186
PT	11+80.86	759624.4015	1275673.9384
POT	15+59.41	759245.8484	1275675.0796

Y1

TYPE	STATION	NORTH	EAST
POT	10+00.00	759666.9097	1277742.8579
PC	17+16.86	758950.2418	1277759.2412
PT	19+00.03	758767.1091	1277763.0920
POT	22+00.00	758467.1928	1277768.8490

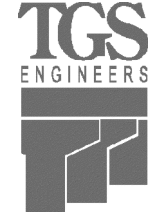
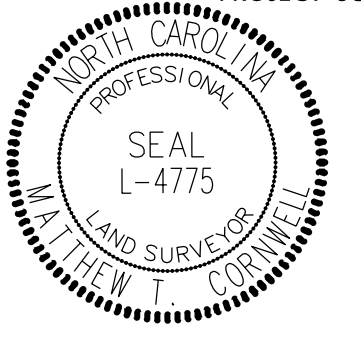

Y2

TYPE	STATION	NORTH	EAST
POT	10+00.00	759347.1725	1278635.5745
PC	14+35.10	759024.2556	1278927.1817
PT	18+48.04	758707.2996	1279191.7010

**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.	SHEET NO.
U-6036	RW03E-1
<b>Location and Surveys</b>	
 TGS ENGINEERS 201 WEST MARION STREET SUITE 200 SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275	
PROJECT SURVEYOR	
 SEAL L-4775 LAND SURVEYOR MATTHEW T. CORNWELL	
DocuSigned by:  E8D39F1473E475... 2/9/2021	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
L	11+80.00	-19.98	759290.5135	1275354.5592
L	11+80.00	-30.00	759300.5016	1275355.3265
L	11+86.95	20.02	759250.0919	1275358.4254
L	11+87.34	30.00	759240.1159	1275358.0453
L	13+90.00	-30.00	759284.4159	1275564.7095
L	13+90.00	30.00	759224.5922	1275560.1136
L	14+74.00	110.00	759138.3929	1275637.7389
L	15+34.00	110.00	759133.7970	1275697.5627
L	16+40.00	-30.00	759265.2662	1275813.9750
L	16+40.00	30.00	759205.4425	1275809.3791
L	21+44.73	-30.00	759226.6048	1276317.2184
L	21+44.73	30.00	759166.7811	1276312.6225
L	21+47.38	30.00	759166.5780	1276315.2678
L	22+07.35	30.00	759162.0584	1276375.1425
L	28+43.00	-30.00	759183.0994	1277013.2552
L	28+75.00	-65.00	759216.5428	1277046.8197
L	29+02.00	-40.00	759190.3222	1277072.5754
L	31+38.00	-40.00	759180.6769	1277307.9917
L	31+57.00	-50.00	759189.9928	1277327.3021
L	31+67.00	-30.00	759169.6542	1277336.5767
L	32+10.93	30.00	759108.1935	1277378.4368
L	32+71.25	30.00	759106.2656	1277438.8062
L	32+96.30	-30.00	759165.4823	1277465.6553
L	34+90.00	-30.01	759159.3310	1277659.6301
L	34+99.57	30.00	759098.9681	1277666.5994
L	35+16.00	-33.00	759161.1810	1277685.7948
L	36+60.00	-33.57	759155.3941	1277829.6797
L	36+60.00	35.00	759086.8865	1277826.6505
L	37+00.00	30.00	759090.1147	1277866.8324
L	37+39.88	-30.00	759148.2945	1277909.3248
L	39+99.93	-30.00	759136.8074	1278169.1204
L	40+59.93	-30.00	759134.1569	1278229.0641
L	40+80.00	30.00	759073.3291	1278246.4614
L	42+50.00	60.00	759035.8490	1278414.9703
L	43+27.22	60.00	759032.4379	1278492.1169
L	43+27.22	-30.00	759122.3501	1278496.0924
L	43+71.17	-30.00	759120.1886	1278540.2722
L	45+84.32	60.00	759014.1305	1278745.1568
L	46+06.39	60.00	759012.2615	1278770.2647

MAGNAIL

MAGNAIL

MAGNAIL

MAGNAIL

MAGNAIL

EXISTING R/W MONUMENT

MAGNAIL

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
Y	12+40.00	30.00	759565.1710	1275644.1169
Y	12+40.00	20.01	759565.2011	1275654.1106
Y	12+40.00	-19.99	759565.3217	1275694.1104
Y	12+40.00	-30.00	759565.3519	1275704.1166
Y	14+48.00	30.00	759357.1719	1275644.7439
Y	14+48.00	-30.00	759357.3528	1275704.7436

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
Y1	12+50.00	20.00	759416.5179	1277728.5767
Y1	12+50.00	-20.00	759417.4321	1277768.5663
Y1	12+50.00	-30.00	759417.6606	1277778.5637
Y1	12+50.00	30.00	759416.2894	1277718.5793
Y1	14+67.00	30.00	759199.3461	1277723.5387
Y1	14+74.00	-30.00	759193.7191	1277783.6830
Y1	16+08.00	30.00	759058.3829	1277726.7612
Y1	16+13.00	-45.00	759055.0983	1277801.8559
Y1	16+50.00	-40.00	759017.9937	1277797.7028
Y1	17+16.86	-40.00	758951.1560	1277799.2307
Y1	17+16.86	30.00	758949.5562	1277729.2490
Y1	18+40.00	-40.00	758827.9414	1277801.8956
Y1	19+00.03	30.00	758766.5334	1277733.0975
Y1	19+40.00	-30.00	758727.7206	1277793.8536
Y1	21+43.23	30.00	758523.3720	1277737.7651
Y1	21+43.48	19.48	758523.3277	1277748.2889
Y1	21+57.56	-20.53	758510.0203	1277788.5639
Y1	21+58.10	-30.00	758509.6647	1277798.0392

MAGNAIL

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 9th day of February, 2021.

DocuSigned by:  
  
 E8D39F1473E475...  
 Professional Land Surveyor

2/9/2021

L-4775  
PLS #

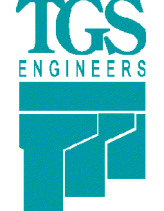
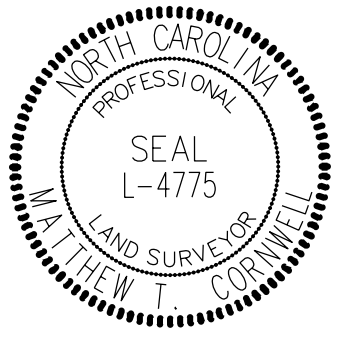
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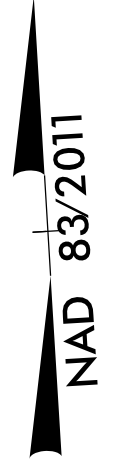
### NOTES:

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 1/21/2021 TO 2/1/2021 .

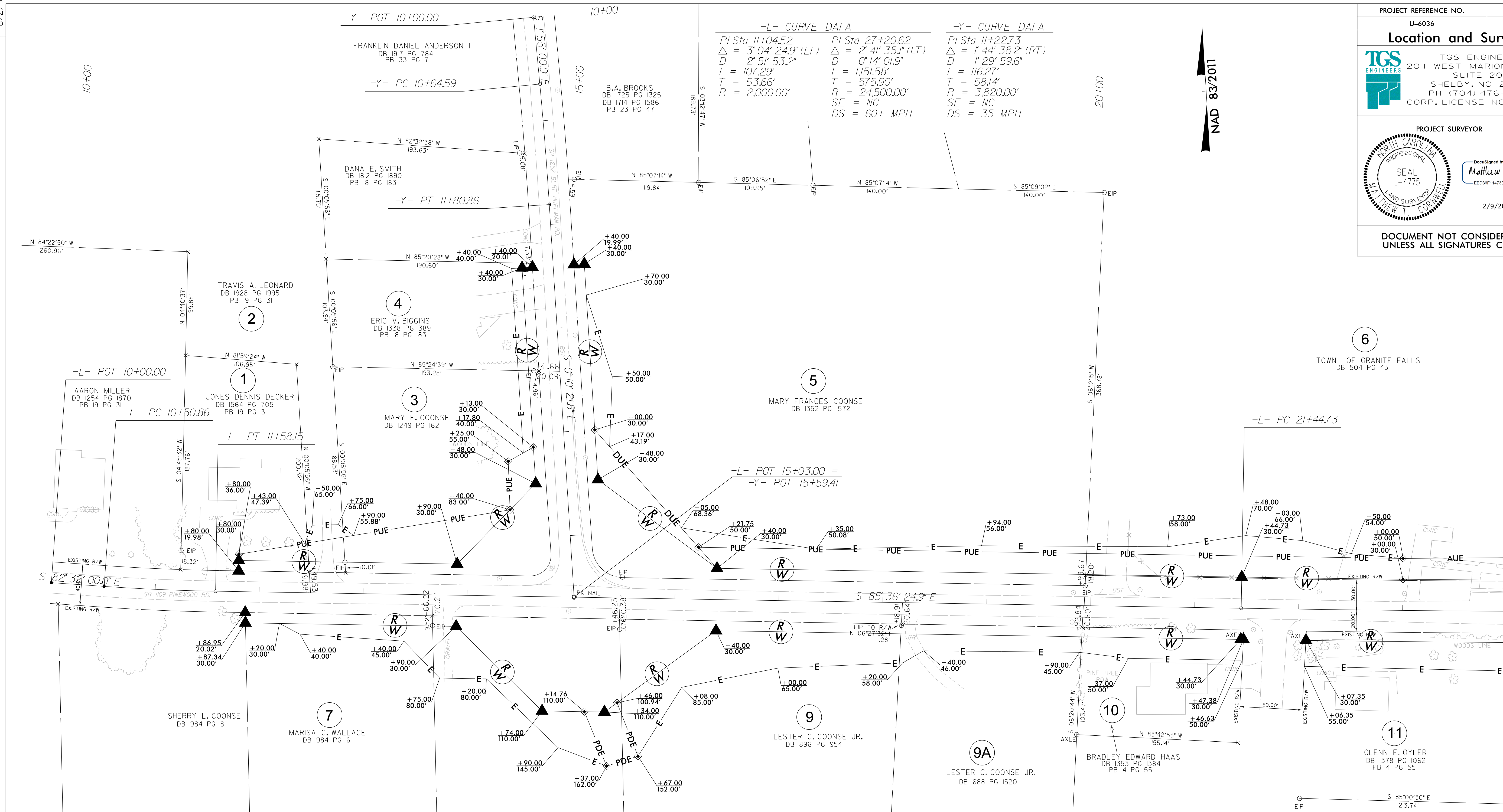
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 mccornwell



PROJECT REFERENCE NO. U-6036	SHEET NO. RW04
<b>Location and Surveys</b>	
 TGS ENGINEERS 201 WEST MARION STREET SUITE 200 SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275	
PROJECT SURVEYOR	
 DocuSigned by: <b>Matthew Cornwell</b> EBO39F1473E475... 2/9/2021	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



-L- CURVE DATA		-Y- CURVE DATA
PI Sta 11+04.52	PI Sta 27+20.62	PI Sta 11+22.73
$\Delta = 3^{\circ}04'24.9"$ (LT)	$\Delta = 2^{\circ}41'35.1"$ (LT)	$\Delta = 1^{\circ}44'38.2"$ (RT)
$D = 2^{\circ}51'53.2"$	$D = 0^{\circ}14'01.9"$	$D = 1^{\circ}29'59.6"$
$L = 107.29'$	$L = 1,151.58'$	$L = 116.27'$
$T = 53.66'$	$T = 575.90'$	$T = 58.14'$
$R = 2,000.00'$	$R = 24,500.00'$	$R = 3,820.00'$
	SE = NC	SE = NC
	DS = 60+ MPH	DS = 35 MPH



MATCH LINE STA. -L- 24+00  
MATCH TO SHEET NO. RW05

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 9th day of February, 2021.

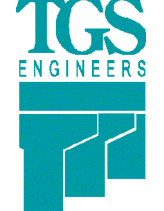


DocuSigned by:  
  
 EBO39F1473E475...  
 Professional Land Surveyor

2/9/2021  
 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 1/21/2021 TO 2/1/2021.

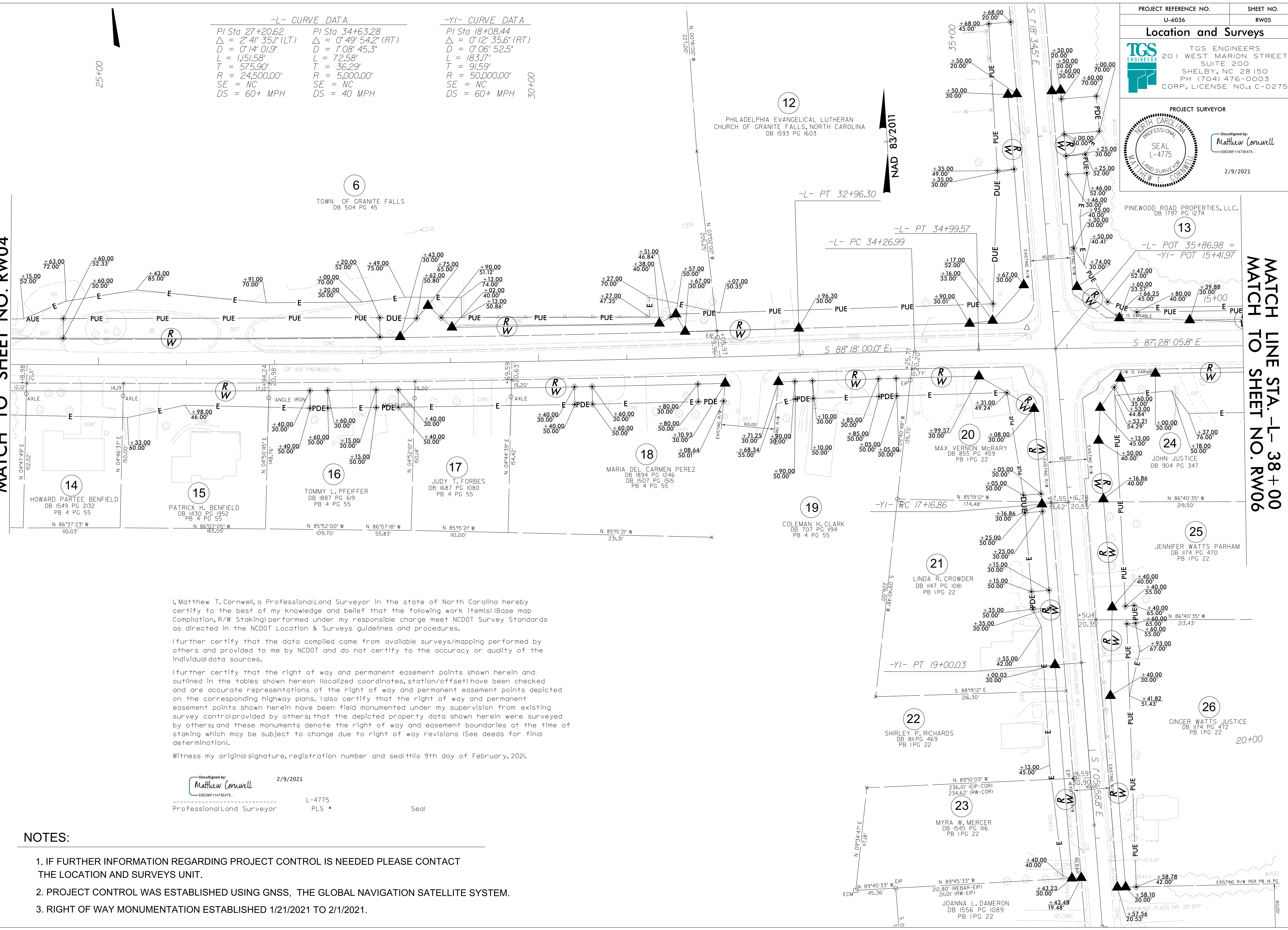
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 mccornwell

PROJECT REFERENCE NO.	SHEET NO.
U-6036	RW05
<b>Location and Surveys</b>	
 <b>TGS ENGINEERS</b> 201 WEST MARION STREET SUITE 200 SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275	
PROJECT SURVEYOR	
 SEAL L-4775 MATTHEW T. CORNWELL PROFESSIONAL LAND SURVEYOR NORTH CAROLINA	
DocuSigned by:  Matthew Cornwell EBD38F11473E475 2/9/2021	

-L- CURVE DATA		-YI- CURVE DATA	
PI Sta 27+20.62	PI Sta 34+63.28	PI Sta 18+08.44	
$\Delta = 2^{\circ} 41' 35.1''$ (LT)	$\Delta = 0^{\circ} 49' 54.2''$ (RT)	$\Delta = 0^{\circ} 12' 35.6''$ (RT)	
D = 0' 14' 01.9"	D = 1' 08' 45.3"	D = 0' 06' 52.5"	
L = 1151.58'	L = 72.58'	L = 183.17'	
T = 575.90'	T = 36.29'	T = 91.59'	
R = 24500.00'	R = 5000.00'	R = 50000.00'	
SE = NC	SE = NC	SE = NC	
DS = 60+ MPH	DS = 40 MPH	DS = 60+ MPH	

MATCH LINE STA. -L- 24+00  
MATCH TO SHEET NO. RW04

MATCH LINE STA. -L- 38+00  
MATCH TO SHEET NO. RW06




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 9th day of February, 2021.

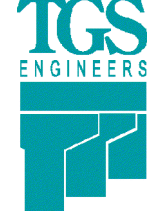
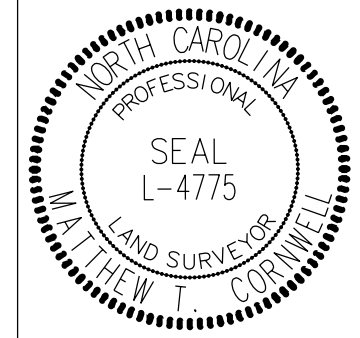
DocuSigned by:  
  
 Matthew Cornwell  
 EBD38F11473E475  
 Professional Land Surveyor  
 L-4775  
 PLS \*  
 Seal

**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 1/21/2021 TO 2/1/2021.

REVISIONS

09-FEB-2021 08:21  
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 mccornwell MAT MCCORNWELL L L P

PROJECT REFERENCE NO. U-6036	SHEET NO. RW06
<b>Location and Surveys</b>	
 <b>TGS ENGINEERS</b> 201 WEST MARION STREET SUITE 200 SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275	
PROJECT SURVEYOR	
 DocuSigned by: <b>Matthew Cornwell</b> EBO30F11473E475 2/9/2021	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

-L- CURVE DATA

PI Sta 44+55.81	PI Sta 46+48.07
$\Delta = 3^{\circ}12'46.1''$ (RT)	$\Delta = 17^{\circ}03'40.3''$ (LT)
$D = 1^{\circ}14'58.7''$	$D = 13^{\circ}28'52.9''$
$L = 257.10'$	$L = 126.55'$
$T = 128.58'$	$T = 63.75'$
$R = 4,585.00'$	$R = 425.00'$
SE = NC	
DS = 35 MPH	

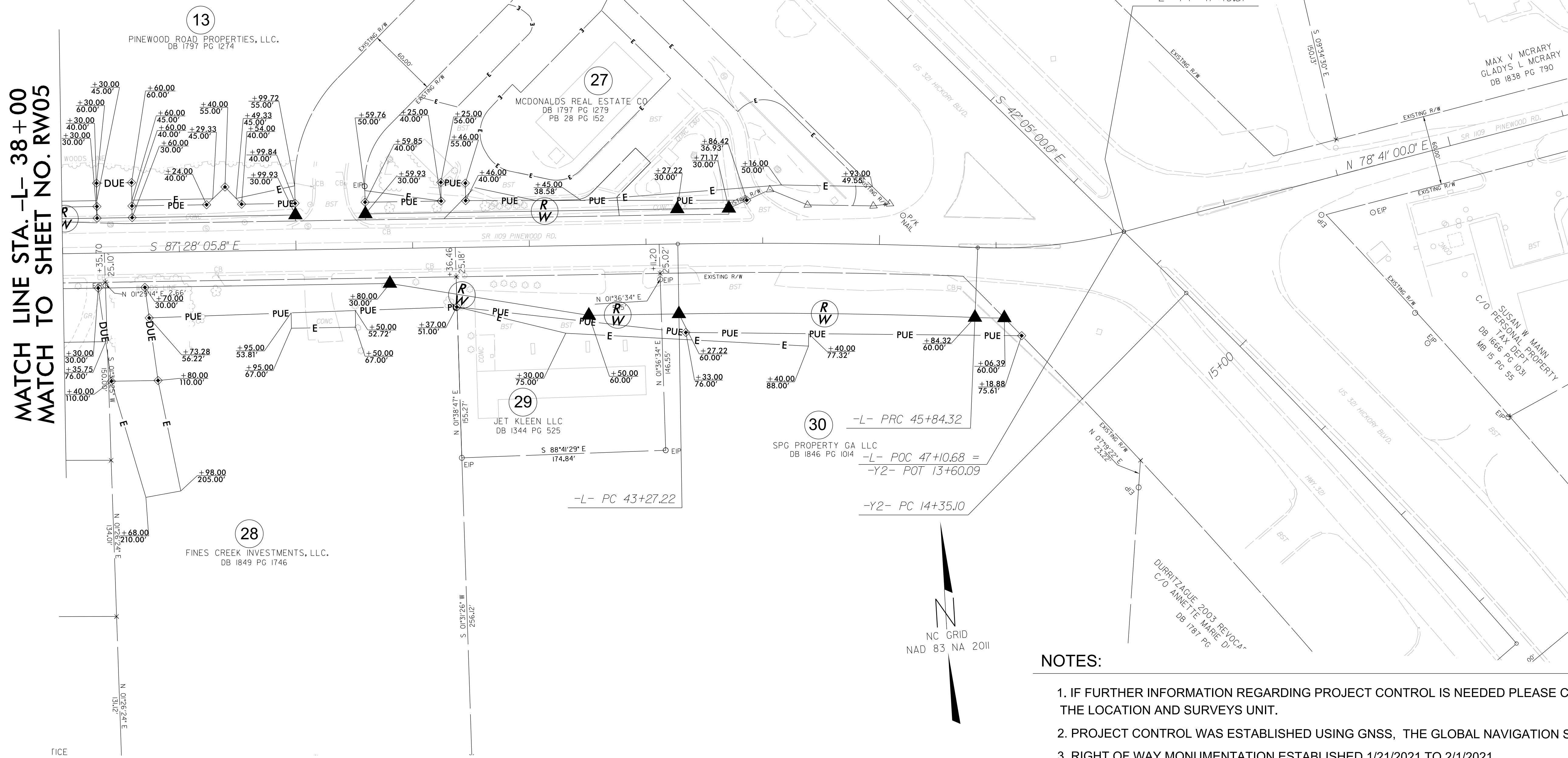
I, Matthew T. Cornwell, a Professional Land Surveyor in the state of North Carolina hereby certify to the best of my knowledge and belief that the following work item(s) (Base map Compilation, R/W Staking) performed under my responsible charge meet NCDOT Survey Standards as directed in the NCDOT Location & 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 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 9th day of February, 2021.

DocuSigned by:  
**Matthew Cornwell**  
 EBO30F11473E475  
 2/9/2021  
 L-4775  
 Professional Land Surveyor PLS #



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 1/21/2021 TO 2/1/2021.

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 mccornwell MAT MCDORNWELL.LLAP.TOP