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09/06/19

TIP PROJECT: U-2581BA

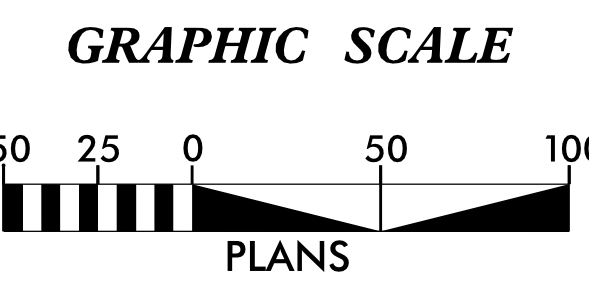
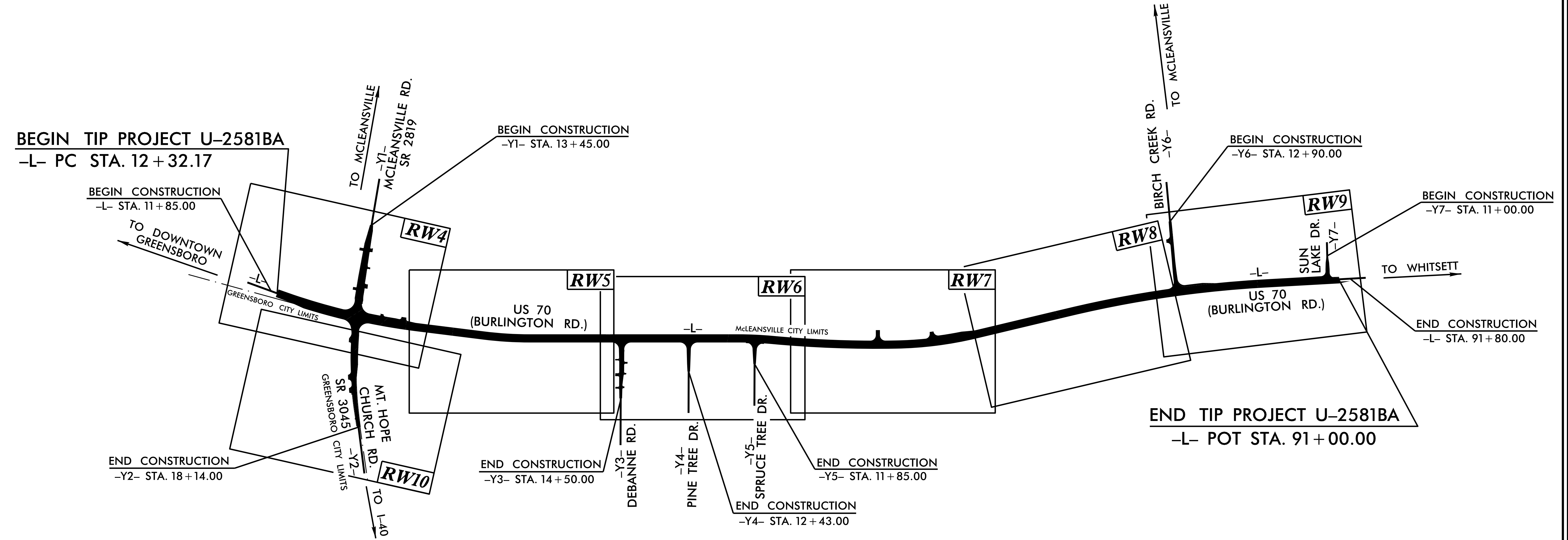
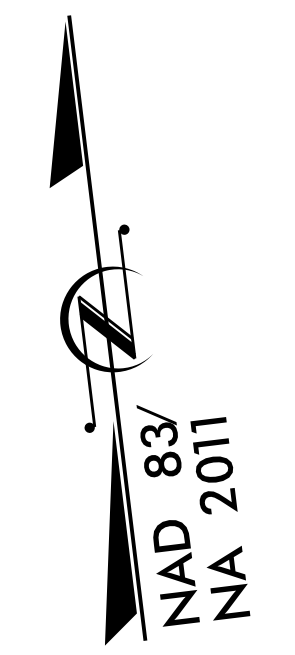
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2581BA	RW01	16

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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

GUILFORD COUNTY

US 70 (BURLINGTON ROAD) FROM WEST OF
SR 3045 (MT. HOPE CHURCH ROAD)/
SR 2819 (MCLEANSVILLE ROAD) TO JUST EAST OF
SR 3175 (BIRCH CREEK ROAD)
GRADING, PAVING, DRAINAGE, SIGNALS AND CULVERT



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "GPS-9" WITH NAD 83/NSRS 2011 STATE PLANE GRID COORDINATES OF NORTHING: 842,283.813(ft) EASTING: 1,820,612.267(ft) ELEVATION: 646.810(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9999465352 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS-9" TO -L- STATION 10+00 IS N 67°41'22" W 24,167.51'(ft) ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88/GEOID G12NC

Prepared in the Office of:



2018 STANDARD SPECIFICATIONS

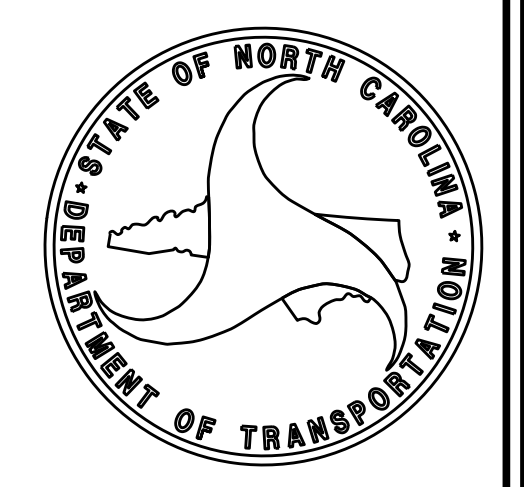
RIGHT OF WAY DATE:
OCTOBER 30, 2018

LETTING DATE:
OCTOBER 15, 2019

PROFESSIONAL LAND SURVEYOR



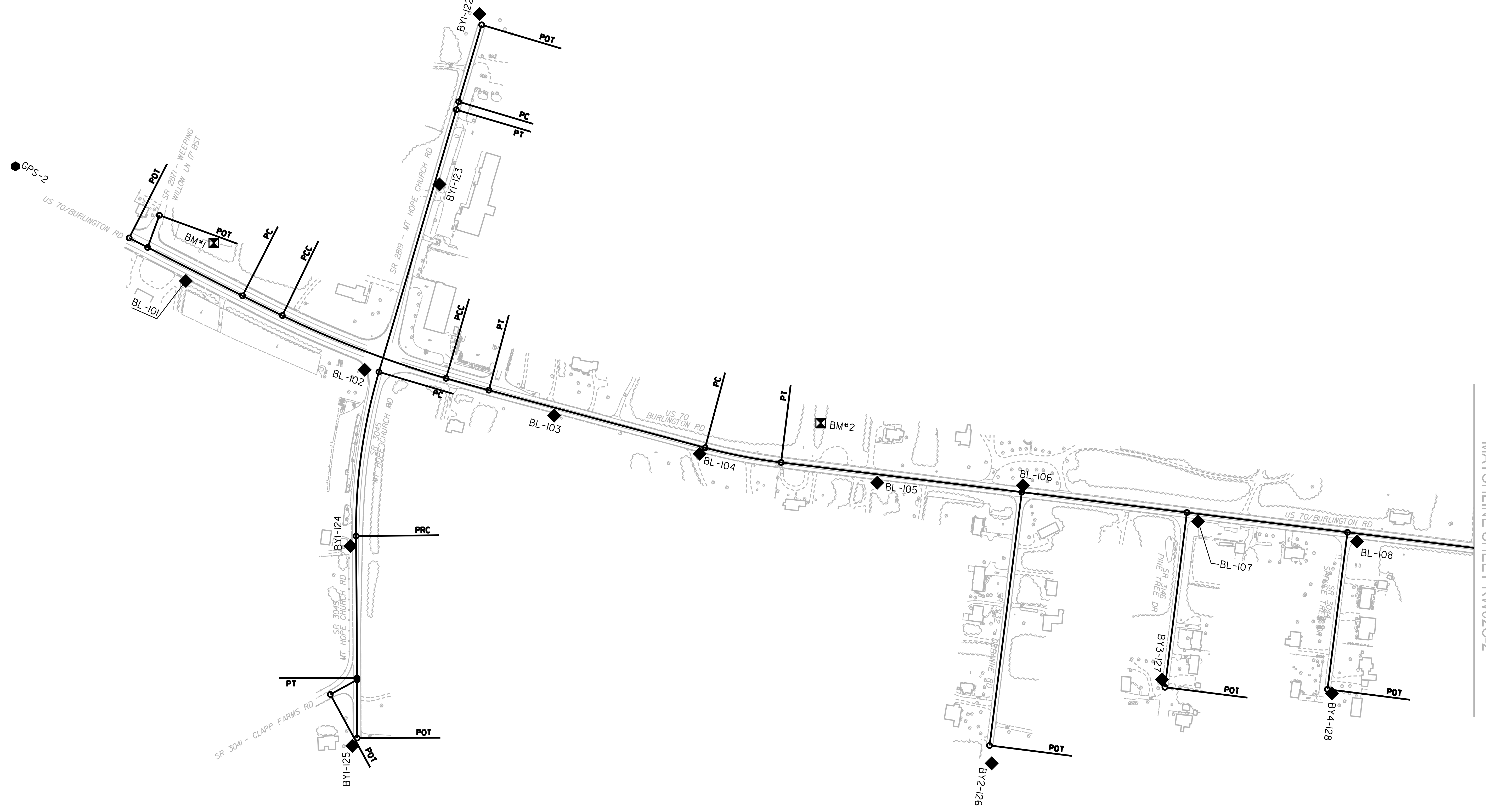
Rudolf A. Vanderveide Jr. 8/9/2019
SIGNATURE: Date:



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

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION



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.

6/2/19

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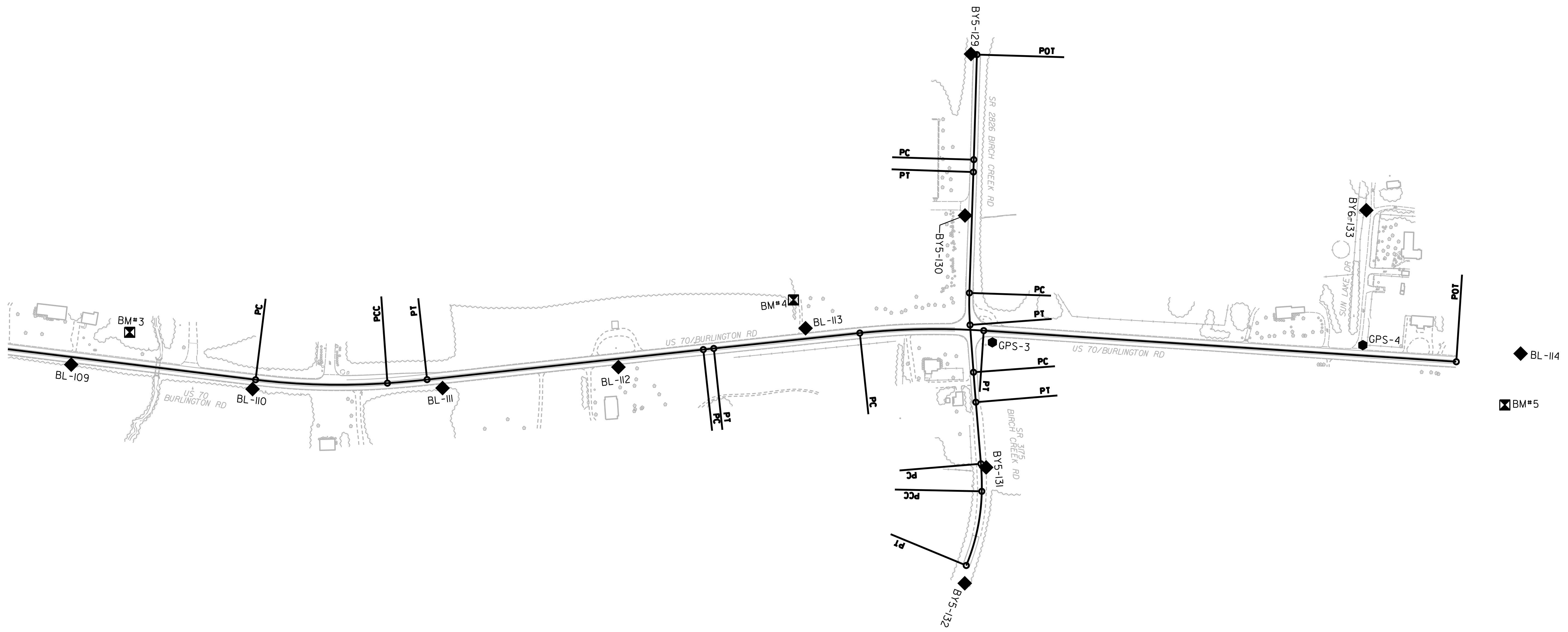
REVISIONS

MATCHLINE SHEET RW02C-2

PROJECT REFERENCE NO.	SHEET NO.
U-2581BA	RW02C-2
Location and Surveys	

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION



NOTES:

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 6/2/19

REVISIONS

SURVEY CONTROL SHEET

W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

BL	POINT	DESC.	NORTH	EAST	ELEVATION
	1	GPS-1	852035.8545	1796814.7589	727.16
	2	GPS-2	851672.6130	1797914.2920	734.84
	101	BL-101	851329.9000	1798423.2730	730.26
	102	BL-102	851064.7840	1798957.1120	743.12
	103	BL-103	850927.2750	1799523.3410	742.08
	104	BL-104	850813.6460	1799958.0650	731.13
	105	BL-105	850727.2190	1800488.8380	732.01
	106	BL-106	850719.2610	1800923.7140	727.21
	107	BL-107	850611.1140	1801447.4170	710.03
	108	BL-108	850551.1890	1801921.3740	695.79
	109	BL-109	850488.0180	1802452.2610	679.07
	110	BL-110	850418.3190	1802968.5770	679.59
	111	BL-111	850421.2540	1803509.5740	702.25
	112	BL-112	850480.9600	1804010.4070	721.51
	113	BL-113	850591.6660	1804543.2060	723.68
	3	GPS-3	850551.4370	1805075.2979	718.77
	4	GPS-4	850543.6000	1806130.0721	706.63
	114	BL-114	850519.4640	1806579.3160	690.76
	115	BL-115	850297.2350	1807152.2160	649.92
	116	BL-116	849993.3640	1807575.2530	644.68
	117	BL-117	849743.7700	1808021.9550	670.03
	118	BL-118	849434.1560	1808555.8810	692.56
	119	BL-119	849057.4570	1809166.3080	674.64
	5	GPS-5	848644.1310	1809813.7262	705.55
	6	GPS-6	848322.4120	1810901.9990	723.77
	120	BL-120	848002.1090	1811325.9730	721.10
	121	BL-121	847541.6840	1811677.0250	720.08

BY1	POINT	DESC.	NORTH	EAST	ELEVATION
	122	BY1-122	852128.1990	1799300.3490	734.84
	123	BY1-123	851618.4560	1799180.8960	738.08
	102	BL-102	851064.7840	1798957.1120	743.12
	124	BY1-124	850537.3790	1798915.1680	736.05
	125	BY1-125	849940.4070	1798920.5030	745.51

BY2	POINT	DESC.	NORTH	EAST	ELEVATION
	106	BL-106	850719.2610	1800923.7140	727.21
	126	BY2-126	849888.0520	1800830.2490	705.96

BY3	POINT	DESC.	NORTH	EAST	ELEVATION
	107	BL-107	850611.1140	1801447.4170	710.03
	127	BY3-127	850138.9710	1801339.0960	720.22

BY4	POINT	DESC.	NORTH	EAST	ELEVATION
	108	BL-108	850551.1890	1801921.3740	695.79
	128	BY4-128	850097.5190	1801846.6310	705.58

BY5	POINT	DESC.	NORTH	EAST	ELEVATION
	129	BY5-129	851372.8060	1805014.2440	702.54
	130	BY5-130	850912.8580	1804997.2170	706.54
	3	GPS-3	850551.4370	1805075.2979	718.77
	131	BY5-131	850195.2270	1805057.4630	722.95
	132	BY5-132	849865.1100	1804996.4550	716.33

BY6	POINT	DESC.	NORTH	EAST	ELEVATION
	133	BY6-133	850927.7050	1806139.9120	693.62
	4	GPS-4	850543.6000	1806130.0721	706.63

BY7	POINT	DESC.	NORTH	EAST	ELEVATION
	134	BY7-134	850517.8620	1807608.9970	649.56
	116	BL-116	849993.3640	1807575.2530	644.68

.....
 BM1 ELEVATION = 724.13
 N 851443 E 1798507
 BL STATION 22+96.00 139 LEFT
 RR SPIKE IN BASE OF 10" MAPLE

.....
 BM2 ELEVATION = 731.08
 N 850905 E 1800320
 BL STATION 42+42.00 149 LEFT
 RR SPIKE IN BASE OF 14" OAK

.....
 BM3 ELEVATION = 672.87
 N 850580 E 1802619
 BL STATION 65+72.00 114 LEFT
 RR SPIKE IN BASE OF 33" GUM

.....
 BM4 ELEVATION = 727.48
 N 850672 E 1804509
 BL STATION 85+13.00 86 LEFT
 RR SPIKE IN BASE OF 31" OAK

.....
 BM5 ELEVATION = 695.20
 N 850373 E 1806534
 BL STATION 105+31.00 148 RIGHT
 RR SPIKE IN BASE OF 12" PINE

.....
 BM6 ELEVATION = 683.31
 N 849322 E 1808556
 BL STATION 128+92.00 95 RIGHT
 RR SPIKE IN BASE OF 14" GUM

.....
 BM7 ELEVATION = 732.91
 N 848252 E 1810779
 BL STATION 153+55.00 103 RIGHT
 RR SPIKE IN BASE OF 15" PINE

NOTES:

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REVISIONS

6/2/99

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SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

EL									
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	851458.482	1798253.954							
LINE			S 62°56'59.4" E	380.33					
PC	851285.520	1798592.678							
CURVE			S 63°34'48.8" E	132.67	01°15'38.8"(LT)	00°57'01.2"	132.67	66.34	6029.08
PCC	851226.491	1798711.489							
CURVE			S 69°01'50.4" E	523.79	09°38'24.4"(LT)	01°50'17.9"	524.41	262.82	3116.79
PCC	851039.044	1799200.587							
CURVE			S 74°28'15.3" E	132.61	01°14'25.2"(LT)	00°56'07.1"	132.61	66.31	6125.86
PT	851003.540	1799328.357							
LINE			S 75°05'27.9" E	668.62					
PC	850831.515	1799974.472							
CURVE			S 79°01'42.8" E	231.20	07°52'29.8"(LT)	03°24'12.1"	231.39	115.88	1683.50
PT	850787.512	1800201.451							
LINE			S 82°57'57.7" E	2796.95					
PC	850445.003	1802977.347							
CURVE			S 88°31'13.0" E	375.51	11°06'30.7"(LT)	02°57'13.2"	376.09	188.64	1939.83
PCC	850435.307	1803352.727							
CURVE			N 84°51'46.6" E	113.40	02°07'30.0"(LT)	01°52'25.6"	113.41	56.71	3057.77
PT	850445.460	1803465.672							
LINE			N 83°48'01.7" E	791.03					
PC	850530.885	1804252.076							
CURVE			N 83°53'11.5" E	30.05	00°10'19.7"(RT)	00°34'22.6"	30.05	15.02	10000.00
PT	850534.085	1804281.951							
LINE			N 83°58'21.4" E	418.15					
PC	850577.992	1804697.789							
CURVE			N 88°52'15.8" E	352.91	09°47'48.7"(RT)	02°46'21.6"	353.34	177.10	2066.45
PT	850584.945	1805050.628							
LINE			S 86°13'49.9" E	1348.50					
POT	850496.291	1806396.213							

EY2									
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	852095.518	1799306.892							
LINE			S 16°35'05.5" W	239.76					
PC	851865.732	1799238.456							
CURVE			S 16°30'46.6" W	25.10	00°08'37.7"(LT)	00°34'22.6"	25.10	12.55	10000.00
PT	851841.668	1799231.322							
LINE			S 16°26'27.7" W	816.97					
PC	851058.104	1799000.097							
CURVE			S 07°56'20.7" W	495.32	17°00'14.0"(LT)	03°25'13.2"	497.14	250.41	1675.15
PCC	850567.533	1798931.683							
CURVE			S 00°22'23.1" E	424.25	00°22'46.3"(RT)	00°05'22.1"	424.25	212.12	64046.66
PT	850143.295	1798934.446							
LINE			S 00°10'59.9" E	179.36					
POT	849963.934	1798935.020							

EY7									
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	851371.167	1805031.203							
LINE			S 01°41'55.3" W	299.38					
PC	851071.914	1805022.328							
CURVE			S 01°47'58.9" W	35.26	00°12'07.3"(RT)	00°34'22.6"	35.26	17.63	10000.00
PT	851036.671	1805021.221							
LINE			S 01°54'02.6" W	344.61					
PC	850692.247	1805009.791							
CURVE			S 01°09'22.6" E	91.17	06°06'50.3"(LT)	06°42'11.2"	91.21	45.65	854.76
PT	850601.098	1805011.630							
LINE			S 04°12'47.7" E	135.12					
PC	850466.347	1805021.557							
CURVE			S 04°27'29.7" E	85.51	00°29'23.9"(LT)	00°34'22.6"	85.51	42.76	10000.00
PT	850381.092	1805028.204							
LINE			S 04°42'11.6" E	176.03					
PC	850205.653	1805042.638							
CURVE			S 01°46'16.7" E	78.51	05°51'49.8"(RT)	07°27'56.6"	78.54	39.31	767.45
PCC	850127.182	1805045.065							
CURVE			S 11°49'00.3" W	215.76	21°18'44.2"(RT)	09°49'14.6"	217.01	109.78	583.42
PT	850127.182	1805045.065							

EY1				
POINT	N	E	BEARING	DIST
POT	851526.346	1798344.345		
LINE			S 20°04'22.8" W	102.31
POT	851430.256	1798309.232		

EY3				
POINT	N	E	BEARING	DIST
POT	850137.575	1798934.464		
LINE			S 61°23'20.3" W	90.54
POT	850094.219	1798854.980		

EY4				
POINT	N	E	BEARING	DIST
POT	850698.794	1800920.476		
LINE			S 07°14'28.7" W	763.21
POT	849941.672	1800824.275		

EY5				
POINT	N	E	BEARING	DIST
POT	850637.938	1801413.685		
LINE			S 07°09'46.6" W	526.48
POT	850115.566	1801348.037		

EY6				
POINT	N	E	BEARING	DIST
POT	850578.762	1801893.287		
LINE			S 07°14'33.6" W	472.99
POT	850109.548	1801833.657		

NOTES:

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REVISIONS

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PROPOSED ALIGNMENT CONTROL SHEET

PROJECT REFERENCE NO.	SHEET NO.
U-2581BA	RW02D-1
Location and Surveys	
WithersRavenel <small>Engineers Planners Surveyors</small>	

DRW1

TYPE	STATION	NORTH	EAST
POT	10+00.00	850414.1701	1803188.6677
PC	10+79.91	850334.2568	1803188.3474
PT	12+47.95	850199.5654	1803103.1246
POT	13+52.66	850154.3465	1803008.6793

DRW2

TYPE	STATION	NORTH	EAST
POT	10+00.00	850561.6833	1805013.3468
PC	10+52.78	850508.9051	1805014.0056
PT	12+86.53	850360.7775	1805163.9940
POT	16+58.07	850360.7775	1805535.5369

L

TYPE	STATION	NORTH	EAST
POT	10+00.00	851458.4821	1798253.9543
PC	12+32.17	851352.8964	1798460.7300
PT	22+96.09	850979.9678	1799454.7181
PC	27+84.53	850861.1386	1799928.4821
PT	31+21.70	850799.5638	1800259.7673
PC	46+50.11	850613.8816	1801776.8511
PRC	49+01.12	850571.9421	1802024.2426
PCC	58+07.03	850428.7306	1802918.2940
PT	63+94.85	850431.3480	1803504.9705
PC	71+03.36	850510.8999	1804209.0032
PT	85+56.57	850544.8042	1805659.8869
POT	92+94.49	850496.2914	1806396.2125

TS1

TYPE	STATION	NORTH	EAST
POT	10+00.00	850471.1333	1802639.5063
POT	10+99.90	850457.9962	1802738.5342

TS2

TYPE	STATION	NORTH	EAST
POT	10+00.00	850446.5845	1802737.0911
POT	11+00.04	850459.7401	1802637.9241

Y1

TYPE	STATION	NORTH	EAST
POT	10+00.00	852095.5177	1799306.8923
PC	12+39.76	851865.7323	1799238.4565
PT	12+64.86	851841.6675	1799231.3223
POT	20+24.64	851112.9582	1799016.2842

Y2

TYPE	STATION	NORTH	EAST
PC	10+00.00	851112.9582	1799016.2842
PRC	16+96.04	850423.8419	1798932.9337
PT	19+76.59	850143.2953	1798934.4458
POT	21+55.95	849963.9344	1798935.0196

Y3

TYPE	STATION	NORTH	EAST
POT	10+00.00	850718.3921	1800922.9664
POT	17+82.96	849941.6723	1800824.2751

Y4

TYPE	STATION	NORTH	EAST
POT	10+00.00	850658.0221	1801416.2091
POT	15+46.72	850115.5664	1801348.0373

Y5

TYPE	STATION	NORTH	EAST
POT	10+00.00	850596.6869	1801895.5651
POT	14+91.06	850109.5484	1801833.6565

Y6

TYPE	STATION	NORTH	EAST
POT	10+00.00	851371.1671	1805031.2028
PC	12+99.38	851071.9138	1805022.3280
PT	13+34.64	851036.6713	1805021.2206
PC	15+87.60	850783.8509	1805012.8305
PT	18+09.82	850561.6833	1805013.3468

Y7

TYPE	STATION	NORTH	EAST
POT	10+00.00	850789.9960	1806145.5938
POT	12+76.74	850514.5905	1806118.4697

NOTES:

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REVISIONS

6/2/09
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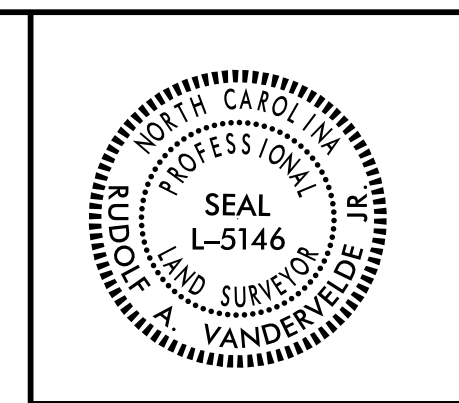
RIGHT OF WAY CONTROL SHEET

I, Rudolf A. VanderVelde Jr., 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) (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 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 August, 2019.

Rudolf A. VanderVelde Jr. 8/9/2019 L-5146
 Professional Land Surveyor PLS # Seal



ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	17.25.00	-41.20	851190.6258	1798925.3740
L	19.42.00	-54.00	851130.2015	1799131.8796
L	22.45.00	-54.00	851044.8973	1799418.9398
L	22.45.00	-45.73	851036.8979	1799416.8407
L	25.22.43	-42.00	850965.6409	1799684.4765
L	27.84.53	-42.00	850901.8767	1799938.7000
L	31.21.70	-42.00	850841.2527	1800264.8698
L	37.15.00	49.68	850678.1707	1800842.6355
L	38.43.00	49.81	850662.4961	1800969.6721
L	42.27.00	50.18	850615.4722	1801350.7822
L	43.40.00	50.29	850601.6345	1801462.9318
L	46.50.11	-42.00	850655.5705	1801781.9536
L	48.26.00	45.18	850542.4923	1801942.2553
L	48.70.79	42.00	850537.0819	1801986.1050
L	49.01.12	-42.00	850612.9834	1802033.1651
L	49.01.12	42.00	850530.9008	1802015.3201
L	49.71.60	-42.00	850598.3820	1802101.7465
L	53.00.00	46.00	850451.3429	1802408.3531
L	53.00.00	42.00	850455.2883	1802409.0118
L	56.89.00	46.00	850396.0999	1802795.5779
L	57.88.00	54.00	850377.0227	1802893.6637
L	58.07.03	54.00	850375.0201	1802912.7099
L	62.15.00	42.00	850375.1204	1803327.6670
L	62.15.00	54.00	850363.1333	1803328.2236
L	63.94.85	42.00	850389.6135	1803509.6862
L	71.03.36	42.00	850469.1655	1804213.7190
L	72.55.00	42.00	850484.7080	1804363.7681
L	72.55.00	54.00	850472.7609	1804364.8934
L	78.15.00	-59.59	850619.4142	1804917.2254
L	79.74.00	-54.00	850616.3028	1805077.3980
L	80.50.00	42.00	850520.3821	1805153.5524
L	80.50.00	54.00	850508.3822	1805153.5088
L	81.01.00	-54.00	850616.0343	1805205.2379
L	82.01.00	-42.00	850602.4240	1805305.6210
L	85.56.57	42.00	850502.8951	1805657.1257
L	85.56.57	-42.00	850586.7133	1805662.6481
L	89.75.00	-42.00	850559.2047	1806080.1743
L	91.80.00	42.00	850461.9092	1806279.2085
L	91.80.00	30.00	850473.8832	1806279.9974

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y1	13.85.00	50.00	851740.5911	1799149.3636
Y1	14.85.00	70.00	851650.3406	1799101.8785
Y1	17.55.00	70.00	851391.3805	1799025.4608
Y1	17.55.00	50.00	851385.7199	1799044.6431
Y1	19.22.85	50.00	851224.7372	1798997.1380
Y1	19.35.00	-58.61	851182.3391	1799097.8704

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y2	10.73.00	62.38	851055.6676	1798938.4408
Y2	11.01.09	-75.00	850998.8122	1799066.6001
Y2	11.15.89	35.00	851007.1985	1798955.9408
Y2	16.00.00	-75.00	850517.7890	1799008.8723
Y2	16.70.00	-57.59	850449.7633	1798990.4550
Y2	16.96.04	35.00	850423.5766	1798897.9347
Y2	19.62.55	35.00	850157.2169	1798899.3995

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y3	10.78.00	29.21	850644.6959	1800884.1589
Y3	10.79.00	-28.00	850636.4929	1800940.7853
Y3	13.25.00	-21.36	850393.2921	1800903.1883

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y4	10.80.00	-23.77	850575.6825	1801429.8179
Y4	10.80.00	26.23	850581.9171	1801380.2081

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y5	10.48.24	46.18	850554.6567	1801843.6682
Y5	10.85.00	24.80	850515.4921	1801860.2441
Y5	10.90.00	-25.20	850504.2284	1801909.2148

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y6	13.90.00	30.00	850982.3415	1804989.4011
Y6	14.00.00	-30.00	850970.3570	1805049.0364
Y6	14.00.00	-40.00	850970.0253	1805059.0309
Y6	14.50.00	55.00	850923.2037	1804962.4248
Y6	15.87.60	-40.00	850782.5242	1805052.8085
Y6	17.25.00	36.00	850646.0889	1804975.2904
Y6	17.30.00	-40.00	850641.9680	1805051.3429

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y7	12.06.00	29.65	850587.8936	1806095.8997

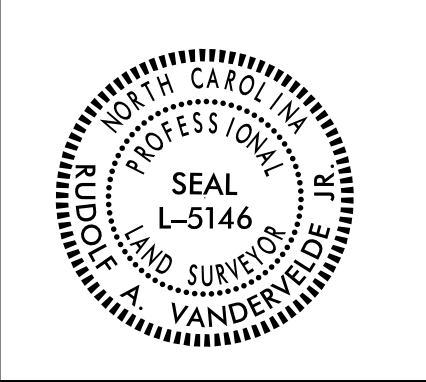
NOTES:

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.

REVISIONS

09-AUG-2019 08:42
 K:\Survey\2019\U-2581BA RW Staking\Geometrics\Res-Com\Submittal\Latest submittal 8-7-19\ALL RW SHEETS\U-2581BA-1s-rw03e-1.dgn
 6/2/19
 RUDOLPH A. VANDERVELDE

PERMANENT EASEMENT CONTROL SHEET



ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
TS1	10+10.21	-45.53	850514.9280	1802655.6175
TS1	10+10.39	-82.44	850551.4933	1802660.6499
TS1	10+15.62	-149.42	850617.2005	1802674.6429
TS1	10+56.81	-149.35	850611.7139	1802715.4665
TS1	10+80.60	-83.40	850543.2134	1802730.3746
TS1	10+80.74	-46.18	850506.2908	1802725.6184

ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
TS2	10+14.62	-89.74	850359.5437	1802710.7937
TS2	10+14.82	-43.08	850405.8314	1802716.7333
TS2	10+52.06	-170.15	850284.7574	1802663.1068
TS2	10+89.46	-89.66	850369.4711	1802636.6193
TS2	10+97.80	-133.01	850327.5863	1802622.6508

ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
Y1	19+28.46	89.62	851230.5629	1798957.5532
Y1	19+39.35	68.77	851214.2233	1798974.4678

ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
Y2	11+99.00	-75.00	850905.3762	1799048.3249
Y2	12+12.00	-97.00	850889.1928	1799067.8332
Y2	12+15.00	-88.00	850887.8575	1799058.4729
Y2	12+18.00	-99.00	850883.1547	1799068.8302
Y2	12+22.00	-90.00	850880.8475	1799059.3126
Y2	15+85.00	65.00	850537.0217	1798869.3942
Y2	15+85.00	35.00	850536.0246	1798899.3776
Y2	16+07.27	35.00	850513.4747	1798898.7202
Y2	16+10.03	60.00	850511.2807	1798873.6588
Y2	16+22.00	-87.00	850496.1661	1799020.3633
Y2	16+22.00	-69.74	850496.5049	1799003.1098

ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
Y3	10+73.00	-33.17	850641.7930	1800946.6732
Y3	10+85.00	-59.00	850626.6332	1800970.7817
Y3	10+92.00	-58.00	850619.8151	1800968.9074
Y3	10+92.00	-27.65	850623.6408	1800938.7985
Y3	10+92.00	-49.00	850620.9495	1800959.9792
Y3	12+37.00	-37.00	850478.6186	1800929.7979
Y3	12+37.00	-23.73	850480.2908	1800916.6376
Y3	12+53.00	-23.30	850464.4728	1800914.1923
Y3	12+53.00	-37.00	850462.7462	1800927.7811
Y3	13+50.00	-35.00	850366.7677	1800913.5698
Y3	13+50.04	-21.42	850368.4433	1800900.0888

ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
Y4	10+65.06	-38.58	850588.6585	1801446.3749
Y4	11+00.00	-42.00	850553.5655	1801445.4121
Y4	11+70.00	-23.77	850486.3849	1801418.5957
Y4	12+25.00	-23.77	850431.8142	1801411.7376
Y4	12+25.00	-40.00	850429.7904	1801427.8412
Y4	12+50.00	-39.00	850405.1102	1801423.7317
Y4	12+50.00	-23.77	850407.0093	1801408.6203

I, Rudolf A. VanderVelde Jr., 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) (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 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 August, 2019.

Rudolf A. VanderVelde Jr. 8/9/2019
Professional Land Surveyor L-5146 PLS # Seal

ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
Y5	11+25.00	-25.20	850469.5076	1801904.8023
Y5	11+25.00	-35.00	850468.2718	1801914.5268
Y5	11+45.00	-35.00	850448.4314	1801912.0054
Y5	11+45.00	-25.20	850449.6672	1801902.2808
Y5	14+44.00	-49.00	850150.0521	1801888.1981
Y5	14+44.00	-25.20	850153.0529	1801864.5852
Y5	14+51.00	-49.00	850143.1079	1801887.3156
Y5	14+51.00	-25.20	850146.1088	1801863.7027
Y5	14+63.00	24.80	850140.5081	1801812.5888
Y5	14+63.00	42.00	850142.6762	1801795.5288

ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
Y6	13+49.00	30.00	851023.3190	1804990.7610
Y6	13+49.00	58.00	851024.2477	1804962.7764
Y6	13+56.00	58.00	851017.2515	1804962.5442
Y6	13+56.00	48.00	851016.9199	1804972.5387
Y6	14+40.00	-55.00	850929.5498	1805072.6960
Y6	14+40.00	-40.00	850930.0473	1805057.7042
Y6	14+80.00	-55.00	850889.5718	1805071.3693
Y6	14+80.00	-40.00	850890.0693	1805056.3775
Y6	17+14.73	81.74	850656.1385	1804929.4571
Y6	17+22.00	-40.00	850649.8653	1805051.2557

ROW MARKER PERMANENT EASEMENT - E

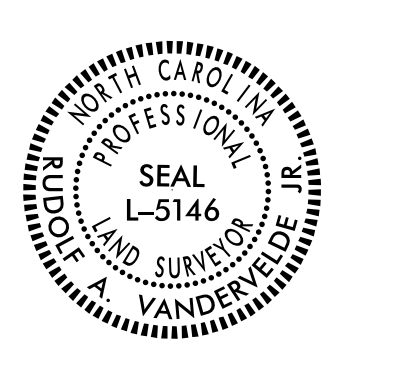
ALIGN	STATION	OFFSET	NORTH	EAST
Y7	12+20.83	35.97	850573.7515	1806088.1479

NOTES:

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2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.

REVISIONS

6/2/19
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Rudolf A. VanderVelde

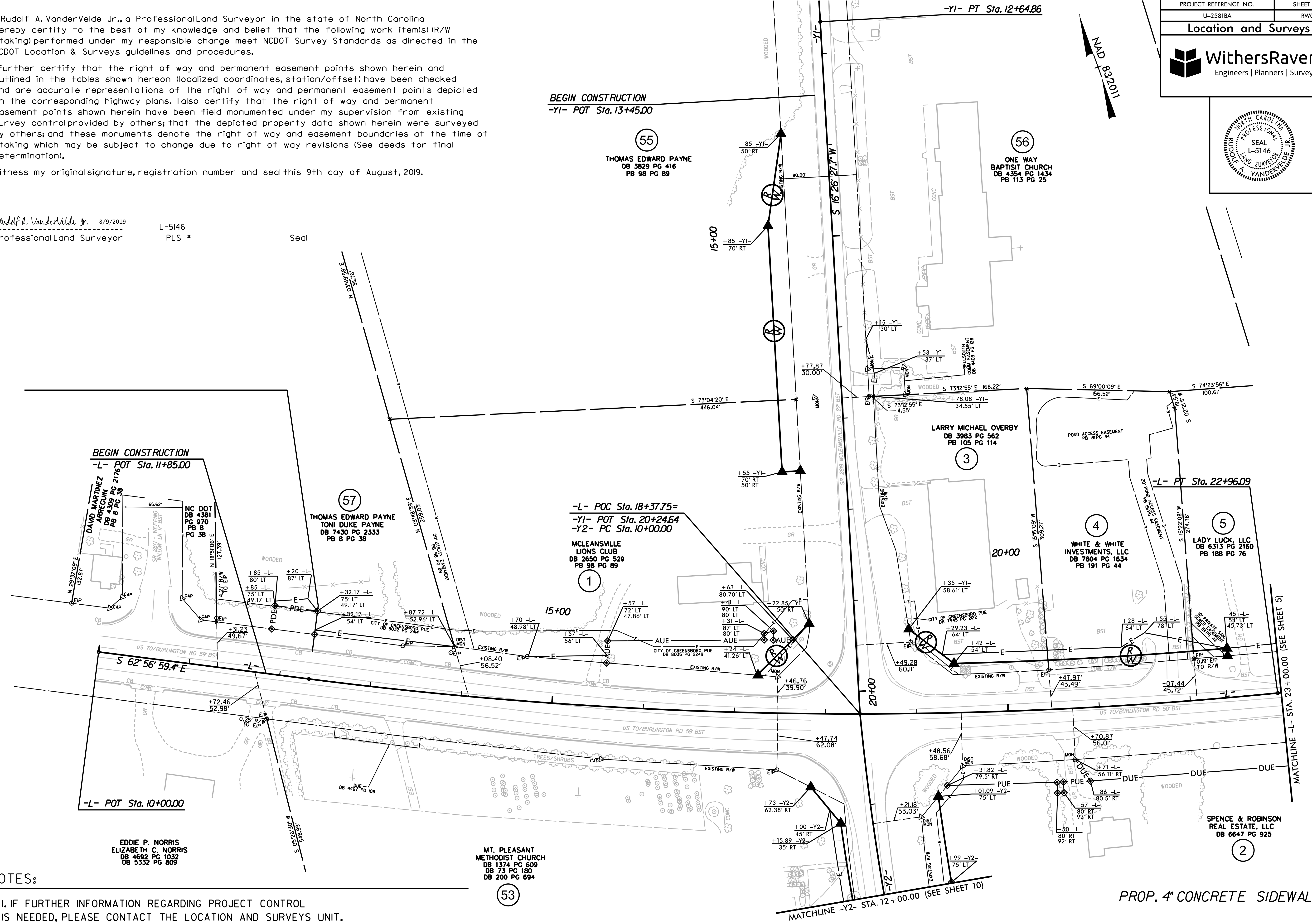


I, Rudolf A. VanderVelde Jr., a Professional Land Surveyor in the state of North Carolina hereby certify to the best of my knowledge and belief that the following work item(s) (R/W Staking) performed under my responsible charge meet NCDOT Survey Standards as directed in the NCDOT Location & Surveys guidelines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

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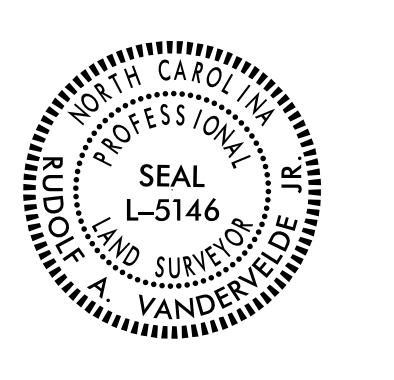
Witness my original signature, registration number and seal this 9th day of August, 2019.

Rudolf A. VanderVelde Jr. 8/9/2019
 Professional Land Surveyor L-5146
 PLS # Seal



- NOTES:**
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REVISIONS
 09-AUG-2019 08:47
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 6/2/19



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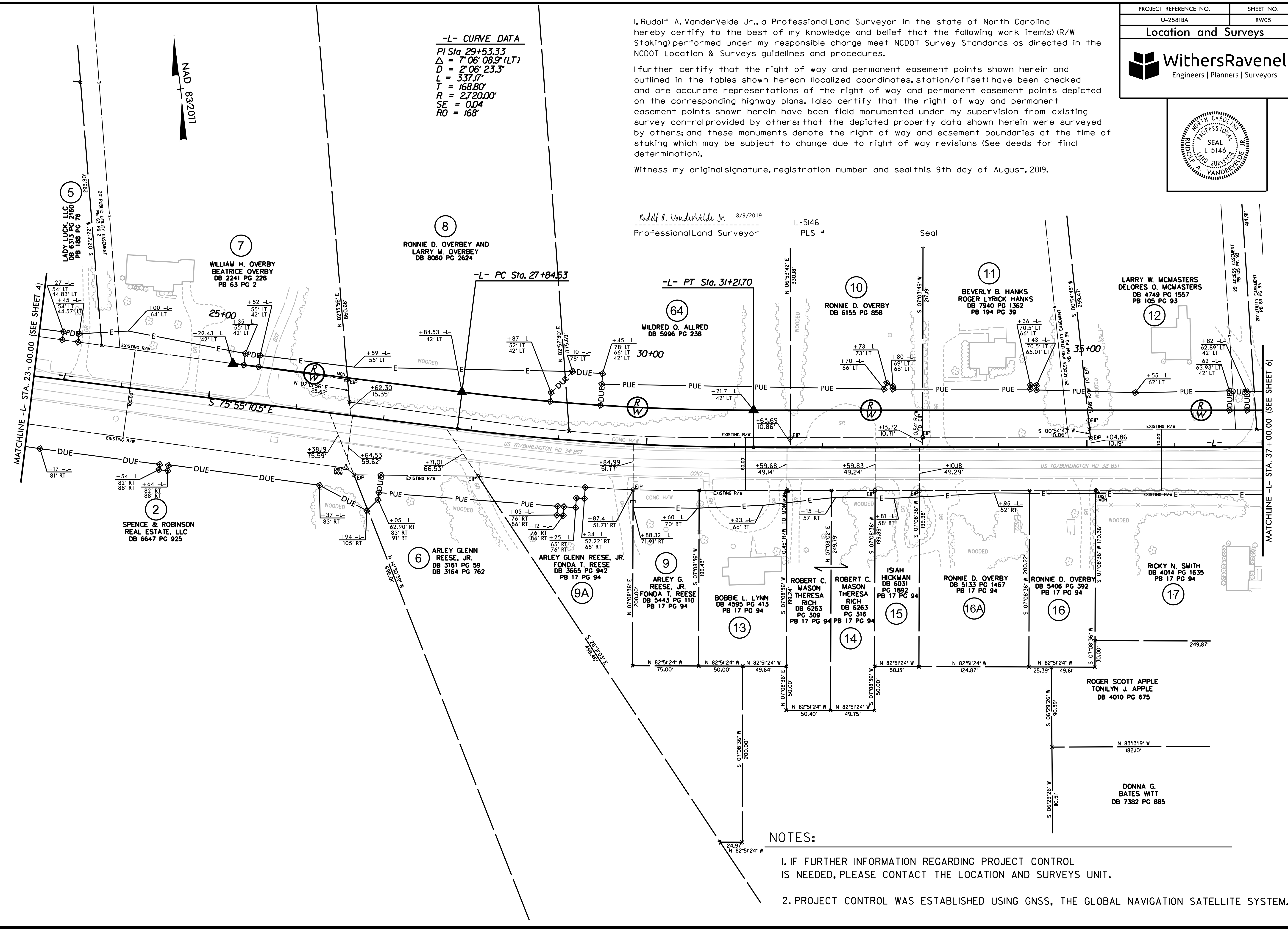
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Rudolf A. VanderVelde Jr. 8/9/2019
Professional Land Surveyor

L-5146
PLS # Seal

-L- CURVE DATA
 PI Sta 29+53.33
 $\Delta = 7^{\circ}06'08.9"$ (LT)
 $D = 2^{\circ}06'23.3"$
 $L = 337.17'$
 $T = 168.80'$
 $R = 2,720.00'$
 $SE = 0.04$
 $RO = 168'$



NOTES:


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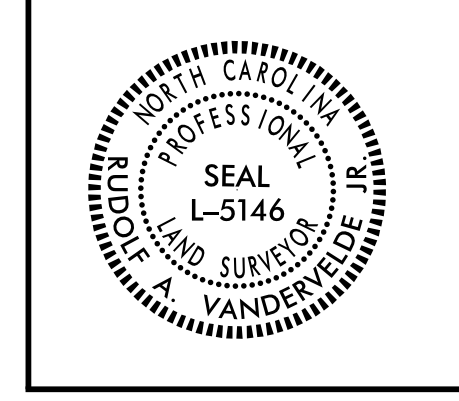
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PROJECT REFERENCE NO.	SHEET NO.
U-2581BA	RW06
Location and Surveys	
 Engineers Planners Surveyors	



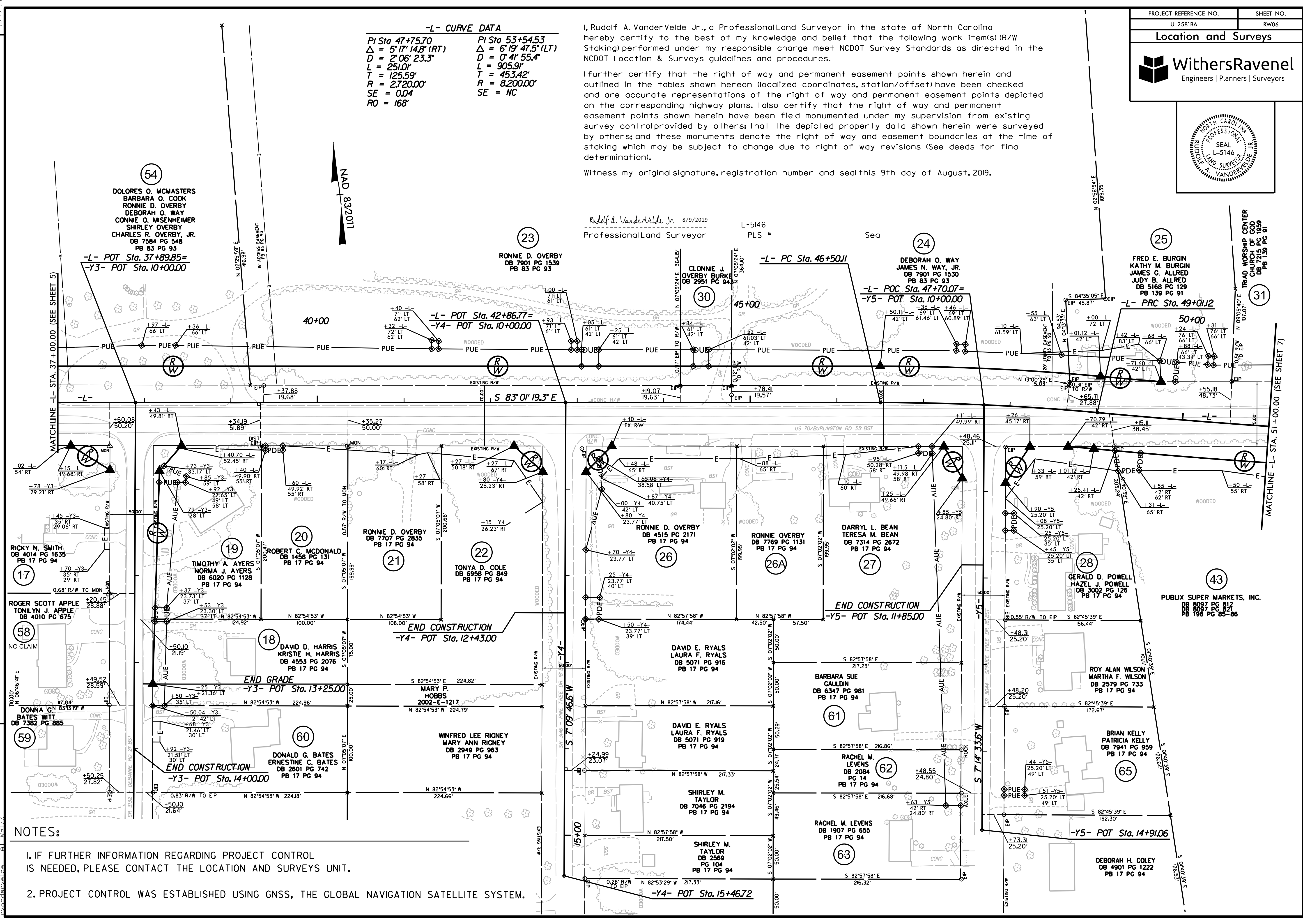
-L- CURVE DATA	
PI Sta 47+75.70 Δ = 5°17'14.8" (RT) D = 2°06'23.3" L = 251.0' T = 125.59' R = 2,720.00' SE = 0.04 RO = 168'	PI Sta 53+54.53 Δ = 6°19'47.5" (LT) D = 0°41'55.4" L = 905.9' T = 453.42' R = 8,200.00' SE = NC

I, Rudolf A. VanderVelde Jr., 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) (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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Rudolf A. VanderVelde Jr. 8/9/2019
Professional Land Surveyor L-5146 PLS # Seal



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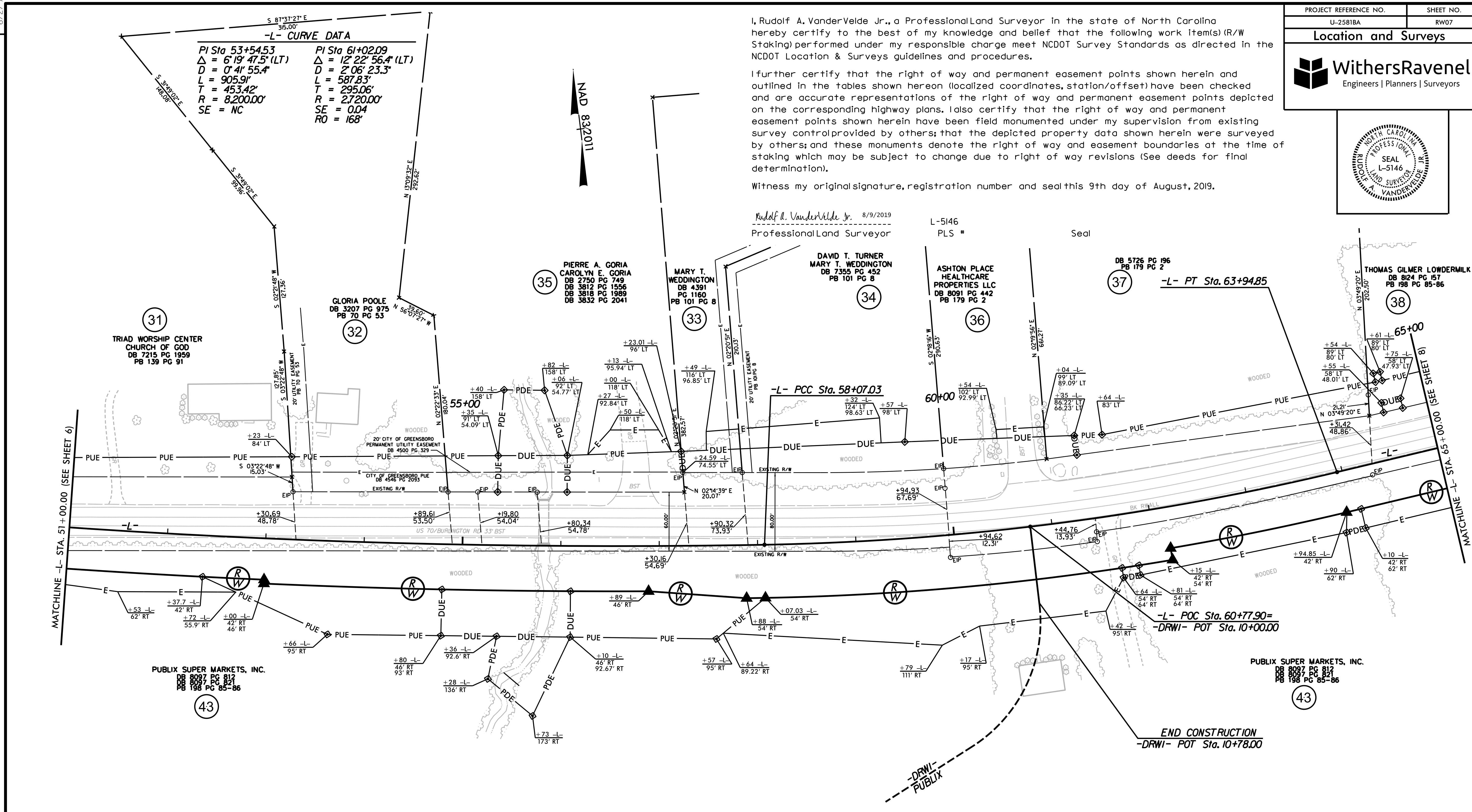


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Rudolf A. VanderVelde Jr. 8/9/2019
 Professional Land Surveyor L-5146
 PLS # Seal

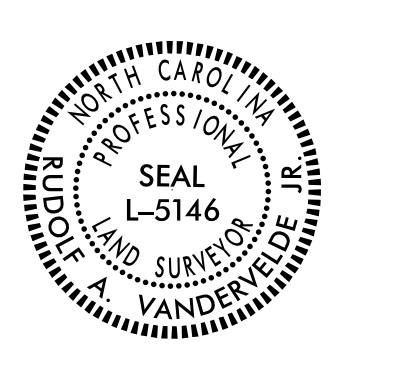


REVISIONS

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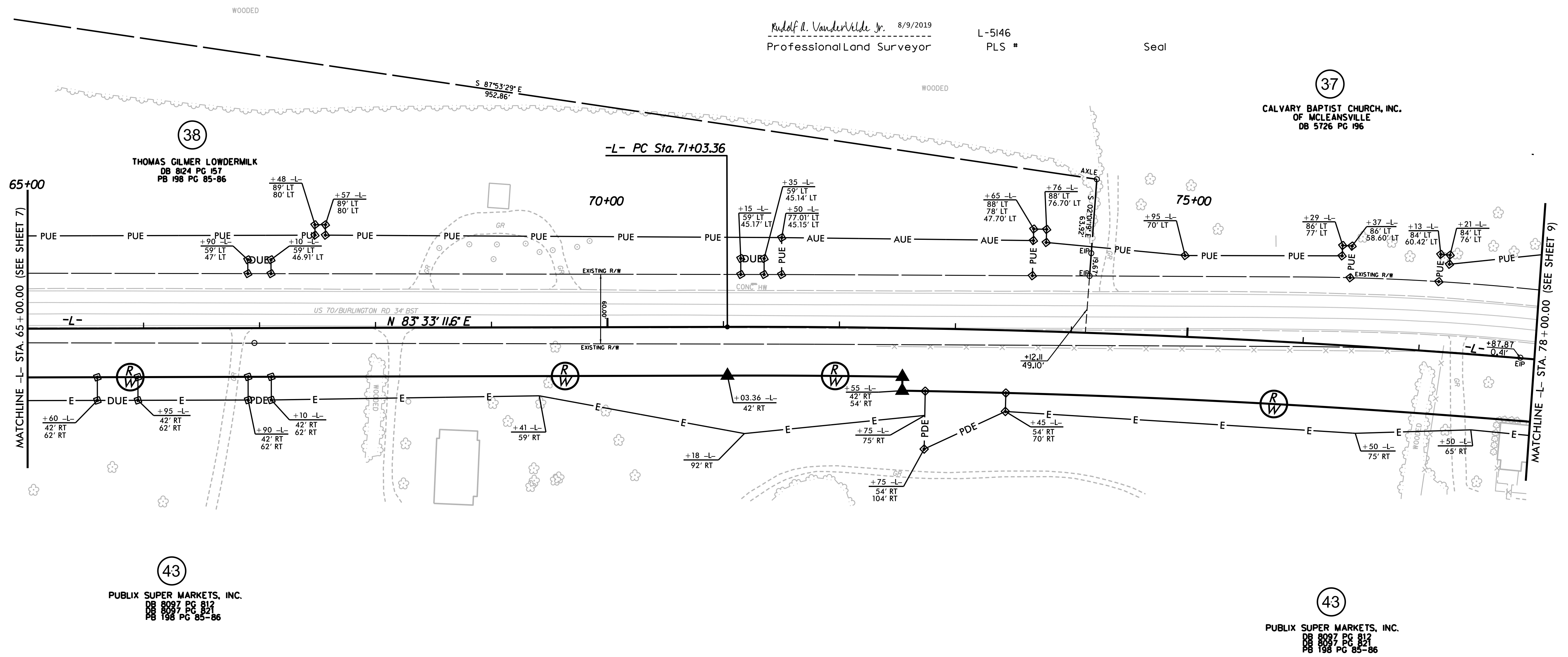
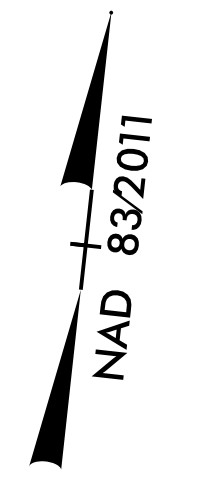
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Witness my original signature, registration number and seal this 9th day of August, 2019.

Rudolf A. VanderVelde Jr. 8/9/2019
 Professional Land Surveyor L-5146 PLS # Seal

-L- CURVE DATA
 PI Sta 78+31.90
 $\Delta = 10' 12'' 58.5''$ (RT)
 D = 0' 42'' 10.9"
 L = 1,453.20'
 T = 728.53'
 R = 8,150.00'
 SE = NC



NOTES:

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REVISIONS

6/2/19
 09-AUG-2019 08:50
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 6/2/2019
 RAV



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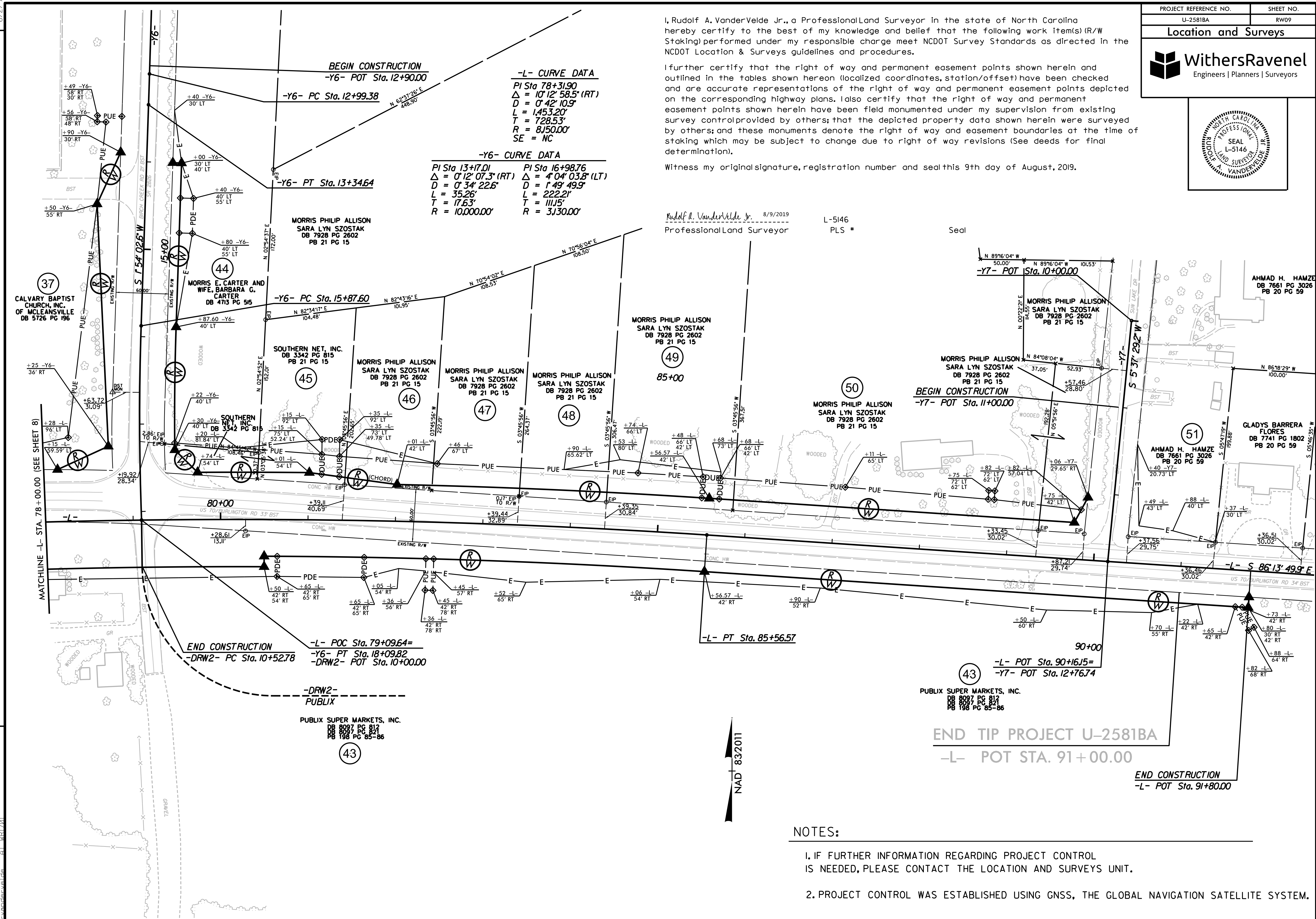
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Rudolf A. VanderVelde Jr. 8/9/2019
Professional Land Surveyor

L-5146
PLS #

Seal



-L- CURVE DATA

PI Sta 78+31.90	PI Sta 16+98.76
$\Delta = 0^{\circ}12'58.5"$ (RT)	$\Delta = 4^{\circ}04'03.8"$ (LT)
$D = 0^{\circ}42'10.9"$	$D = 1^{\circ}49'49.9"$
$L = 1,453.20'$	$L = 222.21'$
$T = 728.53'$	$T = 111.15'$
$R = 81,500.00'$	$R = 3,130.00'$
SE = NC	

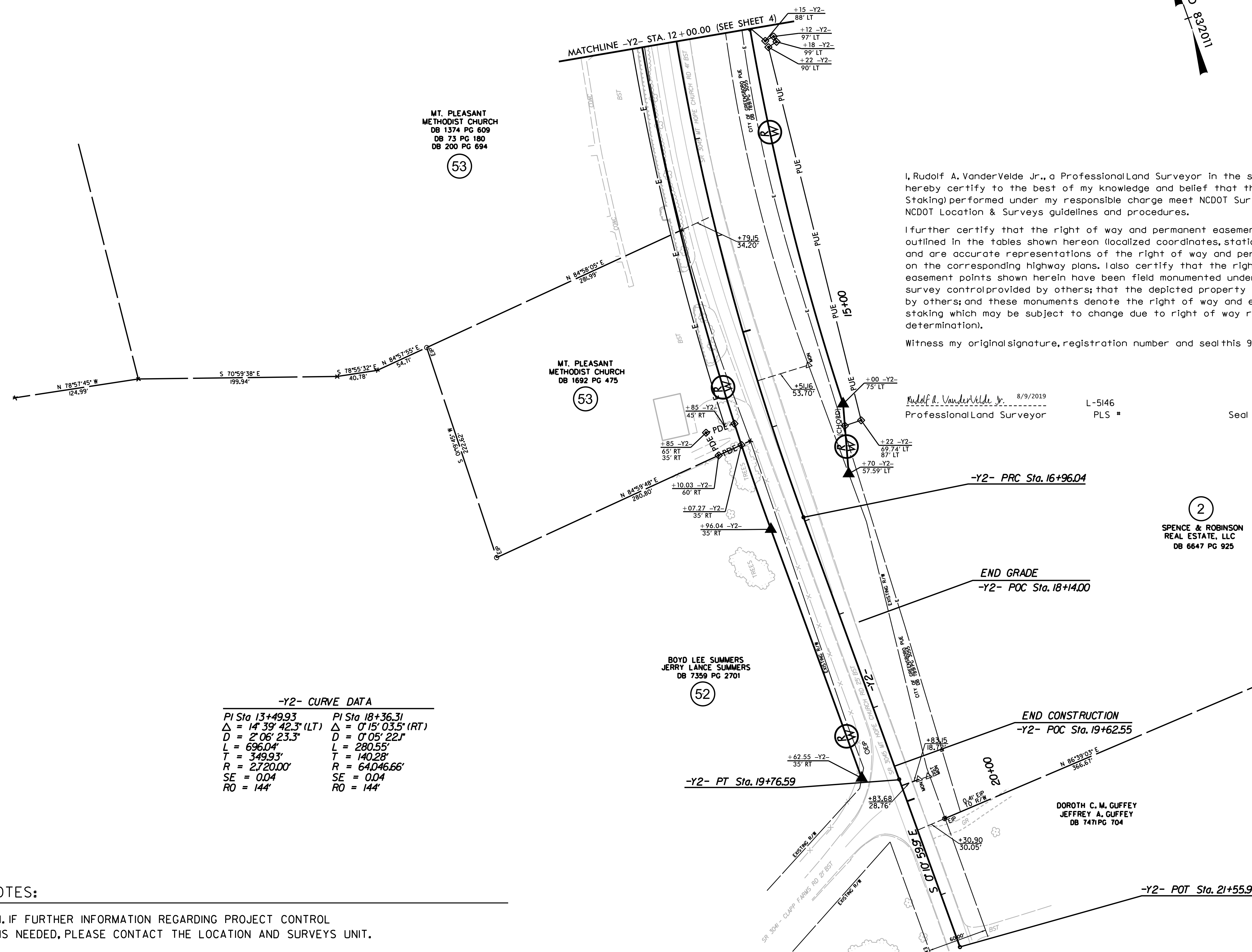
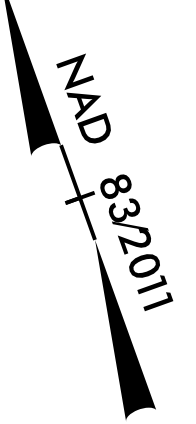
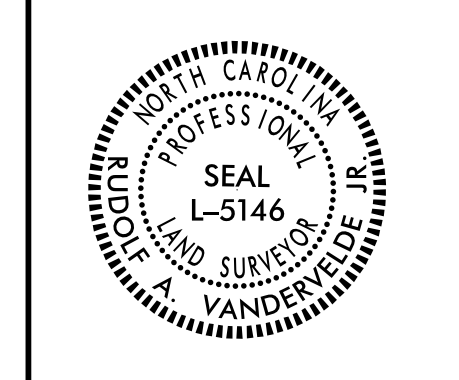
-Y6- CURVE DATA

PI Sta 13+17.01	PI Sta 16+98.76
$\Delta = 0^{\circ}12'07.3"$ (RT)	$\Delta = 4^{\circ}04'03.8"$ (LT)
$D = 0^{\circ}34'22.6"$	$D = 1^{\circ}49'49.9"$
$L = 35.26'$	$L = 222.21'$
$T = 17.63'$	$T = 111.15'$
$R = 10,000.00'$	$R = 3,130.00'$

NOTES:

- IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
- PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.

REVISIONS
 09-AUG-2019 08:50
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 6/2/19



I, Rudolf A. VanderVelde Jr., 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) (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 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 August, 2019.

Rudolf A. VanderVelde Jr. 8/9/2019
Professional Land Surveyor

L-5146
PLS # Seal

2
SPENCE & ROBINSON
REAL ESTATE, LLC
DB 6647 PG 925

-Y2- CURVE DATA	
PI Sta 13+49.93	PI Sta 18+36.31
Δ = 14° 39' 42.3" (LT)	Δ = 0° 15' 03.5" (RT)
D = 2° 06' 23.3"	D = 0° 05' 22.1"
L = 696.04'	L = 280.55'
T = 349.93'	T = 140.28'
R = 2720.00'	R = 64,046.66'
SE = 0.04	SE = 0.04
RO = 144'	RO = 144'

- NOTES:**
- IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
 - PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.

REVISIONS

6/2/2019
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