

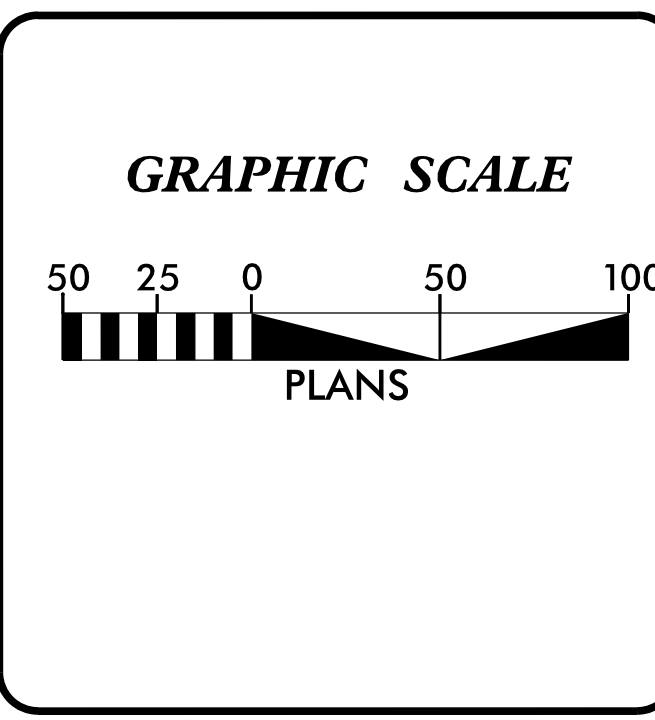
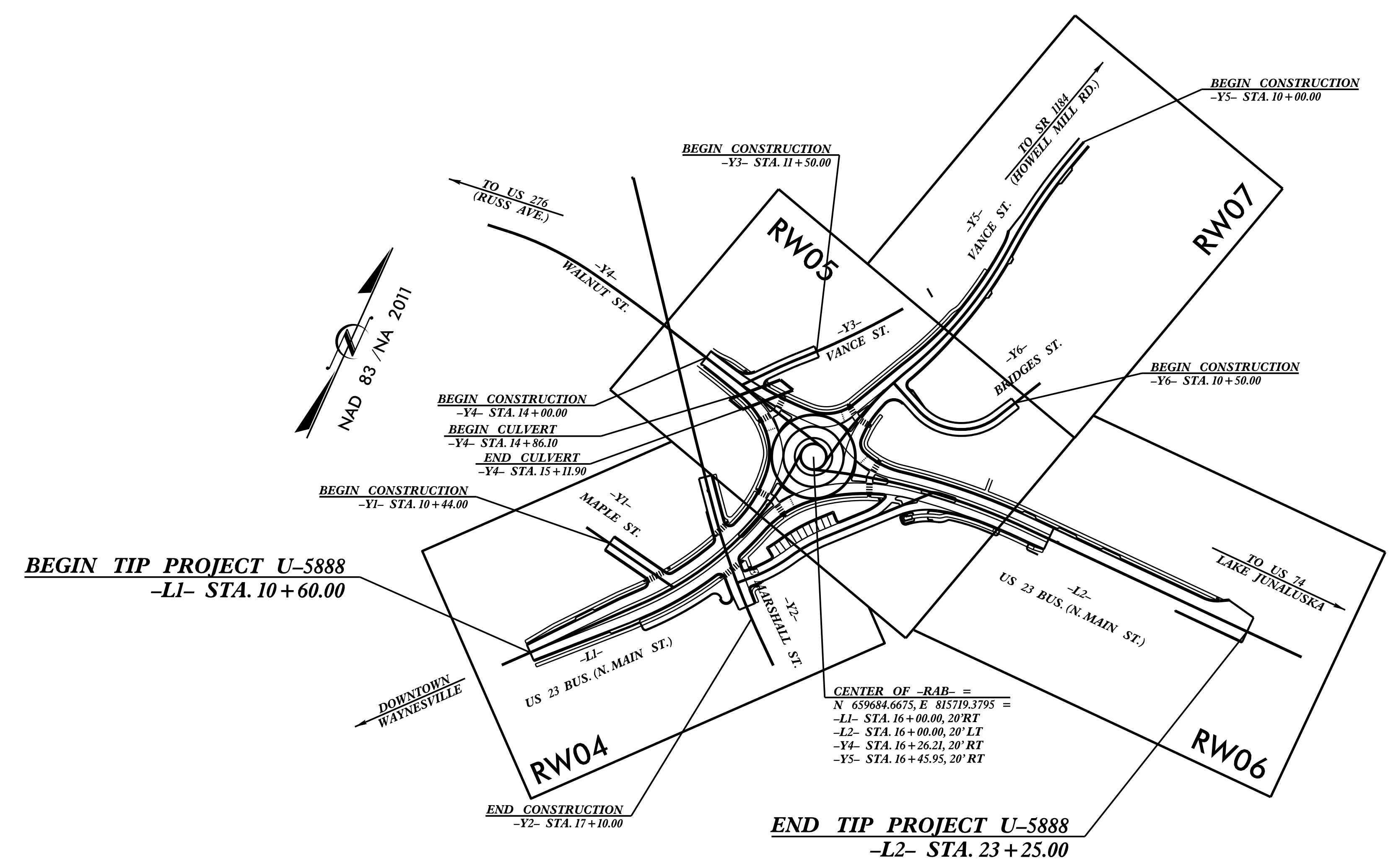
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5888	RW01	

TIP PROJECT: U-5888

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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

HAYWOOD COUNTY



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "U-5839 GPS-103" WITH NAD 83/NSRS XXXX STATE PLANE GRID COORDINATES OF NORTHING: 662182.250(ft) EASTING: 812675.374(ft) ELEVATION BASED ON NCDOT MONUMENT "U-5839 GPS-101"(ft) ELEV.= 2656.372(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99975898833 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GRID DISTANCE FROM "U-5839 GPS-103" TO -L1- STATION 10+11.74 IS "S 42° 26' 29.96" E 4,054.10(ft) ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

Prepared In the Office of:

WETHERILL ENGINEERING

1223 Jones Franklin Rd. Raleigh, N.C. 27606
License No. F-0377
Bus: 919.851.8077 Fax: 919.851.8107

2018 STANDARD SPECIFICATIONS

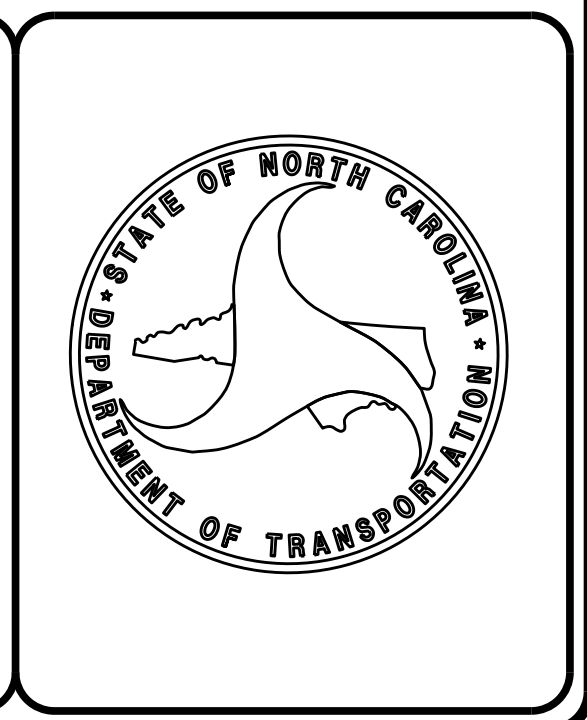
RIGHT OF WAY DATE: June 30, 2018	LETTING DATE: February 18, 2020
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PROFESSIONAL LAND SURVEYOR

DocuSigned by:
Anthony K. Alford
22BA2962F0BAA4E

11/15/2021

SIGNATURE: _____ Date: _____



\$\$\$\$\$ SYSTEM TIME\$\$\$\$\$

6/2/99

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. U-5888	SHEET NO. RW02C-2
Location and Surveys	
WETHERILL ENGINEERING 1223 JONES FRANKLIN RD RALEIGH, NC 27606	

BL	POINT	DESC.	NORTH	EAST	ELEVATION
1		BL-1	659228.5080	815475.7780	2634.69
2		BL-2	659438.2450	815681.8560	2629.02
3		BL-3	659745.7080	815916.0160	2632.38
4		BL-4	659743.7650	816240.4210	2640.15
5		BL-5	659738.9030	816487.1950	2649.40

BY5	POINT	DESC.	NORTH	EAST	ELEVATION
16		BY5-16	660333.5730	815921.8470	2617.95
15		BY5-15	659909.5210	815737.1930	2616.64
14		BY5-14	659761.9510	815565.1110	2624.45
B8		BY2-8	659759.4100	815411.7520	2627.29

BY1	POINT	DESC.	NORTH	EAST	ELEVATION
7		BY1-7	659481.8920	815302.4310	2624.92
6		BY1-6	659393.1030	815564.7590	2628.73
A2		BL-2	659438.2450	815681.8560	2629.02

OFFSITE PRIMARY CONTROL	POINT	DESC.	NORTH	EAST	ELEVATION
101		G101	658367.8250	814621.1980	2656.37
102		G102	658396.5890	814126.4260	2697.91
103		G103	662182.2500	812675.3740	2671.53

BY2	POINT	DESC.	NORTH	EAST	ELEVATION
9		BY2-9	659980.2040	815296.1710	2619.56
8		BY2-8	659759.4100	815411.7520	2627.29
B2		BL-2	659438.2450	815681.8560	2629.02

 BM1 ELEVATION = 2638.71
 N 659147 E 815434
 BL STATION 5+00.00
 S 27°02'02.2" W DIST 91.59
 CHISELED 'X' IN NE CORNER ON CONC PAD

 BM2 ELEVATION = 2652.64
 N 659687 E 816545
 BL STATION 17+52.00
 S 48°04'55.3" E DIST 78.24
 BENCHTIE NAIL SET IN 18" SOUR WOOD

 BM3 ELEVATION = 2638.16
 N 659788 E 815125
 BL STATION 6+53.00 642 LEFT
 TOP NUT ON FIRE HYDRANT

 BM4 ELEVATION = 2613.47
 N 660405 E 815800
 BL STATION 11+81.00 670 LEFT
 BENCHTIE NAIL SET IN 24" LEELAND CYPRUS

BY3	POINT	DESC.	NORTH	EAST	ELEVATION
C2		BL-2	659438.2450	815681.8560	2629.02
10		BY3-10	659402.6250	815789.0310	2634.64
11		BY3-11	659578.5610	815935.7600	2651.34
12		BY3-12	659618.0590	816159.7420	2657.14

BY4	POINT	DESC.	NORTH	EAST	ELEVATION
13		BY4-13	659830.4450	815215.2090	2633.06
A8		BY2-8	659759.4100	815411.7520	2627.29
A3		BL-3	659745.7080	815916.0160	2632.38

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.

6/2/99

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. U-5888	SHEET NO. RW02C-3
Location and Surveys	
WETHERILL ENGINEERING 1223 JONES FRANKLIN RD RALEIGH, NC 27606	

EL

POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	659190.466	815411.240							
LINE			N 41°59'18.9" E	53.82					
PC	659230.471	815447.246							
CURVE			N 43°29'53.5" E	93.29	03°01'09.3"(RT)	03°14'10.0"	93.30	46.66	1770.51
PCC	659298.142	815511.459							
CURVE			N 44°10'38.4" E	219.99	01°39'39.7"(LT)	00°45'18.1"	219.99	110.01	7588.56
PT	659455.913	815664.764							
LINE			N 43°20'48.5" E	257.95					
PC	659643.496	815841.822							
CURVE			N 67°03'55.3" E	195.87	47°26'13.5"(RT)	23°31'58.0"	201.58	106.97	243.47
PT	659719.823	816022.209							
LINE			S 89°12'58.0" E	516.30					
POT	659712.759	816538.456							

EY1

POINT	N	E	BEARING	DIST
POT	659439.532	815442.787		
LINE			S 79°42'03.3" E	178.82
POT	659407.562	815618.721		

EY2A

POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	659964.565	815286.089							
LINE			S 37°40'50.0" E	377.45					
PC	659665.841	815516.807							
CURVE			S 38°28'26.1" E	172.80	01°35'12.2"(LT)	00°55'05.5"	172.81	86.41	6240.08
PT	659530.554	815624.319							
LINE			S 39°16'02.2" E	81.32					
POT	659467.595	815675.790							

EY2B

POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
PC	659470.644	815678.667							
CURVE			S 46°42'35.7" E	111.41	05°26'34.9"(LT)	04°53'00.7"	111.46	55.77	1173.24
PT	659394.247	815759.765							
LINE			S 49°25'53.2" E	47.62					
POT	659363.277	815795.939							

EY3

POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	659604.850	816526.776							
LINE			N 60°29'13.7" W	105.24					
PC	659656.693	816435.192							
CURVE			N 77°46'00.4" W	68.31	34°33'33.5"(LT)	49°49'42.1"	69.36	35.77	114.99
PCC	659671.167	816368.433							
CURVE			S 82°13'39.1" W	120.74	05°27'07.4"(LT)	04°30'50.1"	120.78	60.44	1269.31
PT	659654.839	816248.805							
LINE			S 79°30'05.4" W	41.21					
PC	659647.330	816208.289							
CURVE			S 73°01'34.3" W	41.46	12°57'02.2"(LT)	31°10'15.6"	41.55	20.86	183.81
PCC	659635.227	816168.636							
CURVE			S 72°43'43.9" W	81.16	12°21'21.4"(RT)	15°11'42.9"	81.31	40.82	377.06
PCC	659611.132	816091.138							
CURVE			S 76°02'37.4" W	103.44	05°43'34.2"(LT)	05°32'00.6"	103.48	51.78	1035.44
PCC	659586.185	815990.753							
CURVE			S 58°28'14.7" W	130.96	29°25'11.2"(LT)	22°13'07.8"	132.41	67.70	257.87
PT	659517.702	815879.126							
LINE			S 43°45'39.1" W	171.67					
POT	659393.713	815760.389							

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.

659604.850
 816526.776
 659656.693
 816435.192
 659671.167
 816368.433
 659654.839
 816248.805
 659647.330
 816208.289
 659635.227
 816168.636
 659611.132
 816091.138
 659586.185
 815990.753
 659517.702
 815879.126
 659393.713
 815760.389

PROPOSED ALIGNMENT CONTROL SHEET

6/2/99

REVISIONS

L1

TYPE	STATION	NORTH	EAST
POT	10+11.74	659190.4660	815411.2395
PC	12+51.05	659368.3426	815571.3361
PT	16+00.00	659685.3662	815699.3917
POT	16+00.00	659685.3662	815699.3917

Y2

TYPE	STATION	NORTH	EAST
POT	10+00.00	659964.5649	815286.0890
PC	13+77.45	659665.8412	815516.8070
PCC	15+30.16	659546.1362	815611.6216
PT	17+41.48	659394.9878	815758.9002
POT	17+90.24	659363.2770	815795.9390

L2

TYPE	STATION	NORTH	EAST
PC	16+00.00	659665.7400	815725.8409
PT	19+42.65	659719.2702	816062.5885
POT	24+18.56	659712.7592	816538.4565

Y3

TYPE	STATION	NORTH	EAST
PC	10+00.00	659951.5789	815751.6288
PRC	11+80.48	659813.4842	815635.6500
PT	12+22.19	659782.5294	815607.7095
POT	12+77.52	659740.2418	815572.0217

Y1

TYPE	STATION	NORTH	EAST
POT	10+00.00	659439.5322	815442.7870
POT	11+64.88	659410.0537	815605.0114

Y4

TYPE	STATION	NORTH	EAST
POT	10+00.00	659804.7395	815109.9000
PC	10+33.47	659808.5299	815143.1549
PCC	11+78.72	659803.8291	815287.8113
PT	13+18.92	659775.1700	815425.0387
POT	16+26.21	659704.1257	815724.0035

DR1

TYPE	STATION	NORTH	EAST
POT	10+00.00	659457.1386	815691.8036
PC	10+25.09	659474.8660	815709.5611
PRC	10+93.24	659528.9543	815750.6744
PT	11+53.97	659577.7196	815786.6116
POT	13+35.67	659709.8553	815911.3340

Y5

TYPE	STATION	NORTH	EAST
PC	10+00.00	660303.3885	815900.8785
PCC	10+46.68	660258.4233	815888.3622
PRC	12+01.09	660106.3740	815862.8251
PRC	14+50.54	659867.1428	815797.9618
PT	16+45.95	659681.5933	815739.1419

RAB

TYPE	STATION	NORTH	EAST
PC	10+00.00	659746.8273	815700.3754
PT	14+08.41	659746.8273	815700.3754

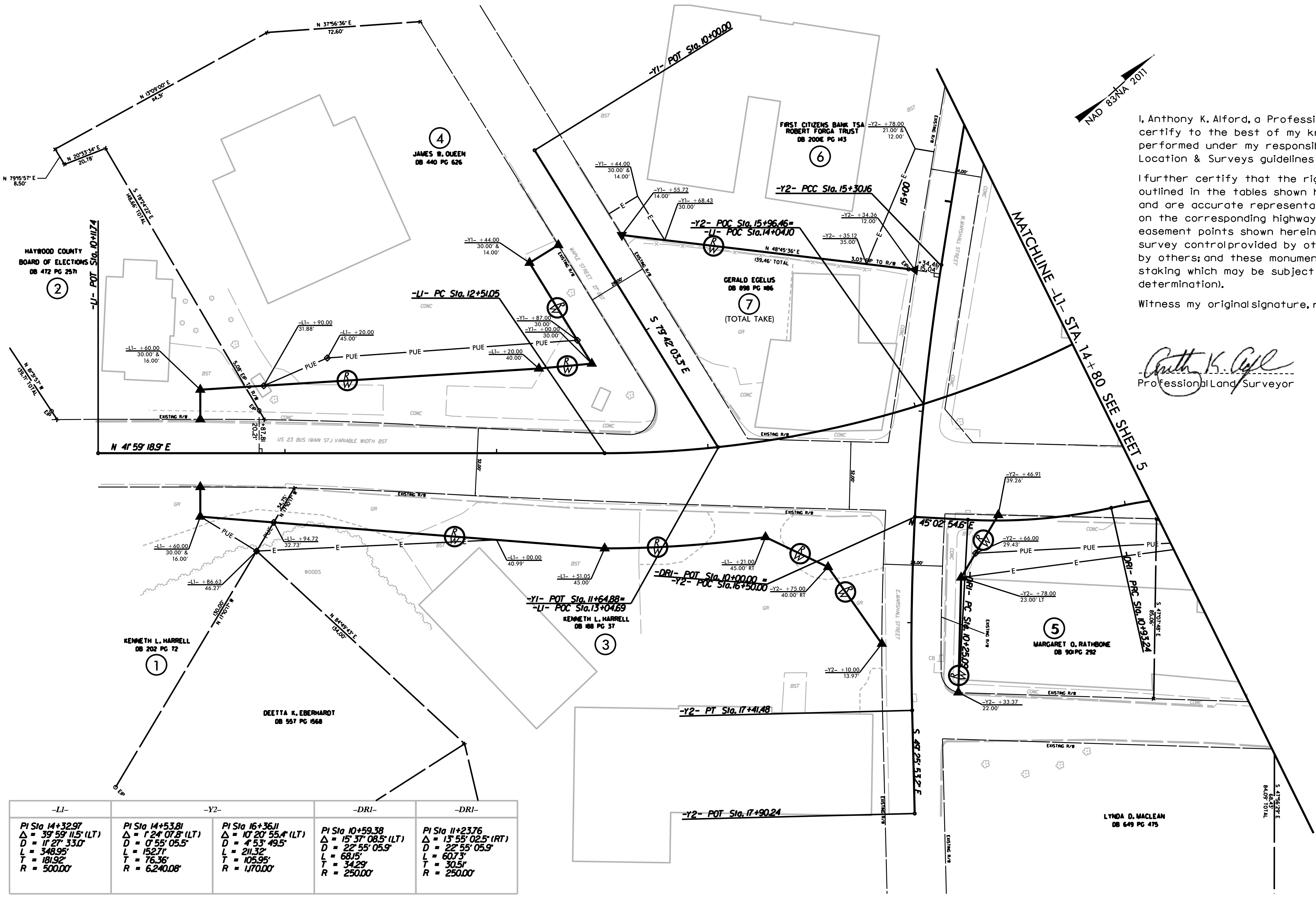
Y6

TYPE	STATION	NORTH	EAST
POT	10+00.00	659934.0529	815993.4471
PC	10+85.25	659858.3554	815954.2363
PT	12+20.83	659817.3400	815838.1486
POT	12+78.33	659840.4474	815785.5039

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.

6/2/99
 WETHERILL ENGINEERING
 1223 JONES FRANKLIN RD
 RALEIGH, NC 27606



I, Anthony K. Alford, 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 2nd day of October, 2018.

Anthony K. Alford
 Professional Land Surveyor

L-4372
 PLS *

Seal

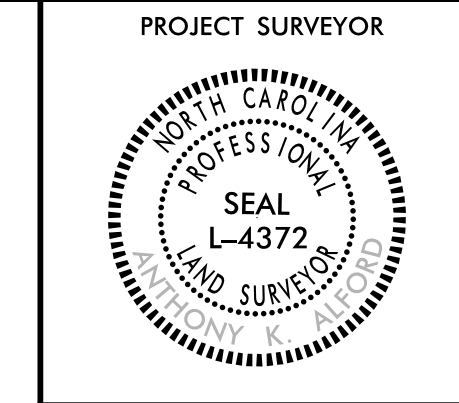
-LI-	-Y2-	-DRI-	-DRI-
PI Sta 14+32.97 $\Delta = 39^{\circ} 59' 11.5" (LT)$ $D = 11^{\circ} 27' 33.0"$ $L = 348.95'$ $T = 181.92'$ $R = 500.00'$	PI Sta 14+53.81 $\Delta = 7^{\circ} 24' 07.8" (LT)$ $D = 0^{\circ} 55' 05.5"$ $L = 152.71'$ $T = 76.36'$ $R = 6,240.08'$	PI Sta 16+36.11 $\Delta = 10^{\circ} 20' 55.4" (LT)$ $D = 4^{\circ} 53' 49.5"$ $L = 211.32'$ $T = 105.95'$ $R = 1,170.00'$	PI Sta 10+59.38 $\Delta = 15^{\circ} 37' 08.5" (LT)$ $D = 22^{\circ} 55' 05.9"$ $L = 68.15'$ $T = 34.29'$ $R = 250.00'$
			PI Sta 11+23.76 $\Delta = 13^{\circ} 55' 02.5" (RT)$ $D = 22^{\circ} 55' 05.9"$ $L = 60.73'$ $T = 30.5'$ $R = 250.00'$

NOTES:

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

REVISIONS

6/2/19
 18-061-2018-024
 Stationing and Surveys\U-5888 RW Staking 18201.30\Drawings\FOR REVIEW\Revised\101818\U5888.Ls_rw04.dgn
 10/2/18 10:51:03 AM
 RAJ



I, Anthony K. Alford, 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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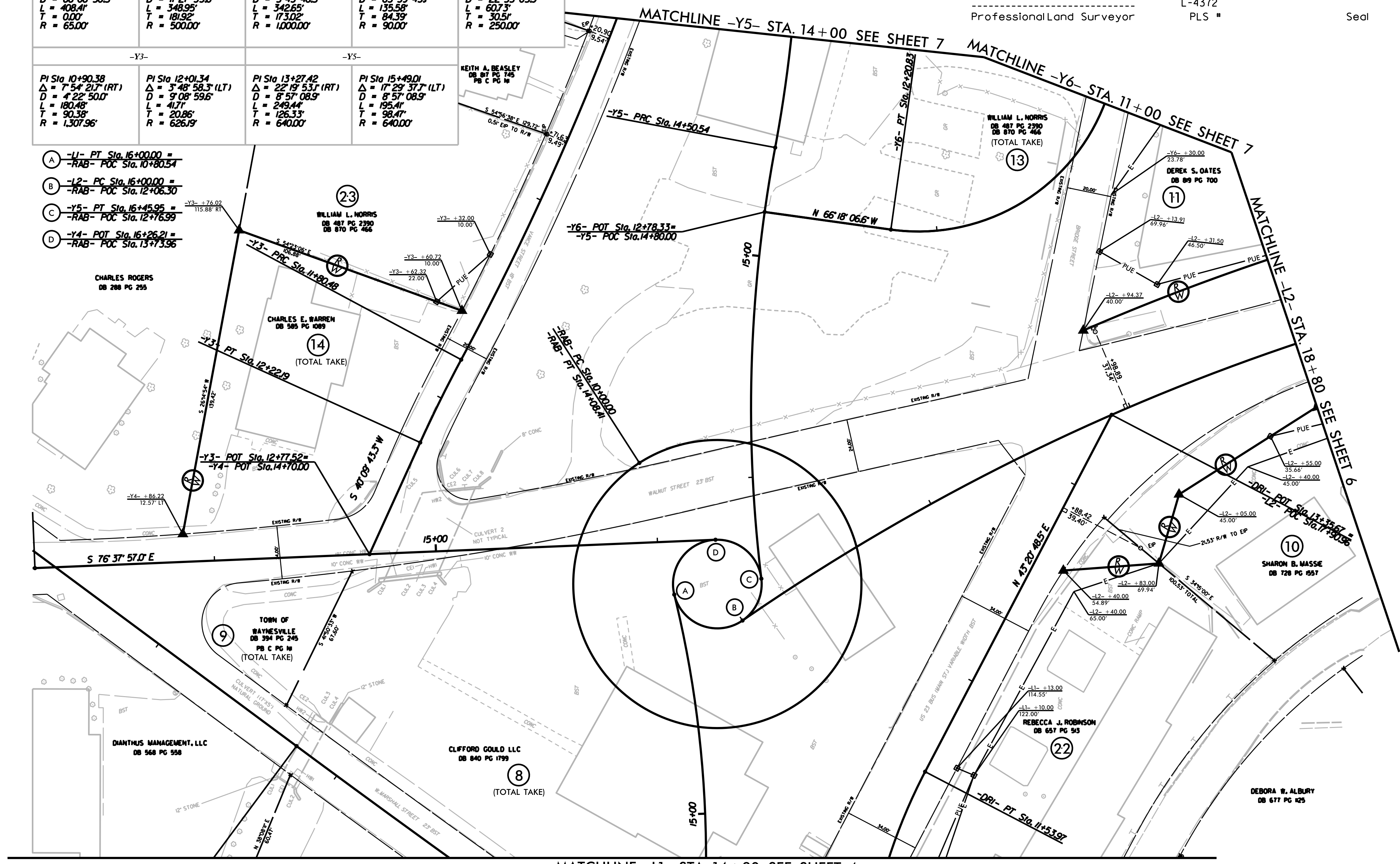
Witness my original signature, registration number and seal this 2nd day of October, 2018.

DocuSigned by:
Anthony K. Alford
228A2982F5844E...

Professional Land Surveyor L-4372 Seal
PLS #

-RAB-	-L1-	-L2-	-Y6-	-DRI-
PI Sta 10+00.00 Δ = 360° 00' 00.0" (LT) D = 88° 08' 50.5" L = 408.41' T = 0.00' R = 65.00'	PI Sta 14+32.97 Δ = 39° 59' 11.5" (LT) D = 17° 27' 33.0" L = 348.95' T = 181.92' R = 500.00'	PI Sta 17+73.02 Δ = 19° 37' 56.5" (RT) D = 5° 43' 46.5" L = 342.65' T = 173.02' R = 1000.00'	PI Sta 11+69.64 Δ = 86° 18' 51.6" (RT) D = 63° 39' 43.1" L = 135.58' T = 84.39' R = 90.00'	PI Sta 11+23.76 Δ = 13° 55' 02.5" (RT) D = 22° 55' 05.9" L = 607.3' T = 305.1' R = 250.00'
-Y3-	-Y5-	KEITH A. BEASLEY DB 87 PG 745 PB C PG 14		
PI Sta 10+90.38 Δ = 7° 54' 21.7" (RT) D = 4° 22' 50.0" L = 180.48' T = 90.38' R = 1,307.96'	PI Sta 12+01.34 Δ = 3° 48' 58.3" (LT) D = 9° 08' 59.6" L = 41.71' T = 20.86' R = 626.19'	PI Sta 13+27.42 Δ = 22° 19' 53.1" (RT) D = 8° 57' 08.9" L = 249.44' T = 126.33' R = 640.00'	PI Sta 15+49.01 Δ = 17° 29' 37.7" (LT) D = 8° 57' 08.9" L = 195.41' T = 98.47' R = 640.00'	

- (A) -Y1- PT Sta. 16+00.00 =
-RAB- POC Sta. 10+80.54
- (B) -Y2- PC Sta. 16+00.00 =
-RAB- POC Sta. 12+06.30
- (C) -Y5- PT Sta. 16+45.95 =
-RAB- POC Sta. 12+16.99
- (D) -Y4- POT Sta. 16+26.21 =
-RAB- POC Sta. 13+13.96



MATCHLINE -L1- STA. 14+80 SEE SHEET 4

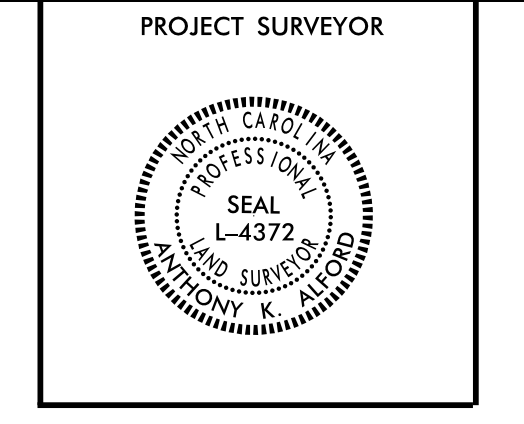
NOTES:

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REVISIONS

18-0617-2018-017 Location and Surveys\U-5888 RW Staking 18201.30\80-Drawings\FOR REVIEW\Revised\101818\U5888-Ls-rw05.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5888	RW06
Location and Surveys	
WETHERILL ENGINEERING 1223 JONES FRANKLIN RD RALEIGH, NC 27606	

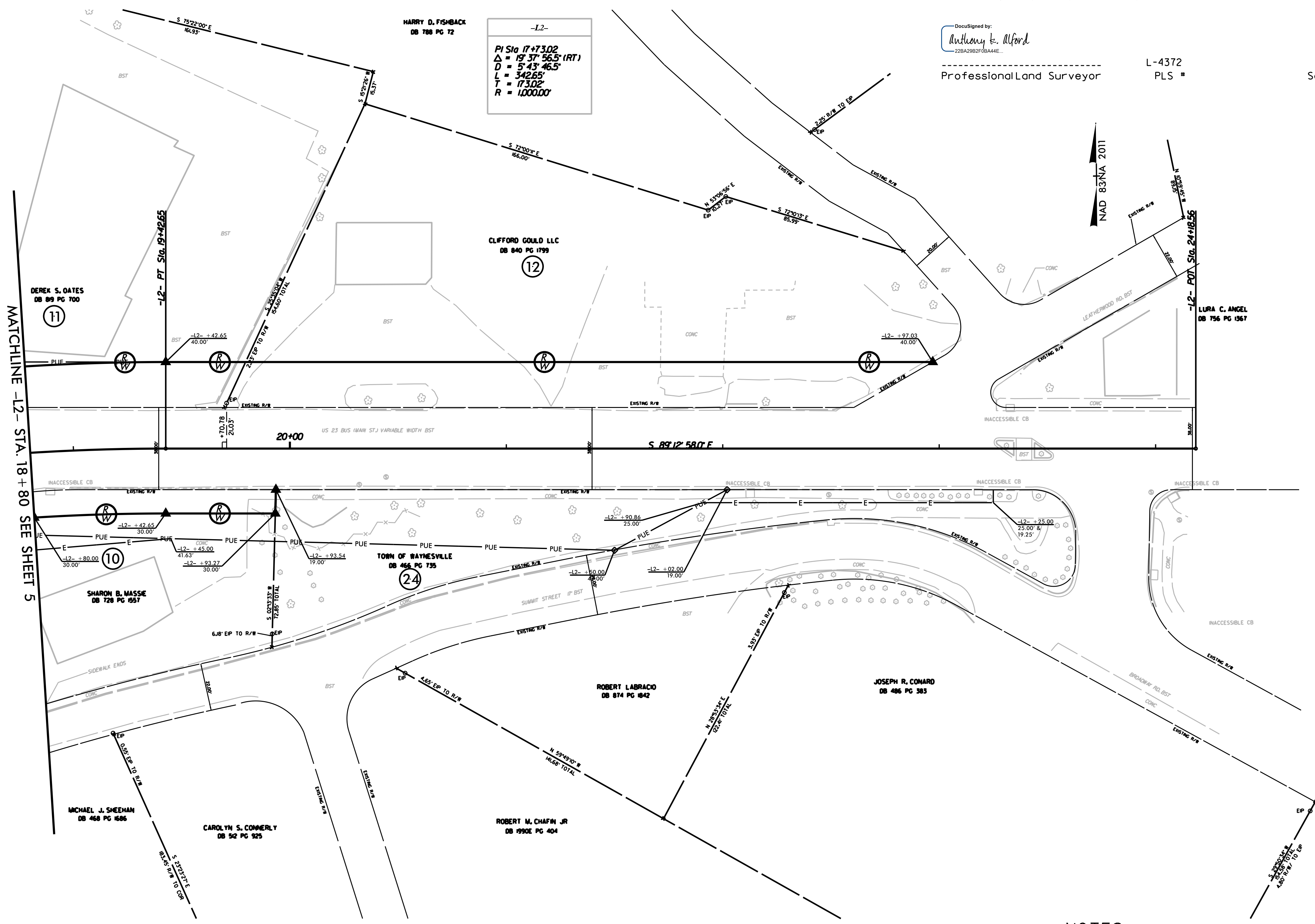


I, Anthony K. Alford, a Professional Land Surveyor in the state of North Carolina hereby certify to the best of my knowledge and belief that the following work item(s) (R/W Staking) performed under my responsible charge meet NCDOT Survey Standards as directed in the NCDOT Location & Surveys guidelines 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 2nd day of October, 2018.

DocuSigned by:
Anthony K. Alford
228A2982F08A44E...
Professional Land Surveyor L-4372 PLS # Seal



-L2-
PI Sta 17+73.02
Δ = 19° 37' 56.5" (RT)
D = 5' 43" 46.5"
L = 342.65'
T = 173.02'
R = 1,000.00'

MATCHLINE -L2- STA. 18 + 80 SEE SHEET 5

REVISIONS

18-0617-2018-0231 Location and Surveys\U-5888 RW Staking 18201.30\80-Drawings\FOR REVIEW\Revised\101818\U5888_Ls_rw06.dgn
10/2/2018 10:50:53 AM

NOTES:

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