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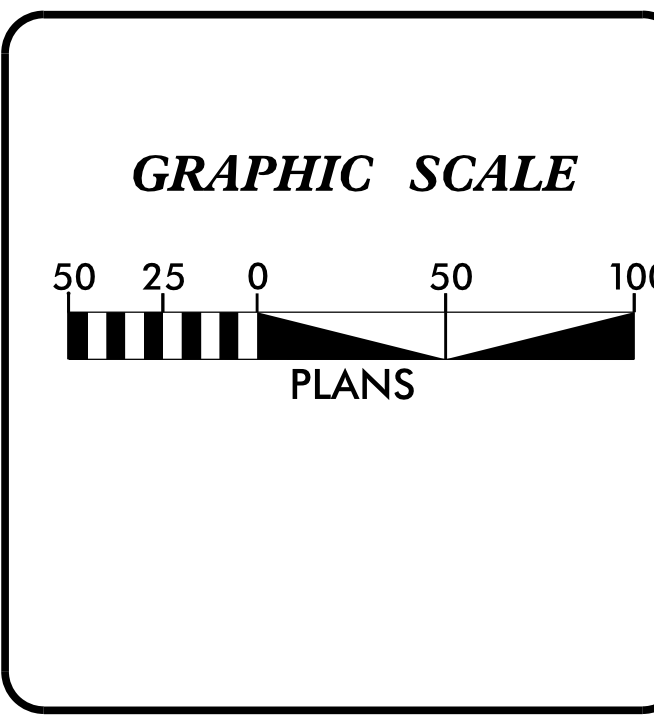
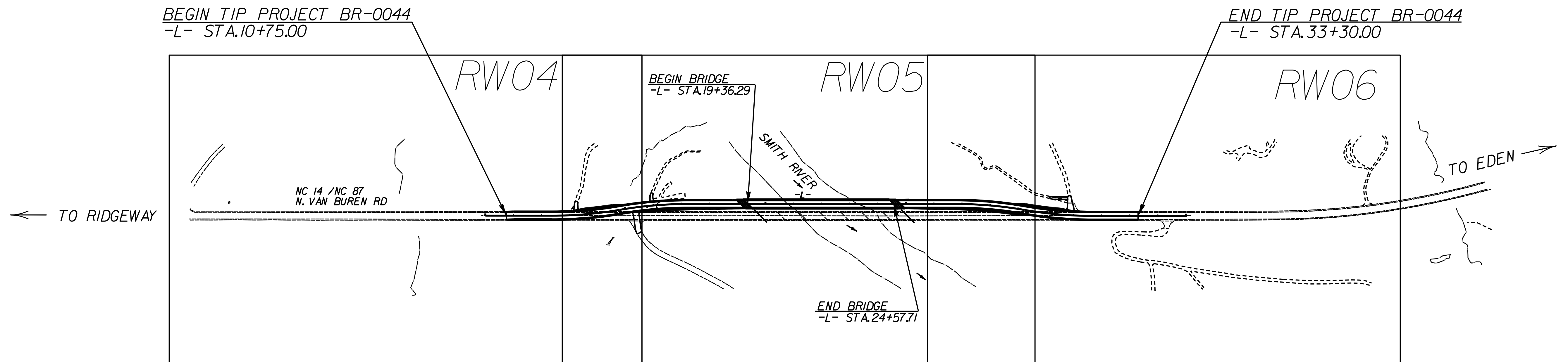
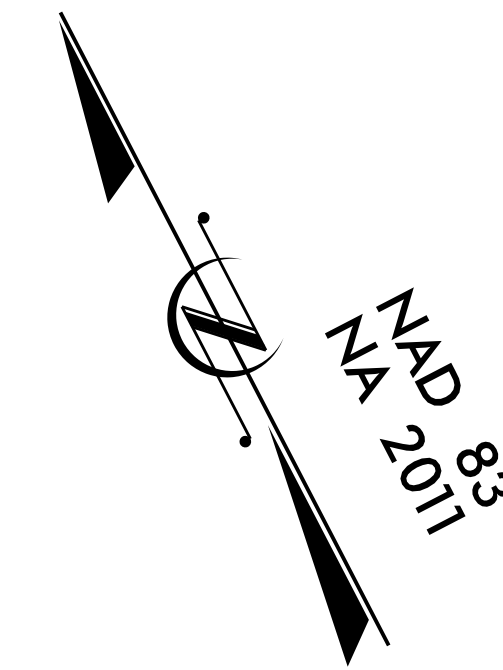
09/06/19

TIP PROJECT: BR-0044

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BR-0044	RW01	

STATE OF NORTH CAROLINA  
 DIVISION OF HIGHWAYS  
 SURVEY CONTROL, EXISTING CENTERLINES,  
 RIGHT OF WAY, EASEMENTS AND PROPERTY TIES

**ROCKINGHAM COUNTY**



**DATUM DESCRIPTION**  
 THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "BR0044-2" WITH NAD 83/NSRS 2011 STATE PLANE GRID COORDINATES OF NORTHING: 1012258.796(ft) EASTING: 1773751.701(ft) ELEVATION: 612.29(ft)  
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.000097072  
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "BR0044-2" TO -L- STATION 15+00 IS N 23-35'58.6" W 97.64(ft)  
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88/GEOID G12NC

Prepared in the Office of:  
**Dewberry**  
 Dewberry Engineers Inc.  
551 RINEY FOREST ROAD  
 DANVILLE, VA 24540  
 PHONE: 434.787.4497  
 FAX: 434.787.4511  
 NCBELS #F-0929

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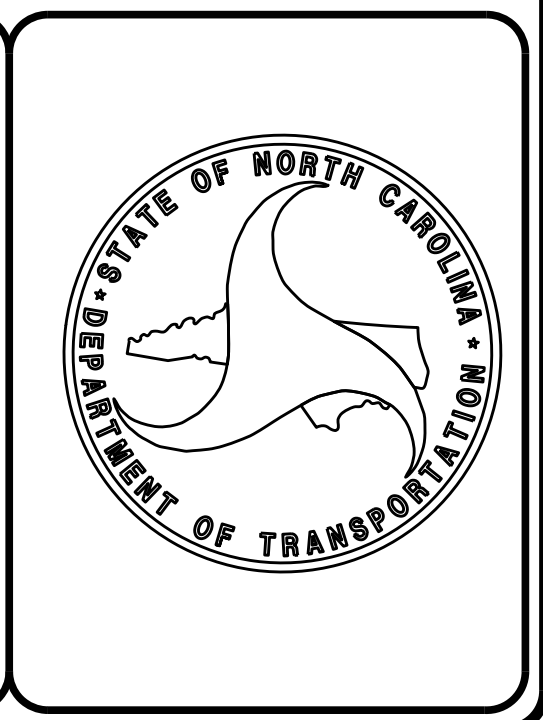
2018 STANDARD SPECIFICATIONS

<b>RIGHT OF WAY DATE:</b> JUNE 17, 2019	<b>LETTING DATE:</b> APRIL 21, 2020
--	--

**PROFESSIONAL LAND SURVEYOR**

DocuSigned by:  
 Robert H. Bengtson  
 EAT9E7CA33884F1...  
 11/19/2019

SIGNATURE: \_\_\_\_\_ Date: \_\_\_\_\_

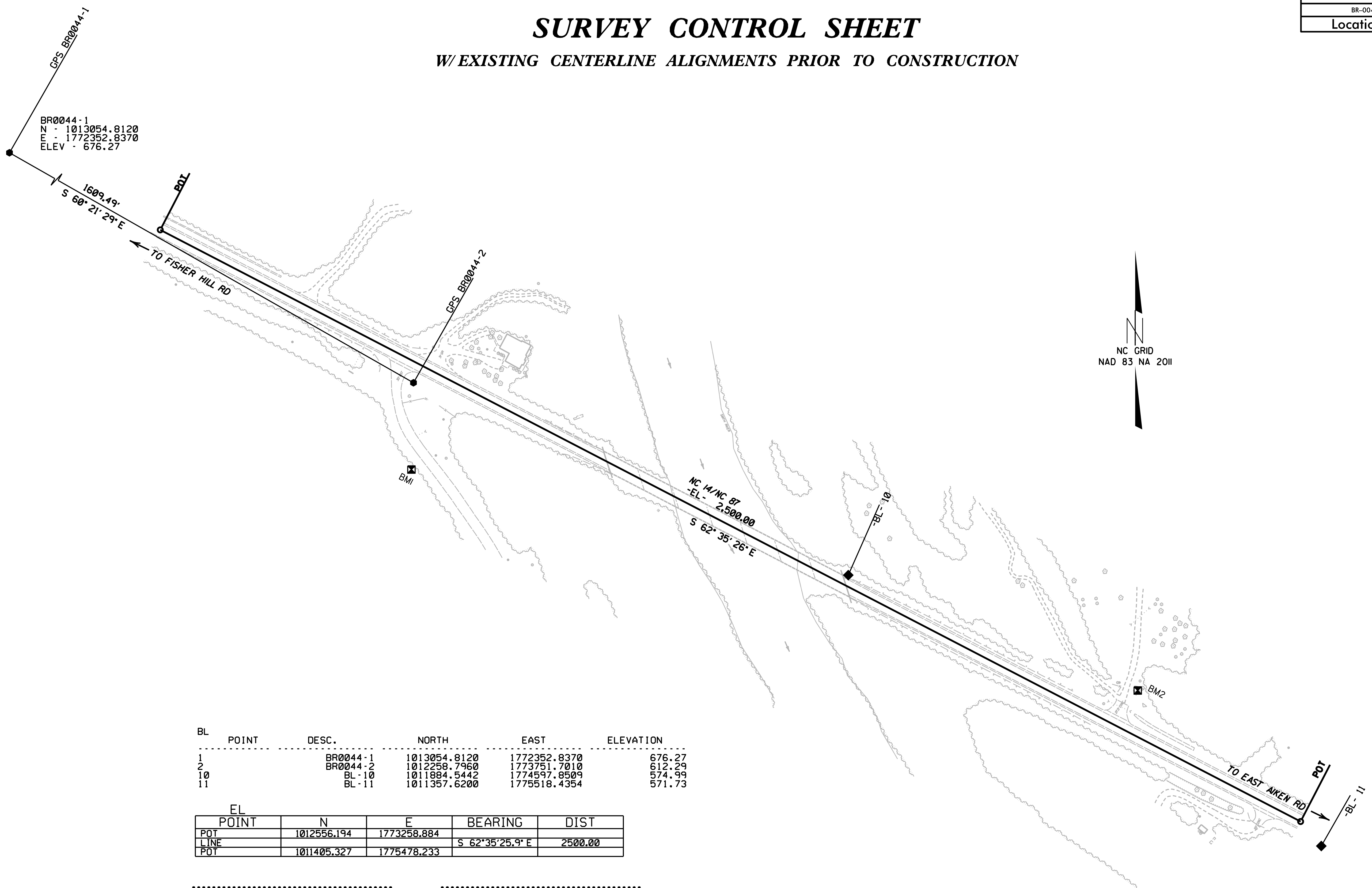


\$\$\$\$\$ SYSTEM \$\$\$\$\$\$  
 \$\$\$ DDN \$\$\$  
 \$\$\$ USERNAME \$\$\$

# SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

6/2/09



BL	POINT	DESC.	NORTH	EAST	ELEVATION
1		BR0044-1	1013054.8120	1772352.8370	676.27
2		BR0044-2	1012258.7960	1773751.7010	612.29
10		BL-10	1011884.5442	1774597.8509	574.99
11		BL-11	1011357.6200	1775518.4354	571.73

EL	POINT	N	E	BEARING	DIST
POT		1012556.194	1773258.884		
LINE				S 62° 35' 25.9" E	2500.00
POT		1011405.327	1775478.233		

.....  
 BMI ELEVATION = 630.72  
 N 1012090 E 1773748  
 BL STATION 21+74.00 156 RIGHT  
 RR SPIKE IN A 12' OAK  
 .....

.....  
 BM2 ELEVATION = 572.78  
 N 1011660 E 1775161  
 BL STATION 36+35.00 85 LEFT  
 CHISELED SQ ON A CONC SIGN BASE  
 .....


**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.

REVISIONS

D:\S\2008\_07\36\Projects\BR0044\microstation\CONTROL SHEETS\BR0044\_LS\_rw2c-1.dgn  
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 10/24/09 10:42 AM

# PROPOSED ALIGNMENT CONTROL SHEET

PROJECT REFERENCE NO. BR-0044	SHEET NO. RW02D-1
Location and Surveys	
 Dewberry Engineers Inc. <small>551 PINEY FOREST ROAD DANVILLE, VA 24540 PHONE: 434.797.4497 FAX: 434.797.4341 NCBELS #F-0929</small>	



DocuSigned by:  
**Robert H. Bengtson** 10/30/2019  
EA79ETCA33894F1

REVISIONS

L			
TYPE	STATION	NORTH	EAST
POT	10+00.00	1012556.1940	1773258.8841
PC	12+37.25	1012446.9763	1773469.5012
PRC	14+79.46	1012354.5863	1773693.0653
PT	17+21.15	1012262.4294	1773916.1801
PC	26+00.27	1011821.2097	1774767.7878
PRC	29+23.99	1011690.8715	1774973.3592
PT	31+67.20	1011560.7663	1775178.4812
POT	35+04.86	1011405.3269	1775478.2326


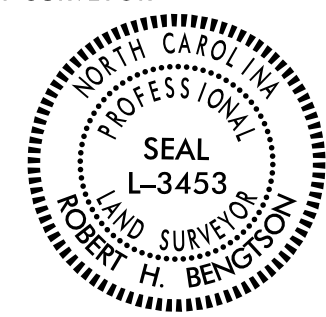
**NOTES:**

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.

6/2/19  
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 Robert H. Bengtson

6/2/19

# RIGHT OF WAY CONTROL SHEET

PROJECT REFERENCE NO. BR-0044	SHEET NO. RW03E-1
<b>Location and Surveys</b>	
 Dewberry Engineers Inc. <small>551 PINEY FOREST ROAD DANVILLE, VA 24040 PHONE: 434.797.4497 FAX: 434.797.4341 NCBELS #F-0929</small>	
PROJECT SURVEYOR  11/15/2019	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, ROBERT H. BENGTSON, 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 14th day of November, 2019.

DocuSigned by:  
  
 Robert H. Bengtson  
 EA79E7CA33894F1  
 -----  
 Professional Land Surveyor

L-3453  
 PLS #

Seal

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	18+60.00	-75.00	1012265.1494	1774073.9644
L	15+59.00	-150.00	1012468.7968	1773821.3593
L	15+85.00	-150.00	1012458.3477	1773848.1811
L	15+85.00	-75.00	1012388.7194	1773820.3084
L	17+21.15	-75.00	1012329.0223	1773950.6820
L	18+60.00	-135.00	1012318.4238	1774101.5659
L	23+74.00	-95.00	1012046.4543	1774539.5484
L	23+74.00	-117.00	1012065.9883	1774549.6689
L	29+95.70	-65.00	1011702.4440	1775068.1884
L	28+07.00	-82.00	1011827.0029	1774921.6679
L	19+25.00	-135.00	1012288.5221	1774159.2798
L	19+60.00	-95.00	1012236.9050	1774171.9554
L	13+83.00	-67.79	1012449.8256	1773626.9271

REVISIONS

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 6/2/19

**NOTES:**


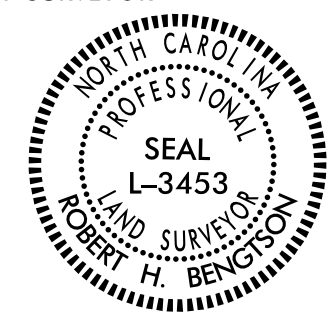
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1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

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

6/2/19

# PERMANENT EASEMENT CONTROL SHEET

PROJECT REFERENCE NO. BR-0044	SHEET NO. RW03E-2
<b>Location and Surveys</b>	
 Dewberry Engineers Inc. <small>551 PINEY FOREST ROAD DANVILLE, VA 24040 PHONE: 434.797.4497 FAX: 434.797.4341 NCBELS #F-0929</small>	
PROJECT SURVEYOR	
 11/15/2019	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, ROBERT H. BENGTON, 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 14th day of November, 2019.

Digitally signed by:   
 -----  
 Professional Land Surveyor      L-3453      Seal

ROW MARKER PERMANENT EASEMENT - E				
ALIGN	STATION	OFFSET	NORTH	EAST
L	14+25.00	110.00	1012268.4195	1773604.3338
L	14+60.00	110.00	1012256.1237	1773640.0242
L	14+25.00	88.36	1012288.7862	1773611.6365
L	14+60.00	93.87	1012271.4398	1773645.0875

### 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.

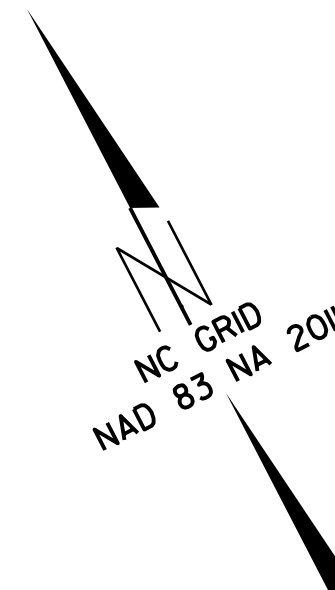
REVISIONS

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 Robert H. Bengtson

6/2/09

-L-

PI Sta 13+58.66	PI Sta 16+00.61
$\Delta = 9' 54" 44.5' (LT)$	$\Delta = 9' 53" 29.9' (RT)$
$D = 4' 05" 33.2'$	$D = 4' 05" 33.2'$
$L = 242.20'$	$L = 241.70'$
$T = 121.41'$	$T = 121.15'$
$R = 1,400.00'$	$R = 1,400.00'$
$e = 0.06 \text{ FT/FT}$	$e = 0.06 \text{ FT/FT}$
$R.O. = 162.00'$	$R.O. = 162.00'$



I, ROBERT H. BENTSON, a Professional Land Surveyor in the state of North Carolina hereby certify to the best of my knowledge and belief that the following work items (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 28th day of October, 2019.

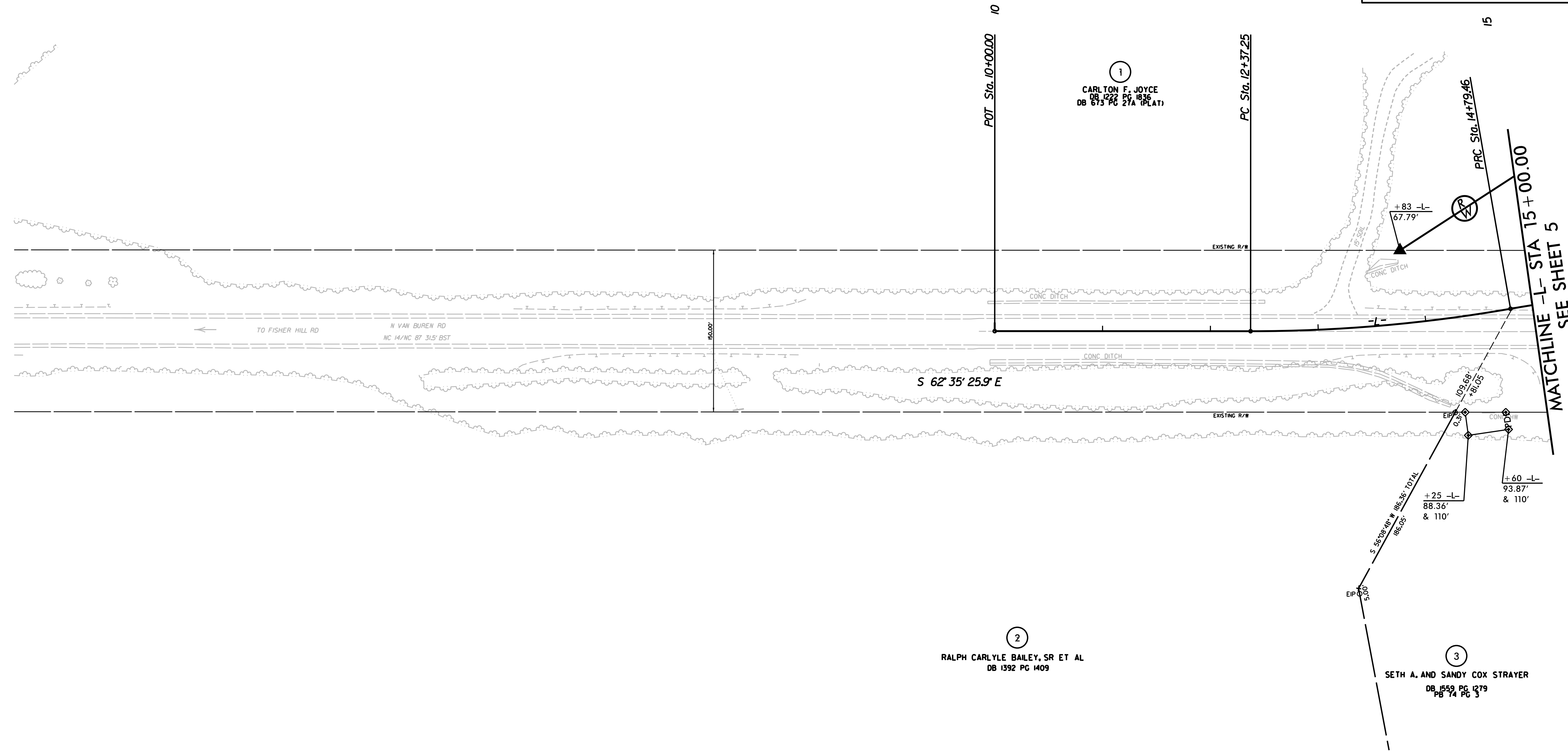
Designed by:  
**Robert H. Bentson**  
 EA767CA3894F1  
 Professional Land Surveyor

L-3453  
 PLS #

Seal

PROJECT REFERENCE NO. BR-0044	SHEET NO. RW04
<b>Location and Surveys</b>	
 551 PINEY FOREST ROAD DANVILLE, VA 24040 PHONE: 434.797.4497 FAX: 434.797.4341 NCBELS #F-0929	
PROJECT SURVEYOR	
11/15/2019	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

REVISIONS



MATCHLINE -L- STA 15+00.00 SEE SHEET 5

**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.

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 Robert H. Bentson

6/2/09

PROJECT REFERENCE NO.	SHEET NO.
BR-0044	RW05

Location and Surveys

**Dewberry**  
Dewberry Engineers Inc.  
551 PINEY FOREST ROAD  
DANVILLE, VA 24540  
PHONE: 434.797.4407  
FAX: 434.797.4341  
NCBELS #F-0929

PROJECT SURVEYOR

11/15/2019

Seal

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I, ROBERT H. BENGTSON, 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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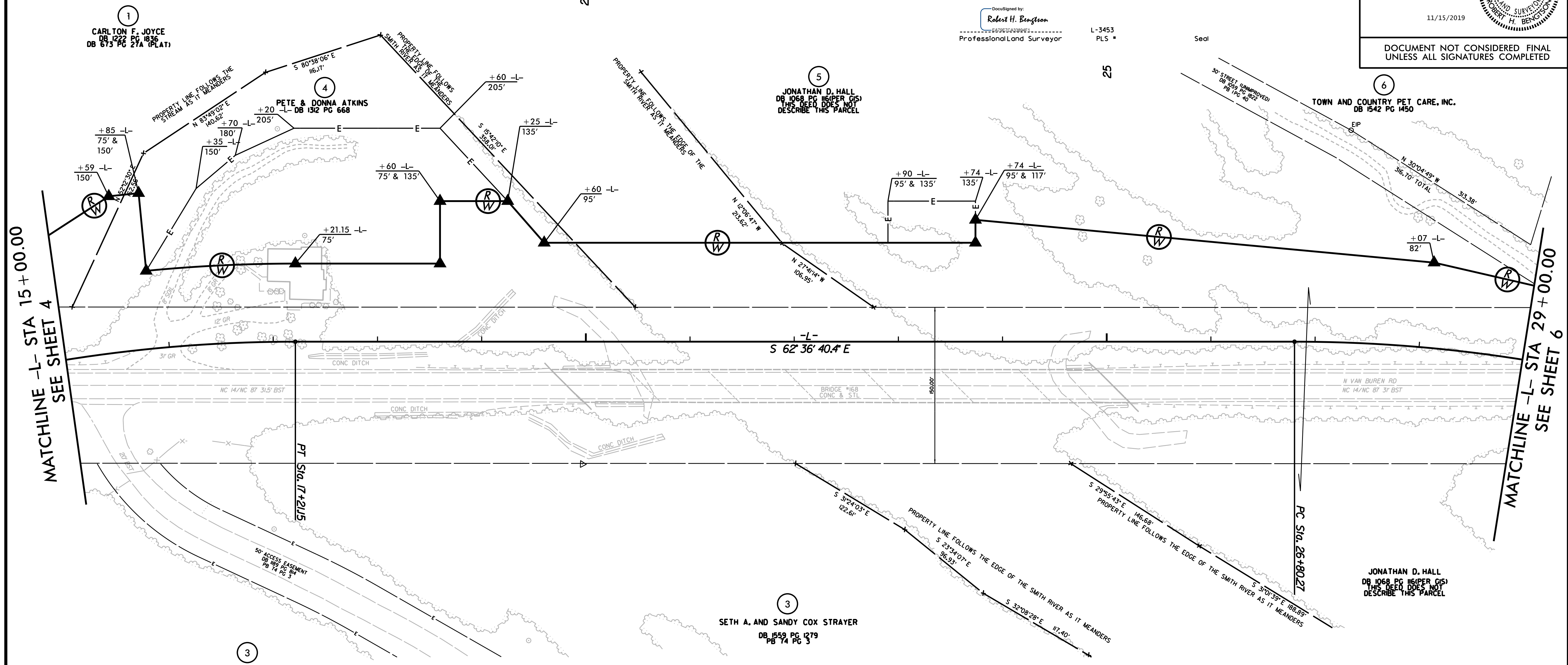
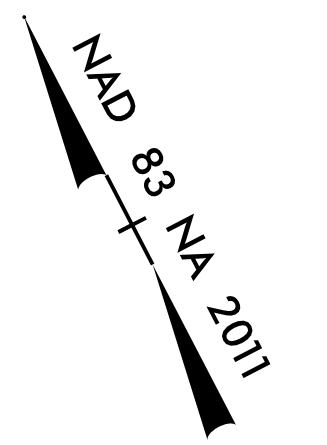
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Witness my original signature, registration number and seal this 28th day of October, 2019.

DocuSigned by:  
**Robert H. Bengtson**  
Professional Land Surveyor L-3453 PLS #

-L-

PI Sta 16+00.61 Δ = 9° 53' 29.9" (RT) D = 4' 05" 33.2" L = 241.70' T = 121.15' R = 1,400.00' e = 0.06 FT/FT R.O. = 162.00'	PI Sta 28+02.44 Δ = 9° 58' 27.2" (RT) D = 4' 05" 33.2" L = 243.72' T = 122.17' R = 1,400.00' e = 0.06 FT/FT R.O. = 162.00'
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REVISIONS

MATCHLINE -L- STA 15+00.00 SEE SHEET 4

MATCHLINE -L- STA 29+00.00 SEE SHEET 6

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.

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 DRAWN BY: rbeng



REVISIONS

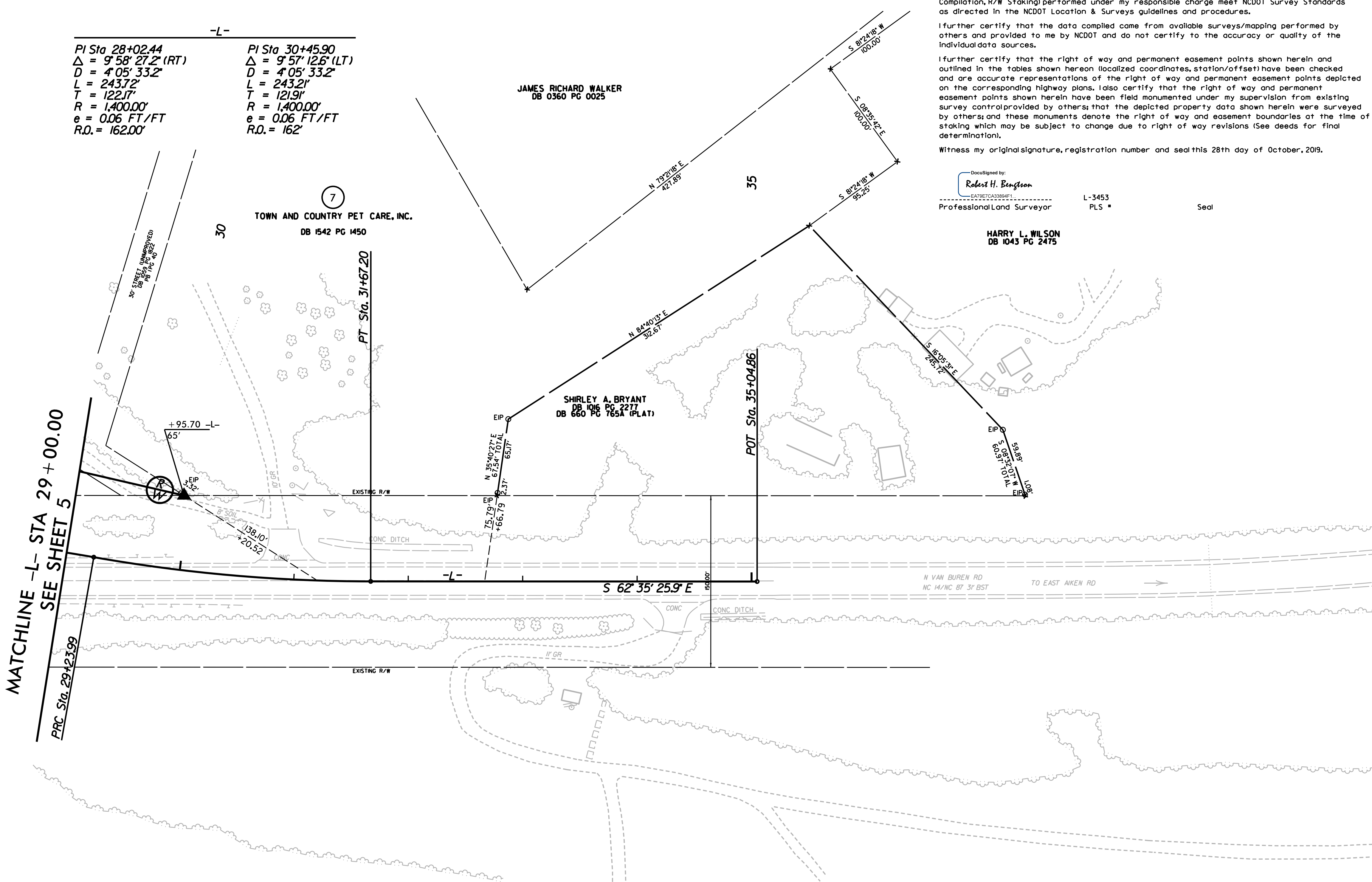
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dwg

-L-

PI Sta 28+02.44	PI Sta 30+45.90
$\Delta = 9' 58' 27.2''$ (RT)	$\Delta = 9' 57' 12.6''$ (LT)
D = 4' 05' 33.2"	D = 4' 05' 33.2"
L = 243.72'	L = 243.21'
T = 122.17'	T = 121.91'
R = 1,400.00'	R = 1,400.00'
e = 0.06 FT/FT	e = 0.06 FT/FT
R.O. = 162.00'	R.O. = 162'

MATCHLINE -L- STA 29+00.00  
SEE SHEET 5

PRC Sta. 29+23.99



I, ROBERT H. BENTSON, 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.

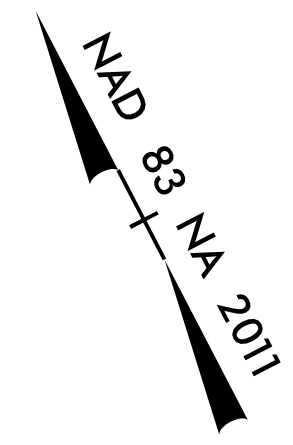
I further certify that the right of way and permanent easement points shown herein and outlined in the tables shown hereon (localized coordinates, station/offset) have been checked and are accurate representations of the right of way and permanent easement points depicted on the corresponding highway 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 28th day of October, 2019.

Designed by:  
**Robert H. Bentson**  
Professional Land Surveyor  
L-3453 PLS

**HARRY L. WILSON**  
DB 1043 PG 2475  
Seal

PROJECT REFERENCE NO. BR-0044	SHEET NO. RW06
<b>Location and Surveys</b>	
 <b>Dewberry</b> Dewberry Engineers Inc. 551 PINEY FOREST ROAD DANVILLE, VA 24540 PHONE: 434.797.4407 FAX: 434.797.4341 NCBELS #F-0929	
PROJECT SURVEYOR	
11/15/2019	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



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.