

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5536	RW01	12

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

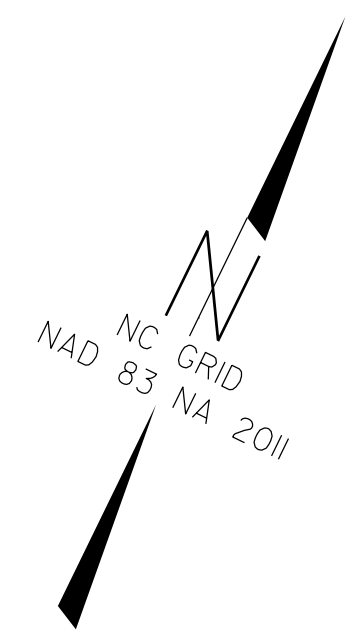
---

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

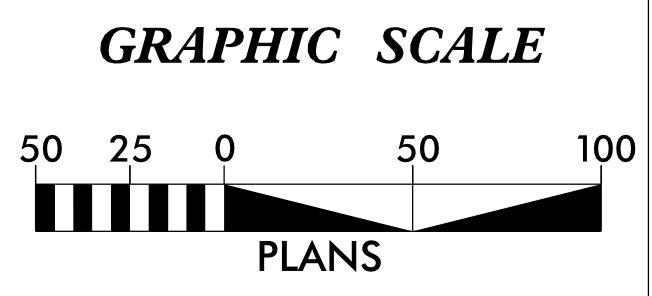
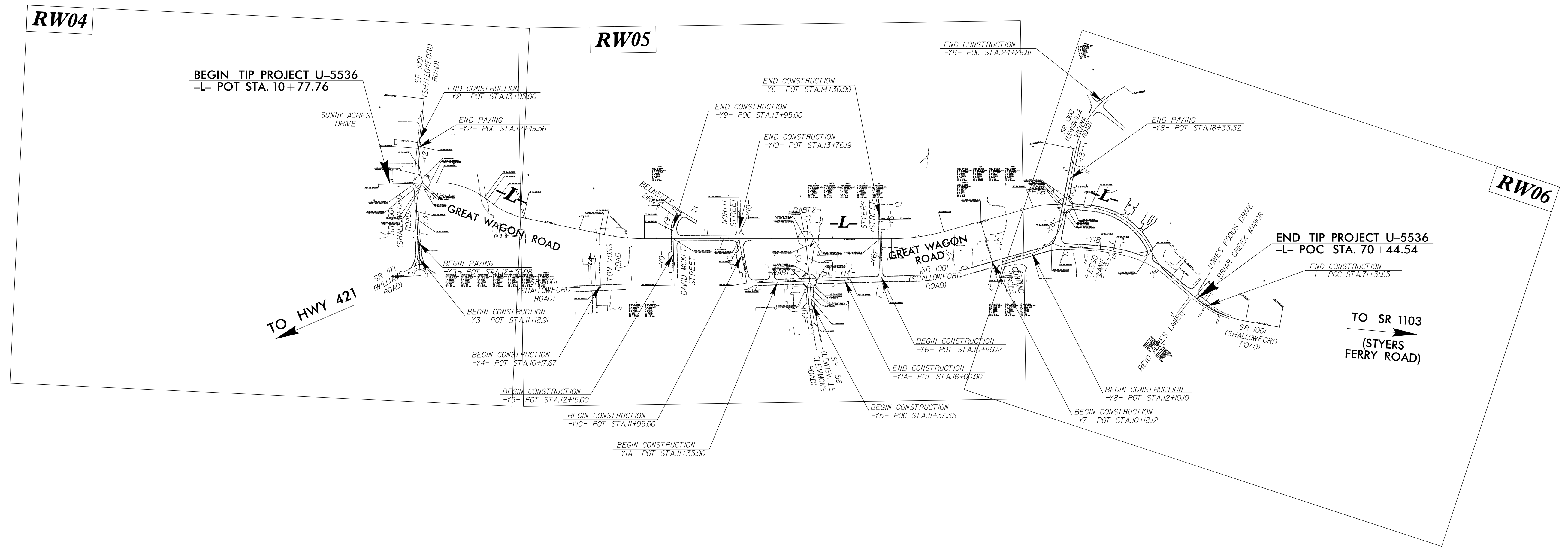
---

## FORSYTH COUNTY

---



**TIP PROJECT: U-5536**



**DATUM DESCRIPTION**

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "U-5536 - 4" WITH NAD 83/2011 STATE PLANE GRID COORDINATES OF NORTHING: 857,013.0997(ft) EASTING: 1,580,799.1677(ft) ELEVATION: 977.99(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99993966

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "U-5536 - 4" TO -L- STATION 40+70.82 IS N 25-59'58.67" W 592.93(ft)

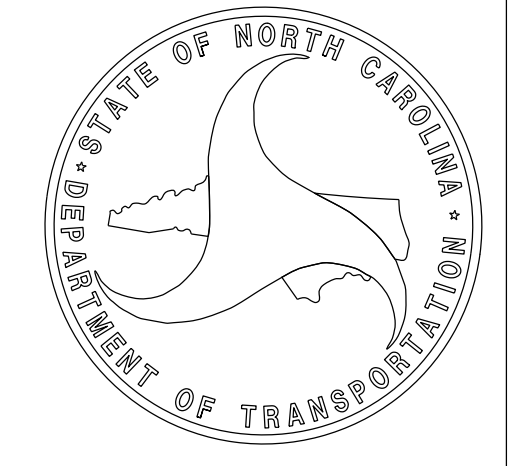
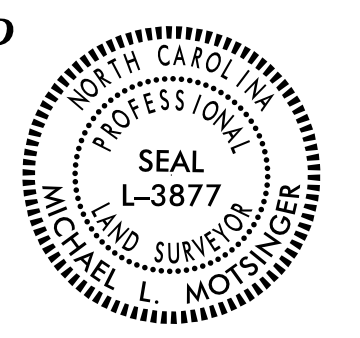
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

Prepared in the Office of:

2018 STANDARD SPECIFICATIONS

<b>RIGHT OF WAY DATE:</b> 12/18/2024	<b>LETTING DATE:</b> 02/18/2025
---	------------------------------------

**PROFESSIONAL LAND SURVEYOR**

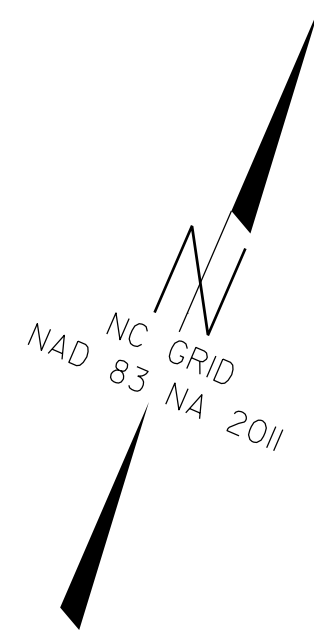


DocuSigned by:  
*Michael L. Motzinger*  
FORSYTH COUNTY  
SIGNATURE:

11/07/2024  
Date:

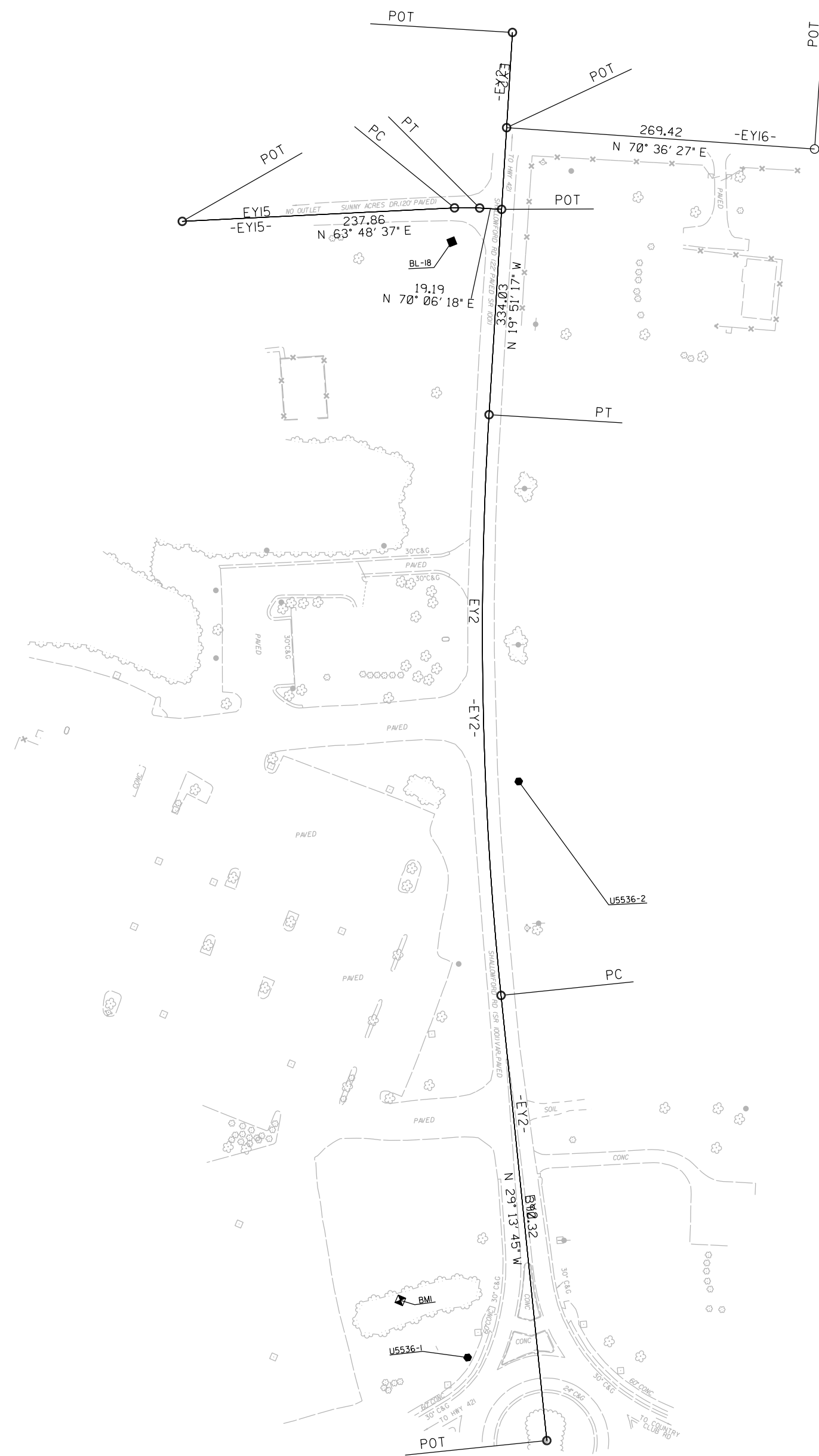
06-NOV-2024 13:37 S:\Units\Div09\Winston\Cliffs Computer\Urban\U5536\Brad\Contral Sheets\_Revisions\_241106\U5536-LS-RW01.dgn jbevington AT LS-328608L

REVISIONS



# SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION



MATCHLINE -L- STA. 20 + 44.08 SEE SHEET RW02C-2

SEE SHEET RW02C-5  
FOR FURTHER  
ALIGNMENT DETAILS

PROJECT REFERENCE NO.	SHEET NO.
U-5536	RW02C-1
<b>Location and Surveys</b>	
PROJECT SURVEYOR	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, Michael L. Motsinger, PLS, certify that the Project Control was [performed/verified] under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

Class of survey: AA  
 Type of GPS field procedure: [Static, OPUS, RTN]  
 Dates of survey: September of 2017  
 Datum/Epoch: NAD 83 / 2011  
 Published/Fixed-control use: [Project Control if applicable, N/A for RTN]  
 Localized around: U-5536 - 4  
 Northing: 857013.0997  
 Easting: 1580799.1677  
 Combined grid factor: 0.99993966  
 Geoid model: G12NC  
 Units: US Survey Feet

I also certify that the Baseline Control for this project 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 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed September of 2017, and all coordinates are based on NAD 83/2011 and all elevations are based on NAVD 88; that this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 7th day of November, 2024.

DocuSigned by:  
  
 F0B8FE70E23CA0E  
 Professional Land Surveyor L-3877



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

I, Michael L. Motsinger, PLS, certify that the Project Control was [performed/verified] under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

Class of survey: AA  
Type of GPS field procedure: [Static, OPUS, RTN]  
Dates of survey: September of 2017  
Datum/Epoch: NAD 83 / 2011  
Published/Fixed-control use: [Project Control if applicable, N/A for RTN]  
Localized around: U-5536 - 4  
Northing: 857013.0997  
Easting: 1580799.1677  
Combined grid factor: 0.99993966  
Geoid model: G12NC  
Units: US Survey Feet

I also certify that the Baseline Control for this project 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 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed September of 2017, and all coordinates are based on NAD 83/2011 and all elevations are based on NAVD 88; that this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 7th day of November, 2024.

DocuSigned by:  
*Michael L. Motsinger*  
F0D6PFE70E23C4DE  
Professional Land Surveyor L-3877



PROJECT REFERENCE NO. U-5536	SHEET NO. RW02C-2
Location and Surveys	
PROJECT SURVEYOR	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



MATCHLINE -L- STA. 20 + 44.08 SEE SHEET RW02C-1

MATCHLINE -L- STA. 55 + 70.86 SEE SHEET RW02C-3



SEE SHEET RW02C-5  
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.


REVISIONS

06-NOV-2024 10:41  
S:\Units\Winston\Clif\Computer\Urbon\U5536\Broad\Control Sheets\Revisions\_241106\_U5536-LS-RW02C-2.dgn  
Jbevrington AT LS-328608L

6/2/09

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

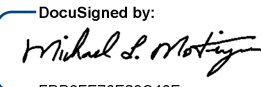
PROJECT REFERENCE NO. U-5536	SHEET NO. RW02C-3
<b>Location and Surveys</b>	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

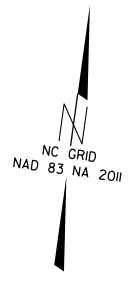
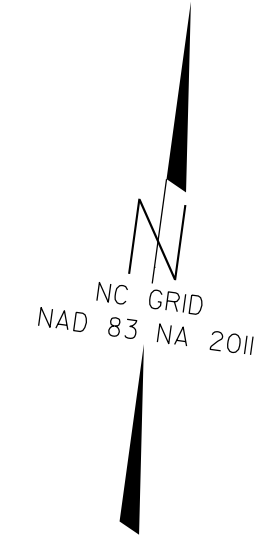
I, Michael L. Motsinger, PLS, certify that the Project Control was performed/verified under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

Class of survey: **AA**  
 Type of GPS field procedure: [Static, OPUS, RTN]  
 Dates of survey: September of 2017  
 Datum/Epoch: NAD 83 / 2011  
 Published/Fixed-control use: [Project Control if applicable, N/A for RTN]  
 Localized around: U-5535 - 4  
 Northing: 857013.0997  
 Easting: 1580799.1677  
 Combined grid factor: 0.99993966  
 Geoid model: G12NC  
 Units: US Survey Feet

I also certify that the Baseline Control for this project 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 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed September of 2017, and all coordinates are based on NAD 83/2011 and all elevations are based on NAVD 88; that this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 7th day of November, 2024.

DocuSigned by:  
  
 FDB6F7E20C40E  
 Professional Land Surveyor L-3877



SEE SHEET RW02C-5  
 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.

REVISIONS

06-NOV-2024 10:54  
 S:\Units\09\Winston\Clif\Computer\Urbon\U5536\Broad\Control\Sheets\_Revisions\_241106\_U5536-LS-RW02C-3.dgn  
 .bevrington AT LS-328608L

# SURVEY CONTROL SHEET

## W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. U-5536	SHEET NO. RW02C-4
<b>Location and Surveys</b>	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

BL	POINT	DESC.	NORTH	EAST	ELEVATION
2		U5536-2	856645.5530	1577965.0330	940.62
7		BL-7	856642.8540	1578424.2470	951.88
8		BL-8	856572.1500	1578848.3850	959.36
9		BL-9	856753.4670	1579162.7590	956.63
10		BL-10	857146.0590	1579632.1990	951.35
11		BL-11	857333.5230	1580035.2090	965.61
3		U5536-3	857539.1950	1580513.2630	963.41
12		BL-12	857690.5810	1580806.8630	955.40
13		BL-13	857785.6430	1581046.9900	970.77
14		BL-14	857923.1830	1581239.1670	947.96
15		BL-15	858011.4770	1581537.9830	954.15
16		BL-16	858032.8540	1581895.1910	952.62
17		BL-17	858333.1900	1582202.8370	957.85
5		U5536-5	858465.2547	1582665.6080	948.61
6		U5536-6	858297.0873	1583264.7051	940.61

BY	POINT	DESC.	NORTH	EAST	ELEVATION
18		BY-18	857054.5300	1577724.8100	933.02
EQ2		U5536-2	856645.5530	1577965.0330	940.62
1		U5536-1	856166.5861	1578123.3462	943.77

BY1	POINT	DESC.	NORTH	EAST	ELEVATION
EQ3		U5536-3	857539.1950	1580513.2630	963.41
4		U5536-4	857013.0997	1580799.1677	977.99

BY2	POINT	DESC.	NORTH	EAST	ELEVATION
EQ12		BL-12	857690.5810	1580806.8630	955.40
19		BY-19	857478.8370	1580969.9550	974.73

BY3	POINT	DESC.	NORTH	EAST	ELEVATION
EQ17		BL-17	858333.1900	1582202.8370	957.85
20		BY-20	858582.2810	1582056.3890	950.48
21		BY-21	858945.8550	1581875.1860	939.76

\*\*\*\*\*  
 BM1            ELEVATION = 944.12  
 N 856189       E 1578050  
 RAILROAD SPIKE SET IN 36" DIA. OAK  
 \*\*\*\*\*

\*\*\*\*\*  
 BM2            ELEVATION = 957.29  
 N 857222       E 1579586  
 RAILROAD SPIKE SET IN 12" DIA. ASH  
 \*\*\*\*\*

\*\*\*\*\*  
 BM3            ELEVATION = 940.30  
 N 858055       E 1581329  
 RAILROAD SPIKE SET IN 26" DIA. PINE  
 \*\*\*\*\*

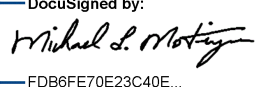
\*\*\*\*\*  
 BM4            ELEVATION = 939.87  
 N 858296       E 1583358  
 RAILROAD SPIKE SET IN 40" DIA. OAK  
 \*\*\*\*\*

I, Michael L. Motsinger, PLS, certify that the Project Control was performed/verified under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

Class of survey: **AA**  
 Type of GPS field procedure: [Static, OPUS, RTN]  
 Dates of survey: September of 2017  
 Datum/Epoch: NAD 83 / 2011  
 Published/Fixed-control use: [Project Control if applicable, N/A for RTN]  
 Localized around: U-5536 - 4  
 Northing: 857013.0997  
 Easting: 1580799.1677  
 Combined grid factor: 0.99993966  
 Geoid model: G12NC  
 Units: US Survey Feet

I also certify that the Baseline Control for this project 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 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed September of 2017, and all coordinates are based on NAD 83/2011 and all elevations are based on NAVD 88; that this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 7th day of November, 2024.

DocuSigned by:  
  
 F0B6F7E23CA0E  
 Professional Land Surveyor L-3877



### 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.

REVISIONS











Location and Surveys

PROJECT SURVEYOR

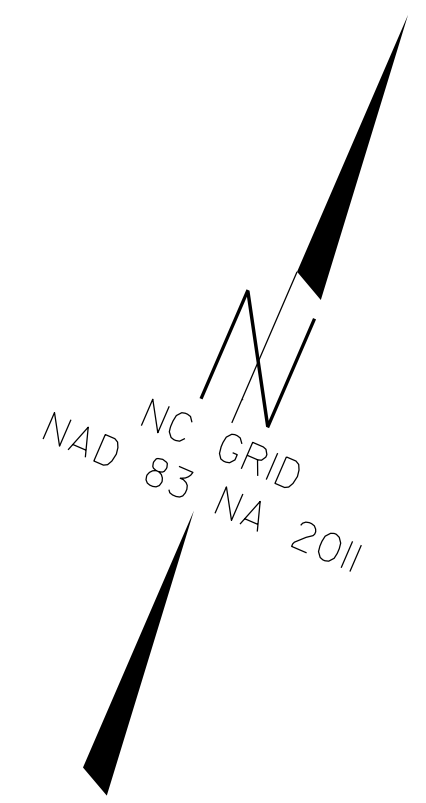
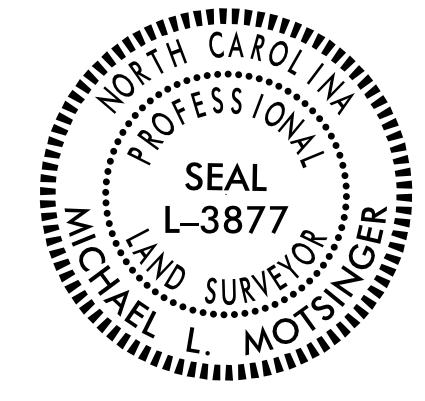


DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

I, Michael L. Motsinger, 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 April 2023 to October 2024, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 7th day of November, 2024.

DocuSigned by:  
  
 Michael L. Motsinger  
 Professional Land Surveyor L-3877



MATCHLINE -L- STA. 20+44 SEE SHEET RW05

REVISIONS

07-NOV-2024 08:46  
 S:\Projects\1040\Winston\Control Sheets\Revisions\_241106\U5536\_LS\_RW04.dgn  
 Winston\_AT\_LS\_328608

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 \_\_\_\_ TO \_\_\_\_.

Location and Surveys

PROJECT SURVEYOR

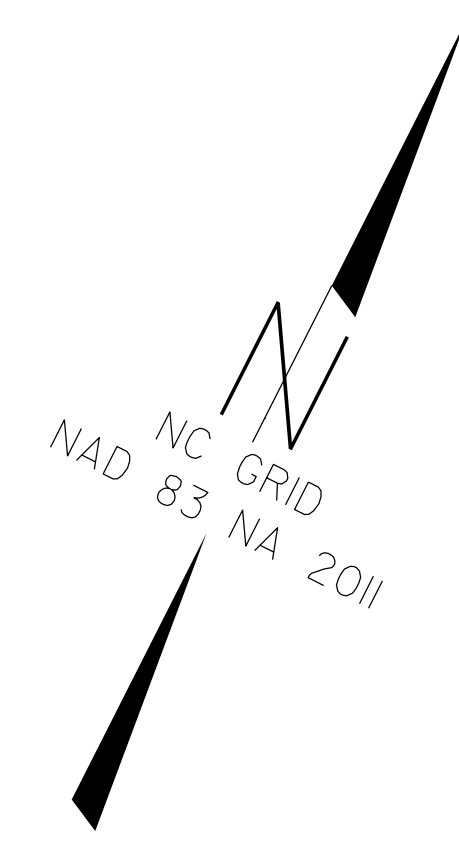
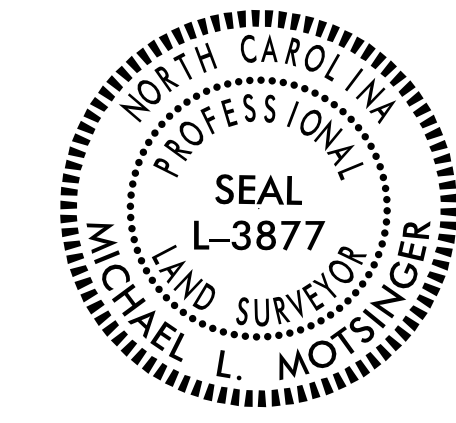


DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

I, Michael L. Motsinger, 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 April 2023 to October 2024, and all coordinates are based on NAD83/2011. That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

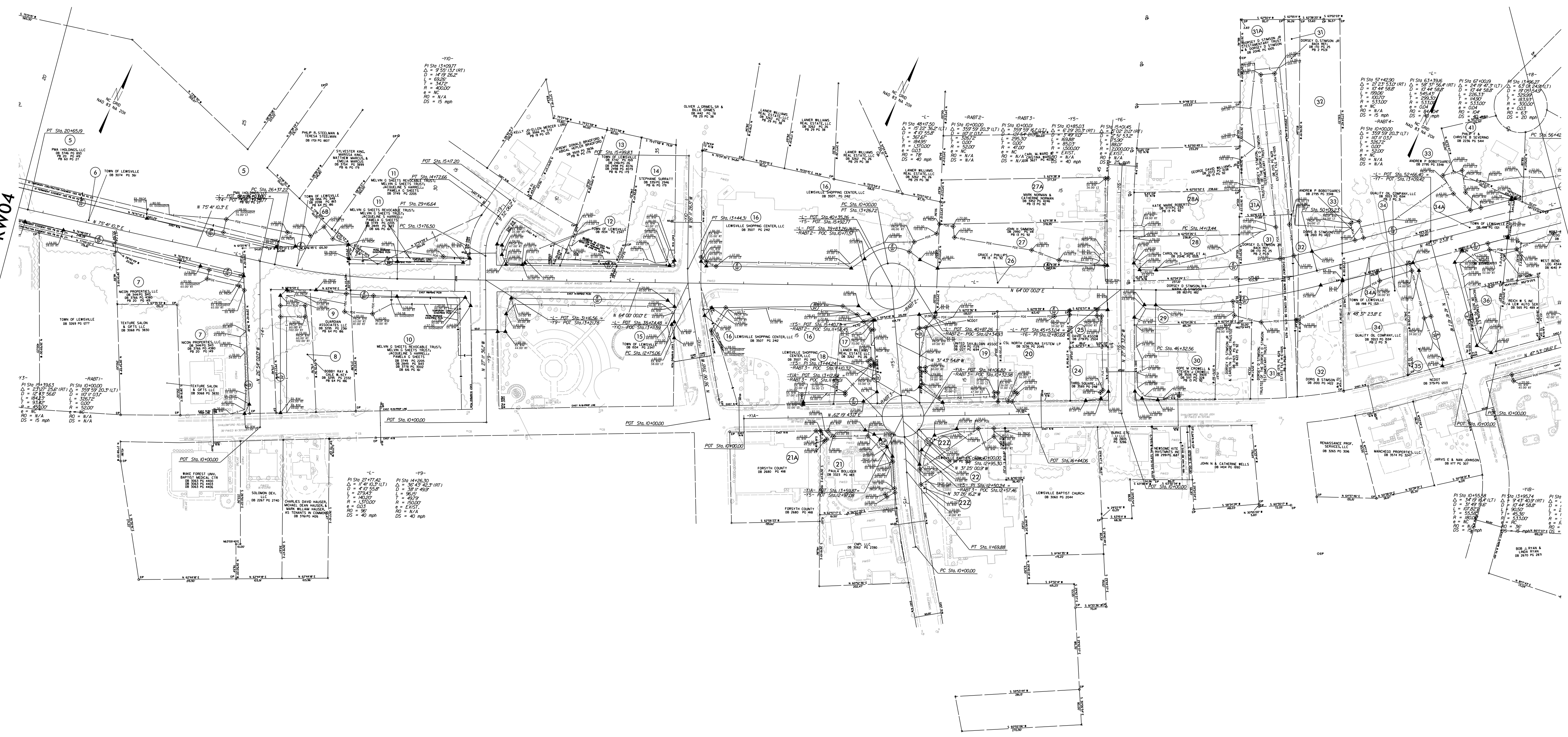
This 7th day of November, 2024.

DocuSigned by: Michael L. Motsinger Professional Land Surveyor L-3877



MATCHLINE -L- STA. 20 + 44 SEE SHEET RW04

MATCHLINE -L- STA. 55 + 71 SEE SHEET RW06



REVISIONS

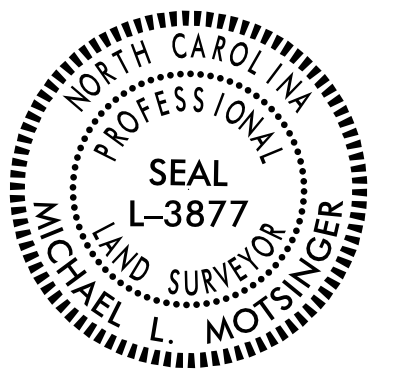
07 NOV 2024 09:07 S:\projects\103\winston\Cliffs Computer-Urban\U5536\Bred\Control Sheets.Revisions.241106.U5536\_LS\_RW05.dgn AT LS-3286081

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 \_\_\_\_ TO \_\_\_\_.

Location and Surveys

PROJECT SURVEYOR

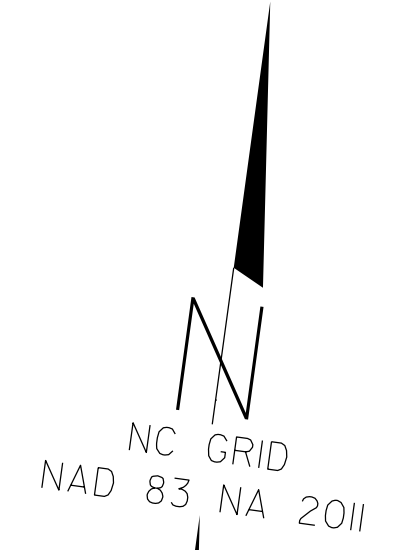


DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

I, Michael L. Motsinger, 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 April 2023 to October 2024, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 7th day of November, 2024.

DocuSigned by:  
  
 Professional Land Surveyor L-3877



MATCHLINE -L- STA. 55 + 71 SEE SHET RW05



REVISIONS

07 NOV 2024 09:21  
 S:\Users\Winston\OneDrive\Computer-Urban\5536\Bred\Control\_Sheets\_Revisions\_241106\U5536\_LS\_RW06.dgn  
 Winston, AT LS-3286081

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 \_\_\_\_ TO \_\_\_\_.