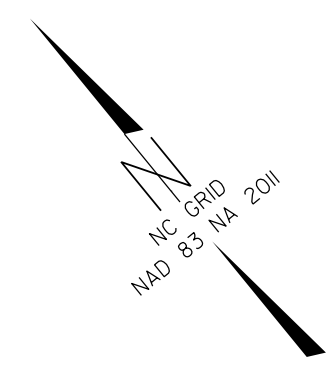


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5610	RW01	08

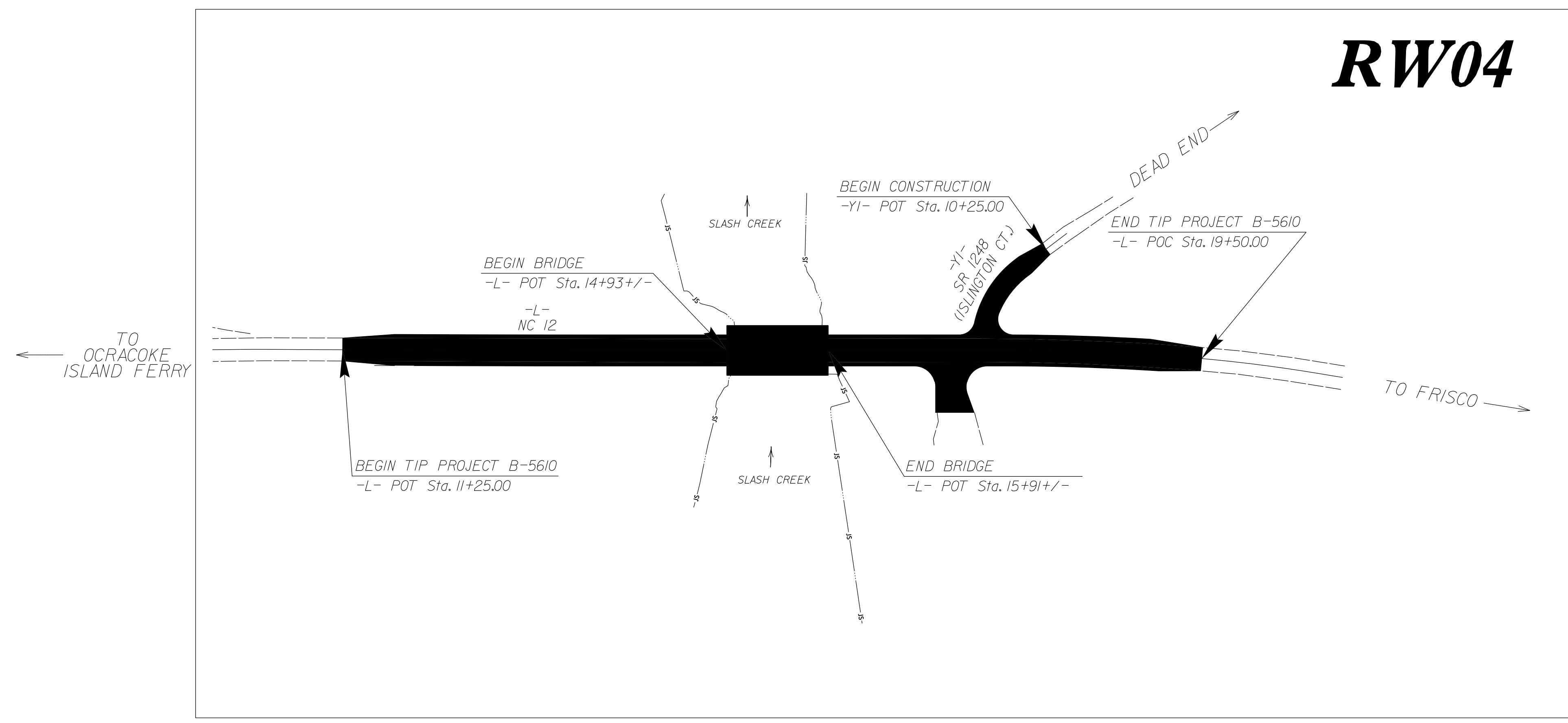
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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

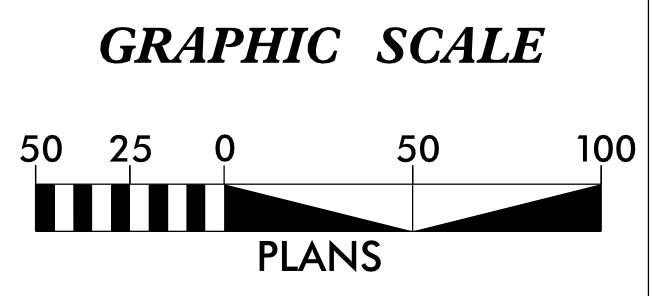
DARE COUNTY



TIP PROJECT: B-5610



27-MAR-2024 14:00 Z:\CAD\2016\160149c_NCDOT_B5610_RW_staking_Dare\SURVEY\DELIVERABLES\TO BE SENT\b5610_ls_rw01_240327.dgn F:\p\thress AT JKA-021



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR GPS MONUMENT "B-5610-2" WITH NAD 83/2011 STATE PLANE GRID COORDINATES OF NORTHING: 550672.292(ft) EASTING: 2988951.730(ft) ELEVATION: 2.089(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99987872

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B-5610-2" TO -L- STATION 10+00.00 IS N 49-13'57.8" W 791.01(ft)

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88/ GEOID G12NC

Prepared in the Office of:

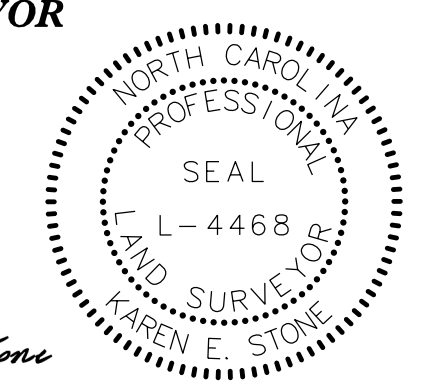
JoynerKeeny, PLLC
1051 N. Winstead Avenue
Rocky Mount, NC 27804
252-977-3124
North Carolina Firm Number P-0551

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
08/19/2021

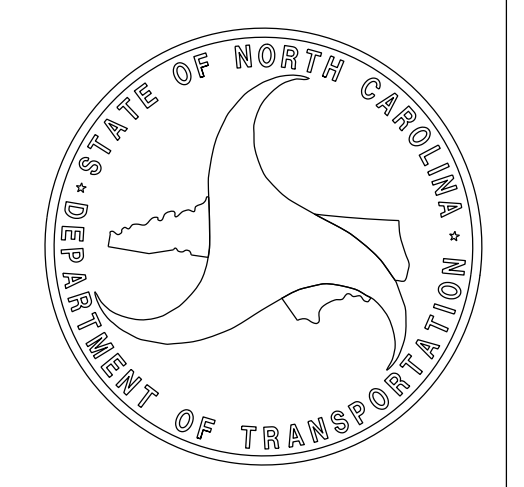
LETTING DATE:
06/18/2024

PROFESSIONAL LAND SURVEYOR



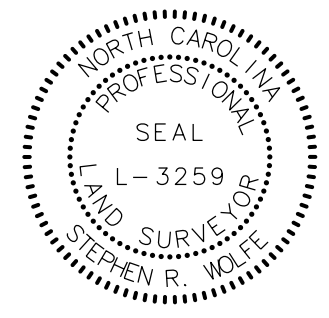
DocuSigned by:
Karen E. Stone
82435A975745452...

3/27/2024
Date:



SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

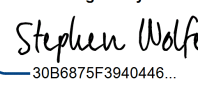
PROJECT REFERENCE NO. B-5610	SHEET NO. RW02C-1
Location and Surveys	
JoynerKeeny, PLLC 1051 N. Winstead Avenue Rocky Mount, NC 27804 252-977-3124 North Carolina Firm Number P-0551	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

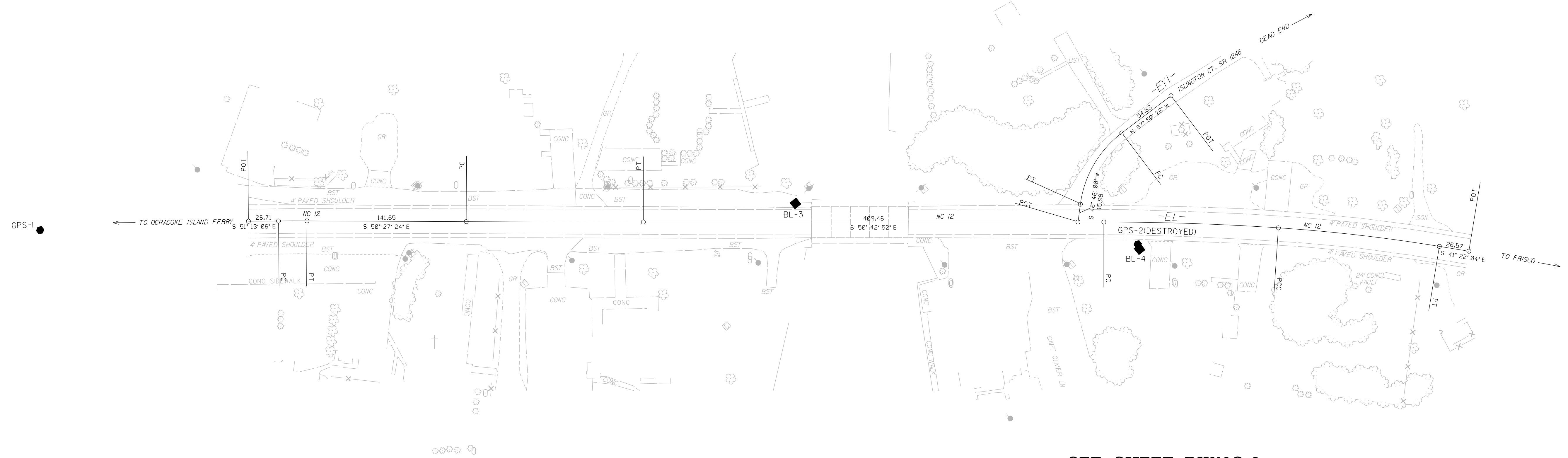
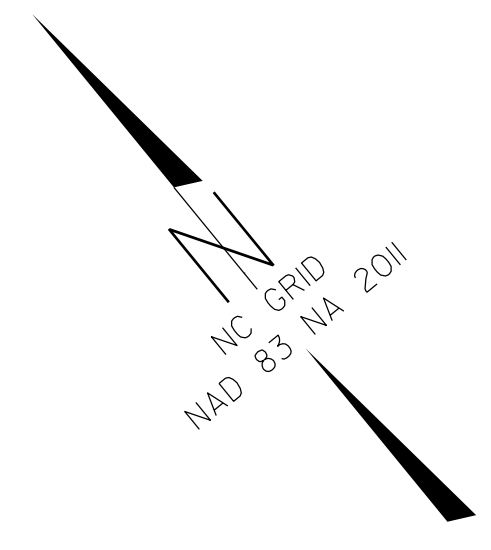
I, Stephen R. Wolfe, PLS, certify that the Project Control was performed under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

Class of survey: **AA**
 Type of GPS field procedure: RTN
 Dates of survey: 22FEB2022
 Datum/Epoch: NAD83/2011
 Published/Fixed-control use: NA
 Localized around: NCDOT GPS-2 (B-5610-2)
 Northing: 550672.292
 Easting: 2988951.730
 Combined grid factor: 0.99987872
 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 24OCT2016, 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 21st day of March, 2022.

DocuSigned by:

 Stephen R. Wolfe
 Professional Land Surveyor L-3259



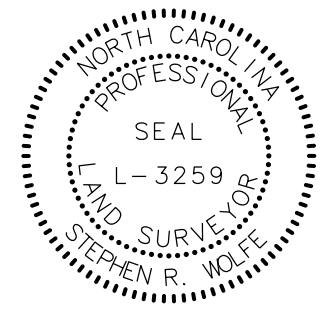
**SEE SHEET RW02C-3
 FOR FURTHER
 ALIGNMENT DETAILS**

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.

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

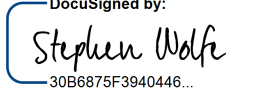
PROJECT REFERENCE NO.	SHEET NO.
B-5610	RW02C-2
Location and Surveys	
JoynerKeeny, PLLC 1051 N. Winstead Avenue Rocky Mount, NC 27804 252-977-3124 North Carolina Firm Number P-0551	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, Stephen R. Wolfe, PLS, certify that the Project Control was performed 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: RTN
 Dates of survey: 22FEB2022
 Datum/Epoch: NAD83/2011
 Published/Fixed-control use: NA
 Localized around: NCDOT GPS-2 (B-5610-2)
 Northing: 550672.292
 Easting: 2988951.730
 Combined grid factor: 0.99987872
 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 22FEB2022, 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 21st day of March, 2022.

DocuSigned by:

3068875F3940446...
 Stephen R. Wolfe
 Professional Land Surveyor L-3259

BL	POINT	DESC.	NORTH	EAST	ELEVATION
1		GPS B5610-1	551299.9790	2988204.2660	2.18
3		BL B5610-3	550893.1102	2988739.0994	4.83
2	(DESTROYED)	GPS B5610-2	550672.2920	2988951.7300	2.09
4		BL B5610-4	550667.8710	2988950.1590	2.00

.....
 196 ELEVATION - 2.83
 N 550750 E 2988907
 BM*2 RR SPIKE IN EDGE OF PAVEMENT

.....
 713 ELEVATION - 5.75
 N 550902 E 2988657
 BM*1 PAINTED CAP BOLT ON FIRE HYDRANT

REVISIONS

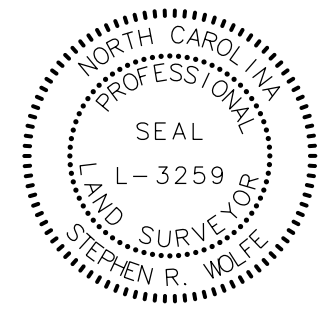
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 rPolthress At JKA-021
 \SURVEY\DELIVERABLES\TO BE SENT\B5610-1s-r-w02c-2.dgn

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.

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
B-5610	RW02C-3
Location and Surveys	
JoynerKeeny, PLLC 1051 N. Winstead Avenue Rocky Mount, NC 27804 252-977-3124 North Carolina Firm Number P-0551	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

EL									
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	551188.811	2988352.646							
LINE			S 51°13'06.4" E	26.71					
PC	551172.081	2988373.467							
CURVE			S 50°50'15.3" E	25.26	00°45'42.2"(RT)	03°00'56.0"	25.26	12.63	1900.00
PT	551156.129	2988393.052							
LINE			S 50°27'24.2" E	141.65					
PC	551065.949	2988502.282							
CURVE			S 50°35'08.3" E	157.50	00°15'28.2"(LT)	00°09'49.3"	157.50	78.75	35000.00
PT	550965.949	2988623.961							
LINE			S 50°42'52.4" E	409.46					
PC	550706.685	2988940.885							
CURVE			S 48°48'47.2" E	155.28	03°48'10.4"(RT)	02°26'54.7"	155.31	77.68	2340.00
PCC	550604.428	2989057.746							
CURVE			S 44°08'23.1" E	144.11	05°32'37.9"(RT)	03°50'43.3"	144.17	72.14	1490.00
PT	550501.005	2989158.109							
LINE			S 41°22'04.1" E	26.57					
POT	550481.064	2989175.669							

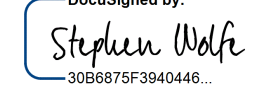
EY1									
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	550755.810	2989058.218							
LINE			N 87°50'25.9" W	54.83					
PC	550757.877	2989003.423							
CURVE			S 69°27'47.1" W	73.31	45°23'34.1"(LT)	60°18'40.8"	75.26	39.73	95.00
PT	550732.158	2988934.771							
LINE			S 46°46'00.0" W	15.98					
POT	550721.212	2988923.127							

I, Stephen R. Wolfe, PLS, certify that the Project Control was performed 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: RTN
 Dates of survey: 22FEB2022
 Datum/Epoch: NAD83/2011
 Published/Fixed-control use: NA
 Localized around: NCDOT GPS-2 (B-5610-2)
 Northing: 550672.292
 Easting: 2988951.730
 Combined grid factor: 0.99987872
 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 22FEB2022, 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 21st day of March, 2022.

DocuSigned by:

 Stephen R. Wolfe
 Professional Land Surveyor L-3259

REVISIONS

21-MAR-2022 10:45
 Z:\CAD\2016\160148C_NCDOT_B5610_FW staking.Dwg
 rPaultress At JKA-021
 \SURVEY\DCN\WORK\RM\RW series sheets\b5610.LS_rw02c-3.dgn

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.

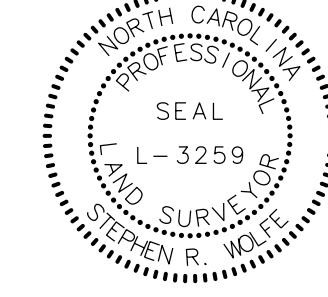
PROPOSED ALIGNMENT CONTROL SHEET

PROJECT REFERENCE NO.	SHEET NO.
B-5610	RW02D-1

Location and Surveys

JoynerKeeny, PLLC
 1051 N. Winstead Avenue
 Rocky Mount, NC 27804
 252-977-3124
 North Carolina Firm Number P-0551

PROJECT SURVEYOR



DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

I, Stephen R. Wolfe, PLS, 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.

This 21st day of March, 2022.

DocuSigned by:

 Stephen Wolfe
 Professional Land Surveyor L-3259

L			
TYPE	STATION	NORTH	EAST
POT	10+00.00	551188.8108	2988352.6458
PC	10+26.71	551172.0813	2988373.4669
PT	10+51.97	551156.1295	2988393.0519
PC	11+93.62	551065.9486	2988502.2820
PT	13+51.11	550965.9495	2988623.9607
PC	17+60.58	550706.6846	2988940.8848
PCC	19+15.89	550604.4276	2989057.7460
PT	20+60.06	550501.0048	2989158.1088
POT	20+86.63	550481.0639	2989175.6692

Y1			
TYPE	STATION	NORTH	EAST
POT	10+00.00	550755.8104	2989058.2100
PC	10+54.83	550757.8766	2989003.4225
PT	11+30.10	550732.1582	2988934.7706
POT	11+46.08	550721.2115	2988923.1271

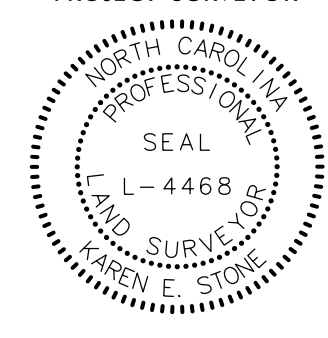
REVISIONS

21-MAR-2022 10:26
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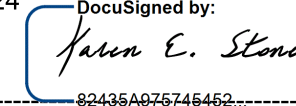
NOTES:

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

PERMANENT EASEMENT CONTROL SHEET

PROJECT REFERENCE NO.	SHEET NO.
B-5610	RW03E-2
Location and Surveys	
JoynerKeeny, PLLC 1051 N. Winstead Avenue Rocky Mount, NC 27804 252-977-3124 North Carolina Firm Number P-0551	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, Karen E. Stone, certify that this map was drawn under my supervision to the extent noted below from an actual survey (see certification note), that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed on 22FEB2022, and all coordinates are based on NAD83/2011. That this survey was performed to meet the requirements of 21NCAC 66.1600 as applicable.

Witness my original signature, registration number and seal this 27th day of March, A.D., 2024.
 DocuSigned by:
 3/27/2024
 82436A025746463
 Professional Land Surveyor L-4468

Certification Note - Work performed under the supervision of Karen E. Stone includes edits to Temporary Construction Easements and Permanent Utility Easement monument stationing only and require no additional field work. This is a revision to a survey performed under the responsible charge of the preceding surveyor, Stephen R. Wolfe, PLS (L-3259), signature date April 12, 2022.

Field data, traverse adjustment, and mapping performed under the preceding surveyor have been reviewed by Karen E. Stone, PLS.

* = NOT SET DUE TO OBSTRUCTION

ROW MARKER PERMANENT EASEMENT - E

	ALIGN	STATION	OFFSET	NORTH	EAST	
PK NAIL SET IN CONC.	L	11+00.00	55.00	551083.1371	2988395.0744	
	L	12+58.00	-45.00	551059.7574	2988580.5551	
	L	12+58.00	-30.00	551048.1727	2988571.0264	
PK NAIL SET IN CONC.	L	13+20.00	-30.00	551008.8639	2988618.9037	
	L	13+20.00	-50.00	551024.3327	2988631.5811	
	L	14+45.00	-30.00	550929.7221	2988715.6244	
	X	L	14+45.00	-45.00	550941.3321	2988725.1222
	X	L	15+07.00	-55.00	550909.8147	2988779.4421
	X	L	15+07.00	-30.00	550890.4647	2988763.6125
	X	L	15+75.00	-50.00	550862.8882	2988828.9083
	X	L	15+75.00	-30.00	550847.4082	2988816.2446
	L	17+31.39	61.30	550677.7203	2988879.4768	
	L	17+33.25	55.00	550681.4137	2988884.9132	
	L	17+40.67	30.00	550696.0680	2988906.4828	
	L	17+45.77	65.57	550665.3129	2988887.9063	
	L	17+56.32	30.00	550686.1603	2988918.5916	
	L	17+92.00	45.00	550652.1802	2988936.1145	
	L	17+92.00	30.00	550663.6616	2988945.7674	
L	18+65.00	30.00	550616.4340	2989000.1950		
L	18+65.00	40.00	550608.9842	2988993.5242		
L	18+89.92	-81.24	550682.0020	2989093.5190		
L	18+92.42	-50.00	550657.2298	2989074.3143		
L	19+04.36	-82.50	550672.8095	2989105.3721		
PK NAIL SET IN CONC.	L	19+07.15	-50.00	550647.0250	2989085.3755	

ROW MARKER PERMANENT EASEMENT - E

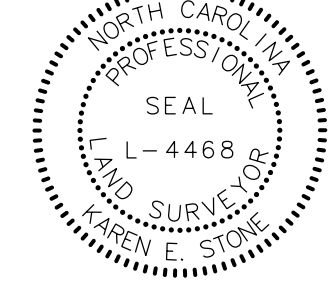
	ALIGN	STATION	OFFSET	NORTH	EAST
X	Y1	10+48.00	-42.40	550715.2470	2989008.6532
	Y1	10+49.24	-30.51	550727.1803	2989007.8631

REVISIONS

27-MAR-2024 15:53
 J:\Projects\011523\AT\JK-042\imathhtheus
 \steking_Dore\SURVE\DELIVERABLES\TO BE SENT\B5610_RW_staking_Dore\SURVE\DELIVERABLES\TO BE SENT\B5610_1s_rw03e-2_240327.dgn

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 22FEB2022 .

PROJECT REFERENCE NO.	SHEET NO.
B-5610	RW04
Location and Surveys	
JoynerKeeny, PLLC 1051 N. Winstead Avenue Rocky Mount, NC 27804 252-977-3124 North Carolina Firm Number P-0551	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, Karen E. Stone, certify that this map was drawn under my supervision to the extent noted below from an actual survey (see certification note), that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed on 22FEB2022, and all coordinates are based on NAD83/2011. That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

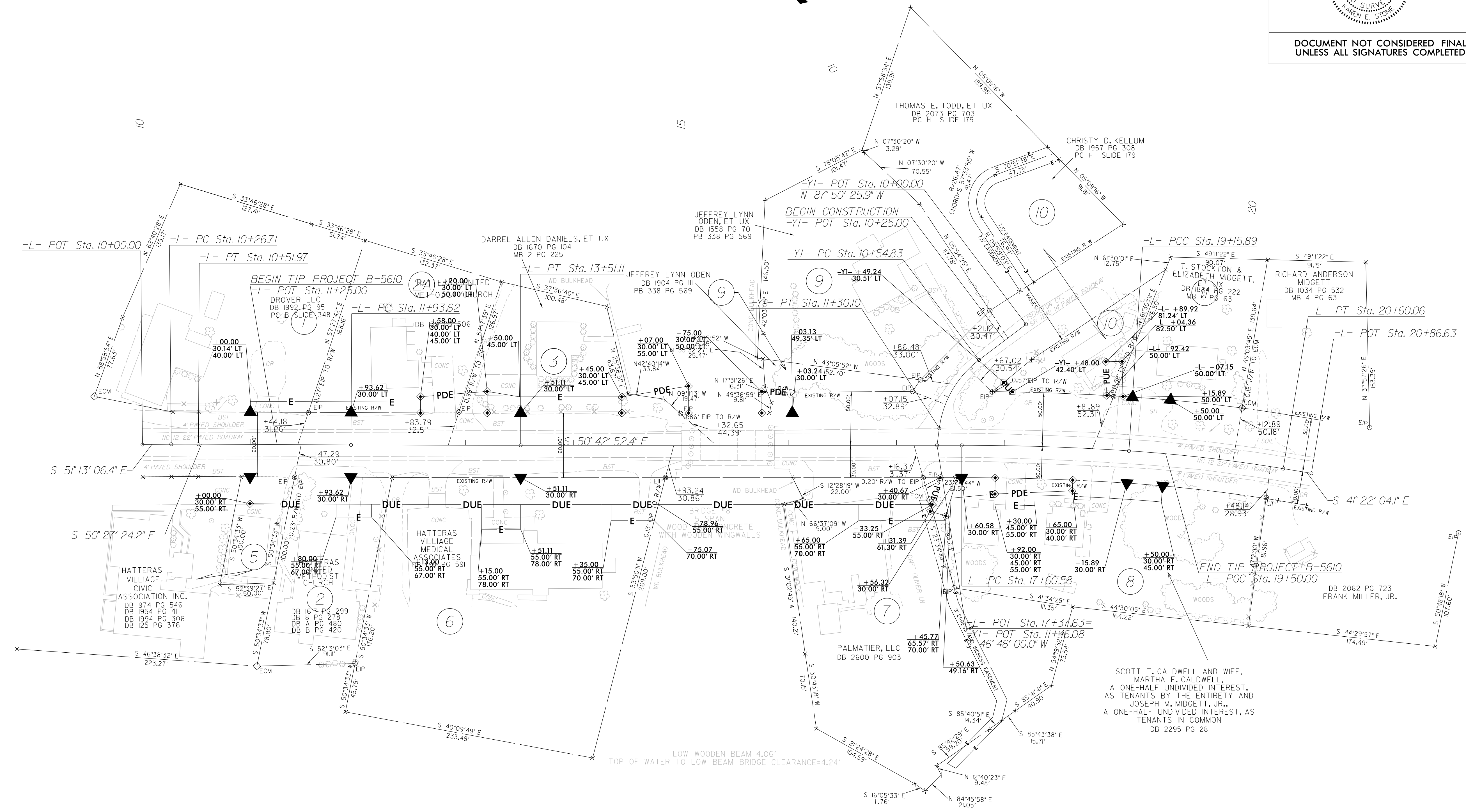
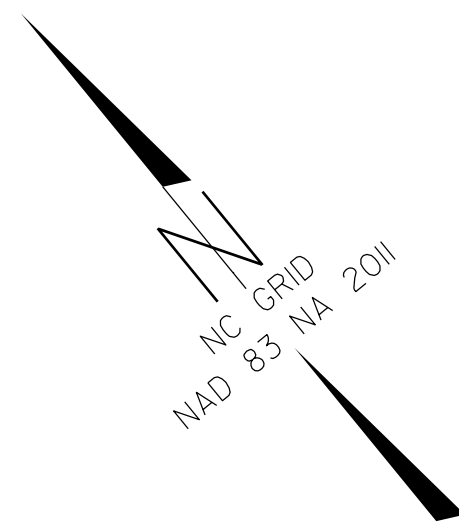
Witness my original signature, registration number and seal this 27th day of March, A.D., 2024.

Karen E. Stone 3/27/2024
 Professional Land Surveyor L-4468

Certification Note - Work performed under the supervision of Karen E. Stone includes edits to Temporary Construction Easements and Permanent Utility Easement monument stationing only and require no additional field work. This is a revision to a survey performed under the responsible charge of the preceding surveyor, Stephen R. Wolfe, PLS (L-3259), signature date April 12, 2022.

Field data, traverse adjustment, and mapping performed under the preceding surveyor have been reviewed by Karen E. Stone, PLS.

-L-				-YI-			
PI Sta 10+39.34	PI Sta 12+72.36	PI Sta 18+38.26	PI Sta 19+88.03	PI Sta 10+94.57			
$\Delta = 0' 45' 42.2''$ (RT)	$\Delta = 0' 15' 28.2''$ (LT)	$\Delta = 3' 48' 10.4''$ (RT)	$\Delta = 5' 32' 37.9''$ (RT)	$\Delta = 45' 23' 34.1''$ (LT)			
D = 3' 00' 56.0"	D = 0' 09' 49.3"	D = 2' 26' 54.7"	D = 3' 50' 43.3"	D = 60' 18' 40.8"			
L = 25.26'	L = 157.50'	L = 155.31'	L = 144.17'	L = 75.26'			
T = 12.63'	T = 78.75'	T = 77.68'	T = 72.14'	T = 39.73'			
R = 1,900.00'	R = 35,000.00'	R = 2,340.00'	R = 1,490.00'	R = 95.00'			
S _e = Exist.	S _e = NC	S _e = 2.5%	S _e = 3%	S _e = 3.5%			
		Runoff = 65'	Runoff = 78'	Runoff = 48.125'			



- 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 ON 22FEB2022 .

REVISIONS

7-MAR-2024 15:56
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