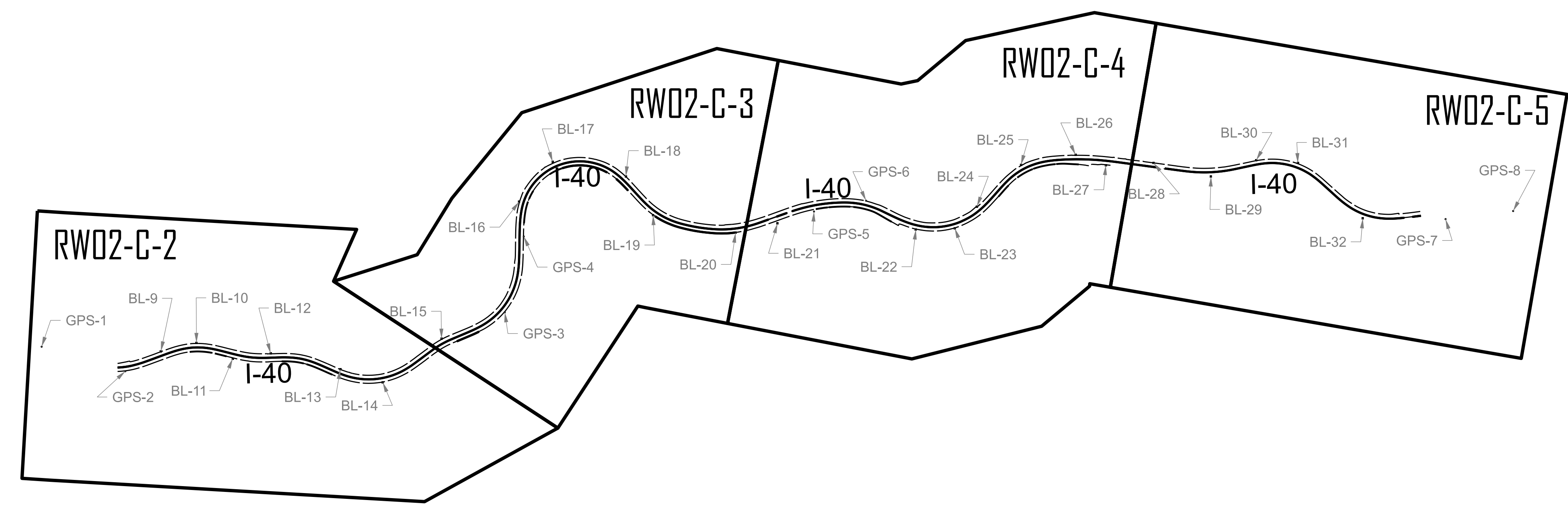


SURVEY CONTROL SHEET

W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION



NOTES:

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

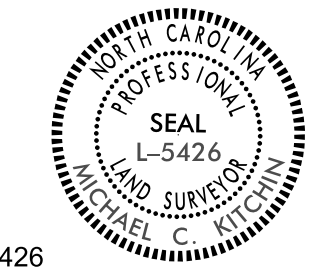
I, Michael C. Kitchin, PLS, certify that the Project Control was performed under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

Class of survey: **AA**
 Type of GPS field procedure: RTN
 Dates of survey: 6/21/22 to 7/13/22
 Datum/Epoch: NAD 83/NSRS 2011
 Published/Fixed-control use: N/A
 Localized around: GPS-5
 Northing: 697,225.2690
 Easting: 1,041,361.8740
 Combined grid factor: 1.000200369 (Grid to Ground)
 Geoid model: GEOID12B
 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 from 6/21/22 to 7/13/22, 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 14th day of April, 2023.

DocuSigned by:
Michael C. Kitchin
Professional Land Surveyor L-5426



HI0010

RW02 C-1

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

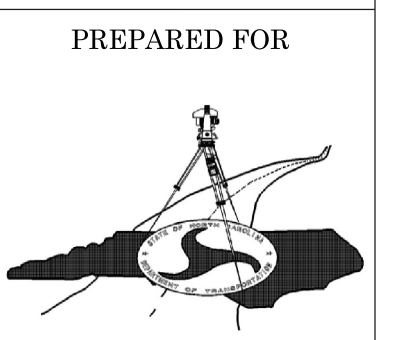
PROFESSIONAL LAND SURVEYOR

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES ARE COMPLETED

2018 STANDARD SPECIFICATIONS

TIP PROJECT: HI0010

County: McDowell



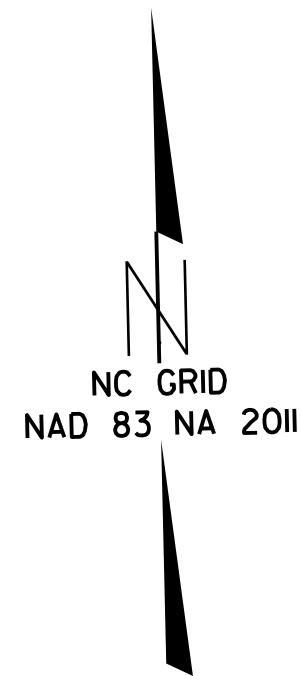
LOCATION AND SURVEYS UNIT

PREPARED BY

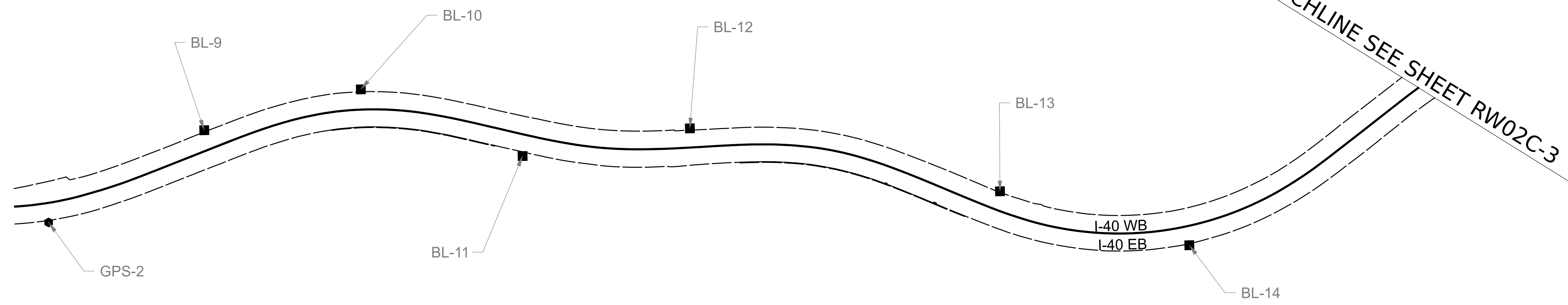
ESP Associates, Inc.
3475 Lakewood Blvd. Fort Mill, SC 29708

SURVEY CONTROL SHEET

W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION



GPS-1



I, Michael C. Kitchin, 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: **A4**
Type of GPS field procedure: RTN
Dates of survey: 6/21/22 to 7/13/22
Datum/Epoch: NAD 83/NSRS 2011
Published/Fixed-control use: N/A
Localized around: GPS-5
Northing: 697,225,2690
Easting: 1,041,361,8740
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Geoid model: GEOID12B
Units: US Survey Feet

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This 14th day of April, 2023.

DocuSigned by:
Michael C. Kitchin
Professional Land Surveyor L-5426



HI0010
RW02 C-2
NORTH CAROLINA
DEPARTMENT
OF TRANSPORTATION

PROFESSIONAL LAND
SURVEYOR

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL SIGNATURES
ARE COMPLETED
2018 STANDARD
SPECIFICATIONS

TIP PROJECT: HI0010
County: McDowell

PREPARED FOR

LOCATION AND
SURVEYS UNIT

PREPARED BY

ESP Associates, Inc.
2475 Lakewood Blvd. Fort Mill, SC 29708

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.

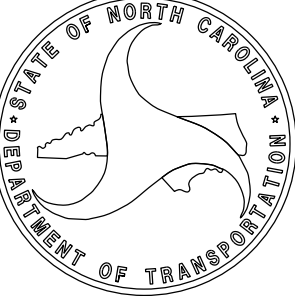
SURVEY CONTROL SHEET

W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

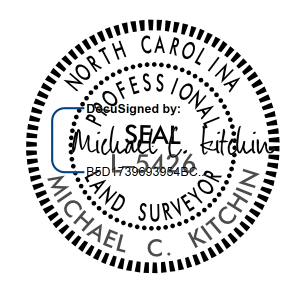
HI0010

RW02 C-3

NORTH CAROLINA
DEPARTMENT
OF TRANSPORTATION



PROFESSIONAL LAND
SURVEYOR



DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL SIGNATURES
ARE COMPLETED
2018 STANDARD
SPECIFICATIONS

I, Michael C. Kitchin, 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:

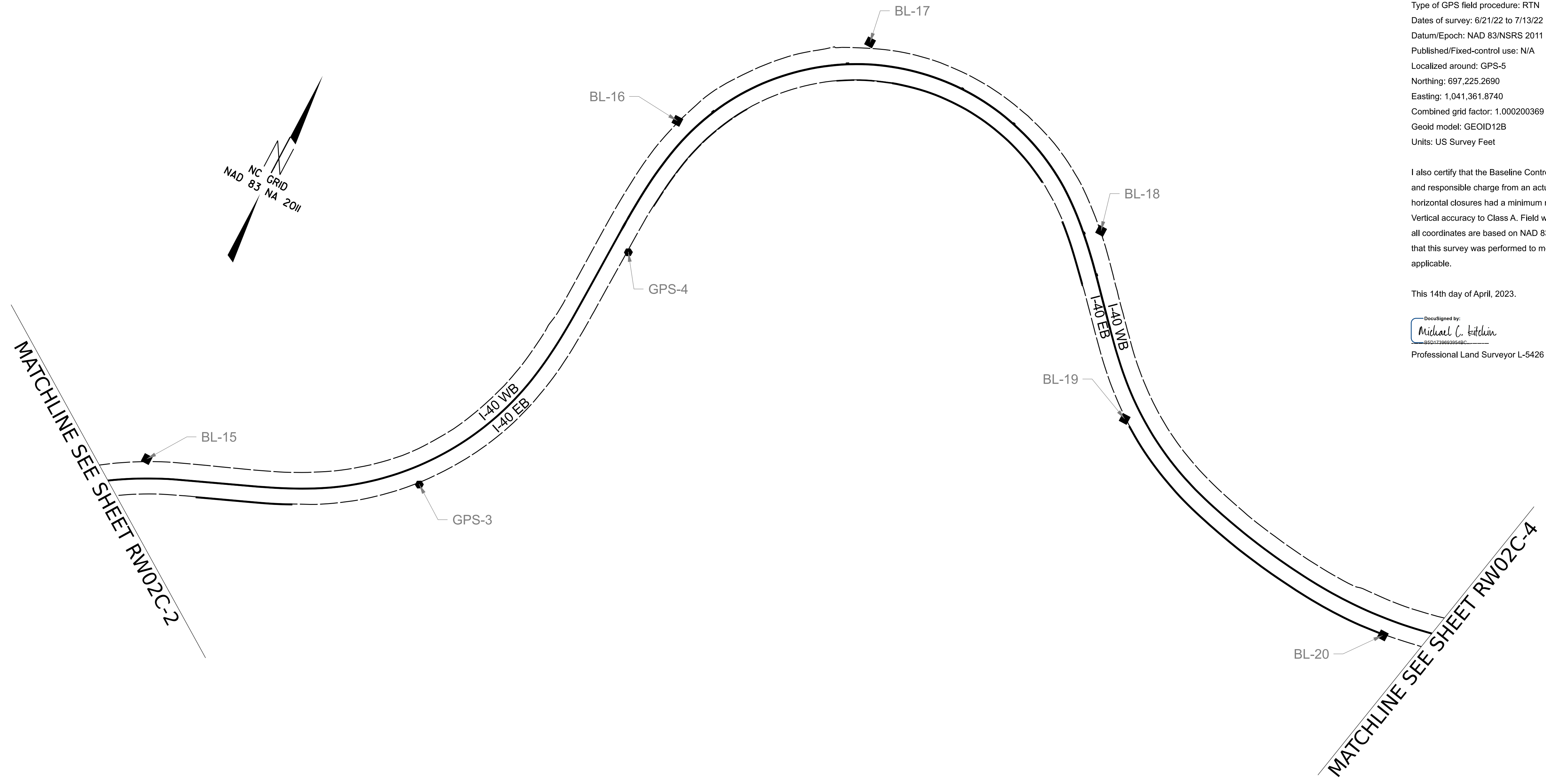
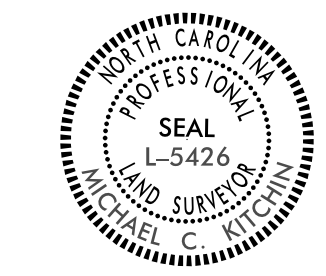
Class of survey: **AA**
Type of GPS field procedure: RTN
Dates of survey: 6/21/22 to 7/13/22
Datum/Epoch: NAD 83/NSRS 2011
Published/Fixed-control use: N/A
Localized around: GPS-5
Northing: 697,225.2690
Easting: 1,041,361.8740
Combined grid factor: 1.000200369 (Grid to Ground)
Geoid model: GEOID12B
Units: 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 from 6/21/22 to 7/13/22, 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 14th day of April, 2023.

DocuSigned by:
Michael C. Kitchin
85033298939548C

Professional Land Surveyor L-5426

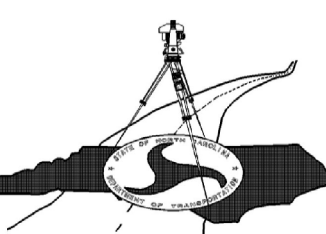


NOTES:

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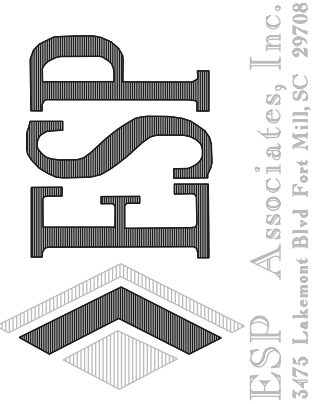
TIP PROJECT: HI0010
County: McDowell

PREPARED FOR



LOCATION AND
SURVEYS UNIT

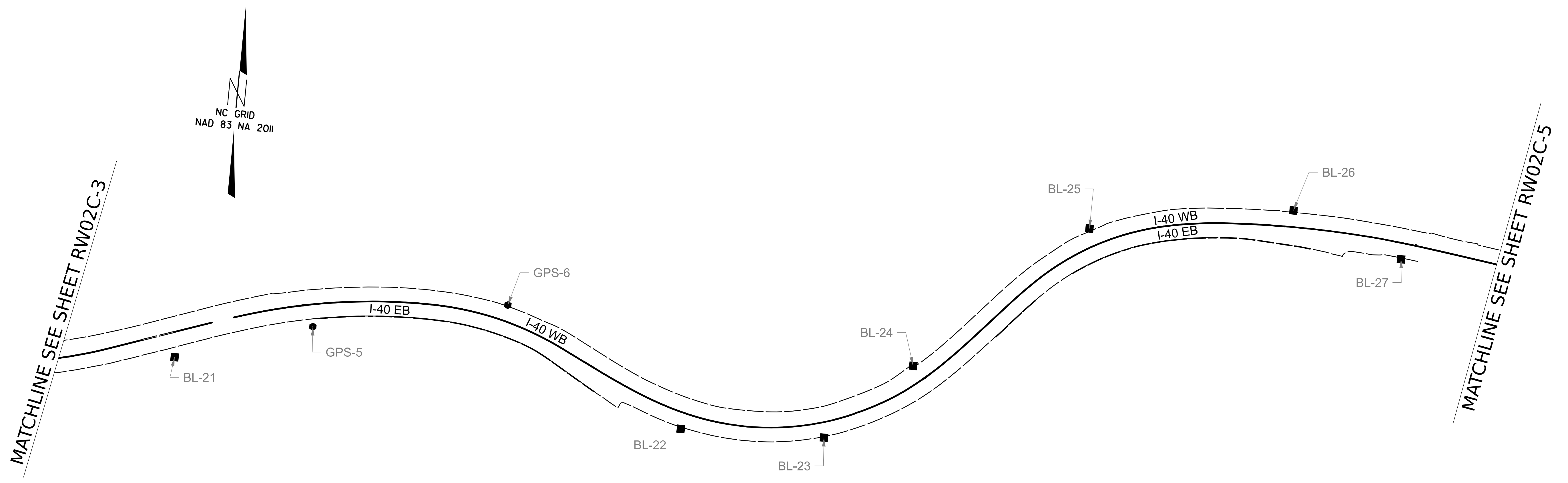
PREPARED BY



ESP Associates, Inc.
575 Lakewood Blvd. Fort Mill, SC 29708

SURVEY CONTROL SHEET

W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION



NOTES:

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This 14th day of April, 2023.

DocuSigned by:
 Michael C. Kitchin
 65017386939548C
 Professional Land Surveyor L-5426

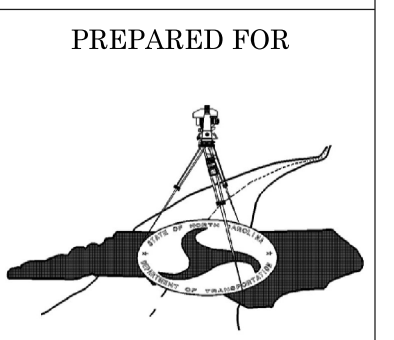


HI0010
 RW02 C-4
 NORTH CAROLINA
 DEPARTMENT
 OF TRANSPORTATION

PROFESSIONAL LAND
 SURVEYOR

DOCUMENT NOT CONSIDERED
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 ARE COMPLETED
 2018 STANDARD
 SPECIFICATIONS

TIP PROJECT: HI0010
 County: McDowell

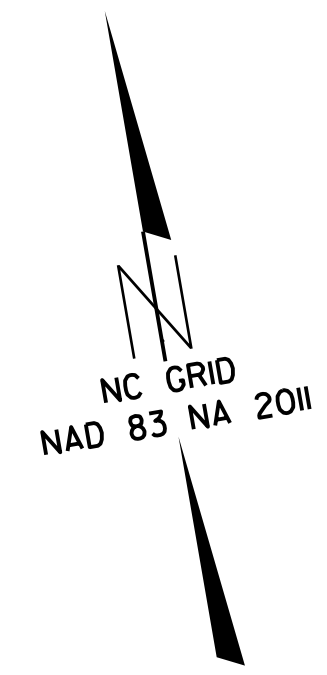


PREPARED BY

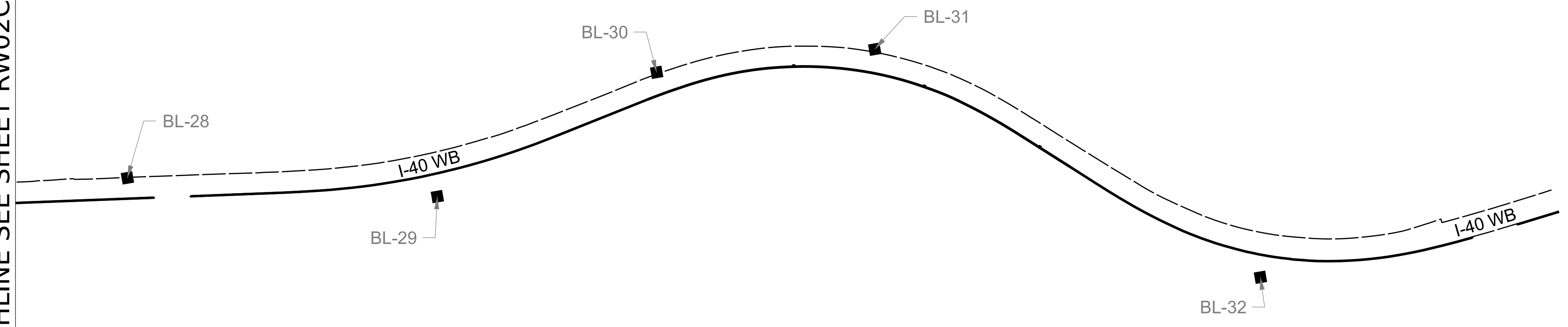
ESP Associates, Inc.
 4475 Lakeland Blvd. Fort Mill, SC 29708

SURVEY CONTROL SHEET

W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION



MATCHLINE SEE SHEET RW02C-4



- NOTES:**
1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
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This 14th day of April, 2023.

DocuSigned by:
Michael C. Kitchin
B5D17396939548C

Professional Land Surveyor L-5426



HI0010

| | |
|------|-----|
| RW02 | C-5 |
|------|-----|

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

PROFESSIONAL LAND SURVEYOR

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES ARE COMPLETED
2018 STANDARD SPECIFICATIONS

TIP PROJECT: HI0010

County: McDowell

PREPARED FOR

LOCATION AND SURVEYS UNIT

PREPARED BY

ESP Associates, Inc.
5475 Latham Blvd. Fort Mill, SC 29708

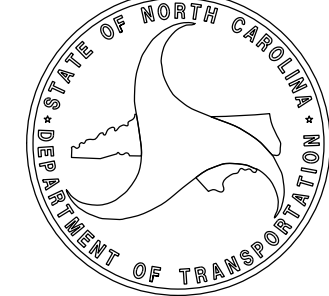
SURVEY CONTROL SHEET

W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

H10010

RWD2 C-6

NORTH CAROLINA
DEPARTMENT
OF TRANSPORTATION



PROFESSIONAL LAND
SURVEYOR



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2018 STANDARD
SPECIFICATIONS

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I also 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 26th day of April, 2023.

DocuSigned by:
Michael C. Kitchin
65017396936546C

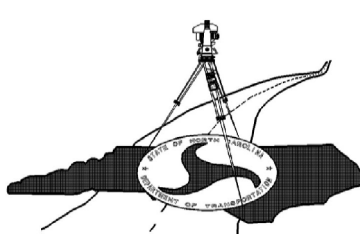


Professional Land Surveyor L-5426

| BASELINE POINTS TABLE | | | | |
|-----------------------|-------|------------|-------------|-----------|
| POINT | DESC | NORTH | EAST | ELEVATION |
| 1 | GPS-1 | 695406.847 | 1030977.022 | 2759.829 |
| 2 | GPS-2 | 695075.958 | 1032101.573 | 2693.1 |
| 9 | BL-9 | 695344.984 | 1032580.456 | 2656.897 |
| 10 | BL-10 | 695458.031 | 1033058.811 | 2629.805 |
| 11 | BL-11 | 695244.271 | 1033545.309 | 2597.776 |
| 12 | BL-12 | 695316.624 | 1034055.237 | 2567.399 |
| 13 | BL-13 | 695103.888 | 1034992.448 | 2509.895 |
| 14 | BL-14 | 694926.946 | 1035563.557 | 2484.531 |
| 15 | BL-15 | 695515.129 | 1036353.603 | 2428.991 |
| 3 | GPS-3 | 695869.023 | 1037204.491 | 2382.259 |
| 4 | GPS-4 | 696889.619 | 1037459.817 | 2321.085 |
| 16 | BL-16 | 697357.859 | 1037398.139 | 2306.025 |
| 17 | BL-17 | 697895.241 | 1037847.315 | 2271.709 |
| 18 | BL-18 | 697699.048 | 1038831.713 | 2231.565 |
| 19 | BL-19 | 697176.681 | 1039198.536 | 2205.298 |
| 20 | BL-20 | 696939.91 | 1040307.667 | 2138.396 |
| 21 | BL-21 | 697066.382 | 1040871.064 | 2101.861 |
| 5 | GPS-5 | 697225.269 | 1041361.874 | 2062.812 |
| 6 | GPS-6 | 697371.72 | 1042061.591 | 2026.771 |
| 22 | BL-22 | 696982.951 | 1042731.822 | 1984.95 |
| 23 | BL-23 | 697001.127 | 1043254.459 | 1955.719 |
| 24 | BL-24 | 697292.772 | 1043552.976 | 1923.892 |
| 25 | BL-25 | 697852.684 | 1044144.265 | 1879.167 |
| 26 | BL-26 | 697989.404 | 1044877.952 | 1834.188 |
| 27 | BL-27 | 697850.076 | 1045285.209 | 1805.852 |
| 28 | BL-28 | 697879.334 | 1045926.815 | 1770.309 |
| 29 | BL-29 | 697696.742 | 1046700.318 | 1728.298 |
| 30 | BL-30 | 697914.53 | 1047307.723 | 1689.283 |
| 31 | BL-31 | 697877.592 | 1047867.816 | 1667.54 |
| 32 | BL-32 | 697133.661 | 1048740.987 | 1627.947 |
| 7 | GPS-7 | 697123.533 | 1049853.948 | 1576.532 |
| 8 | GPS-8 | 697232.464 | 1050762.669 | 1537.664 |

TIP PROJECT: H10010
County: McDowell

PREPARED FOR



LOCATION AND
SURVEYS UNIT

PREPARED BY

