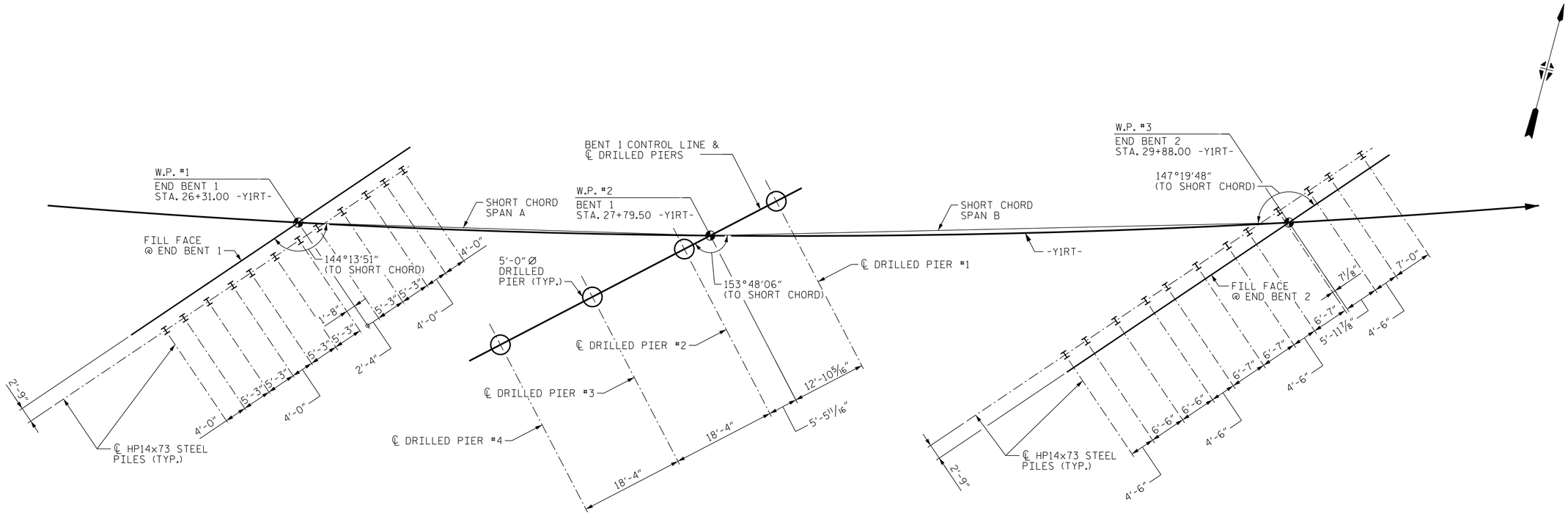


END BENT 1 BENT 1 END BENT 2

# FOUNDATION LAYOUT

(PILE SLEEVES AT END BENTS NOT SHOWN FOR CLARITY)

## NOTES

FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

PILES AT END BENT NO. 1 ARE DESIGNED FOR A FACTORED RESISTANCE OF 85 TONS PER PILE.

DRIVE PILES AT END BENT NO. 1 TO A REQUIRED DRIVING RESISTANCE OF 195 TONS PER PILE. THIS REQUIRED DRIVING RESISTANCE INCLUDES ADDITIONAL RESISTANCE FOR DOWNDRAG.

PILES AT END BENT NO. 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 145 TONS PER PILE.

DRIVE PILES AT END BENT NO. 2 TO A REQUIRED DRIVING RESISTANCE OF 285 TONS PER PILE. THIS REQUIRED DRIVING RESISTANCE INCLUDES ADDITIONAL RESISTANCE FOR DOWNDRAG.

STEEL H-PILE POINTS ARE REQUIRED FOR STEEL H-PILES AT END BENT NO. 2. FOR STEEL PILE POINTS, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 50 TO 60 FT-KIPS PER BLOW WILL BE REQUIRED TO DRIVE PILES AT END BENT NO.1 AND NO. 2. THESE ESTIMATED ENERGY RANGES DO NOT RELEASE THE CONTRACTOR FROM PROVIDING DRIVING EQUIPMENT IN ACCORDANCE WITH SUBARTICLE 450-3(D)(2) OF THE STANDARD SPECIFICATIONS.

TESTING THE FIRST PRODUCTION PILE WITH THE PDA DURING DRIVING, RESTRIKING OR REDRIVING MAYBE REQUIRED. FOR PDA TESTING, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS (AND FOR PILE DRIVING CRITERIA, SEE PILE DRIVING CRITERIA PROVISION).

PILE SLEEVES ARE REQUIRED TO BE INSTALLED AT END BENT NO. 1 AND END BENT NO. 2. THE SLEEVES SHALL BE 24-INCH DIA., 16 GAUGE CORRUGATED METAL PIPE. AFTER INSTALLATION, THE SLEEVES SHALL BE FILLED WITH LOOSE SAND. ALTERNATIVES TO PILE SLEEVES MAY BE CONSIDERED BY THE ENGINEER.

FOR DRILLED PIERS, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.

DRILLED PIERS AT BENT NO. 1 ARE DESIGNED FOR A FACTORED RESISTANCE OF 640 TONS PER PIER. CHECK FIELD CONDITIONS FOR THE REQUIRED TIP RESISTANCE OF 70 TSF.

INSTALL DRILLED PIERS AT BENT NO. 1 TO A TIP ELEVATION NO HIGHER THAN 2540 FEET AND WITH THE REQUIRED TIP RESISTANCE AND PENETRATION OF AT LEAST 5 FT INTO ROCK AS DEFINED BY ARTICLE 411-1 OF THE STANDARD SPECIFICATIONS.

SID INSPECTIONS MAY BE REQUIRED FOR DRILLED PIERS. THE ENGINEER WILL DETERMINE THE NEED FOR SID INSPECTIONS. FOR SID INSPECTIONS, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.

CSL TUBES AND TESTING MAY BE REQUIRED FOR DRILLED PIERS AT BENT NO. 1. FOR CSL TESTING, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.

OBSERVE A TWO-MONTH WAITING PERIOD AFTER CONSTRUCTING THE MECHANICALLY STABILIZED EARTH (MSE) ABUTMENT WALL, END BENT AND REINFORCED BRIDGE APPROACH FILL, IF APPLICABLE, BEFORE BEGINNING APPROACH SLAB CONSTRUCTION AT END BENT NO. 1 AND END BENT NO. 2. FOR BRIDGE WAITING PERIODS, SEE ROADWAY PLANS AND SECTION 235 OF THE STANDARD SPECIFICATIONS.

LEGEND

H HP14X73 VERTICAL PILE

○ 5'-0" Ø DRILLED PIER

PROJECT NO. B-3186/B-5898

HAYWOOD COUNTY

STATION: 27+54.43 -Y1RT-

SHEET 2 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

# GENERAL DRAWING

BRIDGE ON -Y1RT- (US 19) OVER -L-, -L_LT- AND -L_RT- (US 74/US 23) BETWEEN US 276 AND NC 209

| REVISIONS | | | | | | SHEET NO. S02-02 |
|---|---|---|---|---|---|---|
| NO. | BY: | DATE: | NO. | BY: | DATE: | |
| 1 | -- | -- | 3 | -- | -- | TOTAL SHEETS 48 |
| 2 | -- | -- | 4 | -- | -- | |

NORTH CAROLINA PROFESSIONAL SEAL 040791 ENGINEER W. BRIAN WATSON

W. Brian Watson 1/24/2022

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N.C.B.E.L.S. License Number: F-0116

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

| | | | |
|---|---|---|---|
| DES BY: | B. WATSON | DATE : | 06/21 |
| DES CHK: | S. NIFONG | DATE : | 07/21 |
| DWG BY: | D. CARTER | DATE : | 06/21 |
| CHK BY: | S. NIFONG | DATE : | 07/21 |