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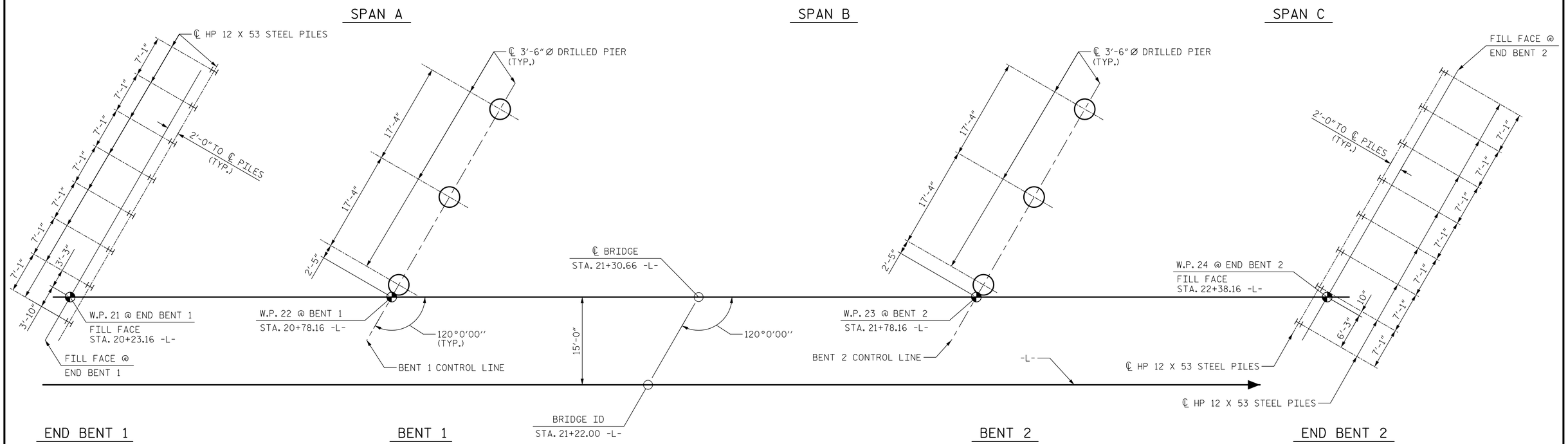

FOUNDATION LAYOUT

DIMENSIONS LOCATING PILES AND DRILLED PIERS ARE SHOWN TO THE CENTERLINE OF PILES AND DRILLED PIERS.

FOUNDATION NOTES:

1. FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.
2. PILES AT END BENT 1 AND END BENT 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 110 TONS PER PILE.
3. DRIVE PILES AT END BENT 1 AND END BENT 2 TO A REQUIRED DRIVING RESISTANCE OF 185 TONS PER PILE.
4. 1
5.
6. STEEL H-PILES POINTS ARE REQUIRED FOR STEEL H-PILES AT END BENT NO. 1 AND END BENT NO. 2. FOR STEEL PILE POINTS, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.
7. FOR DRILLED PIERS, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.
8. PERMANENT STEEL CASINGS MAY BE REQUIRED FOR DRILLED PIERS AT BENT 1. DO NOT EXTEND PERMANENT CASINGS BELOW ELEVATION 686.9 FT (LT) AND 688.0 FT (RT) WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
9. DRILLED PIERS AT BENT 1 ARE DESIGNED FOR A FACTORED RESISTANCE OF 540 TONS PER PIER. CHECK FIELD CONDITIONS FOR THE REQUIRED TIP RESISTANCE OF 5 TSF.
10. INSTALL DRILLED PIERS AT BENT 1 TO A TIP ELEVATION NO HIGHER THAN 675.0 FT WITH THE REQUIRED TIP RESISTANCE AND A PENETRATION OF AT LEAST 5 FT INTO ROCK AS DEFINED BY ARTICLE 411-1 OF THE STANDARD SPECIFICATIONS.
11. THE SCOUR CRITICAL ELEVATION FOR BENT NO. 1 IS ELEVATION 683 FT (LT), 684 FT (C), 685 FT (RT). SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.
12. PERMANENT STEEL CASINGS MAY BE REQUIRED FOR DRILLED PIERS AT BENT 2. DO NOT EXTEND PERMANENT CASINGS BELOW ELEVATION 688.7 FT (LT) AND 686.9 FT (RT) WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
13. DRILLED PIERS AT BENT 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 545 TONS PER PIER. CHECK FIELD CONDITIONS FOR THE REQUIRED TIP RESISTANCE OF 5 TSF.
14. INSTALL DRILLED PIERS AT BENT 2 TO A TIP ELEVATION NO HIGHER THAN 666.0 FT (LT), 668.0 FT (C), AND 670.0 FT (RT) WITH THE REQUIRED TIP RESISTANCE AND A PENETRATION OF AT LEAST 5 FT INTO ROCK AS DEFINED BY ARTICLE 411-1 OF THE STANDARD SPECIFICATIONS.
15. THE SCOUR CRITICAL ELEVATION FOR BENT NO. 2 IS ELEVATION 688 FT. (LT), 687 FT (C), AND 686 FT (RT). SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.
16. SPT MAY BE REQUIRED FOR DRILLED PIERS. THE ENGINEER WILL DETERMINE THE NEED FOR SPT. FOR SPT TESTING, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.
17. 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.
18. CSL TUBES ARE REQUIRED AND CSL TESTING MAY BE REQUIRED FOR DRILLED PIERS. THE ENGINEER WILL DETERMINE THE NEED FOR CSL TESTING. FOR CSL TESTING, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.

SPECIAL FOUNDATION NOTES:

1. BOULDERS WERE ENCOUNTERED IN BORINGS EB1-C (6 FEET), EB1-C1 (6.2 FEET), EB1-C2 (10.5 FEET), EB1-C3 (13.2 FEET), AND EB2-C (4.5 FEET).
2. 1 IF DURING PILE DRIVING, PILES ENCOUNTER OBSTRUCTIONS SUCH AS BOULDERS, CONCRETE, OR CONSTRUCTION DEBRIS AND CANNOT BE DRIVEN TO AN ELEVATION AT LEAST 15 FT. BELOW THE BOTTOM OF CAP, THEN PILE DRIVING SHALL STOP. THE CONTRACTOR SHALL OVER-EXCAVATE TO REMOVE ANY DEBRIS OR HARD OBJECTS AND THEN PROCEED WITH PILE DRIVING. THE EXCAVATED AREA SHALL BE FILLED WITH #57 STONE. THIS WORK OF EXCAVATION AND MATERIAL BACKFILLING WILL BE CONSIDERED INCIDENTAL TO PILE DRIVING EQUIPMENT SETUP FOR HP 12X53 PILES.

1 REVISION #1:
REMOVED PREDRILLING FOR PILES PAY ITEM.

PROJECT NO. B-5717
GUILFORD COUNTY
STATION: 21+22.00 -L-

SHEET 2 OF 3

DRAWN BY :	M.L. CATER DATE : 06/2021
CHECKED BY :	G.R. COLS DATE : 09/2021
DESIGNED BY :	S. NATARAJAN DATE : 06/2021
DESIGN CHECKED BY :	G.R. COLS DATE : 09/2021

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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(919) 854-6200 www.aecom.com
AECOM License No. F-0342

NORTH CAROLINA PROFESSIONAL SEAL 043242 ENGINEER SWETHA NATARAJAN
Docusigned by: Swetha Natarajan
6/9/2022

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR BRIDGE ON SR 4240 OVER S. BUFFALO CREEK BETWEEN E. FLORIDA ST. AND SR 3140
(LEFT LANE)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-02
1	SN	6-9-22	3			TOTAL SHEETS
2			4			38

DATE: 6/9/2022
TIME: 12:56:58 PM
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