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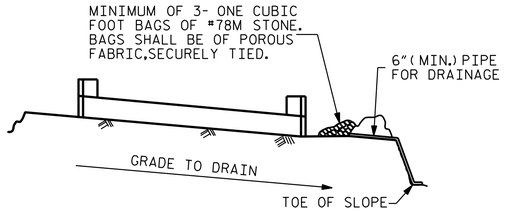
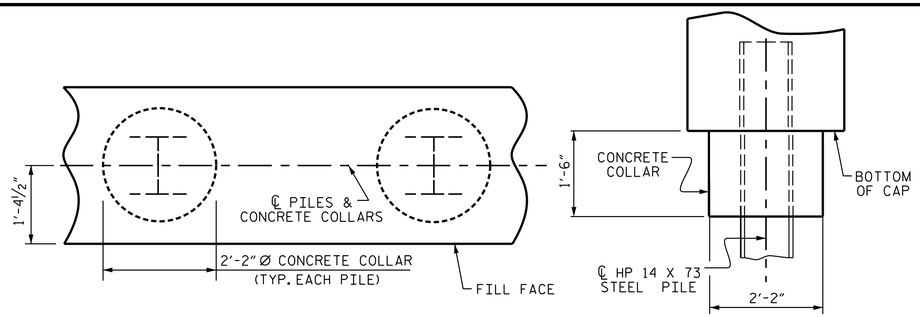


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

BAGGED STONE SHALL REMAIN IN PLACE UNTIL THE ENGINEER DIRECTS THAT IT BE REMOVED. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF SILT ACCUMULATIONS AT BAGGED STONE WHEN SO DIRECTED BY THE ENGINEER. BAGS SHALL BE REMOVED AND REPLACED WHENEVER THE ENGINEER DETERMINES THAT THEY HAVE DETERIORATED AND LOST THEIR EFFECTIVENESS.

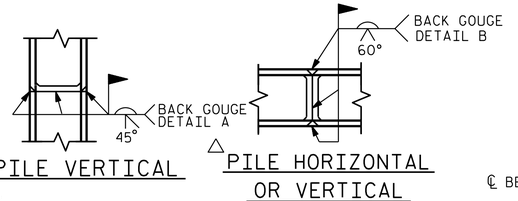
NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK AND THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR THE SEVERAL PAY ITEMS.

TEMPORARY DRAINAGE AT END BENT

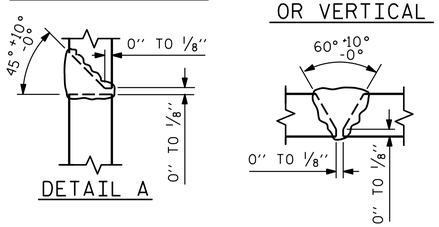


PLAN ELEVATION

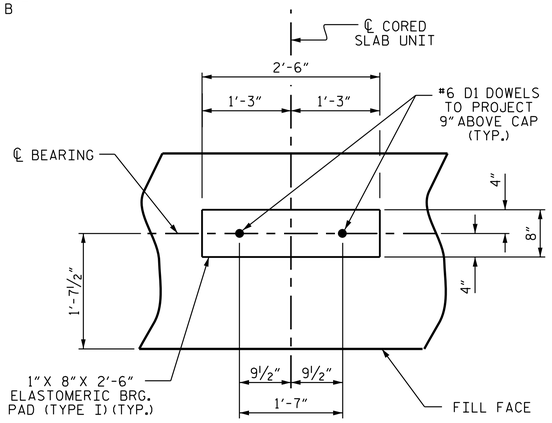
CORROSION PROTECTION FOR STEEL PILES DETAIL



△ PILE VERTICAL △ PILE HORIZONTAL OR VERTICAL



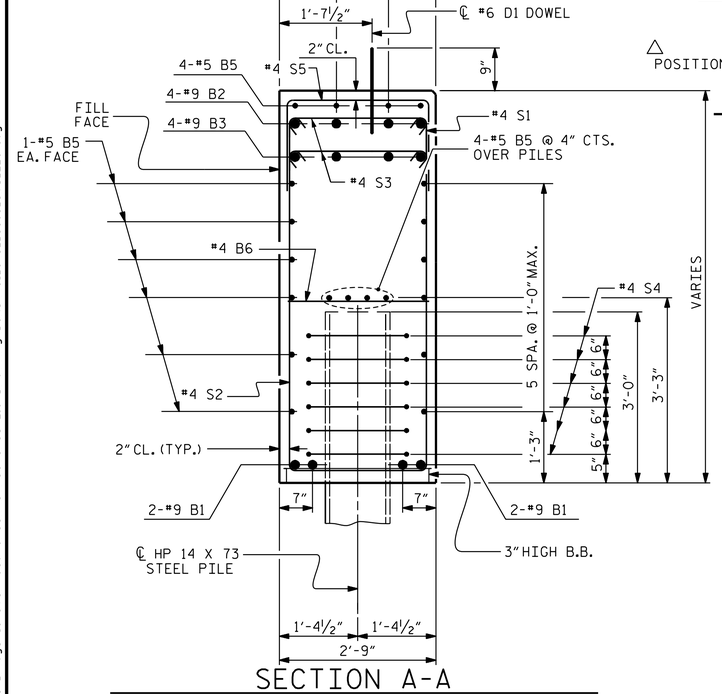
△ POSITION OF PILE DURING WELDING.



DETAIL "A"

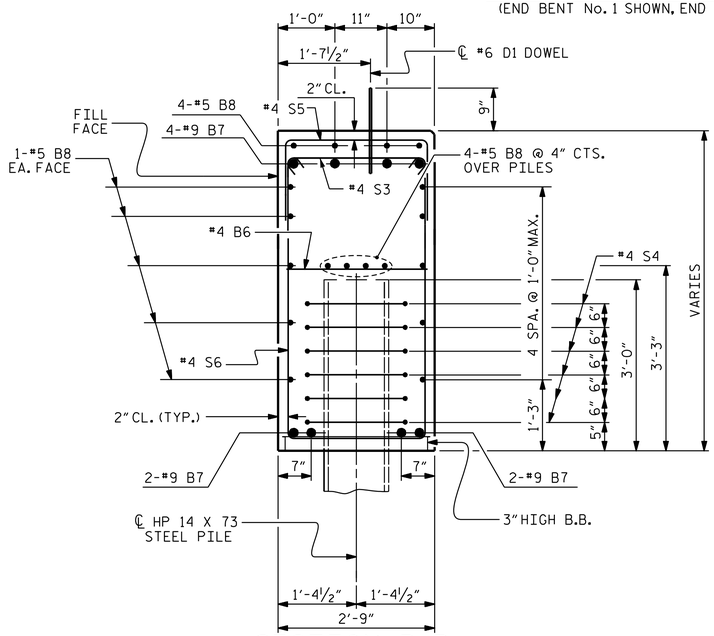
(END BENT No. 1 SHOWN, END BENT No. 2 SIMILAR BY ROTATION)

PILE SPLICE DETAILS



SECTION A-A

(CONCRETE COLLAR NOT SHOWN FOR CLARITY. SEE "CORROSION PROTECTION FOR STEEL PILES DETAIL.")



SECTION B-B

(CONCRETE COLLAR NOT SHOWN FOR CLARITY. SEE "CORROSION PROTECTION FOR STEEL PILES DETAIL.")

BILL OF MATERIAL — END BENT 2 - STAGE I

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	4	#9	1	29'-7"	402
B2	4	#9	1	13'-5"	182
B3	4	#9	STR	19'-10"	270
B4	4	#9	STR	7'-0"	95
B5	20	#5	STR	30'-0"	626
B6	8	#4	STR	2'-5"	13
D1	16	#6	STR	1'-6"	36
H3	42	#6	2	14'-8"	925
K1	10	#4	STR	2'-11"	19
S1	15	#4	3	16'-11"	170
S2	19	#4	3	15'-11"	202
S3	34	#4	4	3'-2"	72
S4	24	#4	5	7'-1"	114
S5	17	#4	6	6'-11"	79
V3	36	#5	STR	10'-0"	375

REINFORCING STEEL (STAGE I) 3,580 LBS.

CLASS A CONCRETE BREAKDOWN (STAGE I)

POUR #1 CAP, LOWER PART OF WINGS & COLLARS 24.1 C.Y.

POUR #2 UPPER PART OF WINGS 1.5 C.Y.

TOTAL CLASS A CONCRETE 25.6 C.Y.

END BENT 2 - STAGE I

HP 14 X 73 STEEL PILES
NO: 4 LIN. FT.= 60

PILE DRIVING EQUIPMENT SETUP FOR HP 14 X 73 STEEL PILES NO: 4

STEEL PILE POINTS NO: 4

BILL OF MATERIAL — END BENT 2 - STAGE II

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B6	4	#4	STR	2'-5"	6
B7	8	#9	1	14'-5"	392
B8	18	#5	STR	14'-8"	275
D1	8	#6	STR	1'-6"	18
H4	36	#6	2	12'-2"	658
K1	10	#4	STR	2'-11"	19
S3	19	#4	4	3'-2"	40
S4	12	#4	5	7'-1"	57
S5	8	#4	6	6'-11"	37
S6	19	#4	3	14'-11"	189
V4	32	#5	STR	8'-4"	145

REINFORCING STEEL (STAGE II) 1,969 LBS.

CLASS A CONCRETE BREAKDOWN (STAGE II)

POUR #3 CAP, LOWER PART OF WINGS & COLLARS 12.7 C.Y.

POUR #4 UPPER PART OF WINGS 1.3 C.Y.

TOTAL CLASS A CONCRETE 14.0 C.Y.

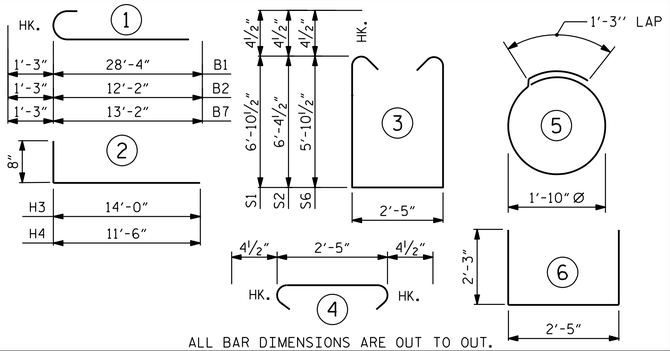
END BENT 2 - STAGE II

HP 14 X 73 STEEL PILES
NO: 2 LIN. FT.= 30

PILE DRIVING EQUIPMENT SETUP FOR HP 14 X 73 STEEL PILES NO: 2

STEEL PILE POINTS NO: 2

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

PROJECT NO. B-5893

MITCHELL COUNTY

STATION: 12+89.50 -L-

SHEET 4 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE

END BENT No. 2 DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-21
1			3			TOTAL SHEETS
2			4			24

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NORTH CAROLINA PROFESSIONAL SEAL 036787 ENGINEER JAIME E. WHEATLEY 3/24/2023

DocuSigned by: Jaime Wheatley 2F709B0E1D764B7...

WSP USA Inc.
434 FAYETTEVILLE STREET
SUITE 1500
RALEIGH, NC 27601
TEL: 1.919.836.4040

LICENSE NO. F-0165

DESIGNED BY:	J. WHEATLEY	DATE :	MAR 2023
DRAWN BY:	J. WHEATLEY	DATE :	MAR 2023
CHECKED BY:	T. KIRSCHBAUM	DATE :	MAR 2023
DESIGN ENGINEER OF RECORD:	J. WHEATLEY	DATE :	MAR 2023

3/24/2023
J:\18890GR-14 B-5893 Bridge 19 over Cub Creek\Structures\2.0 Drafting\DGNs\401.043.B5893.SMLE204.dgn