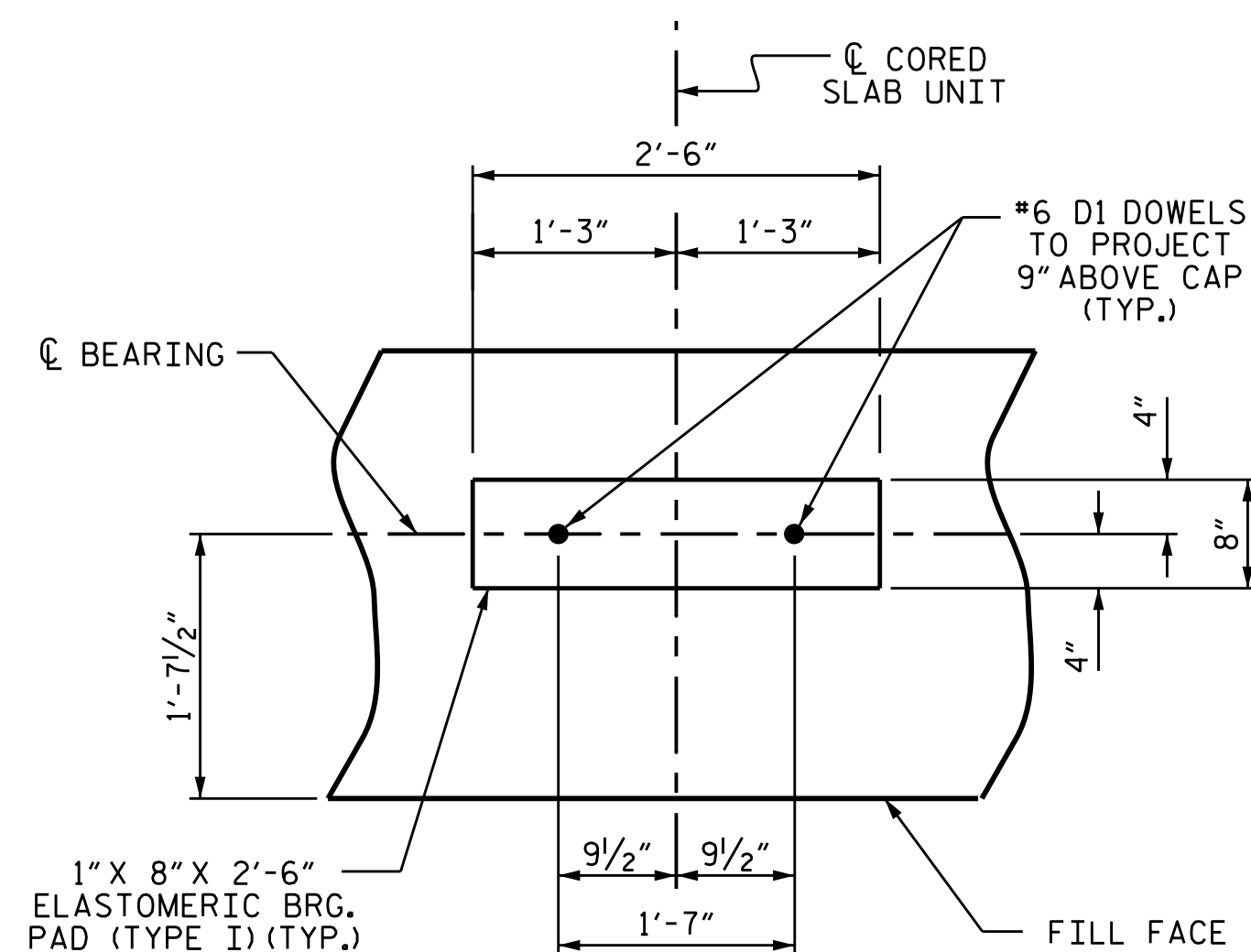


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

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.

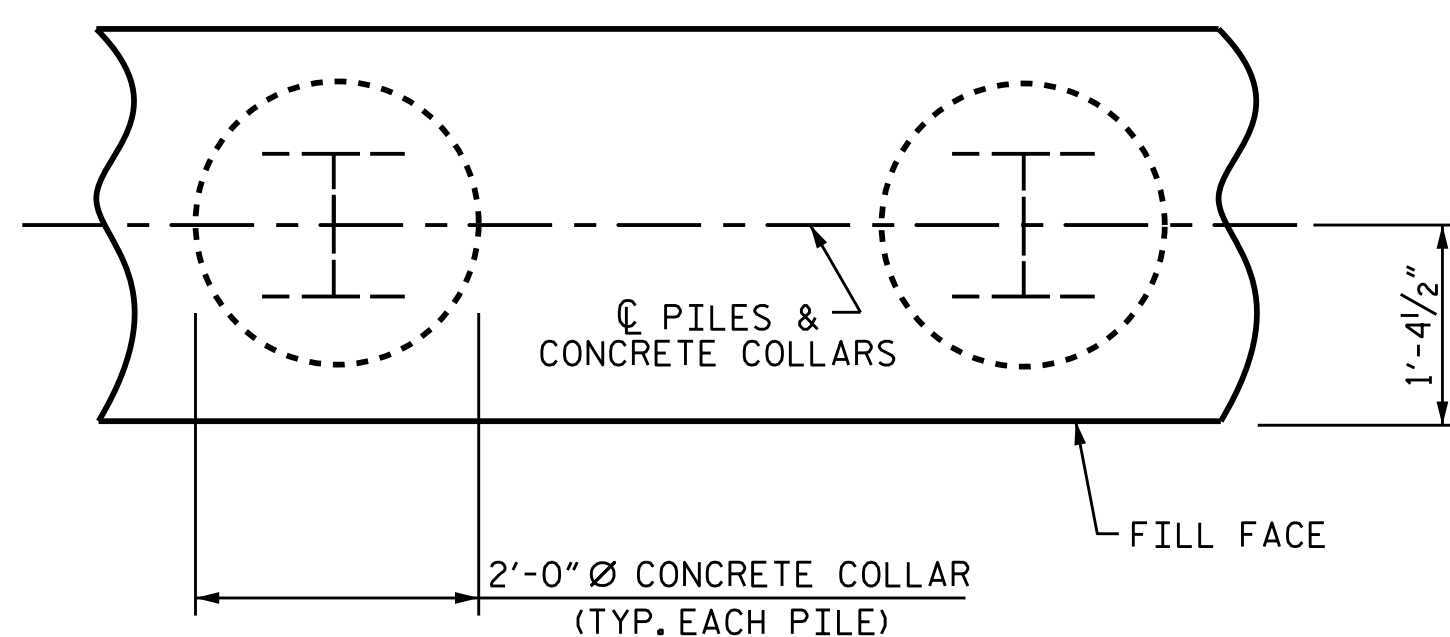
NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK AND THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR THE SEVERAL PAY ITEMS.

TEMPORARY DRAINAGE AT END BENT



DETAIL "A"

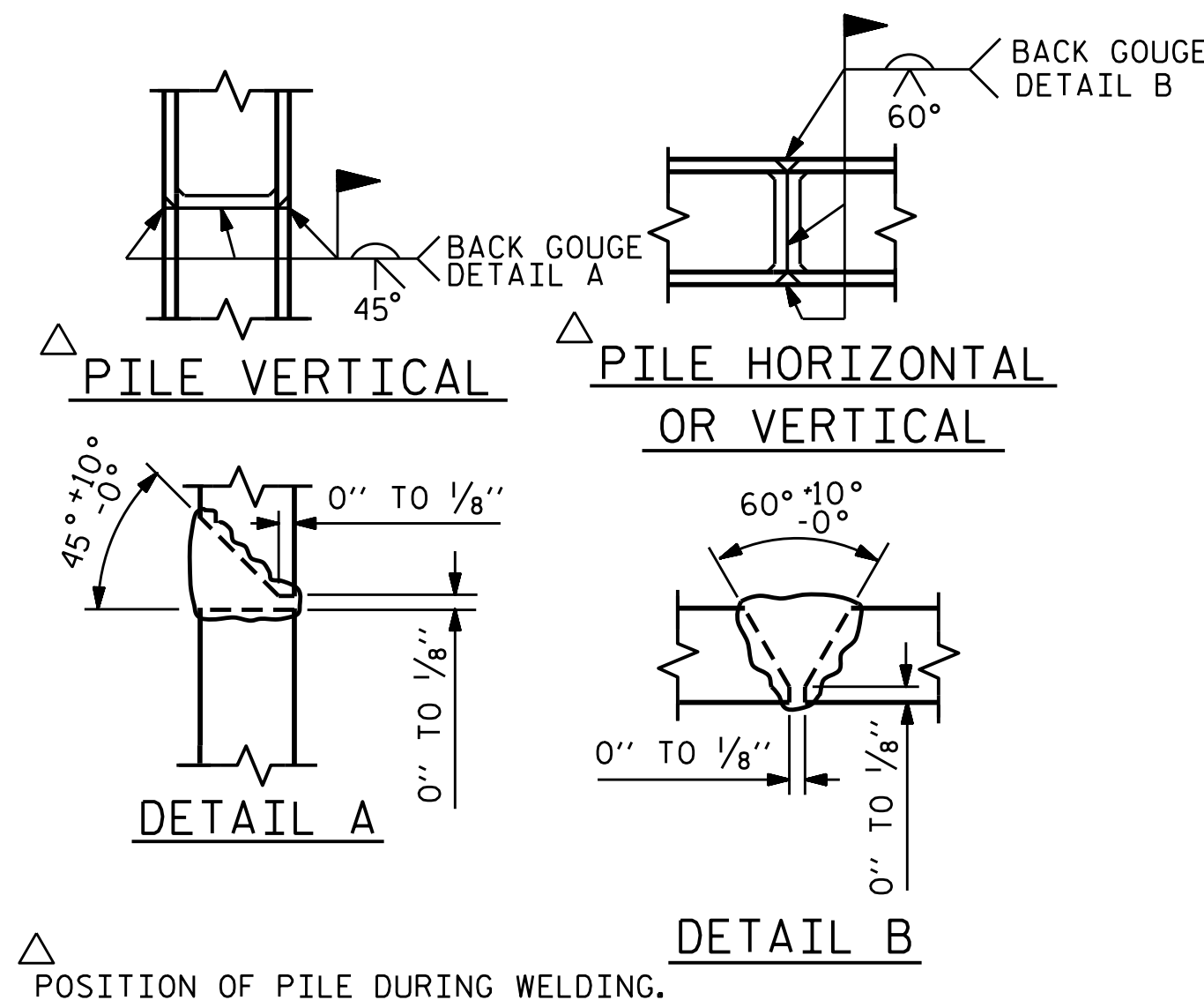
(END BENT No. 1 SHOWN, END BENT No. 2 SIMILAR BY ROTATION)



PLAN

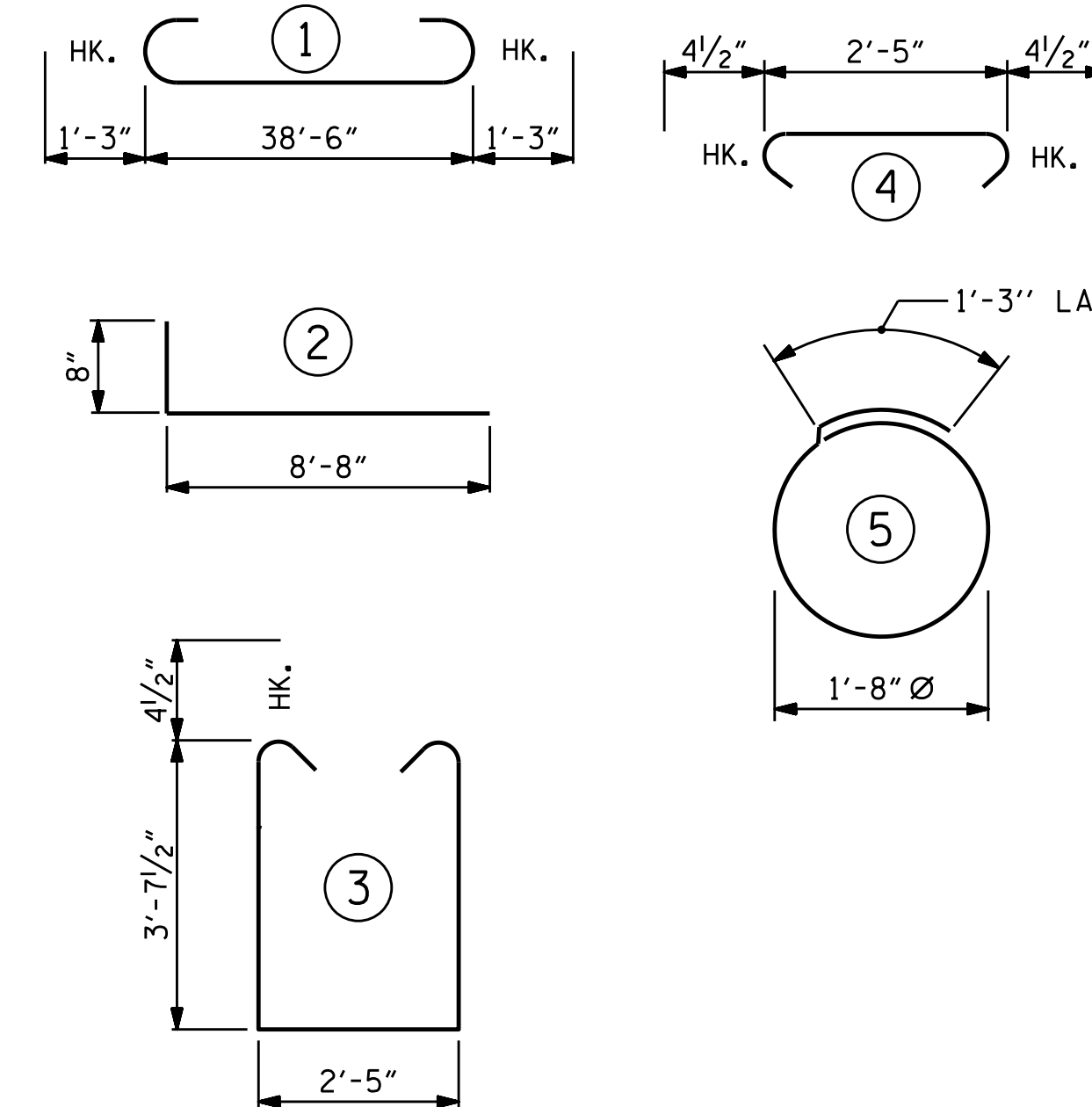
CORROSION PROTECTION FOR STEEL PILES DETAIL

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



PILE SPLICE DETAILS

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

END BENT 1		END BENT 2	
HP 12 X 53 STEEL PILES	HP 12 X 53 STEEL PILES		
NO: 7	NO: 7		
LIN. FT. = 140	LIN. FT. = 105		
STEEL PILE POINTS 7 EA.	STEEL PILE POINTS 7 EA.		

BILL OF MATERIAL

FOR ONE END BENT

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	8	#9	1	41'-0"	1115
B2	28	#4	STR	20'-7"	385
B3	10	#4	STR	2'-5"	16
D1	22	#6	STR	1'-6"	50
H1	40	#4	2	9'-4"	249
K1	16	#4	STR	2'-11"	31
S1	50	#4	3	10'-5"	348
S2	50	#4	4	3'-2"	106
S3	28	#4	5	6'-6"	122
V1	52	#4	STR	6'-2"	214

REINFORCING STEEL (FOR ONE END BENT) 2636 LBS.

CLASS A CONCRETE BREAKDOWN (FOR END BENT 1)

POUR #1 CAP, LOWER PART OF WINGS & COLLARS 19.5 C.Y.

POUR #2 UPPER PART OF WINGS 2.1 C.Y.

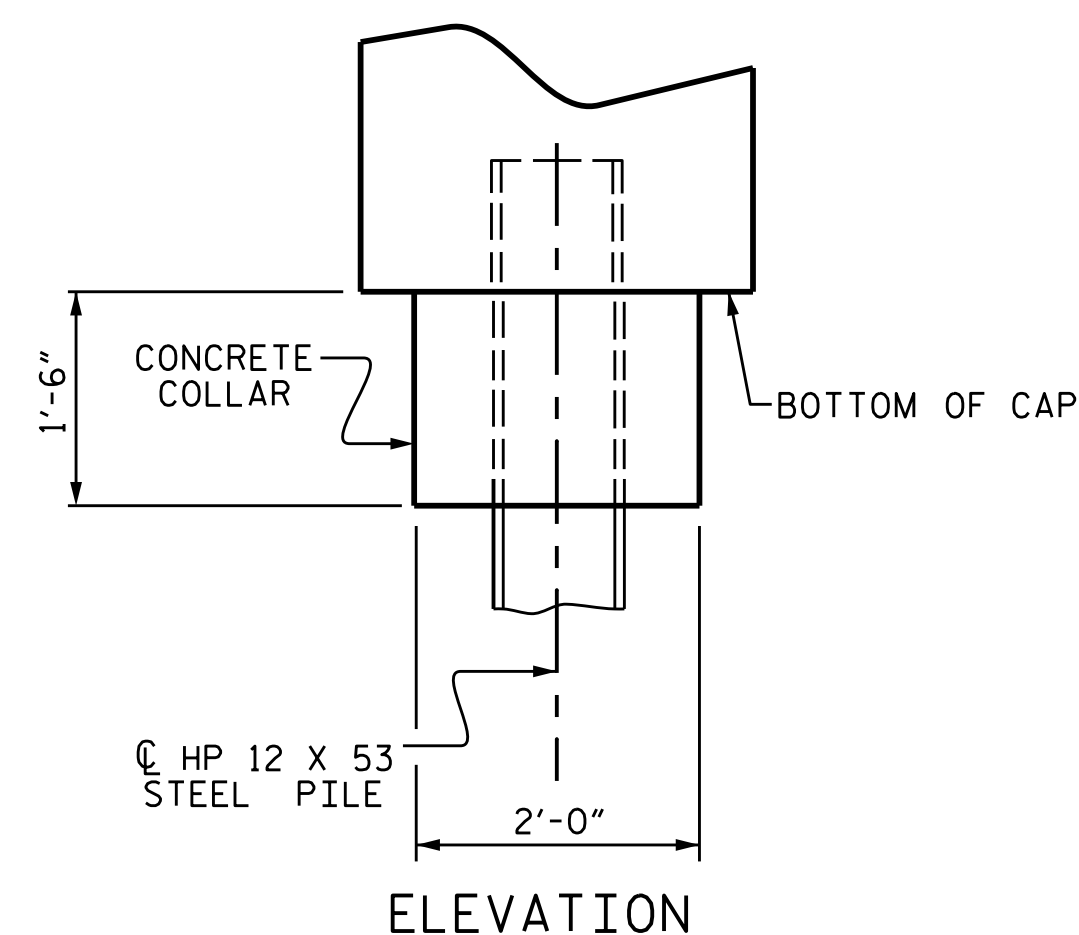
TOTAL CLASS A CONCRETE (FOR END BENT 1) 21.6 C.Y.

CLASS A CONCRETE BREAKDOWN (FOR END BENT 2)

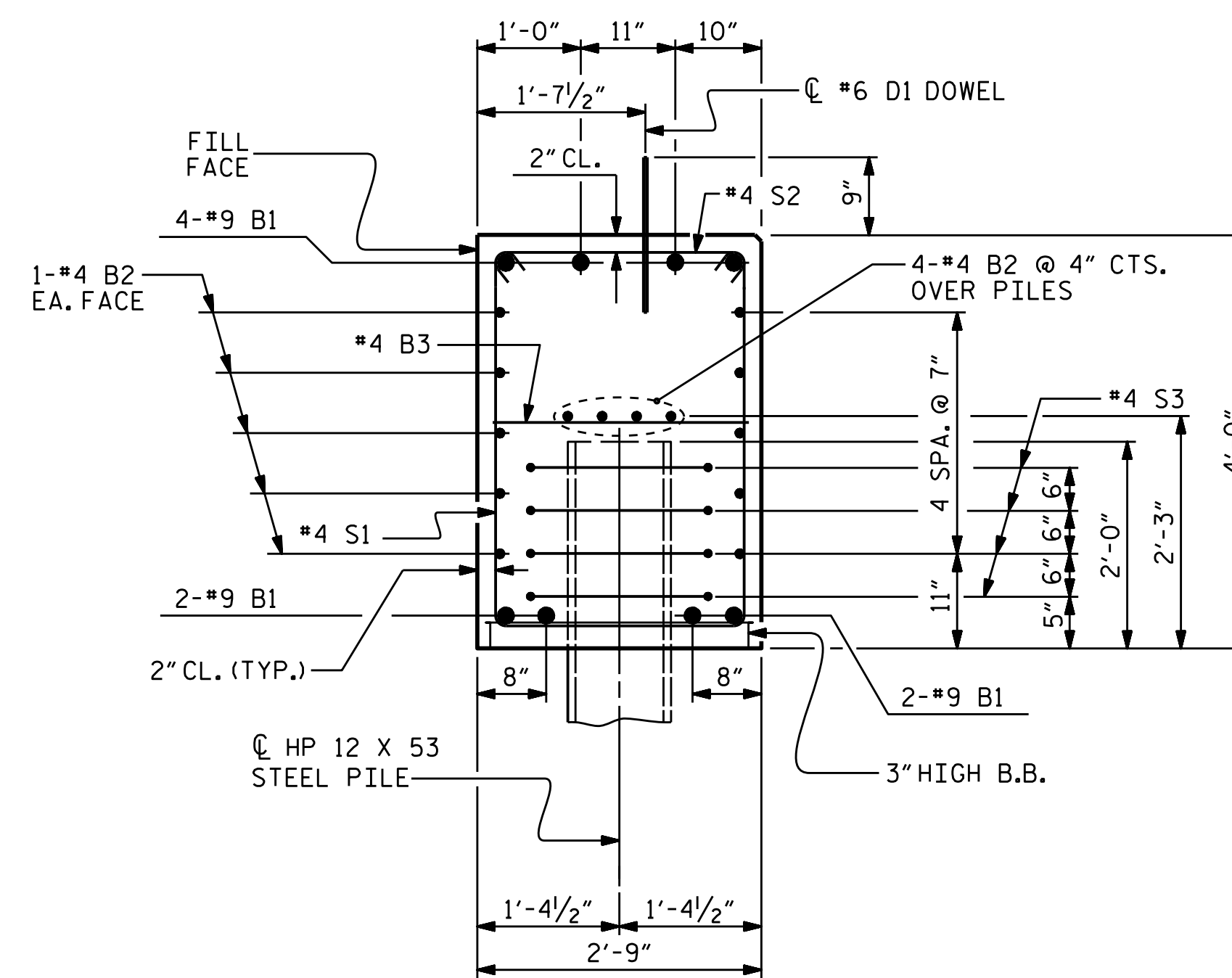
POUR #1 CAP, LOWER PART OF WINGS & COLLARS 19.5 C.Y.

POUR #2 UPPER PART OF WINGS 2.3 C.Y.

TOTAL CLASS A CONCRETE (FOR END BENT 2) 21.8 C.Y.

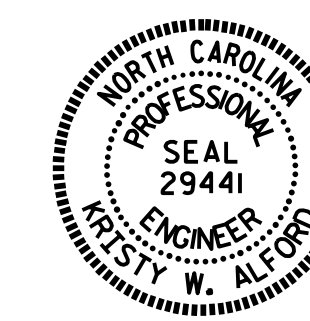


ELEVATION



SECTION A-A

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



DocuSigned by:
Westy W. Alford
2/22/2017

PROJECT NO. B-5166
GRANVILLE COUNTY
STATION: 16+34.00 -L-

SHEET 4 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE

END BENT 1 & 2
DETAILS

ASSEMBLED BY : T.L. AVERETTE DATE : 04/16
CHECKED BY : J.P. ADAMS DATE : 4/2016
DRAWN BY : WJH 12/11
CHECKED BY : AAC 12/11

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-16	
1			3			TOTAL SHEETS 20	
2			4				