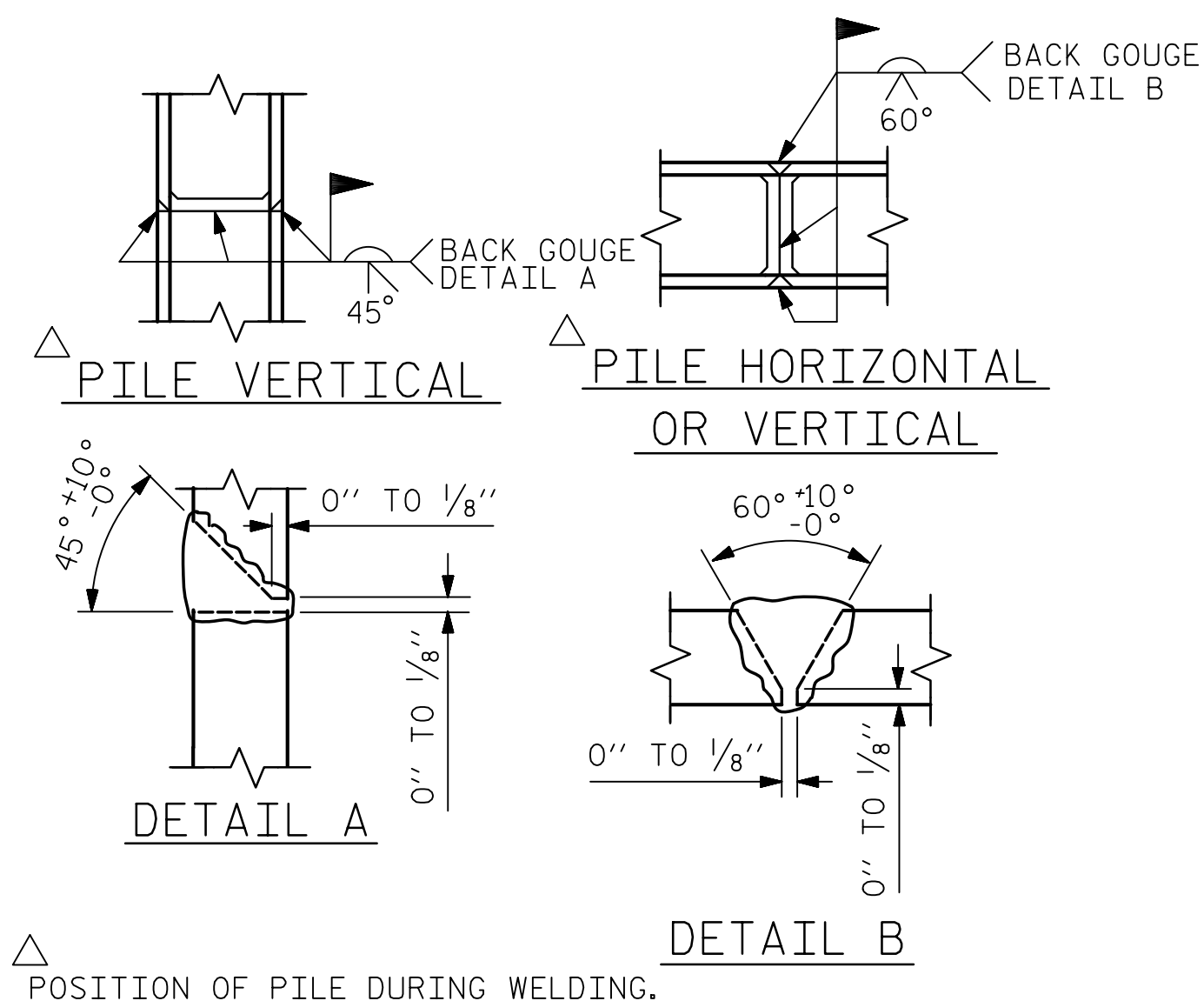


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

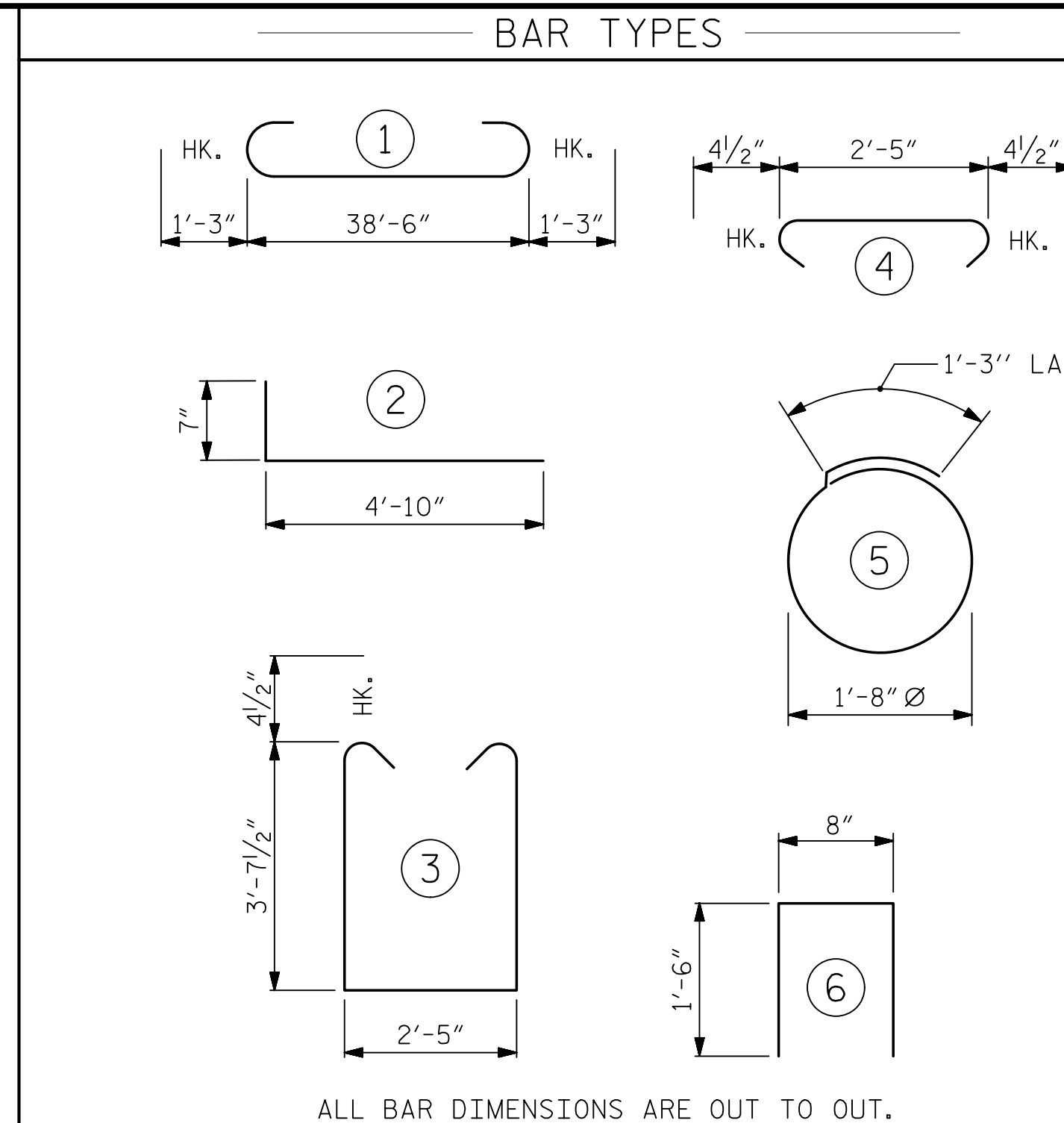
BAGGED STONE SHALL REMAIN IN PLACE UNTIL THE ENGINEER DIRECTS THAT IT BE REMOVED. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF SILT ACCUMULATIONS AT BAGGED STONE WHEN SO DIRECTED BY THE ENGINEER. BAGS SHALL BE REMOVED AND REPLACED WHENEVER THE ENGINEER DETERMINES THAT THEY HAVE DETERIORATED AND LOST THEIR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



PILE SPLICE DETAILS



BILL OF MATERIAL

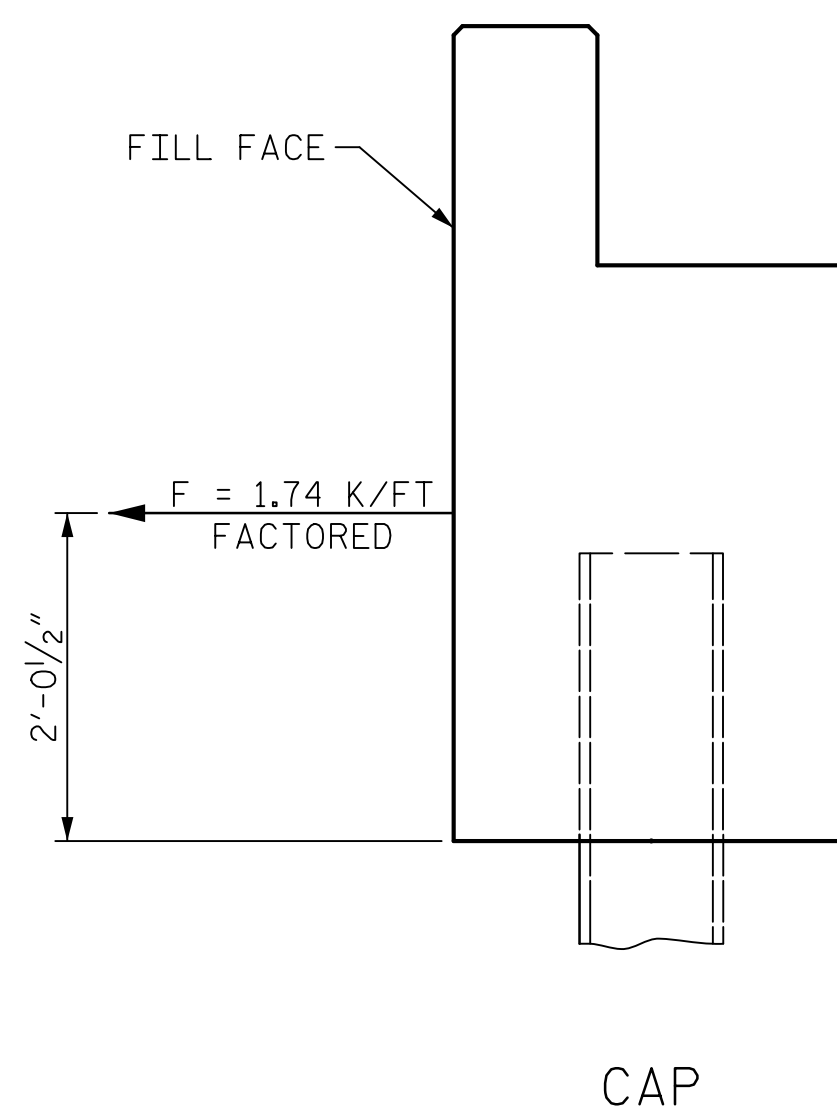
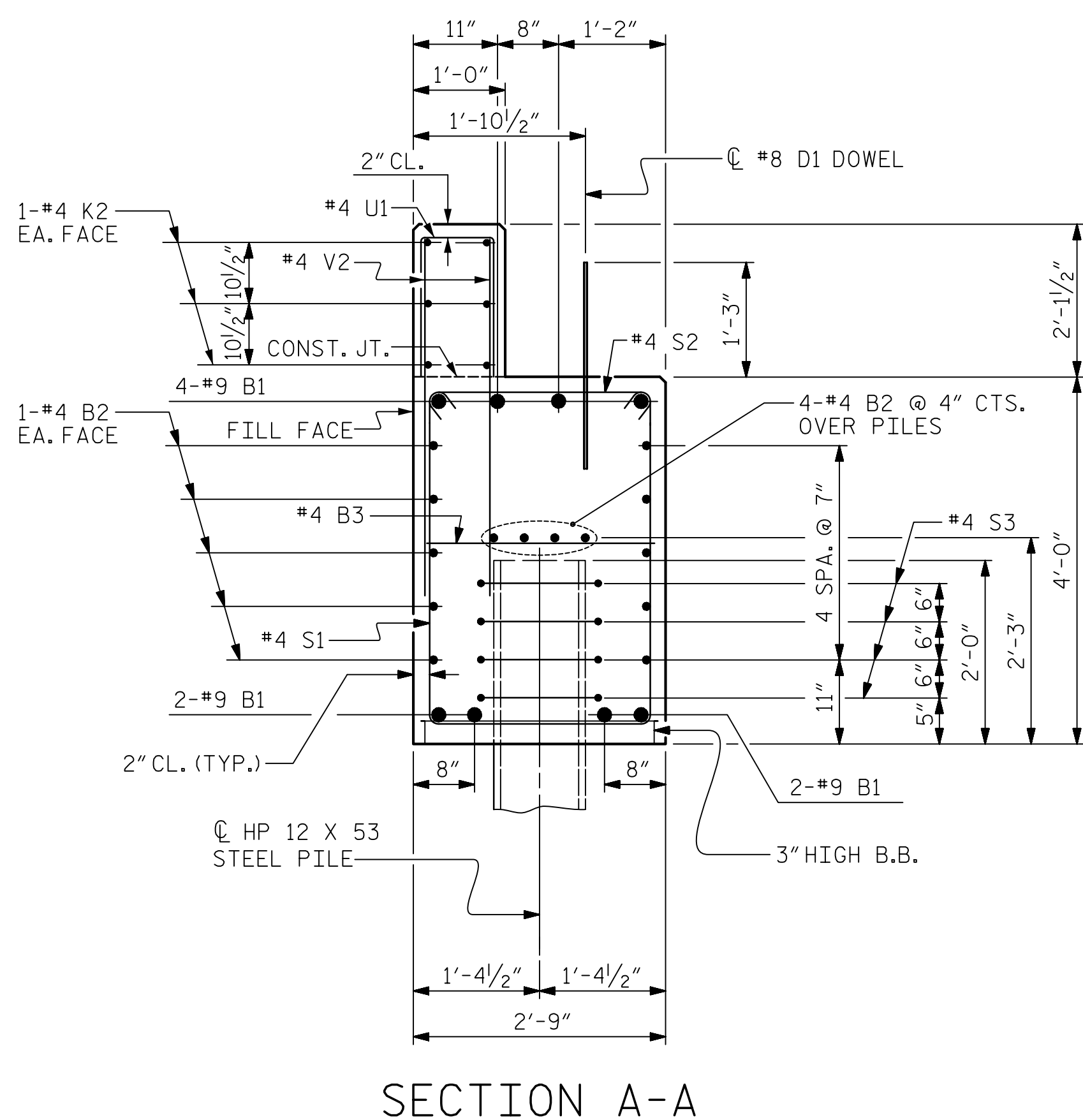
FOR ONE END BENT

BAR NO.	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	#8	STR	2'-3"	132
H1	64	#5	2	5'-5"	362
K1	12	#4	STR	3'-0"	24
K2	12	#4	STR	20'-7"	165
S1	37	#4	3	10'-5"	257
S2	37	#4	4	3'-2"	78
S3	32	#4	5	6'-6"	139
U1	33	#4	6	3'-8"	81
V1	36	#4	STR	7'-8"	184
V2	66	#4	STR	5'-9"	254

REINFORCING STEEL (FOR ONE END BENT) 3192 LBS.

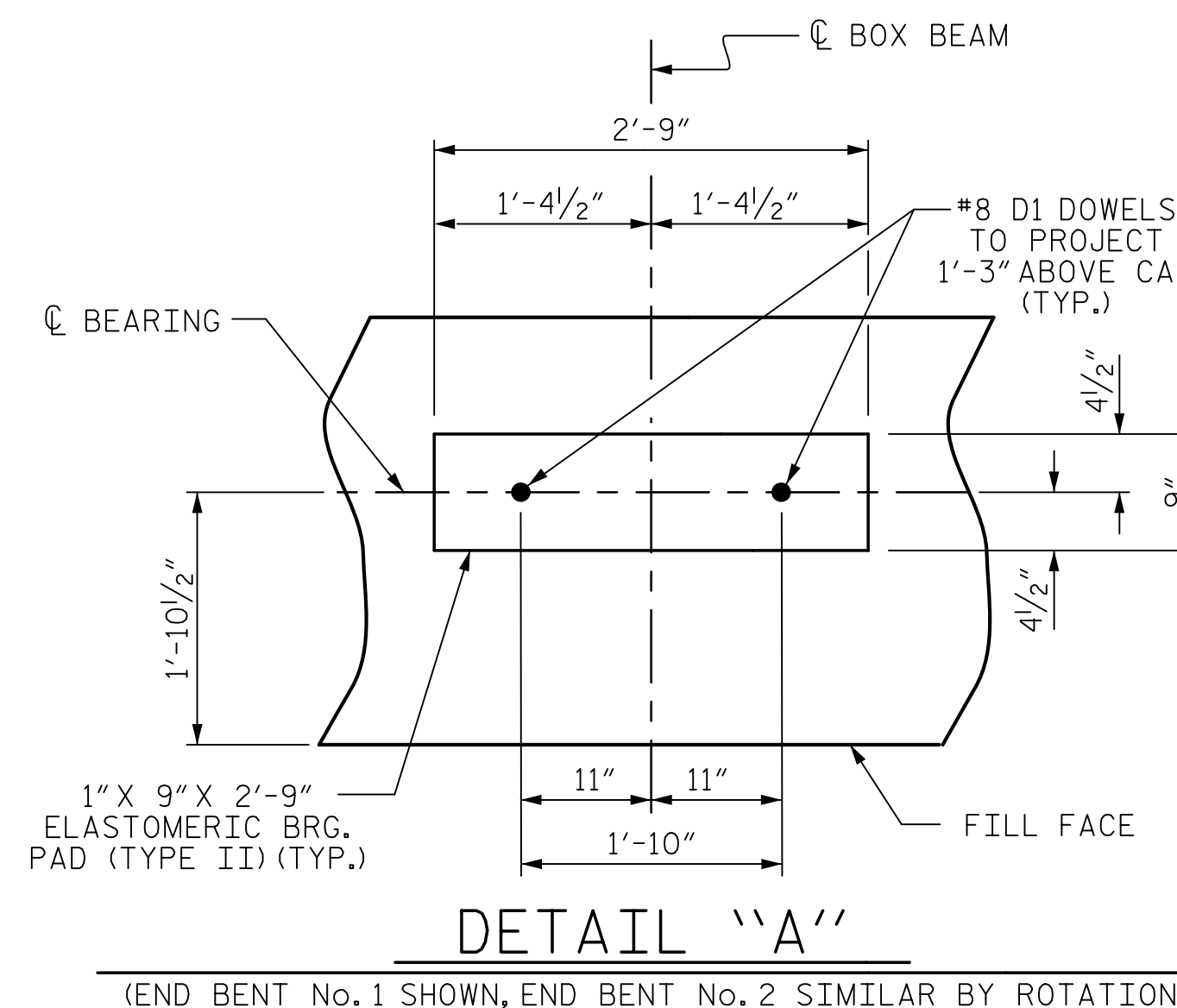
CLASS A CONCRETE BREAKDOWN (FOR ONE END BENT)		
POUR #1	CAP & LOWER PART OF WINGS	16.6 C.Y.
POUR #2	BACKWALL & UPPER PART OF WINGS	4.9 C.Y.
TOTAL CLASS A CONCRETE		21.5 C.Y.

END BENT No. 1	
HP 12 X 53 STEEL PILES	NO: 8 LIN. FT.= 456
PILE DRIVING EQUIPMENT SETUP FOR HP 12 X 53 STEEL PILES	NO: 8
END BENT No. 2	
HP 12 X 53 STEEL PILES	NO: 8 LIN. FT.= 496
PILE DRIVING EQUIPMENT SETUP FOR HP 12 X 53 STEEL PILES	NO: 8



TIEBACK DETAIL

(DETAIL SHOWING TIEBACK RESTRAINT FOR END BENT 1 & 2)



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NC License No. F-1235



PROJECT NO. B-4964
ROCKINGHAM COUNTY
STATION: 18+73.69 -L-
12+70.54 -RAIL-
SHEET 4 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT No. 1 & 2
DETAILS

ASSEMBLED BY : J.S. HOBSON	DATE :06/09/16
CHECKED BY : J.A. LEE	DATE :07/08/16
DRAWN BY : WJH 12/11	REV. 8/14
CHECKED BY : AAC 12/11	MAA/TMG

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-14
1			3			TOTAL SHEETS
2			4			16