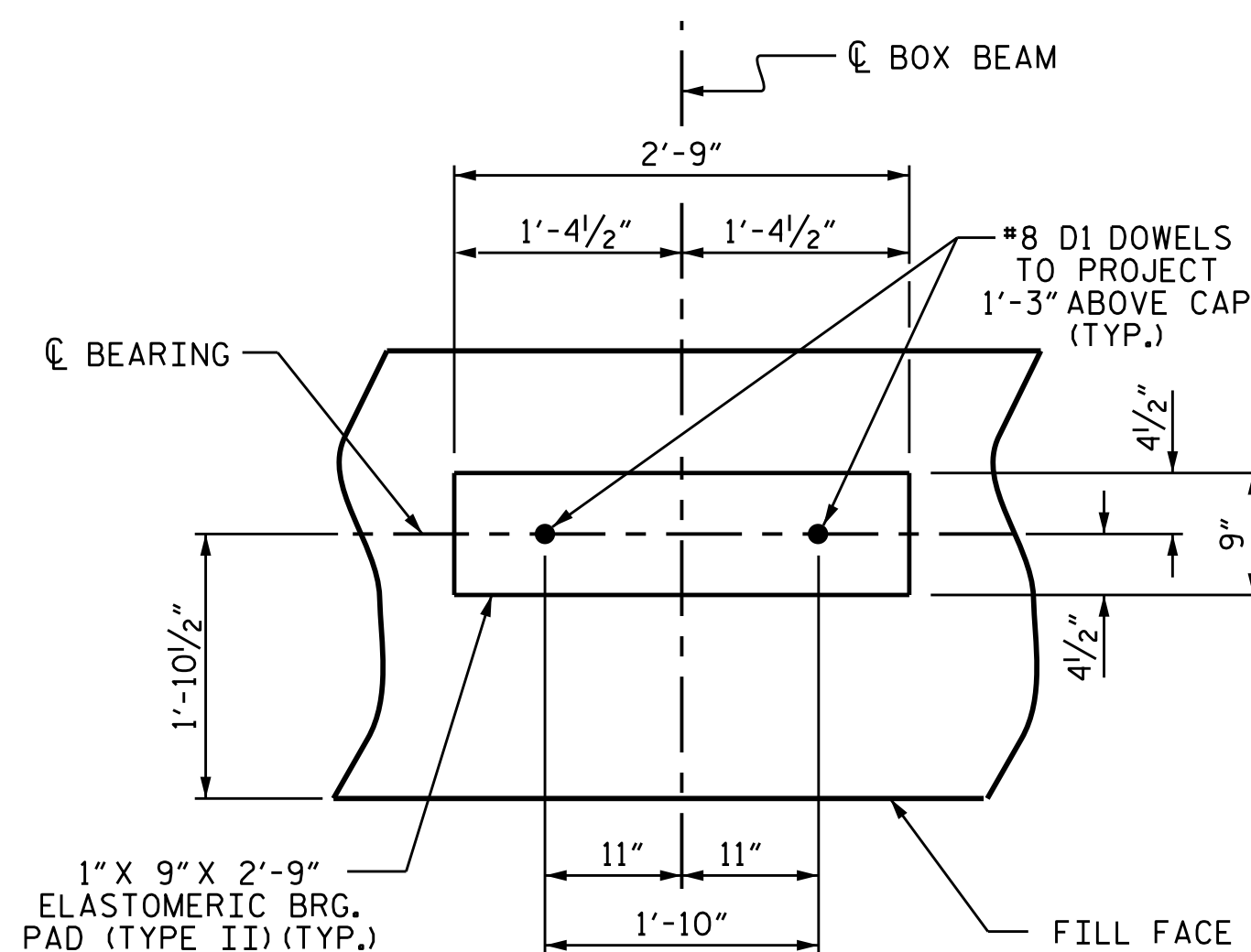


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

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.

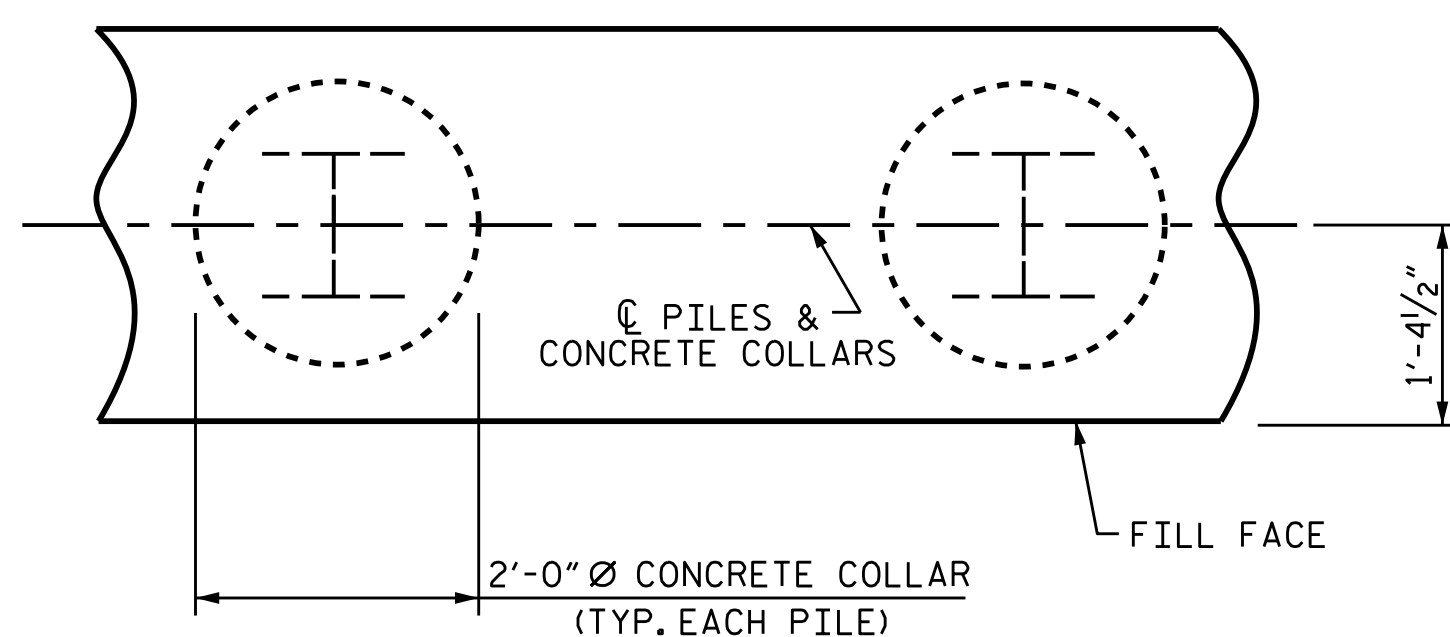
NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK AND THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR THE SEVERAL PAY ITEMS.

### TEMPORARY DRAINAGE AT END BENT



DETAIL "A"

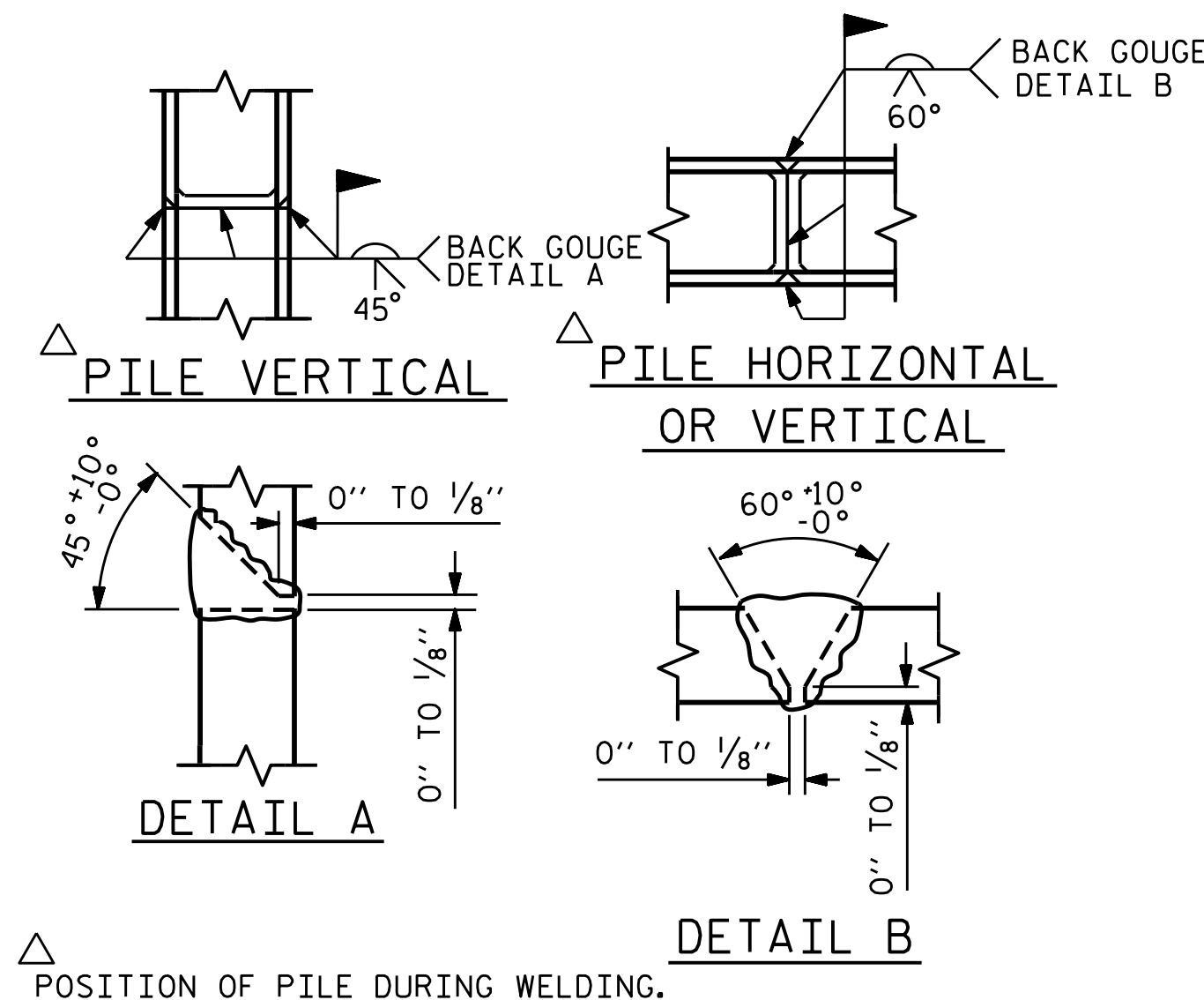
(END BENT 1 SHOWN, END BENT 2 SIMILAR BY ROTATION)



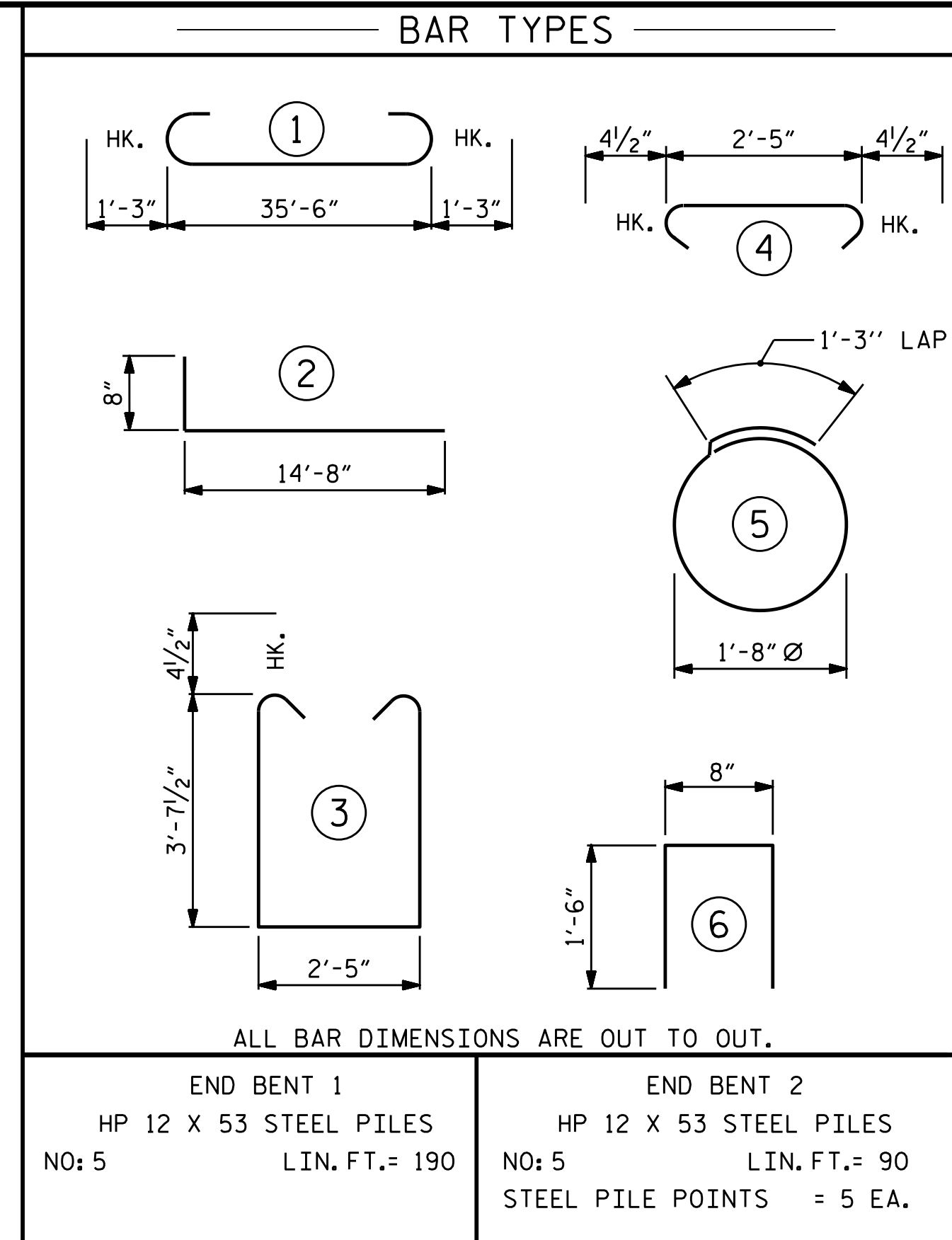
PLAN

### CORROSION PROTECTION FOR STEEL PILES DETAIL

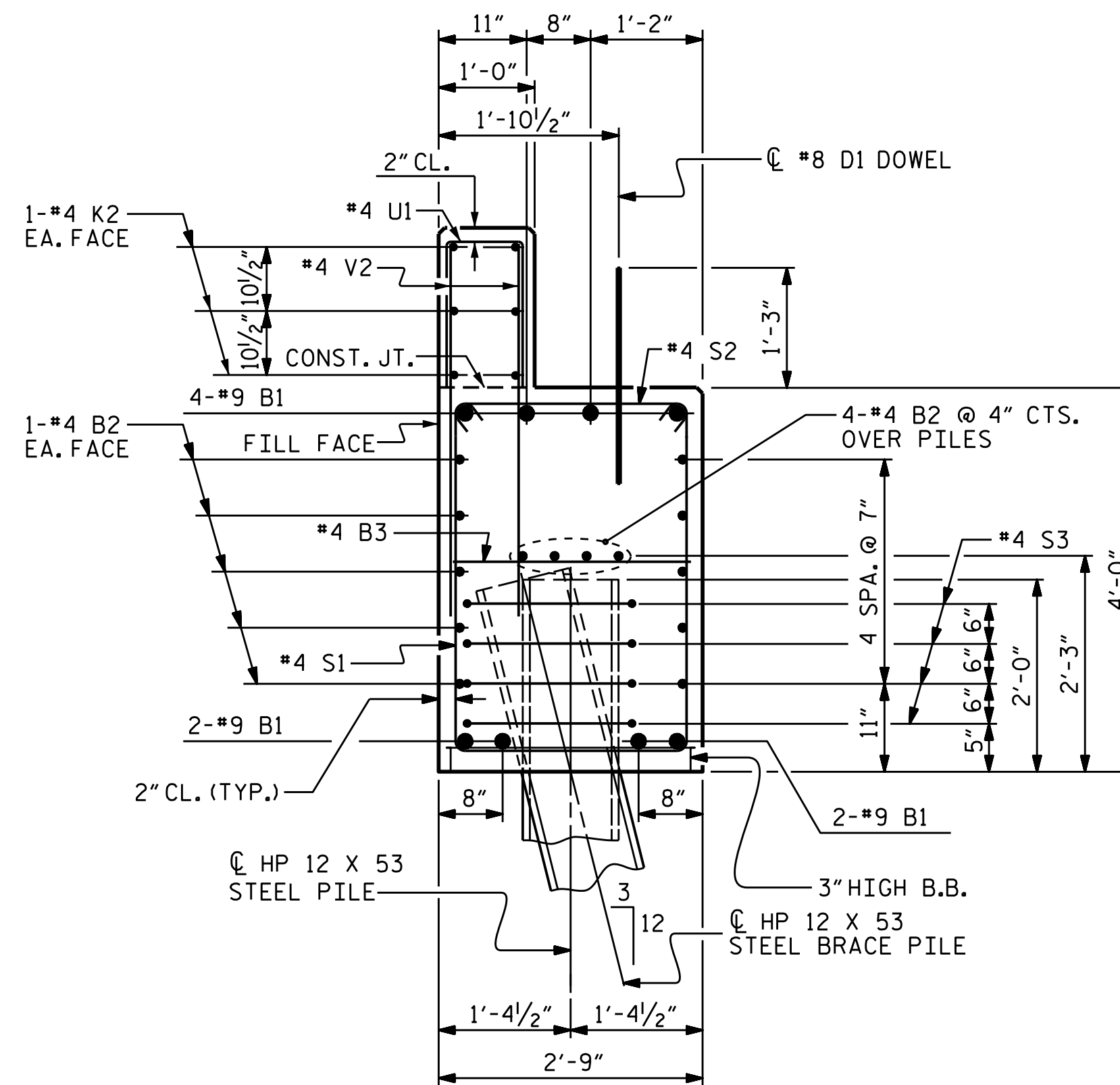
(END BENT 1 SHOWN, END BENT 2 SIMILAR BY ROTATION)



### PILE SPLICE DETAILS



BILL OF MATERIAL FOR ONE END BENT					
BAR NO.	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	8	#9	1	38'-0"	1034
B2	28	#4	STR	19'-1"	357
B3	9	#4	STR	2'-5"	15
D1	20	#8	STR	2'-3"	120
H1	64	#6	2	15'-4"	1474
K1	12	#4	STR	2'-11"	23
K2	12	#4	STR	19'-1"	153
S1	46	#4	3	10'-5"	320
S2	46	#4	4	3'-2"	97
S3	20	#4	5	6'-6"	87
U1	30	#4	6	3'-8"	73
V1	76	#4	STR	7'-8"	389
V2	60	#4	STR	5'-9"	230
REINFORCING STEEL (FOR ONE END BENT)					4372 LBS.
CLASS A CONCRETE BREAKDOWN (FOR ONE END BENT)					
POUR #1 CAP, LOWER PART OF WINGS & COLLARS					19.7 C.Y.
POUR #2 BACKWALL & UPPER PART OF WINGS					7.4 C.Y.
TOTAL CLASS A CONCRETE					27.1 C.Y.



SECTION A-A

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



PROJECT NO. B-5157  
GRANVILLE COUNTY  
STATION: 15+97.50 -L-  
SHEET 4 OF 4

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

SUBSTRUCTURE  
END BENT 1 & 2  
DETAILS

ASSEMBLED BY : K.W. ALFORD	DATE : 12/2015
CHECKED BY : J.P. ADAMS	DATE : 12/2015
DRAWN BY : WJH 12/11	REV. 8/14
CHECKED BY : AAC 12/11	MAA/TMG

23-FEB-2016 07:03  
R:\Structures\Plans\Sub\_Draw\B5157.5D.E\*.dgn  
jpodams

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-13
1			3			TOTAL SHEETS 15
2			4			

STD. NO. EB\_30\_90S4\_39BB