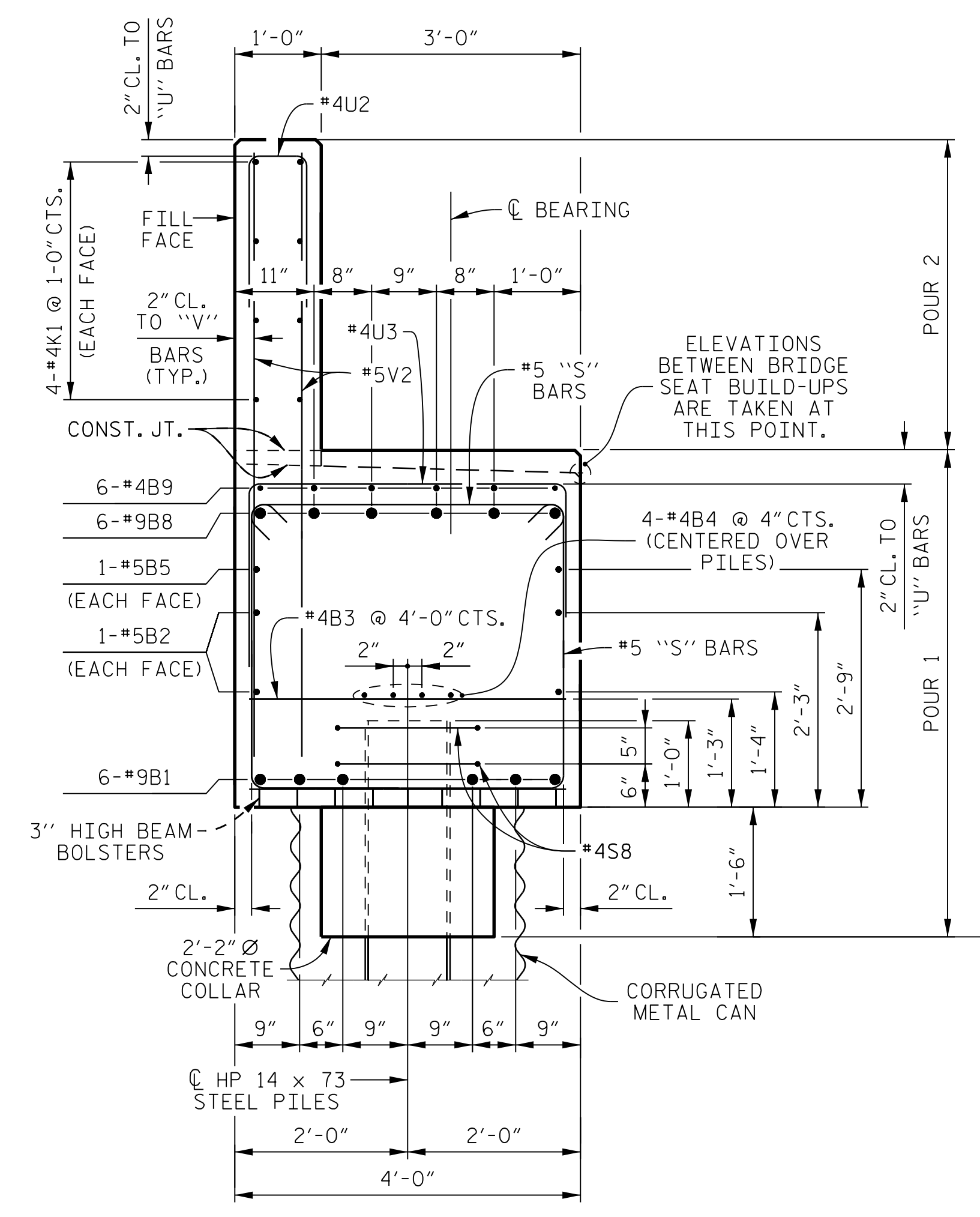
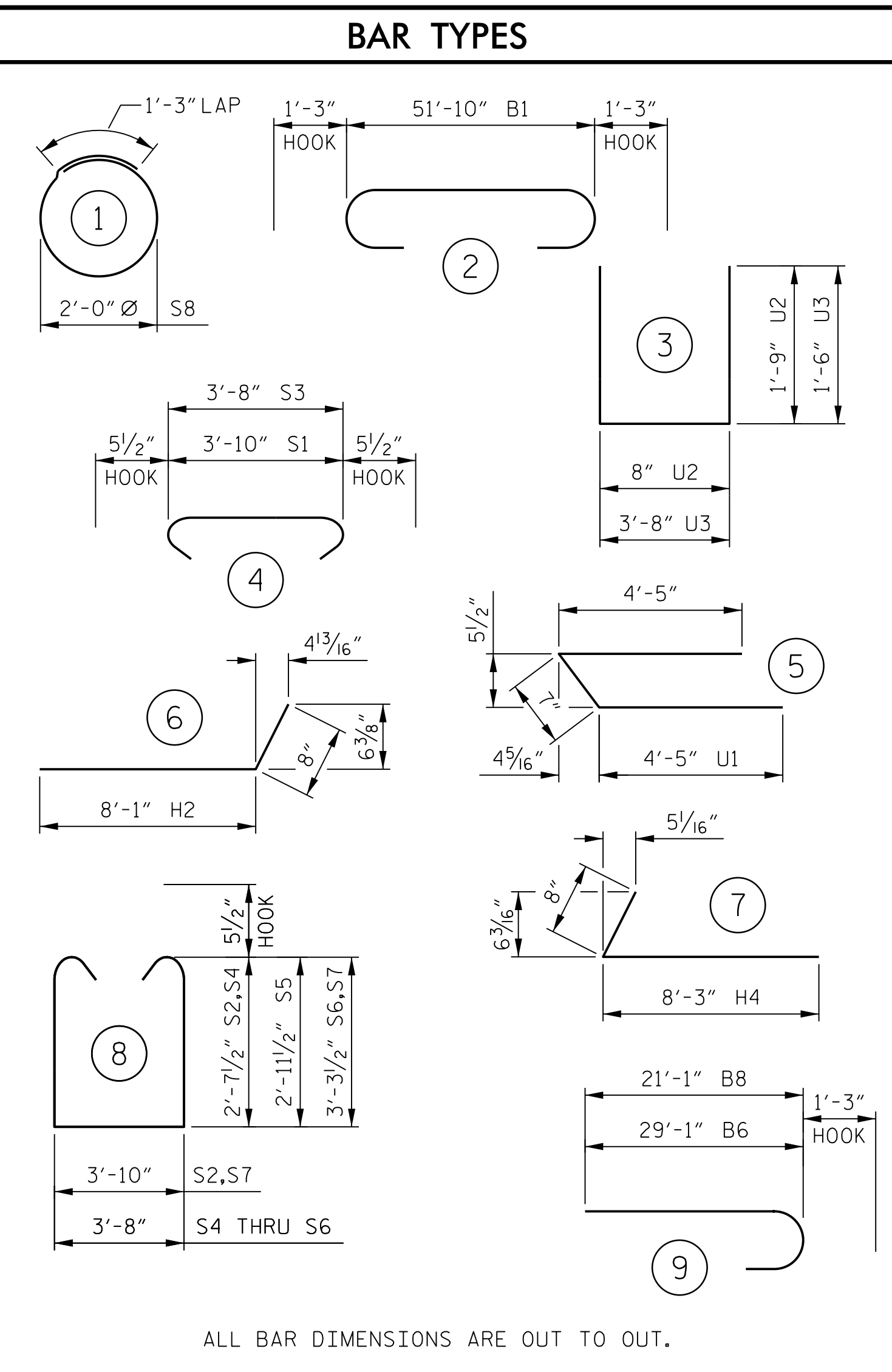


**SECTION A-A**

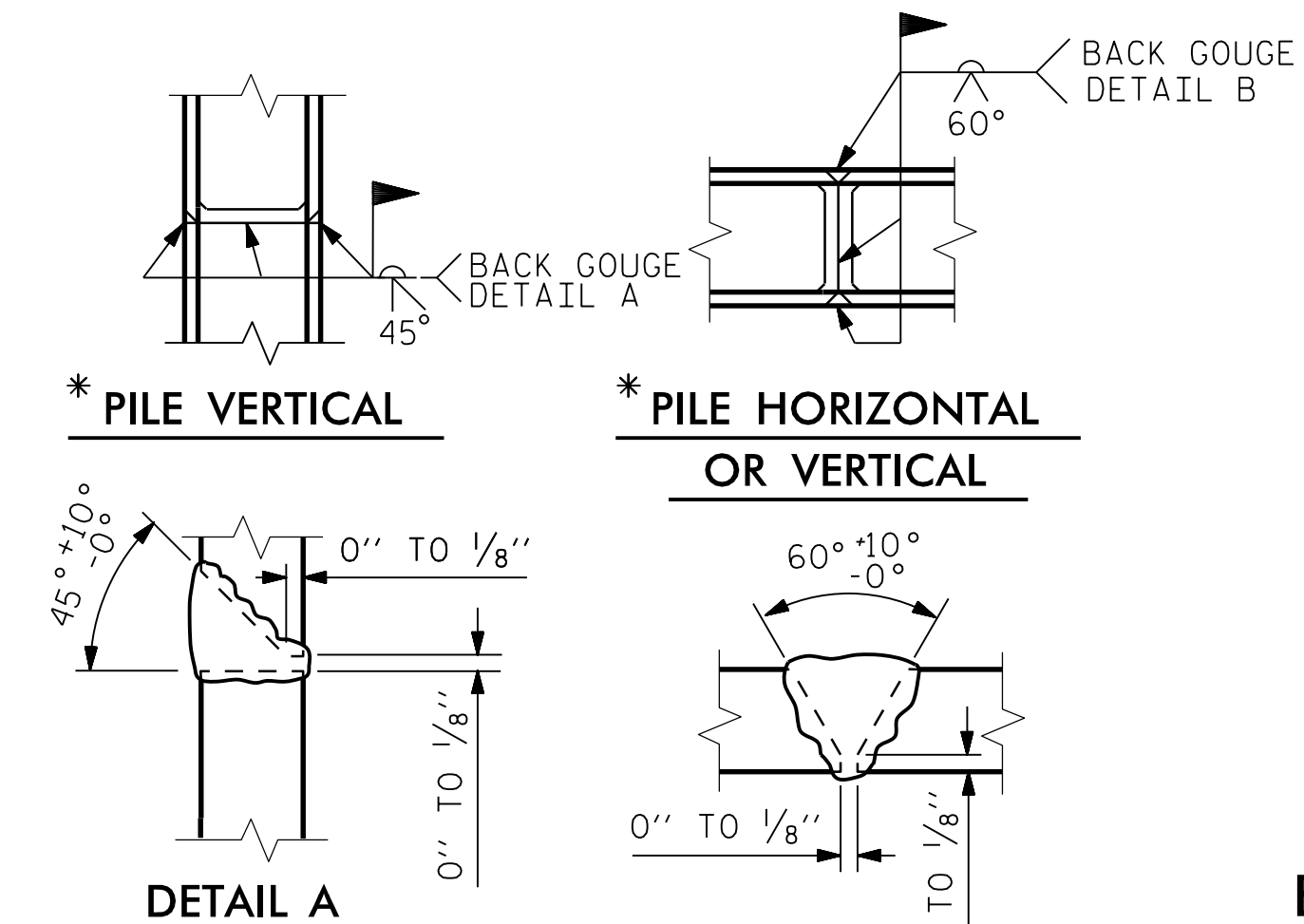


**SECTION B-B**

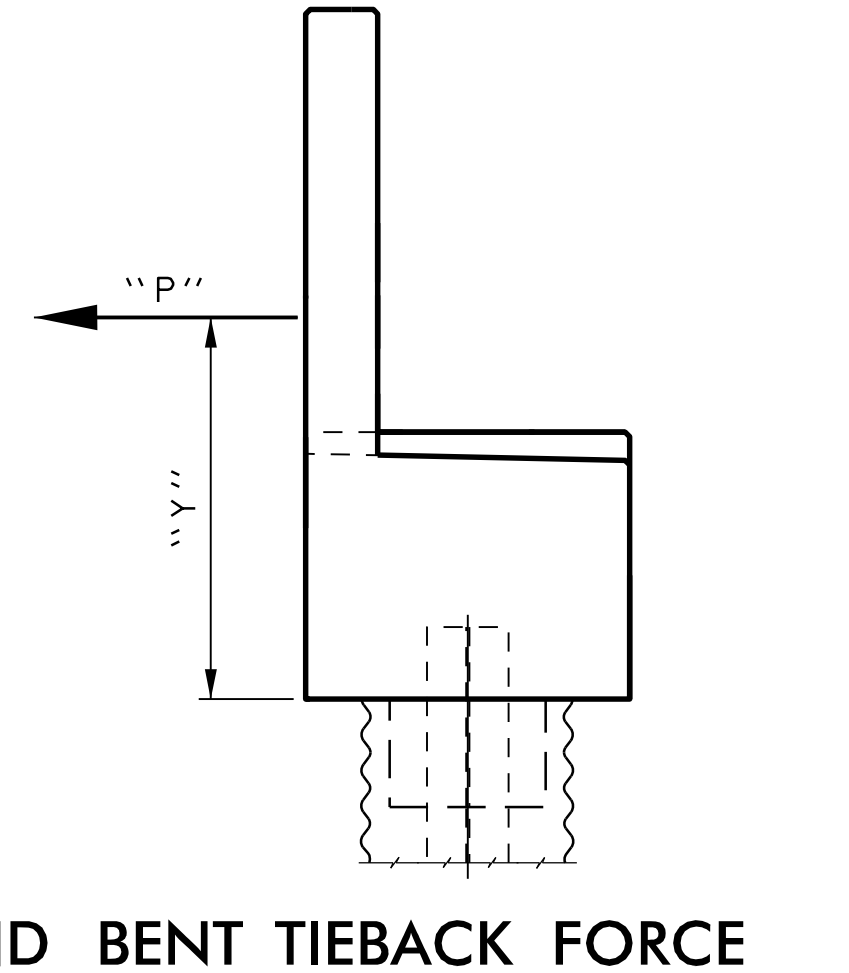
BILL OF MATERIAL					
END BENT 1					
BAR No.	SIZE	TYPE	LENGTH	WEIGHT	
B1	6	#9	2	54'-4"	1,108
B2	4	#5	STR	51'-10"	216
B3	15	#4	STR	3'-8"	37
B4	8	#4	STR	27'-2"	145
B5	2	#5	STR	18'-0"	38
B6	6	#9	9	30'-4"	619
B7	6	#9	STR	22'-4"	449
B8	6	#4	STR	8'-0"	32
B9	6	#4	STR	8'-0"	32
H1	8	#5	STR	8'-1"	67
H2	12	#5	6	8'-9"	110
H3	6	#5	STR	8'-3"	52
H4	12	#5	7	8'-11"	112
K1	16	#4	STR	27'-6"	294
S1	6	#5	4	4'-9"	30
S2	3	#5	8	10'-0"	31
S3	42	#5	4	4'-7"	201
S4	14	#5	8	9'-10"	144
S5	12	#5	8	10'-6"	131
S6	16	#5	8	11'-2"	186
S7	3	#5	8	11'-4"	35
S8	16	#4	1	7'-7"	81
U1	4	#4	5	9'-5"	25
U2	43	#4	3	4'-2"	120
U3	7	#4	3	6'-8"	31
V1	28	#5	STR	9'-4"	273
V2	86	#5	STR	6'-4"	568
V3	28	#5	STR	8'-2"	238
REINFORCING STEEL			5,829 LBS.		
CLASS "A" CONCRETE					
POUR 1 COLLARS, CAP AND LOWER WINGS			29.3 CU. YDS.		
POUR 2 BACKWALL AND UPPER WINGS			10.6 CU. YDS.		
TOTAL			39.9 CU. YDS.		
HP 14 x 73 STEEL PILES			8 REQUIRED 560.0 LIN. FT.		
PILE DRIVING EQUIPMENT SETUP FOR HP14X73 STEEL PILES			8 EACH		



ALL BAR DIMENSIONS ARE OUT TO OUT.



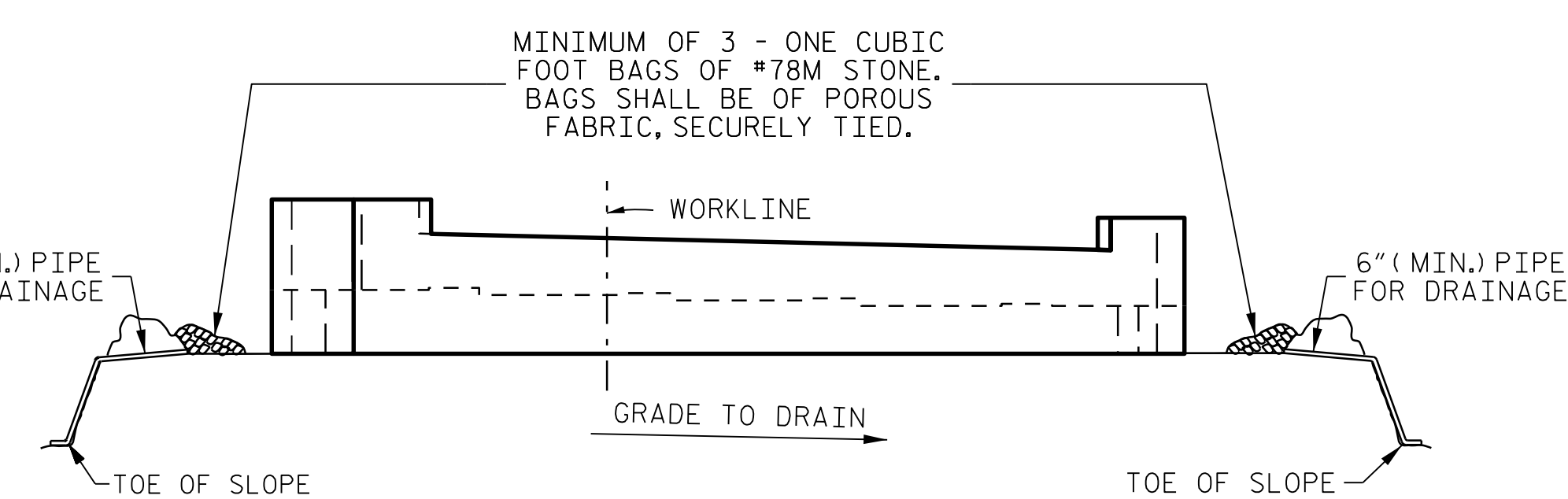
**PILE SPlice DETAILS**



**END BENT TIEBACK FORCE**

COMPONENT	"P" (K / FT.)	"Y" (FT.)
WIND ON STRUCTURE (WS)	0.10	3.625
WIND ON LIVE LOAD (WL)	0.05	3.625
BRAKING FORCE (BR)	0.37	3.625
THERMAL FORCE (TU)	0.13	3.625
EARTH FORCE (EH)	1.26	2,500
LIVE LOAD SURCHARGE (LS)	1.26	3,750

NOTE:  
"P" IS UNFACTORED SERVICE LOAD NORMAL TO FILL FACE.



MINIMUM OF 3 - ONE CUBIC FOOT BAGS OF #78M STONE. BAGS SHALL BE OF POROUS FABRIC, SECURELY TIED.

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 DETEIORATED 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 FOR THE SEVERAL PAY ITEMS.

**TEMPORARY DRAINAGE AT END BENT**

PROJECT NO. **I-4729A**  
**POLK** COUNTY  
 STATION: **22+87.20 -RP E-**

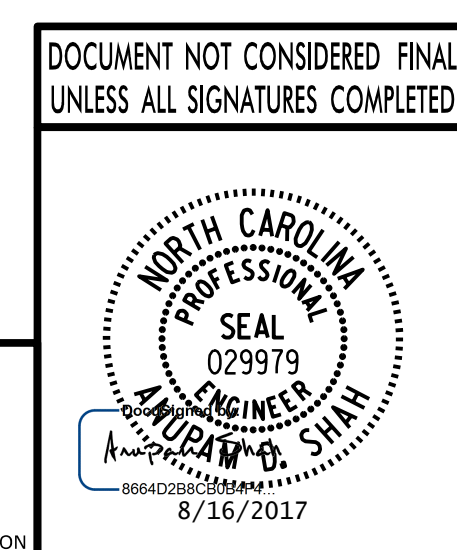
SHEET 3 OF 3

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**SUBSTRUCTURE  
 END BENT 1**

REVISIONS						SHEET No.
No.	BY:	DATE:	No.	BY:	DATE:	TOTAL SHEETS
1			3			24
2			4			

STR. #1



PLANS PREPARED BY:  
**PARSONS**  
 5540 CenterView Drive, Suite 217  
 Raleigh, NC 27606-3386  
 NC LICENSE No. F-0246

DRAWN BY :	K. E. LOFTON	DATE :	6-17
CHECKED BY :	D. PRETORIUS	DATE :	7-17
DESIGN ENGINEER :	A. D. SHAH	DATE :	8-17