

BILL OF MATERIAL

END BENT 2

BAR No.	SIZE	TYPE	LENGTH	WEIGHT
B1	#9	2	51'-0"	1,040
B2	#5	STR	48'-6"	202
B3	#4	STR	3'-8"	34
B4	#4	STR	25'-6"	136
B5	#5	STR	17'-6"	37
B6	#9	9	28'-1"	573
B7	#9	STR	22'-0"	449
B8	#9	9	22'-7"	461
B9	#4	STR	7'-0"	28
H1	#5	STR	7'-8"	64
H2	#5	7	8'-4"	104
H3	#5	STR	7'-10"	49
H4	#5	6	8'-6"	106
K1	#4	STR	25'-6"	273
S1	#5	4	4'-9"	30
S2	#5	8	10'-0"	31
S3	#5	4	4'-7"	201
S4	#5	8	9'-10"	133
S5	#5	8	10'-4"	129
S6	#5	8	10'-9"	191
S7	#5	8	10'-11"	34
S8	#4	1	7'-7"	81
U1	#4	5	9'-1"	24
U2	#4	3	4'-2"	111
U3	#4	3	6'-10"	27
V1	#5	STR	8'-10"	240
V2	#5	STR	6'-2"	515
V3	#5	STR	8'-1"	219

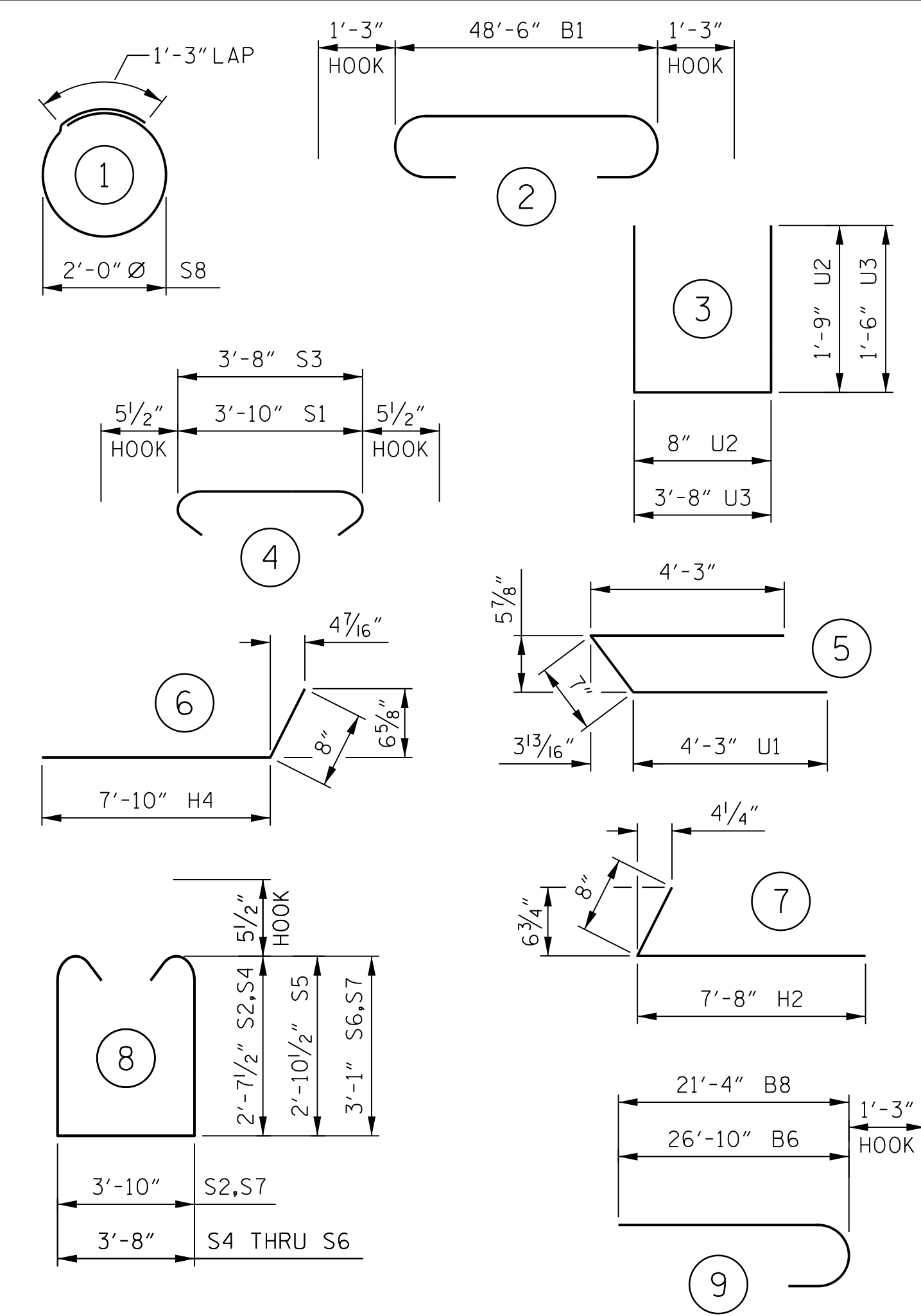
REINFORCING STEEL 5,522 LBS.

CLASS "A" CONCRETE
POUR 1 COLLARS, CAP AND LOWER WINGS 27.5 CU. YDS.
POUR 2 BACKWALL AND UPPER WINGS 11.1 CU. YDS.
TOTAL 38.6 CU. YDS.

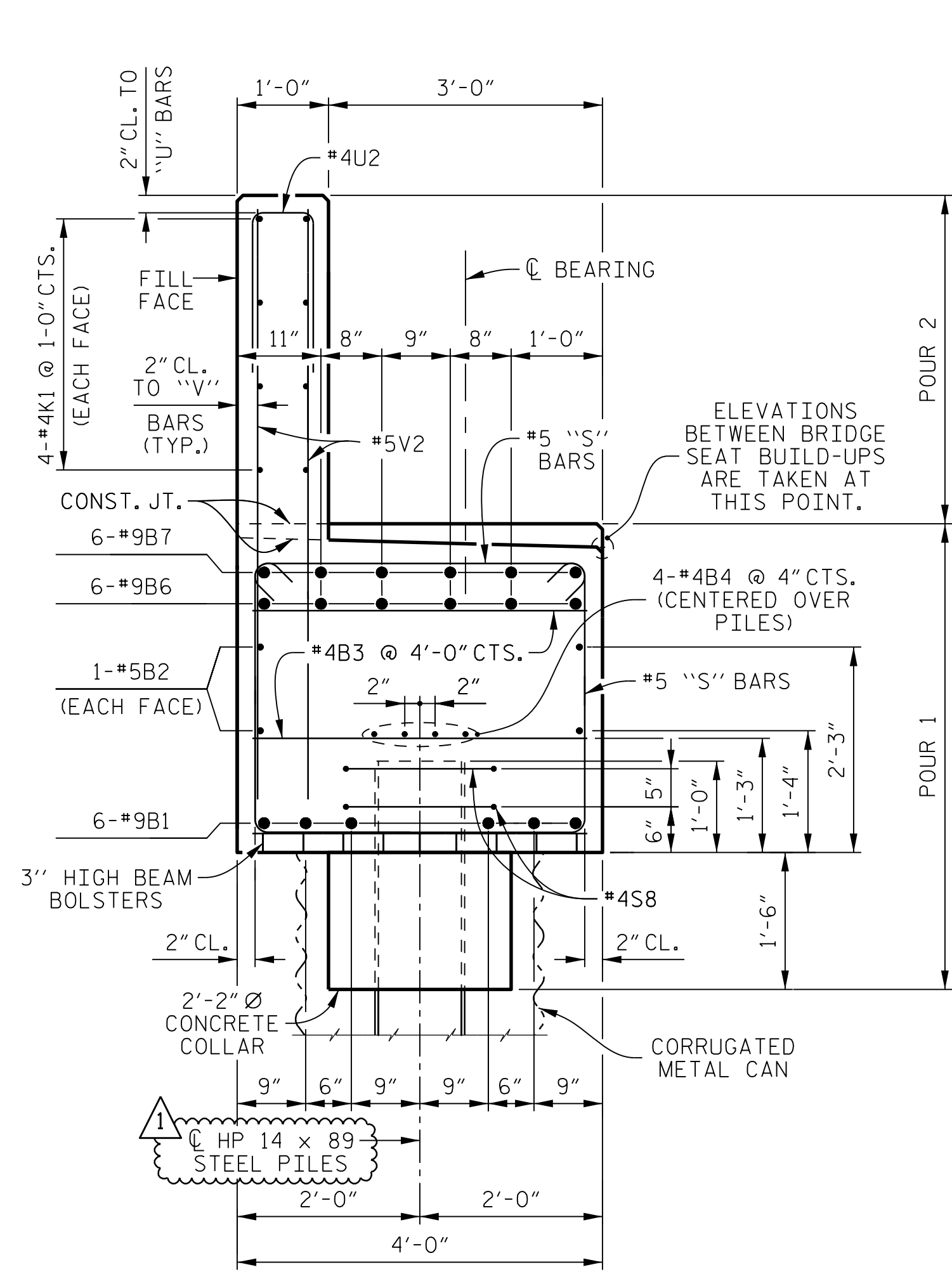
HP 14 x 89 STEEL PILES 8 REQUIRED 580.0 LIN. FT.

PILE DRIVING EQUIPMENT SETUP FOR HP 14 x 89 STEEL PILES 8 EACH

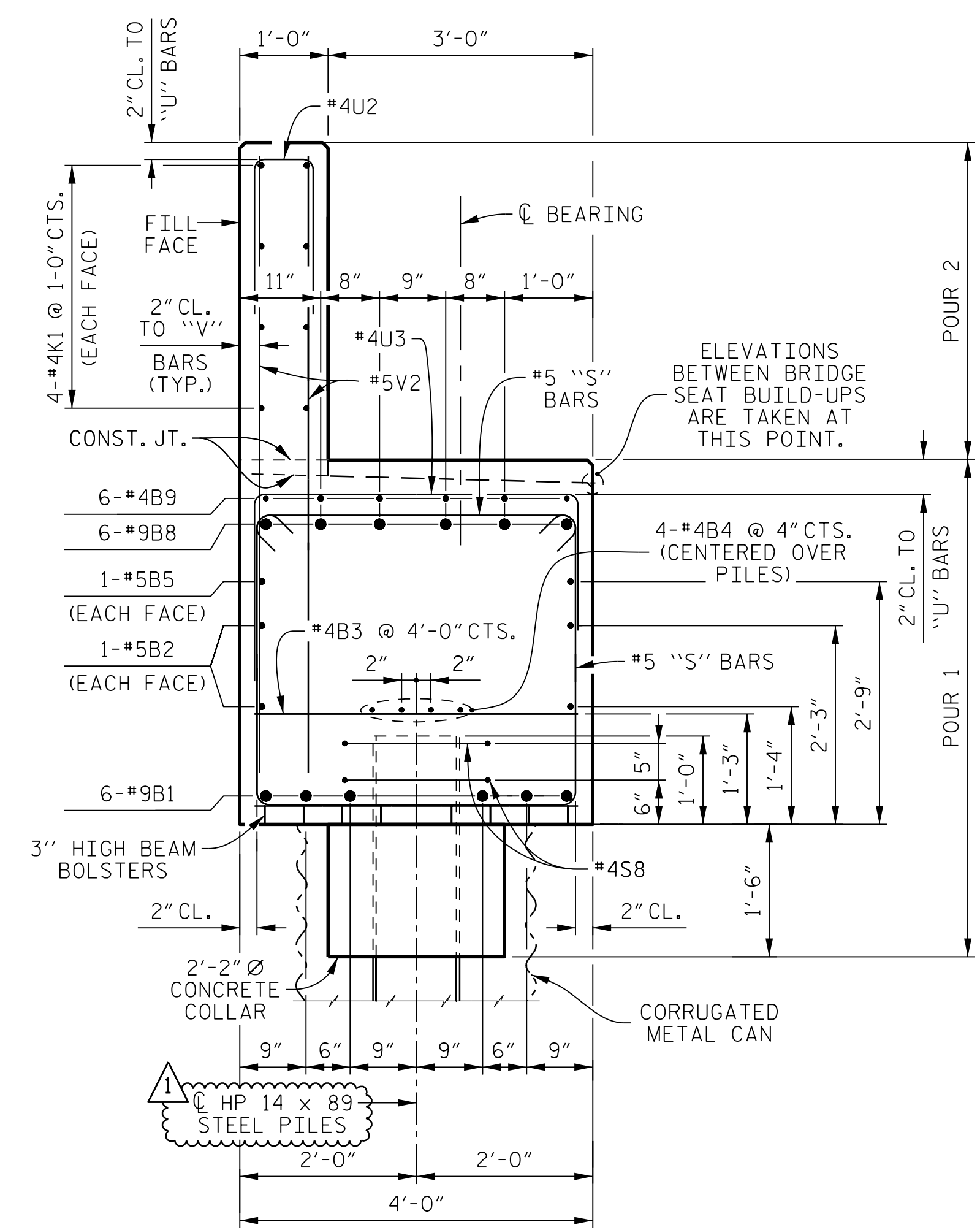
BAR TYPES



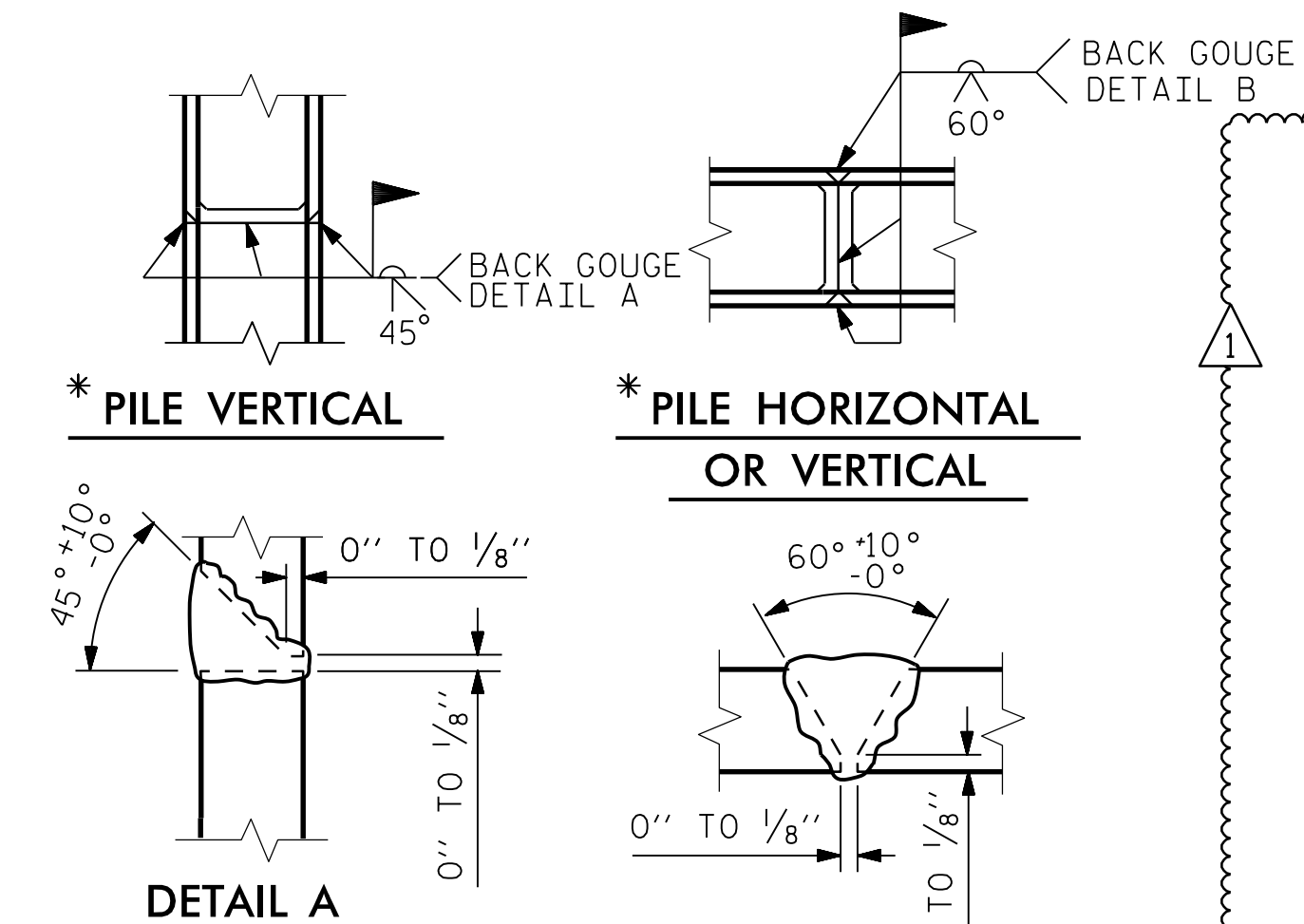
ALL BAR DIMENSIONS ARE OUT TO OUT.



SECTION A-A

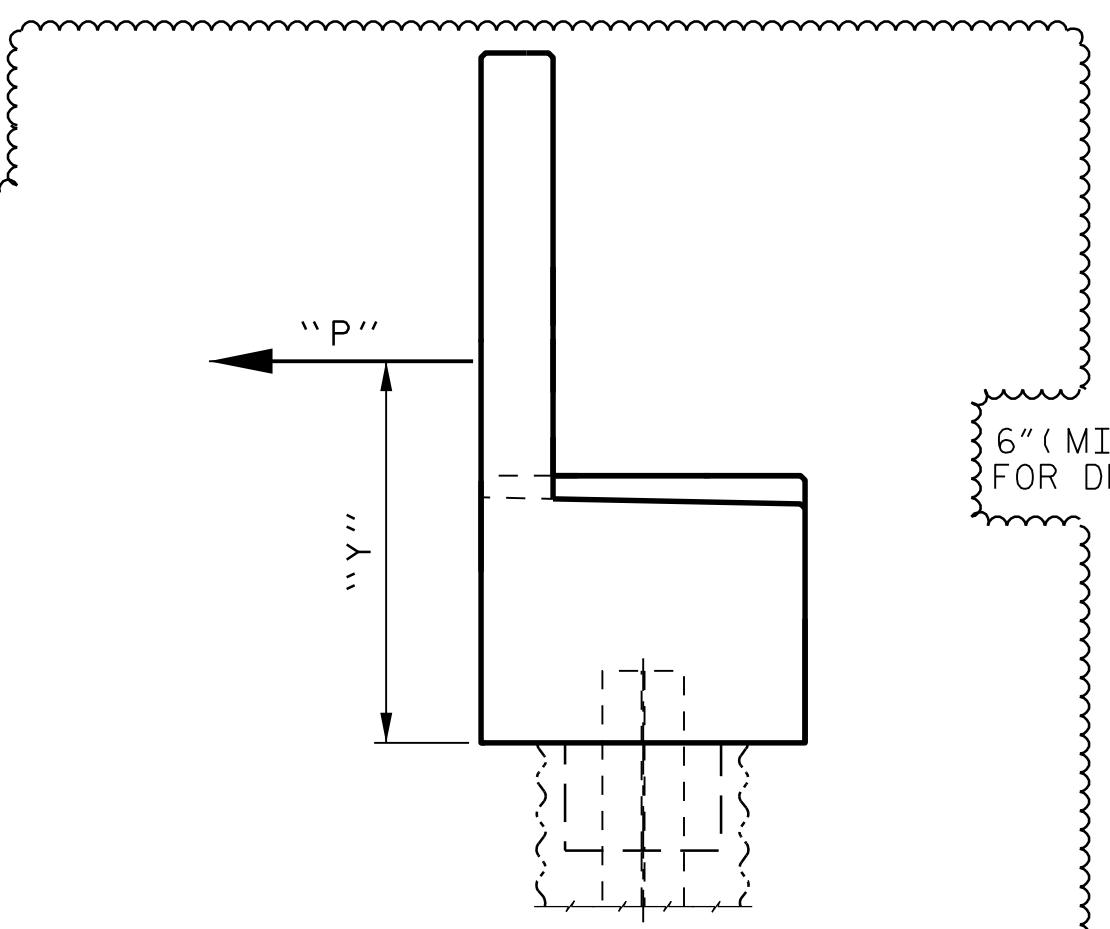


SECTION B-B



PILE SPlice DETAILS

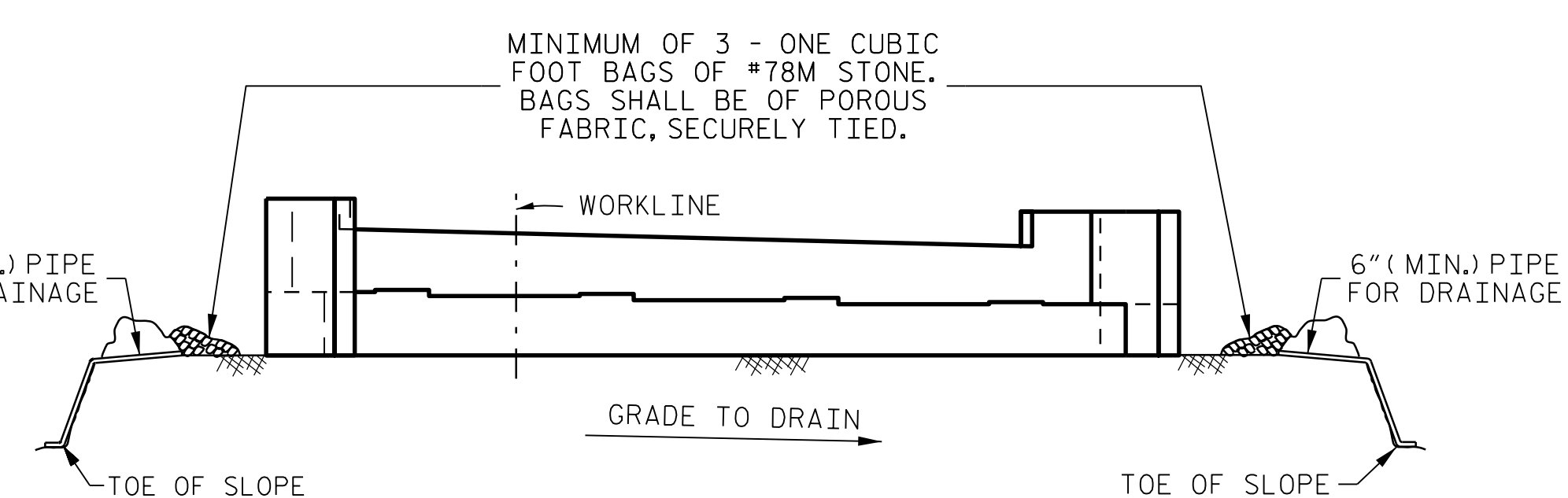
*POSITION OF PILE DURING WELDING.



END BENT TIEBACK FORCE

COMPONENT	"P" (K /FT.)	"Y" (FT.)
WIND ON STRUCTURE (WS)	0.11	3.625
WIND ON LIVE LOAD (WL)	0.05	3.625
BRAKING FORCE (BR)	0.42	3.625
THERMAL FORCE (TU)	0.14	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.



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 FOR THE SEVERAL PAY ITEMS.

TEMPORARY DRAINAGE AT END BENT

REVISIED PILE SIZE AND ADDED DETAIL.

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

PLANS PREPARED BY:
PARSONS
5540 Centerview Drive, Suite 217
Raleigh, NC 27606-3386
NC LICENSE No. F-0246
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 029979

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 2					
REVISIONS					
No.	BY:	DATE:	No.	BY:	DATE:
1	LOFTON	8-25-17	3		
2			4		

SHEET No. S1-20.1
TOTAL SHEETS 24
STR. #1