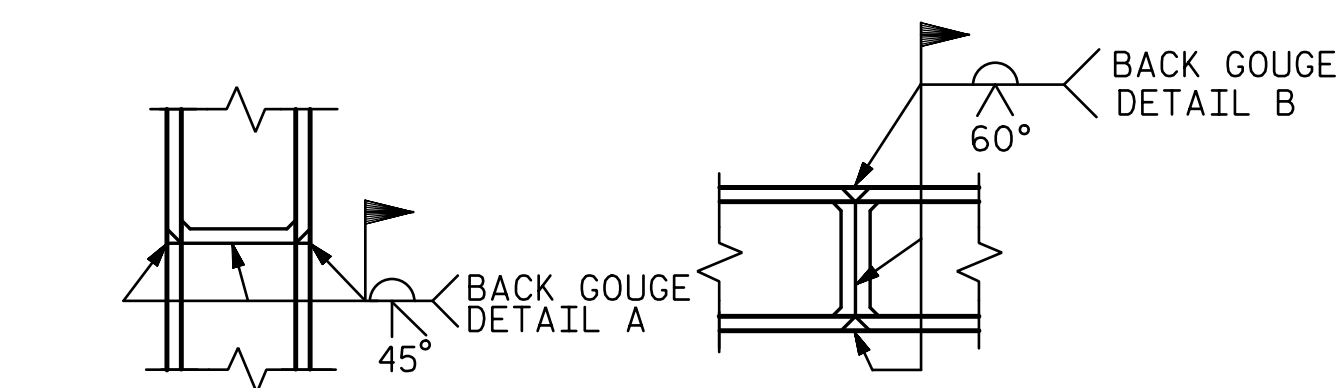


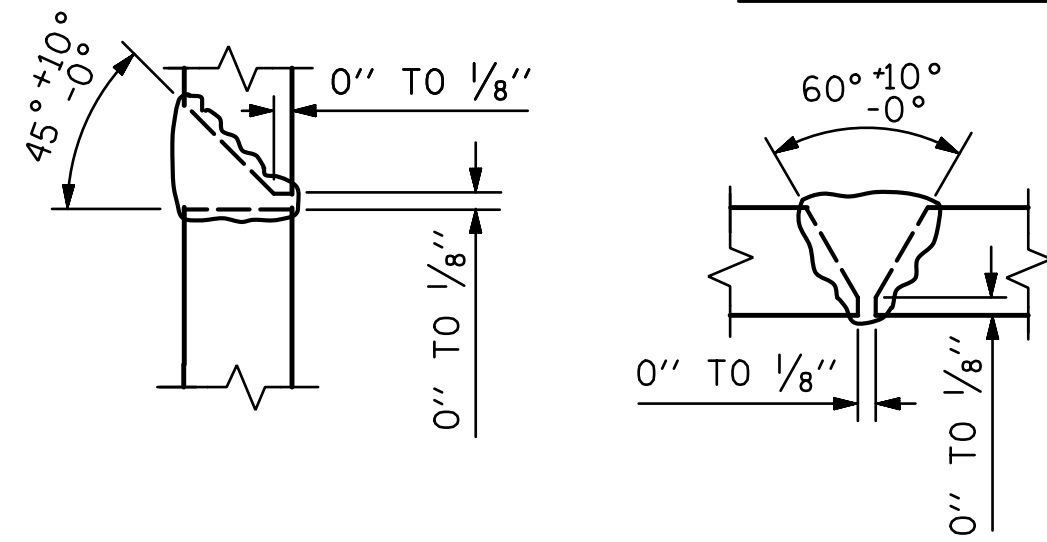
BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

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.

### TEMPORARY DRAINAGE AT END BENT



▲ PILE VERTICAL ▲ PILE HORIZONTAL OR VERTICAL

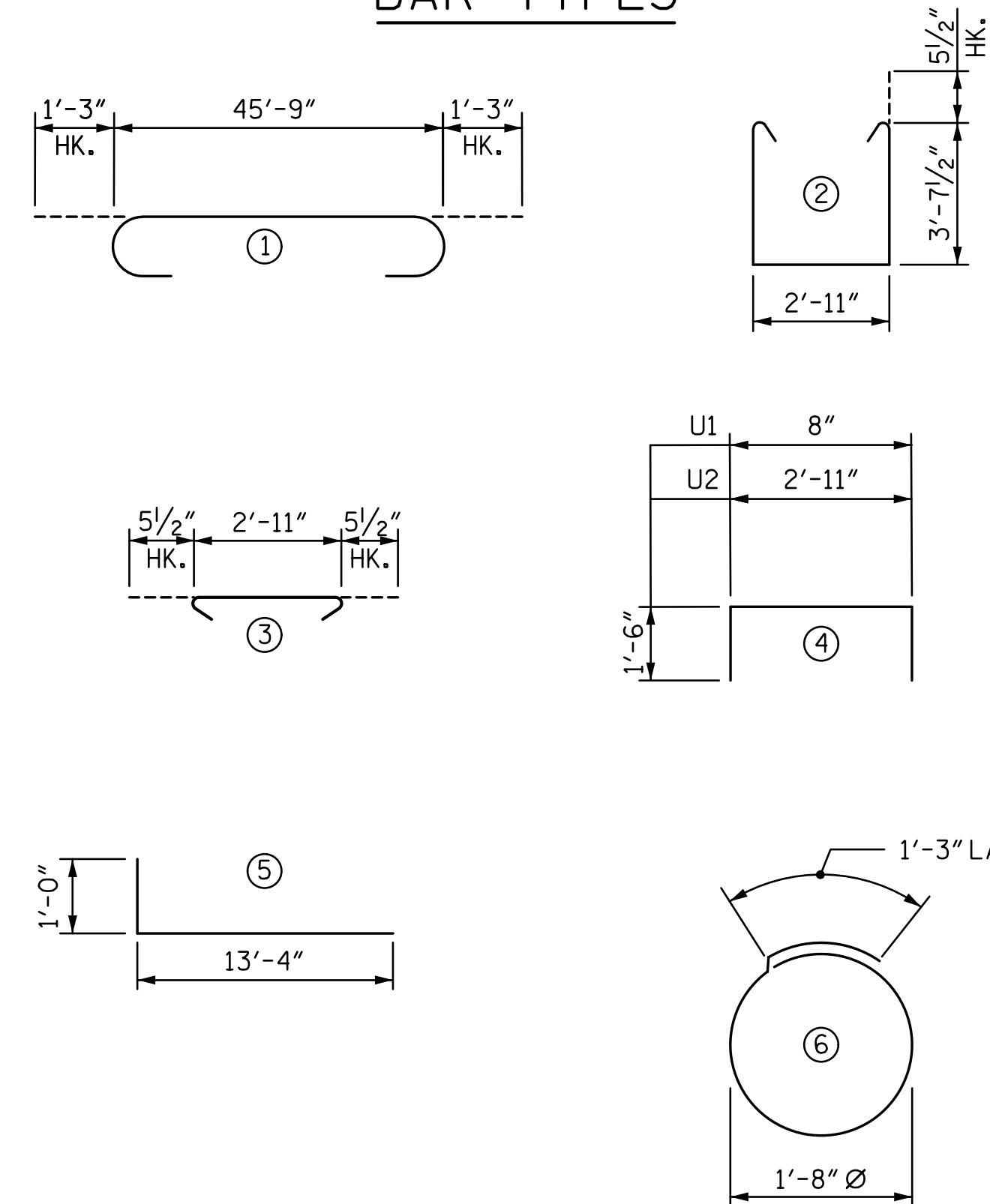


DETAIL A DETAIL B

▲ POSITION OF PILE DURING WELDING.

### PILE SPLICE DETAILS

### BAR TYPES



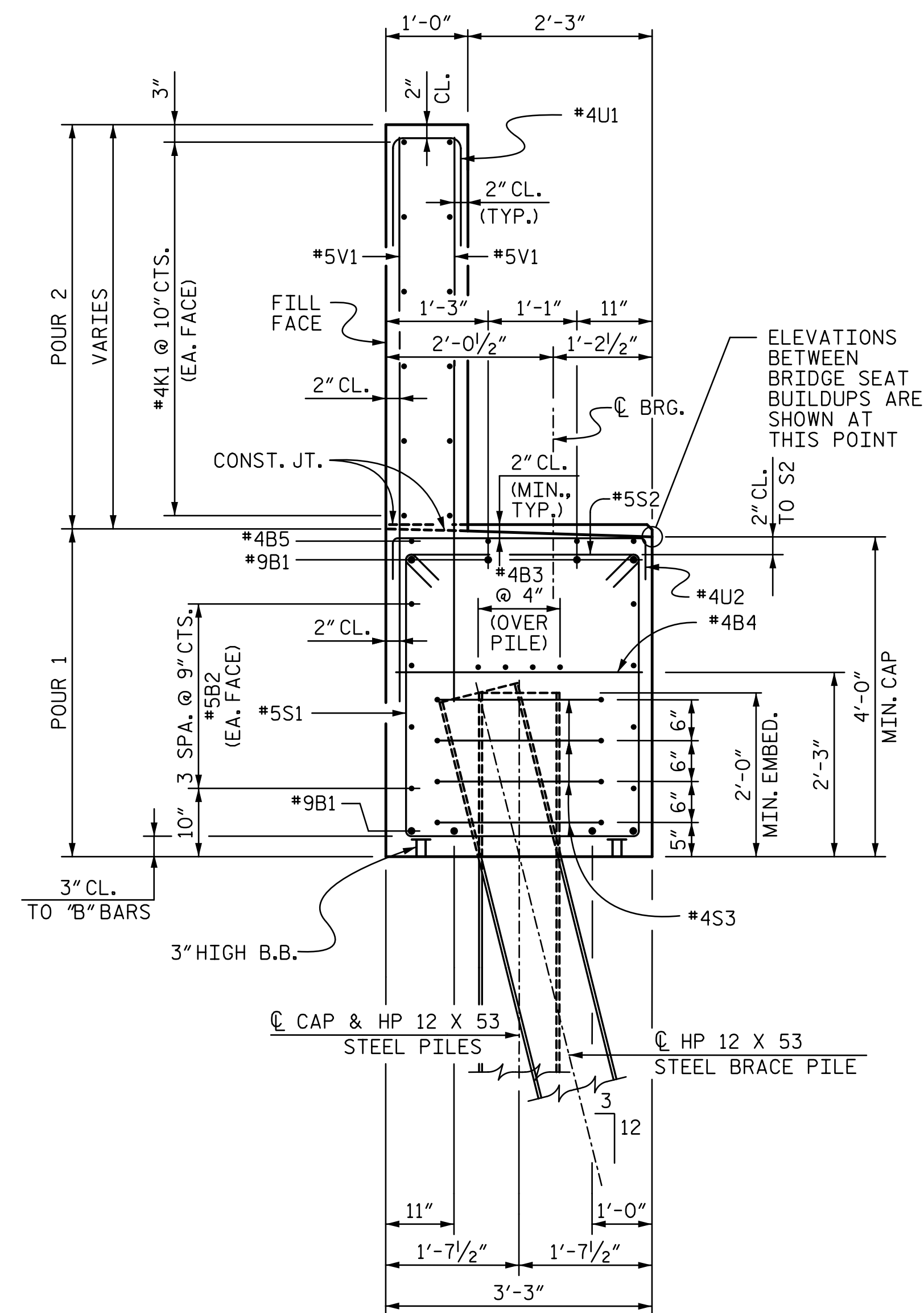
ALL BAR DIMENSIONS ARE OUT TO OUT.

### BILL OF REINFORCING (FOR ONE END BENT, 2 REQ'D.)

MARK	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	8	#9	①	48'-3"	1312
B2	8	#5	STR	45'-9"	382
B3	8	#4	STR	24'-1"	129
B4	12	#4	STR	2'-11"	23
B5	8	#4	STR	3'-3"	17
H1	84	#6	⑤	14'-4"	1,808
K1	24	#4	STR	24'-1"	386
K2	12	#5	STR	2'-7"	32
S1	54	#5	②	11'-1"	624
S2	54	#5	③	3'-10"	216
S3	28	#4	⑥	6'-6"	122
U1	40	#4	④	3'-8"	98
U2	28	#4	④	5'-11"	111
V1	80	#5	STR	6'-10"	570
V2	68	#5	STR	9'-11"	703

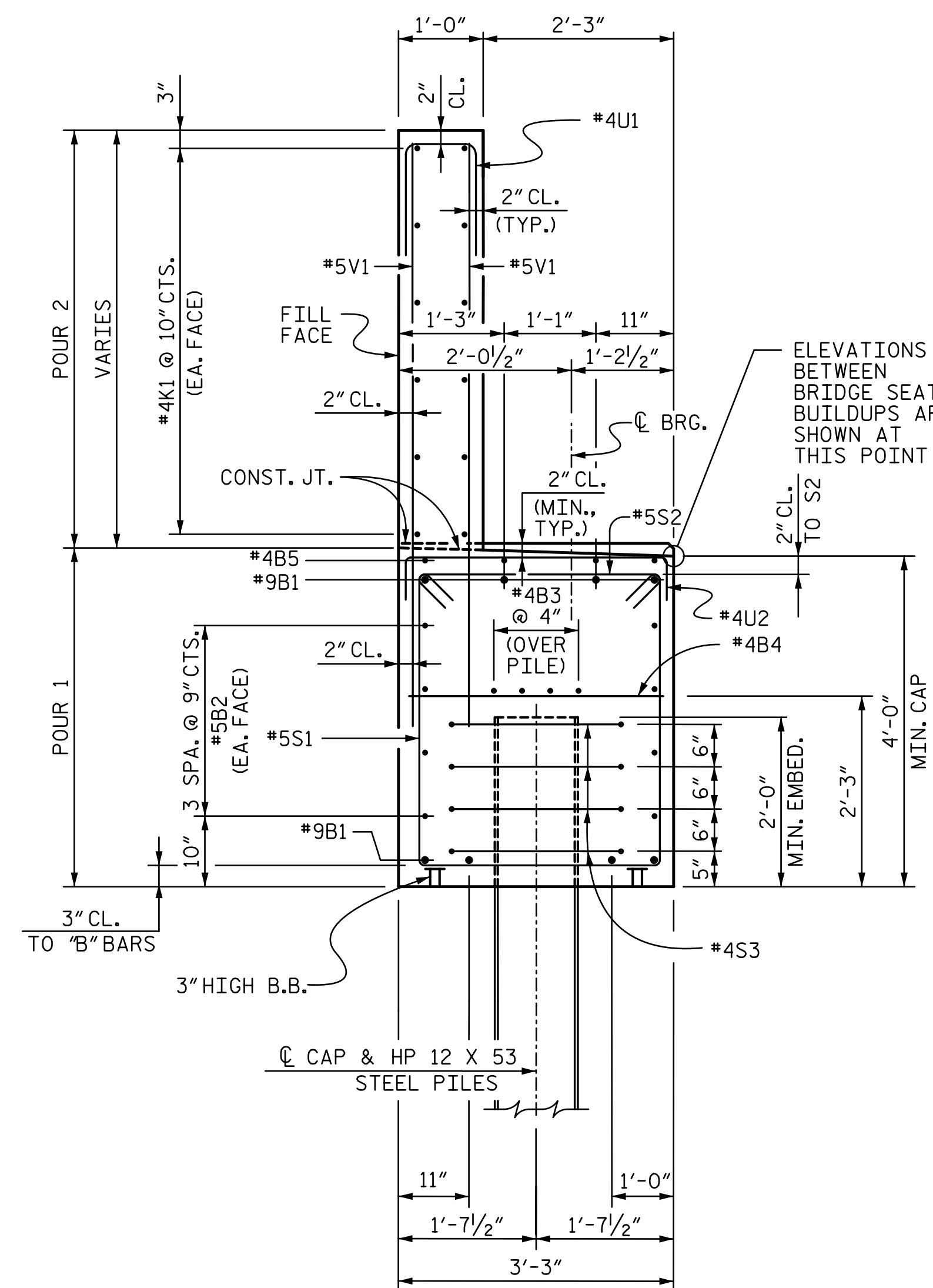
### QUANTITIES

	END BENT 1	END BENT 2
REINFORCING STEEL	LBS. 6,533	6,533
CLASS A CONCRETE		
POUR 1 (CAP, LOWER WING & COLLARS) :	CU. YARDS 28.0	28.0
POUR 2 (BACKWALL & UPPER WING) :	CU. YARDS 14.2	14.2
TOTAL :	CU. YARDS 42.2	42.2
HP 12 X 53 STEEL PILES	(NO.) 7	7
	LIN. FEET 195.0	105.0
PILE DRIVING EQUIPMENT SETUP FOR HP 12 X 53 PILES	EA. 7	7
PILE EXCAVATION IN SOIL	LIN. FEET 35	35
PILE EXCAVATION NOT IN SOIL	LIN. FEET 35	35



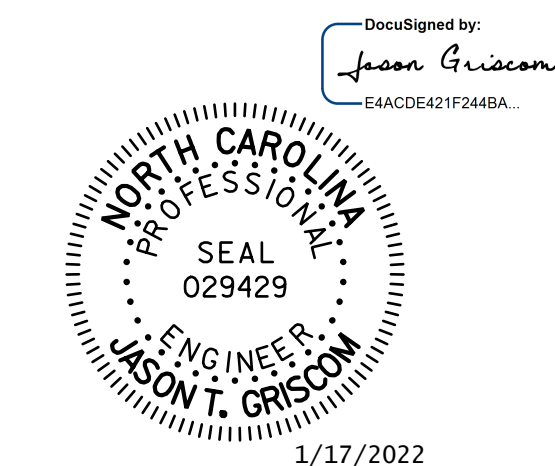
### SECTION A-A

END BENT 1  
ANCHOR BOLTS AND CONCRETE PILE COLLAR NOT SHOWN FOR CLARITY



### SECTION B-B

END BENT 2  
ANCHOR BOLTS AND CONCRETE PILE COLLAR NOT SHOWN FOR CLARITY



STV ENGINEERS, INC.  
100 900 West Trade St., Suite 715  
Charlotte, NC 28202  
NC License Number F-0991

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT NO. B-5810  
CABARRUS COUNTY  
STATION: 23+17.00 -L-  
SHEET 4 OF 4

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

## END BENT DETAILS

REVISIONS				SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

S-30  
TOTAL SHEETS 36

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ASSEMBLED BY : LGH DATE : 6-19  
CHECKED BY : MLO DATE : 12-19  
DESIGN ENGINEER OF RECORD : J. GRISCOM DATE : 1-22