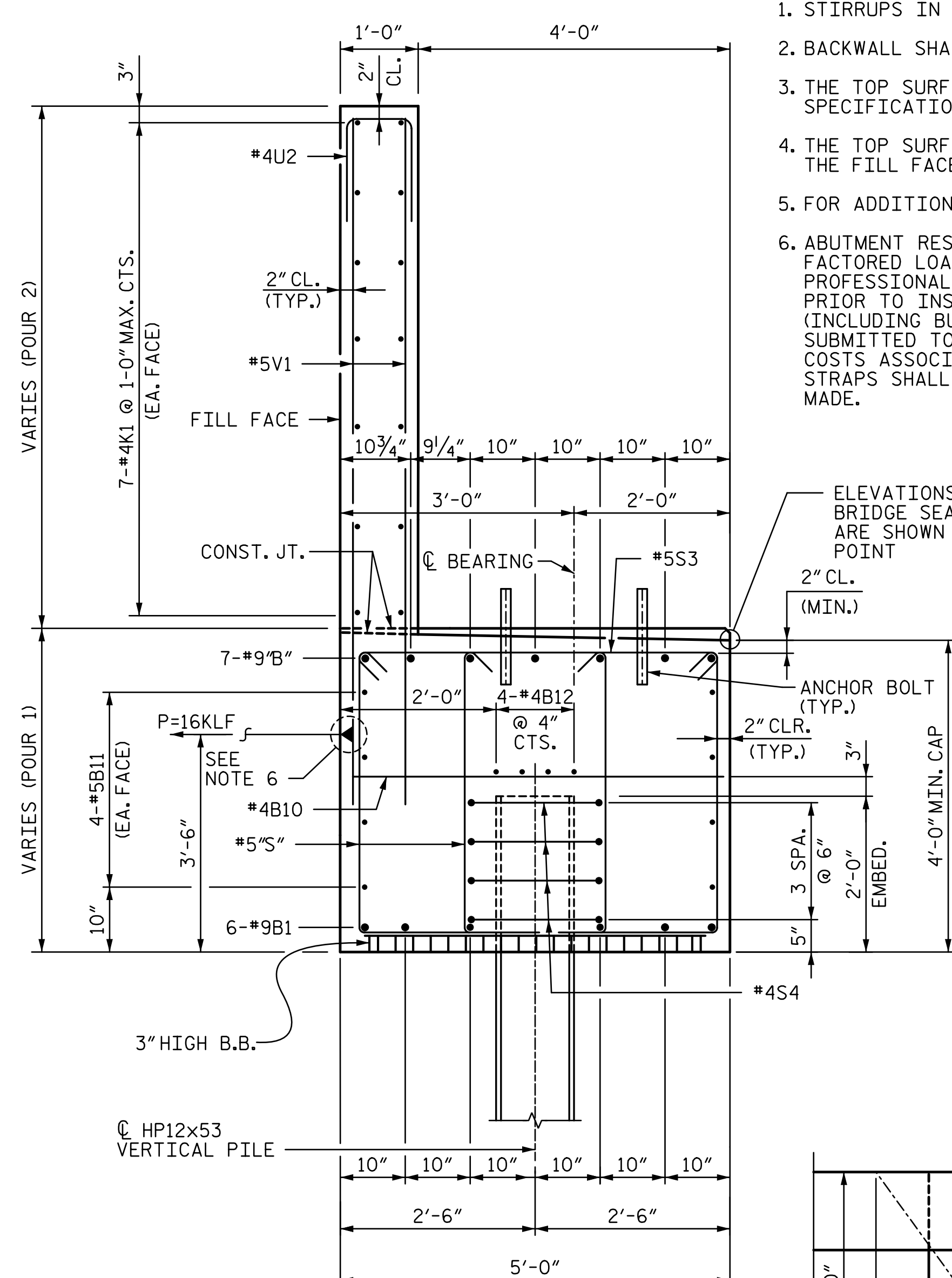
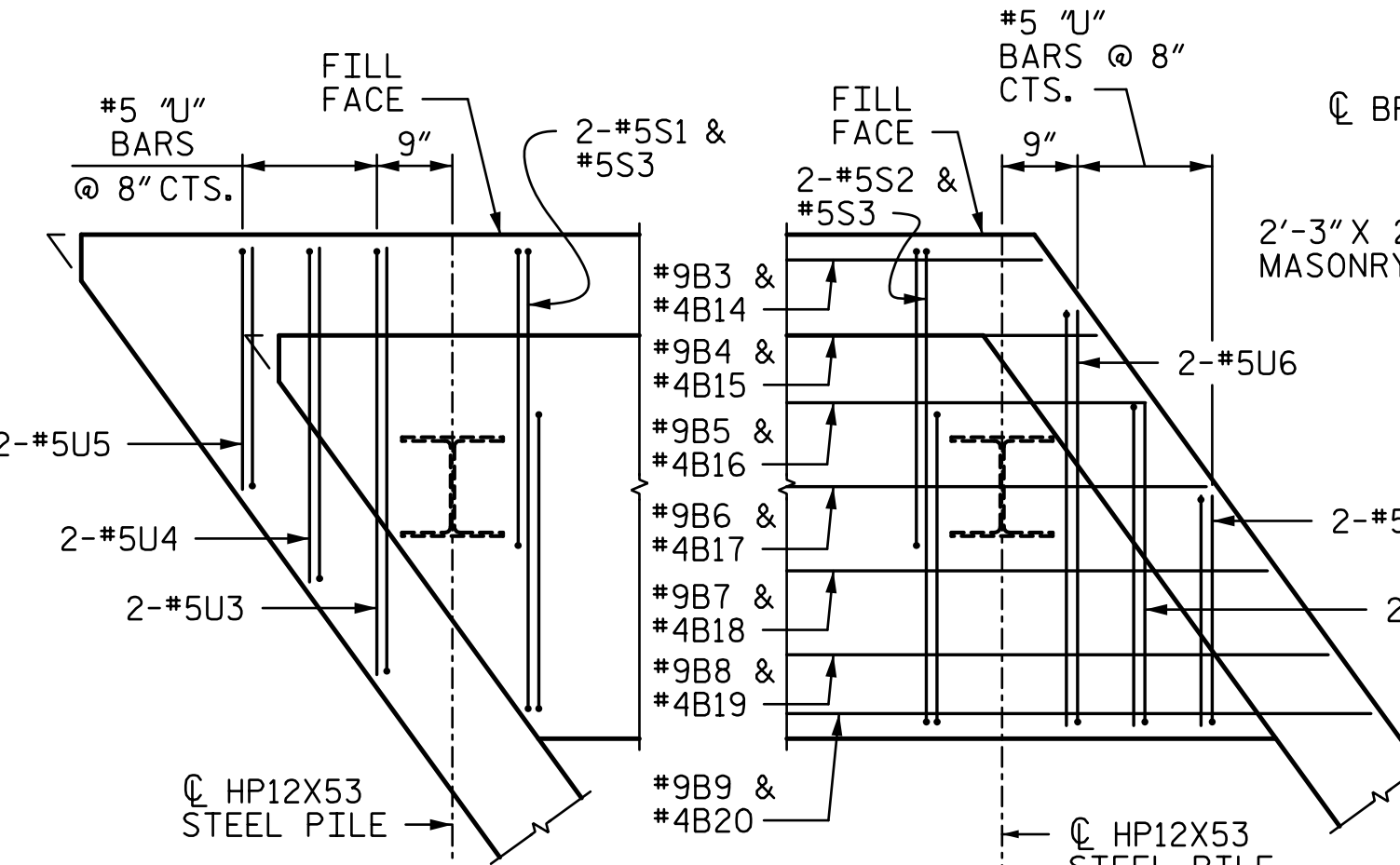


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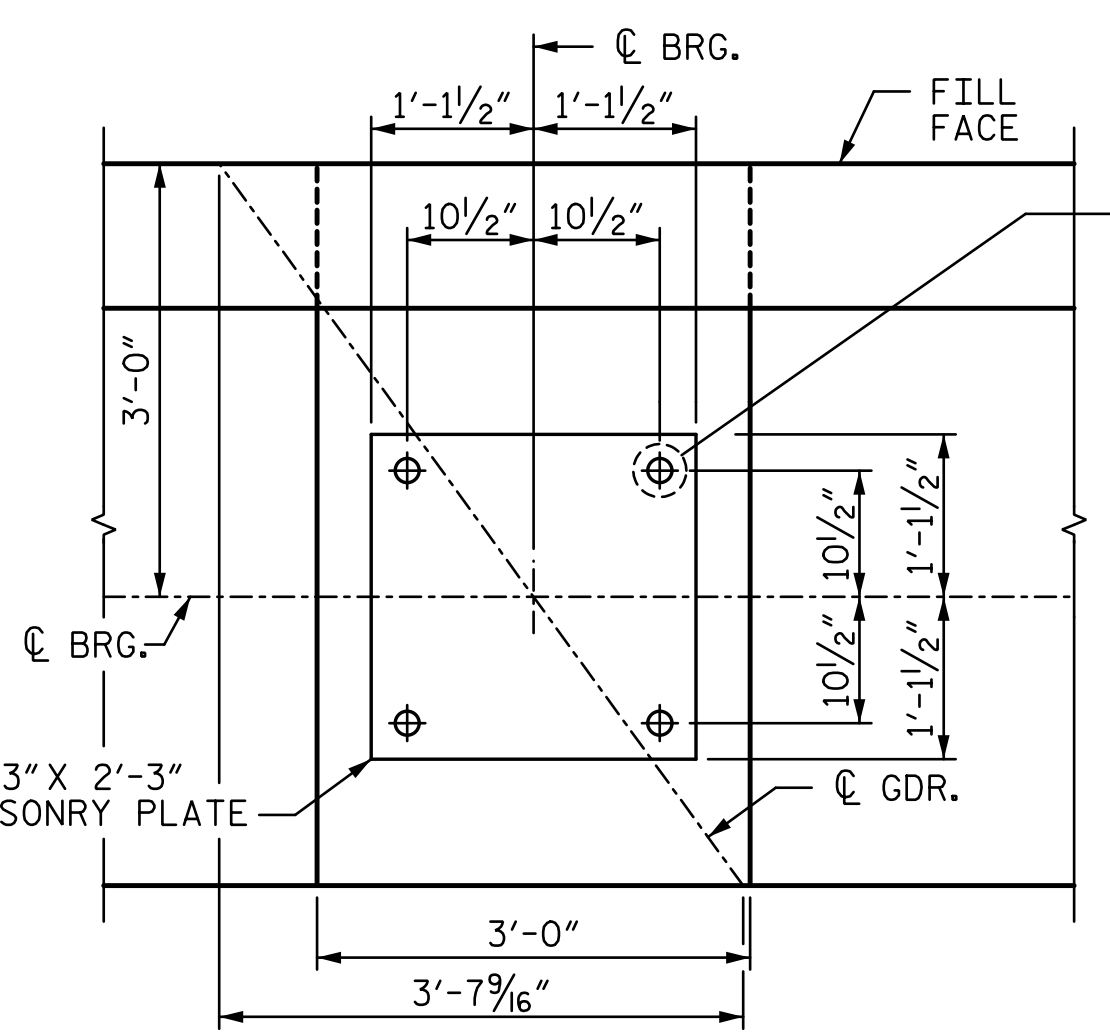


**SECTION A-A**

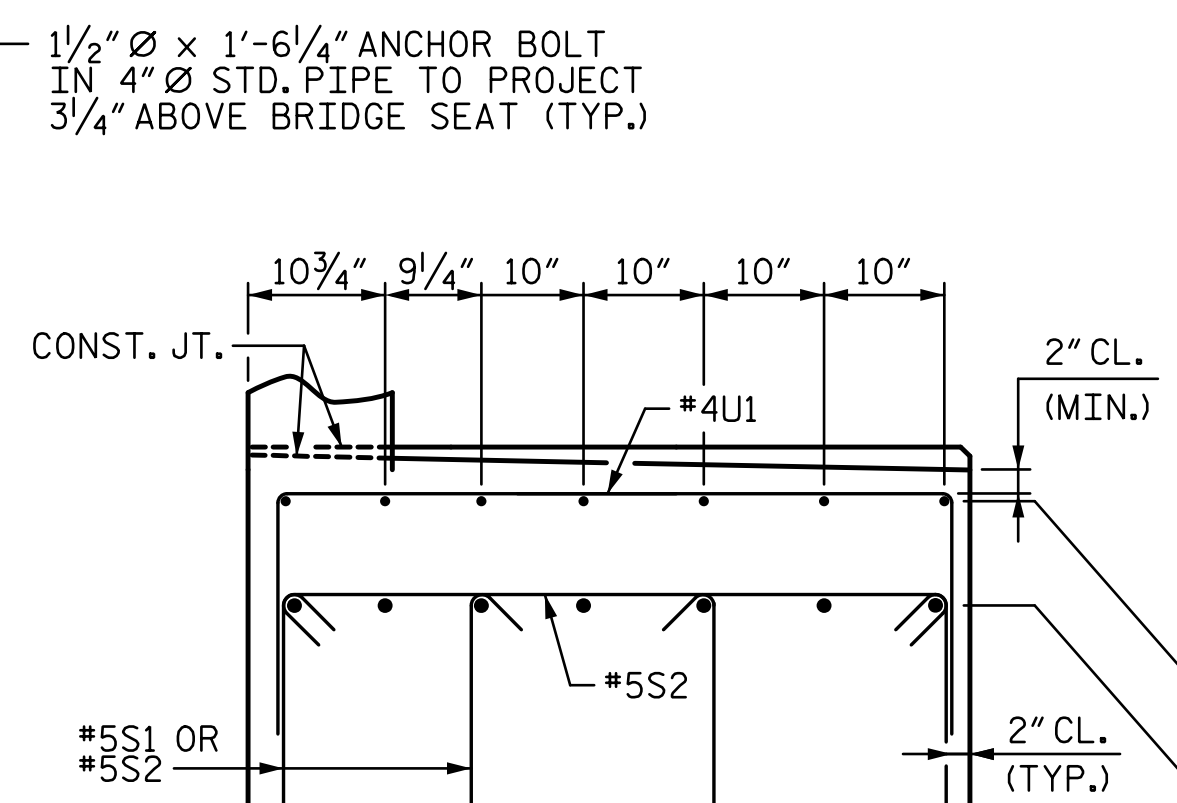


**DETAIL "B"**  
(B" BARS, V" BARS, & END REINFORCEMENT NOT SHOWN FOR CLARITY)

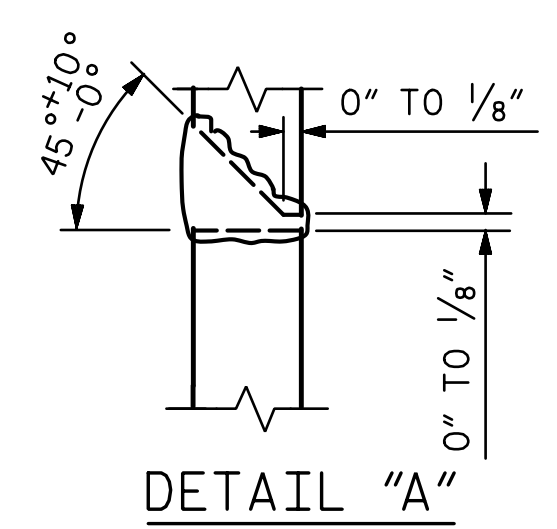
**DETAIL "C"**  
(BOT. B" BARS, V" BARS, & END REINFORCEMENT NOT SHOWN FOR CLARITY)



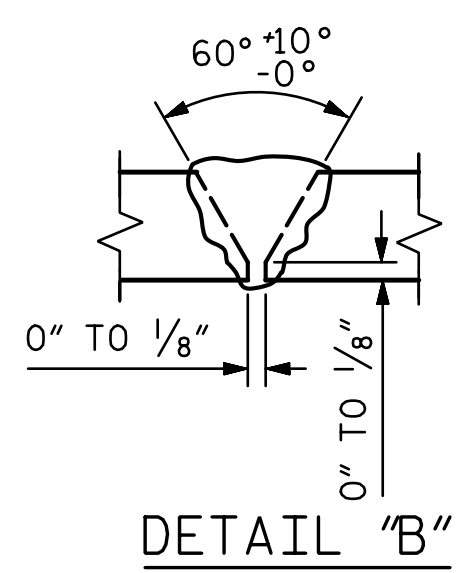
**DETAIL "A"**



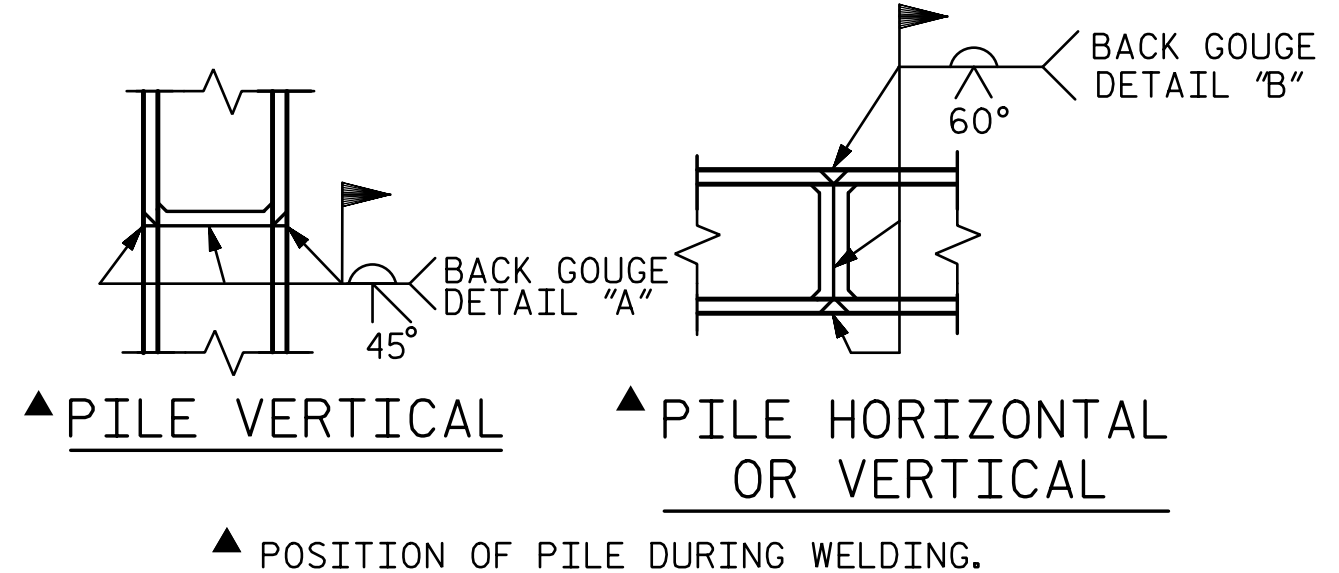
**PARTIAL SECTION B-B**  
(ANCHOR BOLTS NOT SHOWN FOR CLARITY)



**DETAIL "A"**



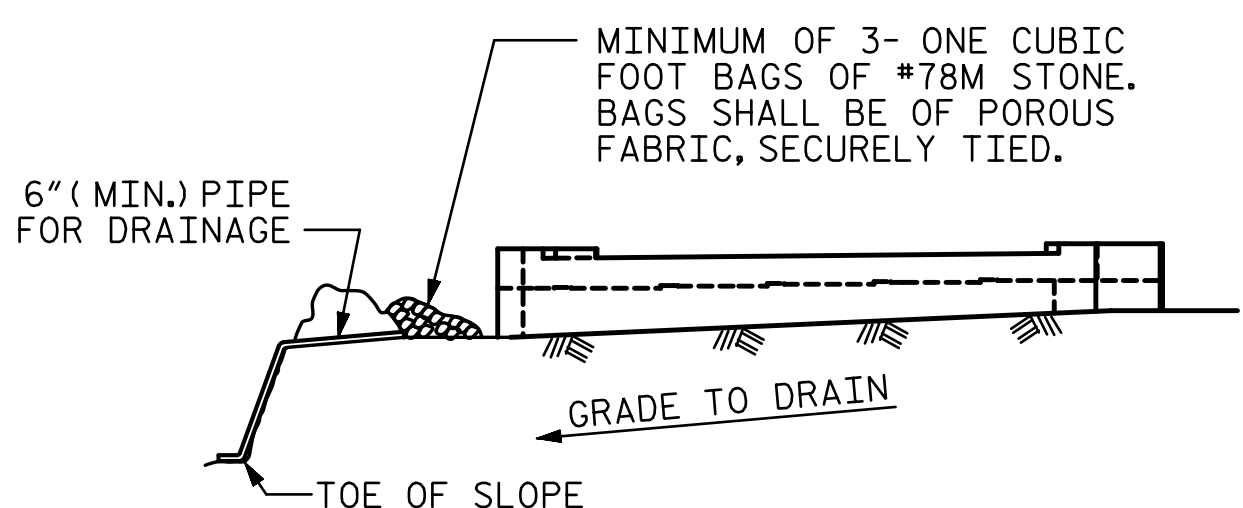
**DETAIL "B"**



**PILE SPLICE DETAILS**

**NOTES:**

1. STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR ANCHOR BOLTS AND PIPE INSERTS.
2. BACKWALL SHALL BE PLACED BEFORE APPLYING THE EPOXY PROTECTIVE COATING.
3. THE TOP SURFACE AREAS OF THE END BENT CAP SHALL BE CURED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS EXCEPT THAT THE MEMBRANE CURING COMPOUND SHALL NOT BE USED.
4. THE TOP SURFACE OF THE CAP EXCEPT THE BRIDGE SEAT BUILDUPS SHALL BE SLOPED TRANSVERSELY FROM THE FILL FACE TO THE OUTSIDE FACE AT THE RATE OF 2%.
5. FOR ADDITIONAL NOTES, SEE "FOUNDATION LAYOUT" SHEET.
6. ABUTMENT RESTRAINTS (STRAPS) ARE REQUIRED ALONG THE CAP AS SHOWN. THE 16KLF LOAD PROVIDED IS A FACTORED LOAD. THE SPACING AND LENGTH OF STRAPS SHALL BE DETERMINED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN NORTH CAROLINA AND SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO INSTALLATION. ANY ADDITIONAL CONSTRUCTION LOADS THAT WILL APPLY TO THE STRAPS (INCLUDING BUT NOT LIMITED TO CRANE LOADS) SHALL BE INCLUDED IN THE STRAP DESIGN AND SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO PLACING CONSTRUCTION LOADS ON THE APPROACH FILL. ALL COSTS ASSOCIATED WITH THE DESIGN AND INSTALLATION, INCLUDING LABOR AND INCIDENTALS, OF THE STRAPS SHALL BE INCLUDED IN THE VARIOUS CONTRACT BID ITEMS. NO ADDITIONAL PAYMENT WILL BE MADE.



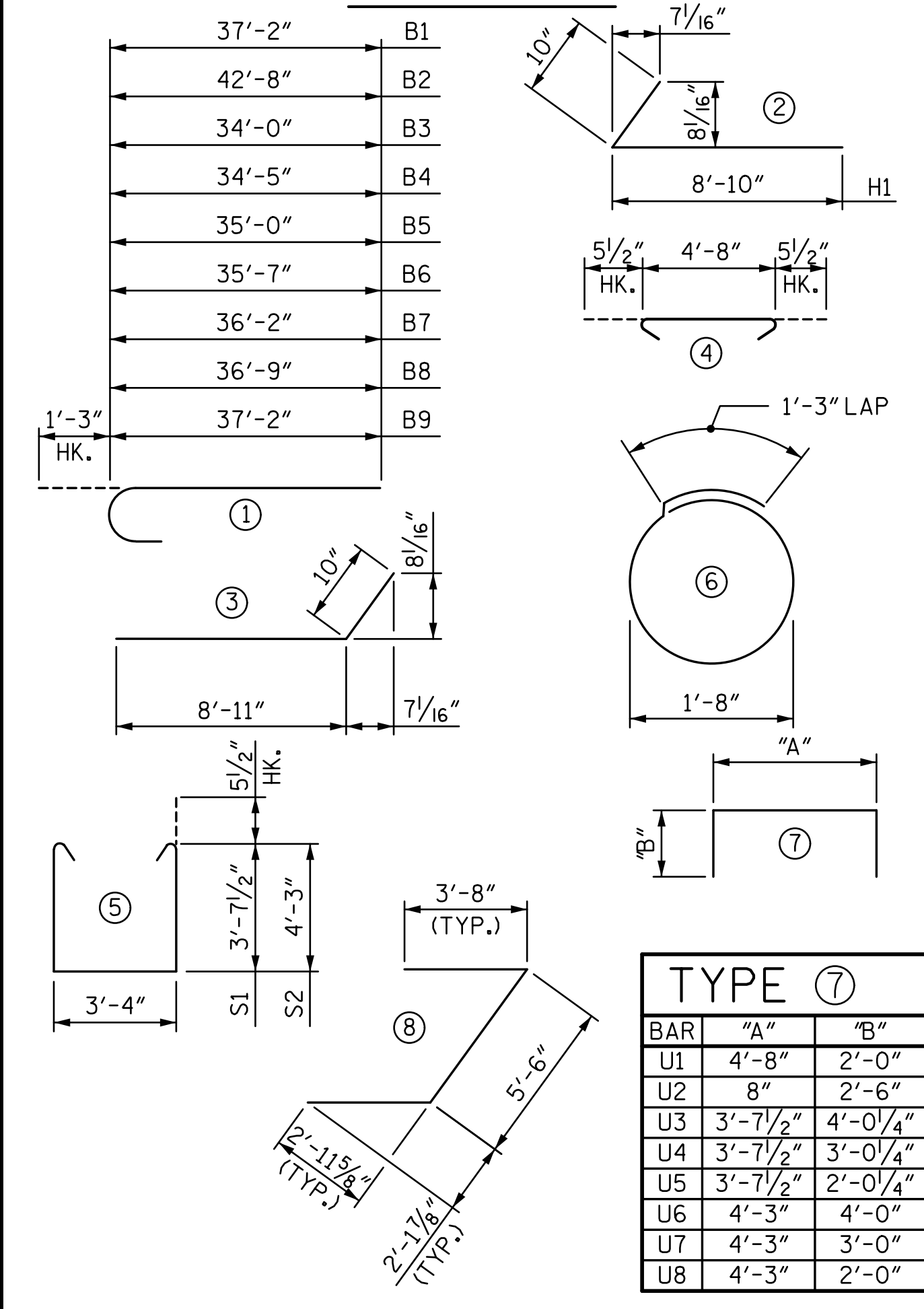
BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

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**

**BAR TYPES**



TYPE ⑦	
BAR	"A" "B"
U1	4'-8" 2'-0"
U2	8" 2'-6"
U3	3'-7 1/2" 4'-0 1/4"
U4	3'-7 1/2" 3'-0 1/4"
U5	3'-7 1/2" 2'-0 1/4"
U6	4'-3" 4'-0"
U7	4'-3" 3'-0"
U8	4'-3" 2'-0"

ALL BAR DIMENSIONS ARE OUT TO OUT.

**QUANTITIES**

		END BENT 2
REINFORCING STEEL	LBS.	10,382
CLASS A CONCRETE		
POUR 1 (CAP & LOWER WING)	: CU. YARDS	59.4
POUR 2 (BACKWALL & UPPER WING)	: CU. YARDS	23.7
TOTAL	: CU. YARDS	83.1
HP12x53 STEEL PILES	NO.	13
	LIN. FEET	555
STEEL PILE POINTS	NO.	13
PILE DRIVING EQUIP. SETUP FOR HP 12x53 STEEL PILES	EA.	13

**BILL OF REINFORCING**

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	12	#9	①	38'-5"	1,567
B2	7	#9	①	43'-11"	1,045
B3	1	#9	①	35'-3"	120
B4	1	#9	①	35'-8"	121
B5	1	#9	①	36'-3"	123
B6	1	#9	①	36'-10"	125
B7	1	#9	①	37'-5"	127
B8	1	#9	①	38'-0"	129
B9	1	#9	①	38'-5"	131
B10	17	#4	STR	4'-8"	53
B11	16	#5	STR	35'-6"	592
B12	12	#4	STR	24'-4"	195
B13	14	#4	STR	12'-10"	120
B14	1	#4	STR	8'-0"	5
B15	1	#4	STR	8'-5"	6
B16	1	#4	STR	9'-1"	6
B17	1	#4	STR	9'-8"	6
B18	1	#4	STR	10'-3"	7
B19	1	#4	STR	10'-10"	7
B20	1	#4	STR	11'-3"	8
H1	28	#5	②	9'-8"	282
H2	30	#5	③	9'-9"	305
K1	42	#4	STR	24'-4"	683
K2	4	#4	STR	3'-0"	8
K3	4	#4	STR	3'-3"	9
S1	60	#5	⑤	11'-6"	720
S2	60	#5	⑤	12'-9"	798
S3	60	#5	④	5'-7"	349
S4	52	#4	⑥	6'-6"	226
U1	23	#4	⑦	8'-8"	133
U2	62	#4	⑦	5'-8"	235
U3	2	#5	⑦	11'-8"	24
U4	2	#5	⑦	9'-8"	20
U5	2	#5	⑦	7'-8"	16
U6	2	#5	⑦	12'-3"	26
U7	2	#5	⑦	10'-3"	21
U8	2	#5	⑦	8'-3"	17
U9	2	#9	⑧	12'-10"	87
V1	124	#5	STR	10'-0"	1,293
V2	25	#5	STR	11'-5"	298
V3	25	#5	STR	13'-0"	339

PROJECT NO. R-2707C  
CLEVELAND COUNTY  
 STATION: 596+50.98 -L-  
 SHEET 3 OF 3



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**SUBSTRUCTURE**  
**END BENT 2**  
 (SITE 6L)

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SHEET NO. **S7-53**  
TOTAL SHEETS **56**

DRAWN BY: MBC DATE: 10-16 DESIGN ENGINEER OF RECORD: V. WU DATE: 10-16  
 CHECKED BY: TJT DATE: 10-16