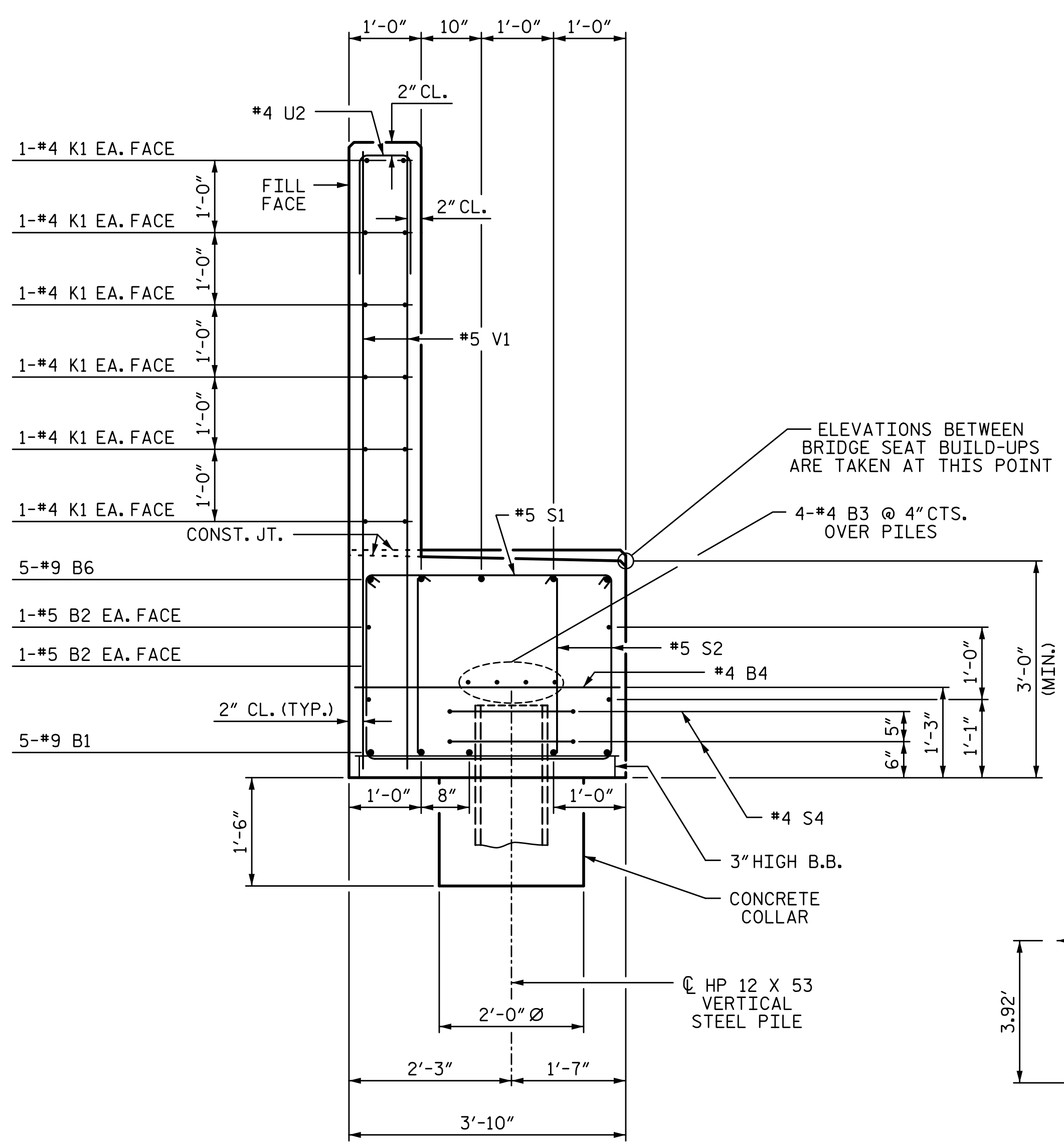
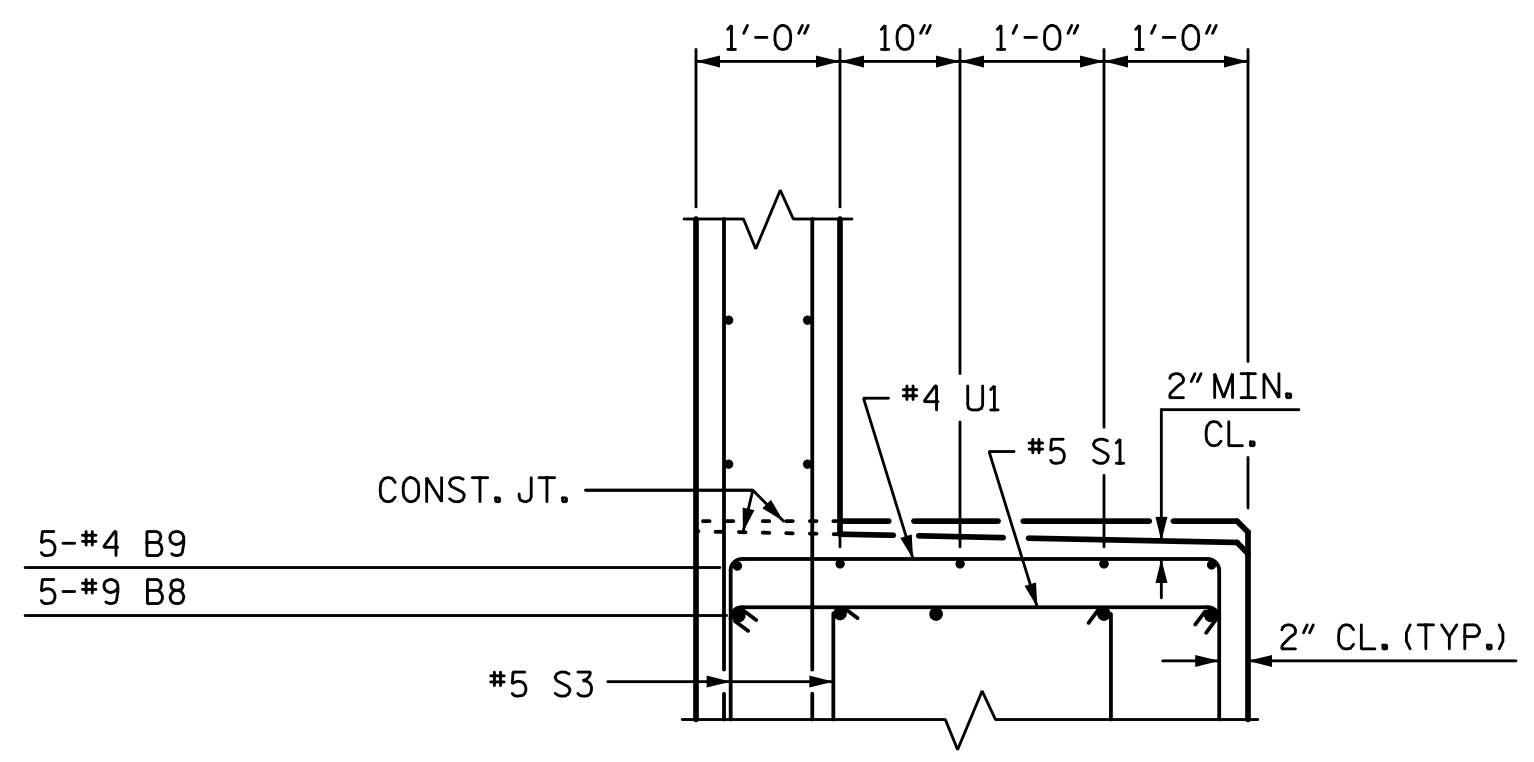


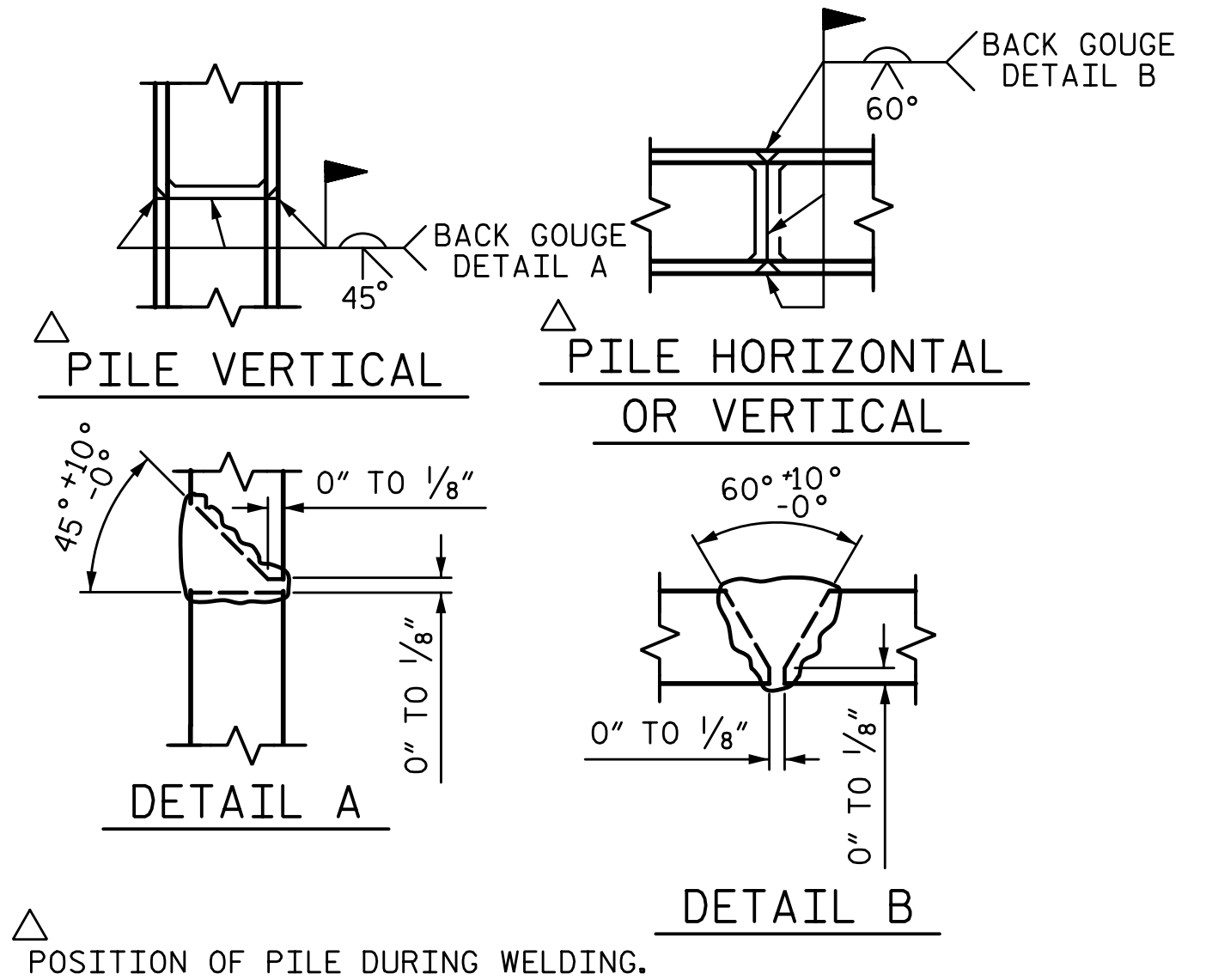
3/22/2017 8:32:04 AM G:\Projects\2014\U-3109A\Structures\Site 2\Site 2-Str 3 Bridge 435 (NBL)\Drawings\Final\403\_U3109A\_smu\_eb1.dgn



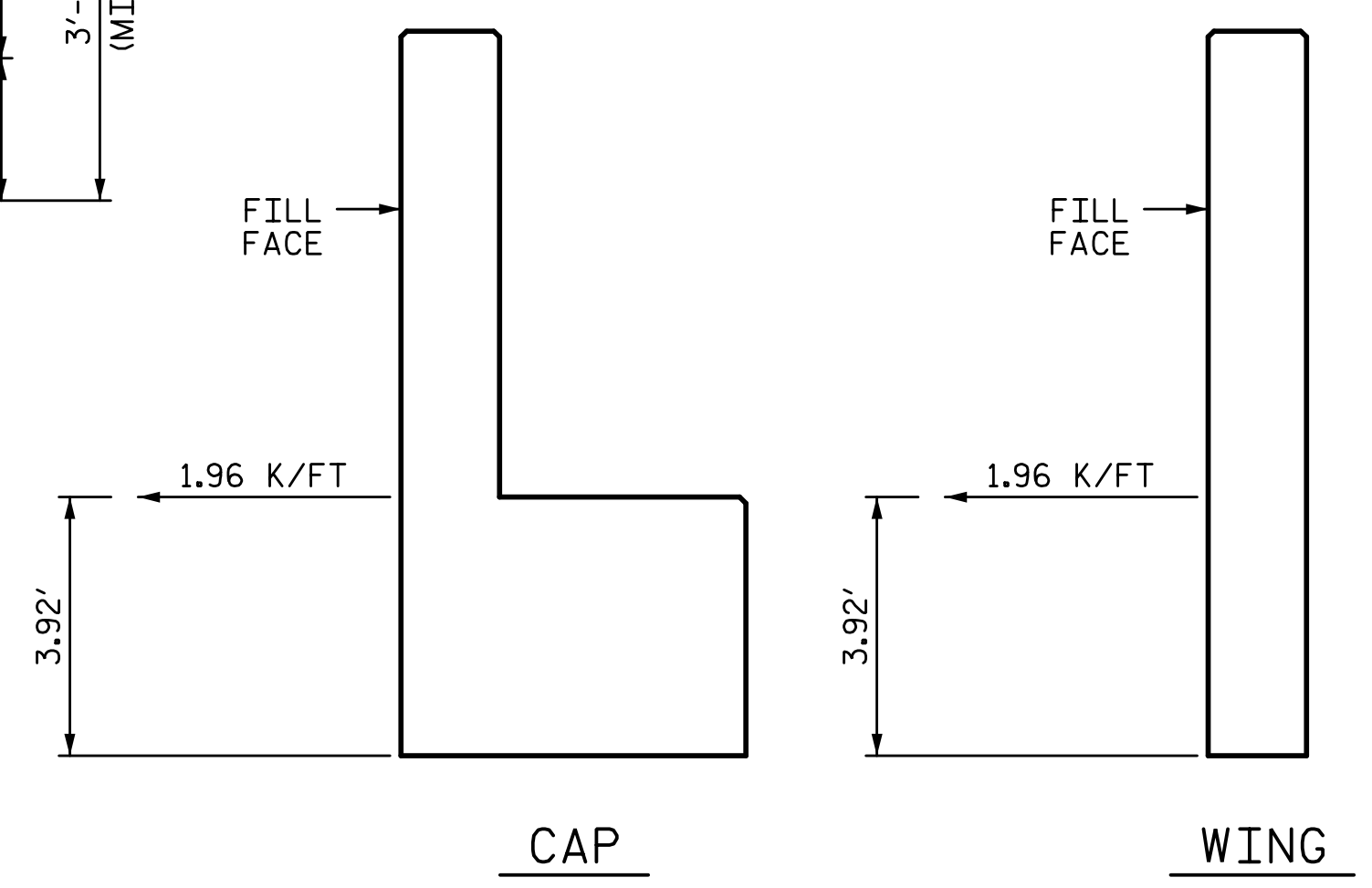
**SECTION A-A**  
(TIEBACK NOT SHOWN FOR CLARITY)



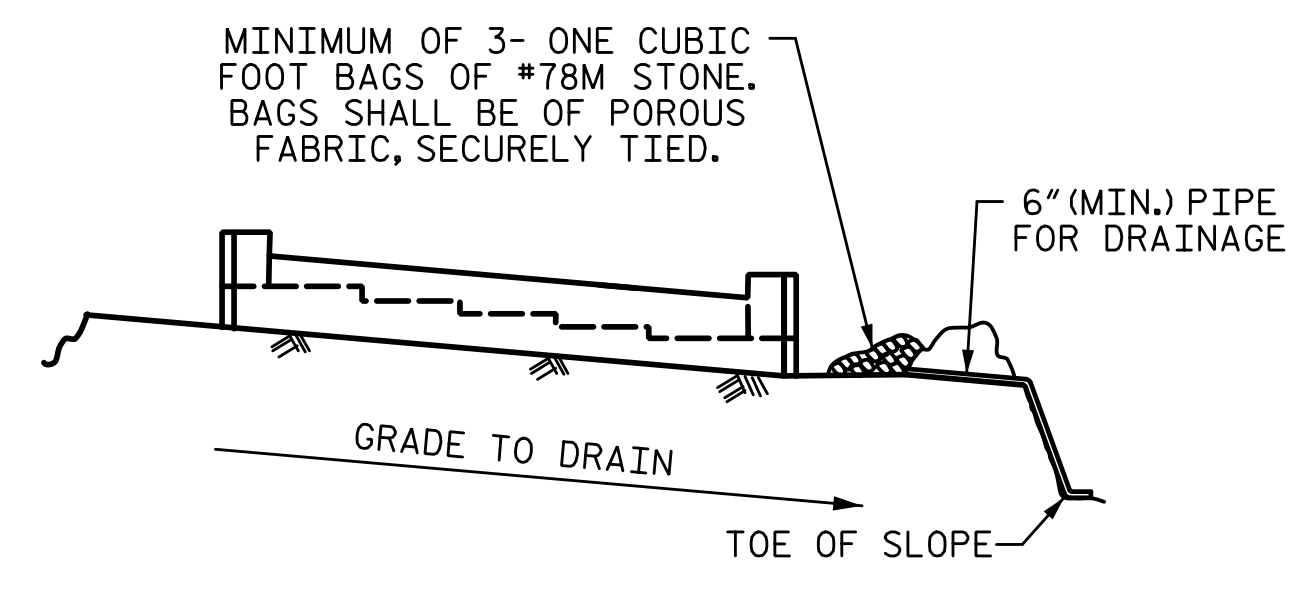
**SECTION B-B**



**PILE SPLICE DETAILS**



**TIEBACK DETAILS**



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 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**

**BILL OF MATERIAL**

END BENT 1					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	5	9	1	45'-8"	776
B2	4	5	STR	43'-4"	181
B3	8	4	STR	22'-11"	122
B4	14	4	STR	3'-6"	33
B5	2	5	STR	7'-0"	15
B6	5	9	2	40'-7"	690
B7	5	4	STR	9'-5"	31
B8	5	9	2	17'-8"	300
B9	5	4	STR	6'-9"	23
H1	26	6	3	13'-3"	517
H2	26	6	3	13'-7"	530
H3	21	5	4	12'-3"	268
H4	21	5	4	12'-0"	263
K1	24	4	STR	22'-11"	367
K2	8	4	STR	2'-10"	15
S1	62	5	8	4'-5"	286
S2	74	5	5	9'-0"	695
S3	50	5	5	10'-10"	565
S4	14	4	6	6'-6"	61
U1	12	4	7	6'-6"	52
U2	37	4	7	3'-8"	91
V1	74	5	STR	8'-4"	643
V2	34	5	STR	11'-9"	417
V3	32	5	STR	10'-2"	339
TOTAL REINFORCING STEEL					7280 LB
CLASS "A" CONCRETE BREAKDOWN					
POUR 1					
(CAP, COLLARS, & LOWER WINGS)					26.8 CY
POUR 2					
(BACKWALL AND UPPER WINGS)					16.6 CY
TOTAL CLASS "A" CONCRETE					43.4 CY
HP 12 X 53 STEEL PILES					
NO. 7					580 LF
PILE DRIVING EQUIPMENT SETUP FOR HP 12 X 53 STEEL PILES					7 EA

ALL BAR DIMENSIONS ARE OUT TO OUT

PROJECT NO. U-3109A  
ALAMANCE COUNTY  
 STATION: 146+61.35 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 SUBSTRUCTURE

**END BENT 1**

(NBL)

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

SHEET NO. S03-38  
 TOTAL SHEETS S03-53

DRAWN BY: S.D. COOPER DATE: 9-15  
 CHECKED BY: J.A. BATTS DATE: 9-15  
 DESIGN ENGINEER OF RECORD: J.A. BATTS DATE: 9-15

PLANS PREPARED BY:

**SIMPSON & ASSOCIATES**

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 (919) 852-0598 (Fax)  
 www.simpsonengr.com  
 LICENSURE NO. C-2521

3/22/2017

STR. #3