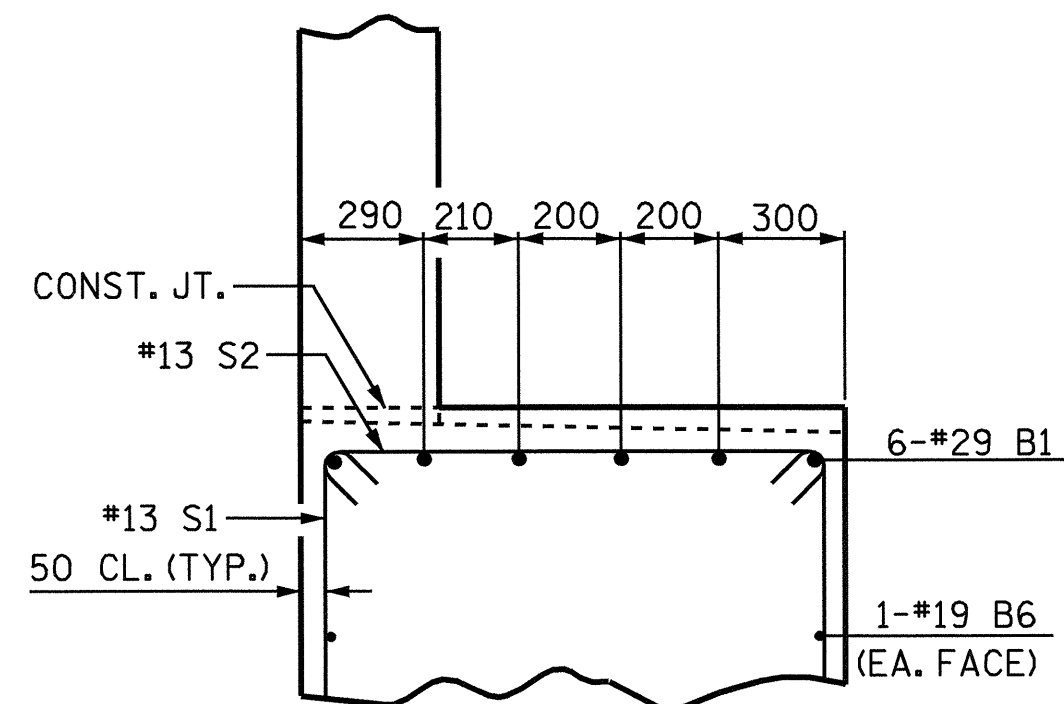


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

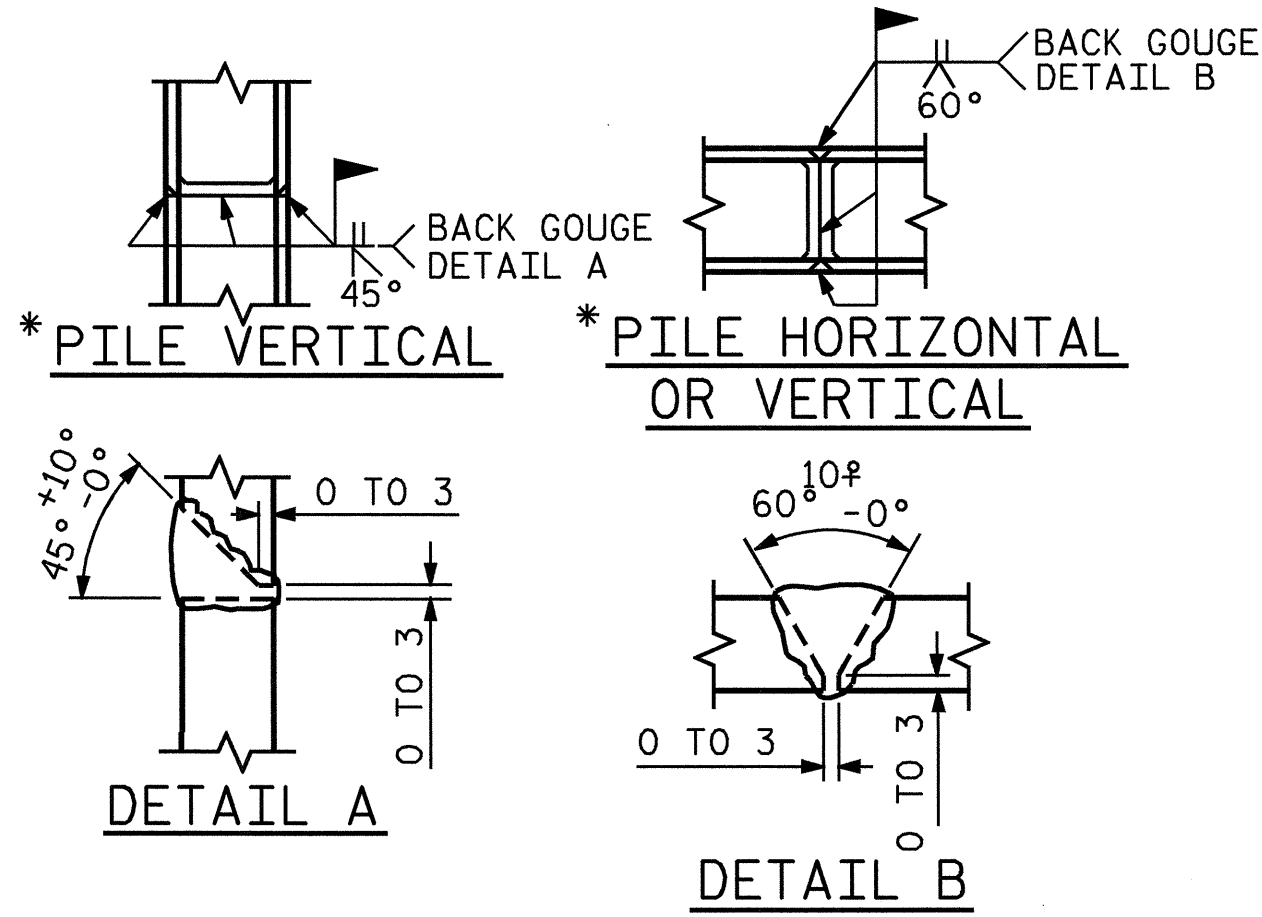
BAGGED STONE SHALL REMAIN IN PLACE UNTIL THE ENGINEER DIRECTS THAT IT BE REMOVED. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF SILT ACCUMULATIONS AT BAGGED STONE WHEN SO DIRECTED BY THE ENGINEER. BAGS SHALL BE REMOVED AND REPLACED WHENEVER THE ENGINEER DETERMINES THAT THEY HAVE DETERIORATED AND LOST THEIR 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

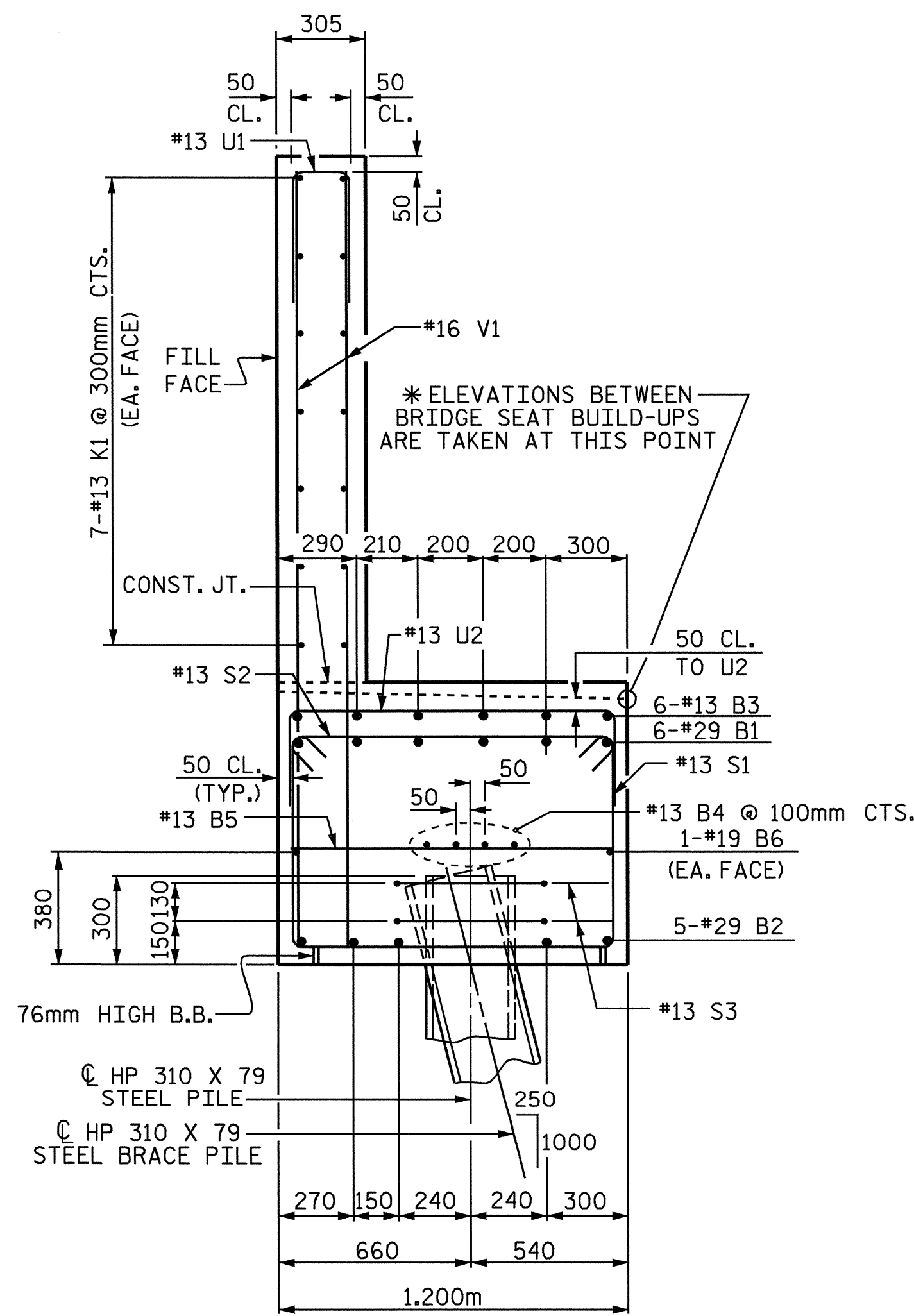


PARTIAL SECTION B-B



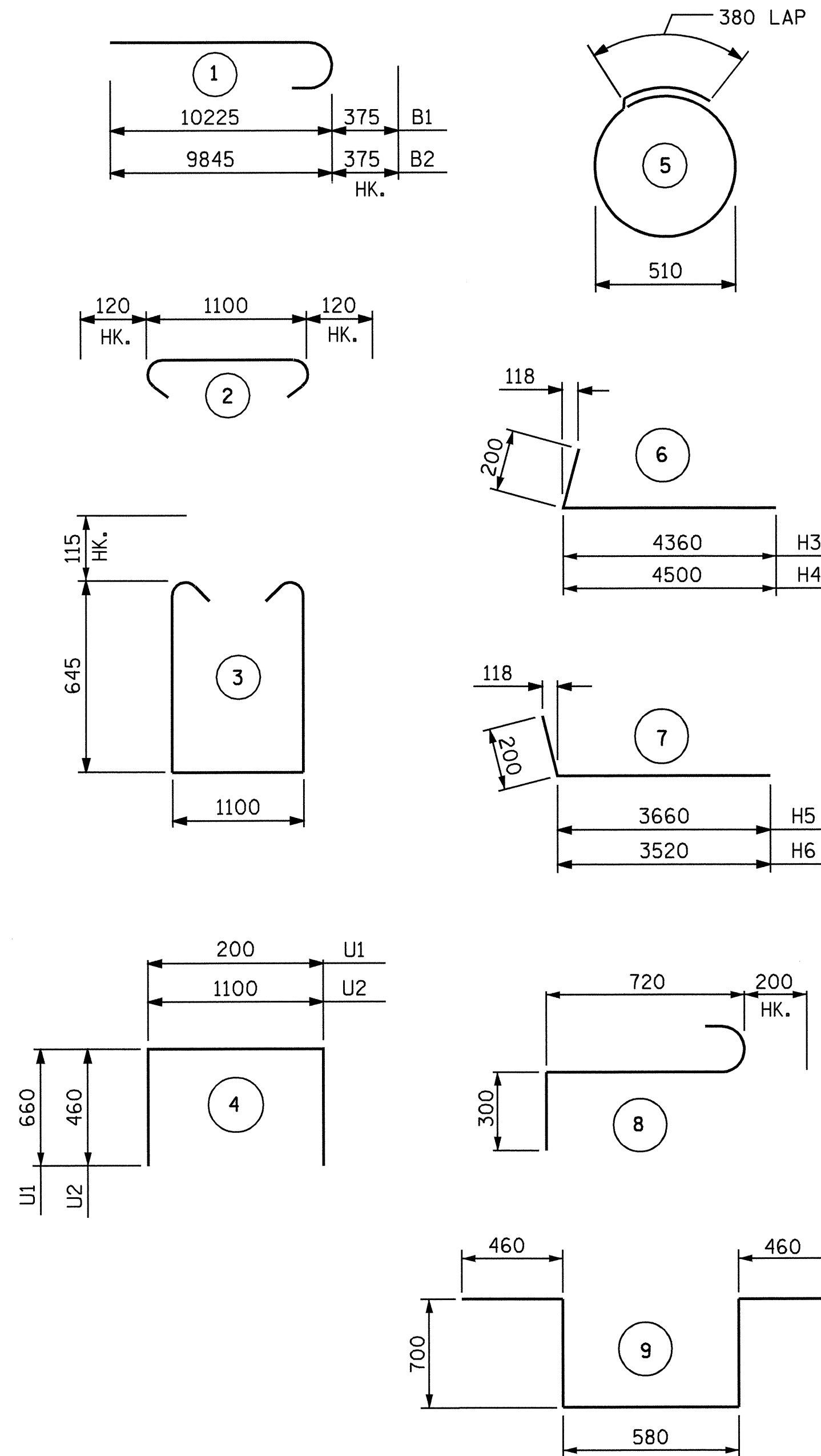
* POSITION OF PILE DURING WELDING.

PILE SPLICE DETAILS



SECTION A-A

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL

END BENT 2

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	12	29	1	10600	644
B2	10	29	1	10220	517
B3	12	13	STR	4140	49
B4	12	13	STR	6420	77
B5	15	13	STR	1100	16
B6	2	19	STR	17760	15
H1	2	13	STR	1060	2
H2	2	13	STR	1080	2
H3	12	13	6	4560	56
H4	12	13	6	4700	57
H5	11	13	7	3860	43
H6	11	13	7	3720	41
K1	42	13	STR	6460	270
S1	76	13	3	2620	198
S2	76	13	2	1340	102
S3	20	13	5	2000	40
S4	2	19	9	2900	13
S5	6	19	8	1220	16
U1	52	13	4	1520	79
U2	15	13	4	2020	30
V1	104	16	STR	2620	423
V2	38	16	STR	3200	189
V3	32	16	STR	2960	147

REINFORCING STEEL kg 3026

CLASS "A" CONCRETE BREAKDOWN
 POUR #1: CAP & WINGS C.M. 20.5
 POUR #2: WINGS & BACKWALL C.M. 16.6

CLASS "A" CONCRETE TOTAL C.M. 37.1

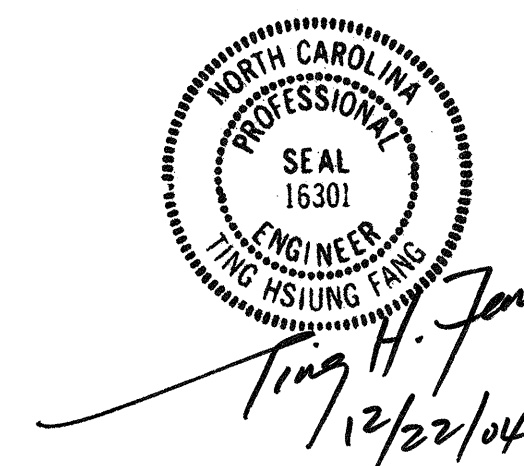
HP 310 X 79 STEEL PILES
 NO. 12 METERS 156.0

PROJECT NO. R-0977A
CHEROKEE COUNTY
 STATION: 41+19.524-LREV-

SHEET 3 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE
 END BENT 2



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-164
1			3			TOTAL SHEETS
2			4			230

DRAWN BY: THF/A.S. CALLAWAY DATE: 10/26/04
 CHECKED BY: J.P. ADAMS DATE: 11/5/04