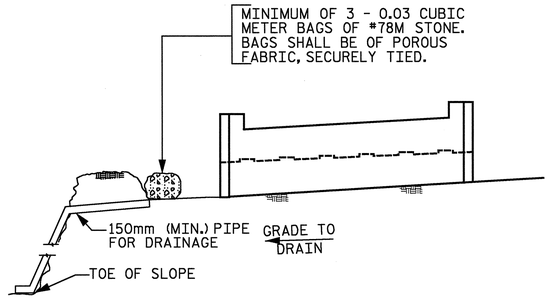


TEMPORARY DRAINAGE AT END BENT

DRAINAGE NOTES:

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.

NOTES:

STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR PIPE INSERTS.

FOR EPOXY PROTECTIVE COATING, SEE SPECIAL PROVISIONS.

BACKWALL SHALL BE PLACED BEFORE APPLYING THE EPOXY PROTECTIVE COATING.

THE TOP SURFACE AREAS OF THE END BENT CAP SHALL BE CURED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS EXCEPT THAT THE MEMBRANE CURING COMPOUND METHOD SHALL NOT BE USED.

THE TOP SURFACE OF THE CAP EXCEPT THE BRIDGE SEAT BUILDUPS SHALL BE SLOPED TRANSVERSELY FROM THE FILL FACE TO THE FRONT FACE AT THE RATE OF 2%.

FOR PIPE INSERTS DETAILS, SEE "POT BEARING DETAILS" SHEET.

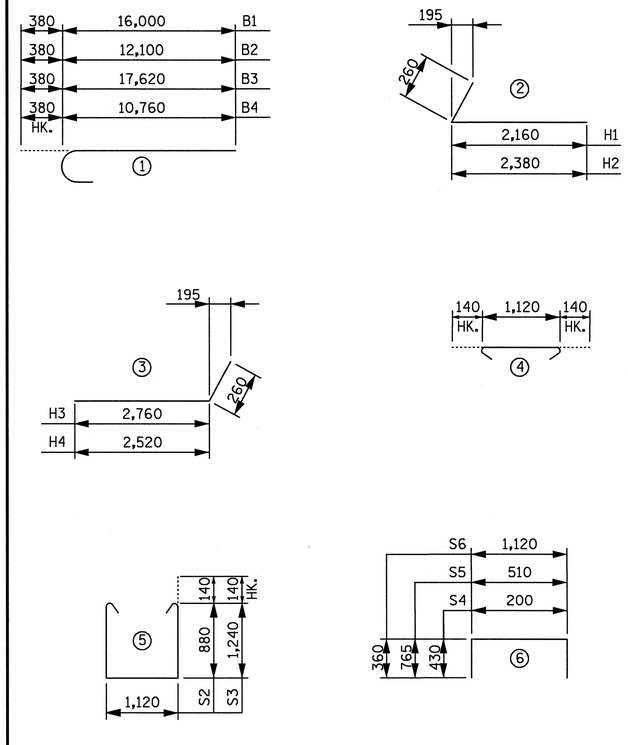
PILES SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 530 kN EACH.

WHEN DRIVING PILES, THE MAXIMUM BLOW COUNT SHALL NOT BE EXCEEDED.

FOR OTHER NOTES, SEE "GENERAL DRAWING LOCATION SKETCH, GENERAL NOTES & TOTAL BILL OF MATERIAL" SHEETS.

THE CONTRACTOR SHALL PROVIDE FOR INSTALLATION OF THE 102mm Ø DRAIN PIPE THROUGH THE WING WALLS AS REQUIRED FOR REINFORCED BRIDGE APPROACH FILLS, SEE ROADWAY PLANS. REINFORCING STEEL IN THE WING WALLS MAY BE SHIFTED AS NECESSORY TO CLEAR THE DRAIN PIPE.

BAR TYPES

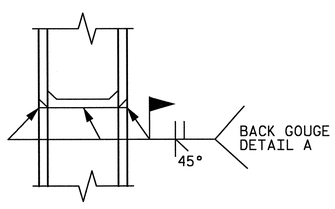


ALL BAR DIMENSIONS ARE OUT TO OUT.

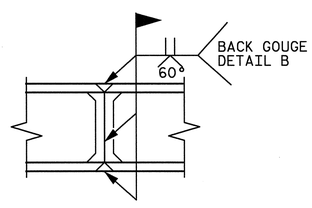
BILL OF REINFORCING

MARK	NO.	SIZE	TYPE	LENGTH (mm)	MASS (kg)
B1	5	#29	①	16,380	414
B2	5	#29	①	12,480	316
B3	5	#29	①	18,000	455
B4	5	#29	①	11,140	282
B5	5	#16	STR.	6,460	50
B6	12	#16	STR.	13,500	251
B7	30	#16	STR.	900	42
B8	2	#16	STR.	9,380	29
B9	32	#13	STR.	7,080	225
B10	22	#13	STR.	1,120	24
B11	5	#16	STR.	1,920	15
H1	14	#16	②	2,420	53
H2	14	#16	②	2,640	57
H3	12	#16	③	3,020	56
H4	12	#16	③	2,780	52
K1	24	#16	STR.	13,500	503
K2	2	#16	STR.	10,400	32
K3	2	#16	STR.	6,860	21
K4	4	#16	STR.	1,380	9
K5	4	#16	STR.	1,360	8
S1	62	#16	④	1,400	135
S2	35	#16	⑤	3,160	172
S3	27	#16	⑤	3,880	163
S4	76	#13	⑥	1,060	80
S5	42	#13	⑥	2,040	85
S6	43	#16	⑥	1,840	123
V1	152	#16	STR.	2,340	552
V2	24	#16	STR.	3,400	127
V3	26	#16	STR.	2,660	107

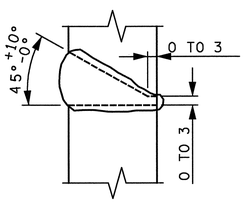
TOTAL REINFORCING STEEL = 4,438 kg



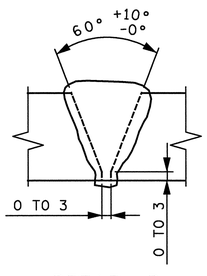
▲PILE VERTICAL



▲PILE HORIZONTAL OR VERTICAL



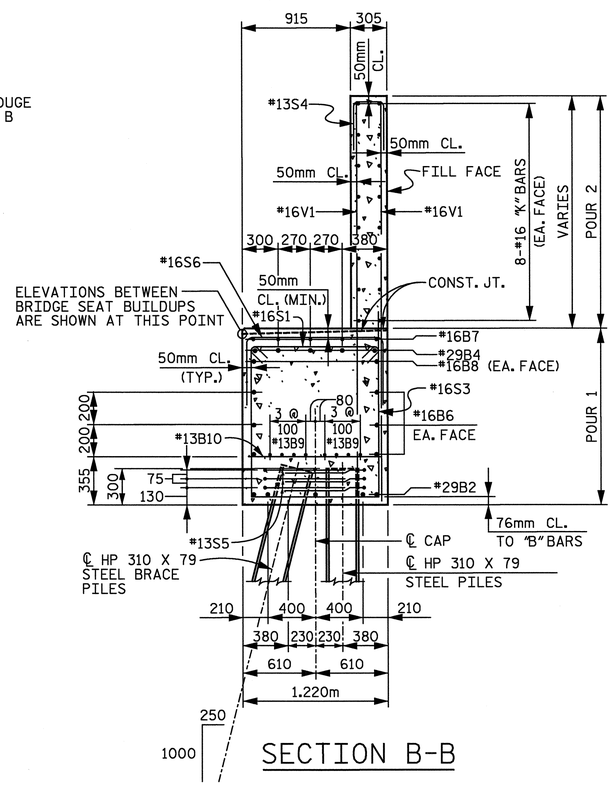
DETAIL A



DETAIL B

▲POSITION OF PILE DURING WELDING.

PILE SPLICE DETAILS



SECTION B-B

QUANTITIES - END BENT 2

REINFORCING STEEL	4,438 kg
CLASS A CONCRETE	POUR 1 : 42.0 CU. METERS
	POUR 2 : 15.2 CU. METERS
	TOTAL : 57.2 CU. METERS
HP 310 X 79 STEEL PILES	14 (NO.)
	190.9 METERS

PROJECT NO. R-2552C
JOHNSTON COUNTY
STATION: POT 148+08.446 -L2-
POT 23+96.446 -Y4-

SHEET 3 OF 3

NORTH CAROLINA PROFESSIONAL SEAL 18165 ENGINEER MARK F. ROBBINS 2-21-05

NORTH CAROLINA PROFESSIONAL SEAL 26363 ENGINEER ZHUGANG LIU 2/18/05

RALPH WHITEHEAD ASSOCIATES, INC.
CONSULTING ENGINEERS
P.O. BOX 35624 CHARLOTTE, N.C. 28235

DRAWN BY KPM, LGH DATE 10-04
CHECKED BY ZAL DATE 1-05
DWG. NO. D-1749.29

REVISIONS

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

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENT 2
-LEFT LANE-

SHEET NO. S-39
TOTAL SHEETS 431

davidlowery 02/17/2005 05:31:10 PM n:\proj\3109-100\ustation\struct\final\3109-100_end bent_2a.dgn