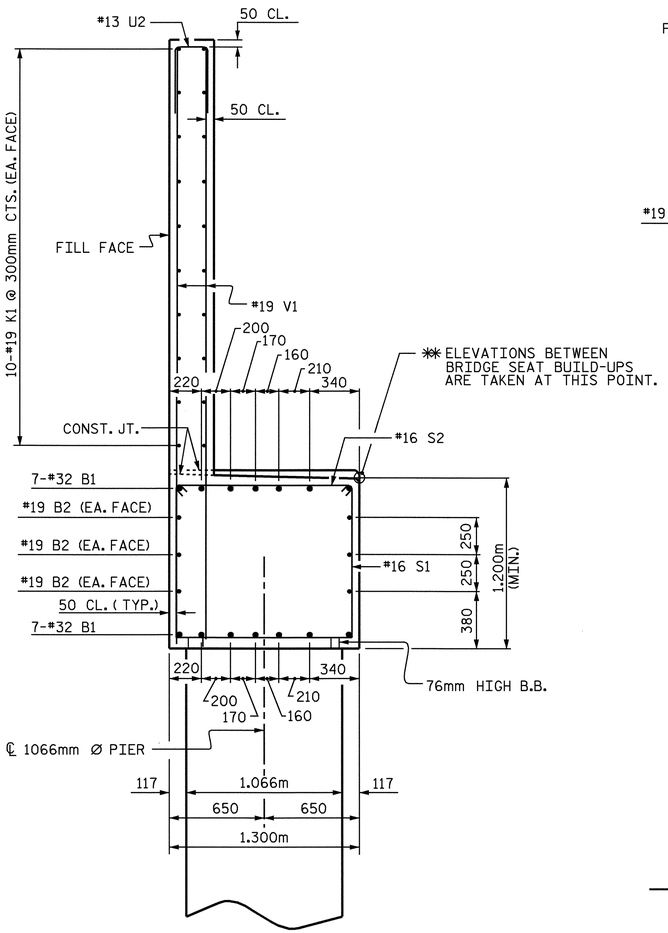
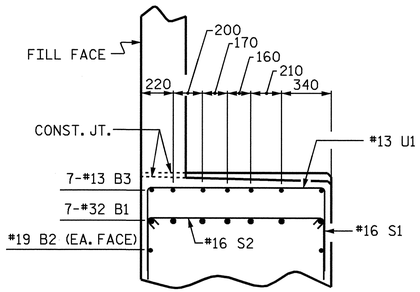
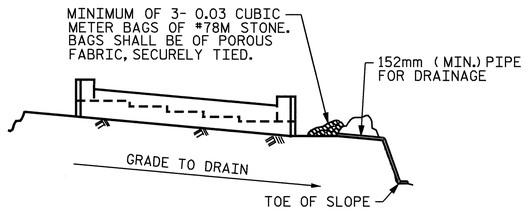




PARTIAL SECTION B-B



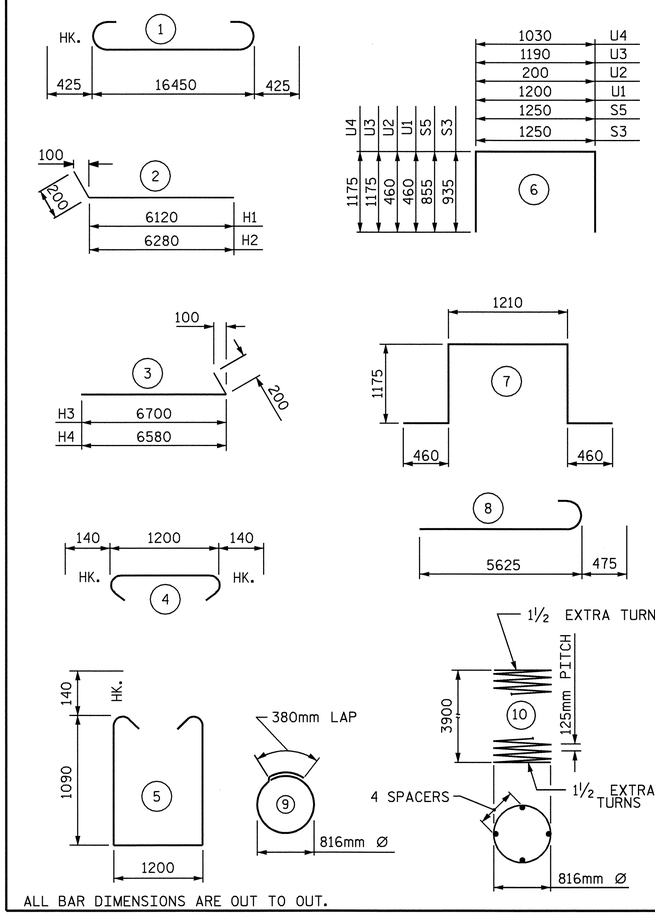
BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

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



ALL BAR DIMENSIONS ARE OUT TO OUT.

✻✻✻ THE SP-1 SPIRAL REINFORCING STEEL SHALL BE W31 OR D-31 COLD DRAWN WIRE OR #16 PLAIN OR DEFORMED BAR.

BILL OF MATERIAL
END BENT 1

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	14	#32	1	17300	1551
B2	6	#19	STR	16500	221
B3	14	#13	STR	4000	56
H1	16	#16	2	6320	157
H2	16	#16	2	6480	161
H3	15	#16	3	6900	161
H4	15	#16	3	6780	158
H5	4	#16	STR	1000	6
K1	20	#16	STR	16500	512
M1	112	#36	8	6100	5402
S1	50	#16	5	3660	284
S2	50	#16	4	1480	115
S3	8	#16	6	3120	39
S4	9	#19	7	4480	90
S5	8	#16	6	2960	37
S6	25	#13	9	2960	74
U1	15	#13	6	2120	32
U2	49	#13	6	1120	55
U3	3	#16	6	3540	16
U4	3	#16	6	3380	16
V1	98	#16	STR	4140	630
V2	50	#19	STR	4720	527
V3	52	#19	STR	4540	528
REINFORCING STEEL				kg	10828
SP-1	7	✻✻✻	10	86,080	935
SPIRAL COLUMN REINFORCING STEEL				kg	935

CLASS A CONCRETE BREAKDOWN

POUR #2: (CAP AND LOWER PORTION OF WINGS)	C.M.	37.3
POUR #3: (BACKWALL AND UPPER PORTION OF WINGS)	C.M.	29.0
TOTAL CONCRETE	C.M.	66.3

DRILLED PIER QUANTITIES

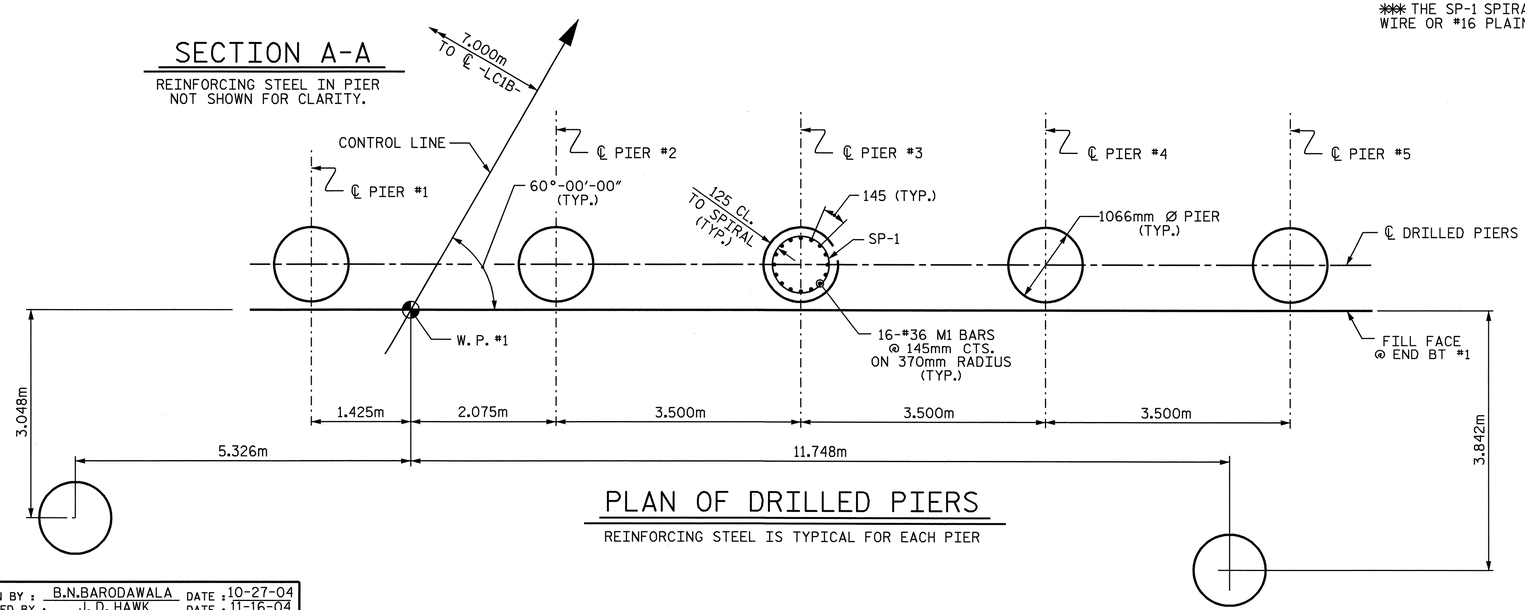
DRILLED PIER CONCRETE POUR #1 (DRILLED PIERS)	C.M.	25.0
1066mm Ø DRILLED PIERS IN SOIL	METERS	8.0
1066mm Ø DRILLED PIERS NOT IN SOIL	METERS	20.0
SPT TESTING	EA.	5
CROSSHOLE SONIC LOGGING	EA.	1
CSL TUBES	METERS	133.0

SECTION A-A

REINFORCING STEEL IN PIER NOT SHOWN FOR CLARITY.

PLAN OF DRILLED PIERS

REINFORCING STEEL IS TYPICAL FOR EACH PIER



PROJECT NO. R-0977A

CHEROKEE COUNTY

STATION: 24+60.500-LC1B-

SHEET 3 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE

END BENT #1

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-111
1			3			TOTAL SHEETS
2			4			230

NORTH CAROLINA PROFESSIONAL SEAL 21638 ENGINEER LAURA E. SUTTON 12/22/04

DRAWN BY : B.N.BARODAWALA DATE : 10-27-04
CHECKED BY : J. D. HAWK DATE : 11-16-04

20-DEC-2004 16:17
W:\SquadL\r0977a\str3\bbarodawala\R0977A_sd_E*_03.dgn
lsutton

STR. #3