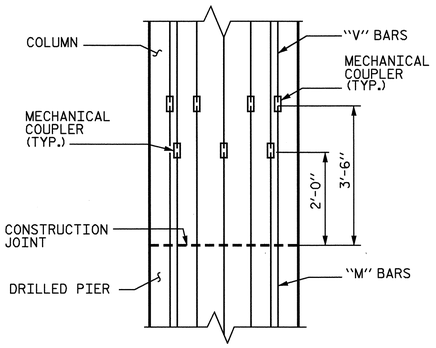
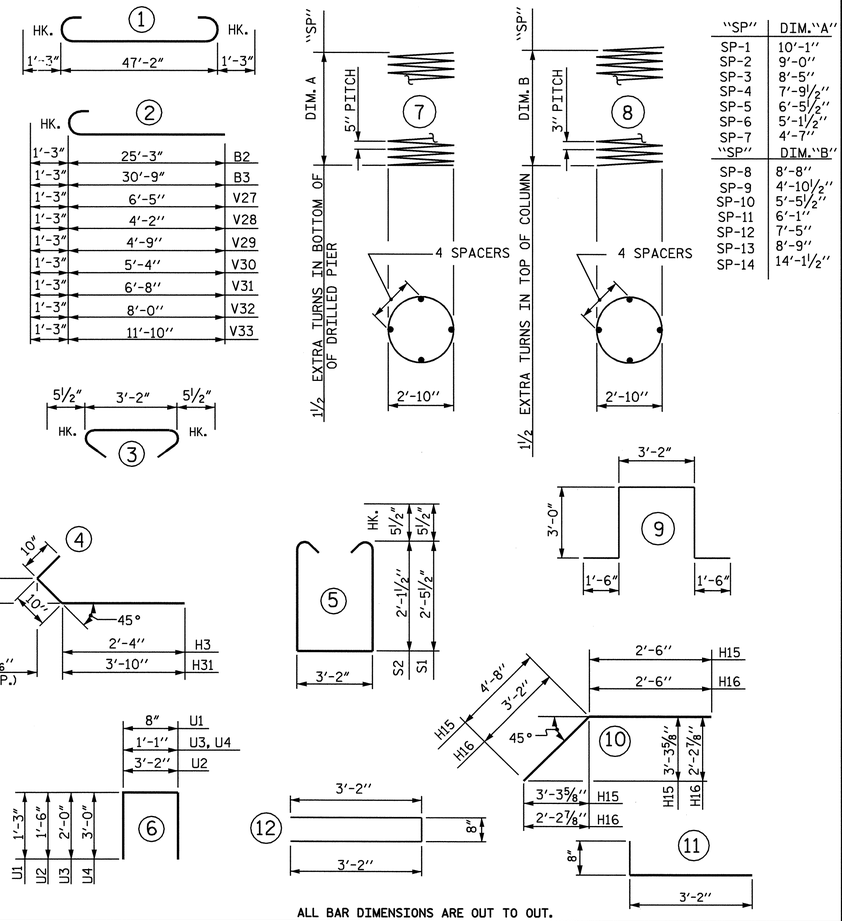


MECHANICAL COUPLER STAGGER DETAIL

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL

END BENT 1

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	5	9	1	49'-8"	844	S1	19	5	5	9'-0"	178
B2	5	9	2	26'-6"	451	S2	19	5	5	8'-4"	165
B3	5	9	2	32'-0"	544	S3	38	5	3	4'-1"	162
B4	8	4	STR	24'-10"	133						
B5	5	4	STR	8'-2"	27	V1	78	5	STR	6'-8"	542
						V2	20	5	STR	9'-3"	193
E1	16	5	STR	5'-0"	83	V3	20	5	STR	8'-6"	177
						V4	4	5	STR	4'-8"	19
H1	28	4	11	3'-10"	72	V5	4	5	STR	5'-5"	23
H2	7	4	12	7'-0"	33	V6	4	5	STR	6'-2"	26
H3	17	5	4	4'-0"	71	V7	4	5	STR	6'-11"	29
H4	8	5	STR	21'-2"	177	V8	4	5	STR	7'-7"	32
H5	2	5	STR	21'-2"	44	V9	4	5	STR	8'-4"	35
H6	2	5	STR	21'-0"	44	V10	4	5	STR	10'-0"	42
H7	2	5	STR	19'-2"	40	V11	4	5	STR	11'-0"	46
H8	2	5	STR	16'-8"	35	V12	5	5	STR	11'-11"	62
H9	2	5	STR	13'-8"	29	V13	6	5	STR	3'-11"	25
H10	2	5	STR	11'-6"	24	V14	14	5	STR	4'-5"	64
H11	2	5	STR	8'-11"	19	V15	14	5	STR	4'-11"	72
H12	2	5	STR	6'-4"	13	V16	14	5	STR	5'-6"	80
H14	2	5	STR	24'-1"	50	V17	14	5	STR	6'-10"	100
H15	12	5	10	7'-2"	90	V18	6	5	STR	8'-3"	52
H16	12	5	10	5'-8"	71	V19	4	5	STR	15'-6"	65
H17	8	5	STR	47'-3"	394	V20	4	5	STR	16'-1"	67
H18	2	5	STR	45'-11"	96	V21	3	5	STR	16'-10"	53
H19	2	5	STR	28'-8"	60	V22	4	5	STR	13'-6"	56
H20	2	5	STR	17'-8"	37	V23	4	5	STR	12'-9"	53
H21	2	5	STR	9'-0"	19	V24	4	5	STR	12'-0"	50
H22	2	5	STR	12'-6"	26	V25	4	5	STR	11'-2"	47
H23	18	5	STR	16'-2"	304	V26	2	5	STR	14'-1"	29
H24	4	5	STR	16'-2"	67	V27	14	9	2	7'-8"	365
H25	2	5	STR	16'-0"	33	V28	14	9	2	5'-5"	258
H26	2	5	STR	14'-5"	30	V29	14	9	2	6'-0"	286
H27	2	5	STR	11'-10"	25	V30	14	9	2	6'-7"	313
H28	2	5	STR	9'-3"	19	V31	14	9	2	8'-0"	381
H29	2	5	STR	6'-8	14	V32	14	9	2	9'-3"	440
H30	2	5	STR	18'-9"	39	V33	14	9	2	13'-1"	623
H31	17	5	4	5'-6"	98	V34	1	5	STR	8'-11'	9
						V35	1	5	STR	10'-1"	11
K1	20	4	STR	24'-10"	332	V36	2	5	STR	4'-3"	9
K2	8	4	STR	3'-10"	21	V37	2	5	STR	4'-10"	10
						V38	2	5	STR	5'-6"	11
M1	14	9	STR	16'-7"	789	V39	2	5	STR	6'-10"	14
M2	14	9	STR	15'-6"	738	V40	2	5	STR	8'-2"	17
M3	14	9	STR	14'-11"	710	V41	1	5	STR	15'-6"	16
M4	14	9	STR	14'-4"	682	V42	1	5	STR	14'-4"	15
M5	14	9	STR	13'-0"	619						
M6	14	9	STR	11'-8"	555	U1	39	4	6	3'-2"	83
M7	14	9	STR	11'-1"	528	U2	6	4	6	6'-2"	25
						U3	14	5	6	5'-1"	74
						U4	14	5	6	7'-1"	103
						U5	58	5	9	12'-2"	736

TOTAL REINFORCING STEEL 15,472 LBS.

SPIRAL REINFORCING STEEL

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
SP-1	1	**	7	213'-11"	223
SP-2	1	**	7	197'-5"	206
SP-3	1	**	7	181'-0"	189
SP-4	1	**	7	172'-9"	180
SP-5	1	**	7	139'-10"	146
SP-6	1	**	7	115'-2"	120
SP-7	1	**	7	107'-0"	112
SP-8	1	***	8	305'-4"	204
SP-9	1	***	8	173'-4"	116
SP-10	1	***	8	198'-1"	132
SP-11	1	***	8	214'-7"	143
SP-12	1	***	8	264'-1"	176
SP-13	1	***	8	305'-4"	204
SP-14	1	***	8	478'-7"	320

TOTAL SPIRAL COLUMN REINFORCING STEEL 2,471 LBS.

CLASS "A" CONCRETE BREAKDOWN

POUR #2	RETAINING WALL & COLUMNS	41.7 CY.
POUR #3	CAP	17.6 CY.
POUR #4	BACKWALL, COLUMNS & TOP OF WINGS	25.4 CY.
	TOTAL CLASS "A" CONCRETE	84.7 CY.

3'-6" Ø DRILLED PIERS

DRILLED PIER CONCRETE BREAKDOWN
POUR #1 DRILLED PIERS 19.6 CY.

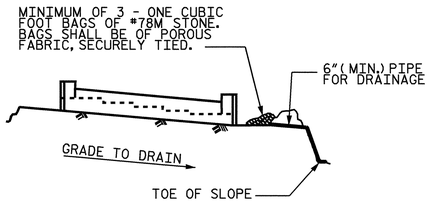
3'-6" Ø DRILLED PIERS NOT IN SOIL
TOTAL LENGTH 54.97 LIN. FT.

CROSS HOLE SONIC LOGGING 1 EACH

CSL TUBES 289.9 LIN. FT.

** THE SP-1 THRU SP-7 SPIRAL REINFORCING STEEL SHALL BE W-31 OR D-31 COLD DRAWN WIRE OR #5 PLAIN OR DEFORMED BARS.

*** THE SP-8 THRU SP-14 SPIRAL REINFORCING STEEL SHALL BE W-20 OR D-20 COLD DRAWN WIRE OR #4 PLAIN OR DEFORMED BARS.

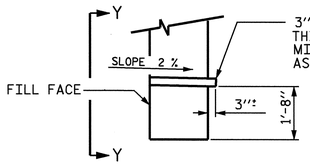


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

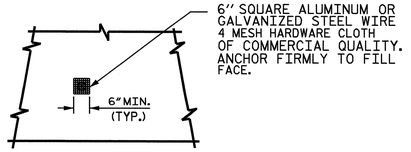
BAGGED STONE SHALL REMAIN IN PLACE UNTIL THE ENGINEER DIRECTS THAT IT BE REMOVED. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF SILT ACCUMULATIONS AT BAGGED STONE WHEN SO DIRECTED BY THE ENGINEER. BAGS SHALL BE REMOVED AND REPLACED WHENEVER THE ENGINEER DETERMINES THAT THEY HAVE DETERIORATED AND LOST THEIR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



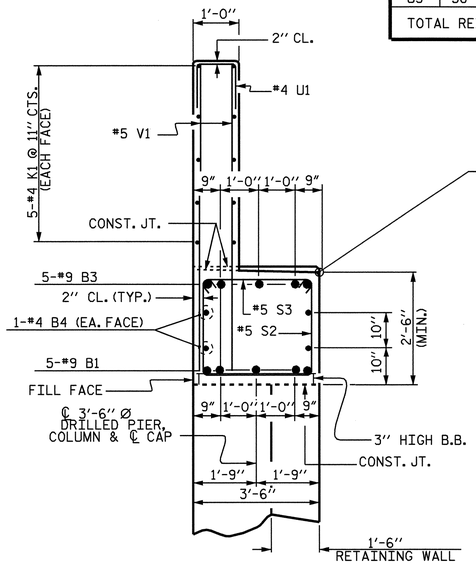
SECTION THRU WALL



VIEW Y-Y

NOTE: NO SEPARATE PAYMENT WILL BE MADE FOR FURNISHING AND INSTALLING THE PVC PIPE DRAINS, HARDWARE CLOTH AND FASTENERS. THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR THE SEVERAL PAY ITEMS.

PIPE DRAIN DETAILS



SECTION A-A

NORTH CAROLINA PROFESSIONAL SEAL 13014 ENGINEER QUANG H. NGUYEN
Quang H. Nguyen 7-12-04

PROJECT NO. B-3607
ASHE COUNTY
STATION: 10+87.50 -L-
SHEET 7 OF 7

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT 1

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-22
1			3			TOTAL SHEETS
2			4			32

DRAWN BY : M. E. POOLE DATE : 03-04
CHECKED BY : J. R. DUGGINS DATE : 03-04

12-JUL-2004 15:36
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NCDOT