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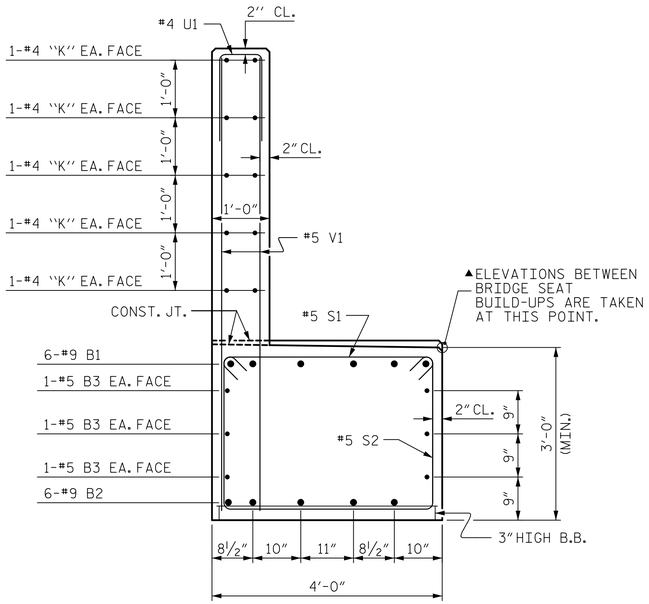
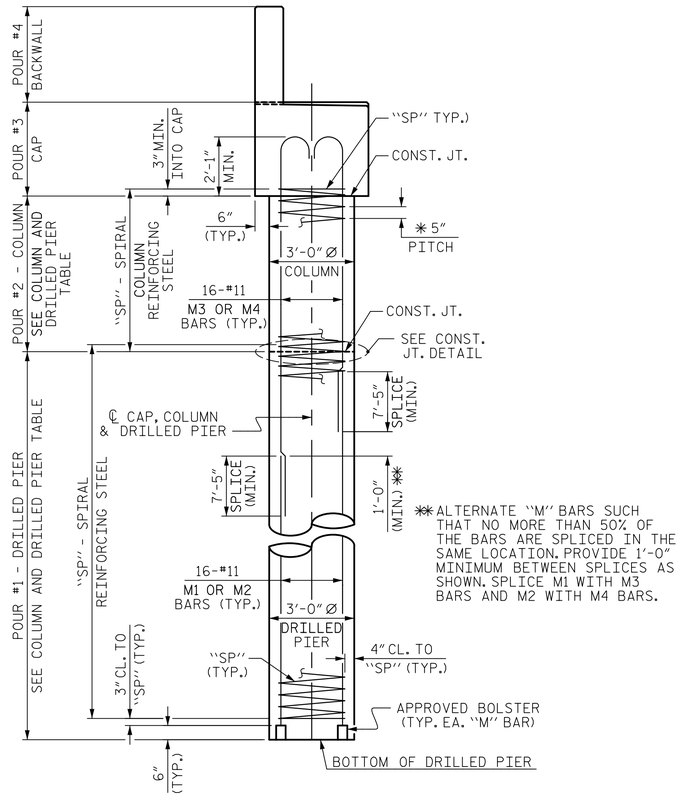
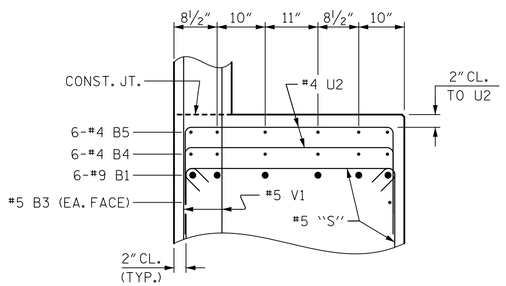


SECTION A-A



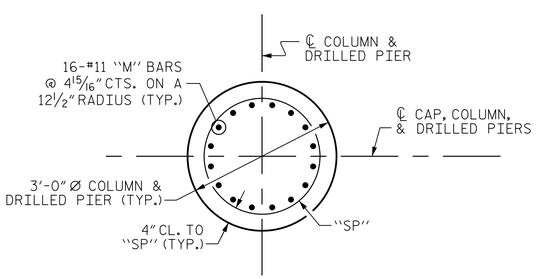
END ELEVATION

✱ COLUMN WILL BE BURIED, MAINTAIN 5" SPIRAL PITCH FROM DRILLED PIER.



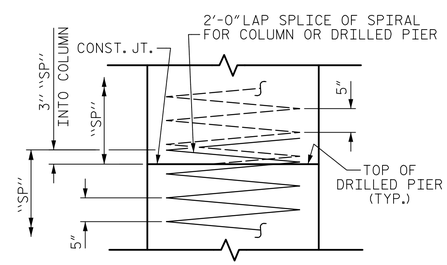
PARTIAL SECTION B-B

COLUMN & DRILLED PIER TABLE			
COLUMN	LENGTH	DRILLED PIER	LENGTH
1	11'-0"	1	56'-3⅝"
2	10'-2⅜"	2	57'-1 3/16"
3	9'-3⅝"	3	58'-0"
4	8'-6"	4	58'-9⅝"
5	7'-3 3/16"	5	59'-8⅜"
6	6'-7 3/16"	6	60'-8⅜"
7	5'-10 13/16"	7	61'-4 13/16"



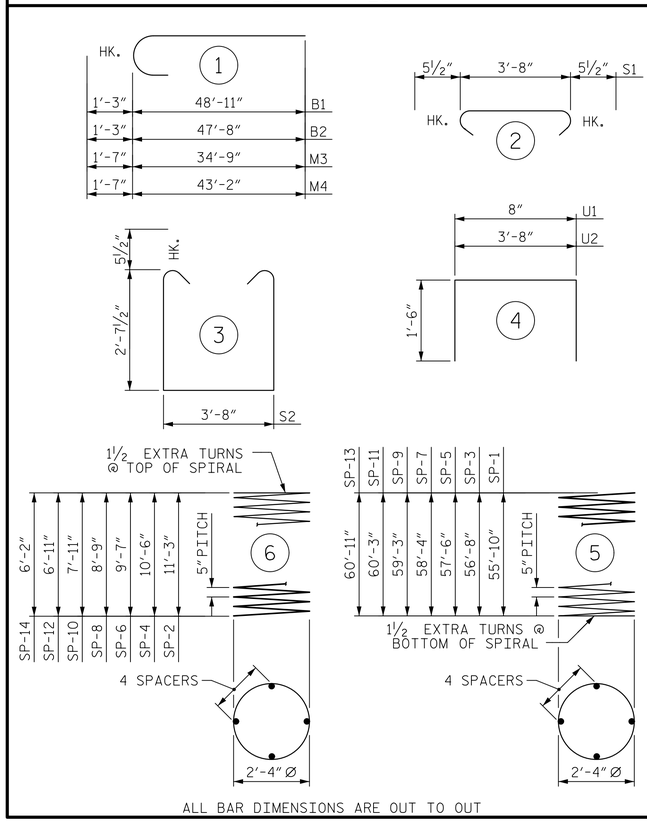
PLAN OF DRILLED PIERS

(REINFORCING STEEL IS TYPICAL FOR EACH DRILLED PIER)



CONSTRUCTION JOINT DETAIL

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT

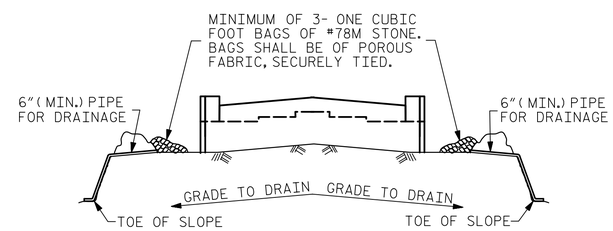
BILL OF MATERIAL

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	12	9	1	50'-2"	2047
B2	12	9	1	48'-11"	1996
B3	12	5	STR.	46'-0"	576
B4	12	4	STR.	19'-1"	153
B5	24	4	STR.	3'-2"	51
K1	40	4	STR.	24'-1"	644
K2	8	4	STR.	3'-9"	20
M1	56	11	STR.	44'-10"	13339
M2	56	11	STR.	36'-5"	10835
M3	56	11	1	36'-4"	10810
M4	56	11	1	44'-9"	13314
S1	108	5	2	4'-7"	516
S2	108	5	3	9'-10"	1108
U1	82	4	4	3'-8"	201
U2	36	4	4	6'-8"	160
V1	164	5	STR.	7'-2"	1226
V2	20	5	STR.	9'-4"	195
REINFORCING STEEL					57,191 LBS.
SP-1	1	✱	5	976'-4"	1018
SP-2	1	✱	6	205'-0"	214
SP-3	1	✱	5	990'-8"	1033
SP-4	1	✱	6	193'-10"	202
SP-5	1	✱	5	1005'-0"	1048
SP-6	1	✱	6	179'-6"	187
SP-7	1	✱	5	1019'-5"	1063
SP-8	1	✱	6	165'-1"	172
SP-9	1	✱	5	1033'-9"	1078
SP-10	1	✱	6	150'-9"	157
SP-11	1	✱	5	1048'-1"	1093
SP-12	1	✱	6	129'-3"	135
SP-13	1	✱	5	1062'-6"	1108
SP-14	1	✱	6	122'-0"	127
SPIRAL COLUMN REINFORCING STEEL					8,635 LBS.

✱ THE SP-1 THRU SP-14 SPIRAL REINFORCING STEEL SHALL BE W31 OR D-31 COLD DRAWN WIRE OR #5 PLAIN OR DEFORMED BAR

CLASS A CONCRETE BREAKDOWN	
POUR #2 (COLUMNS)	15.5 C.Y.
POUR #3 (CAP)	43.7 C.Y.
POUR #4 (BACKWALL)	15.6 C.Y.
TOTAL CLASS A CONCRETE	74.8 C.Y.

DRILLED PIERS:	
DRILLED PIER CONCRETE	
POUR #1 (DRILLED PIERS)	107.9 C.Y.
3'-0" Ø DRILLED PIERS	412.0 LIN. FT.
CSL TUBES	1690.0 LIN. FT.



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

PROJECT NO. B-5103
NEW HANOVER COUNTY
STATION: 16+84.96 -L-

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE

END BENT 1

Prepared by
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PHONE: (919) 461-1100 FAX: (919) 461-1415
NC LIC. # C-2243

11/5/2014
NORTH CAROLINA PROFESSIONAL SEAL 038447 ENGINEER ANDREW S. MILLER

DocuSigned by:
Andrew S. Miller
D5D820D9405446D...

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-36
1			3			TOTAL SHEETS
2			4			48

DRAWN BY : M. K. TOM DATE : 8/1/14
CHECKED BY : R. L. WHITCHER DATE : 9/4/14
DESIGNED BY : M. K. TOM DATE : 8/1/14

11/5/2014
R:\Structures\Submittals\2014_1101 FinalDesign and Tracings\Design Files\401_073_S01_B5103_EB1_02.dgn
matt_tom