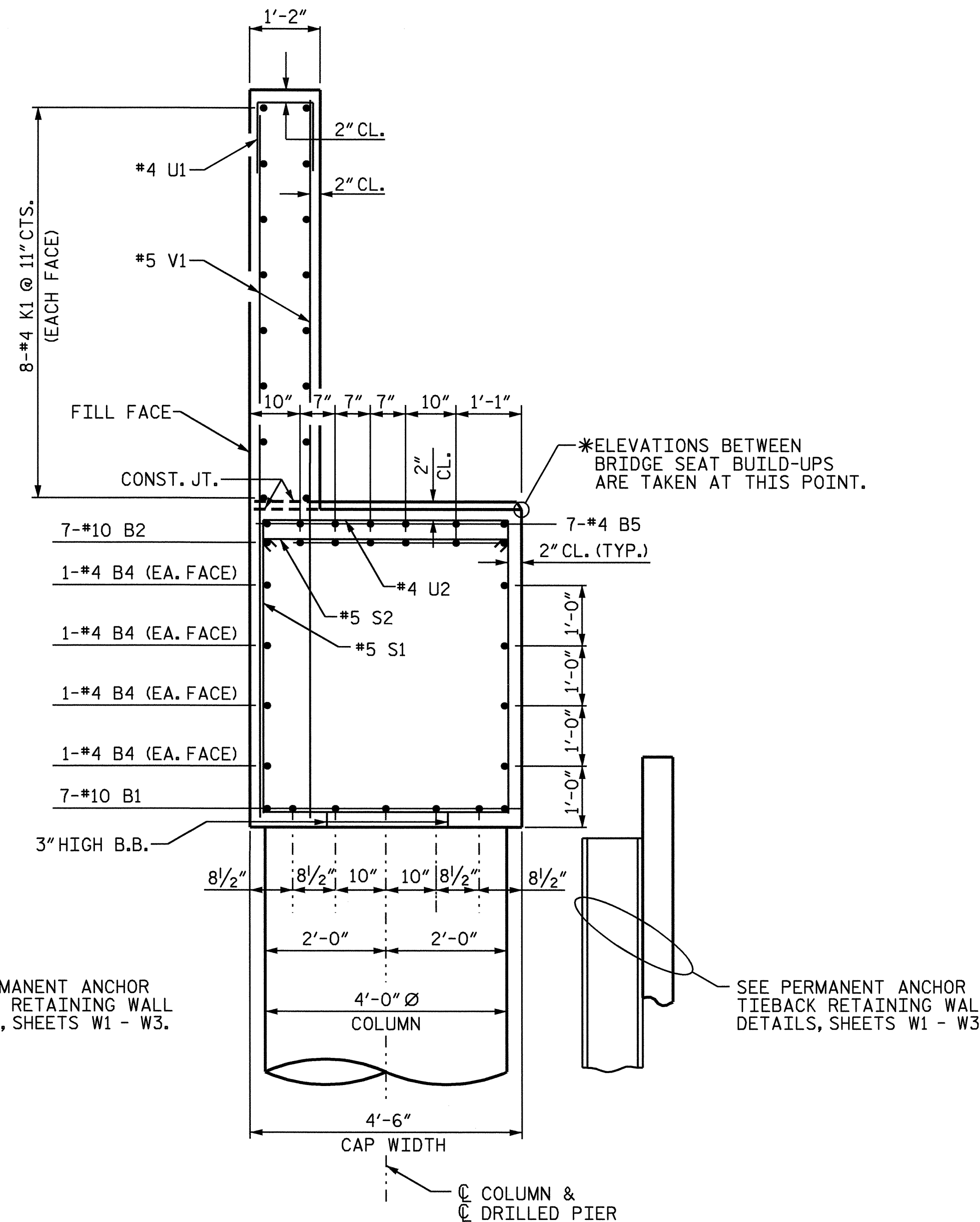
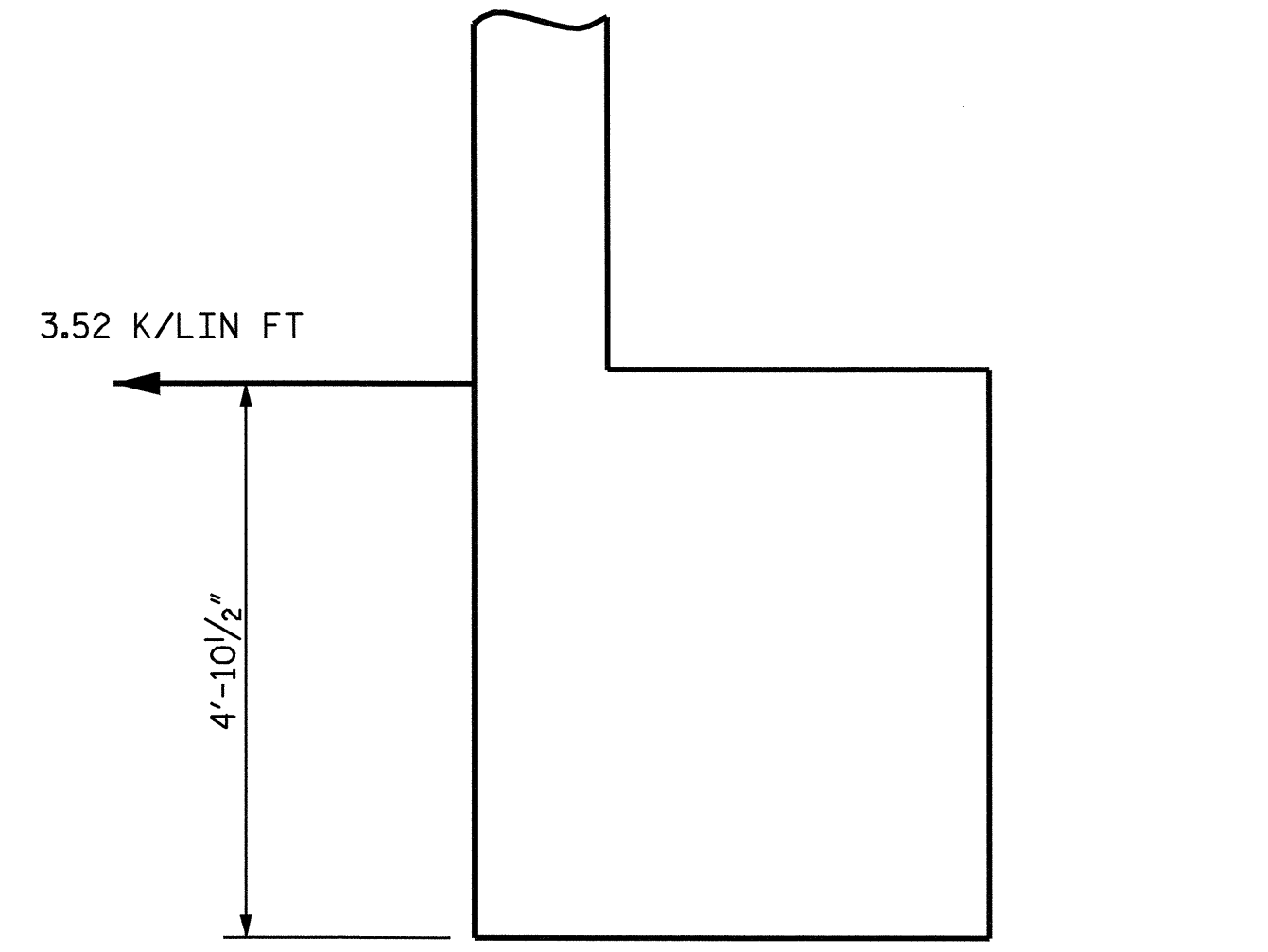


SECTION A-A



SECTION B-B



GALVANIZED REINFORCING STRAP LOAD DETAIL

**GALVANIZED REINFORCING STRAP NOTES**

GALVANIZED REINFORCING STRAPS SHALL BE ATTACHED TO THE END BENT BACKWALL. FOR DESIGN CRITERIA AND DETAILS, SEE "GALVANIZED REINFORCING STRAP" SPECIAL PROVISIONS.

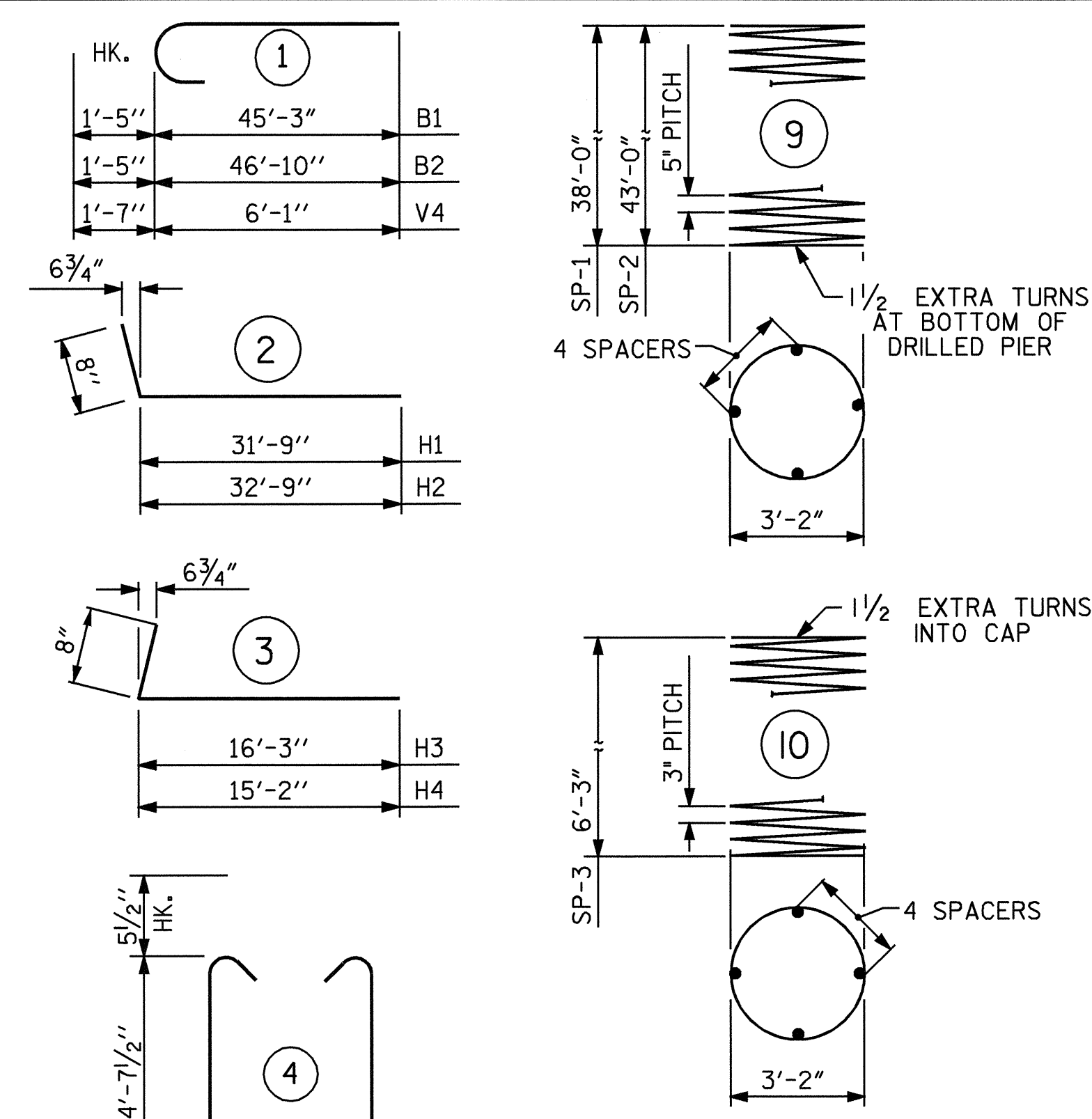
PLANS, WORKING DRAWINGS, AND DESIGN CALCULATIONS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR REVIEW AND APPROVAL. SEE SPECIAL PROVISIONS.

PLANS SUBMITTED FOR REVIEW SHALL INCLUDE THE FOLLOWING: PLAN VIEW, ELEVATION VIEW, TYPICAL SECTIONS, AND STRAP DETAILS.

THE GALVANIZED REINFORCING STRAPS SHALL BE DESIGNED WITH THE FOLLOWING SOIL PARAMETERS:  
 FRICTION ANGLE = 34 DEGREES  
 COHESION c = 0.0  
 UNIT WEIGHT OF SOIL = 110 PCF

FOR CONFLICTS WITH PILES IN THE END BENT WINGS, SEE PLAN VIEW AND FOUNDATION LAYOUT SHEETS.

**BAR TYPES**



**DRILLED PIER QUANTITIES**

DRILLED PIER CONCRETE (POUR #1)	76.3 CU. YD.
4'-0" Ø DRILLED PIER IN SOIL	134.00 FT.
4'-0" Ø DRILLED PIER NOT IN SOIL	30.00 FT.
CSL TUBES	696.00 FT.
SPT TESTING	4 EACH
SID INSPECTION	4 EACH
CROSSHOLE SONIC LOGGING	2 EACH
PERMANENT STEEL CASING FOR 4'-0" DIA. DRILLED PIERS	65.91 FT.
GALVANIZED REINFORCING STRAPS	1200 LIN. FT
#57 STONE BACKFILL FOR GALVANIZED REINFORCING STRAPS	625 CU. YD.

\*\* THE SP-1 & SP-2 SPIRAL REINFORCING STEEL SHALL BE W31 OR D-31 COLD DRAWN WIRE OR #5 PLAIN OR DEFORMED BAR.

\*\*\* THE SP-3 SPIRAL REINFORCING STEEL SHALL BE W20 OR D-20 COLD DRAWN WIRE OR #4 PLAIN OR DEFORMED BAR.

**BILL OF MATERIAL**

BAR NO.	SIZE	TYPE	LENGTH	WEIGHT	
B1	14	10	1	46'-8"	2,811
B2	14	10	1	48'-3"	2,907
B3	14	4	STR.	2'-8"	25
B4	24	4	STR.	29'-3"	469
B5	7	4	STR.	17'-5"	81
H1	16	7	2	32'-5"	1,060
H2	16	7	2	33'-5"	1,093
H3	16	7	3	16'-11"	533
H4	16	7	3	15'-10"	518
K1	48	4	STR.	29'-4"	941
K2	8	4	STR.	4'-9"	25
M1	40	11	STR.	44'-6"	9,457
M2	40	11	STR.	49'-6"	10,520
S1	60	5	4	14'-4"	897
S2	60	5	5	5'-1"	318
S3	6	6	7	3'-9"	34
S4	2	6	8	8'-11"	27
U1	71	4	6	3'-10"	182
U2	18	4	6	7'-2"	86
V1	142	5	STR.	11'-7"	1,716
V2	73	5	STR.	12'-10"	977
V3	40	5	STR.	12'-8"	528
V4	80	11	1	7'-8"	3,259

TOTAL REINFORCING STEEL (LBS) 38,464

BAR NO.	SIZE	TYPE	LENGTH	WEIGHT	
SP-1	2	**	9	908'-5"	1,895
SP-2	2	**	9	1,025'-11"	2,140
SP-3	4	***	10	260'-3"	695

TOTAL SPIRAL REINFORCING STEEL (LBS) 4,730

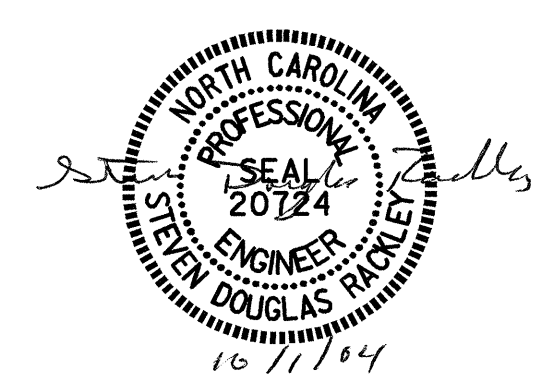
CLASS "A" CONCRETE	
POUR #2	11.2 CU. YD.
POUR #3	80.9 CU. YD.
POUR #4	39.6 CU. YD.
<b>TOTAL CLASS "A" CONCRETE</b>	<b>131.7 CU. YD.</b>

TOTAL HP 12 X 53 STEEL PILES NO.2 LIN.FT. 80

PROJECT NO. R-2911D  
 ROWAN COUNTY  
 STATION: 231+17.87 -L-  
14+25.15 -Y8-  
 SHEET 4 OF 5

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

SUBSTRUCTURE  
 END BENT #1  
 LEFT LANE



REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	120
1			3			
2			4			

DRAWN BY: R. L. CHESSON DATE: 2004 AUG  
 CHECKED BY: S. H. SOCKWELL DATE: 9/04

ALL BAR DIMENSIONS ARE OUT TO OUT.