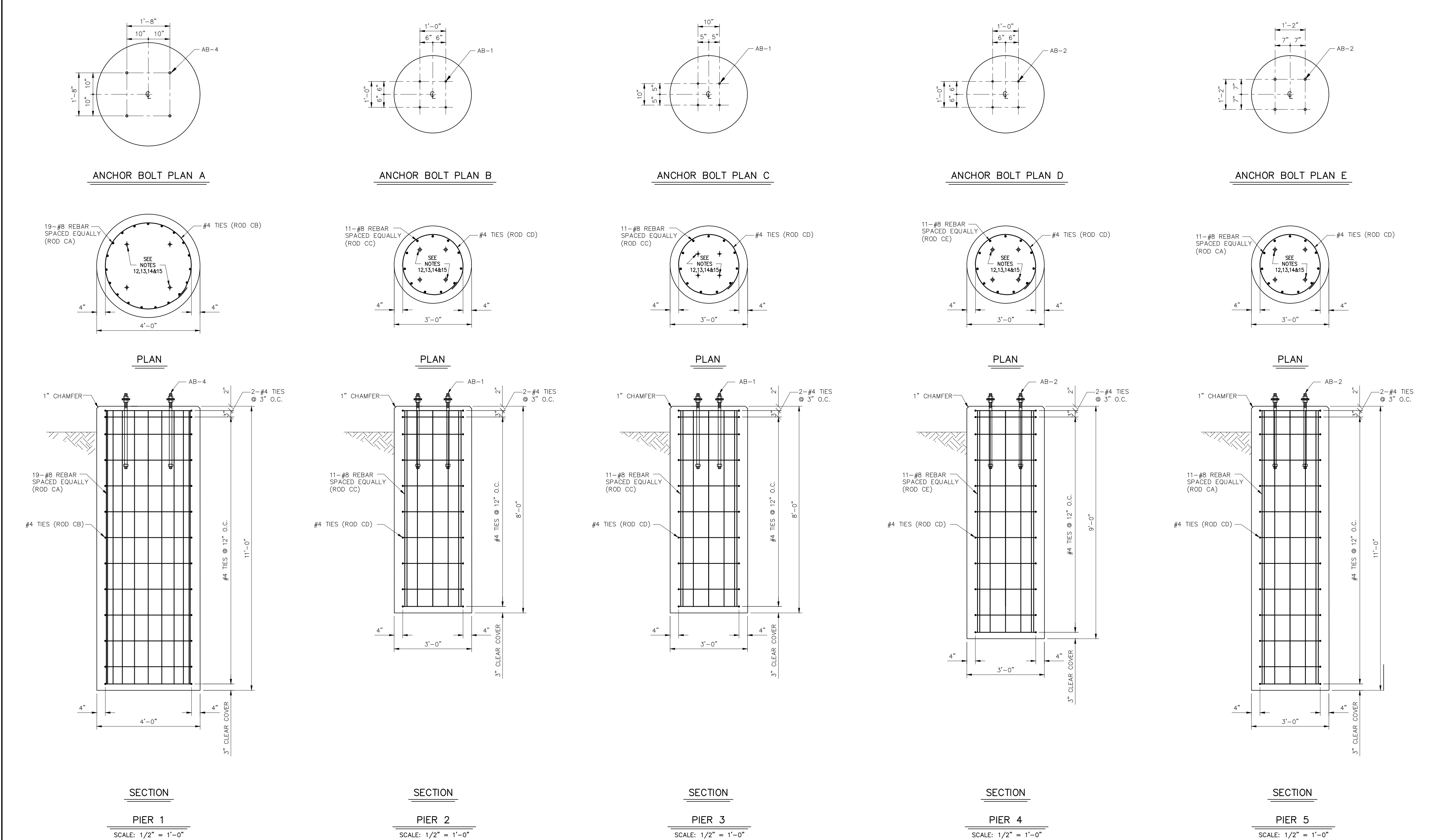
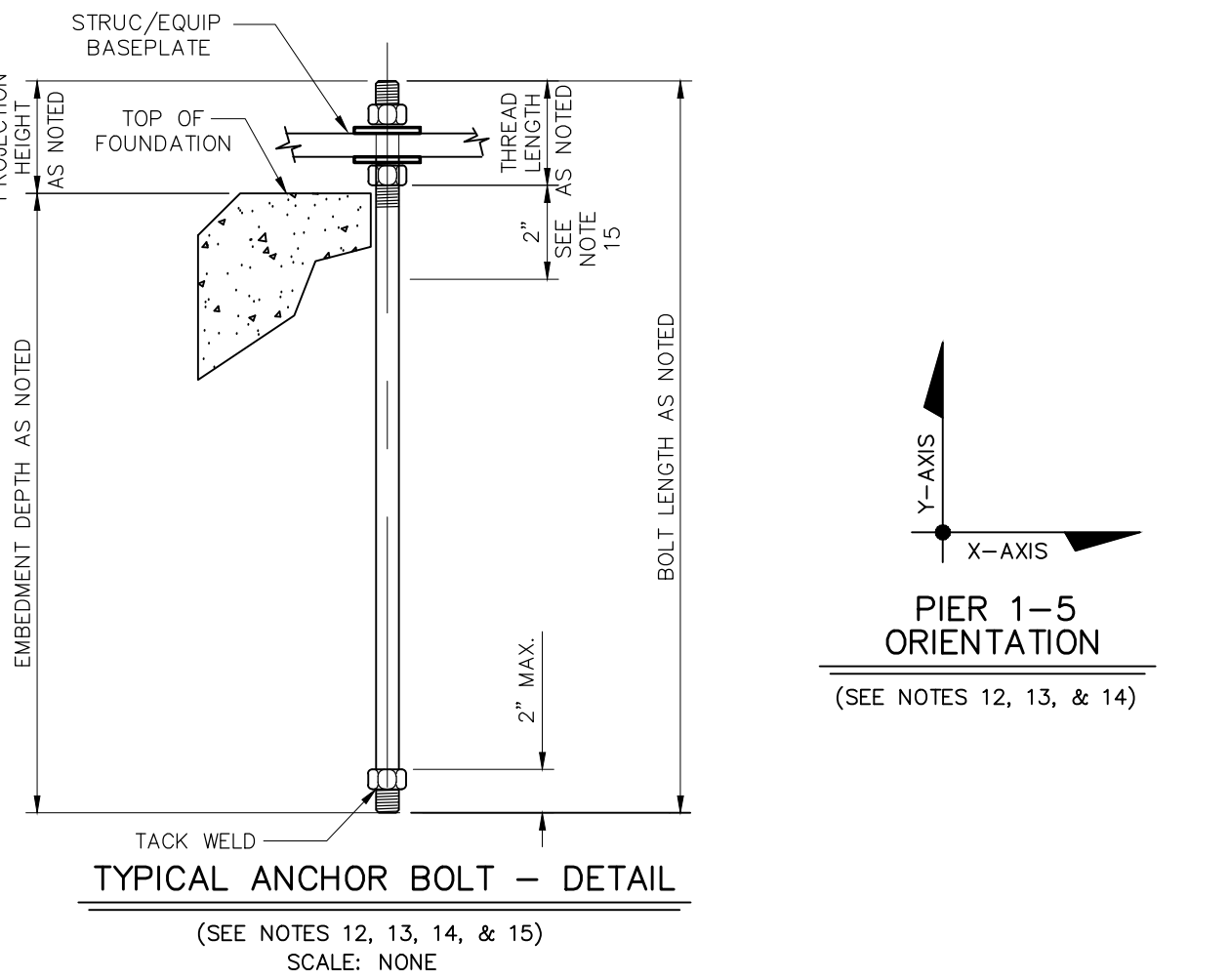




SCHEDULE FOR TYPICAL PIER DETAIL						
PIER NO.	TOTAL REQ'D	PIER		ANCHOR BOLT PLAN	CU YDS CONCRETE	
		DIAMETER	LENGTH		PER FDN	TOTAL
1	3	4'-0"	11'-0"	A	5.12	15.36
2	6	3'-0"	8'-0"	B	2.09	12.54
3	6	3'-0"	8'-0"	C	2.09	12.54
4	13	3'-0"	9'-0"	D	2.36	30.68
5	2	3'-0"	11'-0"	E	2.88	5.76

BILL OF MATERIAL			
ITEM	TOTAL QUANTITIES (THIS SHEET ONLY)	SUPPLIED BY:	DESCRIPTION
REBAR	10,223.55	CONTRACTOR	LBS. OF REBAR
CONCRETE	76.88	CONTRACTOR	CUBIC YARDS OF CONCRETE
AB-1	48	STEEL MANUFACTURER	Ø¾" X 2'-0" ANCHOR BOLT W/(2)FW, (3)HHN
AB-2	60	STEEL MANUFACTURER	Ø1" X 2'-6" ANCHOR BOLT W/(2)FW, (3)HHN
AB-4	12	CONTRACTOR	Ø¾" X 2'-6" ANCHOR BOLT W/(2)FW, (3)HHN



- NOTES
- THE FOUNDATION CONTRACTOR SHALL AT ALL TIMES FULLY COMPLY WITH ALL OSHA STANDARDS AS WELL AS THE OWNER'S SAFETY STANDARDS, AS A MINIMUM, ESPECIALLY WITH REGARD TO SHORING OF ALL EXCAVATIONS. THE ENGINEER OR OWNER WILL IMMEDIATELY HALT CONSTRUCTION ACTIVITIES IF THE CONTRACTOR DOES NOT COMPLY WITH THESE STANDARDS. FAILURE TO COMPLY AT ALL TIMES WITH THESE STANDARDS WILL RESULT IN DISMISSAL FROM THE PROJECT.
 - THE FOUNDATION CONTRACTOR IS RESPONSIBLE FOR OBTAINING COPIES OF OSHA STANDARDS AS WELL AS THE OWNER'S SAFETY STANDARDS. COPIES SHALL BE AVAILABLE ON SITE AT ALL TIMES DURING CONSTRUCTION.
 - ALL FOUNDATIONS TO BE CARRIED TO FIRM UNDISTURBED EARTH OR COMPACTED FILL, WITH A MINIMUM BEARING CAPACITY OF 1,500 PSF, UNLESS OTHERWISE NOTED.
 - WASHED STONE AND STRUCTURAL FILL SHALL BE COMPACTED AS SPECIFIED IN THE FOUNDATION SPECIFICATIONS.
 - REINFORCING STEEL SHALL BE GRADE 60 ASTM A-615 OR A-617.
 - FOR QUANTITY, LENGTH & SHAPE OF RODS SEE REBAR SUMMARY & BENDING LEGEND.
 - CONCRETE SHALL BE 4500 P.S.I. @ 28 DAYS. CONCRETE SHALL BE AIR ENTRAINED WITH AN AIR CONTENT BETWEEN FIVE AND SEVEN PERCENT (5%-7%).
 - CONCRETE SLUMP SHALL MEET REQUIREMENTS OF CONCRETE SPECIFICATIONS. THE CONTRACTOR SHALL MAKE OR HAVE MADE A MINIMUM OF ONE (1) SLUMP TEST IN ACCORDANCE WITH ASTM C 143 FOR EACH TRUCKLOAD OF CONCRETE DELIVERED.
 - CONCRETE COVER OVER REINFORCING STEEL SHALL BE THREE INCHES (3") MINIMUM UNLESS OTHERWISE NOTED.
 - ALL CONCRETE TO BE THOROUGHLY VIBRATED DURING PLACEMENT INTO FORMS TO ENSURE ALL VOIDS ARE FILLED.
 - ALL FOUNDATIONS SHALL BE CHAMFERED ONE INCH (1") AROUND ALL TOP EDGES, UNLESS OTHERWISE SHOWN.
 - TO DETERMINE ANCHOR BOLT SPACING, SEE ANCHOR BOLT PATTERN INDICATED. SEE FOUNDATION ANCHOR BOLT SUMMARY FOR DIAMETER, EMBEDMENT LENGTH, THREAD & HOOK REQUIREMENTS.
 - CAREFUL EXAMINATION OF ANCHOR BOLT ORIENTATION MUST BE MADE IN THAT AN X-AXIS & Y-AXIS SYSTEM HAS BEEN INDICATED ON BOTH FOUNDATION PLAN & DETAIL DRAWINGS TO ENSURE PROPER ORIENTATION.
 - ANCHOR BOLT SPACING & EQUIPMENT BASE PLATES SHALL BE VERIFIED TO BE CORRECT PRIOR TO POURING CONCRETE.
 - AFTER FABRICATION ALL BOLTS ARE TO BE HOT DIP GALVANIZED A MINIMUM OF TWO INCHES (2") PAST NOTED THREAD LENGTH.
 - SUBGRADE WILL BE TOPPED WITH THREE INCHES (3") OF CRUSHER RUN & THREE INCHES (3") OF WASHED STONE TO ACHIEVE FINAL SUBSTATION GRADE.
 - SEE DRAWING FP2 FOR TOP OF FOUNDATION ELEVATIONS.
 - CONTRACTOR IS RESPONSIBLE TO COORDINATE INSTALLATION OF ANY CONDUITS LOCATED UNDERNEATH OR PROTRUDING THROUGH FOUNDATIONS. SEE CONDUIT PLAN AND DETAILS FOR CONDUIT LOCATIONS.
 - ALL CONDUITS, WHEN REQUIRED, ARE TO BE PLUGGED OR CAPPED DURING INITIAL CONSTRUCTION TO PREVENT CONTAMINATION.
 - A CONCRETE BONDING AGENT CONFORMING TO ASTM C1059 SHALL BE APPLIED TO ALL ROUGHENED SURFACES PRIOR TO PLACING FRESH CONCRETE.
 - THE CONTRACTOR SHALL PREPARE, OR HAVE PREPARED, IN ACCORDANCE WITH ASTM C-31, FIVE (5) TEST CYLINDERS FROM EACH TRUCKLOAD OF CONCRETE DELIVERED TO THE SITE. WITHIN 20-24 HOURS AFTER BEING PREPARED, THE CYLINDERS SHALL BE DELIVERED TO A QUALIFIED TESTING LABORATORY AND TESTED IN ACCORDANCE WITH THE CONCRETE SPECIFICATIONS AND ASTM C-39. TEST RESULTS ARE TO BE PROVIDED TO THE ENGINEER FOR EVALUATION AND DIRECTION OF CORRECTIVE ACTION IF NEEDED.
 - THE CONTRACTOR SHALL MEET OR EXCEED ALL REQUIREMENTS OF THE CONCRETE SPECIFICATIONS.

PIER No. "1"									
TOTAL No. REQ'D.- 3									
ROD TYPE	SIZE OF REBAR	NO. REQ'D. PER FDN	LENGTH	DIM A	DIM B	TOTAL REBAR	PER ROD	PER FDN	WEIGHT LBS.
CA	#8	19	10'-7"	-	10'-7"	28.26			536.94
CB	#4	13	10'-6"	1'-7"	12'-1"	8.08			105.04
						TOTAL WEIGHT OF REBAR PER FDN =			
						TIMES TOTAL No. OF FDN's REQ'D =			
						641.98			
						1,925.94			

PIER No. "2"									
TOTAL No. REQ'D.- 6									
ROD TYPE	SIZE OF REBAR	NO. REQ'D. PER FDN	LENGTH	DIM A	DIM B	TOTAL REBAR	PER ROD	PER FDN	WEIGHT LBS.
CC	#8	11	7'-7"	-	7'-7"	20.25			222.75
CD	#4	10	7'-4"	1'-7"	8'-11"	5.97			59.70
						TOTAL WEIGHT OF REBAR PER FDN =			
						TIMES TOTAL No. OF FDN's REQ'D =			
						282.45			
						1,694.70			

PIER No. "3"									
TOTAL No. REQ'D.- 6									
ROD TYPE	SIZE OF REBAR	NO. REQ'D. PER FDN	LENGTH	DIM A	DIM B	TOTAL REBAR	PER ROD	PER FDN	WEIGHT LBS.
CC	#8	11	7'-7"	-	7'-7"	20.25			222.75
CD	#4	10	7'-4"	1'-7"	8'-11"	5.97			59.70
						TOTAL WEIGHT OF REBAR PER FDN =			
						TIMES TOTAL No. OF FDN's REQ'D =			
						282.45			
						1,694.70			

PIER No. "4"									
TOTAL No. REQ'D.- 13									
ROD TYPE	SIZE OF REBAR	NO. REQ'D. PER FDN	LENGTH	DIM A	DIM B	TOTAL REBAR	PER ROD	PER FDN	WEIGHT LBS.
CE	#8	11	8'-7"	-	8'-7"	22.92			252.12
CD	#4	11	7'-4"	1'-7"	8'-11"	5.97			65.67
						TOTAL WEIGHT OF REBAR PER FDN =			
						TIMES TOTAL No. OF FDN's REQ'D =			
						317.79			
						4,131.27			

PIER No. "5"									
TOTAL No. REQ'D.- 2									
ROD TYPE	SIZE OF REBAR	NO. REQ'D. PER FDN	LENGTH	DIM A	DIM B	TOTAL REBAR	PER ROD	PER FDN	WEIGHT LBS.
CA	#8	11	10'-7"	-	10'-7"	28.26			310.86
CD	#4	13	7'-4"	1'-7"	8'-11"	5.97			77.61
						TOTAL WEIGHT OF REBAR PER FDN =			
						TIMES TOTAL No. OF FDN's REQ'D =			
						388.47			
						776.94			

FOUNDATION ANCHOR BOLT SUMMARY															
FDN. DESIGNATION	SERVICE	No. Of REQ'D. STRUCT.'s	No. Of FDN. REQ'D. PER STRUCT.	ANCHOR BOLTS										NOTES	
				ITEM No.	QTY./ FDN.	TOTAL QTY. REQ'D.	DIA.	LENGTH				WASHER QTY.-DESC.	NUT QTY.-DESC.		
								EMBED	THREAD MIN.	PROJECTION ABOVE PAD	HOOK				TOTAL
PIER 1	CIRCUIT SWITCHER	1	3	AB-4	4	12	¾"	2'-2"	5"	4"	-	2'-6"	2-FW	3-HHN	ASTM F1554-GR55
PIER 2	1BS3-1Ø BUS SUPPORT	3	1	AB-1	4	12	¾"	1'-9"	5"	3"	-	2'-0"	2-FW	3-HHN	ASTM F1554-GR55
PIER 2	1VS3-VT STAND	3	1	AB-1	4	12	¾"	1'-9"	5"	3"	-	2'-0"	2-FW	3-HHN	ASTM F1554-GR55
PIER 3	1BS6-3Ø BUS SUPPORT	3	2	AB-1	4	24	¾"	1'-9"	5"	3"	-	2'-0"	2-FW	3-HHN	ASTM F1554-GR55
PIER 4	1BS4-3Ø BUS SUPPORT	3	2	AB-2	4	24	1"	2'-2"	5"	4"	-	2'-6"	2-FW	3-HHN	ASTM F1554-GR55
PIER 4	1BS5-2Ø BUS SUPPORT	1	1	AB-2	4	4	1"	2'-2"	5"	4"	-	2'-6"	2-FW	3-HHN	ASTM F1554-GR55
PIER 4	1SS7-SWITCH STAND	1	2	AB-2	4	8	1"	2'-2"	5"	4"	-	2'-6"	2-FW	3-HHN	ASTM F1554-GR55
PIER 4	1SS8-SWITCH STAND	2	2	AB-2	4	16	1"	2'-2"	5"	4"	-	2'-6"	2-FW	3-HHN	ASTM F1554-GR55
PIER 5	1SS2-SWITCH STAND	1	2	AB-2	4	8	1"	2'-2"	5"	4"	-	2'-6"	2-FW	3-HHN	ASTM F1554-GR55

ROD BENDING LEGEND (NOT TO SCALE)									
A = CIRCUMFERENCE									
ROD CA, CC, & CE									
ROD CB & CD									
REFERENCES:									
FOUNDATION PLAN.....14020FP2									
GREENVILLE UTILITIES COMMISSION GREENVILLE, NORTH CAROLINA									
GREENVILLE WEST 230kv TO 115kv SUBSTATION FOUNDATION DETAILS									
Booth & Associates, LLC 301 Cotton Avenue Raleigh, NC 27601 CONSULTING ENGINEERS									
11/28/2018									
© 11/18									
DWN. AG		DATE: 11/28/18		DWG. NO.					
0		ISSUED FOR BIDS		11/28/18		CKD. RSD		FD1	
NO.		REVISIONS		DATE		SCALE: AS NOTED		14020FD	