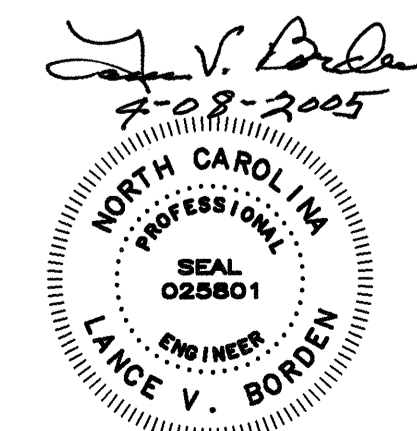


**STRUCTURE GROUNDING**

1. GROUNDING CABLE SHALL BE STRANDED COPPER. MINIMUM WEIGHT 440 LBS. PER 1000 FEET (APPROXIMATELY AWG 2/0).
2. GROUND RODS SHALL BE COPPER CLAD STEEL.
3. NO SHARP BENDS OR SPLICES PERMITTED IN GROUNDING CABLE. INSTALL WITH RADIUS OVER EDGE OF PIERS.
4. ALL ATTACHMENT HARDWARE SHALL BE DESIGNED SPECIFICALLY FOR SUPPORT OF COPPER GROUNDING CABLES.
5. EXOTHERMIC WELDS SHALL UTILIZE MOLDS DESIGNED FOR ATTACHMENT OF 2/0 COPPER CABLE TO VERTICAL STEEL SURFACES AND TO GROUND RODS.
6. INSTALL GROUNDING SYSTEM UPSTREAM AND DOWNSTREAM AT EAST AND WEST TOWERS.
7. 4/0 COPPER GROUNDING CABLE SHALL BE GROUPED WITH LOOP CABLES. SHALL BE EXOTHERMICALLY BONDED TO TOWER STRUCTURES AND EACH END OF THE LIFT SPAN, TERMINATING AT THOSE LOCATIONS. CABLE SHALL BE INSULATED, HIGH STRAND COUNT, TYPE W.
8. EACH OF THE STRUCTURE GROUNDING INSTALLATIONS SHALL PROVIDE A GROUND CONNECTION NOT TO EXCEED 20 OHMS RESISTANCE. ADDITIONAL GROUNDING PROVISIONS SHALL BE ADDED AS MAY BE REQUIRED TO ACHIEVE 20 OHMS MAXIMUM RESISTANCE.



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH			
CAPE FEAR RIVER CROSSING WILMINGTON, NORTH CAROLINA ELECTRICAL ELEVATION AND STRUCTURE GROUNDING			
DRAWN BY		R.L. REED	
SCALE		AS NOTED	
DESIGNED	G.L. FASICK	DETAILED	R.L. REED
CHECKED	L.R. BAKER	CHECKED	G.L. FASICK
DATE		APRIL, 2005	
DRAWING NO.		4 OF 53	