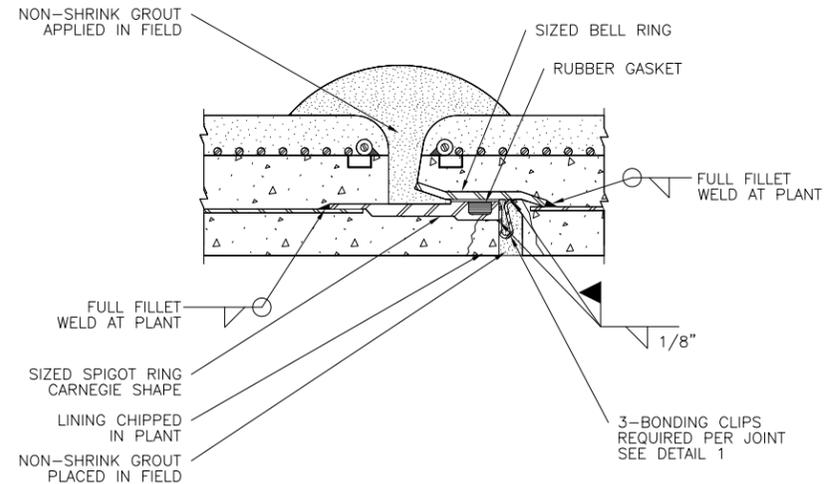


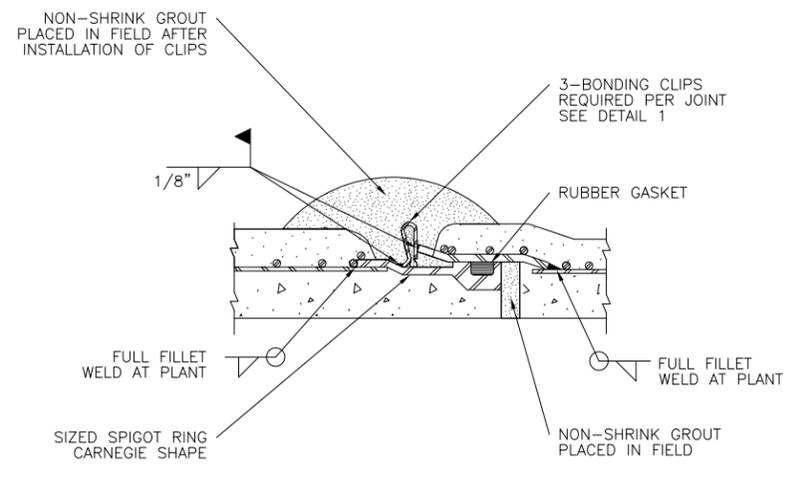
**NOTES:**

1. STEEL BONDING CLIP: MATERIAL SPECIFICATION --- ASTM A366 (COMMERCIAL QUALITY) CUT LENGTH -----  $2\frac{1}{2} \pm \frac{1}{6}$ " WIDTH-----  $1\frac{1}{4} \pm \frac{1}{6}$ "
2. LYTHERM FILLER STRIP TO BE 1" x  $1\frac{1}{2}$ " WIDE TO OVERLAP SIDES OF CLIP.
3. CRIMP JUMPER OVER FILLER AT "A" TO COMPRESS FILLER CLOSE AT PT. "A" AS MUCH AS POSSIBLE WITHOUT CUTTING FILLER PAD.
4. THREE BONDING CLIPS ARE REQUIRED PER GASKETED JOINT (TYPICAL).
5. BONDING NOT REQUIRED FOR WELDED JOINTS.

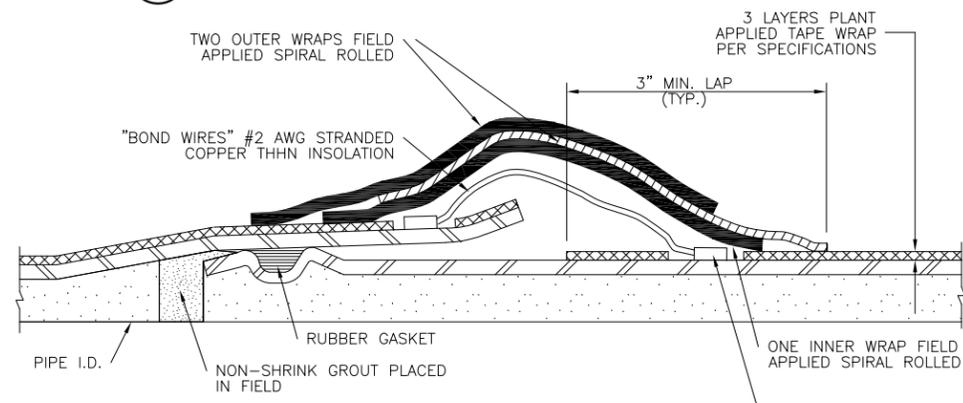
**1 STEEL BONDING CLIP DETAIL**



**2 BONDED JOINT - EMBEDDED CYLINDER PIPE**



**3 BONDED JOINT - BAR WRAPPED CYLINDER PIPE (SIMILAR FOR LINED CYLINDER PIPE)**

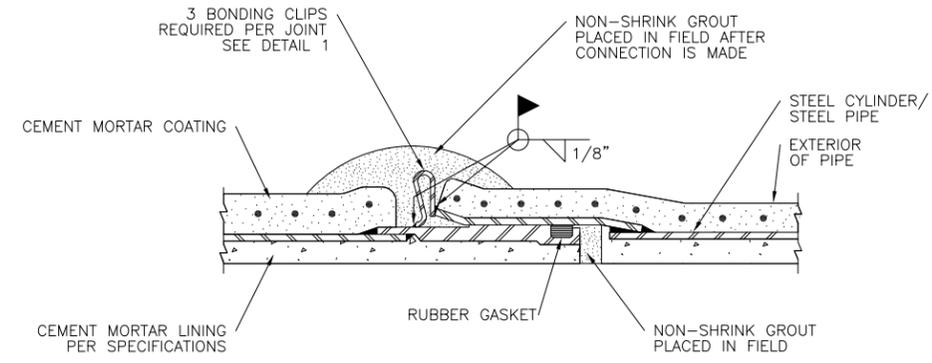


**NOTES:**

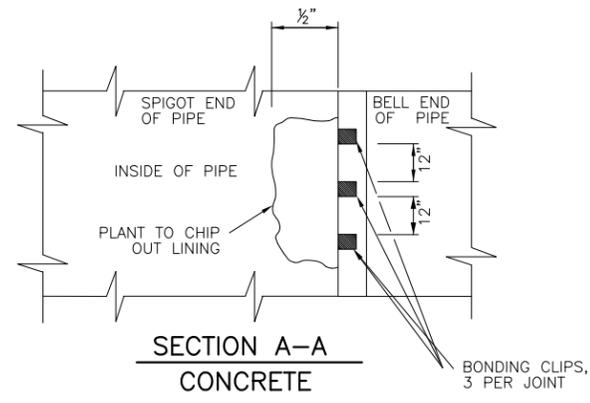
1. STEEL BONDING CLIP IS OPTIONAL TO BOND WIRE.
2. A MINIMUM OF TWO BOND WIRES OR THREE BONDING CLIPS ARE REQUIRED FOR RUBBER GASKETED STEEL PIPE. CLIPS ARE TO BE PROVIDED IN ACCORDANCE WITH DETAILS.
3. BONDING NOT REQUIRED FOR WELDED JOINTS.

**4 O-RING STEEL PIPE JOINT DETAIL**

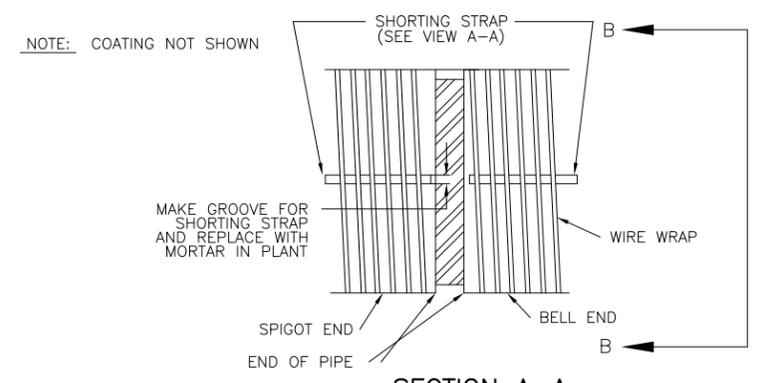
(CEMENT MORTAR LINED & TAPE WRAPPED SHOWN. FLEXIBLE LINING SIMILAR)



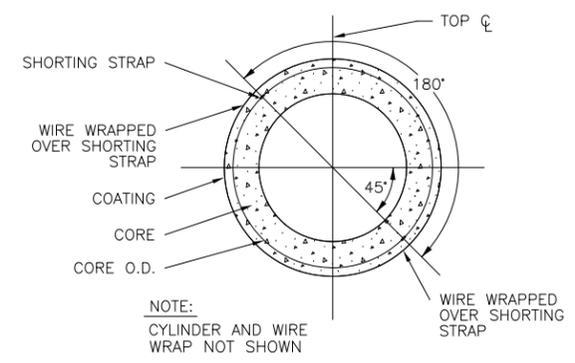
**5 BONDED JOINT - MORTAR COATED STEEL PIPE**



**6 ELECTRICAL CONTINUITY BONDING OF EMBEDDED CYLINDER PIPE**



**SECTION A-A REINFORCEMENT**



**SECTION B-B**

NOTE: PLACE BONDING CLIPS IN INTERIOR JOINT RECESS AS SHOWN. WELD CLIPS TO BELL AND SPIGOT USING 1/8" FILLET WELD. REMOVE SLAG FROM WELD AND FILL RECESS WITH CEMENT MORTAR, COVERING ALL EXPOSED STEEL.

<b>CITY OF HOUSTON</b>	
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
<b>STANDARD LDWL CATHODIC PROTECTION DETAILS FOR JOINT BONDING</b>	
SHEET 1 OF 2 (NOT TO SCALE)	
APPROVED BY:	APPROVED BY:
CITY ENGINEER	DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: NOV-10-2016	DWG NO: