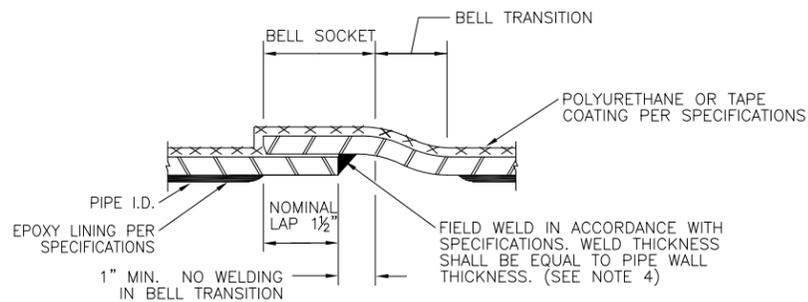
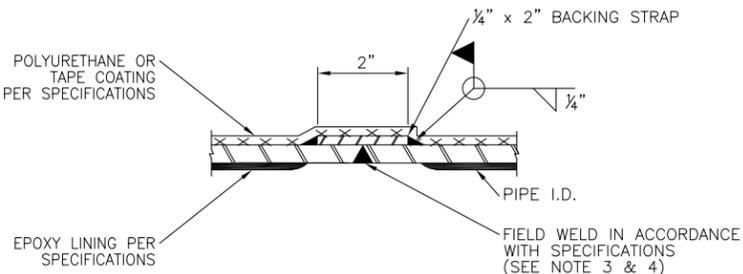


NOTES:

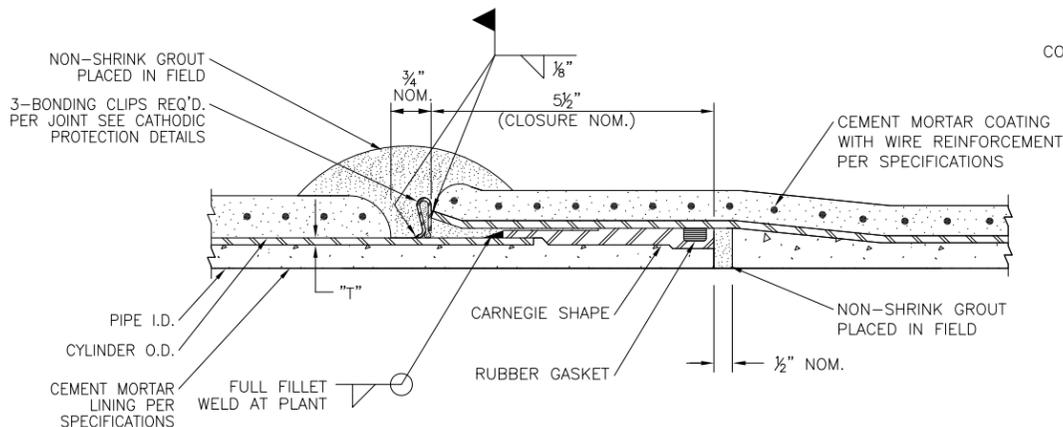
1. OUTSIDE WELD MAY BE SUBSTITUTED FOR INSIDE WELD.



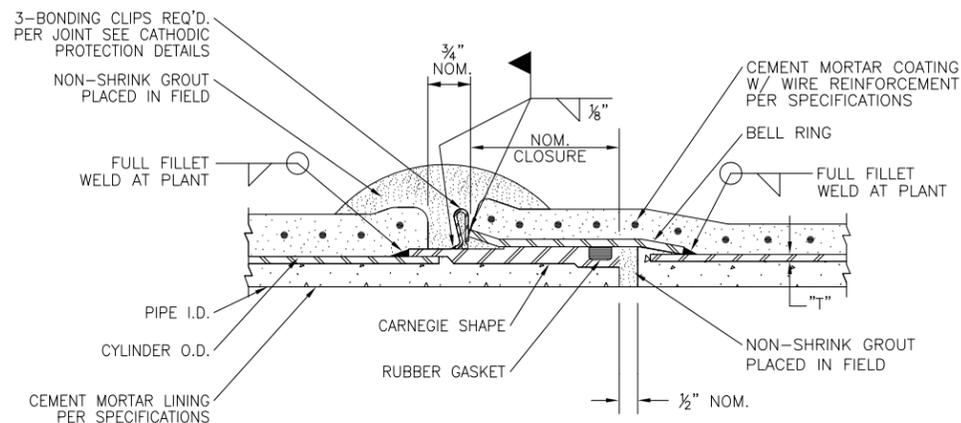
**1 LAP-WELD FIELD JOINT - STEEL PIPE JOINT**  
FLEXIBLE COATING AND LINING



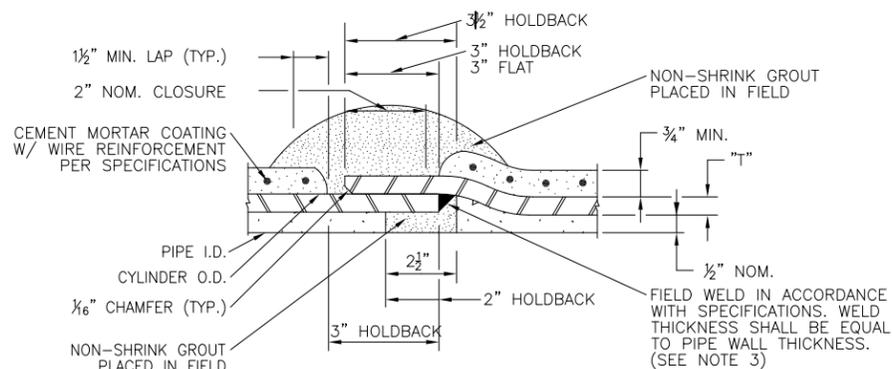
**4 BUTT WELD FIELD JOINT - STEEL PIPE JOINT**  
FLEXIBLE COATING AND LINING



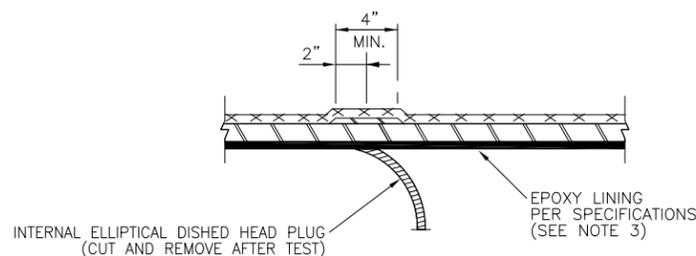
**7 CARNEGIE SPIGOT AND EXPANDED BELL - STEEL PIPE JOINT**  
CEMENT MORTAR LINED & CEMENT MORTAR COATED



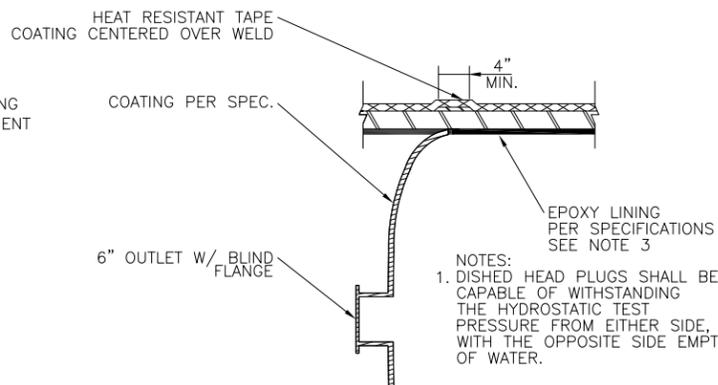
**9 CARNEGIE JOINT - STEEL PIPE JOINT**  
CEMENT MORTAR LINED & CEMENT MORTAR COATED



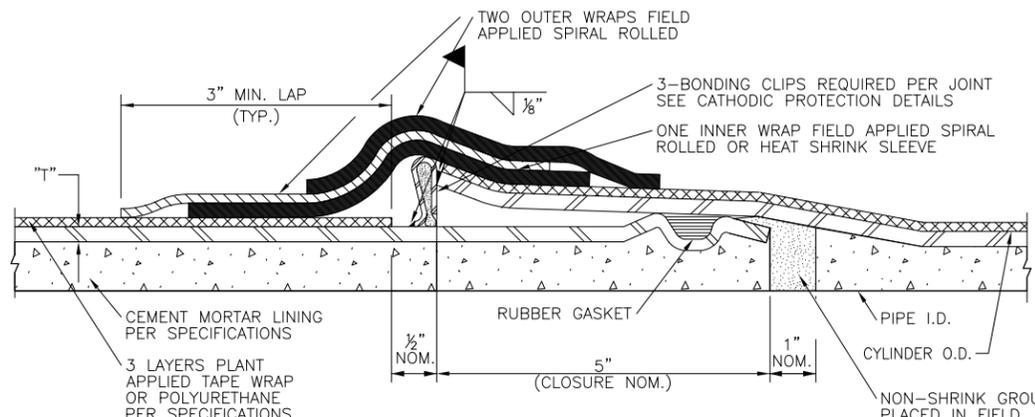
**2 LAP-WELD FIELD JOINT - STEEL PIPE JOINT**  
CEMENT MORTAR LINED & CEMENT MORTAR COATED



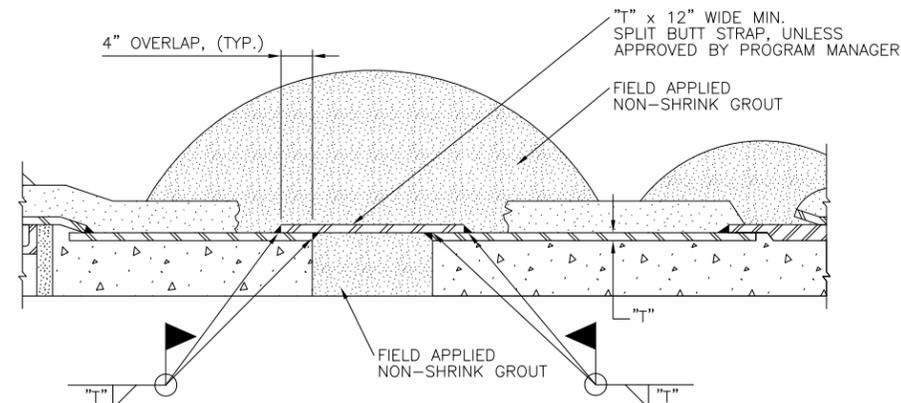
**5 INTERNAL ELLIPTICAL DISHED HEAD PLUG REMOVAL**  
FOR STEEL PIPE WITH FLEXIBLE COATING AND LINING



**8 INTERNAL ELLIPTICAL DISHED HEAD PLUG**  
FOR STEEL PIPE WITH FLEXIBLE COATING AND LINING

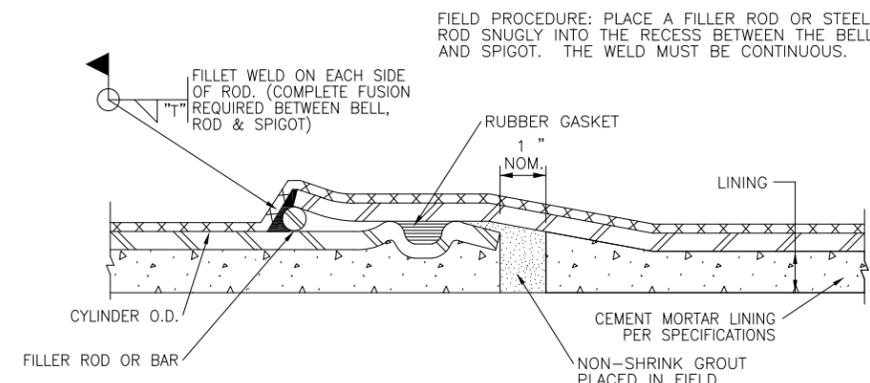


**10 O-RING - STEEL PIPE JOINT**  
CEMENT MORTAR LINED & FLEXIBLE COATING



NOTES:  
1. WELD SIZE SHALL MATCH THICKNESS OF BUTT STRAP AND CARRIER PIPE, AS RECOMMENDED BY THE PIPE MANUFACTURER.  
2. INTERNAL WELD NOT REQUIRED FOR 30\"/>

**3 CLOSURE PIECE**  
FOR STEEL PIPE WITH CEMENT MORTAR LINED AND CEMENT MORTAR COATED (SIMILAR FOR FLEXIBLE COATING AND LINING)



**6 FIELD WELDED O-RING - STEEL PIPE JOINT**

FLEXIBLE COATING AND CEMENT MORTAR LINING (FOR ADJUSTMENTS ONLY AS APPROVED BY ENGINEER AND PIPE MANUFACTURER.)

NOTES:  
1. T = STEEL PIPE WALL THICKNESS AND SIZE OF FILLET ATTACHMENT WELD.  
2. ALL REFERENCES TO PIPE DIAMETER FOR THIS PROJECT SHALL SIGNIFY SIZE MEASURED TO INSIDE DIAMETER OF THE LINED PIPE.  
3. DETAILS 1, 4, 5 AND 8 SHOW EPOXY LINING. CEMENT MORTAR LINING TO BE SIMILAR TO DETAILS ON THIS SHEET SHOWING CEMENT MORTAR LINED PIPE, AS APPROVED BY PROGRAM MANAGER.  
4. SEE SPECIFICATIONS FOR REPAIR OF EPOXY LINING.  
5. WHEN CEMENT MORTAR COATING IS USED FOR STEEL PIPE, FLEXIBLE MASTIC SEALER SHALL BE APPLIED TO THE EXTERIOR OF THE JOINT PRIOR TO JOINT ENGAGEMENT WHEN PIPE IS INSTALLED IN A TUNNEL OR ENCASMENT PIPE.

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