## STEEL PIPE JOINT DETAILS FIELD APPLIED CEMENT-FORM OR PAPER BAND MORTAR COATING 3 1/2" MIN **CEMENT-MORTAR COATING CEMENT-MORTAR COATING** (SHOP APPLIED) (SHOP APPLIED) **CEMENT-MORTAR LINING** CEMENT-MORTAR LINING (SHOP APPLIED) (SHOP APPLIED) LINING SHALL BE BEVELED 3/8" MIN DIA x 6" LONG BONDING JUMPER, FIELD APPLIED CEMENT MORTAR PRE-CURVED TO FIT CONTOUR OF PIPE; NO (SEE NOTE 5) SHAPING OF BONDING JUMPER ON PIPE WILL BE ALLOWED. WELD 1" AT EACH END OF BAR. **RUBBER GASKET** (SEE DETAIL "D") · **ROLLED SPIGOT DETAIL A - RUBBER GASKET JOINT** SPIRAL WRAP TIE WIRE SECURES MESH WIRE HOLD BACK SHOP 1/2" MESH, GALV "RABBIT" WIRE, MINIMUM ONE LAYER COATING 2" MIN FIELD APPLIED CEMENTtp V LENGTH AS REQ'D **MORTAR COATING-**(SEE NOTE 7) FORM OR PAPER BAND, DIAPERED JOINT ONLY SHOP 1 1/2" **CEMENT-MORTAR COATING CEMENT-MORTAR COATING** WELD (SHOP APPLIED) MIN (SHOP APPLIED) **CEMENT-MORTAR LINING** CEMENT-MORTAR LINING **BUTT-STRAP** (SHOP APPLIED) (SHOP APPLIED) SPLIT RING DOUBLE OR SINGLE FIELD APPLIED CEMENT SPLIT MORTAR (SEE NOTE 5) -FIELD **FIELD** WELD WELD **DETAIL B - FIELD WELDED BUTT-STRAP JOINT** FIELD APPLIED 1" 4" STL, SCREWED, SOLID THICK CEMENT-PLUG, W/ SQUARE HEAD. MORTAR COATING (CI PLUG NOT APPROVED) (SEE NOTE 3) 4" MIN DIA STD SADDLE **APPLY GRAPHITE** TYPE STEEL PIPE HALF **BASE THREAD** COUPLING, BLACK, TAPERED **SPIGOT END BELL END** LUBRICANT **THREADS** FIELD WELD t<sub>p</sub> TO SPIGOT 4" MIN STD PIPE PLUG FIELD COAT EXPOSED FIELD WELD INNER METAL SURFACES TO BELL **CEMENT-MORTAR** OF COUPLING, PLUG, AND LINING (SHOP PIPE. W/ CEMENT MORTAR APPLIED)-MIXED W/ CEMENT ADHESIVE **CEMENT-MORTAR** 3/4" **COATING (SHOP** APPLIED)-**DETAIL C - POINTING HANDHOLE DETAIL D - BONDING JUMPER** NTS NTS LOS ANGELES COUNTY WATERWORKS DISTRICTS STANDARD PLAN DEPARTMENT OF PUBLIC WORKS W-35 **APPROVED APRIL 2004** ASSISTANT DEPUTY DIRECTOR SHEET 1 OF 2 DATE

## STEEL PIPE JOINT DETAILS (CONTINUED)

## **GENERAL NOTES:**

- CEMENT MORTAR SHALL BE APPLIED TO WELDED JOINTS <u>ONLY AFTER</u> THE HEAT OF WELDING HAS DISSIPATED.
  JOINT WELDS SHALL NOT BE COOLED BY QUENCHING.
- 2. THE INTERIOR SURFACE OF JOINTS TO BE LINED WITH CEMENT MORTAR SHALL BE CLEANED, AND BRUSHED WITH APPROVED CEMENT ADHESIVE, IMMEDIATELY BEFORE THE MORTAR IS APPLIED.
- 3. CEMENT MORTAR FOR THE INTERIOR OF JOINTS SHALL CONSIST OF ONE PART CEMENT, ONE PART SAND, WATER, AND AN APPROVED CEMENT ADHESIVE ADDED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- 4. CEMENT MORTAR FOR THE EXTERIOR OF JOINTS SHALL CONSIST OF ONE PART CEMENT, ONE PART SAND, AND WATER, AND SHALL BE POURED INTO ONE SIDE OF FORM ONLY.
- 5. THE INTERIOR OF ALL JOINTS SHALL BE SWABBED BY MEANS OF A BALL AND ROD.
- 6. THE POINTING HANDHOLE SHALL BE INSTALLED ADJACENT TO A RUBBER GASKET JOINT, OR CENTERED OVER A BUTT-STRAP JOINT, AND SHALL BE USED AS NOTED ON PLANS OR WHERE A BALL AND ROD SWAB CANNOT BE USED.
- 7. FOR POINTING HANDHOLE, THE MINIMUM LENGTH OF THE BUTT STRAP SHALL BE 9 INCHES FOR ALL PIPE SIZES LISTED IN TABLE BELOW. WITHOUT HAND HOLE, THE MINIMUM LENGTH OF STRAP SHALL BE AS SHOWN IN THE FOLLOWING TABLE:

PIPE SIZES IN INCHES 6 THRU 18 20 THRU 36 MINIMUM LENGTH OF BUTT STRAP REQ'D IN INCHES

4

8. A BOLTED FLANGED JOINT MAY BE USED AS AN ACCEPTABLE ALTERNATE TO THE RUBBER GASKET OR THE BUTT-STRAP JOINT.

LOS ANGELES COUNTY WATERWORKS DISTRICTS

DEPARTMENT OF PUBLIC WORKS

STANDARD PLAN

W-35

SHEET 2 OF 2

**APPROVED** 

ASSISTANT DEPUTY DIRECTOR

APRIL 2004

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