METROPOLITAN UTILITIES DISTRICT Prepared by: D.J. Satterfield Approved by: Jeff Schovanec Approved by: Jeff Schovanec Construction Standard Installation of a Single Insulating Washer Flange Insulating Set No: 8.2.1 Page: 1 of 2 Supersedes: 11-4-13 Effective: 7-9-18

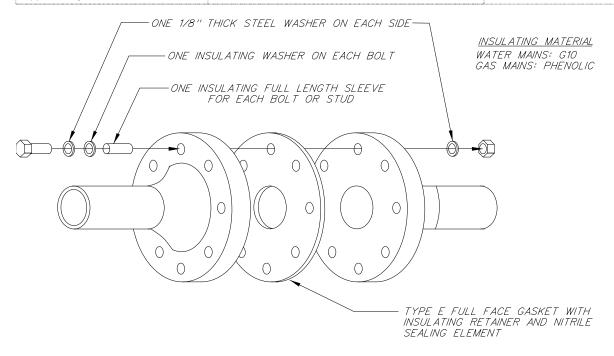


Fig. 1

FLANGE INSULATION WITH SINGLE INSULATING WASHER (Fig. 1)

USE:

Flange insulating sets shall only be installed at locations specified by M.U.D. Engineering.

INSTALLATION:

- 1. Clean and inspect pipe flange faces and gasket.
- 2. Install the gasket and align the flanges and gasket so the bolts or studs will be centered.
- 3. Slip the insulating sleeve over the bolt or stud. Slide the steel and fiber washer over the sleeve up against the head of the bolt.
- 4. Tighten the bolts or studs alternately around the flange by holding the shank steady and tightening the nut to the necessary torque.
- 5. The bolt or stud shall be of sufficient length to extend through the nut a minimum of one full thread but not more than ½ inch.
- 6. Electrical insulation shall be verified as directed by the Corrosion Engineer.

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7. Attach trace wire to steel pipe per Construction Standard <u>8.3.2</u>. If ductile iron pipe is involved and trace wire is available with existing ductile iron pipe, attach test wire to existing trace wire per Construction Standard <u>11.2.2</u>. Install either a roadway box, CC box or test marker. Bring wire(s) up alongside or inside roadway box, CC box or test marker per Construction Standard <u>11.2.2</u>. See Fig. 2.

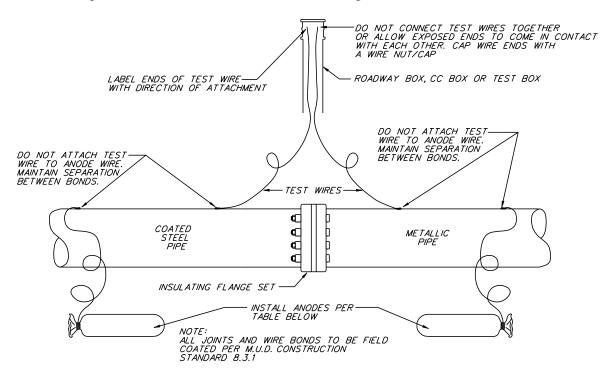


Fig. 2

ANODES REQUIRED		
	Gas	Water
Bare Steel	32#	N/A
Cast Iron	32# w/ Cathodic Clamp	32# w/ Cathodic Clamp
	if O.D. is > 12"	on all sizes
Coated Steel	17# if O.D. is ≤ 12"	17# if O.D. is ≤ 12"
	32# if O.D. is > 12"	32# if O.D. is > 12"
Ductile Iron	None	None

^{**} Added Text

^{***} Added Drawing/Table

