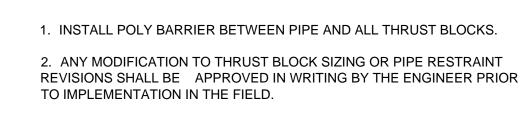


SUPPLIER FOR THE INSTALLATION OF THE GAS LINE. CONTRACTOR SHALL BE RESPONSIBLE FOR INITIAL REVIEW AND CONSTRUCTION COSTS FOR GAS LINE INSTALLATION; UPON FINAL DETERMINATION OF COSTS BY THE UTILITY COMPANY, CONTRACTOR SHALL BILL OWNER FOR ACTUAL COST.

# 



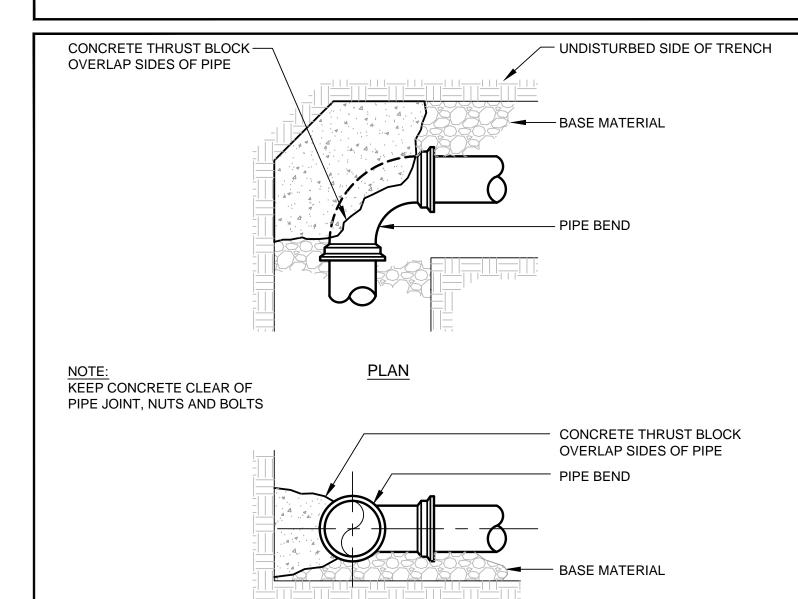
3. ANY WORK RELATING TO WATER PIPING OR DETAILS SHALL BE IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT SPECIFICATIONS.

4. ALL RESTRAINED JOINTS MUST HAVE GRIPRING.

BEARING SURFACE REQUIRED IN SQUARE FEET

PIPE SIZE	1/32 BEND	1/16 BEND	1/8 BEND	1/4 BEND	TEES/CAPS
6"/8"	5.0	5.0	5.0	6.5	5.0
12"	11.5	11.5	11.5	20.0	22.0

## THRUST BLOCK NOTES

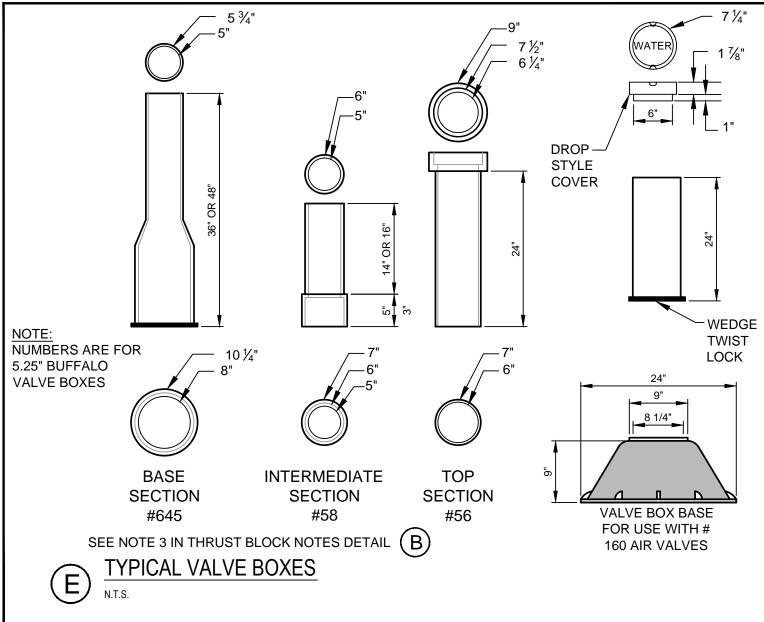


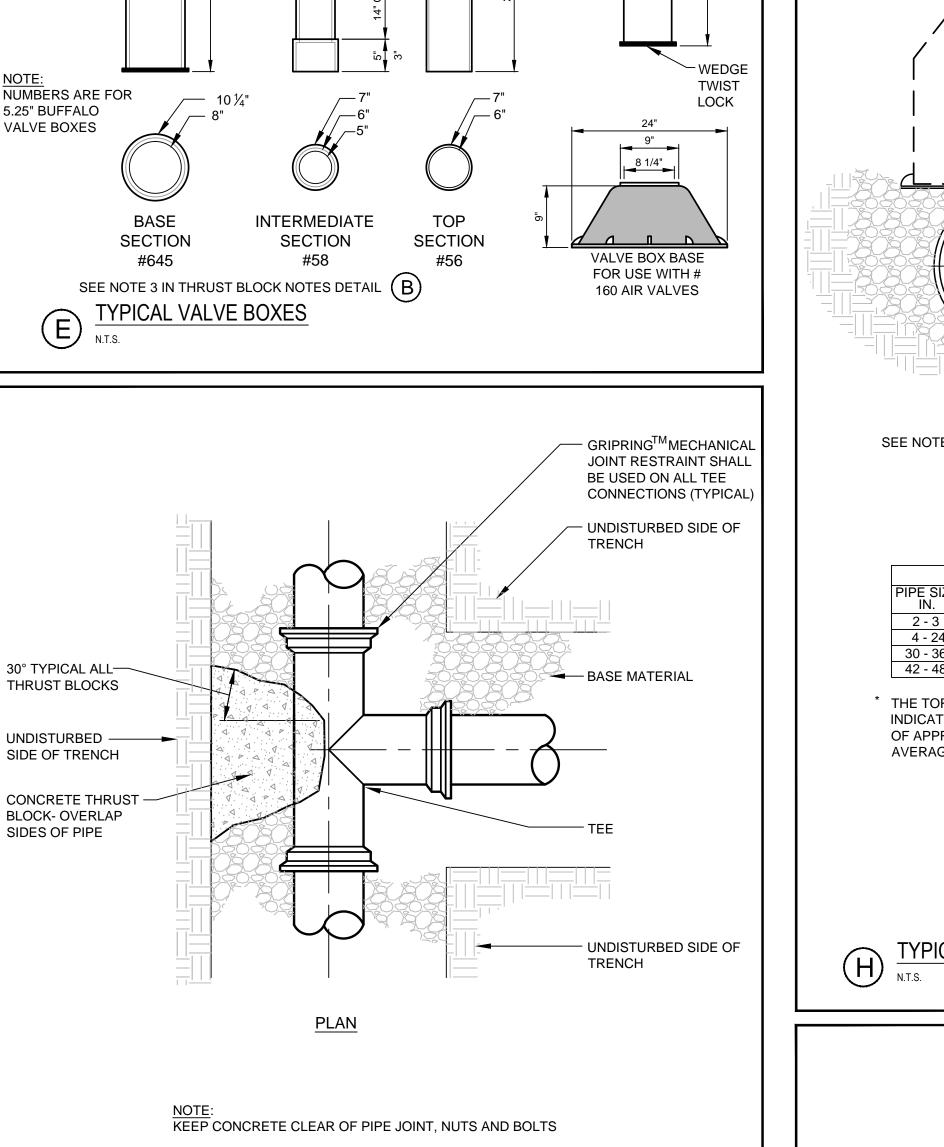
THRUST/RETAINER GLAND SCHEDULE				
1/4 BEND	(90°)	USE POURED-IN-PLACE THRUST BLOCK WITH GRIPRING <sup>TM</sup> MECHANICAL JOINT RESTRAINT		
1/8 BEND	(45°)	THRUST BLOCK w/ GRIPRING TM		
⅓ <sub>6</sub> BEND	(22½°)	THRUST BLOCK w/ GRIPRING TM		
1/ <sub>32</sub> BEND	(11 ½°)	THRUST BLOCK w/ GRIPRING <sup>TM</sup>		

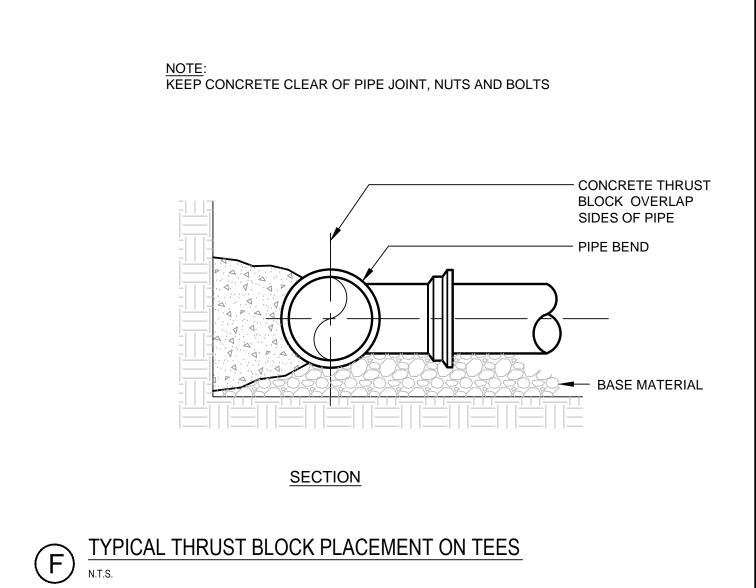
THE ABOVE SCHEDULE IS SUBJECT TO THE APPROVAL OF THE ON-SITE INSPECTOR DUE TO SOILS AND WORKING PRESSURES IN THE AREA.

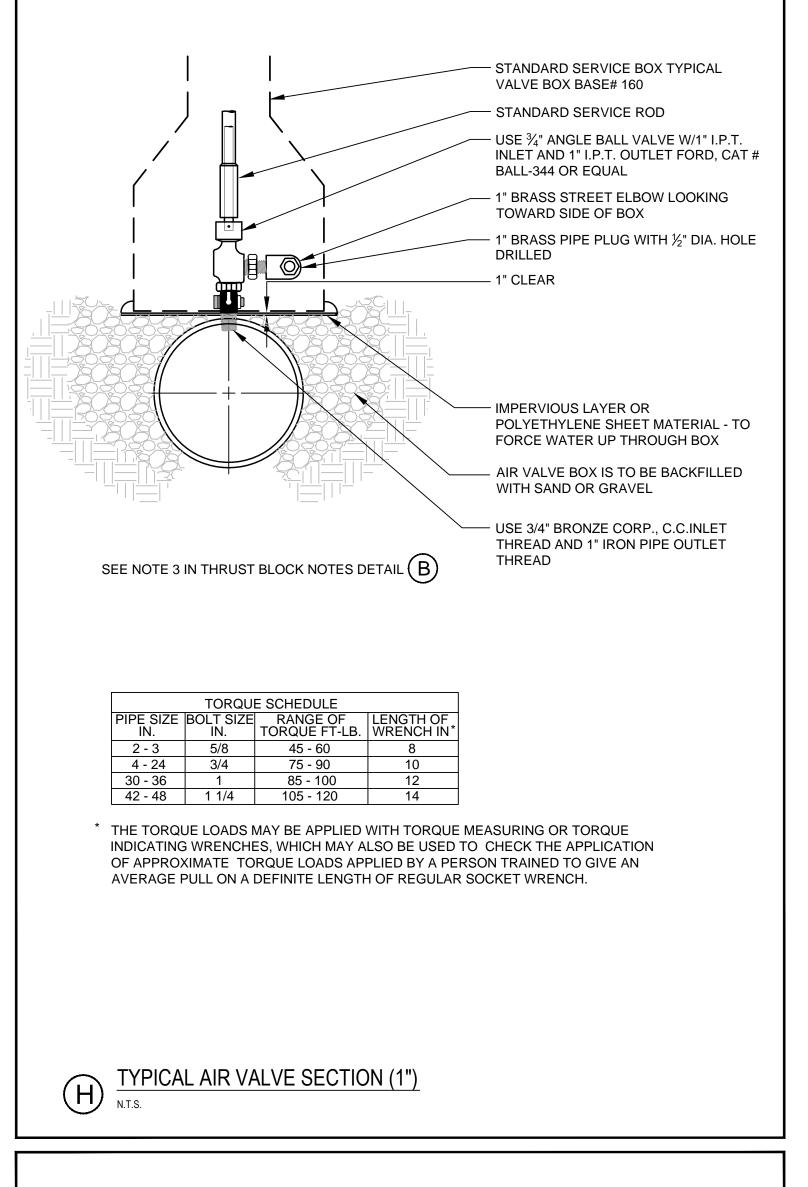
- 1. THE PORTLAND WATER DISTRICT MAY HAVE INSPECTION FEES AND REQUIRE OBSERVATION OF ALL PIPING INSTALLATION BEFORE BURIAL. REFER TO SPECIFICATIONS.
- 2. FOR WATER MAIN LAYOUT SEE DRAWINGS C-4.0
- 3. FOR WATER MAIN PROFILE SEE CONSTRUCTION DRAWINGS C-11.0
- 4. FOR WATER MAIN TRENCH SEE DETAILS ON THIS SHEET
- REFER TO PORTLAND WATER DISTRICT SPECIFICATIONS FOR TESTING AND CHLORINATION REQUIREMENTS.
- 6. ALL HYDRANTS AND VALVES TO BE EPOXY COATED, NUTS AND BOLTS TO BE STAINLESS
- 7. SERVICE RODS FOR DOMESTIC SERVICE OR AIR VALVES TO BE STAINLESS STEEL. TYPICAL THRUST BLOCK PLACEMENT BENDS

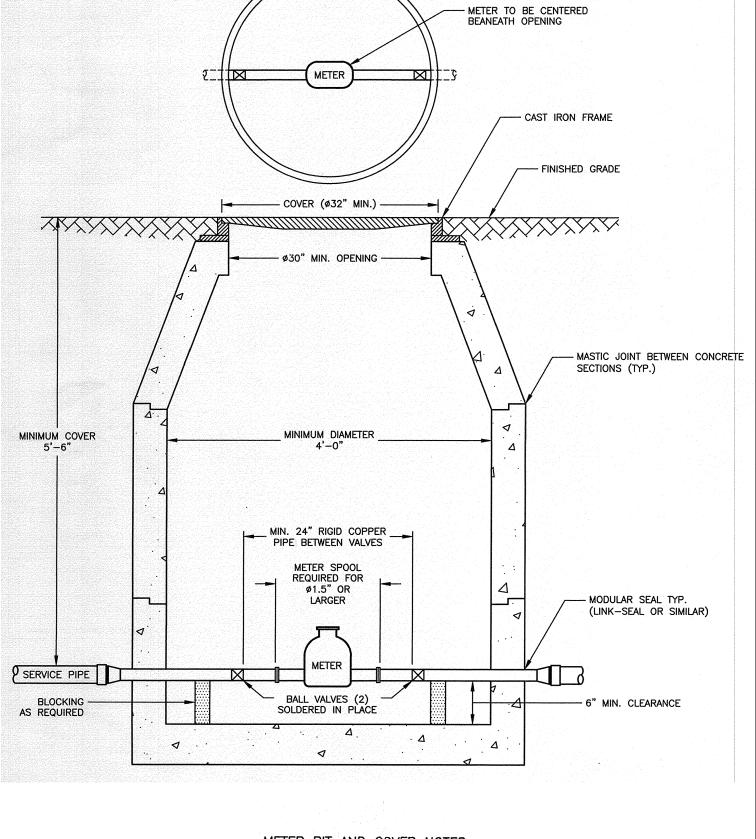
  N.T.S.











### METER PIT AND COVER NOTES

- 1. THE METER PIT SHALL BE SUPPLIED AND INSTALLED BY THE CUSTOMER AND SHALL BE LOCATED ON PRIVATE PROPERTY BETWEEN 10'-0" AND 20'-0" FROM THE PROPERTY LINE.
- 2. THE METER PIT SHALL BE MADE OF PRECAST CONCRETE OF SUFFICIENT SIZE TO PROVIDE 5'-6" MINIMUM GROUND COVER FROM FINISHED GRADE TO THE TOP OF THE SERVICE PIPE. ANY SEAMS BETWEEN CONCRETE SECTIONS SHALL BE SEALED WITH MASTIC JOINT. ALL OPENINGS IN THE CONCRETE FOR SERVICE PIPING SHALL BE SEALED WITH A MODULAR SEAL (LINK-SEAL OR
- 3. THE INTERIOR OF THE METER PIT SHALL BE A MINIMUM OF 4'-0" IN DIAMETER, AND THE METER PIT OPENING SHALL BE A MINIMUM OF 30" IN DIAMETER WITH A CAST IRON FRAME. THE METER PIT COVER SHALL BE CAST IRON, 32" MINIMUM IN DIAMETER, AND BE EITHER PERMANENTLY LABELED "WATER" OR HAVE NO LABEL. ANY STEEL PLATE MATERIAL SHALL BE COATED WITH A RUST
- 4. WALL-MOUNTED LADDER RUNGS SHOULD NOT BE INSTALLED WITHIN METER PIT.
- 5. ALL PIPING INSIDE AND EXTENDING THROUGH THE METER PIT SHALL BE MADE OF COPPER, WITH A MINIMUM OF 6" CLEARANCE FROM THE METER PIT FLOOR. BLOCKING SHALL BE INSTALLED AS REQUIRED TO SUPPORT THE PIPE.
- 6. CUSTOMER SHALL ENSURE THE METER PIT AND COVER ARE PROPERLY RATED FOR TRAFFIC FLOW IF APPLICABLE.

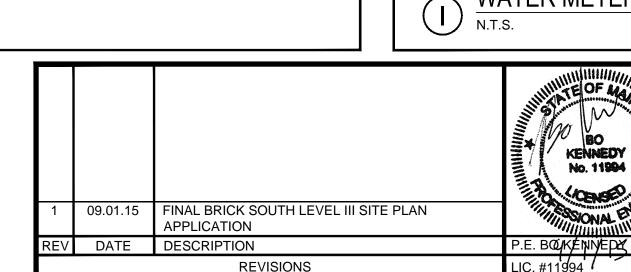
- 7. ONLY PORTLAND WATER DISTRICT PERSONNEL ARE AUTHORIZED TO INSTALL WATER METERS. PORTLAND WATER DISTRICT PERSONNEL WILL BE ADDITIONALLY AUTHORIZED TO OPERATE METER VALVES AS NEEDED FOR INSTALLATION AND
- 8. PORTLAND WATER DISTRICT WILL SUPPLY THE WATER METER AND NECESSARY FITTINGS FOR INSTALLATION. IF REQUIRED, A FLANGED METER SPOOL WILL BE AVAILABLE FOR CUSTOMER PICKUP AT DOUGLASS STREET CUSTOMER SERVICE AND MUST BE INSTALLED BY CUSTOMER PRIOR TO METER SET. ALL OTHER MATERIALS, INCLUDING VALVES, SHALL BE SUPPLIED AND INSTALLED BY THE
- 9. CUSTOMER WILL INSTALL TWO (2) BALL VALVES 24" APART FOR METER INSTALLATION, ALLOWING FOR THE WATER METER TO BE CENTERED UNDER THE
- 10. FOR A SERVICE PIPE WITH A DIAMETER OF 1" OR LESS, CUSTOMER WILL INSTALL RIGID COPPER PIPE (24" MINIMUM) BETWEEN THE BALL VALVES.

METER PIT OPENING. BALL VALVES SHALL BE SOLDERED IN PLACE.

- 11. FOR PIPING WITH A DIAMETER OF 1-1/2" OR LARGER, THE CUSTOMER WILL OBTAIN A FLANGED METER SPOOL PIECE FROM THE PORTLAND WATER DISTRICT. THE CUSTOMER IS RESPONSIBLE FOR ENSURING THAT THE SPOOL PIECE IS
- 12. THE METER PIT MAY HOUSE UP TO TWO 5/8", 3/4" OR 1" METERS. INSTALLATION OF MULTIPLE METERS IN A METER PIT MUST RECEIVE PRIOR APPROVAL FROM THE PORTLAND WATER DISTRICT.

INSTALLED PRIOR TO METER INSTALLATION.

# WATER METER PIT DETAIL N.T.S.



BRICK NORTH AND SOUTH BUILDINGS AT THE FOREFRONT AT THOMPSON'S POINT WATER AND GAS SERVICE

FAY, SPOFFORD & THORNDIKE ENGINEERS · PLANNERS · SCIENTISTS 100 YEARS 778 MAIN ST, SUITE 8, SOUTH PORTLAND, ME 04106 DATE: APRIL 2015 ESIGNED: BEK SCALE: N.T.S.

JOB NO. 2982.05

C-8.7

**DETAILS** CHECKED: SRB ILE NAME: 2982.05-BS DET FOREFRONT PARTNERS |, LP