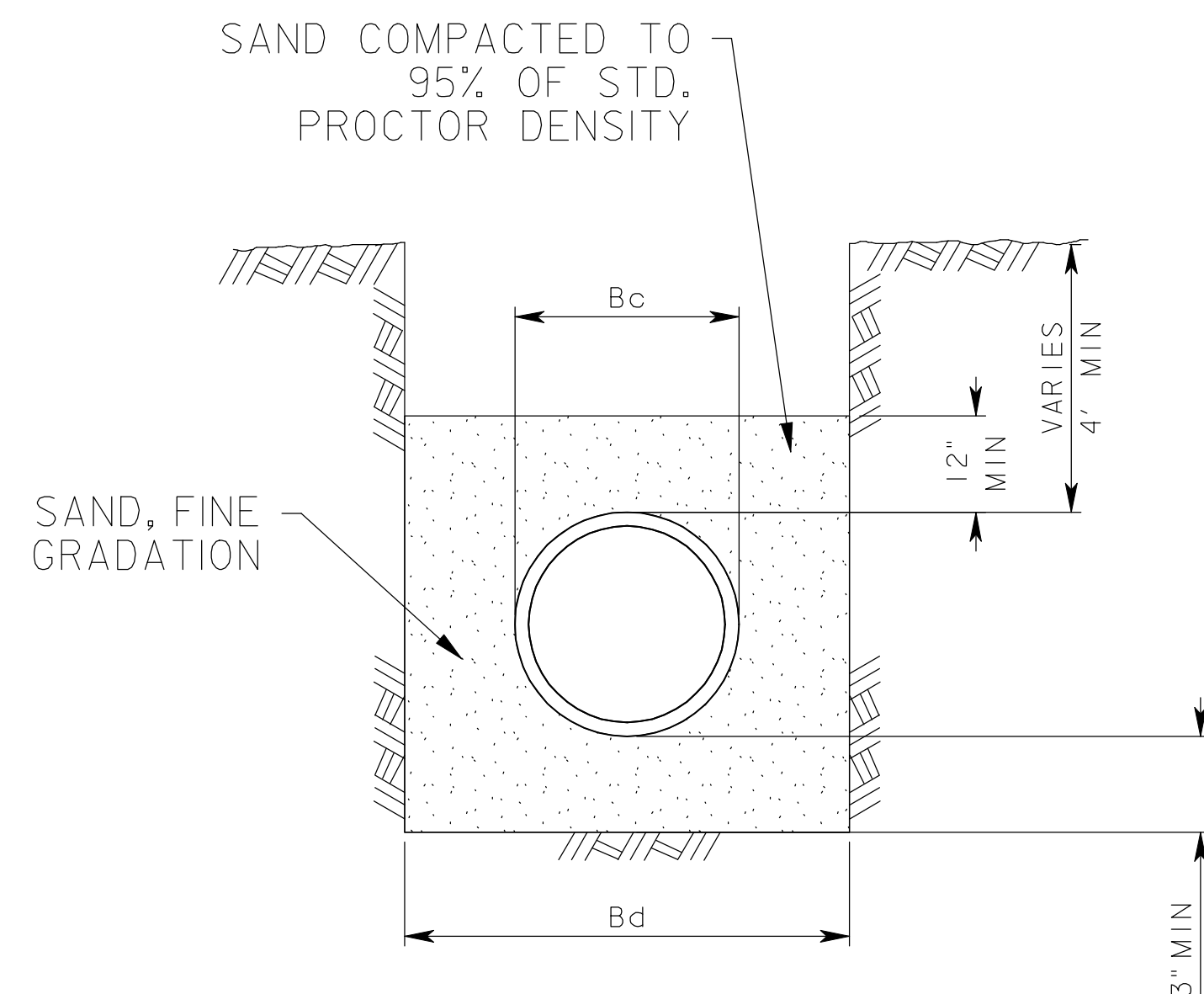


NOTES:

- FOR SIZE AND LENGTH OF CASING REQUIRED SEE PLAN AND PROFILE SHEETS.
- ALL CARRIER PIPE JOINTS INSIDE STEEL CASING PIPE ARE TO BE RESTRAINED WITH MEGA-LUG RESTRAINTS OR APPROVED EQUAL.

PSI MODEL NO. C8G-2 CASING ISOLATORS AS MANUFACTURED BY PIPELINE SEAL AND INSULATOR, INC. OR APPROVED EQUAL (TYP). INSTALL PER MANUFACTURER'S INSTRUCTIONS.

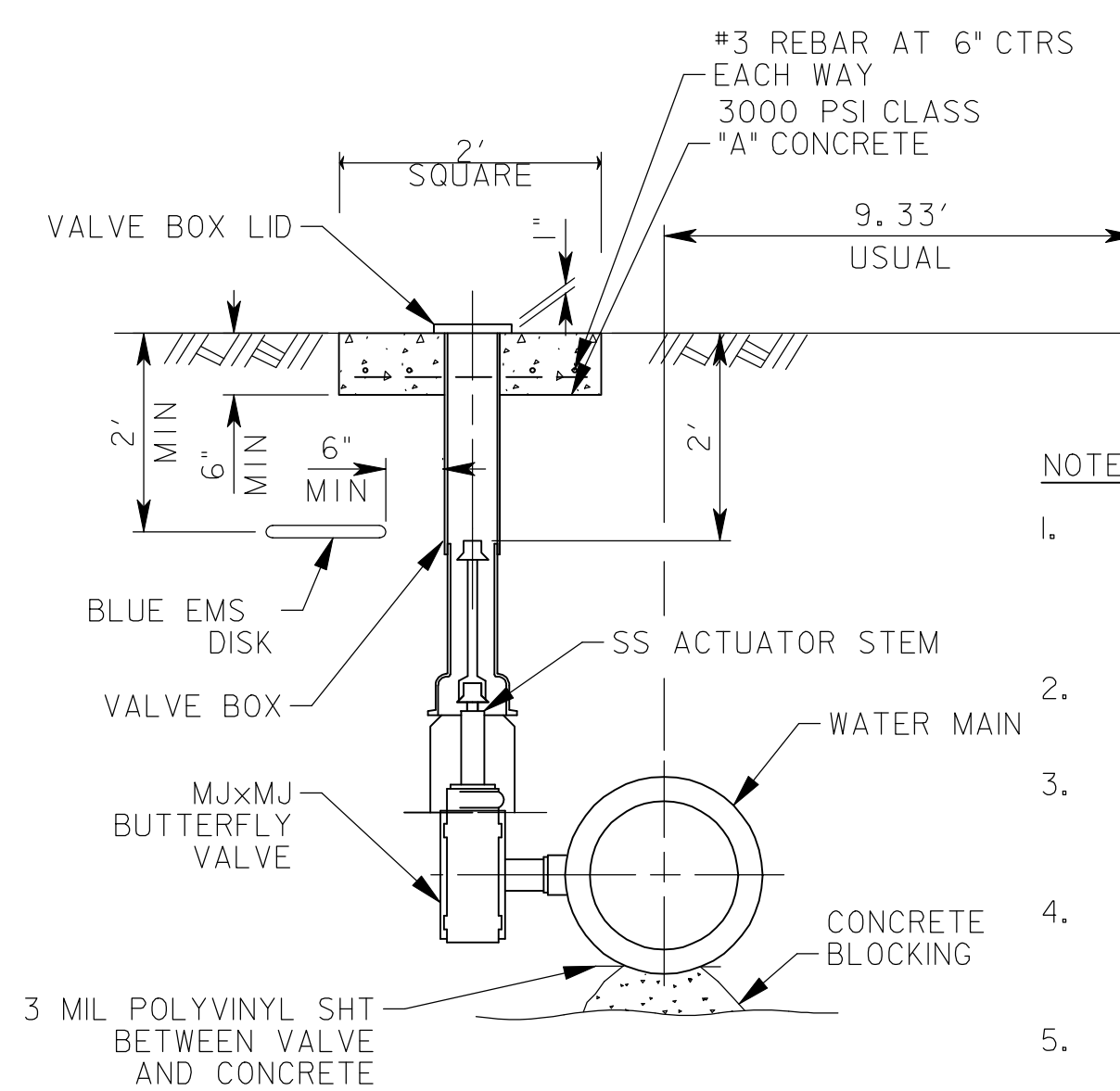
CASING DETAIL
Not To Scale



PIPE EMBEDMENT DETAIL
Not To Scale

NOTES:

- FOR 12" DIAMETER PIPE AND SMALLER:
MINIMUM - "Bd" (TRENCH WIDTH) = OUTSIDE DIAMETER OF PIPE PLUS 16" OR A MINIMUM OF 24", WHICHEVER IS GREATER
- FOR PIPE DIAMETERS GREATER THAN 12" TO 24":
MINIMUM - "Bd" (TRENCH WIDTH) SHALL BE LIMITED TO OUTSIDE DIAMETER OF PIPE PLUS 16"

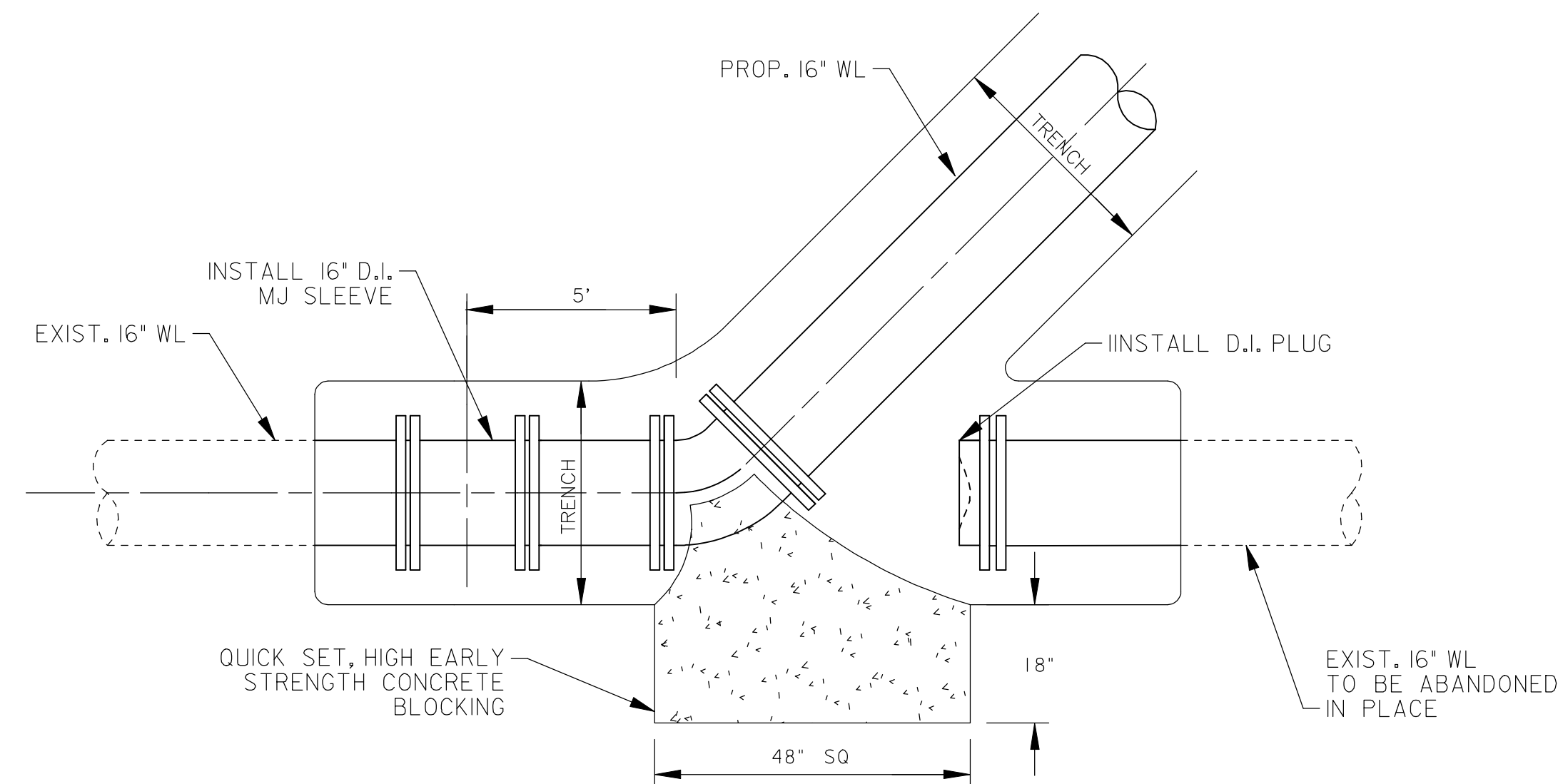


NOTES:

- IF VALVE OPERATING NUT IS MORE THAN 3' BELOW PAVEMENT SURFACE, PROVIDE EXTENSION STEM TO 2' BELOW PAVEMENT SURFACE.
- ALL JOINTS ARE TO BE RESTRAINED. MEGA-LUG OR APPROVED EQUAL.
- STA AND O/S AS SHOWN ON THE PLANS IS TO THE CENTERLINE OF THE WATER MAIN.
- BUTTERFLY VALVE SHALL CONFORM STRICTLY TO AWWA C504 FOR SHORT BODY CLASS 150B.
- MECHANICAL JOINTS SHALL CONFORM STRICTLY TO AWWA C10 FOR MIN 250 PSIG WORKING PRESSURE.

BUTTERFLY VALVE INSTALLATION AND BOX EXTENSION STEM DETAIL

Not To Scale



THRUST BLOCKING AT CONNECTION TO EXISTING 16" WL

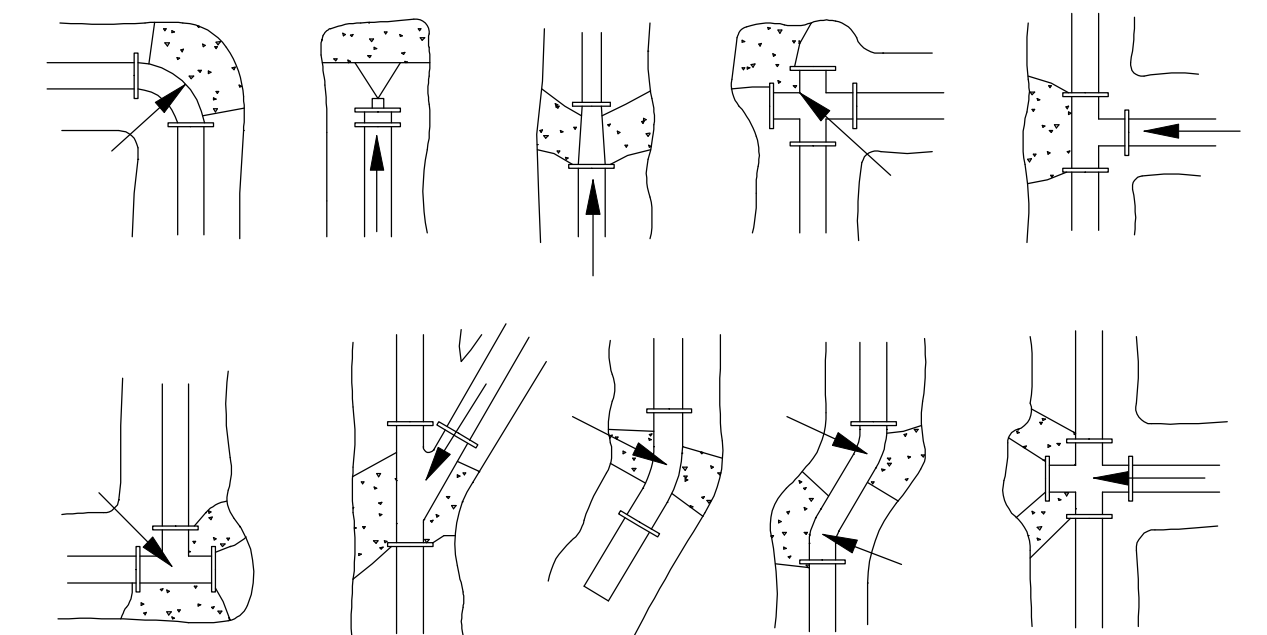
Not To Scale

HORIZONTAL BLOCKING TABLE

AREA REQUIRED (IN SQUARE FEET) BEARING AGAINST UNDISTURBED TRENCH WALL

PIPE SIZE (IN.)	THRUST (POUNDS) DEAD END AND TEE	BLOCKING (SQUARE FEET)					
		DEAD END AND TEE	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND	5" DEFLECT
4	2,450	1.23	1.73	0.94	0.50	0.50	0.50
6	5,513	2.76	3.90	2.11	1.08	0.54	0.50
8	9,802	4.90	6.93	3.75	1.91	0.96	0.50
10	15,315	7.66	10.83	5.86	2.99	1.50	0.67
12	22,054	11.03	15.59	8.43	4.30	2.16	0.96
14	30,018	15.01	21.23	11.49	5.86	2.94	1.31
16	39,207	19.60	27.73	15.01	7.65	3.84	1.71

BASED ON 2,000 PSF SOIL BEARING CAPACITY AND 195 PSILINE PRESSURE (150 PSI WORKING PRESSURE PLUS 30% FOR WATER HAMMER)



TYPICAL THRUST BLOCKING DETAILS

NOTE:

- THE EARTH BEARING SURFACE SHALL BE UNDISTURBED MATERIAL. KEEP ALL JOINTS FREE FROM CONCRETE. THRUST BLOCK TO BE CONSTRUCTED OF 1,500 PSI (28 DAY) CONCRETE AND PLACED AS SHOWN ON "TYPICAL THRUST BLOCKING DETAILS" ABOVE.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL ADEQUATE THRUST BLOCKING. THE HORIZONTAL BLOCKING TABLE SHOWS THE MINIMUM THRUST BLOCKING AREA REQUIRED (IN SQUARE FEET) BEARING AGAINST UNDISTURBED TRENCH WALL.
- ALL FITTINGS SHALL BE BLOCKED REGARDLESS OF THE ANGLE OR DIRECTION, EXCEPT AS NOTED IN THE CHART.
- SOIL BEARING STRENGTH IS ASSUMED TO BE 2,000 PSF. SITE CONDITIONS MAY VARY WHICH WILL REQUIRE MODIFICATIONS TO THE BLOCKING CALCULATIONS.
- NO CONCRETE SHALL BE PLACED OVER PIPE JOINTS, NUTS, OR BOLTS.

RECORD DRAWING

This drawing is a compilation of the original sealed engineering drawing and modifications by addenda, change orders and information furnished by the contractor. Information shown that was provided by the contractor and others not associated with the design engineer cannot be verified for accuracy or completeness. Original sealed drawing is on file at the office of AECOM TECHNICAL SERVICES, Inc., TBPE REG. NO. F-3580

ORIGINAL DRAWING SEALED & SIGNED BY

T.H. Gaertner, P.E.
TX NO. 37124
ON 8-7-09

NO.	REVISION	BY	DATE

City of Rockwall, Texas

**IH 30
WATER LINE IMPROVEMENTS**

STANDARD WATER DETAILS

2 OF 3

AECOM

AECOM TECHNICAL SERVICES, INC.
16000 DALLAS PARKWAY, SUITE 350
DALLAS, TEXAS 75248
WWW.AECOM.COM
TBPE REG. NO. F-3580

Unit	AECOM Water	Scale:	Horz: AS SHOWN	Vert: AS SHOWN	Date	11/4/2011
Designed	JR/RH	Checked	JR/TG	Project No.	60072620	
Drawn	RH/FG	Approved	GH	Sheet	23 of 28	