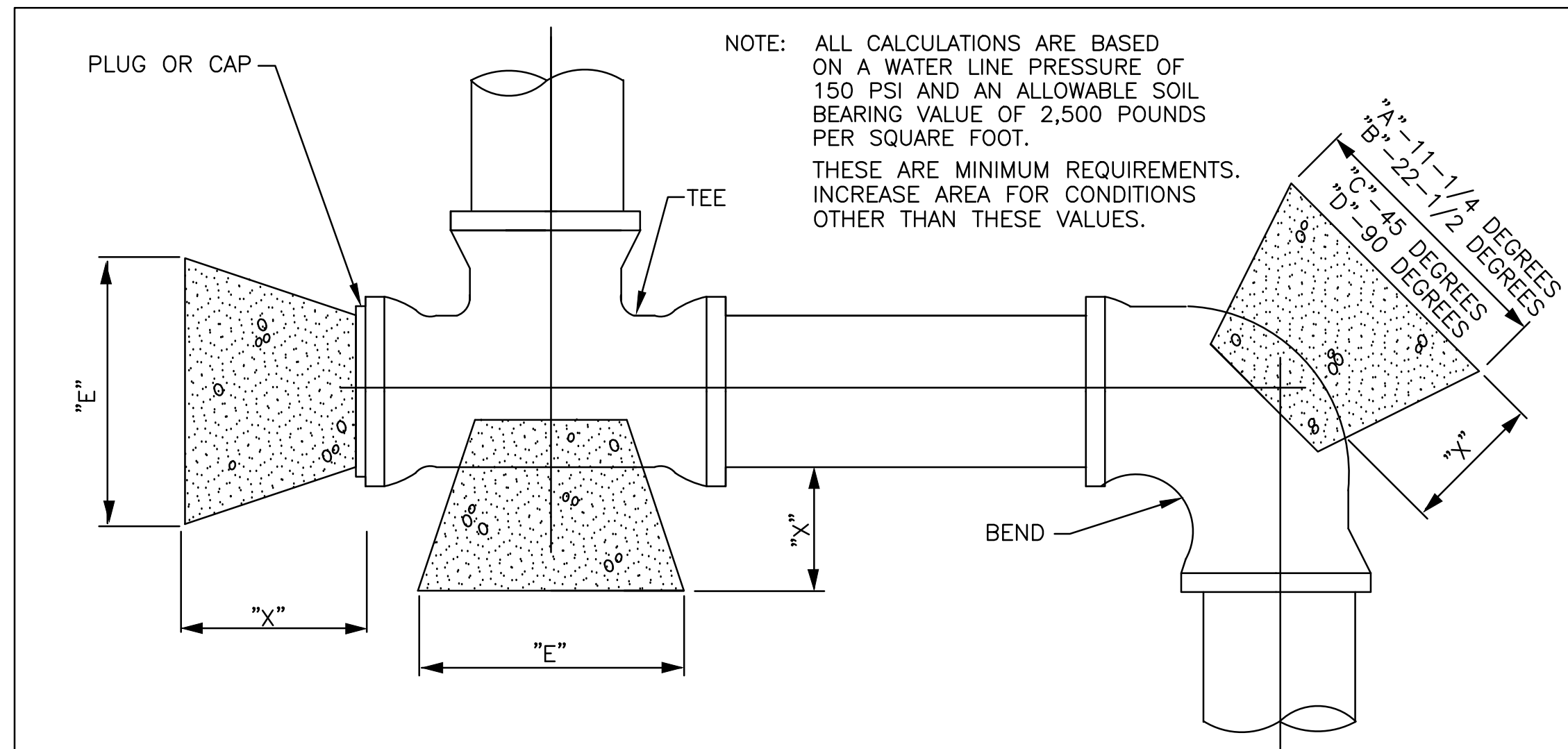


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**HORIZONTAL BLOCKING TABLE**

PIPE SIZE	"X" DIM. IN. FT.	11-1/4 DEGREES		22-1/2 DEGREES		45 DEGREES		90 DEGREES		TEE & PLUG	
		"A"	MIN. AREA	"B"	MIN. AREA	"C"	MIN. AREA	"D"	MIN. AREA	"E"	MIN. AREA
4"	1.5	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.06	1.00	1.00
6"	1.5	1.00	1.00	1.00	1.00	1.14	1.30	1.55	2.40	1.30	1.70
8"	1.5	1.00	1.00	1.08	1.18	1.52	2.31	2.07	4.27	1.74	3.02
10"	1.5	1.00	1.00	1.35	1.84	1.90	3.61	2.58	6.66	2.17	4.71
12"	1.5	1.00	1.33	1.63	2.65	1.86	5.19	3.10	9.60	2.61	6.79
14"	1.5	1.03	1.81	1.90	3.60	2.66	7.07	3.61	13.06	3.04	9.24
16"	2.0	1.18	2.36	2.17	4.71	3.04	9.23	4.13	17.06	3.47	12.06
18"	2.0	1.33	2.99	2.44	5.96	3.42	11.69	4.65	21.59	3.91	15.27
20"	2.0	1.48	3.70	2.71	7.35	3.80	14.43	5.16	26.66	4.34	18.85
21"	2.0	1.55	4.07	2.85	8.11	3.99	15.91	5.42	29.39	4.56	20.78
24"	2.0	1.77	5.32	3.25	10.59	4.56	20.77	6.20	38.39	5.21	27.14
27"	2.5	1.99	6.73	3.66	13.40	5.13	26.29	6.97	48.58	5.86	34.35
30"	2.5	2.22	8.31	4.07	16.55	5.70	32.46	7.74	59.98	6.51	42.41
33"	2.5	2.44	10.06	4.47	20.02	6.27	39.28	8.52	72.57	7.16	51.31
36"	2.5	2.66	11.97	4.88	23.83	6.84	46.74	9.29	86.37	7.81	61.07
39"	3.0	2.88	14.05	5.29	27.97	7.41	54.86	10.07	101.36	8.47	71.68
42"	3.0	3.10	16.30	5.69	32.43	7.98	63.62	10.85	117.56	9.12	83.13

NOTE: CLASS "B" CONCRETE 2,000 PSI SHALL BE USED FOR ALL BLOCKING UNLESS OTHERWISE NOTED ON STANDARD DETAILS OR PLANS.

THE MINIMUM VERTICAL DIMENSION OF ALL BLOCKING SHALL BE 1.5 TIMES THE PIPE DIAMETER WITH AT LEAST 0.75 TIMES THE PIPE DIAMETER EXTENDING BOTH ABOVE AND BELOW THE PIPE CENTERLINE. THIS DIMENSION DETERMINES THE "A" DIMENSION FOR 11-1/4° BENDS.

FOR 22-1/2°, 45°, 90°, AND TEES AND PLUGS, THE VERTICAL DIMENSION SHALL BE EQUAL TO THE HORIZONTAL DIMENSION SHOWN TO PRODUCE THE REQUIRED MINIMUM AREA.

ALL MINIMUM AREAS ARE IN SQUARE FEET.

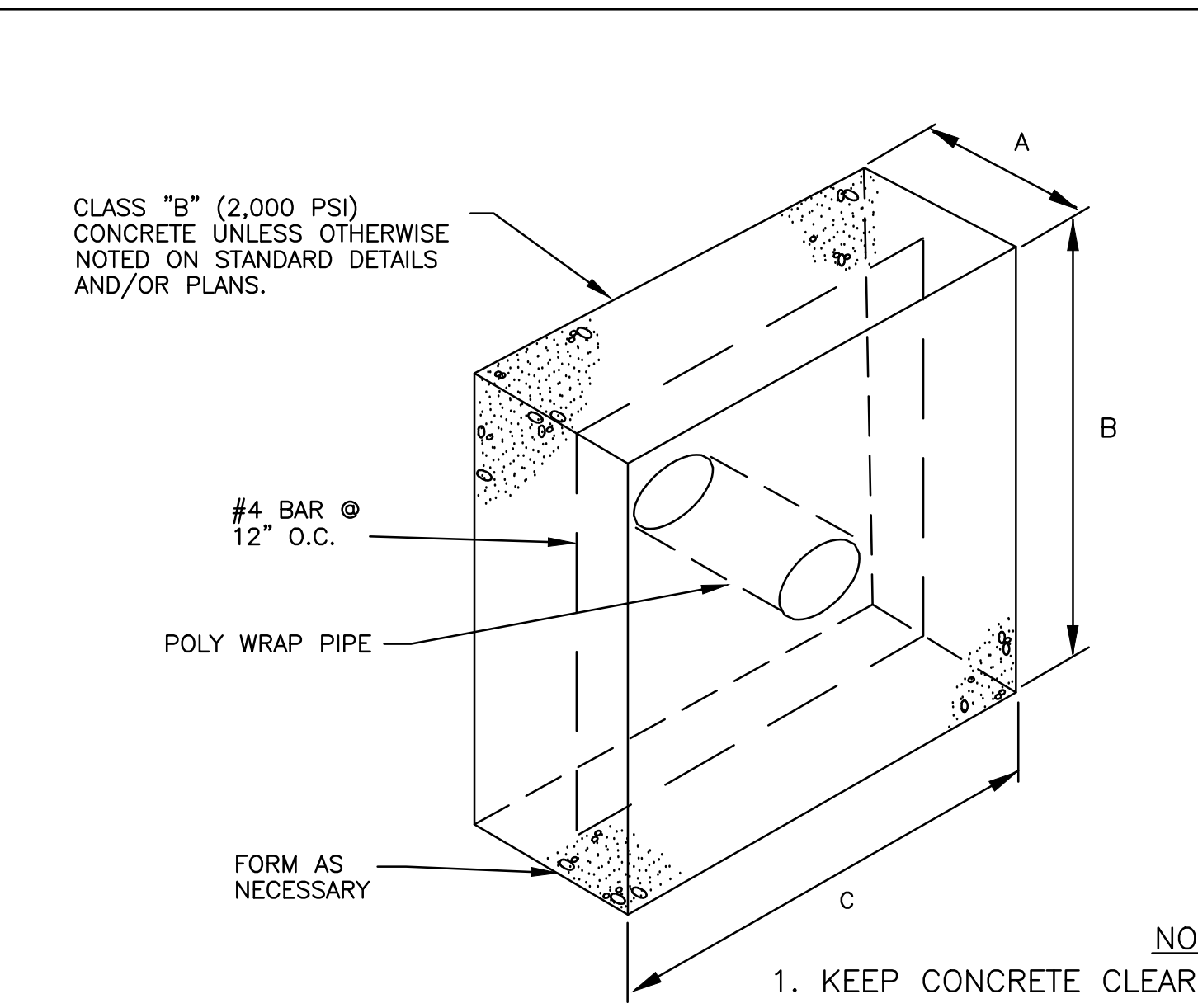
BLOCKING TO BE AGAINST UNDISTURBED TRENCH WALLS AND BOTTOM.

AS A MINIMUM, ALL PIPE FITTINGS IN PRESSURE SITUATIONS SHALL ALSO BE RESTRAINED BY AN APPROVED THRUST RESTRAINT DEVICE.

**FIGURE 5**  
HORIZONTAL THRUST BLOCK  
ARLINGTON WATER UTILITIES

REV: 02/16/12

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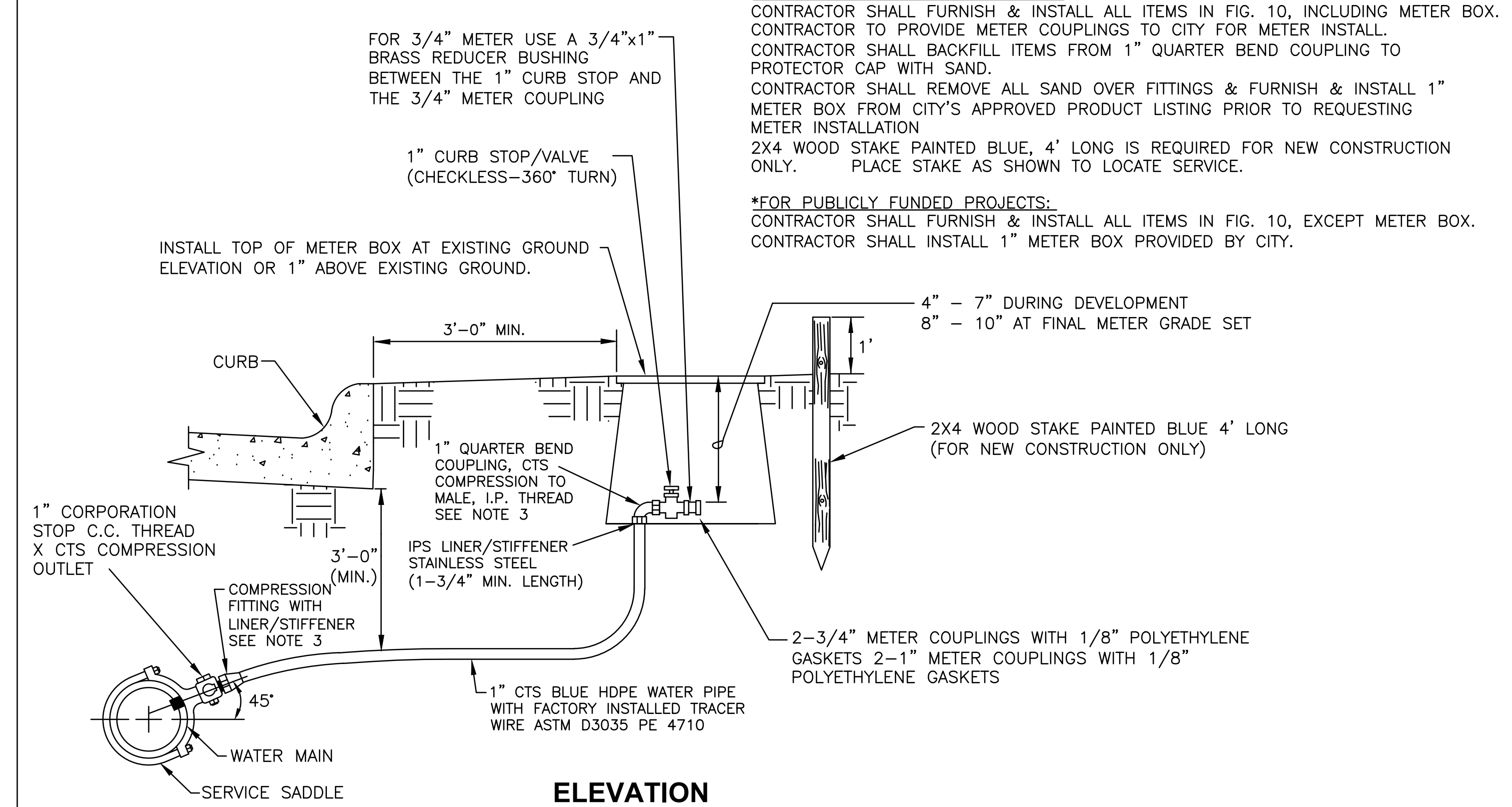


NOTES:  
1. KEEP CONCRETE CLEAR OF PIPE JOINTS & BOLTS.  
2. ALL PIPE FITTINGS BE RESTRAINED BY AN APPROVED THRUST RESTRAINT DEVICE.

PIPE NOMINAL DIA. (in.)	BENDS				
	90°	45°	22-1/2°	11-1/4°	
6	*VOL. REQ'D. C.F.	28.27	22.61	11.33	5.65
	A FT.	1.75	1.5	1.0	0.75
	B FT.	4.0	3.88	3.36	2.75
8	*VOL. REQ'D. C.F.	50.27	40.21	20.11	10.05
	A FT.	2.0	1.75	1.5	1.0
	B FT.	5.0	4.8	3.66	3.2
10	*VOL. REQ'D. C.F.	78.54	62.83	31.41	15.71
	A FT.	2.25	2.0	1.75	1.5
	B FT.	5.9	5.6	4.25	3.25
12	*VOL. REQ'D. C.F.	153.94	123.15	61.57	30.79
	A FT.	4.0	3.5	2.0	1.75
	B FT.	6.2	6.0	5.54	4.2

\*VOLUME CALCULATED ON THE BASIS OF CONCRETE REACTING THRUST ON THE RESPECTIVE BENDS UNDER AN INTERNAL PRESSURE OF 150 PSI AND CONCRETE WEIGHT OF 150 LB. PER CU. FT.

**FIGURE 6**  
VERTICAL TIE-DOWN BLOCK  
ARLINGTON WATER UTILITIES



**ELEVATION**  
NOT TO SCALE

- NOTES:**
- DOUBLE STRAPPED BRONZE SERVICE SADDLES SHALL BE USED FOR ALL SERVICE TAPS. AWWA C800 SADDLE MUST BE DESIGNED FOR PIPE MATERIAL BEING TAPPED.
  - SERVICES SHALL BE CONTINUOUS WITH NO JOINTS FROM CORP. STOP TO QUARTER BEND.
  - ALL COPPER FITTINGS SHALL BE COMPRESSION FITTINGS WITH LINER/STIFFENER (STAINLESS STEEL, MUST BE A STIFFENER RECOMMENDED BY COMPRESSION FITTING MANUFACTURER.
  - NO TAPS SHALL BE LESS THAN 1" MINIMUM.
  - METERS SHALL NOT BE INSTALLED IN EXISTING OR PROPOSED SIDEWALKS OR WITHIN 3' OF DRIVEWAYS OR STREETS.
  - METERS AND TAPS SHALL BE LOCATED ON SAME SIDE OF MAIN.
  - UNLESS OTHERWISE STATED ON CONSTRUCTION PLANS ALL MATERIALS UTILIZED MUST BE ON THE ARLINGTON WATER UTILITIES APPROVED PRODUCT LISTING.
  - TRACER WIRE SHALL BE 10 AWG (AVERAGE WIRE GRADE). HDPE COATED SINGLE STRAND COPPER CLAD STEEL TO BE INSTALLED CONTINUOUSLY (NO SPLICING ALLOWED) FROM THE WATER MAIN TO THE METER BOX. 8" EXPOSED IN THE METER BOX ABOVE QUARTER BEND.
  - TYPE "K" SOFT COPPER SERVICES TO BE USED FOR GAS STATIONS AND OTHER SITES WHICH USE GASOLINE AND OTHER HYDRO CARBONS.

**FIGURE 10**  
1" WATER SERVICE FOR  
1" AND 3/4" OUTLETS  
ARLINGTON WATER UTILITIES

REV: 06/06/2016

**CHESTER W. DITTO GOLF COURSE CLUBHOUSE**  
CITY OF ARLINGTON  
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No.	Date
Revisions	
Project No.	21538.00
Drawn	-CH -XT -MW -HP
Checked	-MDS
Approved	

**CONSTRUCTION DOCUMENTS**

**WATER DETAILS**

Drawing No. **C4.02**

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