

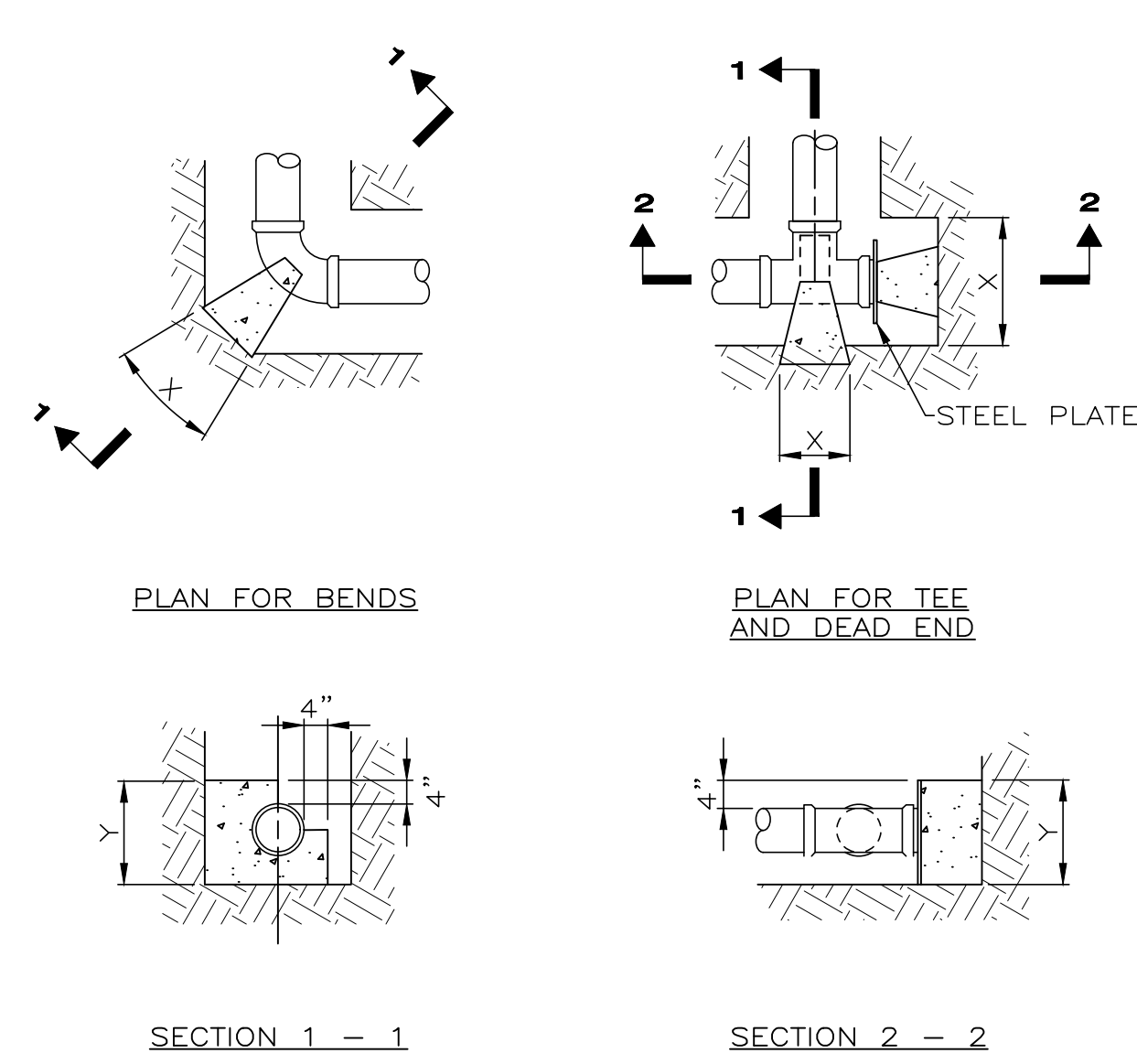
FOR WATER ONLY
 SEE FIG 3.17.1 FOR SANITARY

LAKE COUNTY
 DEPARTMENT OF UTILITIES
 TRENCH AND BEDDING DETAILS
 DATE: 6-16 DRAWN BY: DDB SCALE: NONE

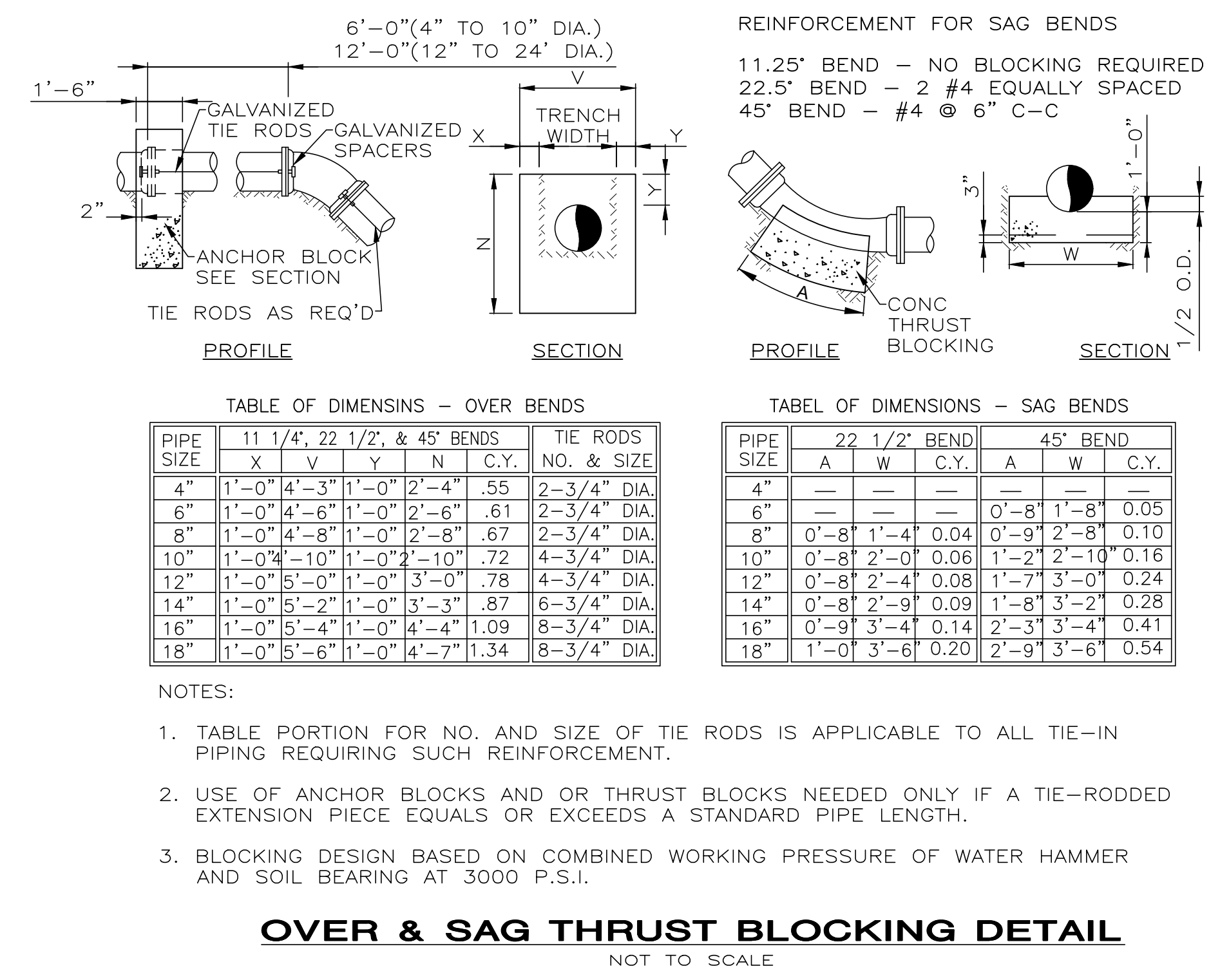
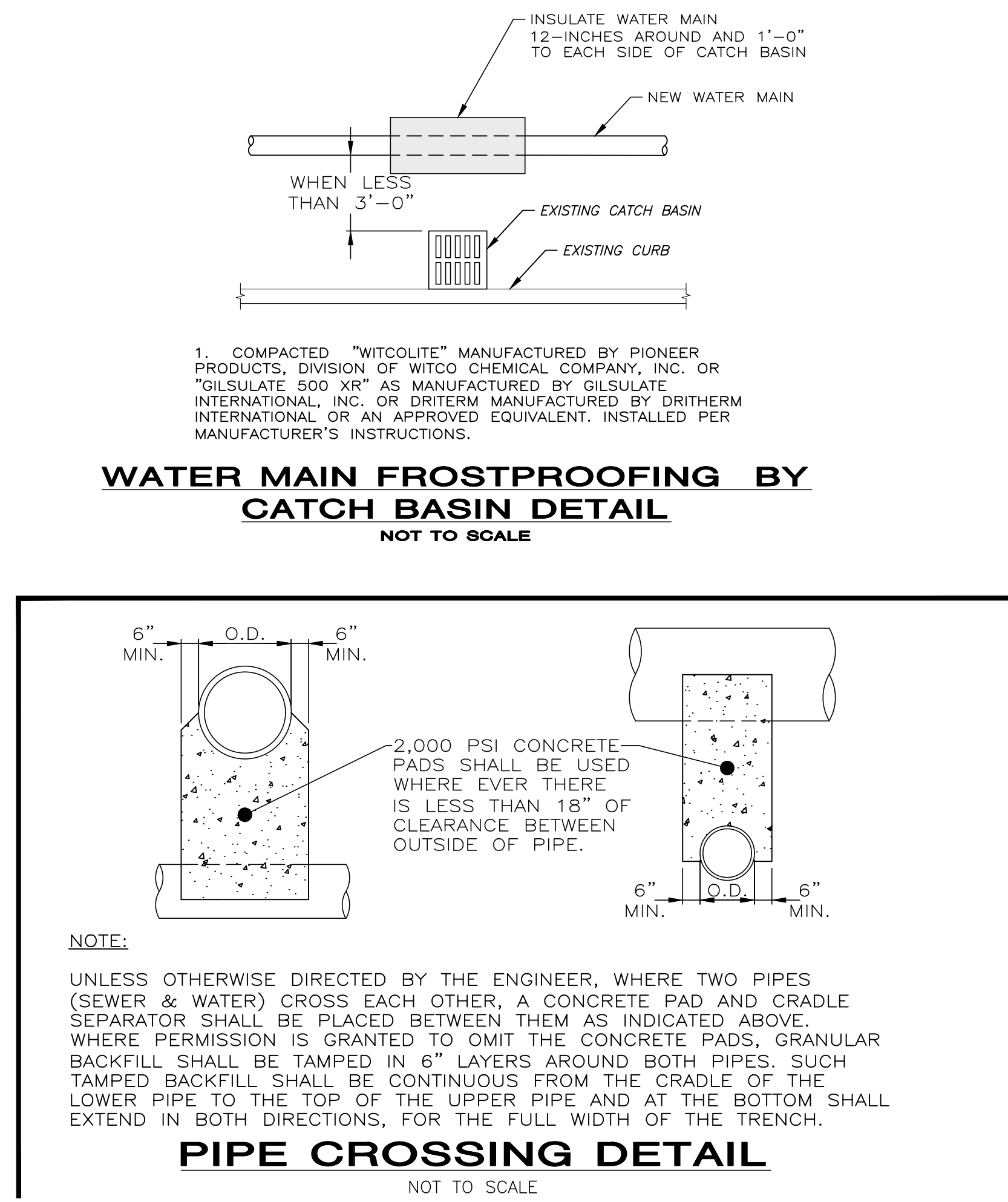
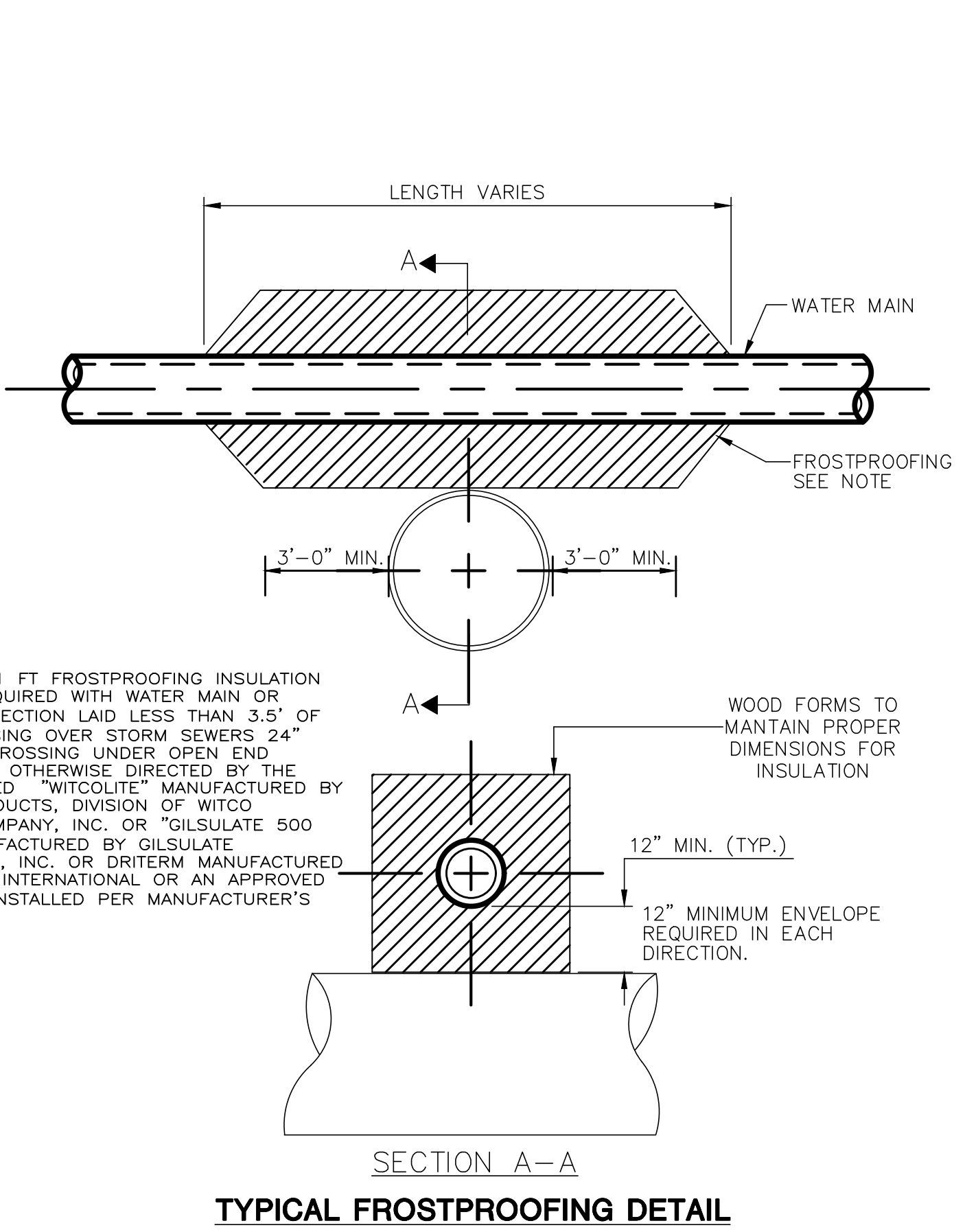
SIZING SCHEDULE BEARING FACE (X Y) IN SQ. FT. CONCRETE VOLUME IN CU. YD.

PIPE SIZE	22-1/2° BEND SOIL BEARING CAPACITY			45° BEND SOIL BEARING CAPACITY		
	1,000 P.S.F.	3,000 P.S.F.	5,000 P.S.F.	1,000 P.S.F.	3,000 P.S.F.	5,000 P.S.F.
4	1.40	0.46	0.26	2.70	0.90	0.54
6	2.80	0.93	0.56	5.50	1.83	1.10
8	4.80	1.60	0.96	9.60	3.20	1.92
10	7.90	2.63	1.96	15.70	5.23	3.14
12	11.30	3.76	2.26	22.30	7.43	4.46
14	15.30	5.10	3.06	30.20	10.06	6.04
16	19.80	6.60	3.96	39.10	13.03	7.82
	1.17	0.76	0.49	1.21	0.79	0.51

PIPE SIZE	90° BEND SOIL BEARING CAPACITY			TEE OR DEAD END SOIL BEARING CAPACITY		
	1,000 P.S.F.	3,000 P.S.F.	5,000 P.S.F.	1,000 P.S.F.	3,000 P.S.F.	5,000 P.S.F.
4	4.90	1.63	0.96	3.50	1.16	0.70
6	10.20	3.40	2.04	7.20	2.40	1.44
8	17.70	5.54	3.54	12.50	4.16	2.50
10	28.90	9.60	5.76	20.40	6.80	4.06
12	41.10	13.70	8.22	29.10	9.70	5.82
14	55.80	18.60	11.16	39.50	13.16	7.90
16	72.20	24.06	14.44	51.10	17.03	10.22
	2.14	1.39	0.90	1.54	1.00	0.65



THRUST BLOCKING DETAIL
 NOT TO SCALE



STATE OF OHIO
 MICHAEL P. CYVAS
 56012
 REGISTERED PROFESSIONAL ENGINEER

your trusted advisor
 consultants
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ERIE STREET WATER LINE REPLACEMENT
 LAKE COUNTY DEPARTMENT OF UTILITIES
 - WILLOUGHBY -
 CONSTRUCTION DETAILS 3

PROJECT NO. 180608
 DISCIPLINE CIVIL
 SHEET NAME CD-03
 SHEET 16 OF 20