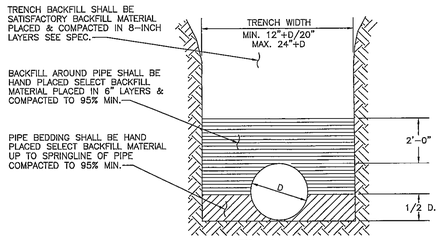
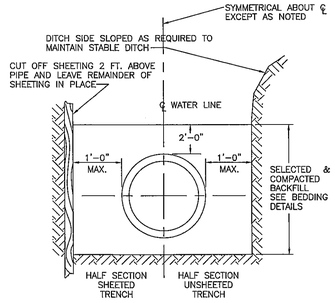


TYPE 2
PIPE BEDDING DETAIL
FOR DUCTILE IRON & P.V.C. PIPE
N.T.S.



WATER LINE PIPE
TRENCH DETAIL
N.T.S.

NOTES:

1). THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL, HIS METHOD OF RESTRAINING THE VALVE OR HYDRANT PRIOR TO ORDERING MATERIAL. FOR THRUST BLOCKING CONSTRUCT THE HYDRANT THRUST BLOCK THE SAME SIZE AS FOR TEE. BLOCK DRAIN HOLE.

2). WHERE MINIMUM DISTANCE REQUIRED USE CLOW-F-1217 (OR EQUAL) ANCHORING TEE WITHOUT ANCHORING COUPLING BETWEEN TEE & GATE VALVE.

3). BURY LINE AS MARKED ON HYDRANT BY THE MANUFACTURER.

4). CONTRACTOR WILL PROVIDE AND INSTALL BLUE HYDRANT DELINEATORS AT LOCATIONS DESIGNATED BY THE ENGINEER.

5). CONTRACTOR WILL UTILIZE VARIOUS ADJUSTMENT TECHNIQUES, GRADLOCK, SPECIAL TEES OR OTHER A.W.W.A. APPROVED FITTINGS.

6). ALL FIRE HYDRANTS SHALL BE PAINTED YELLOW.

7). DUCTILE IRON FLANGED OFF-SET MAY BE USED FOR ADJUSTING FIRE HYDRANT TO FINISHED GRADE.

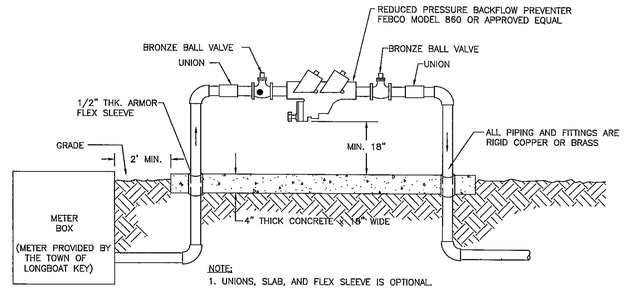
8). ONLY ONE (1) FIRE HYDRANT ASSEMBLY RISER KIT SHALL BE ALLOWED PER FIRE HYDRANT AND SHALL BE SUPPLIED BY FIRE HYDRANT MANUFACTURER.

9). VALVE STEM EXTENSIONS SHALL BE PINNED TO THE OPERATING NUT, AND SHALL BE SUPPLIED BY THE VALVE MANUFACTURER.

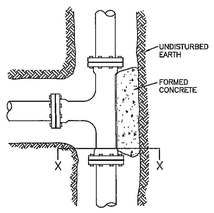
10). RESTRAINED JOINTS ON BACKFLOW PREVENTER AND FIRE HYDRANT CAN BE STAINLESS STEEL RODS OR OTHER APPROVED DEVICE.

11). ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED IN 8-MIL THICK BLACK PLASTIC.

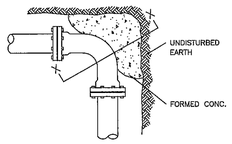
12). FIRE HYDRANT TO BE WATEROUS PACER MODEL ONLY.



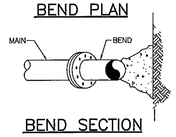
1/2"-2" REDUCED PRESSURE BACKFLOW
PREVENTION ASSEMBLY INSTALLATION
N.T.S.



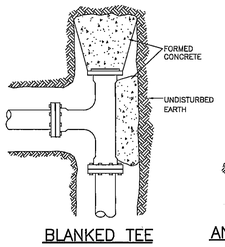
TYPICAL TEE



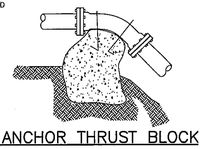
BEND PLAN



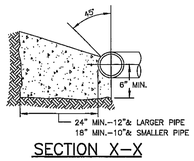
BEND SECTION



BLANKED TEE



ANCHOR THRUST BLOCK



SECTION X-X

THRUST BLOCK BEARING AREA TABLE (SQ. FT.)					
SIZE OF PIPE	TEE & PLUGS	90° BENDS	45° BENDS	22 1/2° BENDS	11 1/4° BENDS
4"	2.5	2.5	1.5	1.0	1.0
6"	5.0	5.0	3.0	1.5	1.0
8"	9.0	9.0	5.0	2.5	1.5
10"	14.0	14.0	7.5	4.0	2.0
12"	20.0	20.0	11.0	5.5	3.0
14"	27.0	27.0	15.0	7.5	4.0
16"	35.0	35.0	19.0	10.0	5.0

NOTE:
1.) WRAP ALL FITTINGS WITH PLASTIC BEFORE POURING THRUST BLOCKS. ALL THRUST BLOCKS MUST BE LEFT OPEN FOR INSPECTION BY THE ENGINEER & TOWN OF LONGBOAT KEY.

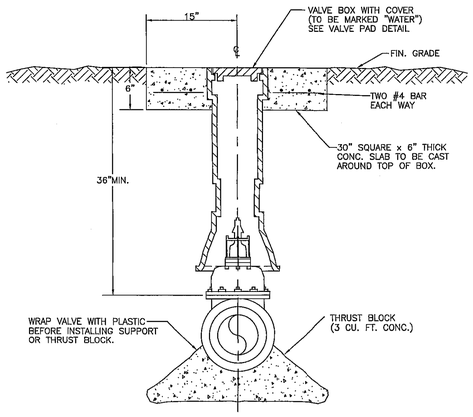
2.) ALL BEARING SURFACE TO BE CARRIED TO UNDISTURBED SOIL.

3.) THESE TABLES SHOW MINIMUM SIZE THRUST BLOCKS FOR GOOD SOIL WITH A 2,000 P.S.F. SOIL BEARING (A-1 THRU A-3 CLEAN SAND AND GRAVELS).

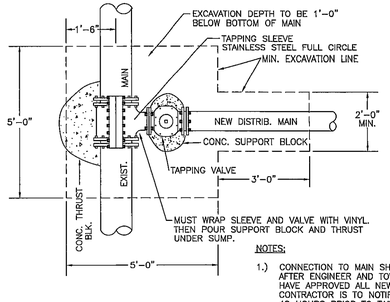
4.) POOR SOIL (A-1 THRU A-8, SILTY SOILS, CLAYS, MUCK & PEAT) WILL REQUIRE LARGER THRUST BLOCKS.

5.) THRUST BLOCK SIZES BASED ON 150 P.S.I. HYDROSTATIC TEST PRESSURE.

TYPICAL THRUST BLOCKING DETAIL FOR WATERMAIN
N.T.S.



GATE VALVE INSTALLATION DETAIL
N.T.S.

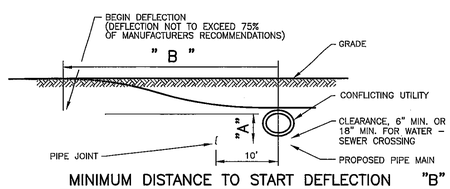


NOTES:

1.) CONNECTION TO MAIN SHALL BE MADE AFTER ENGINEER AND TOWN OF LONGBOAT KEY HAVE APPROVED ALL NEW WATER MAIN CONSTRUCTION. CONTRACTOR IS TO NOTIFY THE ENGINEER 48 HOURS PRIOR TO TAPPING.

2.) SEE SPECS. FOR TAPPING SLEEVE AND VALVE. ANY SUBSTITUTIONS SHALL BE APPROVED BY THE ENGINEER AND TOWN OF LONGBOAT KEY PRIOR TO CONSTRUCTION.

MAIN CONNECTION DETAIL (TAPPED)
N.T.S.



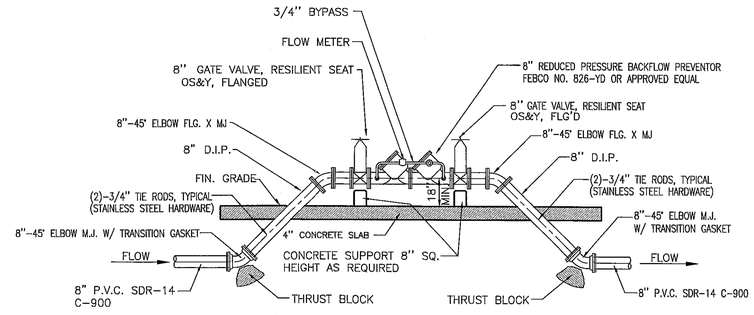
MINIMUM DISTANCE TO START DEFLECTION "B"

BENDING RADIUS OF PIPE		70	80	100	120	150	200	250	300	350	400	500	550
TOTAL DEFLECTION (FT.) "A"	0.5	20	20	20	20	20	20	22	25	26	28	32	34
	1.0	20	20	20	22	22	28	32	35	37	40	46	49
	1.5	20	22	24	27	30	35	39	42	46	49	56	60
	2.0	24	25	28	31	35	40	45	49	53	57	65	70
	3.0	30	31	35	38	42	49	55	60	65	69	80	85

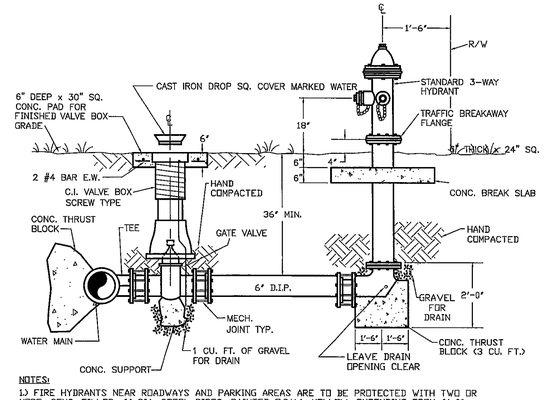
ALLOWABLE BENDING RADIUS DETERMINED FOR ASTM D2241, SDR 21 AND C-900

PIPE DIAMETER		1 1/2"	2"	2 1/2"	3"	4"	6"	8"	12"
ALLOWABLE BENDING RADIUS (FT.)	SDR 21	70	80	100	120	150	220	290	430
	C-900	—	—	—	—	200	300	400	550

UTILITY CROSSING DETAIL
N.T.S.



FIRE LINE/BACKFLOW PREVENTER DETAIL
N.T.S.



NOTES:

1) FIRE HYDRANTS NEAR ROADWAYS AND PARKING AREAS ARE TO BE PROTECTED WITH TWO OR MORE, CONC. FILLED, 6" DIA. STEEL PIPES, PAINTED O.S.H.A. YELLOW, EXTENDING FROM 6'-0" BELOW GRADE TO APPROX. 6" ABOVE TOP OF HYDRANTS.

2) SEE VALVE DETAIL FOR PROPER HYDRANT VALVE INSTALLATION.

FIRE HYDRANT WITH TYPICAL GATE VALVE
N.T.S.

RECORD DRAWINGS

REVISED	NO.	BY	DATE	DESCRIPTION
	1	PSN	2-13-03	REVISED PER TOWN OF LONGBOAT KEY PRELIMINARY REVIEW COMMENTS
	2	PSN	2-20-03	REVISED PER TOWN OF LONGBOAT KEY PRELIMINARY REVIEW COMMENTS
	3	PSN	5-16-03	REVISED PER FINAL CONSTRUCTION PLAN REVIEW
	4	PSN	10-15-03	REVISED 3" WATER SUPPLY BFP DETAIL "COMPOUND METER PURCHASED THRU TOWN OF LBK"
	5	GJR	12-29-05	REMOVED 3" WATER SUPPLY BFP DETAIL, ADDED 8" FIRE LINE/ BFP DETAIL
REVISED	6	PSN	10-6-04	REVISED CLUBHOUSE FOOTPRINT AND SIDEWALKS
	7	GJR	5-17-07	ADDITION OF RECORD INFORMATION
	8			
	9			
	10			

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Since 1919 PHONE (941) 371-6362 • FAX (941) 378-3215 • E-MAIL info@georgefyoung.com

MARK A. ASLER, P.E. NO. 37799
AUG 0 1 2007
DATE

TASK	INITIALS	DATE
DESIGN	H.F.F.	1-13-03
DRAWN	P.S.N.	1-24-03
CHECKED	P.C.P.	5-16-03
QUALITY CHK.	H.F.F.	5-16-03
SCALE	1"=30'	

PREPARED FOR:
LA FIRENZA, LLC
9853 N. TAMIAMI TRAIL, SUITE 218
NAPLES, FLORIDA 34108

LA FIRENZA
WATER SYSTEM DETAILS

JOB NO. 0271007000
SHEET NO. R9

I:\PROJECTS\ENG\2002\0271-0070-00\Dwg\RECORD\0271007000-R09-WATDET.dwg, 7/27/2007 9:00:14 AM, Pete Nickols