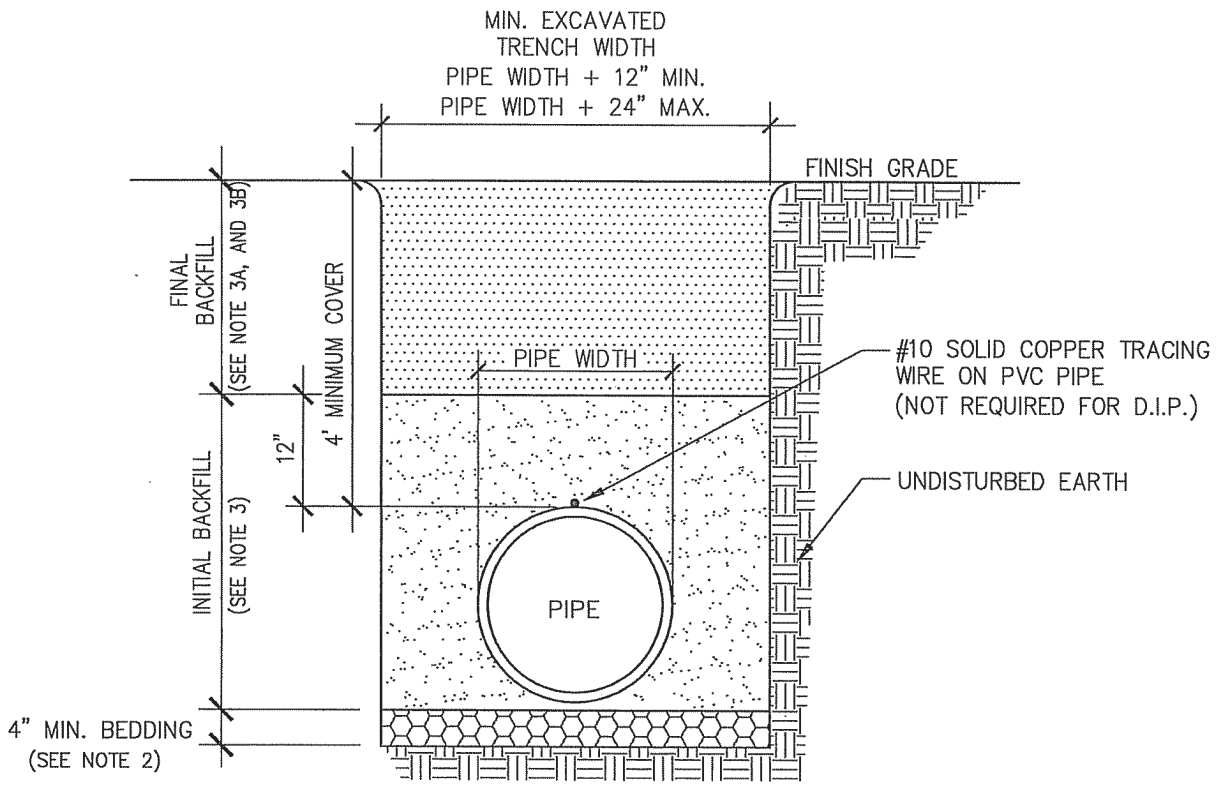


NOTES:

1. LAYING CONDITIONS AS PER AWWA C-600 AND C-605 STANDARDS.
2. BEDDING MATERIAL SHALL BE 4" MINIMUM THICKNESS, LOOSE SOIL (DEFINED AS NATIVE SOIL EXCAVATED FROM THE TRENCH), FREE FROM ROCKS AND SHALL PROVIDE UNIFORM SUPPORT FOR THE FULL LENGTH OF THE PIPE. COMPACT TO 95% OF MAXIMUM DENSITY.
3. INITIAL BACKFILL SHALL BE LIGHTLY CONSOLIDATED IN MAXIMUM 6" LOOSE LIFTS, COMPACTED TO 95% OF MAXIMUM DENSITY.
   A. UNDER AREAS TO BE SEEDED OR SODDED, COMPACT SUCCEEDING LAYERS OF FINAL BACKFILL IN 12" LOOSE LIFTS TO 85% OF MAXIMUM DENSITY.
   B. UNDER STRUCTURES, PAVEMENTS AND ROAD SHOULDERS, COMPACT SUCCEEDING LAYERS OF FINAL BACKFILL IN 6" LOOSE LIFTS TO 95% OF MAXIMUM DENSITY EXCEPT COMPACT TOP 12" OF SUBGRADE TO 98 % OF MAXIMUM DENSITY.
4. PROVIDE SOLID COPPER WIRE IN SUFFICIENT LENGTH FOR ALL BURIED PVC PIPING. AT VALVE BOXES, BRING WIRE TO WITHIN 6" OF THE TOP OF BOX AND INSERT INTO BOX THROUGH A DRILLED HOLE. NOT REQUIRED FOR D.I.P. ATTACH WIRE TO PIPE @ 4'-0" INTERVALS WITH CABLE TIES.

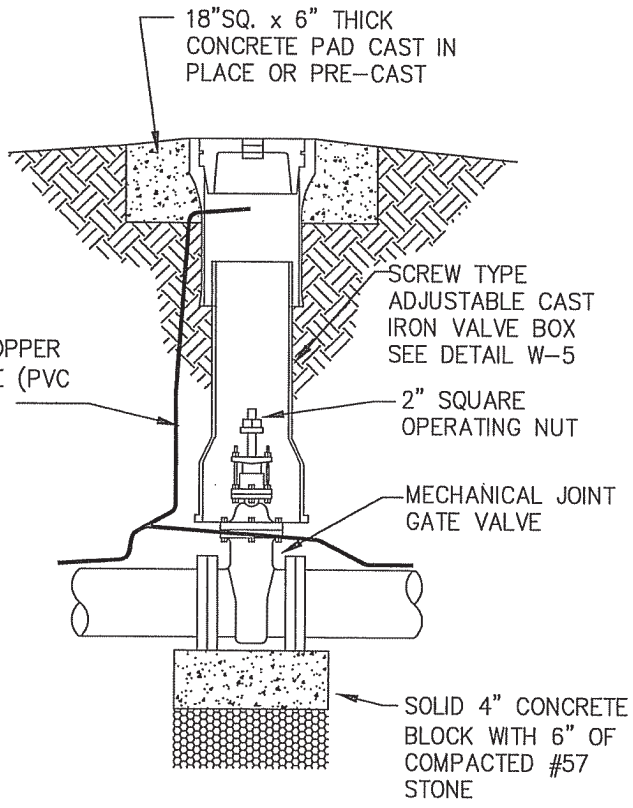
DATE	BY	DESCRIPTION

REVISIONS

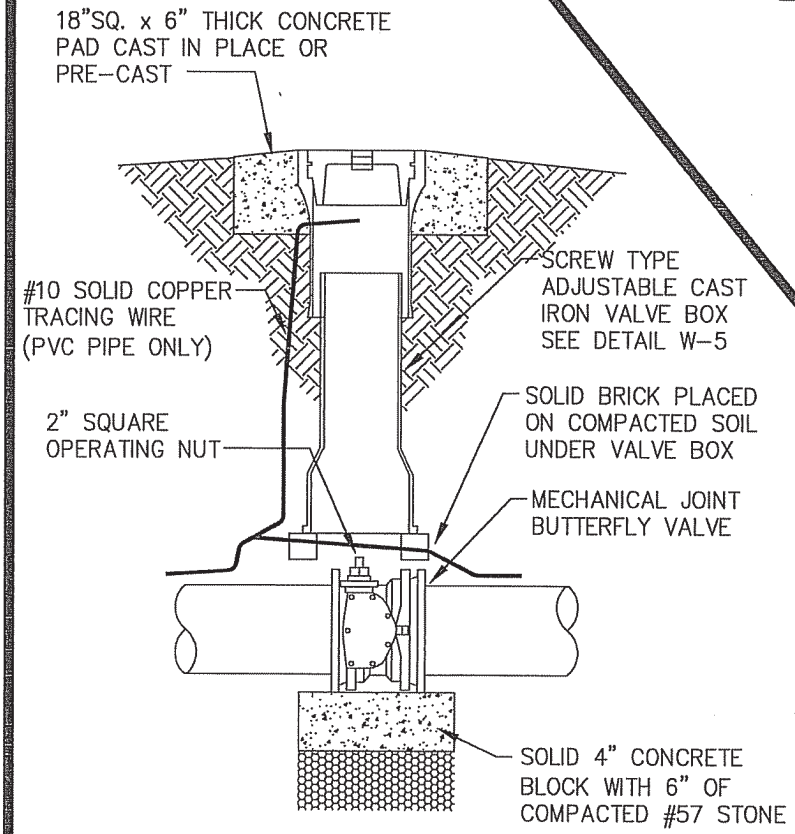
TOWN OF LILLINGTON PUBLIC WORKS

WATER MAIN
TRENCH DETAIL

SCALE	DRAWING #
N.T.S.	W-1



GATE VALVE ASSEMBLY



BUTTERFLY VALVE ASSEMBLY

NOTES:

1. INSTALL MARKER POSTS (DETAIL W-3) ON THE EDGE OF THE DOT RIGHT-OF-WAY LINE.
2. PROVIDE MARKER POSTS AT ALL LINE VALVES.
3. ABBREVIATION "MV" SHALL BE STAMPED ON POSTE TO INDICATE "MAIN VALVE".
4. BRING #10 SOILD COPPER TRACING WIRE (PVC PIPE ONLY) TO WITHIN 6" OF TOP OF VALVE BOX AND INSERT INTO BOX THROUGH DRILLED HOLE.

DATE	BY	DESCRIPTION

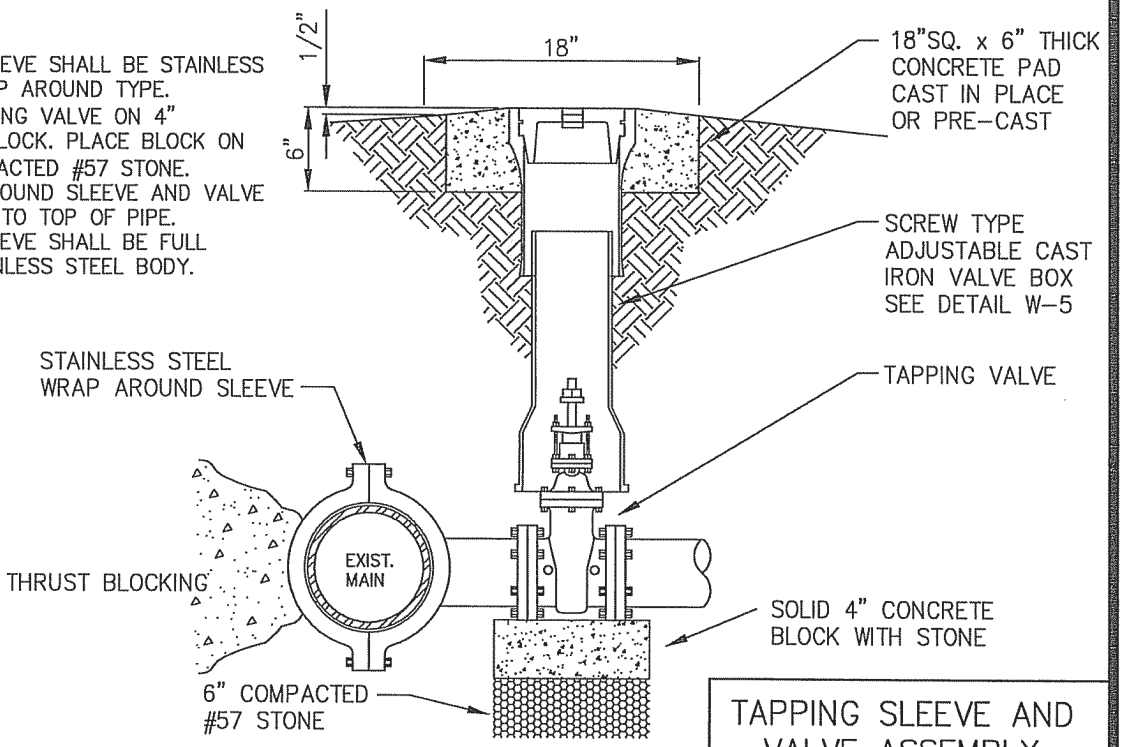
REVISIONS

TOWN OF LILLINGTON PUBLIC WORKS

GATE AND BUTTERFLY VALVE ASSEMBLY DETAILS	SCALE	DRAWING #
	N.T.S.	W-2

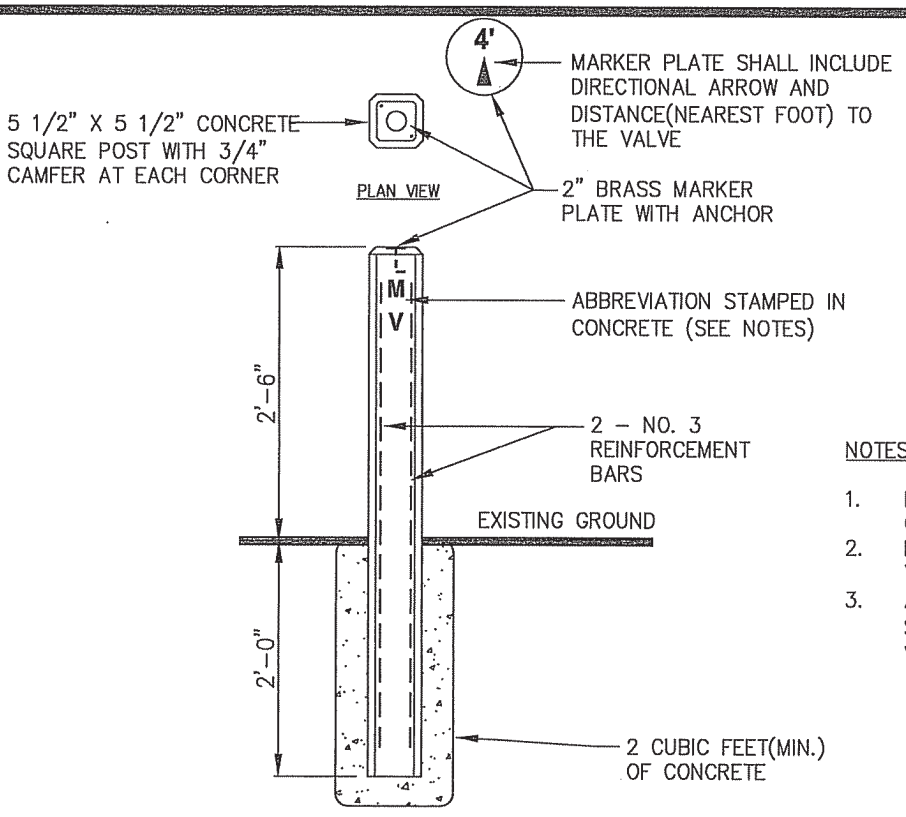
NOTES:

1. TAPPING SLEEVE SHALL BE STAINLESS STEEL WARAP AROUND TYPE.
2. PLACE TAPPING VALVE ON 4" CONCRETE BLOCK. PLACE BLOCK ON 6" OF COMPACTED #57 STONE. BACKFILL AROUND SLEEVE AND VALVE WITH STONE TO TOP OF PIPE.
3. TAPPING SLEEVE SHALL BE FULL CIRCLE STAINLESS STEEL BODY.



TAPPING SLEEVE AND VALVE ASSEMBLY

MARKER



NOTES:

1. INSTALL MARKER POSTS ON THE EDGE OF THE DOT RIGHT-OF-WAY LINE.
2. PROVIDE MARKER POSTS AT ALL LINE VALVES.
3. ABBREVIATION "MV" SHALL BE STAMPED ON POST TO INDICATE "MAIN VALVE".

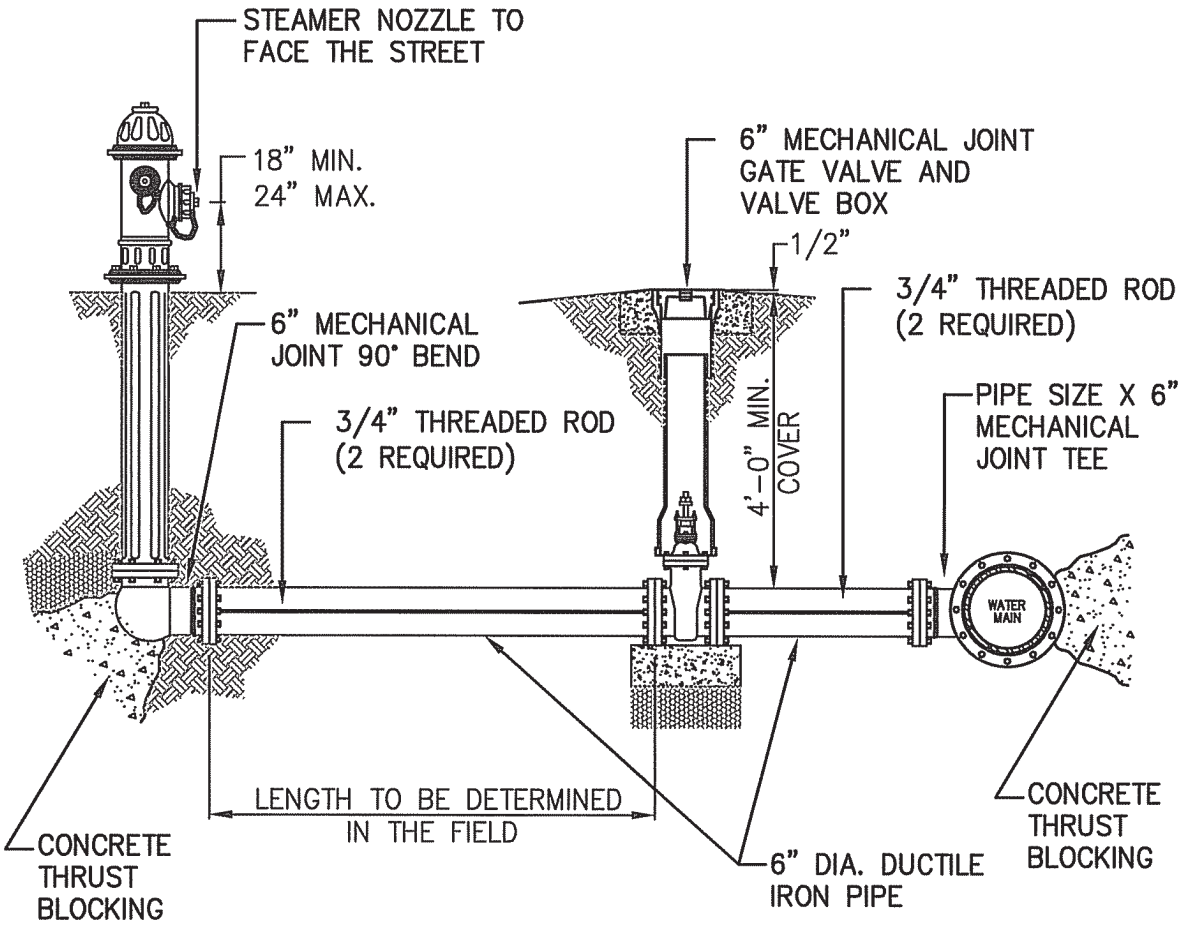
DATE	BY	DESCRIPTION

REVISIONS

TOWN OF LILLINGTON PUBLIC WORKS

TAPPING SLEEVE AND VALVE ASSEMBLY AND MARKER DETAIL

SCALE	DRAWING #
N.T.S.	W-3



NOTES:

1. ALL PIPE JOINTS SHALL BE MECHANICAL RESTRAINED JOINTS.
2. ALL HYDRANTS SHALL BE PLACED AT THE PROPERTY LINES AS DIRECTED BY THE TOWN.
3. ALL HYDRANTS SHALL RECEIVE 2 SHOP COATS AND ONE FIELD COAT OF OSHA SAFETY COLOR RED AS DESCRIBED IN AWWA C-502. ALL NOZZLE CAPS AND BONNETT SHALL BE PAINTED WHITE, PAINT SHALL BE HIGH GLOSS ENAMEL.
4. FIRE HYDRANTS SHALL BE CLOW "MEDALLION", OR MUELLER.
5. APPT 2 COATS OD BITUMASTIC MATERIAL TO RODS OR PROVIDE GALVANIZED RODS.

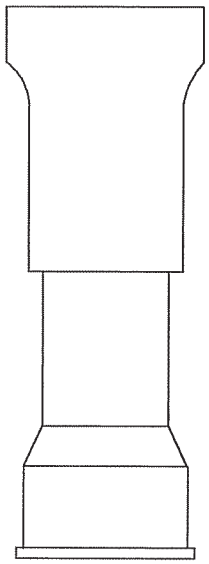
DATE	BY	DESCRIPTION

REVISIONS

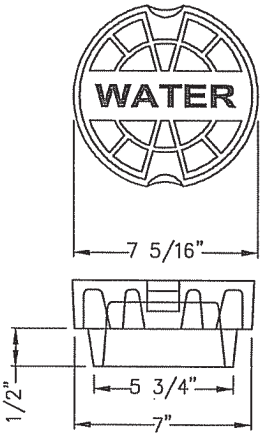
TOWN OF LILLINGTON PUBLIC WORKS

STANDARD FIRE HYDRANT INSTALLATION DETAIL

SCALE	DRAWING #
N.T.S.	W-4

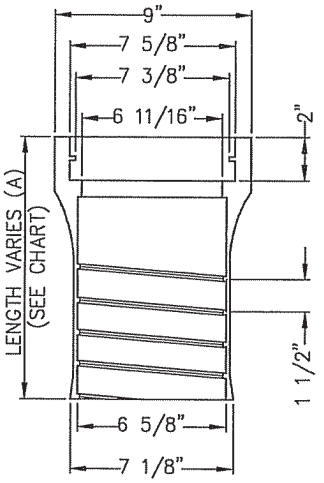


COMPLETE BOX

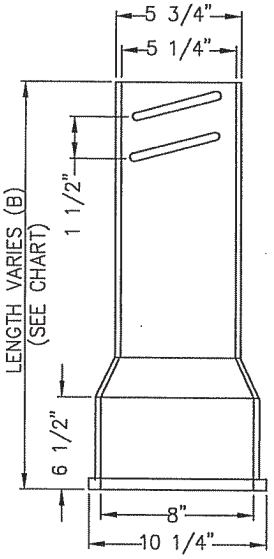


LID

LENGTH (INCHES)	
A	B
10	15
10	24
16	24
16	36
26	36
26	48
26	60



TOP



BOTTOM

NOTES:

1. VALVE BOX SHALL HAVE RAISED LETTERS "WATER" CAST INTO COVER.
2. VALVE BOX ACCOMMODATES 4" THROUGH 12" VALVES.
3. VALVE BOX SHALL HAVE 3/8" HOLE DRILLED IN TOP SECTION THROUGH WHICH A 1/4" X 1 1/2" GALVANIZED BOLT SHALL BE USED TO SECURE A #10 TRACER WIRE FOR NON-FERROUS PIPE. A 1/2" WASHER SHALL BE USED BETWEEN THE NUT AND INSIDE OF BOX, HAND TIGHTENED.
4. DIMENSIONS SHOWN ARE FOR INFORMATION ONLY AND VARY BASED ON THE MANUFACTURER.
5. CASTINGS SHALL BE MANUFACTURED IN THE U.S.A.

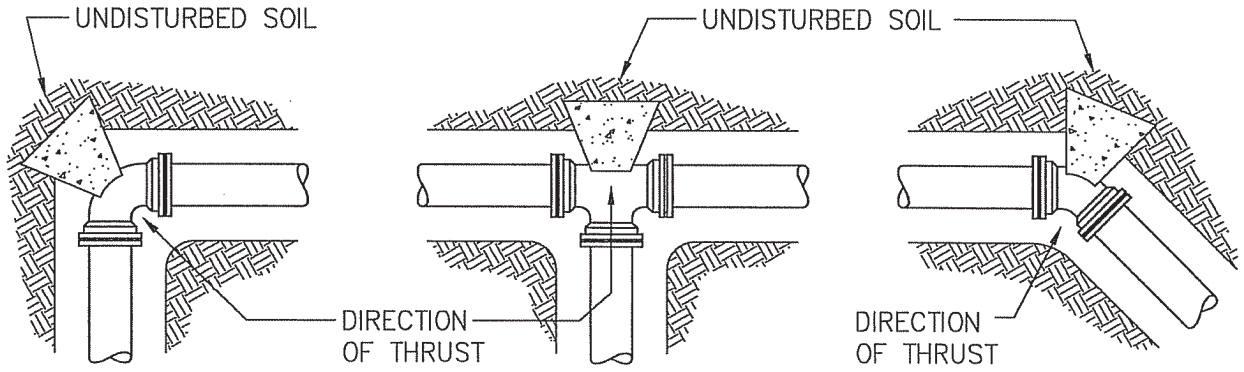
DATE	BY	DESCRIPTION

REVISIONS

TOWN OF LILLINGTON PUBLIC WORKS

SCREW TYPE VALVE BOX DETAIL

SCALE	DRAWING #
N.T.S.	W-5



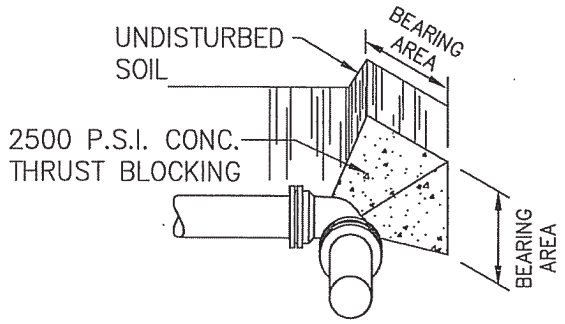
90° BEND

TEE

45° BEND

NOTES

1. ALL BENDS AND TEES SHALL HAVE CONCRETE THRUST BLOCKING.
2. MINIMUM BEARING AREA SHALL BE AS GIVEN IN TABLE (SEE W–6, SHEET 2 OF 2).
3. CONCRETE SHALL BE 2500 P.S.I. MINIMUM.
4. CONCRETE SHALL NOT CONTACT BOLTS OR FLANGES OF MECHANICAL JOINT FITTINGS.



ISOMETRIC

SHEET
1 OF 2

DATE	BY	DESCRIPTION

REVISIONS

TOWN OF LILLINGTON PUBLIC WORKS

CONCRETE THRUST BLOCKING DETAIL

SCALE	DRAWING #
N.T.S.	W–6

REACTION BEARING AREAS FOR HORIZONTAL WATER PIPE BENDS

BASED ON TEST PRESSURE OF 200 P.S.I. AND SAFETY FACTOR OF 1.5

SIZE AND DEGREE OF PIPE BEND		STATIC THRUST IN POUNDS	S_b	SOFT CLAY (#/SF)	SILT (#/SF)	GRAVEL OR COURSE SAND (#/SF)	SANDY SILT (#/SF)	SAND (#/SF)	SANDY CLAY (#/SF)	HARD CLAY (#/SF)
				1,000	1,500	1,600	3,000	4,000	6,000	9,000
				BEARING AREA (A_r) IN SF						
6" PIPE	11 1/4°	1,462		2	1	1	1	1	0	0
	22 1/2°	2,911		4	3	3	1	1	1	0
	45°	5,710		9	6	5	3	2	1	1
	90°	10,550		16	11	10	5	4	3	2
	PLUG & BRANCH	7,460		11	7	7	4	3	2	1
8" PIPE	11 1/4°	2,521		4	3	2	1	1	1	0
	22 1/2°	5,018		8	5	5	3	2	1	1
	45°	9,843		15	10	9	5	4	2	2
	90°	18,187		27	18	17	9	7	5	3
	PLUG & BRANCH	12,860		19	13	12	6	5	3	2
10" PIPE	11 1/4°	3,791		6	4	4	2	1	1	1
	22 1/2°	7,546		11	8	7	4	3	2	1
	45°	14,802		22	15	14	7	6	4	2
	90°	27,351		41	27	26	14	10	7	5
	PLUG & BRANCH	19,340		29	19	18	10	7	5	3
12" PIPE	11 1/4°	5,363		8	5	5	3	2	1	1
	22 1/2°	10,675		16	11	10	5	4	3	2
	45°	20,940		31	21	20	10	8	5	3
	90°	38,693		58	39	36	19	15	10	6
	PLUG & BRANCH	27,360		41	27	26	14	10	7	5
14" PIPE	11 1/4°	7,206		11	7	7	4	3	2	1
	22 1/2°	14,343		22	14	13	7	5	4	2
	45°	28,135		42	28	26	14	11	7	5
	90°	51,986		78	52	49	26	19	13	9
	PLUG & BRANCH	36,760		55	37	34	18	14	9	6
16" PIPE	11 1/4°	9,319		14	9	9	5	3	2	2
	22 1/2°	18,549		28	19	17	9	7	5	3
	45°	36,386		55	36	34	18	14	9	6
	90°	67,232		101	67	63	34	25	17	11
	PLUG & BRANCH	47,540		71	48	45	24	18	12	8
18" PIPE	11 1/4°	11,707		18	12	11	6	4	3	2
	22 1/2°	23,302		35	23	22	12	9	6	4
	45°	45,708		69	46	43	23	17	11	8
	90°	84,457		127	84	79	42	32	21	14
	PLUG & BRANCH	59,720		90	60	56	30	22	15	10
20" PIPE	11 1/4°	14,365		22	14	13	7	5	4	2
	22 1/2°	28,592		43	29	27	14	11	7	5
	45°	56,086		84	56	53	28	21	14	9
	90°	103,634		155	104	97	52	39	26	17
	PLUG & BRANCH	73,280		110	73	69	37	27	18	12
24" PIPE	11 1/4°	20,493		31	20	19	10	8	5	3
	22 1/2°	40,789		61	41	38	20	15	10	7
	45°	80,011		120	80	75	40	30	20	13
	90°	147,842		222	148	139	74	55	37	25
	PLUG & BRANCH	104,540		157	105	98	52	39	26	17

REACTION BEARING AREAS ARE IN SQUARE FEET MEASURED IN A VERTICAL PLANE IN THE TRENCH SIDE AT AN ANGLE OF 90 DEGREES TO THE THRUST VECTOR.

USE 6"–90 DEGREE BEND VALUE FOR THE HYDRANTS FOR ADDITIONAL SAFETY FACTOR.

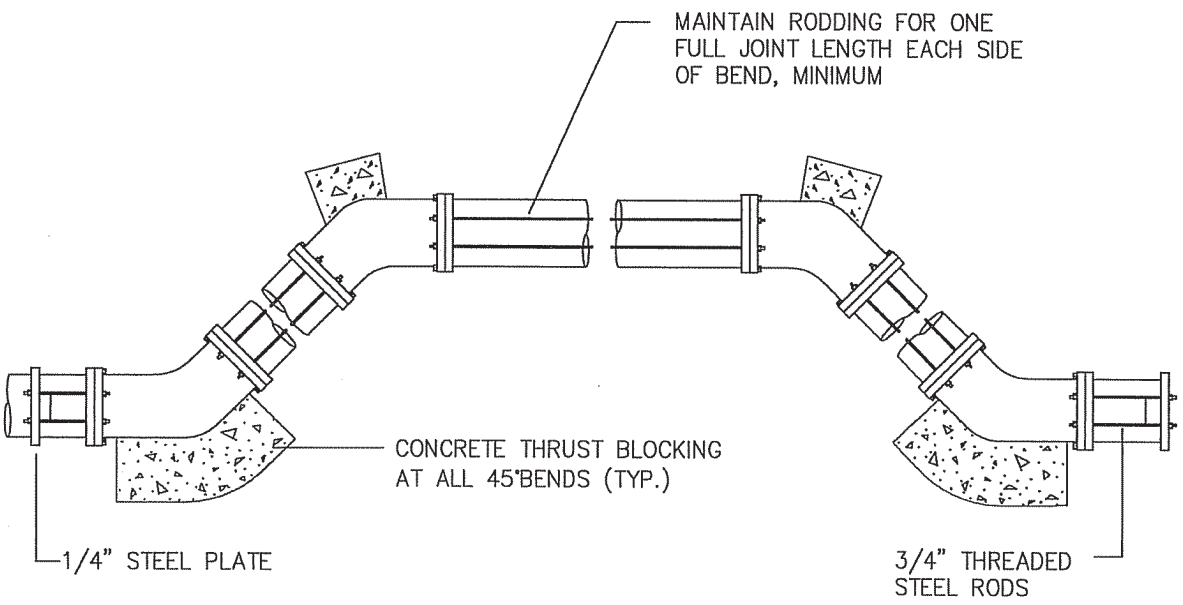
DATE	BY	DESCRIPTION

REVISIONS

TOWN OF LILLINGTON PUBLIC WORKS

CONCRETE THRUST BLOCKING DETAIL

SCALE	DRAWING #
N.T.S.	W–6



ROD REQUIREMENTS

SIZE OF 45° BEND	STATIC THRUST IN POUNDS	NO. OF RODS REQUIRED
6"	4,328	2
8"	7,694	2
12"	17,312	2
16"	30,779	4
20"	48,091	6
24"	69,252	8

NOTES:

1. ONCE INSTALLED AND TIGHT, THE STEEL RODS AND BOLTS SHALL BE COATED WITH 2 COATS OF BITUMINOUS BASE PAINT.
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL BENDS.

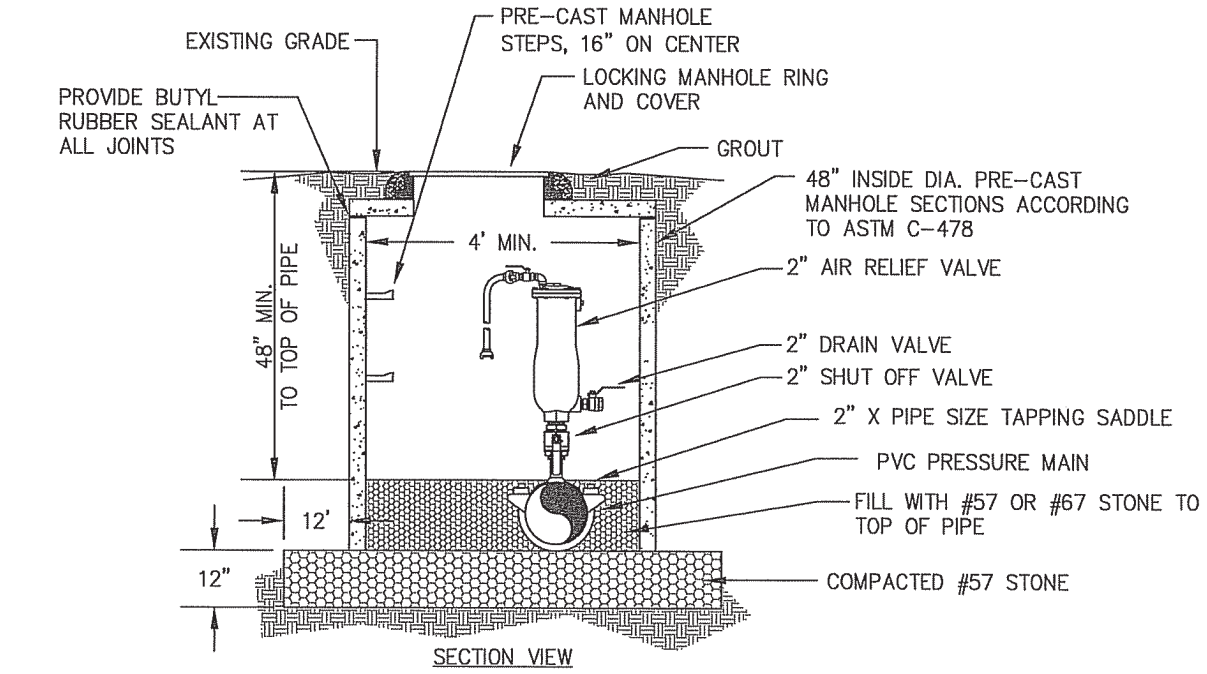
DATE	BY	DESCRIPTION

REVISIONS

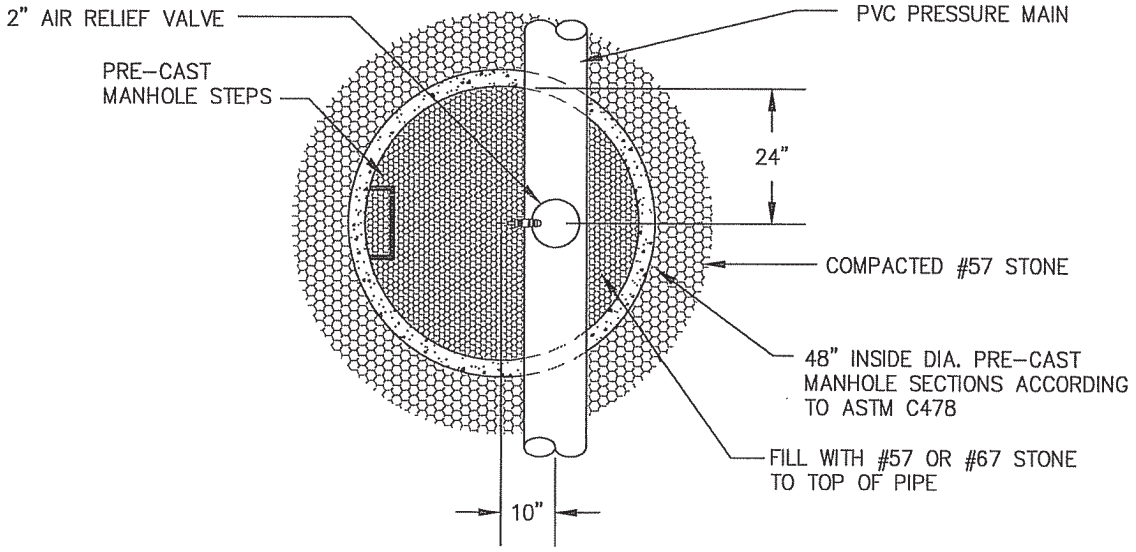
TOWN OF LILLINGTON PUBLIC WORKS

VERTICAL BENDS DETAIL

SCALE	DRAWING #
N.T.S.	W-7



SECTION VIEW



PLAN VIEW

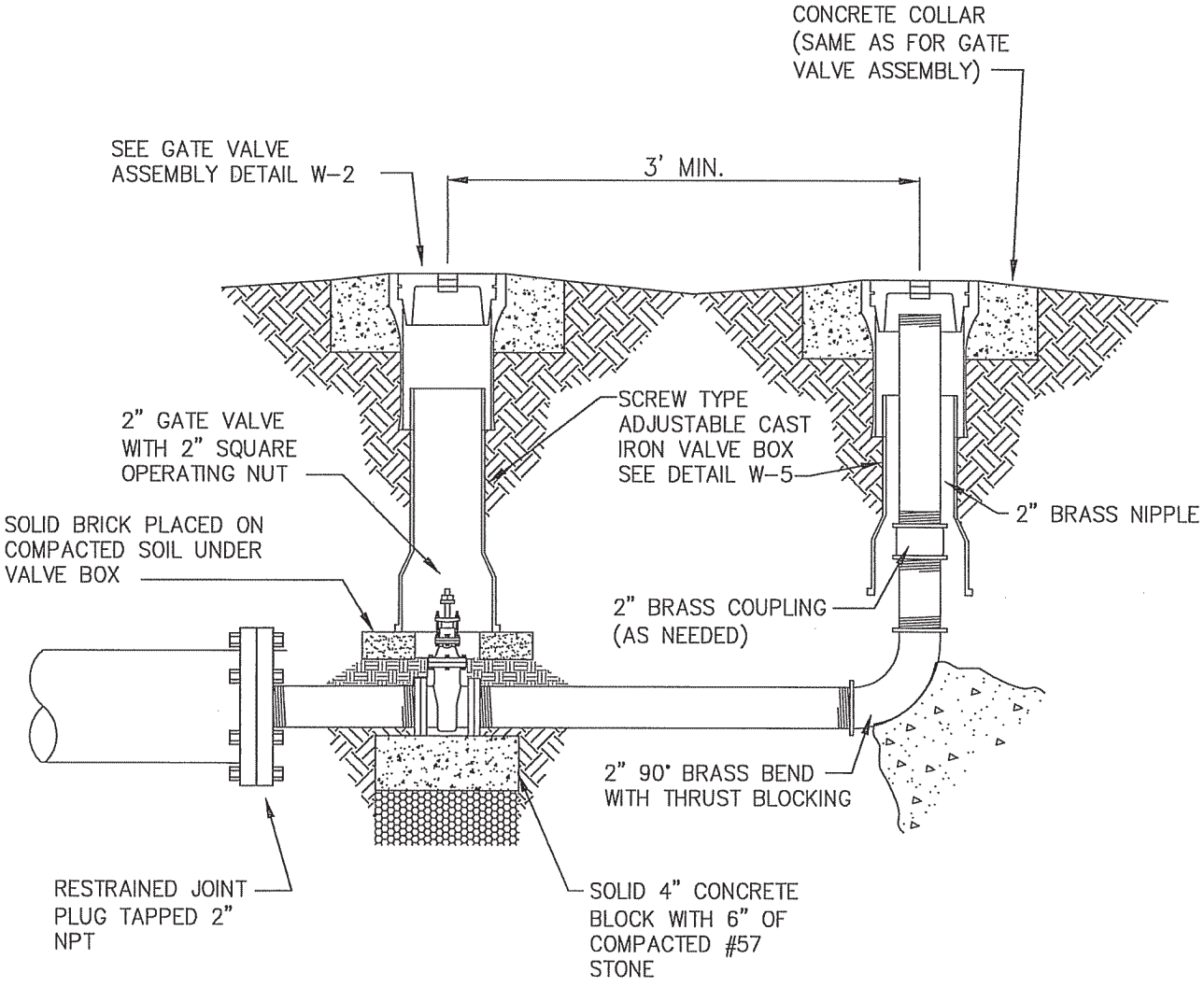
DATE	BY	DESCRIPTION

REVISIONS

TOWN OF LILLINGTON PUBLIC WORKS

AIR RELIEF VALVE ASSEMBLY DETAIL

SCALE	DRAWING #
N.T.S.	W-8



NOTE:

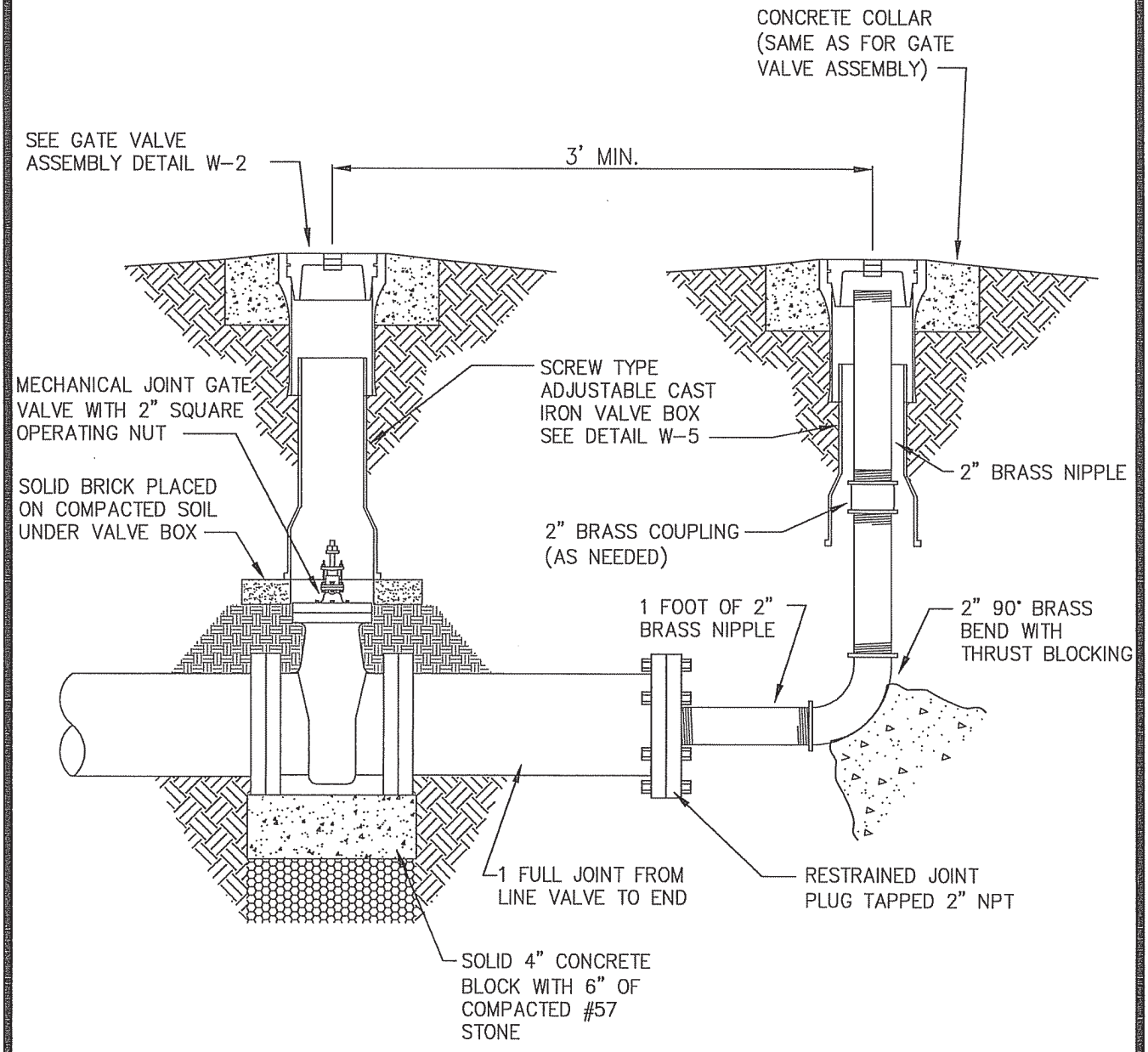
THIS OPTION IS NOT ALLOWED WITHOUT PERMISSION OF THE TOWN OF LILLINGTON.

DATE	BY	DESCRIPTION

REVISIONS

TOWN OF LILLINGTON PUBLIC WORKS

2" PERMANENT BLOW-OFF ASSEMBLY DETAIL	SCALE	DRAWING #
	N.T.S.	W-9



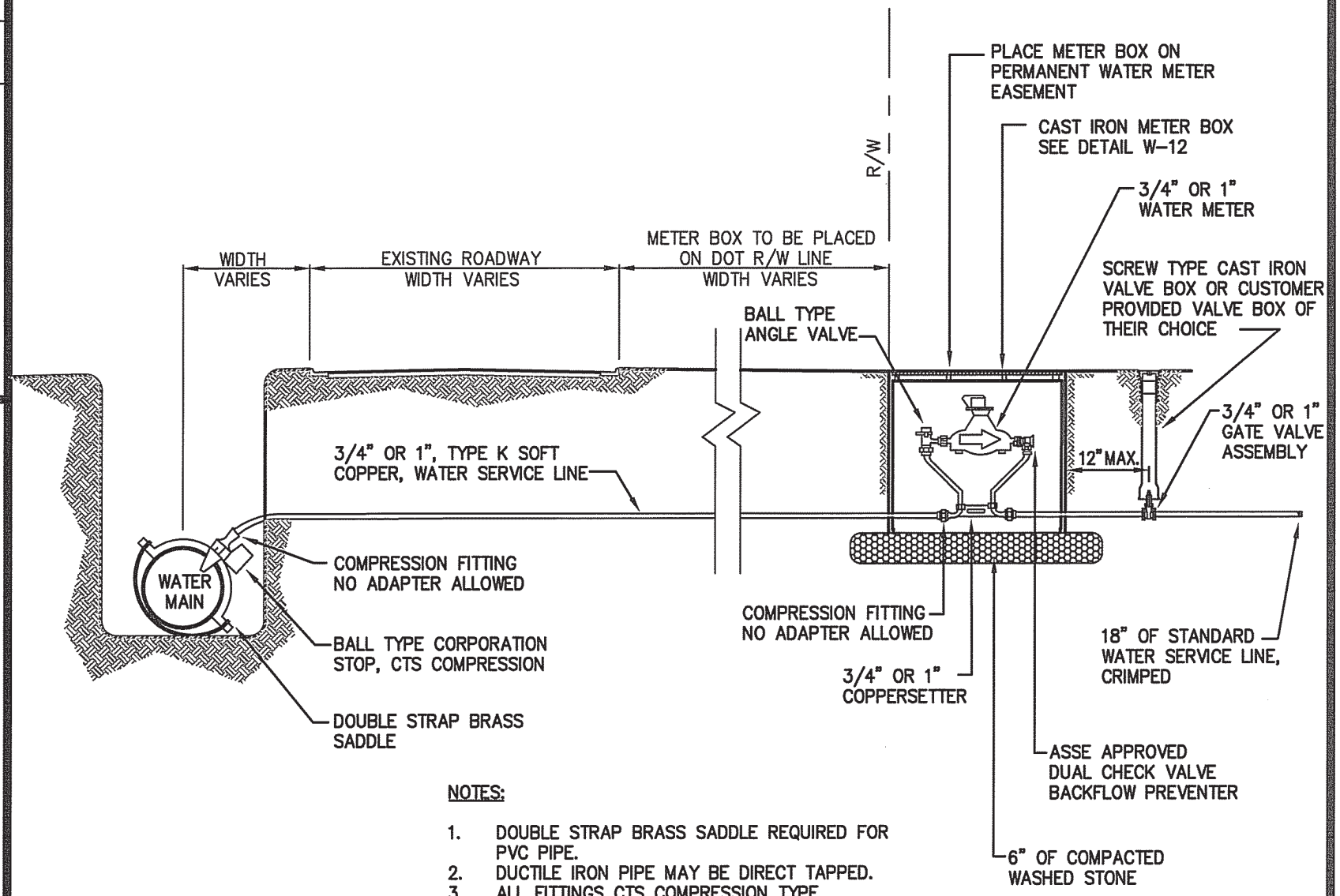
DATE	BY	DESCRIPTION

REVISIONS

TOWN OF LILLINGTON PUBLIC WORKS

2" TEMPORARY BLOW-OFF ASSEMBLY DETAIL

SCALE	DRAWING #
N.T.S.	W-10



NOTES:

1. DOUBLE STRAP BRASS SADDLE REQUIRED FOR PVC PIPE.
2. DUCTILE IRON PIPE MAY BE DIRECT TAPPED.
3. ALL FITTINGS CTS COMPRESSION TYPE.
4. METERS SHALL BE 3/4" OR 1", AND REGISTER IN U.S. GALLONS.

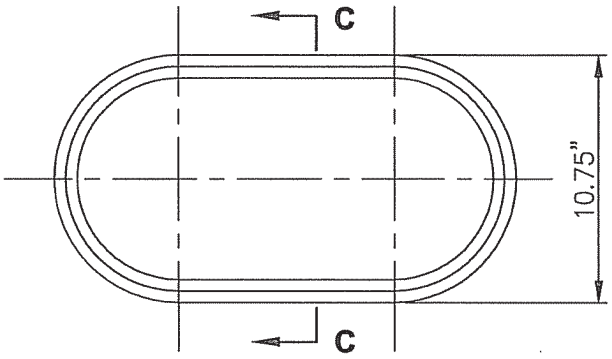
REVISIONS		
DESCRIPTION	BY	DATE

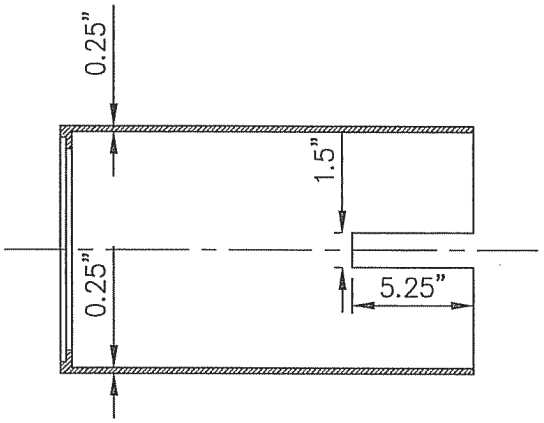
TOWN OF LILLINGTON PUBLIC WORKS

3/4" OR 1" RESIDENTIAL SERVICE CONNECTION DETAIL

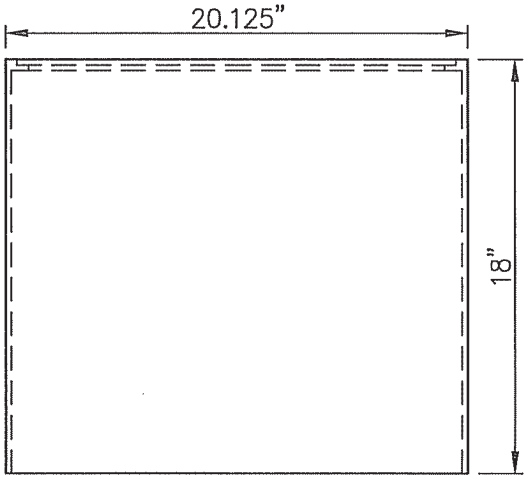
SCALE: N.T.S.

DRAWING #: W-11

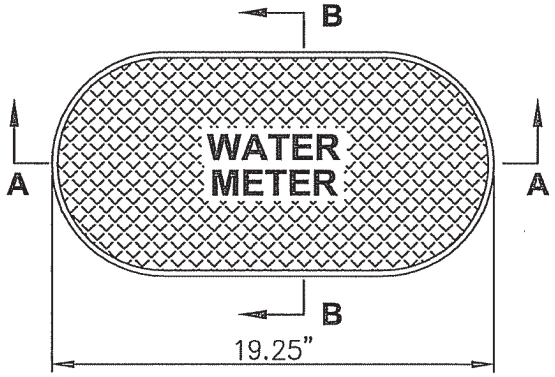


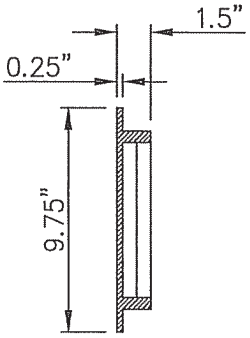


SECTION C–C

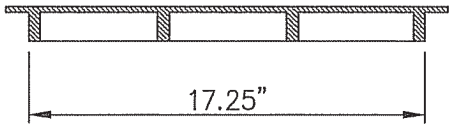


MINIMUM AVERAGE WEIGHT	
FRAME	50 LBS.
COVER	20 LBS.





SECTION B–B



SECTION A–A

NOTES:

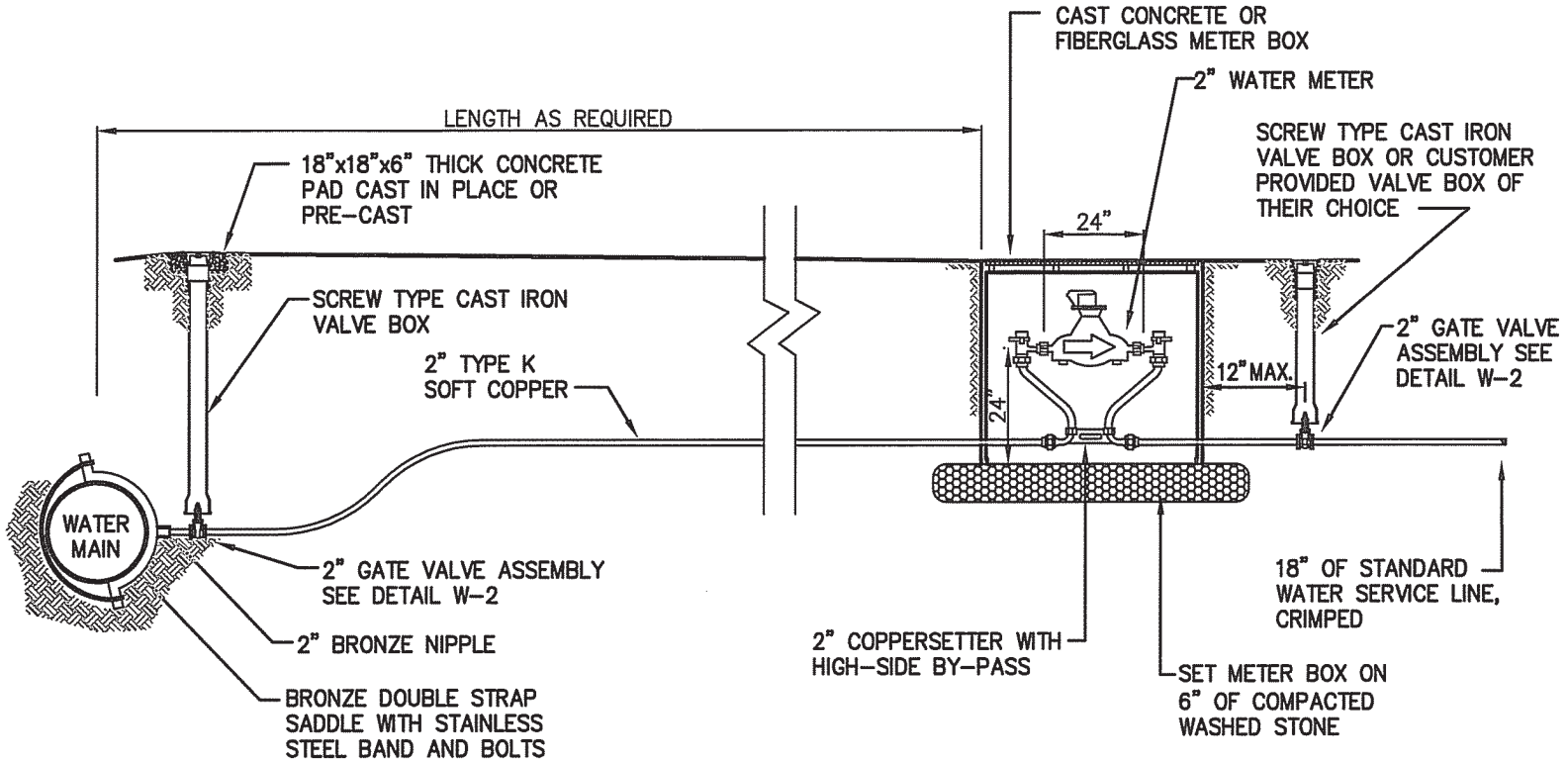
1. ALL CASTINGS SHALL BE MANUFACTURED IN THE U.S.A.
2. FIBERGLASS BOX MAY BE USED, AS APPROVED BY THE TOWN.

DATE	BY	DESCRIPTION

REVISIONS

TOWN OF LILLINGTON PUBLIC WORKS

3/4" AND 1" WATER METER BOX DETAIL	SCALE	DRAWING #
	N.T.S.	W–12



NOTES:

1. WATER METER SHALL BE 2" AND REGISTER IN U.S. GALLONS.
2. 2" COPPERSETTER SHALL HAVE 1" HIGH-SIDE BY-PASS, 2" FIP INLET AND OUTLET, AND 24" METER SPACING.

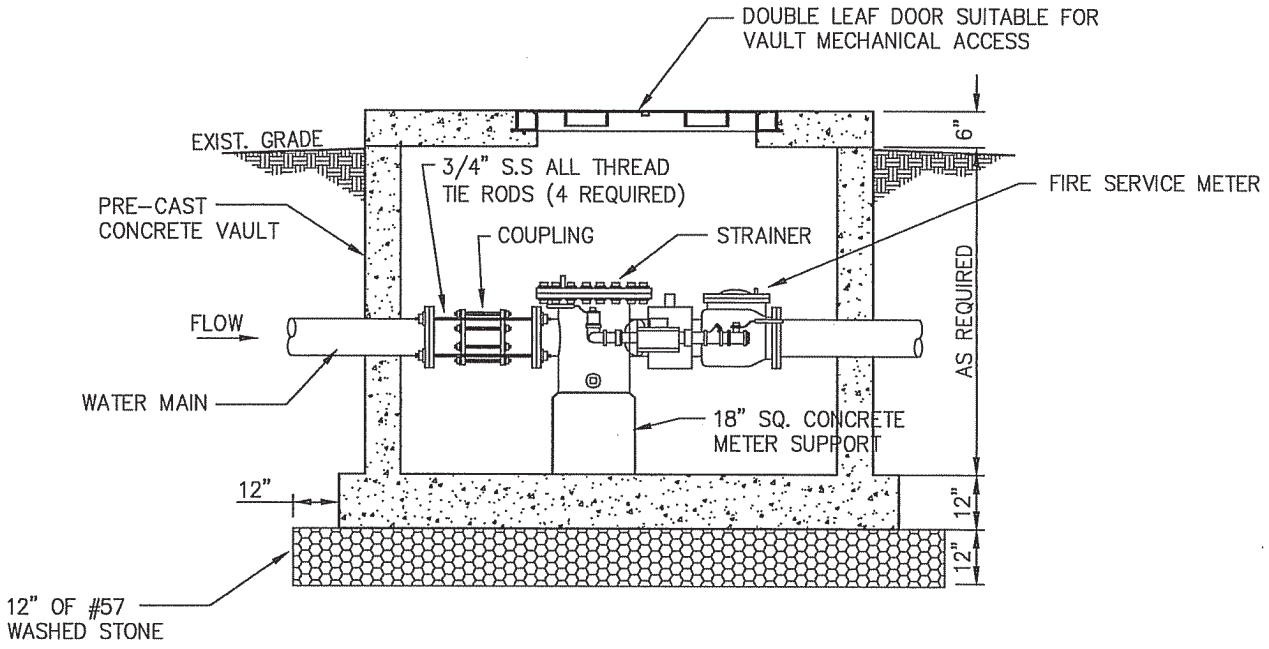
REVISIONS

DATE	BY	DESCRIPTION

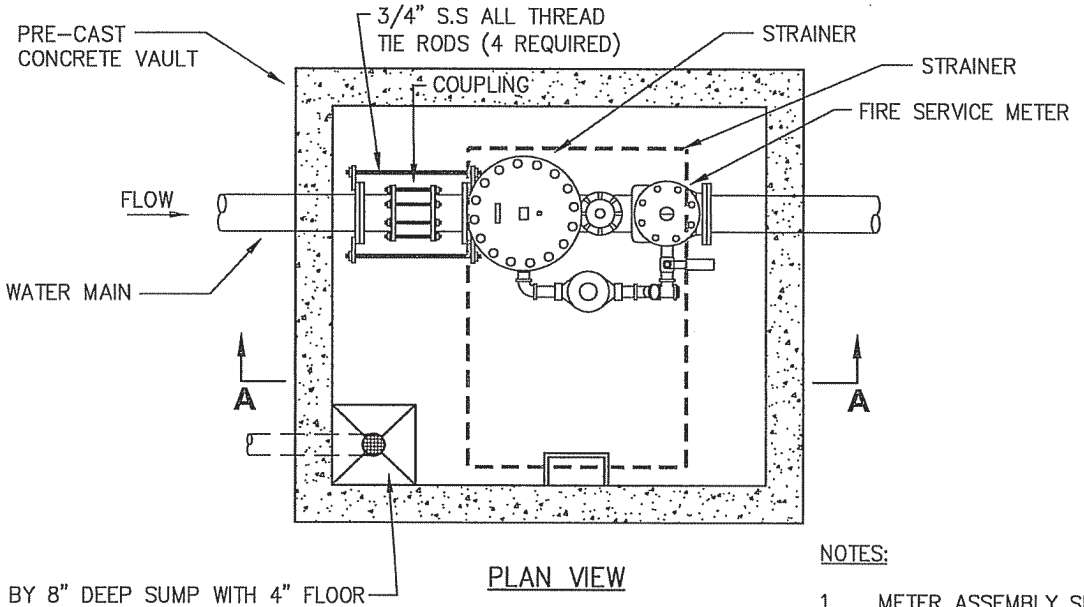
TOWN OF LILLINGTON PUBLIC WORKS

2" RESIDENTIAL SERVICE CONNECTION DETAIL

SCALE	DRAWING #
N.T.S.	W-13



SECTION A–A



PLAN VIEW

NOTES:

1. METER ASSEMBLY SHALL BE NEPTUNE HP PROTECTUS III OR EQUAL.
2. THIS DETAIL PROVIDES GENERAL INFORMATION ONLY. ACTUAL DIMENSIONS WILL VARY WITH THE SIZE OF THE MAIN LINE METER.

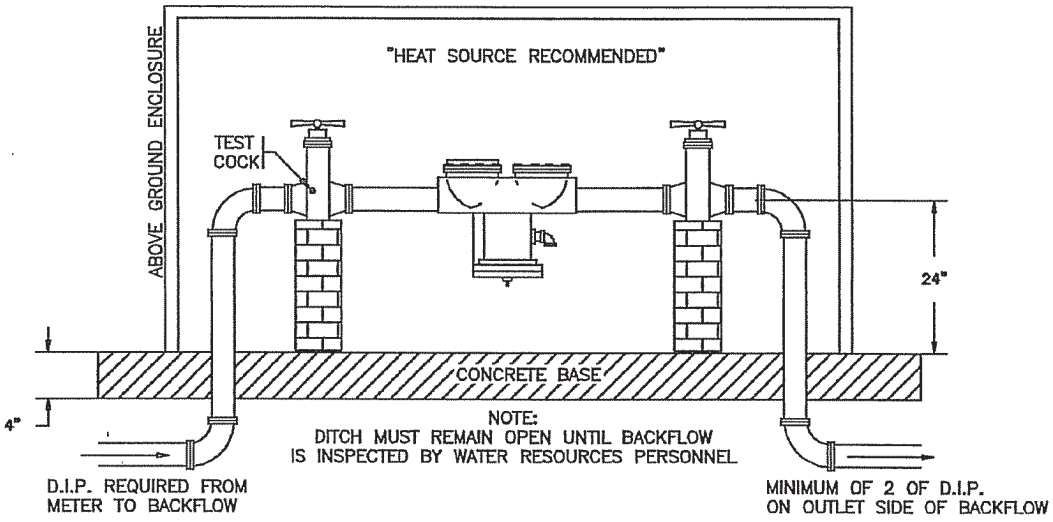
DATE	BY	DESCRIPTION

REVISIONS

TOWN OF LILLINGTON PUBLIC WORKS

FIRE SERVICE METER VAULT LAYOUT AND SECTION DETAIL

SCALE	DRAWING #
N.T.S.	W–14



NOTES:

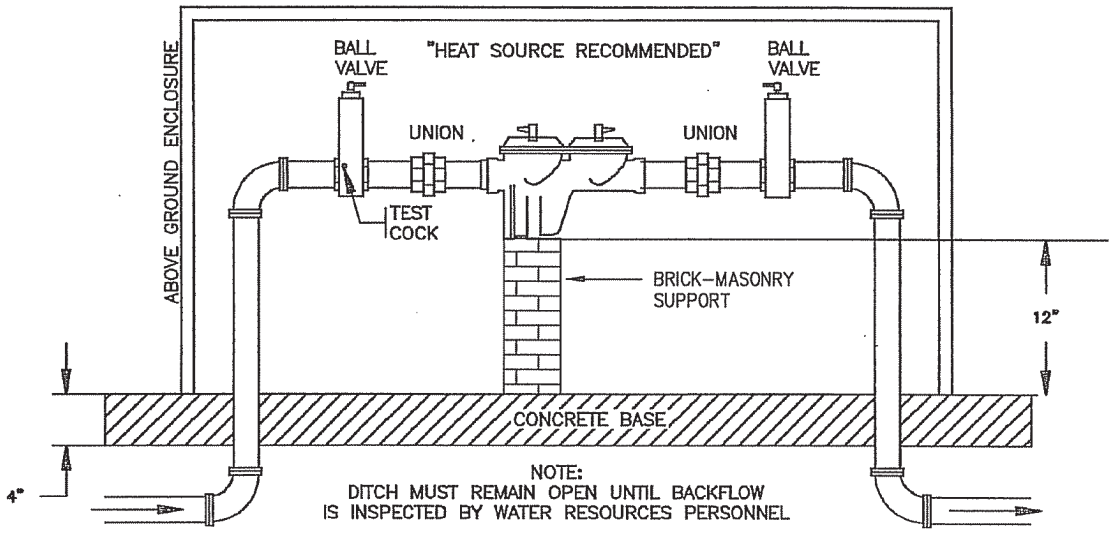
1. THE BACKFLOW DEVICE SHALL BE WITHIN 10 FEET OF AND ON THE PROPERTY SIDE OF THE METER.
2. ALL REDUCED PRESSURE BACKFLOW DEVICES SHALL BE INSTALLED ABOVE GROUND, IN HORIZONTAL POSITION.
3. SHUT OFF VALVES SHALL BE RESILIENT SEAT GATE VALVES WITH FLANGED ENDS AND HAND WHEEL.
4. ALL INTERIOR AND EXTERIOR IRON SURFACES SHALL HAVE EPOXY COATINGS TO CONFORM TO ANSI/AWWA C-550, OR MANUFACTURED OF STAINLESS STEEL.
5. THE BACKFLOW DEVICE SHALL HAVE 4 TEST COCKS WITH ONE INSTALLED ON THE CITY SIDE OF THE INLET GATE VALVE.
6. APPROVED UNITS: HERSEY, WILKINS, FEBCO, WATTS, CONBRACO, AND AMES.
7. APPROVED ABOVE GROUND ENCLOSURES: "HOT BOX", HYDROCOWL, SMI OR BFP MODEL, ENCLOSURES MUST HAVE A DRAIN.
8. TANDEM BACKFLOWS REQUIRED IF SERVING MULITPLE USERS OR SERVICE CONNOT BE INTERUPTED.

DATE	BY	DESCRIPTION

REVISIONS

TOWN OF LILLINGTON PUBLIC WORKS

3"- 8" REDUCED PRESSURE BACKFLOW PREVENTER DETAIL	SCALE	DRAWING #
	N.T.S.	W-15



NOTES:

1. THE BACKFLOW DEVICE SHALL BE WITHIN 5 FEET ON AND ON THE PROPERTY SIDE OF THE METER. FOR DOMESTIC IRRIGATION THE BACKFLOW DEVICE SHALL BE WITHIN 5 FEET OF THE METER.
2. ALL REDUCED PRESSURE BACKFLOW DEVICES SHALL BE INSTALLED ABOVE GROUND, IN HORIZONTAL POSITION.
3. SHUT OFF VALVES SHALL BE FULL PORT , LINE SIZE, LEVER TYPE, AND 1/4 TURN BRONZE BALL VALVES.
4. DEVICES SHALL HAVE TWO RESILIENT SEAT BRONZE UNIONS BETWEEN THE SHUT OFF VALVES FOR REMOVAL OF THE DEVICE.
5. THE BACKFLOW DEVICE SHALL HAVE 4 TEST COCKS WITH ONE INSTALLED ON THE CITY SIDE OF THE INLET GATE VALVE.
6. APPROVED UNITS: WILKINS, FEBCO, WATTS, AND CONBRACO.
7. APPROVED ABOVE GROUND ENCLOSURES: "HOT BOX", HYDROCOWL, SMI OR BFP MODEL, ENCLOSURES MUST HAVE A DRAIN.
8. TANDEM BACKFLOWS REQUIRED IF SERVING MULITPLE USERS OR SERVICE CONNOT BE INTERUPTED.

DATE	BY	DESCRIPTION

REVISIONS

TOWN OF LILLINGTON PUBLIC WORKS

3/4"– 2" REDUCED PRESSURE BACKFLOW PREVENTER DETAIL	SCALE	DRAWING #
	N.T.S.	W–16

FOR IRRIGATION ONLY

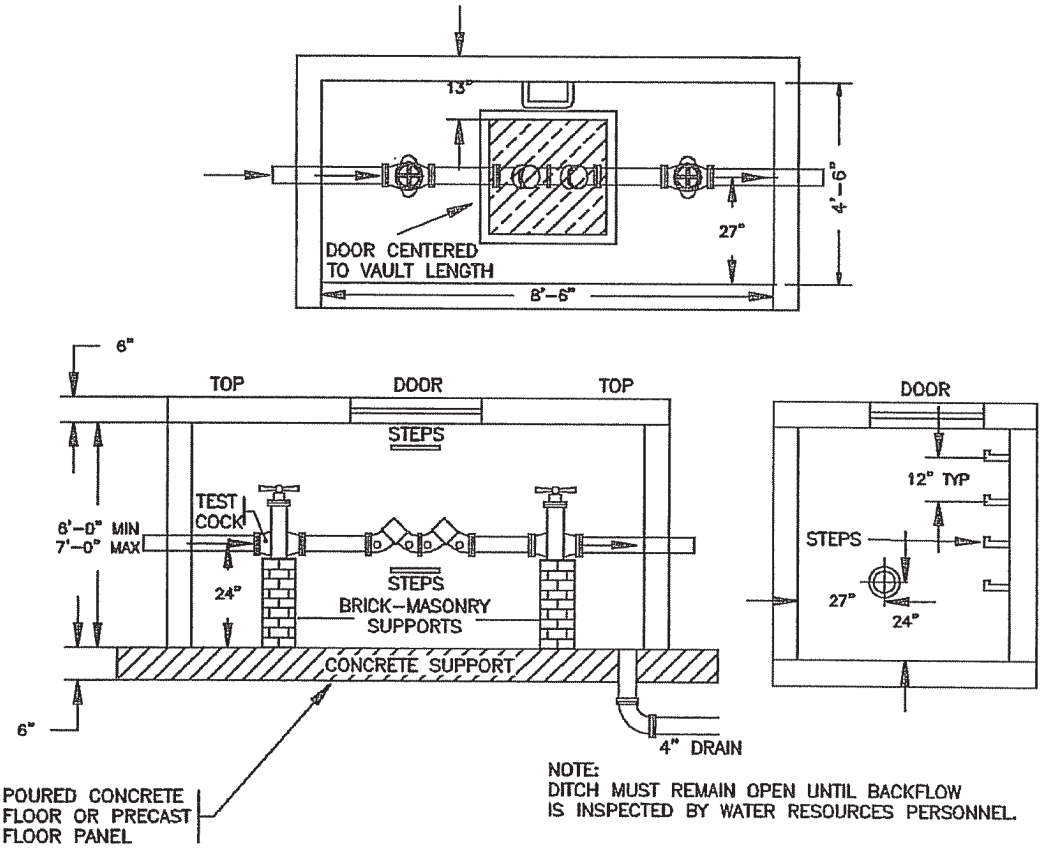
DATE	BY	DESCRIPTION

REVISIONS

TOWN OF LILLINGTON PUBLIC WORKS

IRRIGATION METER AND BACKFLOW DEVICE DETAIL

SCALE	DRAWING #
N.T.S.	W-17



APPROVED UNITS

HERSEY, WILKINS, FEBCO, WATTS
CONBRACO, AMES, FEBCO AMES
DCA ARE APPROVED FOR VERTICAL
INSTALLATION.

NOTES:

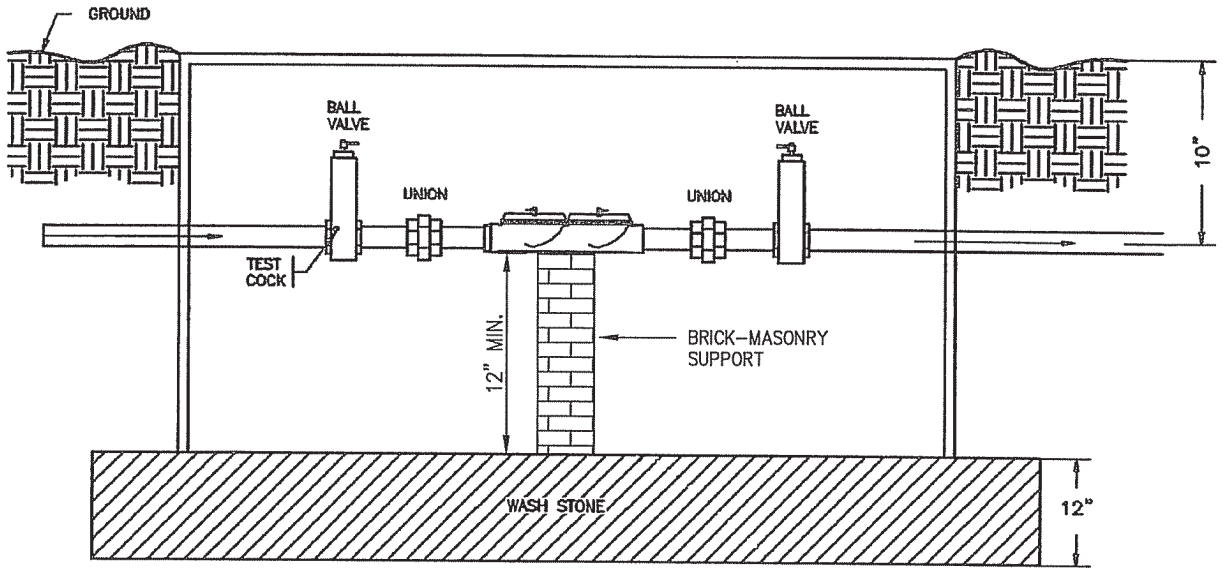
1. THE BACKFLOW DEVICE MUST BE WITHIN 10 FEET OF AND ON THE PROPERTY SIDE OF THE METER.
2. SHUT OFF VALVES SHALL BE RESILIENT SEATED GATE VALVES WITH FLANGED ENDS AND HANDWHEELS.
3. ALL INTERIOR AND EXTERIOR IRON SURFACES SHALL HAVE EPOXY COATING TO CONFORM WITH ANSI/AWWA C-550, OR MANUFACTURED OF STAINLESS STEEL.
4. THE DEVICE SHALL HAVE 4 TEST COCKS WITH ONE INSTALLED ON THE TOWN SIDE OF THE INLET GATE VALVE.
5. ABOVE GROUND ENCLOSURE CAN BE USED, AS PER TOWN SPECIFICATIONS.
6. A 4" GRAVITY FLOOR DRAIN SHALL BE PROVIDED, OR A 2" SUMP PUMP, INSTALLED IN A 12" SQUARE BY 12" DEEP SUMP BASIN.
7. VAULT TOPS SHALL BE ONE PIECE, REINFORCED CONCRETE (SEPARATE UNIT FROM THE VAULT) WITH ACCESS DOOR CAST IN. ACCESS DOOR SHALL BE 36" BY 36" ALUMINUM WITH SPRINGS AND SLAM LOCK MECHANISM. ALL HARDWARE SHALL BE MANUFACTURED OF STAINLESS STEEL. USE U.S. FOUNDARY APS 300 OR APPROVED EQUAL. DOOR SHALL OPEN TO CENTER OF VAULT.
8. VAULT WALLS SHALL BE 6" PRECAST WALL SECTIONS OR 8" BLOCK. IF BLOCK WALLS ARE USED, COAT OUTSIDE OF WALLS WITH THORO-SEAL, OR APPROVED EQUAL.
9. TANDEM BACKFLOWS REQUIRED IF SERVING MULTIPLE USERS OR IF SERVICE CANNOT BE INTERRUPTED.
10. ALL DOUBLE CHECK VALVES SHALL BE INSTALLED IN A HORIZONTAL POSITION, EXCEPT FOR THOSE UNITS APPROVED FOR VERTICAL INSTALLATION.

DATE	BY	DESCRIPTION

REVISIONS

TOWN OF LILLINGTON PUBLIC WORKS

3"- 8" DOUBLE CHECK VALVES DETAIL	SCALE	DRAWING #
	N.T.S.	W-18



NOTES:

1. THE BACKFLOW DEVICE MUST BE WITHIN 5 FEET OF AND ON THE PROPERTY SIDE OF THE METER.
2. THE UNIT SHALL BE PURCHASED AS AN ASSEMBLY INCLUDING 4 TEST COCKS WITH ONE INSTALLED ON THE TOWN SIDE OF THE INLET BALL VALVE.
3. ALL DOUBLE CHECK VALVES MUST BE INSTALLED IN A HORIZONTAL POSITION.
4. SHUT OFF VALVES SHALL BE FULL PORT, LINE SIZE, LEVER TYPE, AND 1/4 TURN BRONZE BAL VALVES.
5. DEVICES SHALL HAVE 2 RESILIENT SEAT BRONZE UNIONS BETWEEN THE SHUT OFF VALVES FOR REMOVAL OF THE DEVICE.
6. THE BOX SHALL BE THE GALVANIZED OVAL SHAPED METER BOX AS MANUFACTURED BY THE SOUTHEASTERN DISTRIBUTORS (OR CAST IRON AS APPROVED BY THE TOWN).
7. APPROVED UNITS: HERSEY, WILKINS, FEBCO, WATTS OR CONBRACO.
8. DRAIN REQUIRED IF INSTALLED IN PAVED AREA.
9. TANDEM BACKFLOWS REQUIRED IF SERVING MULTIPLE USERS OR SERVICE CANNOT BE INTERUPTED.
10. DITCH MUST REMAIN OPEN UNTIL BACKFLOW IS INSPECTED BY WATER RESOURCES PERSONNEL.

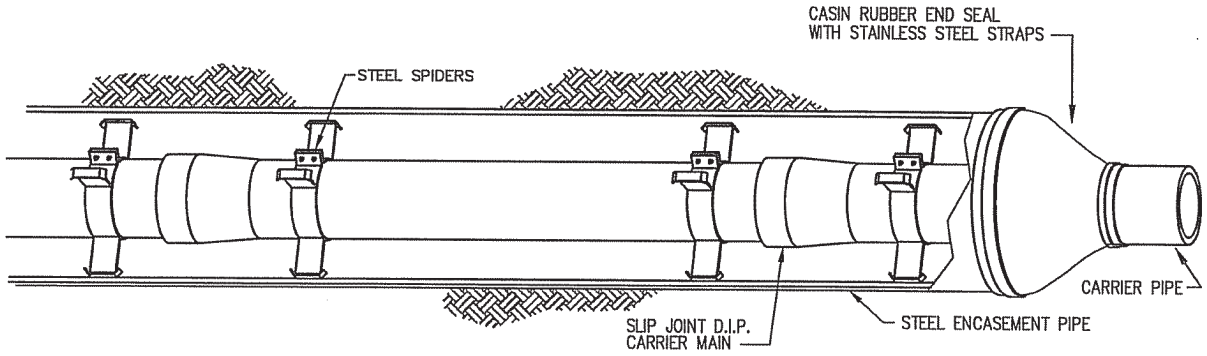
DATE	BY	DESCRIPTION

REVISIONS

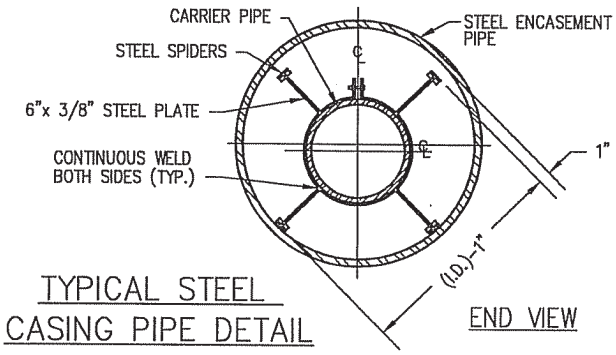
TOWN OF LILLINGTON PUBLIC WORKS

3/4"– 2" DOUBLE CHECK VALVES DETAIL

SCALE	DRAWING #
N.T.S.	W–19

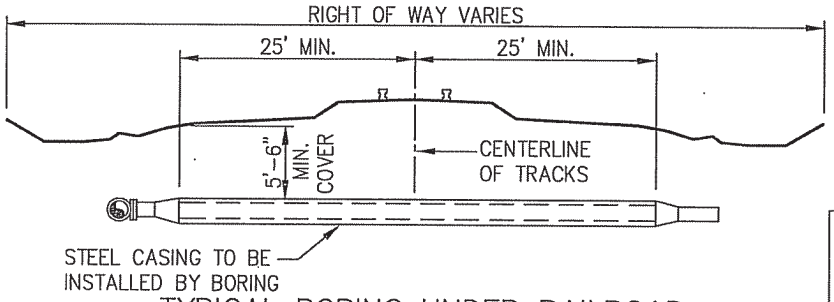


NOMINAL D.I. CARRIER PIPE DIA. (INCHES)	STEEL CASING MINIMUM O.D. (INCHES)	MIN. WALL THICK. FOR HIGHWAYS (INCHES)	MIN. WALL THICK. FOR RAILROADS (INCHES)
3	8.625	0.250	0.250
4	10.75	0.250	0.250
6	14.0	0.250	0.250
8	16.0	0.250	0.312
10	18.0	0.250	0.312
12	20.0	0.250	0.375
14	24.0	0.250	0.375
16	26.0	0.312	0.500
18	28.0	0.312	0.500
20	30.0	0.312	0.500
24	34.0	0.500	0.625



TYPICAL STEEL CASING PIPE DETAIL

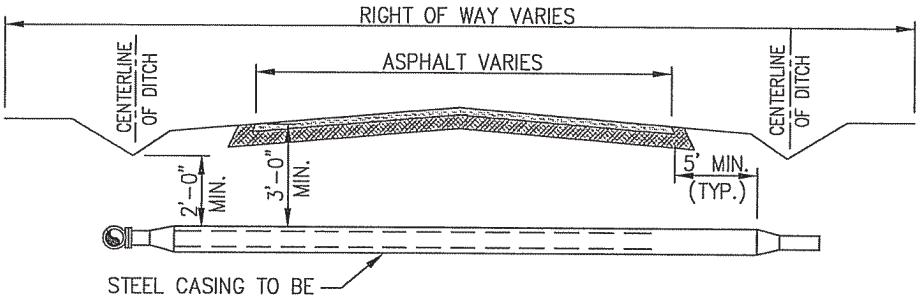
N.T.S.



TYPICAL BORING UNDER RAILROAD

N.T.S.

NOTE:
THESE ARE TYPICAL BORING SECTIONS, THEY MAY VARY AS REQUIRED BY THE RAILROAD OR N.C.D.O.T.



TYPICAL BORING UNDER HIGHWAYS

N.T.S.

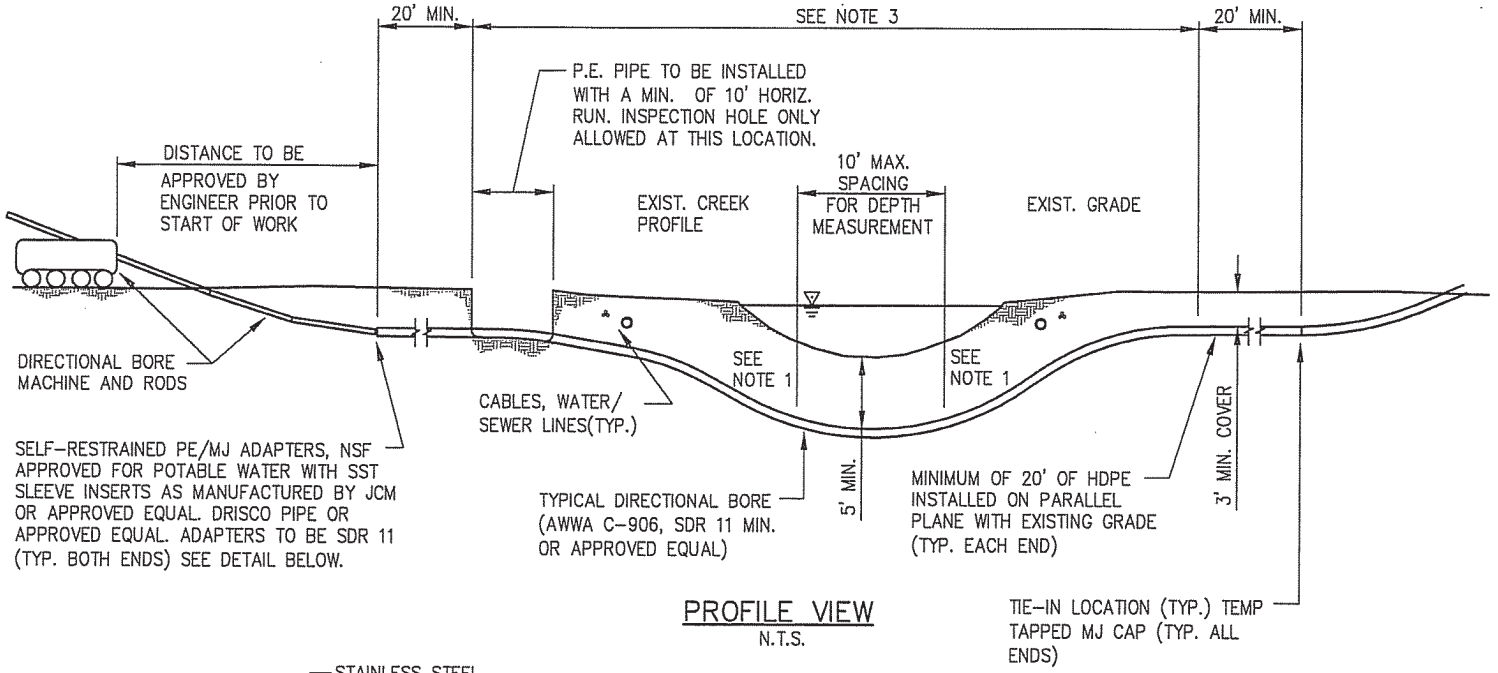
DATE	BY	DESCRIPTION

REVISIONS

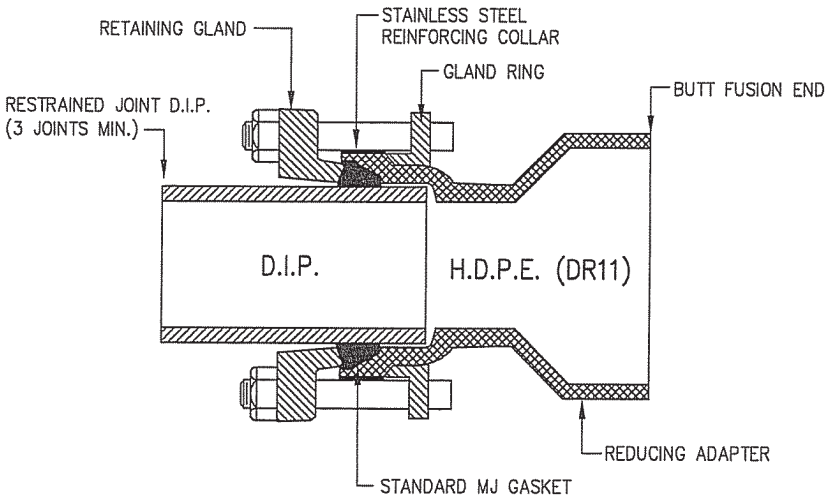
TOWN OF LILLINGTON PUBLIC WORKS

BORE AND JACK DETAILS

SCALE	DRAWING #
N.T.S.	W-20



PROFILE VIEW
N.T.S.



HDPE TO MECHANICAL JOINT REDUCING ADAPTER
N.T.S.

NOTES:

1. A PROFILE AND PLAN SHALL BE PROVIDED FROM ENTRY TO EXIT FOR EACH DIRECTIONAL BORE SECTION BY THE DIRECTIONAL BORE CONTRACTOR.
2. ALL FUSED HDPE PIPE SHALL BE AIR TESTED PRIOR TO BORING.
3. ALL BORE SECTIONS SHALL BE HYDROSTATICALLY TESTED PER SPECIFICATION STANDARDS UPON COMPLETION OF INSTALLATION AND PRIOR TO PLACING THE WATER MAIN ON-LINE.
4. LENGTH OF CROSSING, LOCATION OF INSPECTION/OBSERVATION EXCAVATION, NUMBER OF P.E. PIPE JOINTS, LOCATION OF BORE MACHINE, AUGER ENTRANCE LOCATION, AND TIE-IN POINTS ARE TO BE APPROVED BY ENGINEER PRIOR TO ANY START OF WORK.
5. THIS DETAIL IS ALSO APPLICABLE TO STREAMS, WETLANDS, LARGE STORM DRAINS AND SIMILAR APPLICATIONS FOR DIRECTIONAL BORE WITH POLYETHYLENE PIPE.
6. THE BORE DEVELOPED FOR THE LEAD IN END OF THE PIPE SHALL BE KEPT AT A MINIMUM DIAMETER FOR THE PIPE INSTALLATION. THE LEAD IN END SHALL BE PULLED THROUGH WITHOUT THE M.J. FLANGE ATTACHED FOR LARGER THAN 6" PIPE INSTALLATIONS. THE M.J. FLANGE FOR SAID LEAD IN END SHALL BE INSTALLED AFTER THE PIPE INSTALLATION WITH THE USE OF A SPLIT M.J. FLANGE.
7. CONTRACTOR SHALL FURNISH TO THE ENGINEER THE AS-BUILT LOCATION OF THE BORE IN ACCORDANCE WITH THE SPECIFICATIONS FOR DIRECTIONAL BORING.

REVISIONS

DESCRIPTION	BY	DATE

TOWN OF LILLINGTON PUBLIC WORKS

DIRECTIONAL BORE DETAILS

SCALE	DRAWING #
N.T.S.	W-21