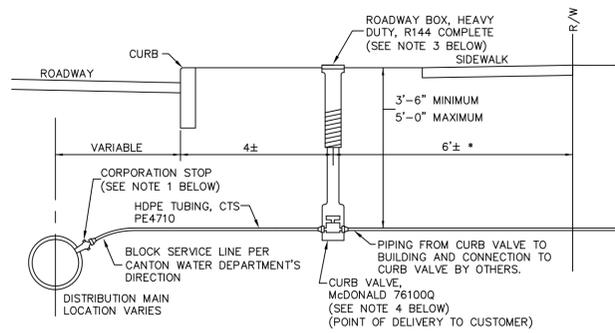


TYPICAL WATER SERVICE (C94)

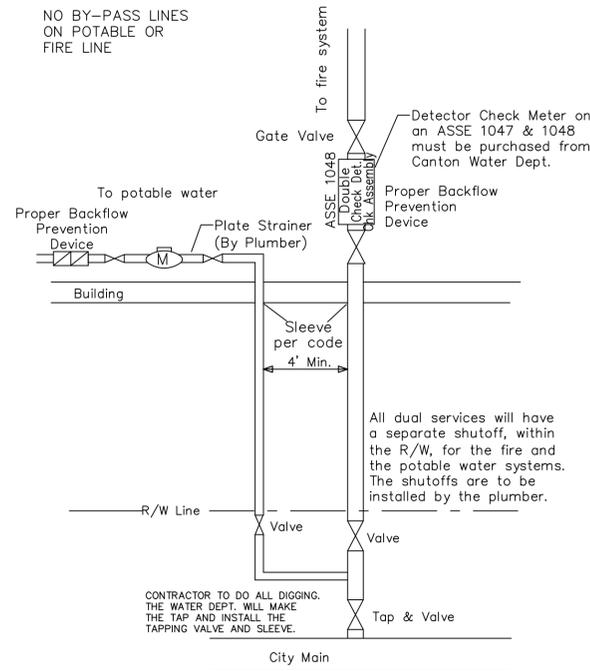


NOTES:

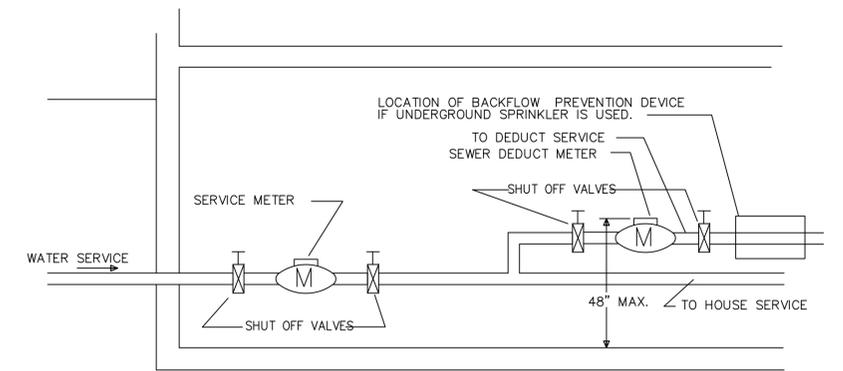
- 1.) CORPORATION STOP AND ASSEMBLY SHALL BE AS FOLLOWS:
 1" CORP. STOP ON DIP: INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION STOP WITH A COMPRESSION CONNECTION.
 1" CORP. STOP ON PVC C909: INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION WITH A COMPRESSION CONNECTION AND A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
 1 1/2" CORP. STOP: INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION STOP WITH A COMPRESSION CONNECTION AND A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
 2" CORP. STOP: INSTALL AT A 45° ANGLE, A MUELLER H-10003 CORPORATION STOP WITH 2" IRON TOP, A STANDARD NO LEAD BRASS 45° ELBOW AND A MUELLER H-15428 COMPRESSION MALE WITH INSERT COUPLING. ASSEMBLY SHALL ALSO CONSIST OF A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
- 2.) A SERVICE CLAMP MUST BE USED WHEN THE MAIN SIZE IS 2 INCH OR SMALLER.
- 3.) HEAVY DUTY VALVE BOXES, COMPLETE, MUST BE USED IN PLACE OF ROADWAY BOXES WHEN THE CURB VALVE IS LOCATED IN ROADWAYS OR ASPHALT DRIVES.
- 4.) WHEN CONNECTING A NEW 1" SERVICE TO AN EXISTING 3/4" SERVICE, THE CURB VALVE SIZE SHALL BE A 1"x3/4" REDUCING CURB VALVE.
- 5.) BRASS REDUCING BUSHINGS OR SWIVEL ELLS WILL NOT BE ALLOWED.
- 6.) APPROVED EQUALS MAY BE USED IN PLACE OF SPECIFIED ITEMS.

TYPICAL DUAL SERVICE (C109)

REVISED 1-05-17 (C109)



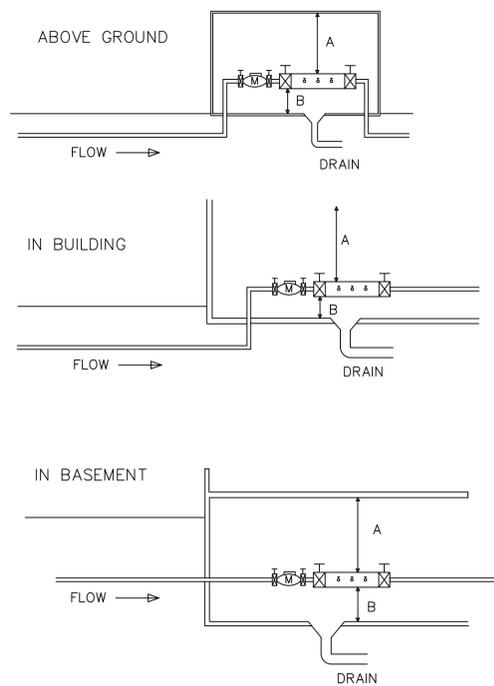
STANDARD SEWER DEDUCT METER INSTALLATION (C97)



NOTE:

The service meter and the sewer deduct meters must be placed in a meter yoke.

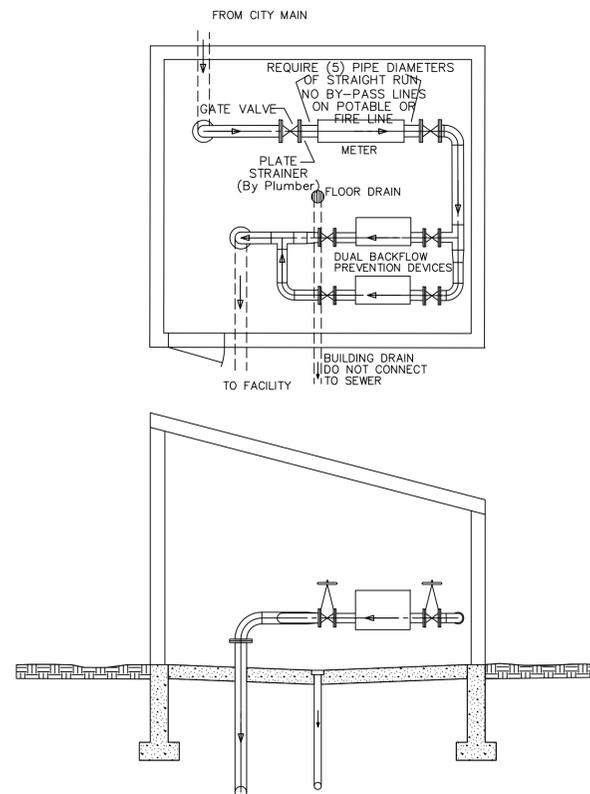
STANDARD RP UNIT INSTALLATION (C87)



- A = ADEQUATE CLEARANCE ABOVE UNIT FOR OPERATION OF VALVES OR REPAIR.
 B = MINIMUM CLEARANCE 12", MAXIMUM CLEARANCE 30".
 NO BY-PASS ALLOWED ON METER
 ALL METERS AND RP UNITS MUST BE PROTECTED FROM FREEZING

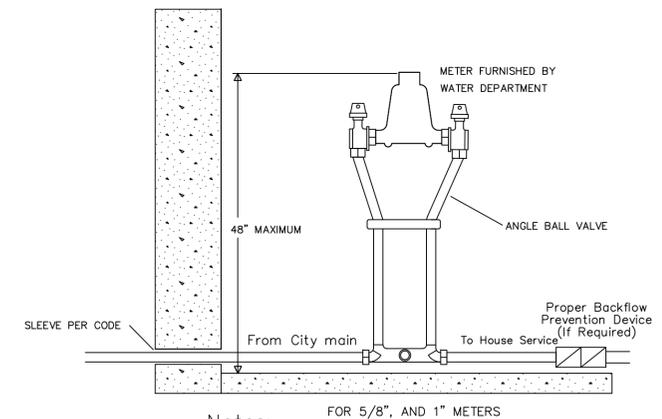
METER AND BACKFLOW PREVENTION HOUSE (C172)

(C172)



COMPOUND METERS ONLY
 **DUAL BACKFLOW PREVENTION DEVICES ARE REQUIRED IF BUILDING REQUIRES UNINTERRUPTED SERVICE
 MINIMUM 30" ABOVE FINISHED FLOOR, FULL ASSEMBLY
 MINIMUM 18" FROM WALL

COPPERSETTER FOR WATER METER (C242)



Notes:

All meters 1 inch and smaller require a coppersetter (Supplied by owner) for proper installation.

Meters are to be placed in an area which provides easy access to the meter for repairs, replacement, and meter readings. Also require drainage.

Water meters to be placed and installed by Canton Water Department personnel inside the building.

Water meters to be installed in a horizontal position only. Installing the water meter vertically is prohibited.

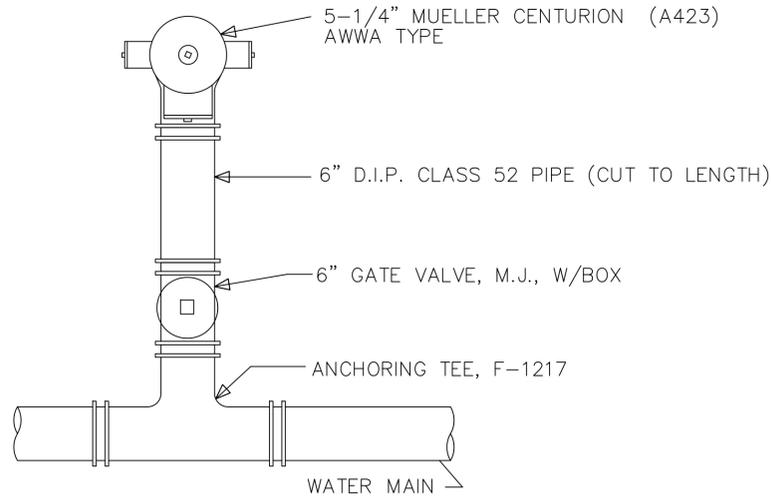


CANTON WATER WORKS
 STANDARD DRAWINGS
 SHEET 1

SCALE NONE		DRAWING NO. C-102	
DRAWN BY RJW	CHECKED BY TD	DATE 5-9-89	

REVISED 8-15-19 BDB
 REVISED 4-27-10 RJW
 REVISED 12-16-09 LAM

HYDRANT CONNECTION (C70)



HYDRANT SETTINGS CONSIST OF HYDRANT, VALVE, VALVE BOX, FITTINGS AND MATERIALS SHOWN OR SPECIFIED WHICH ARE NEEDED FOR PROPER INSTALLATION.

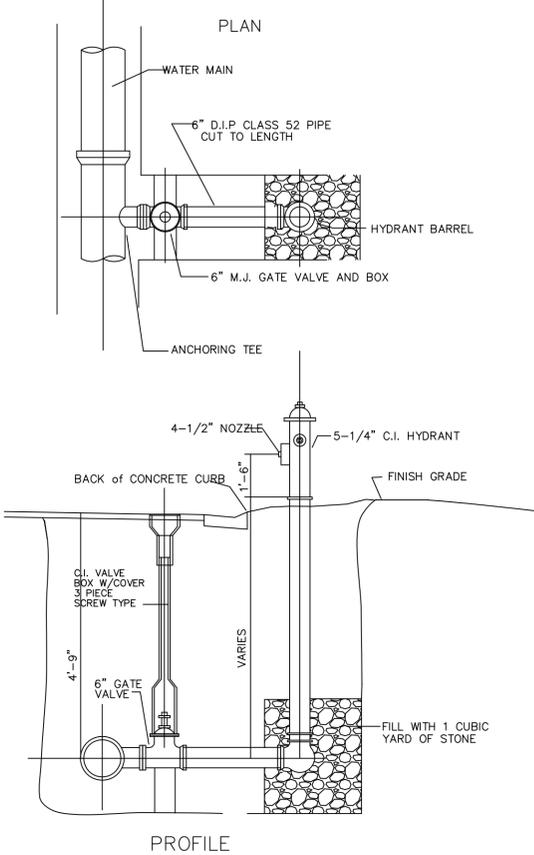
SEE SPECIFICATIONS FOR: MORE INFORMATION ABOUT MATERIALS, SETTING HYDRANTS AND DRAINAGE REQUIREMENTS.

IF RESTRAINED JOINT FITTINGS CANNOT BE USED, (2) TIE RODS AND (4) EYE BOLTS W/NUTS AND WASHERS MUST BE USED.

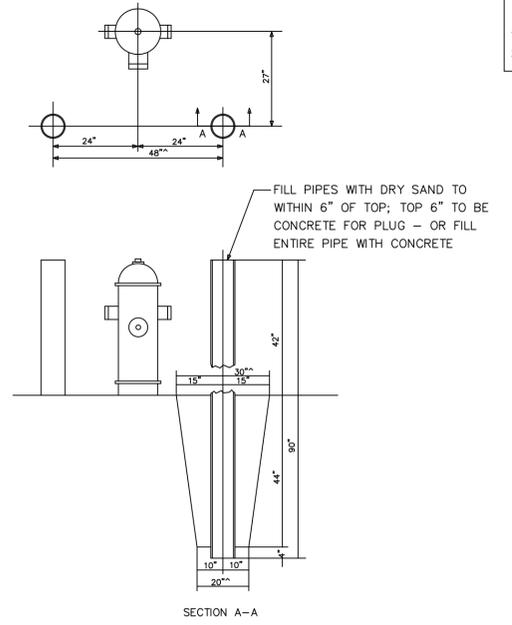
FIGURES SUCH AS F-1217 INDICATE CLOW CORPORATION STYLES. USE THIS BRAND OR APPROVED EQUAL.

ALL HYDRANTS ARE TO BE INSTALLED WITH THE PUMPER NOZZLE FACING THE STREET.

HYDRANT SETTING (C71)



HYDRANT POST GUARDS IF REQUIRED (C67)



MATERIALS REQUIRED FOR SET OF 2 POSTS

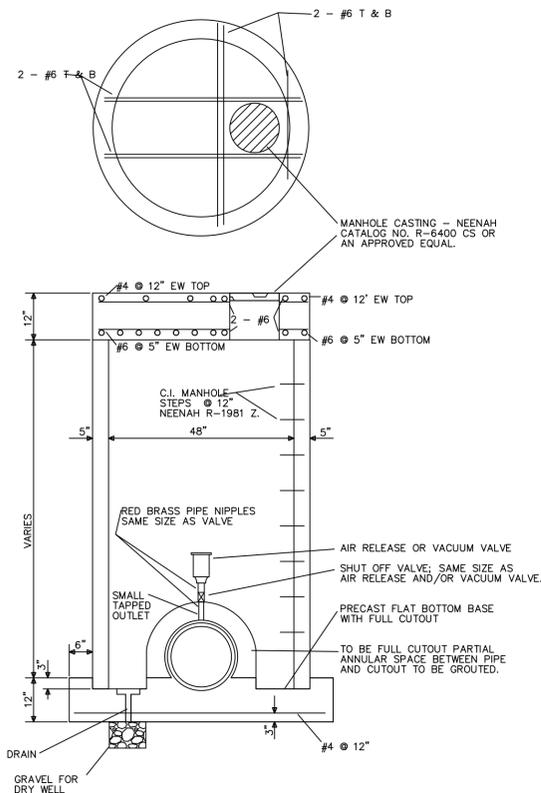
2EA. 6"x90" UNCOATED STEEL PIPES, MIN. WALL THICKNESS .432"

36CF 1 - 2 - 1/2 - 5 CONCRETE WITH GRAVEL AGGREGATE

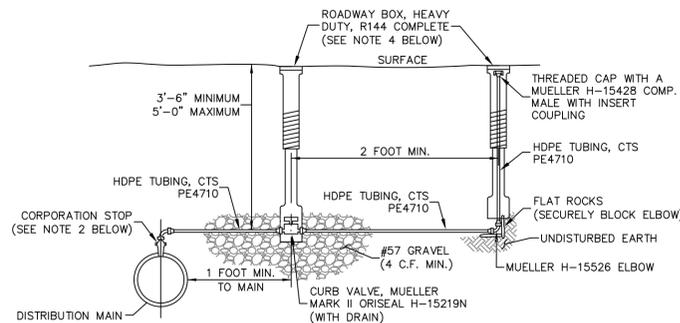
1 COAT REDLEAD PRIMER PAINT

2 COATS ORANGE PAINT

TYPICAL AIR AND VACUUM RELEASE VALVE CHAMBER MAINS SIZE FROM 16 INCHES AND UP (C136)



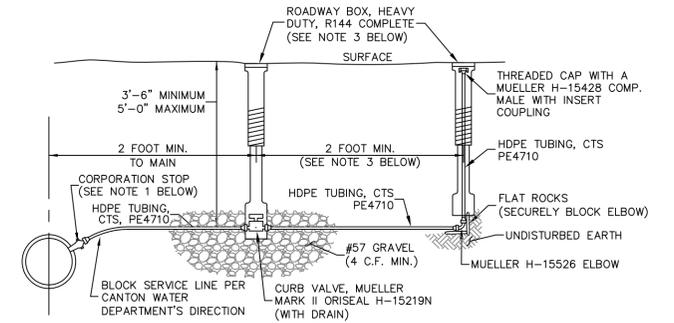
MANUAL AIR RELEASE VALVE MAIN SIZES UP TO AND INCLUDING 12" (C255)



NOTES:

- TO BE USED ON MAINS UP TO AND INCLUDING 12 INCHES.
- CORPORATION STOP AND ASSEMBLY SHALL BE AS FOLLOWS:
 - 1" CORP. STOP ON DIP: INSTALL AT A 90° ANGLE, A MUELLER B-25000 CORPORATION STOP WITH A MUELLER H-15067 ELBOW.
 - 1" CORP. STOP ON PVC C909: INSTALL AT A 90° ANGLE, A MUELLER B-25000 CORPORATION STOP WITH A MUELLER H-15067 ELBOW AND A MUELLER H-15071 COMPRESSION FEMALE WITH INSERT COUPLING. ASSEMBLY SHALL ALSO CONSIST OF A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
 - 1 1/2" CORP. STOP: INSTALL AT A 90° ANGLE, A MUELLER B-25000 CORPORATION STOP WITH A MUELLER H-15068 ELBOW AND A MUELLER H-15071 COMPRESSION FEMALE WITH INSERT COUPLING. ASSEMBLY SHALL ALSO CONSIST OF A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
 - 2" CORP. STOP: INSTALL AT A 90° ANGLE, A MUELLER H-10003 CORPORATION STOP WITH 2" IRON TOP, A MUELLER H-15533 ELBOW AND A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
- BRASS REDUCING BUSHINGS OR SWIVEL ELLS WILL NOT BE ALLOWED.
- HEAVY DUTY VALVE BOXES, COMPLETE, MUST BE USED IN PLACE OF ROADWAY BOXES WHEN LOCATED IN ROADWAYS OR ASPHALT DRIVES.
- APPROVED EQUALS MAY BE USED IN PLACE OF SPECIFIED ITEMS.

STANDARD BLOW-OFF ASSEMBLY (C135)



NOTES:

- CORPORATION STOP AND ASSEMBLY SHALL BE AS FOLLOWS:
 - 1" CORP. STOP ON DIP: INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION STOP WITH A COMPRESSION CONNECTION.
 - 1" CORP. STOP ON PVC C909: INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION WITH A COMPRESSION CONNECTION AND A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
 - 1 1/2" CORP. STOP: INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION STOP WITH A COMPRESSION CONNECTION AND A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
 - 2" CORP. STOP: INSTALL AT A 45° ANGLE, A MUELLER H-10003 CORPORATION STOP WITH 2" IRON TOP, A STANDARD NO LEAD BRASS 45° ELBOW AND A MUELLER H-15428 COMPRESSION MALE WITH INSERT COUPLING. ASSEMBLY SHALL ALSO CONSIST OF A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
- A SERVICE CLAMP MUST BE USED WHEN THE MAIN SIZE IS 2 INCH OR SMALLER.
- HEAVY DUTY VALVE BOXES, COMPLETE, MUST BE USED IN PLACE OF ROADWAY BOXES WHEN THE CURB VALVE IS LOCATED IN ROADWAYS OR ASPHALT DRIVES.
- BRASS REDUCING BUSHINGS OR SWIVEL ELLS WILL NOT BE ALLOWED.
- APPROVED EQUALS MAY BE USED IN PLACE OF SPECIFIED ITEMS.

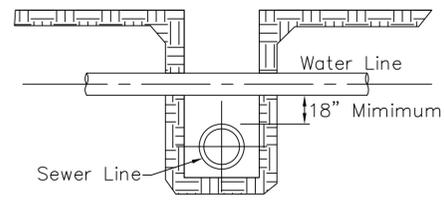


CANTON WATER WORKS
STANDARD DRAWINGS
SHEET 2

SCALE NONE		DRAWING NO. C-103	
DRAWN BY RJW	CHECKED BY TD	DATE 5-9-89	

REVISED 1-21-00 LAM
REVISED 12-13-04 LAM
REVISED 8-15-19 BDB

VERTICAL WATER MAIN CLEARANCE
(C186)

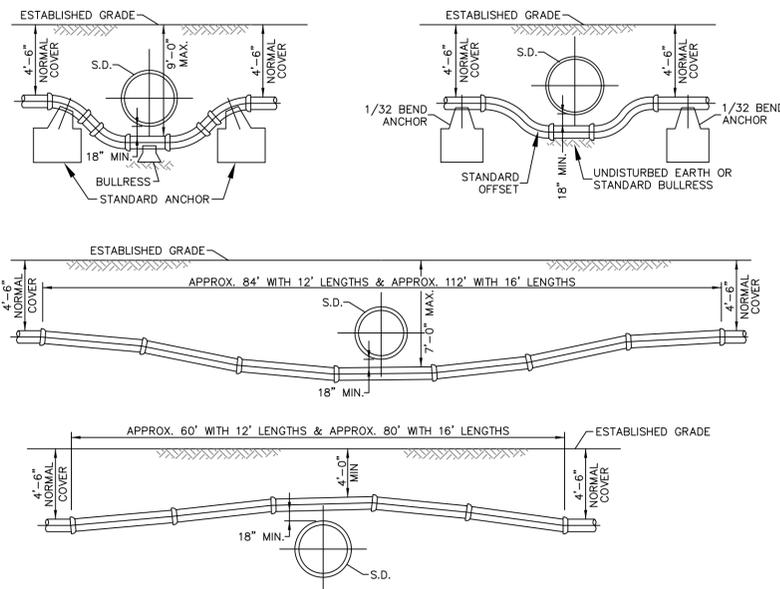


SECTION

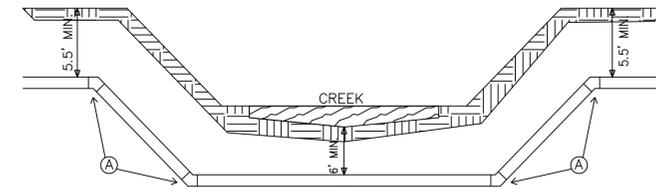
NOTES:

- If joint on water main is within limits of sewer trench, install mechanical bell joint clamp
- If clearance is less than 18":
 - For Storm sewers, concrete encase the storm sewer pipe, 6 ft. on each side of water main.
 - For Sanitary sewers, replace the sanitary sewer pipe with PVC C900 pipe, 10 ft. on each side of water main. Approved couplings shall be used to tie onto the existing sewer.
 Cost for the above shall be included in the unit prices bid for all items in the proposal.
- In no case shall the sewer pipe contact any water main, service line or appurtenance.

WATER MAIN CROSSING STORM DRAIN
(C187)

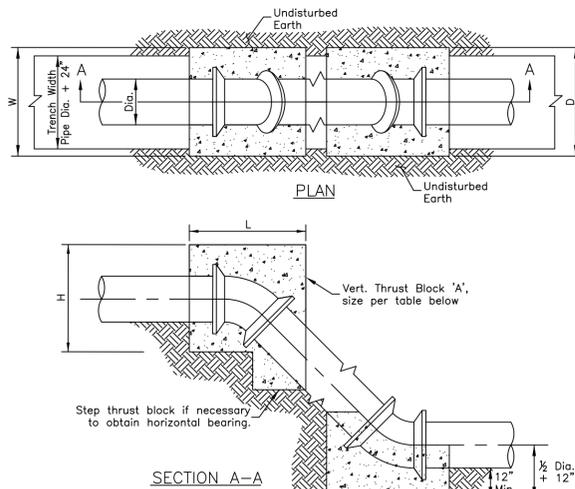


CREEK CROSSING DETAIL
(C252)



- 4 VERTICAL BEND CREEK CROSSING
 (A) MECHANICAL JOINT BENDS – RETAINER GLANDS TO BE MEGALUGS 350 PSI RATING W/8 LUGS ON EACH JOINT. ALL 4 BENDS TO BE RODDED TOGETHER WITH 3/4" RODS AND DUC LUGS. ALSO TO HAVE CONCRETE THRUST BLOCKS AT ALL BENDS. (C147)

CONCRETE THRUST BLOCKS FOR VERTICAL BENDS ON WATER MAINS
POURED IN PLACE (CLASS C)
(C147)

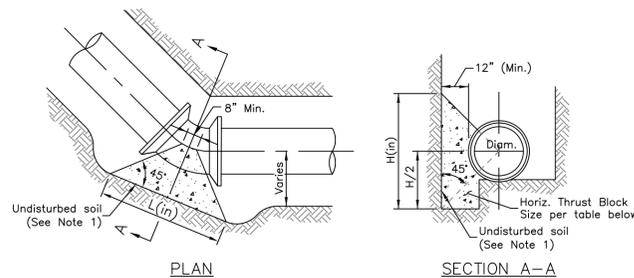


NOTES:

- Pipe, bolts, nuts and fittings shall be wrapped with polyethylene film to prevent corrosion and concrete adhesion.
 Thrust blocks to be centered on bend horizontally.
 Thrust block 'A' shall be off centered on bend vertically to shift the majority of the block above the fitting.
 All joints to be Megalugged.
 Concrete thrust blocks to be placed on all vertical bends.

SIZE OF PIPE	DEGREE OF BEND											
	11 1/4°				22 1/2°				45°			
	L	W	H	V (cy)	L	W	H	V (cy)	L	W	H	V (cy)
6"	12	48	18	0.2	15	43	36	0.5	28	55	24	0.8
8"	12	63	24	0.4	18	57	34	0.7	36	57	33	1.4
12"	20	54	36	0.8	37	62	37	1.7	48	62	51	3.1
16"	31	65	38	1.6	55	65	39	3.0	65	65	65	5.6
20"	40	56	50	2.4	57	66	59	4.8	82	74	68	8.8
24"	48	60	60	3.5	67	72	66	6.9	91	91	72	12.7

HORIZONTAL THRUST BLOCKS
(C130)

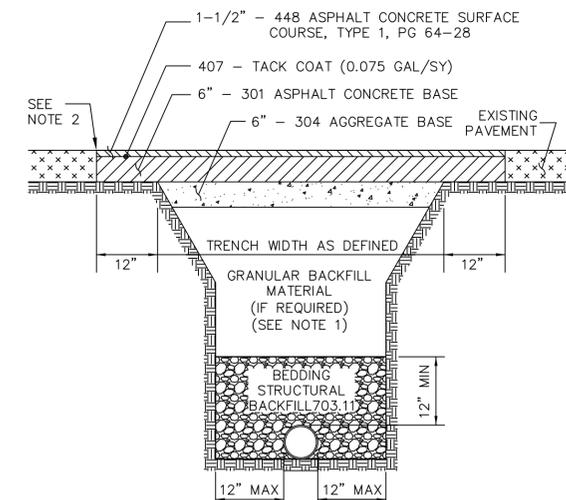


NOTES:

- Thrust blocks shall be placed against undisturbed soil. Where it is not possible, the fill between the bearing surface and undisturbed soil must be compacted to at least 90% Standard Proctor density.
- Pipe, bolts, nuts and fittings shall be wrapped with polyethylene film to prevent corrosion and concrete adhesion.
- All joints to be Megalugged.

SIZE OF PIPE	DEGREE OF BEND							
	11 1/4°		22 1/2°		45°		90°	
	L	H	L	H	L	H	L	H
6"	16	8	16	10	24	14	32	18
8"	16	10	21	14	31	18	44	24
12"	21	16	32	20	48	26	66	36
16"	29	20	42	28	66	34	90	46
20"	37	24	50	36	73	48	107	60
24"	46	28	64	40	93	54	128	72

PAY LIMITS – TRENCH & ROADWAY FOR D.I.P.
(C175)



NOTES:

- CHECK WITH LOCAL AUTHORITY HAVING JURISDICTION WITHIN THE RIGHT-OF-WAY REGARDING BACKFILL REQUIREMENTS.
- SAW CUT EXISTING PAVEMENT, SEAL JOINT PER ODOT ITEM 423 – CRACK SEALING, TYPE IV. INCLUDE COST IN BID PRICE FOR THE PROPOSED PAVEMENT.
- IF ADJACENT PAVEMENT IS DAMAGED OR UNDERMINED DURING CONSTRUCTION, ADDITIONAL PAVEMENT SHALL BE SAW CUT AND REMOVED IN ORDER TO PROVIDE A SOUND PAVEMENT EDGE.



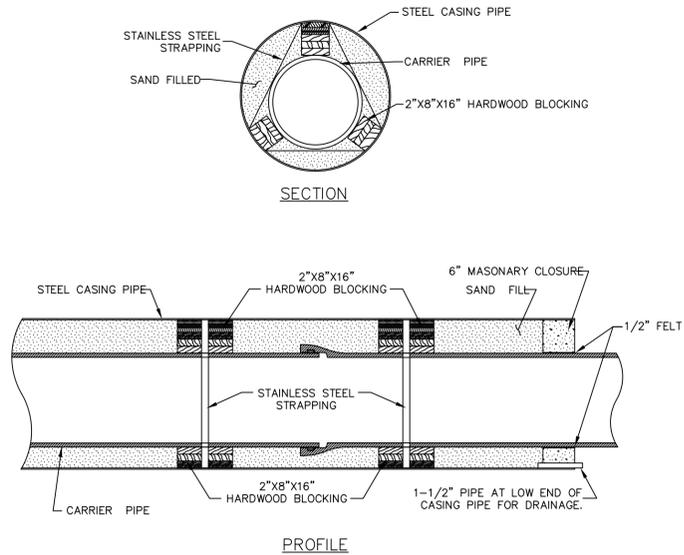
CANTON WATER WORKS
STANDARD DRAWINGS
SHEET 3

SCALE NONE	DRAWING NO. C-237
DRAWN BY LAM	CHECKED BY DATE 7-13-95

REVISED 12-19-18 BDB
REVISED 11-7-02 LAM
REVISED 8-7-96 LAM

BORING / CASING PIPE DETAIL

DWG. NO. C378
REVISED: 10/20/15 BDB

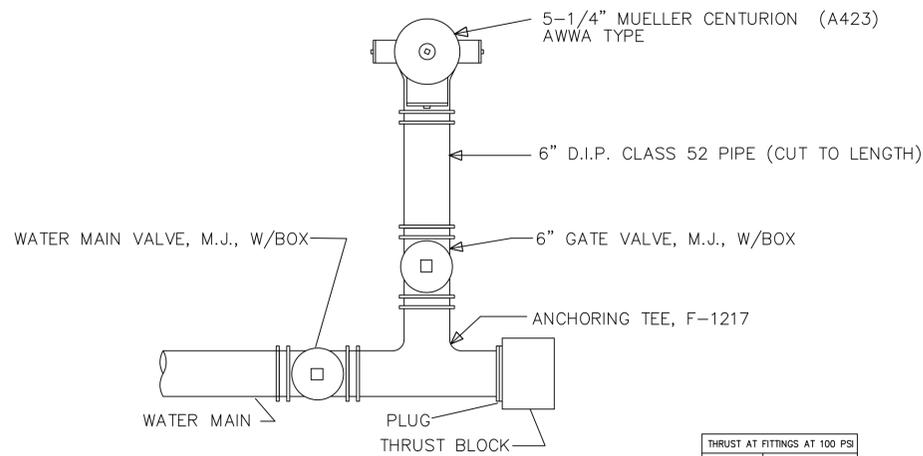


NOTES:

- THREE SUPPORTS SHALL BE USED ON EACH LENGTH OF CARRIER PIPE. PLACE ONE AT EACH END AND ONE IN THE MIDDLE. THE HARDWOOD BLOCKS SHALL BE FORMED TO FIT THE WALL OF THE CASING PIPE.
- THE INSIDE DIAMETER OF THE STEEL CASING PIPE SHALL BE AT LEAST 5 INCHES GREATER THAN THE LARGEST OUTSIDE DIAMETER OF THE CARRIER PIPE JOINTS OR COUPLINGS.
- THE STEEL CASING PIPE SHALL BE AT LEAST 3/8 INCH OR 10 GAUGE STEEL.
- THE ENDS OF THE STEEL CASING PIPE SHALL BE SEALED.
- ANY PIPE JOINTS WITHIN THE CASING PIPE SHALL BE TR-FLEX PIPE, OR AN APPROVED EQUAL RESTRAINED PUSH-ON JOINT PIPE AND FITTINGS.

HYDRANT CONNECTION AT END OF MAIN

DWG.NO.C383



HYDRANT SETTINGS CONSIST OF HYDRANT, VALVE, VALVE BOX, FITTINGS AND MATERIALS SHOWN OR SPECIFIED WHICH ARE NEEDED FOR PROPER INSTALLATION.

SEE SPECIFICATIONS FOR: MORE INFORMATION ABOUT MATERIALS, SETTING HYDRANTS AND DRAINAGE REQUIREMENTS.

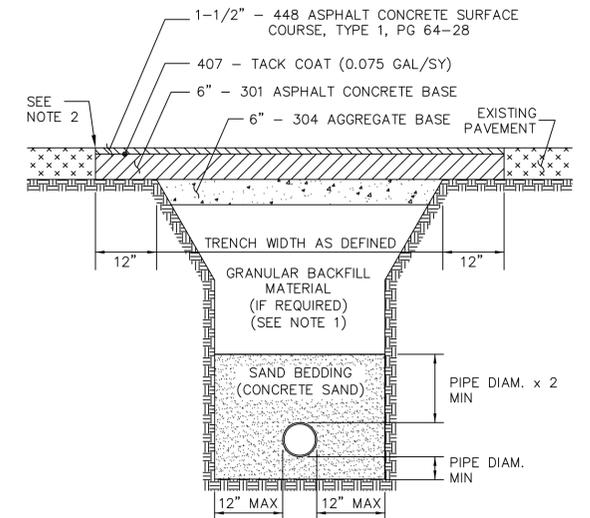
IF RESTRAINED JOINT FITTINGS CANNOT BE USED, (2) TIE RODS AND (4) EYE BOLTS W/NUTS AND WASHERS MUST BE USED.

FIGURES SUCH AS F-1217 INDICATE CLOW CORPORATION STYLES. USE THIS BRAND OR APPROVED EQUAL.

ALL HYDRANTS ARE TO BE INSTALLED WITH THE PUMPER NOZZLE FACING THE STREET.

THRUST AT FITTINGS AT 100 PSI	
MAIN SIZE	TOTAL POUNDS
6	3,739
8	6,433
10	9,677
12	13,685
14	18,385
16	23,779
18	29,865
20	36,644
24	52,279

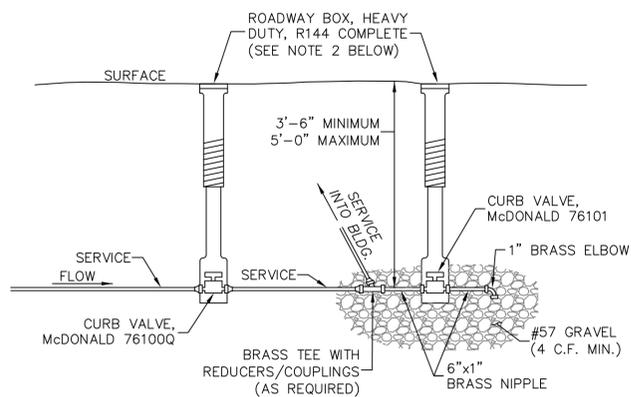
TRENCH DETAIL - C909 PIPE
DWG.NO.C385



NOTES:

- CHECK WITH LOCAL AUTHORITY HAVING JURISDICTION WITHIN THE RIGHT-OF-WAY REGARDING BACKFILL REQUIREMENTS.
- SAW CUT EXISTING PAVEMENT, SEAL JOINT PER ODOT ITEM 423 - CRACK SEALING, TYPE IV. INCLUDE COST IN BID PRICE FOR THE PROPOSED PAVEMENT.
- IF ADJACENT PAVEMENT IS DAMAGED OR UNDERMINED DURING CONSTRUCTION, ADDITIONAL PAVEMENT SHALL BE SAW CUT AND REMOVED IN ORDER TO PROVIDE A SOUND PAVEMENT EDGE.

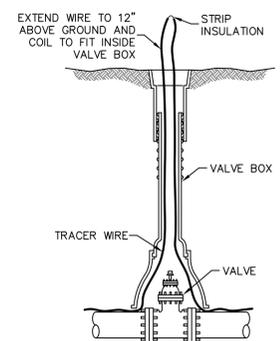
DRAIN DETAIL
DWG.NO.C400



NOTES:

- REFER TO SITE PLAN FOR THE WATER SERVICE SIZE AND MATERIAL. THE FITTINGS SHALL BE SIZED ACCORDINGLY.
- HEAVY DUTY VALVE BOXES, COMPLETE, MUST BE USED IN PLACE OF ROADWAY BOXES WHEN LOCATED IN ROADWAYS OR ASPHALT DRIVES.
- APPROVED EQUALS MAY BE USED IN PLACE OF SPECIFIED ITEMS.

TRACER WIRE AT VALVE BOX DETAIL
DWG.NO.C401



CANTON WATER WORKS
STANDARD DRAWINGS
SHEET 4

REVISED: 8/15/19 BDB
REVISED: 1/05/16 BDB
REVISED: 6.13.06 LAM

SCALE NONE		DRAWING NO. C-379	
DRAWN BY RJW	CHECKED BY	DATE 5-5-05	