



WATERBURY

WATER DEPARTMENT

WATER SERVICE AND MAIN INSTALLATION DETAILS

The Water Department in the City of Waterbury developed this Water Service and Main Installation Details Manual to establish uniform concepts for water system design details for the various sized water services and their appurtenances and to provide guidelines and criteria for the design engineers and contractors to use in preparing portions of planning documents .
If deviations from the prescribed installation are necessary, approval must be obtained from the Water Department prior to the installation.

**CITY OF
WATERBURY**



**BUREAU OF
WATER**



**WATER SERVICE
INSTALLATION
DETAILS**

Waterbury Water Department
 21 East Aurora Street
 Waterbury CT, 06708

CITY OF
 WATERBURY



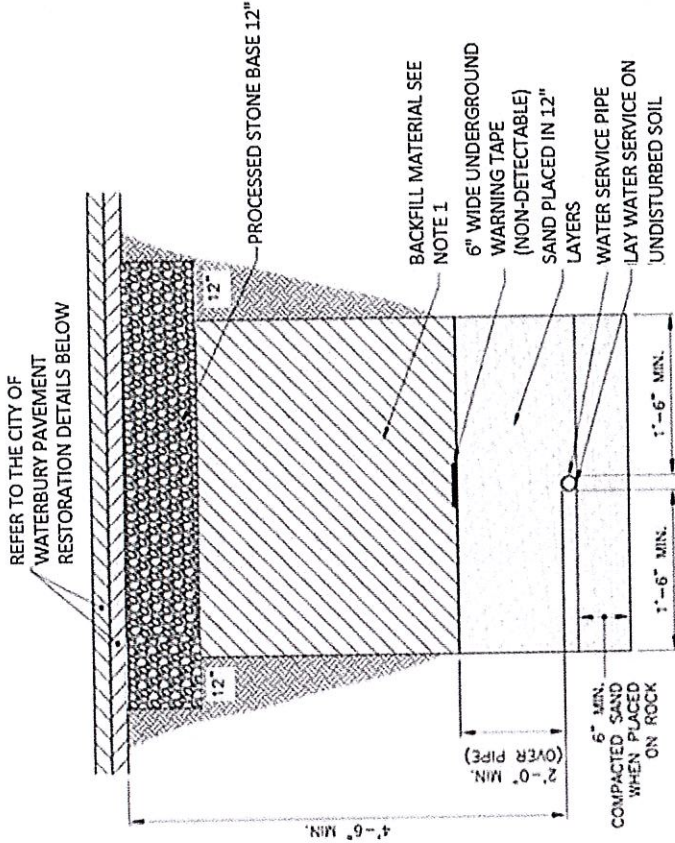
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 WATER



WATER SERVICE
 INSTALLATION
 DETAILS

SERVICE LINE INSPECTION PROCEDURES

- The contractor shall contact the *Water Department Inspector* to request an inspection prior to backfill.
- The Contractor must be present at the site on the day of inspection.
- Water Service Trench shall be excavated and backfilled following trench detail requirements below.
- Leave the TRENCH OPEN. DO NOT backfill the trench until our inspector has approved the service line.

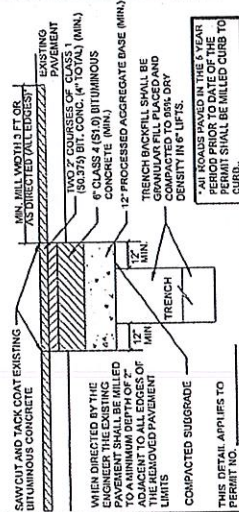


NOTE:

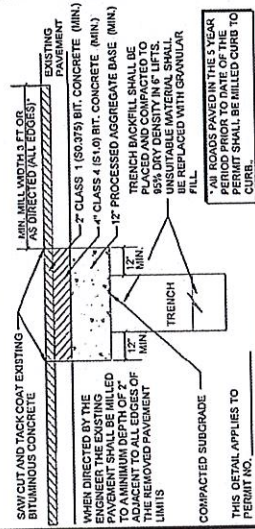
1. BACKFILL MATERIAL SHALL BE BANK-RUN GRAVEL IN PAVED AREAS (INCLUDING SIDEWALKS AND DRIVEWAYS) OR COMMON FILL IN NON-PAVED AREAS

WATER SERVICE TRENCH

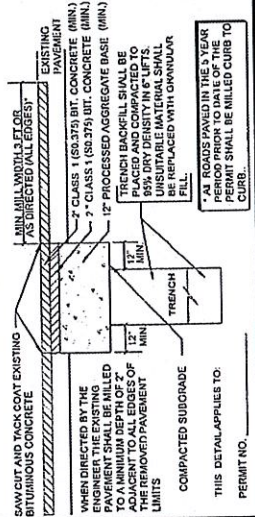
ARTERIAL ROADS PAVEMENT RESTORATION DETAIL

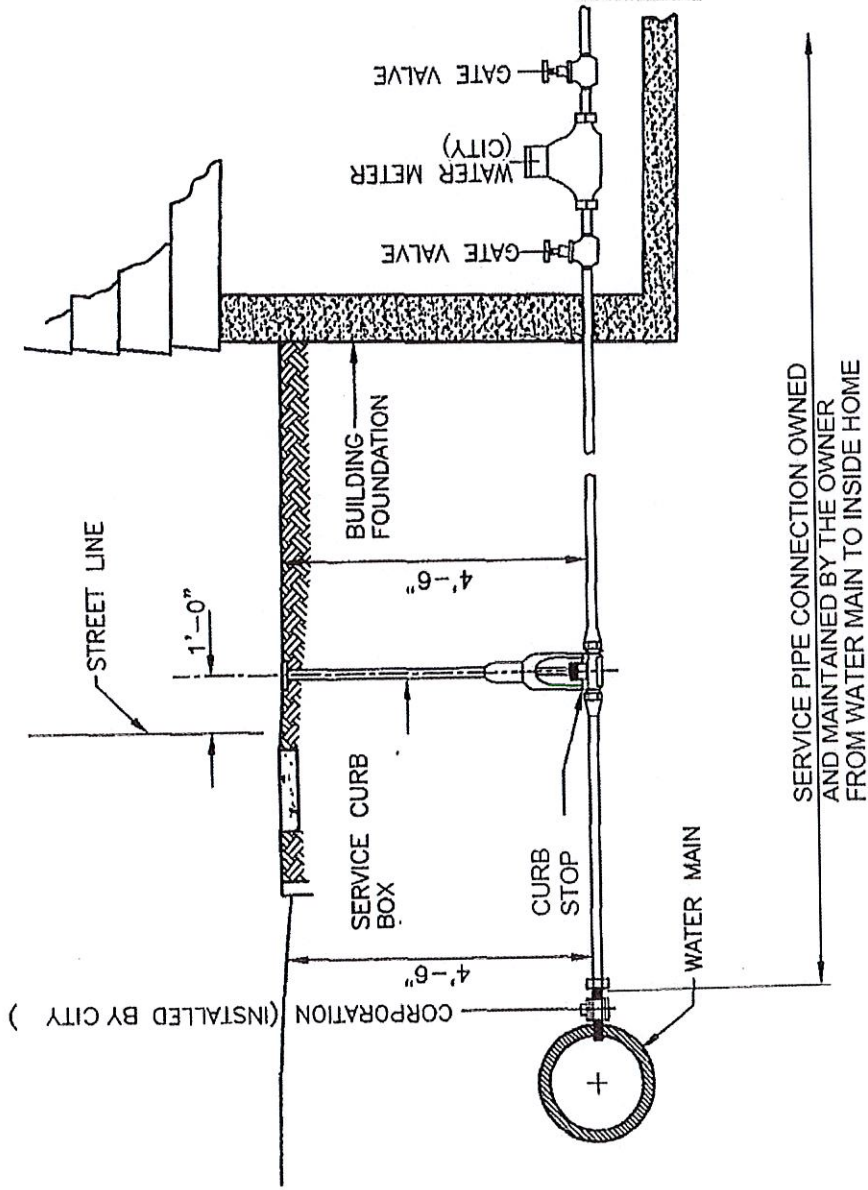


COLLECTOR ROADS PAVEMENT RESTORATION DETAIL

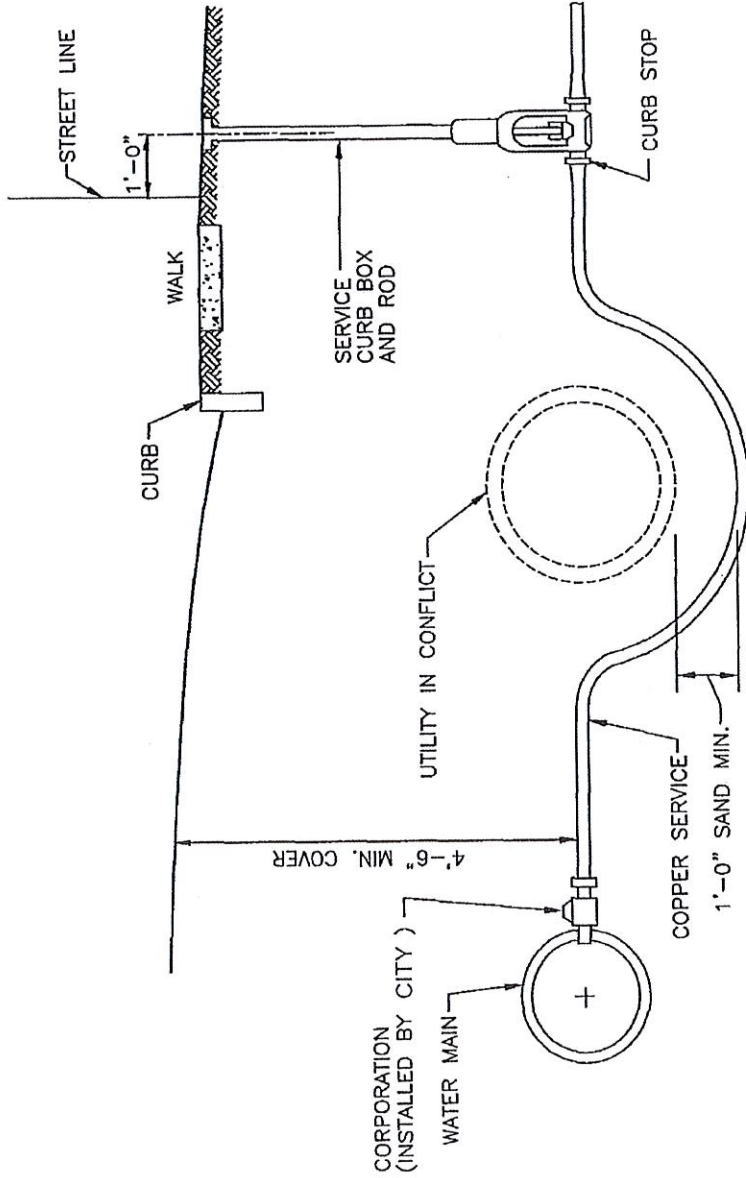


LOCAL ROADS PAVEMENT RESTORATION DETAIL





**TYPICAL Type K COPPER
WATER SERVICE**



TYPICAL DETAIL
COPPER SERVICE OFFSET

Crossings: at sewer crossings, a minimum vertical clearance of 18 inches, measured from crown to invert, should be maintained between the water main and sewer with the preferred location of the water main above the sewer whenever possible. The water main should be centered at the sewer crossing such that the water main joints are spaced as far as possible from the sewer. If the water main will cross above the sewer and will be centered above the sewer such that the water main joints are spaced as far as possible from the sewer, the vertical separation distance may be reduced to 12 inches. There should be no reduction in the vertical separation distance of 18 inches for sanitary sewer force main crossings. If the water main will cross under a sewer, special consideration should be given to the structural support of the sewer to prevent settling or deflection of the sewer which may damage the water main.

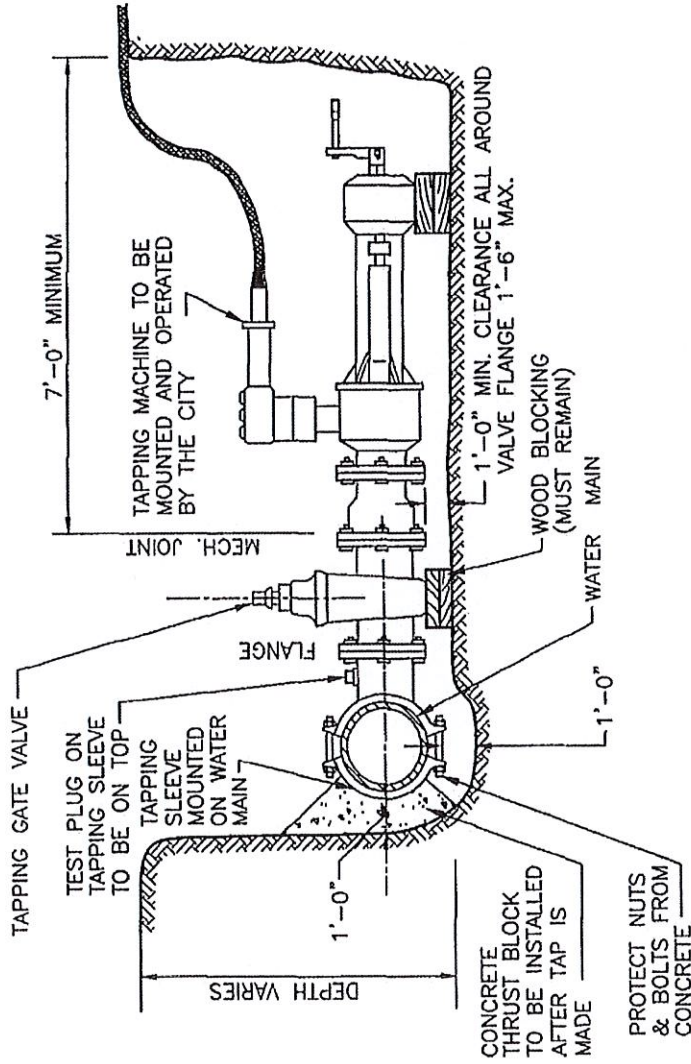
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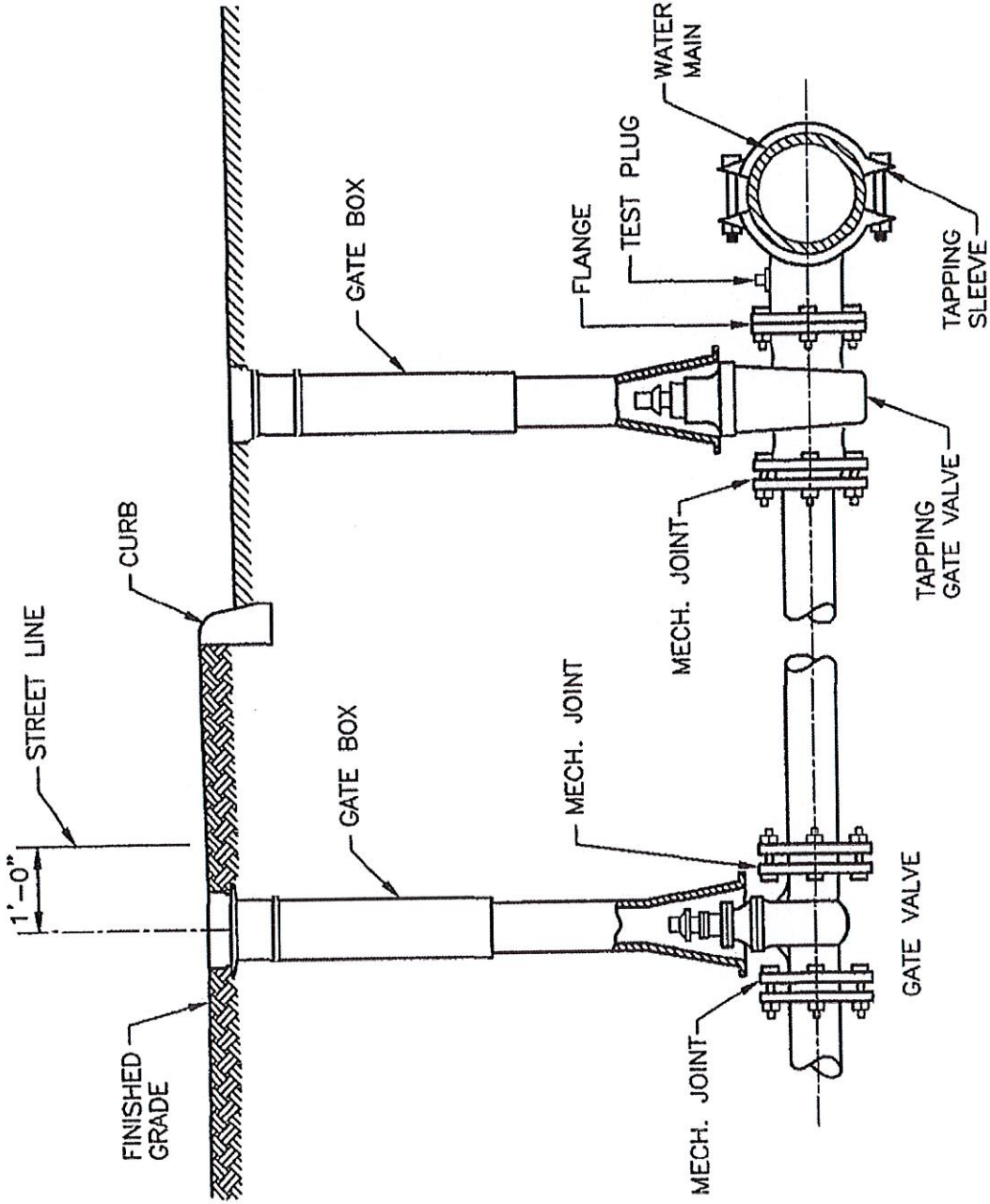
WATER SERVICE
INSTALLATION
DETAILS



**TRENCH REQUIREMENTS FOR MAKING
4-INCH TO 12-INCH TAP
ON WATER MAIN**

NOTES:

1. TAPPING SLEEVE & TAPPING GATE VALVE TO BE INSTALLED ON WATER MAIN BY THE CONTRACTOR. THE DISTRICT WILL TEST INSTALLATION PRIOR TO MAKING TAP. NO TAP WILL BE MADE IF THERE IS NO TEST PLUG.
2. TAPPING GATE VALVE TO HAVE RIGHT HAND OF OPERATION AS DIRECTED BY THE CITY. IF VALVE HAND OF OPERATION IS NOT CORRECT, NO TAP WILL BE MADE.
3. TRENCH TO BE DEWATERED AND IN COMPLIANCE WITH OSHA REQUIREMENTS FOR TRENCH EXCAVATION WITH TRENCH BOX INSTALLED.



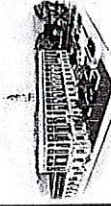
PIPING TO BE RESTRAINED WITH RODDING OR RETAINING GLANDS

SERVICES 4" THROUGH 12"

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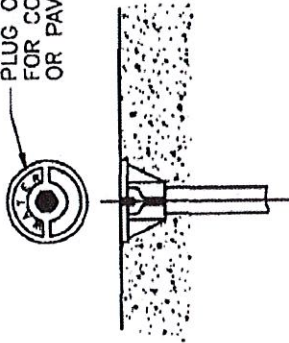


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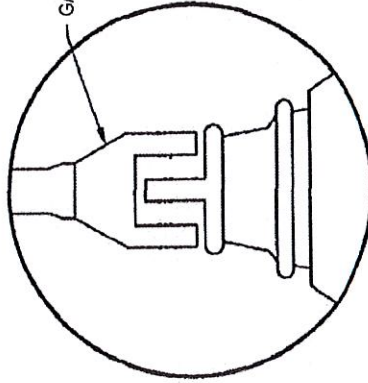


WATER SERVICE
INSTALLATION
DETAILS

PLUG COVER
FOR CONCRETE
OR PAVED AREA

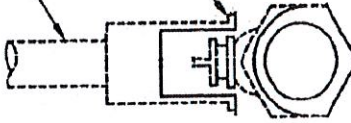


GATE KEY WRENCH



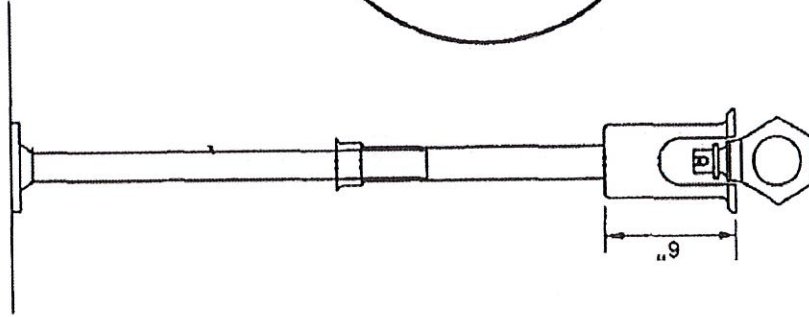
STANDARD
BOX

BASE

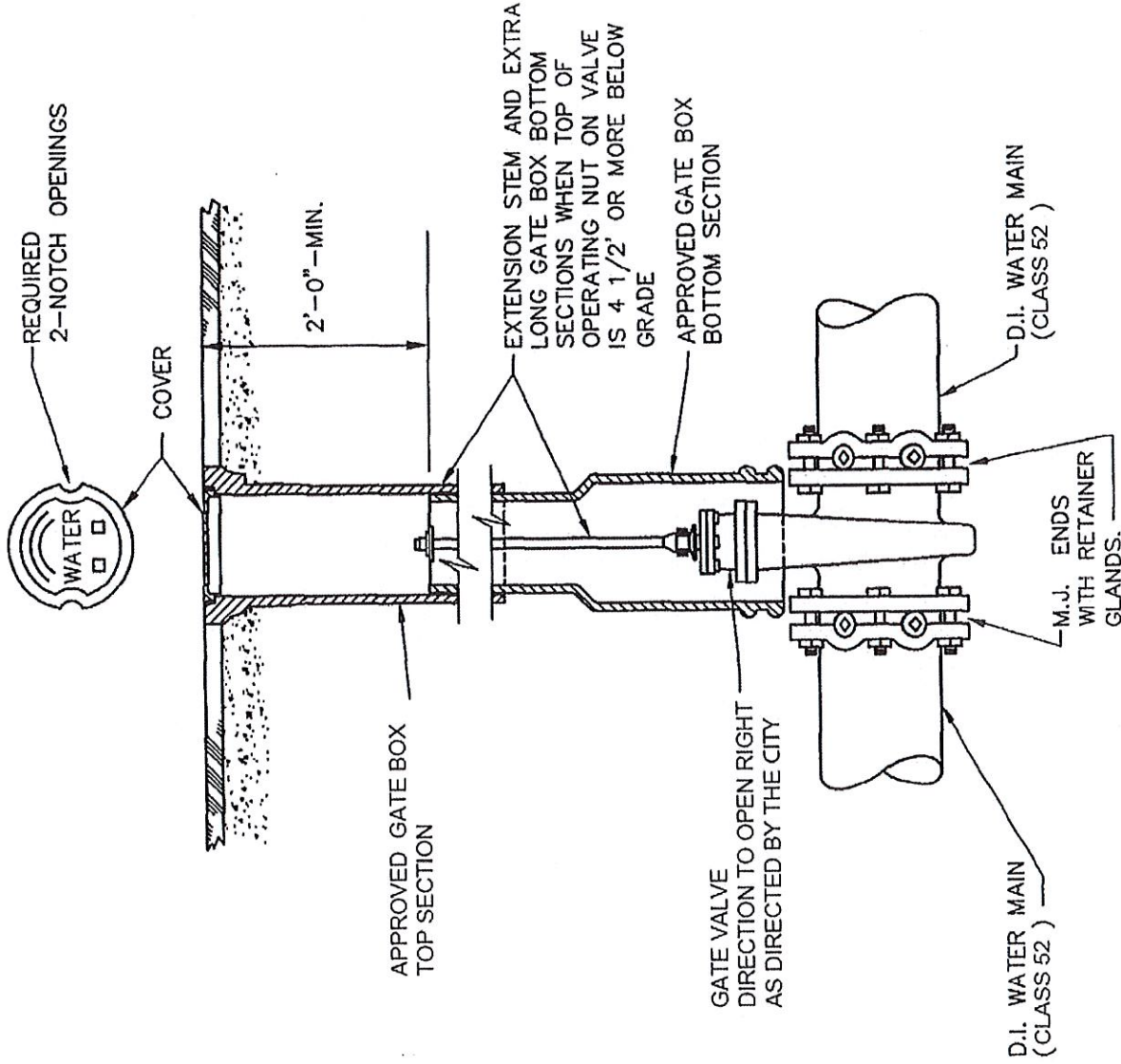


CURB BOX BASE
FOR SERVICES 1 1/2" TO 2"

STANDARD BOX
FOR 1" SERVICE



STANDARD SERVICE CURB BOX



**TYPICAL GATE VALVE INSTALLATION
12" AND SMALLER**

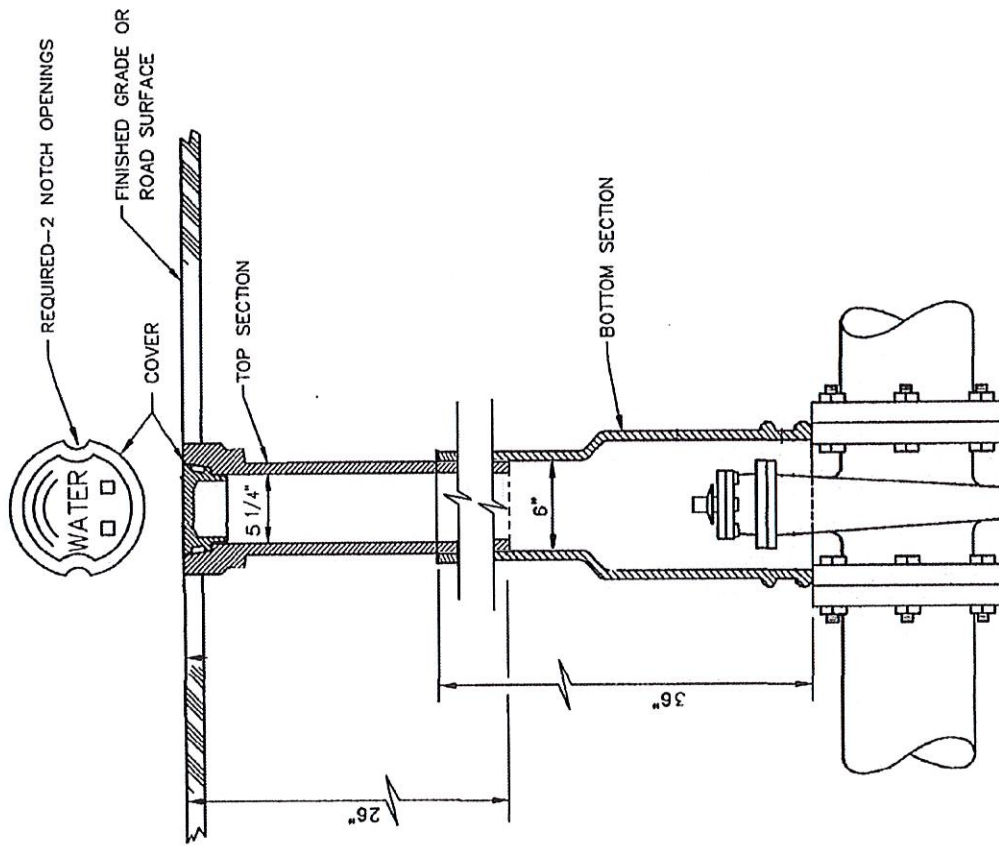
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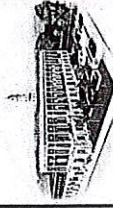


STANDARD GATE BOX
(QWP TYPE)

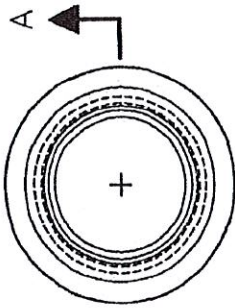
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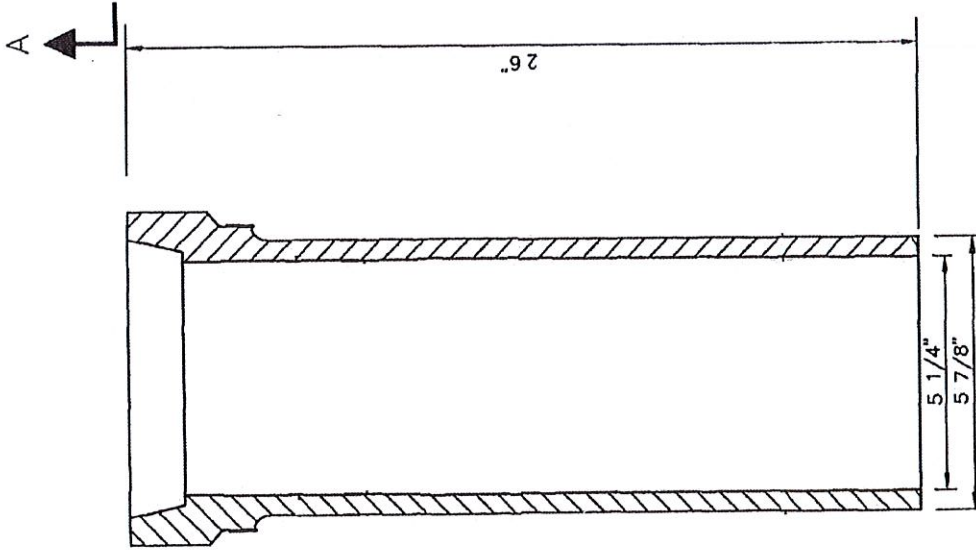
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WATER SERVICE
INSTALLATION
DETAILS



PLAN



26"

5 1/4"
5 7/8"

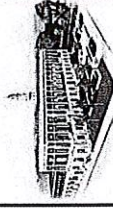
SECTION A-A

**CAST IRON GATE BOX
TOP SECTION
(QWP TYPE)**

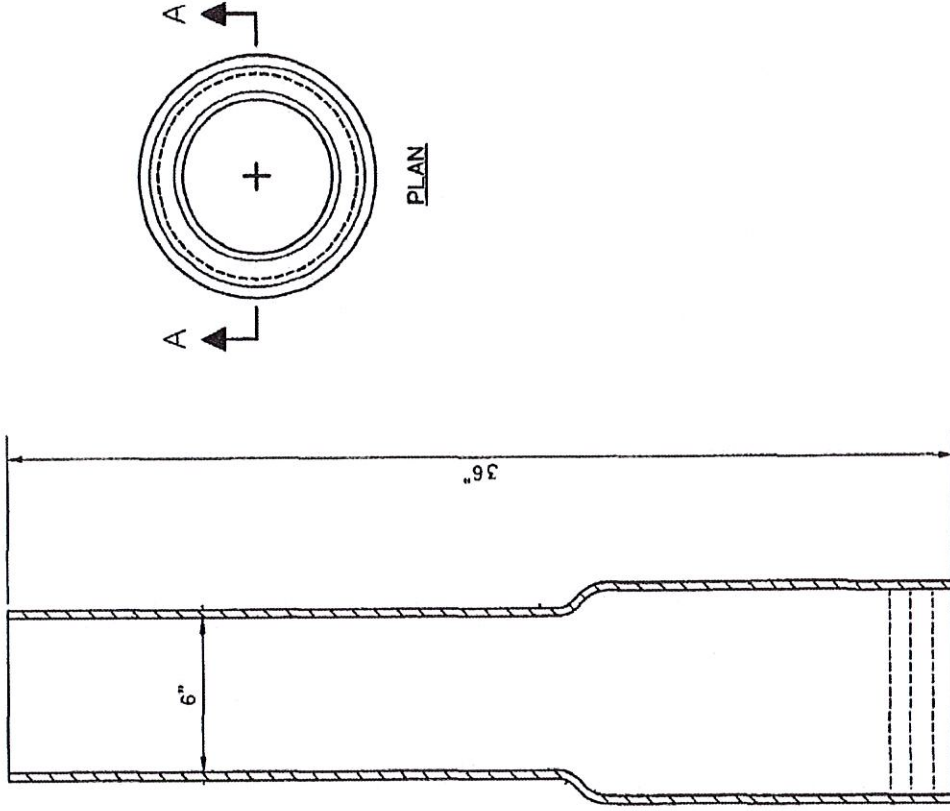
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**CAST IRON GATE BOX
BOTTOM SECTION
(QWP TYPE)**

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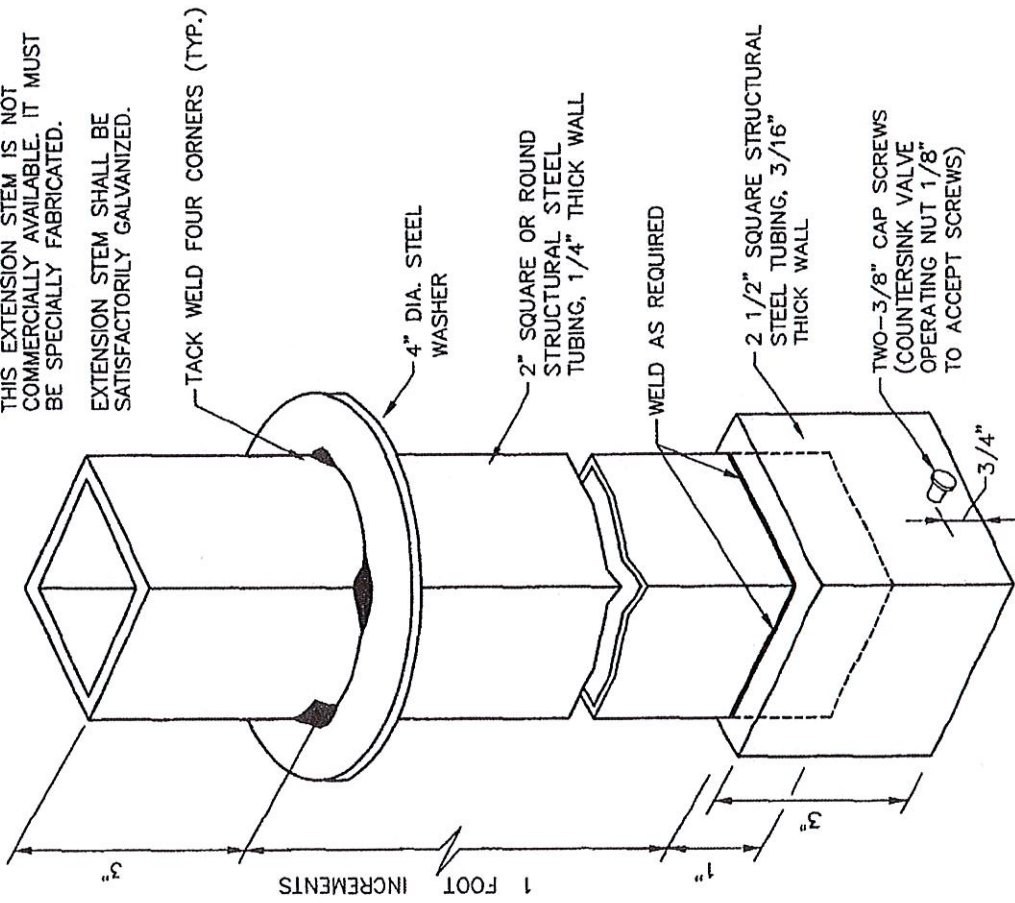


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WATER SERVICE
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NOTE:
THIS EXTENSION STEM IS NOT
COMMERCIALY AVAILABLE. IT MUST
BE SPECIALLY FABRICATED.
EXTENSION STEM SHALL BE
SATISFACTORILY GALVANIZED.



**GATE NUT EXTENSION STEM
FOR GATE BOX INSTALLATION**

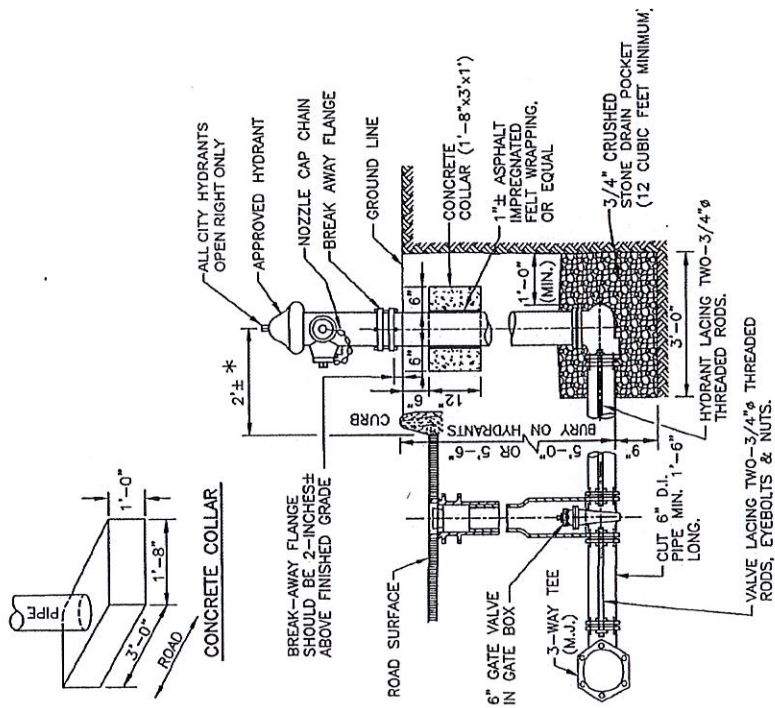
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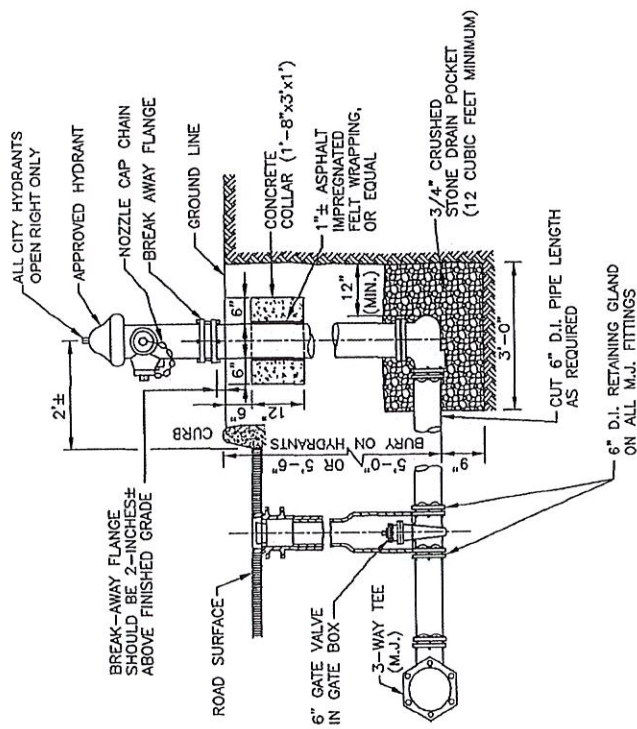
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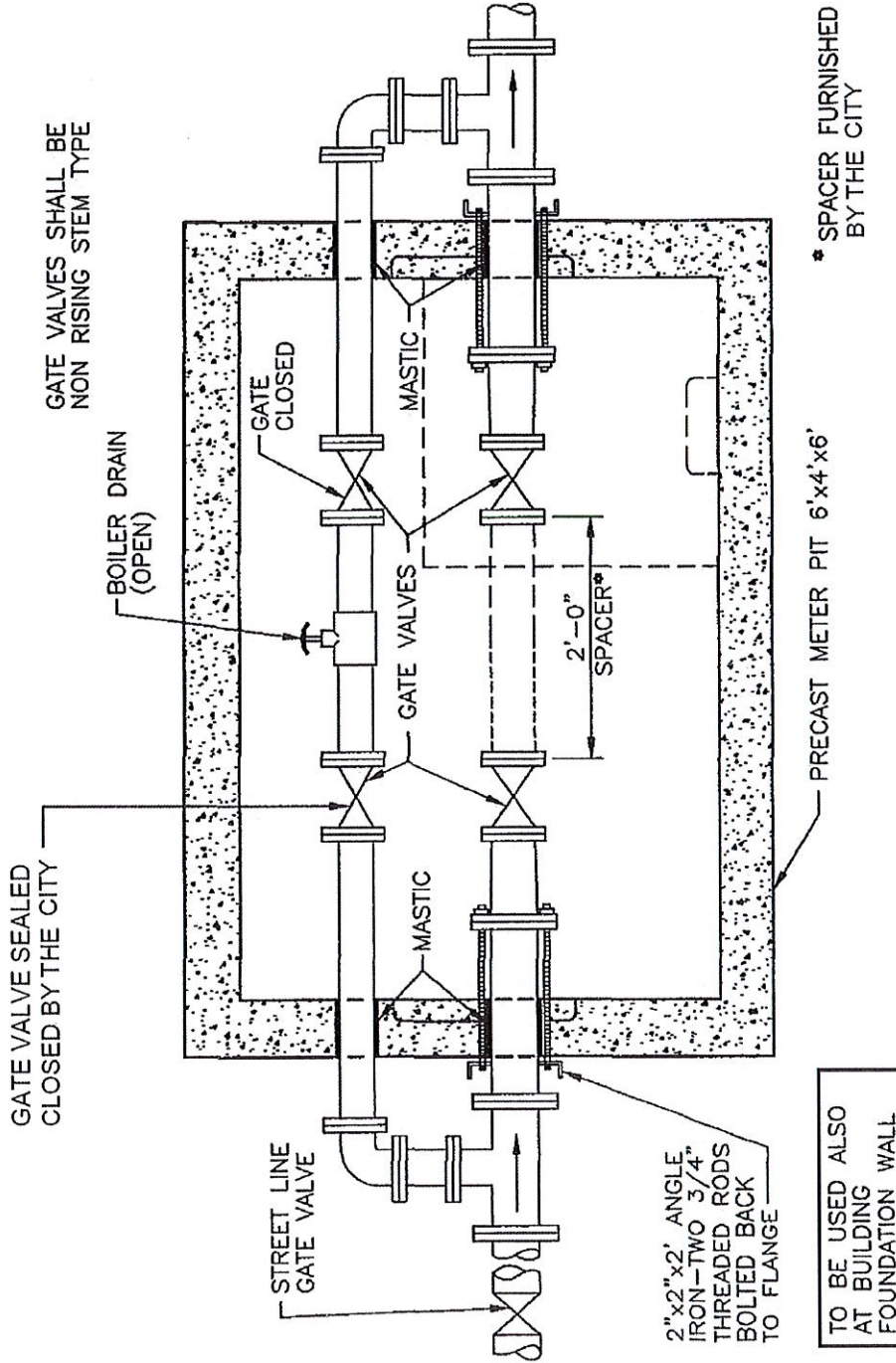
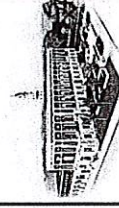
WATER SERVICE
INSTALLATION
DETAILS



FIRE HYDRANT ASSEMBLY
TYPICAL RODDING INSTALLATION



FIRE HYDRANT ASSEMBLY
TYPICAL RETAINING GLAND
INSTALLATION



**TYPICAL METER INSTALLATION
WITH BY-PASS FOR 3" THRU 12" METERS WITH PIT**

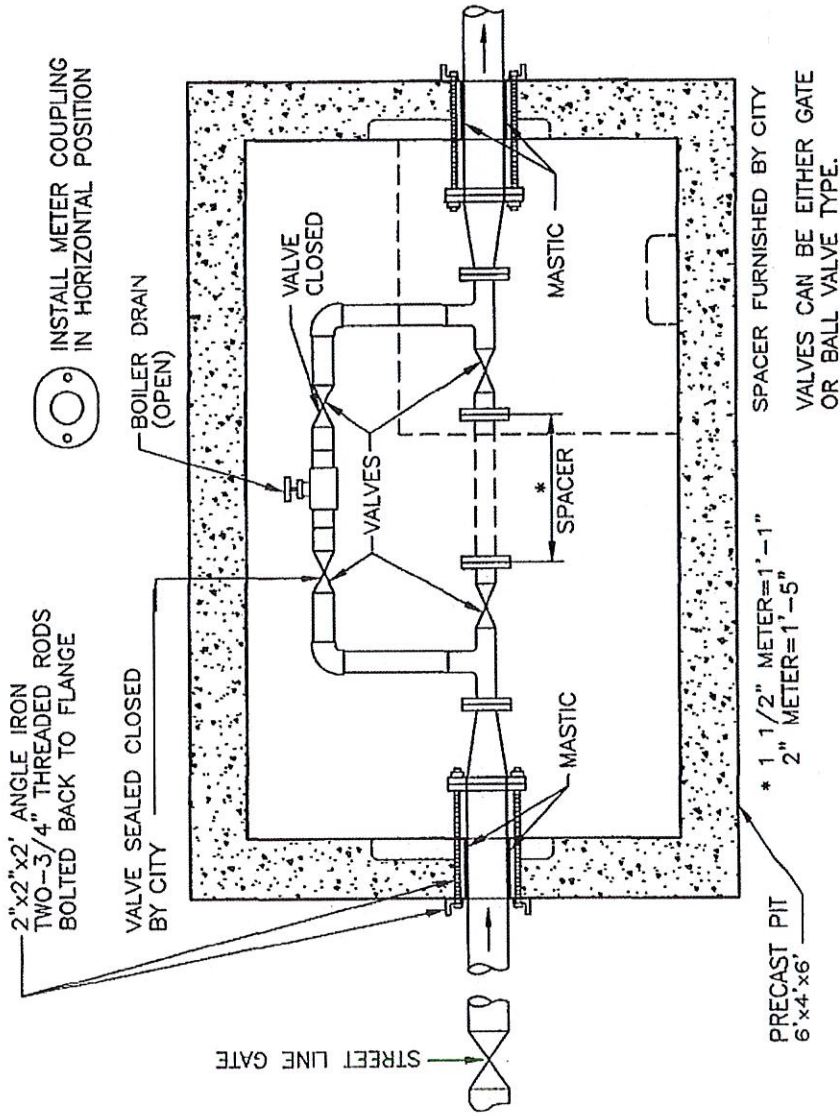
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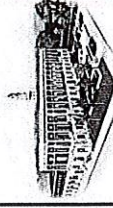
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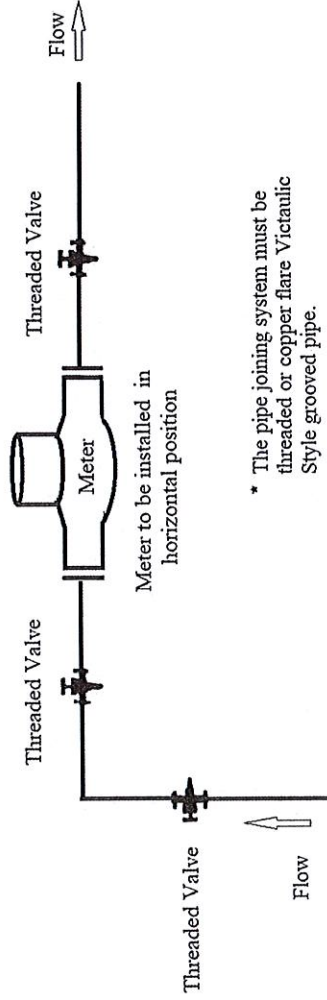


**TYPICAL METER INSTALLATION
WITH BY-PASS FOR 1 1/2" AND 2" METERS WITH PIT**



The customer shall provide:

- A clean, dry and warm place, always free from debris, for the horizontal installation of the meter and must protect the meter from freezing.
- Easily accessible by a person in upright position per purposes of reading, maintenance and installation or removal.
- The general installation arrangement of the meter shall be in accordance with any directions, either special or general, given by the Bureau or its duly authorized agent, in reference to its operation, security, safety, or accessibility.



* The pipe joining system must be threaded or copper flare Victaulic Style grooved pipe.

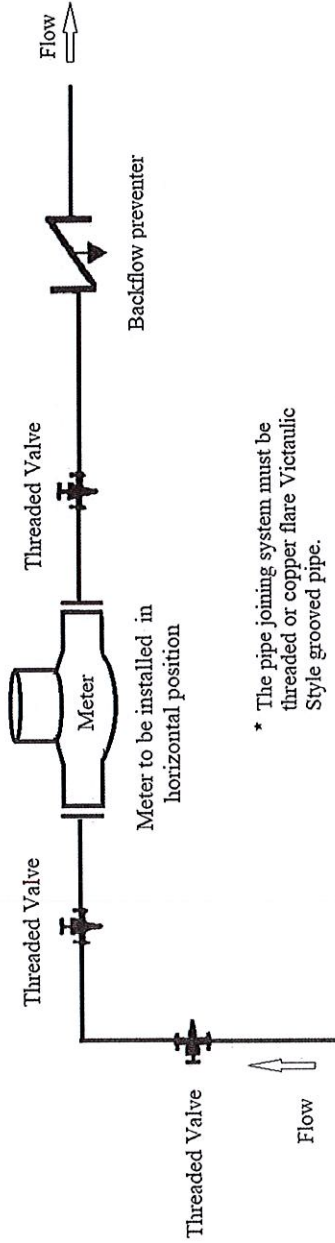
WATER METER
(less than 2")

WATER METER DETAIL
(TYP)



The customer shall provide:

- A clean, dry and warm place, always free from debris, for the horizontal installation of the meter and must protect the meter from freezing.
- Easily accessible by a person in upright position per purposes of readings, maintenance and installation or removal.
- The general installation arrangement of the meter shall be in accordance with any directions, either special or general, given by the Bureau or its duly authorized agent, in reference to its operation, security, safety, or accessibility.



* The pipe joining system must be threaded or copper flare Victaulic Style grooved pipe.

WATER METER
(larger than 2")

WATER METER DETAIL
(TYP)