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**2020 - SECTION 68**  
**WATER METER SERVICES**

### **68.1 GENERAL**

The scope of this section includes general requirements for the meter installation and associated work up to a maximum diameter of 50mm.

### **68.2 MATERIALS**

#### **68.2.1 PIPE**

Type "K" annealed copper tubing conforming to ASTM B88 and CSA HC7.6 - 1978

#### **68.2.2 FITTINGS**

Copper alloy or brass alloy conforming to AWWA C800 - 89

#### **68.2.3 CONDUIT (for ORD Wire)**

16mm rigid PVC Conduit conforming to CSA C22.2 No. 211.2

#### **68.2.4 METER VALVES**

Bypass and inlet and outlet control valves shall be Ford style ball valve (or equivalent) conforming to AWWA C800 -89. All valves are to have pad-lock wings and open in a counter clock-wise direction. A common used Brass Ball Valve is the MAS B3 Series and it is made with an optional locking handle.

#### **68.2.5 PRE-MANUFACTURED METER SETTINGS**

Ford style (or equivalent) for sizes up to 50.8mm where approval has been granted by Aquatera.

### **68.3 INSTALLATION**

The following items are required prior to meter installation, contact Aquatera at [connections@aquatera.ca](mailto:connections@aquatera.ca) :

- 1) All services greater than 75mm, require a full test package as per AWWA standards (see section 91 – testing & section 300 – water testing sequence). A testing plan and site plan shall be submitted to Aquatera Engineering prior to construction for review and approval.

- All test results are to be submitted to Aquatera Engineering for review and approval prior to a meter installation.
- 2) All services greater than 75mm require a min. 19mm injection point and/or flush point min. 50mm for testing.
  - 3) The meter size for each building shall be determined by Aquatera Account Services, based on the proposed usage.
  - 4) Aquatera must witness well/cistern disconnection if applicable.
  - 5) Aquatera must do a site inspection to check the private infrastructure, ie) Sanitary manholes, valves, hydrants & blow offs if applicable.

#### 68.3.1 METER SETTING

Aquatera is unable to install a meter in any set ups existing or new if there is no back flow prevention.

Meter settings shall be constructed using only approved materials in accordance with section 68.2 and shall meet the following requirements:

- 68.3.1.1 In accordance with Standard Detail Drawing 68-01, 68-02, 68-02a, 68-03, 68-04, 68-05, 68-06 & 68-07 (as size requires) attached to this section.
- 68.3.1.2 Such that the setting is fixed, rigid and properly supported.
- 68.3.1.3 With an opening of sufficient length to suit the meter and any appurtenances to be installed.
- 68.3.1.4 With threaded fittings to suit the flange or tail pieces, as the case may require.
- 68.3.1.5 In a location where the meter will be protected from temperature extremes and accessible for the purpose of reading, inspection and maintenance.
- 68.3.1.6 In a horizontal position.
- 68.3.1.7 With inlet and outlet control valves within 300mm of the meter.
- 68.3.1.8 Bypasses shall not be constructed in any case unless permission has been granted in writing by Aquatera.
- 68.3.1.9 Spacing Requirements for Water Meters

5/8" x 3/4" T10:

Total space needed 12 ¾" (includes 2 tail pieces, 2 gaskets and meter)

5/8" x 3/4" T10 (West Aqua):

Total space needed 24 3/4" (includes 3 tail pieces, 2 gaskets and y strainer assembly, flow restrictor and meter)

3/4" T10:

Total space needed 14 1/4" (includes 2 tail pieces, 2 gaskets and meter)

1" T10:

Total space needed 16 1/4" (includes 2 tail pieces, 2 gaskets and meter)

1 1/2" T10:

Total space needed 15 1/4" (includes 2 flanges, 2 gaskets and meter)

2" T10:

Total space needed 19 1/4" (includes 2 flanges, 2 gaskets and meter)

2" Compound/Tru Flo:

Total space needed 24 3/4" (includes 2 flanges, 3 gaskets, 1 strainer and meter)

3" Compound/Tru Flo:

Total space needed 24 3/4" (includes 2 flanges, 3 gaskets, 1 strainer and meter)

4" Compound/Tru Flo:

Total space needed 29 3/4" (includes 2 flanges, 3 gaskets, 1 strainer and meter)

### 68.3.2 RIGID PVC CONDUIT

Only rigid PVC conduit conforming to the requirements of this specification shall be used and shall be installed in accordance with the following requirements:

68.3.2.1 In accordance with the manufacturer's recommendations.

68.3.2.2 In the shortest possible route between the meter and the location of the outside reading device approved by Aquatera.

68.3.2.3 In a manner that allows for the passage of an electricians fish tape.

68.3.2.4 To be installed by the builder when the basement is finished prior to the installation of a meter.

### 68.3.3 IRRIGATION METER

As per the National Plumbing Code of Canada clause 2.6.2.1 and CSA B64.10 clause 5.8.1 & 5.8.2, all irrigation systems shall be installed with back flow preventers (see detail 68-04).

Aquatera is unable to install a meter in any set ups existing or new if there is no back flow prevention.

### 68.3.4 Pressure reducing valves

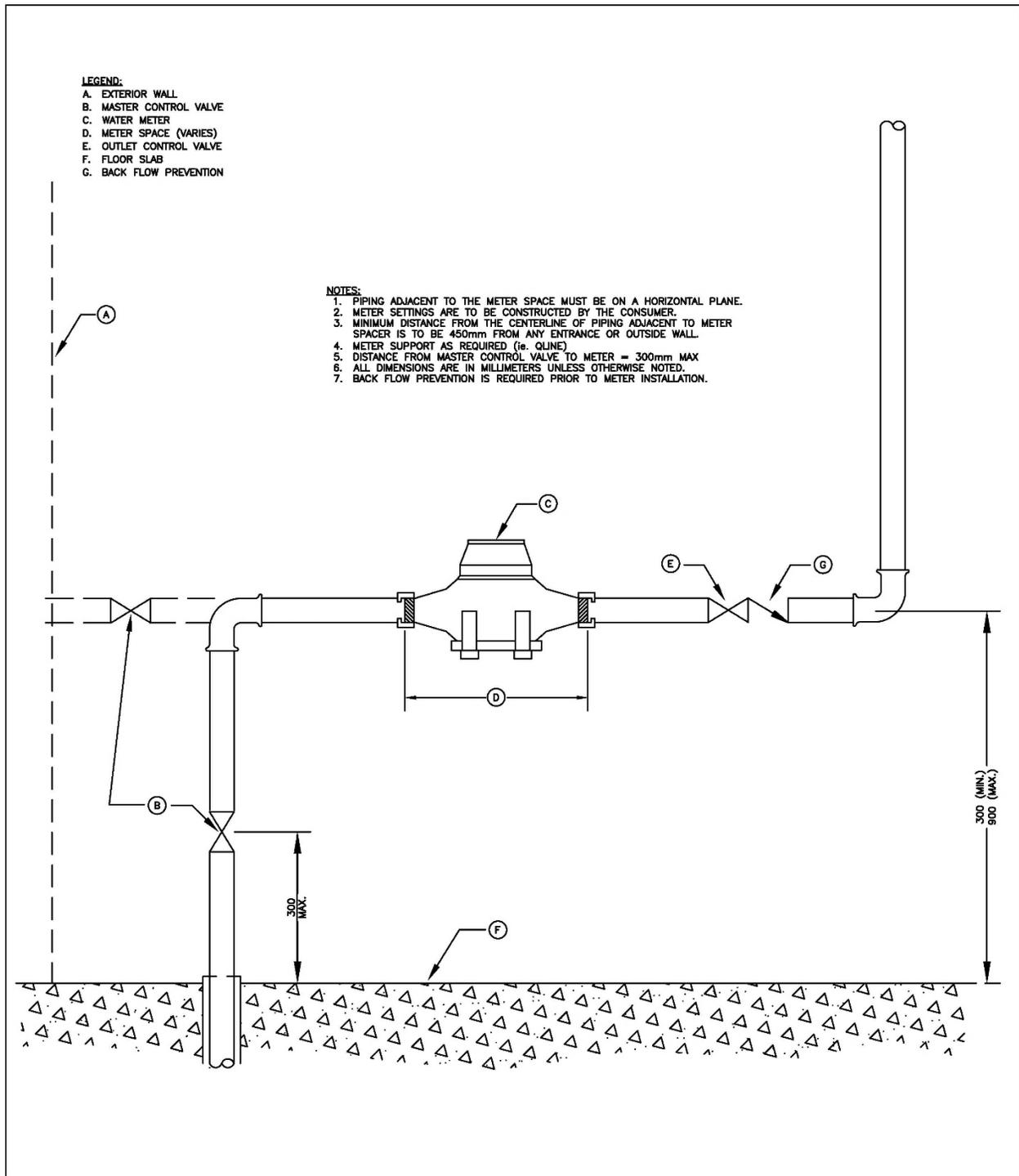
In cases where the system pressure exceeds 80 psi the building owner is required to install a pressure reducing valve after the master control valve and prior to the meter.

## 68.4 TESTING

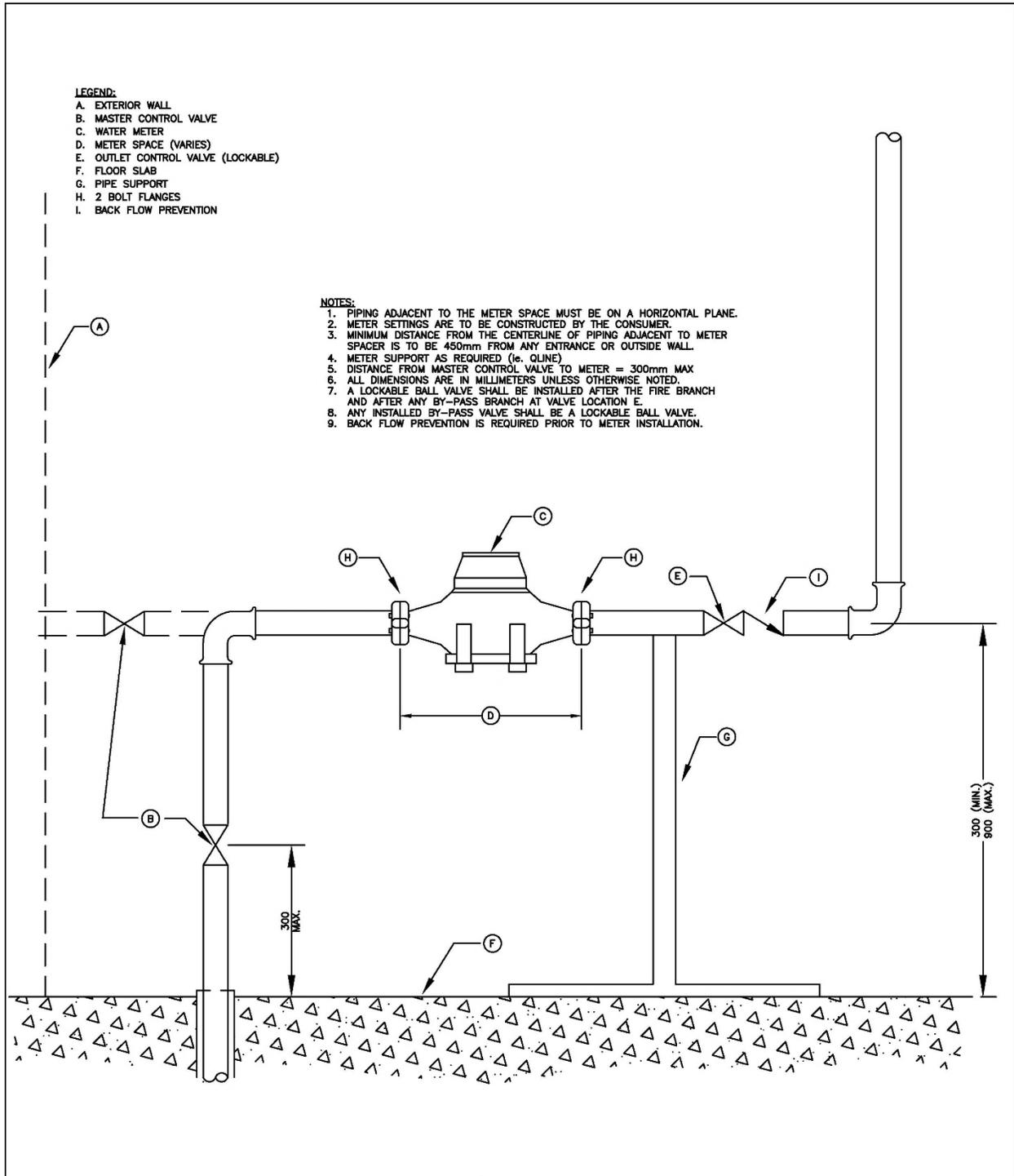
There are no requirements for testing of a meter setting other than that which is required by the Building Code.

## 68.5 PAYMENT

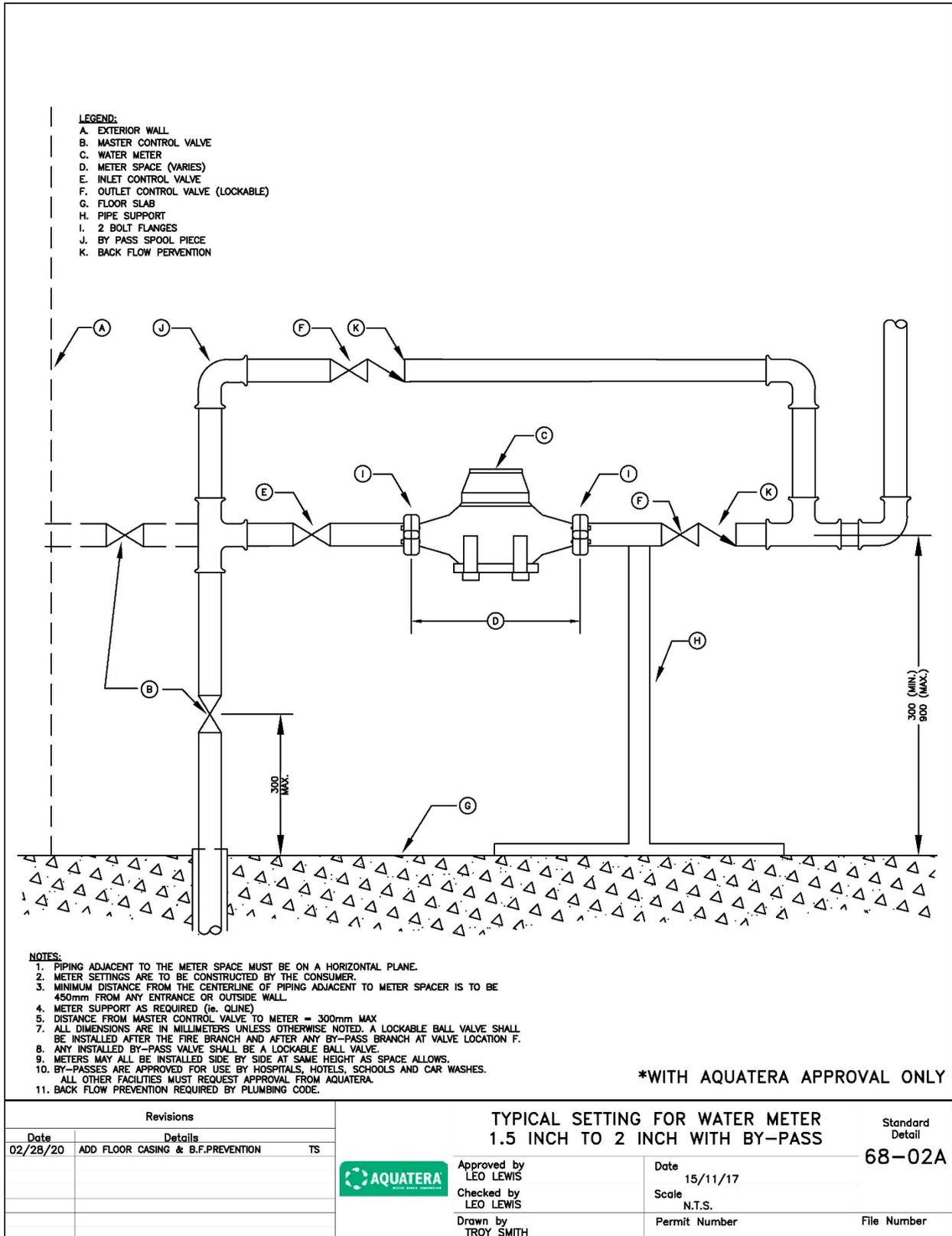
There is no payment for the construction of a meter setting. All costs are to be the responsibility of the property owner.

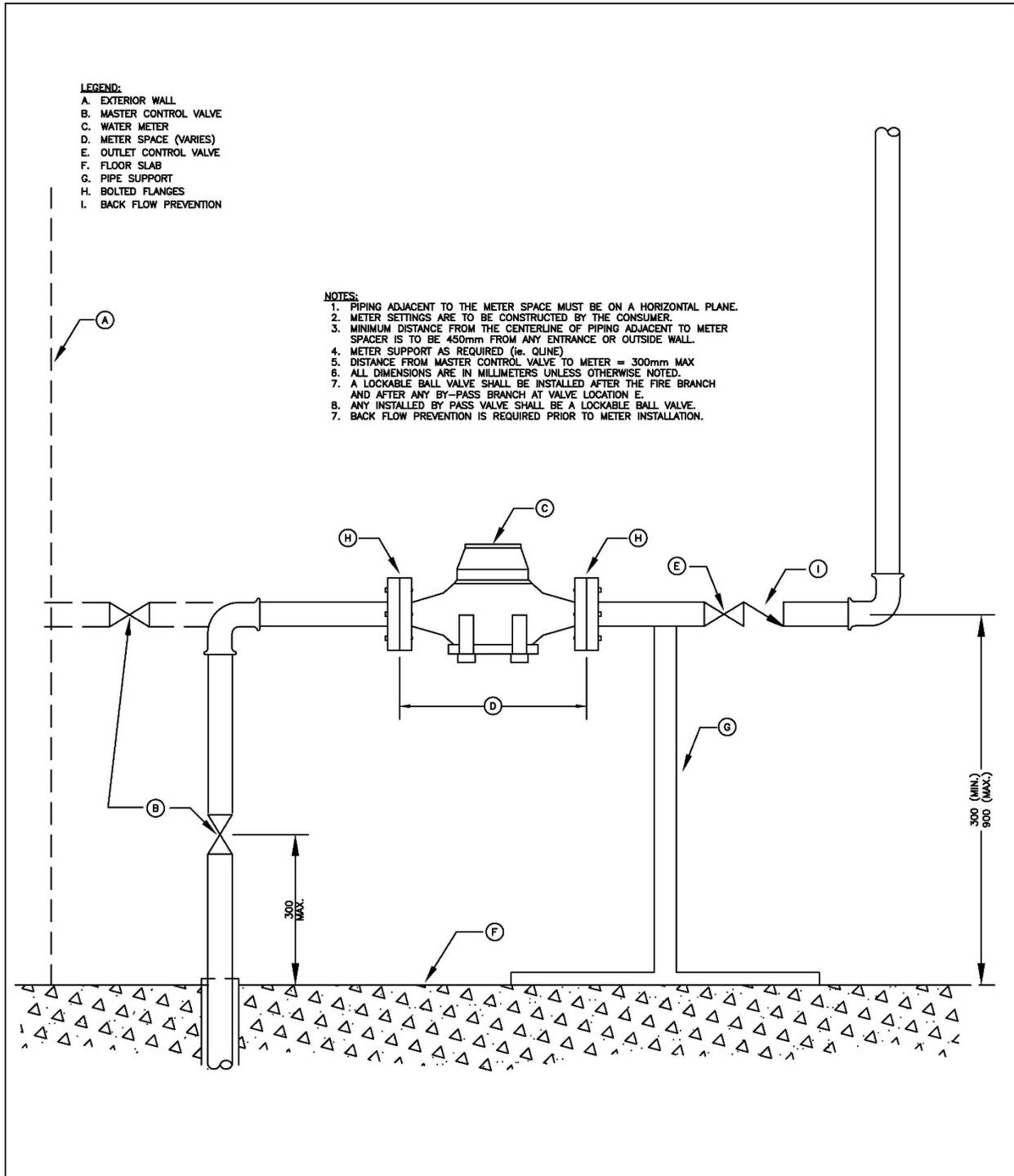


Revisions			<b>TYPICAL SETTING FOR WATER METER 1 INCH OR LESS</b>		Standard Detail <b>68-01</b>
Date 02/28/20	Details REMOVED PERMIT #, ADD B.F.PERVENTION, ADD FLOOR CASING		Approved by Timothy Lau P.Eng.	Date 12/07/12	
-	-	Checked by Brad Vall C.E.T.	Scale N.T.S.	Permit Number -	File Number
		Drawn by Scott Walls			



Revisions		TYPICAL SETTING FOR WATER METER 1-1/2" TO 2"		Standard Detail 68-02
Date	Details	Approved by	Date	
3/10/16	ADD NOTE 7 & 8 TS	Timothy Lau P.Eng.	16/12/14	
2/28/20	ADD FLOOR CASING, REMOVE PERMIT # TS	Checked by Brad Vall C.E.T.	Scale N.T.S.	
		Drawn by Troy Smith	Permit Number	File Number

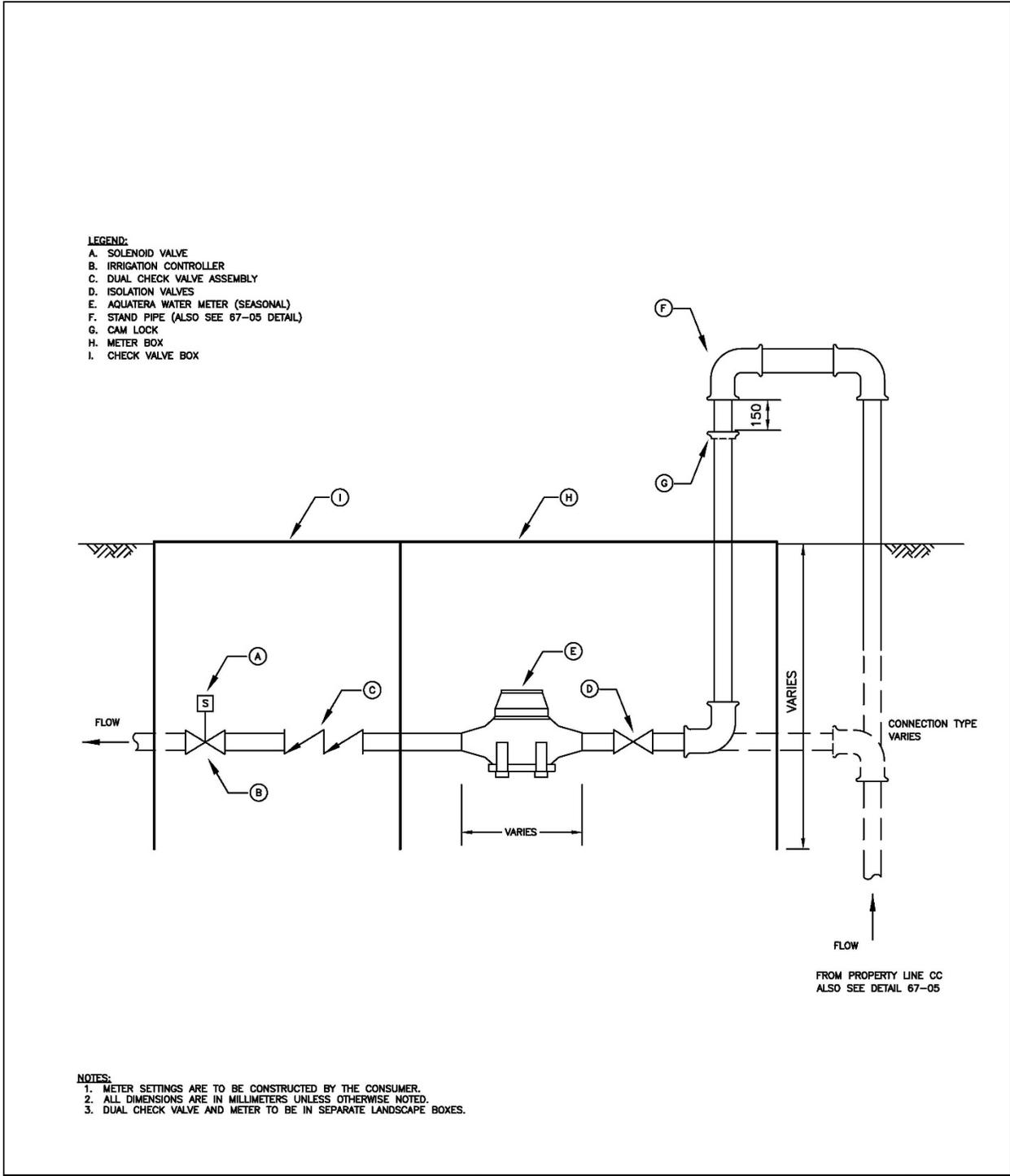




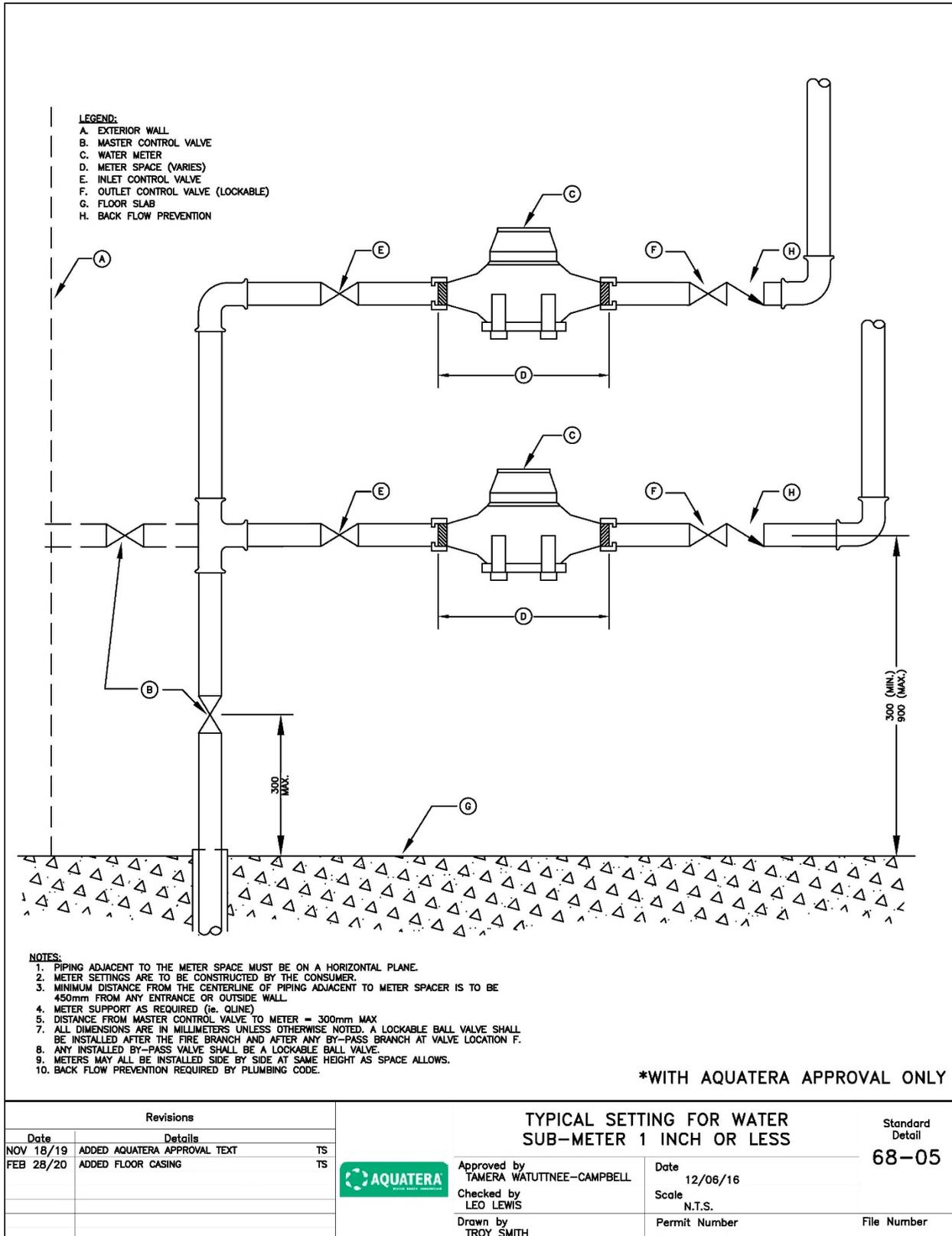
- LEGEND:**
- A. EXTERIOR WALL
  - B. MASTER CONTROL VALVE
  - C. WATER METER
  - D. METER SPACE (VARIES)
  - E. OUTLET CONTROL VALVE
  - F. FLOOR SLAB
  - G. PIPE SUPPORT
  - H. BOLTED FLANGES
  - I. BACK FLOW PREVENTION

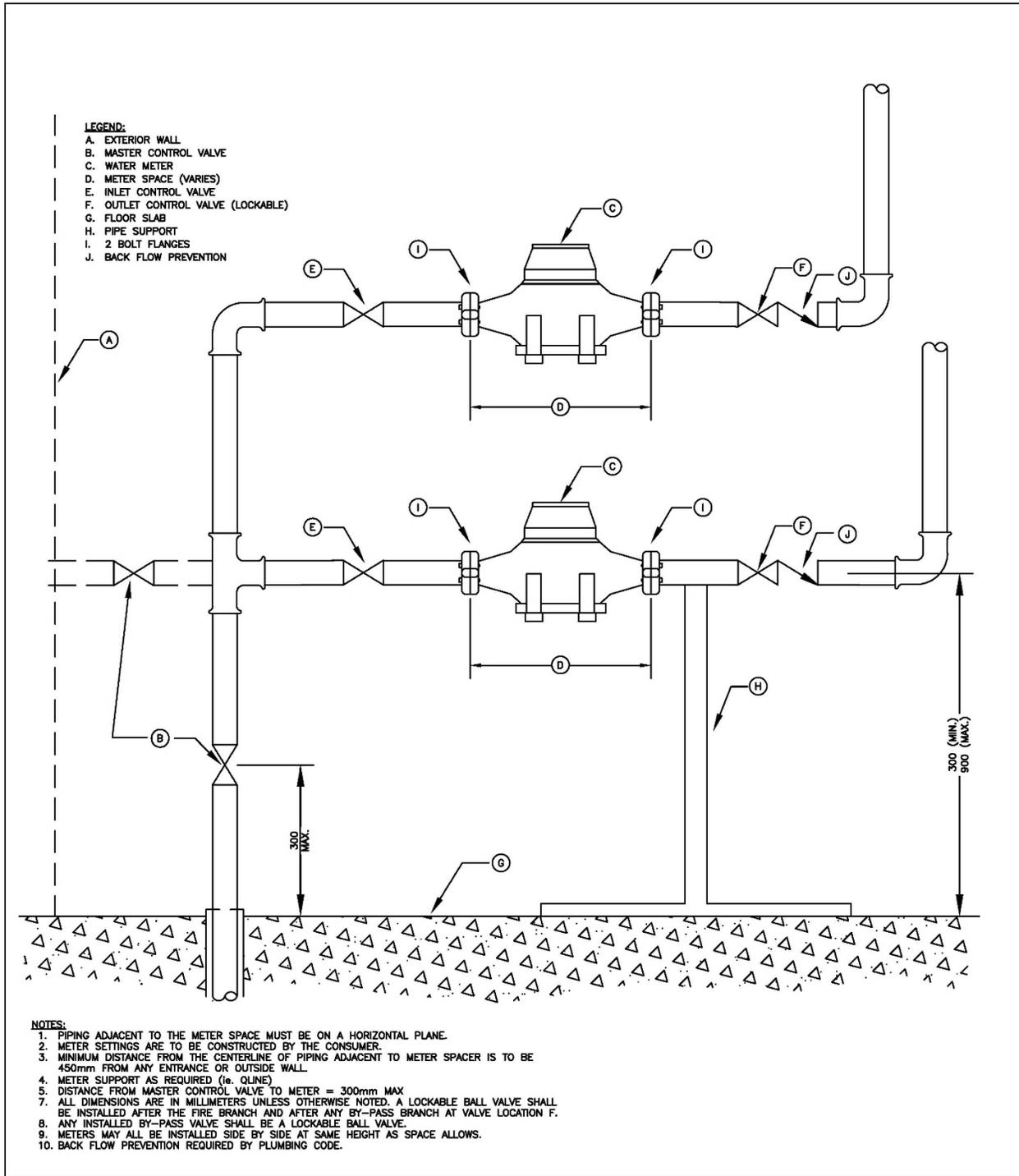
- NOTES:**
1. PIPING ADJACENT TO THE METER SPACE MUST BE ON A HORIZONTAL PLANE.
  2. METER SETTINGS ARE TO BE CONSTRUCTED BY THE CONSUMER.
  3. MINIMUM DISTANCE FROM THE CENTERLINE OF PIPING ADJACENT TO METER SPACER IS TO BE 450mm FROM ANY ENTRANCE OR OUTSIDE WALL.
  4. METER SUPPORT AS REQUIRED (i.e. QLINE)
  5. DISTANCE FROM MASTER CONTROL VALVE TO METER = 300mm MAX
  6. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
  7. A LOCKABLE BALL VALVE SHALL BE INSTALLED AFTER THE FIRE BRANCH AND AFTER ANY BY-PASS BRANCH AT VALVE LOCATION E.
  8. ANY INSTALLED BY PASS VALVE SHALL BE A LOCKABLE BALL VALVE.
  7. BACK FLOW PREVENTION IS REQUIRED PRIOR TO METER INSTALLATION.

Revisions		TYPICAL SETTING FOR WATER METER 3" & GREATER		Standard Detail
Date	Details	Approved by	Date	68-03
3/10/16	ADD NOTE 7 & 8 TS	Timothy Lau P.Eng.	16/12/14	
2/28/20	ADD FLOOR CASING, REMOVE PERMIT # TS	Checked by	Scale	File Number
		Brad Vall C.E.T.	N.T.S.	
		Drawn by	Permit Number	
		Troy Smith		

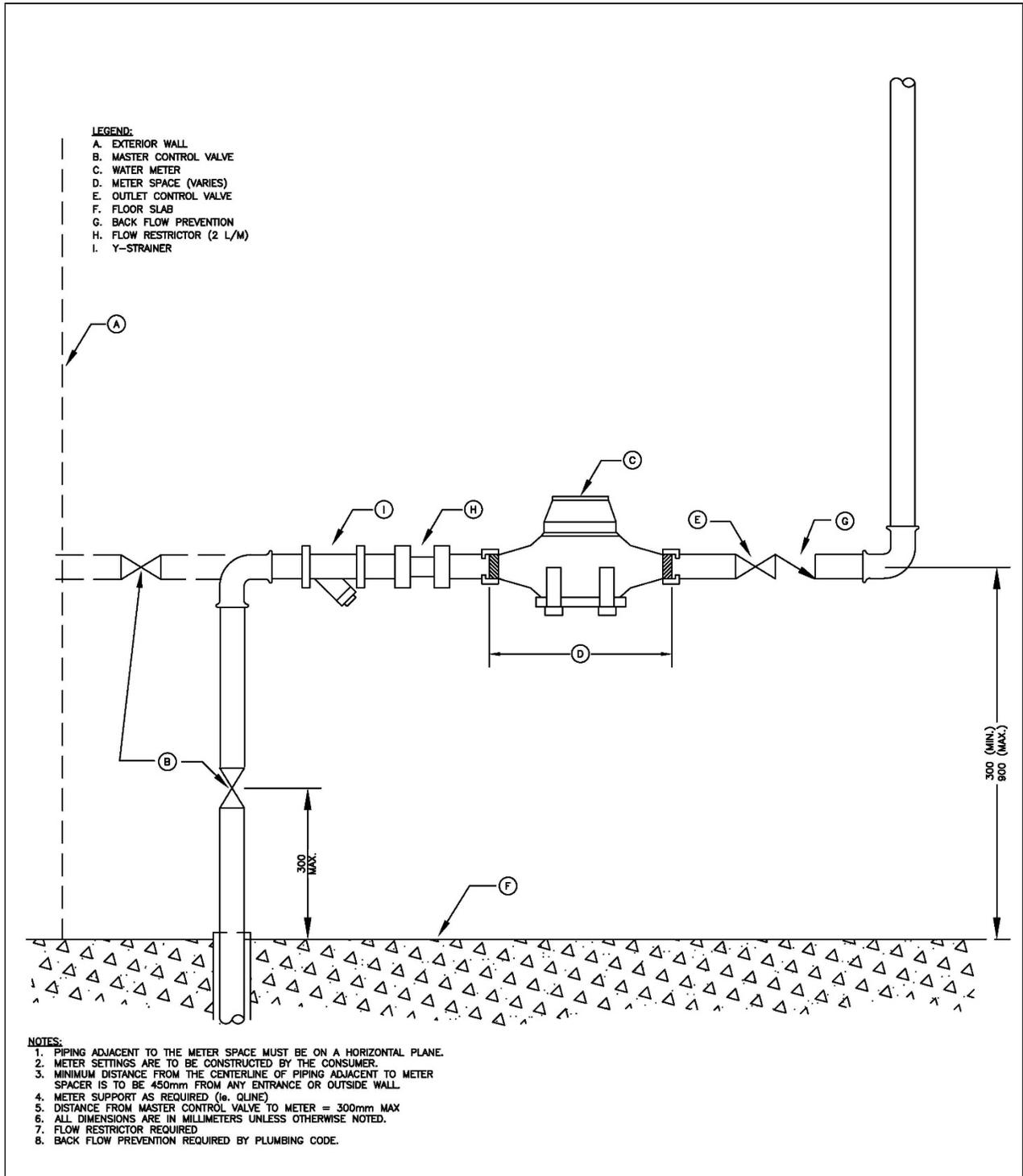


Revisions					<b>TYPICAL SETTING FOR IRRIGATION WATER METER</b>		Standard Detail <b>68-04</b>
Date	Details						
Nov 15/17	REMOVED VALVE AFTER METER	TS	Approved by Brad Vall C.E.T.	Date 26/11/16	Checked by Brad Vall C.E.T.	Scale N.T.S.	File Number
			Drawn by Troy Smith	Permit Number -			





Revisions		TYPICAL SETTING FOR WATER SUB-METER 1.5 INCH TO 2 INCH		Standard Detail
Date	Details		Approved by TAMERA WATUTTNEE-CAMPBELL	68-06
			Checked by LEO LEWIS	
			Drawn by TROY SMITH	Scale N.T.S.
				Permit Number
				File Number



Revisions		TYPICAL SETTING FOR WATER METER 1 INCH OR LESS FOR TRICKLE FEED SYSTEM			Standard Detail
Date	Details	Approved by		Date	68-07
SEP2 2021	ADD Y STRAINER	Brad Vall C.E.T.		12/07/12	
		Checked by Markus Oeser		Scale N.T.S.	
		Drawn by Troy Smith C.E.T.		Permit Number	File Number