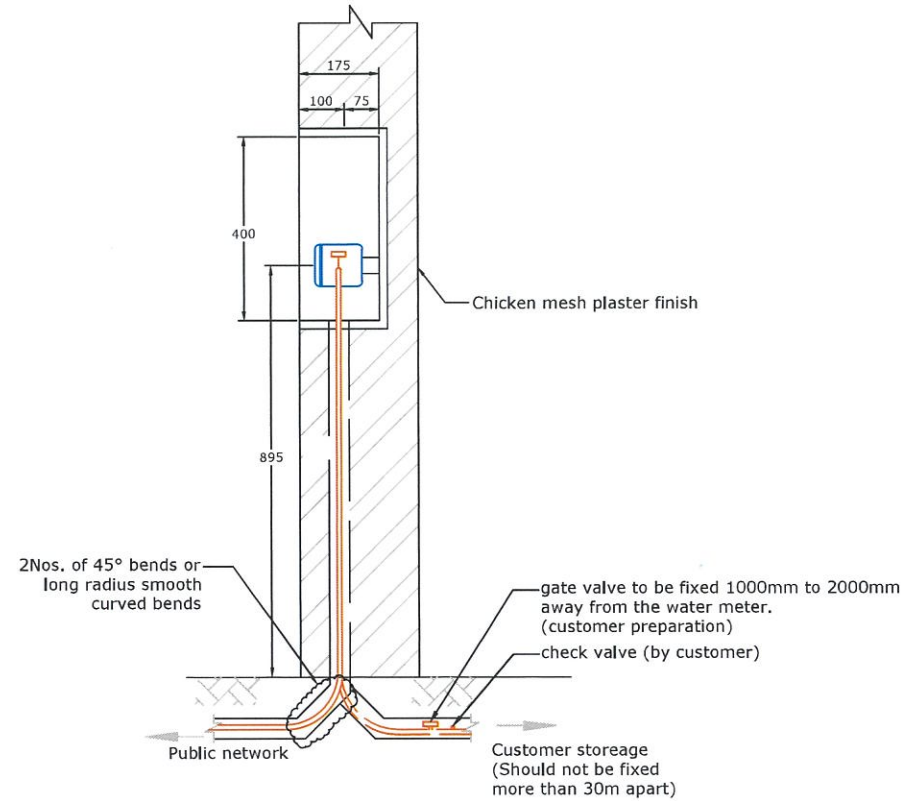
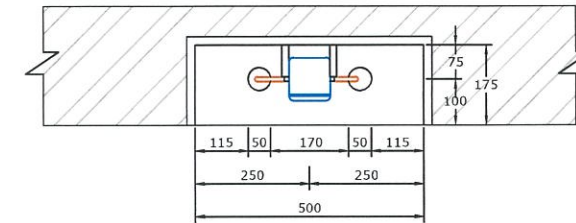


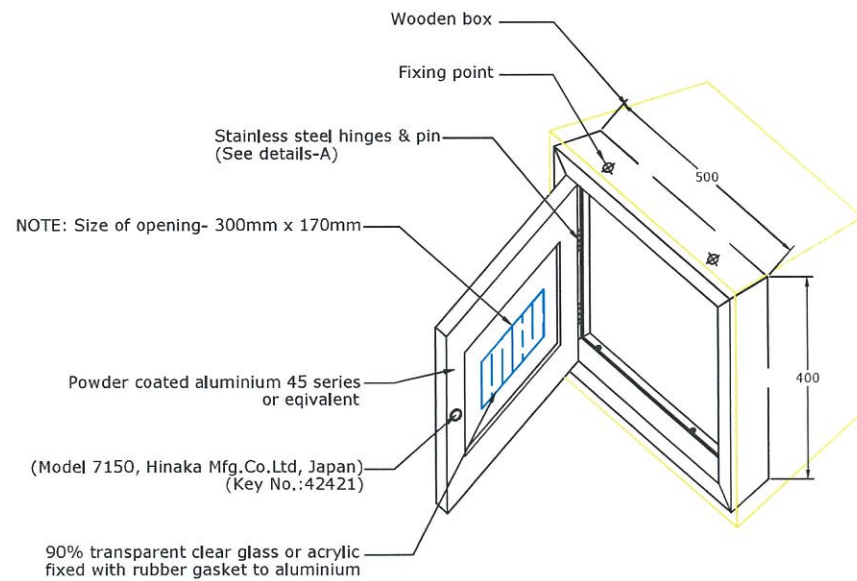
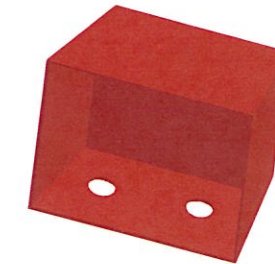
FRONT VIEW



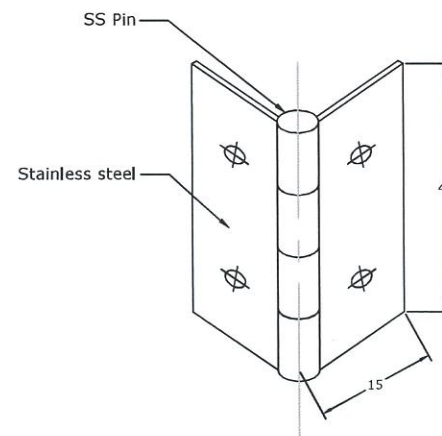
**SECTIONAL VIEW - B
WOODEN BOX IN WALL CAVITY (LOOP IN)**



SECTIONAL VIEW - C



DETAIL - ALUMINIUM FRAME & DOOR (CAVITY WALL TYPE)



DETAIL-A

Notes:

1. Approved with New Connection comments primarily.
2. Final approval is based on supply of material.
3. Position of 50mm sleeves will be changed according to material approval.



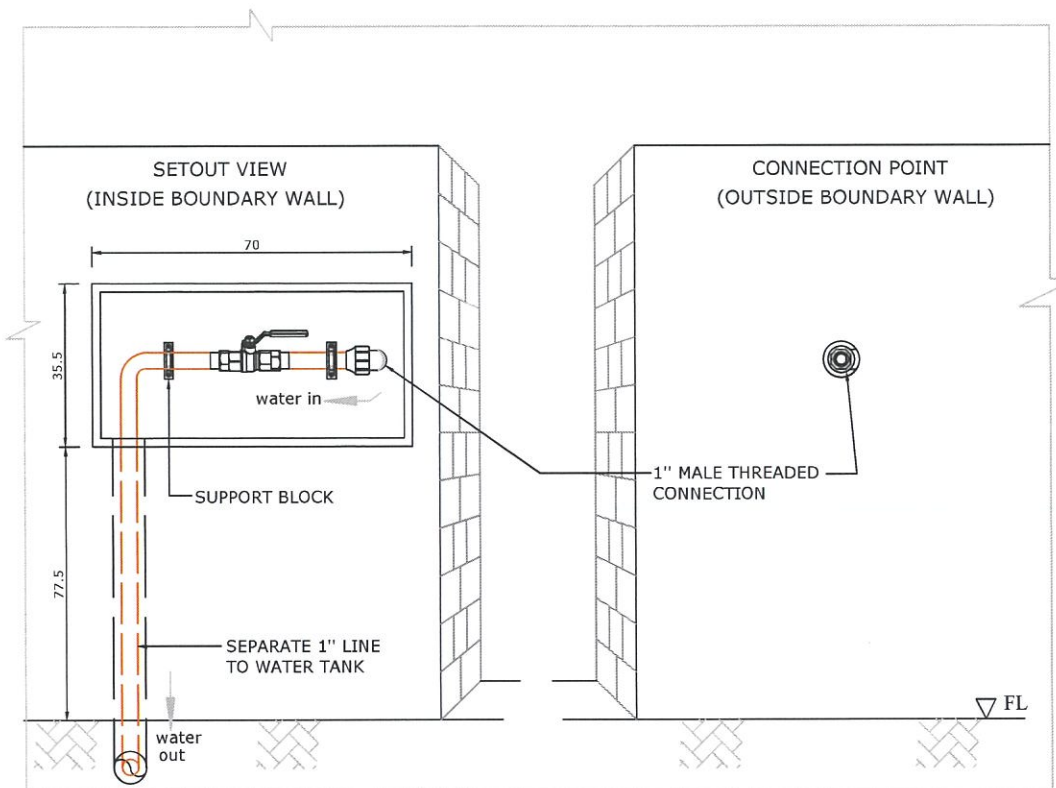
KINGDOM OF BAHRAIN
ELECTRICITY AND WATER AUTHORITY
WATER DISTRIBUTION DIRECTORATE
P.O.BOX NO: 2, BAHRAIN



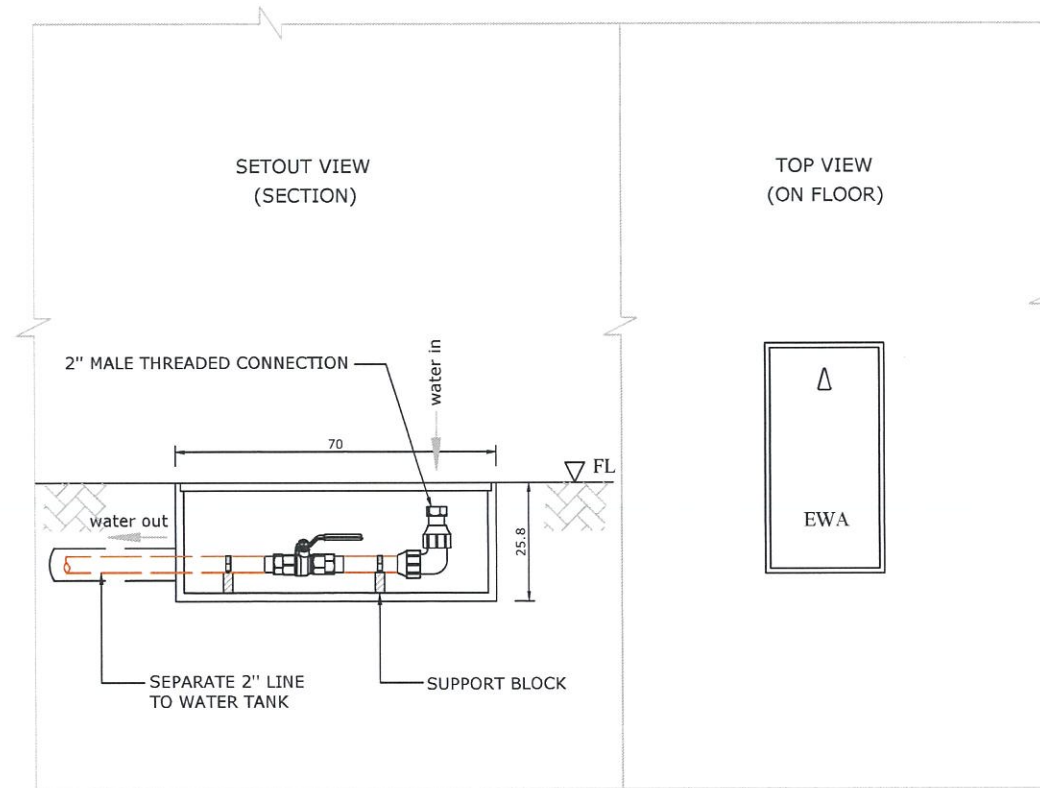
PLANNING AND DESIGN

Drawing Title: **General Arrangement of Domestic Water meter Installation (Horizontal Arrangement - Loop In)**

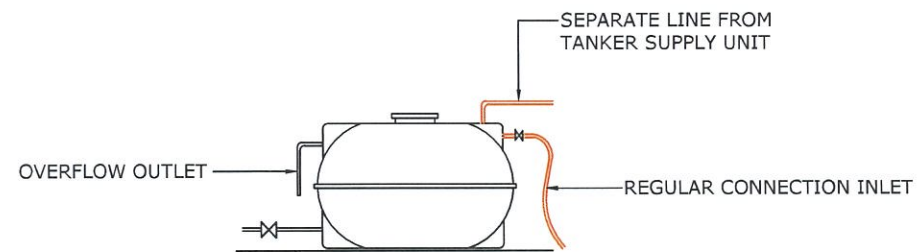
Network Construction & Maintenance:		
Drawn by: <i>Sean P</i> Sean P	Head: <i>Aaed Khalil</i> Aaed Khalil	Chief: <i>Ghadeer Juma</i> Ghadeer Juma
Scale: N.T.S.	Drawing no. WDD-NC/STD/2015-001/R1	
Date: 19.10.2021		



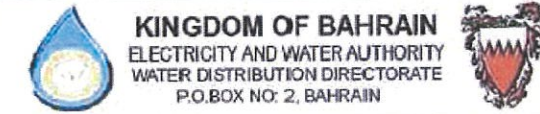
CONNECTION FOR 1" PIPE (CAVITY TYPE)



**CONNECTION FOR 2" PIPE (ON FLOOR)
FOR MULTISTORY BUILDING**



TANK CONNECTION DIAGRAM



KINGDOM OF BAHRAIN
ELECTRICITY AND WATER AUTHORITY
WATER DISTRIBUTION DIRECTORATE
P.O. BOX NO. 2, BAHRAIN

PLANNING AND DESIGN

Drawing Title:
**General Arrangement of
Domestic Water Tanker Supply**

Network Construction & Maintenance:		
Drawn by: <i>Sean P</i> Sean. P	Head: <i>Aaed Khalil</i> Aaed Khalil	Chief: <i>Ghadeer Juma</i> Ghadeer Juma
Scale: N.T.S.	Drawing no. WDD-NC/STD/2021-001	
Date: 02.03.2022		

ELBOW MET UNION
F1 x MD 3/4 INCH x 20 mm
4730 B 360621

ELBOW 90° P x P (MD)
4730 B 360634

1/2 INCH METER

POLYTHENE PIPE (MD)
4710 B 360615

METER TAIL PIECE

TPSC VALVE F1 x P (MD)
4820 B 360639

BOX, WATER METER, WALL
6680 B 360346

POLYTHENE PIPE (MD)
4710 B 360615

COUPLER PF REPAIR
1/2 INCH (LD) x 20 mm (MD)
4730 B 360650

20 mm (MD) WALL METER CONNECTION

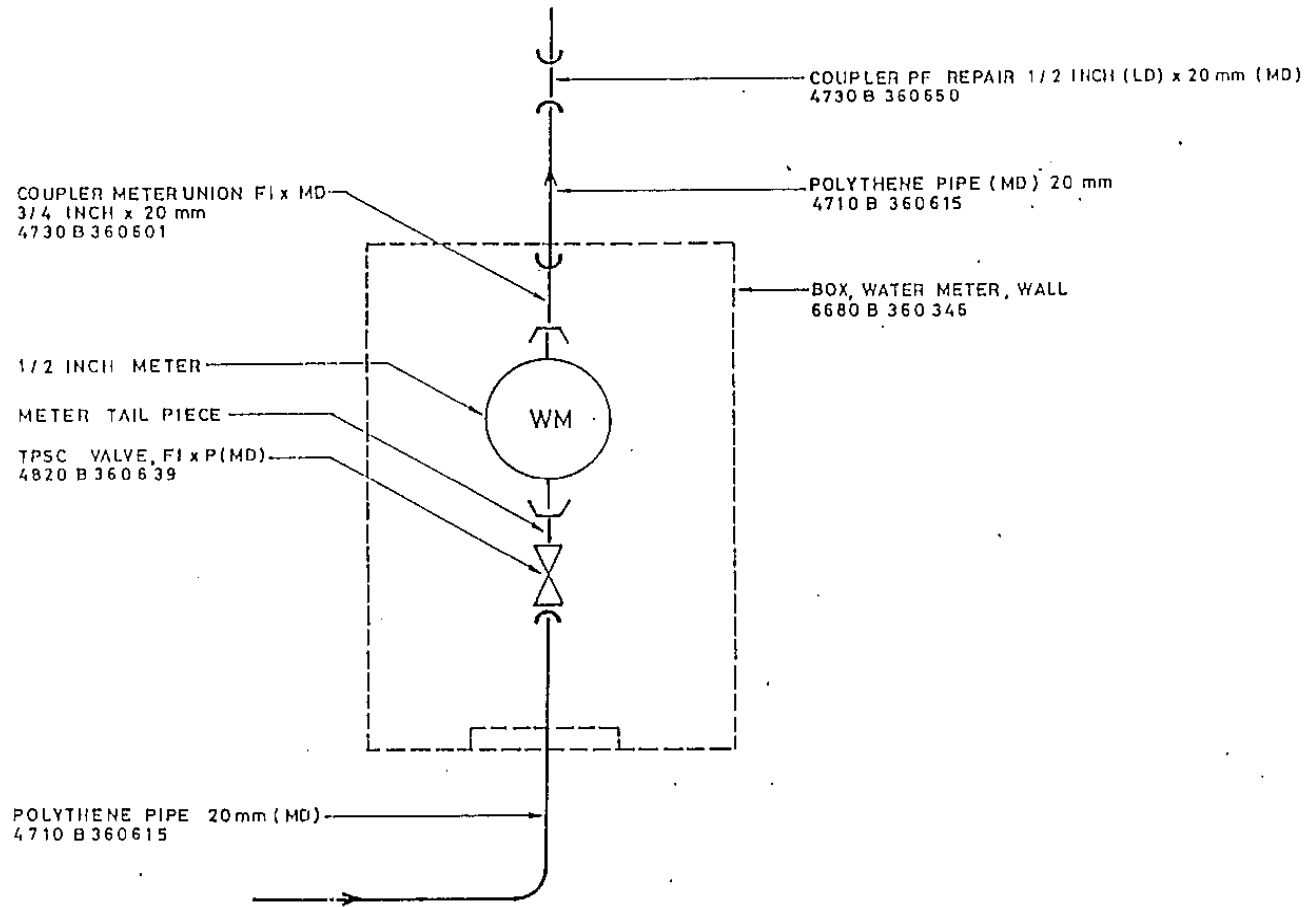
NOT TO SCALE

ELECTRICITY & WATER AUTHORITY
WATER DISTRIBUTION DIRECTORATE
P.O. BOX No.2 BAHRAIN

TITLE:
20 mm WALL METER
CONNECTION

DATE:
NOV.
1996

DRAWING NO:
WDD/031



20 mm (MD) WALL METER CONNECTION

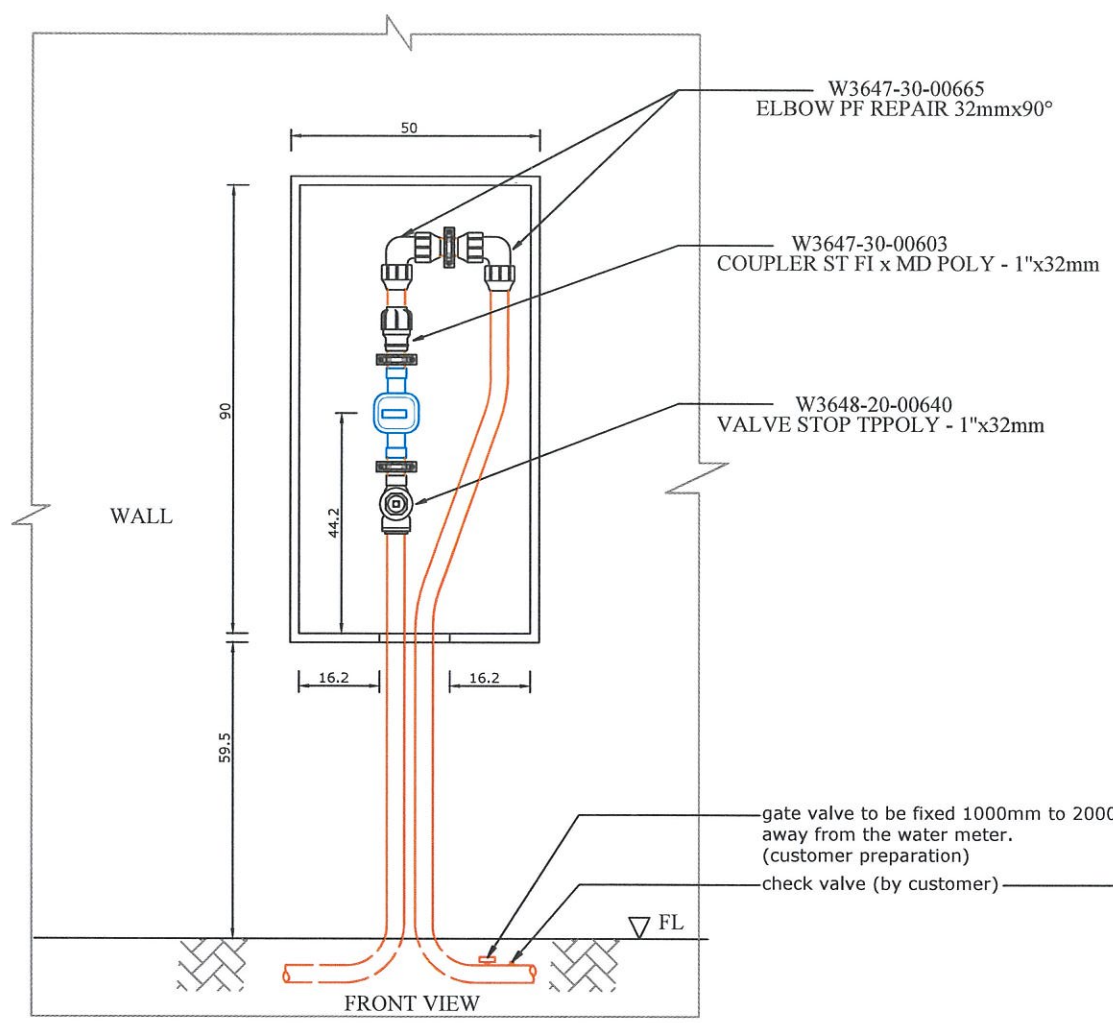
NOT TO SCALE

ELECTRICITY & WATER AUTHORITY
 WATER DISTRIBUTION DIRECTORATE
 P.O. BOX No.2 BAHRAIN

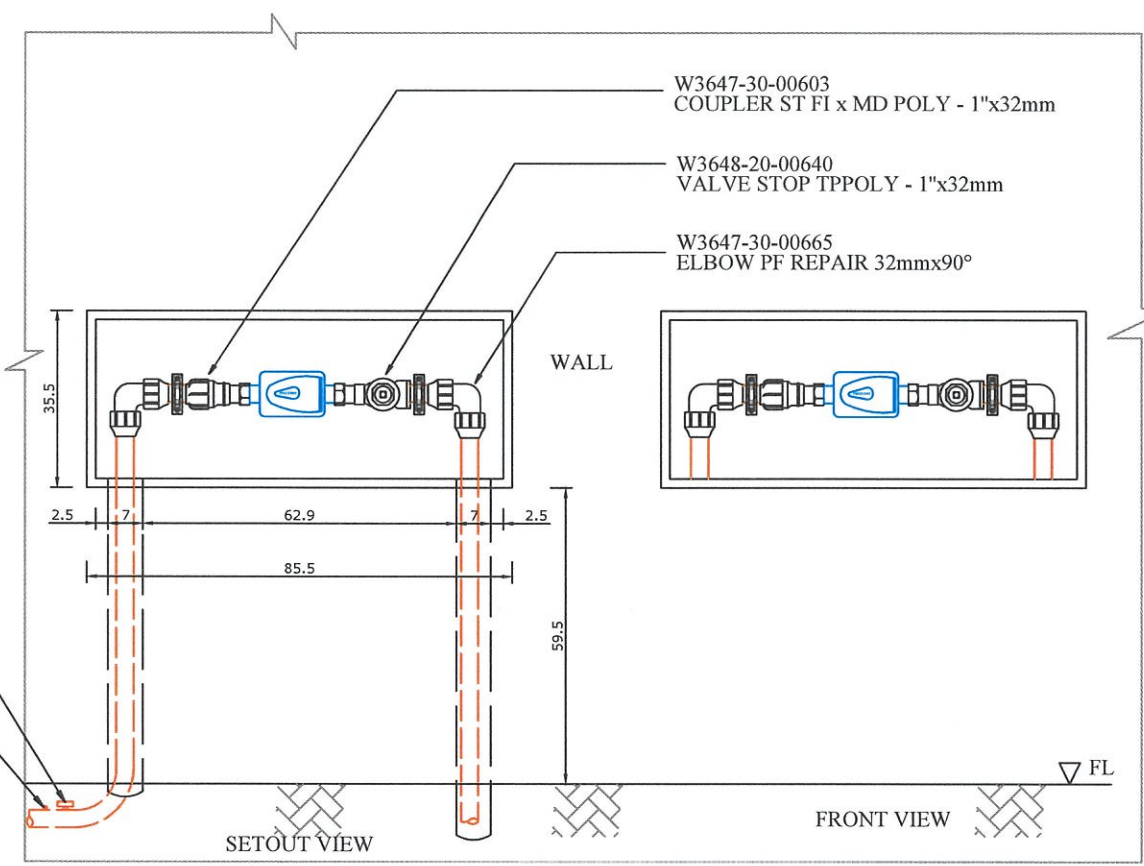
TITLE:
 20mm WALL METER
 CONNECTION

DATE:
 NOV.
 1996

DRAWING NO:
 WDD/032



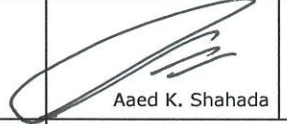
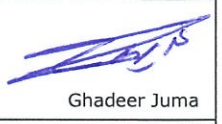


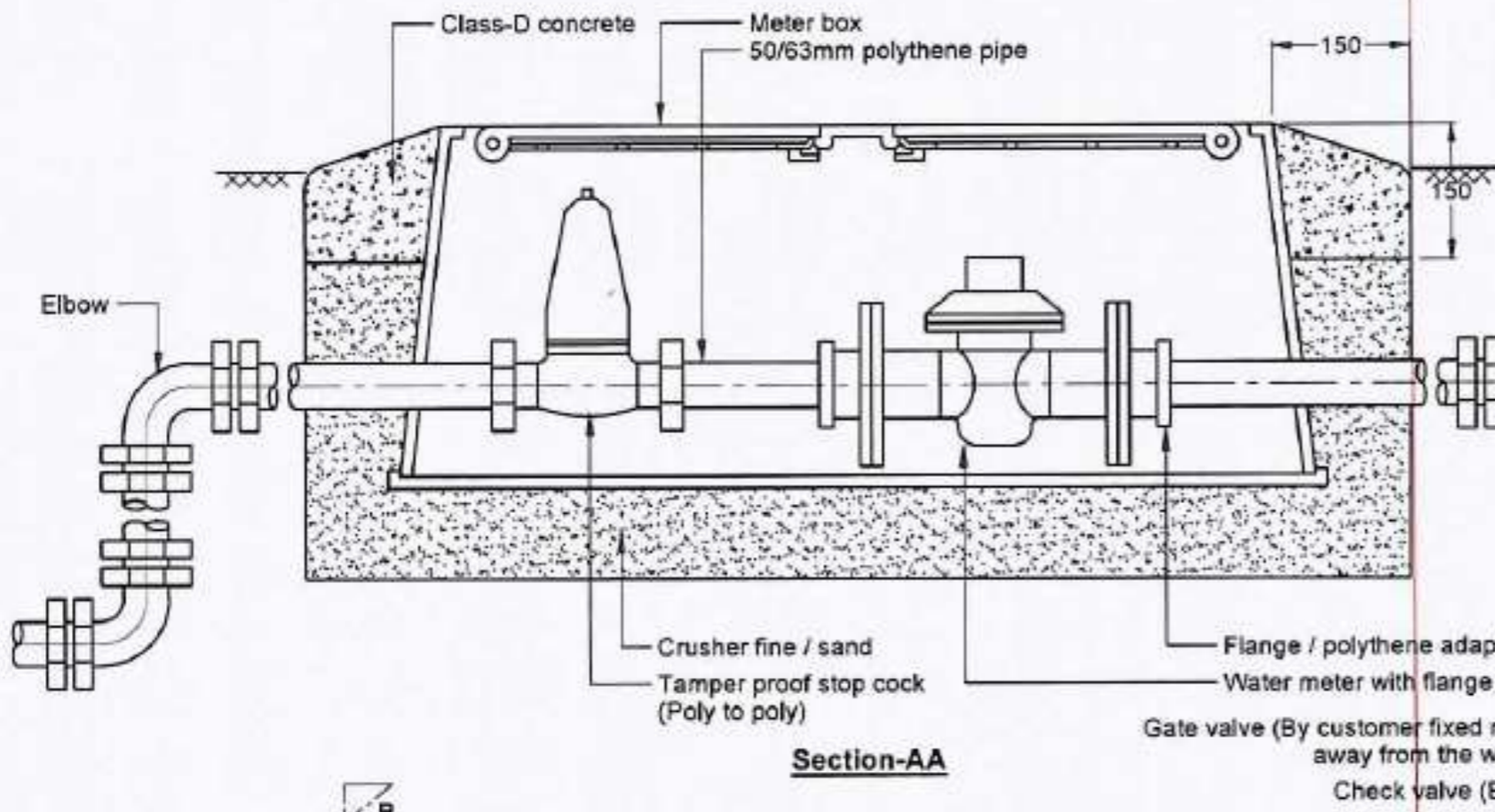
**CONNECTION FOR 1" PIPE
(WALL MOUNTED TYPE)**



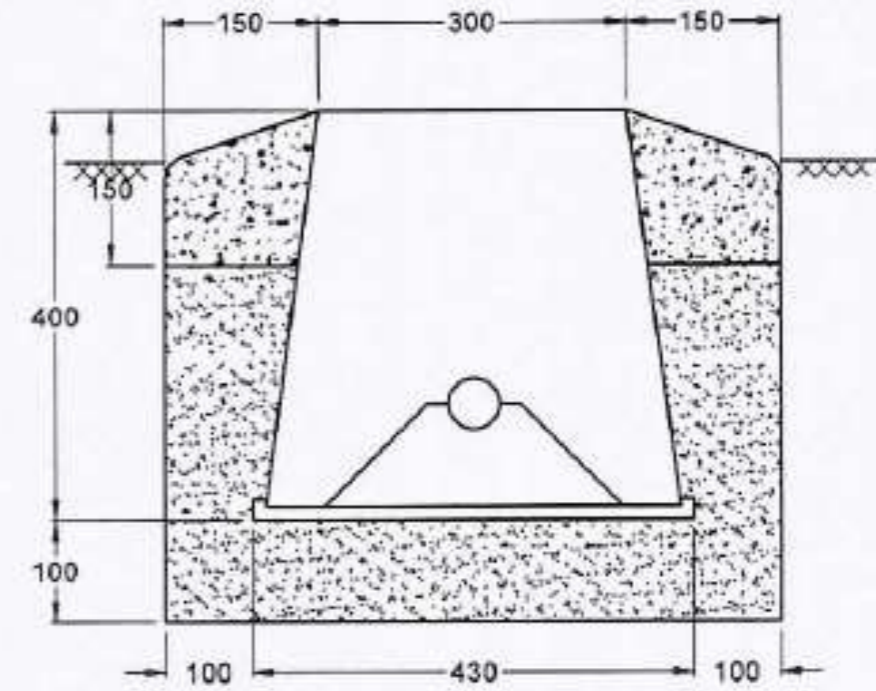
**CONNECTION FOR 1" PIPE
(CAVITY WALL TYPE)**

Note: THE INSTALLATION OF 1" METER WITH OUT BOX AND DOOR

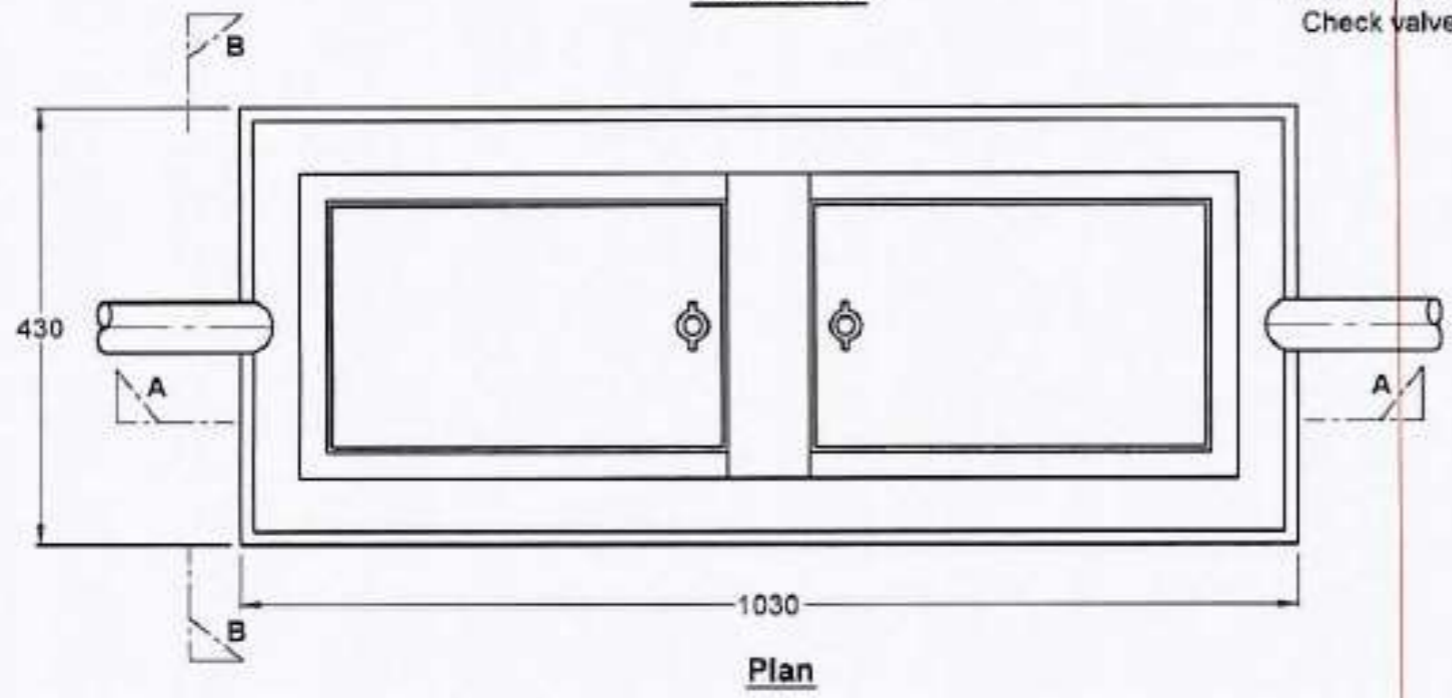
 KINGDOM OF BAHRAIN ELECTRICITY AND WATER AUTHORITY WATER DISTRIBUTION DIRECTORATE P.O.BOX NO: 2, BAHRAIN		
PLANNING AND DESIGN		
Drawing Title: General Arrangement of Domestic Water Meter Installation For 1" Pipe Connection		
 Aaed K. Shahada		 Ghadeer Juma
Scale:	N.T.S.	Drawing no.
Date:	20.04.2023	WDD-NC/STD/2021-003-2



Section-AA



Section-BB

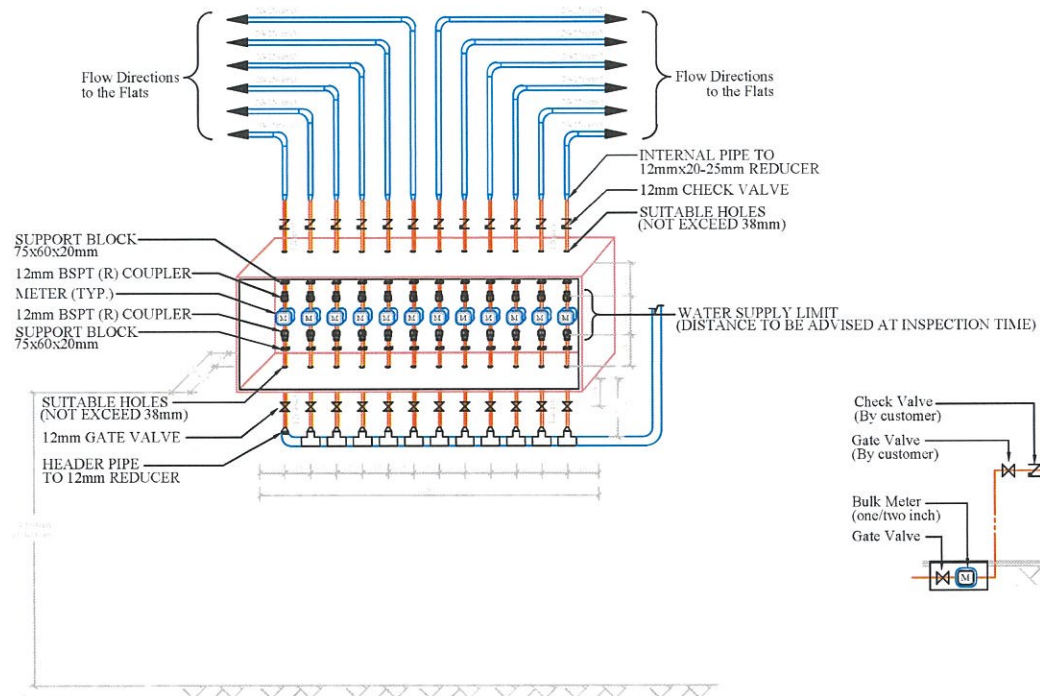


Plan

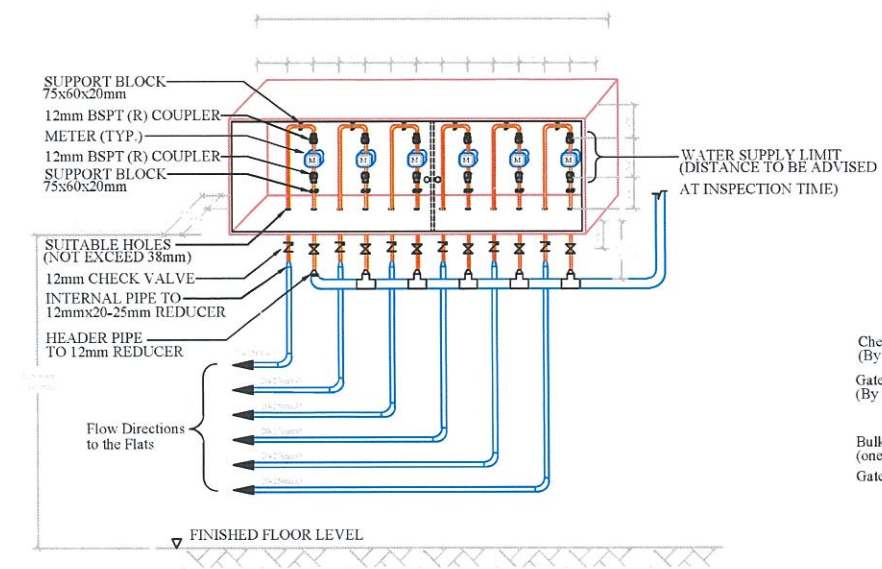
To customer storage
(Should not be fixed more than 30m apart)

All dimensions are in mm.

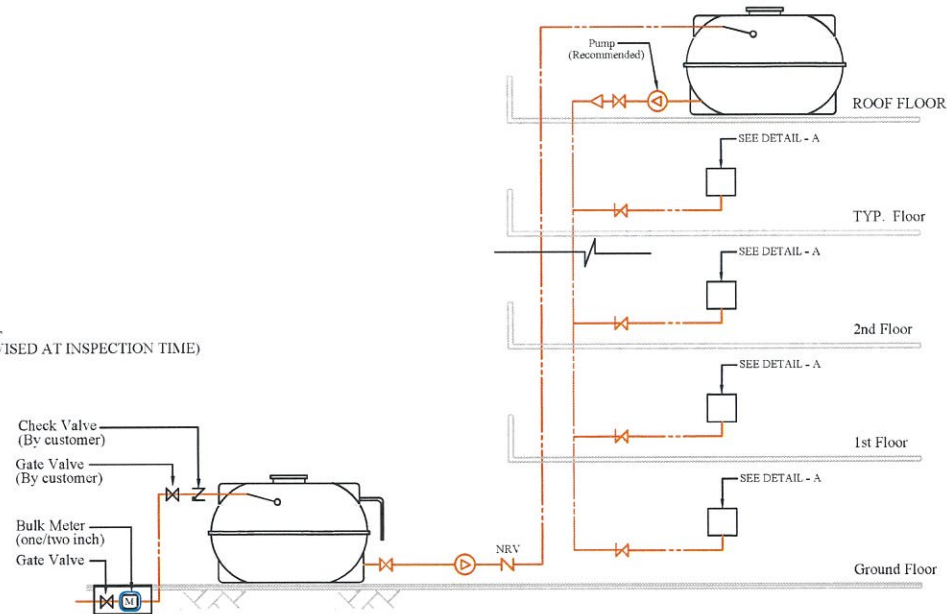
 KINGDOM OF BAHRAIN ELECTRICITY AND WATER AUTHORITY WATER DISTRIBUTION DIRECTORATE P.O. BOX NO. 2, BAHRAIN			
PLANNING AND DESIGN			
Drawing Title:			
INSTALLATION OF 50mm WATER METER GENERAL ARRANGEMENT			
Drawn by:	Checked by:	Approved by:	
Praveen, S	Mahmood, A	Ghadeer, J	
Scale:	Drawing no:		
N.T.S.			
Date:	WDD-NC/STD/2017-001		
29.07.2019			



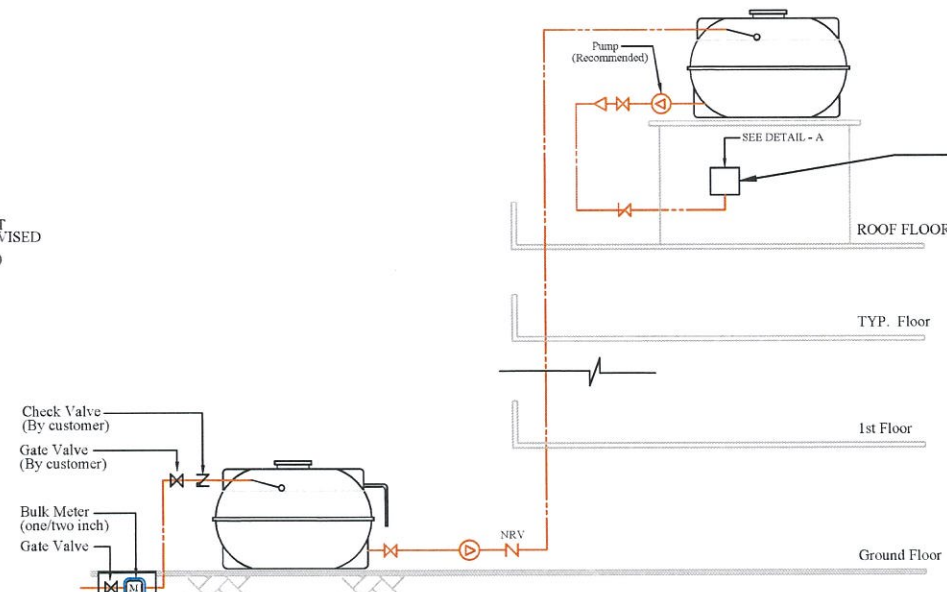
TYPICAL IDENTIFICATION TO BE PROVIDED (OPTION-1)



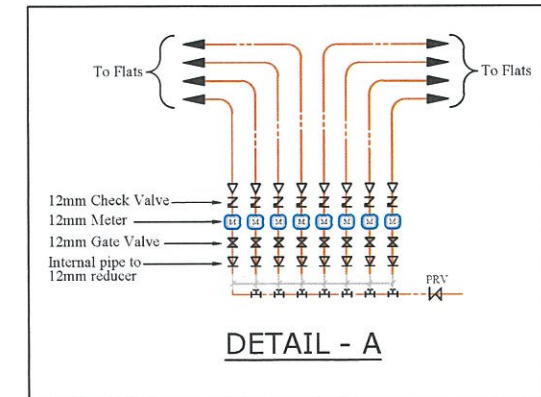
TYPICAL IDENTIFICATION TO BE PROVIDED (OPTION-2)



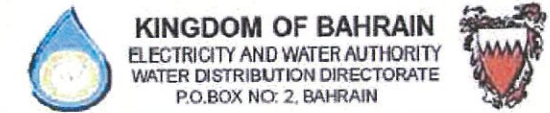
TYPICAL INTERNAL PLUMBING SYSTEM TO MULTI STOREY RESIDENTIAL PREMISES (TYPE-1 METER AT EACH FLOOR)



TYPICAL INTERNAL PLUMBING SYSTEM TO MULTI STOREY RESIDENTIAL PREMISES (TYPE-2 METER AT ROOF)



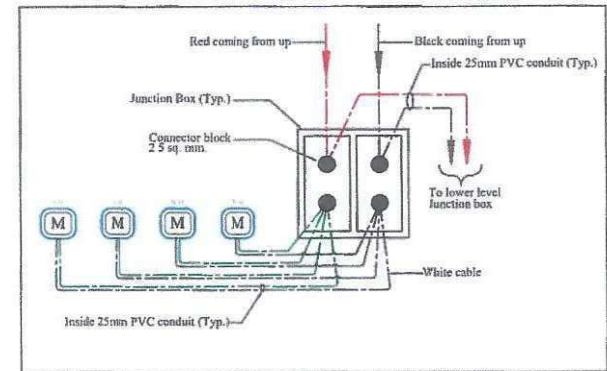
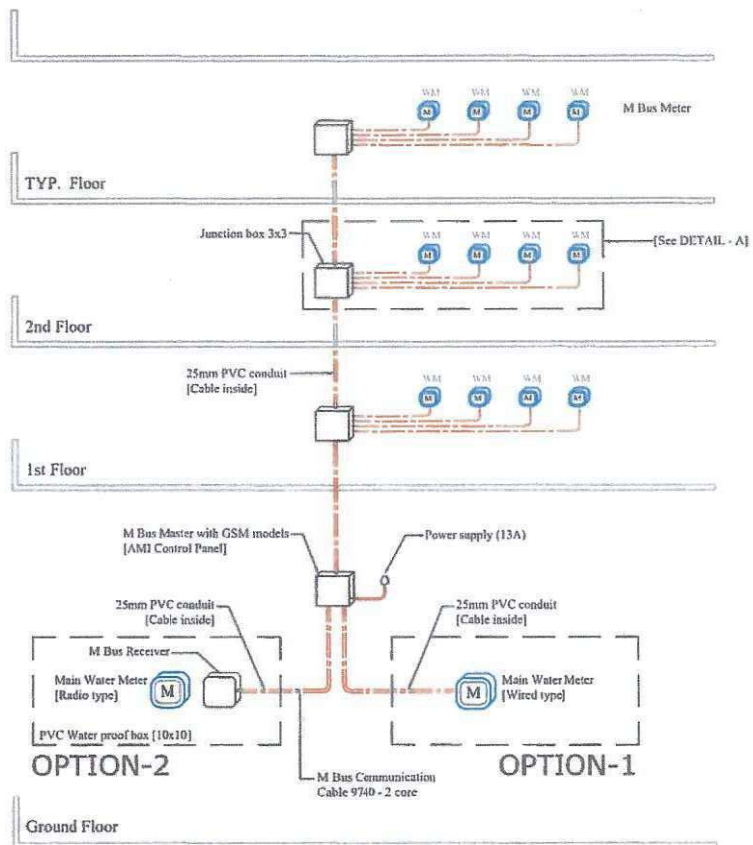
Note: WATER METERS TO BE FIXED ON THE EXTERNAL WALL FOR STAIR CASE LANDING



PLANNING AND DESIGN

Drawing Title: General Arrangement of Domestic Water Meter Installation FOR MULTI STOREY BUILDING

Network Construction & Maintenance:		
Drawn by: <i>Ceey</i> Sean, P	Head: Aaed Khalil	Chief: Ghadeer Juma
Scale: N.T.S.	Drawing no.	
Date: 26.08.2021	WDD-NC/STD/2021-004	



DETAIL - A

 KINGDOM OF BAHRAIN ELECTRICITY AND WATER AUTHORITY WATER DISTRIBUTION DIRECTORATE P.O. BOX NO: 2, BAHRAIN		
PLANNING AND DESIGN		
Drawing Title: <h3 style="text-align: center;">Layout of AMI</h3>		
Network Construction & Maintenance:		
Drawn by: Sean. P	Head :  Aaed Khalil	Chief :  Ghadeer
Scale: N.T.S.	Drawing no.	
Date: 07.09.2021	WDD-NC/STD/2021-0	



NEW CONNECTIONS INPECTION FORM

استمارة الكشف - وحدة التخطيط

Connection Size & Type: حجم ونوع التوصيلة: Application No.: رقم الطلب:
Visit No.: رقم الزيارة: Visit Time: وقت الزيارة: Visit Date: تاريخ الزيارة:

Area: المنطقة: Name: الاسم:
Block: المجمع: Road: طريق: House No.: منزل رقم:
Tel .No.: رقم تلفون: Approved Plumper: مركب انابيب معتمد:

The site was visited by inspector and found the following:

لقد قام المفتش بزيارة الموقع وتبين له التالي:

Description	Details	التفاصيل	الوصف
1 Correct water meter location.			1 موقع التجهيزات مطابق للموقع المعتمد من قبل الإدارة
2 Permanent wall is prepared for meter installation.			2 تجهيز جدار دائم لتثبيت عداد الماء
3 Vertical height from asphalt level to the bottom of cavity is correct 77.5cm.			3 الارتفاع من مستوى الشارع (الأسفلت) الى اسفل التجويف صحيح (77.5 سم)
4 There are tank/ gate valve before the tank & float valve in the tank.			4 وجود خزان ماء او / وصمام تحكم قبل خزان الماء / وجود عوامة في الخزان.
5 Polythene pipe from water tank to meter location with a suitable size for the connection.			5 وجود انبوب بوليثين من الخزان الى موقع العداد بحجم مناسب للتوصيلة
6 Plaster made externally.			6 الجدار الخارجي ممسوح
7 Plaster made internally.			7 الجدار الداخلي ممسوح
8 Cavity prepared to install the meter.			8 وجود تجويف لتثبيت العداد
9 Cavity's width is correct (50cm).			9 عرض التجويف (50 سم)
10 Cavity's height is correct (40cm).			10 ارتفاع التجويف (40 سم)
11 Cavity's depth is correct (17.5cm).			11 عمق التجويف عن المطلوب (17.5 سم)
12 Correct location of bottom hole(s) in cavity.			12 موقع الفتحة السفلية في تجويف العداد صحيح.
13 Correct location of top hole(s) in cavity.			13 موقع الفتحة العلوية في تجويف العداد صحيح.
14 There is duct provided in bottom hole(s).			14 وجود قناة في فتحة التجويف
15 Duct provided in bottom hole(s) is correct.			15 موقع القناة اسفل التجويف صحيح
16 The distance between the bottom two ducts hole box is correct (21 cm)			16 المسافة بين الفتحات السفلية للصندوق (21 سم)
17 There is 45 deg. elbow provided in the ground.			17 وجود كوع (45 درجة) تحت مستوى الارض.
18 There is check valve			18 وجود صمام غير قابل لترجيع
19 There is ball valve			19 وجود العوامة
20 There is permanent/temporary tank			20 يوجد خزان دائم/موقت
others			اخرى
21			21

APPROVED

REJECTED

If you require further information or ready for inspection please contact:

إذا كنت في حاجة لمزيد من المعلومات او كنت مستعدا لأجراء الكشف مرة اخرى فالرجاء الاتصال على:

Inspector No.:
E-mail: WDDinspection@ewa.bh
or Call Center.:17515555

هاتف المفتش:
البريد الإلكتروني: WDDinspection@eaw.bh
او بمركز الاتصالات: 17515555

• The Certified plumber shall comply with all building permits regulations, & commitment to apply the system of water installations inside the building upon completion of construction , including the capacity of tanks storage

• يلتزم السباك المعتمد بجميع اشتراطات اجازة البناء المعتمدة والالتزام بتطبيق نظام التمديدات المائية في داخل المبنى عند الانتهاء من البناء بما في ذلك سعة خزانات المياه

Certified Plumper Signature & Stamp :

التوقيع وختم المقاول المعتمد

Date:

التاريخ:

• Notice: If the site is not ready within 3 months from the date of this request, the application will be cancelled automatically.

• ملاحظة: إذا لم يتم التجهيز خلال مدة اقصاها 3 اشهر من تاريخ الطلب فإن المعاملة سيتم إلغاءها تلقائيا.

WDD Representative Name:

Date:

Signature:



Water Services Coordination Group Inspection Form مجموعة تنسيق خدمات المياه

Individual or Manifold Meter System / شبكة العدادات الفرعية وموزع العدادات في المجمعات السكنية والمسورة

Connection Size & Type: _____ حجم ونوع التوصيلة: _____ Application No.: _____ رقم الطلب: _____
Visit No.: _____ رقم الزيارة: _____ Visit Time: _____ وقت الزيارة: _____ Visit Date: _____ تاريخ الزيارة: _____

Area: _____ المنطقة: _____ Name: _____ الاسم: _____
Block: _____ المجمع: _____ Road: _____ طريق: _____ House No.: _____ منزل رقم: _____
Telp.No.: _____ رقم تلفون: _____ Approved Plumper: _____ مركب الأنابيب: _____

The site was visited by inspector and found the following: لقد قام المفتش بزيارة الموقع وتبين له التالي:

#	Description	Details	التفاصيل	الوصف	#
1	Correct location of individual meters.			موقع التجهيز مطابق للموقع المعتمد من الإدارة	1
2	Plaster made internally			الجدار الداخلي ممسوح	2
3	Plaster made externally			الجدار الخارجي ممسوح	3
4	Water tank			وجود خزانات ماء	4
5	There is check valve			وجود صمام غير قابل للترجيع	5
6	There is ball valve			وجود العوامة	6
7	No gate valve/PRV before and after meter.			وجود صمامات تحكم قبل و بعد العداد	7
8	Pipes are provided from water tank(s) to meters locations.			وجود انابيب موصلة من الخزان إلى مواقع العدادات	8
9	Cavity prepared in site			وجود تجويف لت تركيب العدادات	9
10	Door/glass for the box .			وجود باب للصندوق / وجود زجاج بلاستيك لقراءة العداد	10
11	Pipes numbering are ready & matching with unit addresses/ female socket ¼			وجود ترقيم الأنابيب الخاصة بكل وحدة/ وجود وصلات العدادات ¼ بأسنان مستقلة .	11
12	Vertical height to the bottom of cavity is correct (77.5 cm from finished floor level)			الارتفاع من مستوى الأرضية النهائية إلى أسفل التجويف مطابق للمطلوب (77.5 سم)	12
13	6" PVC duct provided.			وجود انبوب PVC (6 بوصة)	13
14	Cavity width is correct (200 cm)			التجويف غير مطابق للمطلوب (200 سم)	14
15	Cavity height is correct (80 cm)			ارتفاع التجويف مطابق للمطلوب (80 سم)	15
16	Cavity depth is correct (30 cm)			عمق التجويف مطابق للمطلوب (30 سم)	16
17	Correct locations of bottom holes in cavity			مواقع الفتحات السفلية في تجويف العداد صحيحة	17
18	Long 6" PVC provided below the ground.			وجود كوع طويل (6 بوصة) تحت مستوى الأرض (45° درجة)	18
19	Pipe provided from water roof tank to the bottom of cavity.			وجود انبوب من الخزان إلى أسفل التجويف.	19
20	Box height is correct (50 cm)			ارتفاع الصندوق مطابق للمطلوب (50 سم)	20
21	Box depth is correct (30 cm)			عمق الصندوق مطابق للمطلوب (30 سم)	21
22	Pipe for main meter (internal dia=)			وجود انبوب للعداد الرئيسي (القطر الداخلي = بوصة)	22
23	Communication cables			تمديد اسلاك الاتصال للقراءة عن بعد	23
24	Roof water tank is full			الخزان العلوي مملوء بالماء	24

APPROVED

REJECTED

No. of meter ready to be fixed:----- عدد العدادات المجهز لها:----- No. of meters in the application:----- عدد العدادات في الطلب:-----

I declare that the numbering of the pipes connecting to the meters is correct according to the addresses of the units (apartments / shops) issued by the E-Government Authority and is in accordance with the addresses of the water request
أقر بأن ترقيم المواسير الموصلة للعدادات صحيحة وحسب عناوين الوحدات (الشقق/محلات) الصادرة من هيئة الحكومة الالكترونية و مطابق لعناوين طلب الماء

Certified Plumper Signature & Stamp :----- التاريخ:
Date:-----

• Notice: If the site is not ready within 3 months from the date of this request, the application will be cancelled automatically. ملاحظة: اذا لم يتم التجهيز خلال مدة اقصاها 3 اشهر من تاريخ الطلب فإن المعاملة سيتم إلغاءها تلقائيا.

WDD Inspection Representative Name:	Date:	Signature:
New Connection Technician Name:	Date:	Signature:
New Connection Contractor Name:	Date:	Signature:

WATER REGULATION SYSTEM IMPLEMENTATION FORM (Building – Individual Meters Installations)				
Main Account No.:	Owner Name:		CPR/CR:	
Contact No.:	Email:		Signature:	
Main SPN:	Building:	Road:	Block:	Area:
Please attach Unit's numbers not ready for installations				
<p>I hereby confirm the validity & legality of the data and documents that are written and supplied by me to request water service, and I bear legal responsibility in this respect without any liability to EWA, I also pledge to bear the differences between main meter and sub-meters in the internal water distribution network system that are caused by direct connections after the bulk meter</p>			<p>أقر أنا الموقع أدناه بصحة وقانونية البيانات والمستندات المدونة المزودة مني لطلب خدمة الماء و اتحمل المسؤولية القانونية فيما يخص ذلك دون ادنى مسؤولية على هيئة الكهرباء و الماء. و أقر أيضاً بتحمل الفروقات بين العداد الرئيسي للمبنى و عدادات المياه الفرعية التي قد تنتج بسبب التوصيلات المباشرة بعد العداد الرئيسي.</p>	

No.	Water Regulation System Description	Status	(EWA)Remarks												
1	Existing of gate valves before and after the meter, and check valve after the meter.	<input type="checkbox"/> Check Valve <input type="checkbox"/> Gate Valves													
2	Readiness of meters box with glass for meter readings.	<input type="checkbox"/> Yes <input type="checkbox"/> No													
3	Readiness of pipes numbering as per the addresses in the application.	<input type="checkbox"/> Yes <input type="checkbox"/> No													
4	Number of ready units to fix the water meters	Ready Units: _____													
5	Existing of female socket ¾ in both ends of connection with space of 17cm between the two sockets.	<input type="checkbox"/> Female socket <input type="checkbox"/> Space (17cm)													
6	Wiring is ready for indoor meters in each floor (If applicable).	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable													
7	No. of direct Connections after the Bulk meter	No. _____													
8	Ground Tank inlet height from the street level (Max 1.5 m), Max Distance 30m from Main meter.	Distance: _____ m Height: _____ m													
9	Storage Capacity (minimum must be 1/3 capacity in ground tank)	Ground Tank: _____ Roof tank: _____ Total: _____													
	<table border="1"> <tr> <td></td> <td>½ inch</td> <td>1 inch</td> <td>2 inches</td> </tr> <tr> <td>Residential</td> <td>1.5 m3/flat</td> <td>1 m3/flat</td> <td>0.5 m3/flat</td> </tr> <tr> <td>Commercial</td> <td>1.5 m3/flat</td> <td>1.5 m3/flat</td> <td>0.5 m3/flat</td> </tr> </table>		½ inch	1 inch	2 inches	Residential	1.5 m3/flat	1 m3/flat	0.5 m3/flat	Commercial	1.5 m3/flat	1.5 m3/flat	0.5 m3/flat		
	½ inch	1 inch	2 inches												
Residential	1.5 m3/flat	1 m3/flat	0.5 m3/flat												
Commercial	1.5 m3/flat	1.5 m3/flat	0.5 m3/flat												
10	G&R Tanks easy to reach, protected against heat (kept in shade or in a room) or insulated tank and light color. Roof tank full of water.	<input type="checkbox"/> Easy to reach <input type="checkbox"/> Protected against heat <input type="checkbox"/> Roof Tank is Full													
11	Fix overflow line (3-5cm) below the inlet for ground and roof tanks, if the ground / underground tank is more than 10m³ must fix Audible or Visual Alarm System. Overflow water pipes connection location	<input type="checkbox"/> 3 – 5 cm <input type="checkbox"/> Alarm System <input type="checkbox"/> Visible													
12	Methods of All water Pipes/connections -Easy to find leak and easy to replace, Hot & Cold pipes shall be fully insulated.	<input type="checkbox"/> Visible <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inside sleeve													
13	Installation of Isolating Valves (Easy to reach) at Each line of Hot & Cold, Before Ground Tank, also for Water Heater with Safety Valve. Hot & Cold pipes shall be fully insulated	<input type="checkbox"/> Cold Lines <input type="checkbox"/> Hot Lines <input type="checkbox"/> G. Tank Line <input type="checkbox"/> W. Heater													
14	No illegal connection or Direct pumping & intakes from Supply Line.	<input type="checkbox"/> No illegal connection <input type="checkbox"/> No illegal intakes <input type="checkbox"/> No direct pumping													
15	Separate tank available for gardening area more than or equal 50m²	<input type="checkbox"/> Available - Fed by main line at higher level (0.2 or less)- Fed by G.Tank <input type="checkbox"/> Not available													
16	Garden tap size should be 1/2" dia.	<input type="checkbox"/> Yes <input type="checkbox"/> No													
17	Gardens are provided: modern Irrigation system (Dripping or Sprinkler) with a Timer	<input type="checkbox"/> Dripping <input type="checkbox"/> Sprinkler <input type="checkbox"/> Timer													
18	Water Consumption for irrigation: (grass Area: one m²=10L/Day)(one Tree=10L/Day)	(_____)L/Day													
19	Hydraulic Test Completed by licensed plumber (for 24hrs not less than 150% of the network internal pressure)	<input type="checkbox"/> Passed <input type="checkbox"/> Not passed Test Date: _____													
20	<p>Note: 1. Max. Water appliance flow rate [Kitchen Sink-Basin (10 L/m), Bathroom Wash-Basin (8L/m), Shower Tap (10 L/m), Bath Tap (12 L/m)].</p> <p>2. Flush Tanks capacity (not more than 6 liters) with Isolating valve and Dual Flushing System.</p> <p>3. Urinals flushing system (Max = 2Liter Per flashing).</p>														

We Engineering Office/ Authorized Plumber undersigned hereby declare that we had tested the water network for the above site, and found it in line with EWA's Water regulation System, with emphasis on the above tabulates items, and the building is ready to install sub-meters according to EWA regulations and laws.

Plumber Name: _____ License No.: _____	Engineering Office:
Sign: _____ Date: _____	Sign: _____
Tel.: _____ ((Stamp))	Date: _____ ((Stamp))
Electricity & Water Authority Inspected By:	Remark : _____
Name : _____ Date : _____ Sign : _____	
Approved	Rejected