

## Water & Civil Division

### Water AMI (Advanced Metering Infrastructure) Project

#### GUIDELINES FOR DOMESTIC WATER METER INSTALLATION IN VILLAS & SHEDS (ON WALL)

1. For individual consumer premises such as villas, sheds etc. water meters shall be installed on the outside compound wall of the premises where regular access are permitted.
2. Water meter should not be installed in the basement of building, pump room or in underground meter chambers.
3. No cabinet or protection cover of any type shall be installed that may obstruct communication signals from meter (Refer meter installation drawing PEW-STD-AMI-001).
4. Supply line, 32mm dia. LDPE pipe shall be routed through a 75mm dia. protection tube from ground level to the bottom of the Water meter installed on the periphery of the wall.
5. The meter shall be fixed at a standard height of 1200mm for easy reading and maintenance of the meter and fittings.
6. Pipes, valves and all other fittings used for the meter connection shall be high quality, heavy duty, non-toxic and non-corrosive material.
7. Pipe size for ½” meter installation shall be ½” to 1” maximum and for 1” meter installation shall be 1” to 2” maximum.
8. ½” meter can deliver up to 10,000 gallons water in 24 hours and 1” meter can deliver up to 20,000 gallons in 24 hours, approximately.
9. Consumer must have water storage tank equivalent to 24 hours’ consumption for residential premises and storage equivalent to 48 hours’ consumption for labour accommodation and other high consumption premises.
10. The consumer pipe towards the storage tank shall be routed on other side of the wall and connected to the meter through the wall as shown in the drawing.
11. Isolation valves shall be installed upstream and downstream the meter to stop water flow from both directions and a stopcock shall be installed prior to the meter for locking/ disconnection of supply to the meter.
12. Both valves shall be fully open while the meter is in service and no control of flow shall be made by regulating the inlet and outlet valve.
13. The pipework at the meter position should be securely fixed to support the weight of the water meter and to resist any torsion during the installation and removal of the water meter.
14. Meter shall be protected from the risk of damage by shock or vibration induced by the surroundings.
15. Water meter and its associated fittings/pipes shall not be part of electrical earthing.
16. Detailed shop drawing shall be submitted for DEWA approval before commencement of work.

17. No water pump shall be installed upstream or downstream the meter.
18. Maximum pressure at the meter inlet shall not exceed 2 bar, PRVs shall be installed, at least 1mtr. before the meter, to achieve the required pressure.
19. Meter installation guidelines shall strictly be followed while installing the meter.
20. Meter shall be installed in accordance with the arrows shown on the body of the meter and register shall be arranged in the most convenient position for reading.
21. Meter should not be allowed to fall or receive impact damage as this may affect the operation and accuracy of the meter.
22. All connections shall be checked thoroughly for leak after installation of the meter.
23. A PVC Junction box of dimension 150X150X100mm and IP 68 rating shall be installed as recessed (concealed) inside the compound wall as shown in the drawing.
24. A 25mm PVC conduit shall be routed on the rear side of the wall and connected to the Junction box through the back entry provided on the wall as shown in the drawing PEW-STD-AMI-001. Connection of the conduit to Junction box shall be done with proper couplings/adaptors.
25. The conduit shall be GI if routed along walls/ceilings leading to LV room or CPVC (with wall thickness of 2.8mm) if laid underground in sand or concealed in concrete/block walls. In any case, while entering the LV room, the conduit shall be changed to GI at a minimum of 2m distance before entering LV room.
26. A two way junction box of appropriate material shall be provided at every 25m length and each corner (direction change) of the conduit with metallic pulling spring for cable pulling purpose. In case of underground conduit, a concrete pit of dimension 200X200X150mm shall be provided to accommodate the two way Junction box. The connection of conduit to Junction box shall be done with proper couplings/adaptors.
27. A GI Junction box of dimension 150X150X50mm and IP 56 rating shall be installed inside the LV room on wall at a suitable position at a height of 1600mm from the finished floor level. The connection between conduit and Junction box shall be through suitable couplings/adaptors.
28. As built drawing of the communication installation shall be submitted for approval.
29. If there is multiple numbers of villas/sheds, each junction box on the wall shall be looped together via 25mm PVC conduit and then connected to LV room/ Electrical room
30. A/c. No. plate shall be affixed on wall immediately adjacent to the meter (not on the meter).
31. DEWA is responsible for the supply and installation of water meters for new connections. Meters are installed either by DEWA staff or Contractors acting on behalf of DEWA. Customers and property developers are responsible for supply and installation of all ancillary fittings and pipe-work beyond the meter in accordance with relevant DEWA specifications and standard drawings.

32. As-built drawings showing the pipelines to the meter and after meter to the customer pipe connection to their storage tank shall be prepared and submitted to DEWA.

**Reference Drawing: PEW-STD-AMI-001**

Date: 12/12/2017

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