Water & Civil Division

Water AMI (Advanced Metering Infrastructure) Project

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

TABLE OF CONTENTS

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For individual consumer premises such as villas, sheds, and similar units, domestic water meters shall be installed in a vertical position on the compound wall, strictly in accordance with the standard installation drawing PEW-STD-AMI-001, Rev.5.

A. DOMESTIC WATER METER INSTALLATION STANDARD

1. The water meter shall be positioned on the external face of the compound wall, located outside the plot limit, oriented towards the road, ensuring unrestricted and safe access for inspection and maintenance
2. The installation area shall remain free of obstructions such as signboards, barriers, plants, landscaping features, or any structure that may hinder access. A minimum clearance of 2.0 m shall be maintained from all electrical services.
3. Water meters shall not be installed in basements, pump rooms, or underground meter chambers.
4. No protective cabinet, metallic enclosure, or any covering device shall be used that could interfere with the wireless communication of smart meters (refer to drawing PEW-STD-AMI-001, Rev.5).
5. The incoming supply line shall consist of 32 mm dia. LDPE pipe, routed within a 75 mm dia. protection sleeve from ground level up to the water meter connection point on the wall perimeter.
6. Meters shall be mounted at a uniform height of 1200 mm from finished ground level to facilitate ease of reading and maintenance. A minimum clearance of 100 mm shall be maintained between the meter backplate and wall surface.
7. All pipes, valves, and associated fittings used in meter assemblies shall be of high-grade, heavy-duty, non-toxic, and corrosion-resistant material fully conforming to international standards for potable water applications.
8. For ½" meter installations, connecting pipe sizes after the meter shall range from ½" to 1". For 1" meter installations, pipe sizes shall range from 1" to 2".
9. A ½" meter is capable of supplying up to 18 m^3 per 24 hours, while a 1" meter can deliver up to 50 m^3 per 24 hours.
10. Consumers shall provide adequate storage capacity equivalent to 24 hours demand for residential premises and 48 hours demand for labor accommodations and high-consumption facilities.
11. Storage tanks shall be located either at ground level or underground. Elevated storage tanks are not permitted.
12. A gate valve shall be provided near the consumer tank to allow easy access for any maintenance or cleaning purposes. For underground storage tanks, a gate valve shall be installed in a separate manhole and provided with a stainless-steel identification plate. In addition, GRP ladders shall be permanently fixed inside the tank where the depth exceeds 1.0 metre to ensure safe access.

13. A minimum 40 cm clearance gap shall be maintained between the incoming sleeve pipe and the outgoing consumer pipe to facilitate proper installation, alignment, and maintenance of the water meter assembly.
14. The consumer's pipework towards the storage tank shall be routed through the compound wall and connected directly to the outlet side of the water meter as per the standard drawing.
15. The supply line from the meter shall connect directly to the ground-level/underground storage tank. No intermediate bib taps, branches, or bypass arrangements shall be permitted.
16. Isolation valves shall be installed both upstream and downstream of the meter to enable complete shut-off of water flow. A stopcock shall also be provided downstream of the meter for locking or disconnecting supply.
17. A threaded joint/union shall be provided immediately after the meter to allow adjustment and alignment of meter length during installation.
18. Both upstream and downstream valves shall remain fully open while the meter is operational. Flow regulation shall not be carried out using these valves.
19. Pipework shall be securely fixed and adequately supported to bear the weight of the water meter and withstand torsional forces during installation or removal.
20. Meters shall be protected against damage caused by external shock, vibration, or other mechanical stresses.
21. The water meter and its associated piping shall not be used as part of the electrical earthing system.
22. Shop drawings detailing the meter installation shall be submitted for DEWA approval prior to commencement of work.
23. Installation of water pumps either upstream or downstream of the meter is strictly prohibited.
24. The maximum allowable pressure at the meter inlet shall not exceed 2 bar. Where required, Pressure Reducing Valves (PRVs) shall be installed at least 1.0 m downstream of the meter to maintain the permissible inlet pressure.
25. All meter installation works shall be executed in strict compliance with approved meter installation guidelines.
26. Meters shall be installed in accordance with the flow direction arrows indicated on the meter body, with the register positioned for optimal readability.
27. Meters must be handled with care to avoid falls or impacts, as such damage can impair accuracy and operation.

28. All joints and fittings shall be thoroughly leak-tested following installation.

29. An engraved identification plate bearing the words “WATER METER” along with the plot number shall be affixed adjacent to the installation point.
30. DEWA is responsible for supplying and installing water meters for new service connections, either through DEWA staff or authorized contractors. Consumers and developers shall be responsible for the supply and installation of all ancillary fittings and pipework downstream of the meter in accordance with DEWA specifications and standard drawings.
31. As-built drawings showing pipeline routing both upstream to the meter and downstream to the consumer’s storage tank connection shall be prepared and submitted to DEWA upon completion of works.

B. TYPICAL PICTURE REFERENCES