

6.0 FEEDER MAIN DESIGN STANDARDS

6.1 GENERAL

A feeder main is a large diameter pipeline that services a large area of the local water distribution system and is connected at limited locations. No service connections or hydrants are permitted on feeder mains.

6.2 FEEDER MAIN SIZING

Pipe sizing for feeder mains shall be determined by the hydraulic requirements to maintain acceptable levels of service. The minimum pipe size shall be 600 mm.

6.3 FEEDER MAIN PIPE MATERIAL

Pipe materials shall be either PVC conforming to AWWA C-905 standards or Prestressed Concrete Pressure Pipe conforming to AWWA C-301 standards.

6.4 FEEDER MAIN OFFTAKES

Feeder main offtakes shall be located where required in order to supply the area to be developed with sufficient domestic, commercial, industrial, and fire protection water at adequate pressure. The number of offtakes shall be kept to a minimum. The minimum offtake pipe diameter shall be 300mm. All offtake connections shall be provided with isolation valves on the local distribution system side of the system.

6.5 FEEDER MAIN VALVES

“Full-valving” shall be provided such that four valves are installed at a feeder main cross, and three valves are installed at a feeder main tee. Feeder main valves shall also be placed at offtakes and at locations deemed necessary to maintain reliability of operation. Due to the critical nature of this infrastructure, valves on feeder mains shall be installed in valve chambers to allow for maintenance and emergency repair access.

6.6 AIR RELEASE VALVES

Air valves shall be installed where required by the hydraulic profile for protection of the feeder main from any damages that may be caused by air entrapment.

6.7 DRAIN FITTINGS

Drain fittings shall be installed on the feeder main pipe at every valve chamber, offtake chamber, and air release valve installation. Where possible, chamber floor drains and sumps shall be provided.

6.8 OTHER WORKS IN PROXIMITY TO FEEDER MAINS

Further to section 5.2.2, all proposed feeder main crossings shall be designed such that the proposed works cross perpendicular to the feeder main. When crossing above the feeder main, a minimum vertical separation of 0.5m shall be provided between the crown of the feeder main and the underside of the proposed works. When crossing

below the feeder main, a minimum vertical separation of 1.0m shall be provided between the underside of the feeder main and the crown of the proposed works.

Further to section 5.2.3, a minimum horizontal separation distance of 3.0 m edge to edge shall be provided between the alignment of feeder mains and the alignment of all other utilities, including wastewater and land drainage sewer mains. Where this is not possible the City will review the proposed works on a case by case basis.

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