

FIGURE 110-A: TYPICAL SERVICE LAYOUTS (DUAL WATER)

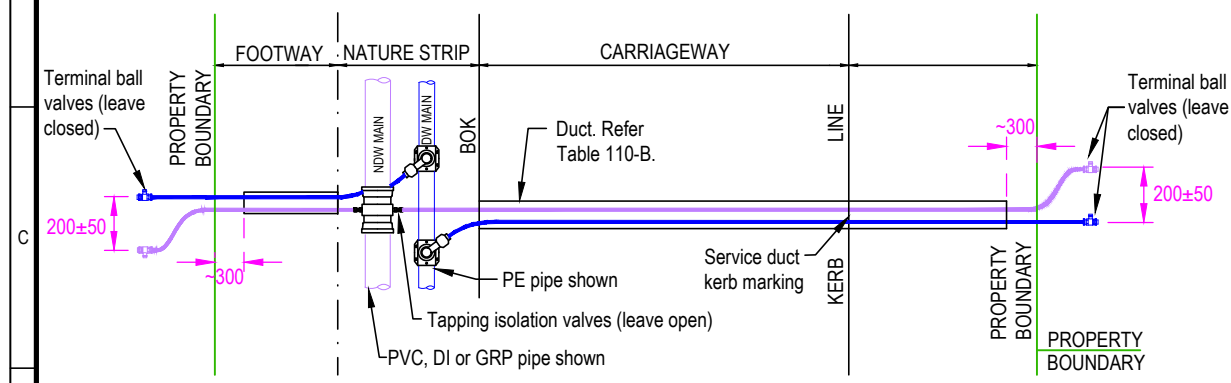


FIGURE 110-B: TYPICAL PROPERTY SERVICE PLAN ACROSS THE RD RESERVE
DN25PE or DN32PE PROPERTY SERVICE ARRANGEMENTS SHOWN

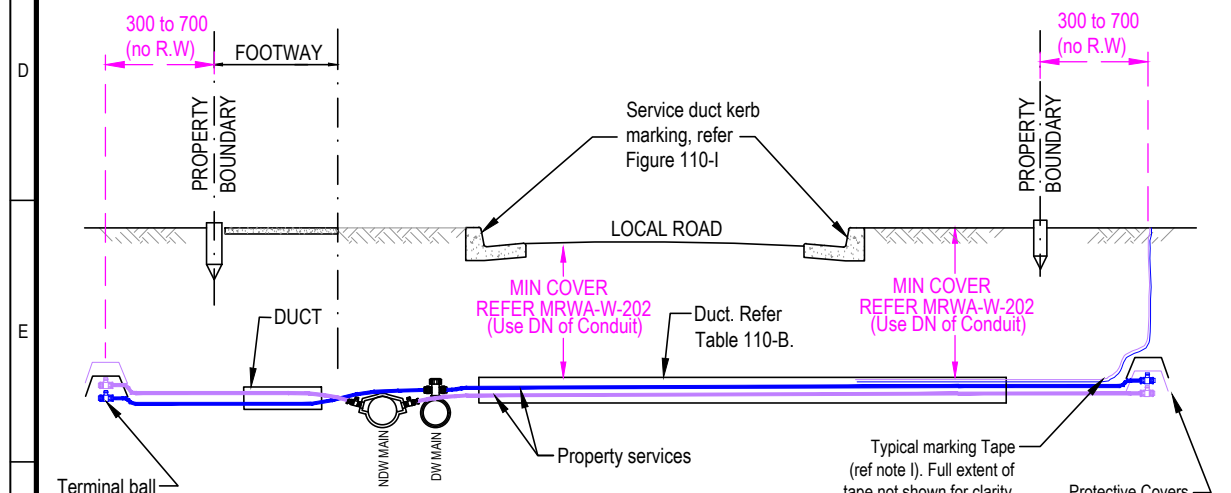


FIGURE 110-C: TYPICAL SERVICE ELEVATION
DN25PE or DN32PE PROPERTY SERVICE ARRANGEMENTS SHOWN

TABLE 110-B: PROPERTY SERVICE ARRANGEMENTS AT DIFFERENT SIZES & CONSTRUCTION METHODS

SIZE	TAPPING	OPEN CUT CONSTRUCTED	TRENCHLESS CONSTRUCTED	END OF SERVICE(S)
DN25PE, or DN32PE	REFER MRWA-W-111	Install DW only service within SN4 DN50 DWV conduit. Combine DW and NDW services into one SN4 DN100 DWV conduit.	Install each service in separate bores. Install as per MRWA-W-213 (hole overcut <30), or Install service(s) within sleeves as per Sewerage standard MRWA-S-208. Use separate SDR21 DN63PE sleeves.	DW / NDW separation 200±50 Ball Valve & Cone required (if service constructed prior to meter installation). Otherwise, ball valve & cone not required.
Non fire service DN40PE, DN50PE or DN63PE	REFER MRWA-W-107	Install DW only service within SN10 DN100 DWV conduit. Combine DW and NDW services into one SN8 DN150 DWV conduit.	Install each service in separate bores. Install as per MRWA-W-213 (hole overcut <30), or Install service(s) within sleeves as per Sewerage standard MRWA-S-208. Use SDR21 DN90/110/125PE sleeves.	DW / NDW separation 300±50 Approved meter assembly
≥DN100 or fire service connections	REFER MRWA-W-106	Install in accordance with AS3500	Install in accordance with AS3500. Connection of a bored pipe to a fixed water main will likely require a flexible coupling (eg: Vario bend, braised Copper socket)	DW / NDW separation 500±100

TABLE 110-A: PROPERTY SERVICE ALIGNMENT & TAPPING PREFERENCES

ASSET	REQUIREMENT	REQUIREMENT DESCRIPTION
TAPPINGS & END OF SERVICES	MANDATORY	Locate adjacent to side boundary where lot <16m wide. Locate adjacent to driveway (5m offset) where lot ≥ 16m wide or where adjacent to side boundary is impractical.
LONG SIDE SERVICES	1st PREFERENCE	Minimise the angle of the crossing (esp where angle is > 10°)
	2nd PREFERENCE	Use pre-tapped connector required for short side of rd

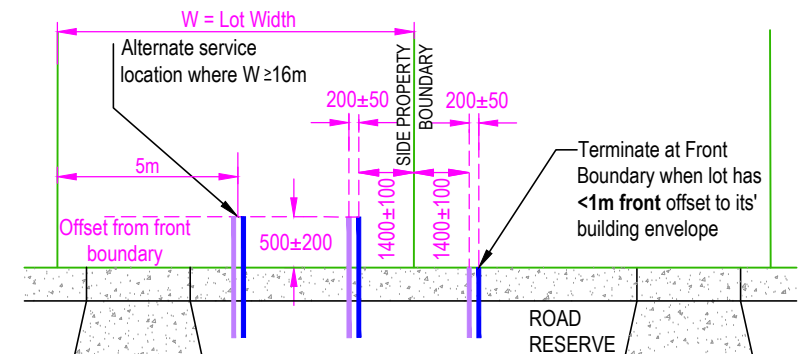
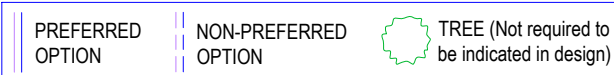


FIGURE 110-D: DN25/32PE PROPERTY SERVICE TERMINATION

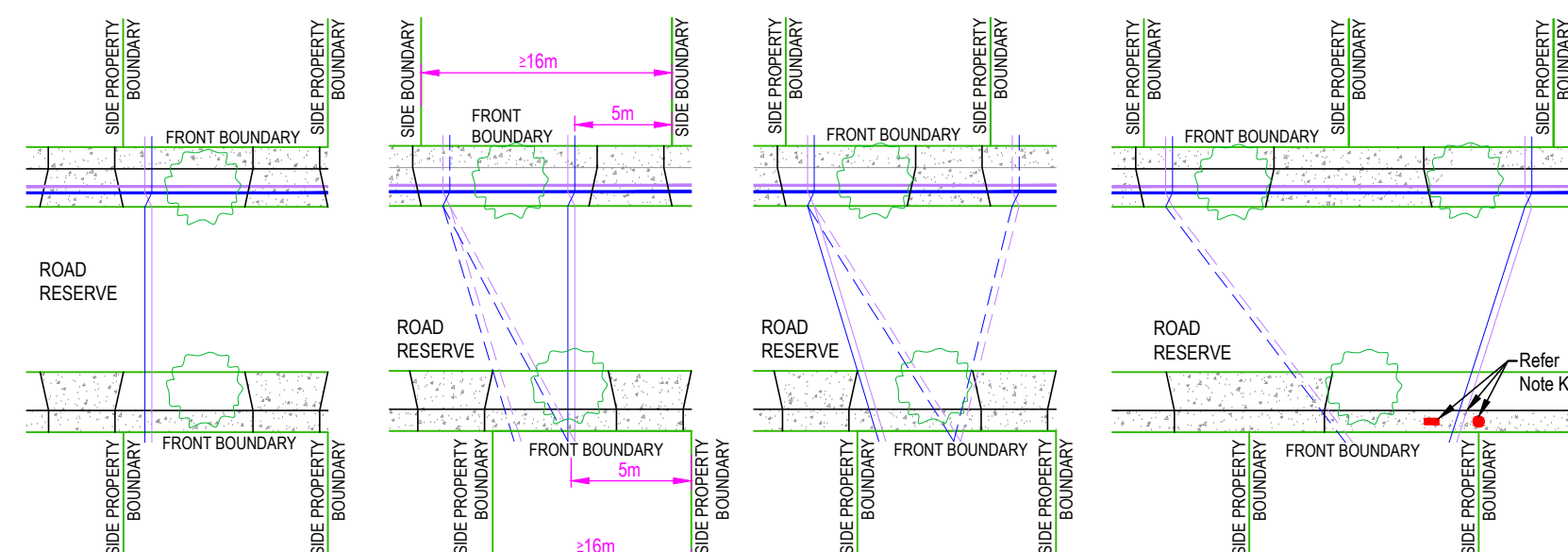


FIGURE 110-E: CASE 1.

FIGURE 110-F: CASE 2.

FIGURE 110-G: CASE 3.

FIGURE 110-H: CASE 4.

NOTES on Table 110-A and Figures 110-D to H:

- A. Examples of how these rules can be applied to determine optimum property service alignments can be found in MRWA-W-102A.
- B. An allowance for trees shall be made for all lots ≥10m wide.
- C. Tappings shall not be installed under pavement or proposed trees unless impractical to do otherwise.
- D. Tappings between driveways and proposed trees are only acceptable in lots ≥16m wide.
- E. End of property services shall be kept clear of pavement.
- F. End of property services shall be kept clear of proposed trees where Table 110-A preferences allow.
- G. Where building envelope front offset <1m, services are to terminate at the front boundary.
- H. GPS co-ordinates of each end of the conduits to be provided with the as constructed information.

- I. These dimensions assume there is no retaining wall at the front of the lot. Where there is a retaining wall, refer to MRWA-W-214.
- J. The tapping preferences set out in Table 110-A are based on pre-tapped connectors being used (ie: that the main is RRJ). For PE reticulation mains, tappings are single port and so only preference one in Table 110-A is relevant.
- K. Where the service is not at 90 deg, provide detectable marking tape from the tapping, through the conduit to the end of the service connection valve and run vertically to surface.
- L. Keep water conduits clear of other authority pits. Use a single long radius bend (R≥1m) in each conduit as required to avoid these structures.

GENERAL NOTES:

1. Property services shall be designed and constructed in accordance with the MRWA 500 series standards.
2. Fire and general services and ≥DN80 property services are owned by the property owner and shall be constructed in accordance with AS3500.
3. All other property services are owned by the Water Agency and shall be designed and constructed in accordance with these MRWA standards.
4. For acceptable water agency owned property service pipelines, refer to MRWA-W-103 & MRWA products portal.
5. For acceptable trenchless constructed sleeves, refer to Sewerage standard MRWA-S-103 & MRWA products portal.
6. For property services installed after road reserve pavement has been constructed (usual method of connecting Industrial / commercial properties), services shall typically be constructed via trenchless construction.
7. For property services installations via trenchless construction, refer to MRWA-W-213.
8. NDW property services shall always be located on the left of the DW property service as you look from the road to the front of property.
9. PE service pipe shall only be bent in accordance to the limitations described in PIPA document POP202.
10. Permanently stamp in wet kerb concrete a "W" (for DW), or a non drinking water symbol (as per Figure 110-G) in line with the service connection conduit on both sides of the road.
11. All property services shall be constructed and pressure tested before connection of the reticulation main to the live network.
12. Tappings shall:
 - 12.1. Be located in non-trafficable areas unless impracticable.
 - 12.2. Be minimum of 500 apart.
 - 12.3. Have isolation valves left open.
13. Where bends are required in property service conduits, they shall be long radius bends, R ≥ 1m.

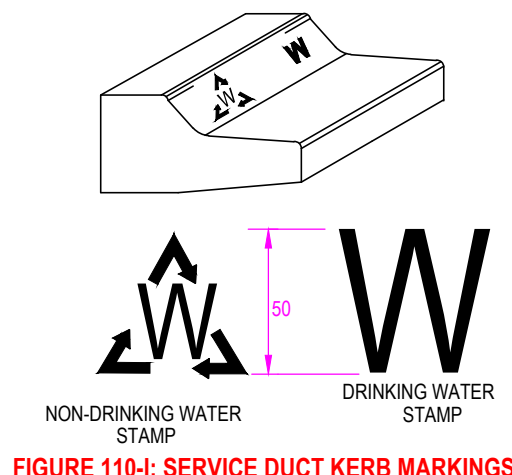


FIGURE 110-I: SERVICE DUCT KERB MARKINGS

DESIGNED:	R. JAGGER	DATE:	20/01/2011
DRAWN:	R. JAGGER	DATE:	20/01/2011
CHECKED:	NAME	DATE	APPROVED: NAME
3	TIES, ALIGNMENT, TABLE 110-B	01/12/16	RJ / CP / JT
2	PUBLISHED FIRST ISSUE	21/03/12	R.JAGGER
1	PRE PUBLISHED DRAFT FOR COMMENT	12/07/11	R.JAGGER
REV	DESCRIPTION	DATE	APPROVED
			<input checked="" type="checkbox"/> CWW C. RIVETTE 21/03/12 <input checked="" type="checkbox"/> SEWL C.PAXMAN 21/03/12 <input checked="" type="checkbox"/> YVW K.DAWSON 21/03/12

MELBOURNE RETAIL WATER AGENCIES

City West Water™

South East Water

Yarra Valley Water

MRWA WATER SUPPLY STANDARDS

PROPERTY SERVICE ARRANGEMENTS

NOT TO SCALE

MRWA-W-110

ISSUED 2012 REVISION NO. 3