

FIGURE 303-A: TYPICAL PROPERTY CONNECTION SCHEMATIC ARRANGEMENTS AT END OF LINE

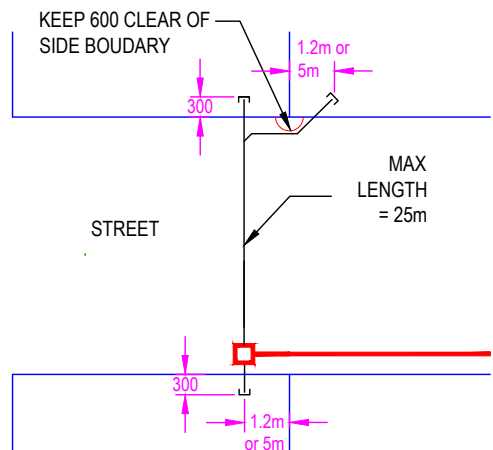


FIGURE 303-A1: LOTS ALIGNED ACROSS STREET

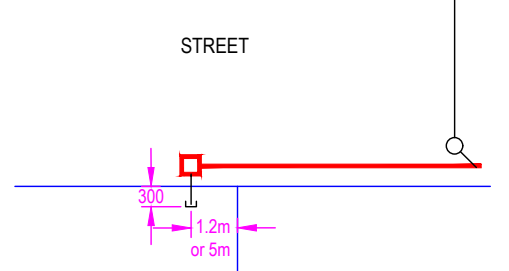
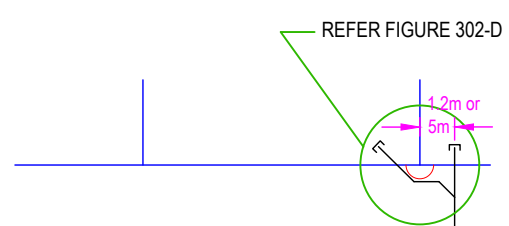


FIGURE 303-A2: LOTS STAGGERED ACROSS STREET

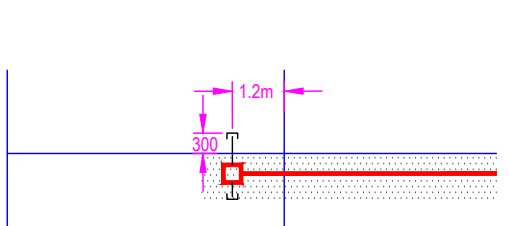


FIGURE 303-A3: ALIGNED BACKYARD LOTS

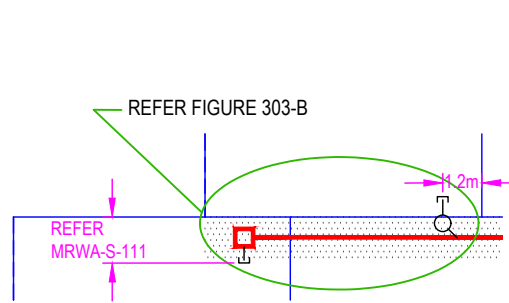
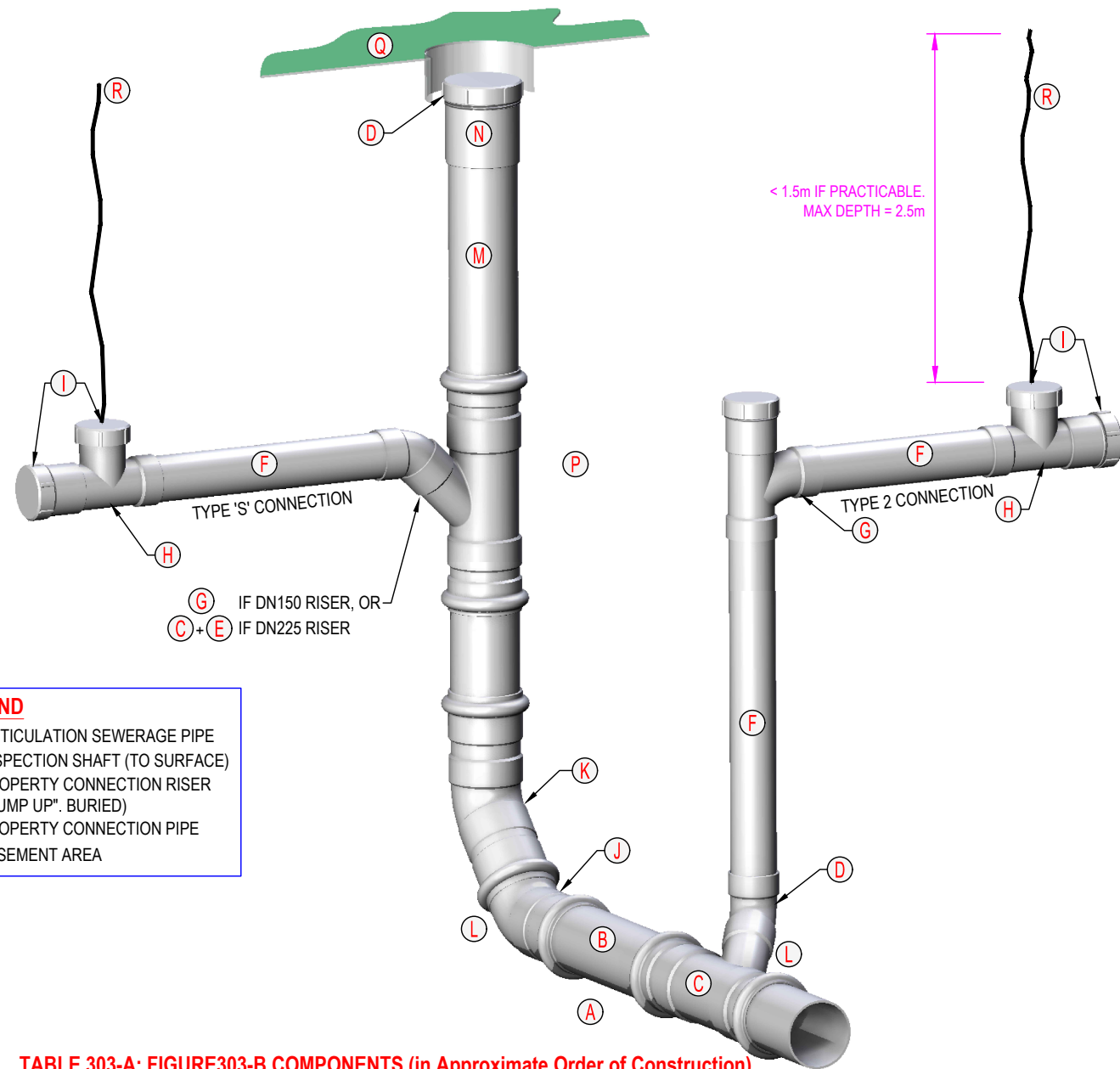


FIGURE 303-A4: STAGGERED BACKYARD LOTS

FIGURE 303-B: TYPICAL TYPE 1 END OF LINE ARRANGEMENT (ISOMETRIC VIEW)



LEGEND

- RETICULATION SEWERAGE PIPE
- INSPECTION SHAFT (TO SURFACE)
- PROPERTY CONNECTION RISER ("JUMP UP", BURIED)
- PROPERTY CONNECTION PIPE
- ▨ EASEMENT AREA

TABLE 303-A: FIGURE 303-B COMPONENTS (in Approximate Order of Construction)

ITEM	DESCRIPTION	MATERIAL	NOTES
A	EMBEDMENT	APPROVED MATERIAL	REFER MRWA-S-202
B	RETICULATION PIPE	TYPICALLY PVC DWV OR PP	REFER MRWA-S-103
C	OBLIQUE JUNCTION	PVC DWV / GRP	REFER MRWA-S-104A
D	60 deg BEND	PVC DWV, SCJ	TYPICALLY M-F. SIZE TO MATCH PROPERTY CONNECTION PIPE
E	45 deg BEND	PVC DWV / GRP	M-F. SIZE TO MATCH PROPERTY CONNECTION PIPE
F	PROPERTY CONNECTION PIPE	PVC DWV, SCJ	LAY IN A VERTICAL ALIGNMENT OR 1 IN 60 GRADE (FOR LATERAL)
G	88 deg SWEEP TEE	PVC DWV, SCJ	
H	INSPECTION OPENING	PVC DWV, SCJ	MARKS END OF WATER AGENCY ASSET
I	SCREW CAP	PVC DWV, SCJ	
J	45 deg BEND	PVC DWV, RRJ OR SCJ	F-M OR F-F TO SUIT. SIZE TO MATCH RETICULATION PIPE
K	45 deg BEND	PVC DWV, RRJ OR SCJ	TYPICALLY M-F. SIZE TO MATCH RETICULATION PIPE
L	RISER PIPE SUPPORT	CEMENT STABILIZED BEDDING	BELOW SHAFT AND JUMP UP. REFER FIGURE 301-C
M	INSPECTION SHAFT RISER PIPE	PVC DWV, SCJ	SIZED TO MATCH RETICULATION PIPE
N	ACCESS COUPLING	PVC DWV, SCJ	SIZED TO MATCH RETICULATION PIPE
O	SCREW CAP	PVC DWV, SCJ	INSTALL ONE AT END OF ACCESS COUPLING
P	COMPACTED BACKFILL	CLASS 2 / CLASS 4 FCR	REFER MRWA BACKFILL SPEC
Q	SURFACE ARRANGEMENT	CONCRETE / DUCTILE IRON	REFER FIGURE 301-B
R	MARKER TAPE	AS PER WSA PS 319. CREAM	FROM CENTRE OF CAP. LAY VERTICALLY TO SURFACE

Type 2 Property Connection Options:

- New connections to existing IS or jump up shafts are permitted provided:
 - There are no more than 2 connections to the shaft in total.
 - The new connection's length is extended by less than 5m to get to the shaft (compared to the length it could be if it were to connect to a sewer).
 - Connection to the shaft is as per MRWA-S-104A.
- Property connections may cross over an obstruction only when:
 - The obvert of the obstruction is low enough, and
 - The obstruction is or will be too low to enable a connection below the obstruction (while achieving minimum clearance), or
 - The property connection is to cross over an existing obstruction to connect to an existing sewer.

FIGURE 303-C : JUMP UP FLEXIBLE COUPLINGS (ISOMETRIC VIEW)

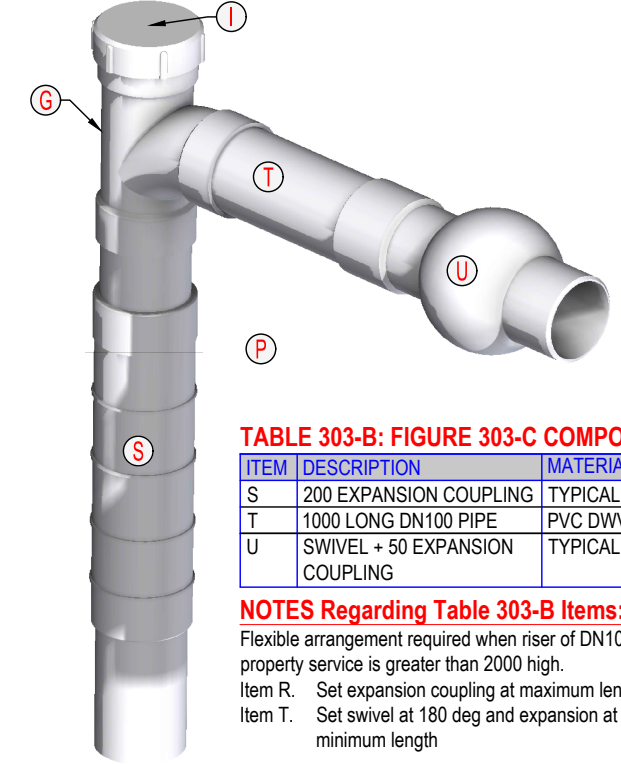


TABLE 303-B: FIGURE 303-C COMPONENTS

ITEM	DESCRIPTION	MATERIAL
S	200 EXPANSION COUPLING	TYPICALLY PVC, SCJ
T	1000 LONG DN100 PIPE	PVC DWV SCJ
U	SWIVEL + 50 EXPANSION COUPLING	TYPICALLY PVC, SCJ

NOTES Regarding Table 303-B Items:

Flexible arrangement required when riser of DN100 property service is greater than 2000 high.
 Item R. Set expansion coupling at maximum length
 Item T. Set swivel at 180 deg and expansion at minimum length

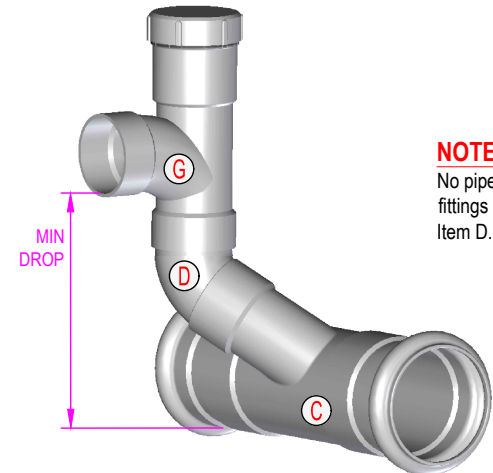


FIGURE 303-D : MINIMUM DROP ARRANGEMENT

NOTES Regarding Figure 303-D:

No pipework required in the vertical jump up, ie: fittings directly connect.
 Item D. Use a M-M 60° bend instead of the M-F bend typically required when pipe is installed in the jump up.

Additional Notes Regarding Table 303-A items:

- Item C. Size as per Table 104-A.
- Item H. IO ties and offsets as per Table 108-B and 109-A

ALL DIMENSIONS IN mm UNLESS STATED OTHERWISE

DESIGNED: R. JAGGER DATE: 1 JULY 2015
 DRAWN: R. JAGGER DATE: 1 JULY 2015

CHECKED:	NAME	DATE	APPROVED:	NAME	DATE
<input checked="" type="checkbox"/>	CWW	D. MOORE	01/09/15	<input checked="" type="checkbox"/>	CWW
<input checked="" type="checkbox"/>	SEW	C. PAXMAN	01/09/15	<input checked="" type="checkbox"/>	SEW
<input checked="" type="checkbox"/>	YVW	K. DAWSON	01/09/15	<input checked="" type="checkbox"/>	YVW

MELBOURNE RETAIL WATER AGENCIES

MRWA SEWERAGE STANDARDS

"JUMP UP" (TYPE 2)
 PROPERTY CONNECTIONS TO SEWERAGE
 MAINS & INSPECTION SHAFTS

NOT TO SCALE

MRWA-S-303

Planning	Design	Construction
		✓✓✓✓

REV	DESCRIPTION	DATE	APPROVED
2	PUBLISHED FIRST ISSUE	01/10/15	CP / JT / KD / RJ
1	PRE-PUBLISHED DRAFT	01/03/15	CP / JT / KD / RJ

ISSUED 2015 VERSION 1