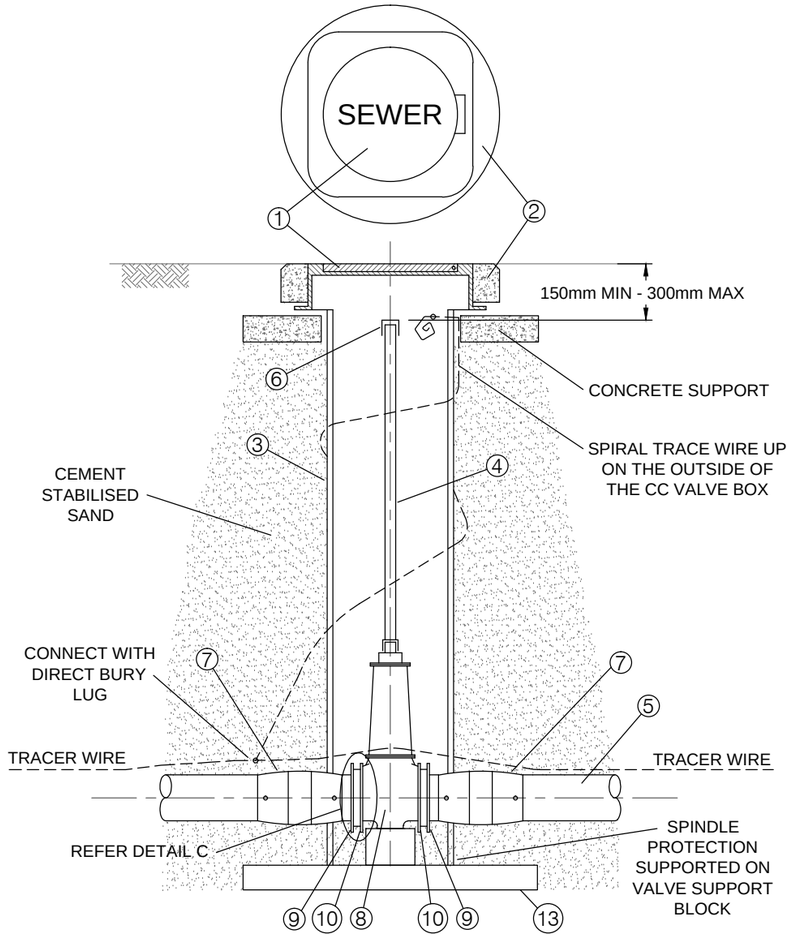
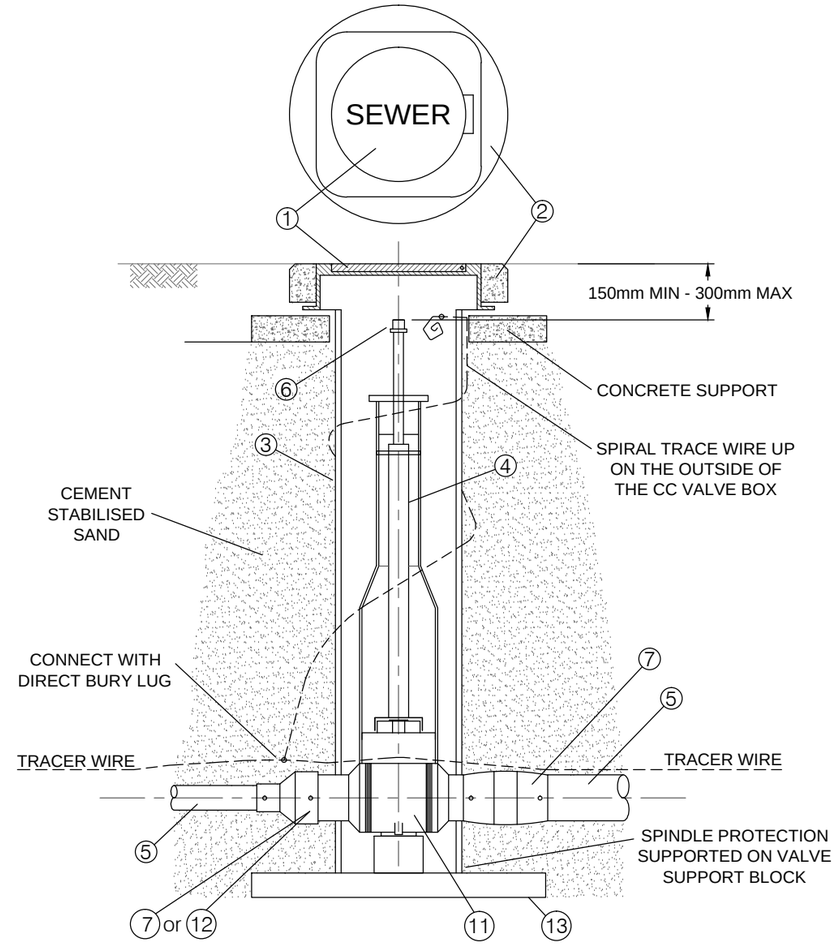


DETAIL A - ISOLATION VALVE - ALL SIZES (FLANGED CONNECTION SHOWN)

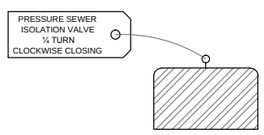
PE 100 SDR11/PN16 INTERNAL DIAMETERS		
OUTSIDE DIAMETER (mm)	PIPE INTERNAL DIAMETER (mm)	PIPELINE VALVING (mm)
50	40	63 B.V. OR 65 R.S.V.
63	51	63 B.V. OR 65 R.S.V.
90	73	80 R.S.V.
125	101	100 R.S.V.
180	145	150 R.S.V.
250	203	200 R.S.V.

NOTE: B.V. - BALL VALVE IN HDPE ¼ TURN (FULL BORE) PN 16 / SDR 11 PE100
R.S.V. - RESILIENT SEATED GATE VALVE

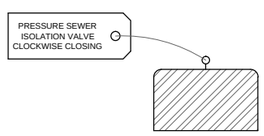
	FITTING SCHEDULE REFER NOTE 11
ITEM	DESCRIPTION
1	D.I. VALVE COVER (NON-TRAFFICABLE SHOWN - REFER NOTE 6)
2	CONCRETE OR RECYCLED PLASTIC SURROUND
3	SPINDLE PROTECTION 150 DWV PVC PIPE SN4.
4	VALVE SPINDLE EXTENSION (600-900) AS PER VALVE MANUFACTURER.
5	PE PIPE
6	VALVE SPINDLE CAP TO SUIT WATER COMPANY PREFERENCE. REFER TO WATER COMPANIES PRODUCT CATALOGUE FOR FURTHER DETAILS.
7	EF COUPLING
8	RESILIENT SEATED GATE VALVE PN 16
9	STUB FLANGE (FOR ELECTROFUSION OR BUTT WELDING)
10	316 STAINLESS STEEL BACKING RING AND BOLTED CONNECTION
11	GEORGE FISCHER OR FRIALEN 63 BALL VALVE IN HD-PE ¼ TURN (FULL BORE) PN 16 / SDR 11 PE 100 OR EQUIVALENT. TOP OF SPINDLE TO BE 12mm SQUARE TO SUIT FERRULE KEY.
12	63 x 50 REDUCER, COUPLERS
13	HARDWOOD OR RECYCLED PLASTIC BLOCKS FOR VALVE SUPPORT. REFER STANDARD DRAWING WAT-1206.



DETAIL B - BALL VALVE ALTERNATIVE - ON PIPES EQUAL TO OR LESS THAN DN 63 PE

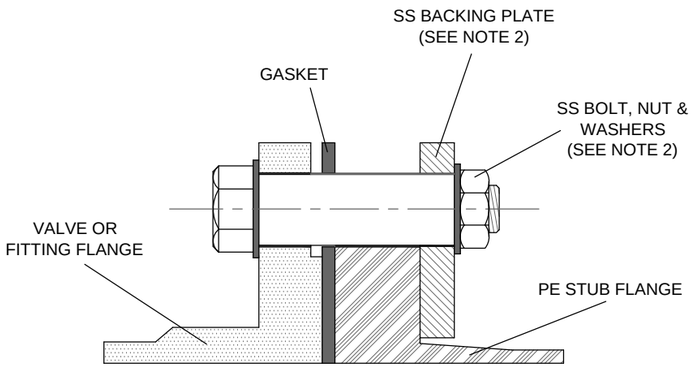


VALVE CAP DETAILS (≤DN 63 PE PIPE)



VALVE CAP DETAILS (>DN 63 PE PIPE)

DETAIL D



DETAIL C - PE BOLTED CONNECTION DETAIL

NOTE: FACTORY JOINED PE IS AN ALTERNATIVE CONNECTION WHERE THE PRODUCT IS WATER AUTHORITY APPROVED.

NOTES:

1. MINIMUM PRESSURE CLASS AND COMPOUND TYPE FOR ALL PIPEWORK AND FITTINGS IS TO BE PN16/ SDR 11 PE 100.
2. ALL BACKING PLATES, NUTS, BOLTS AND WASHERS TO BE A MINIMUM GRADE 316 STAINLESS STEEL. COAT THE THREADED SECTIONS OF ALL STAINLESS STEEL BOLTS WITH AN ANTI-SEIZE LUBRICANT.
3. GASKET MATERIAL TO COMPLY WITH AS4087 AND IN ACCORDANCE WITH WSA 109.
4. INSTALL VALVE IDENTIFICATION CAP ON ALL SPINDLES.
5. COVER AND SHROUD ARE TO BE INSTALLED USING A SUPPORT FLANGE, SO THAT NO LOADING IS TRANSFERRED ONTO THE VALVE OR PIPE.
6. HINGED COVERS SHALL BE USED IN NON-TRAFFICABLE LOCATIONS AND SHALL CLOSE IN THE DIRECTION OF FALL OF LAND OR DIRECTION OF ADJACENT ROAD LANE TRAFFIC. HINGED COVERS SHALL NOT BE USED IN TRAFFICABLE OR PAVED AREAS. REFER NOTE 11.
7. PAINT TOP OF VALVE COVER WITH ORANGE ROAD MARKING PAINT.
8. BALL VALVES SHALL BE USED ON PIPELINES DN 63 PE OR SMALLER.
9. GATE VALVES FOR USE ON MAINS DN 90 PE OR LARGER SHALL BE RESILIENT SEATED GATE VALVES.
10. RESILIENT SEATED GATE VALVES ARE TO BE CLOCKWISE CLOSING.
11. ALL FITTINGS MUST BE WATER AUTHORITY APPROVED. REFER TO MRWA WEB PORTAL FOR LIST OF APPROVED PIPEWORK AND FITTINGS.

REV	DESCRIPTION	DATE	APP.'D
4	PUBLISHED FIRST ISSUE	11/10/12	C. PAXMAN
3	SEW AMENDMENTS	7/08/12	
2	GENERAL AMENDMENTS	10/03/11	
1	GENERAL AMENDMENTS	14/04/10	
0	ISSUED AS STANDARD	09/11/09	

DESIGNED:	S.FRENCH		DATE: 09/11/09				
DRAWN:	D.T.		DATE: 09/11/09				
CHECKED:	INITIALS	DATE	APPROVED:	INITIALS	DATE		
☒ CWW	D.M.	22/08/12	☒ CWW	R.J.	22/08/12		
☒ SEW	S.S.	7/08/12	☒ SEW	C.P.	7/08/12		
☒ YVWL	K.D.	9/10/12	☒ YVWL	A.C.	9/10/12		

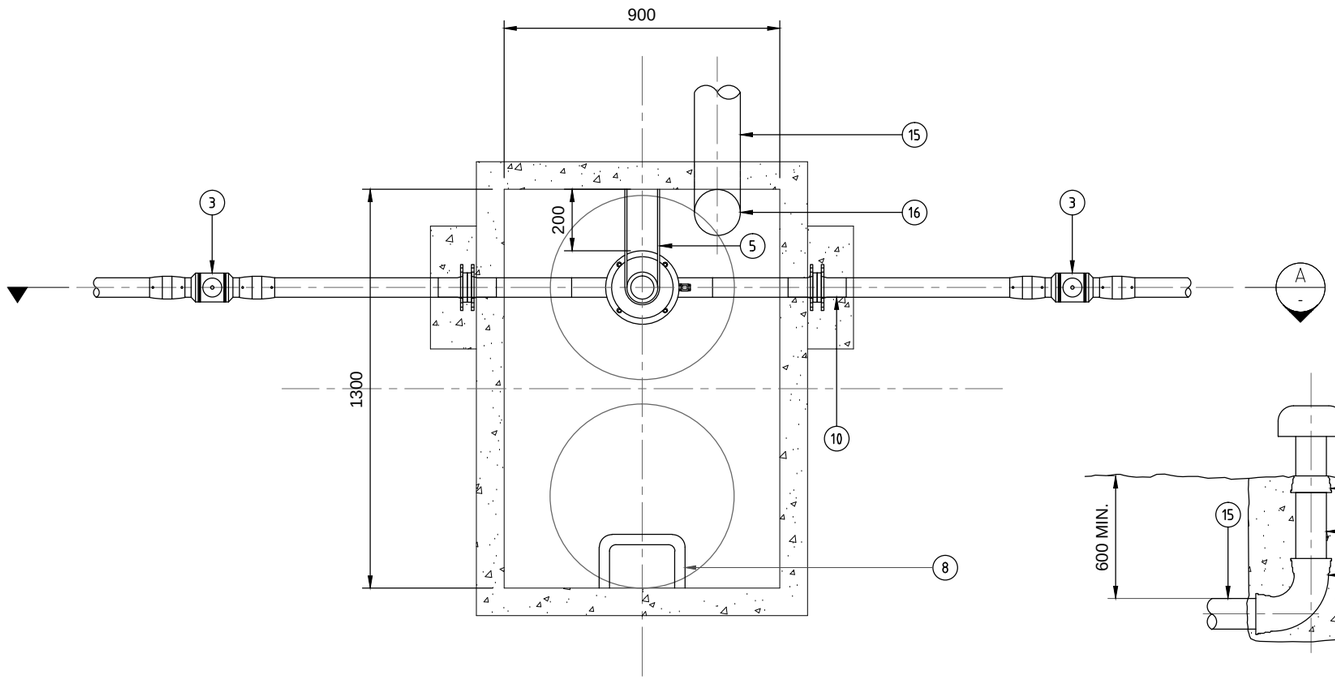
MELBOURNE RETAIL WATER AGENCIES

City West Water · Yarra Valley Water · South East Water

PRESSURE SEWER SYSTEM TYPICAL VALVE INSTALLATION ISOLATION VALVES

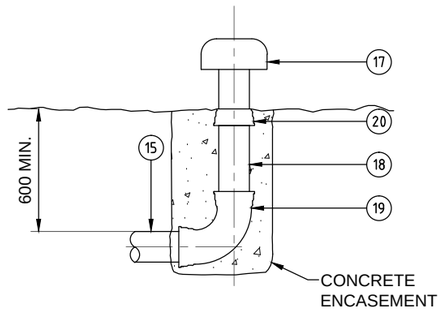
SCALE: N.T.S @A3
SHEET: 1 OF 1
DRAWING No.: PSS-1010-M
REV 4

ADDITIONAL INFORMATION PROVIDED IN SERIES COMMENTARY



TYPICAL AIR VALVE AND PIT DETAIL

NOT TO SCALE



GROUND LEVEL VENT DETAIL - TYPICAL

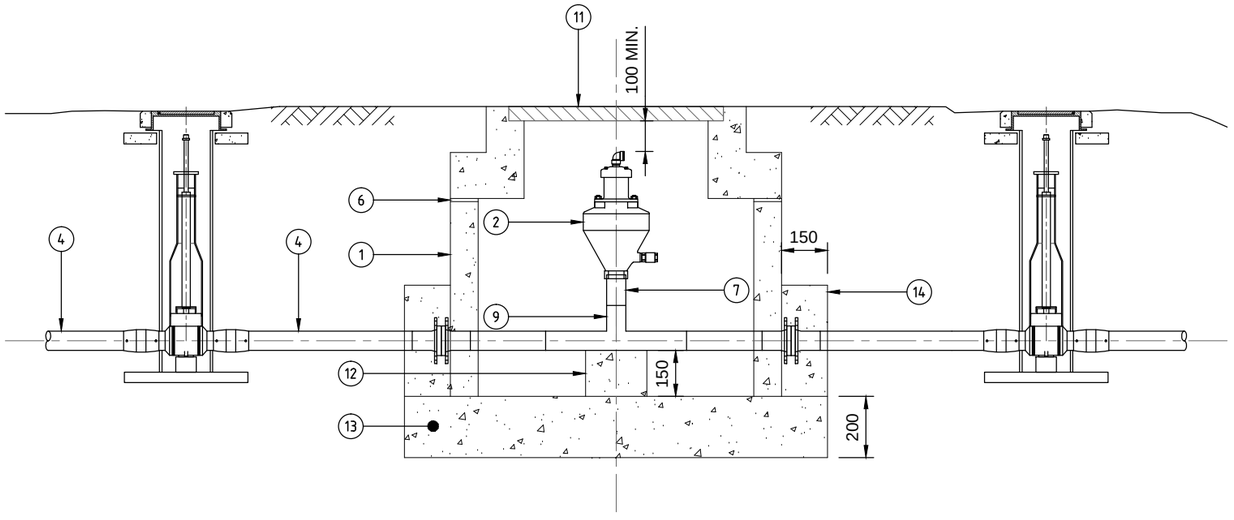
NOT TO SCALE

NOTES:

1. MINIMUM PRESSURE RATING FOR ALL PIPEWORK AND FITTINGS IS TO BE PN16.
2. ALL DI PIPEWORK AND FITTINGS SHALL BE EPOXY COATED OR APPROVED EQUIVALENT.
3. AIR VALVES ARE NOT TO BE LOCATED IN TRAFFICABLE AREAS.
4. ALL BACKING RINGS, NUTS, BOLTS AND WASHERS TO BE A MINIMUM GRADE 316 STAINLESS STEEL. COAT THE THREADED SECTIONS OF ALL STAINLESS STEEL BOLTS WITH AN ANTI-SEIZE LUBRICANT.
5. GASKET MATERIAL TO COMPLY WITH AS 4087 AND IN ACCORDANCE WITH WSA 109.
6. LOCATE GROUND VENT ADJACENT TO PROPERTY BOUNDARY.
7. PLACE SCREENING BUSHES AROUND GROUND VENT WHERE APPROPRIATE.
8. CONTRACTOR TO INSTALL EDUCT VENT IN ACCORDANCE WITH WSA DRAWING SEW-1408 (WHERE REQUIRED).
9. FUSION JOINTING OF PE FLANGE ADAPTER TO REDUCER SHALL BE MADE BY BUTT WELDING ONLY.
10. ALL CONCRETE TO BE WATER INDUSTRY APPROVED.
11. ALL INTERNAL SURFACES TO BE EPOXY COATED.
12. PROVIDE APPROVED LIFTING POINTS TO TOP OF SLAB IF PRECAST.

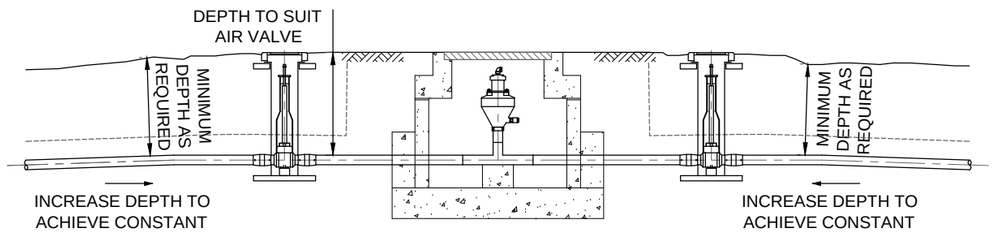
TYPICAL FITTING SCHEDULE	
ITEM	DESCRIPTION
1	ROCLA RECTANGULAR PIT OR WATER AUTHORITY APPROVED EQUIVALENT
2	WATER AUTHORITY APPROVED AIR VALVE
3	VALVE AS PER PSS-1010-M
4	PRESSURE SEWER
5	STEEL BRACING
6	10mm THICK BITUMISED STRIP
7	PE/SS TRANSITION ADAPTOR
8	STEP IRONS
9	PE TEE
10	STUB FLANGE WITH 316 STAINLESS STEEL BACKING RING AND BOLTED CONNECTION
11	Ø600 MANHOLE COVER
12	CONCRETE PIPE SUPPORT
13	CONCRETE BASE SLAB TO BE POURED IN-SITU
14	CONCRETE COLLAR
15	DN100 PVC PIPE TO VENT (LENGTH AND LOCATION TO BE DETERMINED ON SITE)
16	DN100 PVC 90° ELBOW
17	"CREVET PIPELINES" MULTI VENT WITH SELF TAPPING SCREWS FOR FIXING TO PVC SPIGOT END
18	DN100 (SP-SP) PVC PIPE (LENGTH TO SUIT)
19	DN100 (SOC-SOC) PVC 90° BEND
20	DN100 PVC (SOC-SP) ADAPTOR

NOTE: ALL PIPE AND FITTINGS MUST BE APPROVED FOR USE. REFER TO THE MRWA WEB PORTAL. DETAILS ARE SHOWN FOR A DN63 PRESSURE SEWER.



SECTION A

NOT TO SCALE



DETAIL PIPE ARRANGEMENT AT AIR RELEASE VALVE

NOT TO SCALE

REV	DESCRIPTION	DATE	APP.'D
4	PUBLISHED FIRST ISSUE	11/10/12	C. PAXMAN
3	NEW AIR VALVE ARRANGMENT	18/01/12	
2	FITTING TABLE AMENDED	10/03/11	
1	GENERAL AMENDMENTS	14/04/10	
0	ISSUED AS STANDARD	09/11/09	

		INITIALS	DATE		INITIALS	DATE
DESIGNED:	S.FRENCH		DATE: 29/07/09			
DRAWN:	D.T.		DATE: 09/11/09			
CHECKED:				APPROVED:		
☒ CWW	D.M.	22/08/12		☒ CWW	R.J.	22/08/12
☒ SEW	S.S.	17/11/11		☒ SEW	C.P.	18/01/12
☒ YVWL	K.D.	9/10/12		☒ YVWL	A.C.	9/10/12

MELBOURNE RETAIL WATER AGENCIES

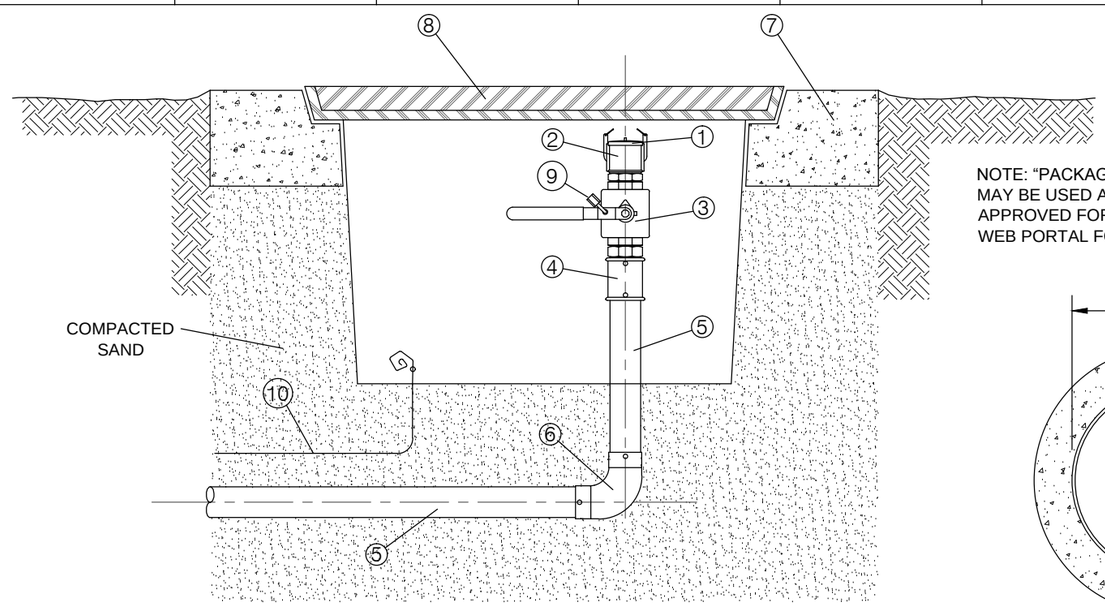
City West Water · Yarra Valley Water · South East Water

PRESSURE SEWER SYSTEM AIR VALVE INSTALLATION IN GROUND

SCALE: N.T.S @A3

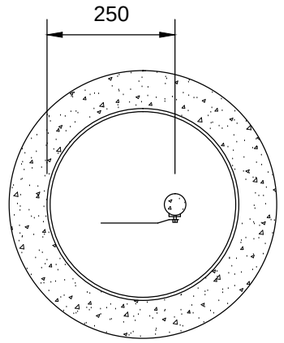
SHEET: 1 OF 1

DRAWING No.:	REV
PSS-1011-M	4

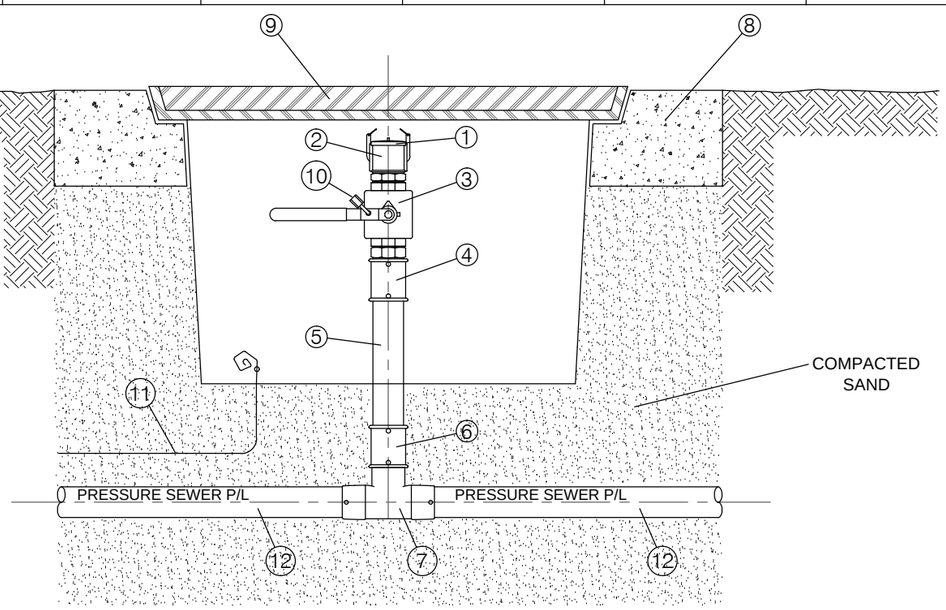


DN 50 PE END OF LINE FLUSHING POINT

NOTE: "PACKAGE" TYPE FLUSHING POINTS MAY BE USED AS AN ALTERNATIVE WHERE APPROVED FOR USE. REFER TO MRWA WEB PORTAL FOR APPROVED PRODUCTS.



PLAN
(COVER REMOVED)

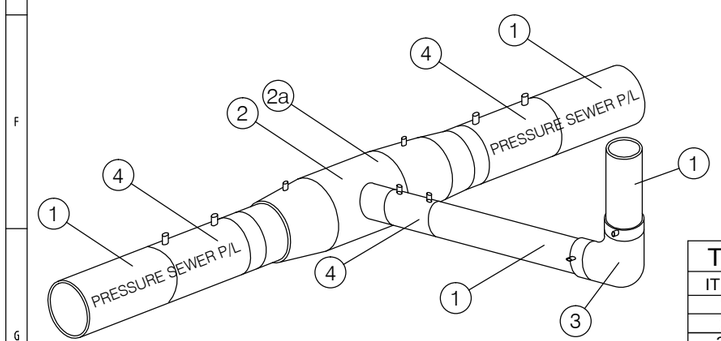


DN 90 PE INTERMEDIATE FLUSHING POINT
(AT LOCAL HIGH POINT)

TYPICAL FITTING SCHEDULE	
ITEM	DESCRIPTION
1	DN 50 POLYPROPYLENE CAMLOCK DUST CAP
2	DN 50 316 STAINLESS STEEL FEMALE CAMLOCK TO MALE BSP THREAD
3	2" 316 STAINLESS STEEL "FULL BORE" BALL VALVE (LOCKABLE)
4	TRANSITION COUPLER PE SS 316 DN 50 TO 2 " (MALE BSP THREAD)
5	50 OD PE PN 16 / SDR11 PE 100 POLYETHYLENE PIPE
6	90° ELBOW (PE 100 SDR 11/PN16)
7	LINPAC COLLARED HYDRANT PIT OR APPROVED EQUIVALENT
8	LINPAC "SEWER" LID (YELLOW) OR APPROVED EQUIVALENT
9	WATER AGENCY STANDARD PADLOCK
10	1.6 DIA 316 STAINLESS STEEL TRACER WIRE OR MARKER TAPE WITH 316 STAINLESS STEEL TRACER WIRE

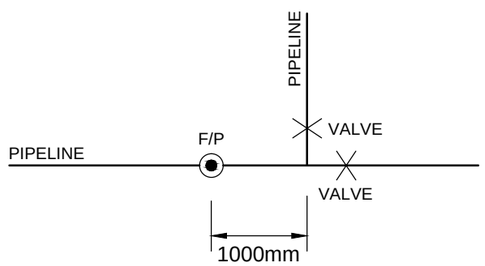
COVER

TYPICAL FITTING SCHEDULE	
ITEM	DESCRIPTION
1	DN 50 POLYPROPYLENE CAMLOCK DUST CAP
2	DN 50 316 STAINLESS STEEL FEMALE CAMLOCK TO MALE BSP THREAD
3	2" 316 STAINLESS STEEL "FULL BORE" BALL VALVE (LOCKABLE)
4	TRANSITION COUPLER PE SS316 DN 63 TO 2" (MALE BSP THREAD)
5	63 OD PE PN 16 / SDR11 PE 100 POLYETHYLENE PIPE
6	63 EFCOUPLER
7	EF REDUCING TEE
8	LINPAC COLLARED HYDRANT PIT OR APPROVED EQUIVALENT
9	LINPAC "SEWER" LID OR APPROVED EQUIVALENT
10	WATER AGENCY STANDARD PADLOCK
11	1.6 DIA 316 STAINLESS STEEL TRACER WIRE OR MARKER TAPE WITH 316 STAINLESS STEEL TRACER WIRE
12	PE PN 16 / SDR11 PE 100 POLYETHYLENE PIPE



DN 63 & DN 90 OFFSET ARRANGEMENT

TYPICAL FITTING SCHEDULE	
ITEM	DESCRIPTION
1	POLYETHYLENE PIPE
2	EF TEE
2a	EF REDUCING TEE
3	ELBOW 90°
4	EF COUPLER



INTERMEDIATE FLUSHING POINT ARRANGEMENT
(AT INTERSECTION)

NOTES:

1. MINIMUM PRESSURE RATING FOR ALL PIPEWORK AND FITTINGS IS TO BE PN16 SDR 11 PE 100 .
2. MINIMUM DISTANCE BETWEEN FLUSHING POINTS AND VALVES IS TO BE 1000 OR 10X DIAMETER (WHICHEVER IS GREATER).
3. WHERE THE PIT MAY BE SUBJECT TO TRAFFIC LOADINGS, THE PIT, COVER AND SURROUND MUST BE TRAFFICABLE.
4. PITS AND COVERS ARE TO BE INSTALLED SO THAT NO LOADING IS TO BE TRANSFERRED ONTO THE VALVES OR PIPES.
5. ELEVATE COVER UP TO 25 ABOVE FINISHED SURFACE LEVEL AND GRADE SOIL AWAY TO PREVENT WATER ENTRY.
6. MALE THREAD ON ALL FITTINGS MUST BE WRAPPED IN PTFE (TEFLON) TAPE.
7. ALL FLUSHING POINTS ARE TO BE LOCATED IN NON-TRAFFICABLE AREAS.
8. OFFSET ARRANGEMENTS FOR FLUSHING POINTS, TO BE UTILISED WHERE PRESSURE SEWER MAINS ARE LOCATED IN TRAFFICABLE AREAS.
9. ALL DIMENSIONS IN MILLIMETERS.
10. REFER TO MRWA WEB PORTAL FOR APPROVED PIPES AND FITTINGS.

REV	DESCRIPTION	DATE	APP.'D
4	PUBLISHED FIRST ISSUE	11/10/12	C. PAXMAN
3	SEW AMENDMENTS	7/08/12	
2	GENERAL AMENDMENTS	10/03/11	
1	GENERAL AMENDMENTS	14/04/10	
0	ISSUED AS STANDARD	09/11/09	

DESIGNED:	S. FRENCH		DATE: JAN 2009				
DRAWN:	D.T.		DATE: 09/11/09				
CHECKED:	INITIALS	DATE	APPROVED:	INITIALS	DATE		
☒ CWW	D.M.	22/08/12	☒ CWW	R.J.	22/08/12		
☒ SEW	S.S.	7/08/12	☒ SEW	C.P.	10/08/12		
☒ YVWL	K.D.	9/10/12	☒ YVWL	A.C.	9/10/12		

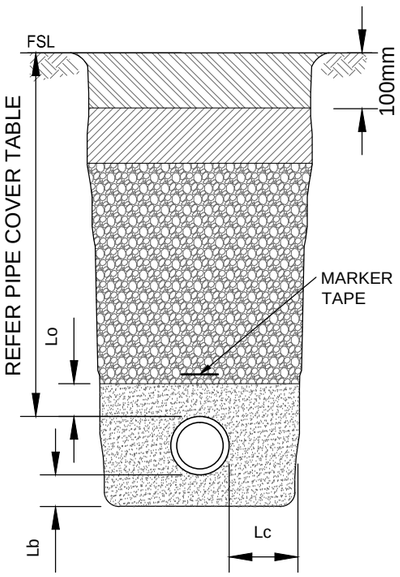
MELBOURNE RETAIL WATER AGENCIES

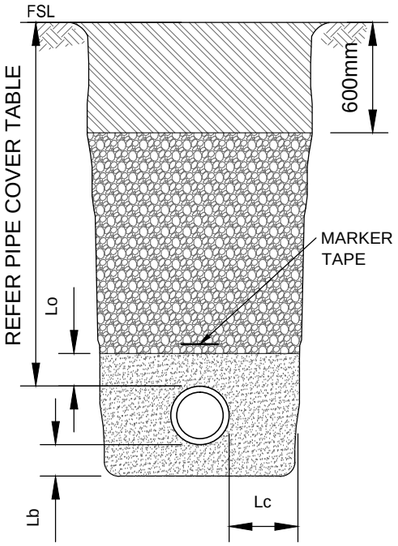
City West Water · Yarra Valley Water · South East Water

PRESSURE SEWER SYSTEM TYPICAL APPURTENANCE FLUSHING POINTS FOR PE MAINS < 180 OD

SCALE: N.T.S @A3
SHEET: 1 OF 1
DRAWING No.: PSS-1012-M
REV 4

ADDITIONAL INFORMATION PROVIDED IN SERIES COMMENTARY





TRAFFICABLE AREAS

TRENCH ZONE	PREFERRED MATERIALS	PRODUCT SPEC. No.	METHOD OF PLACEMENT	COMPACTION REQUIRED	FREQUENCY & LOCATION OF COMPACTION TESTING
PAVEMENT ZONE	REFER TO ROAD OWNERS SPECIFICATION			98% R_D TOP 100mm	FOR EVERY 50m LENGTH OF TRENCH (OR PART THEREOF) THREE TESTS SHALL BE TAKEN: a. WITHIN THE TOP 100mm (IE WITHIN THE BASE COURSE) OF AN EXISTING ROAD; b. IN THE DEPTH RANGE 100mm TO 300mm DEPTH (i.e. WITHIN THE PAVEMENT SUB-BASE).
SUB-BASE ZONE	REFER TO ROAD OWNERS SPECIFICATION				
BACKFILL ZONE	REFER TO ROAD OWNERS SPECIFICATION, OTHERWISE: COMPLY WITH MRWA BACKFILL SPEC - MRWA SPEC 04-03: a. FOR TRENCHES <1.5 METRES DEEP (OTHER THAN FOOTPATHS): THE BACKFILL SHALL BE 20mm CLASS 2 PLANT WET MIXED CRUSHED ROCK, FOR THE FULL DEPTH. b. FOR TRENCHES > 1.5 METRES (OTHER THAN FOOTPATHS): • 20mm CLASS 2 PLANT WET MIXED CRUSHED ROCK FOR THE TOP 600mm. • 20mm CLASS 4 (OR BETTER) CRUSHED ROCK FOR THE REMAINDER. c. FOR TRENCHES UNDER FOOTPATHS: • THE BACK FILL SHALL BE 20mm CLASS 4 (OR BETTER) CRUSHED ROCK.	VIC ROADS SPEC 812	SELECTED MATERIALS SHALL BE WORKED AROUND THE PIPE TO ENSURE ALL VOIDS AT HAUNCHES ARE FILLED AND THE PIPE IS PROVIDED WITH GOOD SUPPORT ALONG ITS ENTIRE LENGTH. WHERE COMPACTION IS REQUIRED, USE HAND TAMPERS, SURFACE PLATE VIBRATORS, VIBRATING ROLLERS OR INTERNAL VIBRATORS TO ACHIEVE REQUIRED COMPACTION. THE BACKFILL MATERIAL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 200mm LOOSE THICKNESS, AND SHALL BE MOISTURE CONDITIONED AS REQUIRED TO FACILITATE COMPACTION TO THE REQUIRED DENSITY. WHERE HAND HELD OR WALK BEHIND COMPACTION EQUIPMENT IS USED ON THE BACKFILL ZONE, AVOID COMPACTION WITHIN 200mm FROM THE TOP OF PIPE. WHERE HEAVIER COMPACTION IS USED ON THE BACKFILL ZONE, AVOID COMPACTION WITHIN 500mm FROM THE TOP OF PIPE.	95% R_D	FOR EVERY 40m LENGTH OF TRENCH (OR PART THEREOF) ONE TEST SHALL BE TAKEN PER TWO LAYERS OF BACKFILL MATERIAL. LAYERS TO BE TESTED SHALL BE SELECTED RANDOMLY. THE POSITION OF THE LAYER TO BE TESTED, AND THE LOCATION OF THE TEST, SHALL VARY FROM TEST TO TEST. ADJACENT LAYERS SHALL NOT BE SELECTED FOR TESTING.
EMBEDMENT ZONE	PREFERRED: a. EMBEDMENT SAND b. 5mm MINUS CRUSHED ROCK SUBJECT TO WATER AUTHORITY APPROVAL - SPECIAL CONDITIONS c. SINGLE SIZED AGGREGATE (10mm, 14mm, 20mm) • REQUIRES THE USE OF GEOTEXTILE FABRIC WRAPPING d. SCORIA (NOT APPROVED BY CITY WEST WATER)	WSA-PS-360 WSA-PS-361 WSA-PS-351 WSA-PS-361 WSA-PS-362		70% i_D	TESTING TYPICALLY NOT REQUIRED PROVIDED PREFERRED GRANULAR EMBEDMENT IS INSTALLED IN ACCORDANCE WITH RECOMMENDED PLACEMENT AND COMPACTION METHODS. REFER AS2566.2 FOR FURTHER INFORMATION.

NON TRAFFICABLE AREAS

TRENCH ZONE	PREFERRED MATERIALS	PRODUCT SPEC. No.	METHOD OF PLACEMENT	COMPACTION REQUIRED	FREQUENCY & LOCATION OF COMPACTION TESTING
BACKFILL ZONE	REFER TO MRWA BACKFILL SPEC - MRWA SPEC 04-03 a. SELECTED FILL MATERIAL THAT IS FREE FROM ORGANIC OR OTHER DELETERIOUS MATERIAL, OBTAINED FROM EXCAVATION OR IMPORTED, WITH A PARTICLE SIZE OF ROCK NOT GREATER THAN 20mm, OR FOR OTHER THAN ROCK NOT GREATER THAN 75mm (REFER AS2566.2-2002)		WHERE COMPACTION IS REQUIRED, USE HAND TAMPERS, SURFACE PLATE VIBRATORS, VIBRATING ROLLERS OR INTERNAL VIBRATORS. THE BACKFILL MATERIAL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 200mm LOOSE THICKNESS, AND SHALL BE MOISTURE CONDITIONED AS REQUIRED TO FACILITATE COMPACTION TO THE REQUIRED DENSITY. WHERE HEAVIER MECHANICAL COMPACTION IS USED, A TRIAL COMPACTION TEST IS REQUIRED TO CONFIRM THE MAXIMUM LIFT THICKNESS. WHERE HAND HELD OR WALK BEHIND COMPACTION EQUIPMENT IS USED ON THE BACKFILL ZONE, AVOID COMPACTION WITHIN 200mm FROM THE TOP OF PIPE. WHERE HEAVIER COMPACTION IS USED ON THE BACKFILL ZONE, AVOID COMPACTION WITHIN 500mm FROM THE TOP OF PIPE.	95% R_D TOP 600mm	1 TEST PER 2 LAYERS PER 40m LENGTH.
	REFER TO MRWA BACKFILL SPEC - MRWA SPEC 04-03 a. SELECTED FILL AS PER TOP 600mm OF BACKFILL b. ORDINARY FILL MATERIAL OBTAINED FROM EXCAVATION OR IMPORTED THAT CONTAINS NOT MORE THAN 20% BY MASS OF ROCK FRAGMENTS WITH SIZE BETWEEN 75mm AND 150mm, WITH NO ROCK OR CLAY FRAGMENTS GREATER THAN 150mm (REFER AS2566.2-2002)			90% R_D	1 TEST PER 2 LAYERS PER 100m LENGTH.
EMBEDMENT ZONE	AS PER TRAFFICABLE EMBEDMENT ZONE			60% i_D	TESTING TYPICALLY NOT REQUIRED PROVIDED PREFERRED GRANULAR EMBEDMENT IS INSTALLED IN ACCORDANCE WITH RECOMMENDED PLACEMENT AND COMPACTION METHODS. REFER AS2566.2 FOR FURTHER INFORMATION.

EMBEDMENT ZONE DIMENSIONS

NOMINAL PIPE SIZE (DN)	Lc	Lb	Lo
≤ 110	75	75	100
> 110, ≤ 140	100	75	100
> 140, ≤ 315	150	100	150
> 315	200	100	150

PIPE COVER

LOCATION	MINIMUM COVER	MAXIMUM COVER
PRIVATE PROPERTY NON TRAFFICABLE	450	1500
PUBLIC PROPERTY NON TRAFFICABLE	900	
TRAFFICABLE AREAS	1200	

NOTES:

1. FOR THE PURPOSES OF BACKFILL, TRAFFICABLE AREAS ARE DEFINED AS:
   a. THE FULL WIDTH OF ANY EXISTING OR PROPOSED ROAD CARRIAGEWAY PLUS SHOULDERS, KERB AND TO A DISTANCE BEHIND THE KERB EQUAL TO THE SEWER MAIN COVER, TO A MAXIMUM OF 1m.
   b. THE PART OF THE NATURE STRIP NEXT TO THE BACK OF KERB EQUAL IN WIDTH TO SEWER MAIN COVER, TO A MAXIMUM OF 1 METRE.
   c. THE FULL WIDTH OF ANY PROPERTY ACCESS DRIVEWAY OR PARKING AREA AND EXTENDING ONE METRE EITHER SIDE.
   d. THE FULL LENGTH OF ANY CONSTRUCTED FOOTPATH (INCLUDING, BUT NOT LIMITED TO CONCRETE, ASPHALT AND CRUSHED ROCK FOOTPATHS).
   e. THE FULL WIDTH OF ANY MEDIAN STRIP.
   f. ANY OTHER AREAS THAT ARE USED AS TRAFFIC AREAS (e.g. CARPARKS, ACCESS TRACKS).
   g. ANY OTHER AREAS WHERE CONTROLLED COMPACTION IS REQUIRED TO MINIMISE POTENTIAL SUBSIDENCE (e.g. WITHIN 400mm OF SURFACE FITTINGS).
2. SPECIFIC BEDDING & BACKFILL REQUIREMENTS DIFFERENT TO THAT DESCRIBED HERE MUST BE SPECIFIED IN THE DESIGN. SPECIAL BEDDING SHALL BE SPECIFIED TO SUIT THE CONDITIONS OF THE TRENCH FLOOR WHERE THERE IS:
   a. IRREGULAR OUTCROPS OF ROCK.
   b. ALLOWABLE HORIZONTAL BEARING PRESSURE (AHBP) OF < 50 kPa.
   c. UNCONTROLLED GROUND WATER.
3. SIDES OF EXCAVATION TO BE KEPT VERTICAL TO AT LEAST 150 ABOVE THE PIPE.
4. ALL ROCK INTRUSIONS OUT OF TRENCH WALL MUST BE REMOVED PRIOR TO ANY PIPE LAYING OPERATIONS.
5. DETECTABLE MARKER TAPE INDICATING "CAUTION - SEWER MAIN BURIED BELOW" IS TO BE PLACED ON TOP OF THE EMBEDMENT MATERIAL FOR ALL OPEN TRENCHED PIPE.
6. WHERE SQUEEZE-OFF TECHNIQUES ARE USED TO ISOLATE SECTIONS OF PIPEWORK DURING CONSTRUCTION, AN ELECTROFUSION COUPLER IS TO BE WELDED TO ENSURE NO FURTHER SQUEEZING OPERATIONS CAN BE UNDERTAKEN AT THE SAME LOCATION.
7. THE MAXIMUM COVER OVER THE MAIN IS TO BE 1.5m, UNLESS OTHERWISE SPECIFIED ON THE CONSTRUCTION DRAWINGS OR APPROVAL IS OBTAINED FROM THE PROJECT SUPERINTENDENT.

REV	DESCRIPTION	DATE	APP.'D
4	PUBLISHED FIRST ISSUE	11/10/12	C. PAXMAN
3	SEW AMENDMENTS	7/08/12	
2	GENERAL AMENDMENTS	10/03/11	
1	GENERAL AMENDMENTS	14/04/10	
0	ISSUED AS STANDARD	09/11/09	

		INITIALS	DATE		INITIALS	DATE
DESIGNED:	S. FRENCH		JAN 2009			
DRAWN:	D.T.		09/11/09			
CHECKED:		INITIALS	DATE	APPROVED:	INITIALS	DATE
☒ CWW		D.M.	22/08/12	☒ CWW	R.J.	22/08/12
☒ SEW		S.S.	7/08/12	☒ SEW	C.P.	10/08/12
☒ YVWL		K.D.	9/10/12	☒ YVWL	A.C.	9/10/12

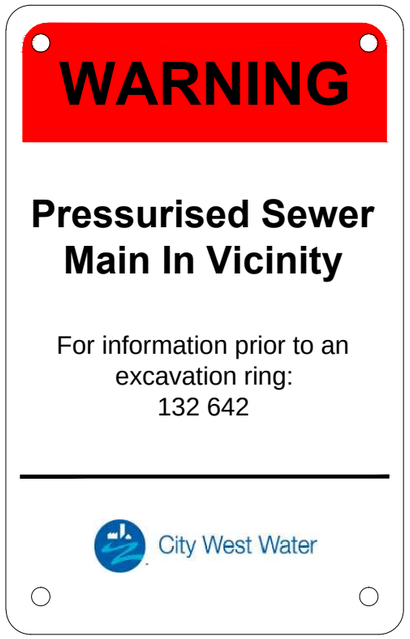
MELBOURNE RETAIL WATER AGENCIES

City West Water · Yarra Valley Water · South East Water

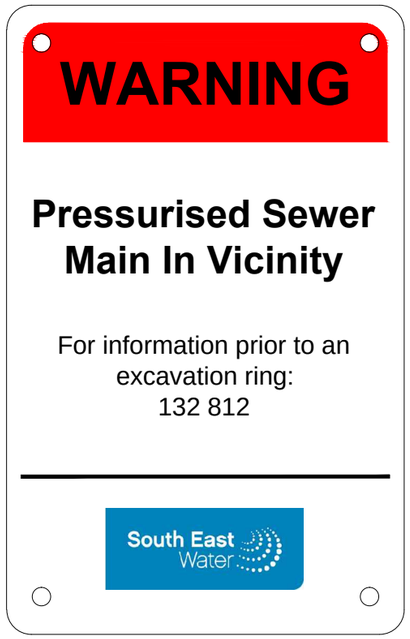
PRESSURE SEWER SYSTEM TRENCH DETAILS DIMENSIONS AND MATERIALS

SCALE: N.T.S @A3
SHEET: 1 OF 1
DRAWING No.: PSS-1013-M
REV: 4

ADDITIONAL INFORMATION PROVIDED IN SERIES COMMENTARY



CWW WARNING SIGN - TYPICAL



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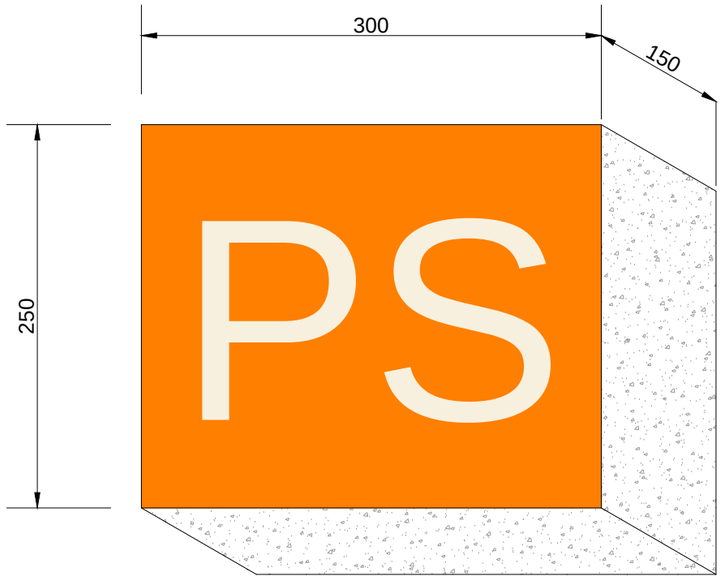
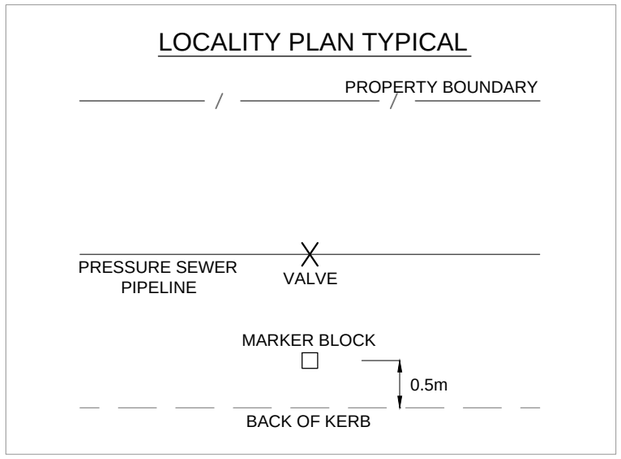
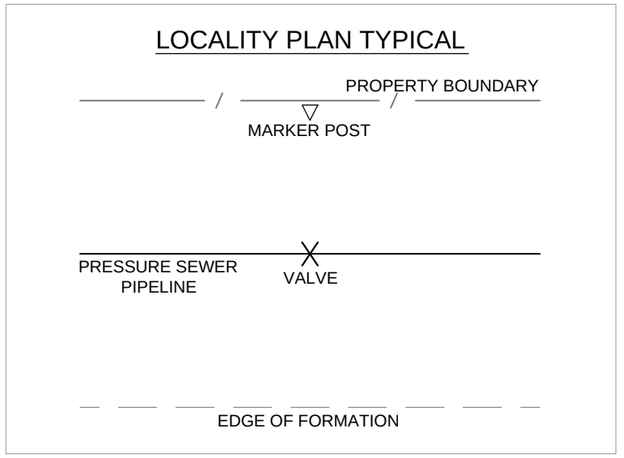
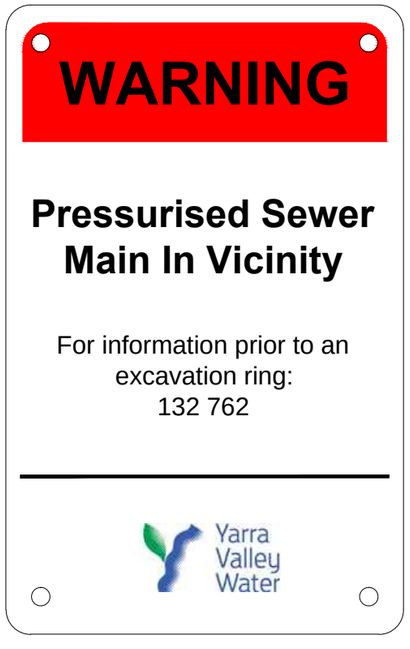


NOTE: LETTERING 150mm HIGH
WITH 15mm DEEP ETCHING

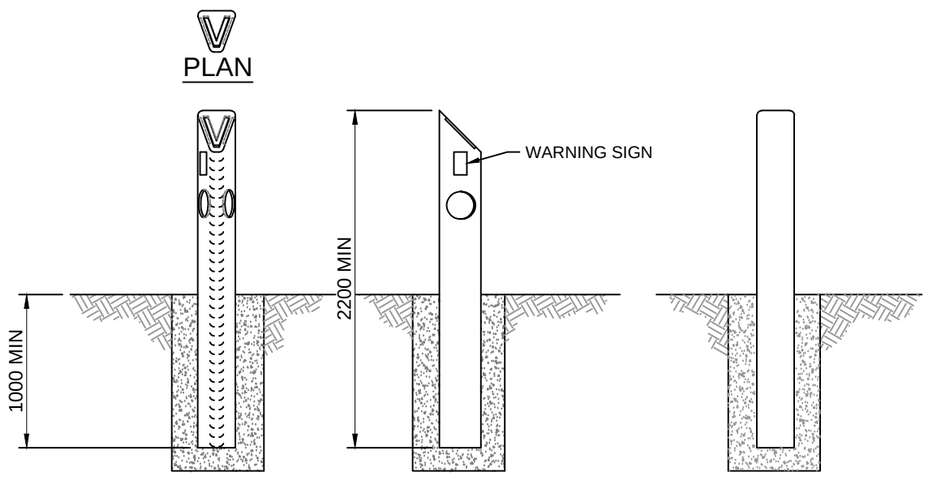
MARKER BLOCK - TYPICAL







YVW WARNING SIGN - TYPICAL



MARKER POST - TYPICAL

NOTES:

1. MARKER POSTS OR BLOCKS ARE TO BE LOCATED AT ALL FITTING LOCATIONS, INCLUDING:
   a. VALVES
   b. FLUSHING POINTS; AND
   c. AIR VALVES
2. MARKER BLOCKS ARE TO BE USED FOR FITTINGS ADJACENT TO SEALED ROADWAYS.
3. MARKER POSTS ARE TO BE USED FOR FITTINGS ADJACENT TO UNSEALED ROADWAYS.
4. WARNING SIGNS ARE TO BE ATTACHED TO ALL POSTS USING SELF TAPPING STAINLESS STEEL SCREWS.
5. WARNING SIGNS TO BE PROVIDED BY THE RELEVANT WATER AUTHORITY.
6. TOP OF MARKER POST IS TO BE CUT OFF SQUARE IF NOT BEING USED AS A VALVE INDICATOR POST.
7. MARKER POSTS TO BE MADE OF RECYCLED PLASTIC, COLOURED GREEN.
8. MARKER BLOCKS ARE TO BE MANUFACTURED IN CONCRETE, WITH THE TOP COLOURED ORANGE AND CREAM COLOURED WRITING.

REV	DESCRIPTION	DATE	APP.'D
3	PUBLISHED FIRST ISSUE	11/10/12	C. PAXMAN
2	WARNING SIGN MOVED TO SIDE OF POST	17/01/12	
1	GENERAL AMENDMENTS	31/03/11	
0	ISSUED AS STANDARD	09/11/09	

		INITIALS	DATE		INITIALS	DATE
DESIGNED:	S. FRENCH		JAN 2009			
DRAWN:	D.T.		09/11/09			
CHECKED:		INITIALS	DATE	APPROVED:	INITIALS	DATE
☒ CWW		D.M.	22/08/12	☒ CWW	R.J.	22/08/12
☒ SEW		S.S.	7/08/12	☒ SEW	C.P.	7/08/12
☒ YVWL		K.D.	9/10/12	☒ YVWL	A.C.	9/10/12

MELBOURNE RETAIL WATER AGENCIES
City West Water · Yarra Valley Water · South East Water

PRESSURE SEWER SYSTEM MARKER POSTS AND MARKER BLOCKS TYPICAL ARRANGEMENT

SCALE: N.T.S @A3
SHEET: 1 OF 1
DRAWING No.: PSS-1014-M
REV: 3

ADDITIONAL INFORMATION PROVIDED IN SERIES COMMENTARY

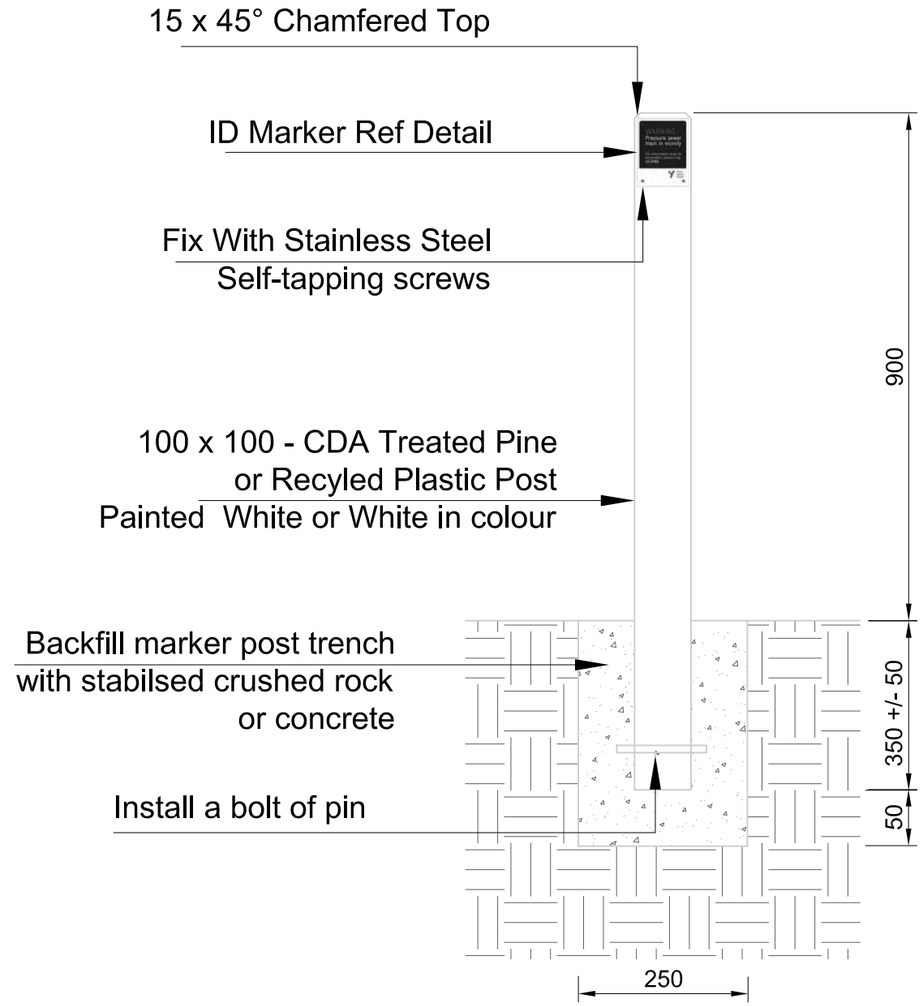
Notes :

1. All dimiensions in millimetres
2. This drawing takes precedence when used within Yarra Valley Water's area of responsibility
3. Marker Posts shall be either recycled plastic of treated pine
4. The contractor shall install marker posts
   - at flushing point, valve and air valve locations with the respective fitting marker plates defined below
   - every 250m along the P/L alignment
   - at locations as directed by the Superintendent
4. Only 1 marker post is required for fitting clusters
5. The contarctor is advised marker posts shall be installed within a tolerance of half a pipe diameter form the design alignmnent or on the property alignment as directed

3mm MARINE GRADE ALUMINIMUM PLATE.
10mm High Characters Stamped 3mm Into Plate.
(Provide As Built Details Not Design Details)

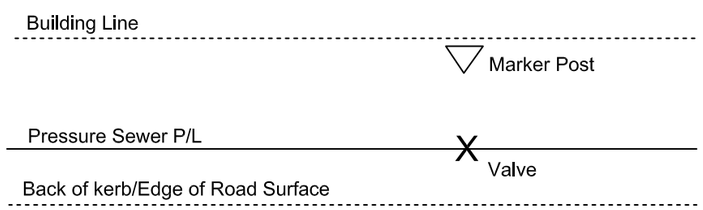
MARKER PLATE DETAILS

N.T.S



MARKER POST DETAIL

N.T.S



TYPICAL MARKER POST LOCATION

REV	DESCRIPTION	DATE	APP.'D
-	-	00/00/00	INITALS
-	-	00/00/00	INITALS
-	-	00/00/00	INITALS
-	-	00/00/00	INITALS
1.1	AMENDED_YVW_MARKER_PLATES	17/09/12	KD

DESIGNED:	KD		DATE:	04/08/11				
DRAWN:	KD		DATE:	04/08/11				
CHECKED:	INITIALS	DATE	APPROVED:	INITIALS	DATE			
☒ CWW	-	00/00/00	☐ CWW	-	00/00/00			
☒ SEWL	-	00/00/00	☐ SEWL	-	00/00/00			
☒ YVW	KD	04/08/11	☒ YVW	KD	04/08/11			

MELBOURNE RETAIL WATER AGENCIES

Yarra Valley Water

WITH ACKNOWLEDGEMENT TO
WATER SERVICES ASSOCIATION of Australia

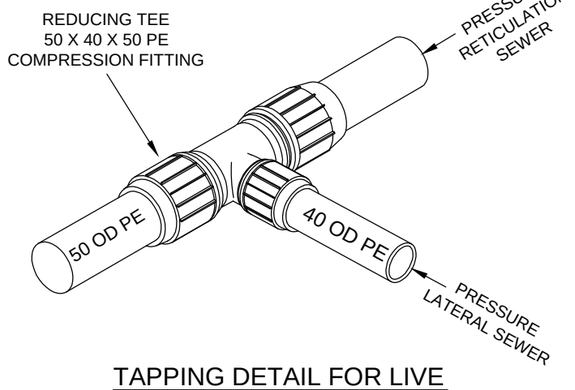
PRESSURE SEWER SYSTEM STANDARD DRAWINGS

NOT TO SCALE

Yarra Valley Water Specific Requirements
Marker Posts
Identification and Details

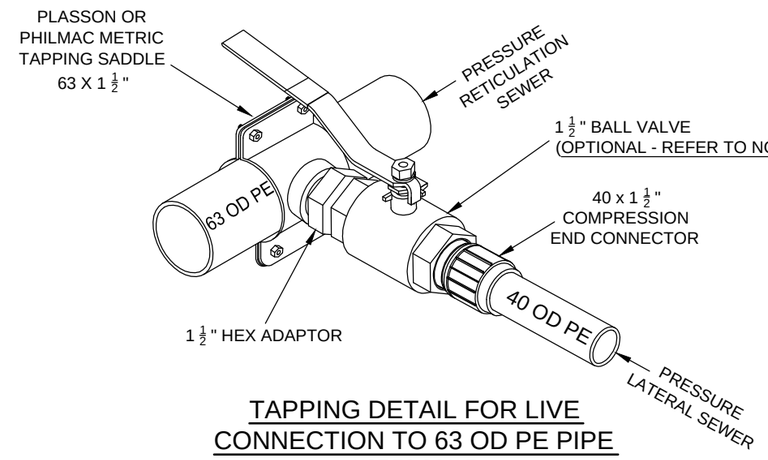
PSS-1014-Y

ISSUED 2011 | VERSION 1



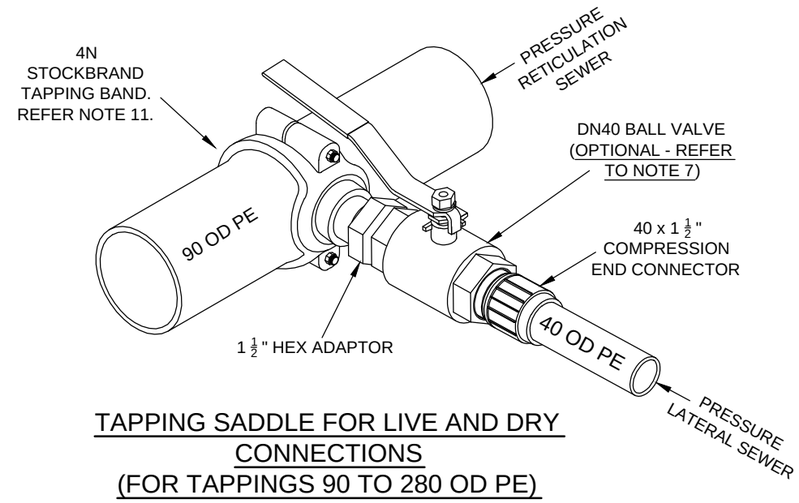
TAPPING DETAIL FOR LIVE CONNECTION TO 50 OD PE PIPE

NOT TO SCALE



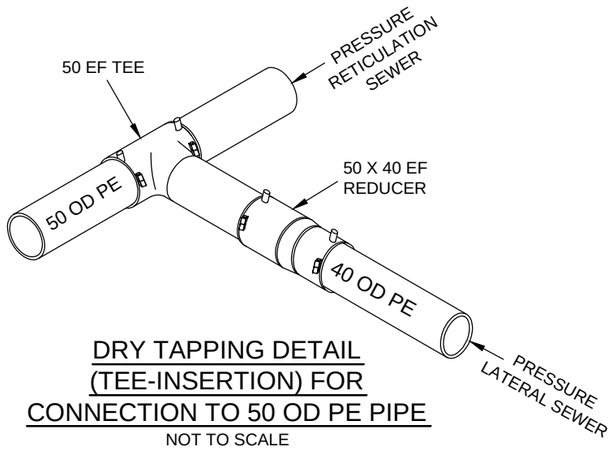
TAPPING DETAIL FOR LIVE CONNECTION TO 63 OD PE PIPE

NOT TO SCALE



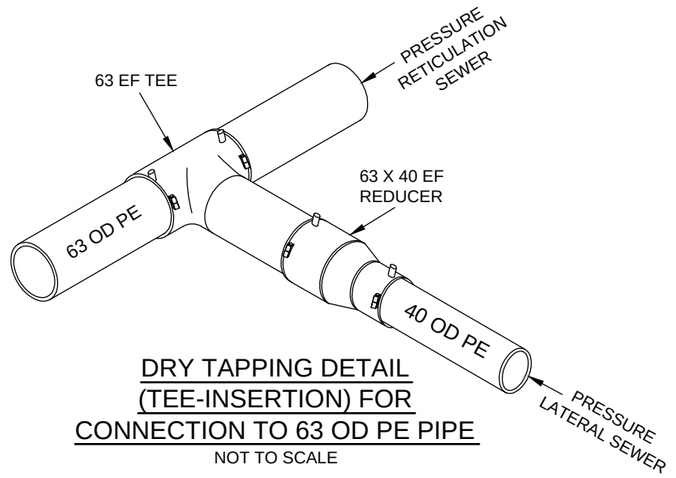
TAPPING SADDLE FOR LIVE AND DRY CONNECTIONS
(FOR TAPPINGS 90 TO 280 OD PE)

NOT TO SCALE



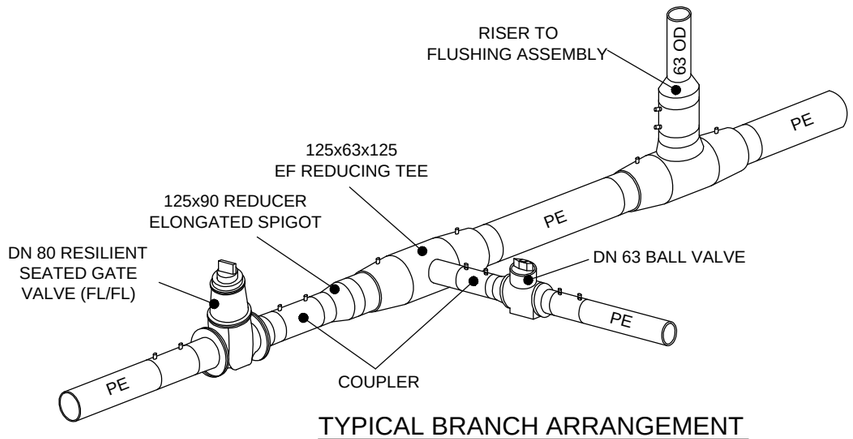
DRY TAPPING DETAIL (TEE-INSERTION) FOR CONNECTION TO 50 OD PE PIPE

NOT TO SCALE



DRY TAPPING DETAIL (TEE-INSERTION) FOR CONNECTION TO 63 OD PE PIPE

NOT TO SCALE



TYPICAL BRANCH ARRANGEMENT

NOT TO SCALE

NOTES

1. MINIMUM PRESSURE CLASS AND PIPE COMPOUND FOR ALL PIPEWORK AND FITTINGS IS TO BE PN16 / SDR11 PE 100.
2. LIVE TAPPING TO BE UNDERTAKEN BY USING SQUEEZE-OFF TECHNIQUE OR TAPPING UNDER PRESSURE.
3. WHERE SQUEEZE-OFF TECHNIQUES ARE USED TO ISOLATE SECTIONS OF PIPEWORK DURING CONSTRUCTION, AN ELECTROFUSION COUPLER IS TO BE WELDED TO ENSURE NO FURTHER SQUEEZING OPERATIONS CAN BE UNDERTAKEN AT THE SAME LOCATION.
4. PRIOR TO UNDERTAKING LIVE TAPPINGS, THE CONTRACTOR SHALL NOTIFY RELEVANT OPERATION PERSONNEL.
5. MALE THREAD ON ALL FITTINGS MUST BE WRAPPED IN PTFE (TEFLON) TAPE.
6. COMPRESSION FITTINGS TO BE INSTALLED AS PER MANUFACTURER'S REQUIREMENTS.
7. BALL VALVES MAY NOT BE REQUIRED ON DRY TAPPINGS (OR LIVE TAPPINGS WHERE SQUEEZE-OFF TECHNIQUES ARE USED) WHEN THE PROPERTY DISCHARGE LINE AND BOUNDARY KIT ARE INSTALLED AT THE SAME TIME.
8. FOR LONG SIDE (OPPOSITE SIDE OF STREET) TAPPINGS OR WHERE PROPERTY DISCHARGE LINES ARE GREATER THAN 30m LONG, 50mm PRESSURE LATERAL SEWERS SHALL BE USED (i.e. BY USING 50mm x 1 ½" END CONNECTORS AT THE TAPPING OR 63-50mm REDUCERS).
9. ALL STEEL FITTINGS, NUTS, BOLTS AND WASHERS TO BE MINIMUM GRADE 316 STAINLESS STEEL. COAT THE THREADED SECTIONS OF ALL STAINLESS STEEL BOLTS WITH ANTI-SEIZE LUBRICANT.
10. REFER TO MRWA WEB PORTAL FOR APPROVED PIPES AND FITTINGS.
11. MAXIMUM MAIN SIZE OF 280 OD TO BE USED FOR 4N STOCKBRAND TAPPING BAND. ANY LARGER FITTINGS WILL REQUIRE WATER AUTHORITY APPROVAL.

REV	DESCRIPTION	DATE	APP.'D
4	PUBLISHED FIRST ISSUE	11/10/12	C PAXMAN
3	TYPICAL BRANCH ARRANGEMENT ADDED	17/01/12	
2	NOTE ADDED	31/03/11	
1	GENERAL AMENDMENTS	14/04/10	
0	ISSUED AS STANDARD	09/11/09	

DESIGNED:	S. FRENCH		DATE: JAN 2009				
DRAWN:	D.T.		DATE: 09/11/09				
CHECKED:	INITIALS	DATE	APPROVED:	INITIALS	DATE		
☒ CWW	D.M.	22/08/12	☒ CWW	R.J.	22/08/12		
☒ SEW	S.S.	7/08/12	☒ SEW	C.P.	7/08/12		
☒ YVWL	K.D.	9/10/12	☒ YVWL	A.C.	9/10/12		

MELBOURNE RETAIL WATER AGENCIES

City West Water · Yarra Valley Water · South East Water

PRESSURE SEWER SYSTEM
PRESSURE SEWER LATERALS
TYPICAL TAPPING INSTALLATION

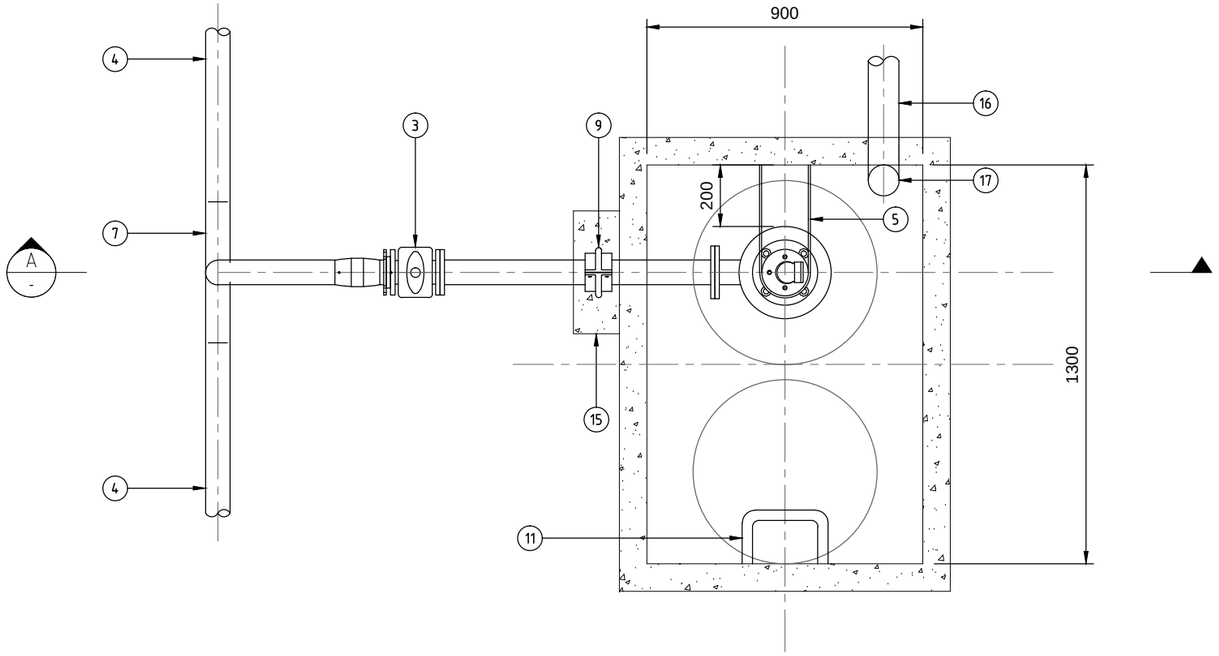
SCALE: N.T.S @A3

SHEET: 1 OF 1

DRAWING No.: PSS-1015-M

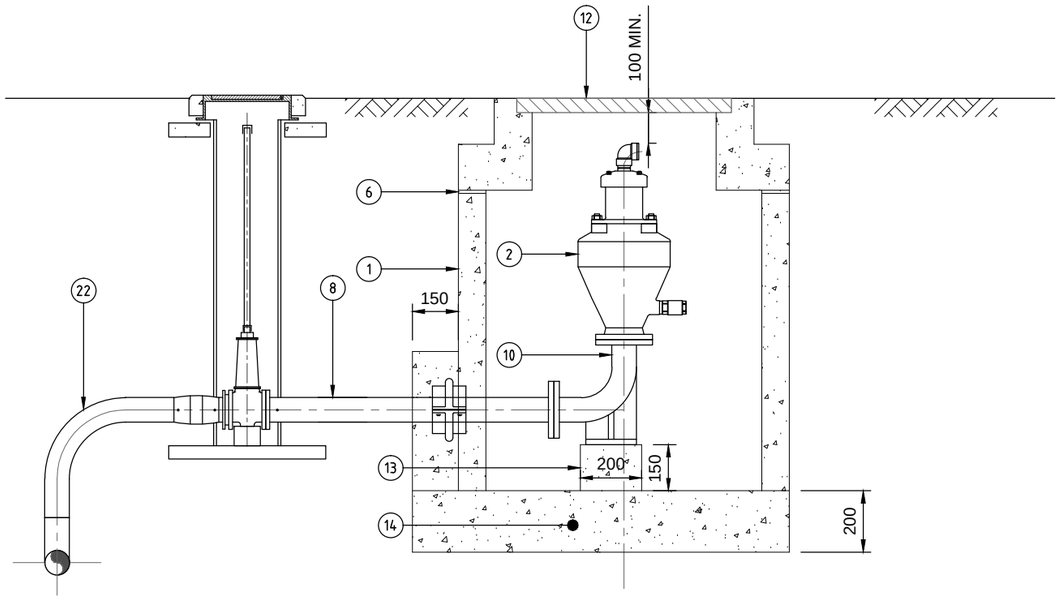
REV: 4

ADDITIONAL INFORMATION PROVIDED IN SERIES COMMENTARY



TYPICAL OFFSET AIR VALVE AND PIT DETAIL

NOT TO SCALE



SECTION A

NOT TO SCALE

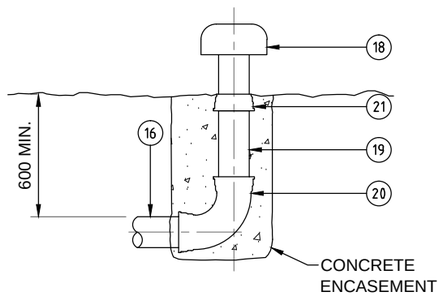
NOTES:

1. MINIMUM PRESSURE RATING FOR ALL PIPEWORK AND FITTINGS IS TO BE PN16.
2. ALL DI PIPEWORK AND FITTINGS SHALL BE EPOXY COATED OR AN APPROVED EQUIVALENT.
3. AIR VALVES ARE NOT TO LOCATED IN TRAFFICABLE AREAS.
4. ALL BACKING RINGS, NUTS, BOLTS AND WASHERS TO BE A MINIMUM GRADE 316 STAINLESS STEEL. COAT THE THREADED SECTIONS OF ALL STAINLESS STEEL BOLTS WITH AN ANTI-SEIZE LUBRICANT.
5. GASKET MATERIAL TO COMPLY WITH AS 4087 AND IN ACCORDANCE WITH WSA 109.
6. LOCATE GROUND VENT ADJACENT TO PROPERTY BOUNDARY.
7. PLACE SCREENING BUSHES AROUND GROUND VENT WHERE APPROPRIATE.
8. CONTRACTOR TO INSTALL EDUCT VENT IN ACCORDANCE WITH WSA DRAWING SEW-1408 (WHERE REQUIRED).
9. FUSION JOINTING OF PE FLANGE ADAPTER TO REDUCER SHALL BE MADE BY BUTT WELDING ONLY.
10. ALL CONCRETE TO BE WATER INDUSTRY APPROVED.
11. ALL INTERNAL SURFACES TO BE EPOXY COATED.
12. PROVIDE APPROVED LIFTING POINTS TO TOP OF SLAB IF PRECAST.

TYPICAL FITTING SCHEDULE

ITEM	DESCRIPTION
1	ROCLA RECTANGULAR PIT OR WATER AUTHORITY APPROVED EQUIVALENT
2	WATER AUTHORITY APPROVED AIR VALVE
3	VALVE AS PER PSS-1010-M
4	PRESSURE SEWER
5	STEEL BRACING
6	10mm THICK BITUMISED STRIP
7	PE TEE
8	DIEL PIPE (LENGTH TO SUIT)
9	PUDDLE FLANGE
10	FLANGED DIEL DUCKFOOT BEND
11	STEP IRONS
12	Ø600 MANHOLE COVER
13	CONCRETE PIPE SUPPORT
14	CONCRETE BASE SLAB TO BE POURED IN-SITU
15	CONCRETE COLLAR
16	DN100 PVC PIPE TO VENT (LENGTH AND LOCATION TO BE DETERMINED ON SITE)
17	DN100 PVC 90° ELBOW
18	"CREVET PIPELINES" MULTI VENT WITH SELF TAPPING SCREWS FOR FIXING TO PVC SPIGOT END
19	DN100 (SP-SP) PVC PIPE (LENGTH TO SUIT)
20	DN100 (SOC-SOC) PVC 90° BEND
21	DN100 PVC (SOC-SP) ADAPTOR
22	PE 90° SWEEPER BEND

NOTE: ALL PIPE AND FITTINGS MUST BE APPROVED FOR USE. REFER TO THE MRWA WEB PORTAL. DETAILS ARE SHOWN FOR A DN90 PRESSURE SEWER.



GROUND LEVEL VENT DETAIL - TYPICAL

NOT TO SCALE

REV	DESCRIPTION	DATE	APP.'D
4	PUBLISHED FIRST ISSUE	11/10/12	C. PAXMAN
3	NEW AIR VALVE ARRANGEMENT	18/01/12	
2	NOTE ADDED	31/03/11	
1	GENERAL AMENDMENTS	24/02/10	
0	ISSUED AS STANDARD	06/11/09	

DESIGNED:	S. FRENCH		DATE: 2009				
DRAWN:	D.T.		DATE: 06/11/09				
CHECKED:	INITIALS	DATE		APPROVED:	INITIALS	DATE	
☒ CWW	D.M.	22/08/12		☒ CWW	R.J.	22/08/12	
☒ SEW	S.S.	7/08/12		☒ SEW	C.P.	7/08/12	
☒ YVWL	K.D.	9/10/12		☒ YVWL	A.C.	9/10/12	

MELBOURNE RETAIL WATER AGENCIES

City West Water · Yarra Valley Water · South East Water

PRESSURE SEWER SYSTEM OFFSET AIR VALVE INSTALLATION IN GROUND

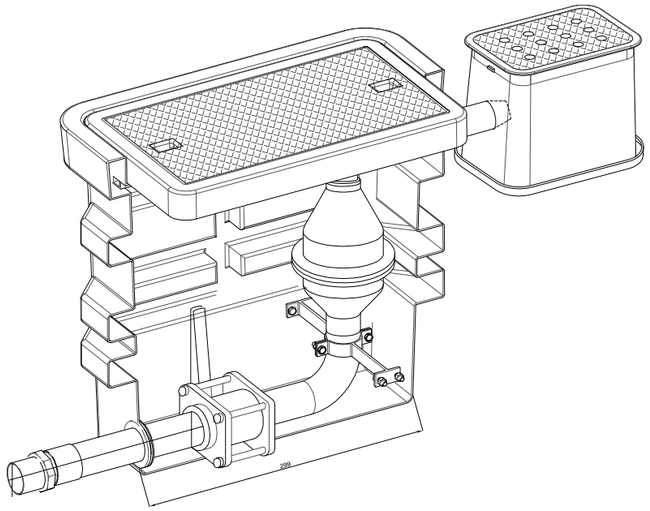
SCALE: N.T.S @A3

SHEET: 1 OF 1

DRAWING No.: PSS-1016-M

REV: 4

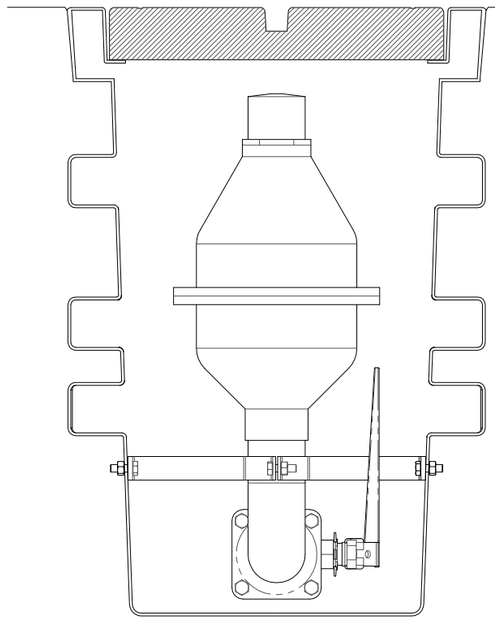
ADDITIONAL INFORMATION PROVIDED IN SERIES COMMENTARY



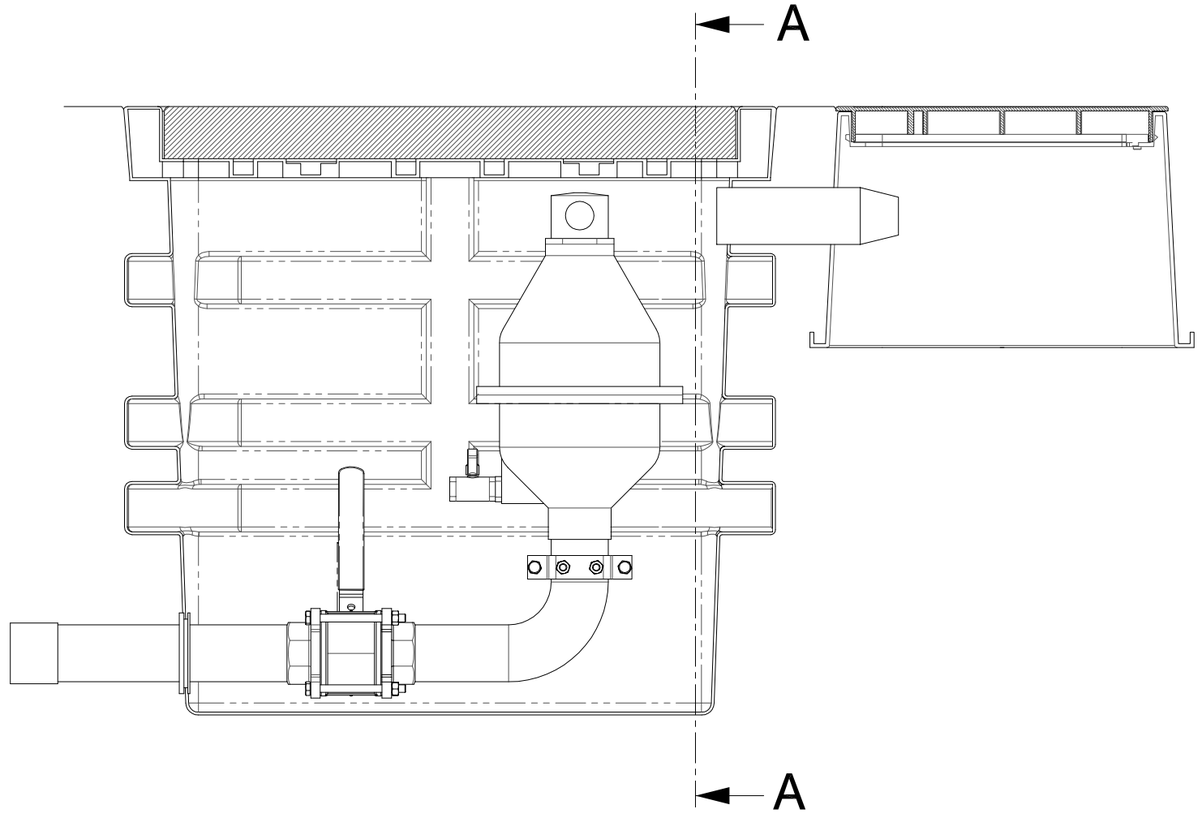
Isometric Cutaway:

Notes:

1. Sizes available to suit polyethylene pipe Ø50through to Ø100.
2. 316 Stainless Steel Pipework.
3. 316 Stainless Steel Isolation Valve (lockable).
4. Polyethylene heavy duty chamber to house flushing point.
5. 'Class A' concrete cover.
6. Ø50 Vent



A-A



ADDITIONAL INFORMATION PROVIDED IN THE DRAWING COMMENTARY

REV	DESCRIPTION	DATE	APP.'D
REV	DESCRIPTION	00/00/00	INITALS
REV	DESCRIPTION	00/00/00	INITALS
REV	DESCRIPTION	00/00/00	INITALS
REV	DESCRIPTION	00/00/00	INITALS
REV	DESCRIPTION	00/00/00	INITALS
REV	DESCRIPTION	DATE	APP.'D

DESIGNED:	KDAWSON		DATE: 24/08/11				
DRAWN:	KDAWSON		DATE: 24/08/11				
CHECKED:	INITIALS	DATE		APPROVED:	INITIALS	DATE	
☐ CWW				☐ CWW			
☐ SEWL				☐ SEWL			
☒ YVW	KD	24/08/11		☒ YVW	KD	24/08/11	

MELBOURNE RETAIL WATER AGENCIES

Yarra Valley Water

WITH ACKNOWLEDGEMENT TO
WATER SERVICES ASSOCIATION of Australia

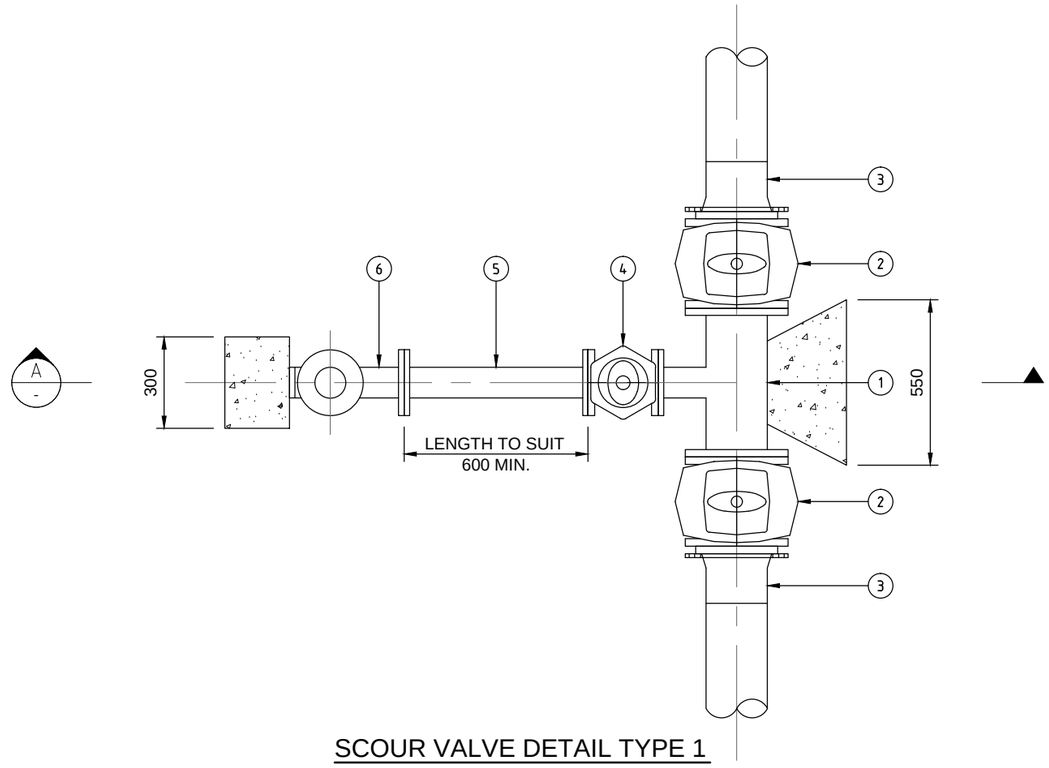
PRESSURE SEWER SYSTEM STANDARD DRAWINGS

NOT TO SCALE

YARRA VALLEY WATER SPECIFIC REQUIREMENTS
TYPICAL APPURTENANCES
OFFSET AIR VALVE DETAILS

PSS-1016-Y

ISSUED 2011 | VERSION 1

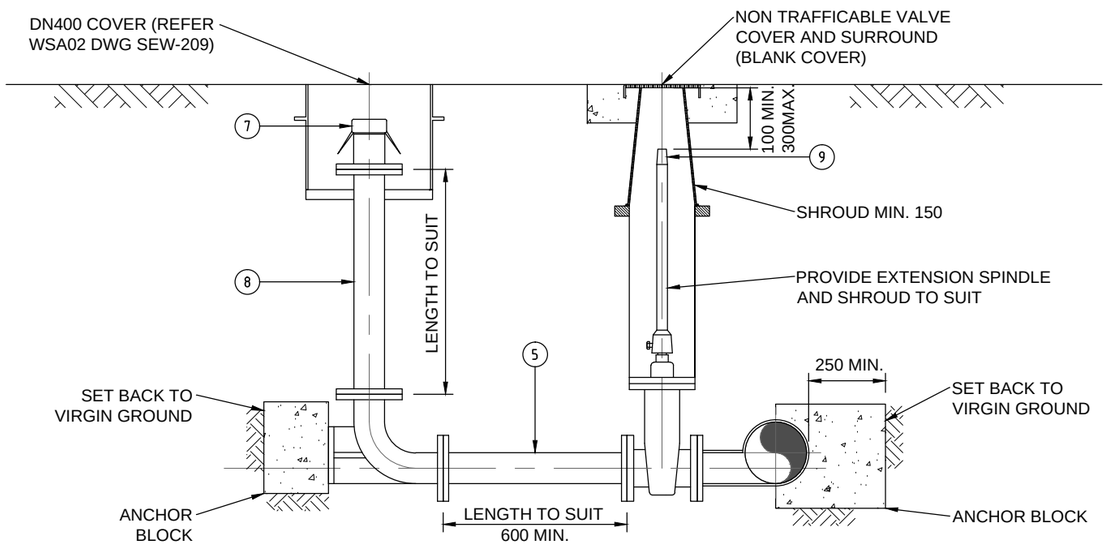


SCOUR VALVE DETAIL TYPE 1
NOT TO SCALE

NOTES:

1. REFER TO MRWA WEB PORTAL FOR APPROVED PIPES AND FITTINGS.

TYPICAL FITTING SCHEDULE	
ITEM	DESCRIPTION
1	DIEL FL-FL-FL SCOUR TEE (DN100 SCOUR OFFTAKE)
2	DIEL FL-FL SLUICE VALVE
3	FULL FACE PE STUB FLANGE WITH STEEL BACKING RING
4	DN100 DIEL FL-FL SLUICE VALVE
5	DN100 DIEL FL-FL PIPE
6	DN100 DIEL FL-FL 90° DUCKFOOT BEND
7	DN100 CAM LOCK AND CAP (FEMALE FITTING)
8	DN100 DIEL FL-FL RISER PIPE
9	DN32 TAPPERED KEY



SECTION A
NOT TO SCALE

REV	DESCRIPTION	DATE	APP.'D
4	PUBLISHED FIRST ISSUE	11/10/12	C. PAXMAN
3	SCOUR PIPE CHANGED TO 100 DIAMETER	19/01/12	
2	NOTE ADDED	31/03/11	
1	GENERAL AMENDMENT	24/02/10	
0	ISSUED AS STANDARD	09/11/09	

DESIGNED:	AW		DATE: 2008				
DRAWN:	D.T.		DATE: 09/11/09				
CHECKED:	INITIALS	DATE		APPROVED:	INITIALS	DATE	
☒ CWW	D.M.	22/08/12		☒ CWW	R.J.	22/08/12	
☒ SEW	S.S.	7/08/12		☒ SEW	C.P.	7/08/12	
☒ YVWL	K.D.	9/10/12		☒ YVWL	A.C.	9/10/12	

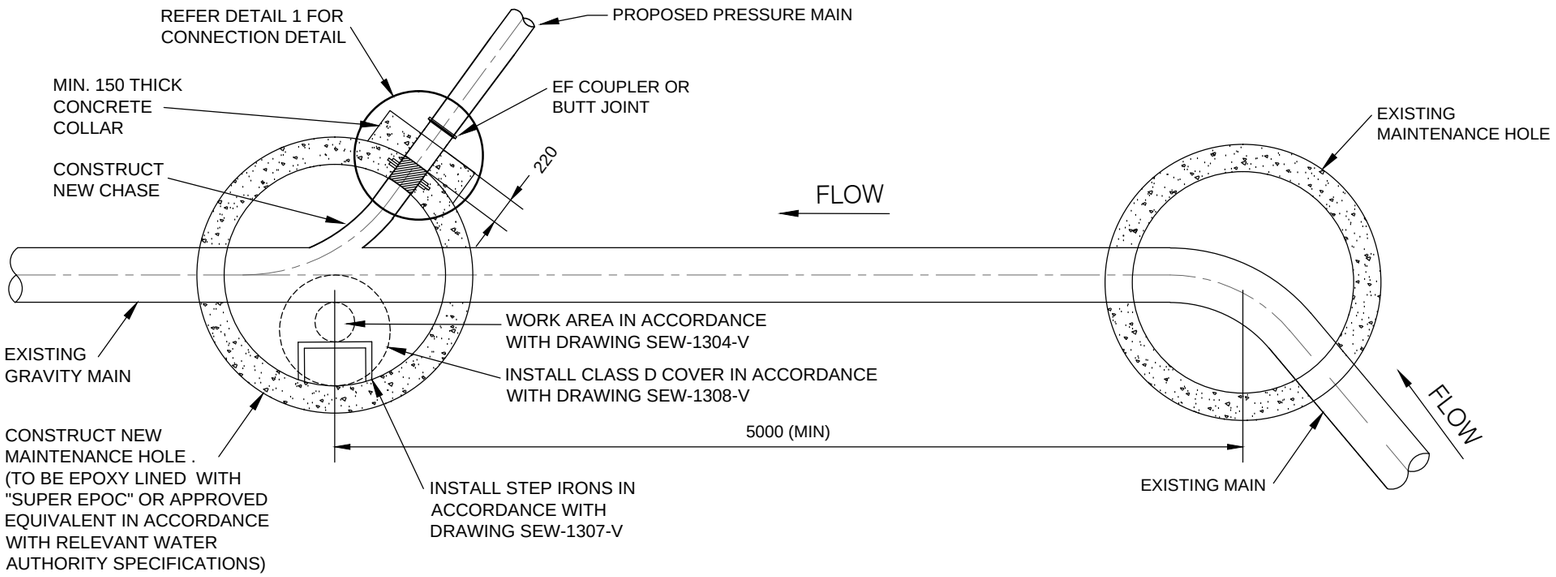
MELBOURNE RETAIL WATER AGENCIES

City West Water · Yarra Valley Water · South East Water

PRESSURE SEWER SYSTEM
TYPICAL APPURTENANCE
TYPICAL SCOUR VALVE DETAILS

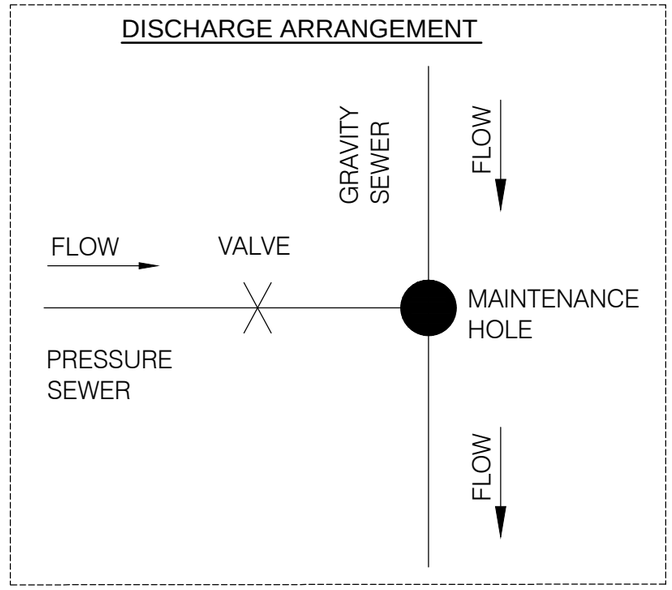
SCALE: N.T.S @A3
SHEET: 1 OF 1
DRAWING No.: PSS-1017-M
REV: 4

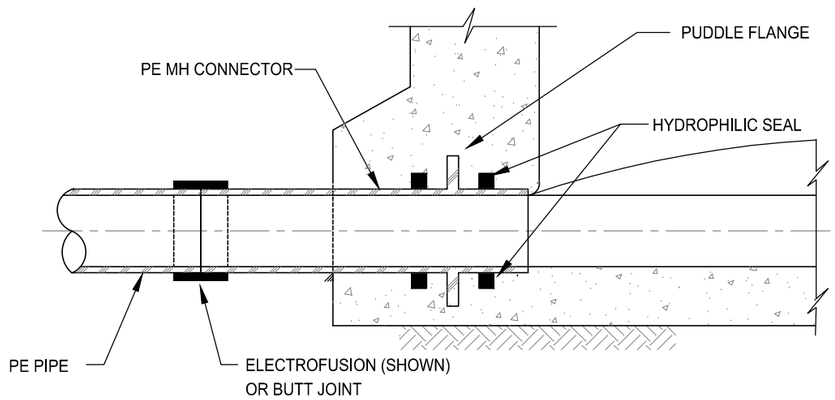
ADDITIONAL INFORMATION PROVIDED IN SERIES COMMENTARY



PLAN VIEW - MAINTENANCE HOLE CONNECTION OVER EXISTING SEWER

NOT TO SCALE





DETAIL 1 - PE-PE CONNECTION

NOT TO SCALE

NOTES

WORKS ON LIVE SEWERS

1. ONLY WATER AGENCY APPROVED CONTRACTORS, APPROVED FOR WORK ON LIVE SEWERS, ARE PERMITTED TO BREAK INTO, ENTER OR CARRY OUT WORK IN LIVE SEWERS OR MAINTENANCE HOLES.
2. CURRENT CERTIFICATES ARE REQUIRED FOR ALL PERSONNEL INVOLVED WITH WORK ON LIVE SEWERS AND THE CONTRACTOR SHALL COMPLY WITH WATER AGENCY REQUIREMENTS.
3. WHEN WORKING IN LIVE SEWERS THE CONTRACTOR SHALL STRICTLY COMPLY WITH THE FOLLOWING:
   - WATER AGENCY'S CONFINED SPACE ENTRY - SAFE WORK PROCEDURE AND
   - VICTORIAN CONFINED SPACES REGULATION 1996.

CONNECTIONS

4. ANY BUTT FUSION JOINTING OF HDPE PIPE SHOULD BE IN ACCORDANCE WITH POP003- 'BUTT FUSION JOINTING OF PE PIPES AND FITTINGS'.
5. ANY ELECTROFUSION JOINTING OF HDPE PIPE SHOULD BE IN ACCORDANCE WITH POP001 - 'ELECTROFUSION JOINTING OF PE PIPE AND FITTINGS FOR PRESSURE APPLICATIONS.
6. ANY FLANGED JOINTING OF HDPE PIPE SHOULD BE IN ACCORDANCE WITH POP007 - 'META BACKING FLANGES FOR USE WITH PE PIPE FLANGE ADAPTORS', PLASTICS PIPE INSTITUTION TECHNICAL NOTE 38 - 'BOLT TORQUE FOR POLYETHYLENE FLANGE JOINTS, AND MANUFACTURERS GUIDELINES/RECOMMENDATIONS, ALL FLANGES MUST BE FULL FACE, UNLESS OTHERWISE NOTED.

ISOLATION VALVES

7. AN ISOLATION VALVE SHALL BE INSTALLED PRIOR TO THE DISCHARGE MAINTENANCE HOLE OF ANY PRESSURE SEWER SYSTEM (REFER STANDARD DRAWING PSS-1010-M).

DISCHARGE MAINTENANCE HOLE

8. MAINTENANCE HOLE WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH THE MELBOURNE RETAIL WATER AGENCIES EDITION OF THE SEWER CODE OF AUSTRALIA (WSA 02-2002-2.3).
9. REFER DRAWING SEW-1502-V FOR CONSTRUCTION OF MAINTENANCE HOLE STRUCTURE OVER EXISTING SEWER.
10. MAINTENANCE HOLE TO BE MINIMUM 1200mm INTERNAL DIAMETER.
11. CHASE TO BE FORMED AS SHOWN AND IN ACCORDANCE WITH DRAWINGS SEW-1304-V AND SEW-1305-V.
12. PRECAST SHAFT SECTIONS ARE NOT PERMITTED.
13. INSTALL STEP IRONS IN ACCORDANCE WITH DRAWING SEW-1307-V.
14. INSTALL CLASS D COVER IN ACCORDANCE WITH DRAWING SEW-1308-V.

REV	DESCRIPTION	DATE	APP.'D
3	PUBLISHED FIRST ISSUE	11/10/12	C. PAXMAN
2	THRUST RESTRAINT REMOVED & GEN. AMENDMENTS	17/01/12	
1	GENERAL AMENDMENTS	14/04/10	
0	ISSUED AS STANDARD	09/11/09	

DESIGNED:	S. FRENCH		DATE:	2008	
DRAWN:	D.T.		DATE:	09/11/09	
CHECKED:	INITIALS	DATE	APPROVED:	INITIALS	DATE
☒ CWW	D.M.	22/08/12	☒ CWW	R.J.	22/08/12
☒ SEW	S.S.	7/08/12	☒ SEW	C.P.	7/08/12
☒ YVWL	K.D.	9/10/12	☒ YVWL	A.C.	9/10/12

MELBOURNE RETAIL WATER AGENCIES

City West Water · Yarra Valley Water · South East Water

PRESSURE SEWER SYSTEM MAINTENANCE STRUCTURES

NEW MAINTENANCE HOLE CONNECTION OVER EXISTING SEWER

SCALE: N.T.S @A3

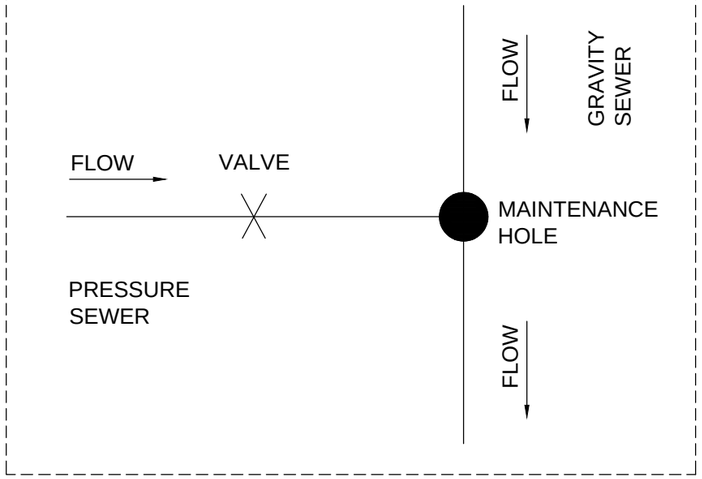
SHEET: 1 OF 1

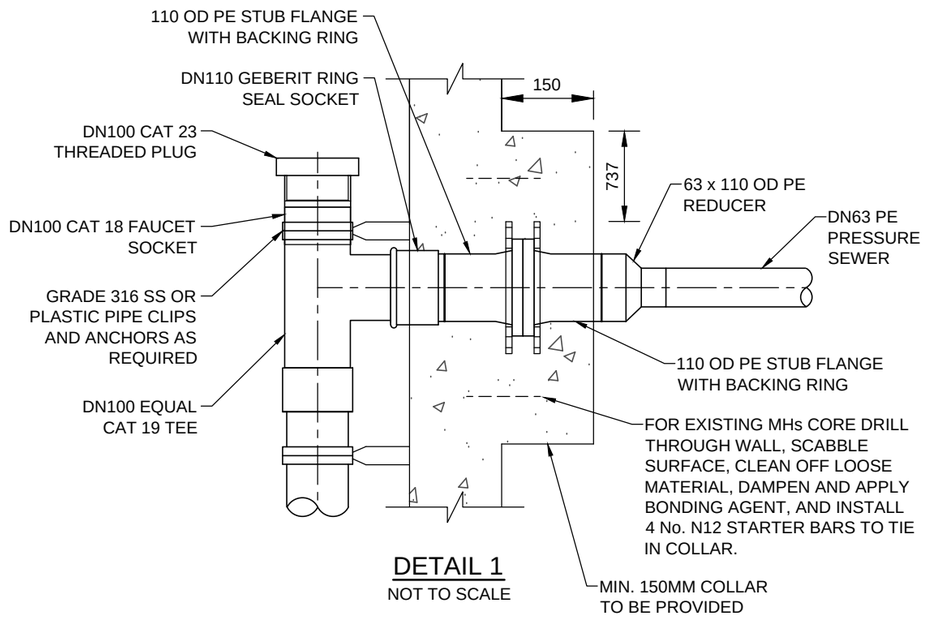
DRAWING No.: PSS-1018-M

REV 3

ADDITIONAL INFORMATION PROVIDED IN SERIES COMMENTARY

DISCHARGE ARRANGEMENT





DETAIL 1

NOT TO SCALE

NOTES:

1. ALL DIMENSIONS IN MILLIMETRES.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH SEW-1300 & SEW-1301.
3. FOR EXISTING PRECAST MH APPLICATIONS CORED HOLE TO BE 150 MIN ABOVE OR BELOW SHAFT SECTION JOINT.
4. DISCHARGE PIPE AND CHANNEL PLACEMENT TO DIRECT SEWAGE IN DIRECTION OF MAIN FLOW. SEE SEW-1304 AND SEW-1305.
5. CONNECTION AND DROP MUST BE DESIGNED WHERE THE PRESSURE SEWER IS >90 OD.
6. DN 1200 MH TO BE USED WHERE DROP PIPE >180 OD OR MORE THAN TWO x 180 OD INTERNAL DROPS ARE USED.
7. WHERE THE PRESSURE SEWER ENTERS THE MH MORE THAN 3200 ABOVE THE MH TABLE, A LANDING MUST BE SPECIFIED 1200 BELOW THE IL OF THE INCOMING SEWER.
8. AN ISOLATION VALVE SHALL BE INSTALLED PRIOR TO THE DISCHARGE MAINTENANCE HOLE OF ANY PRESSURE SEWER SYSTEM (REFER STANDARD DETAIL PSS-1010-M).

WORKS ON LIVE SEWERS

9. ONLY WATER AGENCY APPROVED CONTRACTORS, APPROVED FOR WORK ON LIVE SEWERS, ARE PERMITTED TO BREAK INTO, ENTER OR CARRY OUT WORK IN LIVE SEWERS OR MAINTENANCE HOLES.
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11. WHEN WORKING IN LIVE SEWERS THE CONTRACTOR SHALL STRICTLY COMPLY WITH:
    - THE WATER AGENCY CONFINED SPACE ENTRY - SAFE WORK PROCEDURE;
    - VICTORIAN CONFINED SPACES REGULATION 1996.

CONNECTIONS

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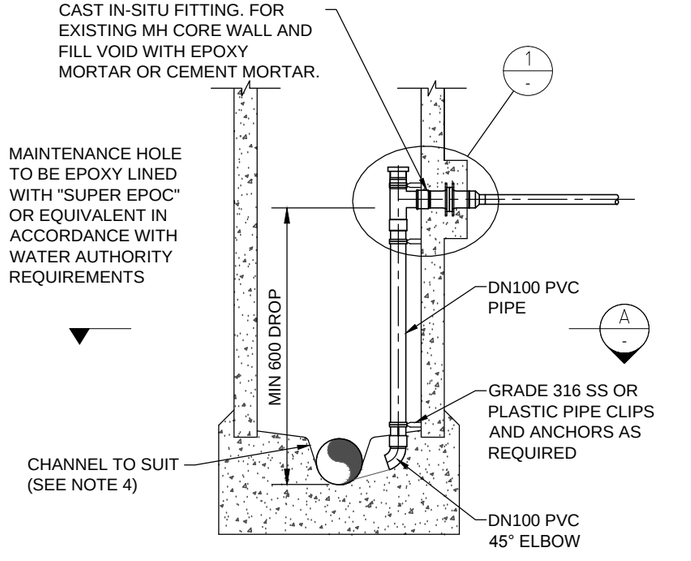
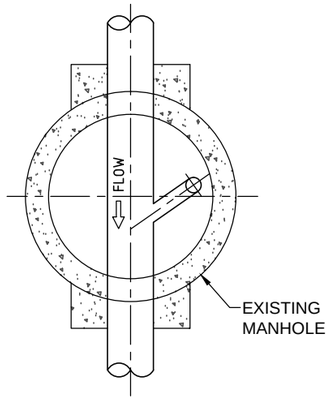


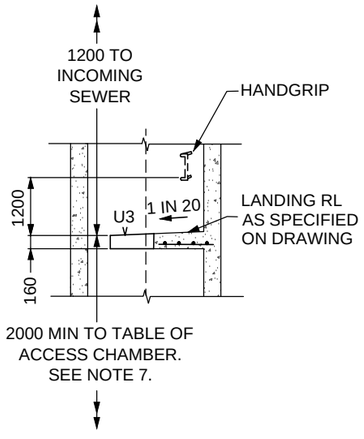
TYPICAL INTERNAL DROP MAINTENANCE HOLE

NOT TO SCALE



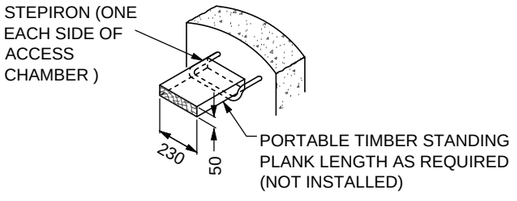
SECTION A

NOT TO SCALE



LANDING DETAILS

NOT TO SCALE



SUPPORT FOR STANDING PLANK

STEPIRON INSTALLED IN THE SAME MANNER AS THE ACCESS STEPIRONS. LEVEL 1200 BELOW INCOMING TYPE 3 DROP. HAND GRIPS ALSO REQUIRED.

REV	DESCRIPTION	DATE	APP.'D
4	PUBLISHED FIRST ISSUE	11/10/12	C. PAXMAN
3	NEW CONNECTION DETAIL, NO THRUST RESTRAINT	17/01/12	
2	NOTE ADDED	10/03/11	
1	GENERAL AMENDMENTS	24/02/10	
0	ISSUED AS STANDARD	09/11/09	

DESIGNED:	S. FRENCH		DATE: 2008				
DRAWN:	D.T.		DATE: 09/11/09				
CHECKED:	INITIALS	DATE		APPROVED:	INITIALS	DATE	
☒ CWW	D.M.	22/08/12		☒ CWW	R.J.	22/08/12	
☒ SEW	S.S.	7/08/12		☒ SEW	C.P.	7/08/12	
☒ YVWL	K.D.	9/10/12		☒ YVWL	A.C.	9/10/12	

MELBOURNE RETAIL WATER AGENCIES

City West Water · Yarra Valley Water · South East Water

PRESSURE SEWER SYSTEM MAINTENANCE STRUCTURES DROP STRUCTURE IN EXISTING MAINTENANCE HOLE

SCALE: N.T.S @A3
SHEET: 1 OF 1
DRAWING No.: PSS-1019-M
REV 4

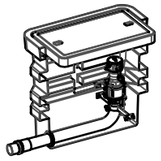
ADDITIONAL INFORMATION PROVIDED IN SERIES COMMENTARY

NOTES:
1. (a) Ø50 flushing point to suit polyethylene pipe Ø50 through to Ø90.
   (b) Ø100 flushing point to suit polyethylene pipe Ø110 through to Ø200.
2. 316 Stainless Steel Pipework.
3. 316 Stainless Steel Isolation Valve (lockable).
4. Polyethylene camlock coupling Ø50 & Ø100.
5. Polyethylene heavy duty chamber to house flushing point.
6. 'Class A' concrete cover.

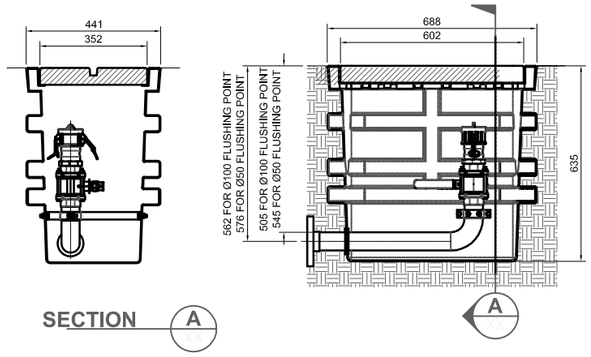
YARRA VALLEY WATER
PRESSURE SEWER
FLUSHING POINT

DO NOT BURY

FLUSHING POINT COVER



ISOMETRIC CUTAWAY



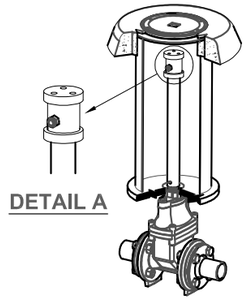
SECTION A

FLUSHING POINT

PLACED DOWNSTREAM OF ISOLATION VALVES AND END OF LINES

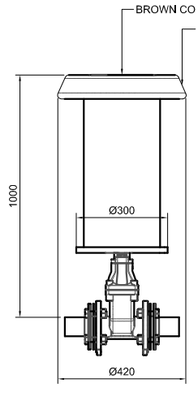
NOTES:
1. Sizes available in Ø50 through to Ø200 to suit polyethylene pipe.
2. Cast iron valve cover in concrete surround.
3. Stub Flange fitted with galvanised backing ring and galvanised bolt. Stainless steel backing rings optional.
4. Ø150 PVC tube and hardwood by others.
5. Fusion bonded epoxy coated flanged 'Table D' valve with resilient seated gate.
6. Turning Direction - Clockwise to Close.
7. Valve Spindle - 3P Pressure Sewer.

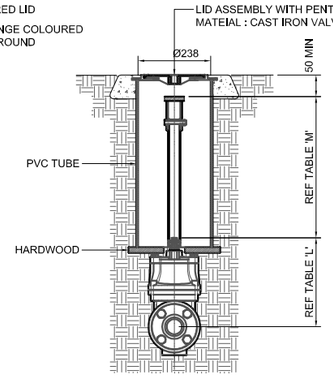
PIPE Ø	'L'	'M'	PIPE Ø	'L'	'M'
50	335	640	225	595	465
80	350	640	250	680	395
100	380	620	300	755	345
150	485	540	375	905	235
200	595	455			



DETAIL A

ISOMETRIC CUTAWAY

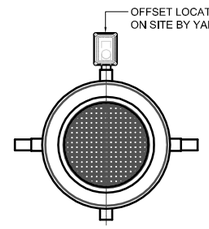




SECTION TRENCH DETAIL

ISOLATION VALVE

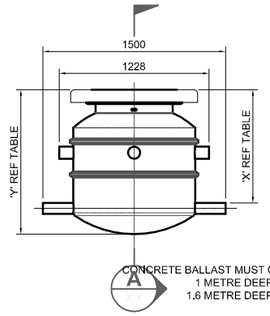
OFFSET LOCATION TO BE APPROVED ON SITE BY YARRA VALLEY WATER

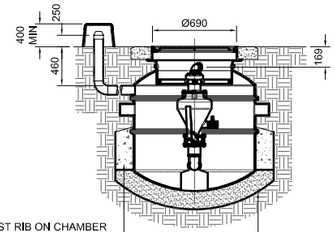


AIR VALVE PIT PLAN

NOTES:
1. Heavy duty sewerage air valve.
2. Polyethyene chamber.
3. Sized to suit polyethylene pipework Ø 50 thru' Ø200.
4. Stainless fitted isolation valve.
5. Light service or optional heavy service gas-tight cover in Ø600 concrete surround.
6. Location of vent to be approved by superintendant.
7. Vent PVC pipe to atmosphere. (Contractor to install)
8. Vent cover to be approved by Superintenant and to be "Marigold' Yellow in colour. (Contractor to Install)
9. 'Unlseal' for vent pipe to be provided by suppller.

PIPE Ø	'X'	'Y'
63	990	1185
90	1065	1185
125	1095	1785
180	1170	1785





ISOMETRIC CUTAWAY

CONCRETE BALLAST MUST COVER FIRST RIB ON CHAMBER
1 METRE DEEP TANK (0.3 CUBIC METRES MIN)
1.6 METRE DEEP TANK (0.5 CUBIC METRES MIN)

BEDDING SAND MUST SUPPORT ENTIRE DOME BASE OF CHAMBER (100mm MIN)

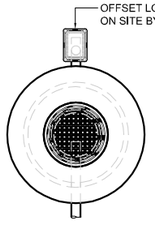
SECTION A

AIR VALVE PIT

(refer to PSS-1016 for preferred AV arrangemet Only to be used only where adequate spece permits or as specifed by the Superintendent)

NON-TRAFFICABLE

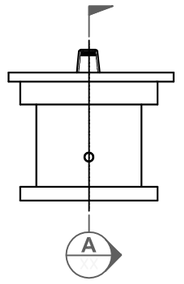
OFFSET LOCATION TO BE APPROVED ON SITE BY YARRA VALLEY WATER

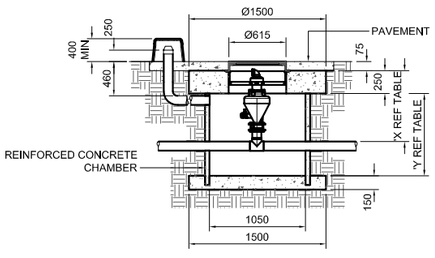


AIR VALVE PIT PLAN

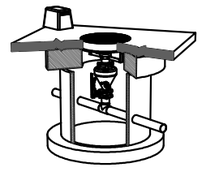
NOTES:
1. Heavy duty sewerage air valve.
2. Reinforced concrete chamber.
3. Sized to suit polyethylene pipework Ø50 thru' Ø200.
4. Stainless fitted isolation valve.
5. Heavy service gas-tight cover in Ø600 concrete surround.
6. Location of vent to be approved by superintendant.
7. Vent PVC pipe to atmosphere. (Contractor to install)
8. Vent cover to be approved by Superintenant and to be "Marigold' Yellow in colour. (Contractor to Install)
9. 'Uniseal' for vent pipe to be provided by supplier.

PIPE Ø	'X'	'Y'
63	850	800
90	945	800
125	980	1100
180	1050	1100





SECTION A



ISOMETRIC CUTAWAY

CONCRETE AIR VALVE PIT

IN ROAD PAVEMENT

REV	DESCRIPTION	DATE	APP.'D
REV	DESCRIPTION	00/00/00	INITALS
REV	DESCRIPTION	00/00/00	INITALS
REV	DESCRIPTION	00/00/00	INITALS
REV	DESCRIPTION	00/00/00	INITALS
REV	DESCRIPTION	00/00/00	INITALS

DESIGNED:	AQUATEC_ENVIRONMENTAL		DATE:	19/09/07				
DRAWN:	AQUATEC_ENVIRONMENTAL		DATE:	19/09/07				
CHECKED:	INITIALS	DATE			APPROVED:	INITIALS	DATE	
☐ CWW		00/00/00			☐ CWW		00/00/00	
☐ SEWL		00/00/00			☐ SEWL		00/00/00	
☒ YVW	KD	26/08/11			☒ YVW	KD	26/08/11	

MELBOURNE RETAIL WATER AGENCIES

Yarra Valley Water

WITH ACKNOWLEDGEMENT TO
WATER SERVICES ASSOCIATION of Australia

PRESSURE SEWER SYSTEM STANDARD DRAWINGS

YARRA VALLEY WATER SPECIFIC REQUIREMENTS
TYPICAL APPURTENANCES
AIR VALVES, FLUSHING POINTS & VALVES

NOT TO SCALE

PSS-1020-Y

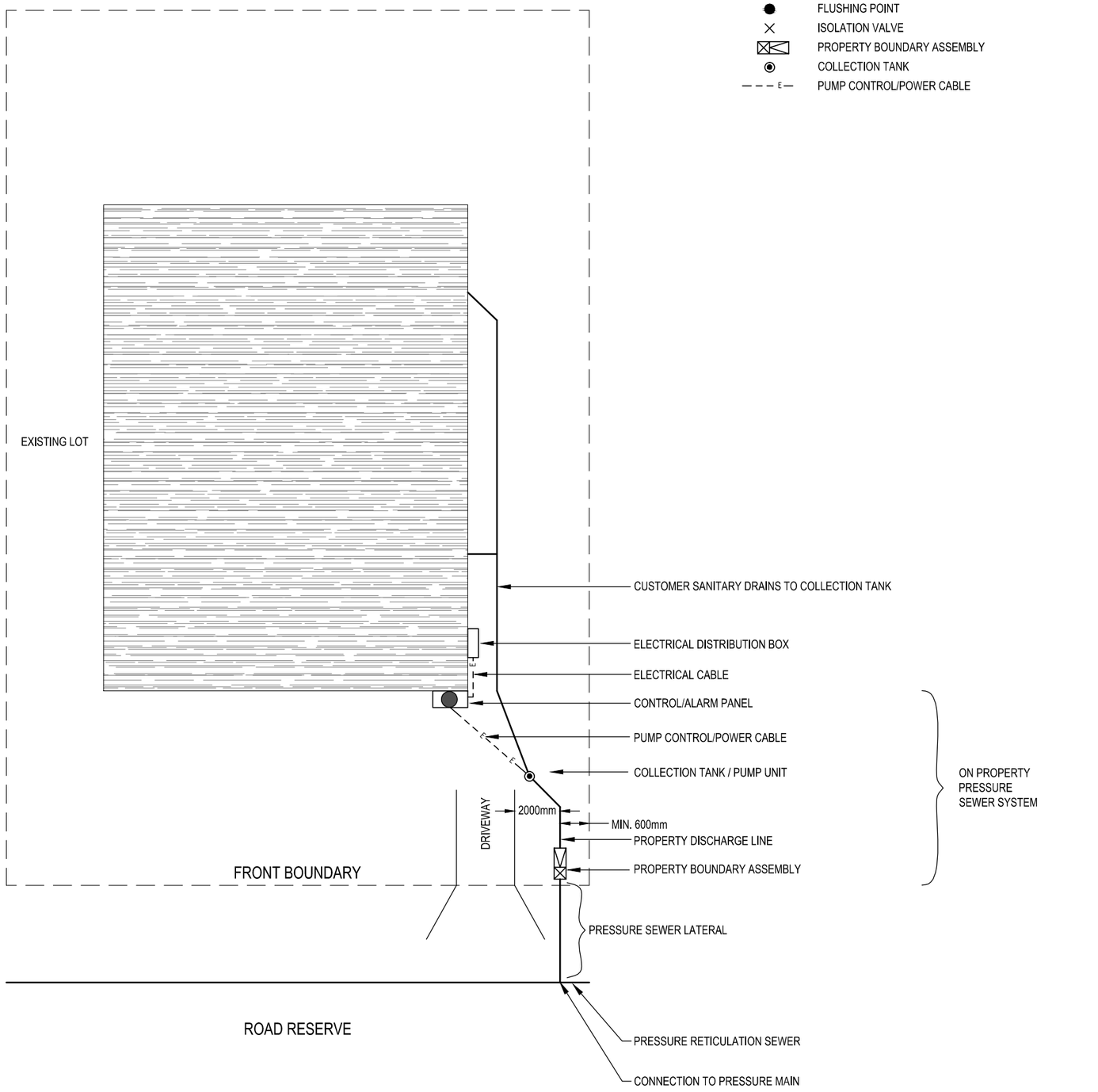
ISSUED 2011 | VERSION 1

GLOSSARY OF TERMS

COLLECTION TANK / PUMP UNIT	A PACKAGE OF SEWER COMPONENTS INSTALLED ON A PROPERTY, INCLUDING A COLLECTION TANK, GRINDER PUMP, LEVEL SWITCHES, PIPEWORK, VALVES AND OTHER APPURTENANCES WITHIN THE UNIT
COLLECTION TANK	THAT PART OF A COLLECTION TANK / PUMP UNIT WHICH COLLECTS AND STORES FLOWS FROM THE CUSTOMER SANITARY DRAIN(S)
CONTROL/ALARM PANEL	THE POWER AND CONTROL PANEL THAT CONTROLS THE OPERATION OF THE GRINDER PUMP AND WHICH CONTAINS AUDIBLE AND VISUAL ALARM COMPONENTS. THE PANEL ALSO CONTAINS A DEDICATED CIRCUIT BREAKER FOR POWER DISCONNECTION
CUSTOMER SANITARY DRAIN	A PIPELINE INSTALLED BY A LICENSED PLUMBER WITHIN A PROPERTY BOUNDARY AND OPERATED BY A PROPERTY OWNER TO CONVEY SEWERAGE FROM BUILDINGS TO THE CONNECTION POINT; CONSTRUCTED TO PLUMBING CODE STANDARDS; ALSO CALLED HOUSE DRAIN, HOUSE SERVICE LINE, HOUSE SEWER, SANITARY CONNECTION, PROPERTY DRAIN, SANITARY DRAIN
ELECTRICAL CABLE	A CABLE THAT DELIVERS POWER FROM THE BUILDING ELECTORAL DISTRIBUTION BOX TO THE CONTROL/ALARM PANEL
ELECTRICAL DISTRIBUTION BOX	A BOARD THAT DISSEMINATES THE MAIN POWER SUPPLY TO THE PROPERTY AN IS THE PRIMARY SOURCE FOR METERING
GRINDER PUMP	A MECHANICAL DEVICE DESIGNED TO PUMP LIQUID AND IN THE PROCESS REDUCE THE SIZE OF SOLIDS CONTAINED IN THE SEWERAGE
PRESSURE RETICULATION SEWER	A COMMON MAIN WHICH TRANSFERS SEWERAGE FROM A NUMBER OF PROPERTIES TO A DOWNSTREAM POINT IN A PRESSURE SEWER SYSTEM I.E. A COMPONENT OF PRESSURE SEWER RETICULATION
PRESSURE SEWER LATERAL	A MAIN THAT CONNECTS A PRESSURE RETICULATION SEWER TO A PROPERTY BOUNDARY ASSEMBLY
PRESSURE SEWER RETICULATION	A NETWORK OF MAINS INCLUDING PRESSURE SEWER LATERALS AND PROPERTY BOUNDARY ASSEMBLIES WHICH TRANSPORT SEWERAGE FROM PROPERTIES TO A SEWERAGE TREATMENT FACILITY OR ANOTHER SEWERAGE SYSTEM
PRESSURE SEWER SYSTEM	A COMPLETE SYSTEM WHEREIN SEWERAGE IS CONVEYED UNDER PRESSURE GENERATED BY PUMPING UNITS LOCATED ON EACH PROPERTY TO A SEWERAGE TREATMENT FACILITY OR ANOTHER SEWERAGE SYSTEM
PROPERTY BOUNDARY ASSEMBLY	A FITTING ASSEMBLY THAT; (a) CONNECTS A PRESSURE SEWER LATERAL TO A PROPERTY DISCHARGE LINE; AND (b) PROVIDES A MEANS OF ISOLATING PRESSURE SEWER RETICULATION FROM A PROPERTY DISCHARGE LINE AND ASSOCIATED COLLECTION/PUMP UNIT
PROPERTY DISCHARGE LINE	A PRESSURE SEWER LINE LOCATED ON PRIVATE PROPERTY THAT CONNECTS THE COLLECTION/PUMP UNIT TO THE PROPERTY BOUNDARY ASSEMBLY
PUMP CONTROL/POWER CABLE	A CABLE THAT DELIVERS POWER FROM THE CONTROL/ALARM PANEL TO THE GRINDER PUMP LOCATED WITHIN THE COLLECTION TANK AND TRANSMITS CONTROL SIGNALS BETWEEN THE PANEL AND THE PUMP

LEGEND:

- FLUSHING POINT
- ISOLATION VALVE
- PROPERTY BOUNDARY ASSEMBLY
- COLLECTION TANK
- E — PUMP CONTROL/POWER CABLE



REV	DESCRIPTION	DATE	APP.'D
4	PUBLISHED FIRST ISSUE	11/10/12	C. PAXMAN
3	PROPERTY BOUNDARY ASSEMBLY REVERSED	17/01/12	
2	GENERAL AMENDMENTS	10/03/11	
1	GENERAL AMENDMENT	24/02/10	
0	ISSUED AS STANDARD	09/11/09	

		INITIALS	DATE		INITIALS	DATE
DESIGNED:	C. RADFORD		DATE: JAN 2009			
DRAWN:	D.T.		DATE: 09/11/09			
CHECKED:				APPROVED:		
☒ CWW	D.M.	22/08/12		☒ CWW	R.J.	22/08/12
☒ SEW	S.S.	7/08/12		☒ SEW	C.P.	7/08/12
☒ YVWL	K.D.	9/10/12		☒ YVWL	A.C.	9/10/12

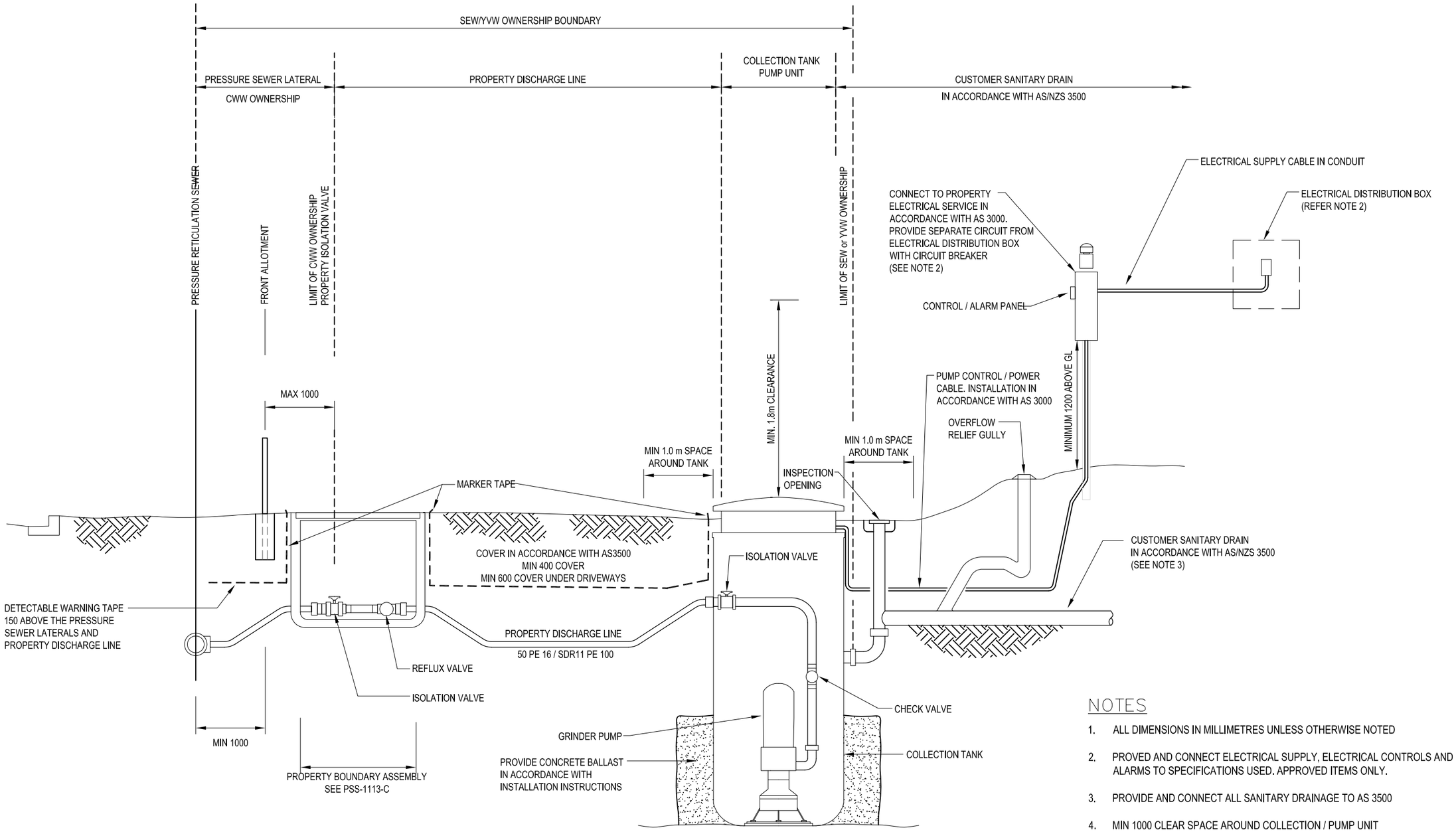
MELBOURNE RETAIL WATER AGENCIES

City West Water · Yarra Valley Water · South East Water

PRESSURE SEWER SYSTEM DESIGN LAYOUT TYPICAL ON PROPERTY COMPONENTS

SCALE: N.T.S @A3
SHEET: 1 OF 1
DRAWING No.: PSS-1110-M
REV: 4

ADDITIONAL INFORMATION PROVIDED IN SERIES COMMENTARY



TYPICAL ARRANGEMENT - SECTION

NOT TO SCALE

NOTES

1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED
2. PROVED AND CONNECT ELECTRICAL SUPPLY, ELECTRICAL CONTROLS AND ALARMS TO SPECIFICATIONS USED. APPROVED ITEMS ONLY.
3. PROVIDE AND CONNECT ALL SANITARY DRAINAGE TO AS 3500
4. MIN 1000 CLEAR SPACE AROUND COLLECTION / PUMP UNIT
5. MIN 1800 CLEAR ABOVE COLLECTION / PUMP UNIT
6. REFER TO MRWA WEB PORTAL FOR APPROVED PIPES AND FITTINGS.

REV	DESCRIPTION	DATE	APP.'D
3	PUBLISHED FIRST ISSUE	11/10/12	PAXMAN
2	GENERAL AMENDMENTS	7/08/12	
1	GENERAL AMENDMENTS	31/03/11	
0	ISSUED AS STANDARD	09/11/09	

DESIGNED:	C. RADFORD		DATE: JAN 2009				
DRAWN:	D.T.		DATE: 09/11/09				
CHECKED:	INITIALS	DATE	APPROVED:	INITIALS	DATE		
☒ CWW	CR	22/08/12	☒ CWW	R.J.	22/08/12		
☒ SEW	S.S.	7/08/12	☒ SEW	C.P.	7/08/12		
☒ YVWL	K.D.	9/10/12	☒ YVWL	A.C.	9/10/12		

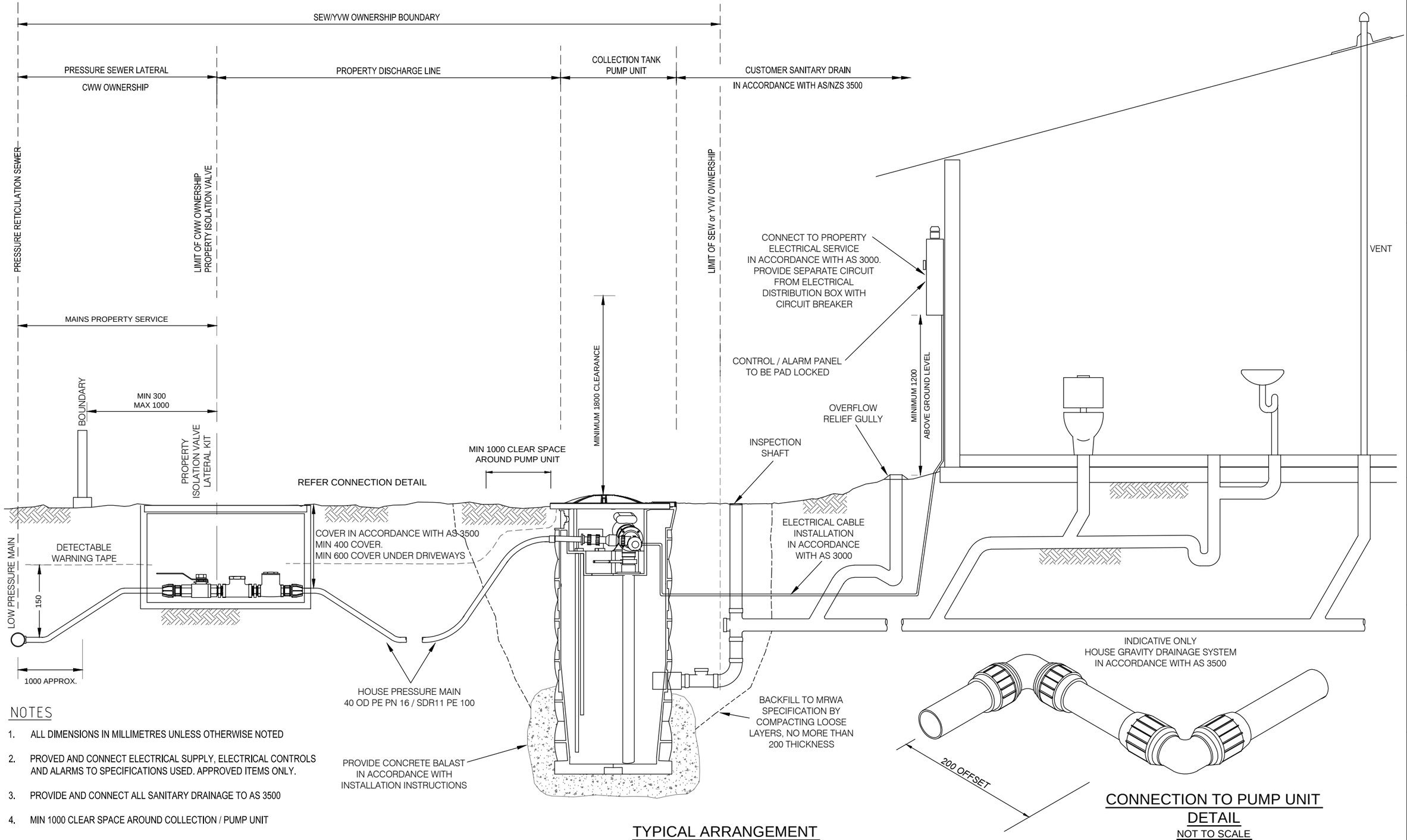
MELBOURNE RETAIL WATER AGENCIES

City West Water · Yarra Valley Water · South East Water

PRESSURE SEWER SYSTEM ON-PROPERTY LAYOUT COMMERCIAL / INDUSTRIAL

SCALE: N.T.S @A3
SHEET: 1 OF 1
DRAWING No.: PSS-1111-M
REV: 3

ADDITIONAL INFORMATION PROVIDED IN SERIES COMMENTARY



TYPICAL ARRANGEMENT

NOT TO SCALE

CONNECTION TO PUMP UNIT DETAIL

NOT TO SCALE

NOTES

1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED
2. PROVED AND CONNECT ELECTRICAL SUPPLY, ELECTRICAL CONTROLS AND ALARMS TO SPECIFICATIONS USED. APPROVED ITEMS ONLY.
3. PROVIDE AND CONNECT ALL SANITARY DRAINAGE TO AS 3500
4. MIN 1000 CLEAR SPACE AROUND COLLECTION / PUMP UNIT
5. MIN 1800 CLEAR ABOVE COLLECTION / PUMP UNIT
6. REFER TO MRWA WEB PORTAL FOR APPROVED PIPES AND FITTINGS.

REV	DESCRIPTION	DATE	APP.'D
4	PUBLISHED FIRST ISSUE	11/10/12	C. PAXMAN
3	GENERAL AMENDMENTS	7/08/12	
2	GENERAL AMENDMENTS	31/03/11	
1	GENERAL AMENDMENTS	14/04/10	
0	ISSUED AS STANDARD	09/11/09	

DESIGNED:	S.FRENCH		DATE: 12/12/07				
DRAWN:	D.T.		DATE: 09/11/09				
CHECKED:	INITIALS	DATE	APPROVED:	INITIALS	DATE		
☒ CWW	D.M.	22/08/12	☒ CWW	R.J.	22/08/12		
☒ SEW	S.S.	7/08/12	☒ SEW	C.P.	7/08/12		
☒ YVWL	K.D.	9/10/12	☒ YVWL	A.C.	9/10/12		

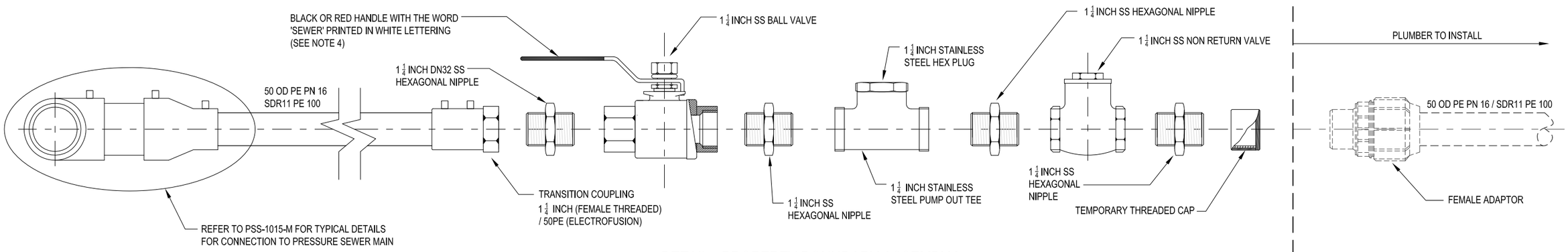
MELBOURNE RETAIL WATER AGENCIES

City West Water · Yarra Valley Water · South East Water

PRESSURE SEWER SYSTEM ON-PROPERTY LAYOUT RESIDENTIAL

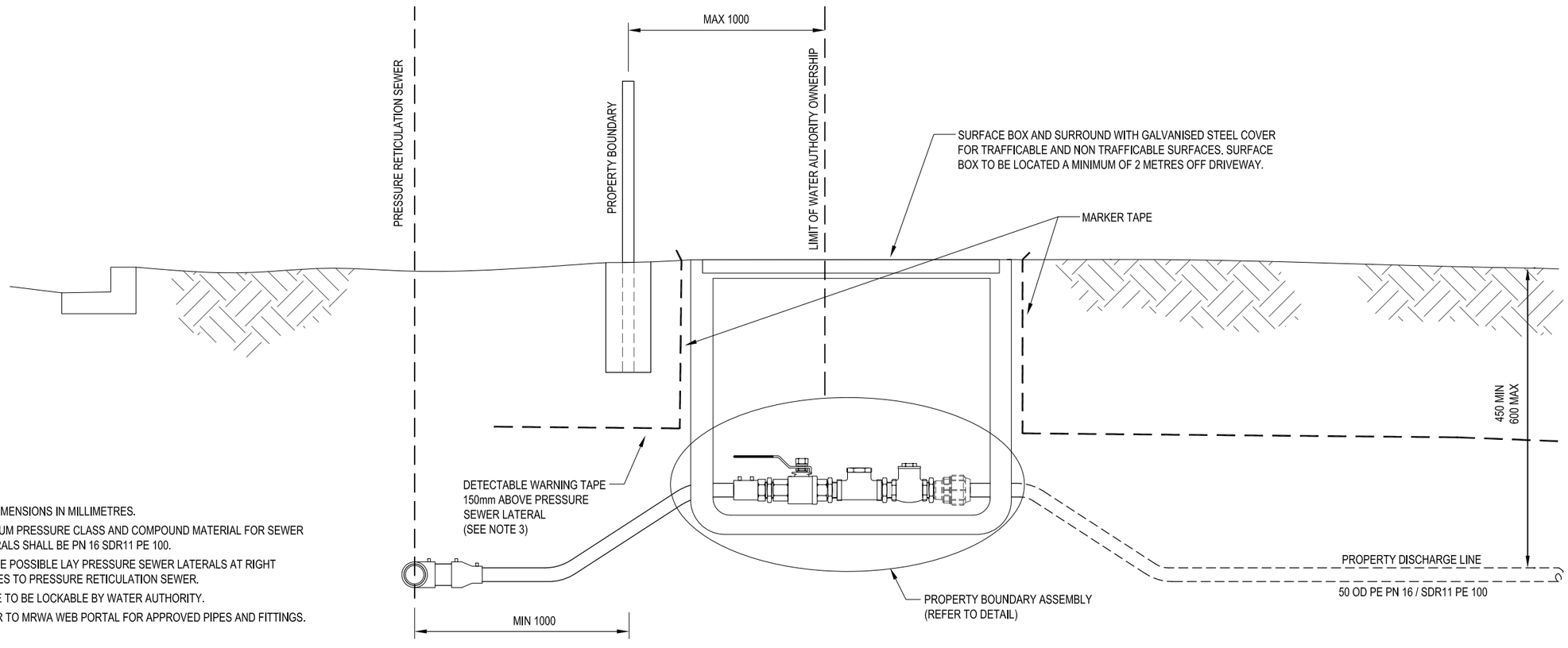
SCALE: N.T.S @A3
SHEET: 1 OF 1
DRAWING No.: PSS-1112-M
REV: 4

ADDITIONAL INFORMATION PROVIDED IN SERIES COMMENTARY



DETAIL - PROPERTY BOUNDARY ASSEMBLY

NOT TO SCALE



NOTES:

1. ALL DIMENSIONS IN MILLIMETRES.
2. MINIMUM PRESSURE CLASS AND COMPOUND MATERIAL FOR SEWER LATERALS SHALL BE PN 16 SDR11 PE 100.
3. WHERE POSSIBLE LAY PRESSURE SEWER LATERALS AT RIGHT ANGLES TO PRESSURE RETICULATION SEWER.
4. VALVE TO BE LOCKABLE BY WATER AUTHORITY.
5. REFER TO MRWA WEB PORTAL FOR APPROVED PIPES AND FITTINGS.

TYPICAL ARRANGEMENT - SECTION

NOT TO SCALE

REV	DESCRIPTION	DATE	APP.'D
4	PUBLISHED FIRST ISSUE	11/10/12	D. PAXMAN
3	TAPPING DETAILS AMENDED	17/01/12	
2	NOTE ADDED	31/03/11	
1	GENERAL AMENDMENTS	14/04/10	
0	ISSUED AS STANDARD	09/11/09	

		INITIALS	DATE		INITIALS	DATE
DESIGNED:	C. RADFORD		DATE: JAN 2009			
DRAWN:	D.T.		DATE: 09/11/09			
CHECKED:		INITIALS	DATE	APPROVED:	INITIALS	DATE
☒ CWW		D.M.	22/08/12	☒ CWW	R.J.	22/08/12
☒ SEW		S.S.	7/08/12	☒ SEW	C.P.	7/08/12
☒ YVWL		K.D.	9/10/12	☒ YVWL	A.C.	9/10/12

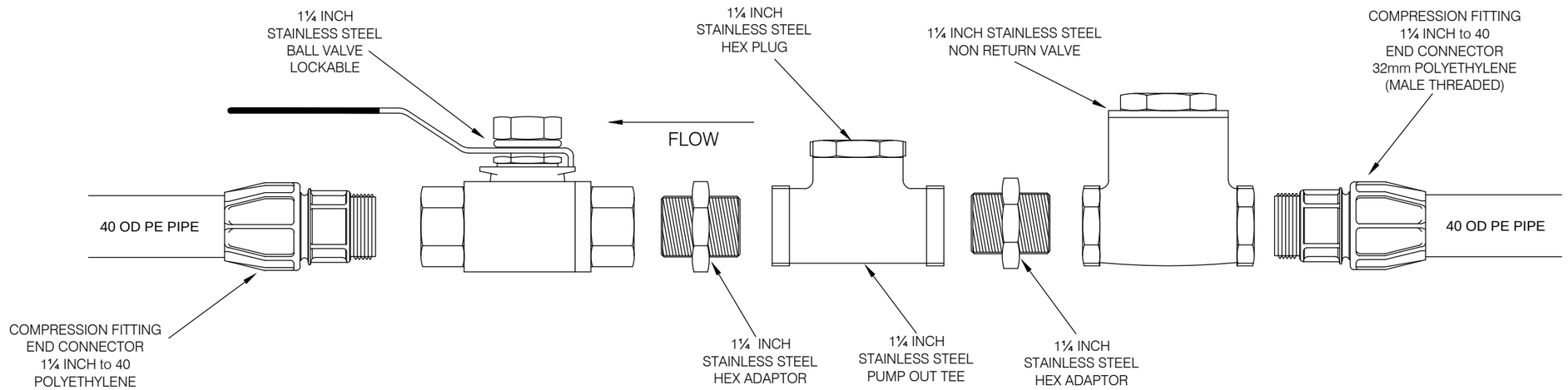
MELBOURNE RETAIL WATER AGENCIES

City West Water · Yarra Valley Water · South East Water

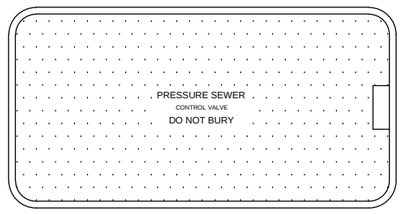
PRESSURE SEWER SYSTEM
PROPERTY BOUNDARY ASSEMBLY
TYPICAL INDUSTRIAL/COMMERCIAL INSTALLATION

SCALE: N.T.S @A3
SHEET: 1 OF 1
DRAWING No.: PSS-1113-M
REV: 4

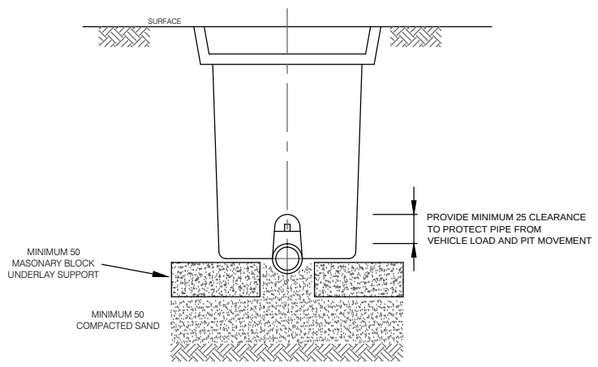
ADDITIONAL INFORMATION PROVIDED IN SERIES COMMENTARY



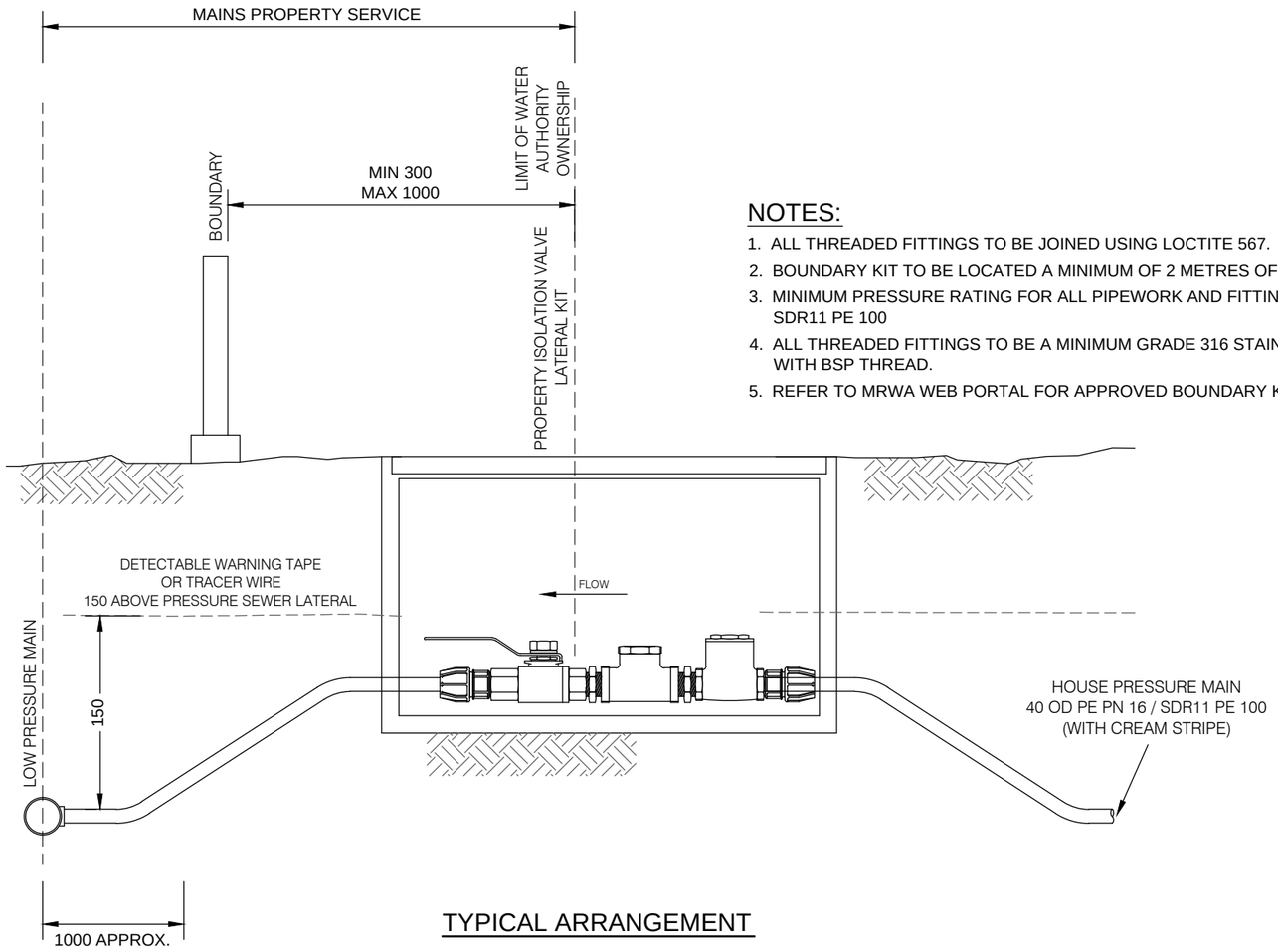
DETAIL - PROPERTY BOUNDARY ASSEMBLY



PLAN VIEW



BOUNDARY KIT
END VIEW



TYPICAL ARRANGEMENT

NOTES:

1. ALL THREADED FITTINGS TO BE JOINED USING LOCTITE 567.
2. BOUNDARY KIT TO BE LOCATED A MINIMUM OF 2 METRES OFF DRIVEWAY.
3. MINIMUM PRESSURE RATING FOR ALL PIPEWORK AND FITTINGS IS PN16 / SDR11 PE 100
4. ALL THREADED FITTINGS TO BE A MINIMUM GRADE 316 STAINLESS STEEL, WITH BSP THREAD.
5. REFER TO MRWA WEB PORTAL FOR APPROVED BOUNDARY KIT COMPONENTS.

REV	DESCRIPTION	DATE	APP.'D
4	PUBLISHED FIRST ISSUE	11/10/12	C. PAXMAN
3	GENERAL AMENDMENTS	7/08/12	
2	GENERAL AMENDMENTS	31/03/11	
1	GENERAL AMENDMENTS	14/04/10	
0	ISSUED AS STANDARD	09/11/09	

		INITIALS	DATE
DESIGNED:	S. FRENCH		DATE: 2006
DRAWN:	D.T.		DATE: 09/11/09
CHECKED:		INITIALS	DATE
☒ CWW		D.M.	14/04/10
☒ SEW		S.S.	7/08/12
☒ YVWL		K.D.	9/10/12
APPROVED:		INITIALS	DATE
☒ CWW		R.J.	14/04/10
☒ SEW		C.P.	7/08/12
☒ YVWL		A.C.	9/10/12

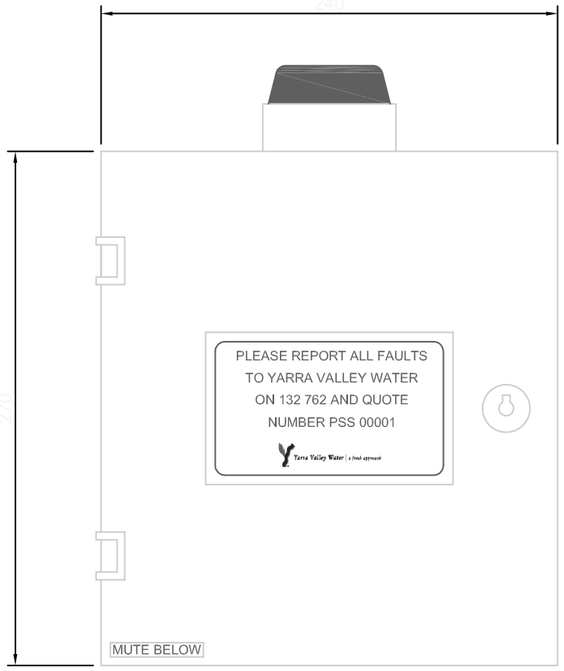
MELBOURNE RETAIL WATER AGENCIES

City West Water · Yarra Valley Water · South East Water

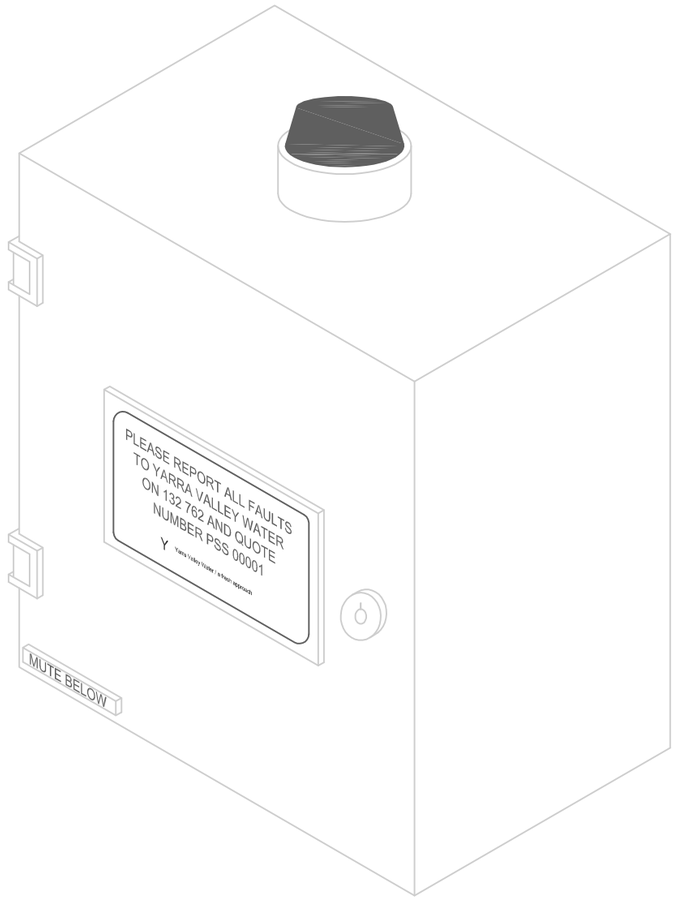
PRESSURE SEWER SYSTEM
PROPERTY BOUNDARY ASSEMBLY
TYPICAL RESIDENTIAL INSTALLATION

SCALE: N.T.S @A3
SHEET: 1 OF 1
DRAWING No.: PSS-1114-M
REV: 4

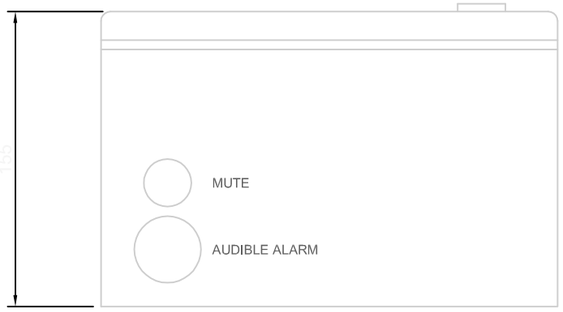
ADDITIONAL INFORMATION PROVIDED IN SERIES COMMENTARY



FRONT VIEW



ISOMETRIC VIEW



BOTTOM VIEW

NOTES

1. METAL WORK 316 STAINLESS STEEL
   POWDERCOATED RIVERGUM GREEN

2. KEY LOCK 268

ADDITIONAL INFORMATION PROVIDED IN THE DRAWING COMMENTARY

REV	DESCRIPTION	DATE	APP.'D
REV	DESCRIPTION	00/00/00	INITALS
REV	DESCRIPTION	00/00/00	INITALS
REV	DESCRIPTION	00/00/00	INITALS
REV	DESCRIPTION	00/00/00	INITALS
REV	DESCRIPTION	00/00/00	INITALS

		INITIALS	DATE		INITIALS	DATE
DESIGNED:	K DAWSON		DATE: 26/08/11			
DRAWN:	K DAWSON		DATE: 26/08/11			
CHECKED:		INITIALS	DATE	APPROVED:	INITIALS	DATE
☐ CWW			00/00/00	☐ CWW		00/00/00
☐ SEWL			00/00/00	☐ SEWL		00/00/00
☒ YVW		KD	26/08/11	☒ YVW	KD	26/08/11

MELBOURNE RETAIL WATER AGENCIES

Yarra Valley Water

WITH ACKNOWLEDGEMENT TO
WATER SERVICES ASSOCIATION of Australia

PRESSURE SEWER SYSTEM STANDARD DRAWINGS

YARRA VALLEY WATER SPECIFIC REQUIREMENTS
PROPERTY SERVICE DETAILS
PUMP CONTROL BOX

NOT TO SCALE

PSS-1115-Y

ISSUED 2011 | VERSION 1