DRAWING NO.	CAD NO.	DRAWING TITLE
WS 1	2010069.002	GENERAL CONSTRUCTION NOTES
WS 2	2010069.001	TYPICAL TRENCH REINSTATEMENT AND BEDDING DETAILS FOR WATER SUPPLY
WS 3	2010069.003	TYPICAL WATERMAIN INTERSECTION LAYOUT
WS 4	2010069.004	ROAD CROSSING DETAILS AND PRINCIPAL MAIN TO RIDER MAIN CONNECTIONS
WS 5	2010069.036	RIDER MAIN ALTERNATIVE CONNECTION
WS 6	2010069.005	BOUNDARY ZONE DETAIL
WS 7	2010069.006	VALVE AND HYDRANT MARKINGS
WS 8	2010069.013	ANCHOR BLOCK DETAILS FOR 90° AND 45° BENDS
WS 9	2010069.014	ANCHOR BLOCK DETAILS FOR 22½° AND 11¼° BENDS AND TEE JUNCTION
WS 10	2010069.015	ANCHOR BLOCK DETAILS. REDUCERS AND VERTICAL BENDS
WS 11	2010069.034	FLANGE CONNECTION DETAIL. PE MAIN TO OTHER
WS 12	2010069.027	HYDRANT DETAIL
WS 13	2010069.029	FLANGED SLUICE VALVE DETAIL
WS 14	2010069.031	AIR RELEASE VALVE AND CHAMBER DETAIL
WS 15	2010069.043	AIR VENT COWLING, VERTICAL STEEL PIPE FABRICATION DETAIL AND CONCRETE FOOTING
WS 18	2010069.012	DOMESTIC WATER METER CONNECTION. 15mm, 20mm AND 25mm DIAMETER
WS 19	2010069.017	WATER METER AND BACKFLOW PREVENTION DEVICE FOR HIGH HAZARD LESS THAN 50mm
WS 20	2010069.018	WATER METER AND BACKFLOW FOR LOW TO MEDIUM HAZARD LESS THAN 50mm
WS 21	2010069.019	FIRE SUPPRESSION SUPPLY AND SEPARATE WATER SUPPLY LESS THAN 50mm
WS 22	2010069.021	MANIFOLD METER BANK LESS THAN 50mm
WS 23	2010069.044	FIRE SUPPRESSION SUPPLY AND SEPARATE DOMESTIC METER BANK
WS 24	2010069.022	FIRE SUPPRESSION SUPPLY AND SEPARATE WATER METER 50mm AND ABOVE
WS 25	2010069.023	COMBINED FIRE SUPPRESSION SUPPLY AND WATER METER 50mm AND ABOVE
WS 26	2010069.045	COMBINED FIRE SUPPRESSION SUPPLY AND COMMERCIAL WITH SEPARATE DOMESTIC SUPPLY
WS 27	2010069.047	TYPICAL ARRANGEMENT OF TEMPORARY CONSTRUCTION WATER METER AND BACKFLOW PREVENTION DEVICE FOR 20mm SS PIPE
WS 28	2010069.048	TYPICAL ARRANGEMENT OF TEMPORARY CONSTRUCTION WATER METER AND BACKFLOW PREVENTION DEVICE FOR 50mm SS PIPE
WS 29	2010069.049	WATER SUPPLY SERVICE / PEET GATE VALVE ≤ DN50
WS 30	2010069.051	WATER SUPPLY AND WATER METER 50mm AND ABOVE
WS 31	2010069.052	FLANGE ARRANGEMENT DETAILS FOR LOCAL WATER NETWORK

GENERAL CONSTRUCTION NOTES

1. STANDARDS RELATING TO WORKS

1.1 WORKS SHALL BE CARRIED OUT TO THE REQUIREMENTS OF THE HEALTH & SAFETY AT WORK IN EMPLOYMENT ACT 2015.

1.2 THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH WATERCARE'S TECHNICAL SPECIFICATIONS, CONSTRUTCION STANDARDS, AND GUIDELINES.

2. MATERIALS

2.1 ALL MATERIALS AND FITTINGS SHALL COMPLY WITH WATERCARE'S MATERIAL SUPPLY STANDARD (ESF-500-STD-601).

3. MANUFACTURER'S SPECIFICATIONS

3.1 MATERIALS SHALL BE INSTALLED TO THE MANUFACTURER'S REQUIREMENTS UNLESS OTHERWISE SPECIFIED.

4. WELDING & FIXINGS

4.1 ALL STEELWORK SHALL BE WORKSHOP FABRICATED.

4.2 STEELWORK AND FIXINGS SHALL BE HOT-DIP GALVANISED TO AS/NZS 4680 UNLESS OTHERWISE STATED.

4.3 A NICKEL ANTI-SEIZE FREE OF COPPER, LEAD, SULPHIDES, CHLORIDES & CARBONS (GRAPHITE) SHALL BE USED ON BOLTS.

4.4 PE WELDING SHALL BE CARRIED OUT BY A QUALIFIED PERSON, REFER TO AS/NZS 2033 – WELDERS SHALL COMPLETE THE RELEVANT UNIT STANDARD QUALIFICATIONS. PRE-QUALIFICATION WELDS AND WELDING RECORDS SHALL BE PROVIDED AS DESCRIBED IN WATERCARE'S GENERAL CIVIL CONSTRUCTION STANDARD.

5. REINFORCING STEEL

5.1 ALL REINFORCEMENT SHALL BE GRADE 500 DUCTILITY CLASS E AND COMPLY WITH AS/NZS 4671.

5.2 REINFORCING SHALL BE CENTRALLY PLACED WITH THE SPECIFIED MINIMUM COVER. BENDS SHALL BE COLD FORMED.

5.3 WELDING OF REINFORCED STEEL SHALL BE CARRIED OUT TO AS/NZS 1554.3.

6. JOINT SEALS

6.1 COUPLINGS & FLANGES : PER WSL MATERIAL STANDARD.

6.2 CONCRETE JOINTS AROUND PIPE PENETRATIONS THROUGH CHAMBERS SHALL BE MADE WITH A SUITABLE HYDROPHILIC SEALANT TO THE MANUFACTURER'S REQUIREMENTS.

6.3 CONCRETE REPAIR SHALL BE REINFORCED AND BOX-CAST TO PREVENT CRACKING FROM SEALANT FORCES.

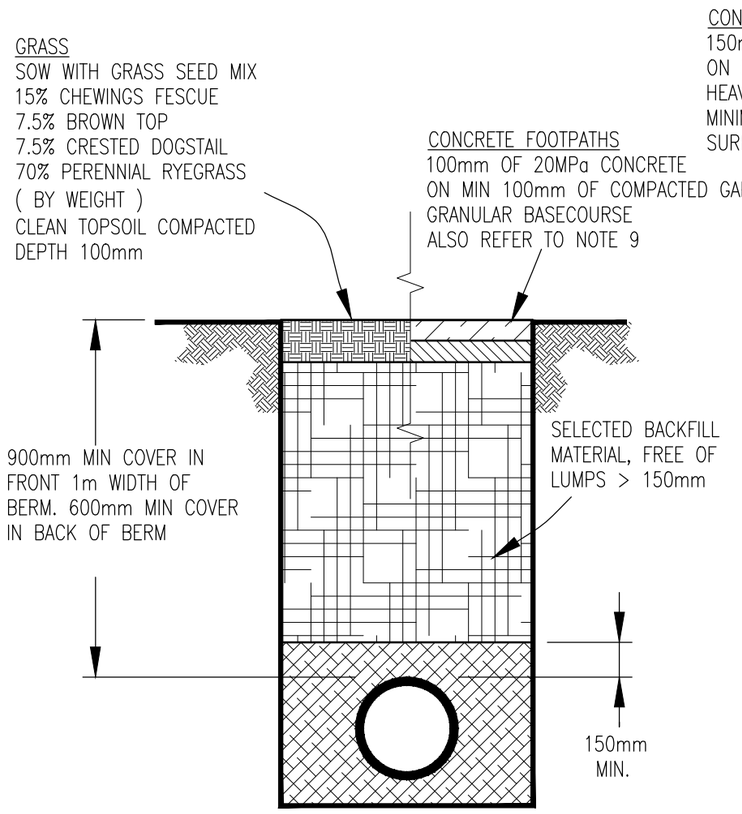
7. DISINFECTION

7.1 DISINFECTION OF PIPELINES SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT VERSION OF WATERCARE'S CODE OF PRACTICE FOR DISINFECTION OF WATER SYSTEMS.

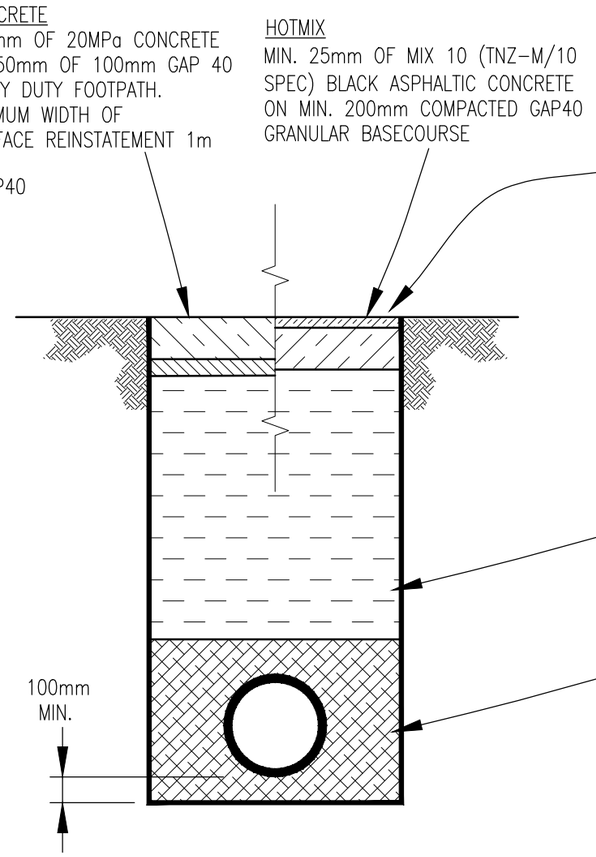
Watercare

GENERAL
CONSTRUCTION NOTES

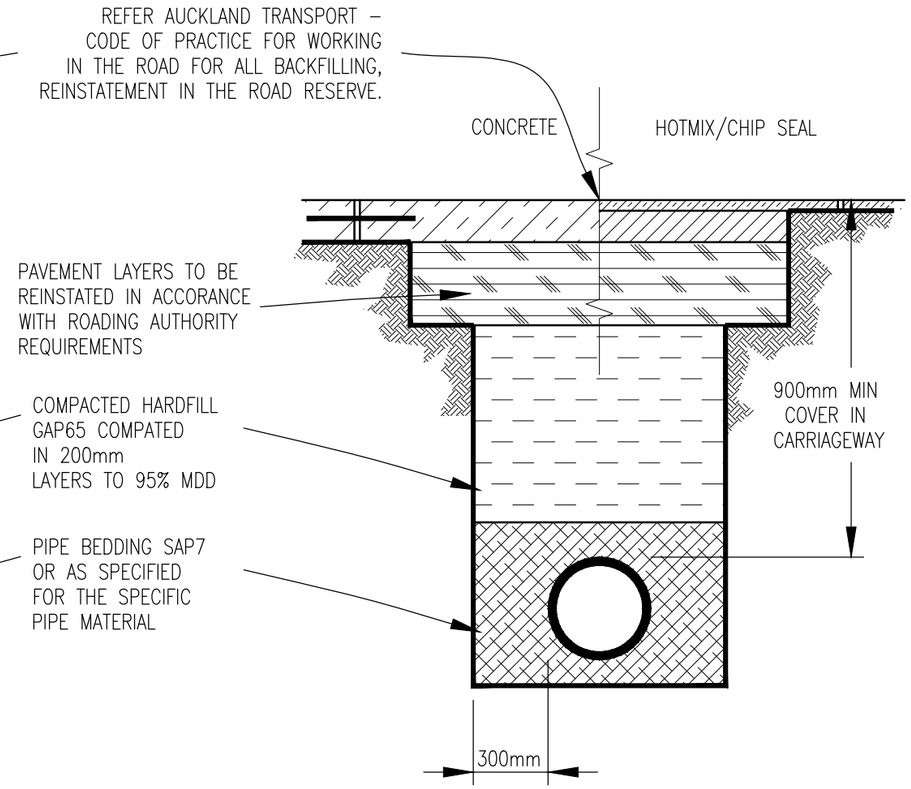
SCALE:	N.T.S.
ISSUE DATE:	18-08-2025
DWG No.	2010069.002E
REFERENCE No.	WS 1



GRASS AREA & FOOTPATH REINSTATEMENT



DRIVEWAY REINSTATEMENT



FOOTPATH/VEHICLE CROSSING, CARRIAGEWAY REINSTATEMENT

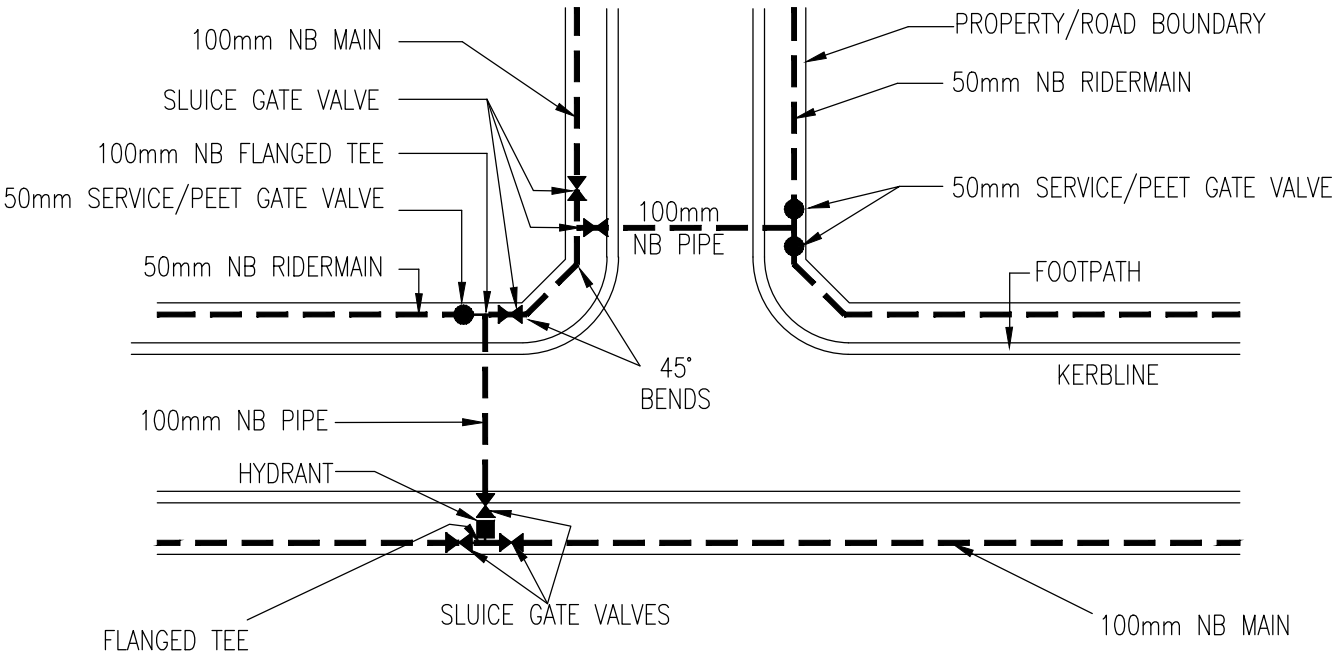
NOTES

1. ROAD PAVEMENTS AND SURFACING REINSTATEMENT WITHIN THE ROAD RESERVE SHALL COMPLY WITH THE AUCKLAND TRANSPORT REQUIREMENTS.
2. BACKFILL IS TO BE COMPACTED IN MAXIMUM 200mm LAYERS TO OBTAIN THE REQUIRED DENSITY, AS PER STANDARD SPECIFICATIONS.
3. WHERE CONCRETE OR OTHER STABILIZED LAYERS EXIST IN THE ROADWAY, THE TRENCH SHALL BE REINSTATED WITH SIMILAR MATERIAL OR AS DIRECTED BY THE ROADING ENGINEER.
4. MINIMUM COVER IN CARRIAGEWAY FOR WATERMAINS SHALL BE 900mm. 900mm COVER IN FRONT 1m OF BERM AND MINIMUM 600mm IN THE BACK OF BERM (REFER TO WS4).
5. FILL SHALL BE CLEAN, NON-CONTAMINATED MATERIAL. HOWEVER, FOR PIPE BEDDING, BACKFILL MATERIAL CAN BE CONSIDERED, PROVIDED IT MEETS AUCKLAND TRANSPORT'S REQUIREMENTS.
6. CONCRETE SURFACE FINISH SHALL COMPLY WITH NZS 3114 AND AS/NZS 3661 SLIP RESISTANCE FOR PEDESTRIANS.
7. PIPE BEDDING SHALL BE COMPACTED TO AS/NZS 2566.2 CLAUSE 5.6.3 FOR COMPACTION CONTROL.
8. ALTERNATIVE EMBEDMENT DETAILS BY SPECIFIC DESIGN FOR PIPE AT STEEP GRADES, INADEQUATE TRENCH FOUNDATION AND EROSION IS NOT COVERED BY THIS DRAWING.
9. FOR HEAVY DUTY FOOTPATHS REFER TO AUCKLAND TRANSPORT REQUIREMENTS.
10. FOR VEHICLE CROSSINGS REFER TO AUCKLAND TRANSPORT STANDARDS.
11. RECYCLED MATERIAL CAN BE CONSIDERED FOR BACKFILL, PROVIDED IT MEETS ACS740: RECYCLED AGGREATES.

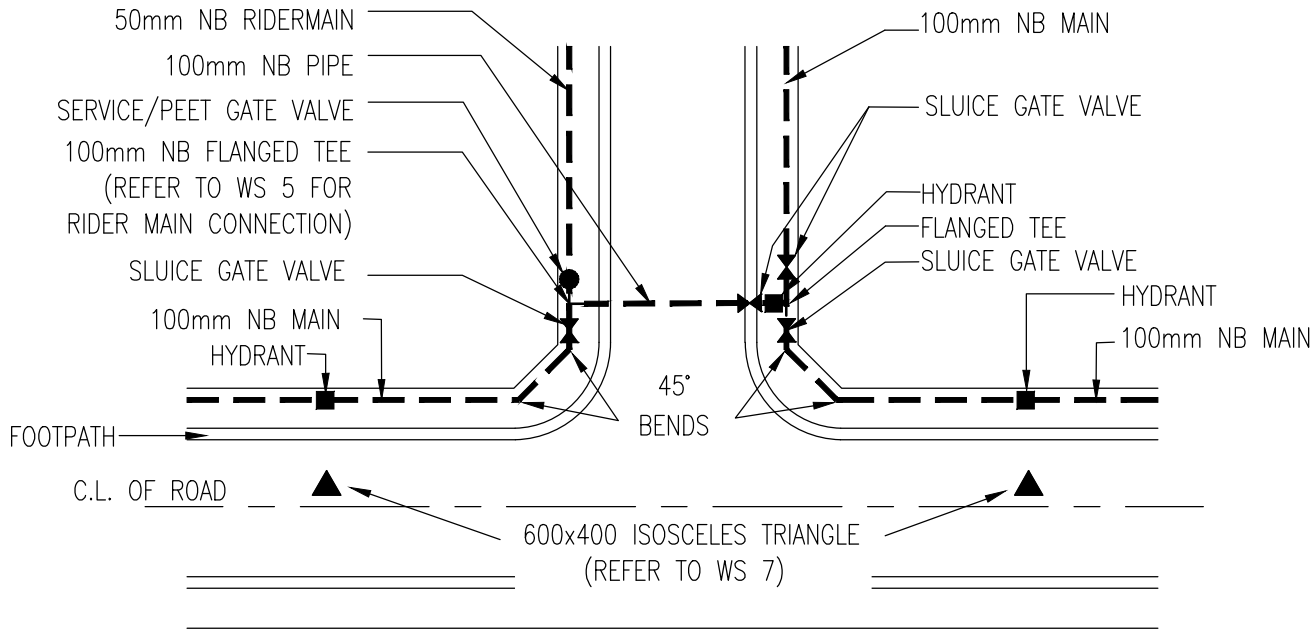
Watercare

TYPICAL TRENCH REINSTATEMENT AND BEDDING DETAILS FOR WATER SUPPLY

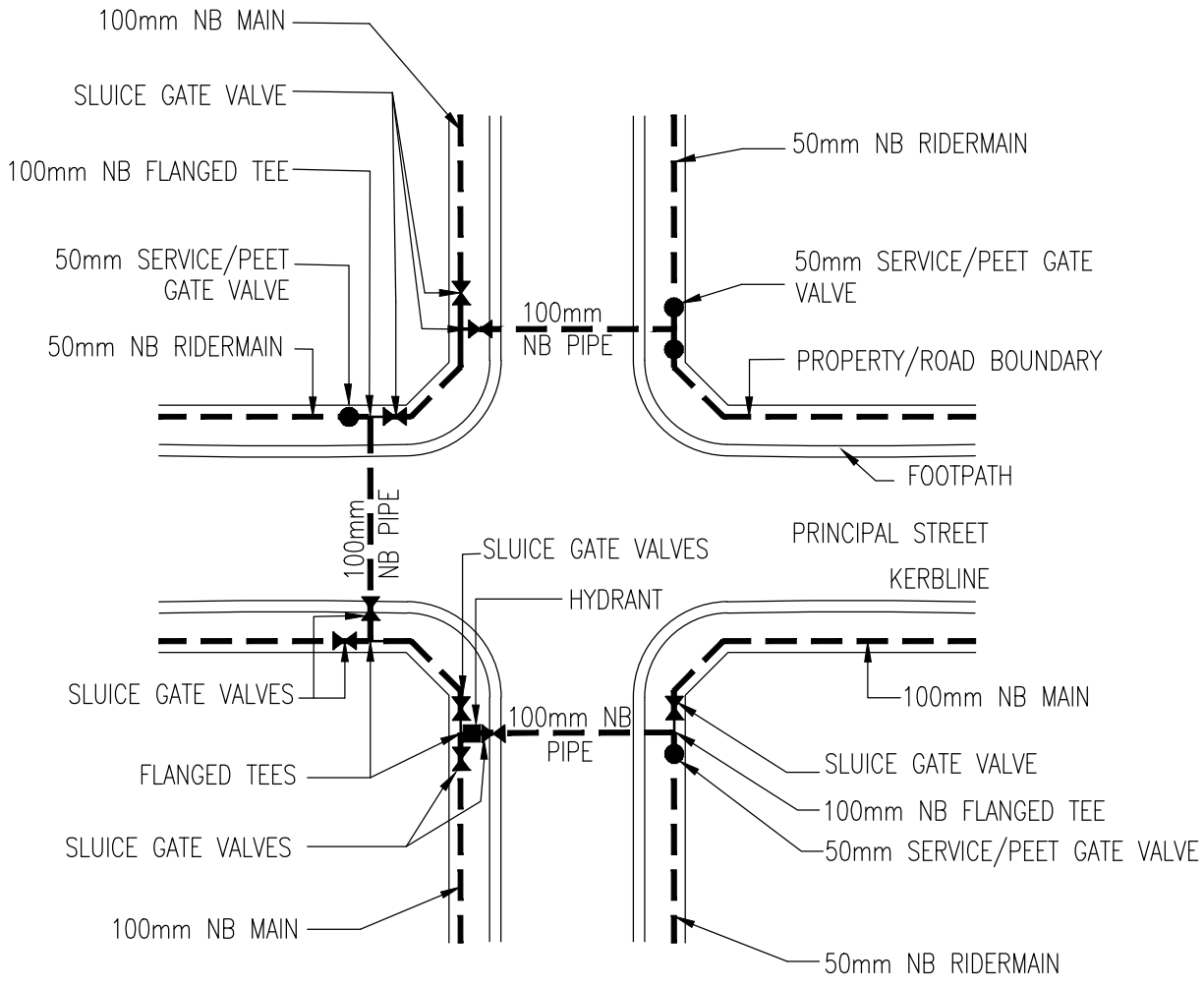
SCALE:	N.T.S.
ISSUE DATE:	18-08-2025
DWG No.	2010069.001E
REFERENCE No.	WS 2



TEE INTERSECTION A



TEE INTERSECTION B



CROSS INTERSECTION

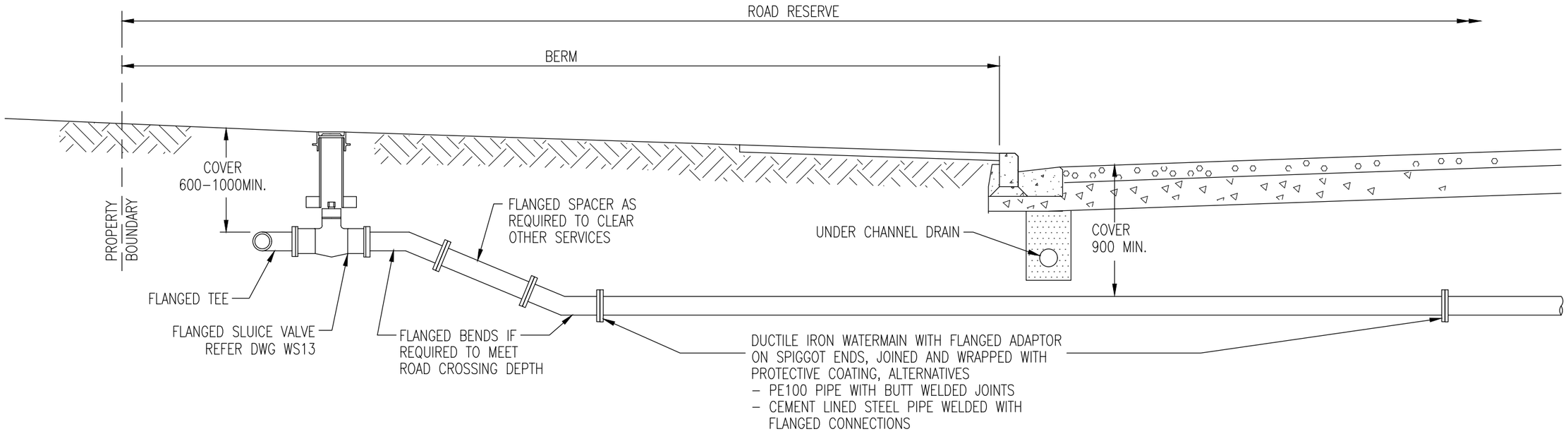
NOTES

1. PIPES SHALL BE LAID PARALLEL WITH THE ROAD AND PROPERTY BOUNDARY.
2. ALL PRINCIPAL MAIN ROAD CROSSINGS SHALL BE 100mm DIA. (OR LARGER) DI, STEEL OR PE100, PIPES EXTENDING FROM MAIN TO MAIN.
3. BENDS SHALL BE LONG RADIUS BENDS.
4. ALL JOINTS UNDER ROADS SHALL BE FIELD WELDED OR FLANGED JOINTS (WRAPPED IN APPROVED WRAPPING SYSTEM, REFER TO WS31).
5. REFER TO WS4 FOR CROSSING DETAILS.
6. WHERE 100mm AND LARGER PRINCIPAL MAINS ARE INSTALLED ON BOTH SIDES OF THE ROAD, ALL VALVES SHALL BE SLUICE VALVES.

Watercare

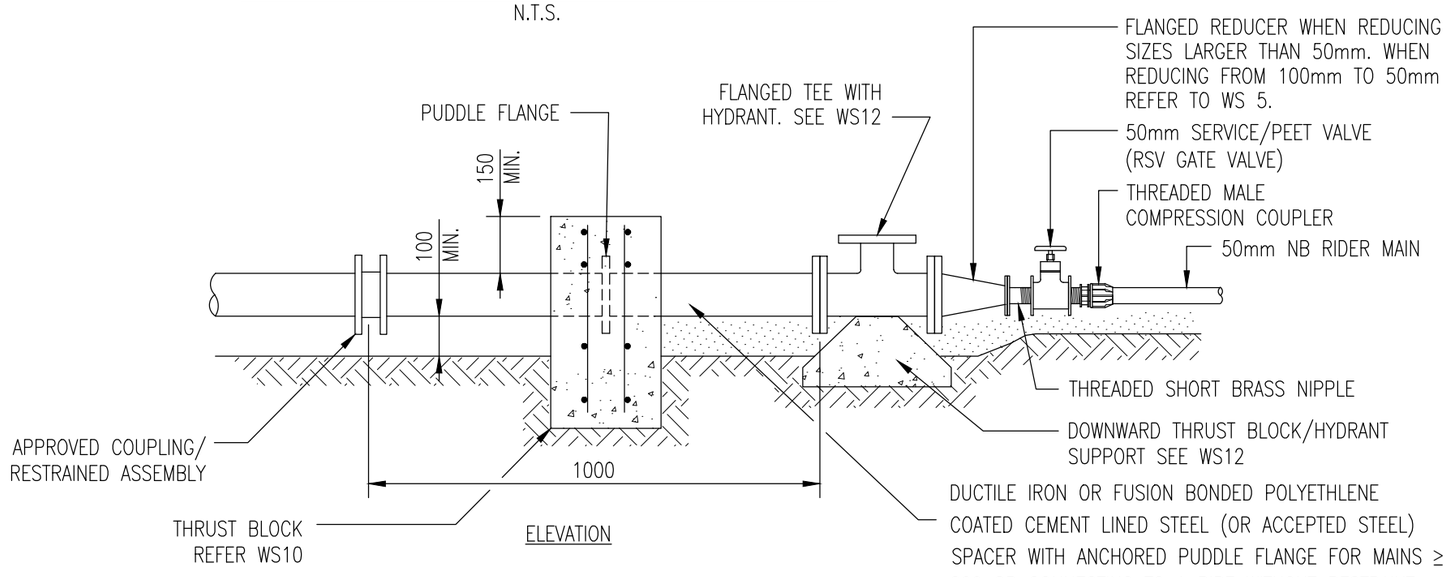
TYPICAL WATERMAIN INTERSECTION LAYOUT

SCALE:	N.T.S.
ISSUE DATE:	18–08–2025
DWG No.	2010069.003C
REFERENCE No.	WS 3



TYPICAL PRINCIPAL MAIN CROSSING UNDER ROAD

N.T.S.



TYPICAL REDUCTION TO 50mm NB RIDERMAIN

SEE NOTE 1 N.T.S.

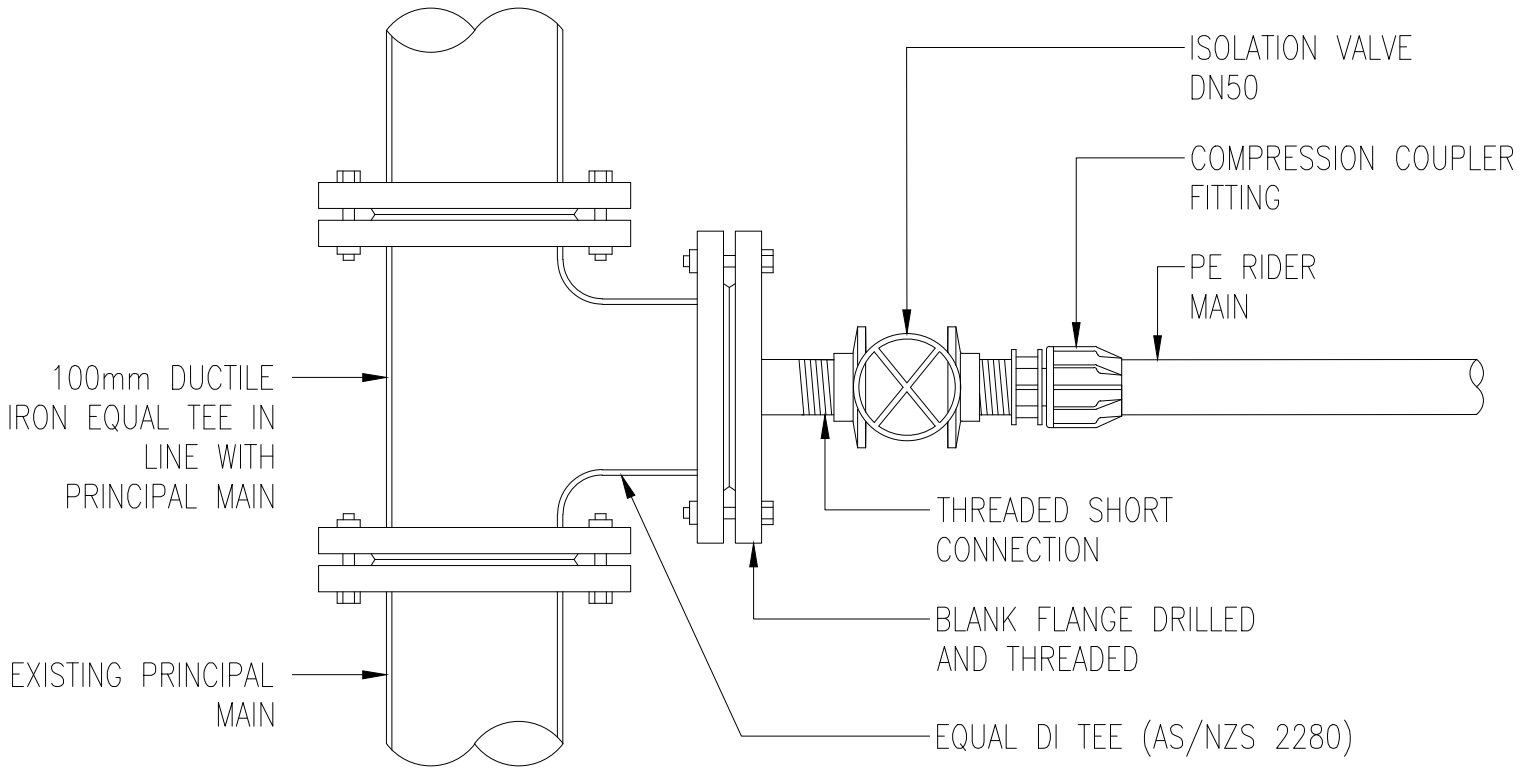
NOTES

1. ALL DIMENSIONS ARE IN mm.
2. THRUST PROTECTION SHALL BE PROVIDED WHERE RESTRAINED CONNECTIONS TRANSITION TO UNRESTRAINED (REFER WSL GUIDANCE NOTE ESF–900–GDN–101).
3. FOR RIDERMAIN CONNECTION SEE WS5.
4. PIPE AND BENDS TO BE SUPPORTED AND PROTECTED AGAINST CORROSION.
5. ALL SPECIAL FITTINGS INCLUDING TEES AND BENDS TO BE FLANGED DUCTILE IRON OR AN ACCEPTED PROPRIETARY ALTERNATIVE.
6. WHERE 100mm AND LARGER PRINCIPAL MAINS ARE INSTALLED ON BOTH SIDES OF THE ROAD, ALL VALVES SHALL BE SLUICE VALVES.

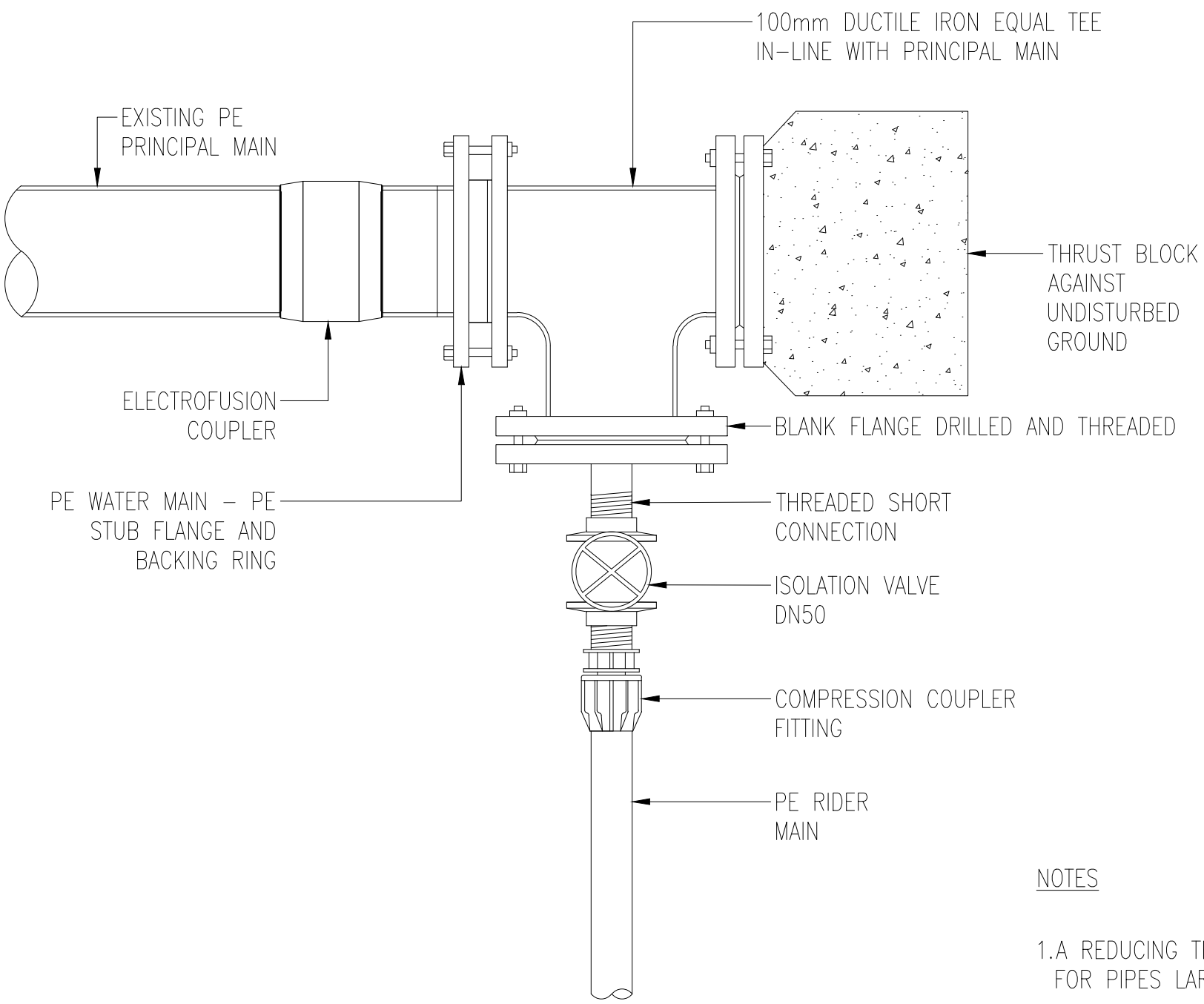
Watercare

ROAD CROSSING DETAILS AND PRINCIPAL MAIN TO RIDER MAIN CONNECTIONS

SCALE:	N.T.S.
ISSUE DATE:	18–08–2025
DWG No.	2010069.004D
REFERENCE No.	WS 4



TEE JUNCTION FOR DI PIPE



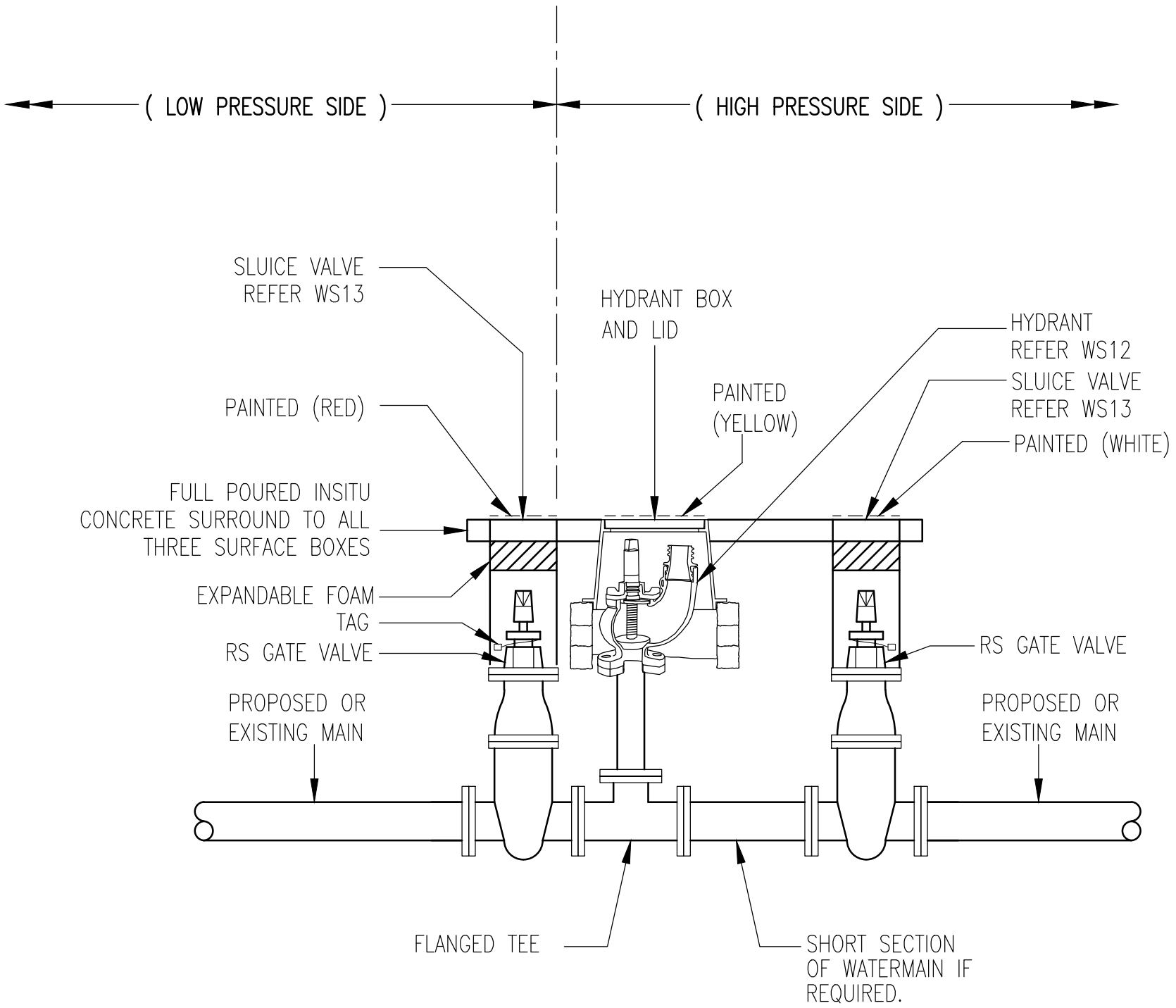
NOTES

1. A REDUCING TEE SHALL BE USED FOR PIPES LARGER THAN 100mm.

END OF MAIN – TEE JUNCTION

RIDER MAIN CONNECTION

SCALE:	N.T.S.
ISSUE DATE:	18–08–2025
DWG No.	2010069.0036D
REFERENCE No.	WS 5



ELEVATION

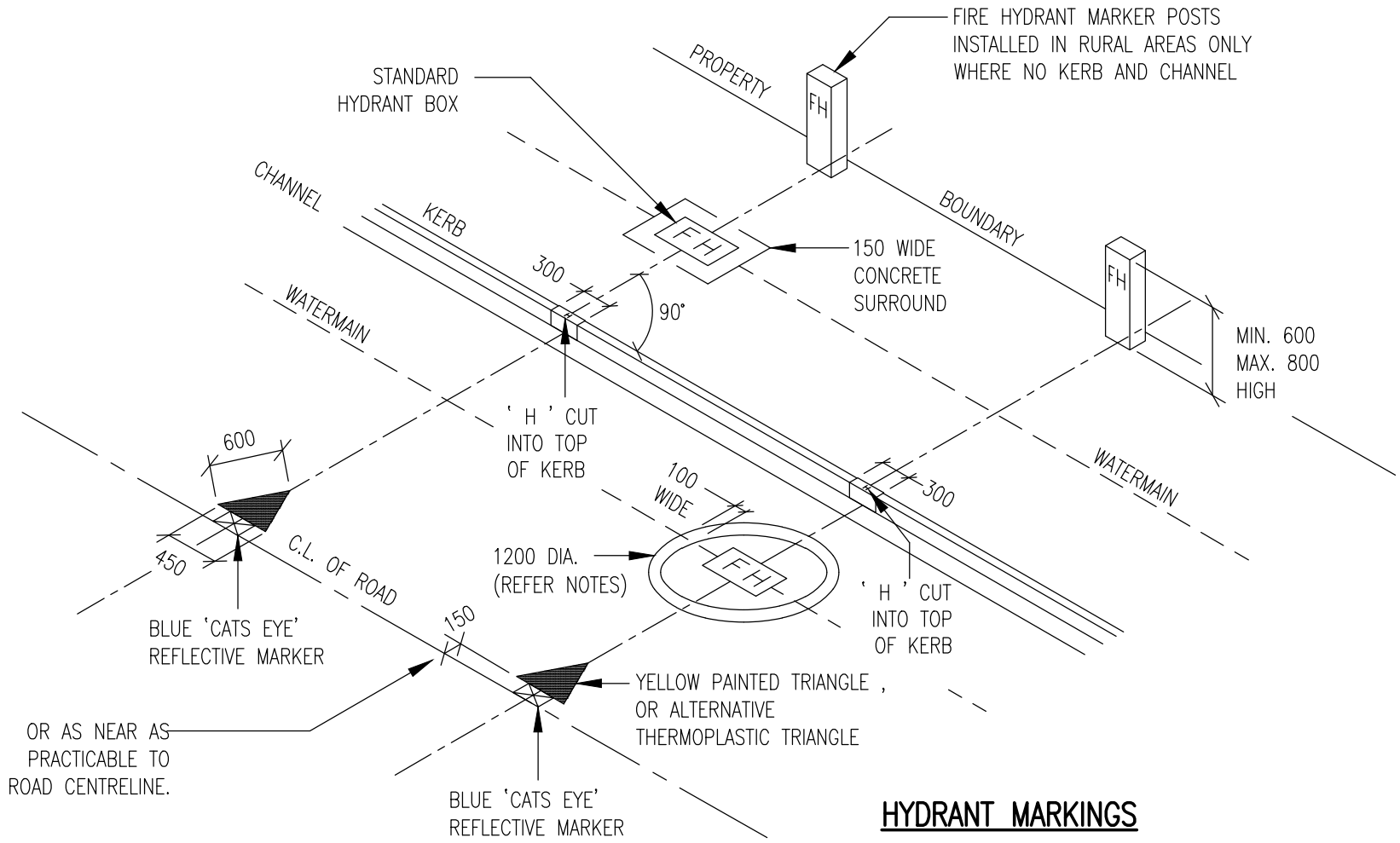
NOTES :

1. ALL SURFACE BOXES AND MARKER POSTS TO BE PAINTED IN ACCORDANCE WITH THE COLOR CODE SPECIFIED ON DRAWING NUMBER WS7.
2. THE RS GATE VALVE ON THE HIGH PRESSURE SIDE IS TO REMAIN IN THE OPEN POSITION AND THE VALVE BOX LID TO BE PAINTED (WHITE).
3. THE RS GATE VALVE ON THE LOW PRESSURE SIDE IS TO REMAIN IN THE CLOSED POSITION AND THE VALVE BOX LIDS TO BE PAINTED (RED). THE VALVE ACCESS SLEEVE SHALL BE FILLED WITH AN EXPANSION FOAM AND TAGGED AFTER ACCEPTANCE TESTING.
4. THE HYDRANT BOX LID TO BE PAINTED (YELLOW).
5. VALVES AND HYDRANTS SHALL BE SUPPORTED ON A CONCRETE BASE AND NOT PASS ANY LOADING ONTO THE CONNECTING PIPE. (FOR HYDRANT SUPPORT SEE WS12)

Watercare

BOUNDARY ZONE DETAIL

SCALE:	N.T.S.
ISSUE DATE:	18–08–2025
DWG No.	2010069.005D
REFERENCE No.	WS 6



HYDRANT MARKINGS

NOTE: ALIGN LONGITUDINAL AXIS OF
HYDRANT BOX WITH
WATERMAIN

NOTES

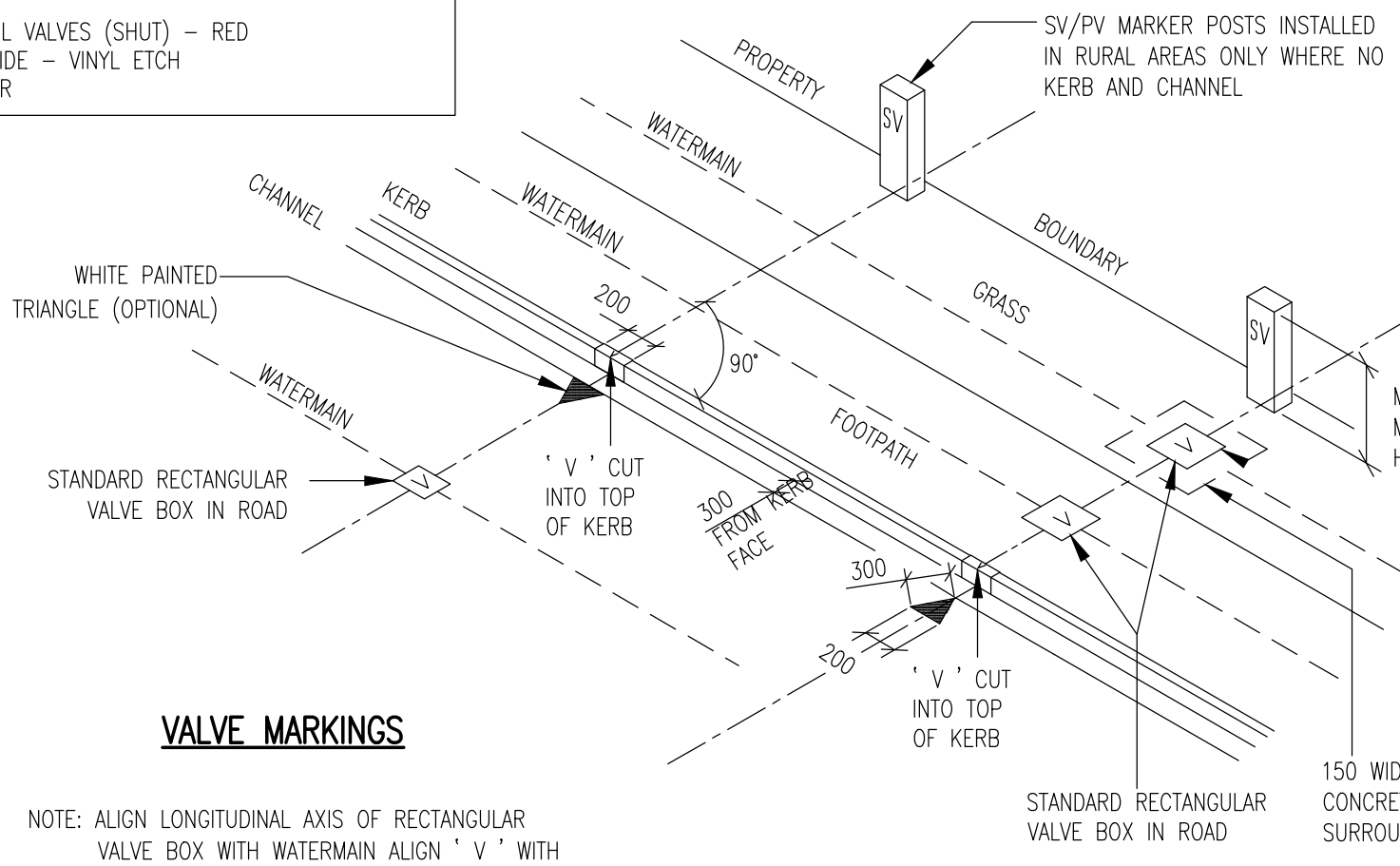
PAINT USED FOR ALL MARKINGS AND CI/DI LIDS SHALL BE TRANSIT "ROAD MARKING PAINT" AS FOLLOWS:–

HYDRANTS – YELLOW
PROTECTIVE PAINTS LTD.– CODE: 880–NRB7 (YELLOW)
OR – RESENE 08 E 51 ;
(ALTERNATIVE OPTION THERMOPLASTIC TRIANGLE)

1200 DAI. CIRCLE AROUND AROUND IS GENERALLY NOT REQUIRED, PROVIDED OTHER MARKINGS ARE IN PLACE

VALVES (PV, SV, AV'S) – WHITE
PROTECTIVE PAINTS LTD – CODE: 880–NRB7(WHITE)

SPECIAL CONTROL VALVES (SHUT) – RED
RESENE RED OXIDE – VINYL ETCH
ADHESION PRIMER



VALVE MARKINGS

NOTE: ALIGN LONGITUDINAL AXIS OF RECTANGULAR
VALVE BOX WITH WATERMAIN ALIGN ' V ' WITH
WATERMAIN AS SHOWN

VALVE AND HYDRANT MARKINGS

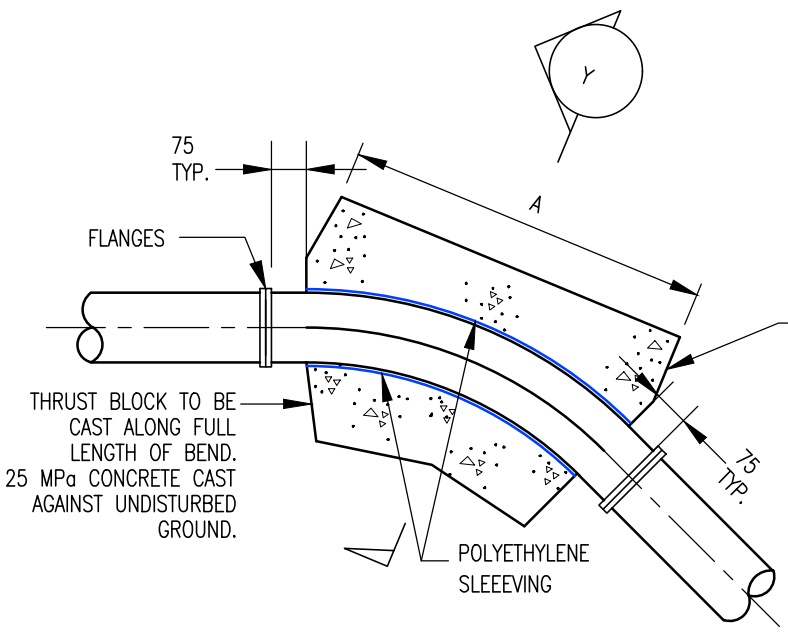
SCALE:	N.T.S.
ISSUE DATE:	18–08–2025
DWG No.	2010069.006B
REFERENCE No.	WS 7

NOTES :

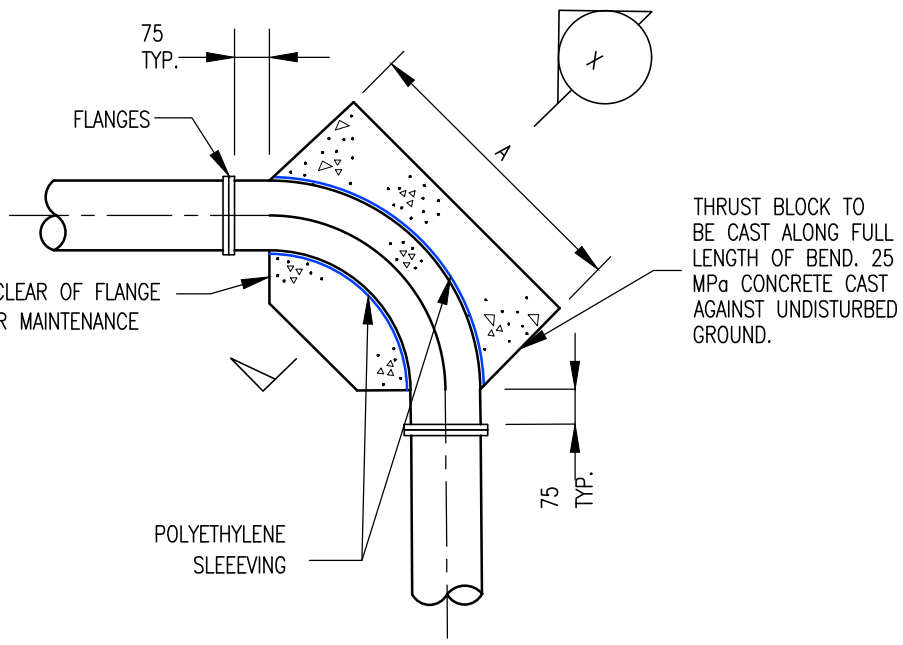
1. ALL DIMENSIONS ARE IN mm.
2. THRUST BLOCK DIMENSIONS ARE BASED ON SOFT CLAY CONDITIONS. (75 kPa BEARING CAPACITY)
3. THE DIMENSIONS TO BE INCREASED OR DECREASED FOR VARIATION IN SOIL CONDITION.
4. AS-BUILT LOCATIONS TO BE OBTAINED PRIOR TO BACKFILL.
5. PROTECTIVE POLYETHYLENE SLEEVING BETWEEN CONCRETE & PIPE.
6. 75mm CLEARANCE BETWEEN FITTINGS/FLANGES AND CONCRETE CASTING.
7. ALL FLANGES FITTINGS TO BE WRAPPED WITH A SUITABLE WRAPPING SYSTEM (REFER WS31).
8. CALCULATED THRUST AREA SHALL BE CAST AGAINST UNDISTURBED NATURAL GROUND.
9. PRE-CAST BLOCKS MAY BE USED FOR INITIAL SUPPORT AND WILL SERVE AS FORMWORK FOR IN-SITU CONCRETE, WHICH SHALL BE CAST AGAINST THE CALCULATED AREA OF UNDISTURBED GROUND.
10. THRUST/ANCHOR FORCE SHALL BE CALCULATED BASED ON THE MAXIMUM TEST PRESSURE.
11. THRUST/ANCHOR BLOCKS ARE REQUIRED WHERE A RESTRAINED PIPELINE TRANSITIONS TO AN UNRESTRAINED PIPELINE (E.G., POLYETHYLENE TO U-PVC). THRUST FORCES MUST BE TRANSFERRED TO UNDISTURBED GROUND BEFORE REACHING UNRESTRAINED PIPE CONNECTION.(REFER TO GUIDANCE NOTE ESF-900-GDN-101)
12. ALL CONCRETE SHALL BE MIN. 25MPa.

DIA. mm	DIMENSION (45° BEND)		
	A	B	C
100	400	300	300
150	750	350	400
200	900	500	500
250	1100	650	600

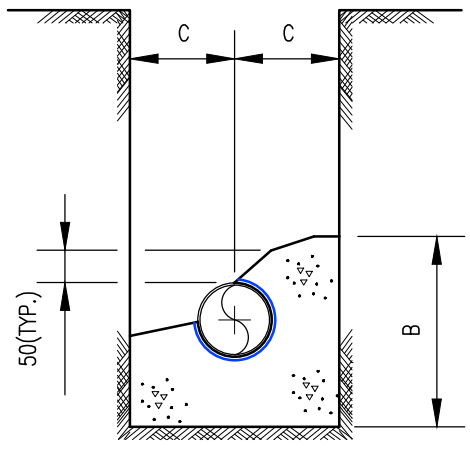
DIA. mm	DIMENSION (90° BEND)		
	A	B	C
100	700	300	450
150	1350	350	450
200	1600	550	550
250	1900	700	600



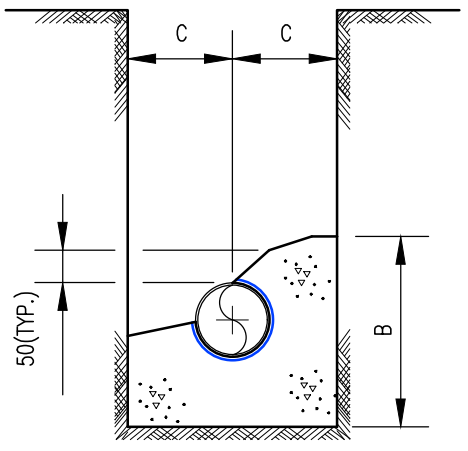
THRUST BLOCKS FOR 45° BENDS



THRUST BLOCKS FOR 90° BENDS



SECTION Y



SECTION X

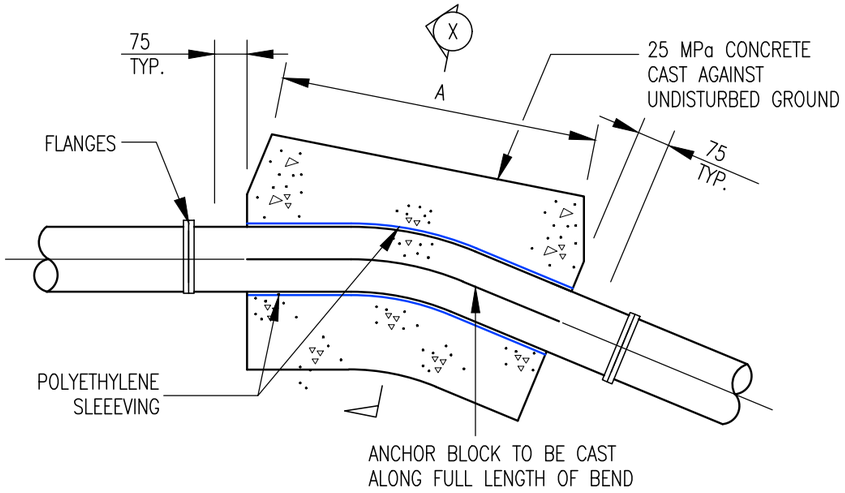
THRUST BLOCK DETAILS FOR 90° & 45° BENDS

SCALE:	N.T.S.
ISSUE DATE:	18-08-2025
DWG No.	2010069.013C
REFERENCE No.	WS 8

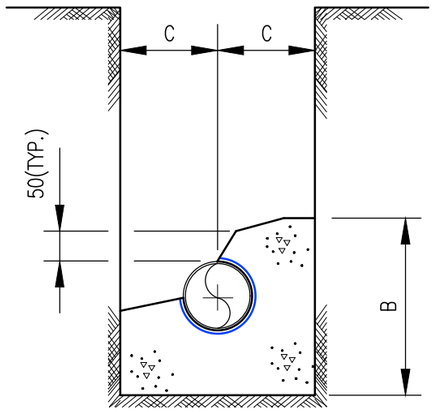
NOTES :

1. REFER TO NOTES IN WS8.

DIA mm	DIMENSION		
	A	B	C
100	300	250	300
150	400	350	400
200	500	500	500
250	600	600	600

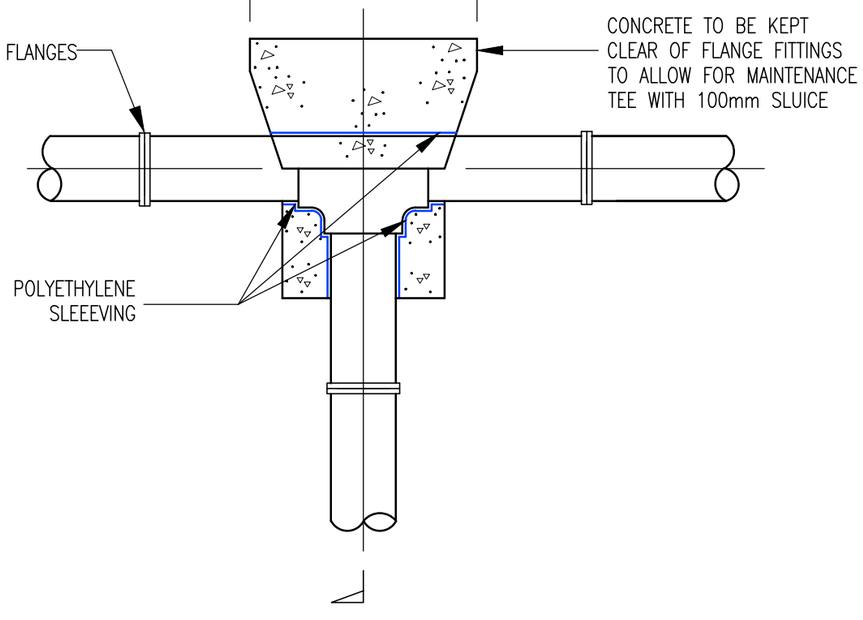


THRUST BLOCKS FOR 22½° & 11¼° BENDS

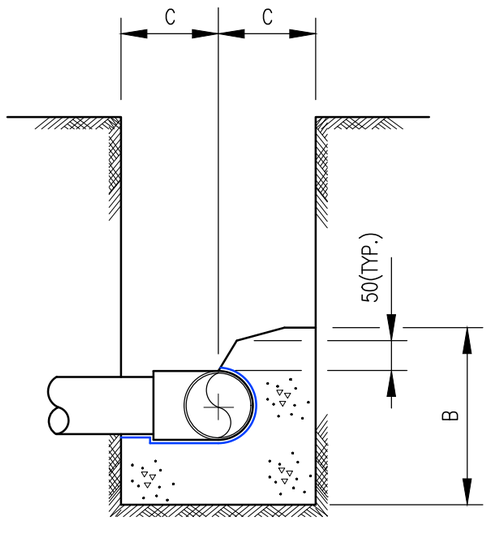


SECTION X

DIA mm	DIMENSION		
	A	B	C
100	500	350	450
150	900	400	450
200	1200	550	550
250	1400	700	600



THRUST BLOCKS TEE JUNCTION & END CAPS



SECTION Y

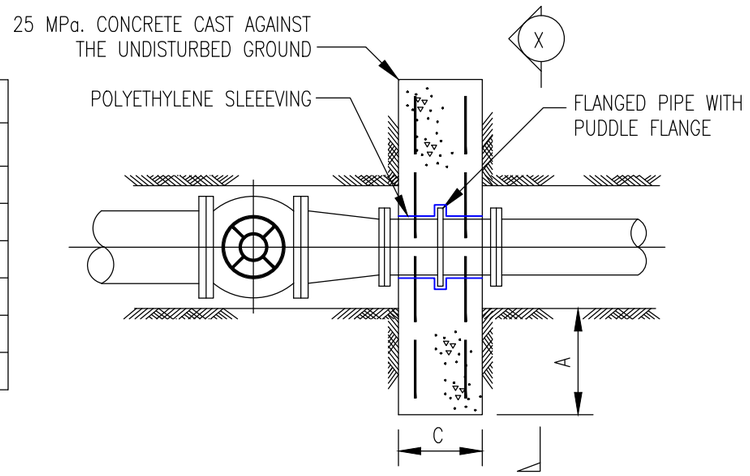
Watercare

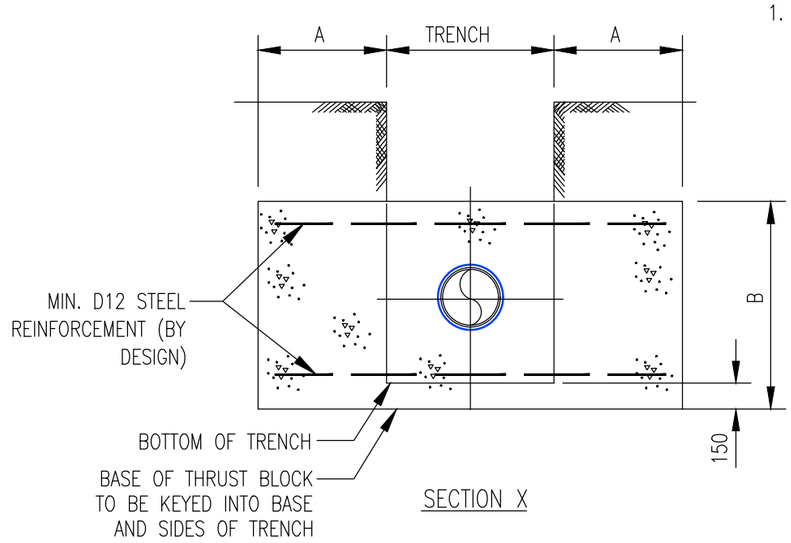
THRUST BLOCK DETAILS FOR 22½° & 11¼° BENDS AND TEE JUNCTION

SCALE:	N.T.S.
ISSUE DATE:	18–08–2025
DWG No.	2010069.014C
REFERENCE No.	WS 9

NOTES :
1. REFER TO NOTES ON WS8.

REDUCER mm	REDUCERS		
	A	B	C
100–150	300	350	300
100–200	600	400	300
150–200	300	500	300
150–250	600	550	300
200–250	300	600	300
200–300	600	700	300



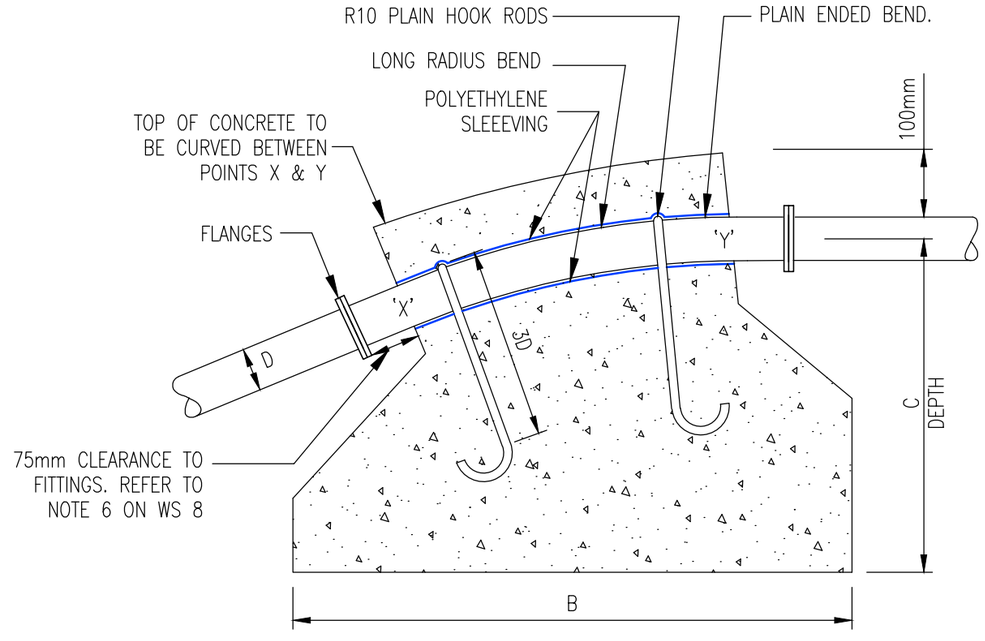


THRUST BLOCKS AT REDUCERS

PIPE DIA	VERTICAL BENDS–45°		
	A	B	C
100mm	600	900	700
150mm	900	1100	900
200mm	1200	1400	900
250mm	1200	1800	1100

PIPE DIA	VERTICAL BENDS–22.5°		
	A	B	C
100mm	600	600	600
150mm	600	900	800
200mm	800	1100	900
250mm	1000	1300	1000

PIPE DIA	VERTICAL BENDS–11.25°		
	A	B	C
100mm	500	500	500
150mm	600	700	600
200mm	600	900	800
250mm	700	1100	800



A = WIDTH OF ANCHOR BLOCK

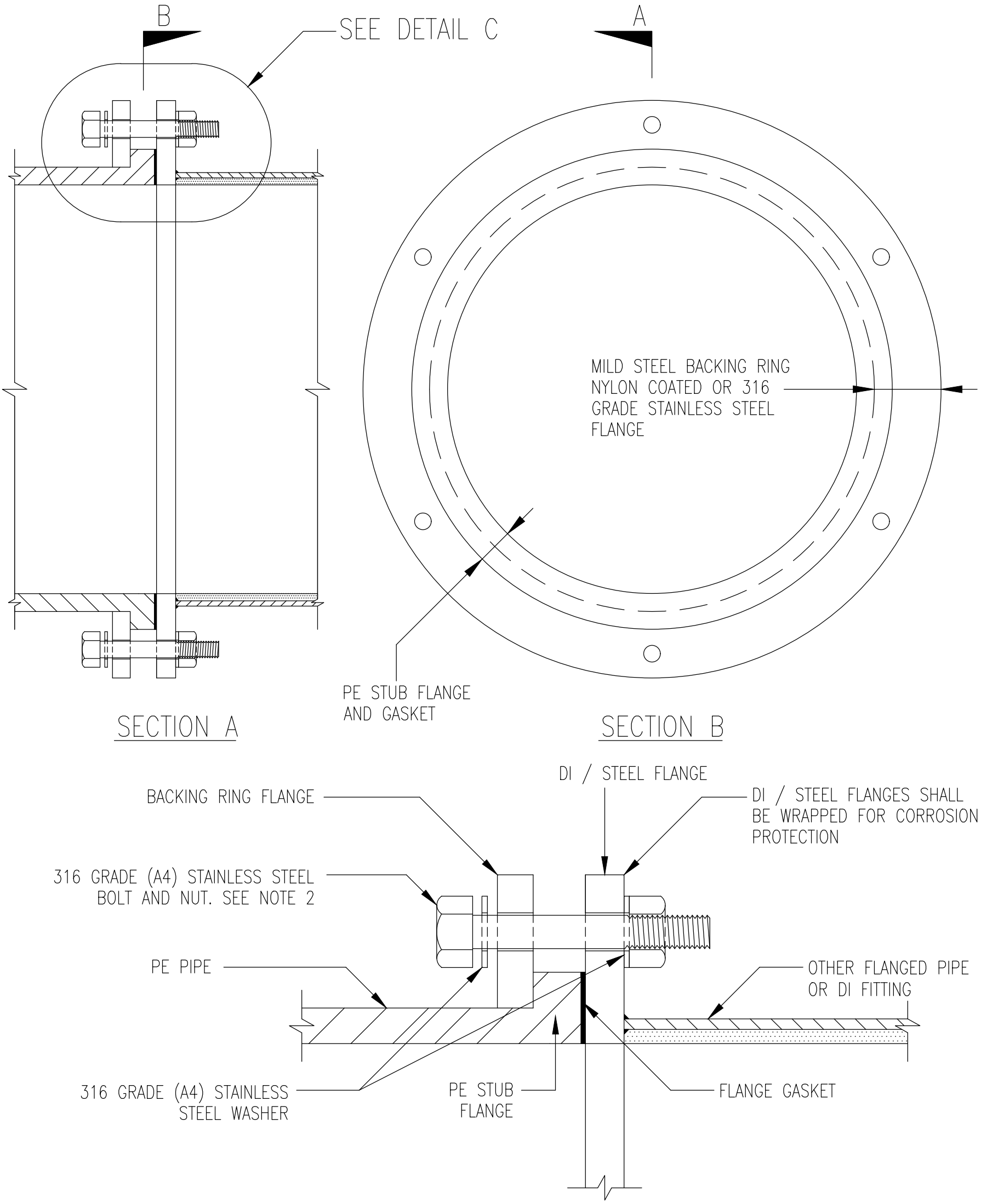
ANCHOR BLOCKS AT BENDS IN VERTICAL PLANE

VERTICAL SECTION

Watercare

THRUST BLOCK DETAILS REDUCERS AND VERTICAL BENDS

SCALE:	N.T.S.
ISSUE DATE:	18–08–2025
DWG No.	2010069.015C
REFERENCE No.	WS 10



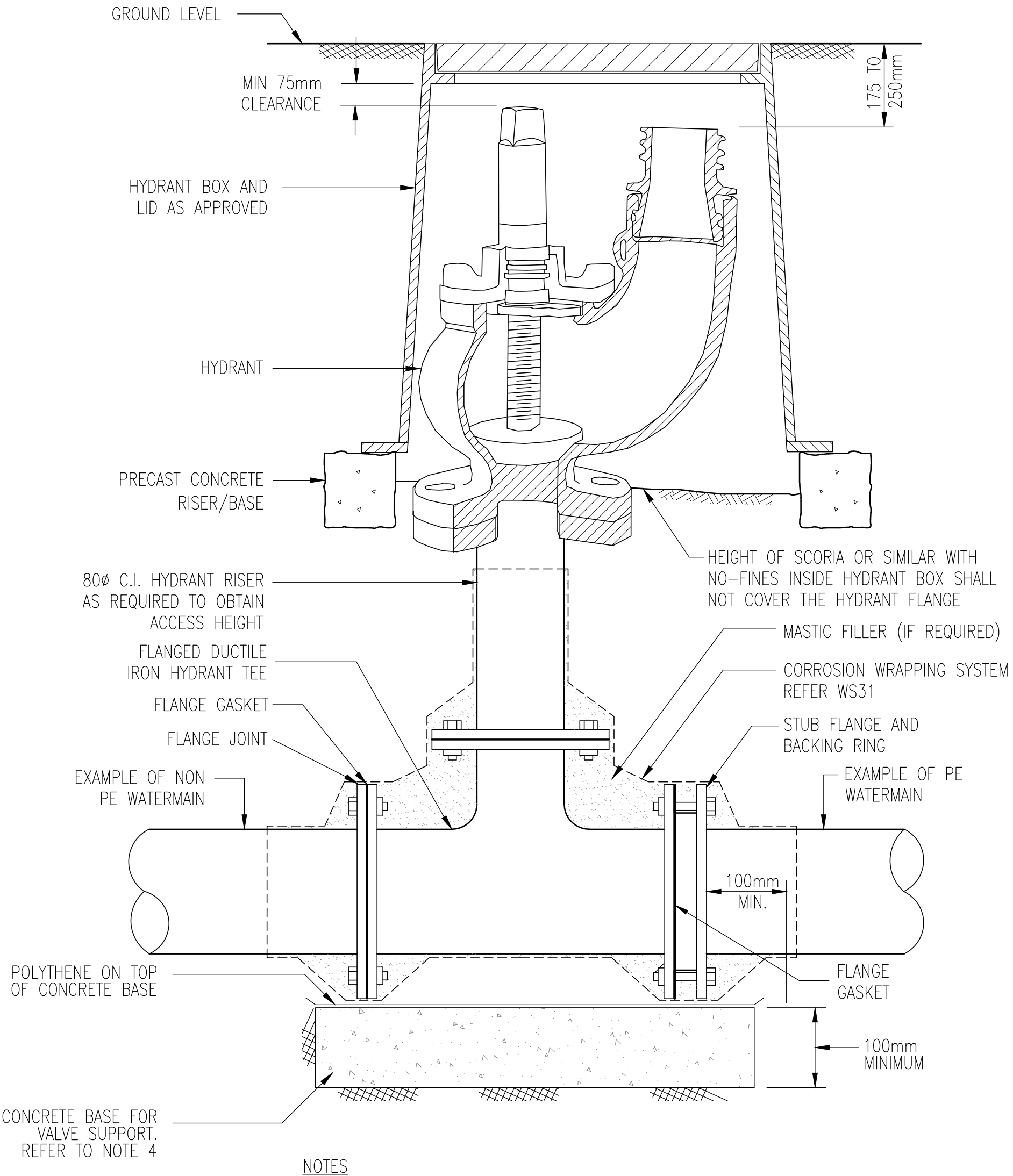
NOTES :

1. WHERE STUB FLANGES ARE USED & STUB FLANGE MACHINED TO FIT, CALCULATIONS MUST SHOW MAX. ALLOWABLE OPERATING PRESSURE IS MET.
2. WHEN USING UNCOATED MILD STEEL FLANGES THE STAINLESS STEEL BOLTS MUST BE ISOLATED WITH AN APPROPRIATE SLEEVE TO PREVENT GALVANIC CORROSION.
3. BOLT ASSEMBLIES MUST BE TO WATERCARE'S MECHANICAL CONSTRUCTION STANDARD.
4. FOR FLANGE ARRANGEMENT AND WRAPPING DETAILS REFER WS31.

Watercare

FLANGE CONNECTION DETAIL PE MAIN TO OTHER

SCALE:	N.T.S.
ISSUE DATE:	18–08–2025
DWG No.	2010069.034C
REFERENCE No.	WS 11



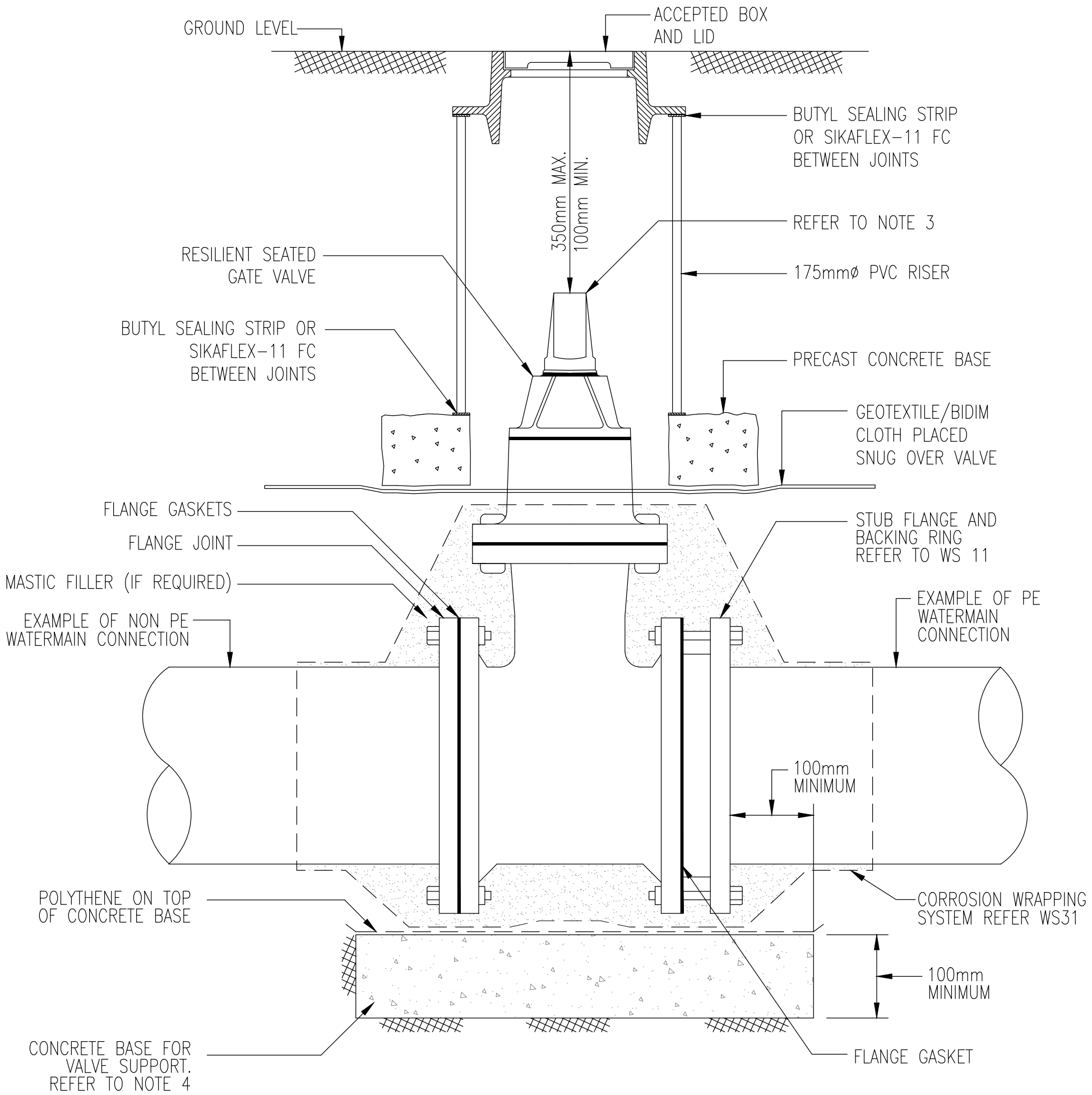
NOTES

1. THE HYDRANT BOX SHALL BE SPACED TO PROVIDE CLEAR ACCESS TO THE VALVE SPINDLE AND OUTLET.
2. FOR TYPICAL NOTES ON FLANGE BOLTING REFER TO WS11.
3. ALL FLANGES AND FITTINGS SHALL BE WRAPPED WITH SUITABLE CORROSION PROTECTION WRAPPING TO THE MANUFACTURERS REQUIREMENTS. REFER WS31.
4. CONCRETE SUPPORT TO BE PROVIDED UNDER HYDRANT TEE. REFER WS9.
5. PIPE BEDDING SHALL BE HOLLOWED OUT UNDER FLANGES TO ENABLE TAPE WRAPPING FOR CORROSION PROTECTION.
6. CORROSION PROTECTION SHALL BE INSTALLED BEFORE CASTING SUPPORTING CONCRETE.

Watercare

HYDRANT DETAIL

SCALE:	N.T.S.
ISSUE DATE:	18-08-2025
DWG No.	2010069.027B
REFERENCE No.	WS 12



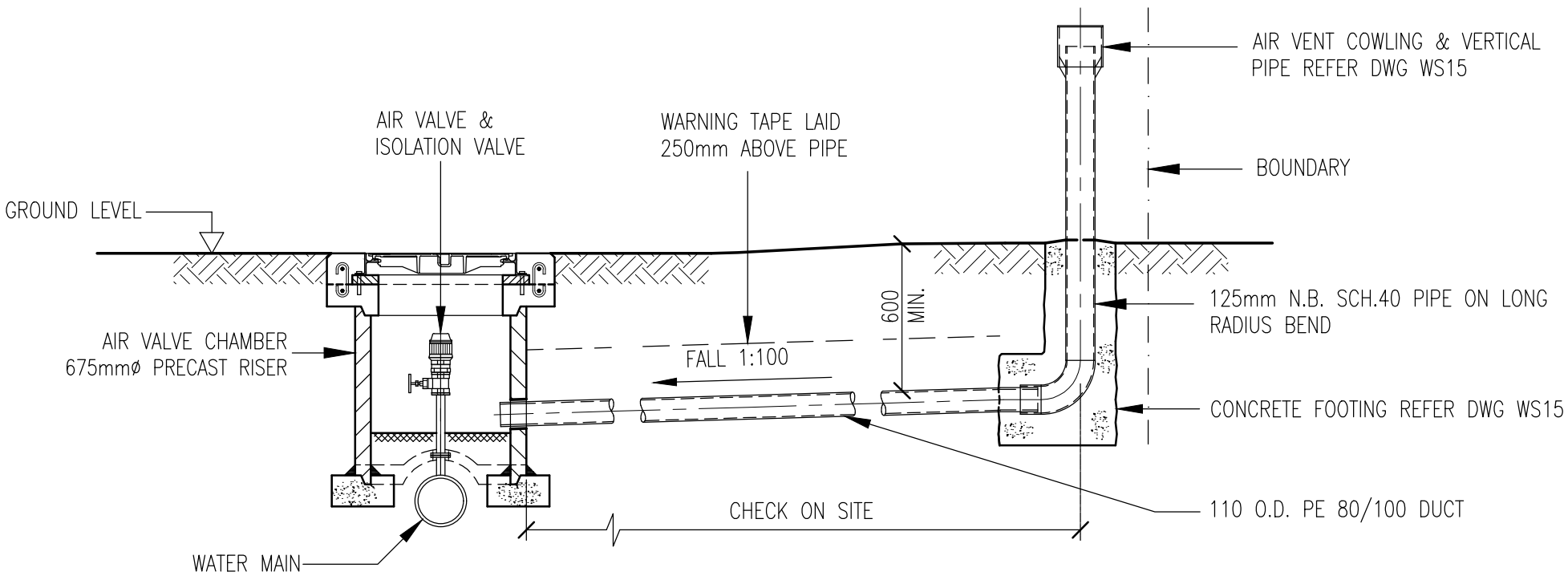
NOTES

1. THE VALVE FLANGES SHALL BE WRAPPED IN APPROVED CORROSION PROTECTED WRAPPING SYSTEM TO THE WRAPPING MANUFACTURERS REQUIREMENTS (REFER TO WS31).
2. REFER WS11 FOR TYPICAL NOTES ON FLANGE BOLTING.
3. AN EXTENSION SPINDLE SHALL BE INCORPERATED AS REQUIRED TO ENSURE THE TOP OF THE SPINDLE IS NO MORE THAN 350mm BELOW THE FINISHED SURFACE LEVEL.
4. FOR VALVES 150mm AND GREATER THE VALVE SHALL BE SUPPORTED ON A IN–SITU CAST CONCRETE BASE OF SUITABLE DIMENSION TO PREVENT ANY LOADS TRANSFERED TO THE PIPE.
5. WHERE RESTRAINED PIPE JOINTS TRANSITIONS TO UNRESTRAINED, THRUST BLOCK IS REQUIRED. FOR CALCULATION REFER WS9, TEE JUNCTIONS AND END CAPS.
6. PIPE BEDDING SHALL BE HOLLOWED OUT UNDER FLANGES TO ENABLE TAPE WRAPPING FOR CORROSION PROTECTION.

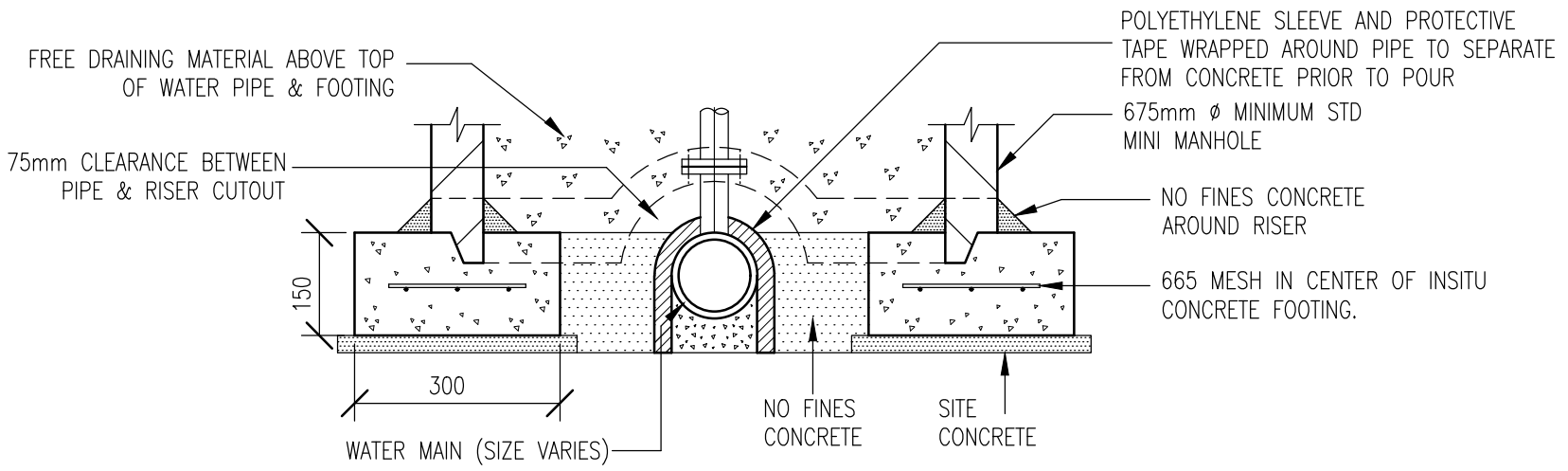
Watercare

FLANGED SLUICE VALVE DETAIL

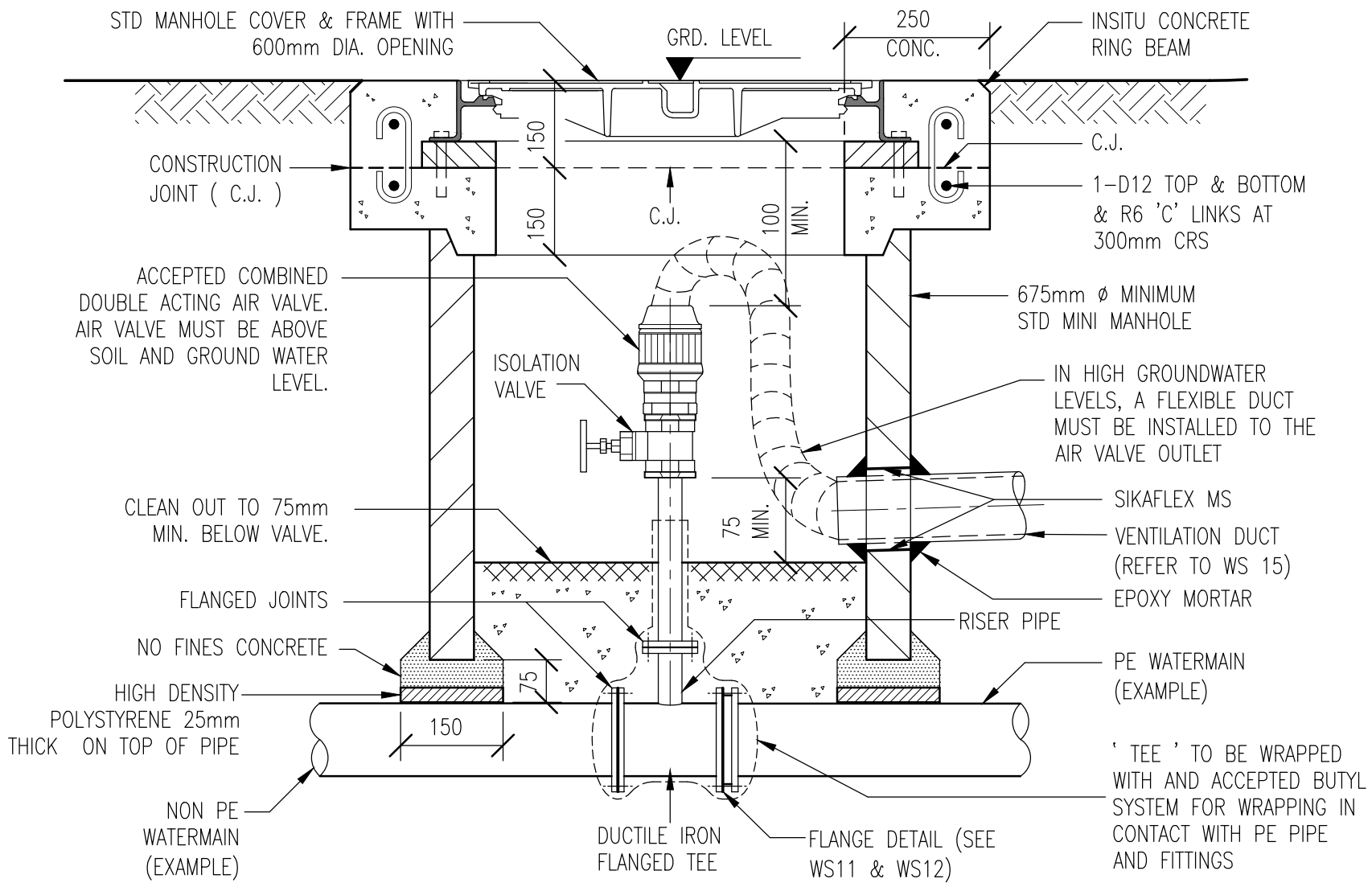
SCALE:	N.T.S.
ISSUE DATE:	18–08–2025
DWG No.	2010069.029C
REFERENCE No.	WS 13



AIR VALVE CHAMBER VENTILATION PIPEWORK



SECTION A



STANDARD AIR RELEASE VALVE & VALVE CHAMBER DETAIL

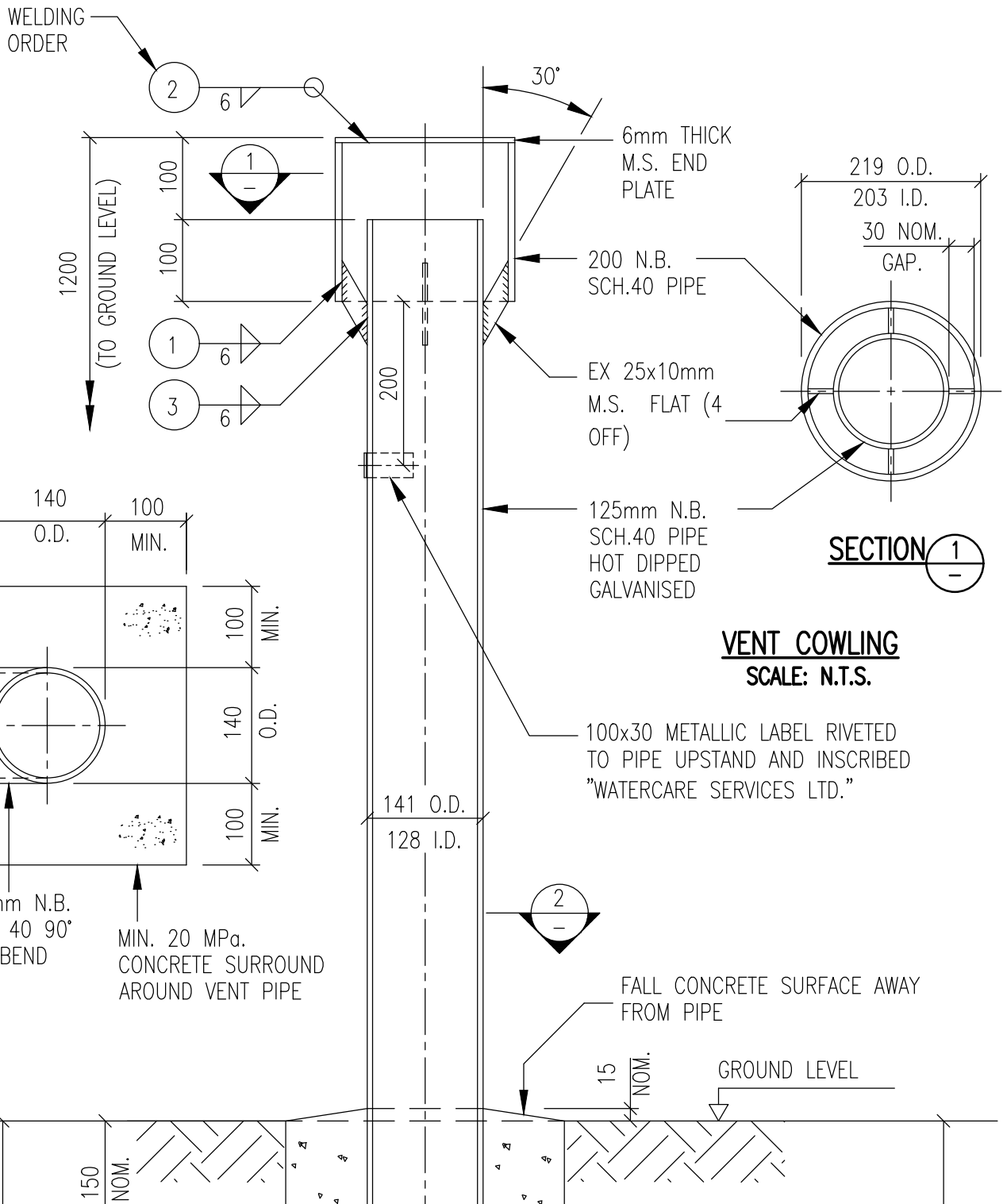
Watercare

AIR RELEASE VALVE AND CHAMBER DETAIL

SCALE:	N.T.S.
ISSUE DATE:	18–08–2025
DWG No.	2010069.031D
REFERENCE No.	WS 14

NOTES

1. FOR AIR RELEASE VALVE CHAMBER REFER DWG WS 14.
2. PLACE EPOXY MORTAR AROUND VENT PIPE AT AIR VALVE CHAMBER CONCRETE WALL.
3. NOTATION:
   C.O.S. = CHECK ON SITE
   N.T.S. = NOT TO SCALE
   O.D. = OVERALL DIAMETER
4. ALL STEEL PIPEWORK & VENT COWLING TO BE HOT DIP GALVANISED AFTER FABRICATION IS COMPLETE.
5. THE AIR VENT MUST BE PLACED 500mm FROM THE BOUNDARY



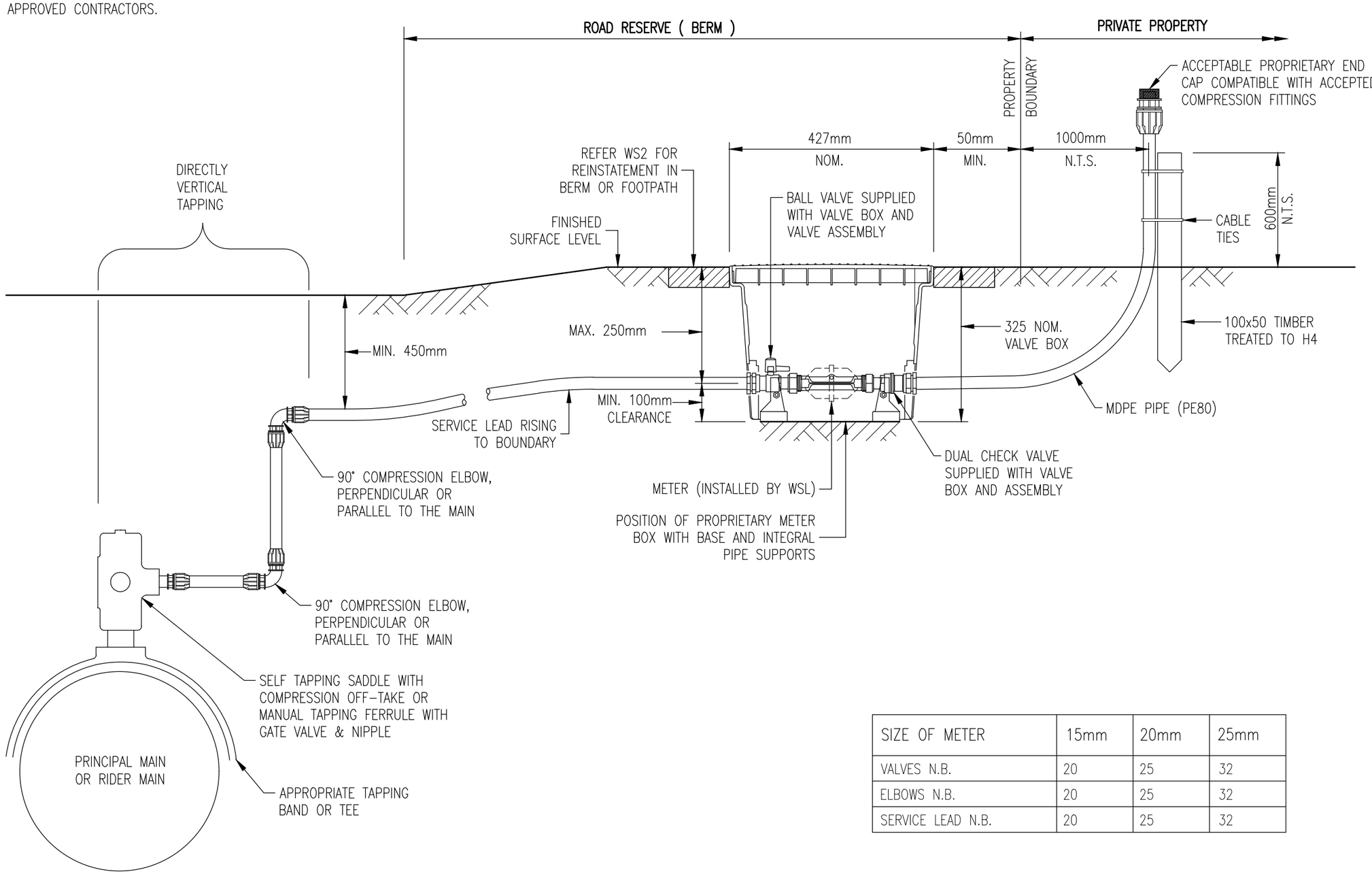
FOOTING & PIPE DETAIL

AIR VENT COWLING, VERTICAL STEEL PIPE FABRICATION DETAIL & CONCRETE FOOTING

SCALE:	N.T.S.
ISSUE DATE:	18–08–2025
DWG No.	2010069.043C
REFERENCE No.	WS 15

NOTES:

1. ALL TAPPING CONNECTIONS TO WATERARE PRINCIPAL MAIN OR RIDER MAINS SHALL BE CARRIED OUT BY WATERCARE APPROVED CONTRACTORS.

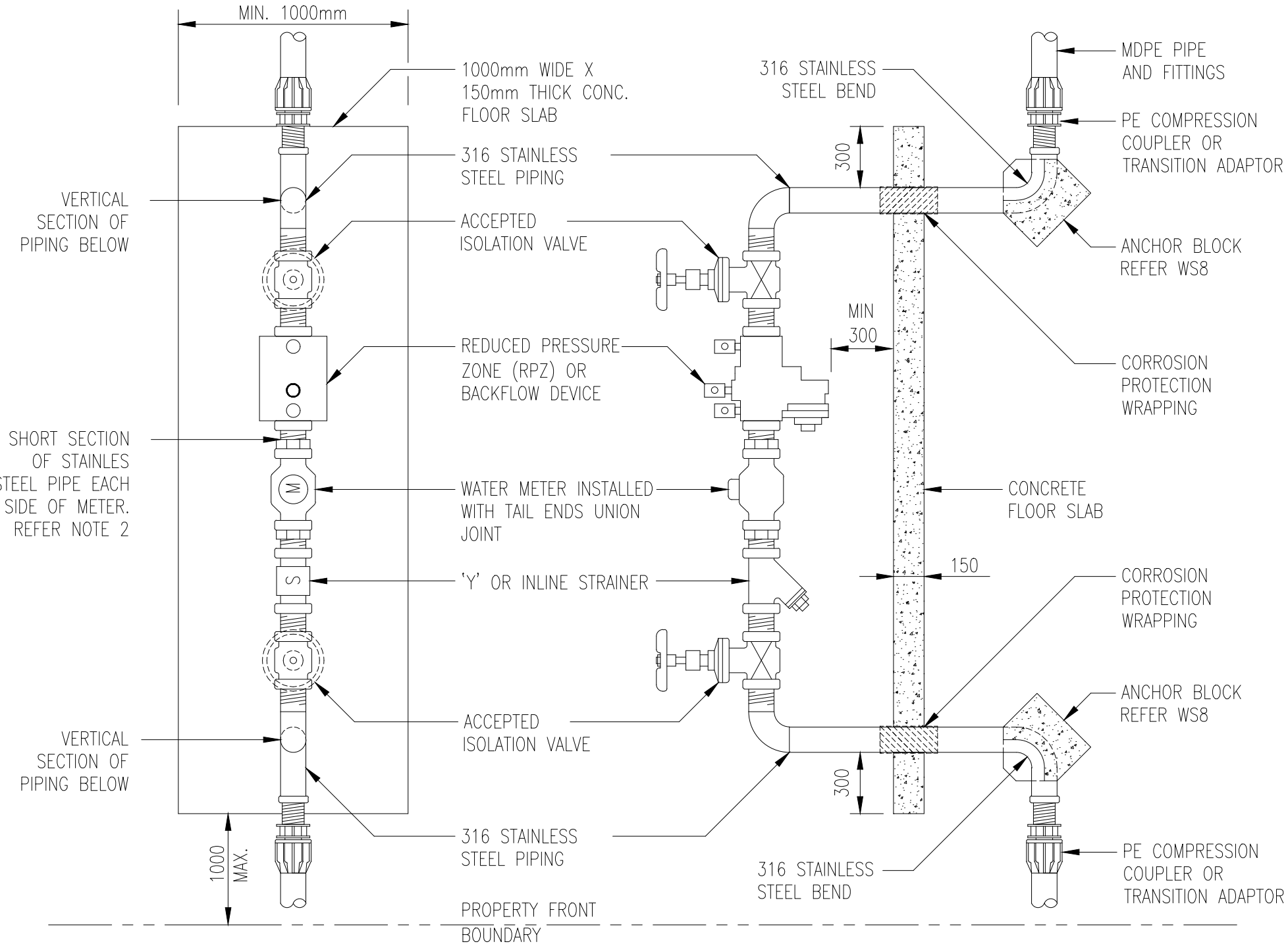


SIZE OF METER	15mm	20mm	25mm
VALVES N.B.	20	25	32
ELBOWS N.B.	20	25	32
SERVICE LEAD N.B.	20	25	32

Watercare

DOMESTIC WATER METER CONNECTION
15mm, 20mm & 25mm DIAMETER

SCALE:	N.T.S.
ISSUE DATE:	18–08–2025
DWG No.	2010069.012G
REFERENCE No.	WS 18



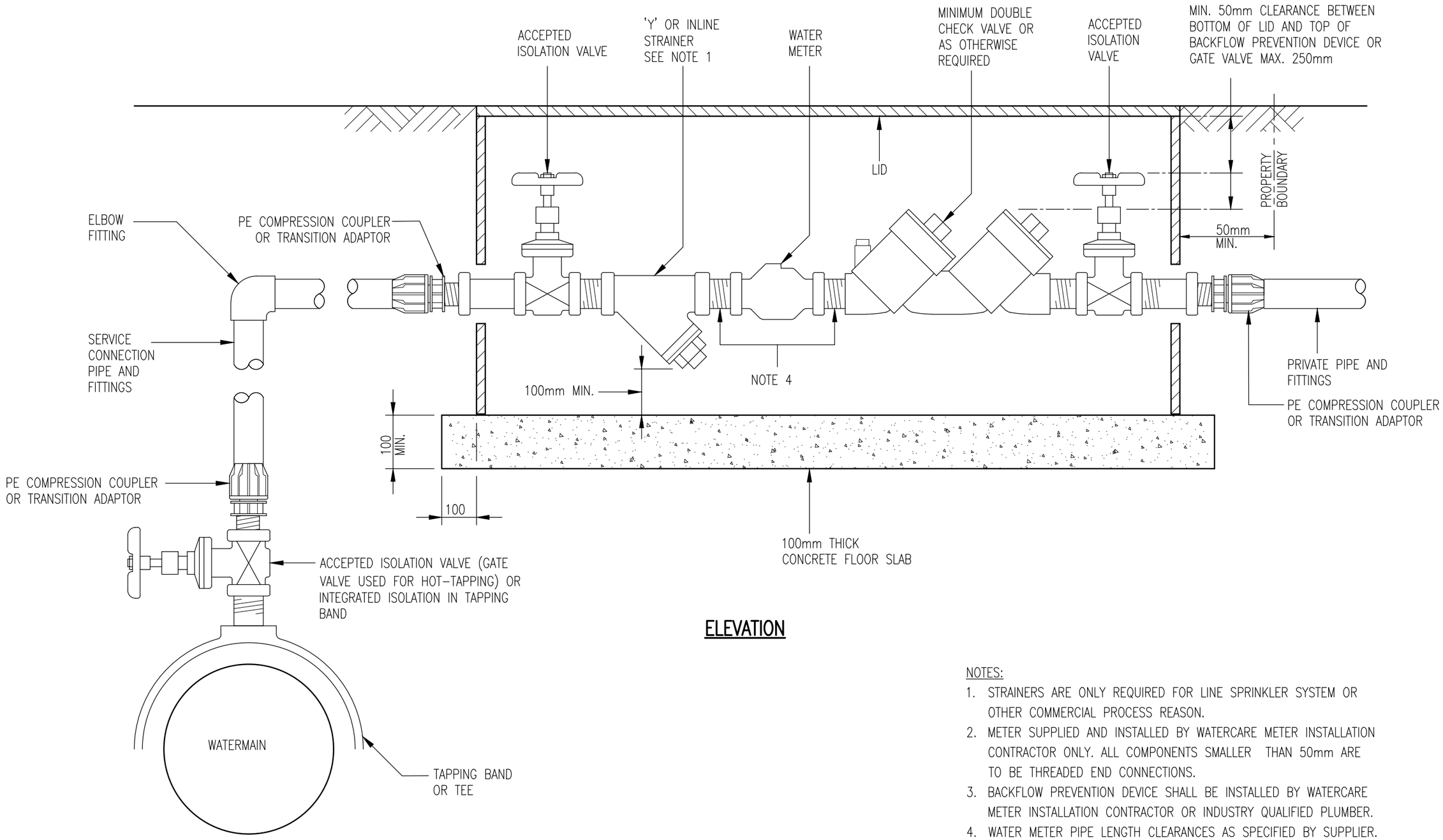
NOTES:

1. HIGH HAZARD INSTALLATIONS WITH RPZ BACKFLOW DEVICES SHALL BE INSTALLED ABOVE GROUND.
2. WATER METER TO BE SUPPLIED AND INSTALLED BY WATERCARE METER INSTALLATION CONTRACTOR ONLY. WATER METER PIPE LENGTH CLEARANCE AS SPECIFIED BY SUPPLIER.
3. BACKFLOW PREVENTION DEVICE SHALL BE INSTALLED BY WATERCARE METER INSTALLATION CONTRACTOR.
4. ALL COMPONENTS ARE TO BE THREADED CONNECTIONS.
5. VALVES TO BE CHAINED WITH A PADLOCK OR ASSEMBLY TO BE HOUSED IN A LOCKABLE PROTECTIVE CAGE.
6. FOR LOW OR MEDIUM RISK REFER WS20.
7. FOR 50mm AND LARGER SUPPLY REFER TO WS24 AND WS25.

Watercare

WATER METER AND BACKFLOW PREVENTION DEVICE FOR HIGH HAZARD LESS THAN 50mm

SCALE:	N.T.S.
ISSUE DATE:	18-08-2025
DWG No.	2010069.017F
REFERENCE No.	WS 19



ELEVATION

NOTES:

1. STRAINERS ARE ONLY REQUIRED FOR LINE SPRINKLER SYSTEM OR OTHER COMMERCIAL PROCESS REASON.
2. METER SUPPLIED AND INSTALLED BY WATERCARE METER INSTALLATION CONTRACTOR ONLY. ALL COMPONENTS SMALLER THAN 50mm ARE TO BE THREADED END CONNECTIONS.
3. BACKFLOW PREVENTION DEVICE SHALL BE INSTALLED BY WATERCARE METER INSTALLATION CONTRACTOR OR INDUSTRY QUALIFIED PLUMBER.
4. WATER METER PIPE LENGTH CLEARANCES AS SPECIFIED BY SUPPLIER. INSTALLED WITH METER END TAILS OR UNION JOINT.

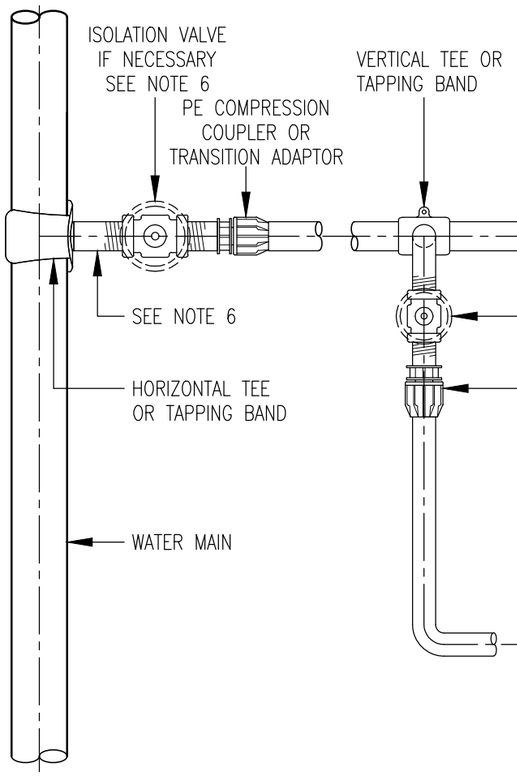
Watercare

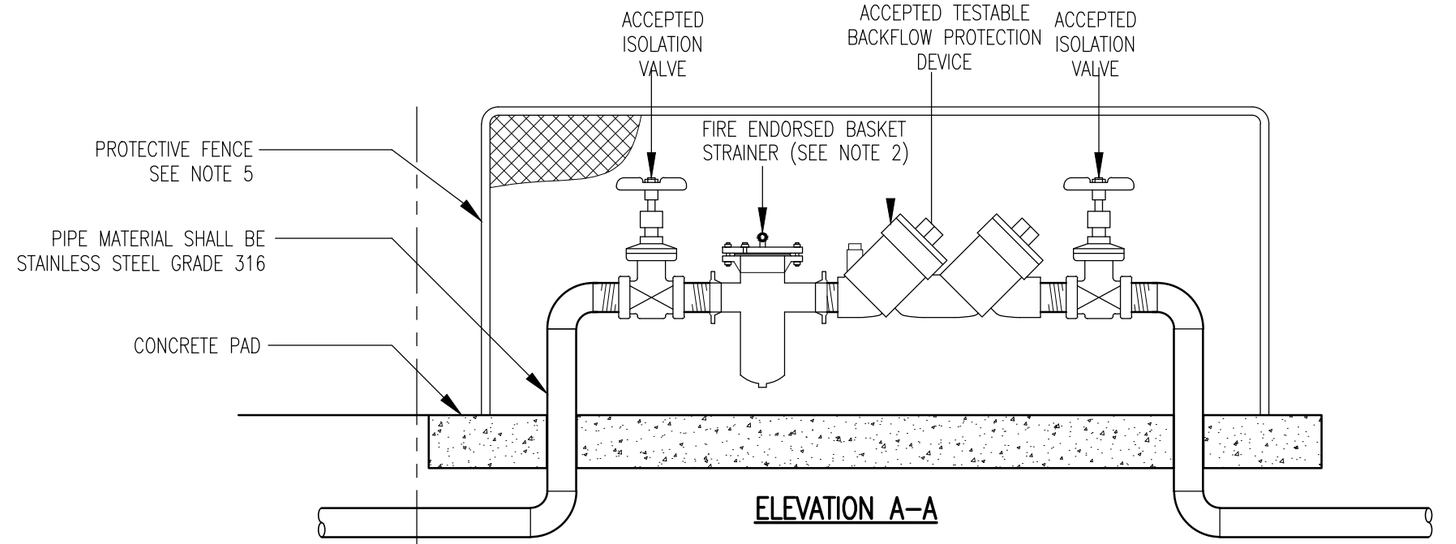
WATER METER AND BACKFLOW FOR LOW TO MEDIUM HAZARD LESS THAN 50mm

SCALE:	N.T.S.
ISSUE DATE:	18–08–2025
DWG No.	2010069.018F
REFERENCE No.	WS 20

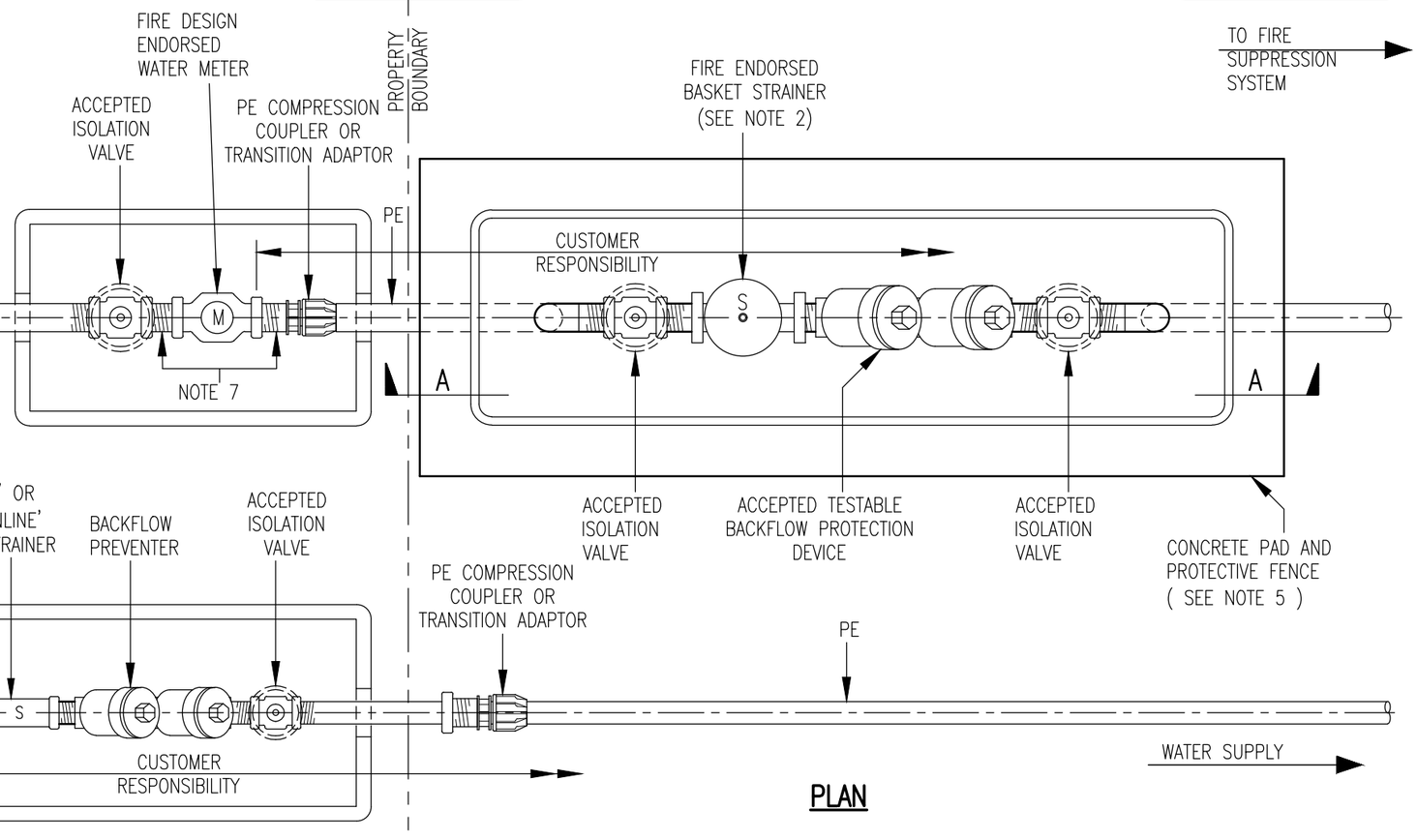
NOTES:

1. PRIVATE FIRE SUPPLIES SHALL BE METERED. THE METER MUST BE SIZED BY A FIRE ENGINEER
2. STRAINER MAY BE REMOVED IF REQUIRED BY FIRE SYSTEM DESIGNER.
3. FIRE CONNECTION PIPE MATERIAL SHALL BE STAINLESS STEEL GRADE 316 FOR ABOVE GROUND.
4. 50mm AND ABOVE SHALL BE FLANGED, REFER TO WS24 AND WS25.
5. THE BACKFLOW PREVENTION ASSEMBLY IS PREFERRED IN PUBLIC LOCATION. SPECIAL AGREEMENT WITH WATERCARE IS REQUIRED TO INSTALL ON PRIVATE PROPERTY. THE ASSEMBLY MAY BE INSTALLED BELOW GROUND, ONLY FOR LOW TO MEDIUM HAZARD INSTALLATIONS.
6. WHERE THE MAIN IS > 5m TO THE BOUNDARY AN ADDITIONAL ISOLATION VALVE ON THE CONNECTION TEE IS REQUIRED.
7. WATER METER PIPE LENGTH CLEARANCES AS SPECIFIED BY SUPPLIER. INSTALLED WITH METER TAILS OR UNION JOINT.
8. BACKFLOW PREVENTION SHOWN INSIDE PRIVATE PROPERTY WHEN INSUFFICIENT BERM SPACE.
9. IN THE FIRE LINE, A BASKET STRAINER RECOMMENDED OVER A 'Y' STRAINER TO REDUCE THE RISK OF CLOGGING.
10. FIRE SUPPLIES SHALL BE METERED AND METER MUST BE SIZED BY A FIRE ENGINEER.





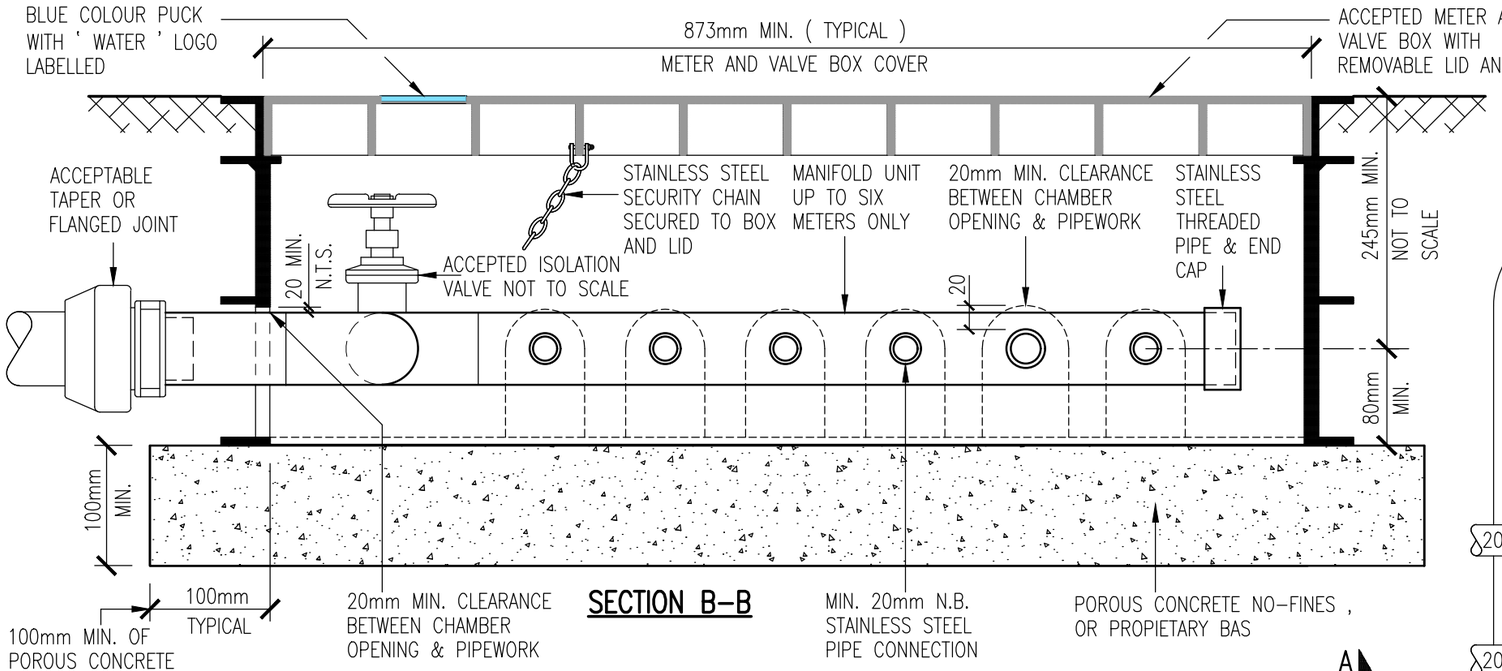
ELEVATION A–A



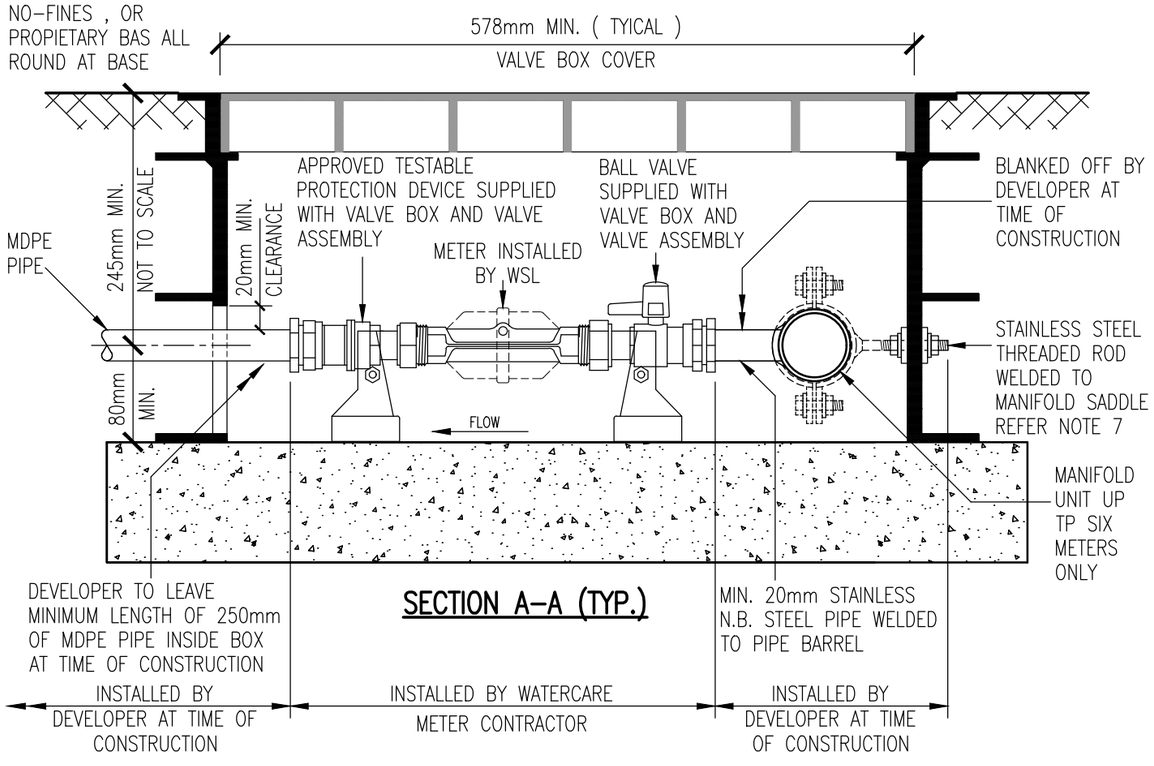
PLAN

FIRE SUPPRESSION SUPPLY AND SEPARATE WATER SUPPLY LESS THAN 50mm

SCALE:	N.T.S.
ISSUE DATE:	18–08–2025
DWG No.	2010069.019H
REFERENCE No.	WS 21



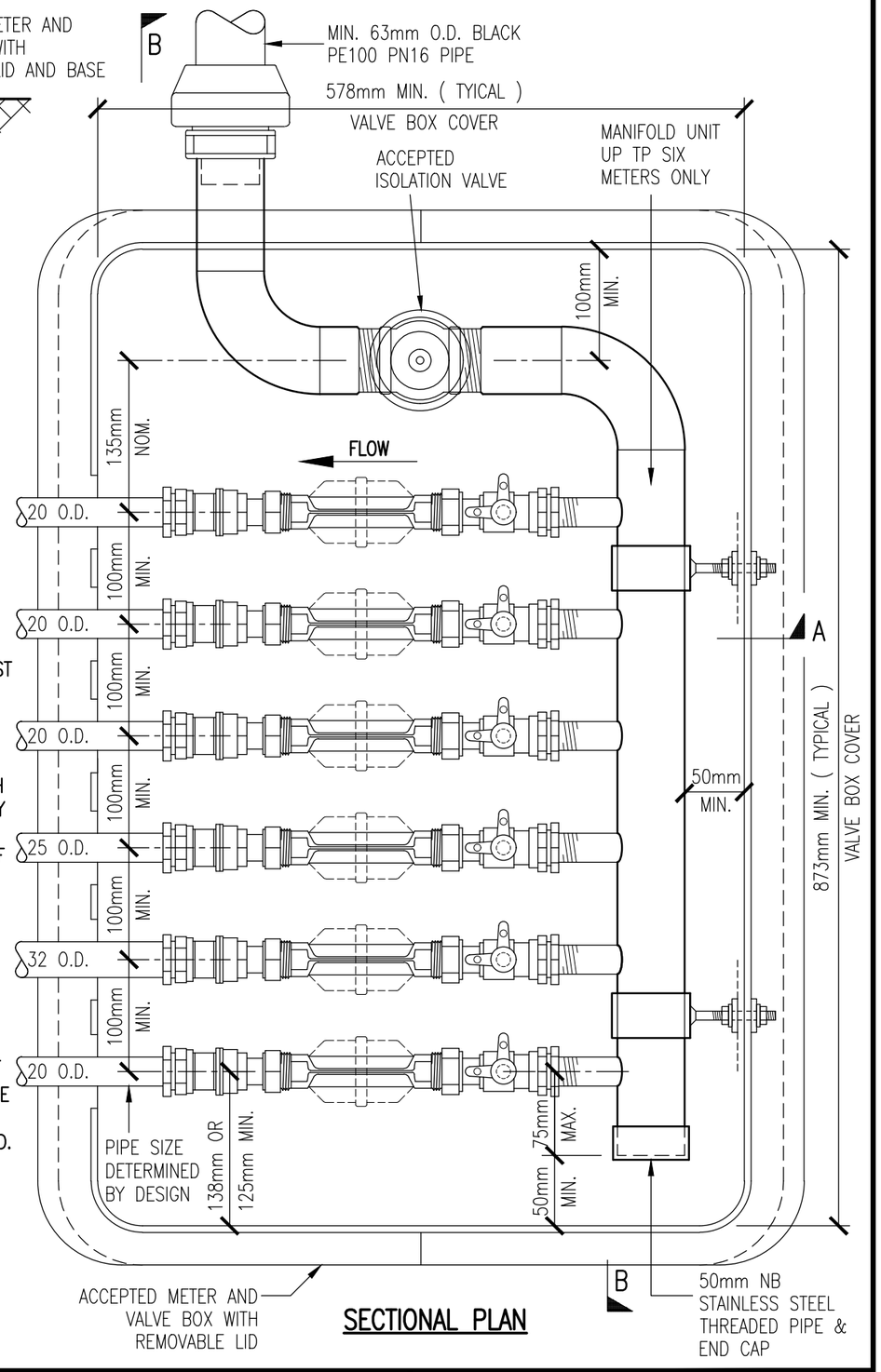
SECTION B–B



SECTION A–A (TYP.)

NOTES:

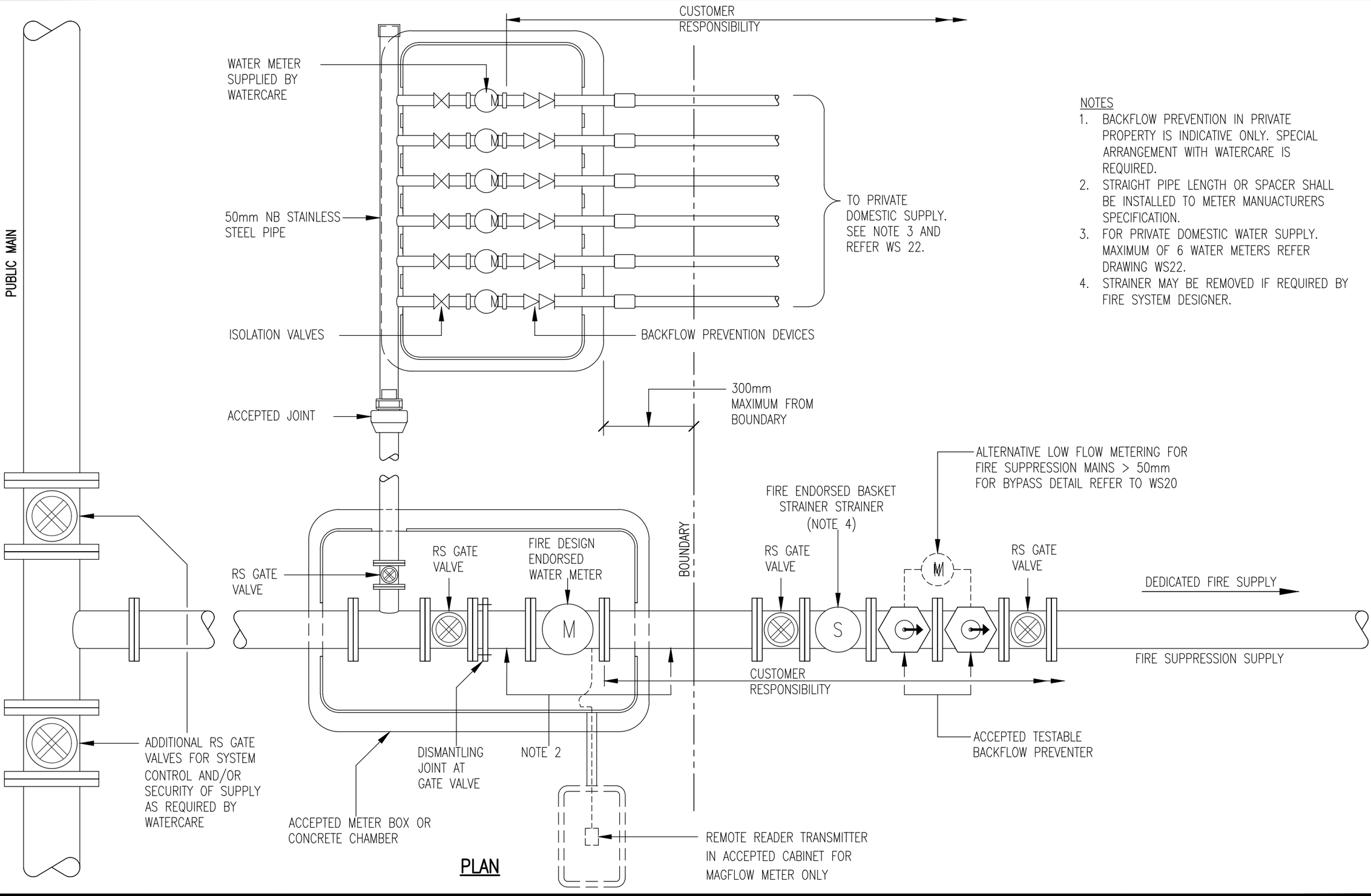
1. IN SOFT SOILS THE BASE MUST BE STABALISED WITH SITE CONCRETE OR CONCRETE BLOCKS TO PREVENT SUBSIDENCE.
2. ALL FITTINGS TO COMPLY WITH WATERCARES MATERIAL SUPPLY STANDARD.
3. BANK TO HAVE A MAXIMUM OF 6 WATER METERS.
4. ABBREVIATIONS :
   O.D. = OUTSIDE DIAMETER
   MIN. = MINIMUM
   TYP. = TYPICAL
5. NUMBERED TAGS TO BE PROVIDED ON EACH CONNECTION STARTING WITH UNIT 1 OR THE (LOWEST UNIT NUMBER) FROM ONE SIDE. THE TAGS SHALL BE CLEARLY MARKED AND FIRMLY ATTACHED.
6. REFER TO WS18 FOR TYPICAL DOMESTIC METER ASSEMBLY.
7. 8mm DIA. STAINLESS STEEL THREADED ROD WELDED TO MANIFOLD SADDLE WITH NUTS AND WASHERS EACH SIDE OF VALVE BOX WALL.



SECTIONAL PLAN

DOMESTIC MANIFOLD METER BANK LESS THAN 50mm

SCALE:	N.T.S.
ISSUE DATE:	18–08–2025
DWG No.	2010069.021D
REFERENCE No.	WS 22



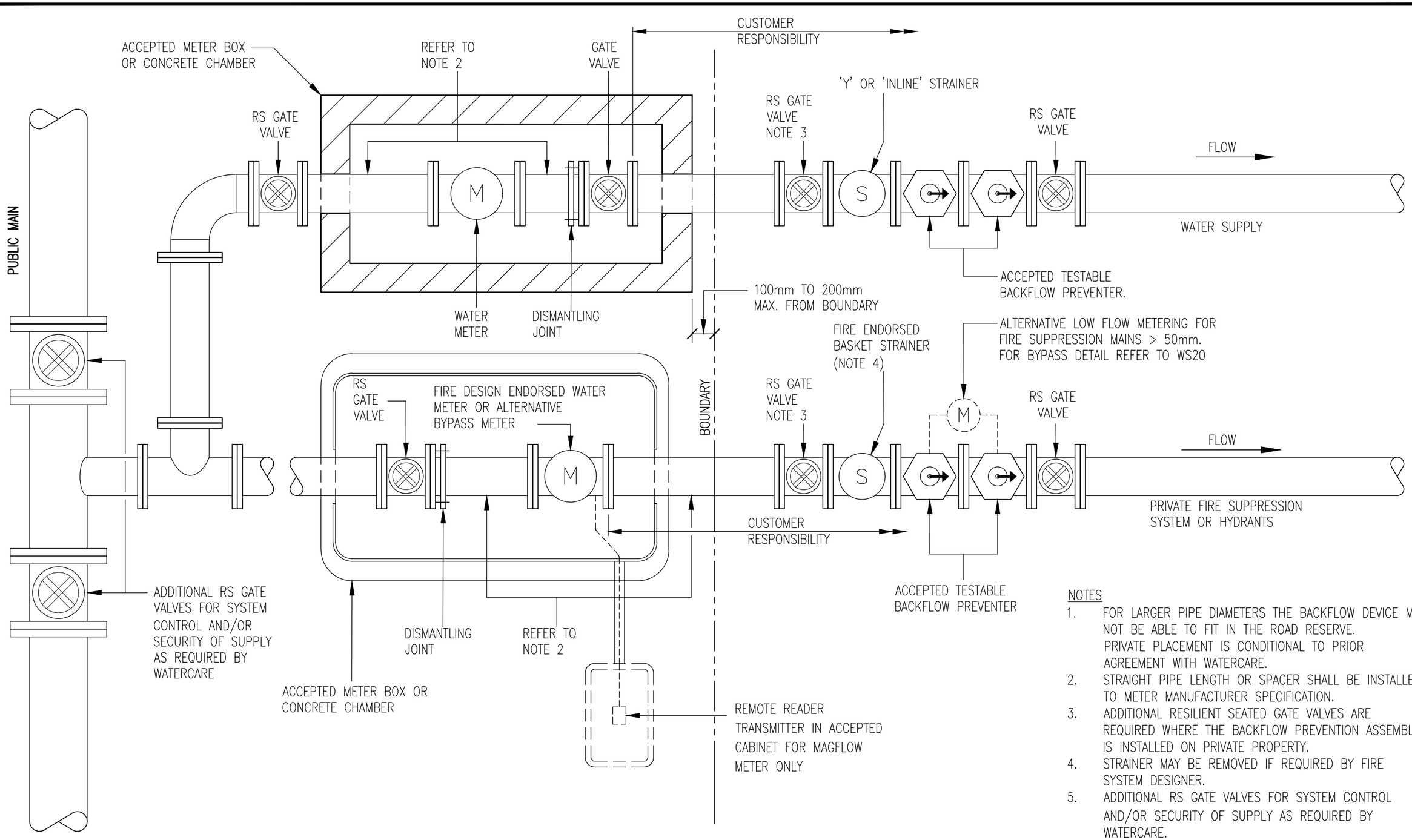
NOTES

1. BACKFLOW PREVENTION IN PRIVATE PROPERTY IS INDICATIVE ONLY. SPECIAL ARRANGEMENT WITH WATERCARE IS REQUIRED.
2. STRAIGHT PIPE LENGTH OR SPACER SHALL BE INSTALLED TO METER MANUACTURERS SPECIFICATION.
3. FOR PRIVATE DOMESTIC WATER SUPPLY. MAXIMUM OF 6 WATER METERS REFER DRAWING WS22.
4. STRAINER MAY BE REMOVED IF REQUIRED BY FIRE SYSTEM DESIGNER.

Watercare

FIRE SUPPRESSION SUPPLY AND SEPARATE DOMESTIC METER BANK

SCALE:	N.T.S.
ISSUE DATE:	18–08–2025
DWG No.	2010069.044E
REFERENCE No.	WS 23



PLAN

NOTES

1. FOR LARGER PIPE DIAMETERS THE BACKFLOW DEVICE MAY NOT BE ABLE TO FIT IN THE ROAD RESERVE. PRIVATE PLACEMENT IS CONDITIONAL TO PRIOR AGREEMENT WITH WATERCARE.
2. STRAIGHT PIPE LENGTH OR SPACER SHALL BE INSTALLED TO METER MANUFACTURER SPECIFICATION.
3. ADDITIONAL RESILIENT SEATED GATE VALVES ARE REQUIRED WHERE THE BACKFLOW PREVENTION ASSEMBLY IS INSTALLED ON PRIVATE PROPERTY.
4. STRAINER MAY BE REMOVED IF REQUIRED BY FIRE SYSTEM DESIGNER.
5. ADDITIONAL RS GATE VALVES FOR SYSTEM CONTROL AND/OR SECURITY OF SUPPLY AS REQUIRED BY WATERCARE.
6. NO RPZ'S SHALL BE INSTALLED ON DESIGNATED FIRE SUPPLY LINES. THIS WILL ONLY BE CONSIDERED FOR COMBINED SUPPLY LINES.

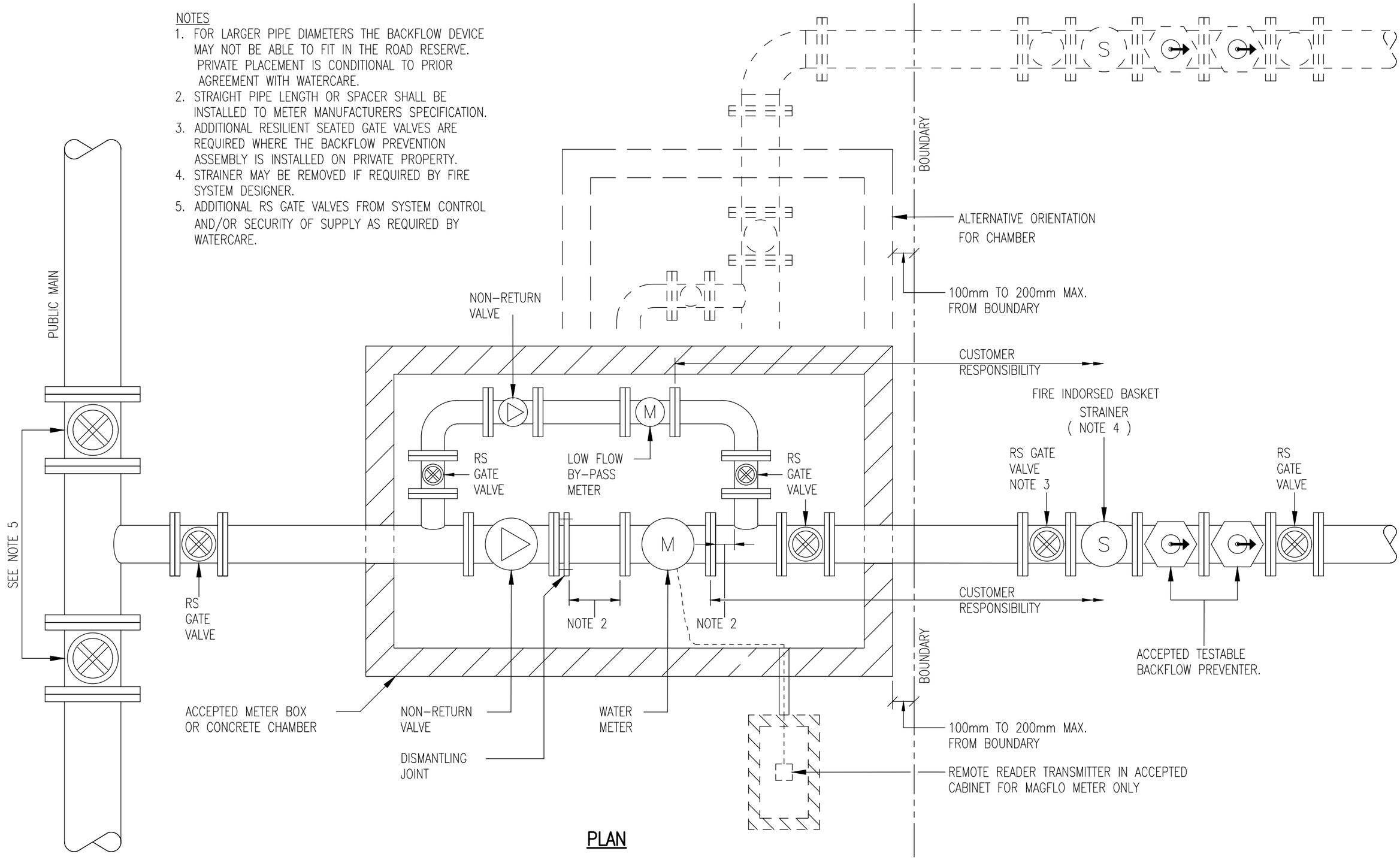
Watercare

FIRE SUPPRESSION SUPPY AND SEPARATE WATER METER 50mm AND ABOVE

SCALE:	N.T.S.
ISSUE DATE:	18–08–2025
DWG No.	2010069.022G
REFERENCE No.	WS 24

NOTES

1. FOR LARGER PIPE DIAMETERS THE BACKFLOW DEVICE MAY NOT BE ABLE TO FIT IN THE ROAD RESERVE. PRIVATE PLACEMENT IS CONDITIONAL TO PRIOR AGREEMENT WITH WATERCARE.
2. STRAIGHT PIPE LENGTH OR SPACER SHALL BE INSTALLED TO METER MANUFACTURERS SPECIFICATION.
3. ADDITIONAL RESILIENT SEATED GATE VALVES ARE REQUIRED WHERE THE BACKFLOW PREVENTION ASSEMBLY IS INSTALLED ON PRIVATE PROPERTY.
4. STRAINER MAY BE REMOVED IF REQUIRED BY FIRE SYSTEM DESIGNER.
5. ADDITIONAL RS GATE VALVES FROM SYSTEM CONTROL AND/OR SECURITY OF SUPPLY AS REQUIRED BY WATERCARE.



PLAN

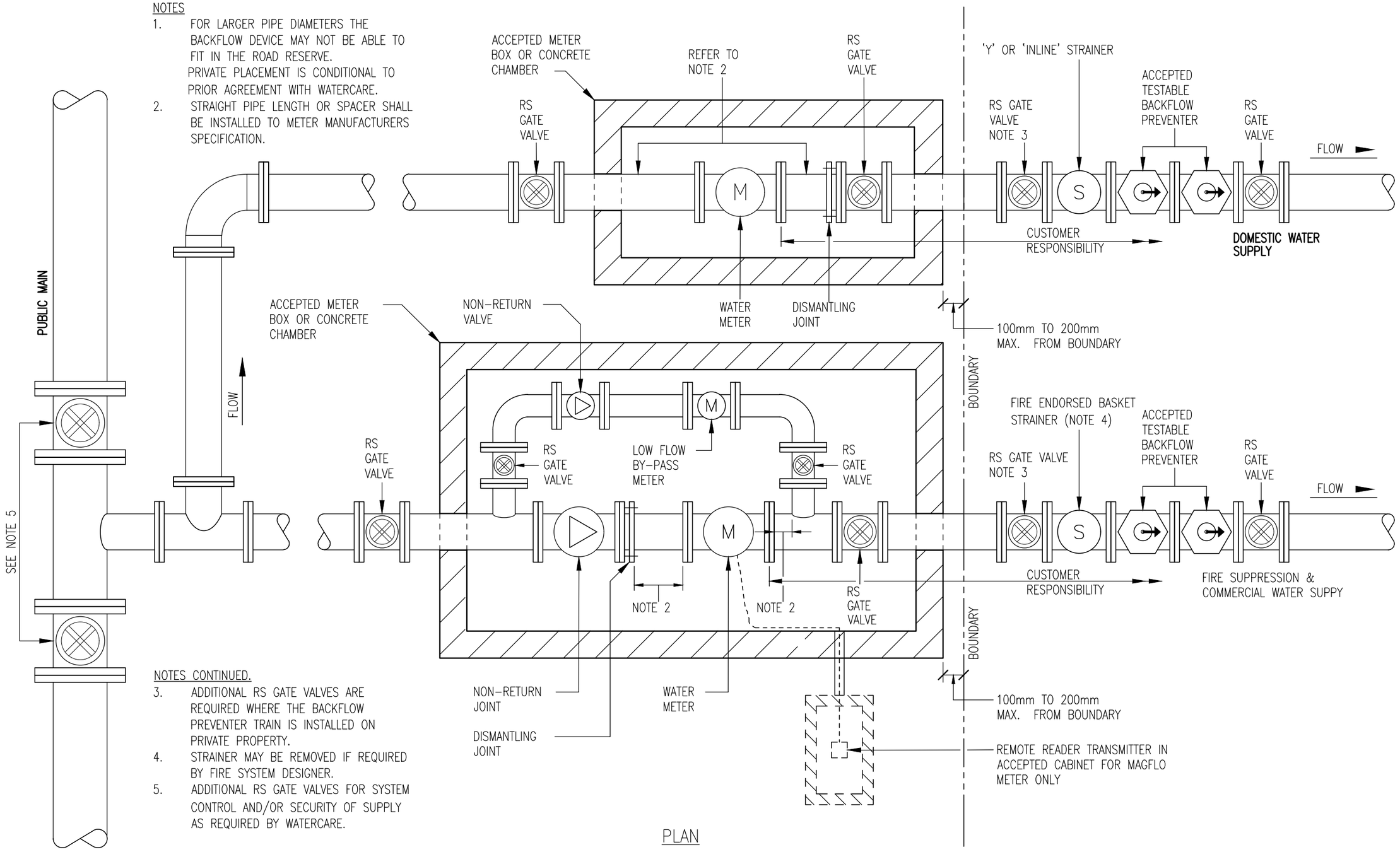
Watercare

COMBINED FIRE SUPPRESSION SUPPLY AND WATER METER 50mm AND ABOVE

SCALE:	N.T.S.
ISSUE DATE:	18-08-2025
DWG No.	2010069.023G
REFERENCE No.	WS 25

NOTES

1. FOR LARGER PIPE DIAMETERS THE BACKFLOW DEVICE MAY NOT BE ABLE TO FIT IN THE ROAD RESERVE. PRIVATE PLACEMENT IS CONDITIONAL TO PRIOR AGREEMENT WITH WATERCARE.
2. STRAIGHT PIPE LENGTH OR SPACER SHALL BE INSTALLED TO METER MANUFACTURERS SPECIFICATION.



NOTES CONTINUED.

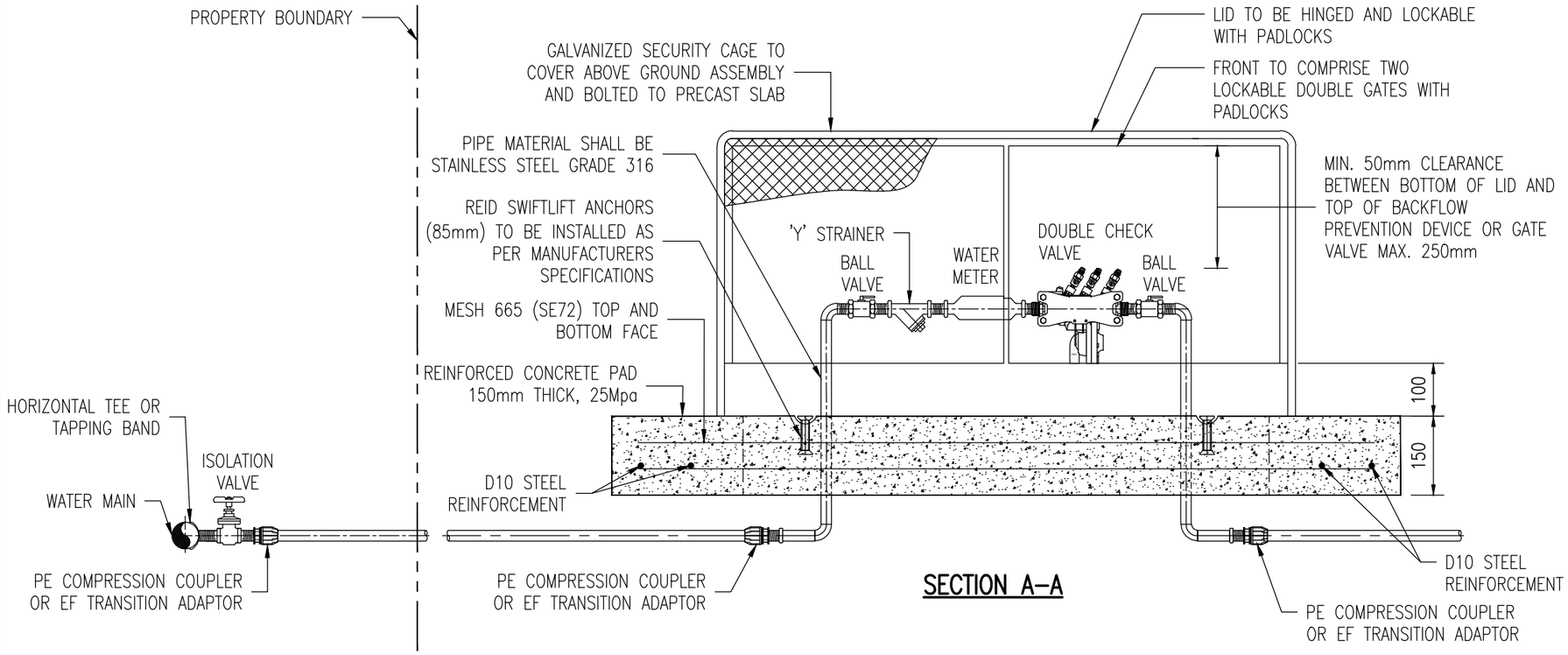
3. ADDITIONAL RS GATE VALVES ARE REQUIRED WHERE THE BACKFLOW PREVENTER TRAIN IS INSTALLED ON PRIVATE PROPERTY.
4. STRAINER MAY BE REMOVED IF REQUIRED BY FIRE SYSTEM DESIGNER.
5. ADDITIONAL RS GATE VALVES FOR SYSTEM CONTROL AND/OR SECURITY OF SUPPLY AS REQUIRED BY WATERCARE.

PLAN

Watercare

COMBINED FIRE SUPPRESSION SUPPLY AND COMMERCIAL WITH SEPARATE DOMESTIC SUPPLY

SCALE:	N.T.S.
ISSUE DATE:	18-08-2025
DWG No.	2010069.045E
REFERENCE No.	WS 26



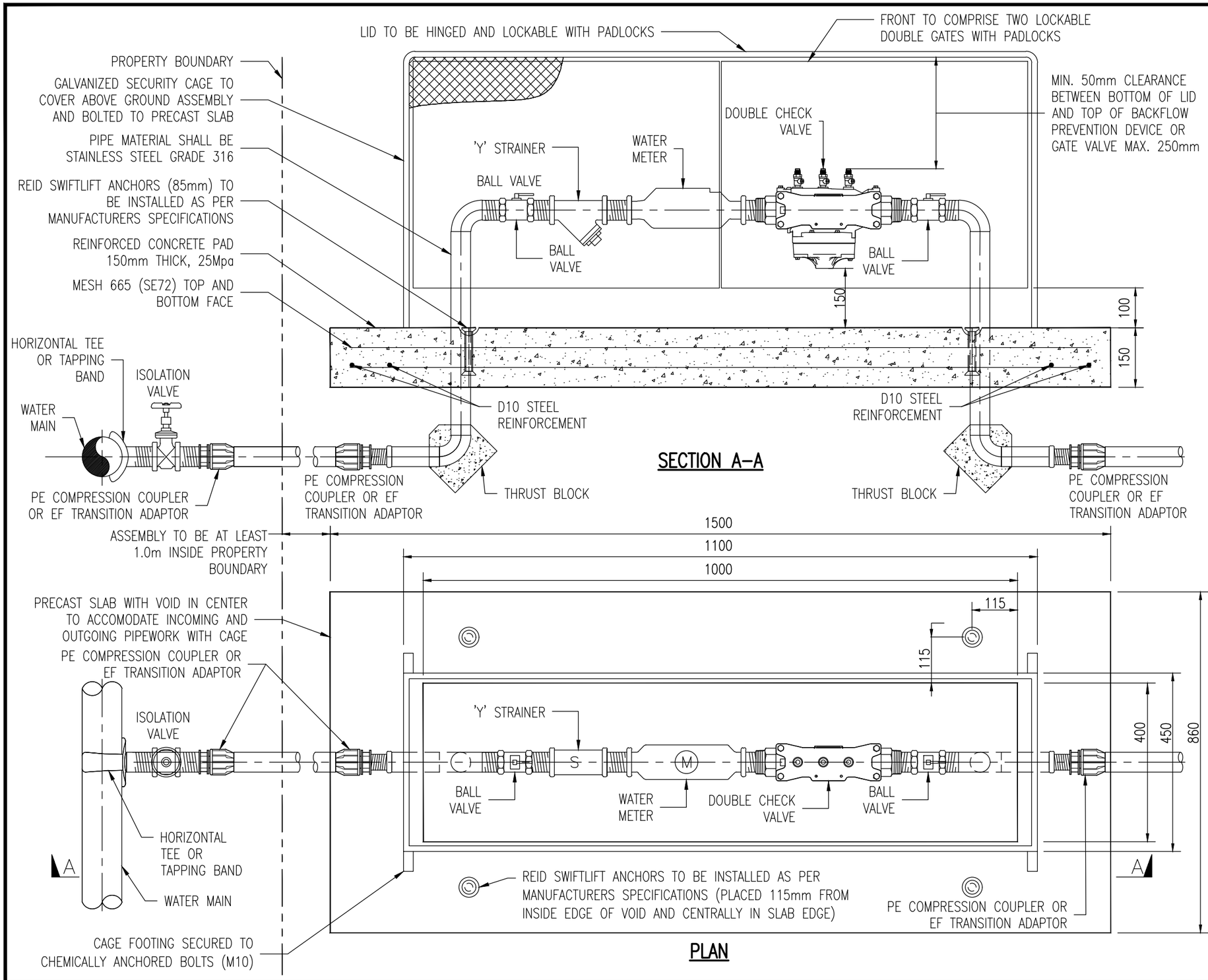
NOTES

1. ALL DIMENSIONS ARE IN "mm" UNLESS STATED OTHERWISE.
2. CONNECTION PIPE MATERIAL SHALL BE STAINLESS STEEL GRADE 316 FOR ABOVE GROUND.
3. ALL FITTINGS TO COMPLY WITH WATERCARE'S MATERIAL SUPPLY STANDARD.
4. FITTINGS SHALL BE MANUFACTURED TO RELEVANT SPECIFICATIONS.
   - –GATE VALVE AS PER AS1628 OR BS 5154.
   - –STRAINER AS PER 3688.
   - –WATER METER AS PER AS 3565.1.
   - –BACKFLOW PREVENTION DEVICE AS PER AS/NZS 2845.1.
5. A TESTABLE BACKFLOW DEVICE SHALL BE INSTALLED ON ALL TEMPORARY CONSTRUCTION METER CONNECTIONS.
6. PRIOR TO CONNECTION BEING SUPPLIED, THE SITE SHALL BE ASSESSED TO DETERMINE THE APPROPRIATE HAZARD CLASSIFICATION AND BACKFLOW PREVENTION DEVICE.
7. THE TEMPORARY CONSTRUCTION METER ASSEMBLY SHALL BE INSTALLED UP TO 1.0m INSIDE THE PROPERTY BEING SERVICED.
8. THE ASSEMBLY SHALL BE SUPPLIED AND INSTALLED BY WATERCARE'S APPROVED CONTRACTOR ONLY.
9. WATER METER PIPE LENGTH CLEARANCES AS SPECIFIED BY SUPPLIER. INSTALLED WITH METER TAILS OR UNION JOINT.
10. THE ASSEMBLY IS TO BE HOUSED IN A LOCKABLE PROTECTIVE CAGE WITH EXCLUSIVE ACCESS TO WATERCARE.
11. THE LOCKABLE CAGE SHALL HAVE TOP AND FRONT HINGED ACCESS AND BE MANUFACTURED FROM HOT DIPPED GALVANIZED STEEL.
12. ALL COMPONENTS ARE TO BE THREADED CONNECTIONS.
13. TEMPORARY CONNECTIONS: A MECHANICAL TAPPING BAND SHALL BE INSTALLED OVER THE EXISTING PIPE AND THE FITTINGS SHALL BE APPROPRIATE FOR EXISTING PIPE MATERIAL.
14. ISOLATION VALVES SHALL BE PROVIDED WITH APPROPRIATELY SIZED ACCESS CHAMBERS.
15. ALL CONCRETE REINFORCEMENT SHALL HAVE MINIMUM COVER OF 50mm.

Watercare

TYPICAL ARRANGEMENT OF TEMPORARY CONSTRUCTION WATER METER AND BACKFLOW PREVENTION DEVICE FOR 20mm SS PIPE

SCALE:	N.T.S.
ISSUE DATE:	18–08–2025
DWG No.	2010069.047 A
REFERENCE No.	WS 27



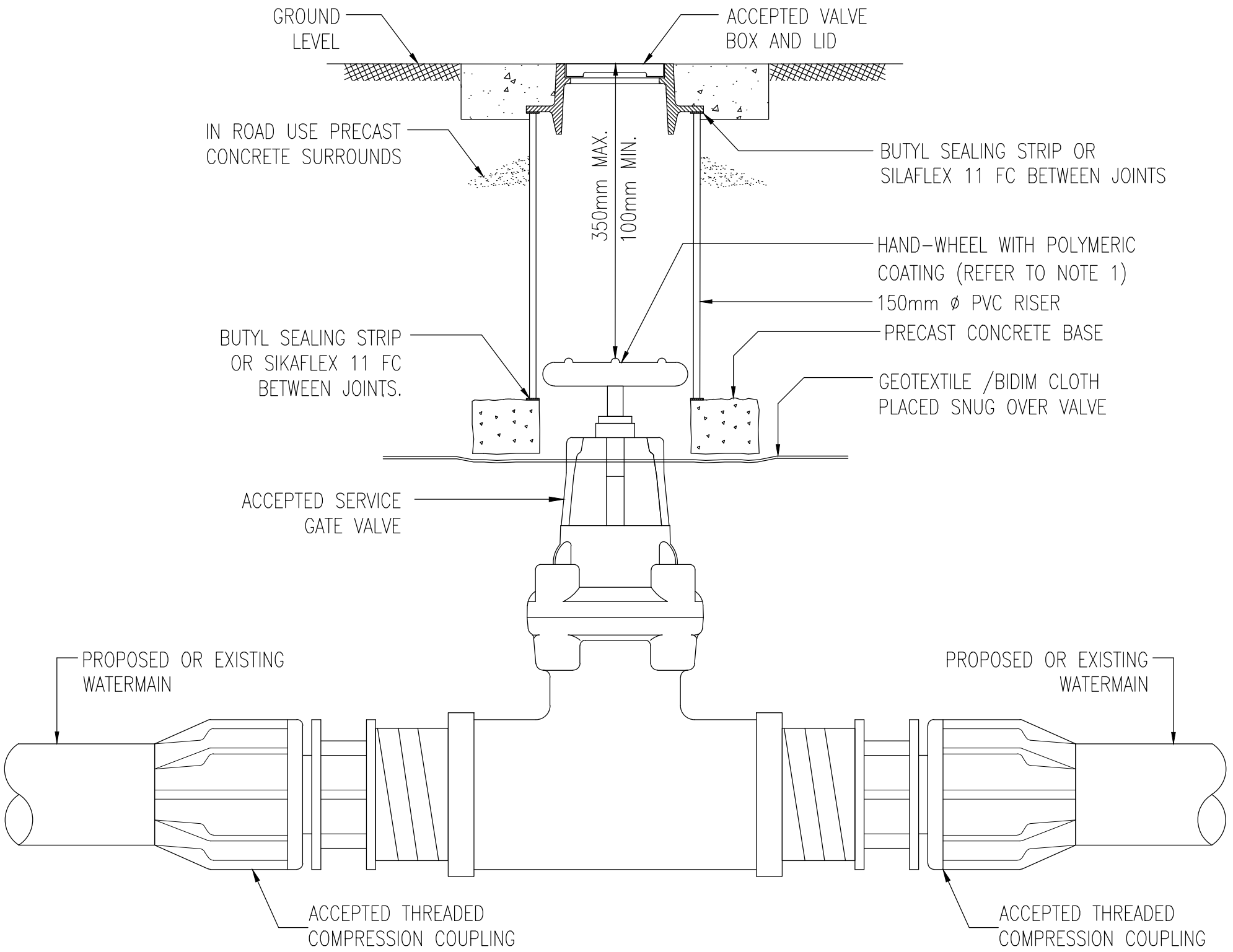
NOTES

1. ALL DIMENSIONS ARE IN "mm" UNLESS STATED OTHERWISE.
2. CONNECTION PIPE MATERIAL SHALL BE STAINLESS STEEL GRADE 316 FOR ABOVE GROUND.
3. ALL FITTINGS TO BE AS/NZS 4020 CERTIFIED FOR USE WITH POTABLE WATER.
4. FITTINGS SHALL BE MANUFACTURED TO RELEVANT SPECIFICATIONS.
   - –GATE VALVE AS PER AS1628 OR BS 5154.
   - –STRAINER AS PER 3688.
   - –WATER METER AS PER AS 3565.1.
   - –BACKFLOW PREVENTION DEVICE AS PER AS/NZS 2845.1.
5. A TESTABLE BACKFLOW DEVICE SHALL BE INSTALLED ON ALL TEMPORARY CONSTRUCTION METER CONNECTIONS.
6. PRIOR TO CONNECTION BEING SUPPLIED, THE SITE SHALL BE ASSESSED TO DETERMINE THE APPROPRIATE HAZARD CLASSIFICATION AND BACKFLOW PREVENTION DEVICE.
7. THE TEMPORARY CONSTRUCTION METER ASSEMBLY SHALL BE INSTALLED UP TO 1.0m INSIDE THE PROPERTY BEING SERVICED.
8. THE ASSEMBLY SHALL BE SUPPLIED AND INSTALLED BY WATERCARE'S APPROVED CONTRACTOR ONLY.
9. WATER METER PIPE LENGTH CLEARANCES AS SPECIFIED BY SUPPLIER. INSTALLED WITH METER TAILS OR UNION JOINT.
10. THE ASSEMBLY IS TO BE HOUSED IN A LOCKABLE PROTECTIVE CAGE WITH EXCLUSIVE ACCESS TO WATERCARE.
11. THE LOCKABLE CAGE SHALL HAVE TOP AND FRONT HINGED ACCESS AND BE MANUFACTURED FROM HOT DIPPED GALVANIZED STEEL.
12. ALL COMPONENTS ARE TO BE THREADED CONNECTIONS EXCEPT THE WATER METER WHICH IS FLANGED. THREADED FLANGE NECKS WILL BE REQUIRED ON THE METER TO COMPLETE THE ASSEMBLY.
13. TEMPORARY CONNECTIONS: A MECHANICAL TAPPING BAND SHALL BE INSTALLED OVER THE EXISTING PIPE AND FITTINGS SHALL BE APPROPRIATE FOR EXISTING PIPE MATERIAL FOR PERMANENT CONNECTIONS TO THE WATER MAIN A HORIZONTAL TEE SHALL BE INSTALLED.
14. ISOLATION VALVES SHALL BE PROVIDED WITH APPROPRIATELY SIZED ACCESS CHAMBERS.
15. THE REQUIREMENT FOR THRUST BLOCKS ON PIPELINES SHALL BE ASSESSED ON A CASE–BY–CASE BASIS.
16. WATER METER ARRANGEMENTS GREATER THAN 50mm SHALL BE ASSESSED ON A CASE BY CASE BASIS.
17. ALL CONCRETE REINFORCEMENT SHALL HAVE MINIMUM COVER OF 50mm.
18. ENSURE ADEQUATE STRUCTURAL SUPPORT FOR ISOLATING VALVES AND BACKFLOW PREVENTERS TO PREVENT SAGGING OR DIPPING DUE TO WEIGHT. PREFABRICATED SECTIONS ARE RECOMMENDED FOR PRACTICALITY. SUPPORT DESIGNS MUST BE APPROVED BY A QUALIFIED DESIGNER.

Watercare

TYPICAL ARRANGEMENT OF TEMPORARY CONSTRUCTION WATER METER AND BACKFLOW PREVENTION DEVICE FOR 50mm SS PIPE

SCALE:	N.T.S.
ISSUE DATE:	18–08–2025
DWG No.	2010069.048 A
REFERENCE No.	WS 28



NOTES

1. NOMINAL DEPTH OF BETWEEN 100 AND 350mm FROM GROUND LEVEL TO TOP OF GATE VALVE HAND WHEEL.
2. METALLIC DETECTOR / WARNING TAPE TO BE LAID 300mm ABOVE ALL BULK, TRUNK, PRINCIPAL AND RIDER MAIN PIPES AND 100mm ABOVE SERVICE PIPES AND CONTINUE AROUND VALVE ENCLOSURE WHILST MAINTAINING TAPE CONDUCTIVITY.
3. ALL VALVES SHALL INCLUDE A TAG OR OTHER MEANS TO CLEARLY INDICATE CLOSING DIRECTION. VALVES SHALL BE CLOCKWISE CLOSING.
4. REFER TO WS 7 FOR ROAD MARKINGS AND PAINTING OF BOX LIDS.

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WATER SUPPLY SERVICE / PEET GATE VALVE ≤ DN50

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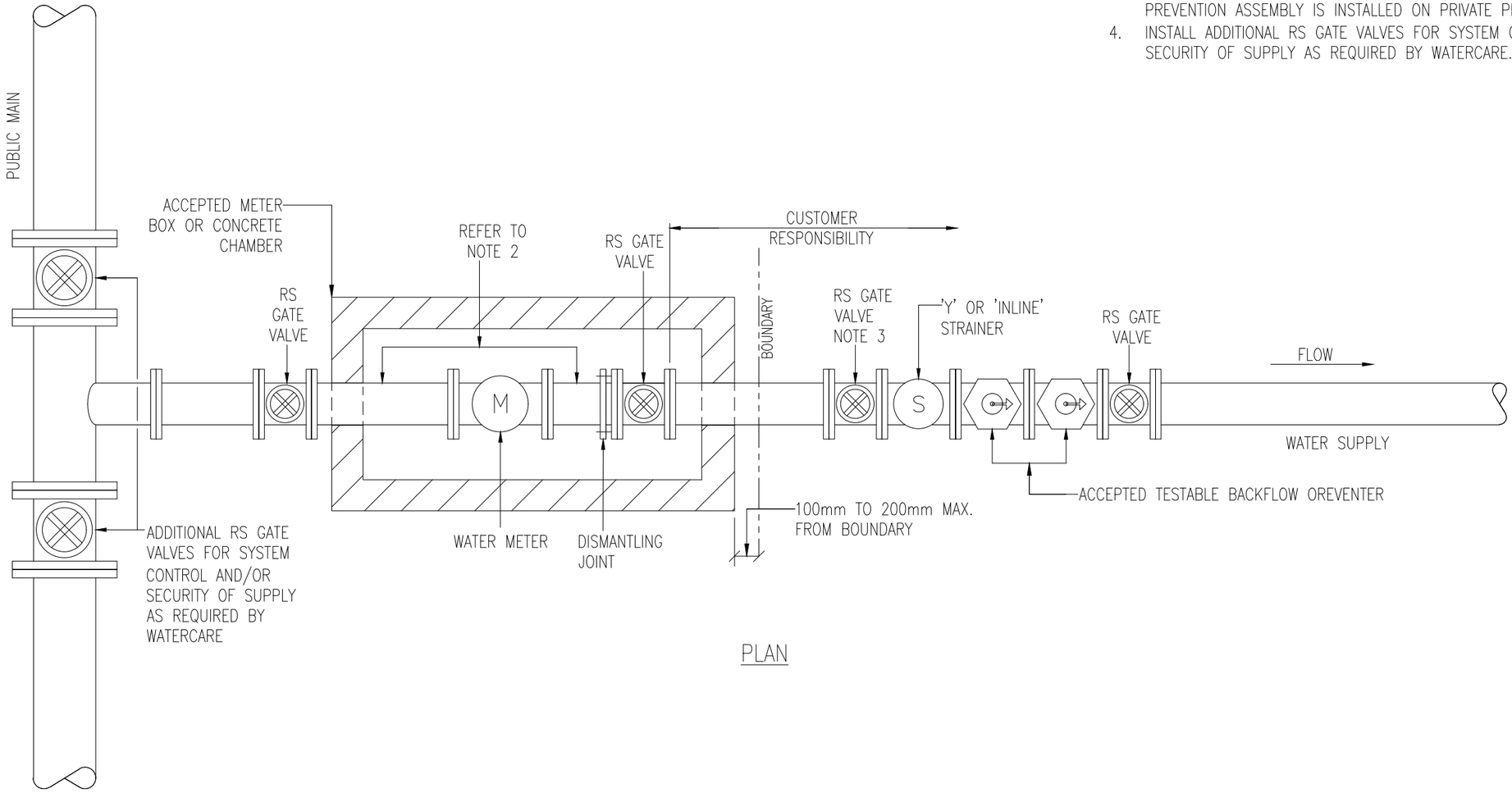
NOTES

1. FOR LARGER PIPE DIAMETERS THE BACKFLOW DEVICE MAY NOT BE ABLE TO FIT IN THE ROAD RESERVE. PRIVATE PLACEMENT IS CONDITIONAL.
2. STRAIGHT PIPE LENGTH OR SPACER SHALL BE INSTALLED TO METER MANUFACTURER SPECIFICATION.
3. ADDITIONAL RS GATE VALVES ARE REQUIRED WHERE THE BACKFLOW PREVENTION ASSEMBLY IS INSTALLED ON PRIVATE PROPERTY.
4. INSTALL ADDITIONAL RS GATE VALVES FOR SYSTEM CONTROL AND/OR SECURITY OF SUPPLY AS REQUIRED BY WATERCARE.



PLAN

WATER SUPPLY AND WATER METER 50mm AND ABOVE

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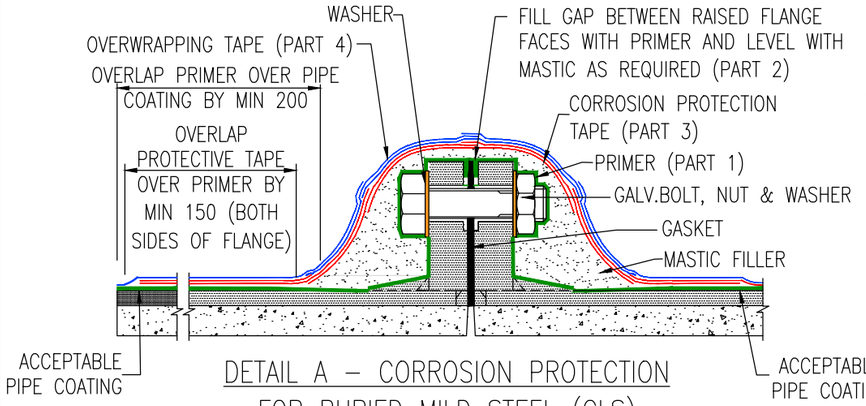
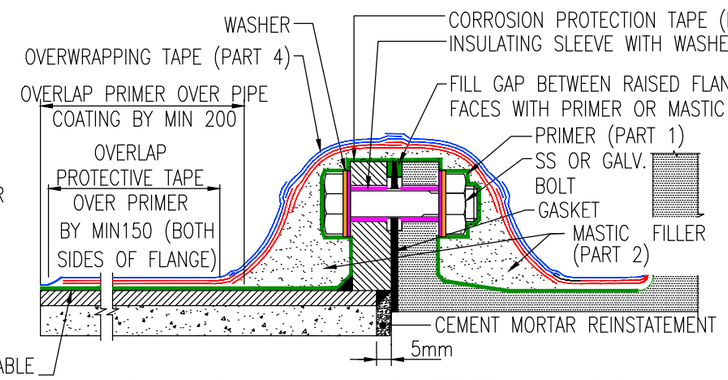
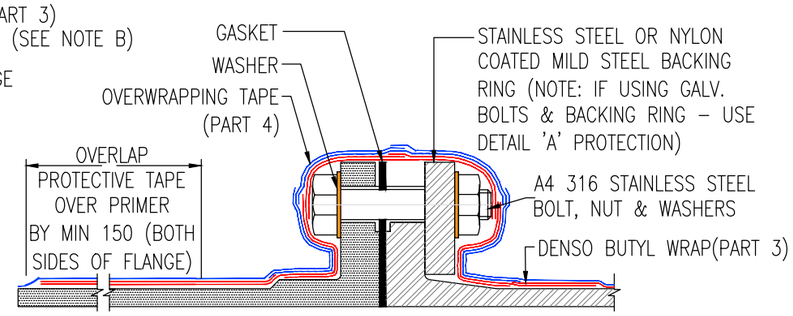


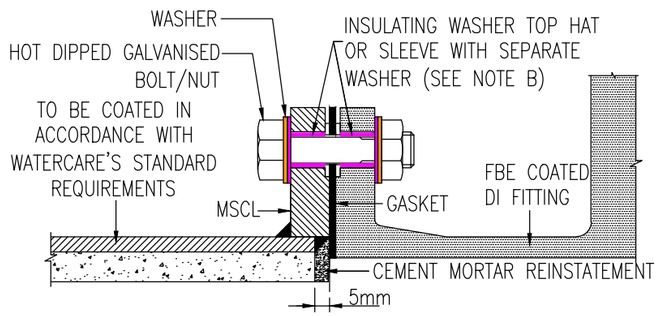
DETAIL A – CORROSION PROTECTION FOR BURIED MILD STEEL (CLS) FLANGES – UNCOATED (4–PART)



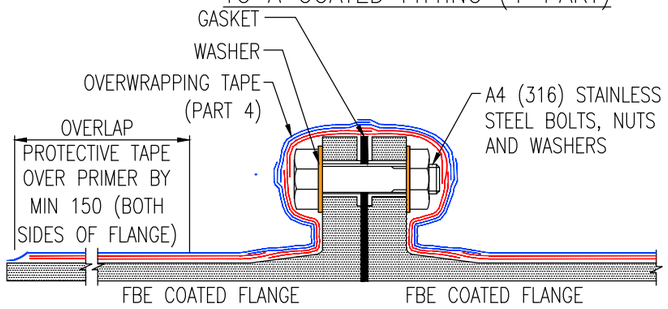
DETAIL B – CORROSION PROTECTION OF AN UNCOATED CLS FLANGE CONNECTED TO A COATED FITTING (4–PART)



DETAIL C – PE STUB FLANGE CONNECTION DETAIL (2–PART)



DETAIL D – MILD STEEL (CLS) TO FUSION BONDED EPOXY (FBE) ABOVE GROUND FLANGE CONNECTION DETAIL



DETAIL E – FUSION BONDED EPOXY (FBE) COATED DUCTILE IRON FLANGES WITH STAINLESS STEEL BOLTS (2–PART)

FLANGE & BOLT ISOLATION

FLANGE MATERIAL 1	FLANGE MATERIAL 2	BOLT, NUT & WASHER	INSULATING WASHER REQUIRED UNDER METAL WASHER
MILD STEEL (CLS)	MILD STEEL (CLS)	GALV.	NO
		STAINLESS STEEL	YES
FBE	FBE	GALV.	NO
		STAINLESS STEEL	NO
MILD STEEL (CLS)	FBE	GALV.	NO
		STAINLESS STEEL	YES
STAINLESS STEEL BACKING RING	PE	GALV.	YES
		STAINLESS STEEL	NO
GALV. STEEL BACKING RING	PE	GALV.	NO
		STAINLESS STEEL	YES

GENERAL NOTES:

1. ALL FLANGES ARE TO BE RAISED FACE TYPE.
2. ANY FBE COATED FITTINGS WHICH ARE DAMAGED TO THE POINT WHERE BARE METAL IS EXPOSED SHALL BE REPAIRED WITH A REPAIR PRODUCT APPROVED BY MANUFACTURER OTHERWISE IT SHALL NOT BE INSTALLED.
3. ENSURE ALL FLANGES AND BOLTS ARE CLEAN AND FREE OF DIRT OF CONTAMINANTS.
4. FOR ALL GALVANIZED FASTENERS IN BELOW GROUND INSTALLATIONS, THE 4 PART PETROLATUM CORROSION PROTECTION SYSTEM (I.E. USING PRIMER, MASTIC, FILLER AND WRAPPING) IS TO BE USED.
5. WHERE AN UNCOATED FLANGE JOINT IS IN A PIT, THEN FULL BOLT/FLANGE WRAPPING IS REQUIRED DUE TO POTENTIAL FOR MOISTURE. IF THERE IS NO POTENTIAL FOR MOISTURE, THEN THE FLANGE CONNECTION IS TO BE EPOXY PAINTED INSTEAD OF WRAPPED.
6. REFER TO WATERCARE GUIDANCE NOTE: STEEL BOLTED FLANGED JOINT ASSEMBLIES (ESF–600–GDN–702) FOR FLANGE ASSEMBLE REQUIREMENTS.
7. REFER TO WATERCARE GENERAL MECHANICAL CONSTRUCTION STANDARDS (ESF–600–STD–701) FOR GENERAL CONSTRUCTION REQUIREMENTS

CORROSION PROTECTION:

A. PIPE BEDDING SHALL BE HOLLOWED ENOUGH UNDER THE FLANGES TO ENABLE TAPE TO BE WOUND UNDERNEATH. TEMPORARY VALVE SUPPORT MAY BE REQUIRED BEFORE ANY PERMANENT CONCRETE VALVE SUPPORT IS POURED.

B. INSULATING WASHERS SHALL BE HIGH STRENGTH NYLON OR PHENOLIC WASHERS

C. CORROSION PROTECTION DESCRIBED HERE IS REQUIRED FOR ALL STEEL OR DUCTILE IRON FLANGE SURFACES WHICH DO NOT HAVE A HIGH INTEGRITY COATING CONSISTING OF ONE OF THE FOLLOWING.
   - C1. FUSION BONDED MDPE TO AS4321.
   - C2. FUSION BONDED EPOXY COATING TO AS/NZ4158.
   - C3. DUCTILE IRON PIPE WITH ZINC COATING TO OF MIN 400g/m².

D. PAINTED SURFACES ARE NOT ACCEPTABLE COATINGS FOR BELOW GROUND APPLICATIONS. THESE SURFACES WILL BE REFERRED TO AS UNCOATED.

E. ALL CORROSION PROTECTION PRODUCTS SHALL BE APPLIED AS PER THE MANUFACTURERS SPECIFICATIONS.

F. PRODUCTS FROM A SINGLE MANUFACTURER SHALL BE USED TO ENSURE COMPATIBILITY OF PRODUCTS.

G. SURFACE PREPARATION BEFORE APPLYING CORROSION PROTECTION: – ALL SURFACES TO BE PRIMED SHALL BE PREPARED TO A FINISH OF St2 ACCORDING TO AS 1627.2 CLASS SA2. POWER WIRE BRUSH REMOVE ALL SCALE, LOOSE RUST AND OLD FLAKING COATING. WELD SPLATTER AND SLAG TO BE REMOVED. ONCE THIS IS COMPLETED THE 4–PART SYSTEM CAN BE APPLIED.
   PART 1 : PRIMER – SHALL BE APPLIED BY BRUSH OR HAND TO ALL UNCOATED SURFACES TO A DISTANCE OF 200mm PAST COATED PIPE/FITTING. THE ENTIRE AREA TO BE WRAPPED SHALL BE PRIMED, INCLUDING ALL FLANGES AND BOLTS.
   PART 2 : MASTIC – APPLY MASTIC TO CREATE A GRADUAL AND SMOOTH TRANSITION FROM THE PIPE TO THE OUTER DIAMETER OF THE FLANGE. APPLICATION AROUND BOLT HEADS ONLY IS NOT ACCEPTABLE. APPLY MASTIC BY HAND, ENSURING NO VOIDS ARE PRESENT.
   PART 3 : CORROSION PROTECTIVE TAPE – APPLY PETROLATUM OR BUTYL TAPE SYSTEM CONTINUOUSLY WITH 55% OVERLAP STRETCHING AND MOULDING THE TAPE TO LIMIT CREASES AND PREVENT GAPS.
   PART 4 : OVERWRAPPING TAPE – PROVIDE PHYSICAL AND MECHANICAL PROTECTION TO THE CORROSION PROTECTIVE TAPE USING A PVC OVERWRAPPING TAPE. APPLY WITH 55% OVERLAP, STRETCHING TAPE TO LIMIT CREASES AND PREVENT GAPS.

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FLANGE ARRANGEMENT DETAILS FOR LOCAL WATER NETWORK

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