NOTES:
1. REFER 4405-30002-01 AND 4405-30002-02 FOR GENERAL NOTES.
2. ALL BRASS & GUNMETAL FITTINGS SHALL BE PROTECTED IN ACCORDANCE WITH TS 18.
3. PE & STAINLESS STEEL FITTINGS DO NOT REQUIRE PROTECTIVE WRAPPING UNLESS DAMAGED. REFER NOTE 5 FOR CLARIFICATION OF DAMAGE.
4. THE CONTRACTOR SHALL INSPECT ALL PE & STAINLESS STEEL FITTINGS PRIOR TO INSTALLATION.
5. IF DAMAGE IS DETECTED PROCEED USING THESE GUIDELINES:
   • EXTERNAL DAMAGE < 25 x 25 mm - WRAP THE ITEM IN ACCORDANCE WITH TS 18 AND THIS DRAWING.
   • INTERNAL OR EXTERNAL DAMAGE > 25 x 25 mm - REPLACE THE ITEM.
6. THE PROCEDURE FOR WRAPPING ALL METALLIC TAPPING SADDLES AND ALL BRASS FITTINGS SHALL BE:
   • COAT WITH PETROLATUM PRIMER,
   • WRAP WITH 50 mm WIDE PETROLATUM TAPE,
   • IN ACCORDANCE WITH TS 18.
7. POLYETHYLENE SLEEving AROUND THE PETROLATUM TAPE IS NOT REQUIRED IF PIPE IS PVC, AC, OR CICL.
8. WHERE THE PIPE IS IC, THE CONTINUITY OF THE POLYETHYLENE SLEEving SHALL BE MAINTAINED BY:
   • CUTTING A PIECE OF POLYETHYLENE SLEEving SUFFICIENTLY LONG AND WIDE TO PROVIDE MIN 150 OVERLAP (AT EACH END) TO THE SLEEving PROTECTING THE PIPE.
   • APPLYING THE PETROLATUM TAPE SYSTEM AROUND THE SADDLE OR PRETAPPED CONNECTOR TAPPING AND FITTING.
   • FIT THE PREPARED PIECE OF SLEEving AROUND THE PIPE AND FITTING AND SECURE BOTH ENDS TO THE PIPE SLEEving WITH ADHESIVE TAPE.
9. WHERE THE PIPE IS MSCL:
   • PRIOR TO WELDING, REMOVE THE PIPE COATING AROUND THE AREA WHERE BOSS IS TO BE LOCATED,
   • CLEAN THE PIPE COATING FOR THE FULL CIRCUMFERENCE 100 mm WIDE EACH SIDE OF THE BOSS,
   • FOLLOWING WELDING, COAT PIPE, BOSS AND BRASS FITTINGS WITH PETROLATUM PRIMER AND FILL GAPS WITH MASTIC,
   • WRAP PIPE, BOSS, COCK PLUG AND BRASS FITTINGS WITH 50 mm WIDE PETROLATUM TAPE,
   • APPLY OVERWRAP TAPE OVER THE PIPE AND FITTING.
10. PETROLATUM PRODUCTS AND METHODS FOR APPLICATION OF THE TAPE SYSTEM SHALL BE IN ACCORDANCE WITH TS 18.
**NOTES:**

1. CATHODIC PROTECTION IS GENERALLY ONLY REQUIRED FOR DOG LEGS LARGER THAN DN200. FOR MORE SIGNIFICANT LOCATIONS, E.G. MAJOR ROAD OR CREEK CROSSINGS, DN100 & DN150 DOG LEGS MAY REQUIRE CATHODIC PROTECTION. REFER NOTE 3.

2. THE DOG LEG DESIGN SHALL BE APPROVED BY SA WATER PRIOR TO UNDERTAKING THE CATHODIC PROTECTION DESIGN.

3. THE DESIGNER SHALL CONSULT THE SA WATER CATHODIC PROTECTION SPECIALIST FOR CONFIRMATION OF REQUIREMENTS.

4. IF THE ADJOINING PIPE IS AC, PVC OR PE, STANDARD INSULATED FLANGED JOINTS AND TEST POINTS ARE NOT REQUIRED.

5. SACRIFICIAL CP SYSTEM SHALL BE DESIGNED TO PROVIDE A POTENTIAL MORE NEGATIVE THAN 0.85V WITH RESPECT TO A COPPER/COPPER SULPHATE REFERENCE ELECTRODE AND SHALL HAVE A MINIMUM DESIGN LIFE OF 10 YEARS IN ACCORDANCE WITH AS3932.2.

6. INSTALL STUDS ON THE PIPELINE FOR TEST POINT CONNECTIONS AND SACRIFICIAL ANODE CONNECTION AT THE LOCATIONS SHOWN ON THE DESIGN DRAWING AND IN ACCORDANCE WITH SA WATER DGR 75 10.

7. WHERE THE PIPE IS:
   - SINTAKOTE MSL AND THE SINTAKOTE HAS BEEN REMOVED,
   - NON SINTAKOTE MSL,
   THE PIPE TOGETHER WITH CABLE CONNECTION POINTS AND EXTENSION PIPES AT EACH END SHALL BE PROTECTED BY WRAPPING WITH BITUMEN MASTIC TAPE SYSTEM IN ACCORDANCE WITH SA WATER SPECIFICATION TS 15.
   - FLANGED DCL,
   THE PIPE SHALL NOT BE COVERED BY A THE PROTECTIVE PE SLEEVE. THE PIPE TOGETHER WITH CABLE CONNECTION POINTS AND EXTENSION PIPES AT EACH END SHALL BE PROTECTED BY WRAPPING WITH BITUMEN MASTIC TAPE SYSTEM IN ACCORDANCE WITH TS 18.

8. THE CABLES SHALL BE Laid OVER THE BITUMEN MASTIC TAPE SYSTEM.

9. THE CONTRACTOR SHALL IDENTIFY THE CATHODIC PROTECTION TEST POINT BY EITHER:
   - FOR IMPROVED AREAS, IN A CAST IRON STREETBOX, IN ACCORDANCE WITH SA WATER DGR 75 19, REFER 4005-30007-41 FOR STREET BOX INSTALLATION.
   - OR
   - FOR UNIMPROVED AREAS, ON A 90 X 90 PAR WOODEN POST, IN ACCORDANCE WITH SA WATER DGR 75 19.

10. AT THE ANODE A LENGTH OF 6MM PVC CONDUIT SHALL BE INSTALLED VERTICALLY, STARTING FROM DIRECTLY ABOVE THE ANODE AND FINISHING OPEN ENDED IN A FIBREGLASS GROUND BOX INSTALLED DIRECTLY ABOVE THE ANODE. WHERE THE ANODE IS INSTALLED IN THE ROADWAY A CAST IRON STREETBOX IS REQUIRED.

11. CABLE FROM THE ANODE TO THE CONNECTION JUNCTION BOX SHALL PASS UNEARTHED VIA THE GROUND BOX OR STREETBOX.

12. FOR FLANGE CABLE BONDING DETAILS REFER SA WATER DGR 75-10.

13. OPTIONS AVAILABLE FOR FITTINGS FOR CONNECTION TO PIPELINE (FLANGE/ SOCKET/ SPIGOT ENDS). REFER 4005-30005-09 AND APPROVED ITEMS CATALOGUE.

14. PRIOR TO CPC, CATHODIC PROTECTION POTENTIAL MEASUREMENTS AT TEST POINTS AND ANODE CURRENTS SHALL BE RECORDED.

15. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING AS CONSTRUCTED DOCUMENTATION TO THE SA WATER CATHODIC PROTECTION SPECIALIST:
   - THE CATHODIC PROTECTION POTENTIAL MEASUREMENTS AT TEST POINTS AND THE ANODE CURRENTS RECORDED AFTER COMMISSIONING THE SYSTEM.
   - AN 'AS CONSTRUCTED' DRAWING SHOWING ANODES, TEST POINTS, BONDING AND INSULATED FLANGES INCORPORATING DETAILED LOCATION OF ALL ITEMS.
REPAIR OF DN20 COPPER WATER CONNECTION

Stage 1
1. Expose connection.
2. If possible, turn cock plug off.
3. Unscrew flared nut on cock plug.
4. Cut tubing as close as possible to base of flare.

Stage 2
5. Rotate copper tubing.
6. Remove flared nut and tubing from flare.
7. Thoroughly clean tubing.
8. Slide disassembled adapter onto tubing.

Stage 3
9. Re-align copper tubing with cock plug.
10. Slide brass body, with insulating insert, down tubing and using Loctite thread screw onto cock plug.
11. Slide remaining components down tube and screw nut onto brass body.
12. If cock plug off turn on.

With maincock fitted

No maincock fitted

Above ground water meter/stop cocks may vary

Repair of meter inlet

SA WATER STANDARD DRAWINGS
WATER SUPPLY CONSTRUCTION MANUAL
REPAIR OF
DN20 COPPER WATER CONNECTIONS

REV
DATE
CN
DETAILS
AP
CURRENT REV
AUTHORISED
SIGNATURE

1
3/03/16
MS
2016 STANDARDS REVIEW
T6

SAWater

Drawing number

4005-30010-04

This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.
NOTES:

1. REFER 4005-30002-01 AND 4005-30002-02 FOR GENERAL NOTES.
2. CONNECTION (& METER) RELOCATION IS ONLY APPROVED FOR DN25 AND DN25 WATER METERS.
3. NO RELOCATION OF DN40 & DN50 METERS PERMITTED.
4. RELOCATION IS APPROVED FOR BOTH DRINKING WATER AND NON-DRINKING WATER SYSTEMS.
5. THE OD25 PE PIPEWORK SHALL BE LAYED IN FOOTPATH. SHOULD OTHER UTILITIES IMPACT COMPLIANCE WITH
   THIS REQUIREMENT, APPROVAL OF THE SA WATER REPRESENTATIVE SHALL BE SOUGHT FOR PERMISSION
   TO LOCATE PIPEWORK WITHIN THE PROPERTY (MAX 500 FROM FRONTAGE) OR WITHIN THE ROAD.
6. DETECTABLE UNDERGROUND WARNING TAPE SHALL BE LAY APPROX 300 ABOVE OD25 PE PIPE.
   TAPE MARKINGS WILL BE DEPENDENT UPON THE DRINKING WATER SYSTEM.
7. RELOCATION OF THE WATER CONNECTION OR WATER METER IS PERMITTED ONLY IF A RELOCATED CONNECTION
   OR METER CANNOT BE MOVED.
8. REFER 4005-30002-01 FOR GENERAL NOTES.
9. REFER 4005-30006-01 FOR WATER CONNECTION NOTES & REQUIREMENTS.
10. REFER 4005-30006-01 FOR DN25 AND DN25 WATER METERS ASSEMBLY.
11. FOR ALL RELOCATIONS:
   THE CONTRACTOR SHALL PROVIDE THE SA WATER WITH AN 'AS CONSTRUCTED' DRAWING WITH REQUIRED
   DIMENSIONS & INFORMATION LISTED IN TABLE 1.
12. ALL DIMENSIONS IN MILLimetRES UNLESS NOTED OTHERWISE.
<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>MAINCOCK (38 mm)</td>
<td>TURNED ON PRIOR TO BACKFILL</td>
</tr>
<tr>
<td>2</td>
<td>PE END CONNECTOR (FEMALE)</td>
<td>OD 50 x 1 1/2 &quot;</td>
</tr>
<tr>
<td>3</td>
<td>DN 40 BALL VALVE</td>
<td>ZETCO SERIES 1298</td>
</tr>
<tr>
<td>4</td>
<td>REDUCING BUSH OR BRASS</td>
<td>2 1/2&quot; BSP X 1 1/4&quot; SPG - SOC BSP</td>
</tr>
<tr>
<td>5</td>
<td>2&quot; CAMLOCK COUPLER (MALE)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>G STREET BOX</td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:**

1. REFER 4005-30002-01 AND 4005-30002-02 FOR GENERAL NOTES.
2. REFER 4005-30005-11 FOR COLD WATER MAIN.
3. REFER 4005-30006-05 FOR (TYPICAL) DRAIN WATER CONNECTION DETAIL.
4. PIPE EMBEDMENT & TRENCH REINSTATEMENT SHALL BE IN ACCORDANCE WITH WSCM SECTION 3.
5. REFER WSCM SECTION 7 FOR STREET BOX INSTALLATION DETAILS.
6. THE INSTALLATION SHALL BE PERFORMED TO THE SATISFACTION OF THE SA WATER REPRESENTATIVE.