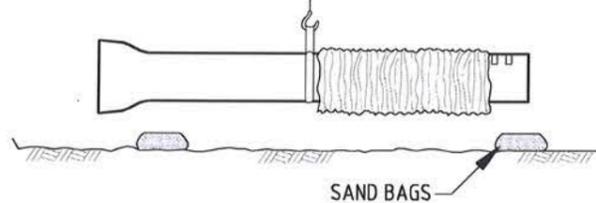


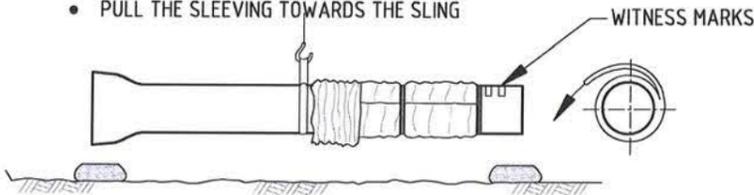
**GUIDELINES**

- FOR INSTALLATION OF DICL PIPE & FITTINGS THE WORK SHALL BE UNDERTAKEN UNDER THE DIRECTION OF A PERSON WHO HAS COMPLETED THE VIADUX DICL PIPELINE COURSE & HAS PROVIDED THE SA WATER REPRESENTATIVE WITH EVIDENCE OF THE COURSE COMPLETION.
- PRIOR TO COMMENCEMENT, REQUIRED EQUIPMENT TO UNDERTAKE THE WORK SHALL BE ON SITE & INSPECTED.
- POLYETHYLENE SLEEVING SHALL BE INSTALLED:
  - IN ACCORDANCE WITH THE REQUIREMENT SPECIFIED IN AS3681 'GUIDELINES FOR THE APPLICATION OF POLYETHYLENE SLEEVING TO DUCTILE IRON PIPELINE AND FITTINGS.
  - IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
- IN CRAMPED SITUATIONS:
  - STRAP & BUCKLES SHALL BE USED
- IN WET CONDITIONS:
  - STRAPS & BUCKLES ARE PREFERABLE TO ADHESIVE TAPE.
- THE PIPE & FITTINGS SHALL BE CLEANED PRIOR TO JOINTING.

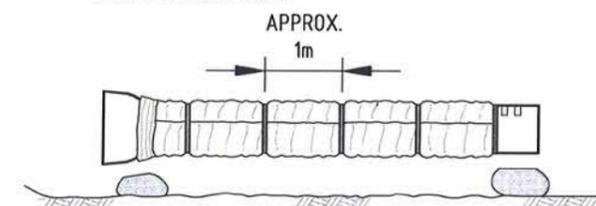


**SLEEVING OF DICL PIPE**

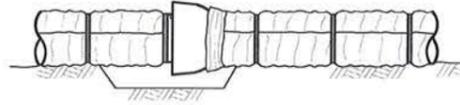
- PULL THE SLEEVING ONTO THE PIPE:
  - CUT SLEEVING LONG ENOUGH TO COVER THE PIPE AND OVERLAP THE SOCKET END APPROX. 300 mm.
  - CENTRALISE THE SLING UNTIL THE PIPE IS BALANCED
  - PULL THE SLEEVING TOWARDS THE SLING



- FIT THE SLEEVING ONTO THE PIPE:
  - FOLD THE SLEEVING AT TOP OF THE PIPE, POOLING TIGHTLY,
  - SLEEVING TO BE CLOSE TO THE WITNESS MARKS BUT ENSURE MARKS ARE EXPOSED.



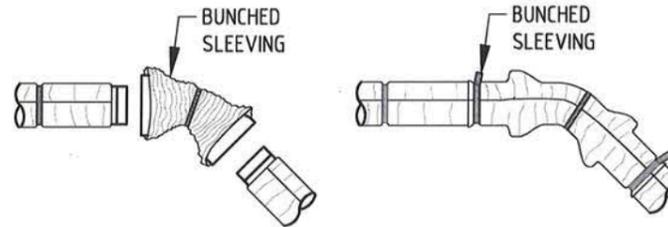
- CONTINUE TO SECURE THE SLEEVING
  - LOWER THE PIPE ONTO SANDBAGS AND REMOVE SLING.
  - PULL THE SLEEVING ALONG THE PIPE
  - TAPE THE SLEEVING AT REGULAR 1m INTERVALS.
  - EXTRA SLEEVING TO BE BUNCHED AT SOCKET END.



- PLACEMENT OF PIPE & COMPLETION OF SLEEVING:
  - ENSURE A SUITABLE DEPRESSION HAS BEEN MADE IN THE BEDDING WHERE THE JOINT WILL BE LOCATED,
  - LIFT THE PIPE FROM THE CENTRE WITH A SLING,
  - KEEP THE FOLD OF THE SLEEVING AT THE TOP OF THE PIPE
  - OVERLAP THE SLEEVING OVER THE JOINT AND SECURE WITH THE STRAP AND BUCKLE

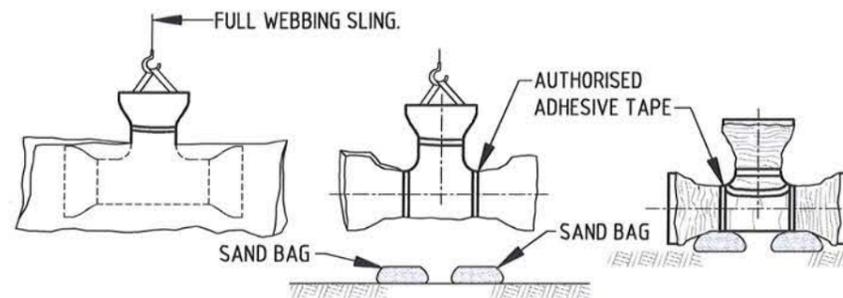
**SLEEVING OF DICL FITTINGS**

**1. BENDS**



- PRIOR TO JOINTING :
  - CUT SLEEVING LONG ENOUGH TO COVER THE BEND AND OVERLAP THE ENDS APPROX. 300 mm.
  - PLACE SLEEVING OVER THE BEND AND SECURE WITH TAPE AROUND THE CENTRE OF THE BEND.
  - BUNCH SLEEVING BEHIND THE SOCKETS.
- AFTER JOINTING OF BEND TO PIPES
  - PLACE THE BUNCHED SLEEVING OVER OVER SOCKETS.
  - ENSURE SLEEVING FOLLOWS THE SOCKET SHAPE,
  - SEAL THE OVERLAPS TO THE SLEEVED PIPES WITH STRAPS AND BUCKLES.

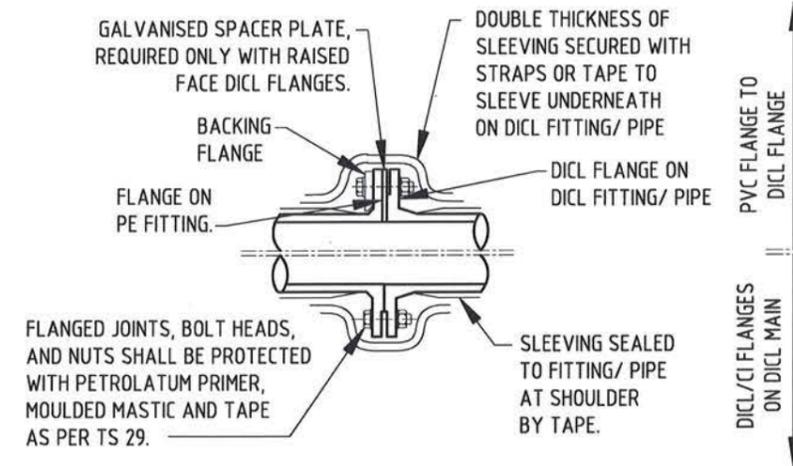
**2. TEES**



- TWO PIECES OF SLEEVING ARE REQUIRED.
- ALLOW 300 mm OVERLAP.
- CUT THE BODY PIECE  $\frac{2}{3}$  OF THE WAY ALONG THE SIDE OF THE SLEEVE.
- LIFT THE TEE WITH THE SLING AT THE TOP OF THE BRANCH.
- SLIDE THE BODY PIECE ON THE FACE. TAPE THE SLEEVE AND SEAL.
- LOWER ONTO SAND BAG & REMOVE THE SLING.
- SLIDE THE BRANCH PIECE OF SLEEVING INTO THE TEE. TAPE THE SLEEVING AND SEAL.

**3. FLANGES**

(REQUIRE SLEEVING PLUS PETROLATUM PROTECTION)



- ALL FLANGES ON FITTINGS WHICH ARE TO BE BURIED SHALL BE PROTECTED BY PETROLATUM TAPE SYSTEM IN ACCORDANCE WITH TS 29 AND SHALL BE DOUBLE OVER WRAPPED WITH POLYETHYLENE SLEEVING.

**4. TAPPING SADDLES**

- REMOVE A 150 mm SECTION OF SLEEVING AT THE TAPPING POSITION.
- ASSEMBLE THE TAPPING SADDLE ONTO THE PIPE.
- USING A SEPARATE PIECE OF SLEEVING WRAP IT CIRCUMFERENTIALLY AROUND THE EXPOSED PIPE SECTION AND TAPPING SADDLE. TAPE THE ENDS OF THE SLEEVING.
- INSTALL THE NIPPLE TO THE TAPPING SADDLE AS REQUIRED.
- REPAIR ANY DAMAGED SLEEVING IN THE FOLLOWING MANNER:
  - FOR HOLES SMALLER THAN TAPE WIDTH, USE ADHESIVE TAPE.
  - FOR LARGER HOLES EITHER OVERLAP WITH POLYETHYLENE SHEET WITH STRAP AND BUCKLE OR ADHESIVE TAPE WHICH SHALL BE AROUND FULL CIRCUMFERENCE OF PIPE.

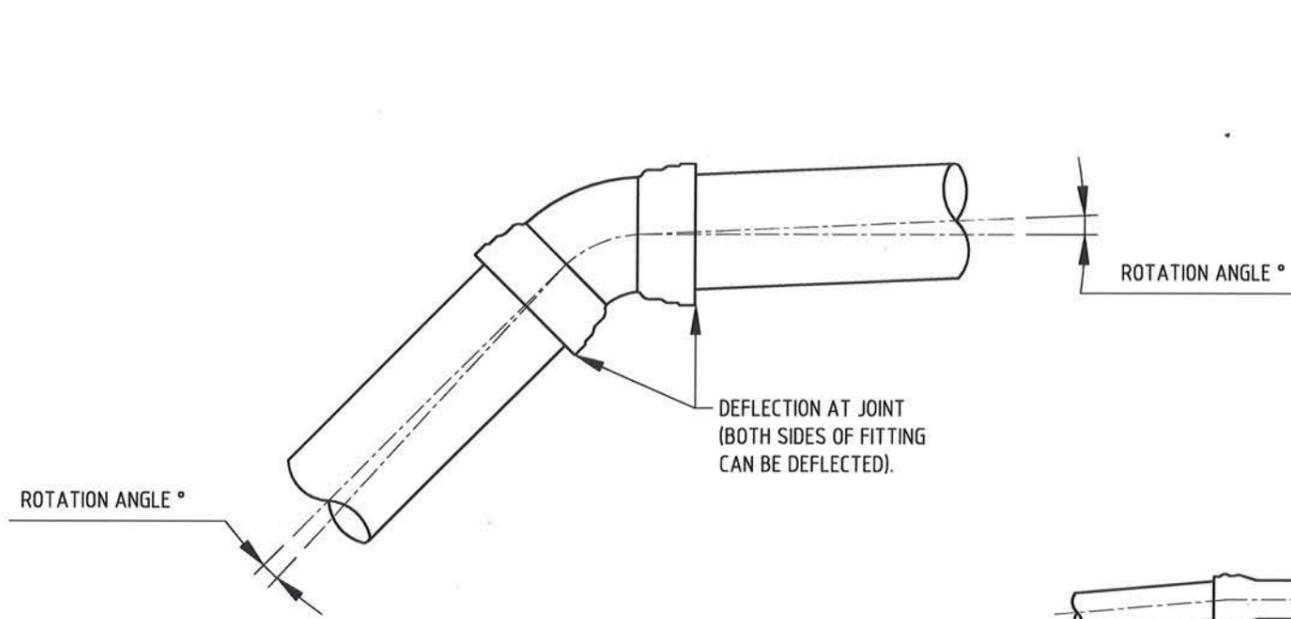
**NOTES:**

- REFER 4005-30002-01 & 4005-30002-02 FOR GENERAL NOTES.
- PVC MAINS:
  - ALL FITTINGS WHICH ARE TO BE BURIED SHALL BE PROTECTED BY:
    - POLYETHYLENE SLEEVING PROVIDED IF FITTING IS ASSOCIATED WITH AN ANCHOR BLOCK.
    - TAPE EXTRA SLEEVING ON FITTINGS WHERE ANCHOR BLOCK WILL CONTACT FITTING.
  - OR
    - PETROLATUM TAPE SYSTEM IN ACCORDANCE WITH TS 18.
    - PE FITTINGS - ONLY FLANGES NEED CORROSION PROTECTION.
- WHERE THE RESTRAINED JOINTING SYSTEM IS USED THE SPECIALLY MARKED "RESTRAINED JOINT SYSTEM" MARKING TAPE SHALL BE USED.

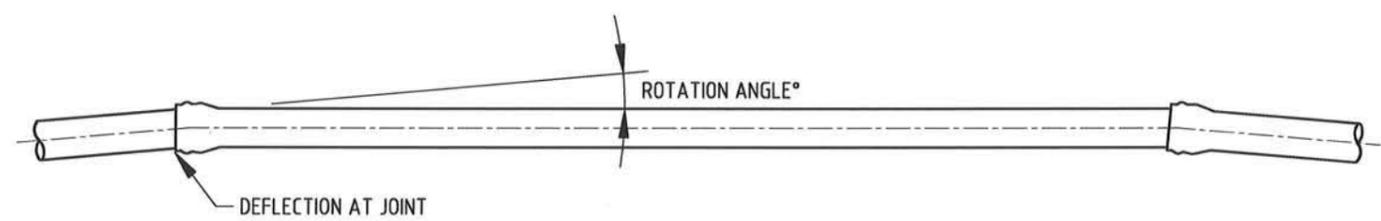
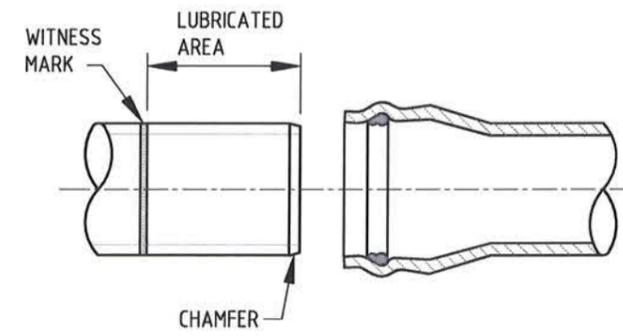
REVISION PANEL					DESIGN PANEL		SA WATER STANDARD DRAWINGS		A3		1
REV	DATE	DRN	DETAILS	APR	CURRENT REV	DESIGNED:	AUTHORISED:	WATER SUPPLY CONSTRUCTION MANUAL		SHT SIZE	REVISION
1	31/03/16	MS	2016 STANDARDS REVIEW	TG		28/09/15		SLEEVING OF DICL PIPE FITTINGS		TOTAL SHEETS:	
						RJP				SUPERSEDES: C1, C2	
						MS				DRAWING NUMBER	
						21/03/16	T. Gale			4005-30005-01	
						TG				PREFIX	SHEET

SA Water
   
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TYPICAL DEFLECTION AT PIPE TO FITTING JOINTS



TYPICAL DEFLECTION AT PIPE TO PIPE JOINTS

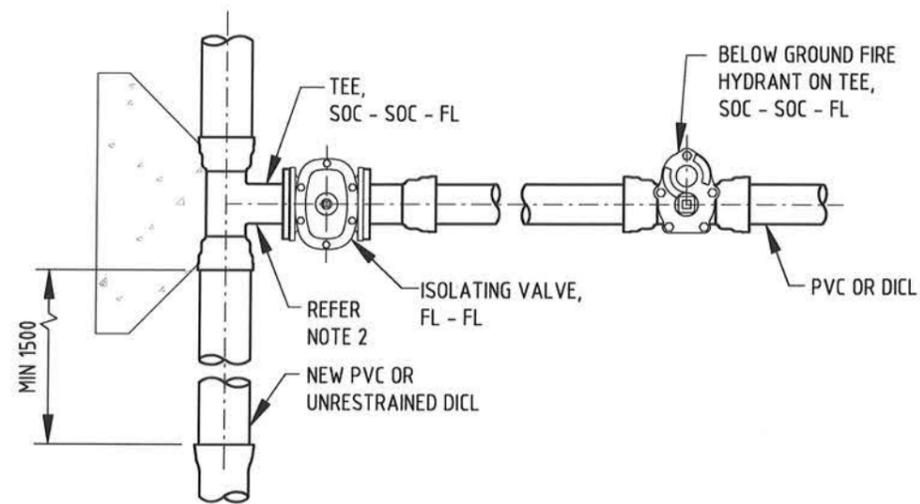
NOTE: PIPE IS TO BE DEFLECTED ONLY AFTER JOINT HAS BEEN MADE.

**NOTES:**

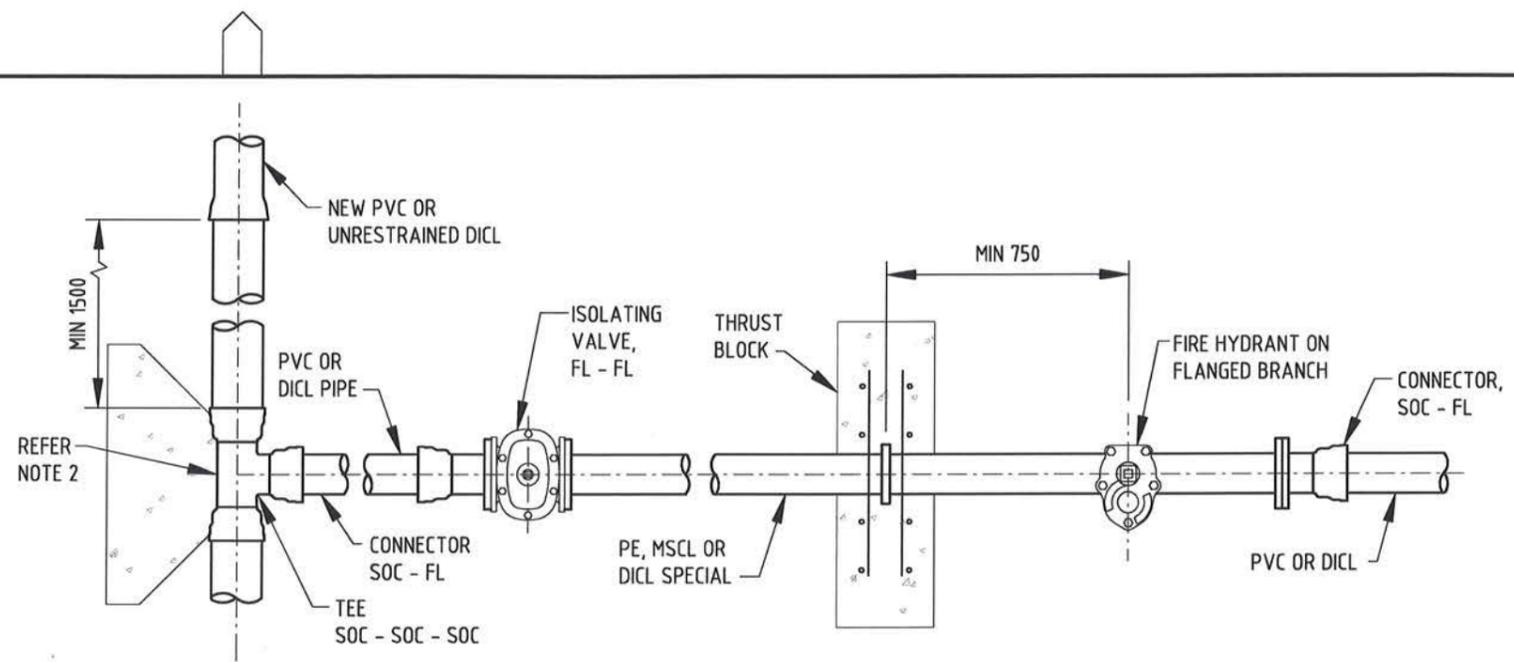
1. REFER 4005-30002-01 & 4005-30002-02 FOR GENERAL NOTES.
2. PERMISSIBLE MAXIMUM ALLOWABLE DEFLECTIONS FOR BOTH THE PIPE SOCKET & THE FITTING SOCKET VARY DEPENDENT UPON PIPE MATERIAL, PIPE SIZE & PIPE MANUFACTURER.  
THE CONTRACTOR SHALL CONFIRM THE MAXIMUM ALLOWABLE DEFLECTION WITH THE PIPE MANUFACTURER.
3. WHERE A DESIGN IS BASED UPON A REQUIREMENT FOR DEFLECTED PIPES, THE DESIGNER SHALL SPECIFY THE REQUIRED DEFLECTION ON THE DESIGN DRAWINGS.
4. PIPES SHALL BE HANDLED AND INSTALLED IN ACCORDANCE WITH SA WATER'S CONSTRUCTION DOCUMENTATION & THE PIPE MANUFACTURER'S INSTRUCTIONS.
5. WHERE REQUIRED, PIPES CAN BE CUT TO LENGTH ON SITE USING EITHER A HAND SAW OR POWERED CUTTING DISC. REFER MANUFACTURERS INSTRUCTIONS FOR REQUIREMENTS FOR CHAMFERING THE CUT PIPE CHAMFER.
6. REFER MANUFACTURERS INSTRUCTIONS FOR DETAILS ON APPLICATION OF PIPE LUBRICANT, INSERTION OF CUT SPIGOT THRUSTING OF PIPE TO WITNESS MARK.
7. PRIOR TO CUTTING & USE OF THE SOCKET END OF A DICL PIPE, THE PIPE OD SHALL BE CHECKED. REFER 4005-30005-05.
8. WHERE INSERTING PIPE INTO DUCTILE IRON FITTINGS ENSURE THE APPROPRIATE WITNESS MARK IS USED TO SUIT THESE PARTICULAR SOCKETS.
9. PIPES SHALL NOT BE CUT WITHIN 1.0 m OF THE SOCKET END OF THE PIPE. THUS, THE MINIMUM PERMISSIBLE LENGTH OF PIPE SHALL BE 1.0 m.

REVISION PANEL					DESIGN PANEL		 SA WATER STANDARD DRAWINGS WATER SUPPLY CONSTRUCTION MANUAL PIPE JOINTING & DEFLECTION	A3	1
REV	DATE	DRN	DETAILS	APR	CURRENT REV	AUTHORISED:		SHT SIZE	REVISION
1	31/03/16	MS	2016 STANDARDS REVIEW	TG	TG	DESIGNED: 28/09/15 RJP DRAWN: 16/11/15 MS REVIEWED: 21/03/16 TG			
							TOTAL SHEETS: SUPERSEDES: C3, C4 DRAWING NUMBER 4005-30005-02 PREFIX NUMBER SHEET		

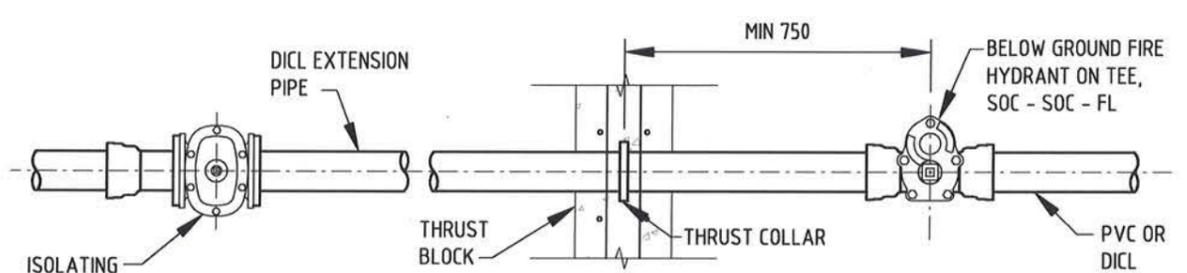
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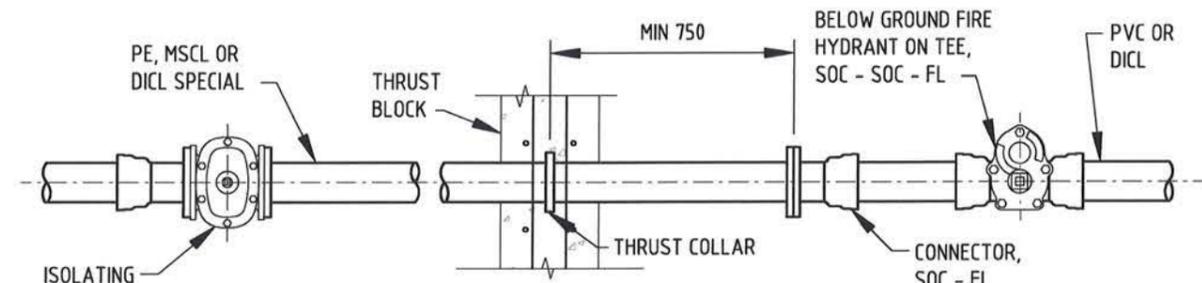
**METHOD 1:  
STOP VALVE ADJACENT TEE**



**METHOD 2: STOP VALVE SEPARATE FROM TEE  
OPTION 1: EXTENSION PIPE WITH THRUST  
COLLAR, HYDRANT TEE AND FL - FL ENDS**



**METHOD 2:  
OPTION 2: EXTENSION PIPE WITH  
THRUST COLLAR AND FL - SPIG ENDS**



**METHOD 2:  
OPTION 3: EXTENSION PIPE WITH  
THRUST COLLAR AND FL - FL ENDS**

**NOTES:**

1. REFER 4005-30002-01 & 4005-30002-02 FOR GENERAL NOTES.
2. TEES SHALL NOT BE INSTALLED WITHIN MIN 1500 OF THE SOCKET END OF A DN100 PIPE.
3. WORK SHALL ONLY BE UNDERTAKEN UNDER THE DIRECTION OF A PERSON WHO HAS COMPLETED AN APPROVED DUCTILE IRON PIPE INSTALLATION TRAINING COURSE.
4. REFER SECTION 3 FOR THRUST/ ANCHOR BLOCKS REQUIREMENTS.
5. FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH 4005-30005-10 & 4005-30005-11.
6. ALL DIMENSIONS IN MILLIMETRES.

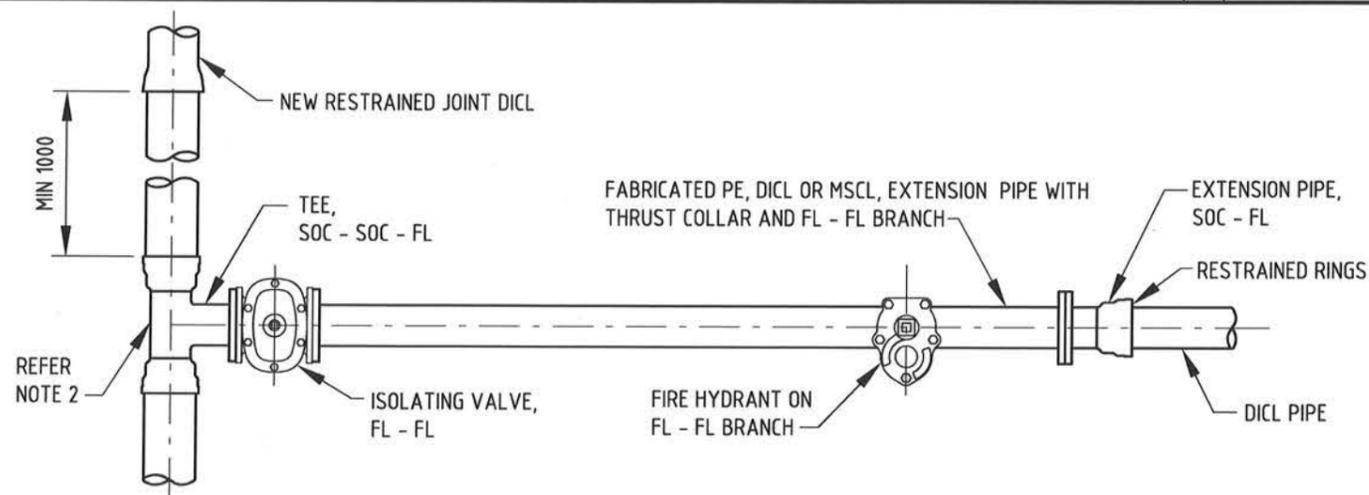
REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
1	31/03/16	MS	2016 STANDARDS REVIEW	TG

DESIGN PANEL	
DESIGNED: 28/09/15 RJP	AUTHORISED: 31/03/16 T.GALEK
DRAWN: 16/11/16 MS	SIGNATURE: <i>T. Galek</i>
REVIEWED: 31/03/16 TG	

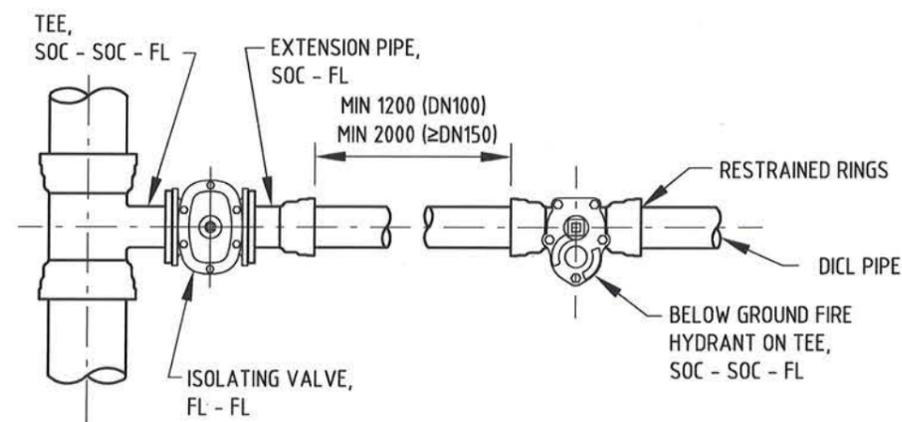
  
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**SA WATER STANDARD DRAWINGS**  
**WATER SUPPLY CONSTRUCTION MANUAL**  
**NEW WATER MAIN**  
**PVC OR UNRESTRAINED DICL**  
**BRANCH INSTALLATION ARRANGEMENTS**

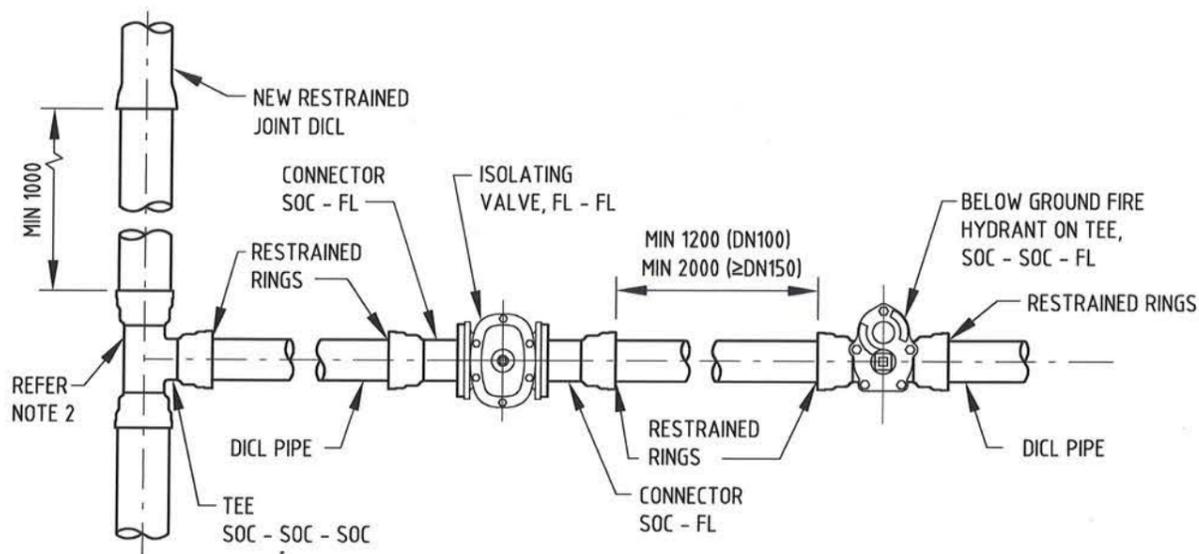
A3 SHT SIZE	1 REVISION
TOTAL SHEETS:	
SUPERSEDES: 91-0059-01 (C5)	
DRAWING NUMBER	
4005-30005-03	
PREFIX	NUMBER SHEET



**METHOD 1  
STOP VALVE ADJACENT TEE  
DN100 & DN150 MAINS BRANCH ARRANGEMENT**



**METHOD 2:  
RESTRAINED JOINT DICL BRANCHES OFF NEW  
DN200 & LARGER MAINS BRANCH ARRANGEMENT**



**METHOD 3:  
STOP VALVE SEPARATE FROM TEE**

**NOTES:**

1. REFER 4005-30002-01 & 4005-30002-02 FOR GENERAL NOTES.
2. TEES SHALL NOT BE INSTALLED WITHIN MIN 1000 mm OF THE SOCKET END OF A DN100 PIPE.
3. WORK SHALL ONLY BE UNDERTAKEN UNDER THE DIRECTION OF A PERSON WHO HAS COMPLETED AN APPROVED DUCTILE IRON PIPE INSTALLATION TRAINING COURSE.
4. CUT LENGTHS OF DICL PIPE SHALL BE FROM A SECTION OF PIPE WITHIN 3.5 m OF THE SPIGOT.
5. REFER 4005-30003-08 FOR RESTRAINED JOINT REQUIREMENTS IN LIEU OF THRUST/ ANCHOR BLOCKS.
6. WHERE THE RESTRAINED JOINTING SYSTEM IS USED MARKING TAPE SHOWING 'RESTRAINED JOINT SYSTEM' SHALL BE USED.
7. FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH 4005-30005-10 & 4005-30005-11.
8. ALL DIMENSIONS IN MILLIMETRES.

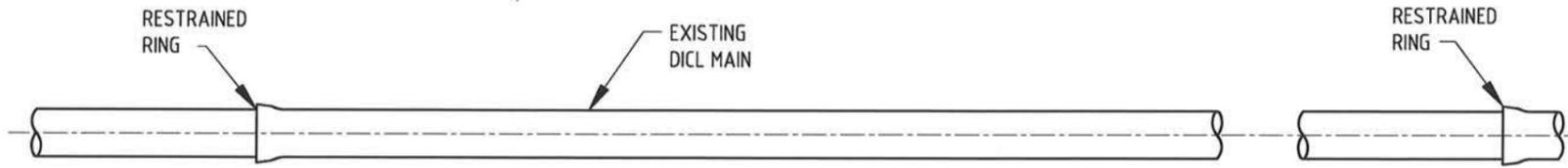
REVISION PANEL			
REV	DATE	DRN	DETAILS
2	05/12/16	RP	DRAWING REFERENCE CHANGED
1	31/03/16	MS	2016 STANDARDS REVIEW

DESIGN PANEL		
DESIGNED:	28/09/15	AUTHORISED:
RJP		T.GALEK
DRAWN:	16/11/15	SIGNATURE:
MS		
REVIEWED:	21/03/16	ORIGINAL SIGNED
TG		

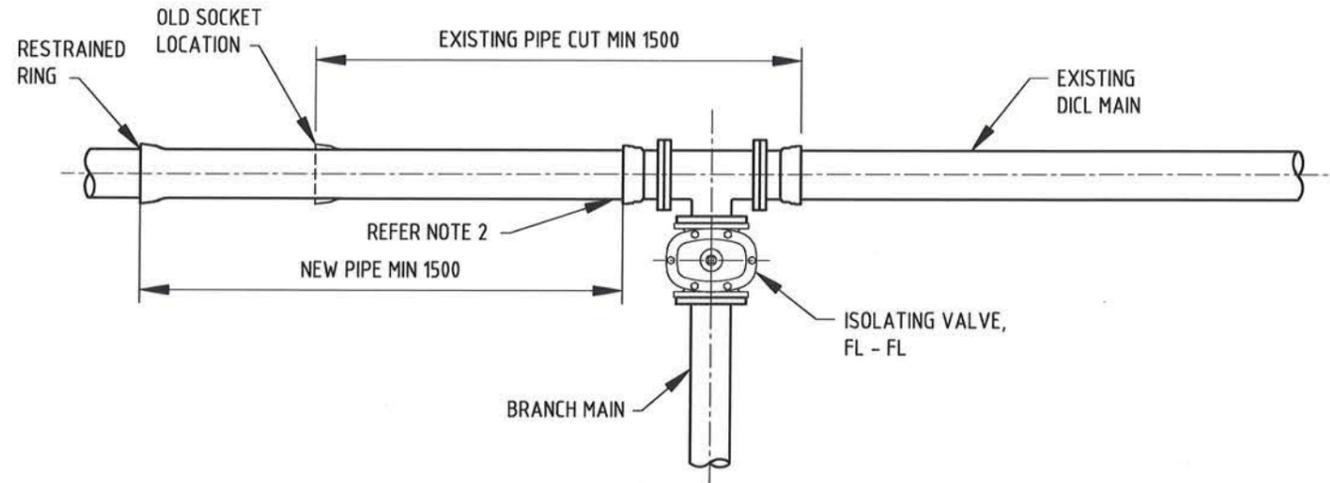
  
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**SA WATER STANDARD DRAWINGS**  
**WATER SUPPLY CONSTRUCTION MANUAL**  
**NEW WATER MAIN WITH**  
**RESTRAINED JOINT DICL**  
**BRANCH INSTALLATION ARRANGEMENTS**

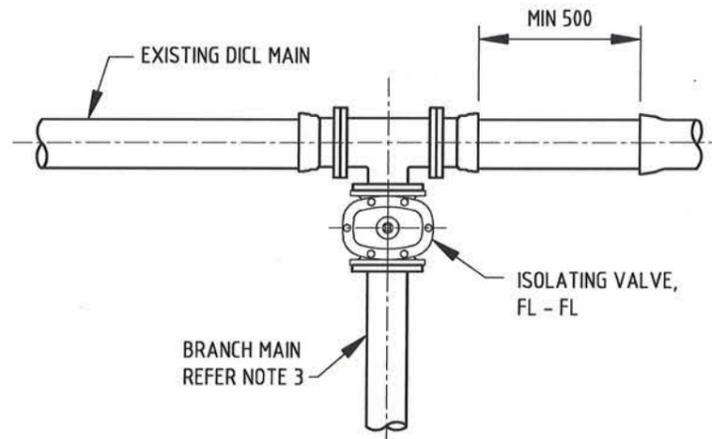
A3	2
SHT SIZE	REVISION
TOTAL SHEETS: 1	
SUPERSEDES: 91-0059-05 (C6)	
DRAWING NUMBER	
4005-30005-04	
PREFIX	NUMBER SHEET



EXISTING PIPES PRIOR TO NEW BRANCH MAIN



NEW BRANCH CUT INTO EXISTING MAIN AT SOCKET END OF PIPE



NEW BRANCH CUT INTO EXISTING MAIN AT SPIGOT END OF PIPE

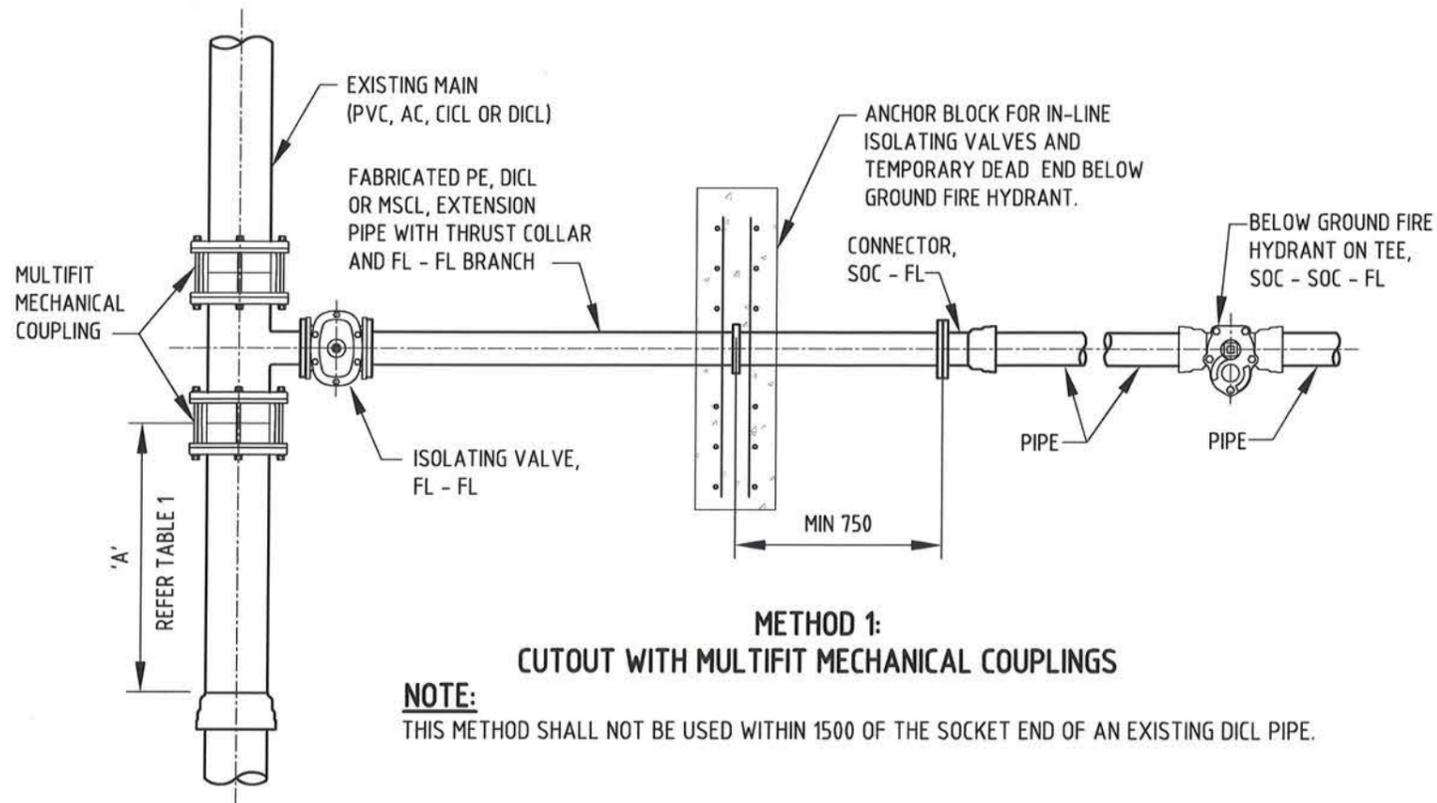
TABLE 1  
PIPE OD TOLERANCE

PIPE DN	PIPE OD	TOLERANCE
100	122	+1 mm TO - 2 mm
150	177	+1 mm TO - 2 mm
200	232	+1 mm TO - 2 mm
250	286	+1 mm TO - 2 mm
300	345	+1 mm TO - 2 mm
375	426	+/- 2 mm

**NOTES:**

- REFER 4005-30002-01 & 4005-30002-02 FOR GENERAL NOTES.
- PRIOR TO THE CUTTING OF NEW SECTION OF PIPE THE NEW PIPE OD SHALL BE CHECKED TO CONFIRM OD IS WITHIN TOLERANCE AND THE PIPE IS SUITABLE FOR INSTALLATION. REFER TABLE 1.  
PIPE WITH A LARGER OD MAY BE CHAMFERED TO ACHIEVE REQUIRED OD. PIPE WITH A SMALLER OD SHALL BE REJECTED.
- IF NEW BRANCH MAIN IS RESTRAINED JOINT DICL REFER 4005-30005-04.  
IF NEW BRANCH MAIN IS PVC OR NON RESTRAINED JOINT DICL, REFER 4005-30005-03.
- WHERE THE EXISTING MAIN CANNOT BE SHUT DOWN TO ACHIEVE THE CUT IN, AN UNDER PRESSURE TAPPING SHALL BE PERFORMED. REFER 4005-30005-06.
- WORK SHALL ONLY BE UNDERTAKEN UNDER THE DIRECTION OF A PERSON WHO HAS COMPLETED AN APPROVED DUCTILE IRON PIPE INSTALLATION TRAINING COURSE.
- REFER 4005-30003-09 FOR RESTRAINED JOINT REQUIREMENTS IN LIEU OF THRUST/ ANCHOR BLOCKS.
- WHERE THE RESTRAINED JOINTING SYSTEM IS USED MARKING TAPE SHOWING 'RESTRAINED JOINT SYSTEM' SHALL BE USED.
- ALL DIMENSIONS IN MILLIMETRES.

REVISION PANEL				DESIGN PANEL				SA WATER STANDARD DRAWINGS		A3	1
REV	DATE	DRN	DETAILS	APR	CURRENT REV AUTHORIZED:	DESIGNED: 28/09/15	AUTHORISED: 31/03/16	 <b>SA WATER</b> WATER SUPPLY CONSTRUCTION MANUAL EXISTING RESTRAINED JOINT DICL MAIN NEW BRANCH MAIN RESTRAINED OR NON RESTRAINED		SHT SIZE	REVISION
						RJP	T.GALEK			TOTAL SHEETS:	
					SIGNATURE:	DRAWN: 16/11/15	SIGNATURE:	SUPERSEDES: 91-0059-04 (C9)		DRAWING NUMBER	
						MS		DRAWING NUMBER		4005-30005-05	
1	31/03/16	MS	2016 STANDARDS REVIEW	TG		REVIEWED 21/03/16	TG	PREFIX		NUMBER SHEET	
								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.		SHEET	

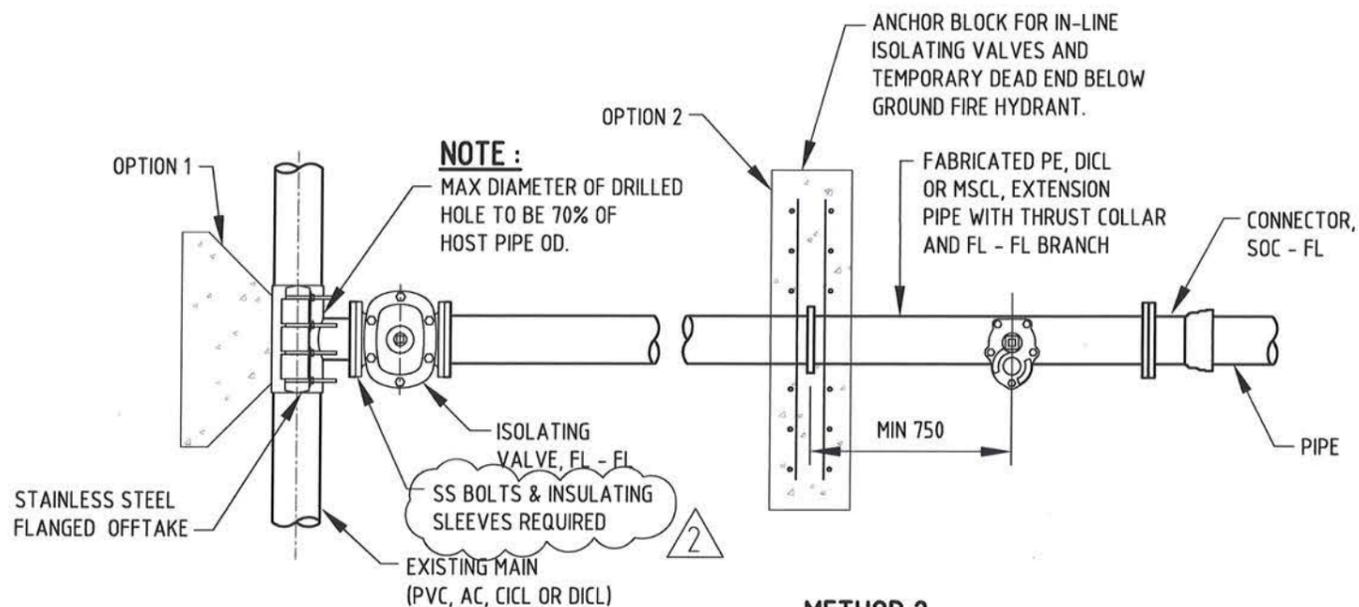


**METHOD 1:  
CUTOUT WITH MULTIFIT MECHANICAL COUPLINGS**

**NOTE:**  
THIS METHOD SHALL NOT BE USED WITHIN 1500 OF THE SOCKET END OF AN EXISTING D1CL PIPE.

**TABLE 1**

PIPE	DIMENSION 'A'
PVC, AC OR C1CL	1000
D1CL	1500

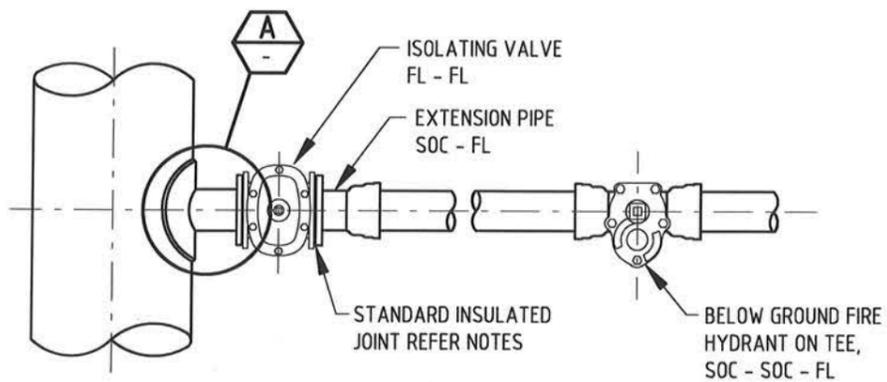


**METHOD 2:  
UNDER PRESSURE TAPPING  
(USING STAINLESS STEEL FLANGED OFFTAKE)**

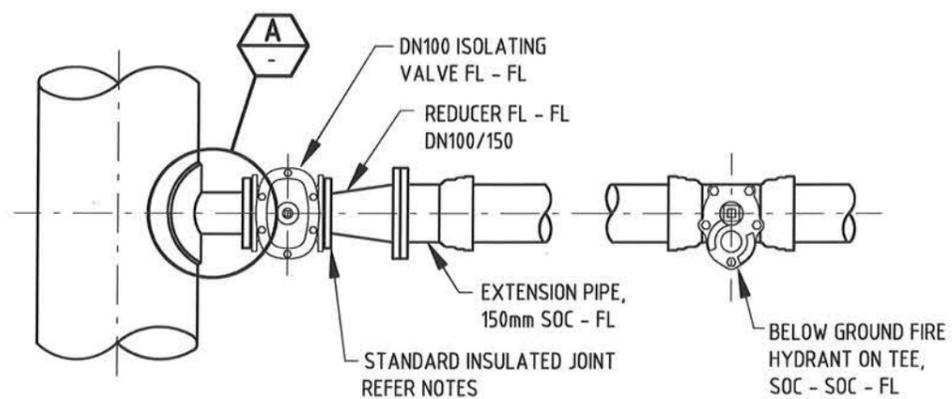
**NOTES:**

- REFER 4005-30002-01 AND 4005-30002-02 FOR GENERAL NOTES.
- IF EXISTING MAIN IS RESTRAINED JOINT D1CL, **METHOD 1 SHALL NOT BE USED** FOR 'CUT-IN' INTO RESTRAINED JOINT MAINS. REFER 4005-30005-05.
- FOR METHOD 2 IF THE BRANCH OFFTAKE IS TO BE UNDERTAKEN AS A LIVE CONNECTION (UNDER PRESSURE TAPPING), THE WORK SHALL ONLY BE UNDERTAKEN BY AN AUTHORISED CONTRACTOR. **REFER AUTHORISED PRODUCTS FOR WATER SYSTEMS FOR CONTRACTORS APPROVED TO PERFORM THIS WORK.**
- FOR METHOD 2, **LOCATION OF THRUST BLOCK SHALL BE EITHER OPTION 1 OR OPTION 2.**
- PRIOR TO CONFIRMATION OF THE CONNECTING METHOD THE CONTRACTOR SHALL CONFIRM:
  - THE EXISTING MAIN PIPE MATERIAL,
  - PROXIMITY OF EXISTING PIPE SOCKET,
  - AVAILABILITY OF COUPLINGS.
- IF BRANCH MAIN IS PVC OR NON RESTRAINED JOINT D1CL, AN ANCHOR BLOCK (WITH EXTENSION PIPE AND THRUST COLLAR) IS REQUIRED.
- IF BRANCH MAIN IS RESTRAINED JOINT D1CL, AND THE NEW MAIN IS RESTRAINED JOINT D1CL, AN ANCHOR BLOCK MAY NOT BE REQUIRED, SUBJECT TO CONFIRMATION OF THE PROXIMITY OF THE NEAREST SOCKET. IF SOCKET LOCATION CANNOT BE CONFIRMED, A THRUST BLOCK SHALL BE CONSTRUCTED. **REFER 4005-30003-09 FOR RESTRAINED JOINT REQUIREMENTS IN LIEU OF THRUST/ ANCHOR BLOCKS.**
- TEE FOR FIRE HYDRANT MAY BE INCLUDED ON THE FABRICATED EXTENSION PIPE OR FURTHER ALONG THE MAIN.
- REFER 4005-30005-01 FOR SLEEVING OF D1CL PIPE.
- REFER SECTION 3 FOR ANCHOR BLOCK INFORMATION.
- ALL DIMENSIONS IN MILLIMETRES.

REVISION PANEL					DESIGN PANEL			SA WATER STANDARD DRAWINGS		A3	2
REV	DATE	DRN	DETAILS	APR	CURRENT REV 16/12/16	DESIGNED: 28/09/15	AUTHORISED: 31/03/16	WATER SUPPLY CONSTRUCTION MANUAL		SHT SIZE	REVISION
2	21/11/16	RJP	SS BOLTS & INSULATION ADDED FOR METHOD 2		AUTHORISED: T. GALEK	RJP	T. GALEK	NEW BRANCH OFF EXISTING MAIN		TOTAL SHEETS:	
1	31/03/16	MS	2016 STANDARDS REVIEW	TG	SIGNATURE: <i>T. Galek</i>	DRAWN: 16/11/15	SIGNATURE:	CUT OUT WITH MECHANICAL COUPLINGS		SUPERSEDES: 91-0059-02 (C7)	
						MS		OR UNDER PRESSURE TAPPING		DRAWING NUMBER	
						REVIEWED: 21/03/16	TG	ORIGINAL SIGNED		<b>4005-30005-06</b>	
								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.		PREFIX	SHEET



① ALL BRANCH SIZES EXCEPT DN150



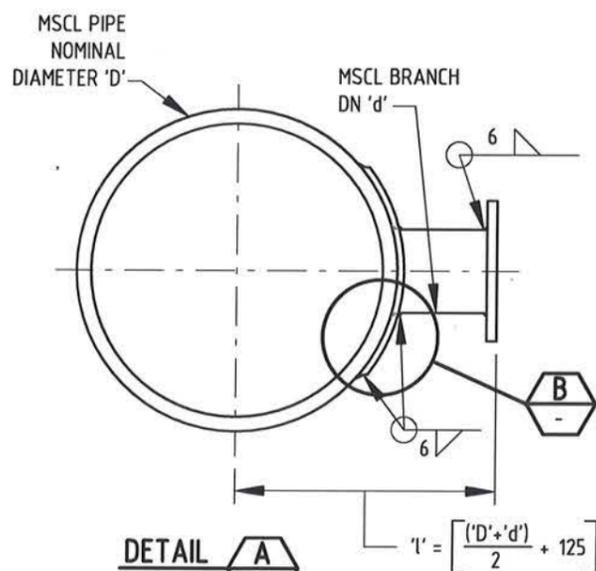
② DN150 BRANCH ONLY

**MSCL FABRICATION/ INSTALLATION REQUIREMENTS:**

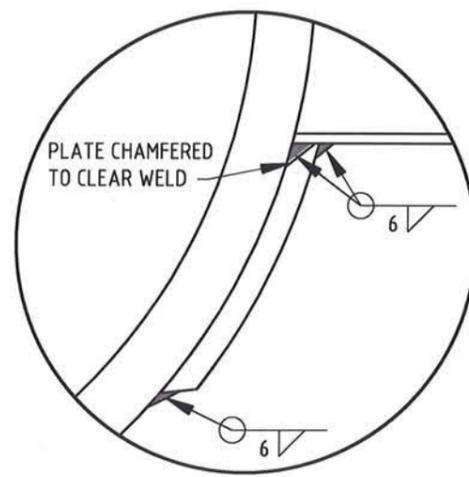
1. ALL WELDING SHALL BE IN ACCORDANCE WITH AS 4041, CLASS 2P.
2. FLANGES SHALL BE IN ACCORDANCE WITH AS 4087. DIMENSIONS FOR STEEL CLASS 16, FLAT FACED.
3. CLEAN EXISTING MAIN PIPE COATING FOR FULL PIPE CIRCUMFERENCE FOR 100 mm SURROUNDING OFFTAKE LOCATION.
4. CLEAN ENTIRE LENGTH OF BRANCH OFFTAKE.
5. ALL WELDING SLAG SHALL BE REMOVED.
6. FOR BURIED APPLICATIONS:
  - OFFTAKE SHALL BE PROTECTED WITH BITUMEN MASTIC TAPE SYSTEM IN ACCORDANCE WITH TS 18.
  - ADDITIONAL BITUMEN MASTIC TAPE SYSTEM SHALL BE EXTENDED AROUND FULL PIPE CIRCUMFERENCE, ADJACENT TO OFFTAKE, AND ONTO THE EXISTING COATING, IN ACCORDANCE WITH TS 18.

**NOTES:**

1. REFER 4005-30002-01 & 4005-30002-02 FOR GENERAL NOTES.
2. A BRANCH SHALL NOT BE INSTALLED WITHIN MIN 1000 mm OF THE SOCKET END OF A DN100 PIPE. MSCL FLANGED OFFTAKES, DN100 & DN150, SHALL BE AN 'UNDER PRESSURE TAPPING' AND SHALL BE UNDERTAKEN BY AN AUTHORISED CONTRACTOR. REFER AUTHORISED PRODUCTS FOR WATER SYSTEMS FOR CONTRACTORS APPROVED TO PERFORM THIS WORK.
3. THRUST / ANCHOR BLOCKS ARE NOT REQUIRED.
4. THE CONSULTANT SHALL DETERMINE THE REINFORCING PLATE SIZE. CONFIRMATION OF PIPELINE PRESSURES SHALL BE SOUGHT FROM THE SA WATER REPRESENTATIVE TO ASSIST WITH THE CALCULATION.
5. ALL BELOW GROUND FLANGES FIRE HYDRANTS, ISOLATING VALVES AND TAPERS SHALL BE PROTECTED WITH PETROLATUM TAPE SYSTEM OR BITUMEN MASTIC TAPE SYSTEM IN ACCORDANCE WITH TS 18.
6. STANDARD INSULATED FLANGED JOINT SHALL BE INSTALLED WHERE INDICATED. REFER 04-0408-01 FOR DETAILS.
7. REFER SECTION 5 FOR DETAILS ON PIPE CONSTRUCTION FOR THE BRANCH MAIN.
8. REFER SECTION 3 FOR THRUST PROTECTION FOR THE BRANCH MAIN.



MSCL FLANGED OFFTAKE DETAIL  
END ELEVATION



DETAIL WELDING

REVISION PANEL					DESIGN PANEL			 <b>SA WATER STANDARD DRAWINGS</b> <b>WATER SUPPLY CONSTRUCTION MANUAL</b> <b>LAYING DETAILS FOR BRANCHES OFF</b> <b>EXISTING MSCL MAIN</b>	A3	1
REV	DATE	DRN	DETAILS	APR	CURRENT REV AUTHORIZED:	DESIGNED: 28/09/15	AUTHORIZED: 31/03/16		SHT SIZE	REVISION
					SIGNATURE:	RJP	T.GALEK	TOTAL SHEETS:		
						DRAWN: 16/11/15	SIGNATURE:	SUPERSEDES: 91-0059-03 (C8)		
						MS	<i>T. Galek</i>	DRAWING NUMBER		
						REVIEWED: 21/03/16	TG	4005-30005-07		
1	31/03/16	MS	2016 STANDARDS REVIEW	TG				PREFIX	NUMBER	SHEET

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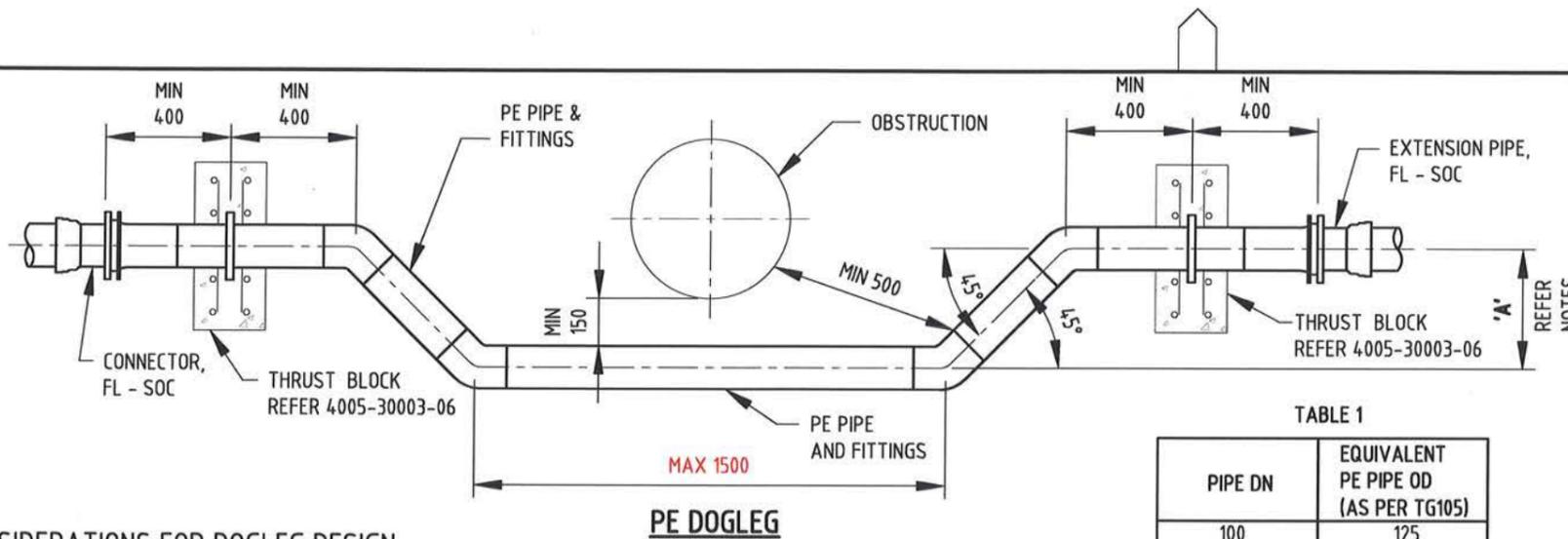
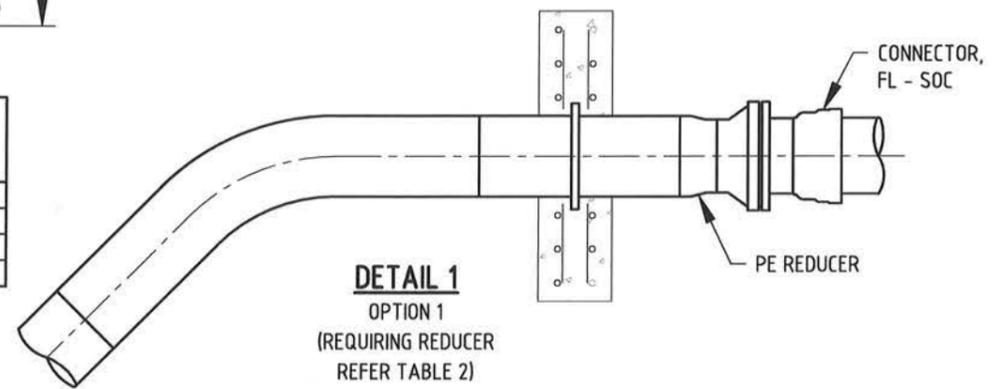


TABLE 2

PIPE DN	EQUIVALENT PE PIPE OD (AS PER TG105)	OPTION 1 > 6m LENGTH (FROM FLANGE - FLANGE) REDUCER REQUIRED	OPTION 2 UP TO MAX 6m LENGTH (FROM FLANGE - FLANGE) SMALLER OD APPROVED
200	250	250-225	225
250	315	315-280	280

TABLE 1

PIPE DN	EQUIVALENT PE PIPE OD (AS PER TG105)
100	125
150	180
200	250
250	315



**CONSIDERATIONS FOR DOGLEG DESIGN:**

- LENGTH AND DEPTH: THE PRIMARY CONSIDERATION FOR ANY DOGLEG SHALL BE THE MINIMISATION OF LENGTH & DEPTH.
- POSITIONING OF BRANCH MAINS & FITTINGS: THE LOWER SECTION OF THE DOGLEG SHALL BE A CONTINUOUS ITEM. THE POSITIONING OF BRANCHES, VALVES AND PROPERTY CONNECTIONS IS NOT PERMITTED. APPROVAL SHALL BE OBTAINED FROM THE SA WATER REPRESENTATIVE FOR DEVIATION FROM THIS REQUIREMENT.
- VERTICAL CLEARANCE TO OBSTRUCTION: REFER WSA03 2011 TABLE 5.5 FOR MINIMUM CLEARANCE REQUIREMENTS.
- THE USE OF A SMALL DOGLEG (RATHER THAN VERTICAL DEFLECTION OF PIPES) IS NOT A GIVEN. SA WATER HAS THE AUTHORITY TO NOT APPROVE THE USE OF A DOGLEG IN SUCH INSTANCES. FOR MINOR VERTICAL CHANGES CONFIRMATION OF REQUIREMENTS SHALL BE SOUGHT FROM THE SA WATER REPRESENTATIVE.

**STANDARD / NON STANDARD DOGLEG:**

- A DOGLEG IS CONSIDERED STANDARD IF IT IN ACCORDANCE WITH THIS DRAWING. REQUIREMENTS ARE:
  - THE LOWER LENGTH BEING A MAXIMUM 1500,
  - THE VERTICAL CHANGE BEING EITHER 500 OR 1000. THE PREFERRED VERTICAL CHANGE (DIMENSION 'A') IS 500. THE 1000 OPTION MAY BE UTILISED WHERE THE OBSTRUCTION SIZE OR TYPE JUSTIFIES ITS USE, AND,
  - THERE IS ONLY ONE OBSTRUCTION.
- A DOGLEG IS CONSIDERED NON STANDARD IF IT:
  - INVOLVES MULTIPLE OBSTRUCTIONS,
  - IS UNUSUALLY DEEP, OR, IS EXCESSIVELY LONG.
  - IS OVER THE TOP OF AN OBSTRUCTION. THIS REQUIRES APPROVAL BY THE SA WATER REPRESENTATIVE. FOR THIS OPTION, AN AUTHORISED AIR RELEASE MECHANISM SHALL BE INSTALLED. THE VALVE FLANGE & BOLTS SHALL BE WRAPPED IN ACCORDANCE WITH TS 18.

**DESIGN DRAWINGS:**

- 'NON STANDARD' DOGLEGS SHALL BE DETAILED ON THE DESIGN DRAWINGS. SUFFICIENT DETAIL SHALL BE PROVIDED TO ALLOW PROPER ASSESSMENT. THIS REQUIRES THE INCLUSION OF A SECTION AND/ OR ENLARGEMENT ON THE DESIGN DRAWING. ALL OBSTRUCTIONS SHALL BE LABELLED, EG 375 SWD, TOGETHER WITH THE WATER MAIN CHAINAGE, THE DESIGNED CLEARANCE BETWEEN THE WATER MAIN AND THE OBSTRUCTION. INDICATIVE DIMENSIONS ARE UNACCEPTABLE.
- WHERE A DOGLEG IS IN ACCORDANCE WITH THIS DRAWING (WITH STANDARD CLEARANCES), A NOTE PLACED ON THE DESIGN DRAWING IS SUFFICIENT. THE NOTE SHALL IDENTIFY THE CHAINAGE FOR THE DOGLEG TOGETHER WITH THE TYPE OF CONFLICTING SERVICE, AND THE DESIGNED CLEARANCE.

**PE DOGLEGS:**

- PE PIPE FOR USE AS A DOGLEG SHALL BE PERMITTED FOR DIAMETERS UP TO AND INCLUDING DN250. LARGER DIAMETER DOGLEGS SHALL BE CONSTRUCTED USING OTHER APPROVED PIPE MATERIAL.
- FOR DN200 & DN250 DIAMETERS, THE PE OD EQUIVALENT MAY REQUIRE A REDUCER TO MATCH THE FLANGE OF THE ADJOINING PVC OR DICL PIPE. DETERMINATION IS DEPENDENT UPON THE LENGTH OF THE DOGLEG (6 METRES). REFER TABLE 2 ABOVE.
  - FOR LENGTHS GREATER THAN 6 METRES A REDUCER WILL BE REQUIRED.
  - FOR LENGTHS UP TO 6 METRES, AN ALTERNATIVE SMALLER OD IS APPROVED.

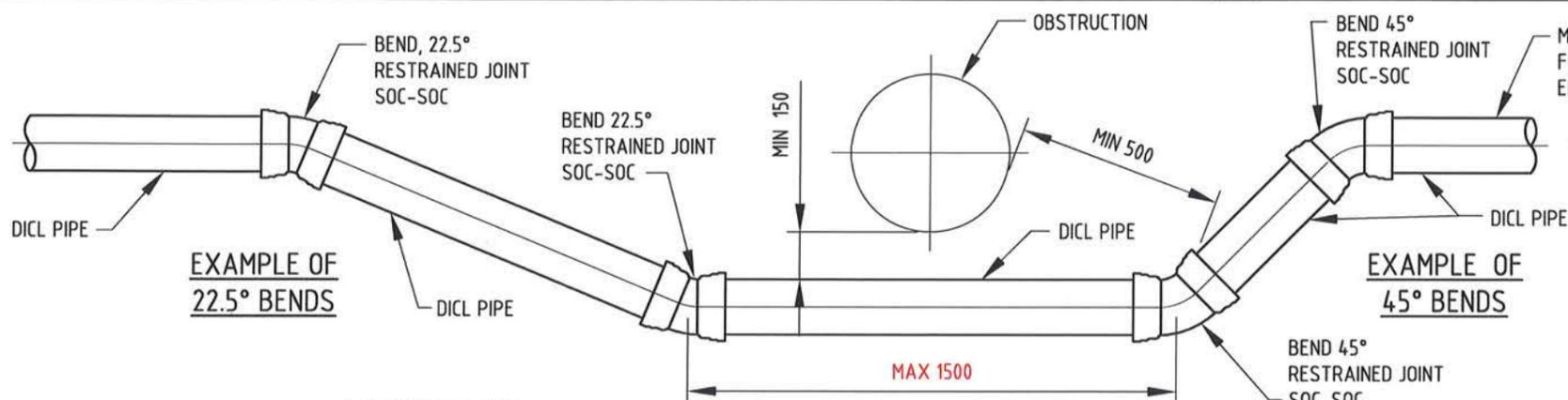
**FABRICATION OF PE SPECIALS & DELIVERABLES:**

- APPROVED FABRICATION METHODS:
  - BUTT WELD (FACTORY MANUFACTURE)
  - OR
  - ELECTROFUSION COUPLINGS.
- FABRICATION SHALL ONLY BE UNDERTAKEN BY QUALIFIED PE WELDERS. BUTT WELDING OF PE SPECIALS MAY ONLY BE UNDERTAKEN BY AN AUTHORISED MANUFACTURER LISTED IN THE AUTHORISED PRODUCTS FOR WATER SYSTEMS.
- THE FABRICATION COMPANY SHALL PROVIDE A FORM:
  - IDENTIFYING EVERY WELD, WITH THE DATE OF THE WELD AND NAME AND ID OF THE EMPLOYEE WHO UNDERTOOK THE WELD.
  - DETAILING THE MATERIALS USED, IE ITEM MANUFACTURER & DESCRIPTION.
  - THE TECHNICIAN WHO UNDERTOOK THE WELD. EACH WELD SHALL BE STAMPED WITH THE WELDER ID.
- AN AUTHORISED OFFICER OF THE FABRICATION COMPANY SHALL SIGN THE FORM.
- A COPY OF THE FABRICATION COMPANY'S FORM SHALL BE PROVIDED TO THE CONSTRUCTION CONTRACTOR WHO SHALL INITIAL THE FORM AND PROVIDE A COPY TO THE SA WATER REPRESENTATIVE.

1. FOR GENERAL NOTES REFER 4005-30002-01 & 4005-30002-02.
2. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.

REVISION PANEL				DESIGN PANEL				<p>SA WATER STANDARD DRAWINGS WATER SUPPLY CONSTRUCTION MANUAL DOGLEG CONSIDERATIONS &amp; STANDARD PE DOGLEG</p>	A3 SHT SIZE	1 REVISION
REV	DATE	DRN	DETAILS	APR	CURRENT REV AUTHORISED:	DESIGNED: 28/09/15 RJP	AUTHORISED: 31/03/16 T.GALEK		TOTAL SHEETS:	
					SIGNATURE:	DRAWN: 16/11/15 MS	SIGNATURE: <i>T. Galek</i>	SUPERSEDES: 91-0060-02 (C13)		
						REVIEWED: 21/03/16 TG		DRAWING NUMBER		
1	31/03/16	MS	2016 STANDARDS REVIEW	TG				4005-30005-08		
								PREFIX	NUMBER	SHEET

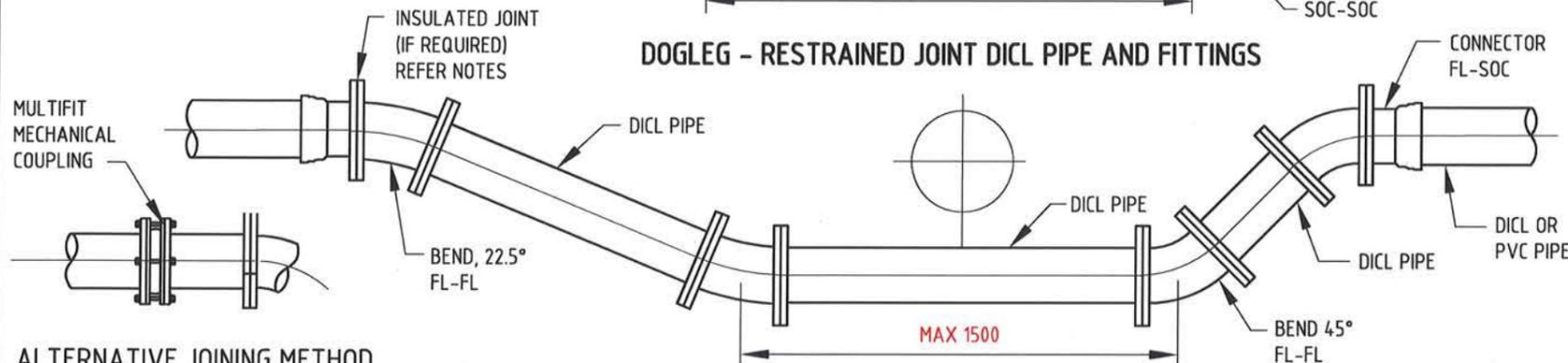
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EXAMPLE OF 22.5° BENDS

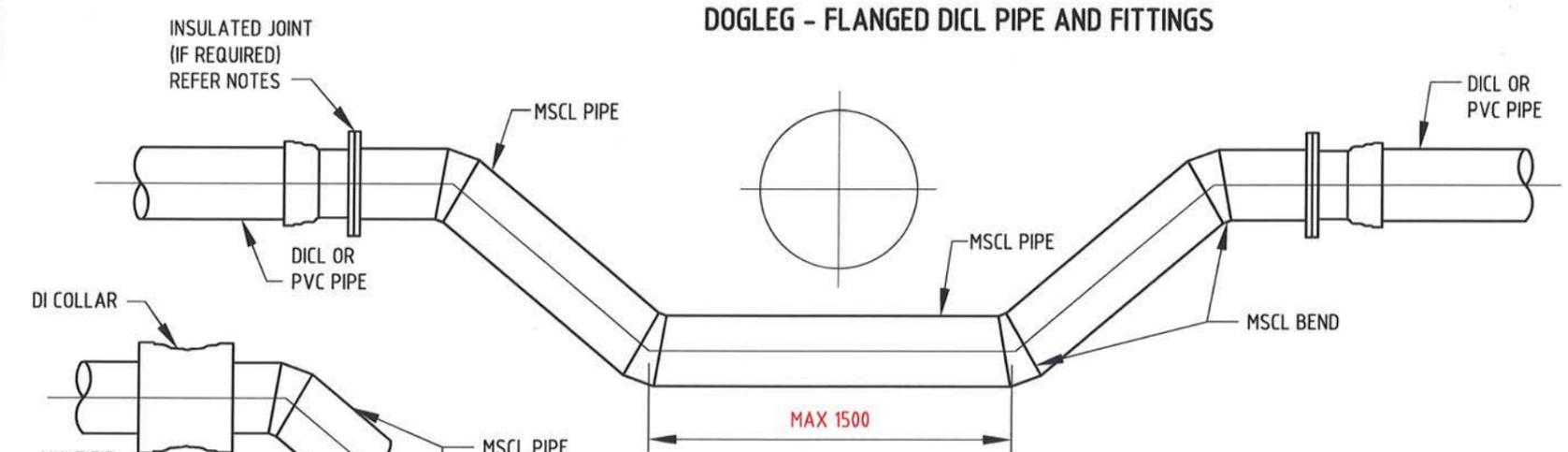
EXAMPLE OF 45° BENDS

DOGLEG - RESTRAINED JOINT DICI PIPE AND FITTINGS



ALTERNATIVE JOINING METHOD

DOGLEG - FLANGED DICI PIPE AND FITTINGS



ALTERNATIVE JOINING METHODS

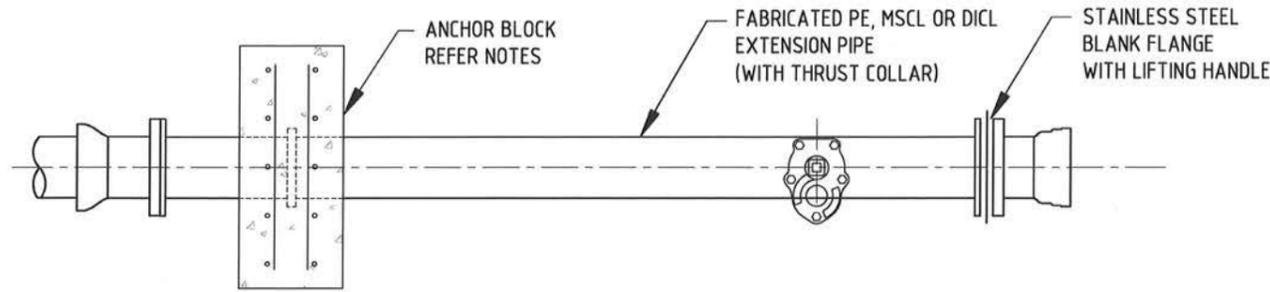
DOGLEG -MSCL PIPE, WELDED BENDS

NOTES:

- REFER 4005-30002-01 & 4005-30002-02 FOR GENERAL NOTES.
- REFER 4005-30005-08 FOR:
  - DOGLEG CONSIDERATIONS,
  - DESIGN REQUIREMENTS,
  - DESIGN DRAWING REQUIREMENTS,
  - THE PE PIPE ALTERNATIVE.
- CUT LENGTHS OF DICI PIPE FOR USE WITH THE RESTRAINED JOINT METHOD SHALL BE FROM A SECTION OF PIPE WITHIN 3.5 m OF THE SPIGOT.
- DICI DOGLEGS SHALL BE PROTECTED BY EITHER:
  - LINEAR LOW DENSITY POLYETHYLENE SLEEVING. (REFER 4005-30005-01).
  - OR
  - WRAPPING WITH PETROLATUM TAPE SYSTEM IN ACCORDANCE WITH TS 29.
- MSCL DOG LEGS:
  - ALL WELDING SHALL BE IN ACCORDANCE WITH AS 4041, CLASS 2.
  - SINTAKOTED PIPES:
    - WHERE SINTAKOTE HAS BEEN DAMAGED OR REMOVED, PIPE SHALL BE WRAPPED WITH BITUMEN MASTIC TAPE SYSTEM, IN ACCORDANCE WITH TS 18.
  - NON-SINTAKOTED PIPES:
    - PIPE SHALL BE WRAPPED WITH BITUMEN MASTIC TAPE SYSTEM, IN ACCORDANCE WITH TS 18.
- STANDARD INSULATED FLANGED JOINT
  - SHALL BE INSTALLED WHERE INDICATED IF ADJOINING MAIN IS DICI OR CI CL. NOT REQUIRED IF ADJOINING MAIN IS PVC OR AC.
  - REFER 04-0408-01 FOR DETAILS.
- THRUST BLOCKS MAY NOT BE REQUIRED WHEN DOGLEG IS FABRICATED ENTIRELY FROM:
  - RESTRAINED JOINT DICI PIPE AND FITTINGS,
  - FLANGED DICI PIPE AND FITTINGS,
  - WELDED MSCL PIPE.
- REFER 4005-30003-08 FOR RESTRAINED JOINT REQUIREMENTS IN LIEU OF THRUST BLOCKS.
- DN200 AND LARGER, MSCL & DICI DOG LEGS SHALL BE CATHODICALLY PROTECTED. REFER 4005-30009-03.
- SHOULD STAINLESS STEEL BE UTILISED IN LIEU OF MSCL THE PIPE SHALL BE AS 1449, GRADE 316.

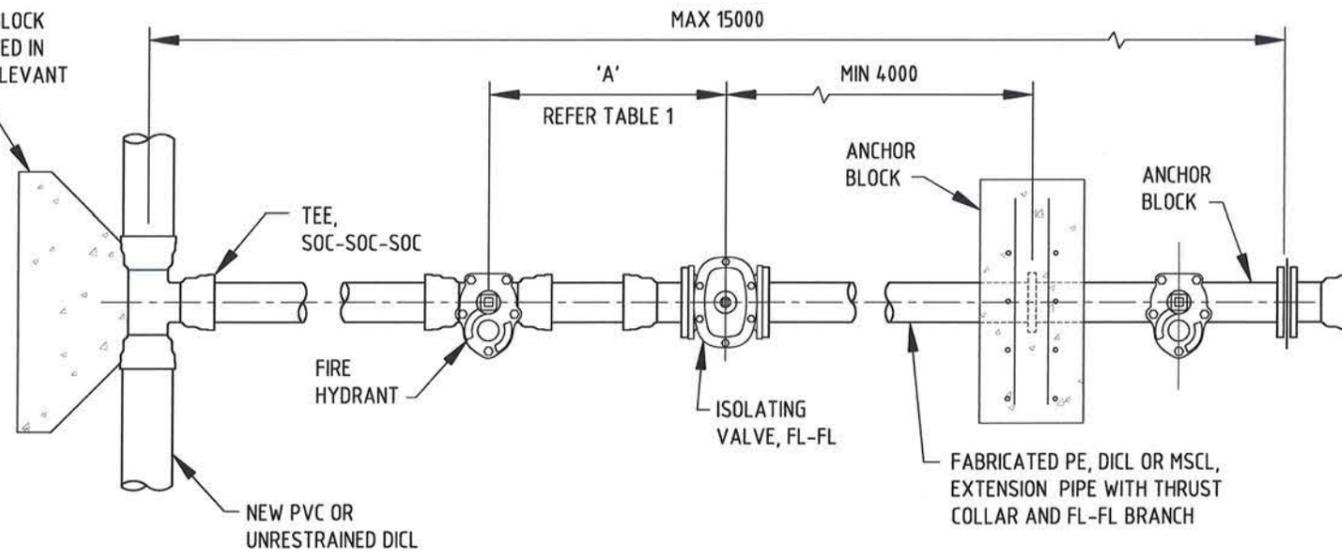
REVISION PANEL				DESIGN PANEL				SA WATER STANDARD DRAWINGS		A3		2	
REV	DATE	DRN	DETAILS	APR	DESIGNED:	AUTHORISED:	SIGNATURE:	WATER SUPPLY CONSTRUCTION MANUAL		SHT SIZE		REVISION	
2	19/07/16	PC	SUPERSEDES CHANGED		RJP	T.GALEK		DICI & MSCL DOGLEGS		TOTAL SHEETS:		2	
1	31/03/16	MS	2016 STANDARDS REVIEW	TG	MS			SOUTH AUSTRALIAN WATER CORPORATION		SUPERSEDES: C12 & C13		DRAWING NUMBER	
								4005-30005-09		PREFIX		NUMBER SHEET	

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**TEMPORARY END FIRE HYDRANT  
DN100 TO DN375 MAINS  
USING AUTHORISED FABRICATED EXTENSION PIPE**

TEE, PIPE & THRUST BLOCK SHALL BE CONSTRUCTED IN ACCORDANCE WITH RELEVANT WSCM DRAWINGS.



**TEMPORARY END FIRE HYDRANT  
WITHIN 15m OF BRANCH**

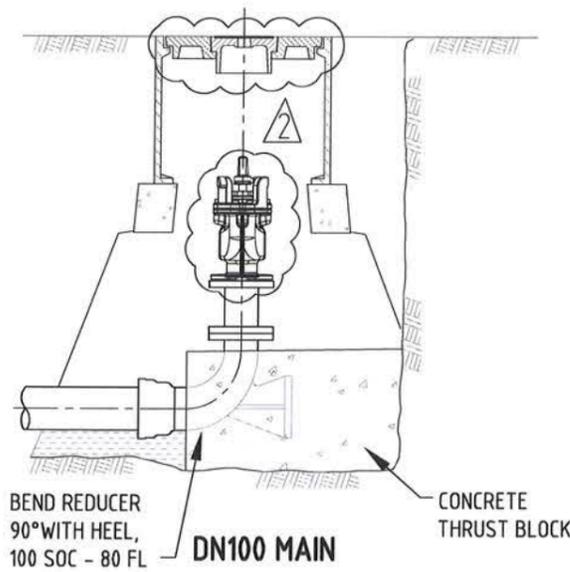
TABLE 1

DN	'A'
100	1200
>100	2000

**NOTES:**

1. REFER 4005-30002-01 AND 4005-30002-02 FOR GENERAL NOTES.
2. HYDRANT SHALL BE INSTALLED WITH CUP FACE TO ROAD CENTRE.
3. BELOW GROUND FIRE HYDRANT SHALL BE PROTECTED WITH PETROLATUM TAPE SYSTEM OR BITUMEN MASTIC TAPE SYSTEM IN ACCORDANCE WITH TS 18.
4. REFER 4005-30003-07 FOR THRUST BLOCK DETAILS.
5. REFER 4005-30007-01 FOR CAST IRON STREET BOX INSTALLATION.
6. REFER 4005-30007-03 FOR PLACEMENT OF RRPMS.
7. REFER 4005-30007-04 FOR MARKER POST DETAILS.
8. ALL DIMENSIONS IN MILLIMETRES.

REVISION PANEL				DESIGN PANEL		 SA WATER STANDARD DRAWINGS WATER SUPPLY CONSTRUCTION MANUAL TEMPORARY END FIRE HYDRANTS	A3 SHT SIZE	1 REVISION	
REV	DATE	DRN	DETAILS	APR	CURRENT REV AUTHORISED:		DESIGNED: 28/09/15 RJP	AUTHORISED: 31/03/16 T.GALEK	TOTAL SHEETS:
					SIGNATURE:	DRAWN: 16/11/16 MS	SIGNATURE: <i>T. Galek</i>	SUPERSEDES: 91-0068-04 (F4)	
1	31/03/16	MS	2016 STANDARDS REVIEW	TG		REVIEWED: 21/03/16 TG		DRAWING NUMBER <b>4005-30005-10</b>	
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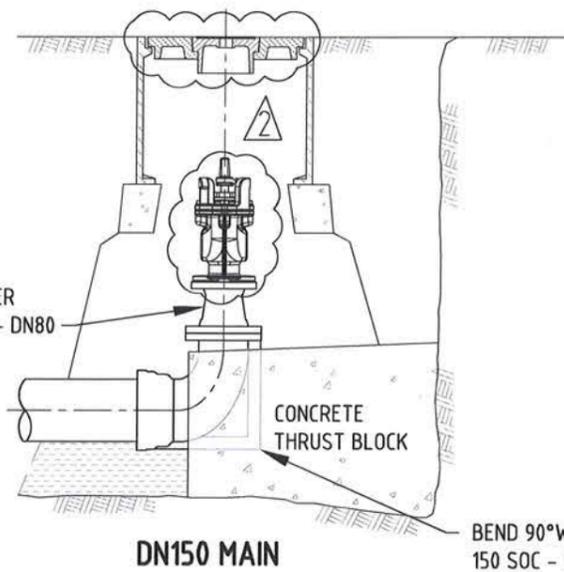


BEND REDUCER  
90° WITH HEEL,  
100 SOC - 80 FL

DN100 MAIN

CONCRETE  
THRUST BLOCK

**PERMANENT END FIRE HYDRANTS**  
USED WHERE NO FUTURE EXTENSION IS REQUIRED  
(DEAD END STREETS ETC.).



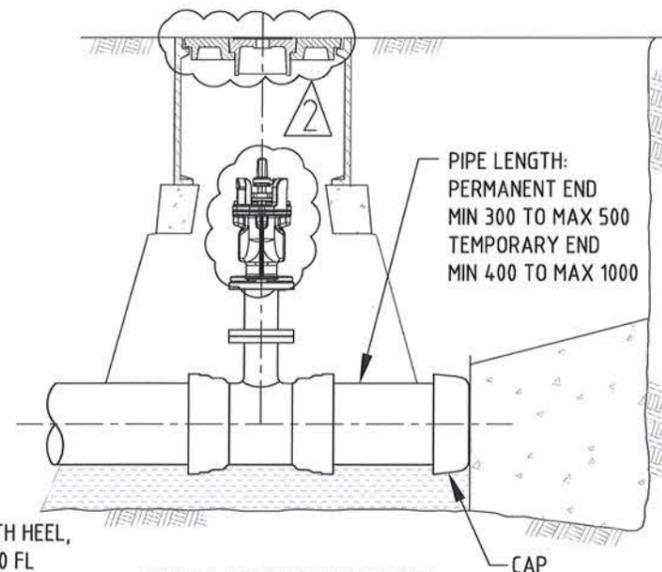
REDUCER  
DN150 - DN80

DN150 MAIN

CONCRETE  
THRUST BLOCK

BEND 90° WITH HEEL,  
150 SOC - 150 FL

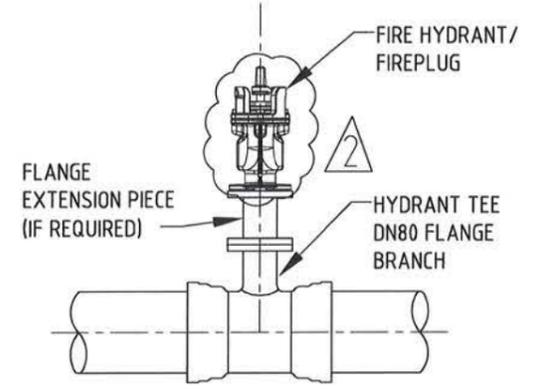
IN CERTAIN CIRCUMSTANCES MAY BE UTILISED AS TEMPORARY END.  
APPROVAL SHALL BE SOUGHT FROM THE SA WATER REPRESENTATIVE.



PIPE LENGTH:  
PERMANENT END  
MIN 300 TO MAX 500  
TEMPORARY END  
MIN 400 TO MAX 1000

CAP

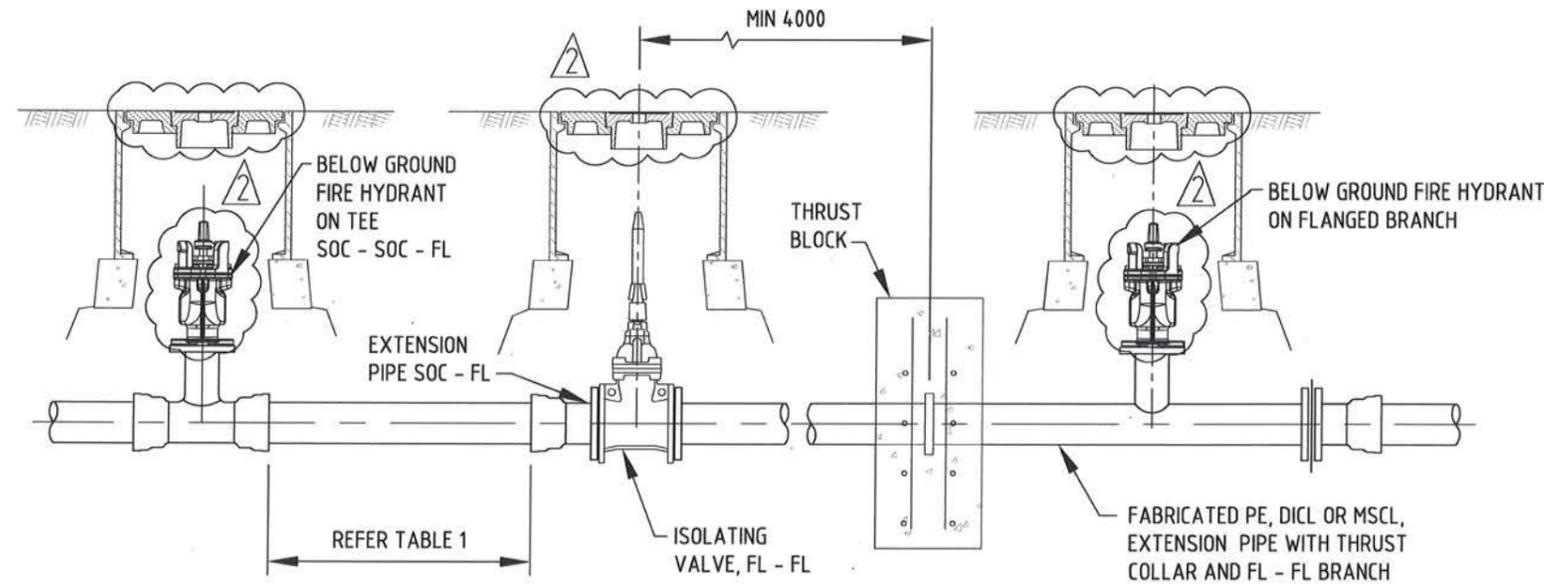
**DN200 TO DN375 MAINS  
USING CAP**



FLANGE  
EXTENSION PIECE  
(IF REQUIRED)

HYDRANT TEE  
DN80 FLANGE  
BRANCH

**INTERMEDIATE FIRE HYDRANT  
DN100 TO DN375 MAINS**



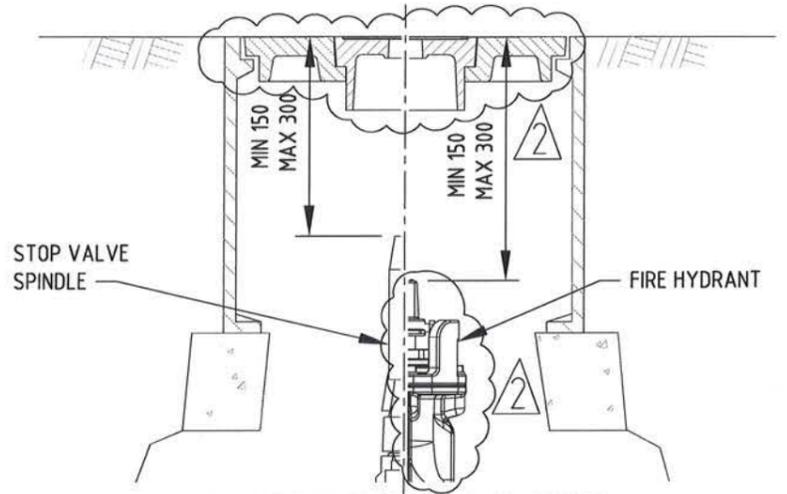
REFER TABLE 1

**ELEVATION**

**BELOW GROUND ISOLATING VALVE  
AND FIRE HYDRANT SET**

**TABLE 1**

DN	'A'
100	1200
>100	2000

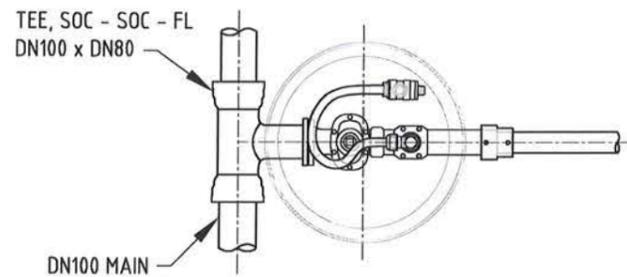


**SETTING DETAIL FOR SPINDLE HEIGHT  
RELATIVE TO FINISHED LEVEL**

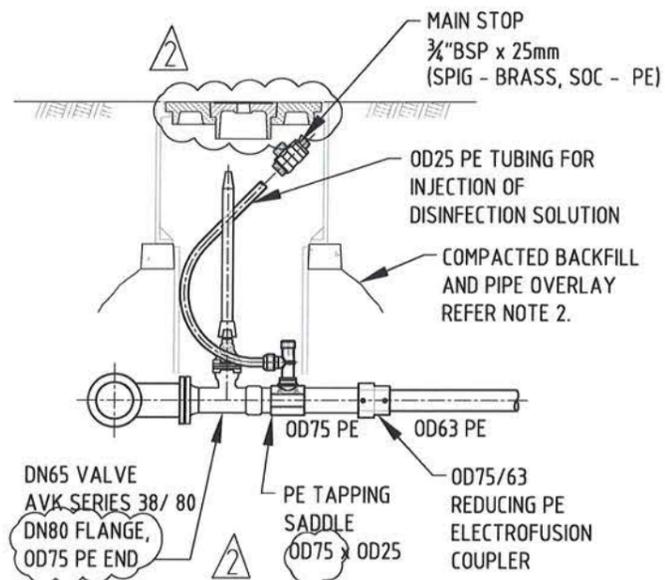
**NOTES:**

1. REFER 4005-30002-01 AND 4005-30002-02 FOR GENERAL NOTES.
2. HYDRANT SHALL BE INSTALLED WITH CUP FACE TO ROAD CENTRE.
3. BELOW GROUND FIRE HYDRANT SHALL BE PROTECTED WITH PETROLATUM TAPE SYSTEM OR BITUMEN MASTIC TAPE SYSTEM IN ACCORDANCE WITH TS 18.
4. REFER 4005-30003-07 FOR THRUST BLOCK DETAILS.
5. REFER 4005-30007-01 FOR CAST IRON STREET BOX INSTALLATION.
6. REFER 4005-30007-03 FOR PLACEMENT OF RRPMS
7. REFER 4005-30007-04 FOR MARKER POST DETAILS.

REVISION PANEL				DESIGN PANEL				SA WATER STANDARD DRAWINGS		A3		2	
REV	DATE	DRN	DETAILS	APR	CURRENT REV 16/12/16	DESIGNED: 28/09/15	AUTHORISED: 31/03/16	WATER SUPPLY CONSTRUCTION MANUAL		SHT SIZE		REVISION	
2	08/11/16	RJP	FP IMAGE CHANGED. LID CHANGED TO TWO PIECE.		AUTHORISED: T. GALEK	RJP	T. GALEK	FIRE HYDRANTS		TOTAL SHEETS:			
1	31/03/16	MS	2016 STANDARDS REVIEW		SIGNATURE: <i>T. Galek</i>	MS		PERMANENT INSTALLATION		SUPERSEDES: F5, B17			
								SOUTH AUSTRALIAN WATER CORPORATION		DRAWING NUMBER		4005-30005-11	
								and shall not be copied or modified in part or in whole without authorization.		PREFIX		NUMBER SHEET	



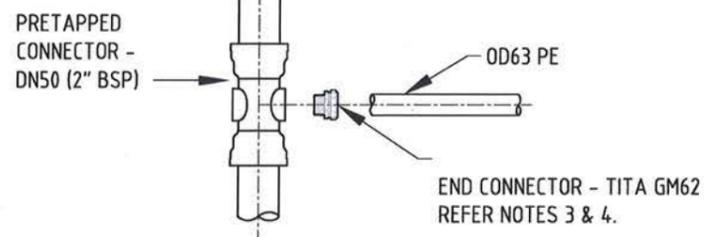
PLAN



ELEVATION

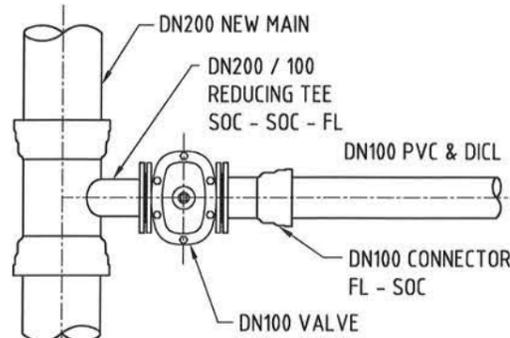
**DN80 BRANCH OFFTAKE  
(REDUCING TO OD63 PE MAIN)**

NOTE: REQUIRES AN ADJACENT FIRE HYDRANT

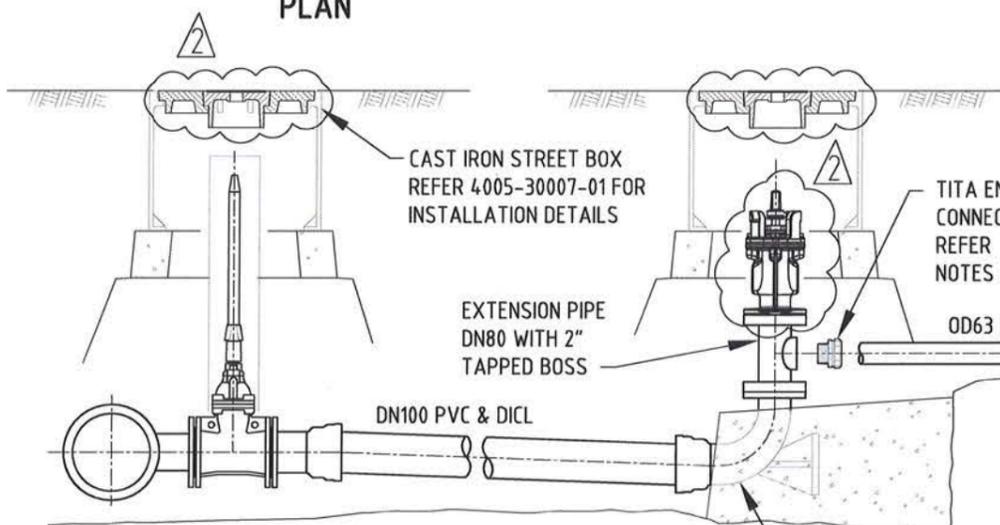


**DN100 OR DN150 BRANCH OFFTAKE  
UTILISING PRETAPPED CONNECTOR**

NOTE: REQUIRES AN ADJACENT FIRE HYDRANT



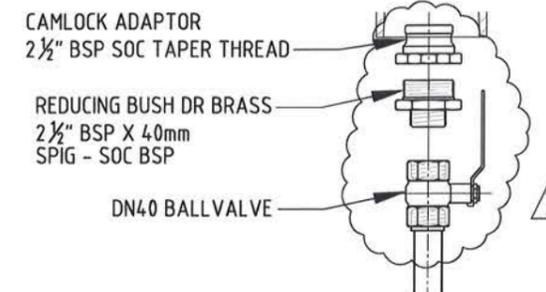
PLAN



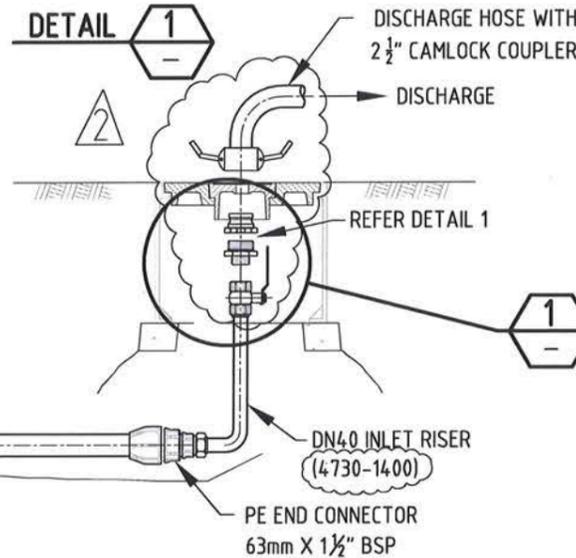
ELEVATION

**DN100 BRANCH OFFTAKE  
FROM DN200 & LARGER MAINS.  
(REDUCING TO OD63 PE MAIN)**

NOTE: REQUIRES AN ADJACENT FIRE HYDRANT



DETAIL 1



**END OF LINE AIR BLEED / FLUSHING PIT**

PIPEWORK TO BE PLACED CENTRALLY IN STREET BOX CHAMBER

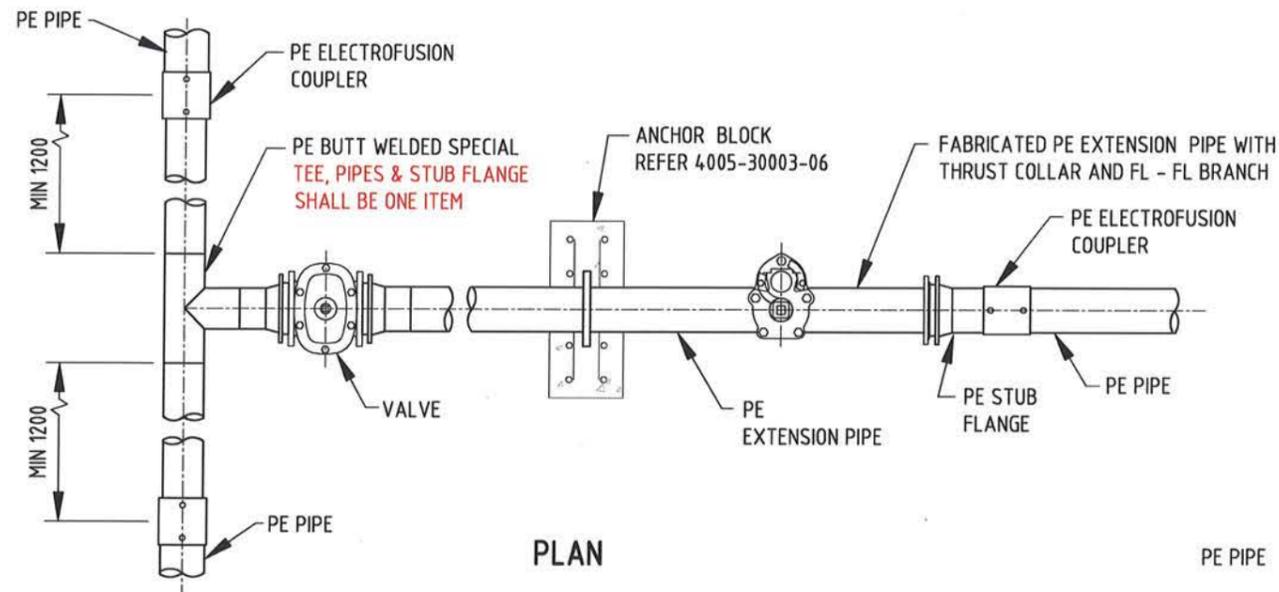
**NOTES:**

- REFER 4005-30002-01 AND 4005-30002-02 FOR GENERAL NOTES.
- REFER 4005-30005-11 FOR OD63 WATER MAIN & WATER CONNECTIONS DETAIL.
- THE TITA BRASS END CONNECTOR SHALL BE BRASS FITTED WITH BLUE THIMBLE AND BLUE SEALING RING - PE100 PN16
- INSTALLATION OF THE TITA BRASS END CONNECTOR
  - CUT PE PIPE AND PLACE NUT AND BLUE SEALING RING ON PIPE
  - INSERT CORRECT THIMBLE INTO PIPE
  - FULLY HOME THIMBLE USING A PIECE OF WOOD OR A SOFT FACED Mallet
  - START NUT ON THREAD AND TIGHTEN WITH C-SPANNER OR SIMILAR. (DO NOT APPLY UNDUE FORCE AS PIPE WILL DISTORT).
  - AFTER 5 MINUTES RE-TIGHTEN NUT. (SEALING RING MAY EXTRUDE OUT BETWEEN PIPE & NUT. THIS IS ACCEPTABLE).
- MAXIMUM DISTANCE BETWEEN ANY ALLOTMENT AND NEAREST FIRE HYDRANT SHALL BE 80 m.
- MAXIMUM NUMBER OF WATER CONNECTIONS FROM A OD63 MAIN IS 10.

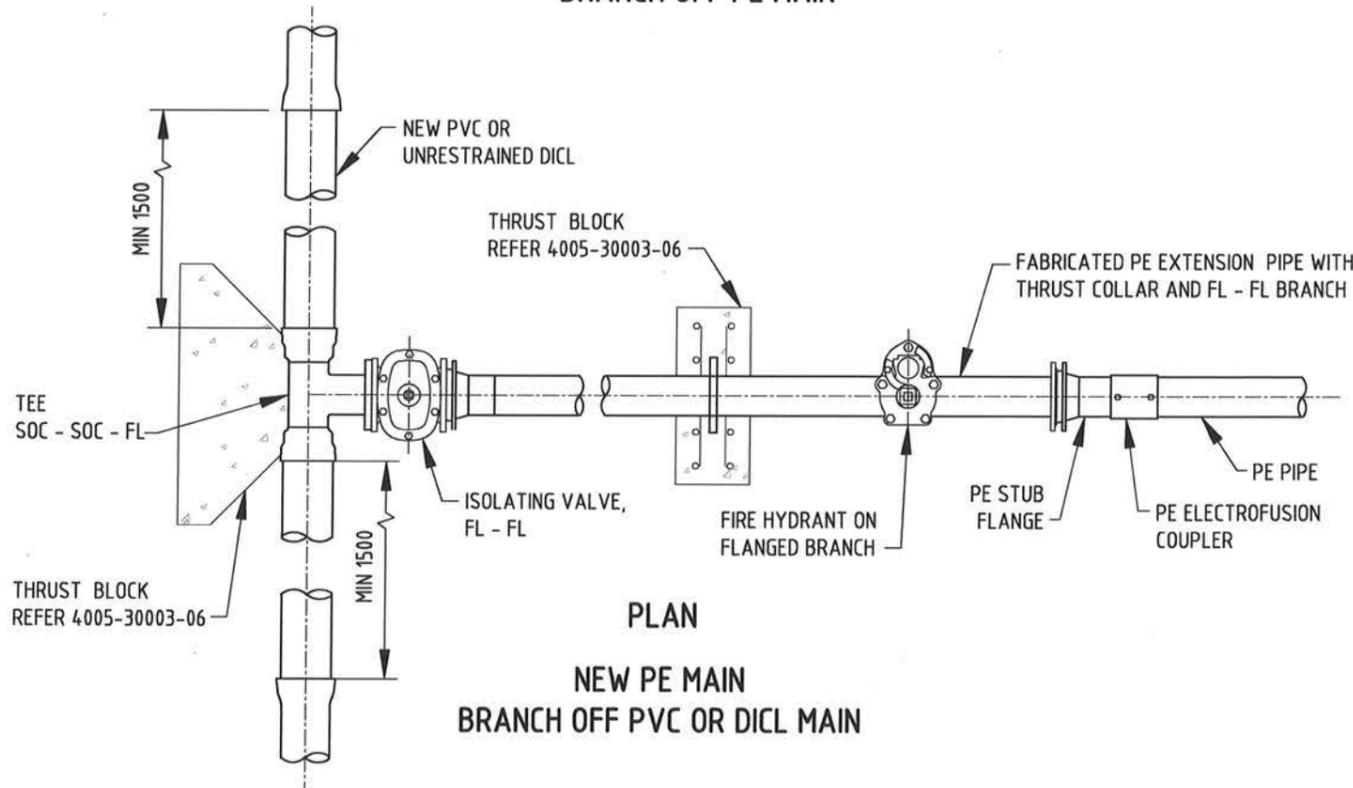
REVISION PANEL				DESIGN PANEL				SA WATER STANDARD DRAWINGS		A3		2
REV	DATE	DRN	DETAILS	APR	CURRENT REV 16/12/16	DESIGNED: 28/09/15	AUTHORISED: 31/03/16	WATER SUPPLY CONSTRUCTION MANUAL		SHT SIZE		REVISION
2	20/11/16	PC	AIR BLEED VALVE; DN50 VALVE; LID CHANGED		AUTHORISED: T. GALEK	RJP	T. GALEK	NEW OD63 POLYETHYLENE (PE) MAIN		TOTAL SHEETS:		
1	31/03/16	MS	2016 STANDARDS REVIEW	TG	SIGNATURE: T. Galek	MS	ORIGINAL SIGNED	BRANCH OFF PVC OR DICL PIPE		SUPERSEDES: 96-0085-02 (C15)		
								INSTALLATION OPTIONS		DRAWING NUMBER		
										4005-30005-12		
										PREFIX NUMBER SHEET		



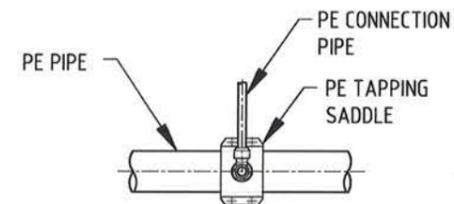
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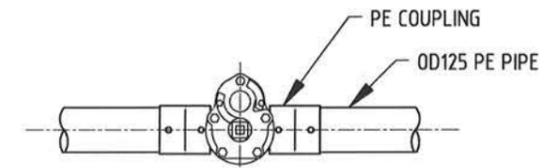
PLAN  
NEW PE MAIN  
BRANCH OFF PE MAIN



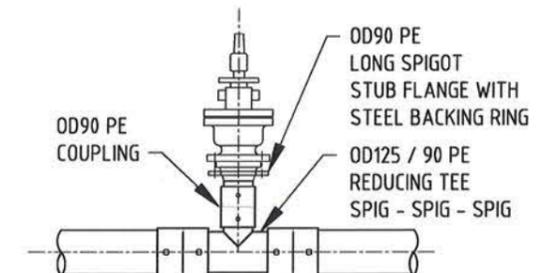
PLAN  
NEW PE MAIN  
BRANCH OFF PVC OR DICL MAIN



PLAN  
WATER CONNECTION  
(PE TAPPING SADDLE & PIPE  
REFER 4005-30006-03)



PLAN



ELEVATION

INTERMEDIATE FIRE HYDRANT  
(REFER 4005-30005-11)

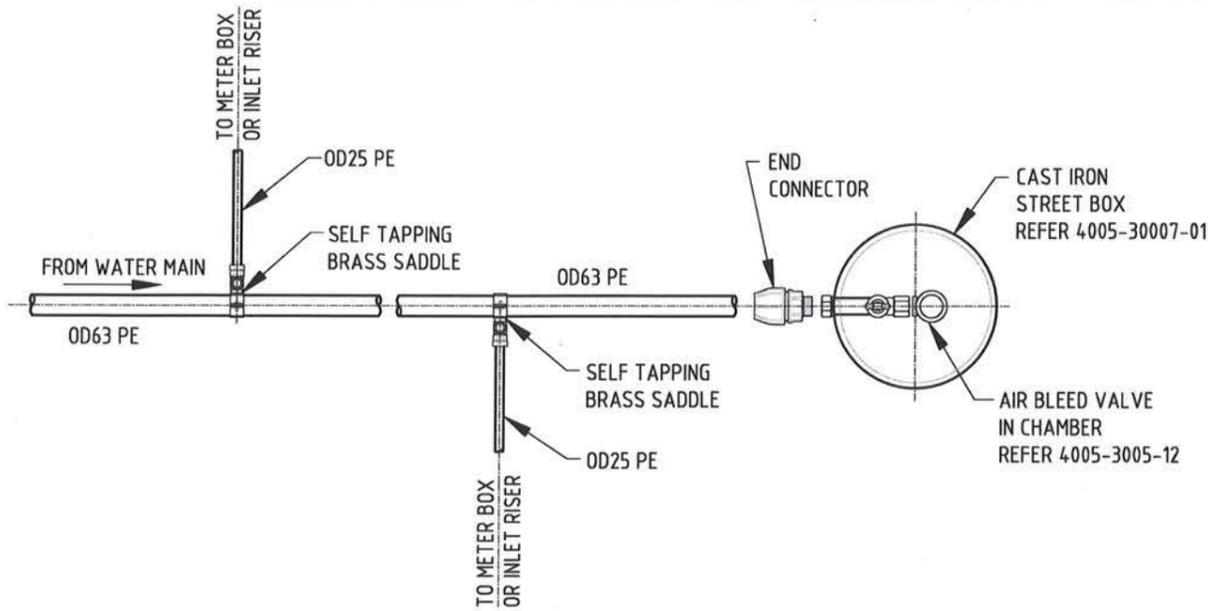
NOTES:

- REFER 4005-30002-01 AND 4005-30002-02 FOR GENERAL NOTES.
- FOR APPROVED EQUIVALENT PE PIPE SIZING REFER TG105.
- BUTT WELDING OF PE SPECIALS MAY ONLY BE UNDERTAKEN BY AN AUTHORISED MANUFACTURER LISTED IN THE AUTHORISED ITEMS FOR WATER INFRASTRUCTURE. REFER 4005-30005-08 FOR FABRICATION REQUIREMENTS AND DELIVERABLES.**
- REFER 4005-30002-02 FOR SPECIFIC REQUIREMENTS FOR PE:
  - ALL PE WELDING SHALL ONLY BE UNDERTAKEN BY QUALIFIED WELDERS.
  - INSTALLATION DURING HIGH TEMPERATURE.

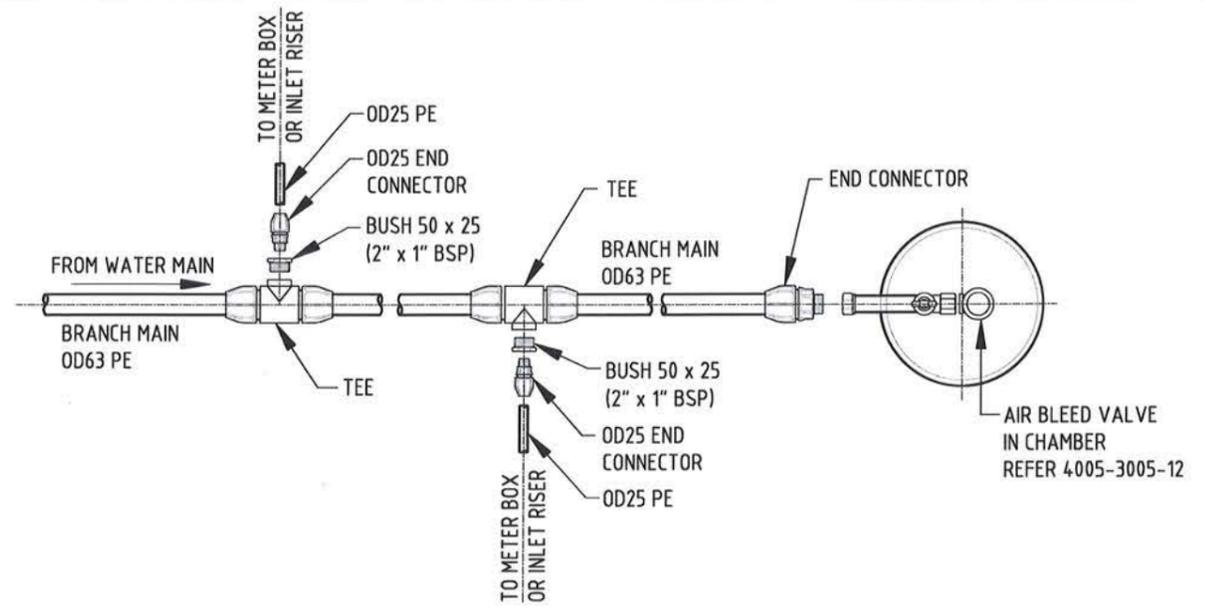
REVISION PANEL					DESIGN PANEL			SA WATER STANDARD DRAWINGS		A3		1
REV	DATE	DRN	DETAILS	APR	CURRENT REV	DESIGNED:	AUTHORISED:	WATER SUPPLY CONSTRUCTION MANUAL		SHT SIZE	REVISION	
1	31/03/16	MS	2016 STANDARDS REVIEW	TG	AUTHORISED:	28/09/15 RJP	31/03/16 T.GALEK	NEW POLYETHYLENE (PE) WATER MAIN		TOTAL SHEETS:		
					SIGNATURE:	16/11/15 MS	SIGNATURE: <i>T. Galek</i>	OPTIONS FOR INSTALLATION		SUPERSEDES:		
						21/03/16 TG		OD125 OR LARGER		DRAWING NUMBER		
										4005-30005-13		
										PREFIX	NUMBER	SHEET



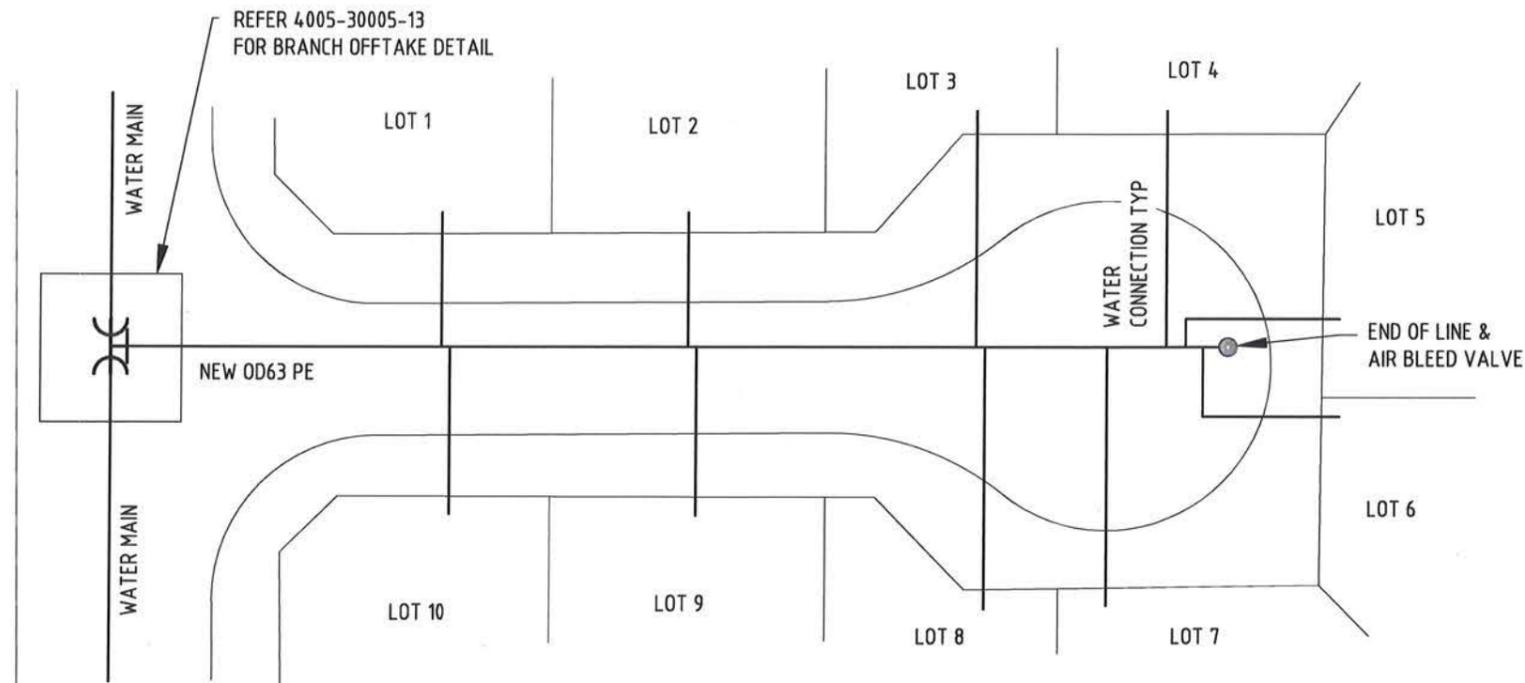
This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.



**WATER CONNECTION  
SELF TAPPING SADDLE OPTION**



**WATER CONNECTION  
MECHANICAL COUPLING OPTION**



**OD63 PE MAIN  
TYPICAL LAYOUT**

**NOTES:**

1. REFER 4005-30002-01 AND 4005-30002-02 FOR GENERAL NOTES.
2. MAXIMUM DISTANCE BETWEEN ANY ALLOTMENT AND NEAREST FIRE HYDRANT SHALL BE 80 METRES.
3. MAXIMUM LENGTH OF OD25 TUBING IS 25 METRES.
4. MAXIMUM NUMBER OF WATER CONNECTIONS FROM A OD63 PE MAIN IS 10.
5. REFER SECTION 3 FOR COMPACTED PIPE BEDDING AND BACKFILL.
6. REFER 4005-30006-01 FOR WATER CONNECTIONS TYPICAL LAYOUT.
7. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.

REVISION PANEL				DESIGN PANEL				SA Water		SA WATER STANDARD DRAWINGS		A3	1		
REV	DATE	DRN	DETAILS	APR	CURRENT REV AUTHORIZED:	DESIGNED: 28/09/15	AUTHORISED: 31/03/16	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.		WATER SUPPLY CONSTRUCTION MANUAL		SHT SIZE	REVISION		
					SIGNATURE:	RJP	T.GALEK			OD63 POLYETHYLENE (PE) MAIN BRANCH		TOTAL SHEETS:			
						DRAWN: 16/11/16	SIGNATURE:			CONNECTION DETAILS		SUPERSEDES: C14, C16			
						MS	<i>T. Galek</i>			DRAWING NUMBER		DRAWING NUMBER			
1	31/03/16	MS	2016 STANDARDS REVIEW	TG		REVIEWED: 21/03/16	TG	PREFIX		NUMBER		SHEET			
										4005-30005-14					