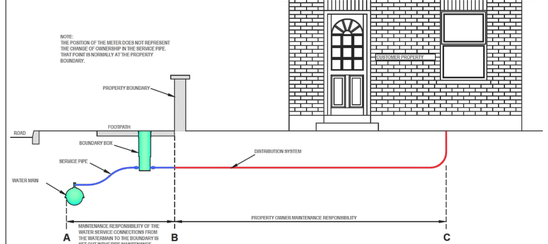
1. ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.



	MAINTENANCE RESPONSIBILITY
A - B SERVICE PIPE	SEE NOTE ABOVE
METER / BOUNDARY BOX	IRISH WATER
B - C (DISTRIBUTION SYSTEM)	PROPERTY OWNER
INTERNAL PLUMBING	PROPERTY OWNER

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE EIREANN / IRISH WATER

No	Date	Drn	Chk	Description	Appr
1	07/20/04	TOC		Responsibility Changed	MSD
0	09/15/03	TOC		Initial Issue	SL

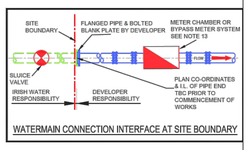
STANDARD DETAILS - WATER

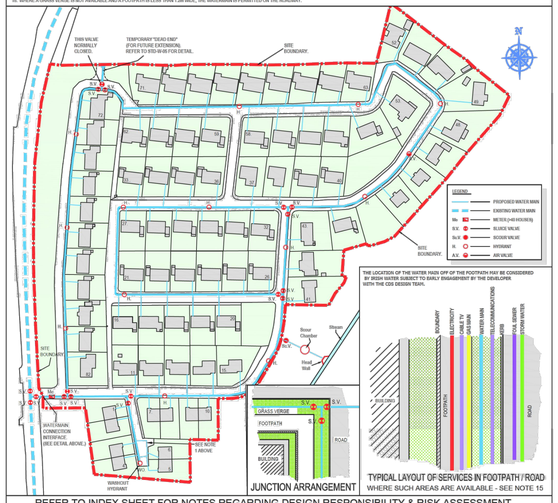
TITLE: WATER SERVICE CONNECTION RESPONSIBILITY

SCALE: NOT TO SCALE | DATE: SEPT. 2015

DRAWING No. STD-W- 01 | REV 1

1. WATER MAIN LAYOUTS SHALL BE ARRANGED IN LOOPS OR BRNCH NO AS TO AVOID "DEAD ENDS" OR TERMINAL POINTS. ALL MAINS SHALL TERMINATE IN A LOOP OR BRNCH TO ACCOMMODATE ONE DIRECTIONAL FLUSHING OF THE NETWORK. LOOPS SHALL ARRIE A MINIMUM OF 4 HOUSES AND 1 HYDRANE.
2. THE MINIMUM PIPE SIZE SHALL BE 100mm INTERNAL DIAMETER IN HOUSING DEVELOPMENTS OF 49 AND UP TO 199 HOUSES. DEVELOPMENTS OF 199 HOUSES AND ABOVE SHALL HAVE A MINIMUM PIPE SIZE OF 150mm INTERNAL DIAMETER.RPMZ AND 150mm BRANCH MAINS. NORMAL INTERNAL DIAMETER OF 150mm AND LONGER SHOULD BE ALLOWED IN WANDLER DEVELOPMENTS BUT NOT WHERE HYDRANTS ARE LOCATED AND THE WATER FROM MORE THAN ONE DIRECTION.
3. THE MINIMUM PIPE SIZE SHALL BE 150mm IN INDUSTRIAL OR COMMERCIAL DEVELOPMENTS.
4. EVERY PREMISE SHOULD HAVE A SEPARATE SERVICE CONNECTION. THE USE OF COMMON SERVICE PIPES IS NOT ALLOWED. SERVICE CONNECTIONS SHALL BE AS SHORT AR REASONABLY POSSIBLE. LONG SERVICE CONNECTIONS (IN EXCESS OF 10m) SHLL NOT BE ALLOWED. A NEDER MAIN AT THE OPPOSITE SIDE OF THE ROAD TO THE MAIN WATER MAIN MAY BE REQUIRED SUBJECT TO APPROVAL FROM IRISH WATER. SERVICE CONNECTIONS SHALL BE A MINIMUM PIPE SIZE OF 25mm OUTSIDE DIRRETER, 20mm INTERNAL DIMETER.
6. WATER MAIN DESIGNS SHOULD BE LAID TO PROVIDE THE OPTIMUM CIRCULATION IN THE LOCAL WATER NETWORK. WATER MAINS MAY TERMINATE IN A DEAD END ONLY WITH IRISH WATER APPROVAL. IN BRICH CASE, AN ON-LINE BRANCHOUT HYDRANT SHALL BE PROVIDED AT THE DEAD END, IN ACCORDANCE WITH IRISH WATER.
8. VALVES SHALL BE ARRANGED IN SUCH A MANNER TO ALLOW THE NETWORK TO BE MANAGED TO ENSURE THAT NO MORE THAN 40 PROPERTIES LOSE WATER FROM A BURST ON THE SYSTEM, AT ANY ONE TIME.
7. NO CONCRETE PROPERTY KERB LINE SHALL BE NEAR THAN 40m FROM A HYDRANT. HYDRANT DETAILS AND LOCATIONS SHALL BE SUBJECT TO THE APPROVAL OF THE RELEVANT LOCAL AUTHORITY FIRE DEPARTMENT.
9. WATER SUPPLY MAINS SHALL BE LAID IN COMMON AREAS AND NOT THROUGH INDIVIDUAL PRIVATE GARDENS OR DRIVEWAYS ETC.
10. A THREE WAY VALVE ARRANGEMENT SHALL BE PROVIDED AT ALL JUNCTIONS, AS A MINIMUM.
11. AIR VALVES SHALL BE PROVIDED AT THE HIGHEST POINT OF THE WATER MAIN LOCATED AT THE REAR HIGHT HAND SIDE OF THE ENTRANCE TO THE NEW DEVELOPMENT (FROM A NEW FACING INTO THE DEVELOPMENT) IF POSSIBLE AND WHERE THE PROPERTIES ARE EQUALLY AND REASONABLY DISTRIBUTED AT BOTH SIDES OF THE ESTATE ROADWAY.
11. AIR VALVES TO BE LOCATED AT FORKIN WHERE AIR IS LIKELY TO BUILD UP.
12. THE DEVELOPER IN TO LIAISE WITH THE FIRE SERVICES AUTHORITY IN ORDER TO ENSURE FIRE FLOBS ARE AVAILABLE THROUGHOUT THE DEVELOPMENT.
13. BULK FLOW METERS SHALL BE FITTED IN ALL DEVELOPMENTS WITH A DEMAND IN EXCESS OF 20m³ PER DAY. BULK FLOW METERS SHALL BE FITTED IN ACCORDANCE WITH IRISH WATER STANDARDS AND SPECIFICATIONS. WHERE MORE THAN ONE METER IS REQUIRED, THE METERS SHALL BE PREMADED WITH A DEDICATED BYPASS PIPEWORK AND CHAMBER IN ACCORDANCE WITH IRS 80-B01 TO ACCOMMODATE THE RECORDING OF NIGHT FLOWS.
14. WATERMAINS TO BE LOCATED IN GRASS VERGE, IF GRASS VERGE IS NOT AVAILABLE, WATERMAINS TO BE LOCATED UNDER FOOTPATH AWAY FROM KERB. REFER TO IRS 80-W-11 FOR TYPICAL UTILITY LAYOUT.
15. WHERE A GRASS VERGE IS NOT AVAILABLE AND A FOOTPATH IS LESS THAN 1.2m WIDE, THE WATERMAIN IS PERMITTED ON THE ROADWAY.





REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE EIREANN / IRISH WATER

No	Date	Drn	Chk	Description	Appr
2	07/20/04	RH	TOC	Connection Interface Detail added, notes added	MSD
1	11/17/	JMC	TOC	Sets "dead end" & hdb 1 ref. added	MSD
0	09/15/	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER

TITLE: TYPICAL LAYOUT FOR WATER MAINS WITHIN DEVELOPMENTS

SCALE: NOT TO SCALE | DATE: SEPT. 2015

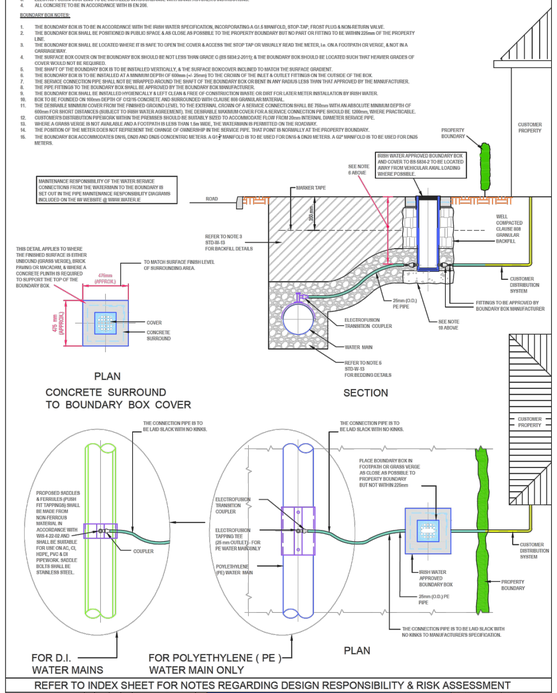
DRAWING No. STD-W- 02 | REV 2

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. THE CONNECTION TO AN EXISTING MAIN THE CONNECTION SHALL BE AN PER THE PIPE MANUFACTURER'S SPECIFICATION.
3. ELECTRO FUSION COUPLING TO BE INSTALLED IN ACCORDANCE WITH MANNEFACTURER'S INSTRUCTIONS.
4. ALL CONCRETE TO BE IN ACCORDANCE WITH BS EN 206.

BOUNDARY BOX NOTES:

1. THE BOUNDARY BOX IN TO BE IN ACCORDANCE WITH THE IRISH WATER SPECIFICATION, INCORPORATING A GLS MINIATURE, STOP TAP, FROST PLUG & NON RETURN VALVE.
2. THE BOUNDARY BOX SHALL BE PORITIONED IN PUBLIC SPACE & AS CLOSE AS POSSIBLE TO THE PROPERTY BOUNDARY BUT NO PART OH FITTING TO BE WITHIN 250mm OF THE PROPERTY LINE.
3. THE BOUNDARY BOX SHALL BE LOCATED WHERE IT IS SAFE TO OPEN THE COVER & ACCESS THE STOP TAP OR WISHALLY READ THE METER, I.e. ON A FOOTPATH OR VERGE, & NOT IN A CARRIAGEWAY.
4. THE WARFACE BOX COVER ON THE BOUNDARY BOX SHOULD BE NOT SHALLOWER THAN GRADE C (BS 5834-2:2011), & THE UNIVERSALLY BOUNDED SUCH THAT HEAVIER GRADES OF COVER WOULD NOT BE REQUIRED.
5. THE SHAFT OF THE BOUNDARY BOX IS TO BE INSTALLED VERTICALLY & THE SURFACE BOXCOVER IS REQUIRED TO MATCH THE SURFACE GRADEPAE.
6. THE BOUNDARY BOX SHALL BE PROVIDED AT A MINIMUM DEPTH OF 750mm (i.e. 250mm) TO THE CROWN OF THE INLET & OUTLET FITTINGS ON THE OUTSIDE OF THE BOX.
7. THE SERVICE CONNECTION PIPE SHALL NOT BE TRAMPED BEYOND THE SHAFT OF THE BOUNDARY BOX OR BENEATH ANY HINGES LESS THAN THAT APPROVED BY THE MANNFACTURER.
8. THE PIPE FITTINGS TO THE BOUNDARY BOX SHALL BE APPROVED BY THE BOUNDARY BOX MANNFACTURER.
9. THE BOUNDARY BOX SHALL BE INSTALLED PERPENDICULARLY & LEFT CLEAR & FREE OF CONSTRUCTION WASTE OR DIRT FOR LATER METER INSTALLATION BY IRISH WATER.
10. BOX TO BE FOUNDED ON 100mm DEPTH OF C12/15 CONCRETE, AND SURROUNDED WITH CLASSE 6R6 GRANULAR MATERIAL.
11. THE DEFINABLE MINIMUM COVER FROM THE FINISHED GROUND LEVEL TO THE EXTERNAL CROWN OF A SERVICE CONNECTION SHALL BE 750mm WITH AN ABSOLUTE MINIMUM DEPTH OF 600mm FOR SHORT DISTANCES (SUBJECT TO IRISH WATER ASSESSMENT). THE DEFINABLE MINIMUM COVER FOR A SERVICE CONNECTION PIPE SHOULD BE 1200mm, WHERE PRACTICABLE.
12. THE CONNECTION PIPE SHALL BE LAID TO A MINIMUM DEPTH OF 750mm (i.e. 250mm) TO THE CROWN OF THE PIPE, IN ACCORDANCE WITH THE MANNFACTURER'S INSTRUCTIONS.
13. WHERE A GRASS VERGE IS NOT AVAILABLE AND A FOOTPATH IS LESS THAN 1.8m WIDE, THE WATERMAIN IS PERMITTED ON THE ROADWAY.
14. THE POSITION OF THE METER DOES NOT REPRESENT THE CHANGE OF OWNERSHIP IN THE SERVICE PIPE. THAT POINT IS NORMALLY AT THE PROPERTY BOUNDARY.
15. THE BOUNDARY BOX ACCOMMODATION ENVS, ENDS AND ENDS CONCENTRIC METERS. A 40 @ MANIFOLD IS TO BE USED FOR DN19 & DN25 METERS. A 120 MANIFOLD IS TO BE USED FOR DN50



REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE EIREANN / IRISH WATER

No	Date	Drn	Chk	Description	Appr
4	07/20/04	TOC		Service connection ownership revised, notes added	MSD
3	11/17/	JMC	TOC	Updated & added notes	MSD
2	09/16/	JMC	TOC	Revised D.I. service tapping detail	MSD
1	04/16/	JMC	TOC	Added dimensions & notes	MSD
0	09/15/	JMC	TOC	Initial Issue	SL

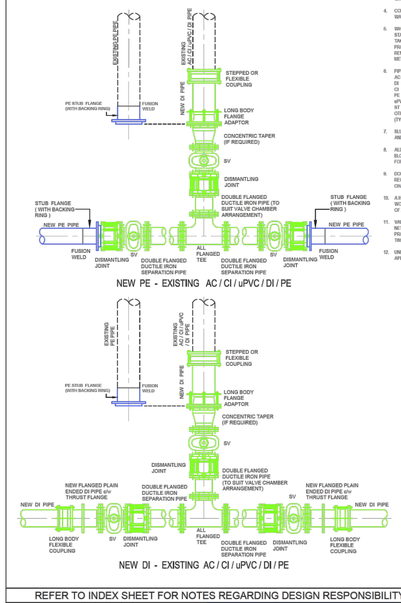
STANDARD DETAILS - WATER

TITLE: CUSTOMER CONNECTION AND BOUNDARY BOX (25mm OD PIPE)

SCALE: NOT TO SCALE | DATE: SEPT. 2015

DRAWING No. STD-W- 03 | REV 4

1. ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. ALL BENDS, TEES, DEAD ENDS, ETC. OF PIPELINES TO BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AR PER DRAWING No. STD-W-28. THRUST BLOCKS NOT SHOWN FOR CLARITY.
3. BUTT FUSION WELDING AND ELECTRO FUSION JOINTING OF PIPES SHALL ONLY BE CARRIED OUT BY TRAINED OPERATIVES IN POSSESSION OF A CURRENT TRAINING CERTIFICATE, USING FULLY AUTOMATIC APPROVED EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. THE IDENTITY OF THE PE PIPELINE MANUFACTURER SHALL BE MADE KNOWN TO IRISH WATER PRIOR TO COMMENCEMENT OF THE INSTALLATION. CERTIFICATION AND TESTING (INCLUDING INDEPENDENT THIRD PARTY CERTIFICATION) SHALL BE PROVIDED TO CONFIRM QUALITY ASSURANCE COMPLIANCE. EACH JOINT SHALL BE CLEARLY BRIRED WITH THE JOINT LOGGED AUTOMATICALLY ON THE JOINING MACHINE. A PRINTOUT OF THE JOINT DETAILS, WITH A GPS LOCATION OF EACH JOINT, SHALL BE PROVIDED AND RETAINED FOR QUALITY ASSURANCE PURPOSES.
4. CONNECTING TO EXISTING MAINS IS TO BE CARRIED OUT BY IRISH WATER OR AN APPROVED IRISH WATER AGENT.
5. WHEN EXISTING AC WATERMAINS ARE PRESENT A SPECIFIC METHOD STATEMENT SHALL BE SUBMITTED TO IRISH WATER PRIOR TO WORKS TAKING PLACE AND SUBJECT TO IRISTSON APPROVAL, DETAILING THE PROPECTION TO BE PUT IN PLACE TO EXISTING MAINS, METHOD OF REMOVAL OF EXISTING AC, METHOD OF DISPOSAL OF EXISTING AC AND METHOD OF CONNECTION TO EXISTING AC.
6. PIPE MATERIAL REFERENCES AR FOLLOWS:
   AC – ASBESTOS CEMENT
   DI – DUCTILE IRON
   CI – CAST IRON
   PE – POLYETHYLENE
   uPVC – UNPLASTICISED POLY VINYL CHLORIDE
   ST – STEEL
   OTHER - REFOER TO ALL EXISTING PIPE MATERIALS OTHER THAN PE (TYPICALLY AC, DI, CI, uPVC & ST)
7. BLUICE VALVE CHAMBERS TO BE IN ACCORDANCE WITH STD-W-14 (DI) AND STD-W-16 (PE). CHAMBERS NOT SHOWN FOR CLARITY.
8. ALL THRUST FLANGES TO BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AR PER DRAWING No. STD-W-28. THRUST BLOCKS NOT SHOWN FOR CLARITY.
9. DOUBLE FLANGED REPRAIXTION PIPE, UP TO 6m IN LENGTH, MAY BE REQUIRED TO ALLOW REPARATION DISTANCE BETWEEN VALVE CHAMBERS.
10. VALVES SHALL BE ARRANGED IN SUCH A MANNER TO ALLOW FOR NETWORK TO BE MANAGED TO ENSURE THAT NO MORE THAN 40 PROPERTIES LOSE WATER FROM A BURST ON THE SYSTEM AT ANY ONE TIME.
11. UNEQUAL TEES MAY BE USED INSTEAD OF CONCENTRIC TAPERS (WHERE APPLICABLE).



REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE EIREANN / IRISH WATER

No	Date	Drn	Chk	Description	Appr
3	07/20/04	RH	TOC	Added Note 12, separation pipe material added, diameter/lengths deleted	MSD
2	11/17/	JMC	TOC	Bolted entry, PE pipe to bitumen & galvanised notes.	MSD
1	09/16/	JMC	TOC	Added Note 10	MSD
0	09/15/	JMC	TOC	Initial Issue	SL

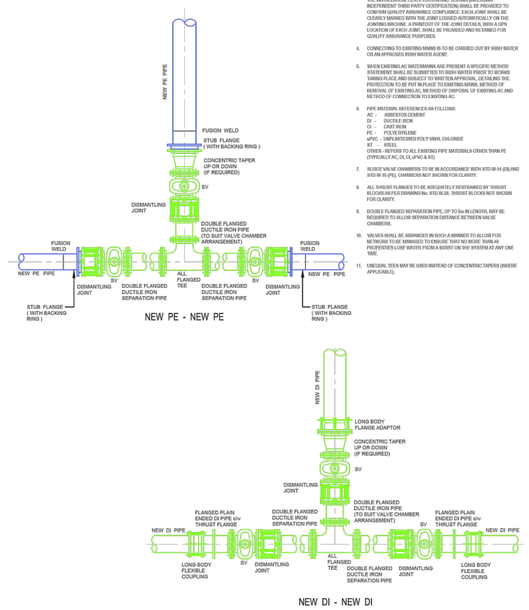
STANDARD DETAILS - WATER

TITLE: GENERAL PIPE CONNECTIONS (Sheet 3 of 7)

SCALE: NOT TO SCALE | DATE: SEPT. 2015

DRAWING No. STD-W- 06 | REV 3

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. ALL SENDS, TEES, DEAD ENDS, ETC. OF PIPELINES TO BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AR PER DRAWING No. STD-W-28. THRUST BLOCKS NOT SHOWN FOR CLARITY.
3. BUTT FUSION WELDING AND ELECTRO FUSION JOINTING OF PIPES SHALL ONLY BE CARRIED OUT BY TRAINED OPERATIVES IN POSSESSION OF A CURRENT TRAINING CERTIFICATE, USING FULLY AUTOMATIC APPROVED EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. THE IDENTITY OF THE PE PIPELINE MANUFACTURER SHALL BE MADE KNOWN TO IRISH WATER PRIOR TO COMMENCEMENT OF THE INSTALLATION. CERTIFICATION AND TESTING (INCLUDING INDEPENDENT THIRD PARTY CERTIFICATION) SHALL BE PROVIDED TO CONFIRM QUALITY ASSURANCE COMPLIANCE. EACH JOINT SHALL BE CLEARLY BRIRED WITH THE JOINT LOGGED AUTOMATICALLY ON THE JOINING MACHINE. A PRINTOUT OF THE JOINT DETAILS, WITH A GPS LOCATION OF EACH JOINT, SHALL BE PROVIDED AND RETAINED FOR QUALITY ASSURANCE PURPOSES.
4. CONNECTING TO EXISTING MAINS IS TO BE CARRIED OUT BY IRISH WATER OR AN APPROVED IRISH WATER AGENT.
5. WHEN EXISTING AC WATERMAINS ARE PRESENT A SPECIFIC METHOD STATEMENT SHALL BE SUBMITTED TO IRISH WATER PRIOR TO WORKS TAKING PLACE AND SUBJECT TO IRISTSON APPROVAL, DETAILING THE PROPECTION TO BE PUT IN PLACE TO EXISTING MAINS, METHOD OF REMOVAL OF EXISTING AC, METHOD OF DISPOSAL OF EXISTING AC AND METHOD OF CONNECTION TO EXISTING AC.
6. PIPE MATERIAL REFERENCES AR FOLLOWS:
   AC – ASBESTOS CEMENT
   DI – DUCTILE IRON
   CI – CAST IRON
   PE – POLYETHYLENE
   uPVC – UNPLASTICISED POLY VINYL CHLORIDE
   ST – STEEL
   OTHER - REFOER TO ALL EXISTING PIPE MATERIALS OTHER THAN PE (TYPICALLY AC, DI, CI, uPVC & ST)
7. BLUICE VALVE CHAMBERS TO BE IN ACCORDANCE WITH STD-W-14 (DI) AND STD-W-16 (PE). CHAMBERS NOT SHOWN FOR CLARITY.
8. ALL THRUST FLANGES TO BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AR PER DRAWING No. STD-W-28. THRUST BLOCKS NOT SHOWN FOR CLARITY.
9. DOUBLE FLANGED REPRAIXTION PIPE, UP TO 6m IN LENGTH, MAY BE REQUIRED TO ALLOW REPARATION DISTANCE BETWEEN VALVE CHAMBERS.
10. A HIGH LEVEL OF HEALTH & SAFETY PROCEEDURES IS REQUIRED WHEN BOMBING ON AC MAINS, & THE OPERATION OF DISMANTLING REMOVAL OF AC PIPES & JOINER.
11. VALVES SHALL BE ARRANGED IN SUCH A MANNER TO ALLOW FOR NETWORK TO BE MANAGED TO ENSURE THAT NO MORE THAN 40 PROPERTIES LOSE WATER FROM A BURST ON THE SYSTEM AT ANY ONE TIME.
12. UNEQUAL TEES MAY BE USED INSTEAD OF CONCENTRIC TAPERS (WHERE APPLICABLE).



REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE EIREANN / IRISH WATER

No	Date	Drn	Chk	Description	Appr
2	07/20/04	RH	TOC	Added flexible PE separation pipe material added, diameter/lengths deleted	MSD
1	11/17/	JMC	TOC	Notes added & updated.	MSD
0	09/15/	JMC	TOC	Initial Issue	SL

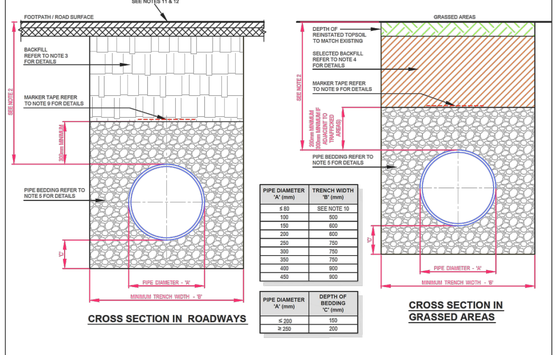
STANDARD DETAILS - WATER

TITLE: GENERAL PIPE CONNECTIONS (Sheet 4 of 7)

SCALE: NOT TO SCALE | DATE: SEPT. 2015

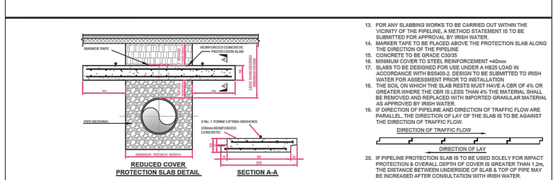
DRAWING No. STD-W- 07 | REV 2

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. THE MINIMUM DEPTH OF COVER FROM THE FINISHED GROUND LEVEL TO THE EXTERNAL CROWN OF THE PIPE SHALL BE 600mm WHERE THE PIPE IS TO BE LOCATED IN HOUSING ESTATE ROADS. GREATER DEPTHS OF COVER AND/OR PIPE STRENGTHS ARE REQUIRED WHERE HIGH TRAFFIC LOADING IS EXPECTED. THE DESIRABLE COVER FOR A WATERMAIN SHOULD BE 1200mm, WHERE PRACTICABLE & SHOULD NOT EXCEED 3.0m.
3. CLAUSE 604 / 608 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS IS TO BE USED AS BACKFILL MATERIAL WHERE THE WATER MAIN IS LOCATED IN ROADS, FOOTPATHS OR WHEN THE NEAREST PART OF THE TRENCH IS WITHIN 1m OF THE PAVED EDGE OF THE ROADWAY. CLAUSE 604 / 608 IS TO BE COMPACTED AS PER CLAUSE 802 OF THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS. WHERE THE TRENCH IS WITHIN 1m OF THE PAVED EDGE OF THE ROADWAY, CLAUSE 804 / 808 IS TO BE COMPACTED AS PER CLAUSE 802 OF THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS. OTHERWISE CLAUSE 804 MAY BE USED. ALTERNATIVE BACKFILL MATERIAL, SUCH AS CEMENT BOUND MATERIAL, CONCRETE PAVEMENTS, CONCRETE STRUCTURES OR CONCRETE PRODUCTS, MAY BE USED, SUBJECT TO REVIEW BY IRISH WATER, PROVIDED THAT THE ALTERNATIVE MATERIAL SO THAT DESCRIBED ABOVE (CLAUSE 804 OR CLAUSE 808) OF THE PIPE TRENCH WILL ONLY BE ALLOWED BY IRISH WATER WHERE THE ROADS AUTHORITY IN WHOSE FUNCTIONAL AREA THE DEVELOPMENT IS LOCATED, PROVIDES **WRITTEN APPROVAL** TO THE DEVELOPER TO THE USE SUCH ALTERNATIVE MATERIAL.
4. SELECTED EXCAVATED MATERIAL MAY BE USED IN GREEN-FIELD AREAS ABOVE GRANULAR PIPE SURROUND MATERIAL SUBJECT TO REVIEW BY IRISH WATER.
5. PIPE BEDDING SHALL COMPLY WITH WIS 4-08-02 AND IGN 4-08-01 GRANULAR MATERIAL SHALL BE 14mm TO 5mm (⅝ ⅝) GRADED AGGREGATE OR 10mm (⅝ ⅝) SINGLE SIZED AGGREGATE TO IS EN 13242.
6. IN SOFT GROUND CONDITIONS (CBR < 5) THE MATERIAL SHOULD BE EXCAVATED OUT AND DISPOSED OF IN ACCORDANCE WITH THE WASTE MANAGEMENT ACT AND CLAUSE 604 / 608 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS SHALL REPLACE THE EXCAVATED MATERIAL. WRAPPED IN GEOTEXTILE WRAPPING. ALTERNATIVELY, SPECIAL PIPE SUPPORT ARRANGEMENTS, INCLUDING PILING ETC. MAY BE REQUIRED WHERE THE DEPTH OF SOFT MATERIAL IS EXCESSIVE. SUCH ARRANGEMENTS SHALL BE SUBJECT TO ASSESSMENT BY IRISH WATER BEFORE ADVANCING WITH THE WORK.
7. PIPES SHALL NOT BE SUPPORTED ON STONES OR ROCKS, OR ANY HARD OBJECT AT ANY POINT ALONG THE TRENCH. SHALL BE EXCAVATED TO A DEPTH OF 150mm BELOW THE ACTUAL DEPTH OF THE TRENCH WITH THE VOID FILLED WITH CLAUSE 804 / 808 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS. THE GRANULAR MATERIAL SHALL BE LAID ABOVE THIS VOID BACKFILL MATERIAL.
8. SHOULD MINIMUM COVER NOT BE ACHIEVABLE, CONCRETE GRADE C8/10 SHALL BE USED AS BACKFILL MATERIAL.
9. PIPES SHALL BE PROTECTED BY THE USE OF PE PIPE SLEEVES WHERE THE PIPE IS LAID IN CLAY SOILS. PLASTIC PIPES SHALL HAVE WARNING TAPE INCORPORATED A REINFORCED BAND BRACING WIRE. SERVICE PIPES SHALL HAVE 250mm WIDE BEDDING TAPE. MARKER TAPE TO BE LAID AT TOP OF PIPE BEDDING LAYER.
10. TRENCH WIDTHS FOR PIPE SIZES ≤80mm MAY BE <500mm, SUBJECT TO CONSIDERATION BEING GIVEN TO THE TRENCH DEPTH, HEALTH & SAFETY & CONSTRUCTION ACCESS REQUIREMENTS.
11. NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
12. EXISTING ROAD REINSTATEMENT TO COMPLY WITH CURRENT VERSION OF "GUIDELINES FOR MANAGING OPENINGS IN PUBLIC ROADS" BY THE DEPT. OF TRANSPORT, TOURISM & SPORT, OR TRANSPORT INFRASTRUCTURE IRELAND REQUIREMENTS.



PIPE DIAMETER 'A' (mm)	TRENCH WIDTH 'B' (mm)
≤ 80	SEE NOTE 10
100	500
150	600
200	600
250	750
300	750
350	750
400	900
450	900

PIPE DIAMETER 'A' (mm)	DEPTH OF BEDDING 'C' (mm)
≤ 200	150
≥ 250	200



13. FOR ANY SLABBING WORKS TO BE CARRIED OUT WITHIN THE VICINITY OF THE PIPELINE, A METHOD STATEMENT IS TO BE SUBMITTED FOR APPROVAL BY IRISH WATER.
14. MARKER TAPE TO BE PLACED ABOVE THE PROTECTION SLAB ALONG THE PIPELINE AT A DEPTH OF 300mm.
15. CONCRETE TO BE GRADE C30/37.
16. MINIMUM COVER TO STEEL REINFORCEMENT =40mm
17. SLABS TO BE DESIGNED FOR USE UNDER A HB25 LOAD IN ACCORDANCE WITH BS5400-2. DESIGN TO BE SUBMITTED TO IRISH WATER FOR ASSESSMENT PRIOR TO INSTALLATION
18. THE SOIL ON WHIC