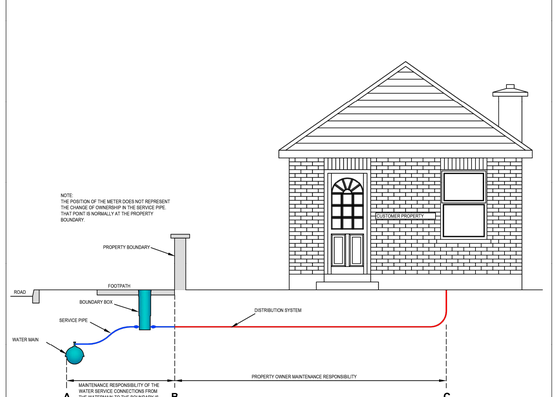
1. ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.



	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	App
2	07/20	RH	TOC	Missed Note 11, separation pipe material added, dismantling joints relocated	WD
1	11/17	JMC	TOC	Notes added & updated.	WD
0	09/15	JMC	TOC	Initial Issue	SL

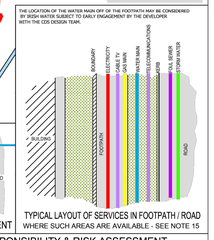
STANDARD DETAILS - WATER | SCALE: NOT TO SCALE | DATE: SEPT. 2015

TITLE: WATER SERVICE CONNECTION RESPONSIBILITY

DRAWING No.: STD-W- 01 | REV: 1

1. WATER MAIN LAYOUTS SHALL BE ARRANGED IN LOOPS OR RINGS SO AS TO AVOID "DEAD END" OR TERMINAL POINTS. ALL MAINS SHALL TERMINATE IN A LOOP OR RING TO ACCOMMODATE ONE DIRECTIONAL FLUSHING OF THE NETWORK. LOOPS SHALL HAVE A MINIMUM OF 4 HOUSES AND 1 HYDRANT.
2. THE MINIMUM PIPE SIZE SHALL BE 100mm INTERNAL DIAMETER IN HOUSING DEVELOPMENTS OF 40 AND UP TO 100 HOUSES. DEVELOPMENTS OF 100 HOUSES AND ABOVE SHALL HAVE A MINIMUM PIPE SIZE OF 150mm INTERNAL DIAMETER SPINE AND 100mm BRANCH MAINS. NOMINAL INTERNAL DIAMETERS OF 80mm AND LESS MAY BE ALLOWED IN SMALLER DEVELOPMENTS BUT NOT WHERE HYDRANTS ARE LOCATED AND ONLY AFTER PRIOR WRITTEN AGREEMENT FROM IRISH WATER.
3. WATER MAINS SHALL BE LAID IN PUBLIC ROADS IN HOUSING AND 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 AS REASONABLY POSSIBLE. LONG SERVICE CONNECTIONS (IN EXCESS OF 1m) WILL NOT BE ALLOWED. A RISER 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 DIAMETER, 20mm INTERNAL DIAMETER.
5. WATER MAINS 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 WHICH CASE AN ON-LINE WASHOUT HYDRANT SHALL BE PROVIDED AT THE DEAD END, REFER TO STD-W-H 16 FOR DETAILS.
6. 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 DOMESTIC PROPERTY SHALL BE THE SOLE PREMISE FROM A HYDRANT. HYDRANT DETAILS AND LOCATIONS SHALL BE SUBJECT TO THE APPROVAL OF THE RELEVANT LOCAL AUTHORITY FIRE DEPARTMENT.
8. WATER SUPPLY MAINS SHALL BE LAID IN COMMON AREAS AND NOT THROUGH INDIVIDUAL PRIVATE GARDENS OR DRIVEWAYS ETC.
9. A THREE-WAY VALVE ARRANGEMENT SHALL BE PROVIDED AT ALL JUNCTIONS, AS A MINIMUM.
10. WHERE POSSIBLE, FIRE HYDRANTS SHALL BE LOCATED AT THE RIGHT-HAND SIDE OF THE ENTRANCE TO THE NEW DEVELOPMENT (WHEN VIEWED FROM 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 HIGH POINTS WHERE AIR IS LIKELY TO BUILD UP.
12. THE DEVELOPER IS TO LIAISE WITH THE FIRE SERVICES AUTHORITY IN ORDER TO ENSURE FIRE FLOWS 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 HAVE A FACTORY FITTED AMR AND INSTALLED IN A SUITABLE SIZED CHAMBER. DEVELOPMENTS WITH A DEMAND OF LESS THAN 20m³ PER DAY SHALL BE PROVIDED WITH A DEDICATED BYPASS PIPEWORK AND CHAMBER IN ACCORDANCE WITH STD-W-26 (MF TO ACCOMMODATE THE FUTURE FITTING OF AN AMR.
14. WATERMAINS TO BE LOCATED IN GRASS VERGE. IF GRASS VERGE IS NOT AVAILABLE, WATERMAINS TO BE LOCATED UNDER FOOTPATH ARMY FROM KERB. REFER TO STD-W-H 01 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.





JUNCTION ARRANGEMENT

THE LOCATION OF THE WATER MAIN OFF OF THE FOOTPATH MAY BE CONSIDERED BY IRISH WATER SUBJECT TO EARLY ENGAGEMENT BY THE DEVELOPER WITH THE CDS DESIGN TEAM.

TYPICAL LAYOUT OF SERVICES IN FOOTPATH / ROAD WHERE SUCH AREAS ARE AVAILABLE - SEE NOTE 15

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

UISCE EIREANN : IRISH WATER

No	Date	Drn	Chk	Description	App
2	07/20	RH	TOC	Connection Interface Detail added, notes added	WD
1	11/17	JMC	TOC	Min. "bad ex" 6 nib 1 nf" added	WD
0	09/15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER | SCALE: NOT TO SCALE | DATE: SEPT. 2015

TITLE: TYPICAL LAYOUT FOR WATER MAINS WITHIN DEVELOPMENTS

DRAWING No.: STD-W- 02 | REV: 2

GENERAL NOTES:

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

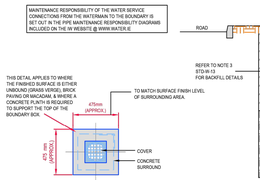
BOUNDARY BOX NOTES:

1. THE BOUNDARY BOX IS TO BE IN ACCORDANCE WITH THE IRISH WATER SPECIFICATION, INCORPORATING A G1/2 MANIFOLD, STOP-TAP, FROST PLUG & NON-RETURN VALVE.
2. THE BOUNDARY BOX SHALL BE POSITIONED IN PUBLIC SPACE & AS CLOSE AS POSSIBLE TO THE PROPERTY BOUNDARY BUT NO PART OR FITTING TO BE WITHIN 225mm OF THE PROPERTY BOUNDARY.
3. THE BOUNDARY BOX SHALL BE LOCATED WHERE IT IS SAFE TO OPEN THE COVER & ACCESS THE STOP TAP OR VISUALLY READ THE METER, I.E. ON A FOOTPATH OR VERGE, & NOT IN A CARRIAGEWAY.
4. THE SURFACE BOX COVER ON THE BOUNDARY BOX SHOULD BE NOT LESS THAN GRADE C (B5 SB4 X 20181), & THE BOUNDARY BOX SHOULD BE LOCATED SUCH THAT HEAVIER GRADES OF COVER WOULD NOT BE REQUIRED.
5. THE SHAFT OF THE BOUNDARY BOX IS TO BE INSTALLED VERTICALLY, & THE SURFACE BOX/COVER INCLINED TO MATCH THE SURFACE GRADIENT.
6. THE BOUNDARY BOX IS TO BE INSTALLED AT A MINIMUM DEPTH OF 600mm (+/- 25mm) TO THE CROWN OF THE INLET & OUTLET FITTINGS ON THE OUTSIDE OF THE BOX.
7. THE BOUNDARY BOX SHALL BE SUITABLE FOR THE INSTALLATION OF AN ELECTRONIC REGISTER OF THE TYPE SUPPLIED BY IW MANUFACTURER.
8. THE PIPE FITTINGS TO THE BOUNDARY BOX SHALL BE APPROVED BY THE BOUNDARY BOX MANUFACTURER.
9. THE BOUNDARY BOX SHALL BE INSTALLED HYGIENICALLY & LEFT CLEAN & FREE OF CONSTRUCTION WASTE OR DIRT FOR LATER METER INSTALLATION BY IRISH WATER.
10. BOX TO BE FOUNDED ON 150mm DEPTH OF C15/20 CONCRETE AND SURROUNDED WITH CLAUSE 804 GRANULAR MATERIAL.
11. THE DESIRABLE 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 AGREEMENT). THE DESIRABLE MAXIMUM DEPTH FOR A SERVICE CONNECTION PIPE SHOULD BE 1200mm, WHERE PRACTICABLE.
12. CUSTOMER'S DISTRIBUTION PIPEWORK WITHIN THE PREMISES SHOULD BE SUITABLY SIZED TO ACCOMMODATE FLOW FROM 25mm INTERNAL DIAMETER SERVICE PIPE.
13. WHERE A GRASS VERGE IS NOT AVAILABLE AND A FOOTPATH IS LESS THAN 1.5m 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 ACCOMMODATES DN15, DN20 AND DN25 CONCENTRIC METERS. A DI-P MANIFOLD IS TO BE USED FOR DN15 & DN20 METERS. A CPT MANIFOLD IS TO BE USED FOR DN25



WATERMAIN CONNECTION INTERFACE AT SITE BOUNDARY

MAINTENANCE RESPONSIBILITY OF THE WATER SERVICE CONNECTIONS FROM THE WATERMAIN TO THE BOUNDARY IS SET OUT IN THE PIPE MAINTENANCE RESPONSIBILITY DIAGRAMS INCLUDED ON THE IW WEBSITE @ WWW.WATER.IE



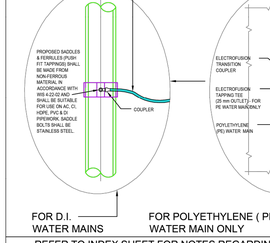
SECTION

THIS DETAIL APPLIES TO WHERE THE FINISHED SURFACE IS EITHER UNBOUND (GRASS VERGE), BRICK PAVING OR MACADAM, & WHERE A CONCRETE PLINTH IS REQUIRED TO SUPPORT THE TOP OF THE BOUNDARY BOX.



PLAN

CONCRETE SURROUND TO BOUNDARY BOX COVER



FOR D.I. WATER MAINS

FOR POLYETHYLENE (PE) WATER MAIN ONLY

PLAN

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

UISCE EIREANN : IRISH WATER

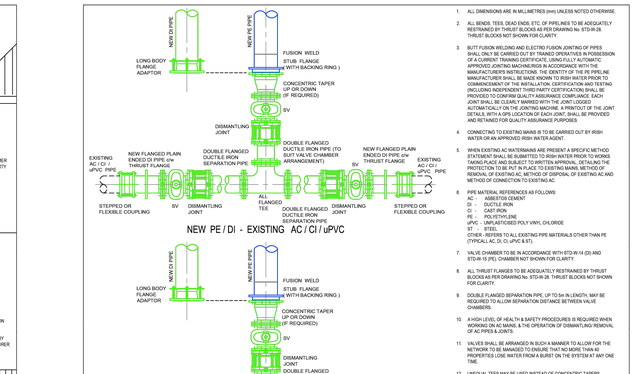
No	Date	Drn	Chk	Description	App
4	07/20	RH	TOC	Service connection ownership revised, notes added	WD
3	11/17	JMC	TOC	Updated & added notes	WD
2	09/16	JMC	TOC	Revised D.I. service tapping detail	WD
1	04/16	JMC	TOC	Added dimensions & notes	WD
0	09/15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER | SCALE: NOT TO SCALE | DATE: SEPT. 2015

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

DRAWING No.: STD-W- 03 | REV: 4

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. ALL BENDS, TEES, DEAD ENDS, ETC. OF PIPELINES TO BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AS PER DRAWING No. STD-W-28.
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 JOINTING MACHINE/RIGS 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 TORQUE TESTING BY AN INDEPENDENT THIRD PARTY CERTIFICATION SHALL BE PROVIDED TO CONFIRM QUALITY ASSURANCE COMPLIANCE. EACH JOINT SHALL BE CLEARLY MARKED WITH THE JOINT LOGGED AUTOMATICALLY ON THE JOINTING 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 WRITTEN APPROVAL, DETAILING THE PROTECTION 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 AS FOLLOWS:
   AC - ASBESTOS CEMENT
   DI - DUCTILE IRON
   CI - CAST IRON
   PE - POLYETHYLENE
   uPVC - UNPLASTICISED POLY VINYL CHLORIDE
   ST - STEEL
   OTHER - REFERS TO ALL EXISTING PIPE MATERIALS OTHER THAN PE (TYPICALLY AC, CI, uPVC & ST)
7. SLUICE VALVE CHAMBERS TO BE IN ACCORDANCE WITH STD-W-14 (DI) AND STD-W-15 (PE). CHAMBERS NOT SHOWN FOR CLARITY.
8. ALL THRUST FLANGES TO BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AS PER DRAWING No. STD-W-28. THRUST BLOCKS NOT SHOWN FOR CLARITY.
9. DOUBLE FLANGED SEPARATION PIPE, UP TO 5m IN LENGTH, MAY BE REQUIRED TO ALLOW SEPARATION 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

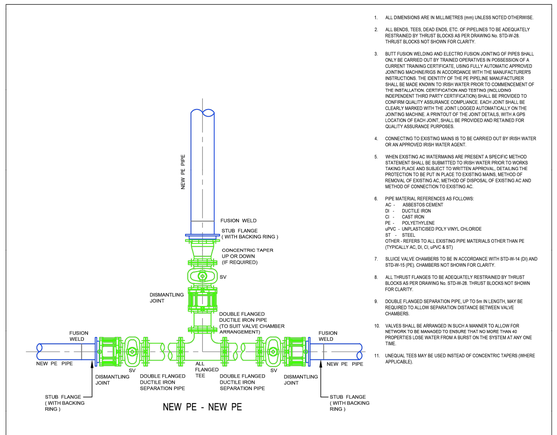
No	Date	Drn	Chk	Description	App
3	07/20	RH	TOC	Added Note 12, separation pipe material added, dismantling joints relocated	WD
2	11/17	JMC	TOC	Added new D.I. pipe to details, added 3 No. details & updated notes	WD
1	09/16	JMC	TOC	Added Notes 10	WD
0	09/15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER | SCALE: NOT TO SCALE | DATE: SEPT. 2015

TITLE: GENERAL PIPE CONNECTIONS (Sheet 2 of 7)

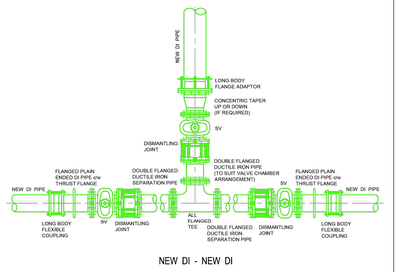
DRAWING No.: STD-W- 05 | REV: 3

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



NEW PE - NEW PE

2. ALL BENDS, TEES, DEAD ENDS, ETC. OF PIPELINES SHALL BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AS 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 JOINTING MACHINE/RIGS 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 TORQUE TESTING BY AN INDEPENDENT THIRD PARTY CERTIFICATION SHALL BE PROVIDED TO CONFIRM QUALITY ASSURANCE COMPLIANCE. EACH JOINT SHALL BE CLEARLY MARKED WITH THE JOINT LOGGED AUTOMATICALLY ON THE JOINTING 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 WRITTEN APPROVAL, DETAILING THE PROTECTION 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 AS FOLLOWS:
   AC - ASBESTOS CEMENT
   DI - DUCTILE IRON
   CI - CAST IRON
   PE - POLYETHYLENE
   uPVC - UNPLASTICISED POLY VINYL CHLORIDE
   ST - STEEL
   OTHER - REFERS TO ALL EXISTING PIPE MATERIALS OTHER THAN PE (TYPICALLY AC, CI, uPVC & ST)
7. SLUICE VALVE CHAMBERS TO BE IN ACCORDANCE WITH STD-W-14 (DI) AND STD-W-15 (PE). CHAMBERS NOT SHOWN FOR CLARITY.
8. ALL THRUST FLANGES TO BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AS PER DRAWING No. STD-W-28. THRUST BLOCKS NOT SHOWN FOR CLARITY.
9. DOUBLE FLANGED SEPARATION PIPE, UP TO 5m IN LENGTH, MAY BE REQUIRED TO ALLOW SEPARATION 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).



NEW DI - NEW DI

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

UISCE EIREANN : IRISH WATER

No	Date	Drn	Chk	Description	App
2	07/20	RH	TOC	Added Notes 11, separation pipe material added, dismantling joints relocated	WD
1	11/17	JMC	TOC	Notes added & updated.	WD
0	09/15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER | SCALE: NOT TO SCALE | DATE: SEPT. 2015

TITLE: GENERAL PIPE CONNECTIONS (Sheet 4 of 7)

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 900mm WHERE THE PIPE IS TO BE LOCATED IN HOUSING ESTATE ROADS. GREATER DEPTHS OF COVER AND/OR PIPE STRENGTH & ANCHORAGE AGAINST UPLIFT DUE TO LOCATION OF BEDDING MATERIAL MAY BE REQUIRED WHERE HIGH TRAFFIC LOADING IS ANTICIPATED. THE DESIRABLE COVER FOR A WATERMAIN SHOULD BE 1200mm, WHERE PRACTICABLE & SHOULD NOT EXCEED 3.0m.
3. CLAUSE 804 / 808 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 804 / 808 IS TO BE COMPACTED AS PER CLAUSE 802 OF THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS. CLAUSE 808 IS TO BE USED WITHIN 500mm OF CEMENT BOUND MATERIALS, CONCRETE PAVEMENTS, CONCRETE STRUCTURES OR CONCRETE PRODUCTS. OTHERWISE CLAUSE 804 MAY BE USED. ALTERNATIVE BACKFILL MATERIAL TO 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 IS EN 1610 AND EITHER (A) 4-0G AND/OR 4-0N 4-06-01 GRANULAR MATERIAL SHALL BE 14mm TO 5mm (E.G.) GRADED AGGREGATE OR 10mm (E.G.) FINE SIZED AGGREGATE TO IS EN 13242.
6. WHERE EXCAVATED MATERIAL IS UNSUITABLE, MATERIAL SHOULD BE EXCAVATED OUT AND DISPOSED OF IN ACCORDANCE WITH THE WASTE MANAGEMENT ACT AND CLAUSE 804 / 808 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS SHALL REPLACE THE EXCAVATED MATERIAL WRAPPED IN GEO-TEXTILE 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 PROCEEDING WITH THE WORK.
7. PIPES SHALL NOT BE SUPPORTED ON STONES OR ROCKS, OR ANY HARD OBJECT AT ANY POINT ALONG THE TRENCH. ROCK SHALL BE EXCAVATED TO A DEPTH OF 150mm BELOW THE ACTUAL DEPTH OF THE PIPE INVERT AND BACKFILLED TO THAT DEPTH WITH CLAUSE 804 / 808 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS. GRANULAR MATERIAL SHALL BE LAID ABOVE THIS GOOD BACKFILL MATERIAL.
8. SHOULD MINIMUM COVER NOT BE ACHIEVABLE, CONCRETE GRADE C8/10 SHALL BE USED AS BACKFILL MATERIAL.
9. MARKER TAPE TO BE 400mm WIDE BLUE PCV YETHYLENE MATERIAL IN ACCORDANCE WITH EN 12163, PLASTIC PIPES SHALL HAVE WARNING TAPE INCORPORATED A REINFORCED BAND BRACING WIRE. SERVICE PIPES SHALL HAVE 200mm WIDE MESH TAPE. MARKER TAPE TO BE LAID AT TOP OF PIPE BEDDING LAYER.
10. TRENCH WIDTHS FOR PIPE SIZES ≤800mm 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.

