

COVER TO BE SET IN CEMENTITIOUS EPOXY RESIN/POLYESTER MORTAR 30N/mm²

MANHOLE COVER AND FRAME SHALL COMPLY TO IS EN 124 AND BS 7903 (ALL CLASS D400 COVERS SHALL HAVE MIN. FRAME DEPTH 100-150mm) MIN. OPE. 600x600mm or 600mm Ø.

1 Min. TO 3 Max. COURSES OF CLASS B SOLID ENGINEERING BRICKS SET IN M30 MORTAR TO ISEN 998 (PROPRIETARY PRECAST RISER PIECES BEDDED ON M30 MORTAR MAY BE USED TO ACHIEVE CORRECT TOP OF COVER LEVEL 2 No. Max.)

PRECAST CONCRETE MANHOLE RINGS TO IS 420 IN CONJUNCTION WITH IS EN 1917 : 2004

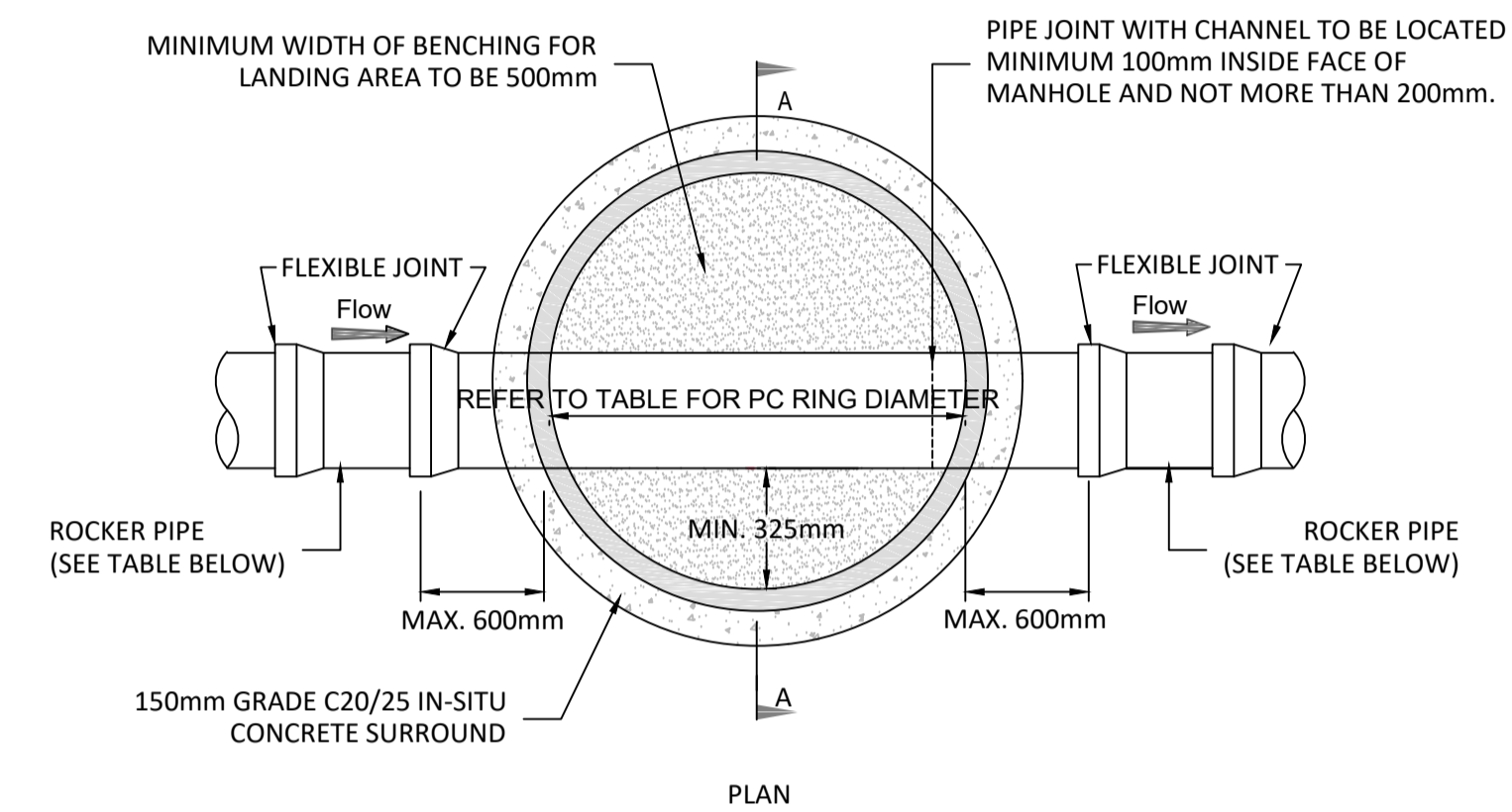
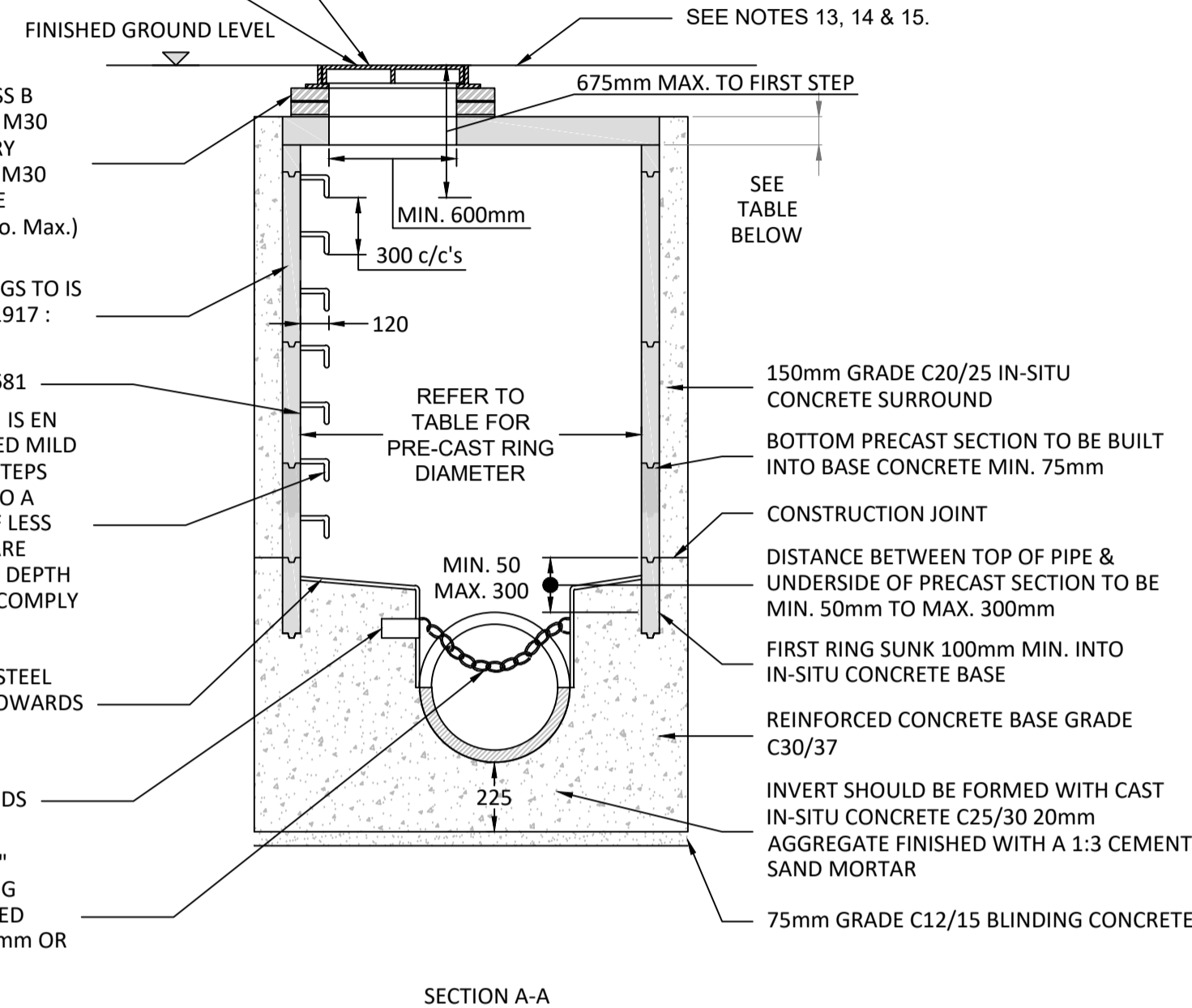
ELASTOMETRIC JOINT SEAL TO EN 681 MANHOLE STEPS TO COMPLY WITH IS EN 13101, TYPE D, CLASS 1, GALVANISED MILD STEEL & PLASTIC ENCAPSULATED. STEPS ARE REQUIRED IN MANHOLES UP TO A GROUND TO PIPE SOFFIT DEPTH OF LESS THAN 3.0m. MANHOLE LADDERS ARE REQUIRED FOR MANHOLES WITH A DEPTH IN EXCESS OF 3.0m & LADDERS TO COMPLY WITH IS EN 14396.

1:3 CEMENT:SAND MORTAR WITH STEEL TROWEL FINISH AT A 1:30 SLOPE TOWARDS THE CHANNEL

SELF CLEANING TOE HOLES TO BE PROVIDED WHERE CHANNEL EXCEEDS 600mm WIDE

STAINLESS STEEL CHAIN IN "DOWN" POSITION SECURED TO RESTRAINING HOOK, WHEN CHAMBER IS OCCUPIED WHERE THE PIPE DIAMETER IS 450mm OR MORE

NOTE: PRECAST CONCRETE MANHOLES SHALL ONLY BE USED WHERE THE WATER TABLE IS LOW. THEY SHALL NOT BE USED WHERE THERE IS A PERCHED WATER TABLE, WHERE THE SEWER IS LOCATED NEXT TO A RIVER, LAKE OR OTHER WATER BODY AND WITHIN AREAS THAT ARE IDENTIFIED BY THE OFFICE OF PUBLIC WORKS CATCHMENT FLOOD RISK ASSESSMENT AND MANAGEMENT (CFRAM) WITH A FLOOD RISK OF 1 IN 10 YEARS.



- NOTES:
- ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
 - PRE-CAST MANHOLES UNITS: COMPLYING WITH REQUIREMENTS OF IS EN 1917 AND IS 420.
 - THICKER MANHOLE BASES REQUIRED FOR SEWERS IN EXCESS OF 3m DEEP WHERE THE SIZE IS GREATER THAN THE STANDARD MINIMUM SIZE.
 - APPROVED PRE-CAST CONCRETE BASES MAY BE USED INCORPORATING CHANNELS, BENCHING ETC. SUBJECT TO IRISH WATER REVIEW AND COMPLYING WITH ISEN 1719 AND IS 420.
 - STRUCTURAL DESIGN AND REINFORCEMENT DETAILS TO BE PROVIDED BY THE DEVELOPER AND SUBMITTED TO IRISH WATER FOR REVIEW.
 - MANHOLES GREATER THAN 3m IN DEPTH WILL REQUIRE A DETAILED STRUCTURAL DESIGN AND BE SUBJECT TO IRISH WATER REVIEW.
 - MANHOLE ROOFS SHALL CONSIST OF A RE-INFORCED CONCRETE SLAB OF IN-SITU CONCRETE, C30/37, WITH A MINIMUM THICKNESS OF 225mm DESIGNED TO CARRY ALL LIVE AND DEAD LOADS. ALTERNATIVELY, APPROVED PRE-CAST CONCRETE ROOF SLABS MAY BE USED SUBJECT TO IRISH WATER REVIEW AND COMPLIANCE WITH IS EN 1917.
 - COVERS AND FRAMES SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS SUBJECT TO REVIEW BY IRISH WATER.
 - 200mm ALL AROUND x 100mm DEEP, C20/25 CONCRETE PLINTH COMPLETE WITH BULL NOSE FINISH AND TO BE PROVIDED COMPLETE WITH MILD STEEL REINFORCEMENT LINK AROUND COVERS IN GREEN AREAS.
 - ALL CHAMBERS TO BE CHECKED FOR UPLIFT BY THE DEVELOPER BASED ON GROUND CONDITIONS WITHIN THE SITE. SHOULD ANTI FLOATATION MEASURES BE REQUIRED THEY SHALL BE SUBJECT TO REVIEW BY IRISH WATER.
 - ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206 : 2013.
 - ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
 - NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
 - 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.
 - IF DEPTH FROM GROUND TO PIPE SOFFIT IS GREATER THAN 6m DEEP, A SITE SPECIFIC ENGINEERED SOLUTION FOR ACCESS SHALL BE PROVIDED.
 - PROPRIETARY WATERTIGHT PCC MANHOLE RING SYSTEMS WITH A WALL THICKNESS > 125mm, & A WATER TIGHT JOINT SEALING SYSTEM, MAY BE USED WITHOUT CONCRETE SURROUND, SUBJECT TO THE GROUND WATER LEVEL AT THE MANHOLE BEING LOW, & SUBJECT TO REVIEW BY IRISH WATER.
 - THE INTERNAL MANHOLE DIAMETERS SHOWN IN THE TABLE BELOW ARE MINIMUM DIMENSIONS AND WILL INCREASE DEPENDING ON THE NUMBER AND DIAMETER OF ADDITIONAL INLETS AND FINISHED WITH A 1:3 SAND/CEMENT FINISH TO SUIT FLOW OF INLETS AND OUTLET.

MINIMUM MANHOLE DIAMETERS			
DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	INTERNAL DIAMETER OF MANHOLE (mm)	MIN. PRECAST ROOF SLAB EFFECTIVE THICKNESS (mm)	MIN. IN-SITU ROOF SLAB THICKNESS (mm)
LESS THAN 375	1200	160	225
375 TO 450	1350	160	225
500 TO 750 *	1500	170	225

ROCKER PIPE LENGTH	
PIPE DIAMETER (mm)	ROCKER PIPE LENGTH (mm)
150 TO 600	600
GREATER THAN 600 TO 750 *	1000
GREATER THAN 750 *	1250

* SEWERS GREATER THAN 450mm Ø ARE OUTSIDE THE SCOPE OF THE STANDARD DETAILS. MANHOLE SIZE OF THESE CHAMBERS MAY BE REQUIRED DUE TO MULTIPLE PIPES WITHIN MANHOLE.

PRE-CAST CONCRETE MANHOLE WITH CAST IN SITU BASE (ref. STD-WW-10)

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