



(FOR LAST PRIVATE MANHOLES WHERE
DEPTH TO INVERT IS 1m OR LESS)



TYPICAL MANHOLE DETAIL 'TYPE B'
(FOR LAST PRIVATE MANHOLES WHERE DEPTH TO INVERT IS 1m TO 3m)



- DCC WILL NOT APPROVE THE USE OF PRE-CAST CONCRETE MANHOLE STRUCTURES.
- USE OF UNTRAPPED PRE-CAST GULLY POTS SUBJECT TO DCC APPROVAL.

- JOINTS SHALL BE FLUSH POINTED AS THE WORK PROCEEDS. ALL FOUL MANHOLES MUST BE FACED IN SOLID ENGINEERING BRICK (MIN. CLASS A OR B) OR INSITU SOLID ENGINEERING BRICK (MIN. CLASS A OR B) OR INSITU CONCRETE FOR 1m ABOVE BENCHING LEVEL. BRICKS TO BE BONDED TO BLOCKWORK USING ENGLISH GARDEN WALL BOND.
16. RELIEVING ARCHES FORMED BY 215x103x65 BRICKS AS PER DRAWING. RELIEVING ARCHES USED IN BRICK OR BLOCKWORK MANHOLES TO EXTEND OVER FULL THICKNESS OF WALL. DOUBLE ARCH TO BE FORMED FOR PIPE DIAMETERS GREATER THAN 600mm.
17. BENCHING AND PIPE CHANNEL PIPE SURROUND – CL. 20/20 CONCRETE.
18. BENCHING FINISHED IN 2:1 SAND-CEMENT MORTAR WITH A SMOOTH TROWEL FINISH. LEVEL TO PIPE VERTICALLY AT 1 IN 30 SLOPE TOWARDS CHANNEL.
19. STANDARD RUNGS AT 300c/c VERTICALLY AND GALVANISED TO BS 729. FOR MANHOLE DEEPER THAN 1m.
20. 600mm SQUARE OPE IN ROOF SLAB POSITIONED OVER RUNG/LADDER POSITION
21. 200mm THICK PRECAST R.C. ROOF SLAB IN CL 30/20 CONCRETE. COVER POSITION.
22. 1 TO 2 NO. ENGINEERING BRICKS CL. B TO I.S. 91: 1983 SET IN 1:3 (CEMENT SAND MORTAR).
23. CLASS D400 MANHOLE COVER AND FRAME TO IS/EN 124. 150mm DEEP FRAME FOR ROADS, 100mm DEEP FOR FOOTPATHS AND GREEN AREAS. TO BE LADK DESIGN, CLOSED KEYWAYS, MANUFACTURED FROM SPHEROIDAL GRAPHITE CAST IRON (DUCTILE CAST IRON), 600 x 600 (or 600x600) CLEAR OPENING, COVER AND FRAME COATED IN BITUMEN OR OTHER APPROVED MATERIAL. COVER TO HAVE A MINIMUM MASS OF 140kg/m². FRAME BEARING AREA SHALL BE 80,000mm² MIN. FRAMES SHALL BE DESIGNED TO PREVENT COVERS FALLING INTO MANHOLE. FRAMES SHALL BE BEDDED ON APPROVED MORTAR TO MANUFACTURER'S INSTRUCTIONS.
24. BACKDROP MANHOLES SHALL HAVE A HEAVY DUTY CLASS D400 COVER AND FRAME FITTED AT GROUND LEVEL TO THE INLET PIPE ON THE BACKDROP.
25. SHORT LENGTH PIPE, PIPE JOINT EXTERNAL TO MANHOLE SHALL NOT EXCEED 600mm FROM THE INNER FACE OF THE MANHOLE WALL. SHORT LENGTH PIPES SURROUNDED IN 150mm THICK CL 20/20 CONCRETE AND SHALL BE CUT FLUSH WITH INSIDE SURFACE OF THE MH.
26. WHEN DEPTH OF MANHOLES TO INVERT IS GREATER THAN 3.0m, LADDERS SHALL BE USED INSTEAD OF RUNGS, TO BS 4211 EXCEPT THAT STRINGERS SHOULD NOT BE LESS THAN 65x12mm IN SECTION AND RUNGS 25mm IN DIA. FIXED LADDERS SHOULD MEET THE DIMENSIONAL REQUIREMENTS OF BS4211.
27. TOP/EDGES OF 230mm MINIMUM DEPTH AND GALVANISED STEEL SAFETY RAILINGS TO BE PROVIDED IN BENCHING OF SEWERS GREATER THAN 525mm diam. AND DEPTH TO INVERT >3m FOR ACCESS TO INVERT.
28. SAFETY CHAIN TO BE PROVIDED IN MANHOLES >450mm. MILD STEEL SAFETY CHAIN SHALL BE 10mm NOMINAL SIZE GRADE M(H) NON CALIBRATED C TYPE 1, COMPLYING WITH BS 4942 PART 2.
29. LADDER STRINGERS SHOULD BE ADEQUATELY SUPPORTED FROM THE MANHOLE WALL AT INTERVALS OF NOT MORE THAN 2.0m. STRINGERS SHALL BE BOLTED TO CLEATS TO FACILITATE REMOVAL.
30. ALL LADDERS, RUNGS, HANDRAILS, SAFETY CHAINS ETC. SHALL BE HOT GALVANISED TO B.S.729.
31. SOCKET OF PIPE SHOULD BE CUT FLUSH WITH THE INSIDE SURFACE OF THE MANHOLE WALL.
32. POSITION OF 915mm SQUARE OPE IN INTERMEDIATE ROOF SLAB TO BE AS SHOWN IN THE MANHOLE WALL.
- A) ALL MANHOLES SHALL BE WATER TIGHT TO THE SATISFACTION OF THE ENGINEER.
- B) FORMWORK TO REINFORCED CONCRETE AND MASS CONCRETE SHALL COMPLY TO CLASS 2, SECTION 6.2.7, BS 8110: PART1: 1997.
- C) FINISH TO THE TOP OF SLABS SHALL COMPLY TO TYPE A, SECTION 6 BS 8110 : PART 1 : 1997.
- D) PLAN DIMENSIONS OF MANHOLES ARE BASED ON BLOCKWORK HAVING CO-ORDINATING SIZE OF 450 X 225 X 100.
- E) MANHOLES ARE DESIGNED TO BS.8005 AND WALL THICKNESSES TO L3 BLOCKWORK DESIGN CODE TAKING GRANULAR FILL PRESSURE AND H₂ SURCHARGE.
- F) REINFORCEMENT TO SLABS TO ENGINEERS DETAILS.
33. FOR MANHOLES >3m DEPTH TO INVERT USE 30N/20 IN-SITU CONCRETE REINFORCING MESH REF. A3930c.0.16kg/m TO BE FIXED AT MID POINT WALL. ADDITIONAL REINFORCEMENT TO BE SUPPLIED OVER PIPE CROWN. (REFER TO RC DETAILS)
34. ALL DRAINAGE WORKS INCLUDING OUTFALL MANHOLES WITHIN PRIVATE PROPERTY ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE GREATER DUBLIN REGIONAL CODE OF PRACTISE FOR DRAINAGE WORKS.

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1. DO NOT SCALE. USE FIGURED DIMENSIONS ONLY.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECTURAL AND ENGINEERING DRAWINGS.
- 2.1 ALSO TO BE READ IN CONJUNCTION WITH THE GREATER DUBLIN REGIONAL CODE OF PRACTICE V6.0.

Project

ICAL PUBLIC SURFACE WATER

INAGE CONSTRUCTION DETAILS



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