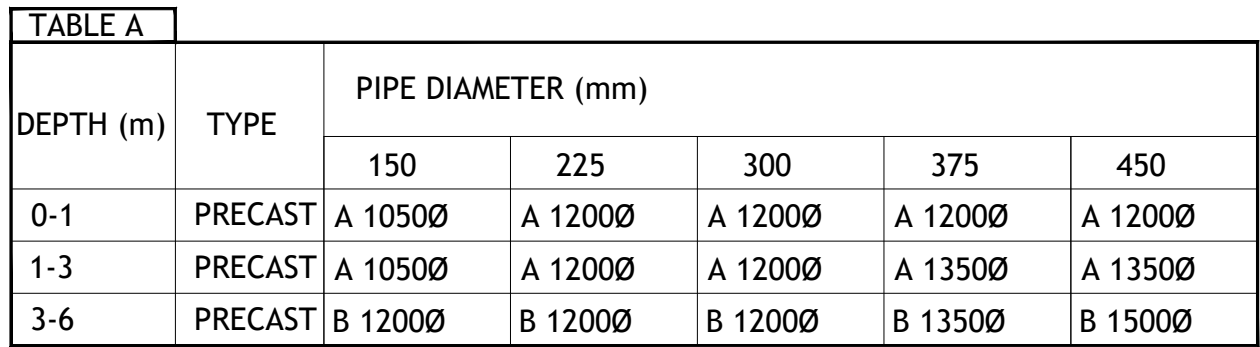




Section A-A  
Type B 3-6m depth



150mm of grade C25/30 in-situ concrete surround

Stainless steel chain

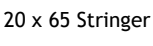
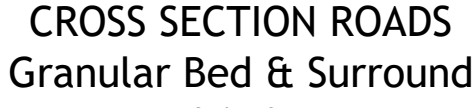
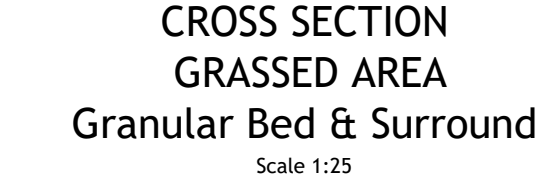
Stopper

Y Junction

45° bend

150mm of grade C25/30 in-situ concrete surround

### Backdrop Manhole Type 3



1. Read in conjunction with all relevant Architect's & Engineer's drawings and cross read the detailed notes on the various manholes.
2. The minimum diameter of manhole shall be as shown in Table A, but this may be increased subject to the number of branches. This is made up as follows:
  - For pipes up to 150mmØ, provide the sum of the branches + 200mm per branch + 300mm for pipes over 150mmØ, provide the sum of the branches + 300mm per branch + 300mm if no pipes up to 150mmØ are used; for 2x150mm + 1x250mm on one side, length 400mm (subject to minimum clearances).
3. Access rungs shall be provided in manholes greater than 1m to the invert level of the pipe.
4. A 200mm concrete surround, 100mm depth, shall be provided around manhole covers in grassed areas.
5. Class U2 finish to the top of slabs. Reinforcement in the slabs to details or as directed by the Engineer.
6. Manhole foundations to be 225mm C30/37 cast concrete with 75mm lean mix concrete bedding (if required by site conditions).
7. Use pre-formed half circle channel pipes through manholes but the pipeline may be laid through the manhole and the crown cut out to half diameter ensuring that flexible joints are located either side of manhole at max.600mm as measured from the inner face of manhole wall.
8. Use CL 20N/20 concrete for benching and pipe channel pipe surround.
9. Benchings to be finished in 1:3 cement-sand mortar with a smooth, trowel finish, at 1 in 30 slope towards channel. Form a 25mm radius nosing on benching, level with crown of the pipe.
10. Standard galvanised (BS 729) rungs to be positioned @ 300c/c vertically.
11. Roof slab to have a min. 600mm square ope.
12. 225Ntk. Pre-cast R.C/F Slab in C30/37 Concrete. Cover to steel shall be 40mm.
13. 225Ntk. Pre-cast cover frame to be laid in concrete to 3 No. max. courses of engineering bricks (CL B to 1.5:9.1:983 set in C50/F60 mortar).
14. MH cover and frames to be Class D400 and to BS EN 124. 150mm deep frame for roads, 100mm deep for footpaths and green areas. Class B250 manhole deep cover for areas where heavy areas access is required. Vehicular traffic. Non-rock design, closed keyways, manufactured from spheroidal graphite cast iron (ductile cast iron), 600x600mm (or 600dium), 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 C50/F60 mortar to manufacturers instructions.
15. Galvanised steel safety ladders to be provided in benching of 230mm greater than 400mm Ø and depth to invert+3m for access to invert. Toe holes of 230mm min. depth to be provided where chamber is greater than 1.5m.
16. Safety chain to be provided on pipes that exceed 450mm Ø. Stainless steel safety chain shall be 10mm nominal size grade MH (N) non calibrated chain, type 1, complying with B.5.4942 Part 2.
17. When chain from Manholes to Invert is greater than 3.0m. ladders shall be used, instead of rungs 2.5m. ladders shall be used. B.5.4211 except that stringers should be not less than 65x5x20mm. in section and runs 25mm in diam. Fixed Ladders should meet the dimensional requirements of B.5.4211.
18. Ladders shall be supported from the Manhole wall at intervals of not more than 2.0m. stringers should be bolted to cleats to allow removal.
19. Socket of pipe to be cut flush with the inside surface of the manhole wall.
20. Where manhole diameter changes in deep manholes, provide a 910mm square ope in the intermediate roof slab.
21. All Manholes shall be watertight to the satisfaction of the Engineer. Formwork to reinforced concrete and mass concrete shall comply comply to Class 2, Section 6.2.7 BS8110-1 Part 1:1997. Finish to the top of slabs shall comply to Type A, Section 6.2.7 BS8110-1 Part 1: 1997. Manholes are designed to BS 8005 and wall thicknesses to S1325.
22. Precast Manholes, Chamber walls and cover slab to be constructed to EN 1597 and IS 420 2004.
23. Manhole ope to be situated furthest from the nearest carriageway. Manhole access to be positioned to allow viewing of oncoming traffic.
24. For bedding and sealing of chamber rings, the top ring below PC slab and bottom ring to be bedded with cement mortar. For intermediate rings, joints to be sealed with approved pre-formed jointing strip.
25. Precast Manholes to be surrounded with a minimum of 150mm thick Grade C25/30 concrete.

3. Pipe backfill to be granular material to C1804/808 in accordance with the NRA Specification for Road Works. Use only CL808 material when within 500mm of cement bound materials such as concrete kerbs/pavements.
4. Backfill material to be well compacted in accordance with CL802 of the NRA specification compacted in layers of not greater than 150mm.
5. Clay filling in open spaces shall consist of suitable selected excavated material, shall be free from roots, debris, stones, rubbish, organic and vegetable matter and lumps of clay larger than 75mm in size and shall be compacted in 150mm layers. It shall meet the requirements of "Acceptable material" as defined in Clause 6.02 of the NRA Specification for Road Works.
6. Pipe bedding shall be in accordance with WS14-08 and IGW 4-08-01. Granular material to be 5mm to 14mm graded aggregate or 10mm single sized aggregate to IGW13242.
7. All pipes to have a 150mm Concrete surround where the cover is less than 900mm in depth. For pedestrian and cycle crossings the concrete surround shall have a cover is <1.2m trafficked areas. All other pipework to be to bedding details as shown.
8. Concrete for pipe bedding, haunching and surrounds shall be grade C16/20 and have expansion joints at all pipe joints using 15mm filter board.
9. Formwork to Reinforced concrete shall be in accordance with the BS 5400 class FF2.
10. Wrap PE pipes in plastic sheeting before casting into concrete

THIS IS A PLANNING DRAWING AND IS  
FOR THE APPROVAL OF Uisce Éireann

		SHOWN		DATE	