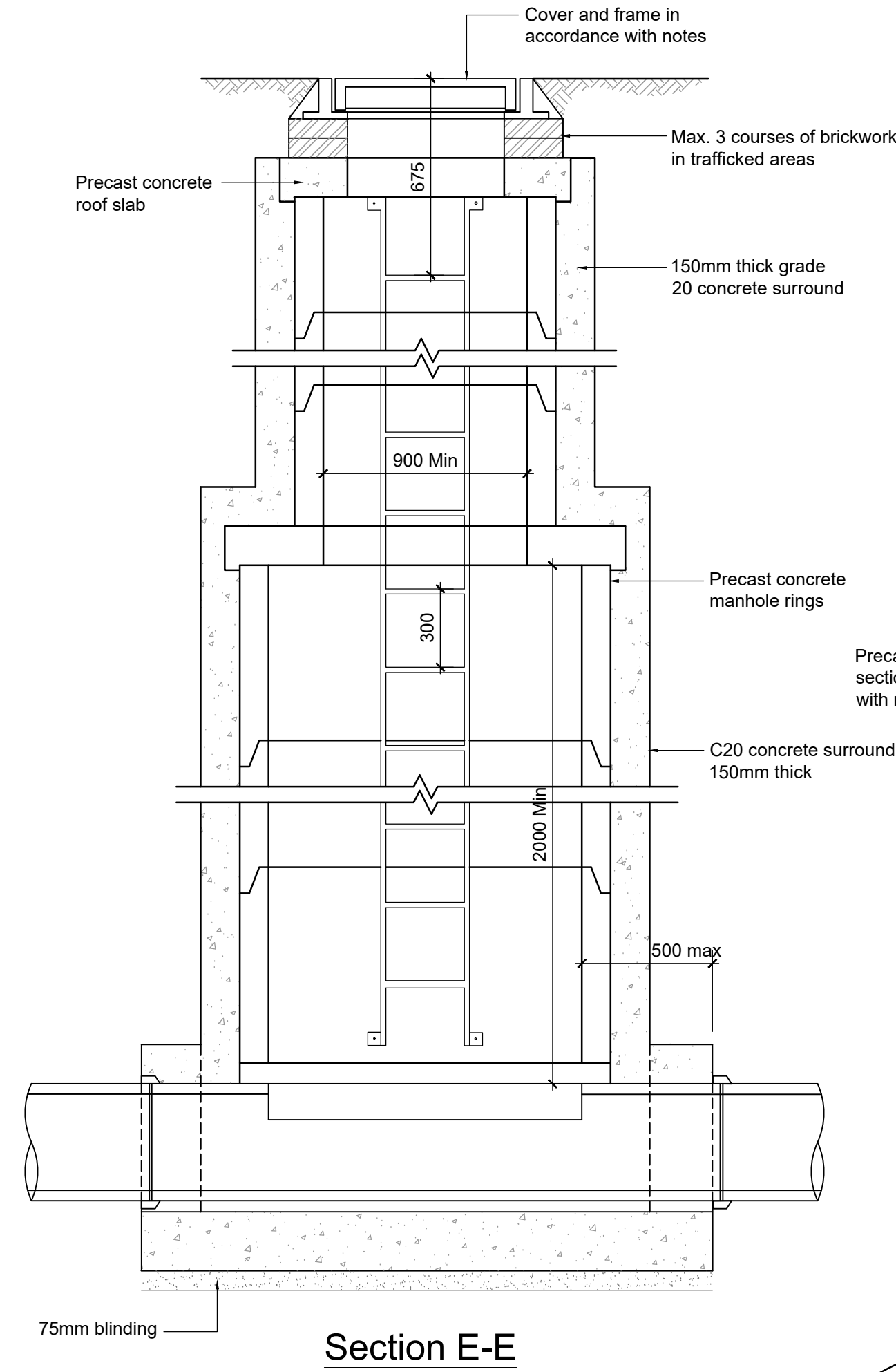
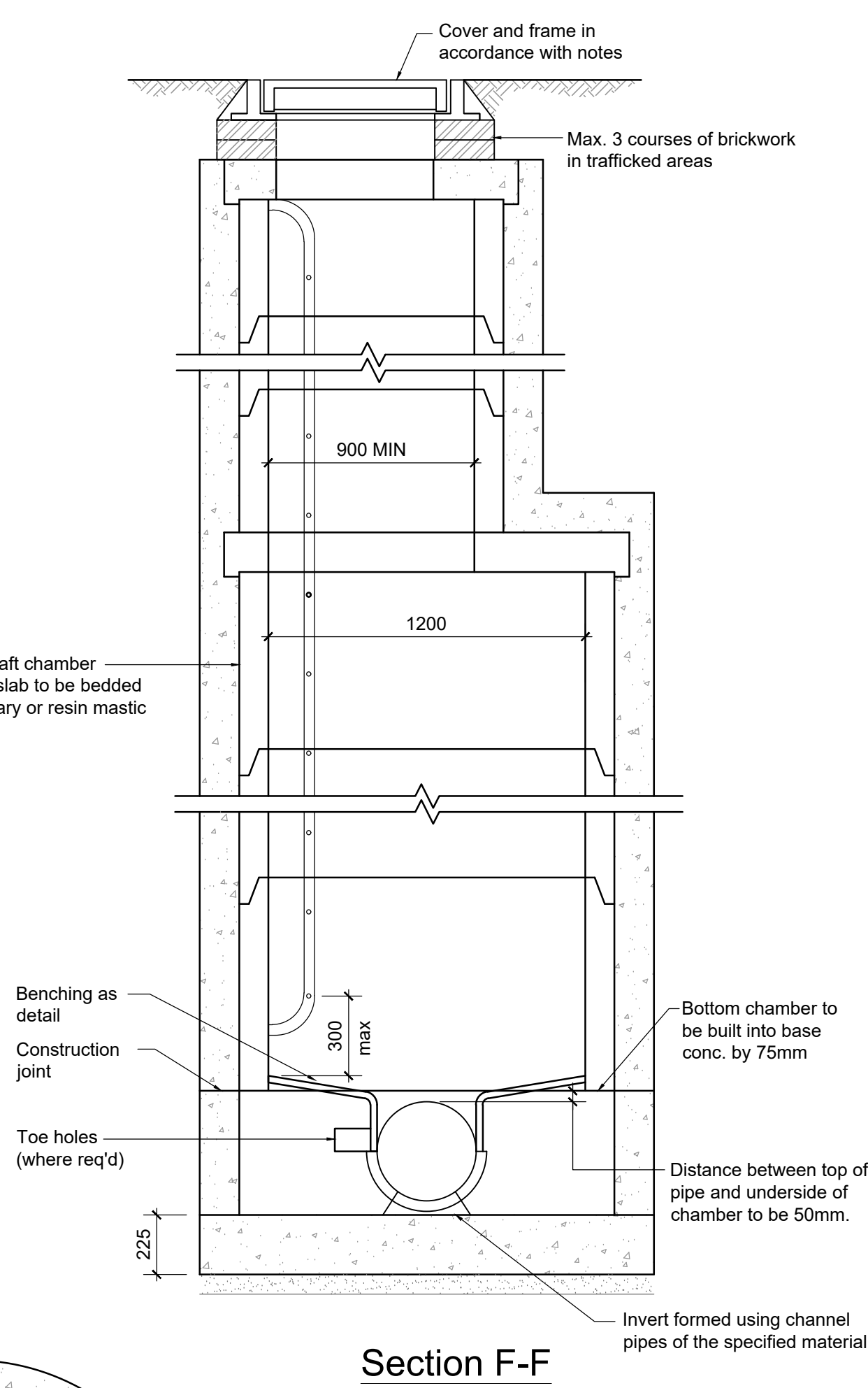
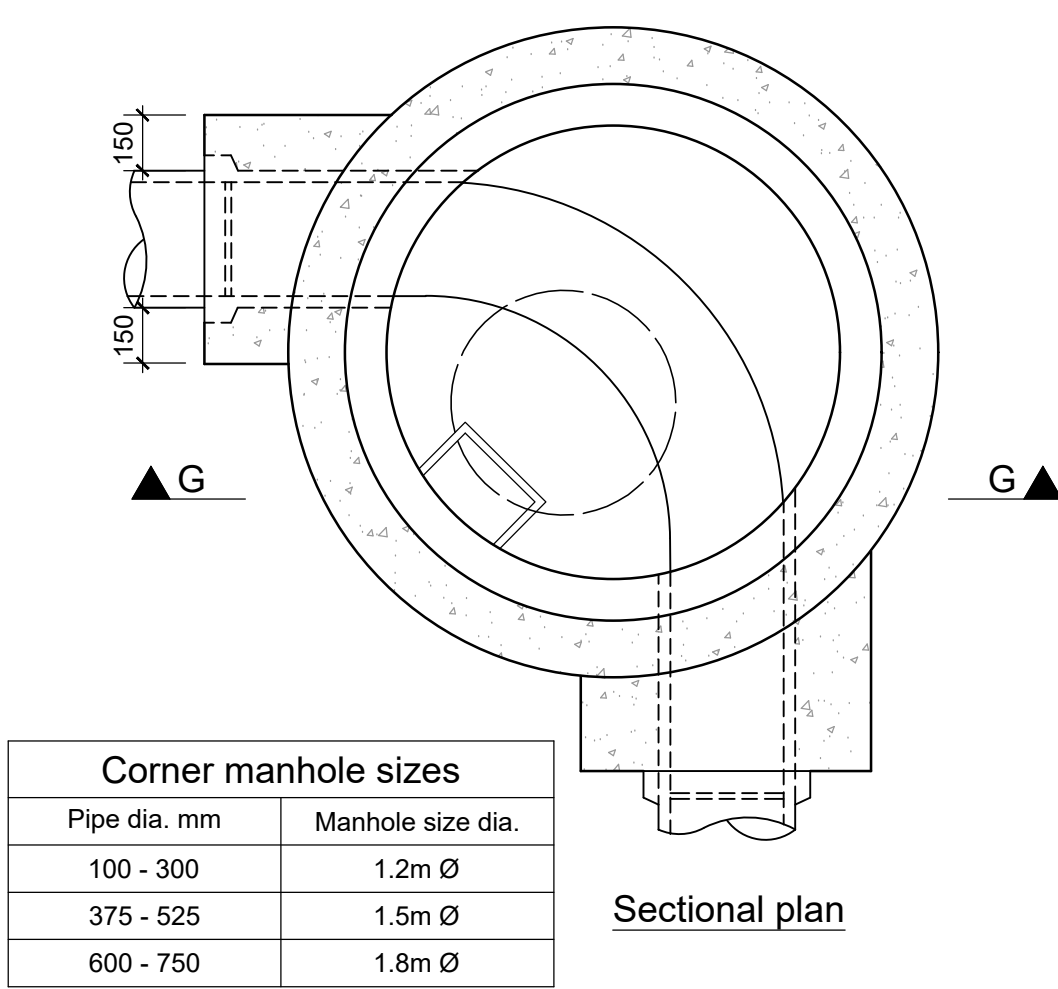




Section E-E

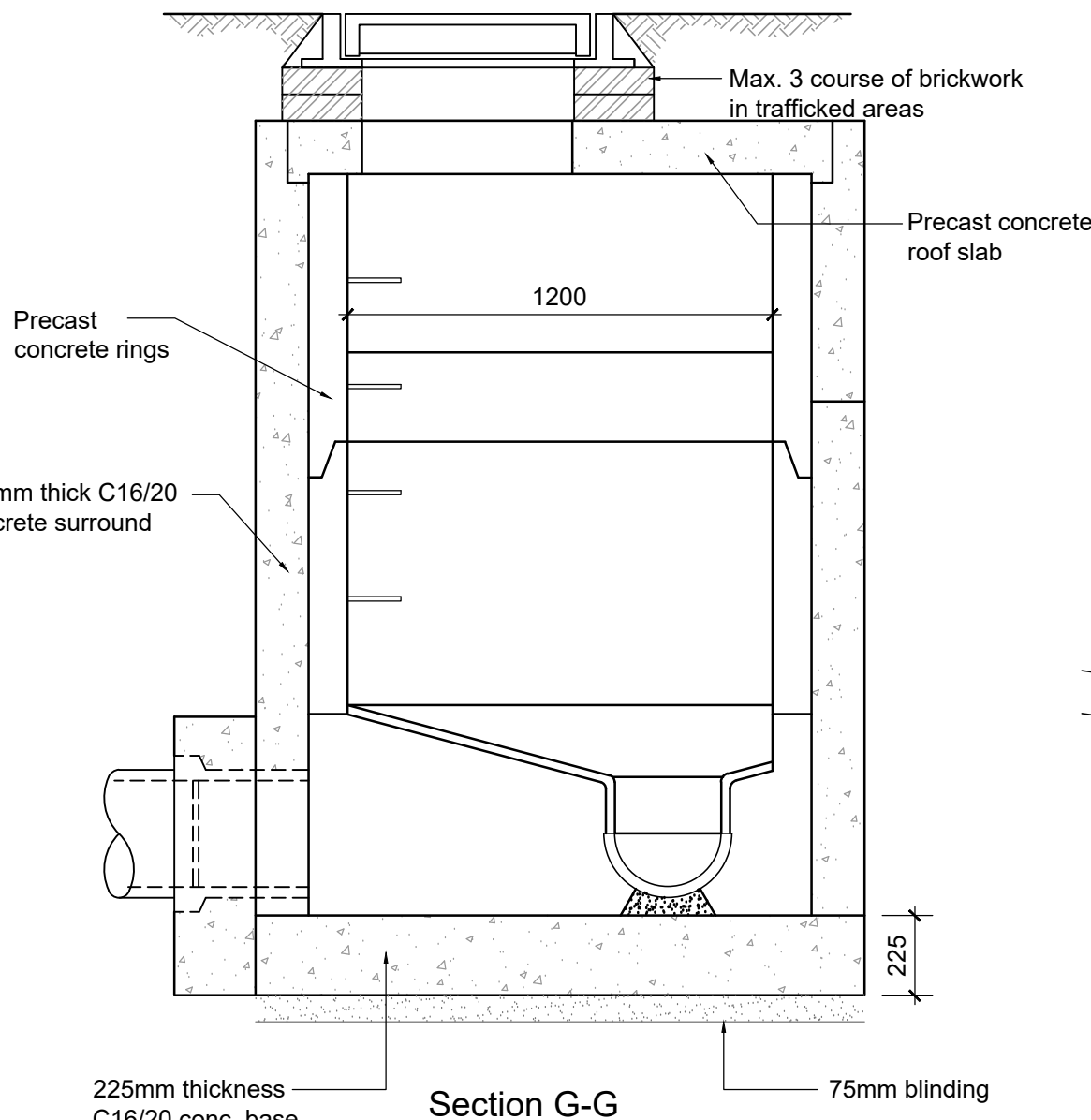


Section F-F



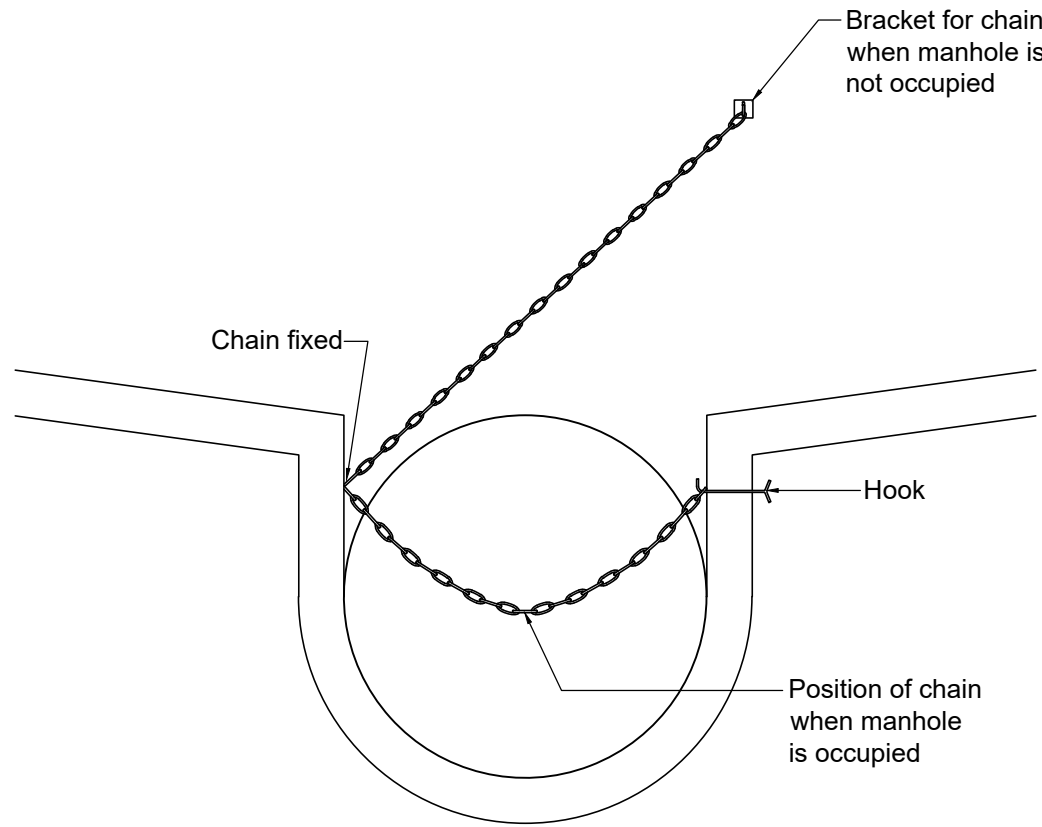
Corner manhole sizes	
Pipe dia. mm	Manhole size dia.
100 - 300	1.2m Ø
375 - 525	1.5m Ø
600 - 750	1.8m Ø

Sectional plan



Section G-G

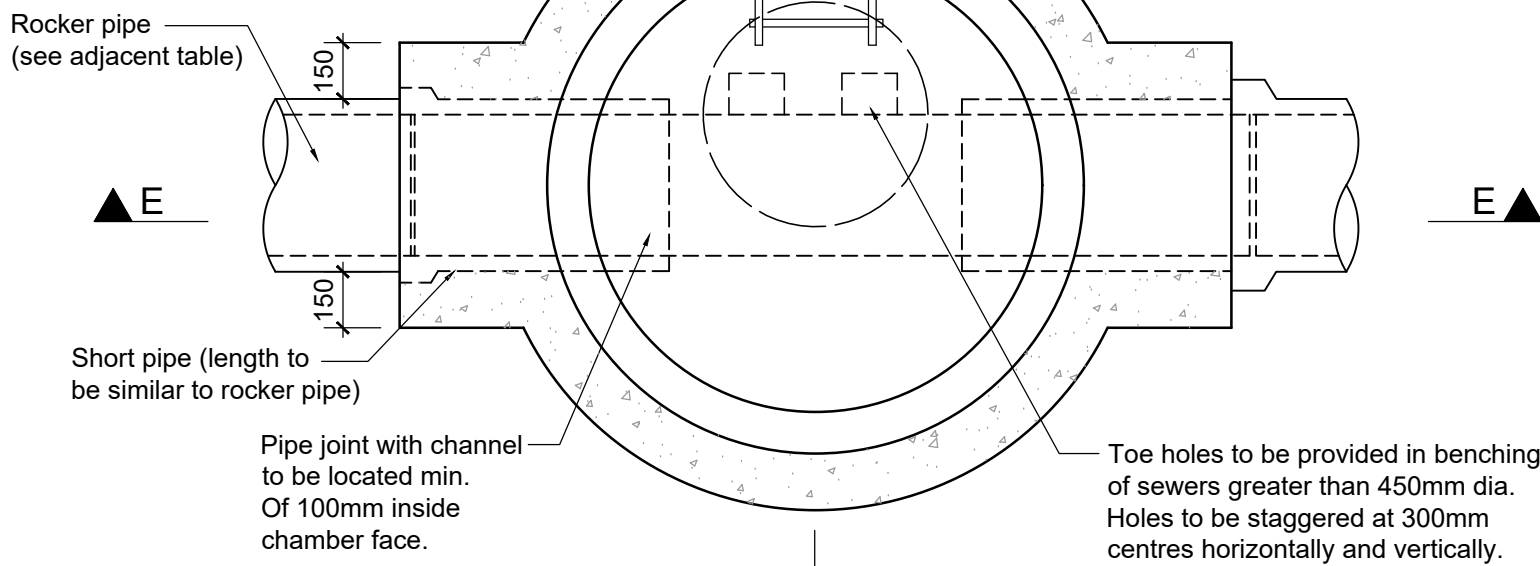
Precast concrete corner manhole
(If over 3.0m deep use shaft for deep manhole)
1:20



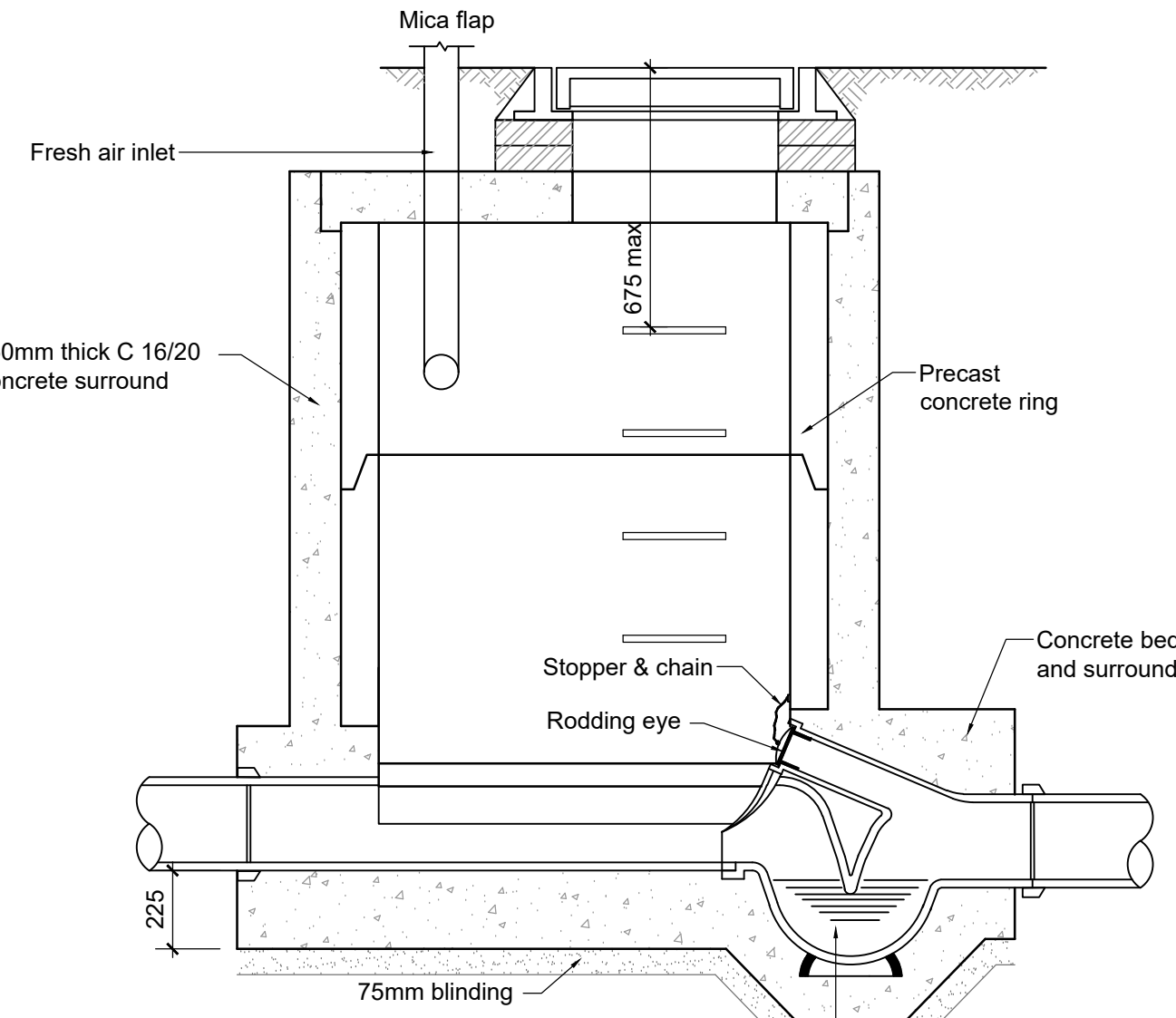
Safety chain detail
(For pipe diameters greater than 600mm)
1:20

Manhole sizes	
Pipe dia. Mm	Manhole size dia.
100 - 300	1.2m Ø
375 - 750	1.5m Ø
750 - 900	1.8m Ø
1050-1200	2.1m Ø

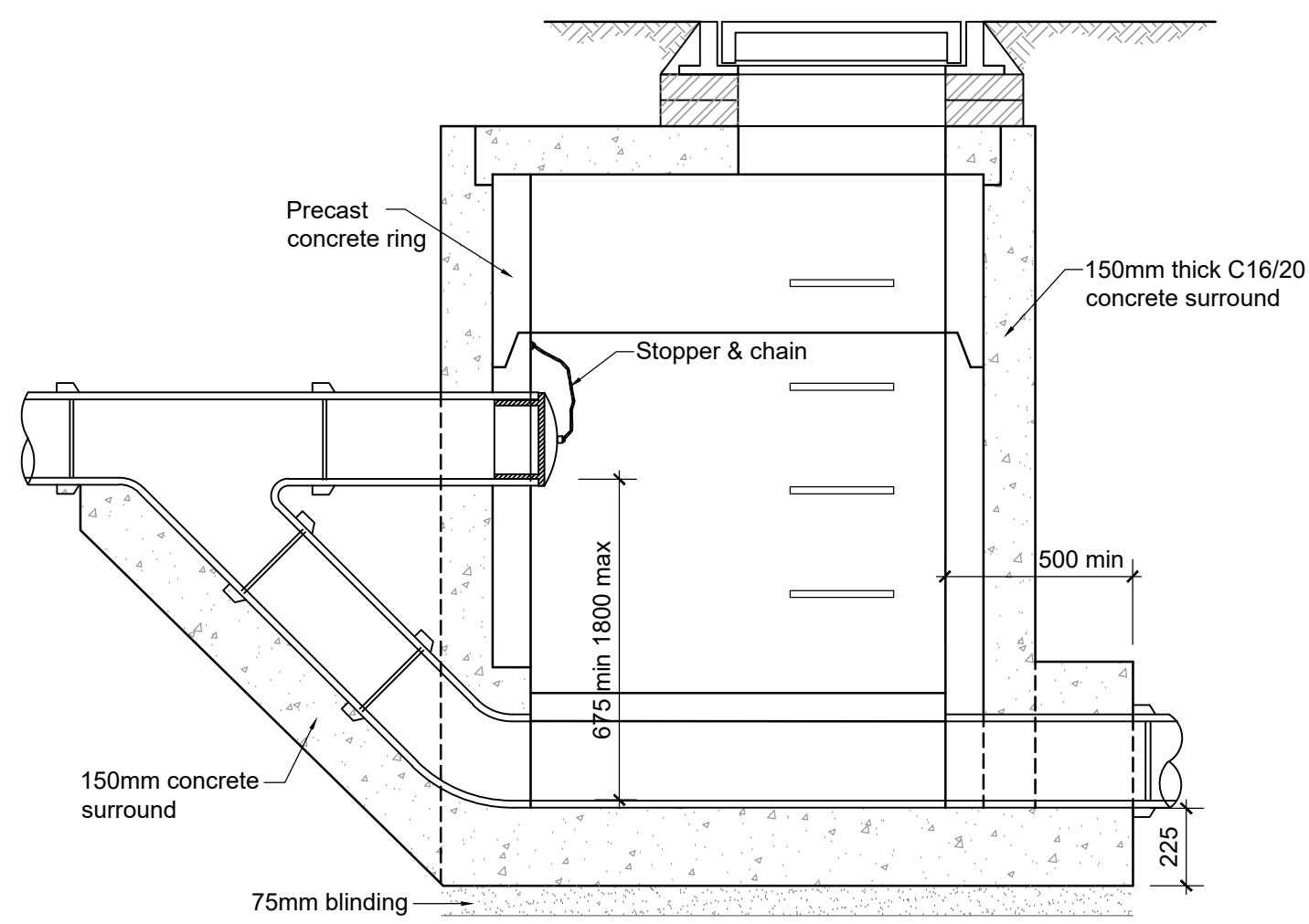
Rocker pipes	
Pipe dia. mm	Rocker pipe length
150 - 450	0.5 - 0.75m
525 - 750	0.75 - 1.0m



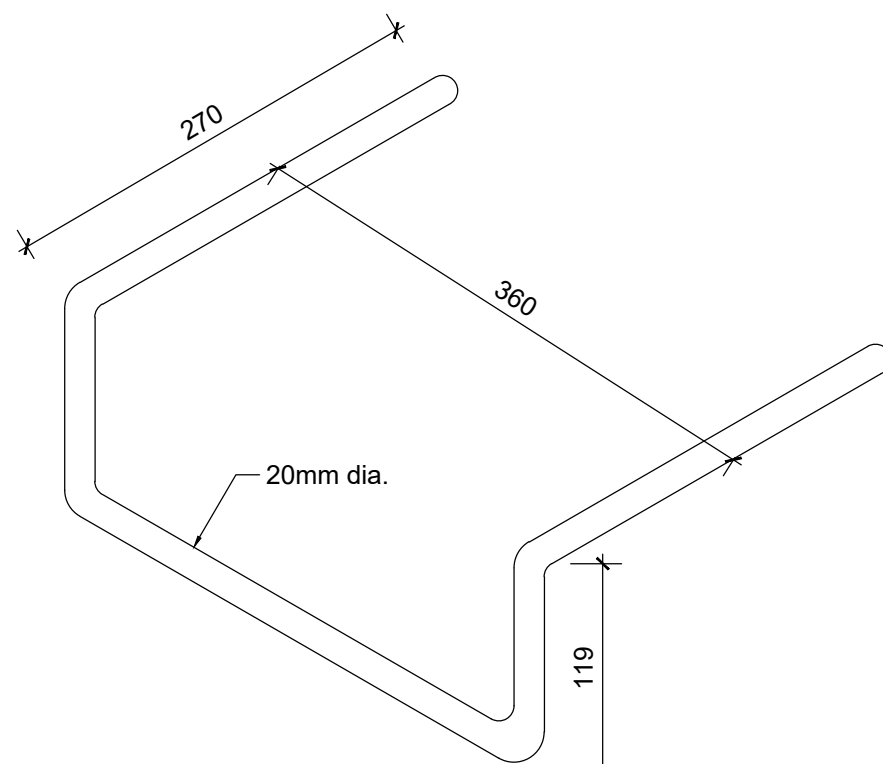
Sectional plan
Deep precast concrete manhole
(Depths over 3.0m & up to 5.5m)
1:20



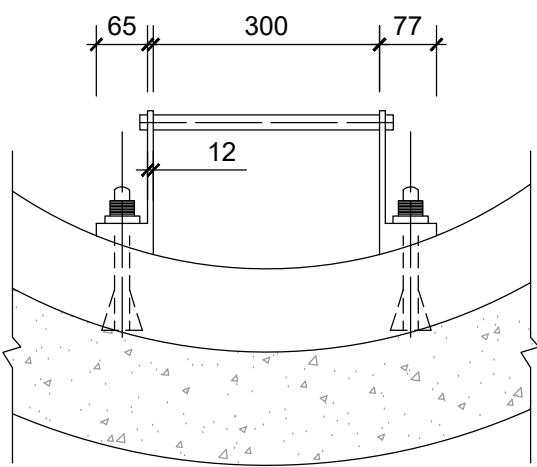
Detail of channel interceptor
1:20



Ramped backdrop manhole
1:20



Ladder rungs
1:20



Access ladder detail
1:20

Notes:
Manhole construction

Concrete manholes shall be constructed of precast units complying with I.S.420 and shall be of the dimensions as shown on the drawing. The base, and benching shall be formed insitu of C16/20 concrete. The base shall be 225mm thick and the channel be purpose made half round channels. The precast rings shall be surrounded in 150mm thick C16/20 concrete. A flexible joint shall be provided to each pipe within 500mm of the inner face of the manhole wall. Projecting pipes shall be surrounded with C16/20 concrete with the base been cast monolithically with the manhole base. A further "rocker" pipe shall be provided for pipes up to 450mm dia. Of 500mm to 750mm length, and pipes greater than 450mm dia. 750mm to 1000mm length.

Covers

Manhole covers and frames to comply with the requirements of IS/EN 124:2015. Covers in roadways to be an approved minimum Class D400 with 600mm clear opening with polyester resin bedding material for fixing manhole frames as per clause in Arup Specification (Materials). Covers in grassed areas and footpaths not adjacent to roadways to be minimum Class C250 with 600mm clear opening. Maximum of 3 courses of engineering bricks to be provided under manhole frames in trafficked areas with 2 courses in un-trafficked areas.

Ladder rungs

Ladder rungs shall be 20mm diameter mild steel heavily galvanised after manufacture as shown on the drawing and fitted at 300mm centres. Length embedded in wall 125mm.

Access ladders

Access ladders to be manufactured from mild steel with 65mm x 12mm stringers 300mm apart with 20mm diameter rungs at 300mm c/c. Mild steel stays 65mm x 12mm to be provided at intervals not exceeding 2.4m. Ladder and stays to be heavily galvanised to BS 729 after manufacture. The ladder is to be fixed with 18mm diameter stainless steel bolts.

Benching

Benching is to be formed in C16/20 concrete and should rise vertically from the top edge of the channel to a height not less than that of the soffit of the outlet and slope upwards to meet the wall of the manhole at at gradient of 1:12 (min. rise 25mm). It should be floated with a steel float to a smooth hard surface with a 25mm thick coat of 1:2 cement mortar laid while the benching concrete is still green. The channel shall be purpose made half round channels of the same material as the pipeline or other as approved by the engineer.

C01	03/10/25	DB	AS	GS
Issued for Planning (Status A2)				
P01	02/07/25	DB	AS	GS
Issued for Information (Status S2)				
Rev	Date	By	Chkd	Appd

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Client
Limerick Twenty Thirty

Project Title
Cleaves Riverside Quarter
Masterplan

Drawing Title
Proposed Details
Sheet 2

Scale at A1	1:20
Role	Civil Drainage
Suitability	A2 - Issued for Planning
Arup Job No	277975-00
Name	CRQMP-ARUP-XX-00-DR-CE-4402
Rev	C01