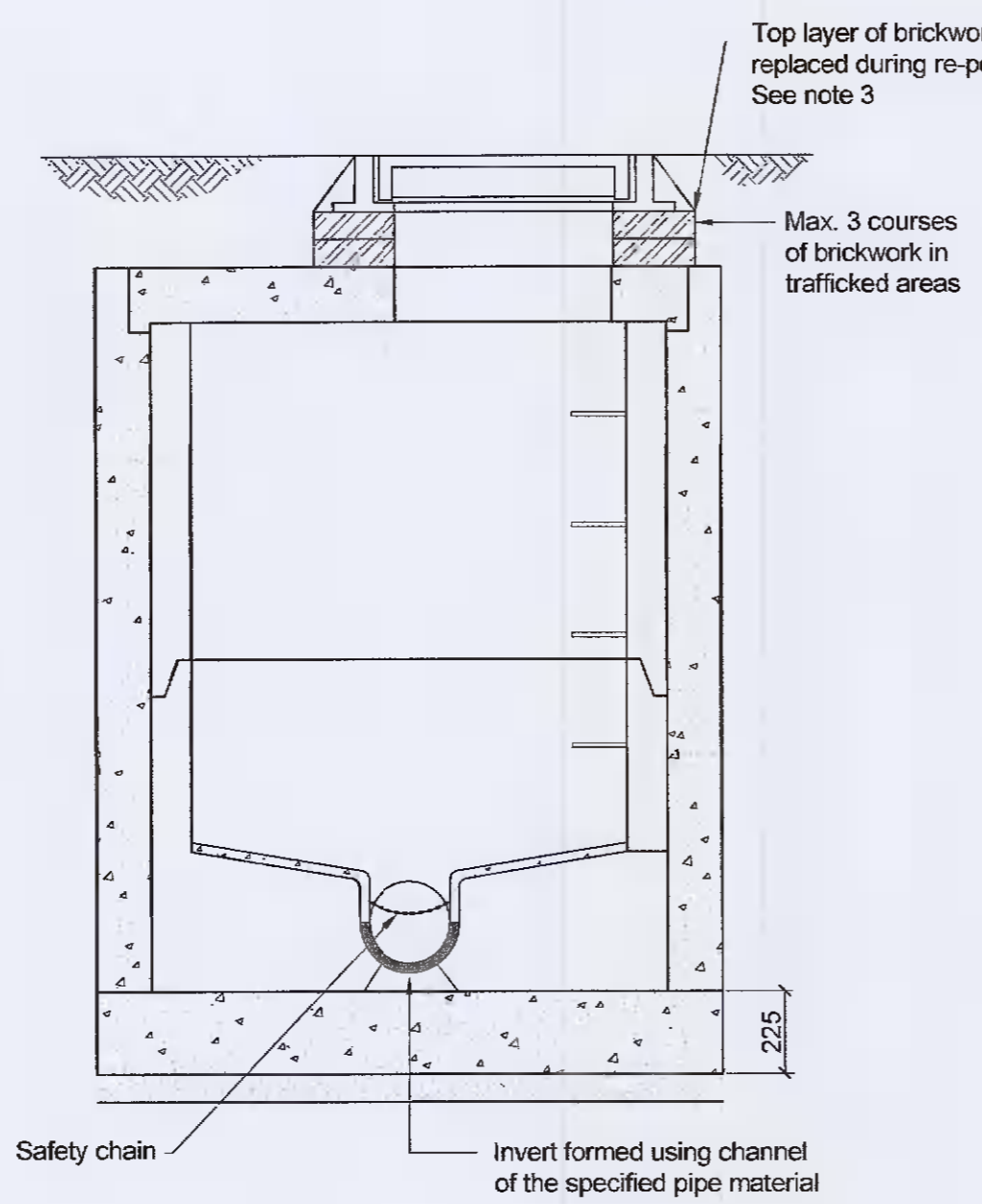
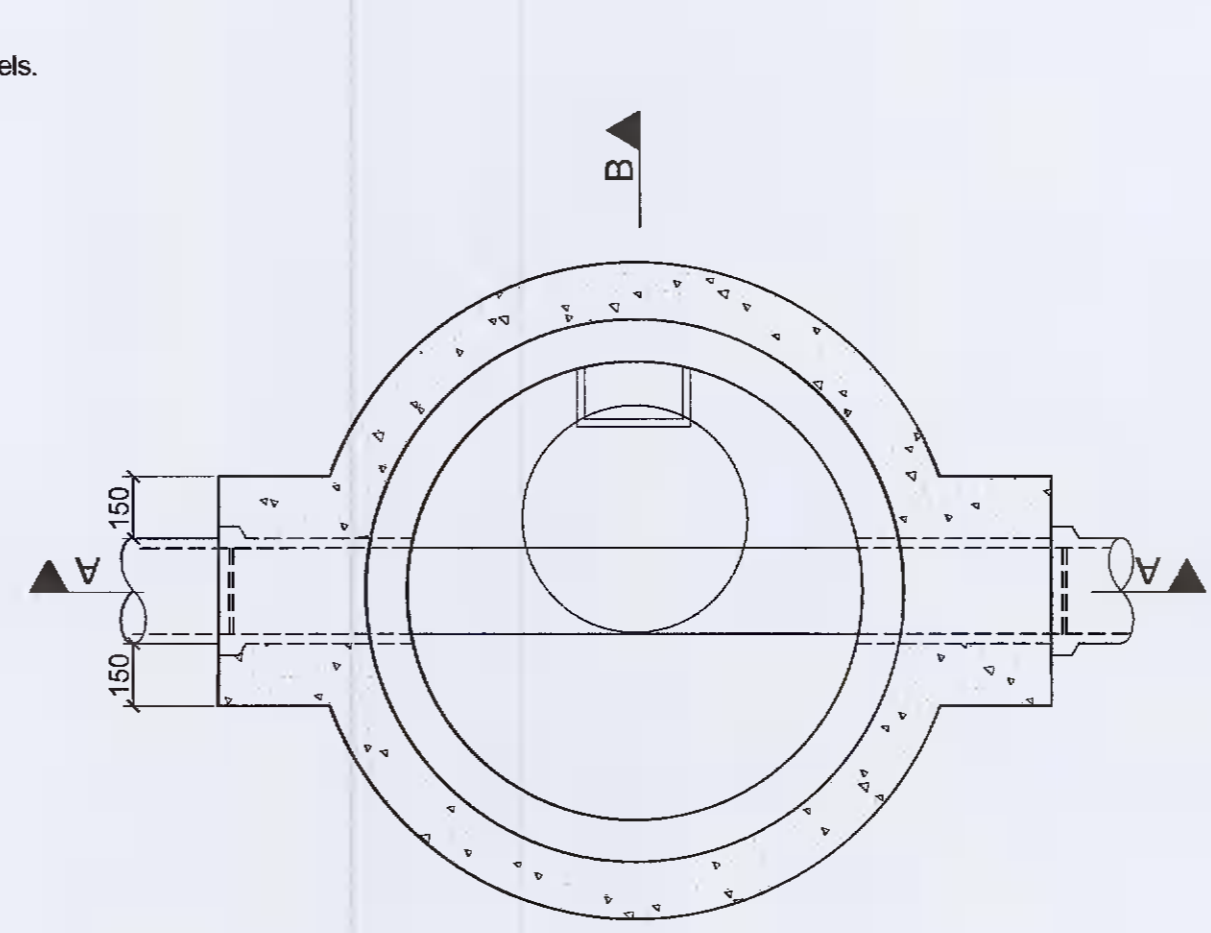


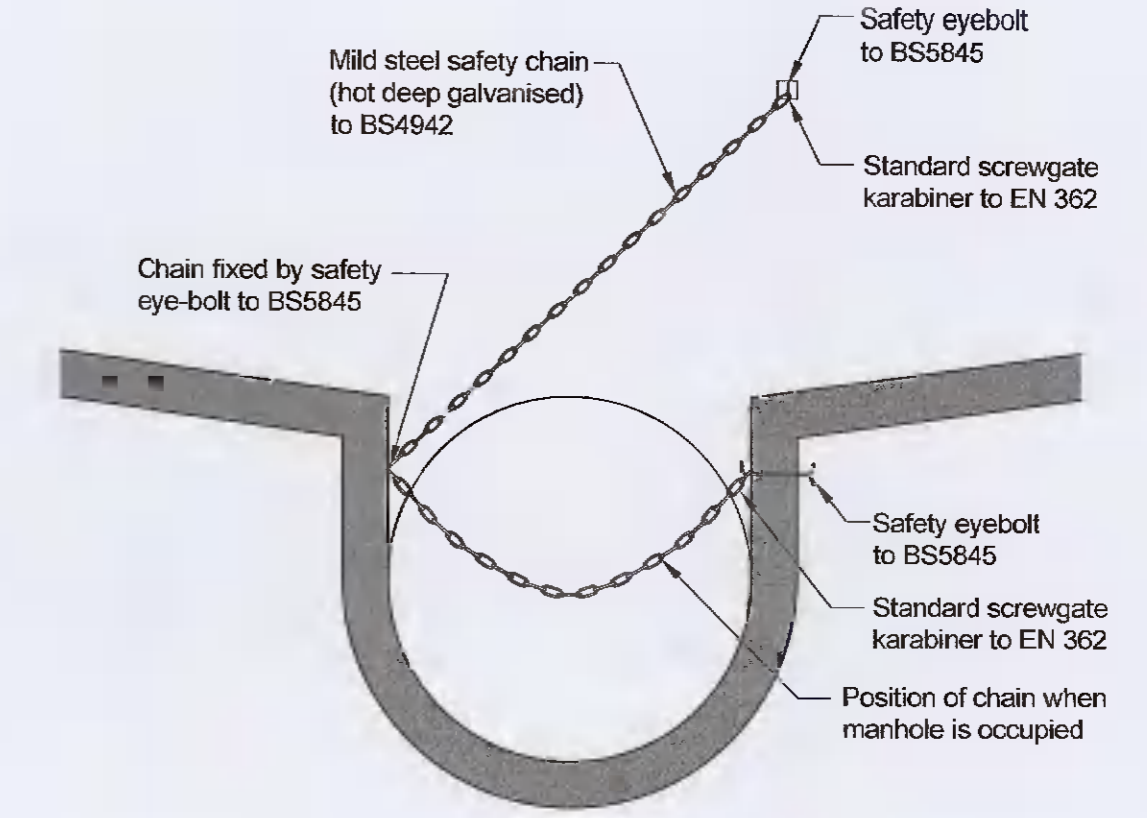
Section A-A



Section B-B

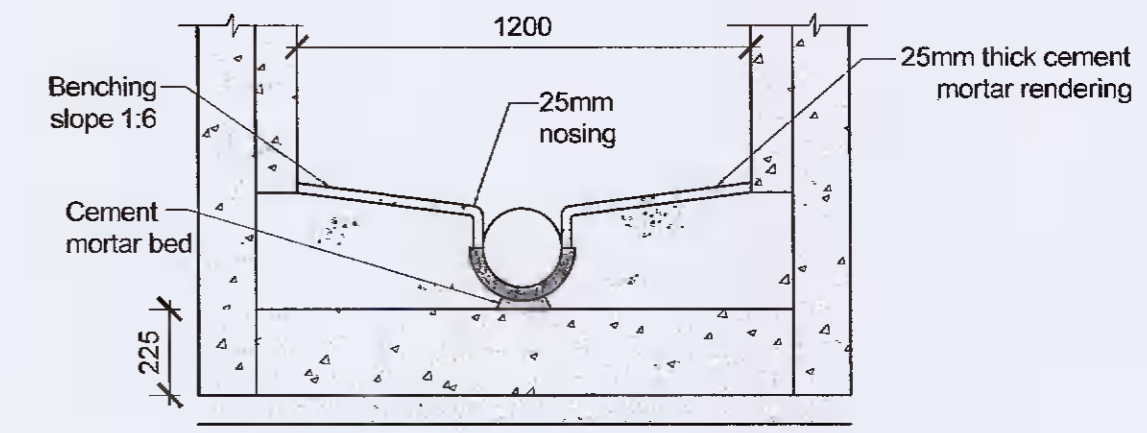


Sectional plan



Safety chain detail  
(for pipe diameters > 600mm)  
Scale 1:20

**Shallow Precast Concrete Manhole**  
(Depths up to 3.0m on Pipes up to 300mm dia.)  
1:20



Benching detail  
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

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

Chamber Cover Types			
Reference	Shape	Load Class	Min Opening (mm)
Type A	Square	C250	600x600 grated
Type B	Circular	B125	600Ø
Type C	Circular	C250	600Ø
Type D	Circular	D400	600Ø
Type E	Circular	C250	450Ø

**Manhole Construction**  
Concrete manholes shall be constructed of precast units complying with E.N.420 and shall be of the dimensions as shown on the drawing. The Base, and Benchings shall be formed In Situ 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.

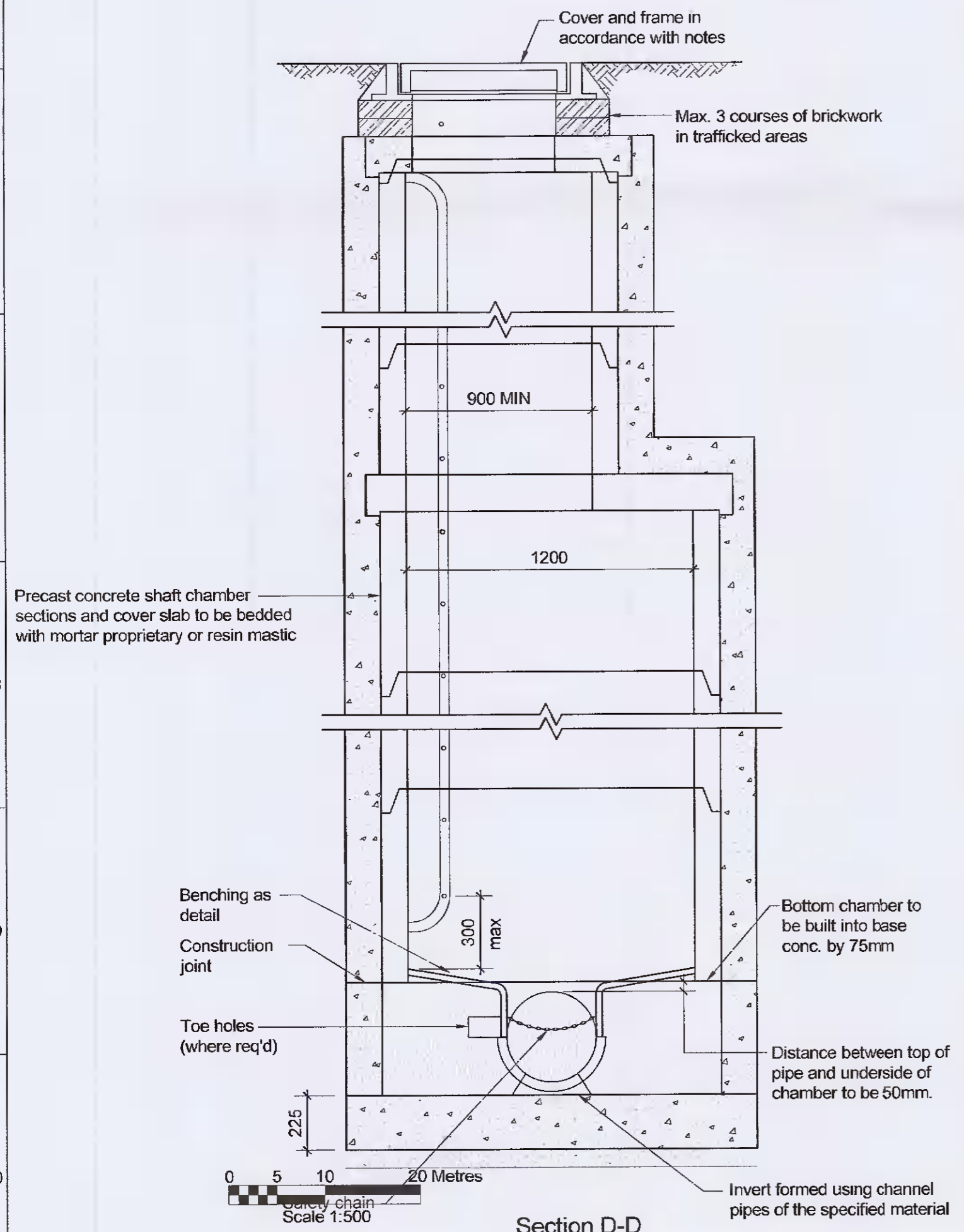
A flexible joint shall be provided to each pipe within 500mm of the inner face of the manhole wall. Projecting pipes shall be surrounded with C16/20 Concrete with the base been cast monolithically with the manhole base. A FURTHER "Rocker" Pipe shall be provided for pipes up to 450mm Ø, of 500mm to 750mm length, and pipes greater than 450mm Ø, 750mm to 1000mm length.

**Covers**  
Manhole Covers and Frames to comply with the requirements of EN 124:1994. Covers in roadways to be an approved minimum CLASS D400 with 600mm clear opening. Covers shall be Steel or Iron Fabricated Galvanized with 100mm deep frame, non rock by means of v shaped seating with wedging. Covers to be third party certified e.g. BSI KMI or similar unless noted otherwise.

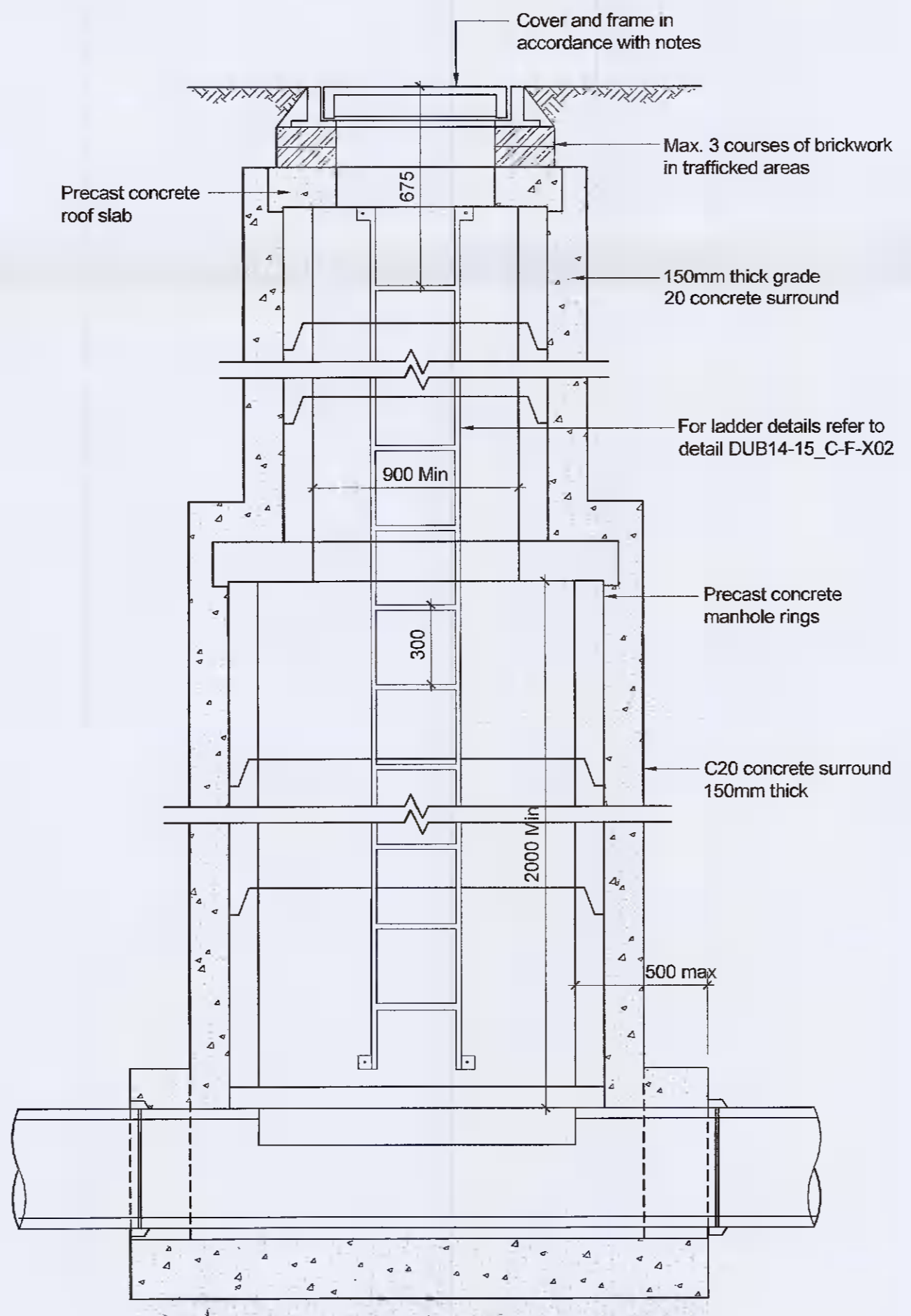
**Ladder Rungs**  
Ladder Rungs shall be 20mm diameter Mild Steel heavily Galvanized after manufacture as shown on the drawing and fitted at 300mm centres. Length embedded in wall 125mm.

**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 Galvanized to BS 729 after manufacture. The Ladder is to be fixed with 18mm diameter STainless Steel Bolts.

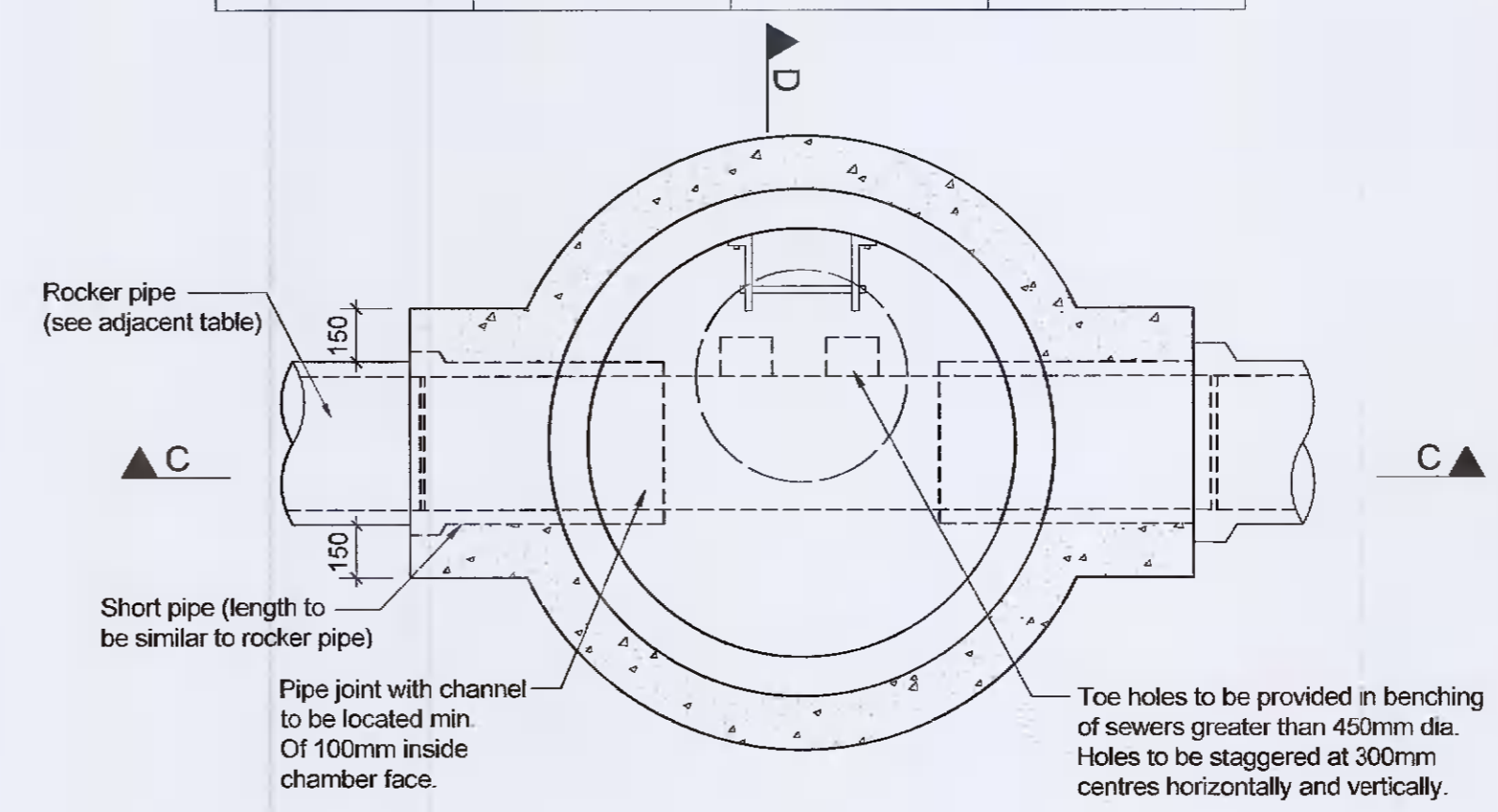
**Benching**  
Benching is to be formed in C25/30 Concrete and should rise vertically from the top edge of the channel to a height not less than that of the Soffit of the outlet and slope upwards to meet the wall of the Manhole at a gradient of 1:6 (min. rise 25mm). It should be floated with a Steel Float to a smooth hard surface with a 25mm thick coat of 1:1 Cement Mortar laid while the Benchings Concrete is still green.



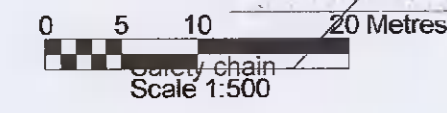
Section D-D



Section C-C  
**Deep precast concrete manhole**  
(Depths over 3.0m & up to 5.5m)  
1:20



Sectional plan



C01	16/07/21	DF	CDS	JMAC
Issued for Planning				
Rev	Date	By	Chkd	Appd

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Client  
Digital Netherlands VIII B.V.  
(Netherlands)

Project Title  
INXN DUB15/16

Drawing Title  
Standard Details Sheet 1

Scale at A1	As Shown
Role	Civil
Suitability	Planning
Arup Job No	280503-00
Rev	C01
Name	IE-DUBZZ-STE1-EO-ARP-DR-C-0112