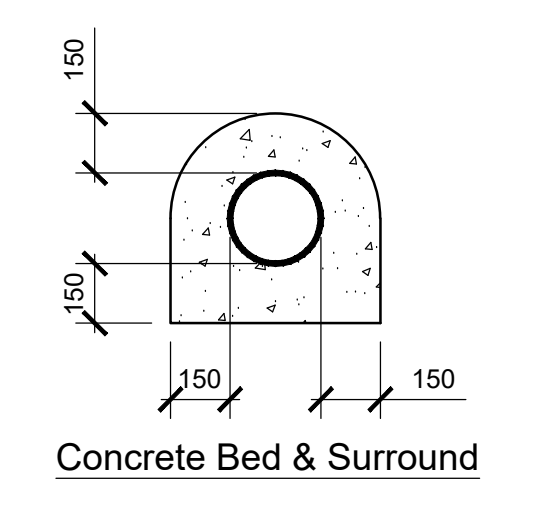
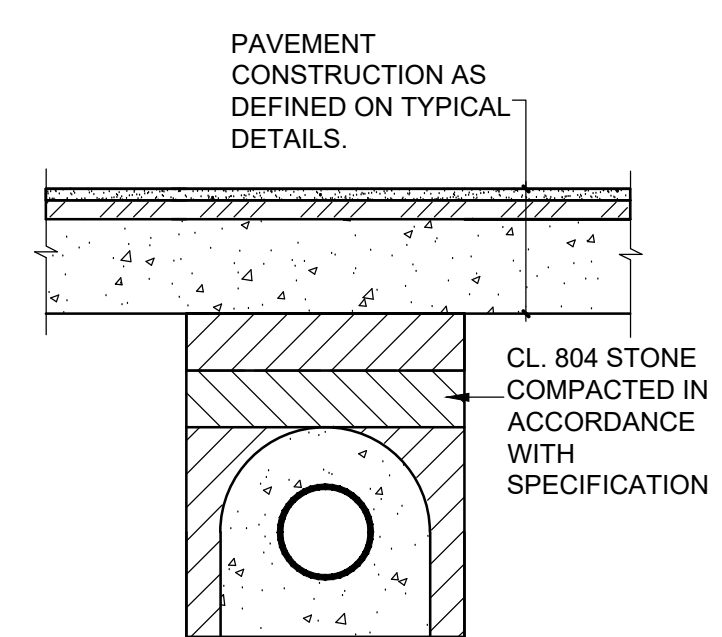


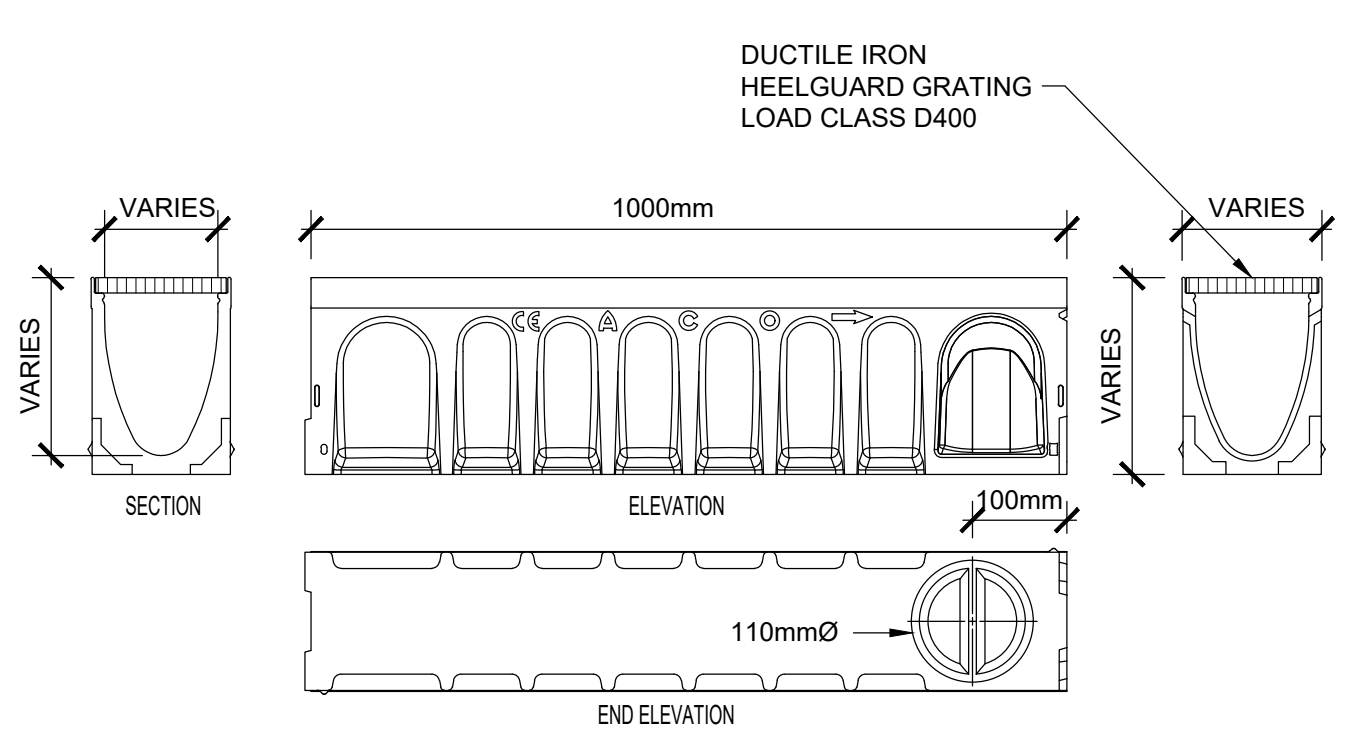
Typical Hydrocarbon Interceptor Backfill Detail
Scale 1:30



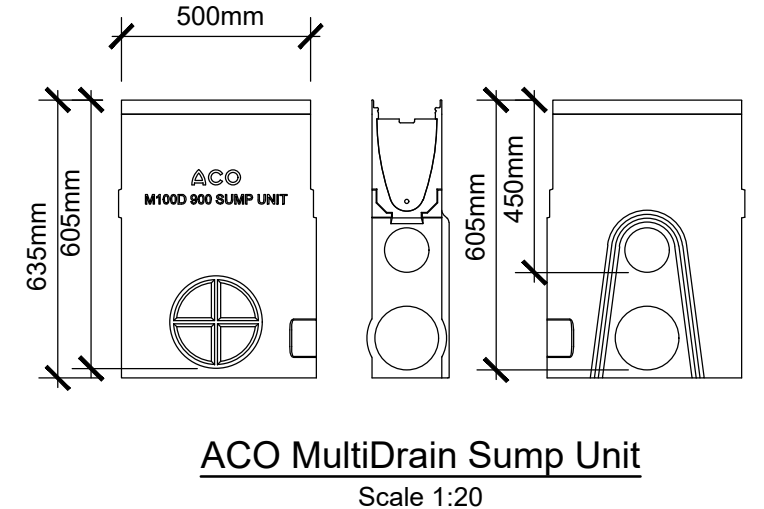
Concrete Bed & Surround
Joint in Concrete Surround to Flexible Jointed Spigot & Socket Pipes
Scale 1:20



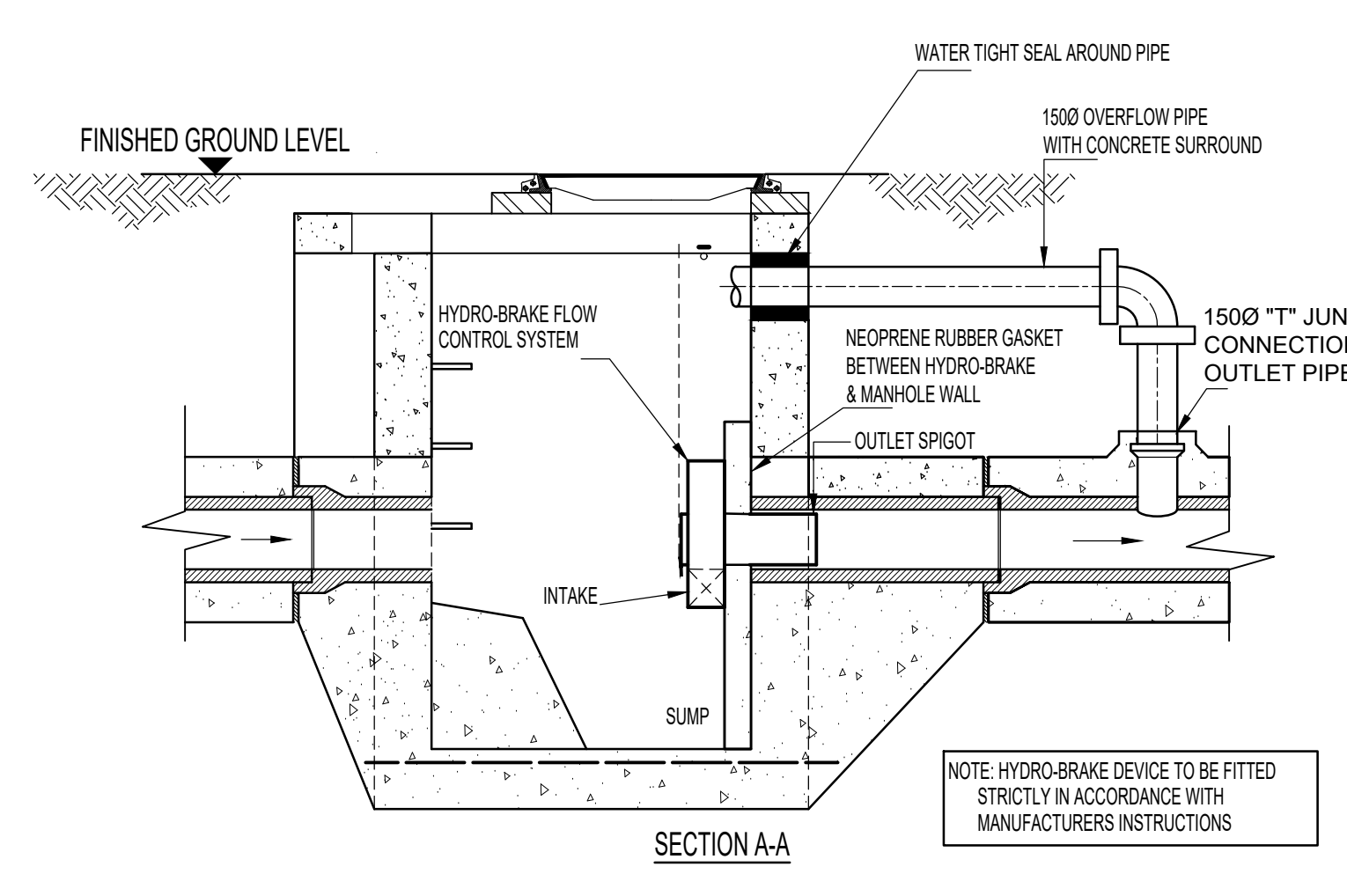
Concrete Bed & Surround
Construction Details for Concrete Bed & Surround to Surface Water Drain
Scale 1:20



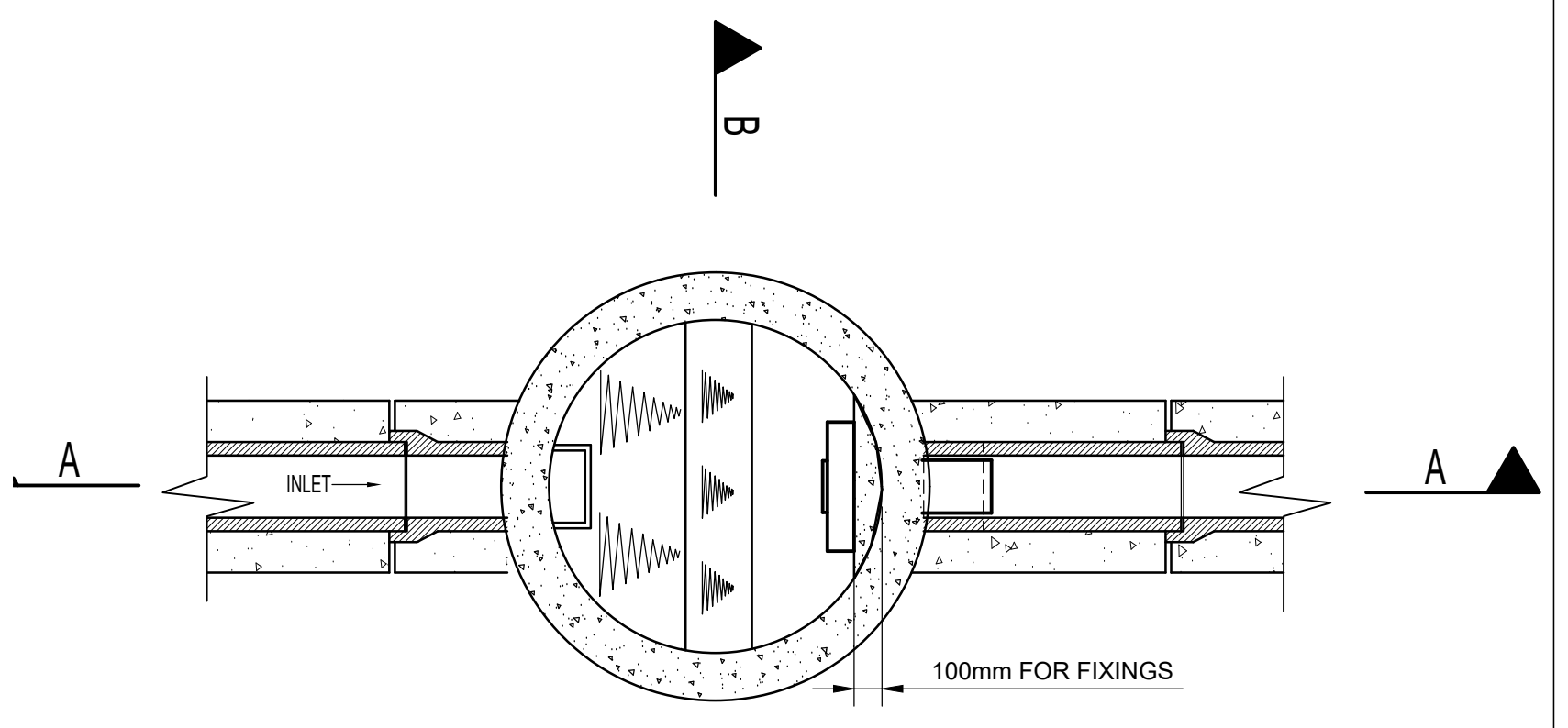
Aco MultiDrain Detail
Scale 1:10



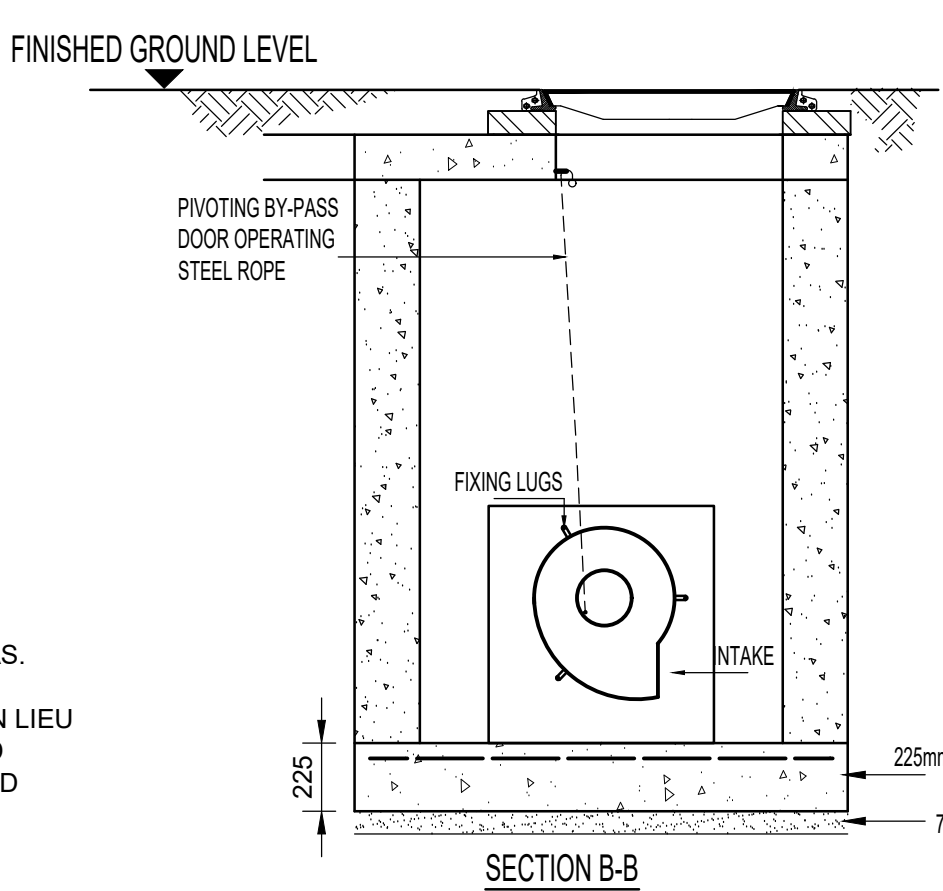
ACO MultiDrain Sump Unit
Scale 1:20



SECTION AA
NOTE: HYDRO-BRAKE DEVICE TO BE FITTED STRICTLY IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS



SECTIONAL PLAN



SECTION B-B
HYDRO-BRAKE FLOW CONTROL CHAMBER
SCALE 1:25

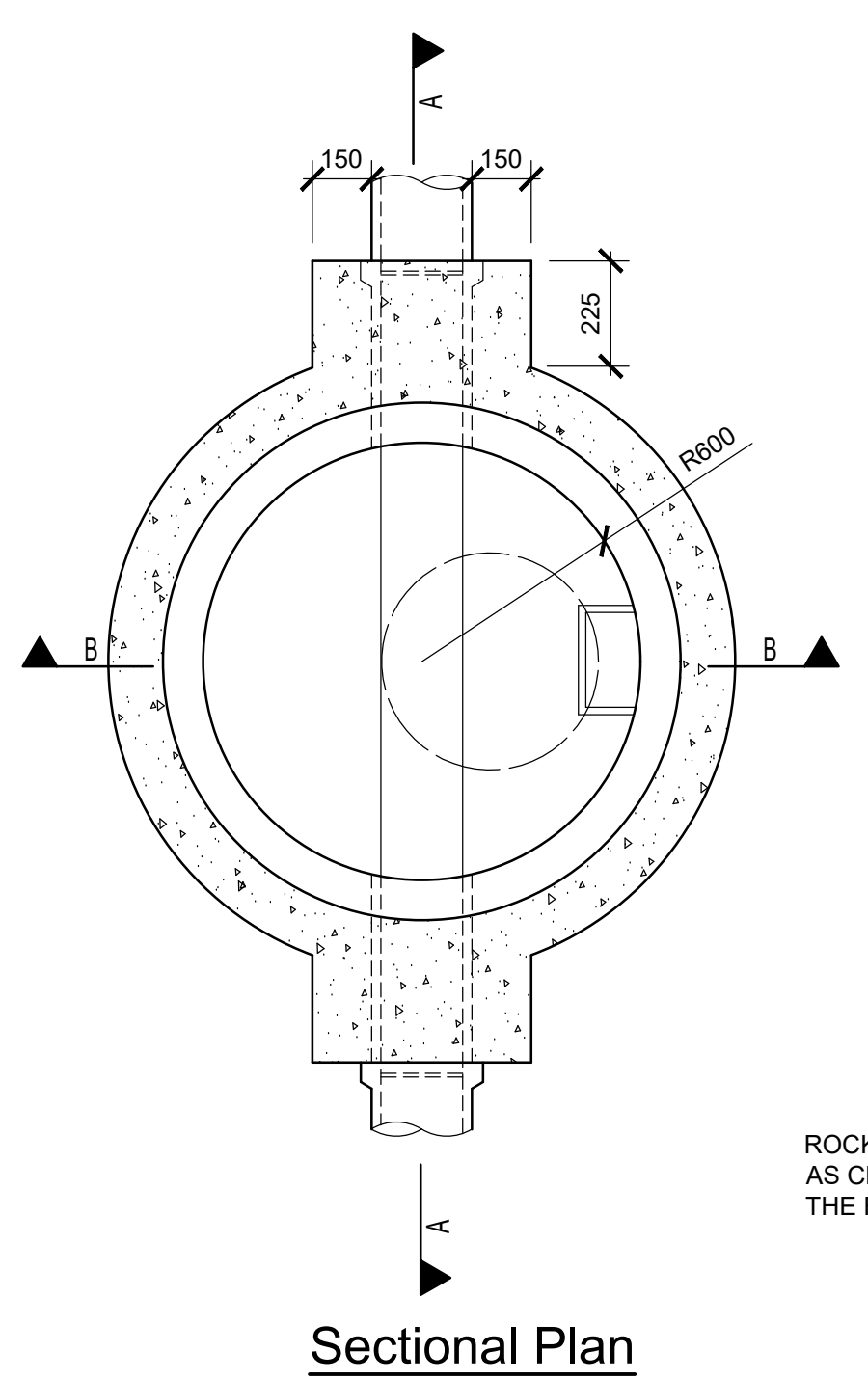
MANHOLE CONSTRUCTION
CONCRETE MANHOLES SHALL BE CONSTRUCTED OF PRECAST UNITS COMPLYING WITH E.N.420 AND SHALL BE OF THE DIMENSIONS AS SHOWN ON THE DRAWING. THE BASE AND BENCHING SHALL BE FORMED IN SITU OF C16/20 CONCRETE. THE BASE SHALL BE 225mm THICK AND THE CHANNEL BE PURPOSE MADE HALF ROUND CHANNELS. 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 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 EN 124:1994. COVERS IN ROADWAYS TO BE AN APPROVED MINIMUM CLASS D400 WITH 800mm CLEAR OPENING. COVERS SHALL BE STEEL OR IRON FABRICATED GALVANISED WITH 100mm DEEP FRAME. NON ROCK BY MEANS OF V SHAPED SEATING WITH WEDGING. COVERS TO BE THIRD PARTY CERTIFIED e.g. B8i KMI OR SIMILAR UNLESS NOTED OTHERWISE.

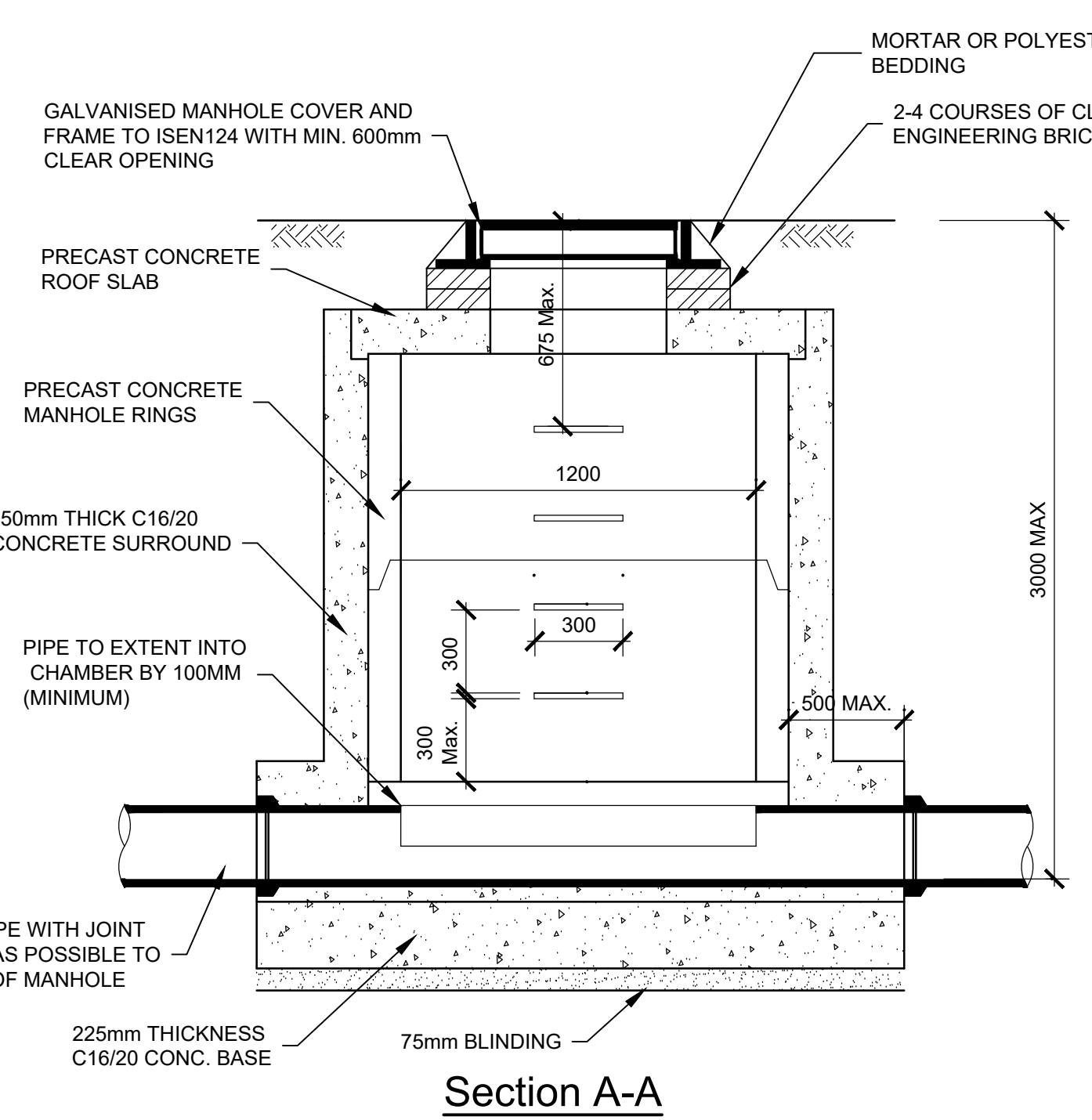
LADDER RUNGS
LADDER RUNGS SHALL BE 20mm DIAMETER MILD STEEL HEAVILY GALVANISED AFTER MANUFACTURE AS SHOWN ON THE DRAWING AND FITTED AT 300mm CENTRES. LENGTH EMBEDDED IN WALL, 125mm.

ACCESS LADDERS
ACCESS LADDERS TO BE MANUFACTURED FROM MILD STEEL WITH 65mmX12mm STRINGERS 300mm APART WITH 20mm DIAMETER RUNGS AT 300mm c/c. MILD STEEL STAYS 65mmX12mm 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.

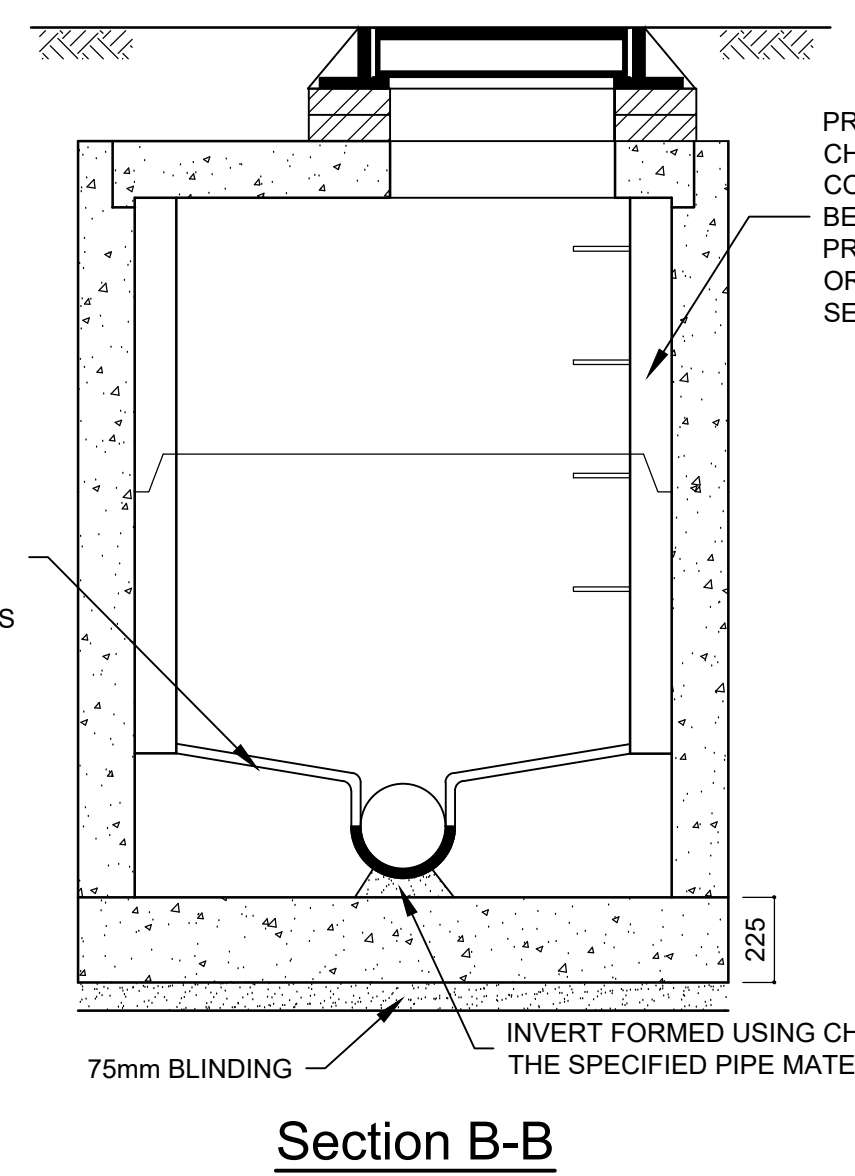
BENCHING
BENCHING IS TO BE FORMED IN C25/30 CONCRETE AND SHOULD RISE VERTICALLY FROM THE TOP EDGE OF THE CHANNEL TO A HEIGHT NOT LESS THAN THAT OF THE SOFFIT OF THE OUTLET AND SLOPE UPWARDS TO MEET THE WALL OF THE MANHOLE AT A GRADIENT OF 1:6 (MIN RISE 25mm). IT SHOULD BE FLOATED WITH A STEEL FLOAT TO A SMOOTH HARD SURFACE WITH A 25mm THICK COAT OF 1:1 CEMENT MORTAR LAID WHILE THE BENCHING CONCRETE IS STILL GREEN.



Sectional Plan



Section A-A

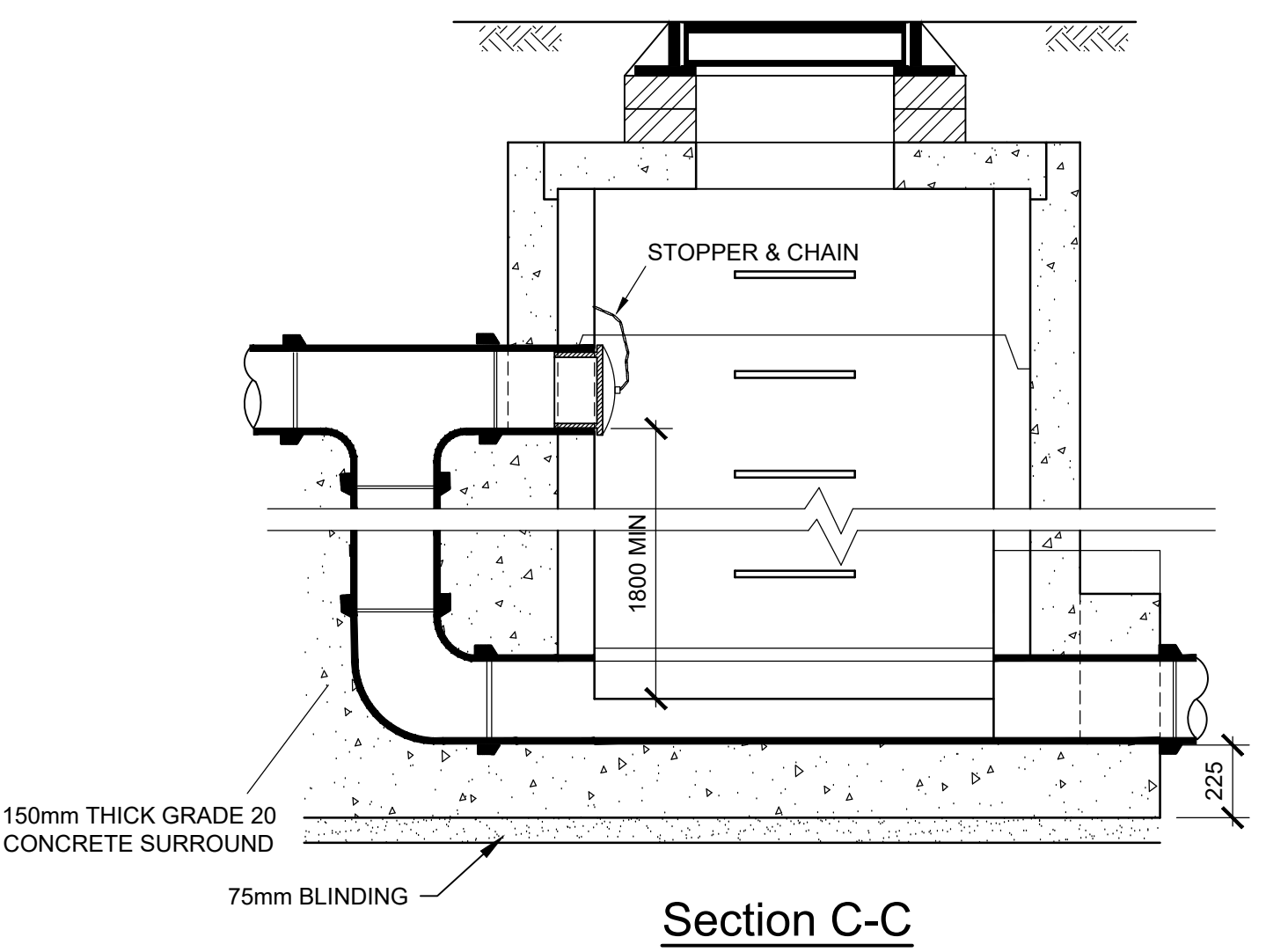


Section B-B

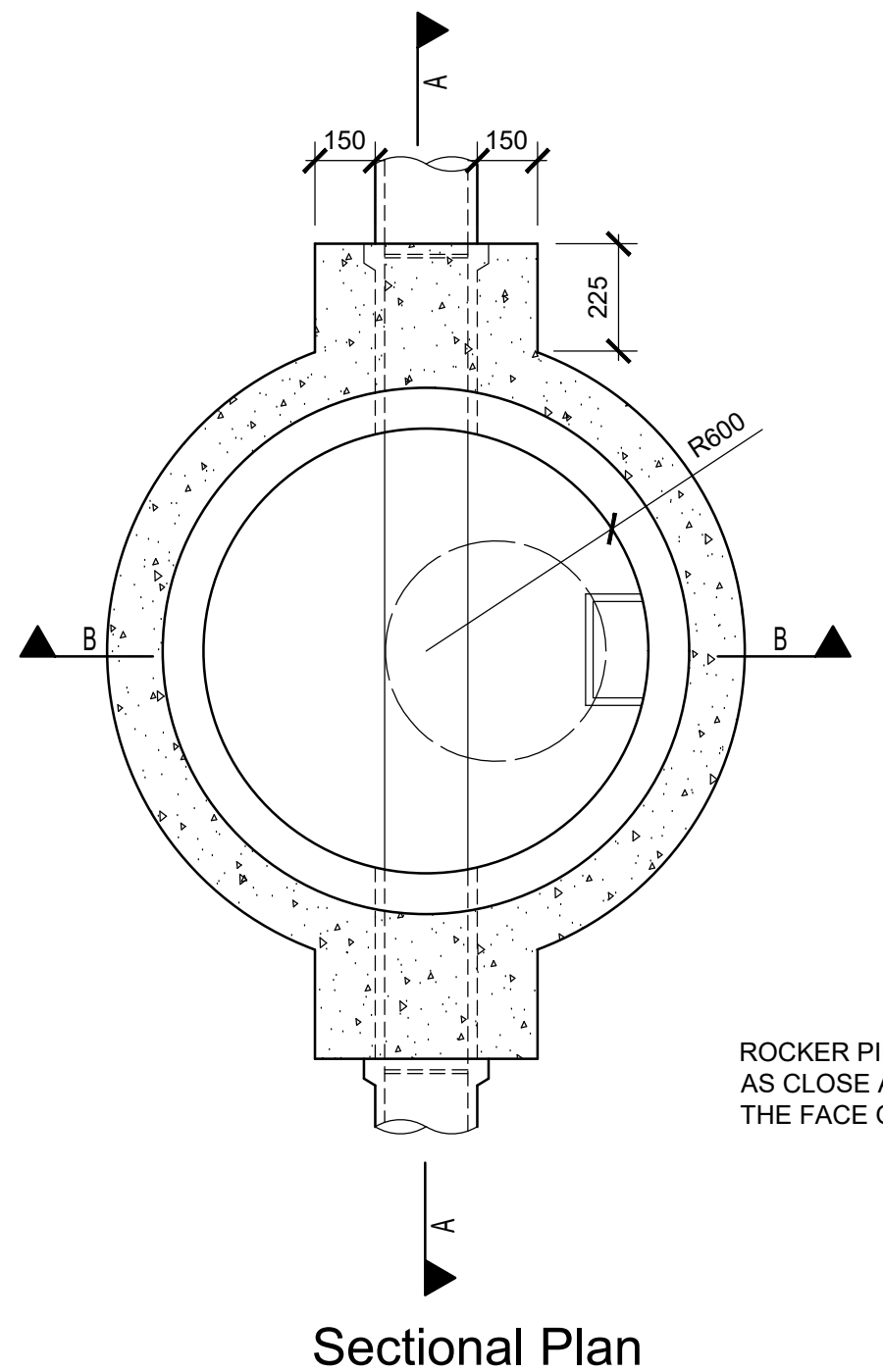
Shallow Precast Concrete Manhole
SCALE 1:20
(DEPTHS UP TO 3.0m)

CORNER MANHOLE SIZES	
PIPE DIA. mm	MANHOLE SIZE DIA.
100 - 300	1.2m Ø
375 - 525	1.5m Ø
600 - 900	1.8m Ø

MANHOLE SIZES	
PIPE DIA. mm	MANHOLE SIZE DIA.
100 - 375	1.2m Ø
450 - 750	1.5m Ø
900	1.8m Ø

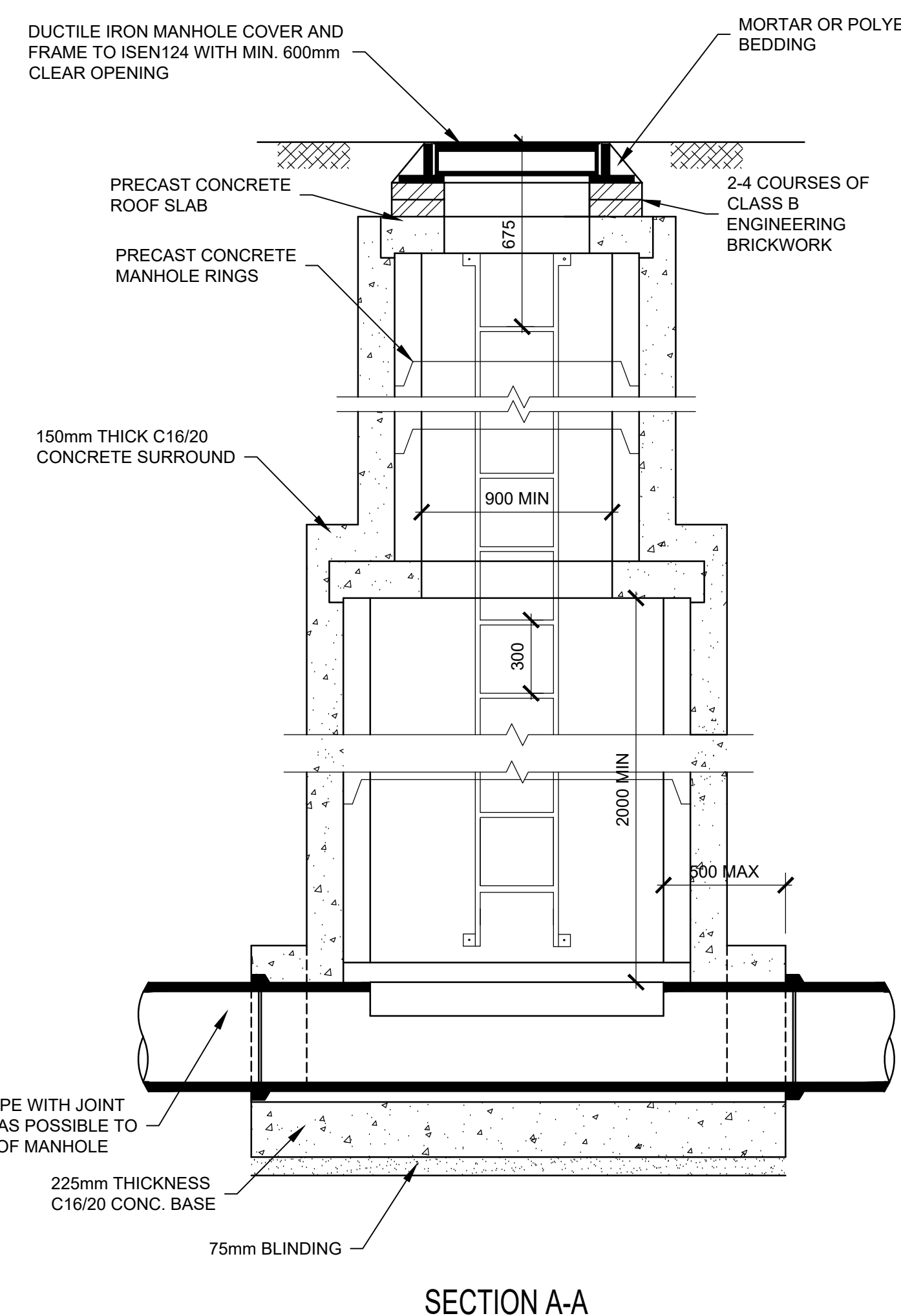


Section C-C

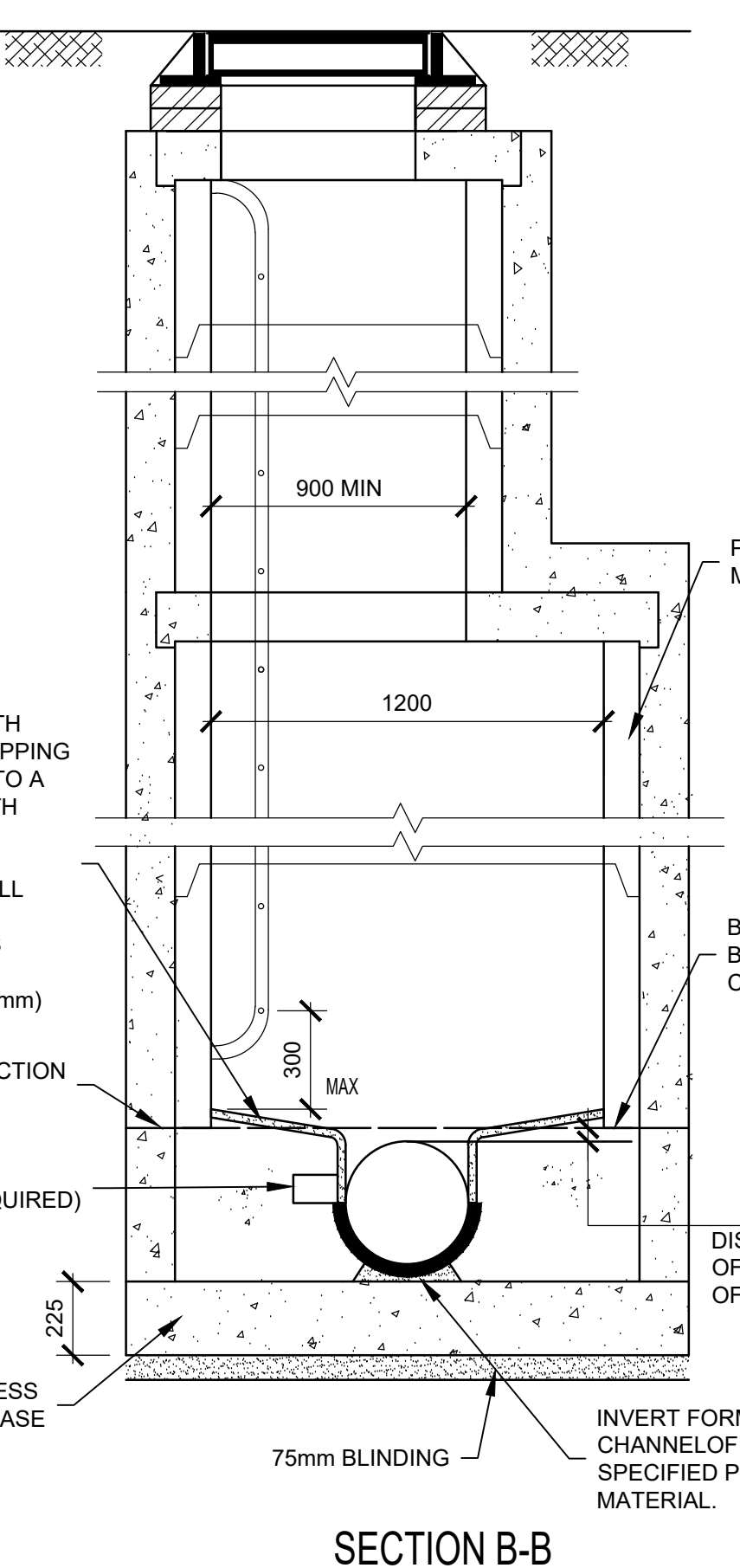


Sectional Plan

Vertical Backdrop Manhole
Scale 1:20

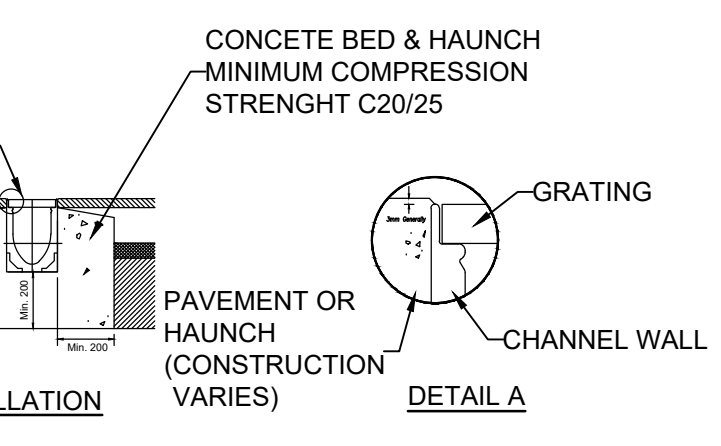


SECTION A-A

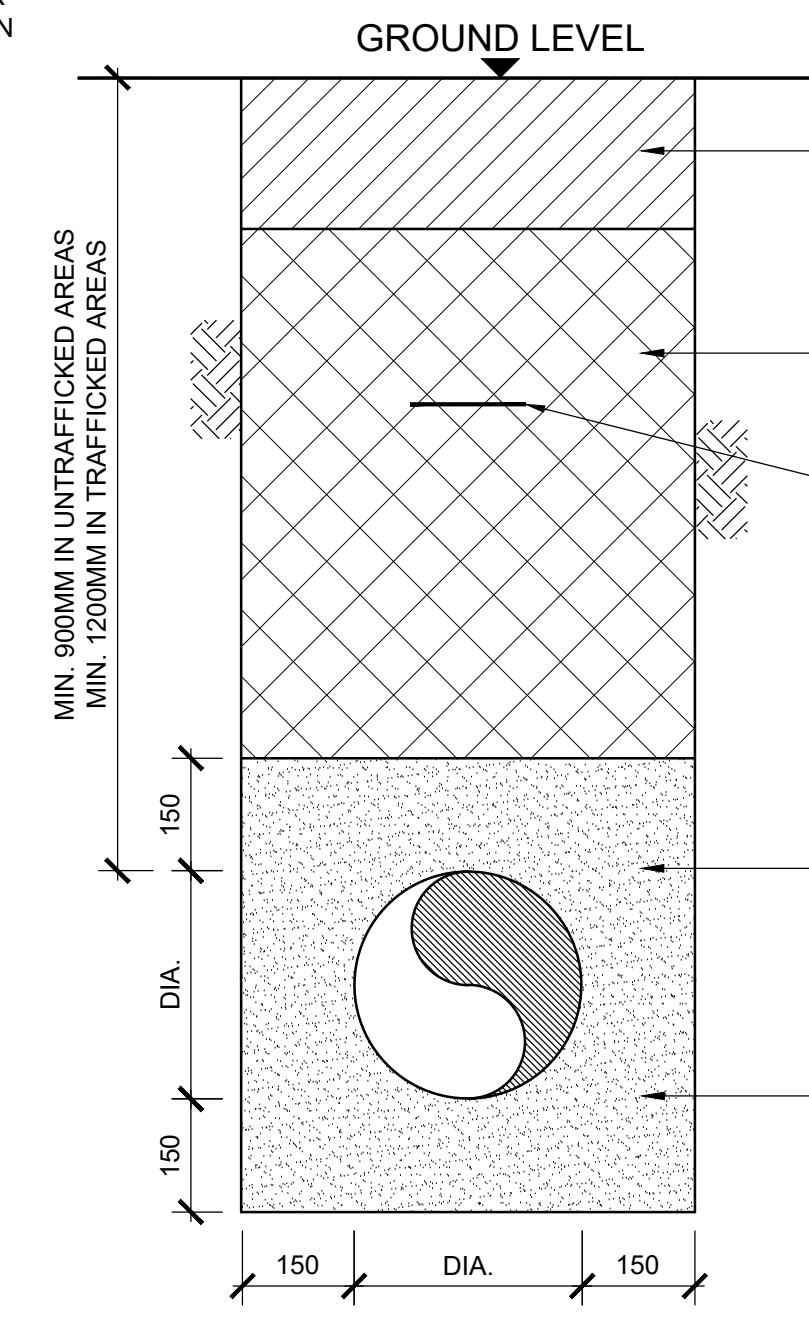


SECTION B-B

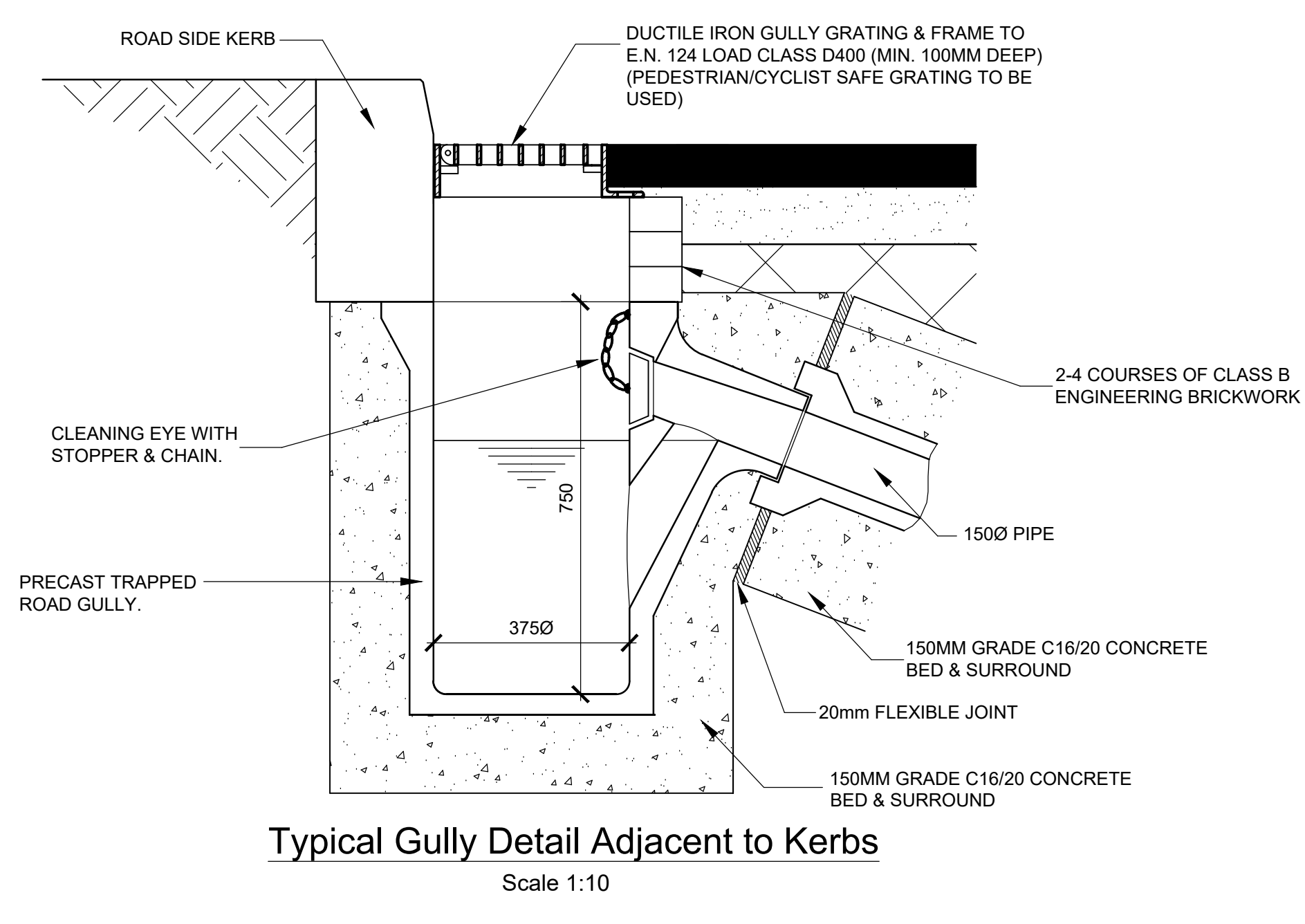
DEEP PRECAST CONCRETE MANHOLE
SCALE 1:20
(DEPTHS OVER 3.0m & UP TO 5.5m)



DETAIL A



Typical Drainage Trench Detail
Scale 1:10



Typical Gully Detail Adjacent to Kerbs
Scale 1:10

- Notes:**
- This Drawing shall be Read in Conjunction with all Other Relevant Specifications & Drawings.
 - All Dimensions in Millimeters (mm) unless noted otherwise.
 - Refer to MUN-ARUP-ZZ-ZZ-DR-C-0020 for the Proposed Surface Water Drainage Layout.
 - Refer to MUN-ARUP-ZZ-ZZ-DR-C-0030 for the Proposed Foul Water Drainage Layout.
 - All Foul Water Infrastructure to be Designed and Constructed in Accordance with the Irish Water Code of Practice and Standard Details.

P01	20/01/21	ROD	RM	KG
Issued for Planning				
Rev	Date	By	Chk	Appd

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Mungret Residential Development,
Mungret, Limerick

Proposed Drainage Details

Scale of A0	As Shown
Title	Civil Infrastructure
Subsidiary	S2 - Suitable for Information
Arup Job No	261585-00
Rev	P01
Name	MUN-ARUP-ZZ-ZZ-DR-C-0100