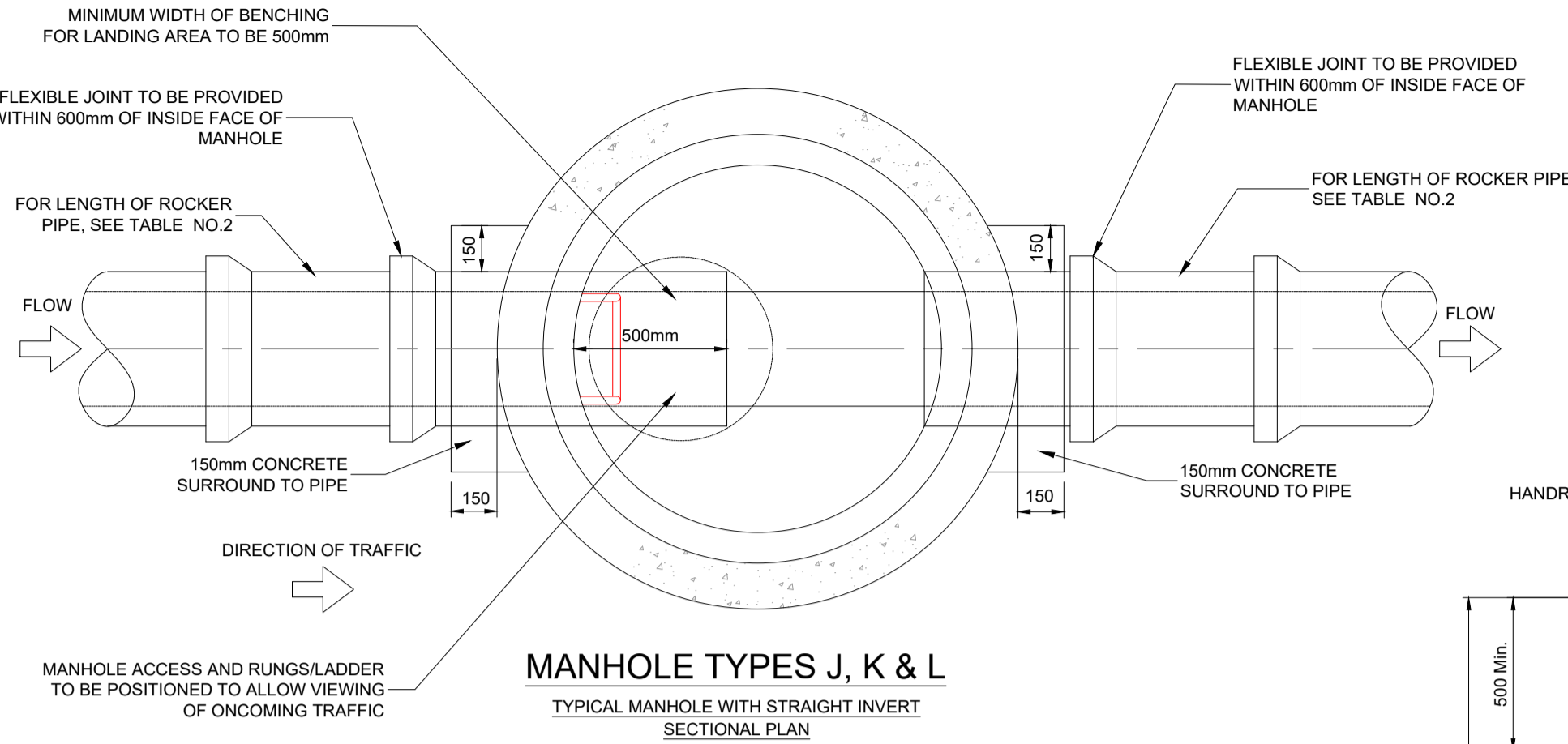


NOTES:

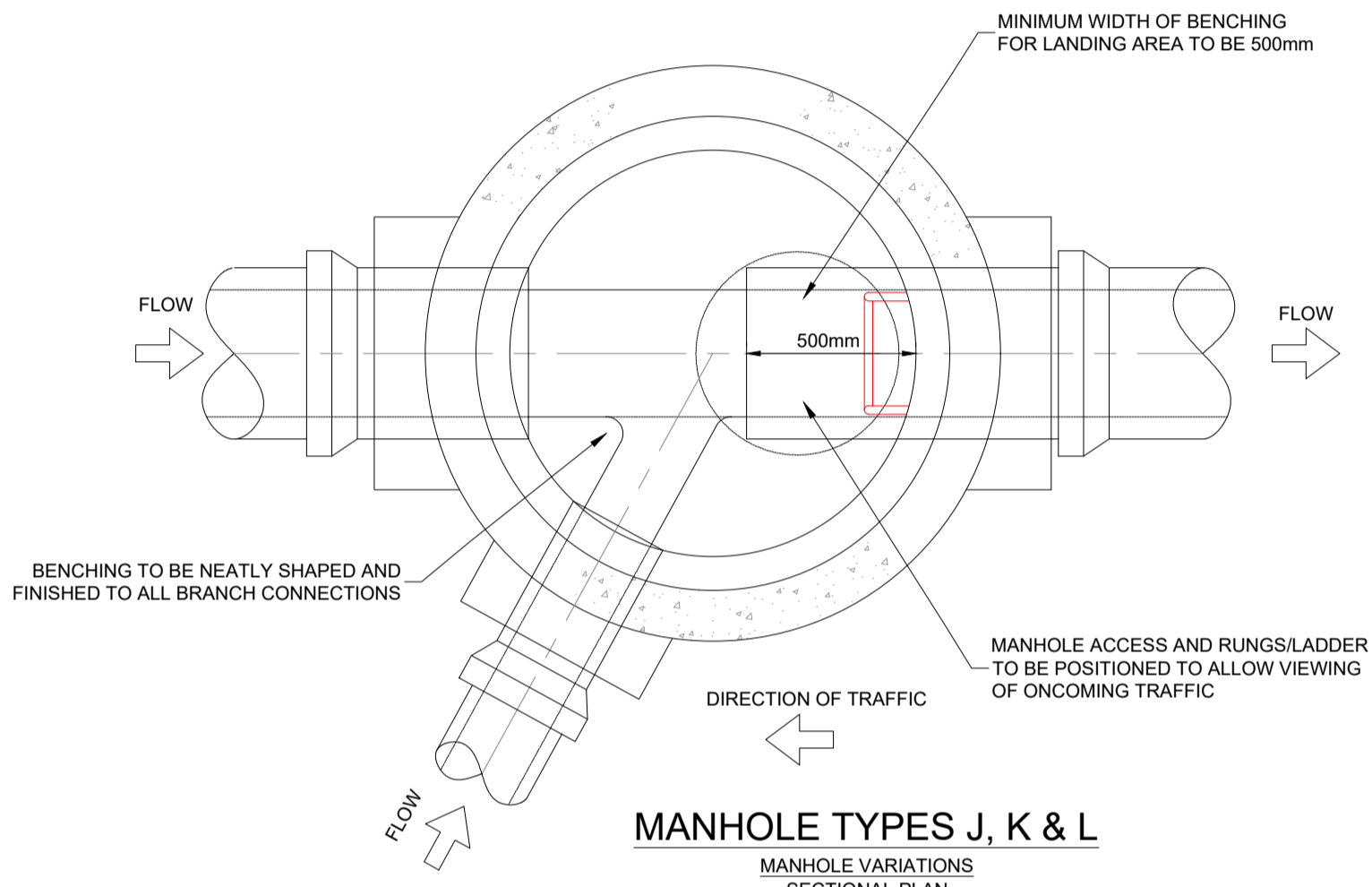
- DO NOT SCALE FROM THIS DRAWING. USE STATED DIMENSIONS ONLY. IF IN DOUBT, CONSULT THE ENGINEER.
- LEVELS REFER TO O.S. DATUM MALIN HEAD.
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION.
- FOR ALL INLETS, OUTLETS AND BRANCHES MATCH CROWN LEVELS UNLESS INDICATED OTHERWISE ELSEWHERE.
- BLINDING CONCRETE SHALL BE CLASS C12/15 TO E.N. 206-1. BLINDING SHALL BE A MINIMUM THICKNESS OF 100mm.
- FOUNDATION CONCRETE SHALL BE CLASS C16/20 Dmax=20mm TO E.N. 206-1. FOUNDATIONS SHALL BE A MINIMUM THICKNESS OF 225mm.
- PRECAST MANHOLE SIZES TO BE IN ACCORDANCE WITH TABLE 1.
- PRECAST MANHOLE CHAMBER WALLS, COVER SLABS AND REDUCING SLABS TO BE CONSTRUCTED TO I.S. E.N. 1917 AND I.S. 420 2004
- FOR BEDDING AND SEALING OF CHAMBER RINGS, THE TOP RING (TO PRE CAST COVER SLAB) AND BOTTOM RING TO BE BEDDED WITH CEMENT MORTAR. FOR INTERMEDIATE RINGS, JOINTS TO BE SEALED WITH TYPE 2 RUBBER GASKETS AND JOINTING RINGS TO B.S. 2494.
- PRE CAST MANHOLES TO BE SURROUNDED WITH A MINIMUM OF 150mm THICK CONCRETE CLASS C16/20 Dmax=40mm TO E.N. 206-1
- BENCHING AND PIPE CHANNEL PIPE SURROUND - CONCRETE CLASS C16/20 Dmax=20mm TO E.N. 206-1.
- BENCHING FINISHED IN MINIMUM 25mm THICK 2:1 SAND:CEMENT MORTAR WITH A SMOOTH TROWEL FINISH, AT 1 IN 30 SLOPE TOWARDS CHANNEL.
- 1 TO 2 COURSES OF SOLID ENGINEERING BRICKS CLASS B TO I.S.91:1983 SET IN 3:1 SAND: CEMENT MORTAR.
- MANHOLE COVERS AND FRAMES TO BE CLASS D400 OR E600 TO I.S. E.N. 124. 150mm DEEP FRAME FOR ROADS AND 100mm DEEP FOR FOOTPATHS AND GREEN AREAS. NON-ROCK DESIGN. CLOSED KEYWAYS. MANUFACTURED FROM SPHEROIDAL GRAPHITE CAST IRON (DUCTILE CAST IRON). COVER AND FRAME COATED IN BITUMEN OR OTHER APPROVED MATERIAL. COVER TO HAVE A MINIMUM MASS OF 14kg/m². FRAME BEARING AREA SHALL BE 80,000mm². MINIMUM FRAMES SHALL BE DESIGNED TO PREVENT COVERS FALLING INTO MANHOLE. FRAMES SHALL BE BEDDED ON APPROVED MORTAR TO MANUFACTURES INSTRUCTIONS.
- MANHOLE COVERS, FRAMES, REGULATING COURSES AND SLAB OPES TO PROVIDE CLEAR OPENING OF 600mmx600mm (OR 600mm DIAMETER). WHERE DEPTH OF COVER TO CROWN OF PIPE IS LESS THAN 2.0m, CLEAR OPENING TO BE 900mmX900mm (OR 900mm DIAMETER).
- SAFETY CHAINS TO BE PROVIDED ON PIPES THAT EXCEED 450mm IN DIAMETER. MILD STEEL SAFETY CHAIN SHALL BE 10mm NOMINAL SIZE GRADE M/H NON-CALIBRATED CHAIN, TYPE 1, COMPLYING WITH B.S.4942 PART 2 OR EQUIVALENT.
- STANDARD RUNGS AT 300mm c/c VERTICALLY AND GALVANIZED TO THE LATEST VERSION OF B.S. 729 OR EQUIVALENT. NOTE: STEPS IRONS ARE NOT ACCEPTABLE.
- LADDER STRINGERS SHOULD BE ADEQUATELY SUPPORTED FROM THE MANHOLE WALL AT INTERVALS OF NOT MORE THAN 2.0m. STRINGERS SHOULD BE BOLTED TO CLEATS TO FACILITATE RENEWAL.
- DISTANCE FROM THE TOP RUNG OF THE LADDER TO GROUND LEVEL MUST BE A MAXIMUM OF 500mm.
- ALL LADDERS, RUNGS, HANDRAILS, SAFETY CHAINS ETC SHALL BE HOT DIP GALVANIZED TO B.S.729 OR EQUIVALENT.
- MANHOLE OPENINGS TO BE SITUATED FURTHEST FROM THE NEAREST CARRIAGEWAY. MANHOLE STEPS / ACCESS TO BE POSITIONED TO ALLOW VIEWING OF ONCOMING TRAFFIC.
- SHORT LENGTH PIPE AND PIPE JOINT EXTERNAL TO MANHOLE SHALL NOT EXCEED 600mm FROM THE INNER FACE OF MANHOLE WALL.
- BLOCK WORK SHALL BE BEDDED AND JOINTED USING MORTAR TO I.S. 406. BEDS AND VERTICAL JOINTS SHALL BE COMPLETELY FILLED WITH MORTAR AS THE BLOCKS ARE LAID. JOINTS SHALL BE FLUSH POINTED AS THE WORK PROCEEDS.
- RELIEVING ARCH FORMED BY 215x103x65 SOLID ENGINEERING BRICK CLASS A OR B AS PER DRAWING. RELIEVING ARCHES USED IN BRICK OR BLOCK WORK MANHOLES EXTEND OVER FULL THICKNESS OF WALL. A DOUBLE ARCH IS TO BE FORMED FOR PIPE DIAMETERS GREATER THAN 600mm.
- ALL MANHOLES TO BE WATERTIGHT TO THE SATISFACTION OF THE ENGINEER.

TABLE NO. 1	
DIA. OF LARGEST PIPE IN MH (mm)	MINIMUM INTERNAL DIAMETER OF MH (mm)
LESS THAN 375	1200
375	1200
450	1350
525	1350
600	1500
750	1800
900	1800
1050	2100
1200	2100

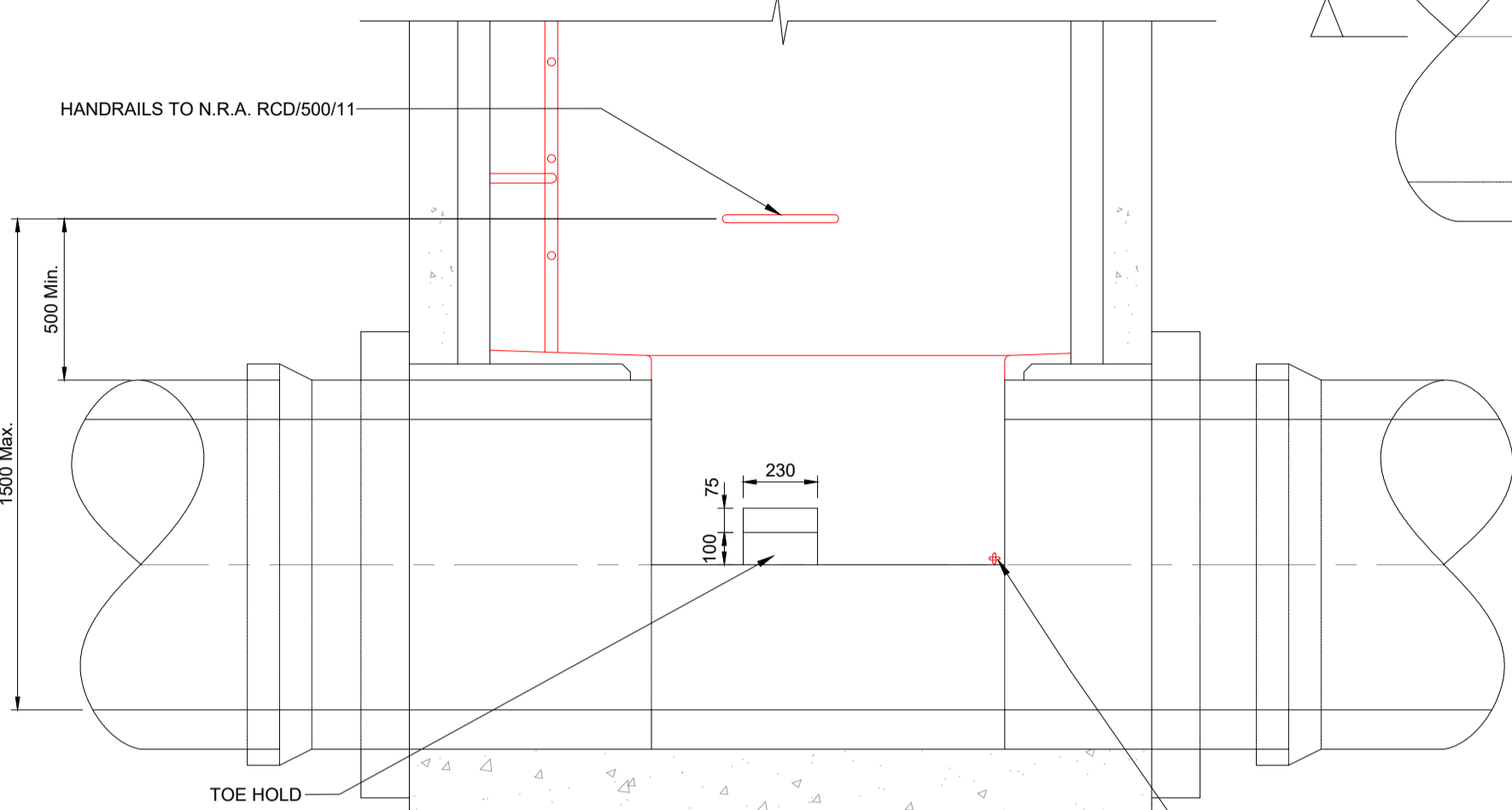
TABLE NO. 2	
DIA. OF PIPE (mm)	LENGTH OF ROCKER PIPE (mm)
150-600	600
675-750	1000
>750	1250



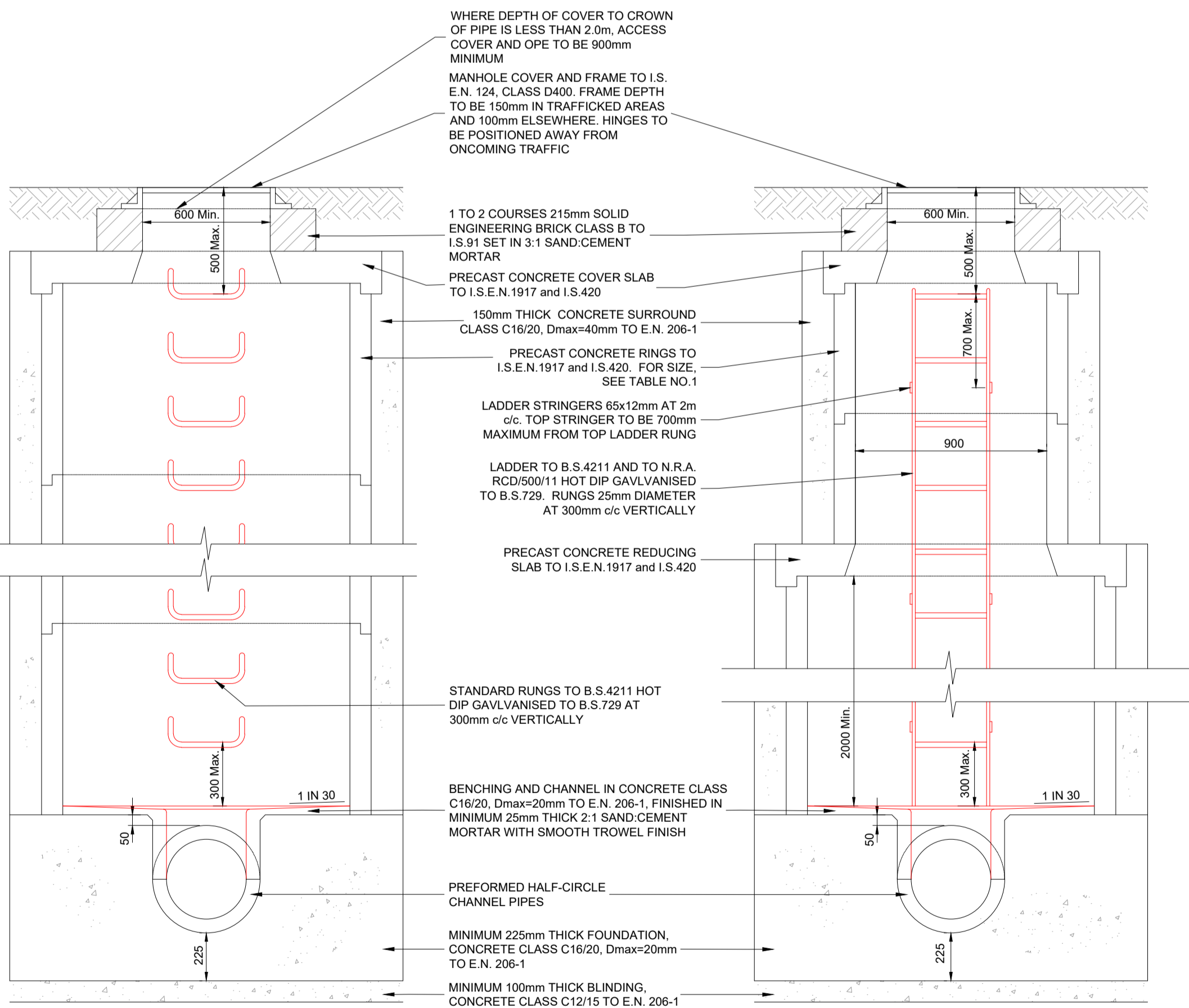
MANHOLE TYPES J, K & L
TYPICAL MANHOLE WITH STRAIGHT INVERT
SECTIONAL PLAN



MANHOLE TYPES J, K & L
MANHOLE VARIATIONS
SECTIONAL PLAN

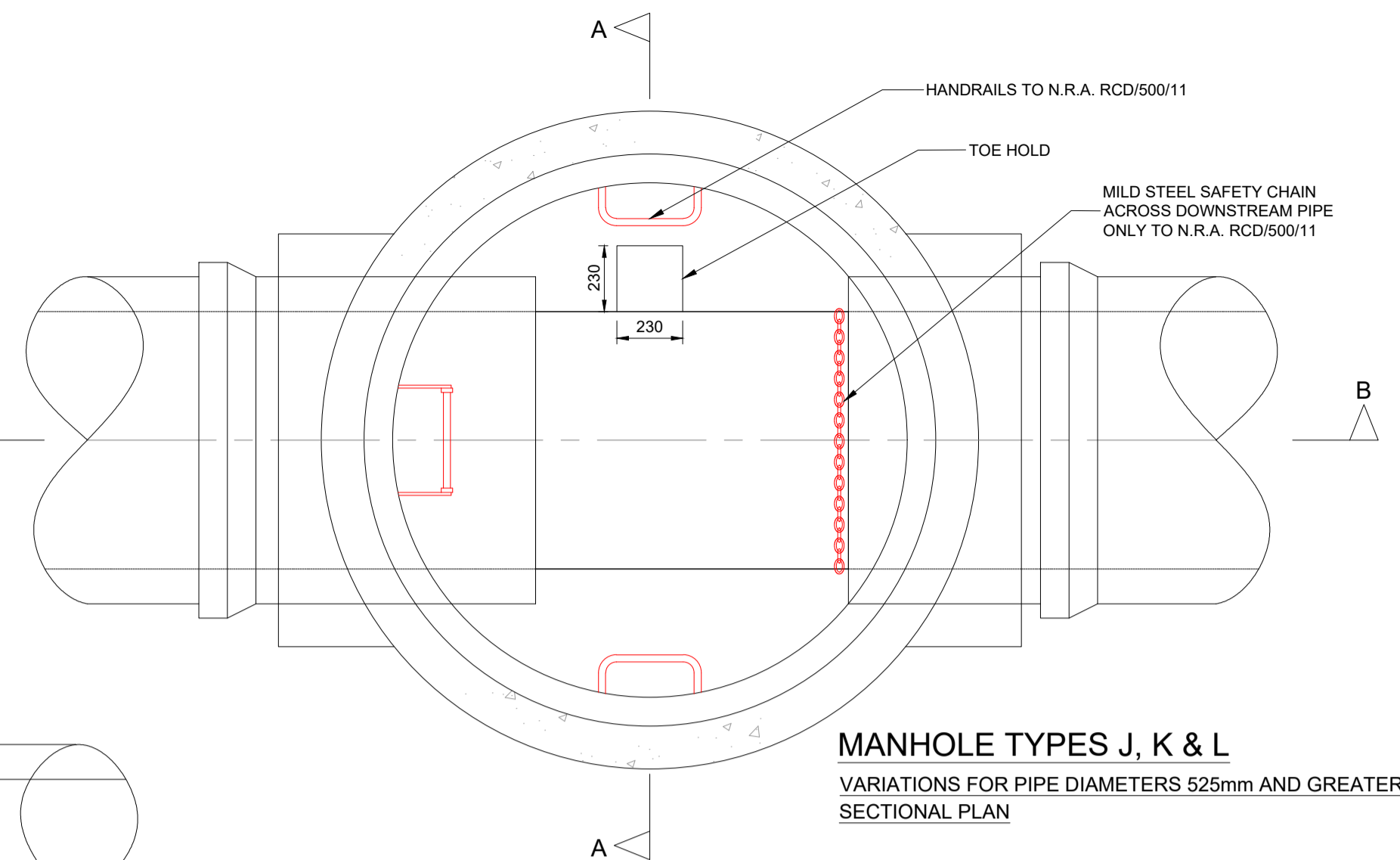


MANHOLE TYPES J, K & L
VARIATIONS FOR PIPE DIAMETERS 525mm AND GREATER
SECTION B-B

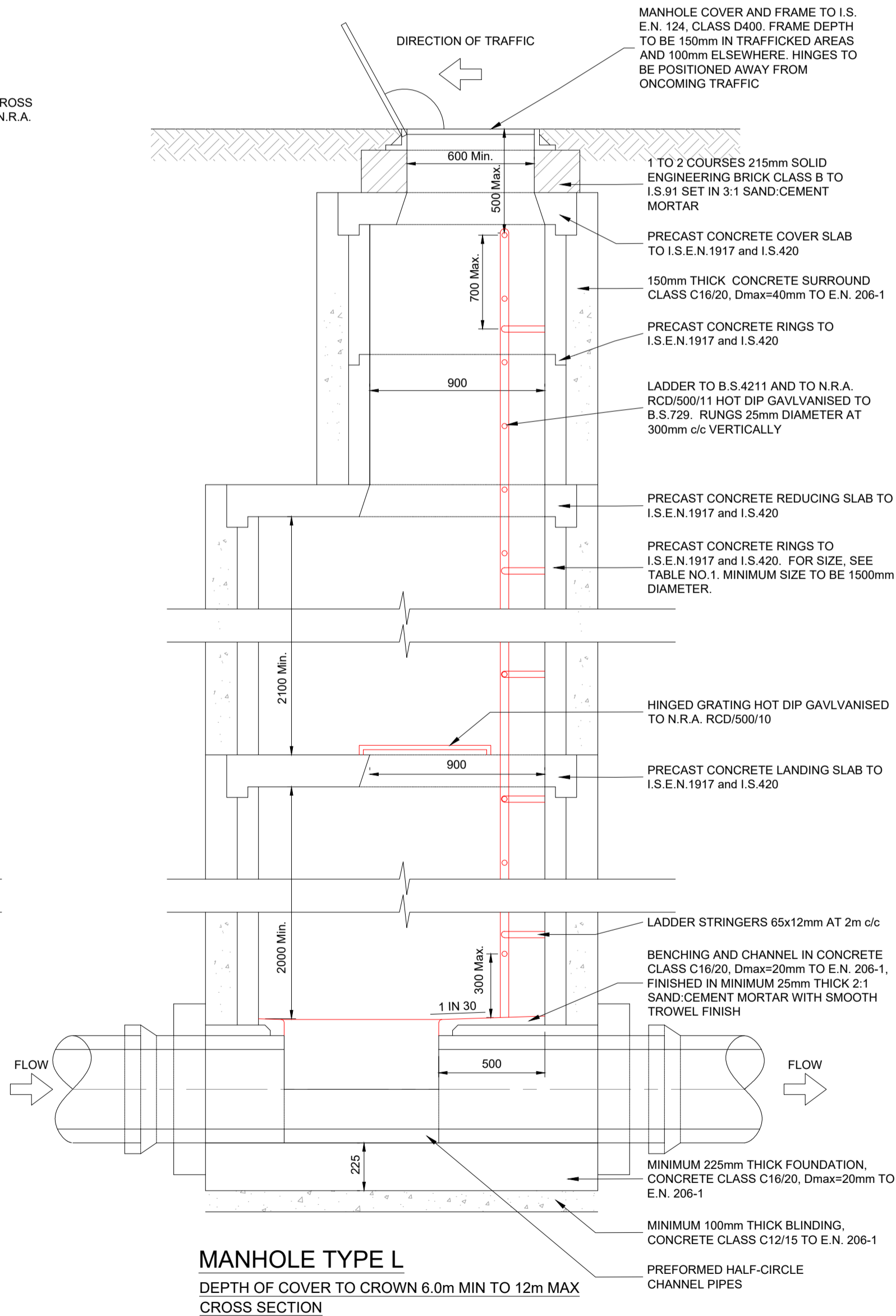


MANHOLE TYPE J
DEPTH OF COVER TO CROWN 1.0m MIN TO 3.0m MAX
CROSS SECTION

MANHOLE TYPE K
DEPTH OF COVER TO CROWN 3.0m MIN TO 6.0m MAX
CROSS SECTION



MANHOLE TYPES J, K & L
VARIATIONS FOR PIPE DIAMETERS 525mm AND GREATER
SECTIONAL PLAN



MANHOLE TYPE L
DEPTH OF COVER TO CROWN 6.0m MIN TO 12m MAX
CROSS SECTION

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- FOR SETTING OUT REFER TO ARCHITECT'S DRAWINGS.
- THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER ARCHITECTURAL AND ENGINEERING DRAWINGS AND ALL OTHER RELEVANT DRAWINGS AND SPECIFICATIONS.
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Rev No.	Date	Revision Note	Drn by	Chkd by
P01	14.01.20	SUITABLE FOR PLANNING	SD	MK
C01	23.06.20	ISSUED FOR PLANNING	RP	MK
C02	25.09.20	ISSUED FOR PLANNING	AB	MK

Rev No.	Date	Revision Note	Drn by	Chkd by

PLANNING DRAWING.
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Client: **BURKEWAY HOMES LTD**
Project: **RESIDENTIAL DEVELOPMENT AT BEARNA**
Title: **DRAINAGE DETAILS SHEET 01 OF 05**

Code | Originator | Zone | Level | Role | Type | Number | Status | Revision
B861 · OCSC · XX · XX · DR · C · 0520 · A1 · C02
Date: 14.01.20 Scale: N.T.S. @ A1 Drn by:SD Chkd by:MK Aprvd by:AH