

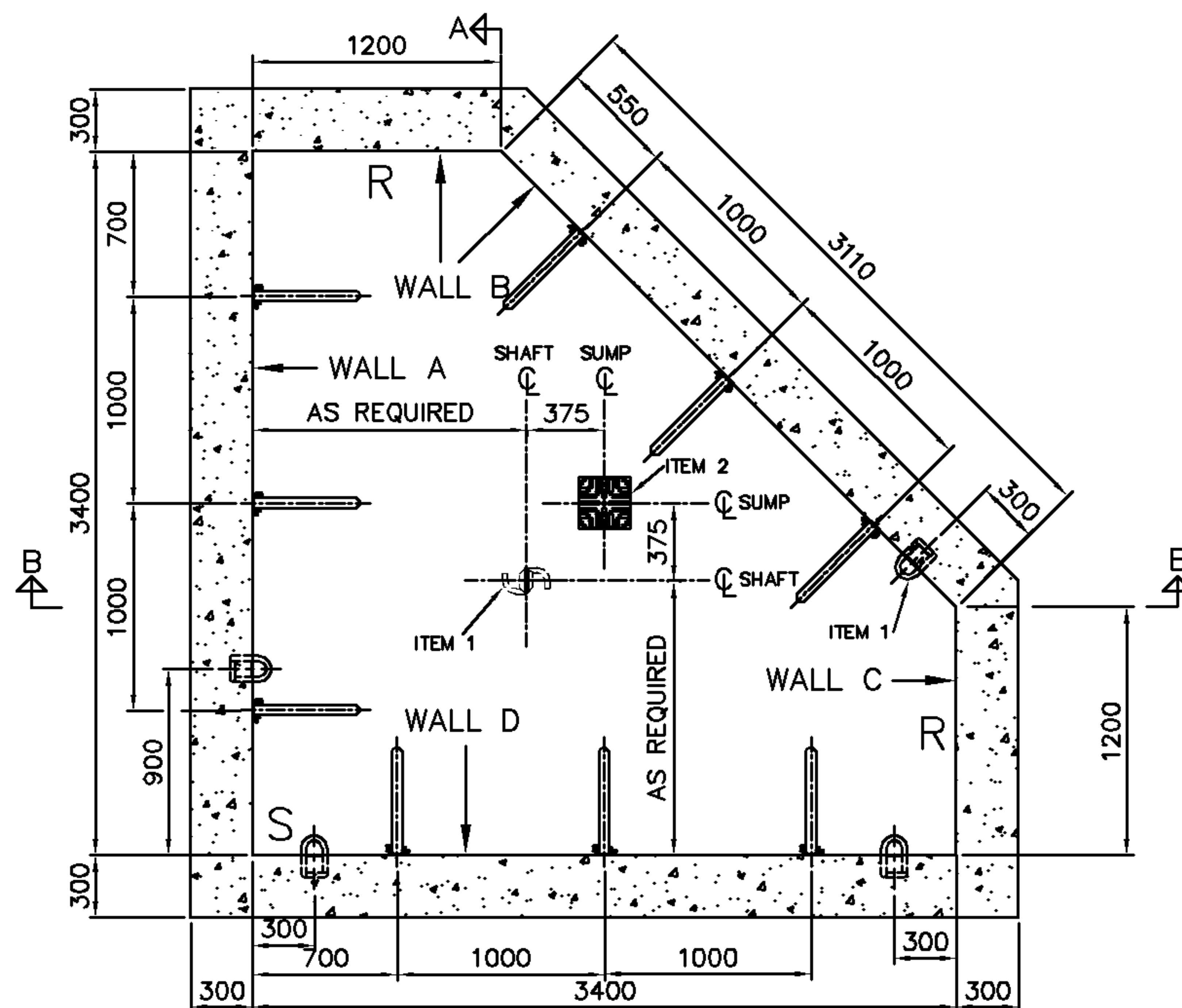


NOTES

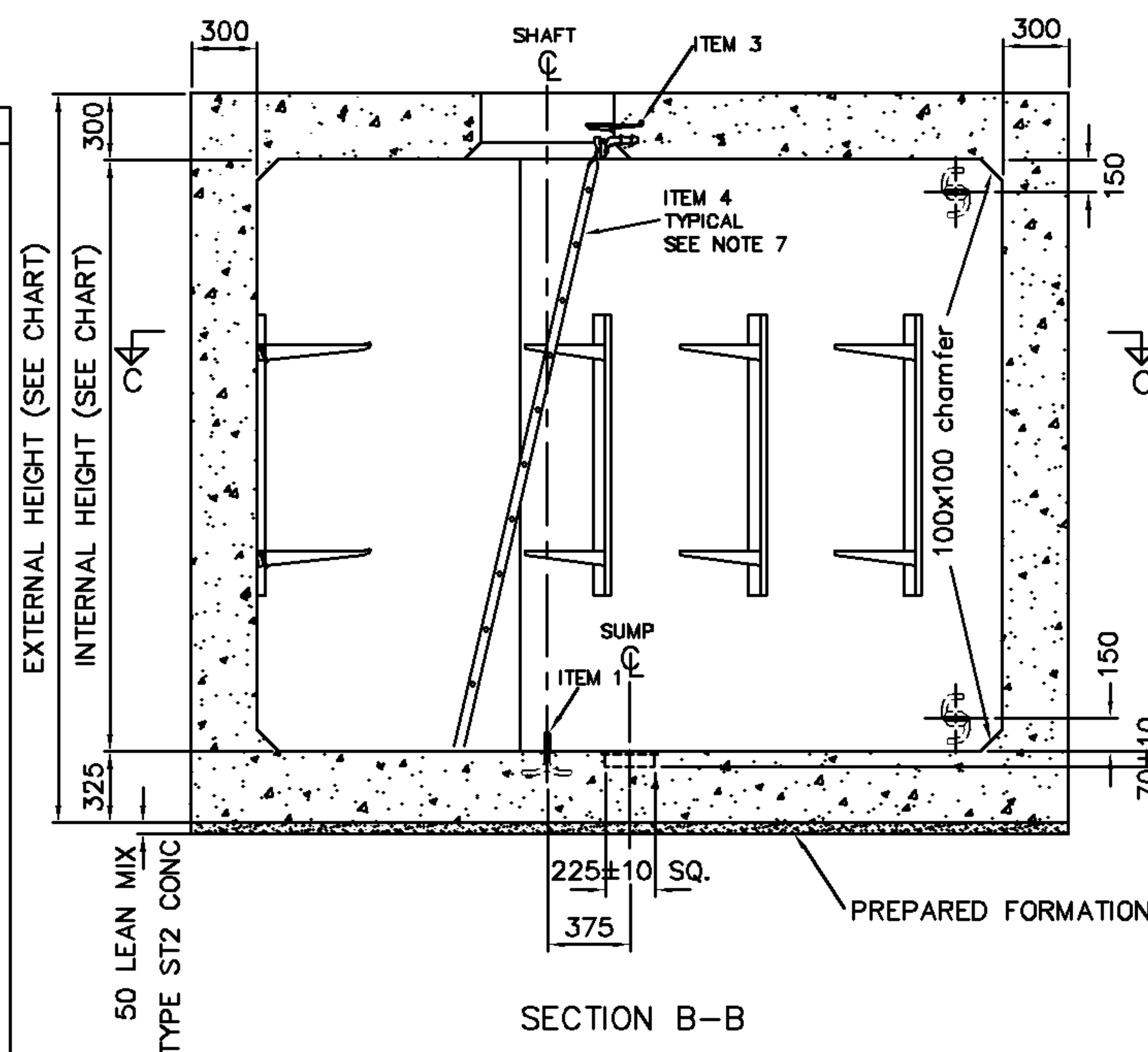
- THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS, DOCUMENTATION AND SPECIFICATIONS RELATING TO THIS MANHOLE STRUCTURE TYPE CONSTRUCTION.
- WORKMANSHIP, MATERIALS AND METHOD OF CONSTRUCTION ARE TO COMPLY WITH ALL CURRENT RELEVANT CONTRACT DOCUMENTS, BRITISH STANDARDS, EUROCODES AND CODES OF PRACTICE (RELEVANT TO THE CONSTRUCTION INDUSTRY) AND ACCEPTED CONSTRUCTION PRACTICE.
- ALL EXISTING SERVICES POSITIONS ARE TO BE VERIFIED ON SITE BY THE CONTRACTOR PRIOR TO STARTING THE WORKS.
- ALL ACCEPTED SAFE DIGGING PRACTICES AND SAFE METHODS OF WORKING ARE TO BE EMPLOYED DURING THE INSTALLATION OF THE MANHOLE STRUCTURE.
- CONCRETE TO BE GRADE C35/45 WITH A WATER CEMENT RATIO 0.4. MIN. CEMENT CONTENT 380kg/m³. AGGREGATE MAX. SIZE 20mm. ALL IN ACCORDANCE WITH BS8500 (BS EN206).
- DUCT ENTRIES CAN BE PLACED IN THE WALLS IN THE POSITIONS REQUIRED WITH MINIMUM CLEARANCE OF 150mm FROM ADJACENT WALL, 450mm FROM ROOF AND 350mm FROM FLOOR.
- SHAFT TO BE CONSTRUCTED IN ACCORDANCE WITH CN1153 AND POSITIONED AS REQUIRED. STEPS AND LADDER TO BE ORIENTATED TO FACE THE ONCOMING TRAFFIC. DETAILS SHOWN ARE TYPICAL POSITIONS.
- ANY BRICKS USED TO FORM SHAFT OR ADJUST FRAME AND COVER LEVEL TO BE (MINIMUM) CLASS B ENGINEERING BRICKS. MORTAR TO BE 1:5 CEMENT:SAND RATIO (MAXIMUM) OR 1:1:5 CEMENT:LIME:SAND CLASS (III).
- BRICKS AND MORTAR TO BE IN ACCORDANCE WITH BS EN1996.
- REINFORCEMENT TO BE GRADE B500B OR B500C CONFORMING TO BS4449: 2005 (CLAUSE 1712 SHW).
- BAR SCHEDULE AND BENDING TO CONFORM TO BS8666.
- MINIMUM COVER 55mm TO ANY CONCRETE FACE PROPRIETARY APPROVED SPACERS TO BE UTILISED.
- BARS INTERSECTING HOLES TO BE CUT ON SITE AND TRIMMED TO CN13916
- ADDITIONAL BARS MAY BE UTILISED TO TIE / SUPPORT MAIN BARS AS REQUIRED.
- MAXIMUM SPACING OF REINFORCING BARS TO BE 150mm C/C.
- SUMP TO BE POSITIONED BELOW SHAFT. TYPICAL POSITION SHOWN.
- ANCHOR IRONS MUST BE POSITIONED AT LEAST 230mm FROM ANY DUCT OR WALL OPENING. ANCHOR IRONS MUST BE POSITIONED 150mm FROM ANY WALL, ROOF OR FLOOR. FLOOR ANCHOR IRONS SHOULD BE PLACED BELOW SHAFT.
- STANDARD DEPTHS OF COVER TO THE TOP OF THE ROOF ARE:-
 - 150mm FOOTWAY
 - 450mm CARRIAGEWAY
- ALL WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH THE SPECIFICATION FOR HIGHWAY WORKS (SHW) AND ALL SUBSEQUENT AMENDMENTS.
- ALL BACKFILL MATERIAL IS TO BE CLASS 6N TYPE.
- ALL CONSTRUCTION JOINTS TO BE AS PER CLAUSE 1710 SHW.
- INTERNAL CORNER CHAMFER DETAILS TO BE AS PER APPENDIX D OF BD 31/01 THE DESIGN OF BURIED CONCRETE BOX AND PORTAL FRAME STRUCTURES.
- CONTRACTOR TO PROVIDE A GENERAL ARRANGEMENT DRAWING SHOWING THE POSITION OF THE STRUCTURE IN RELATION TO THE HIGHWAY AND ITS FEATURES, INCLUDING RELATIVE LEVELS TO HIGHWAY SURFACE.
- CONTRACTOR TO PROVIDE DETAILS, NUMBER AND POSITION OF DUCT ENTRY OPENINGS WITHIN THE CHAMBER.
- CONTRACTOR TO PROVIDE PROGRAMME OF CONSTRUCTION SEQUENCE DETAILING TIMING OF POURS AND COMMENCEMENT OF BACKFILL.
- CONCRETE TESTING TO BE UNDERTAKEN IN ACCORDANCE WITH BT SPECIFICATION.

SCHEDULE				
ITEM	DESCRIPTION		DRWG. NO.	NO. OF
1	ANCHOR IRON NO. 4		CN 1162	9
2	GRATING SUMP		CN 9165	1
3	STEPS MANHOLE NO.1		CN 1961	1
4	STEEL LADDER WITH HOOKS		CN 1161	1
	M'H SIZE	LENGTH		
	A	2250		
	B	2550		
	C	2850		
5	CABLE BEARER No, 10 WALL TYPE		CN 1059	9
6	BOLTS FOUNDATION INDENTED No, 2		CN 1166	18
7	FRAME & COVER		CN 1961	1
8	BRACKET CABLE BEARER 18		CN 1069	18
9	PINS LOCKING CABLE BEARER		CN 1301	18
10	FRAME & COVER		CN15572	1

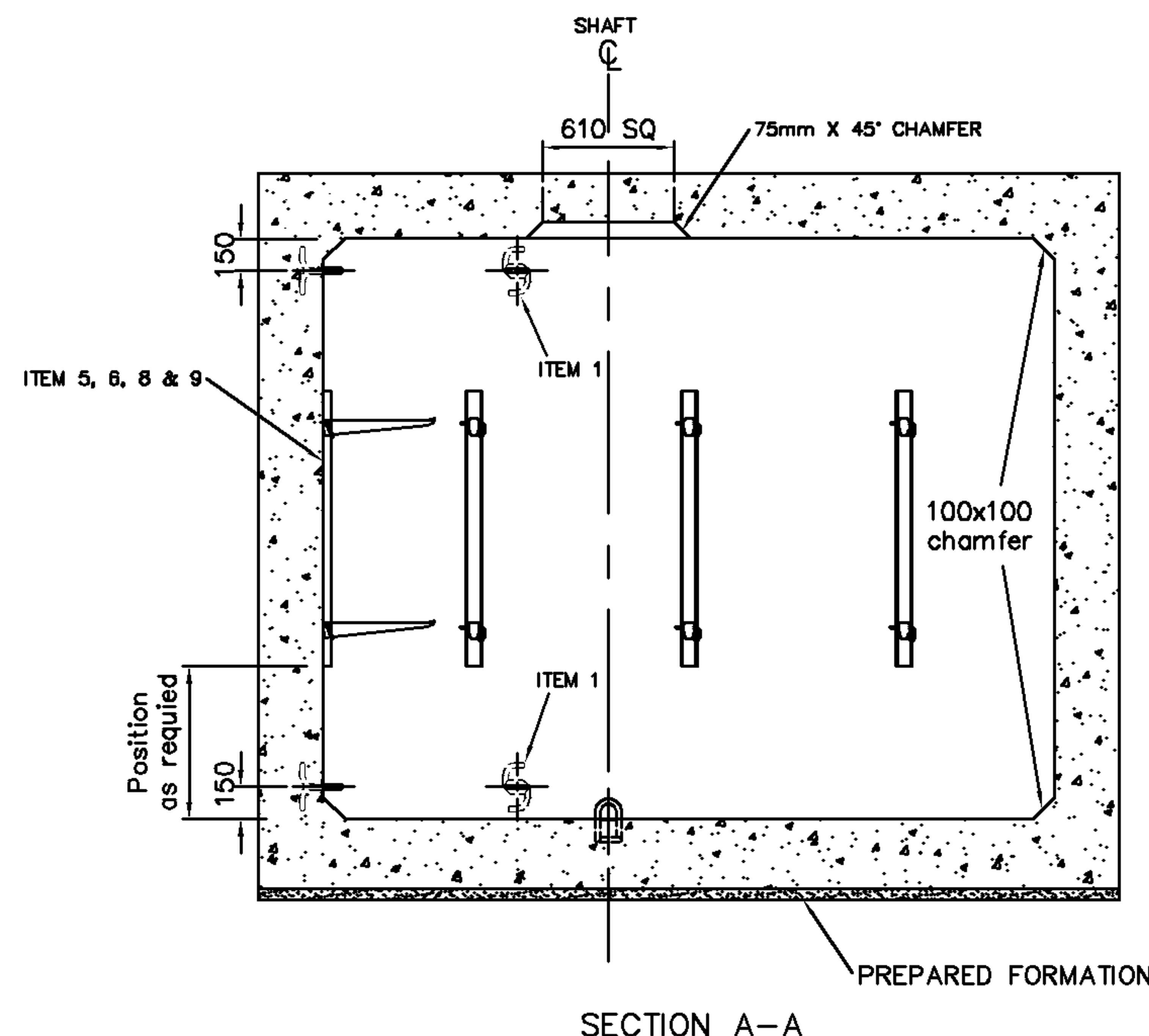
MANHOLE HEIGHT VARIATION AND No. OF DUCTS				
TYPE	INTERNAL HEIGHT	EXTERNAL HEIGHT (REF)	No. OF DUCTS IN POSITIONS	
			R	S
A	2100	2725	48	18
B	2400	3025	60	24
C	2700	3325	72	27



SECTION C-C



SECTION B-B



SECTION A-A

TOLERANCES: - CN15456

ANCHOR IRON POSITION $\pm 50\text{mm}$
TOP OF DEPTH PLATE $\pm 4\text{mm}$
BEDDING MATERIAL ± 5
CEMENT MORTAR -20mm
BRICKWORK MORTAR JOINTS $\pm 5\text{mm}$
VOIDAGE 0.5%
DUCT ENTRY POSITION $\pm 25\text{mm}$
DUCT FLUSH WITH WALL -10mm
WALL FLATNESS $\pm 11\text{mm}$
F & C LEVEL WITH HIGHWAY NIL
F & C ROCKING NIL
F & C SURROUND IN UNMADE $\pm 5\text{mm}$
F & C UNSUPPORTED OVER BOX $+5\text{mm}$
MANHOLE INTERNAL LENGTH & WIDTH $\pm 25\text{mm}$
MANHOLE INTERNAL HEIGHT $\pm 15\text{mm}$
SHAFT DIMENSIONS $\pm 10\text{mm}$ -10mm $+15\text{mm}$
SHAFT POSITION IN ROOF $\pm 100\text{mm}$
STEEL BARS ALIGNMENT
VERT & HORIZ $\pm 15\text{mm}$
NEAR FACE TO FAR FACE $\pm 15\text{mm}$
STEEL CAGE GRID PATTERN $\pm 10\text{mm}$
STEEL DEPTH OF COVER $\pm 5\text{mm}$
STEEL DEPTH TO LUG $\pm 5\text{mm}$
STEP POSITION $\pm 15\text{mm}$
STEP HORIZONTAL $\pm 5\text{mm}$
SUMP POSITION $\pm 25\text{mm}$
SUMP DEPTH $\pm 10\text{mm}$
ROUND SUMP 230# $\pm 5\text{mm}$
VERTICALITY OF WALLS $\pm 15\text{mm}$
SLAB THICKNESS -10 TO $+150\text{mm}$
BOLT FOUNDATION $\pm 5\text{mm}$

DIMENSIONS IN mm UNLESS OTHERWISE STATED

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DO NOT SCALE

ORIGINAL SCALE 1:20

A1 A2	DRN RFG C S	ANY MODIFICATION TO THE DRAWING OR THE USE OF ALTERNATIVE ITEMS TO THOSE SPECIFIED MUST BE AGREED WITH THE DESIGNER.
	CKD M.S.	
	CERTIFICATION	
	DESIGNER	
	M DA RIOS	
	CLIENT	
	M DA RIOS	
	DATE 04/07/94	

MATERIAL

-

FINISH

-

OMS Drawing Review
Prepared formation notes added
Hatching added

BT

OMS

24.08.15

AMENDMENT

G

BT

ISSUE

Openreach

ALA944

CN 14942

SHT 01 OF 08

TOLERANCES TO SPECS
BS8666, BS5606, BS EN1992
CN15456.

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ISSUE

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VARIOUS LOCATIONS

STANDARD
MANHOLE MRX512A,512B,512C
GENERAL ARRANGEMENT

REFERENCES
SPEC: BS4449,BS8666,
BS5606,BS EN1992,BS550,
DRGS: CN1059,CN1153,CN1161
CN1162,CN1165,CN1961,
CN1965,CN13916,CN1472,CN15456
SPECS: BS8500, BS EN206

ALA944

CN 14942

SHT 01 OF 08