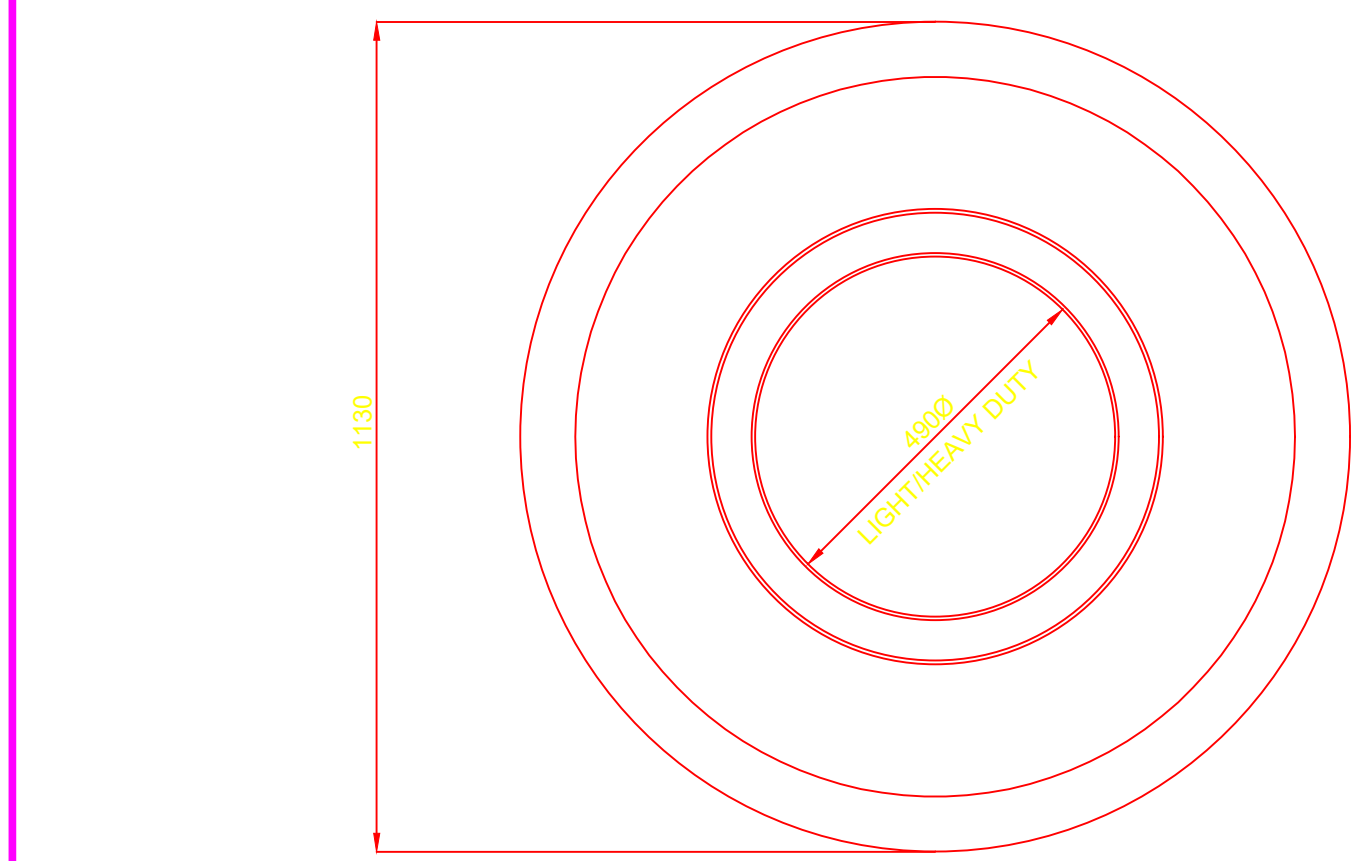
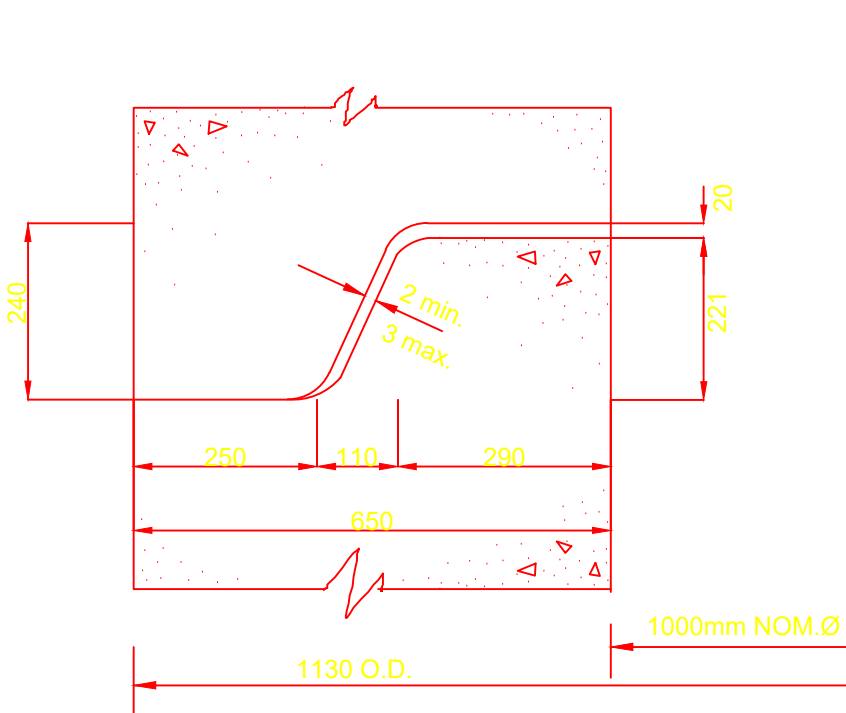
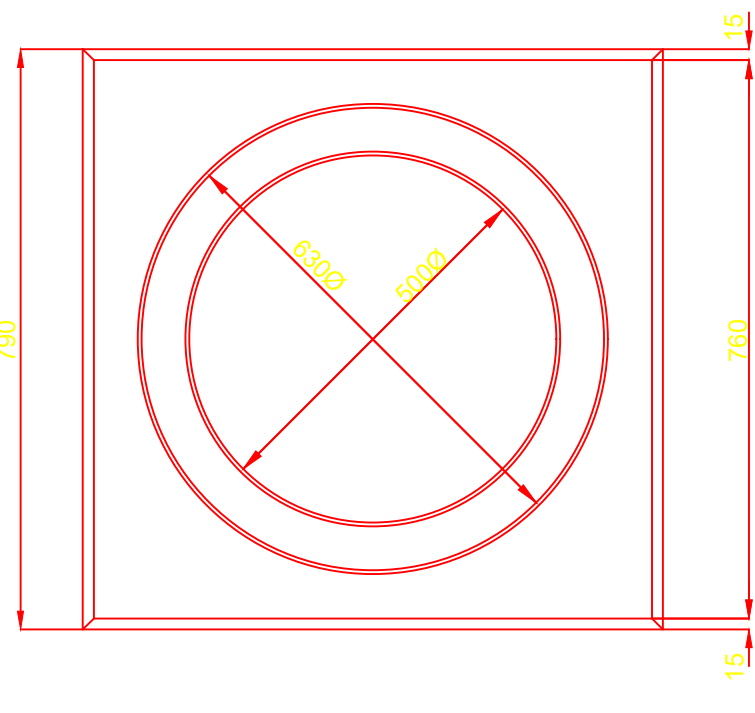




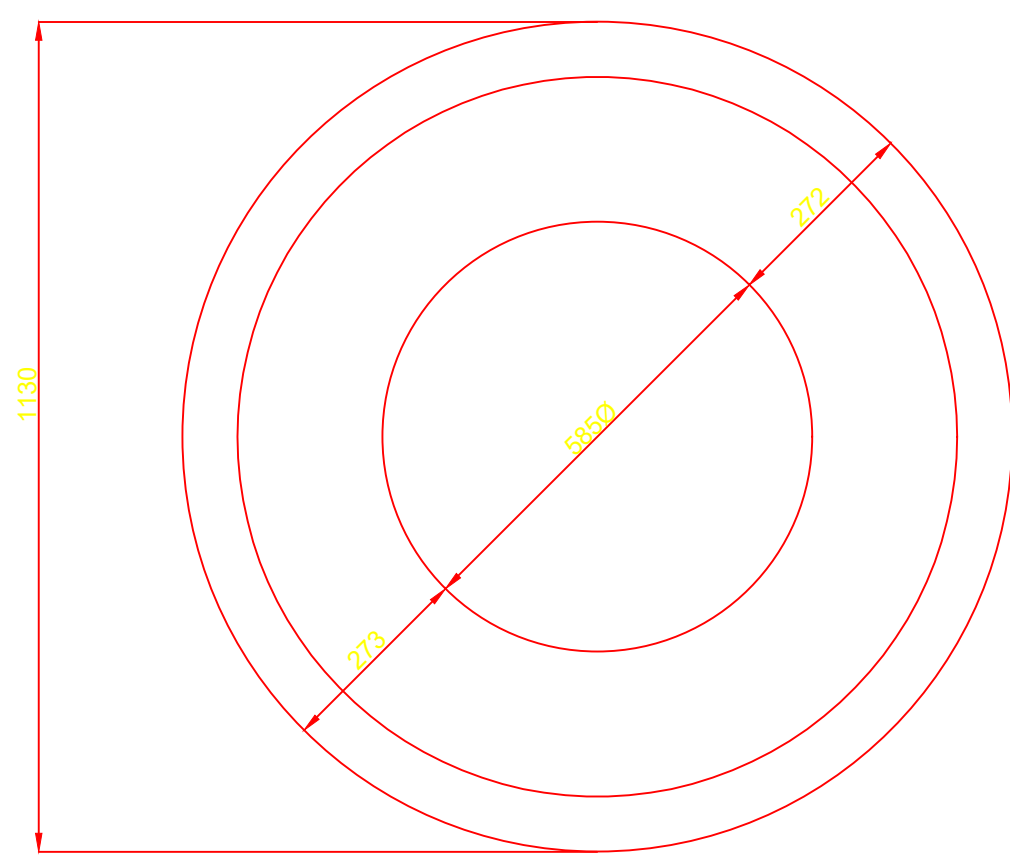
PLAN OF CIRCULAR LIGHT AND HEAVY DUTY FRAME FOR 1000 NOM. DIA. MANHOLE



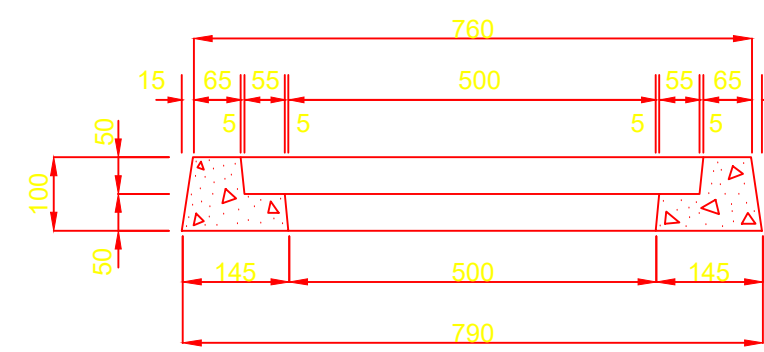
DETAIL OF JOINT



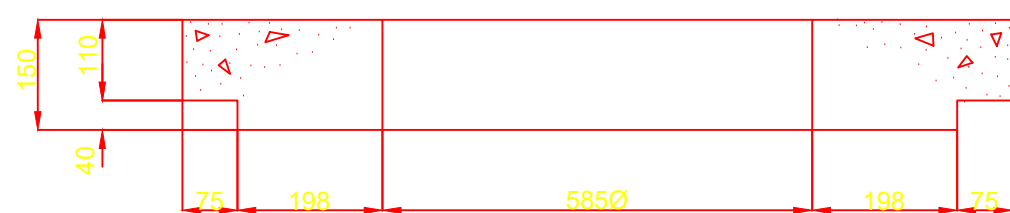
PLAN



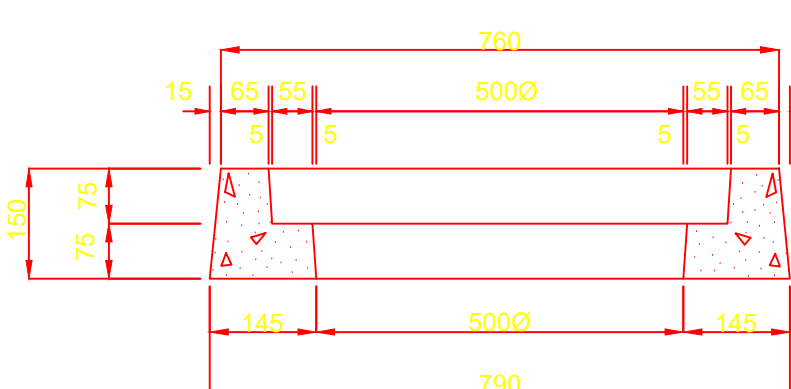
PLAN OF CIRCULAR COVER SLAB



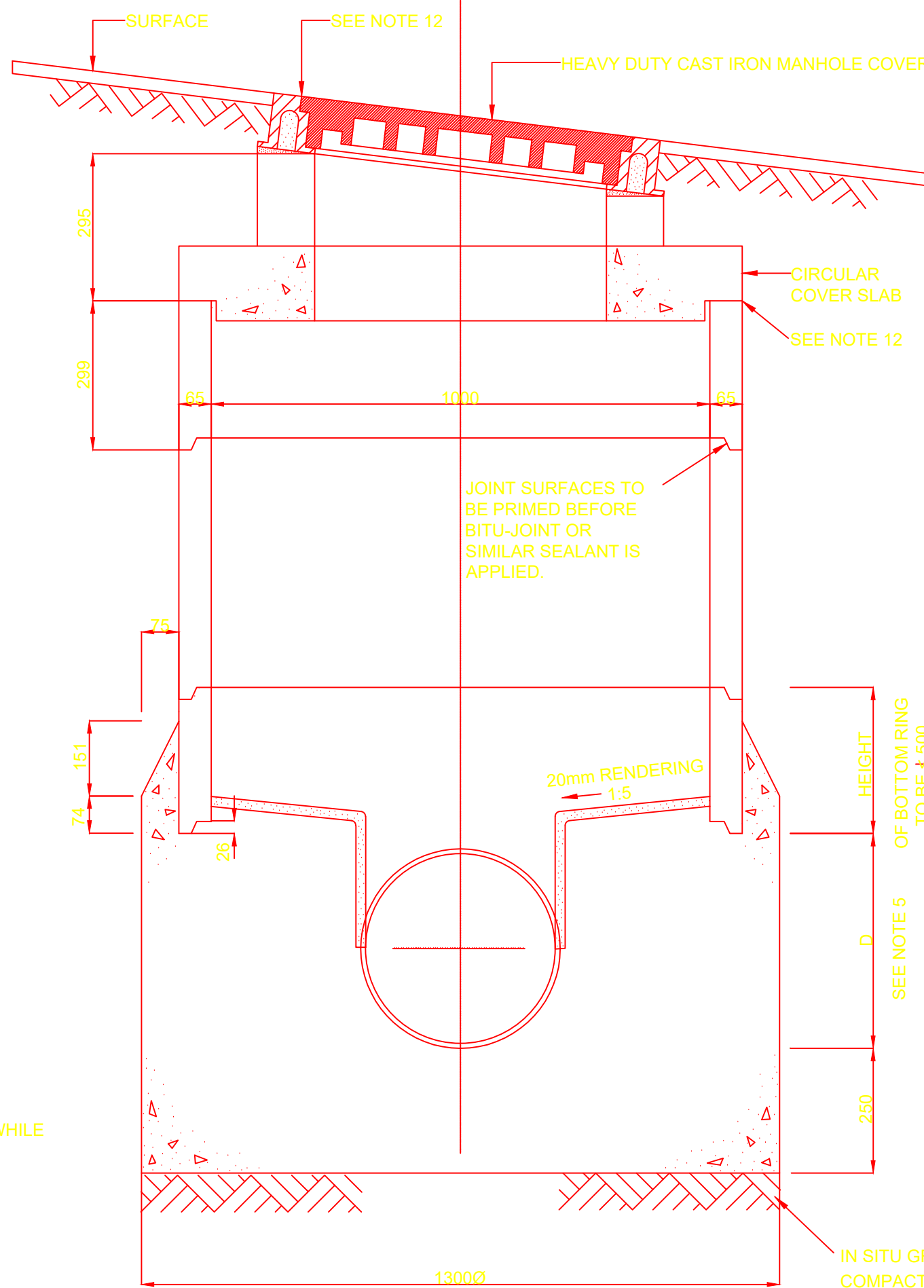
SECTION OF LIGHT DUTY SQUARE MANHOLE FRAME



SECTION OF CIRCULAR COVER SLAB



SECTION OF HEAVY DUTY SQUARE MANHOLE FRAME



SECTION OF 1000 DIA. MANHOLE

SEWER RING MANHOLE

Scale 1:10

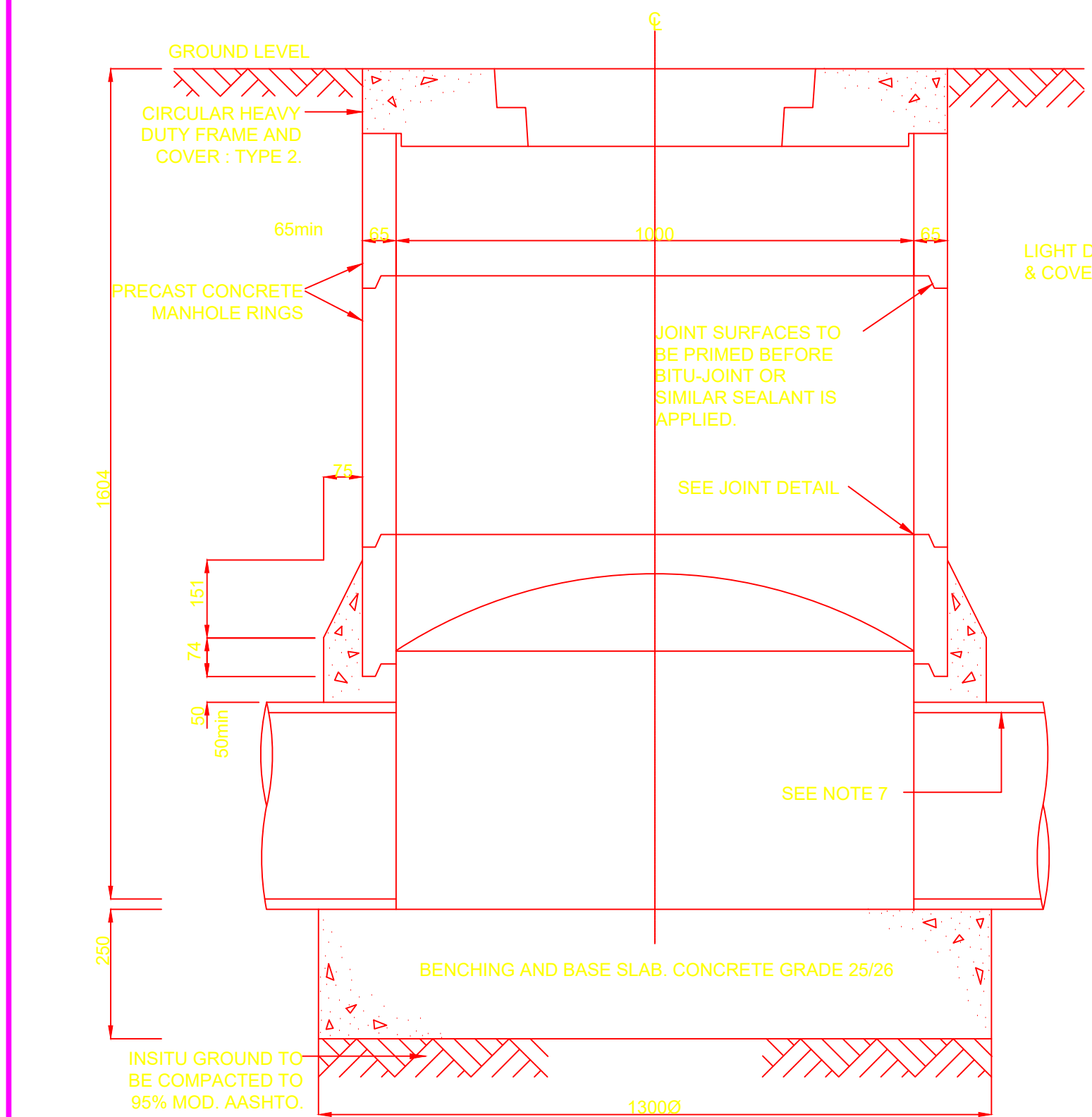
C. SEWER MANHOLE:-

8. RENDERING FOR MANHOLE BENCHING SHALL CONSIST OF 1 PART H.A.C. TO 2 PARTS SAND THOROUGHLY MIXED AND APPLIED TO CONCRETE SURFACES WHILE THE LATTER ARE STILL GREEN. RENDERING SHALL BE AT LEAST 20mm THICK.
9. ALL PIPES BUILT INTO MANHOLES SHALL NOT EXCEED 1.0m IN LENGTH AND THE ADJOINING PIPE SHALL NOT EXCEED 2.0m IN LENGTH.
10. EVERY U/P V.C. PIPE BUILT INTO A MANHOLE SHALL HAVE CLEAN DRY SAND (TO S.A.B.S. 1083 TABLE 1.) GLUED TO ITS OUTSIDE AS RECOMMENDED BY PIPE MANUFACTURER USING SPECIAL PVC CEMENT (HENKEL S.A. PTY. LTD. TANGIT) OR SIMILAR) TO ENSURE GOOD ADHESION TO BASE CONCRETE.
11. IN LOCATIONS DEFINED BY THE ENGINEER AS SUBJECT TO FLOODING, C.I. MANHOLE COVERS AND JOINTS SEALED WITH BOSTIK BUTYL TAPE OR SIMILAR, SHALL BE USED.

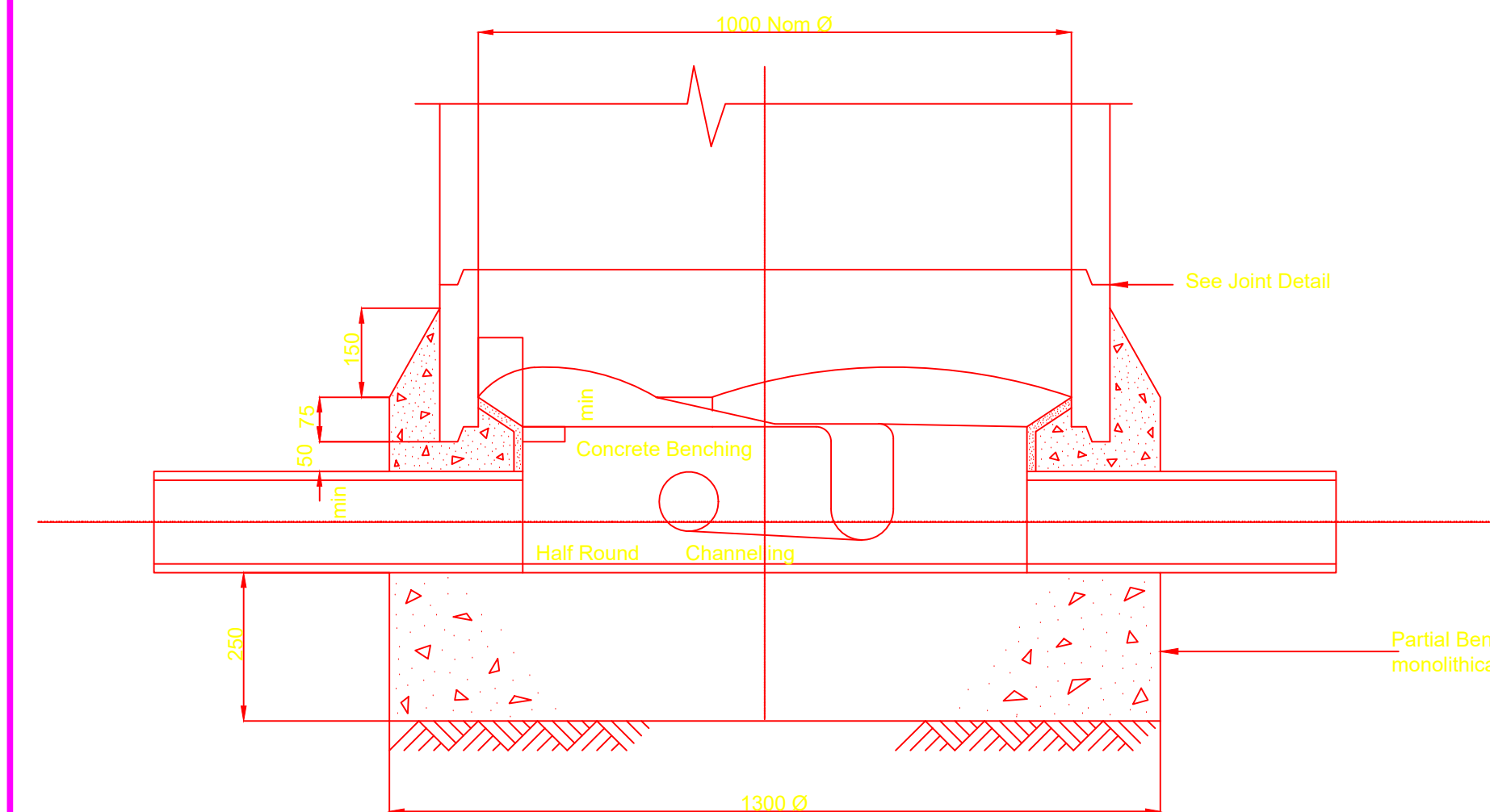
NOTES:

A. GENERAL

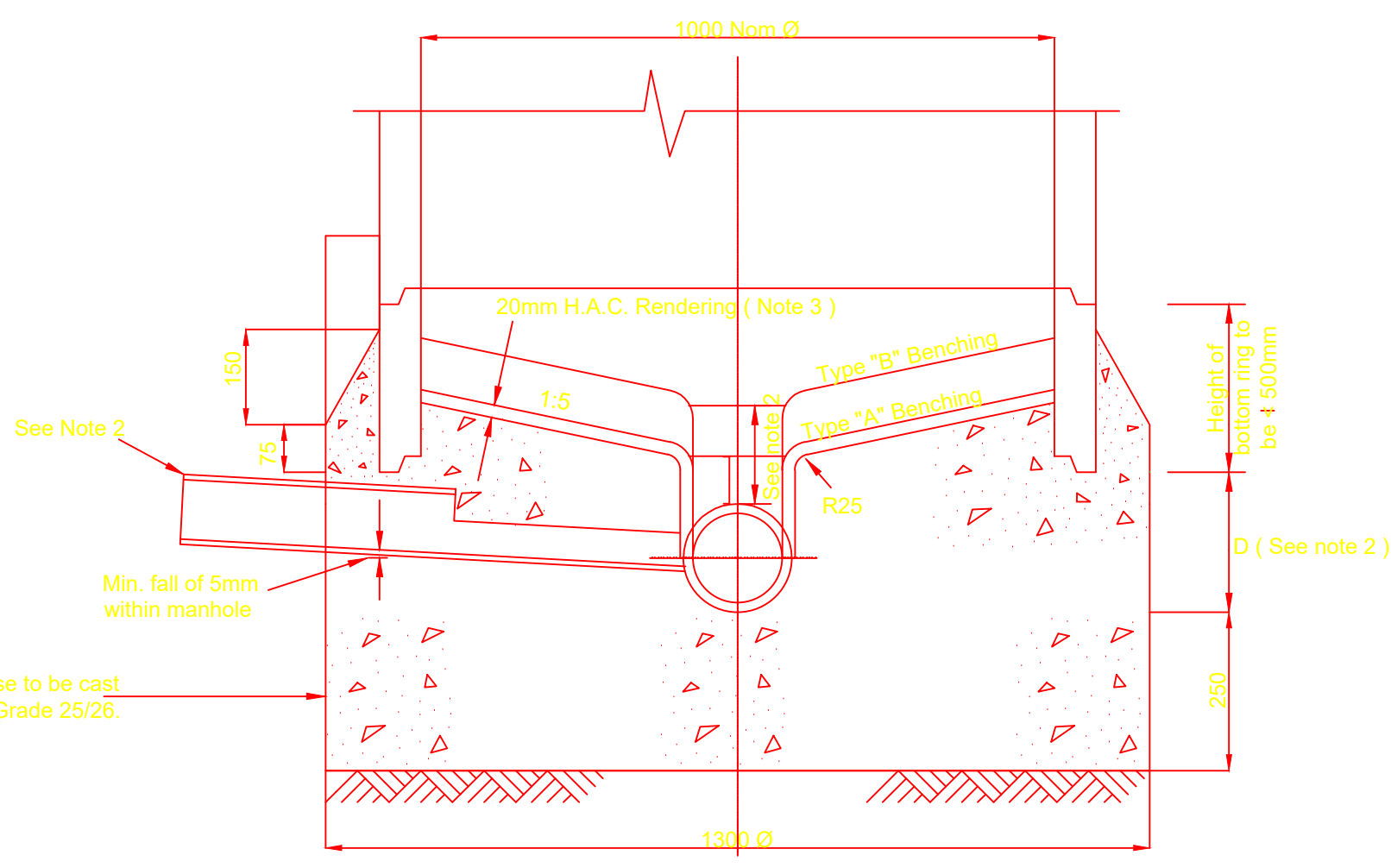
1. ALL PRECAST CONCRETE MANHOLE COMPONENTS TO COMPLY WITH THE REQUIREMENTS OF S.A.B.S. 1294 (WHERE APPLICABLE).
2. LENGTHS OF INDIVIDUAL WALL UNITS ARE TO VARY IN MULTIPLES OF 250mm.
3. HEAVY DUTY CAST IRON COVERS AND FRAMES TO ARE TO BE USED ON MANHOLES UNDER VEHICULAR TRAFFIC.
4. FOR DETAILS OF STEEL REINFORCEMENT TO MANHOLE COVERS, COVER SLABS AND FRAMES - SEE STANDARD PRECAST DETAILS LISTED ABOVE.
5. STORMWATER MANHOLE
6. DIMENSION D VARIES WITH THE DIAMETER OF THE PIPES. DIMENSION D SHALL BE TO A POINT 50mm ABOVE THE HIGHEST CROWN OF THE PIPES.
7. RENDERING FOR MANHOLE BENCHING SHALL CONSIST OF 1 PART CEMENT TO 3 PARTS SAND THOROUGHLY MIXED AND APPLIED TO CONCRETE SURFACES WHILE THE LATTER ARE STILL GREEN. RENDERING SHALL BE AT LEAST 20mm THICK.
8. THE LENGTH OF PIPE BUILT INTO THE MANHOLE SHALL NOT EXCEED 2.5m.



SECTION OF 1000 DIA. MANHOLE



SECTION OF 1000 DIAMETER MANHOLE



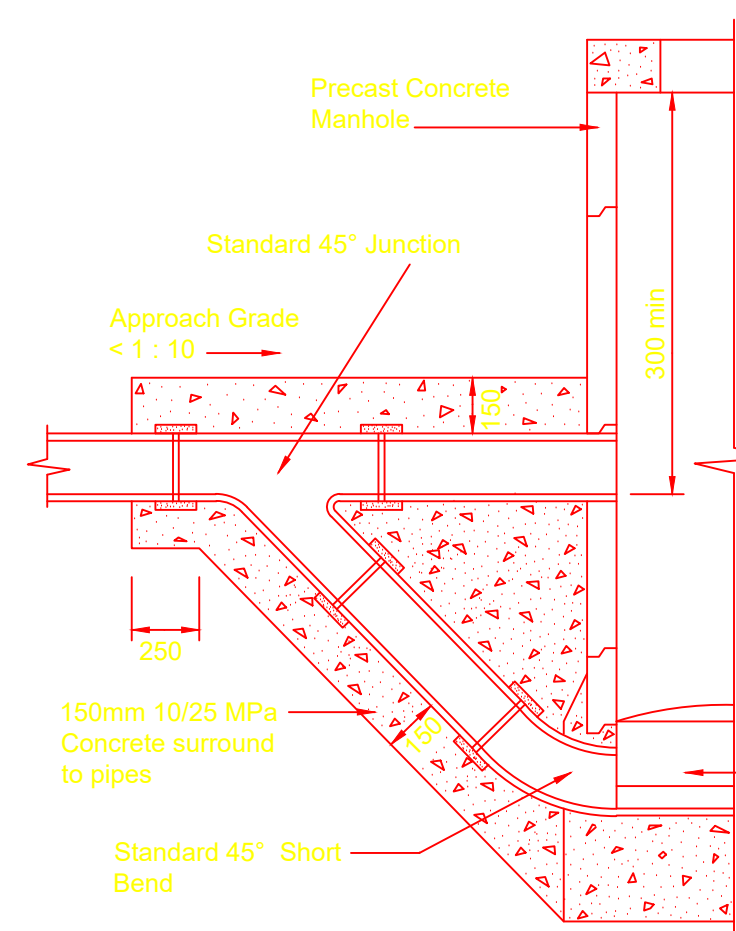
SECTION OF 1000 DIAMETER MANHOLE

NOTE :

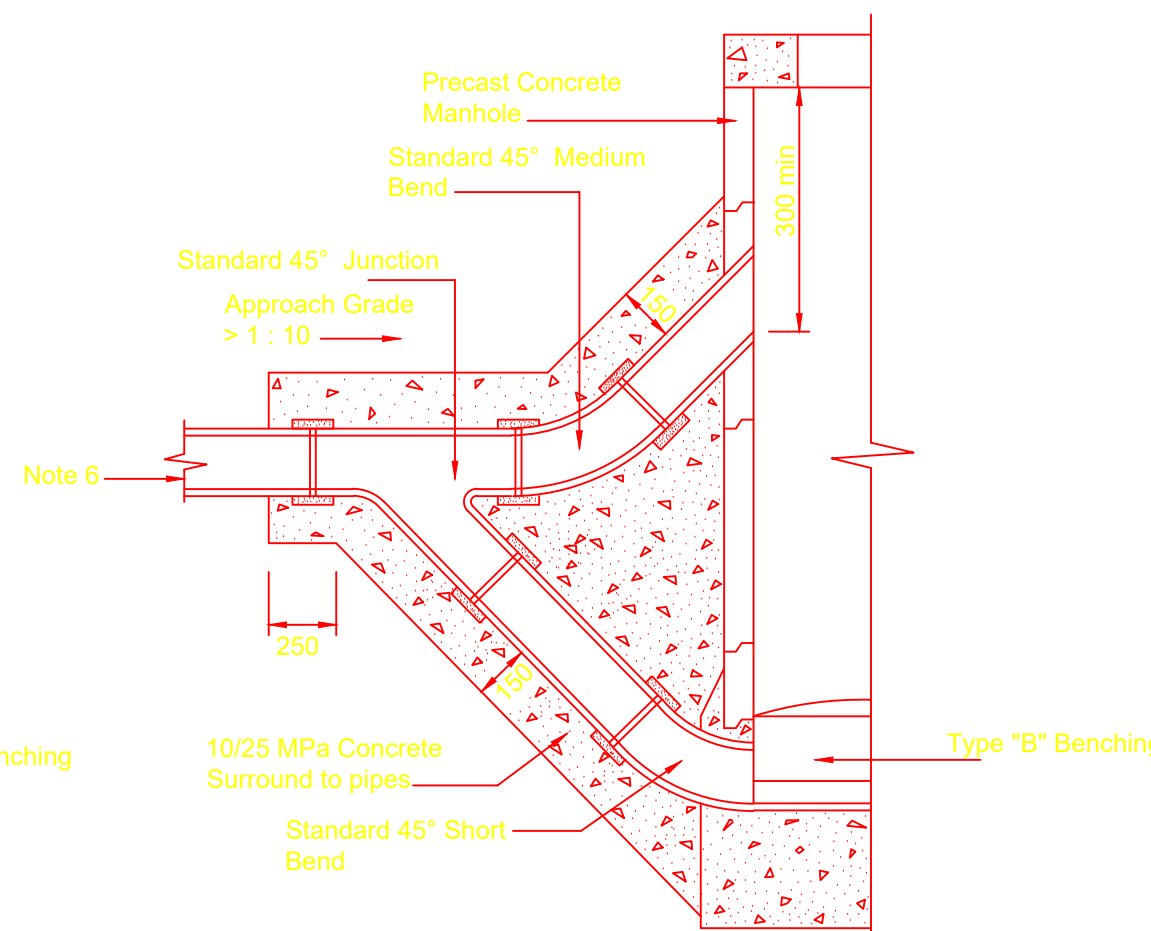
1. Where approach grades into the manhole are 1 : 15 or steeper and associated with a change in direction in the manhole of 30 or more, the benching is to be brought up two pipe diameters above the pipe invert (Type B benching sewers).
2. Dimension D varies with the diameter of the sewer pipes and shall be to a point 50mm above the highest crown of the pipes.
3. Rendering for manhole benching shall consist of one part H.A.C. to two parts sand thoroughly mixed and applied to concrete surfaces while the latter are still green. Rendering shall be at least 20mm thick.

PRECAST CONCRETE SEWER MANHOLE

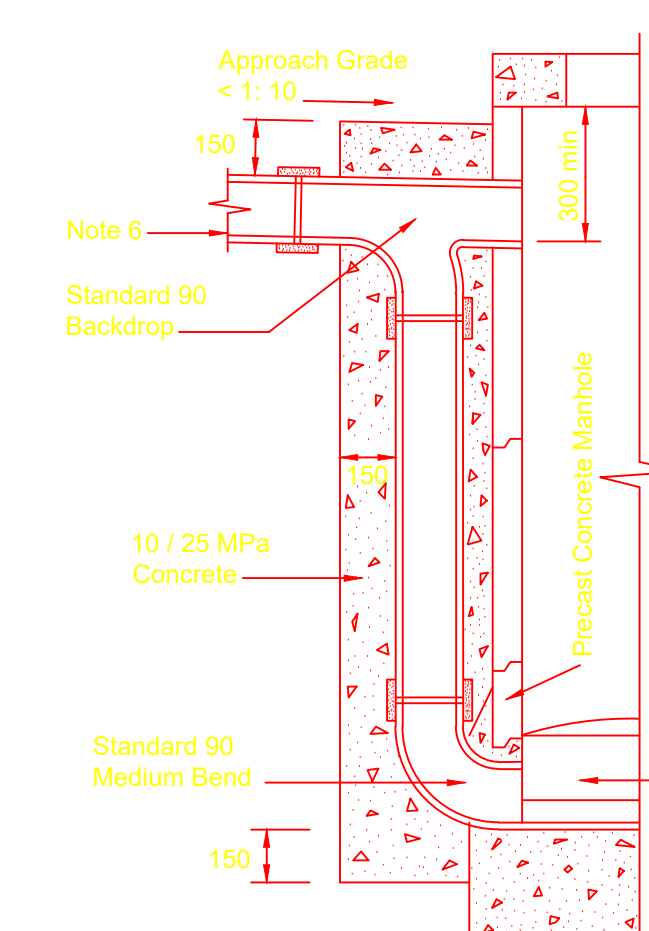
Scale 1:10



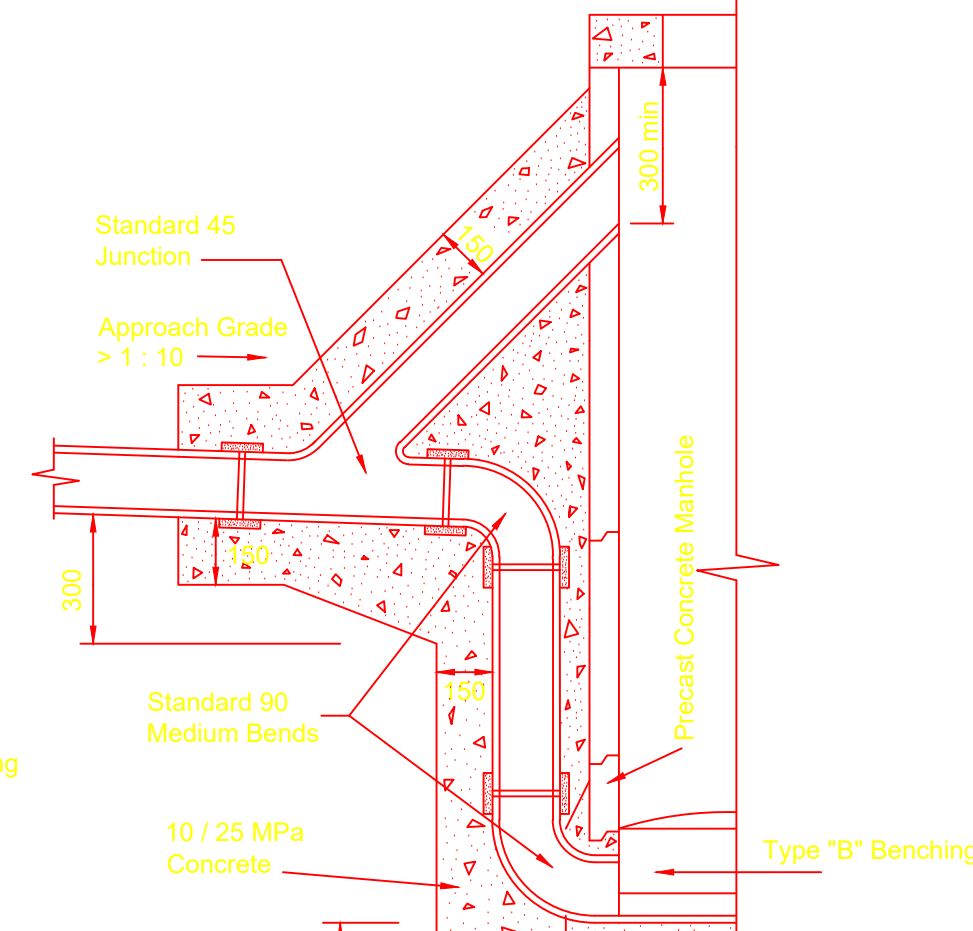
RAMP MANHOLE : TYPE A FOR DROPS BETWEEN 500 AND 1000



RAMP MANHOLE : TYPE B FOR DROPS BETWEEN 500 AND 1000

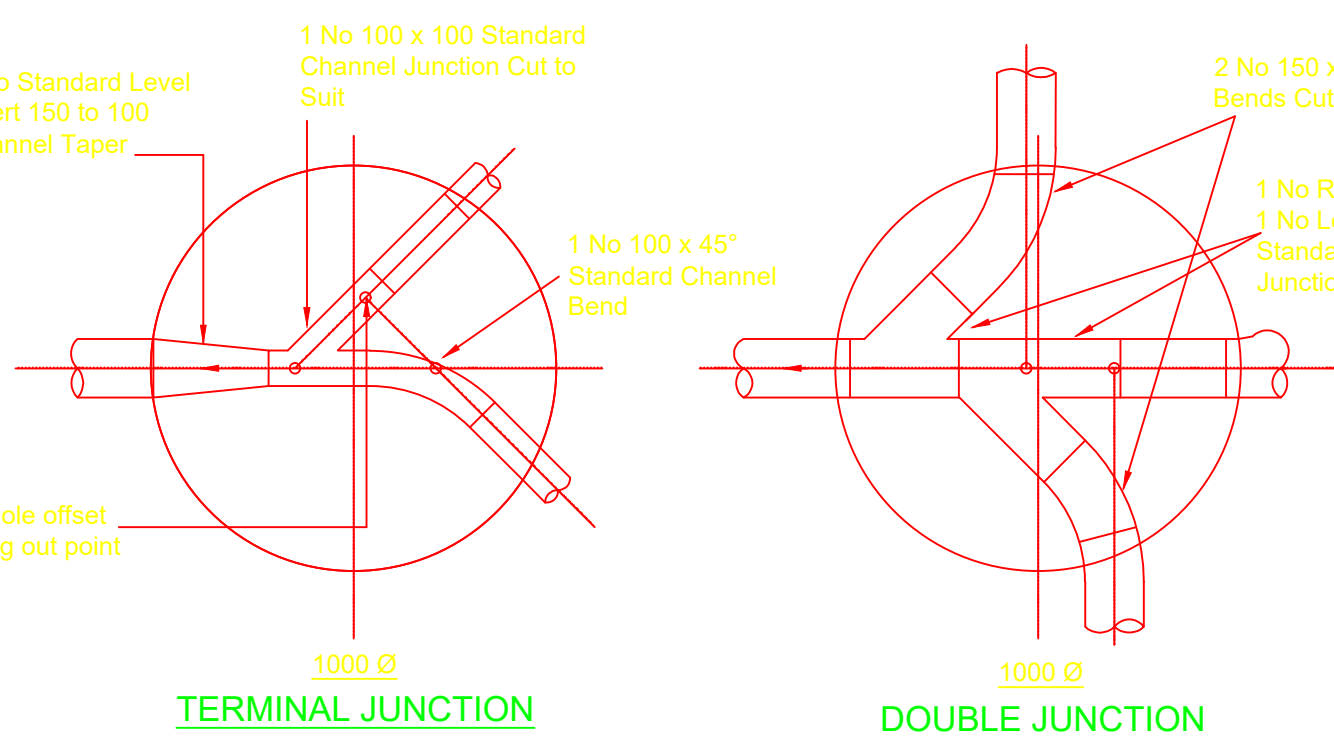
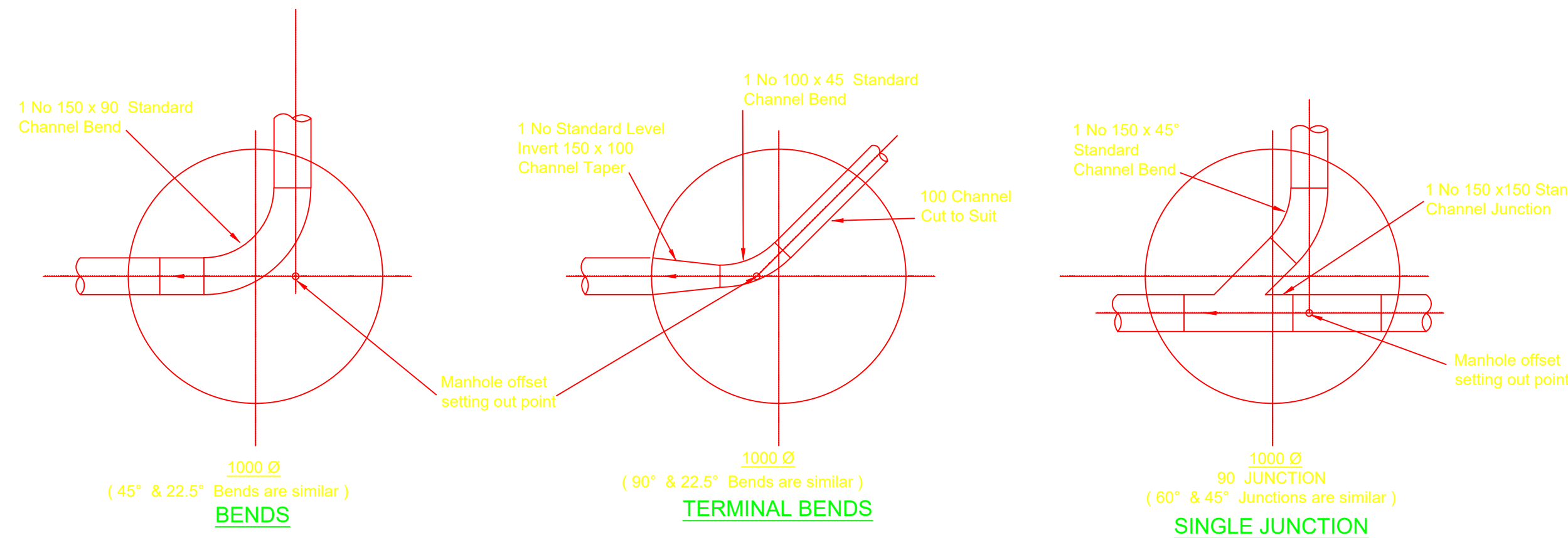


BACKDROP MANHOLE : TYPE A FOR DROPS IN EXCESS OF 1000



BACKDROP MANHOLE : TYPE B FOR DROPS IN EXCESS OF 1000

STANDARD FITTING FOR RAMP AND BACKDROP MANHOLES. NOT TO SCALE



STANDARD CHANNELLING IN PRECAST CONCRETE MANHOLES. NOT TO SCALE

No.	DATE	REVISION	CONSULT. ENG.
1	11/5/2014	CONSTRUCTION RECORD DRAWING	THUSO CONSULTING
2	16/12/2017	ISSUED FOR CONSTRUCTION	



DESIGNED BY
SSI ENGINEERS AND ENVIRONMENTAL CONSULTANTS (Pty) Ltd TRADING AS ROYAL HASKONINGDHV
P.O. BOX 12671
BRANDFOP
6224
BLOEMFONTEIN
TEL: (051) 450 7200
FAX: (051) 430 8220

DESIGNED BY	APPROVED
S.S.	Name : D. COLLET Prof. Reg. No. : 200170067 Date : 03/12/2012
R.M.	CONSTRUCTION RECORD DRAWING
CHECKED BY	Name : Prof. Reg. No. : Date :
D.C.	



ACCEPTANCE
THIS ACCEPTANCE IS FOR PROCEDURAL AND ADMINISTRATIVE REVIEW PURPOSES ONLY AND DOES NOT ATTRACT LEGAL LIABILITY OR LIABILITY OF ANY KIND FROM WHATEVER CAUSE OR HOWEVER ARISING
AIRPORTS COMPANY SOUTH AFRICA
Date:

PROJECT DESCRIPTION
CONSTRUCTION OF NEW WATER AND DRAINAGE SERVICES AT BLOEMFONTEIN AIRPORT

SCALE : AS SHOWN

DRAWING DESCRIPTION
STANDARD SEWER DETAILS

SHEET 1 OF 1

CONTRACT NUMBER		BL13/29/AU/02	
DRAWING LOCATION DATA		START	END
ROUTE		-	-
SECTION		-	-
DRAWING km DISTANCE		-	-
DRAWING TYPE		WATER RELATED	
DRAWING NUMBER		TBFN90 DP 01 S	
		REV	1