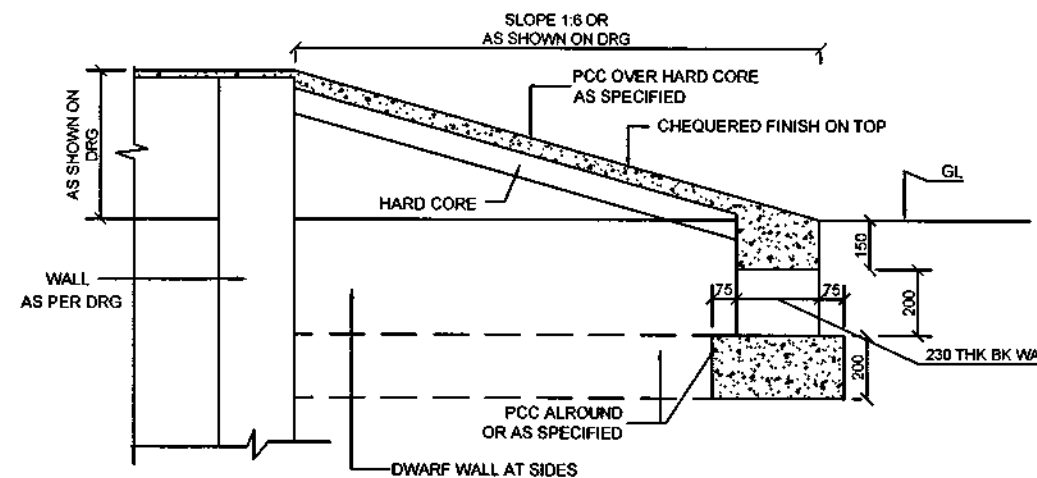
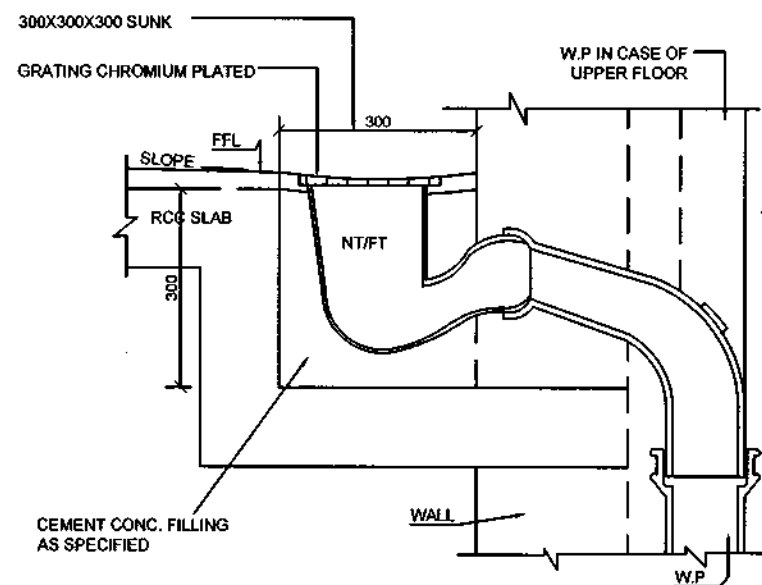


**DETAILS OF STEP**

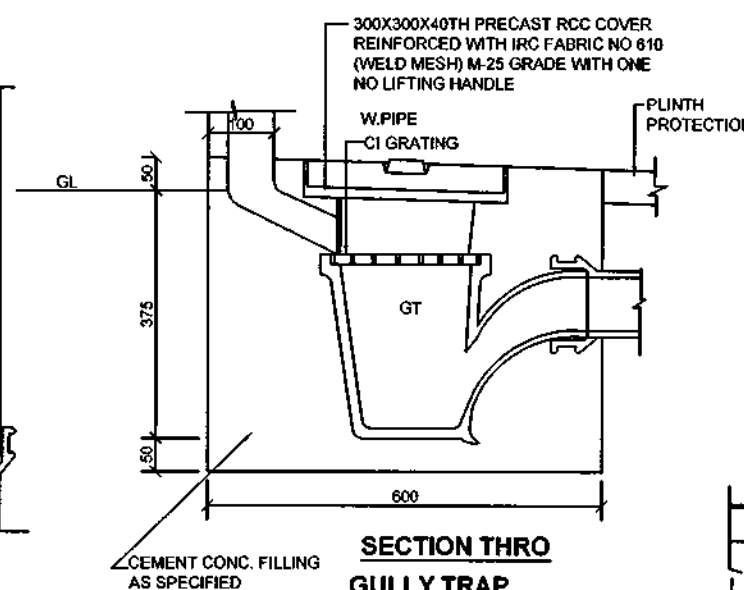
NOTE :- IN CASE OF PLINTH HT. MORE THAN 500 OR LESS THAN 450 THE RISER SHALL BE PROVIDED 150 INCREASED OR DECREASED ACCORDINGLY.



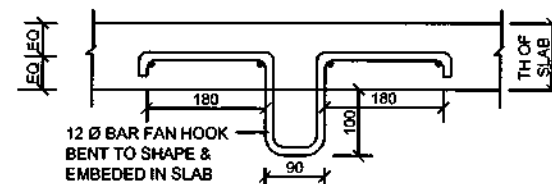
**DETAILS OF RAMP**



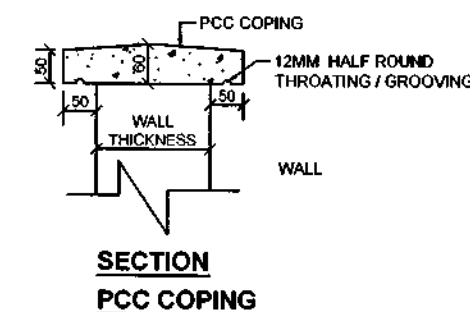
**SECTION THRO  
DETAIL OF LOCAL SUNK**



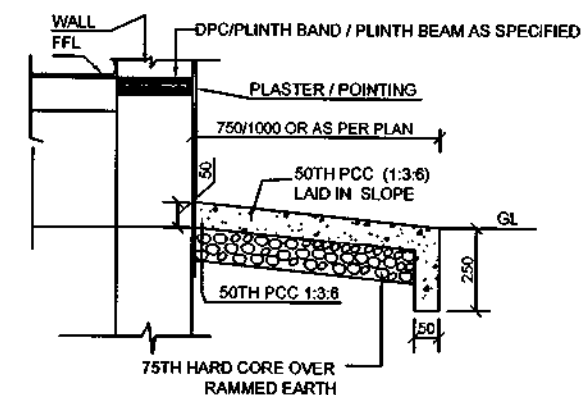
**SECTION THRO  
GULLY TRAP**



**DETAIL OF FAN HOOK**



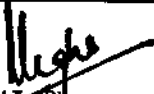
**SECTION  
PCC COPING**

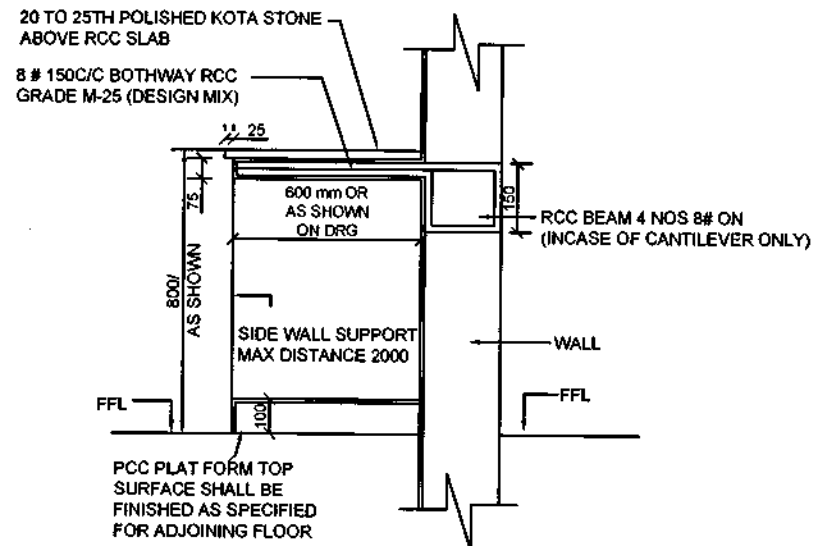


**SECTION  
PLINTH PROTECTION**

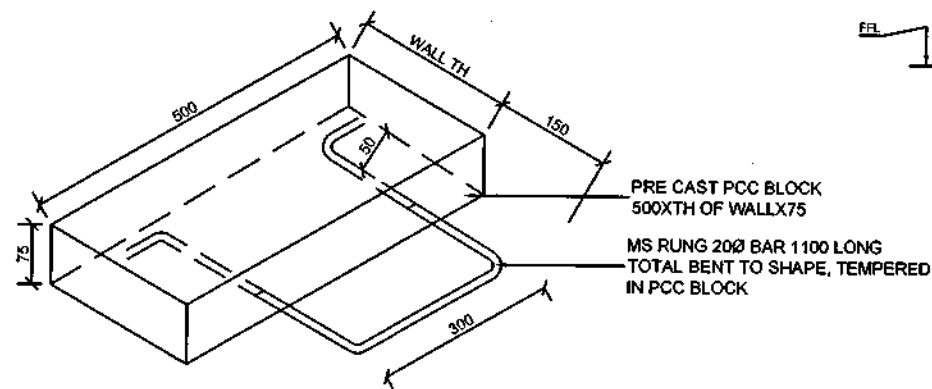
**NOTES**

- 1 CONTRACTOR TO CHECK AND VERIFY ALL THE DIMENSIONS BEFORE EXECUTION OF THE WORK.
- 2 FIGURED DIMENSIONS SHALL BE FOLLOWED.
- 3 ALL DIMENSIONS ARE GIVEN IN MILLIMETERS.
- 4 WALL THICKNESS SHALL BE AS INDICATED ON MAIN DRAWINGS OR AS SPECIFIED.
- 5 REFER TYPICAL DETAILS SHOWN IN THIS DRG AS APPLICABLE WHEN NOT SHOWN IN THE MAIN DRGS
- 6 THE DETAILS/SPECIFICATION SHOWN IN THE MAIN DRGS SHALL SUPERCEED THE DETAILS/SPECIFICATION SHOWN IN THIS DRG.

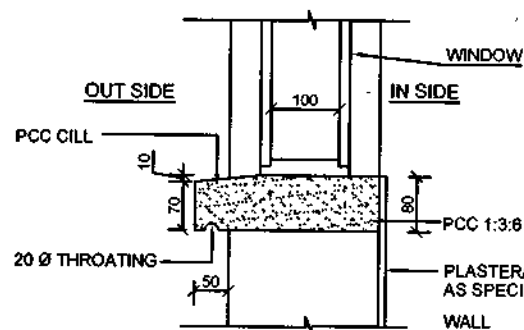
S NO	DATE	DESCRIPTION	INITIALS
REVISIONS			
MISC TYPICAL DETAILS-2			
DATE	12-01-15	CHIEF ENGINEER UDHAMPUR ZONE	SHT. NO.
DRN	GEETA		1/3
TCD			
CKD			
SCALE		DRG. NO. CEUZ/TD/1544/16	
AAD (ARCH)		 LT. COL. SENIOR ARCHITECT FOR CHIEF ENGINEER	
DY ARCH			



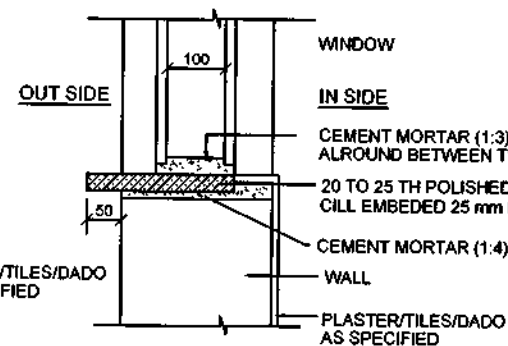
**SECTION**  
**KOTA STONE ABOVE RCC SLAB**  
**COOKING PLATFORM /**  
**PREPARATION PLATFORM**



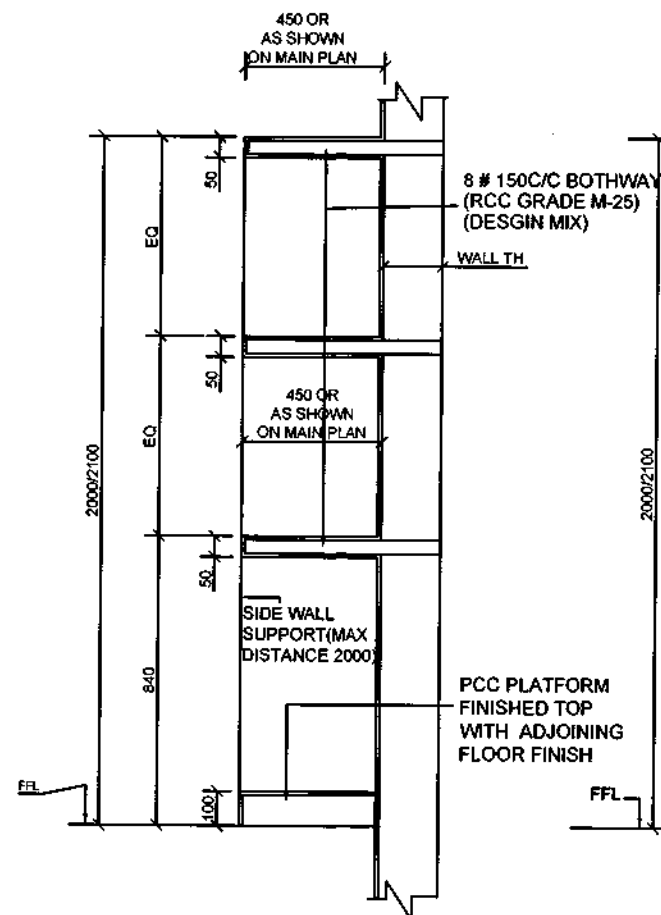
**VIEW OF PRECAST PCC BLOCK**  
**(ONE UNIT)**



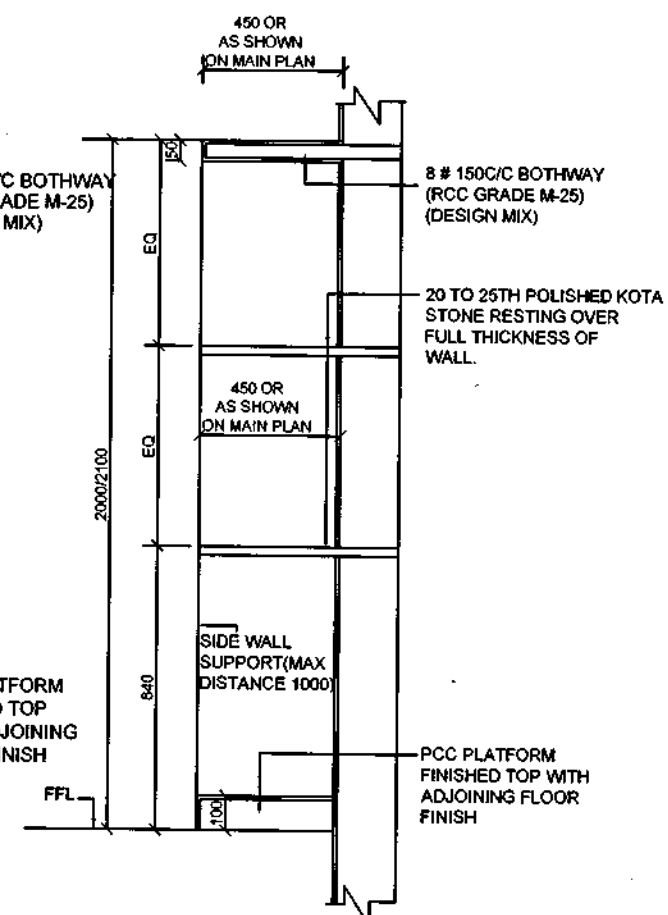
**SECTION**  
**PCC CILL**



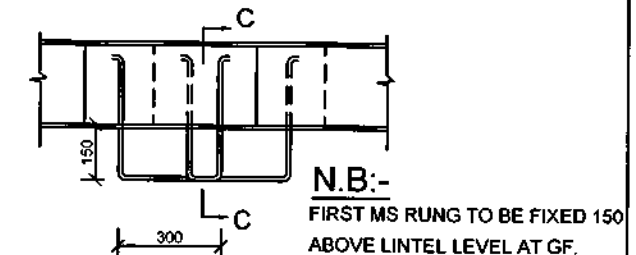
**DETAIL OF POLISHED**  
**KOTA STONE CILL TYPE-1**



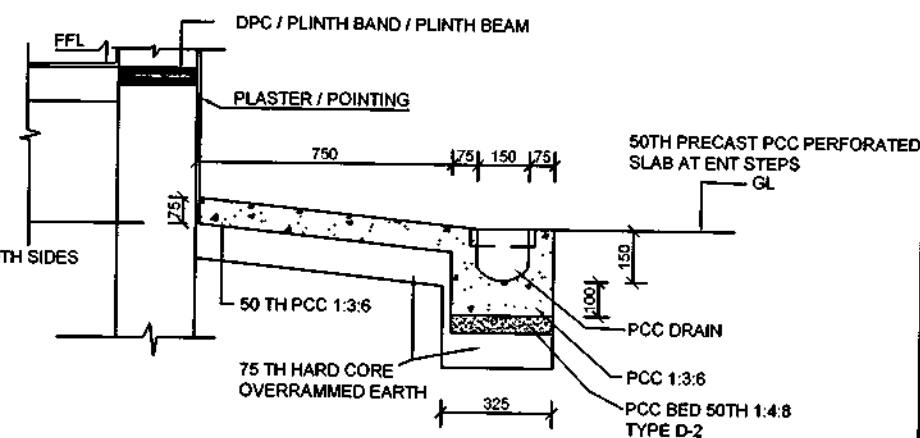
**SECTION**  
**RCC SHELVES 3 TIER**



**SECTION**  
**KOTA STONE SHELVES**  
**2 TIER**



**PLAN**  
**TYPICAL DETAILS OF MS RUNG**



**SECTION**  
**PLINTH PROTECTION WITH DRAIN**

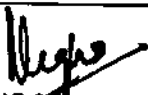
**NOTES**

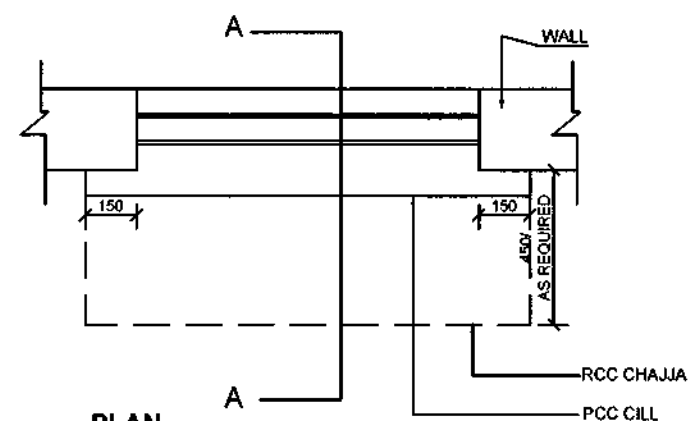
- 1 FOR NOTES REFER SHT.NO. 1/3 OF THIS DRG.

S NO	DATE	DESCRIPTION	INITIALS
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**REVISIONS**

**MISC TYPICAL DETAILS-2**

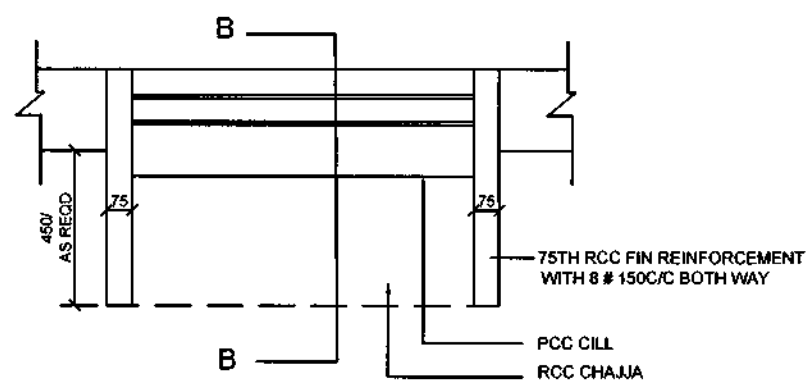
DATE	12-01-15	CHIEF ENGINEER UDHAMPUR ZONE	SHT. NO.
DRN	GEETA		2/3
TCD			
CKD			
SCALE		DRG. NO. CEUZ/TD/1544/15	
AAD (ARCH)		 LT. COL. SENIOR ARCHITECT FOR CHIEF ENGINEER	
DY ARCH			



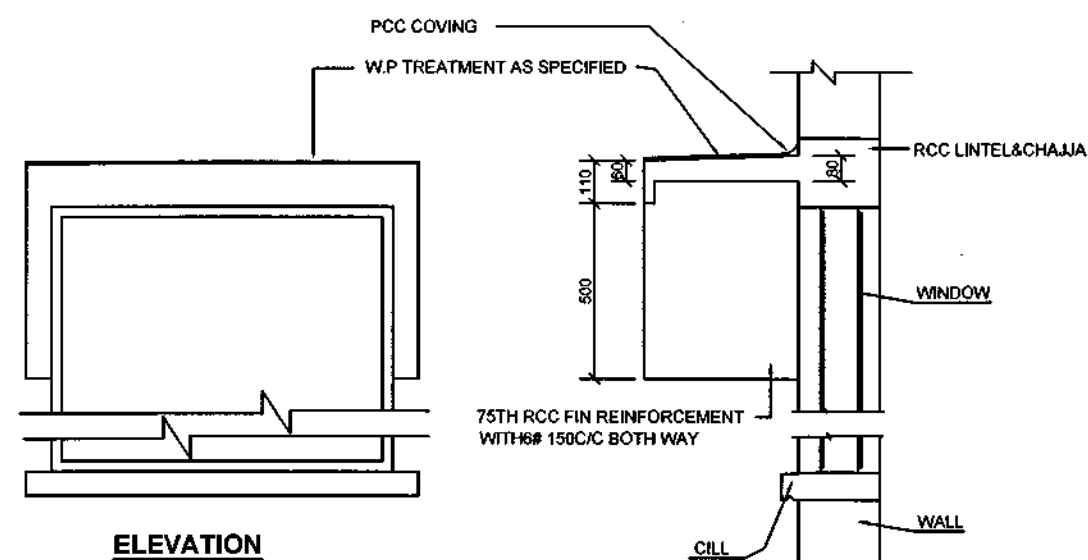
**PLAN**  
**RCC CHAJJA TYPE-A**

**N.B.-**

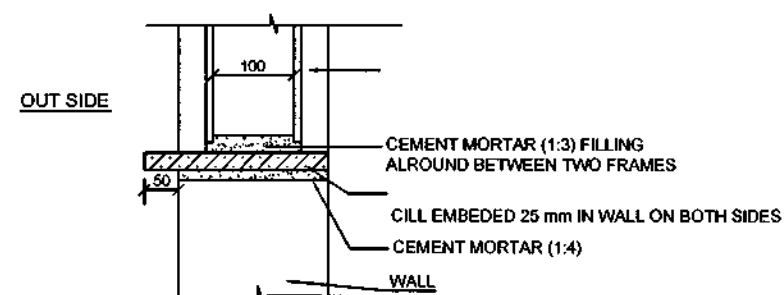
DETAILS OF RCC CHAJJA TYPE A & B ARE ALSO APPLICABLE  
FOR OUT SIDE DOORS/OPENINGS AS INDICATED IN MAIN DRAWINGS.



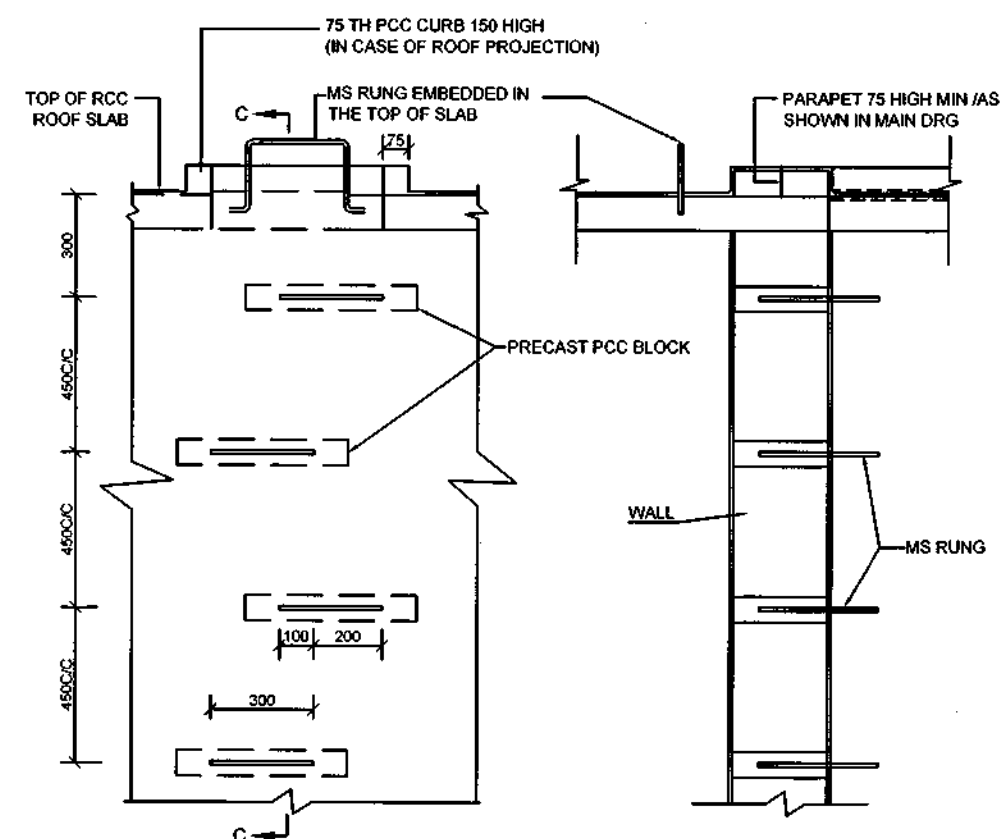
**PLAN**  
**RCC CHAJJA TYPE-B**



**SECTION B-B**



**DETAIL OF POLISHED**  
**KOTA STONE CILL TYPE-2**




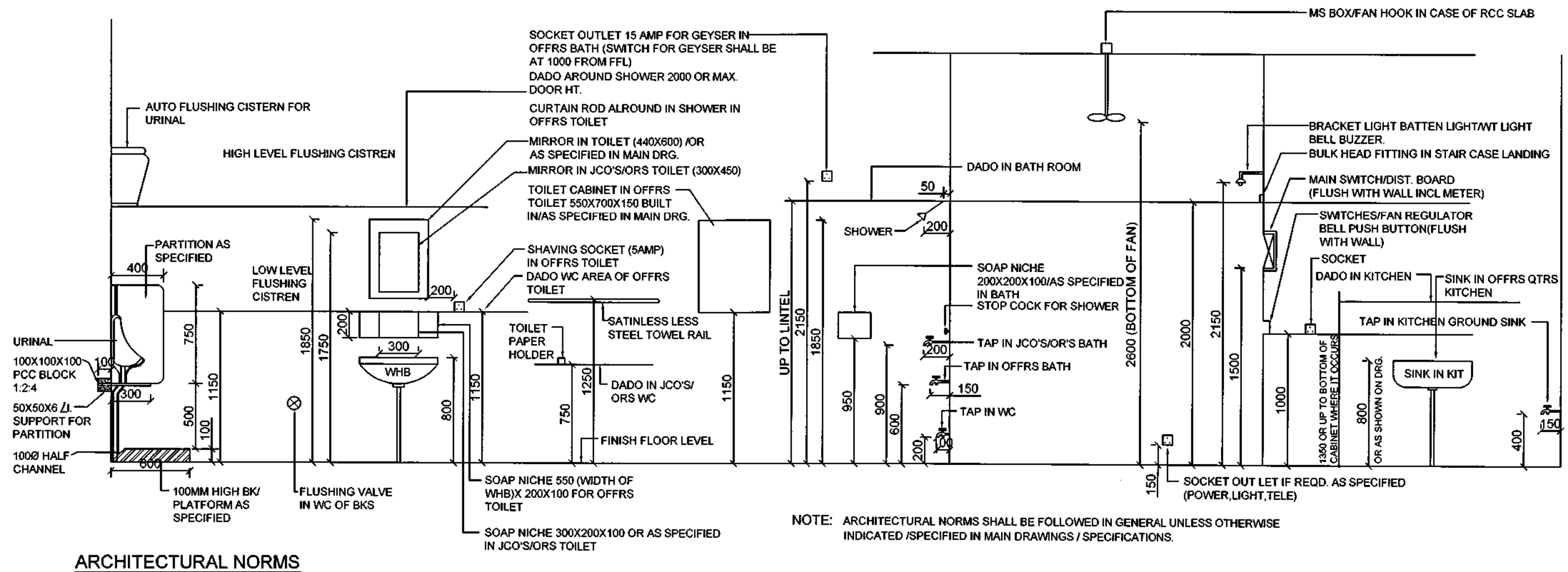
### ELEVATION

**SECTION 'C-C'**

## NOTES

1 FOR NOTES REFER SHT.NO. 1/3 OF THIS DRG.


S NO	DATE	DESCRIPTION	INITIALS
REVISIONS			
MISC TYPICAL DETAILS-2			
DATE	12-01-15	CHIEF ENGINEER UDHAMPUR ZONE	SHT. NO.  3/3
DRN	GEETA		
TCO			
CKD			
SCALE			
		DRG. NO. CEUZ/TD/1544/15	
AAD (ARCH)		 LT. COL. SENIOR ARCHITECT FOR CHIEF ENGINEER	
DY ARCH			




#### NOTES FOR SCHEDULE OF FINISHES:-

- ALL EXTERNAL PIPES (SOIL, WASTE, VENT & RAIN WATER ETC.) SHALL BE PAINTED WITH SYNTHETIC ENAMEL PAINT 1ST QUALITY IN COLOUR SHADE TO MATCH WITH THE ADJACENT SURFACE
- WOOD WORK IN DIRECT CONTACT WITH MASONARY OR CONCRETE SHALL BE TREATED WITH TWO COATS OF HOT TAR.
- ALL HIDDEN SURFACES OF WOOD WORK SHALL BE TREATED WITH TWO COATS OF CREOSOTE OIL.
- OVER HEAD WATER TANK SHALL BE PROVIDED WITH LOCKING ARRANGEMENT & SHALL BE TREATED WITH TWO COAT OF CEMENT PAINT INCLUDING ITS SUPPORTING ELEMENTS.
- EXPOSED SURFACES OF RCC WORK SHALL BE PLASTERED 5mm TH. IN CEMENT MORTAR (1:3) FINISHED EVEN & SMOOTH AS SPECIFIED RCC SURFACES FLUSHED WITH WALL SHALL BE PLASTERED SAME AS SPECIFIED FOR WALL.
- UNEXPOSED STEEL WORK EXCEPT REINFORCEMENT SHALL BE PAINTED WITH TWO COATS OF RED OXIDE PAINT BEFORE PLACING THEM IN POSITION.

- EXTERNAL PLASTER/POINTING SHALL BE UP TO 150 mm BELOW GROUND LEVEL WHERE PLINTH PROTECTION IS NOT TO BE PROVIDED.
- PLASTERED GROOVE 15 mm WIDE & 6 mm DEEP SHALL BE PROVIDED -INTERNALLY AT ALL JUCTIONS OF RCC COLUMN, BEAMS & SLAB WITH WALLING.
- INTERNAL PLASTERED SURFACES OF CUPBOARD & WARDROBES SHALL BE TREATED WITH TWO COATS OF SYNTHETIC ENAMEL PAINT (WHITE) OVER ONE COAT OF PRIMER.
- LOCATIONS NOT COVERED IN THE DRG SHALL BE FINISHED SAME AS PER ADJACENT SURFACES/DETAIL DRAWINGS.
- WIRE GAUGE OF FLY PROOF/MOSQUITO PROOF SHUTTERS SHALL NOT BE PAINTED.
- CAST-IN-SITU TERRAZZO SHALL BE PROVIDED WITH 4 TO 7 MM SIZE MARBLE CHIPS. AS SPECIFIED
- INTERNAL & EXTERNAL FACES OF THE PARAPET WALL (AT ROOF) SHALL BE FINISHED WITH 15 mm TH PLASTER AS PER EXTERNAL FINISH AS SPECIFIED.

S NO	DATE	DESCRIPTION	INITIALS
REVISIONS			
ARCHITECTURAL NORMS AND GENERAL NOTES			
DATE	12-01-15	CHIEF ENGINEER UDHAMPUR ZONE	SHT. NO.
DRN	GEETA		1/2
TCD			
CKD			
SCALE			DRG. NO. CEUZ/TD/1545/15
AAD (ARCH)		 LT. COL. SENIOR ARCHITECT FOR CHIEF ENGINEER	
DY ARCH			

ARCHITECTURAL		E/M	
1	CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION THE WORK.	1	CONTRACTOR AND EXECUTIVE TO CHECK AND CO-RELATE ALL DRAWING BEFORE TAKING EXECUTION IN HAND.
2	ALL DIMENSIONS ARE GIVEN IN MILLIMETRES UNLESS OTHERWISE SPECIFIED	2	INTERNAL ELECTRIFICATION FITTINGS/ ACCESORIES/ SWITCHES & WIRING ETC. SHALL BE LOCATED CLEAR OF DOORS/ WINDOWS.
3	FIGURED DIMENSIONS SHALL BE FOLLOWED.	3	INTERNAL ELECTRIFICATION WORK SHALL BE CARRIED OUT AS PER IS -732
4	EXECUTIVE AUTHORITY SHALL CHECK AND VERIFY ALL THE DRGS.BEFORE TAKING EXECUTION IN HAND.	4	LAYOUT OF INTERNAL ELECTRIFICATION HAS BEEN MARKED FOR ONE QTR. AND IT SHALL BE REPEATED SIMILARLY FOR OTHER QTRS. OF THE SAME TYPR/ CATEGORY. THE LAYOUT IS HOWEVER TENTATIVE & WORK SHALL BE FINALLY BE EXECUTED AS PER LAYOUT APPROVED BY GE AND NO PRICE ADJUSTMENT SHALL BE ADMISSIBLE ON THIS ACCOUNT.
5	ALL GLAZED WINDOWS VENTILATORS SHALL BE PROVIDED WITH GUARD BARS (AS PER DETAILS) OR AS SPECIFIED IN MAIN DRG.	5	MOUNTING HEIGHTS FOR VARIOUS ELECTRICAL FITTINGS/ FIXTURES ETC. SHALL BE AS PER IS-732/E-IN-C'S T.I. HOWEVER ALL SWITCHES/ SOCKET OUTLETS/ FAN REGULATORS SHALL BE MOUNTED IN SUCH WAY THAT THE BOTTOM OF SUNK TYPE BOX IS 1.0 M FROM FFL.
6	IN CASE OF WINDOWS,VENTILATORS:-MOSQUITO PROOF SHUTTER SHALL OPEN INSIDE AND GLAZED SHUTTER OPEN OUTSIDE.	6	<u>SCHEDULE OF WIRING</u> a) POINT WIRING - CONCEALED CONDUIT (RIGID PVC) TYPE AS PER IS-9537.
7	IN CASE OF DOORS:-MOSQUITO PROOF SHUTTER SHALL OPEN OUTSIDE & PANELLED SHUTTER SHALL OPEN INSIDE THE ROOM.	7	TELEPHONE CONDUIT (RIGID PVC, CONCEALED IN WALLS) DULY PRE-WIRED SHALL BE PROVIDED WITH TELEPHONE SOCKETS SUITABLE LOCATED AS SHOWN IN DRG.
8	THE MINIMUM DIMENSIONS GIVEN FOR ROOM HEIGHT SHALL BE MEASURED AT THE FARTHEST END FROM THE RIDGE LINE INSIDE THE ROOM AS SHOWN.	8	RIGID PVC CONDUIT (20MM Ø) CONCEALED IN WALL IN SIDE THE QTR. AND RIGID STEEL CONDUIT (20MM Ø) FIXED TO WALL OUTSIDE THE QTR. SHALL BE PROVIDED FOR TV ANTENNA TERMINATING SUITABLY AS PER INSTRUCTION OF GE.
9	THE HEIGHT OF PARAPET WALL ON THE ROOF TOP SHALL BE PROVIDED (HT SHOWN IN THE DRG) AT THE RIDGE LINE & SHALL INCREASE ACCORDINGLY. AS SHOWN IN ELEVATION	INT. W/S	
10	FLOOR TO FLOOR HEIGHT SHOWN IS FROM FFL TO FFL FOR GROUND FLOOR & FFL TO TOP OF RCC SLAB EXCLUDING WP TREATMENT AT TOP FLOOR.	1	FOLLOWING ITEMS ARE REQUIRED TO BE PROVIDED WITH EVERY SERVICE/OH TANK (OR AS SHOWN IN THE MAIN DRG. :- I) OVERFLOW PIPE OF DIA EQUAL TO THE DIA OF INLET PIPE ,WITH MOSQUITO NET, ONE METRE PROJECTED FROM OUTER WALL OF THE BUILDING. II) ONE WASH OUT PIPE WITH ONE BAND & PLUG FROM BOTTOM OF TANK TO 150 ABOVE THE ROOF. THE DIA OF WASH OUT PIPE WILL BE EQUAL TO THE DIA OF INLET. III) ONE VENT PIPE OF 15 mmØ,CONNECTED WITH DISTRIBUTION PIPE LENGTH OF VENT PIPE WILL GO UP TO 100 HIGH ABOVE OH TANK. IV) ONE VENT PIPE OF 15 mm Ø,CONNECTED FROM TOP OF GEYSER.THE LENGTH OF THIS VENT PIPE WILL GO UP TO 100 HIGH ABOVE OH TANK.
11	DETAILS GIVEN IN TD DRGS SHALL BE FOLLOWED AS INDICATED IN MAIN DRAWING.		
12	RCC/STRUCTURAL ELEMENTS SHALL BE FOLLOWED WITH SIZE/THICKNESS AS PER STR. DRGS.IRRESPECTIVE OF THE SAME IS SHOWN OR NOT SHOWN IN ARCH DRGS.		
13	50X25 DRIP MOULD IN PLASTER SHALL BE PROVIDED TO ALL ROOF PROJECTIONS/CANOPYS/CHAJJAS WITH OUT DOWN WARD FACIA		
14	FOR FIXING OF EXHAUST FAN THE PROVISION OF 4 NOS BOLT TO BE MADE WHICH ARE EMBEDDED IN WALL WITH PCC BLOCK (100X100X150 PCC 1:2:4)		
15	PCC COPING SHALL BE PROVIDED ABOVE ALL PARAPET WALL/COMPOUND WALL AS PER DETAIL.		
16	DETAILS OF ROLLING SHUTTERS & COLLAPSIBLE DOOR (GATE) SHALL BE AS PER MANUFACTURERS DETAILS WITH FIXING AT SITE OR AS SPECIFIED.		
17	THE OPENING FOR EXHAUST FANS (OF REQUIRED DIAMETER) SHALL BE PROVIDED BELOW FLOOR/ROOF BAND/BEAM UNLESS OTHERWISE INDICATED.		
18	PLINTH PROJECTION SHALL BE PROVIDED AROUND THE BLDG AS PER DETAIL & AS SPECIFIED.		
19	PIPE FROM NT TO NT AND NT TO GT WHICH IS EMBEDDED BELOW FFL SHALL BE 75 Ø C I PIPE OR AS SPECIFIED.		
20	NICHE FOR MCB DBS SHALL BE PROVIDED AT THE LOCATION DECIDED BY GE AT SITE AT THE TIME OF EXECUTION IF NOT SHOWN IN THE DRGS.		

S NO	DATE	DESCRIPTION	INITIALS
REVISIONS			
ARCHITECTURAL NORMS AND GENERAL NOTES			
DATE	12-01-15	CHIEF ENGINEER UDHAMPUR ZONE	SHT. NO.
DRN	GEETA		2/2
TCD			
CKD			
SCALE		DRG. NO. CEUZ/TD/1545/15	
AAD (ARCH)		 LT. COL. SENIOR ARCHITECT FOR CHIEF ENGINEER	
DY ARCH			

# NOTES :-

1. CONTRACTOR TO CHECK & VERIFY ALL DIMENSIONS BEFORE EXECUTION OF THE WORK.
2. FIGURED DIMENSION SHALL BE FOLLOWED.
3. ALL DIM ARE IN MILIMETER UNLESS OTHERWISE SPECIFIED.
4. ALL EXPOSED WOOD WORK SHALL BE TREATED WITH SYNTHETIC ENAMEL PAINT AS SPECIFIED.

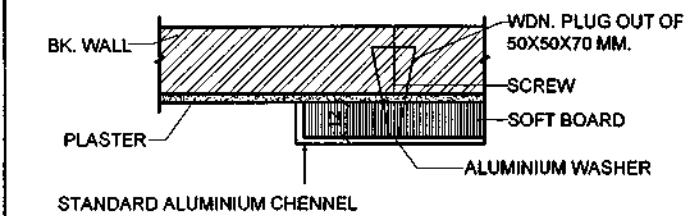
Sr. No.	DATE	DESCRIPTION
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TYPICAL DETAIL FOR BLACK BOARD, LOOKING GLASS, DUPLICATE KEY BOX, NOTICE BOARD, DISPLAY BOARD & DISPLAY WINDOW

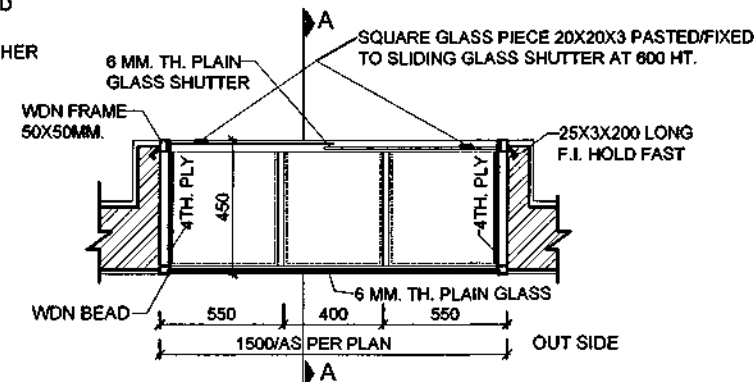
## PLANS, ELEVATIONS, SECTIONS & DETAILS

DATE	12-01-15	CHIEF ENGINEER UDHAMPUR ZONE	SHT. NO. 1/2
DRN	GEETA		
TCD			
CKD			
SCALE		DRG. NO. CEUZ/TD/1547/15	
AAD (ARCH)			
BY ARCH			

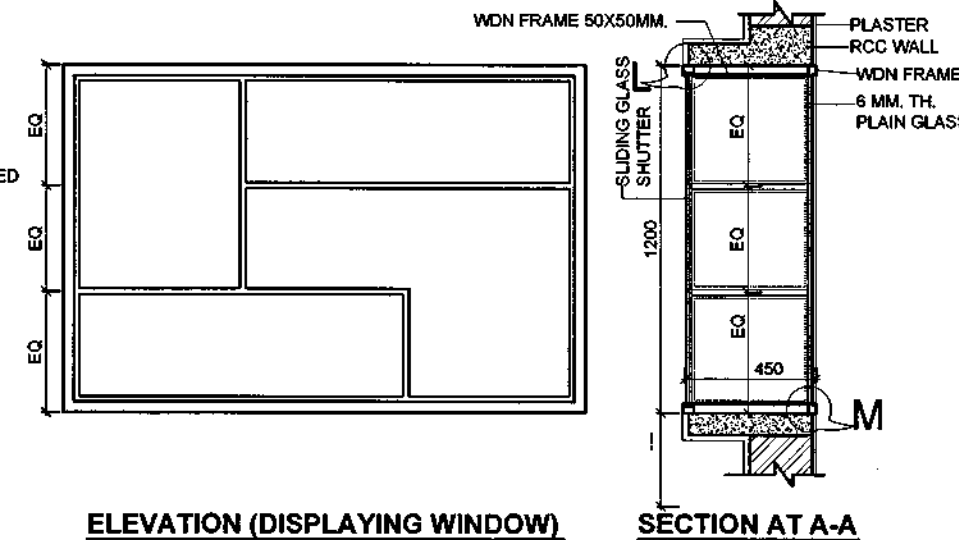
LT. COL.  
SENIOR ARCHITECT  
FOR CHIEF ENGINEER



**DETAIL AT 'A'**  
**NOTICE BOARD / DISPLAY BOARD**

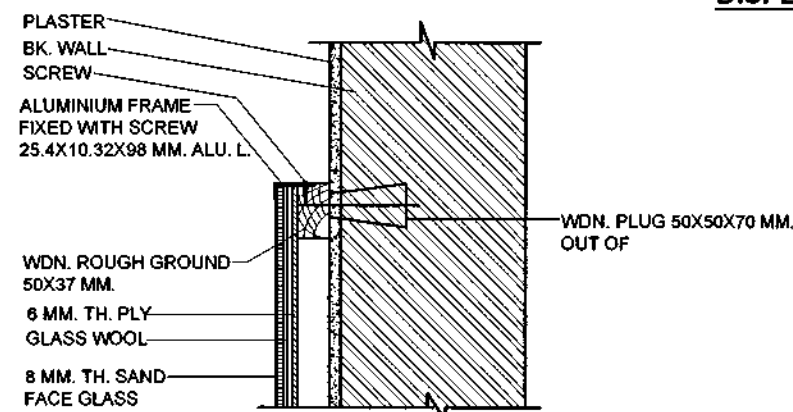


**DISPLAY WINDOW**

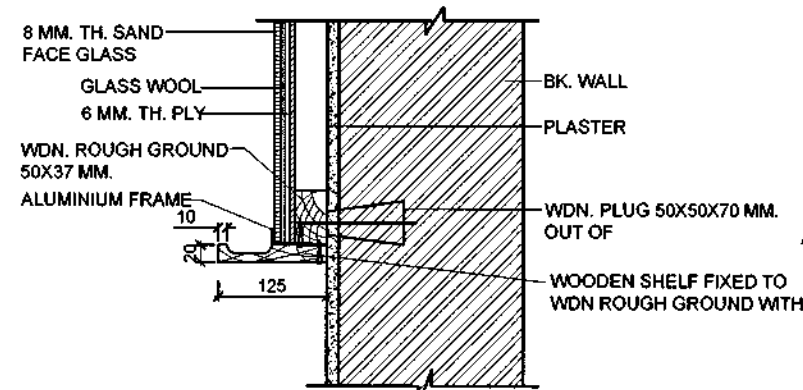


**ELEVATION (DISPLAYING WINDOW)**

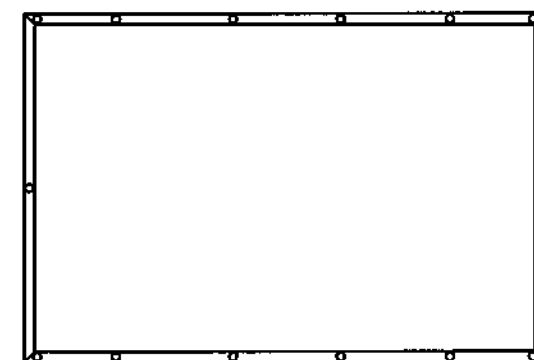
**SECTION AT A-A**



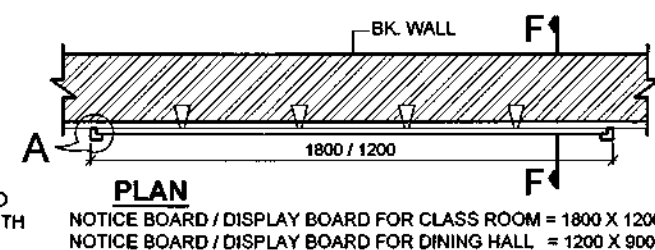
**DETAIL AT 'C'**



**DETAIL AT 'B'**

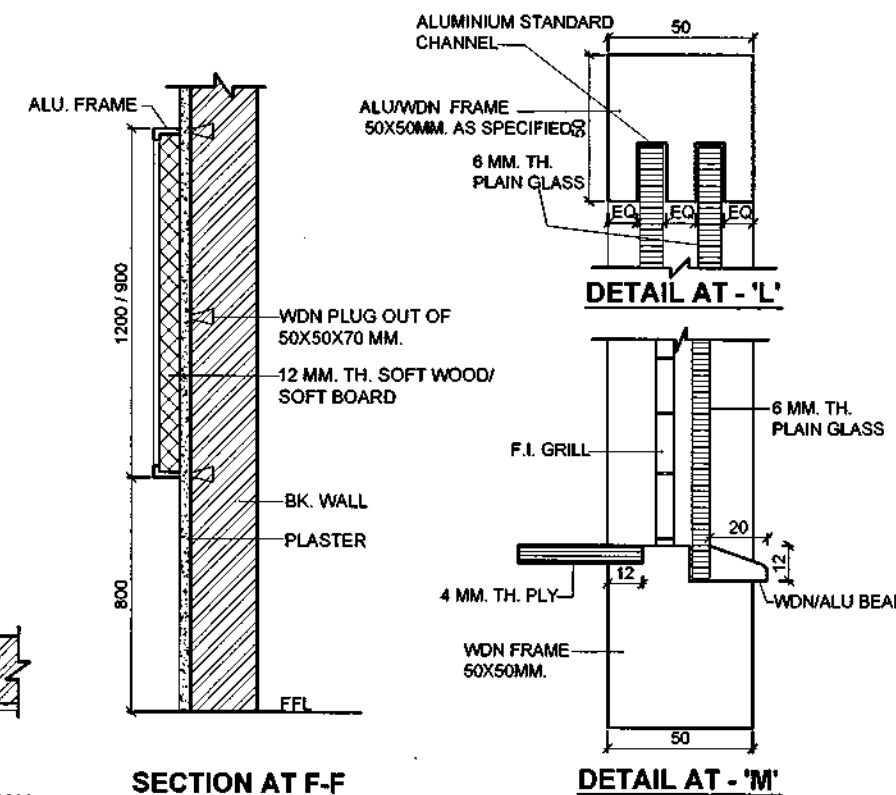


**ELEVATION**



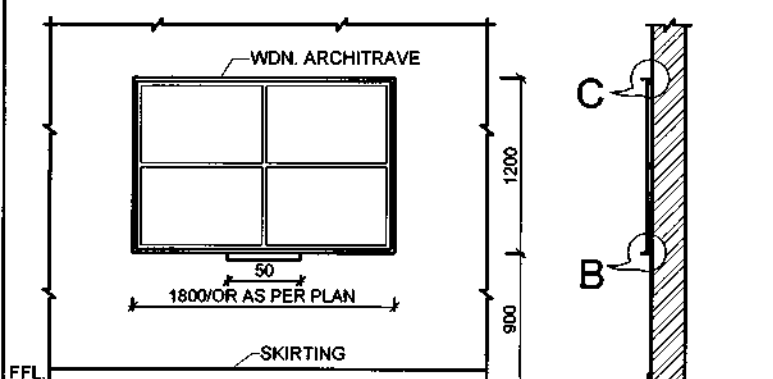
**PLAN**

NOTICE BOARD / DISPLAY BOARD FOR CLASS ROOM = 1800 X 1200  
NOTICE BOARD / DISPLAY BOARD FOR DINING HALL = 1200 X 900



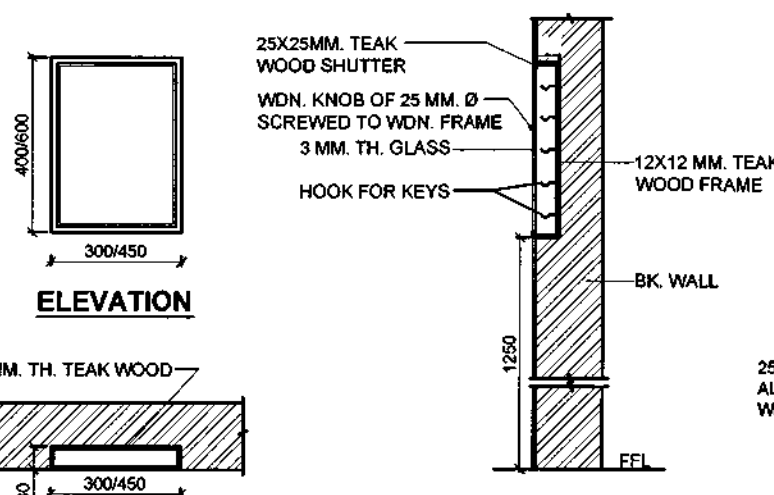
**SECTION AT F-F**

**DETAIL AT 'M'**



**ELEVATION**  
**DETAIL OF BLACK BOARD**

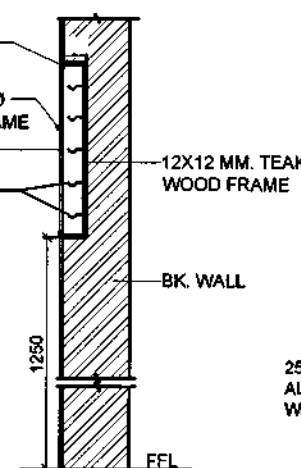
**SECTION**



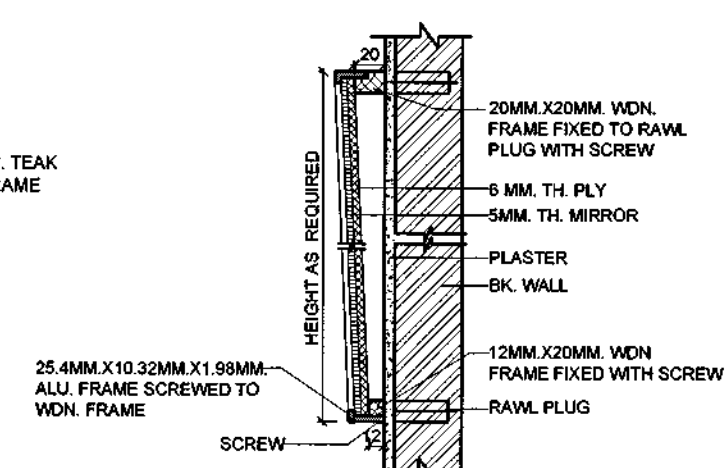
**ELEVATION**

**PLAN**

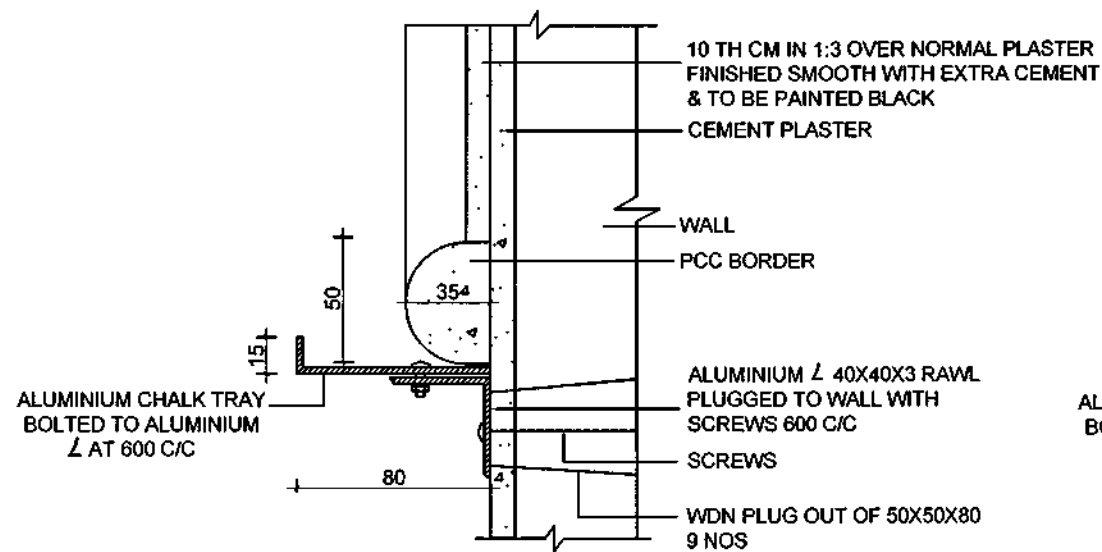
**DETAIL OF DUPLICATE KEY BOX**



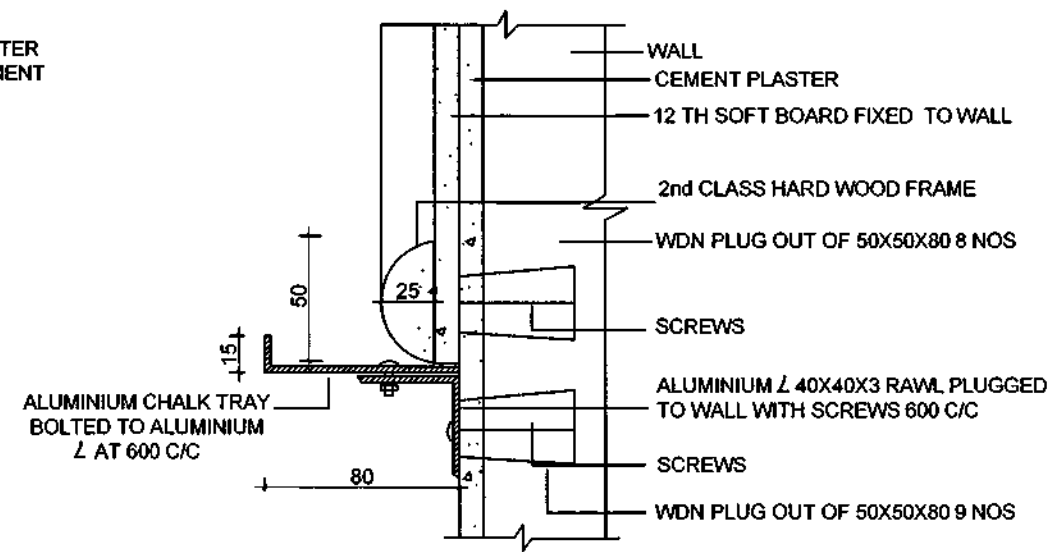
**X - SECTION**



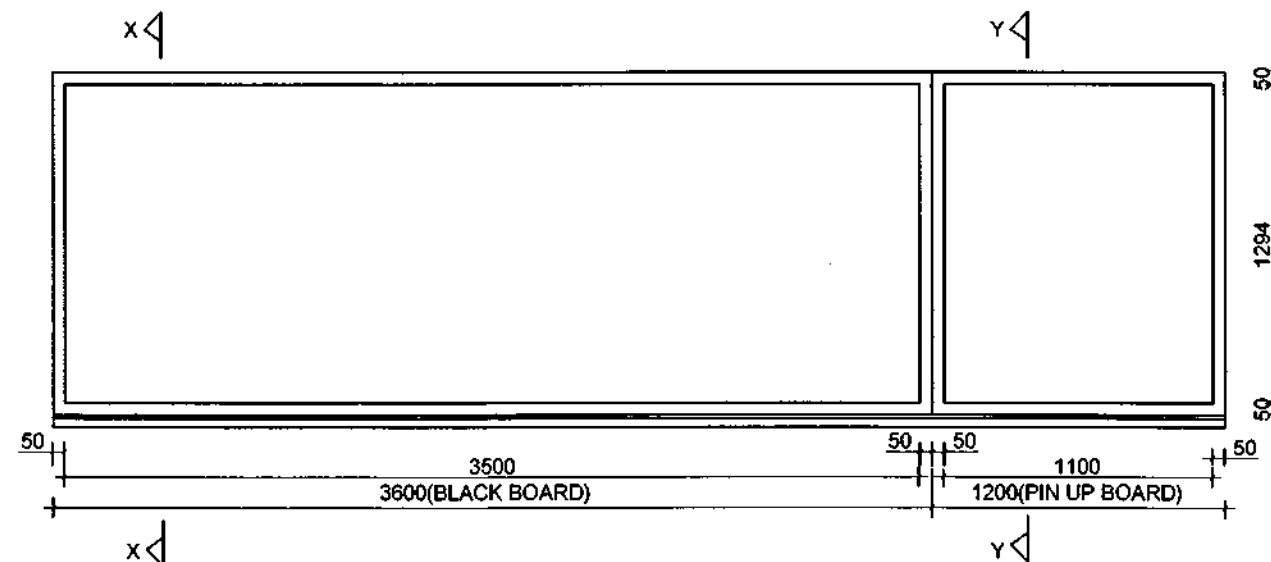
**FIXING DETAIL OF LOOKING GLASS**  
**SIZE 100CM.X120CM. AS PER PLAN**



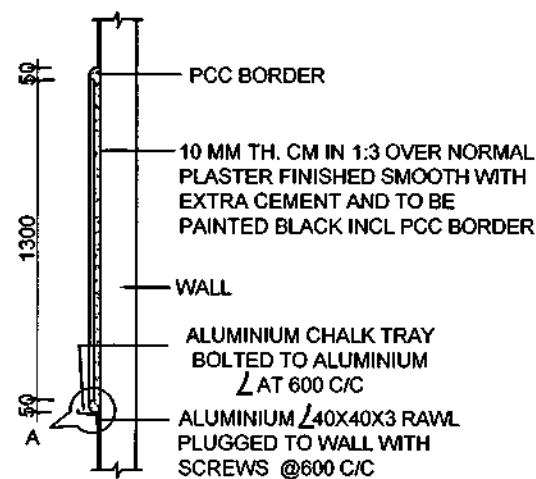
DETAIL AT (A)



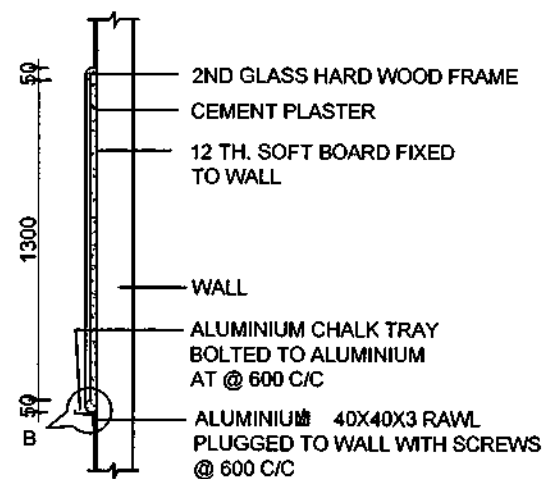
DETAIL AT (B)



FRONT ELEVATION OF BLACK BOARD & PIN UP BOARD



SECTION AT X-X



SECTION AT Y-Y

NOTES

- 1 ALL DIMENSIONS GIVEN ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN IN DRAWING.
- 2 FIGURED DIMENSIONS SHALL BE FOLLOWED
- 3 CONTRACTOR TO CHECK & VERIFY ALL DIMENSIONS BEFORE TAKING EXECUTION IN HAND.
- 4 ALL SIZES GIVEN FOR WOOD WORK ARE FINISHED SIZES.
- 5 ALL EXPOSED WOODEN SURFACES SHALL BE FINISHED WITH FRENCH POLISH.
- 6 ALL HIDDEN SURFACES OF WOOD WORK SHALL BE TREATED WITH TWO COATS OF HOT TAR.

TYPICAL DETAIL OF BLACK BOARD, PIN UP BOARD

DATE	12-01-15	CHIEF ENGINEER	SHT. NO.
DRN	GEETA	UDHAMPUR ZONE	2/2
TCD			
CKD			
SCALE		DRG. NO. CEU2/TD/1547/15	
AAD (ARCH)			
BY ARCH			

LT. COL.  
SENIOR ARCHITECT  
FOR CHIEF ENGINEER

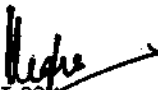
DETAIL OF FLOOR TRAP  
SCALE 1:5

DETAIL OF NAHANI TRAP  
SCALE 1:5

DETAIL OF GULLY TRAP  
SCALE 1:10

**NOTES :**

1. CONTRACTOR TO CHECK AND VERIFY ALL THE DIMENSIONS BEFORE EXECUTION OF THE WORK.
2. FIGURED DIMENSIONS SHALL BE FOLLOWED.
3. ALL DIMENSIONS ARE GIVEN IN MILLIMETERS.

SNo	DATE	DESCRIPTION	INITIAL
<b>REVISIONS</b>			
<b>DETAILS OF FLOOR TRAP NAHANI TRAP &amp; GULLY TRAP</b>			
DATE	12-01-15	<b>CHIEF ENGINEER UDHAMPUR ZONE</b>	SHT. NO.
DRN	GEETA		<b>1/1</b>
TCD			
CKD			
SCALE			
		<b>DRG. NO. CEUZ/TD/1550/15</b>	
AAD (ARCH)		 <b>LT. COL. SENIOR ARCHITECT FOR CHIEF ENGINEER</b>	
BY ARCH			



## GENERAL NOTES :-

1. CONTRACTOR AND EXECUTIVE AUTHORITY TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF THE WORK.
  2. ALL DIMENSIONS ARE GIVEN IN MILLIMETERS, UNLESS OTHERWISE SHOWN.
  3. FIGURED DIMENSIONS SHALL BE FOLLOWED.
  4. FOR EARTHQUAKE RESISTING FEATURES BUILDINGS ARE CATEGORIZED AS PER TABLE-1.
  5. RECOMMENDED MORTAR MIXES AS PER TABLE - 2 OR EQUIVALENT SPECIFICATIONS SHALL BE USED FOR MASONRY CONSTRUCTION.
  6. SEISMIC STRENGTHENING ARRANGEMENTS SHALL BE PROVIDED TO BUILDING AS PER TABLE - 3 IN SHT-2/5 FOR THE CATEGORY OF BUILDING AS APPLICABLE.
  7. PLINTH BAND SHALL BE PROVIDED AT PLINTH LEVEL OF LOAD BEARING WALLS ON TOP OF FOUNDATION WALL, WHERE APPLICABLE PROVISION OF DPC SHALL BE DECIDED AS PER THE LEVEL OF PLINTH BAND.
  8. LINTEL BAND SHALL BE PROVIDED CONTINUOUSLY AT LINTEL LEVEL ON ALL EXTERNAL, INTERNAL, AND CROSS WALLS (LOAD BEARING WALLS) WHERE APPLICABLE.
  9. ROOF BAND SHALL BE PROVIDED IMMEDIATELY BELOW THE ROOF OR FLOORS SLABS ON ALL WALLS. IT NEED NOT BE PROVIDED ON THE TOP OF PANEL WALLS IN FRAMED STRUCTURE.
  10. GABLE BAND SHALL BE PROVIDED OVER ALL GABLE ENDS SUITABLY TIED TO ROOF BAND (REF. FIG-2 AND FIG-2(A)).
  11. THE REINFORCEMENT OF PLINTH, LINTEL, ROOF AND GABLE BAND SHALL BE AS PER TABLE-4 AND SHALL BE MADE CONTINUOUS OVER THE BUILDING PLAN AT THAT LEVEL (FIG-1 AND FIG-2). BENDING DETAILS ARE GIVEN IN FIG-3.
  12. VERTICAL REINFORCEMENT AT CORNERS AND JUNCTIONS OF WALLS SHALL BE PROVIDED AS PER TABLE- 5 AND SHALL BE EMBEDDED AT BOTTOM IN FOUNDATION CONCRETE AND EMBEDDED AT TOP IN ROOF BAND AND PASS THROUGH THE LINTEL BANDS AND FLOOR SLABS OR FLOOR LEVEL BANDS IN ALL STOREYS (FIG-4). BARS AT DIFFERENT STOREYS MAY BE WELDED OR SUITABLY LAPPED. THE REINFORCEMENT SHALL BE EMBEDDED IN CONCRETE AT BOTH ENDS FOR DEVELOPMENT LENGTH OF THE BAR( $L_d$ ).
  13. VERTICAL REINFORCEMENT AT JAMBS OF WINDOWS AND DOOR OPENINGS SHALL BE PROVIDED AS PER TABLE-5.
  14. IN CASE THE SIZE AND LOCATION OF OPENING IN THE LOAD BEARING WALL DO NOT FULFILL THE REQUIREMENT OF CLAUSE 8.3.1 OF IS - 4326 : 2013, THE OPENING SHALL BE STRENGTHENED BY PROVIDING REINFORCEMENT CONCRETE ALL AROUND AS SHOWN IN FIG-5 ON SHT-4/5. THIS REINFORCEMENT SHALL BE IN ADDITION TO THAT MENTIONED IN NOTE NO-13.
  15. MASONRY WORK SHALL BE REPLACED WITH RCC JAMB WITH FOUR NUMBERS 10# BARS AND 8 MM # TIES @200 MM C/C IN SITUATION WHERE THE LENGTH OF MASONRY WALL BETWEEN THE OPENING IS LESS THAN 500 MM OR OPENINGS ARE ADJACENT TO CORNER WALLS. (FIG-6(A) AND FIG-6(B)).
  16. LINTEL BANDS AND PLINTH BANDS SHALL BE CONTINUOUS IN VERTICAL PLANE WHERE OPENINGS OCCUR AT DIFFERENT LEVELS(FIG-7).
  17. ALL BANDS SHALL BE CAST IN CONCRETE OF M-25 DESIGN MIX.
  18. VERTICAL REINFORCEMENT SHALL BE EMBEDDED INSIDE CONCRETE OF M-25 DESIGN MIX WITH 12.5 MM AGGREGATE TO ENSURE SAFETY FROM CORROSION AND GOOD BOND WITH MASONRY.
  19. TO ACHIEVE ADEQUATE TOUGHNESS AND DUCTILITY TO RESIST SEVERE EARTHQUAKE SHOCKS, ADDITIONAL PROVISIONS AS GIVEN IN THE SUCCEEDING PARAGRAPHS SHALL BE ADOPTED FOR ALL REINFORCED CONCRETE STRUCTURE, WHICH ARE LOCATED IN SEISMIC ZONE THREE, FOUR OR FIVE.
- (a) MAXIMUM SPACING OF STIRRUPS OVER A LENGTH OF  $2d$  AT EITHER END OF A BEAM SHALL NOT EXCEED  $d/4$  OR 8 TIMES THE DIA OF THE SMALLEST LONGITUDINAL BAR. HOWEVER, IT NEED NOT BE LESS THAN 100 MM UNLESS OTHERWISE SHOWN LESS IN MAIN STRUCTURAL DRG. THIS FIRST STIRRUP SHALL BE AT A DISTANCE NOT EXCEEDING 50 MM FROM THE JOINT FACE. ELSEWHERE THE BEAM SHALL HAVE VERTICAL STIRRUPS AT A SPACING NOT EXCEEDING  $d/2$  WHERE  $d$  IS THE EFFECTIVE DEPTH OF THE BEAM (REFER FIG-8). THE STIRRUPS SHALL HAVE  $135^\circ$  HOOK WITH A 6 TIMES DIA EXTENSION BUT NOT LESS THAN 75 MM(REF, FIG-8 (A))
- (b) IN AN EXTERNAL BEAM COLUMN JOINT, BOTH THE TOP AND THE BOTTOM BARS SHALL BE PROVIDED WITH THE ANCHORAGE LENGTH BEYOND THE INNER FACE OF THE COLUMN EQUAL TO THE DEVELOPMENT LENGTH IN TENSION PLUS 10 TIMES THE BAR DIA (REF. FIG-8).
- (c) SPECIAL CONFINING REINFORCEMENT IN COLUMN SHALL BE PROVIDED OVER A LENGTH  $L_0$  FROM EACH JOINT FACE ( $L_0$  EQUAL TO LARGER LATERAL DIMENSION OF THE MEMBER, OR  $1/6$  OF THE CLEAR SPAN OF THE MEMBER OR 450 MM WHICHEVER IS MORE), (REF. FIG-9).
- (d) LAP SPLICES SHALL BE PROVIDED ONLY IN THE CENTRAL HALF OF THE COLUMN LENGTH. HOOPS SHALL BE PROVIDED OVER THE ENTIRE SPLICE LENGTH AT SPACING NOT EXCEEDING 150 MM C/C. NOT MORE THAN 50% OF BARS SHALL BE SPICED AT ONE SECTION.
- (e) SPECIAL CONFINING REINFORCEMENT AS REQUIRED AT THE END OF COLUMN SHALL BE PROVIDED THROUGH THE JOINT AS WELL UNLESS THE JOINT HAS BEAMS FRAMING INTO ALL VERTICAL FACES OF JOINT AND WHERE EACH BEAM WIDTH IS AT LEAST  $\frac{3}{4}$  OF COLUMN WIDTH. IN THE LATER CASE, SPECIAL CONFINING REINFORCEMENT MAY BE REDUCED TO HALF BUT SPACING SHOULD NOT BE LESS THAN 150 MM C/C.
- (f) WHEN A COLUMN TERMINATES INTO A FOOTING, SPECIAL CONFINING REINFORCEMENT AS PROVIDED IN LENGTH  $L_0$  SHALL BE EXTENDED AT LEAST 300 MM INTO THE FOOTING (REF. FIG-10)
- (g) IN CASE OF BEAMS, THE LONGITUDINAL BARS SHALL BE SPICED, ONLY IF HOOPS ARE PROVIDED OVER THE ENTIRE SPLICE LENGTH, AT A SPACING NOT EXCEEDING 150 MM (REF. FIG-11). THE LAP LENGTH SHALL NOT BE LESS THAN THE BAR DEVELOPMENT LENGTH IN TENSION. LAP SPLICES SHALL NOT BE PROVIDED (a) WITHIN A JOINT, (b) WITHIN A DISTANCE OF  $2d$  FROM JOINT FACE, AND (c) WITHIN A QUARTER LENGTH OF MEMBER WHERE FLEXURAL YIELDING MAY GENERALLY OCCUR UNDER THE EFFECT OF EARTHQUAKE FORCE. NOT MORE THAN 50% OF THE BARS SHALL BE SPICED AT ONE SECTION.

## NOTES:-

1. SPAN SHALL BE CENTER TO CENTER DISTANCE BETWEEN WALLS, COLUMNS OR BUTTRESSES.
2. WIDTH OF RCC BAND SHALL BE SAME AS THE THICKNESS OF THE WALL.
3. THE VERTICAL THICKNESS OF RCC BAND SHALL BE KEPT AS 75 MM MIN. WHERE FOUR BARS ARE SPECIFIED (FIG-3)
4. IN CASE OF RCC BANDS, LONGITUDINAL BARS SHALL BE HELD IN POSITION BY LATERAL TIES OF 8 MM DIA SPACED AT 150 MM C/C.
5. THIS DRG. IS BASED ON IS : 4326-2013 AND IS : 13920 - 2016.
6. THE REINFORCEMENT BARS SHALL BE TMT STEEL Fe 500D (MEETING ALL THE REQUIREMENTS OF IS - 1786) AS APPLICABLE AS PER MAIN STRUCTURAL DRAWINGS.
7. GENERAL NOTES :- 7,8,9,10 NOT APPLICABLE FOR SMRF RCC STRUCTURES.

S NO	DATE	DESCRIPTION	INITIAL
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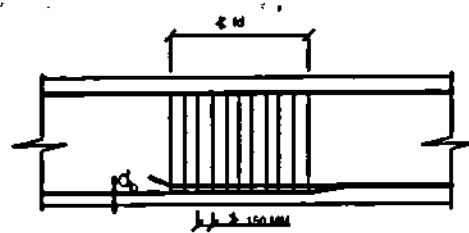
### REVISION

### TYPICAL DETAILS OF SEISMIC PROVISIONS

### GENERAL NOTES

DATE	01.04.2021	SH NO	
DRN	SUB A. SHAMBER	CHIEF ENGINEER	1
DES	LT COL UDITH KEGI	UDHAMPUR ZONE	5
DF NO			
SCALE	AS SHOWN	DRG NO : CEUZ/TD-1584/2021	

50-1 (DESIGN)  
FOR CHIEF ENGINEER



Ld = DEVELOPMENT LENGTH  
d<sub>b</sub> = BAR DIA

TABLE - 1 : BUILDING CATEGORIES FOR EARTHQUAKE RESISTANT FEATURES

IMPORTANCE FACTOR	SEISMIC ZONE			
	II	III	IV	V
1.0	B	C	D	E
1.5	C	D	E	E

NOTE : CATEGORY I IS NOT DEFUNCT AS ZONE I DOES NOT EXIST AT PRESENT

FIG - 11 :- LAP SPLICE IN BEAM

TABLE - 2 : RECOMMENDED MORTAR MIXES

SL. No (1)	BUILDING CATEGORIES (2)	SL.No AS GIVEN IN TABLE 1 OF IS 1905 (3)	GRADE OF MORTAR (4)	MIX PROPORTIONS (BY LOOSE VOLUME) (5) (6) (7)			MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS N/mm (8)
I	E	2(a) 2(b)	M2 ---	1 1	1/4 C or B 1/2 C or B	4 4 1/2	7.5 6.0
II	D	3(a) 3(B)	M1 ---	1 1	----- 1C or B	5 6	5.0 3.0
III	C	4(a) 4(b)	M2 ---	1 1	----- 2 B	6 9	3.0 2.0
IV	B	5(a) 5(b)	M3 ---	1 1	----- 3 B	7 12	1.5 1.5

TABLE - 3 : STRENGTHENING ARRANGEMENT RECOMMENDED FOR MASONRY BUILDING (RECTANGULAR MASONRY UNITS)

SL. No (1)	BUILDING CATEGORIES (2)	NUMBER OF STOREYS (3)	STRENGTHENING TO BE PROVIDED IN ALL STOREYS (4)
I	B	a) 1 TO 3 b) 4	a, b, c, f, g a, b, c, f, g
II	C	a) 1 AND 2 b) 3 AND 4	a, b, c, f, g a to g
III	D	a) 1 AND 2 b) 3 AND 4	a to g a to h
IV	E	1 TO 3 <sup>1)</sup>	a to h

TABLE - 4 : RECOMMENDED LONGITUDINAL STEEL (TMT BARS) IN REINFORCEMENT CONCRETE BANDS

SPAN IN METERS	BUILDING CATEGORIES							
	B		C		D		E	
	NO OF BARS	DIA # (MM)	NO OF BARS	DIA # (MM)	NO OF BARS	DIA # (MM)	NO OF BARS	DIA # (MM)
5 OR LESS	2	8	2	8	2	8	2	10
6	2	8	2	8	2	10	2	12
7	2	8	2	10	2	12	4	10
8	2	10	2	12	4	10	4	12

## WHERE

a	MASONRY MORTAR (TABLE-2)
b	LINTEL BAND
c	ROOF/ FLOOR BAND AND GABLE BAND WHERE NECESSARY
d	VERTICAL STEEL AT CORNERS AND JUNCTION OF WALL
e	VERTICAL STEEL AT JAMBS OF OPENINGS
f	BRACING IN PLAN AT TIE LEVEL OF TRUSSED ROOFS
g	PLINTH BAND
h	DOWEL BARS

TABLE - 5 : VERTICAL STEEL REINFORCEMENT IN MASONRY WALLS WITH RECTANGULAR MASONRY UNITS

SL. No (1)	NO. OF STOREYS (2)	STOREY (3)	DIAMETER OF HSD SINGLE BAR AT EACH CRITICAL SECTION, MM			
			CATE-GORY B (4)	CATE-GORY C (5)	CATE-GORY D (6)	CATE-GORY E (7)
(I)	ONE	---	NIL	NIL	10	12
(II)	TWO	a) TOP b) BOTTOM	NIL NIL	NIL NIL	10 12	12 16
(III)	THREE	a) TOP b) MIDDLE c) BOTTOM	NIL NIL NIL	10 10 12	10 12 12	12 16 16
(IV)	FOUR	a) TOP b) THIRD c) SECOND d) BOTTOM	10 10 10 12	10 10 12 12	10 12 16 20	FOUR STOREY BUILDING NOT PERMITTED

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REVISION			
TYPICAL DETAILS OF SEISMIC PROVISIONS			
TABLES OF BUILDING CATEGORY AND STRENGTHENING, MEASURES			
DATE	01.04.2021	CHIEF ENGINEER UDHAMPUR ZONE	SH NO
DRN	RAJ A. SHAHEER		2
DES	LT COL UDIT NEGI		5
OF NO			
SCALE	AS SHOWN	DRG NO : CEUZ/TD-1584/2021	

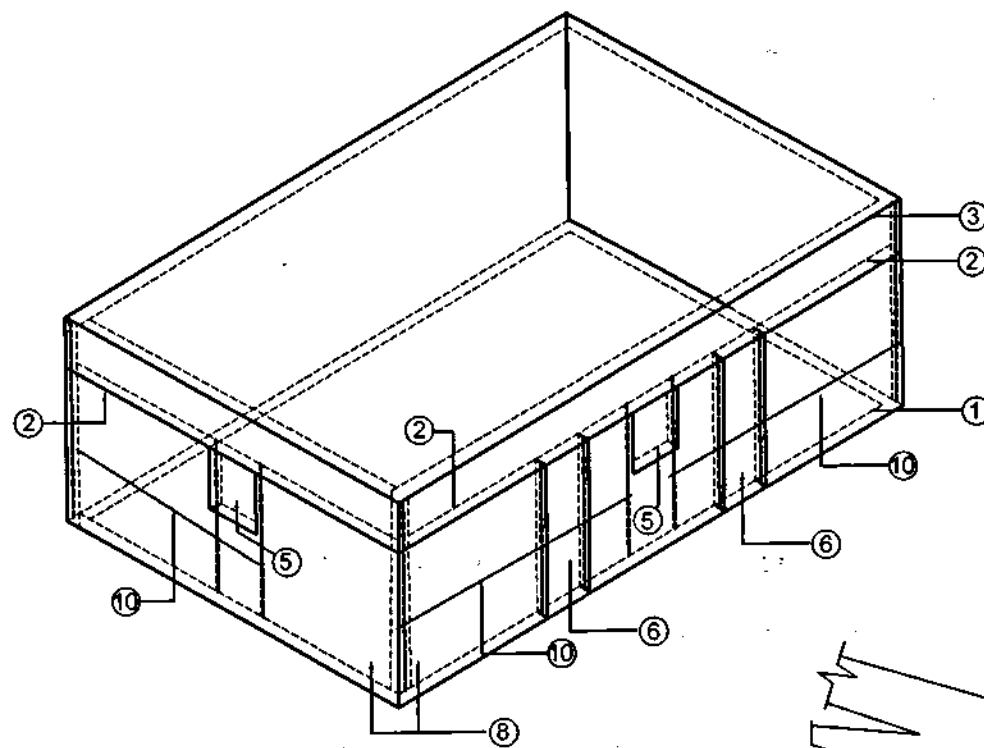


FIG - 1  
OVERALL ARRANGEMENT OF  
REINFORCING MASONRY BUILDING

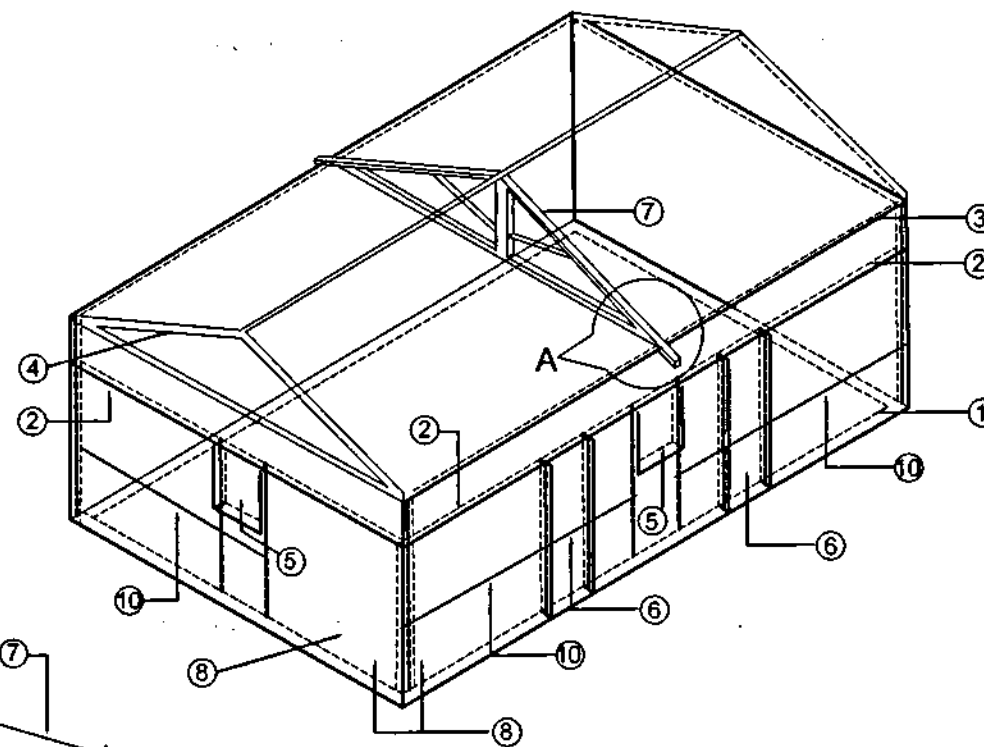


FIG - 2  
OVERALL ARRANGEMENT OF REINFORCING  
MASONRY HAVING PITCHED ROOF BUILDING

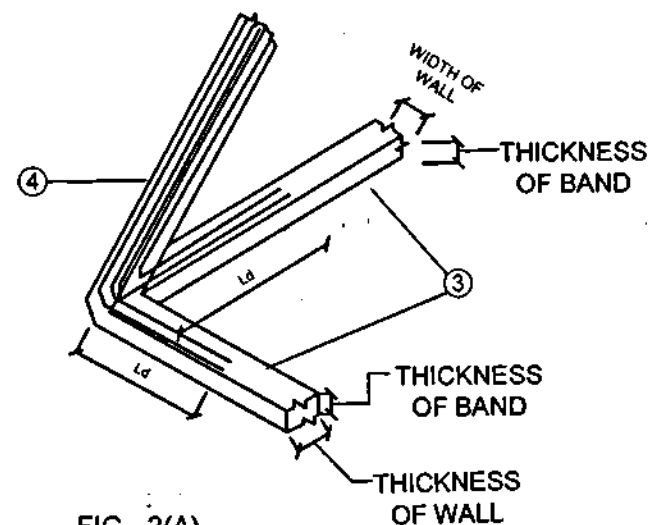
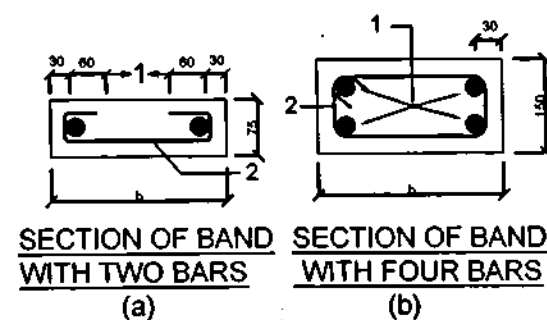


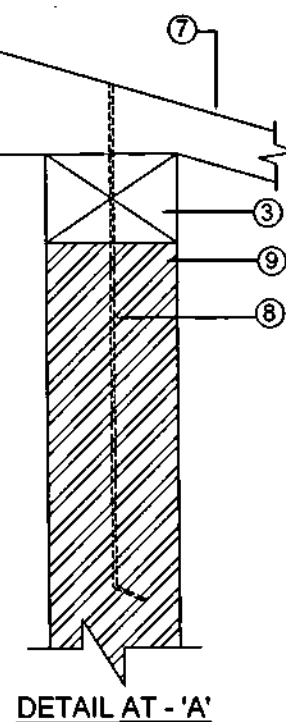
FIG - 2(A)  
JUNCTION DETAIL OF ROOF  
AND GABLE BAND

NOTE:- DETAILING OF REINFORCEMENT FOR  
TIE LEVEL (ROOF) BAND AS PER FIG - 3



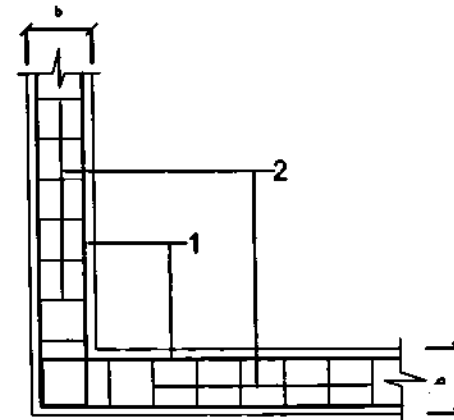
1. LONGITUDINAL BARS
2. LATERAL TIES
- b. WALL THICKNESS

FIG - 3  
REINFORCEMENT AND BENDING DETAIL IN R C C BANDS

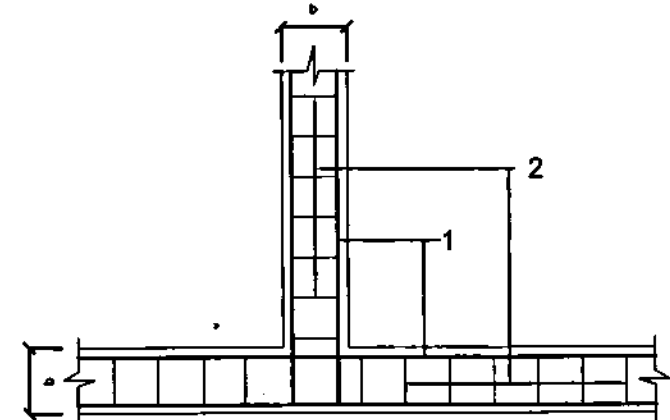


DETAIL AT - 'A'

1. PLINTH BAND
2. LINTEL BAND
3. FLOOR / ROOF /  
TIE LEVEL BAND
4. GABLE BAND
5. WINDOW
6. DOOR
7. RAFTER
8. WALL
9. HOLDING DOWN  
BOLT
10. VERTICAL BAR



STRUCTURAL PLAN AT  
CORNER JUNCTION  
(c)



STRUCTURAL PLAN AT  
JUNCTION OF WALL  
(d)

S NO	DATE	DESCRIPTION	INITIAL
REVISION			
TYPICAL DETAILS OF SEISMIC PROVISIONS			
FIG-1, FIG-2, FIG-2 (A) AND FIG-3			
DATE	01.04.2021	CHIEF ENGINEER UDHAMPUR ZONE	SH NO
DRN	SUBA SHABEER		3
DES	LT COL UDIT MEH		5
DF NO			
SCALE	AS SHOWN	DRG NO: CEUZ/TD-1584/2021	

*[Signature]*

SO-1 (DESIGN)  
FOR CHIEF ENGINEER

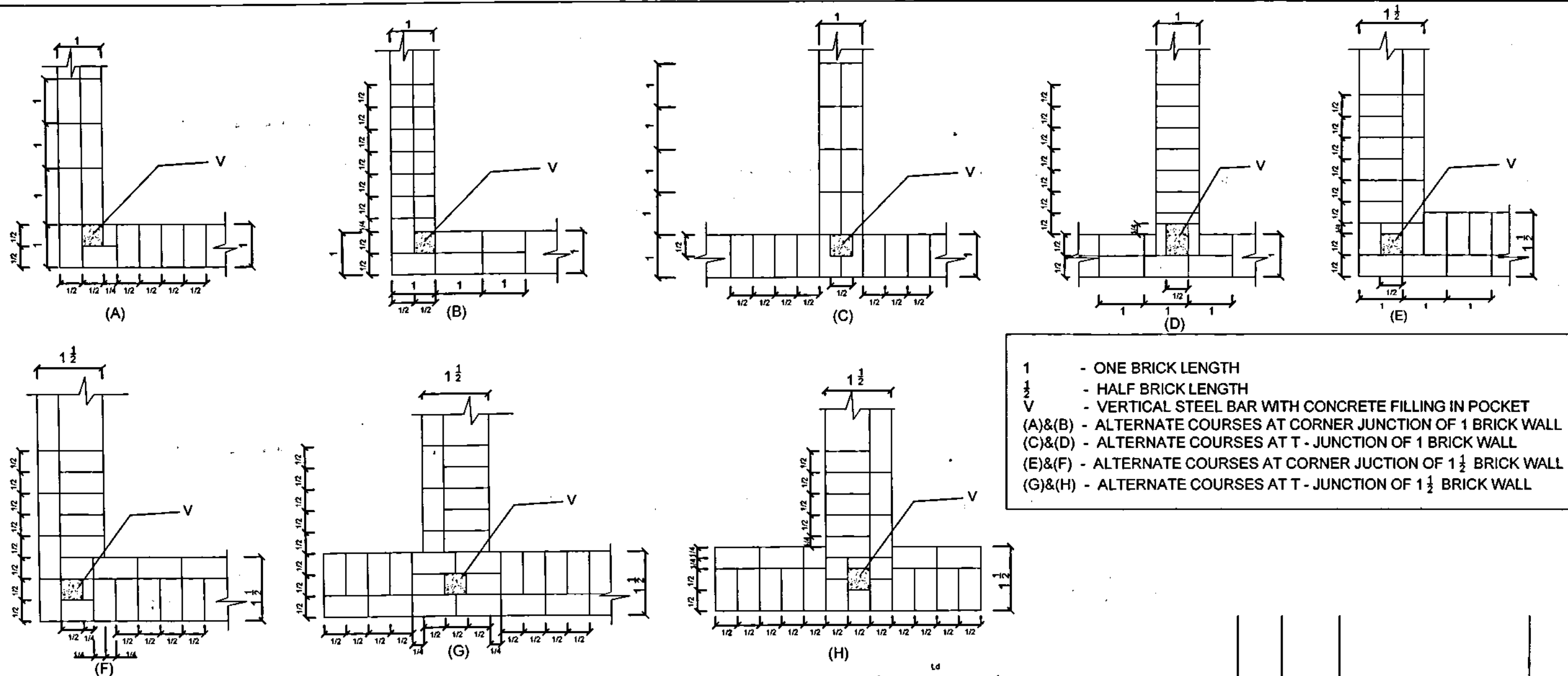


FIG - 4  
TYPICAL DETAILS OF PROVIDING VERTICAL STEEL BARS IN BRICK MASONRY

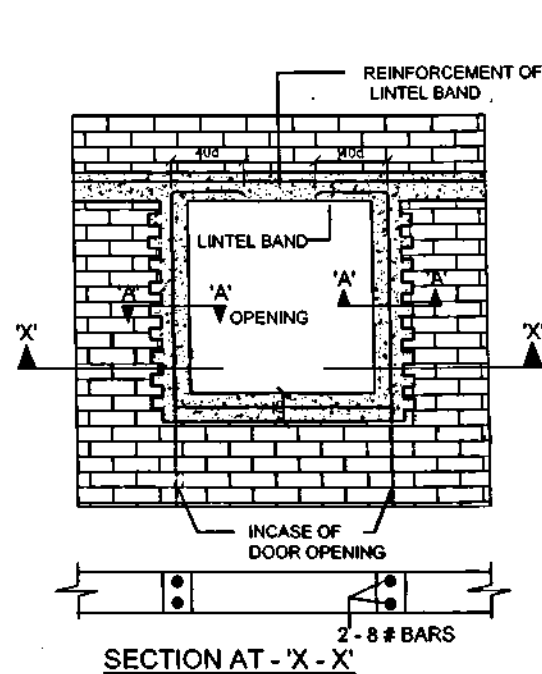


FIG - 5  
STRENGTHENING MASONRY  
AROUND OPENING

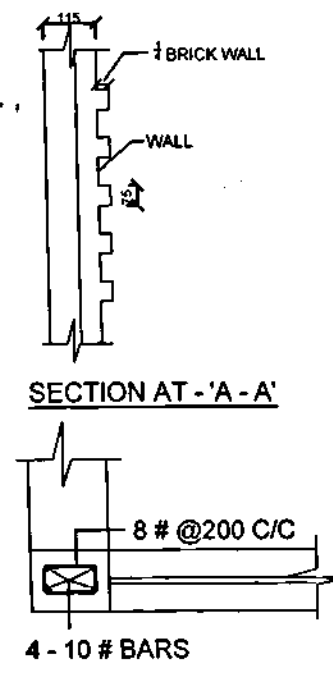


FIG - 6(B)  
OPENING ADJACENT TO  
CORNER WALLS

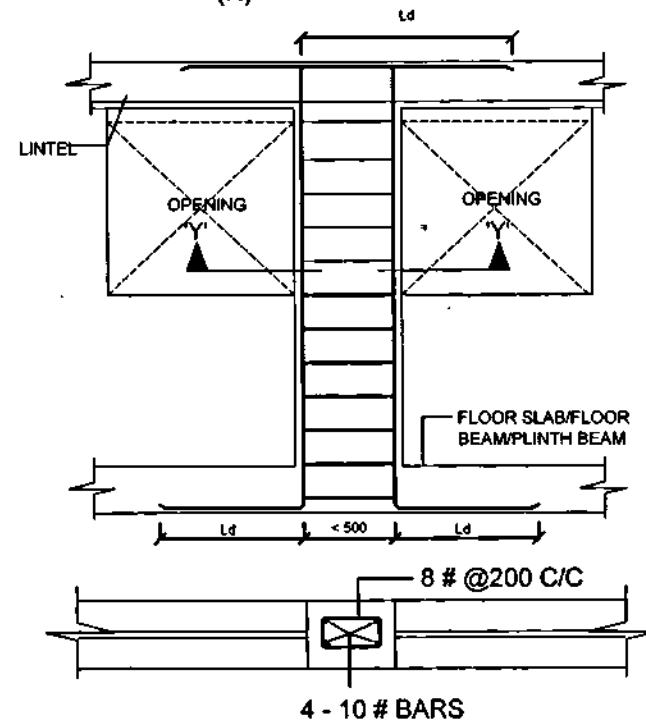



FIG - 6(A)  
DETAIL OF RCC JAMB

S NO	DATE	DESCRIPTION	INITIAL
REVISION			
TYPICAL DETAILS OF SEISMIC PROVISIONS			
FIG-4, FIG-5, FIG-6 (A) AND FIG-6 (B)			
DATE	01.04.2021	CHIEF ENGINEER UDHAMPUR ZONE	SH NO
DRN	SUB A. SHABEER		4
DES	LT COL UDIT NEGI		5
DF NO			
SCALE	AS SHOWN	DRG NO: CEUZ/TD-1584/2021	
		 SO-1 (DESIGN) FOR CHIEF ENGINEER	

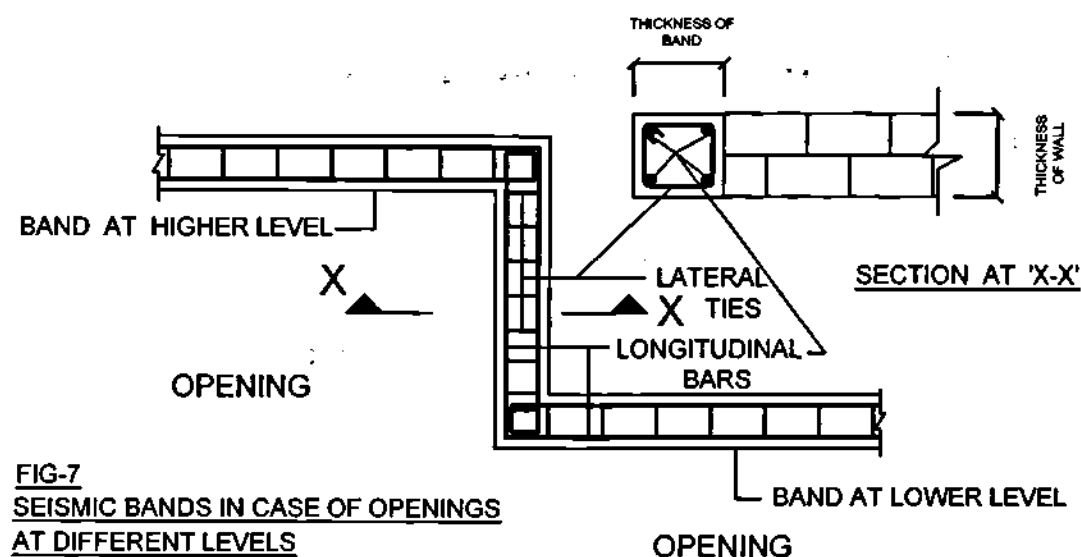


FIG-7  
SEISMIC BANDS IN CASE OF OPENINGS  
AT DIFFERENT LEVELS

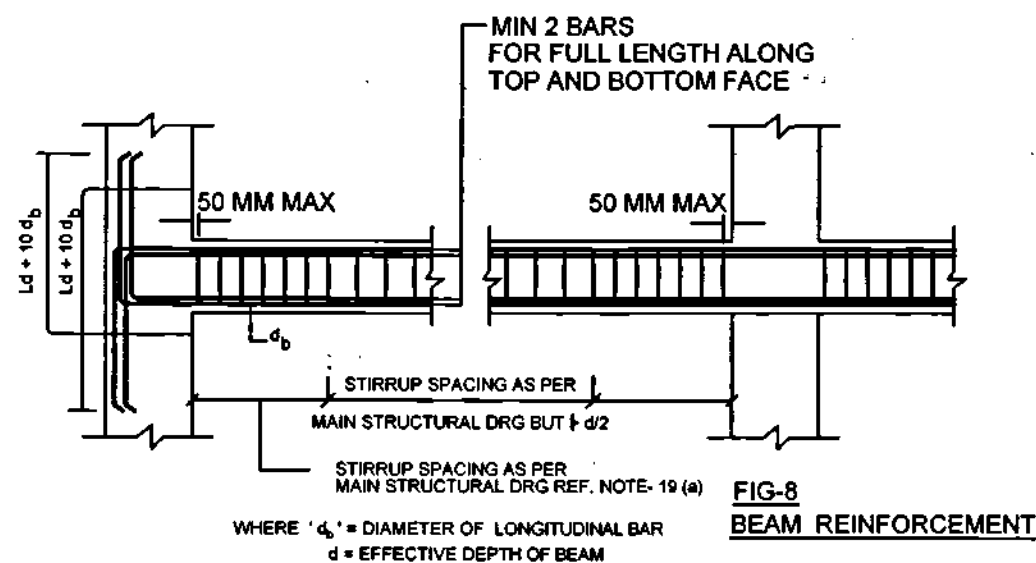


FIG-8  
BEAM REINFORCEMENT

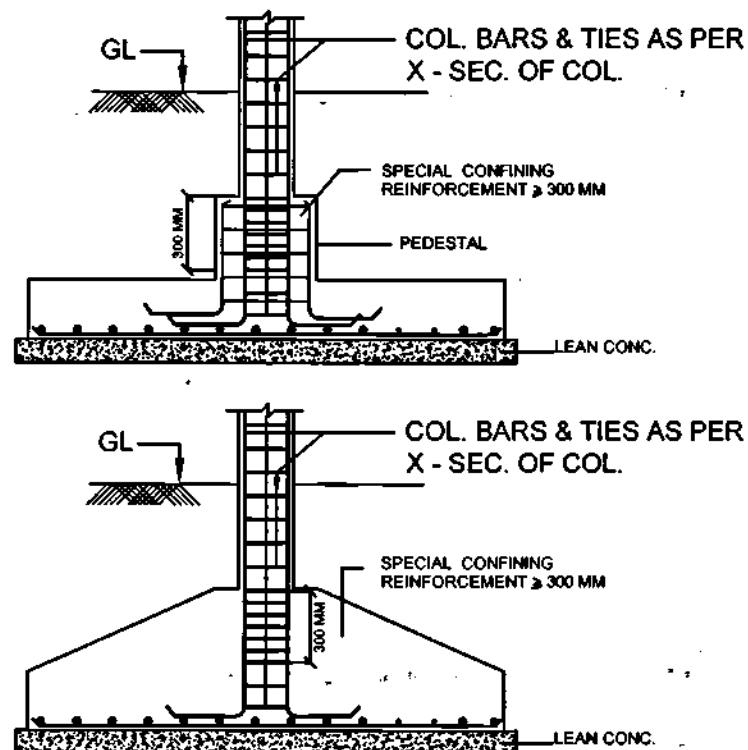


FIG-10  
PROVISION OF SPECIAL CONFINING  
REINFORCEMENT IN FOOTING

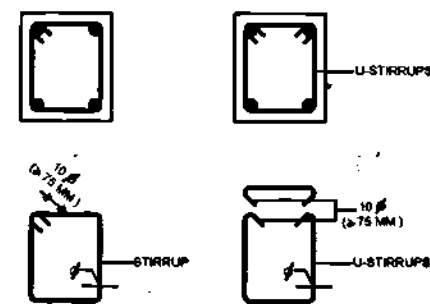


FIG-8 (A)  
BENDING DETAILS OF STIRRUPS  
IN BEAMS

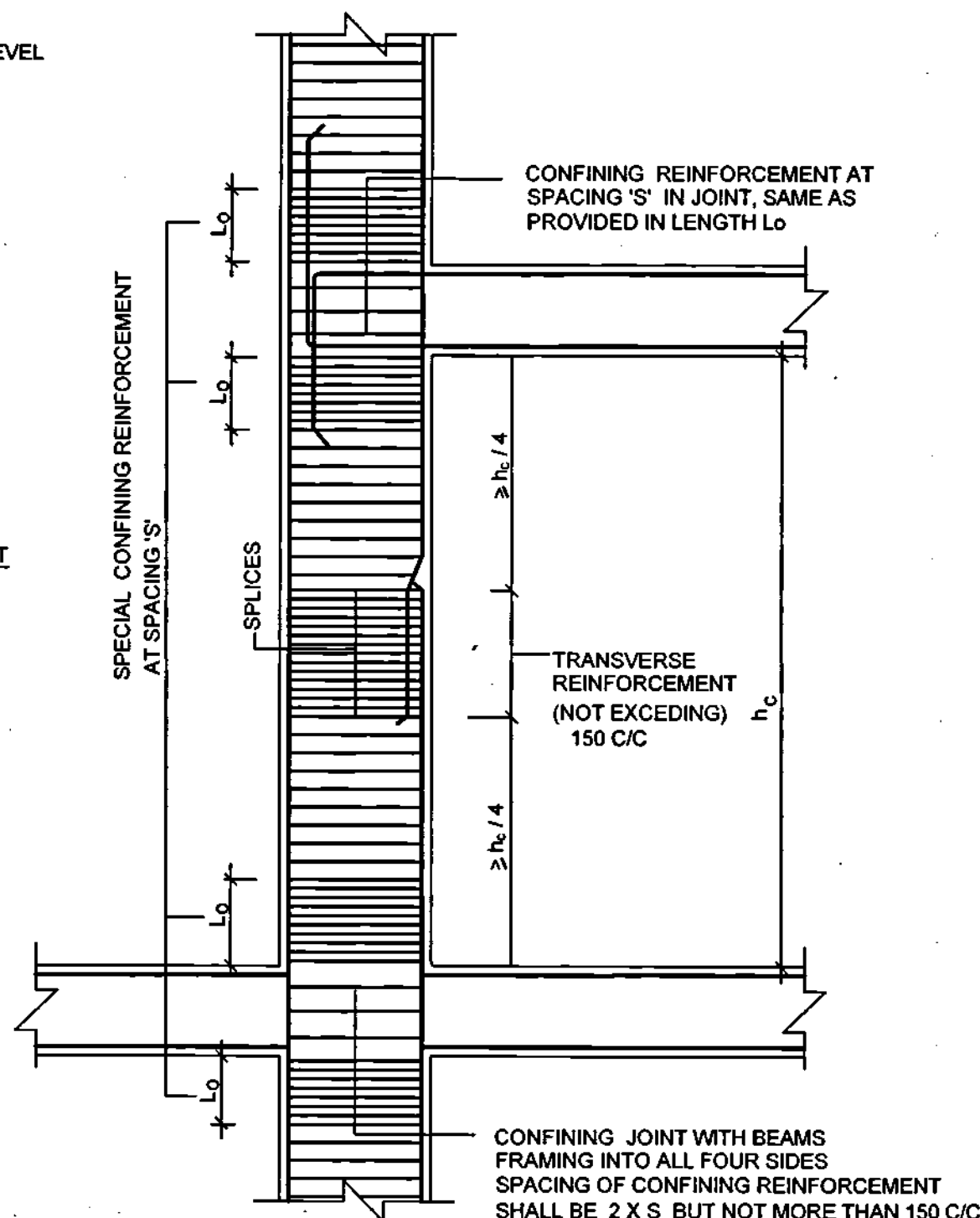
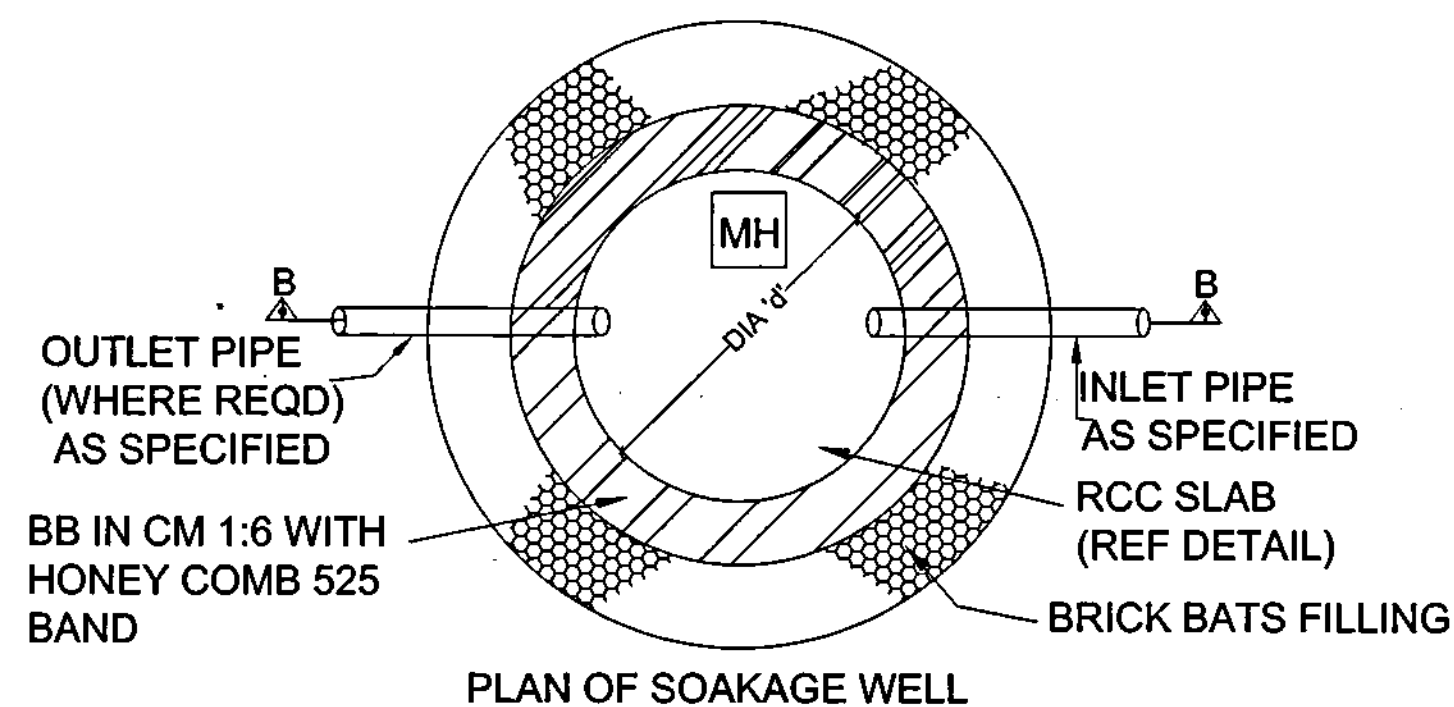
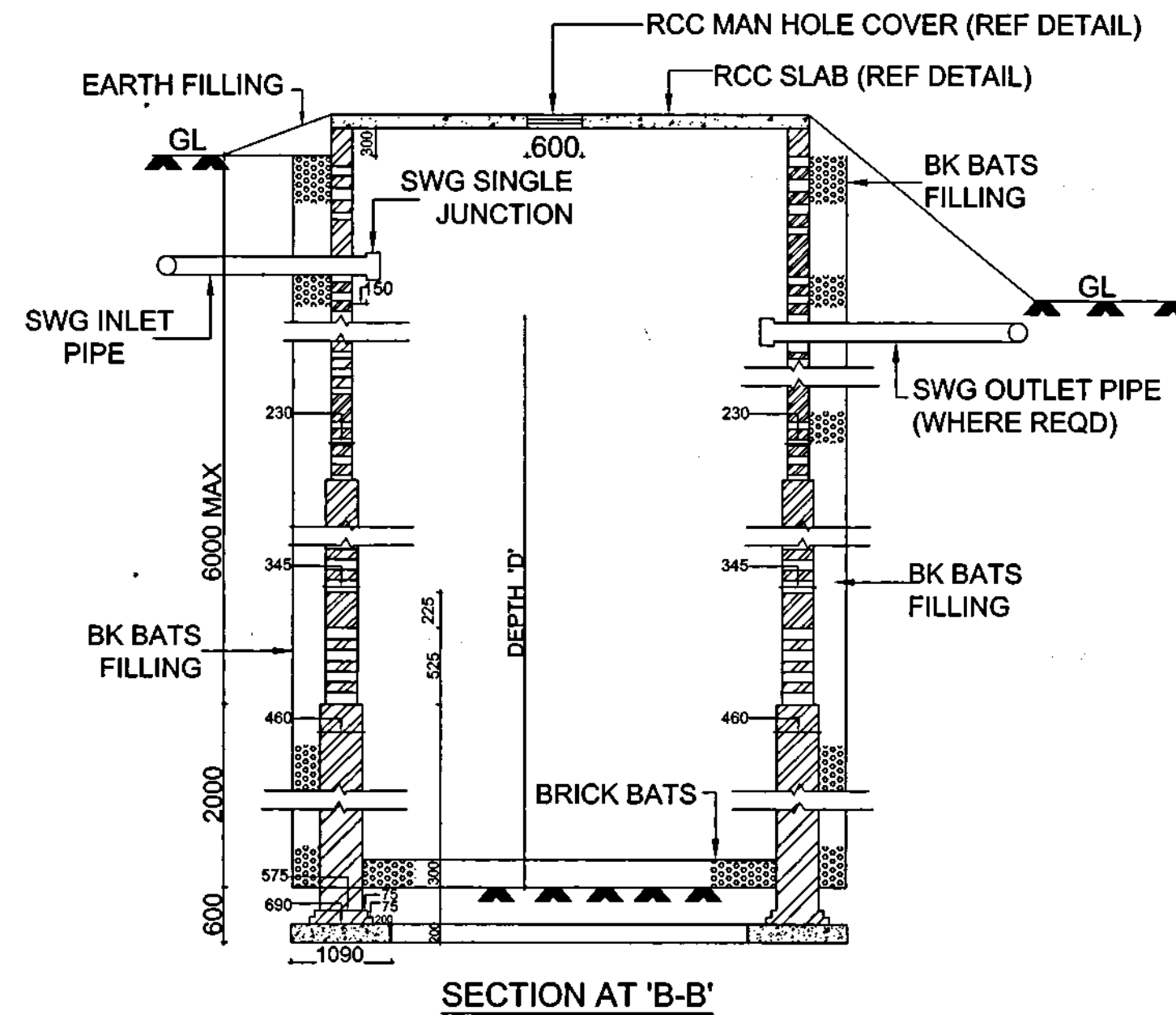
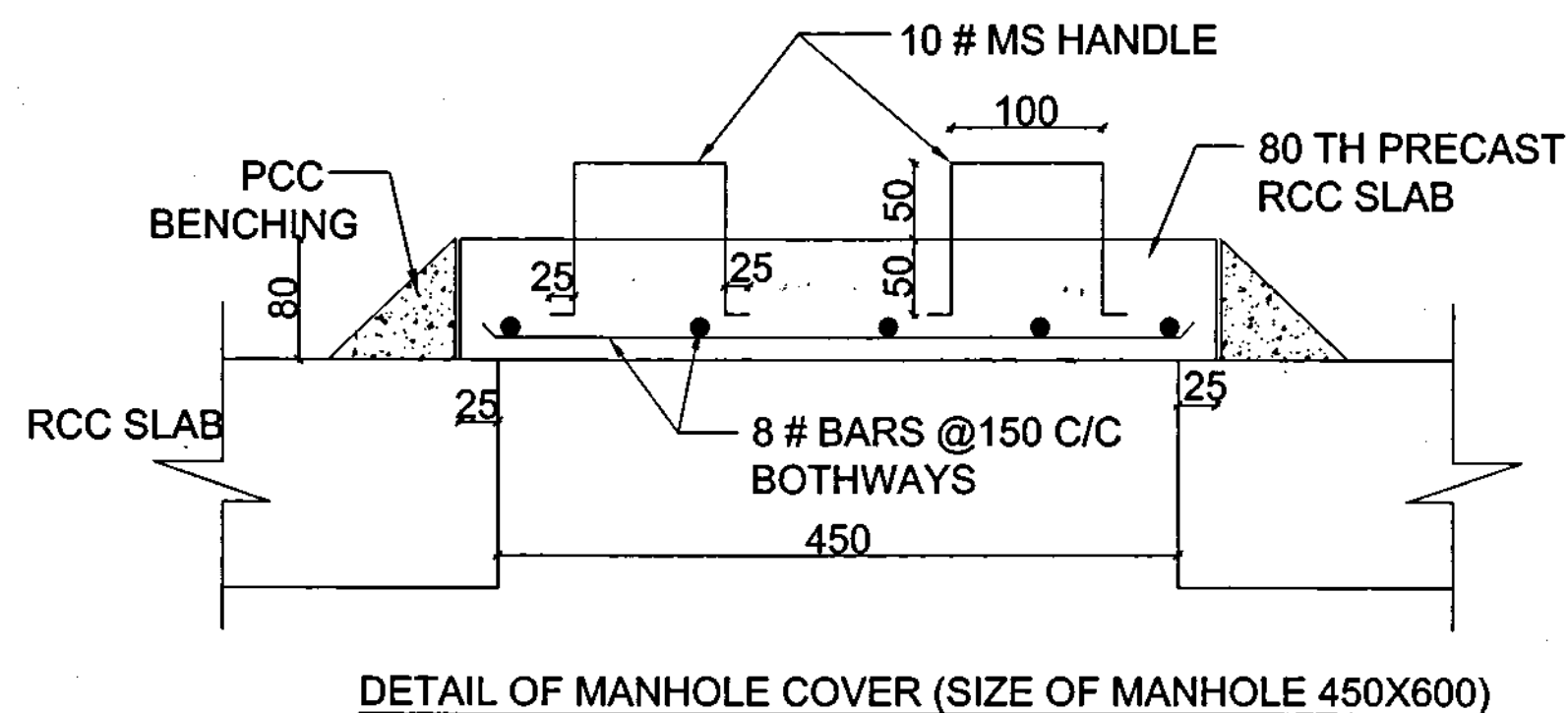
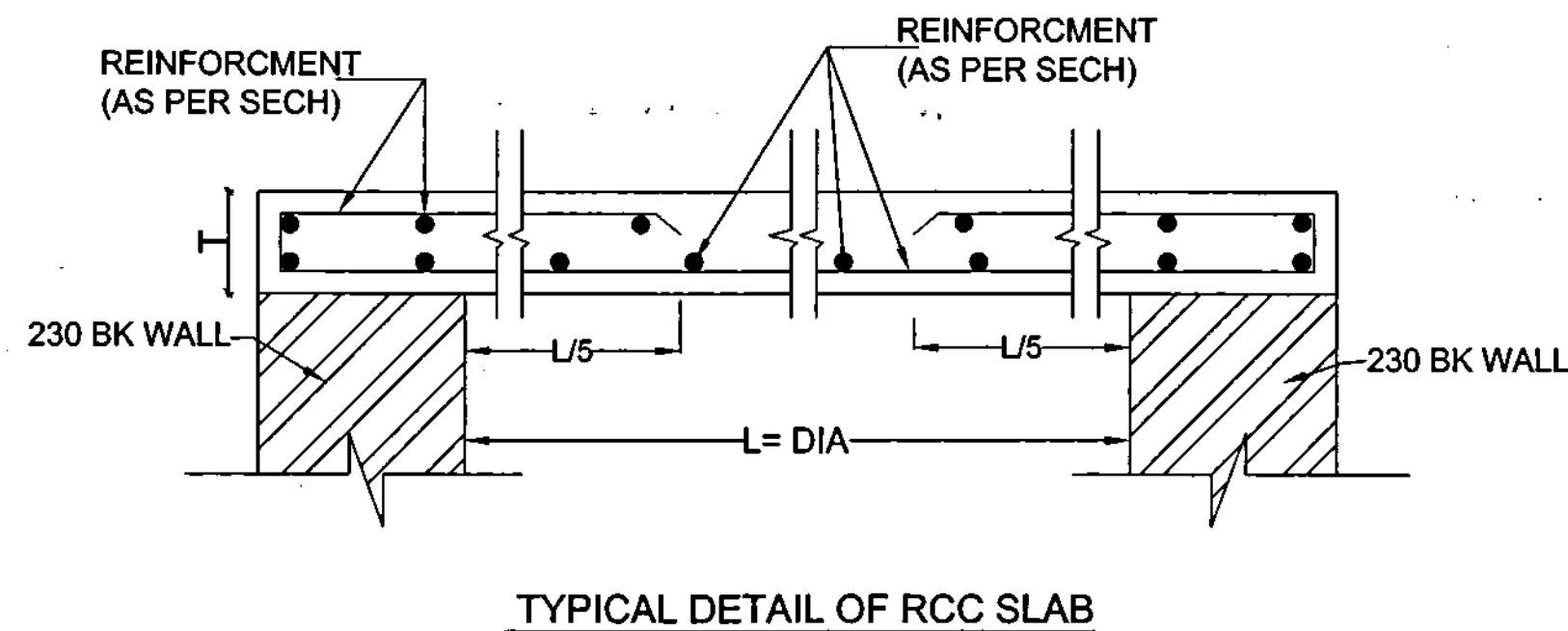
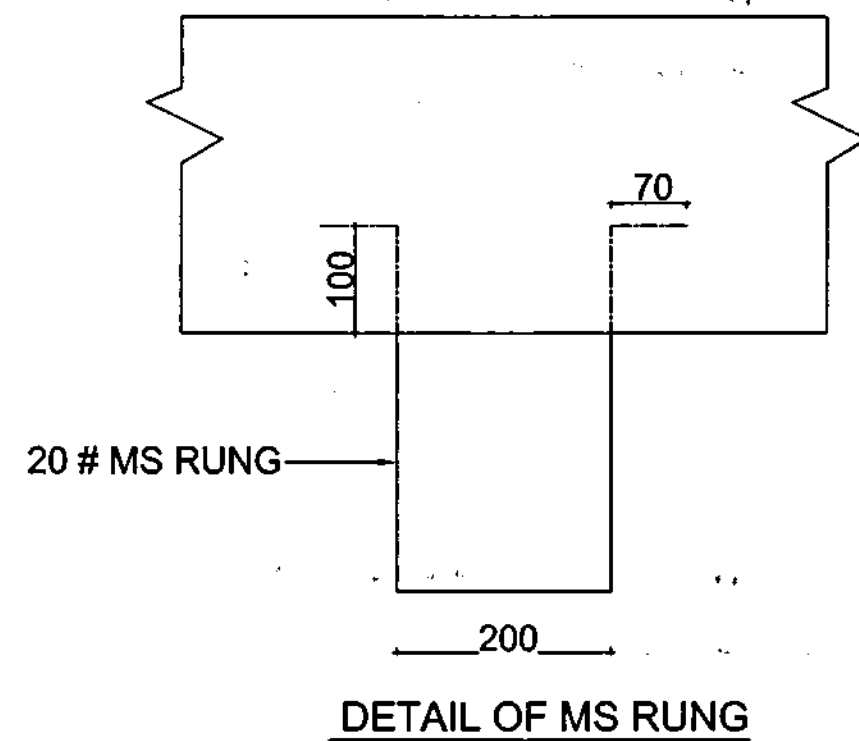


FIG-9  
COLUMN AND JOINT DETAILING

S NO	DATE	DESCRIPTION	INITIAL
REVISION			
TYPICAL DETAILS OF SEISMIC PROVISIONS			
FIG-7, FIG-8, FIG-8(A) FIG-9 AND FIG - 10			
DATE	01.04.2021	CHIEF ENGINEER UDHAMPUR ZONE	SH NO
DRN	SUB A. SHABER		5
DES	LT COL UDIT NEGI		5
DF NO			
SCALE	AS SHOWN	DRG NO: CEUZ/TD-1584/2021	

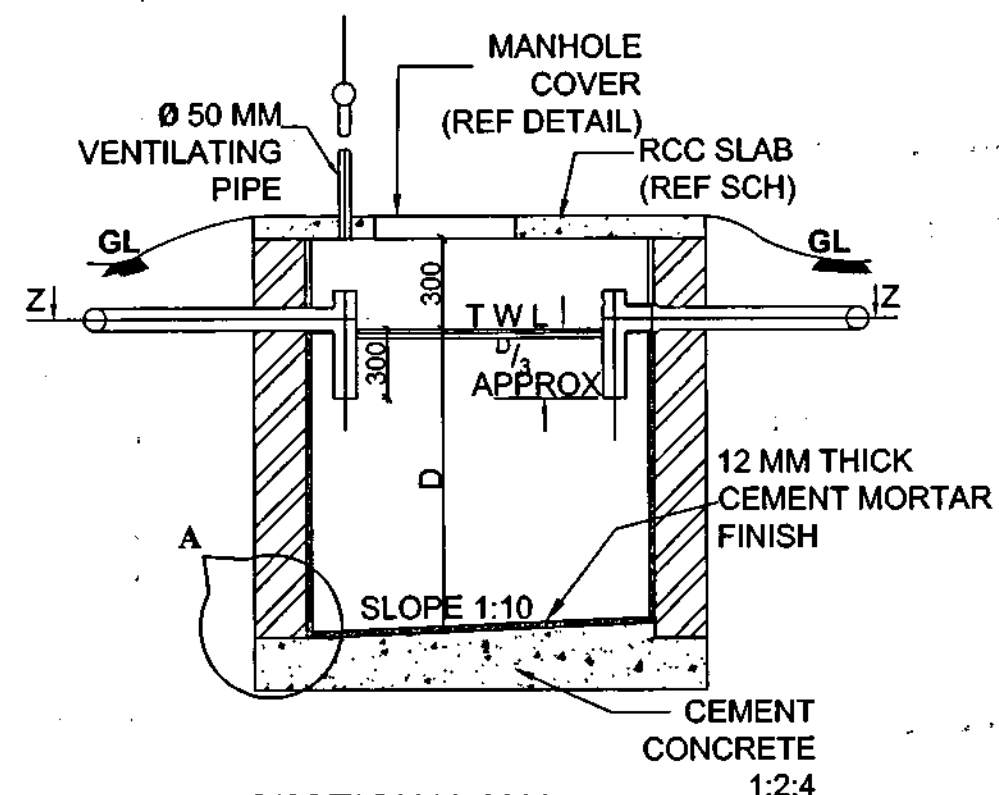


- NOTES**
23. BASE OF SOAKAGE WELL SHALL BE ABOVE GROUND WATER TABLE LEVEL.
  24. INVERT OF OUTLET PIPE OF SEPTIC TANK SHALL BE 50 MM BELOW INVERT OF INLET PIPE.
  25. FOR POPULATION OVER 100, DUPLICATING SEPTIC TANKS, EACH PROVIDING HALF THE TOTAL CAPACITY REQUIRED, SHOULD BE OPERATED IN PARALLEL.
  26. MINIMUM FREE-BOARD OF 300 MM SHALL BE PROVIDED IN SEPTIC TANK.
  27. VENTILATING PIPE (MINIMUM 50 MM DIA) WITH SUITABLE CAGE OF MOSQUITO PROOF MESH AT THE TOP SHALL BE PROVIDED WITH EVERY SEPTIC TANK.

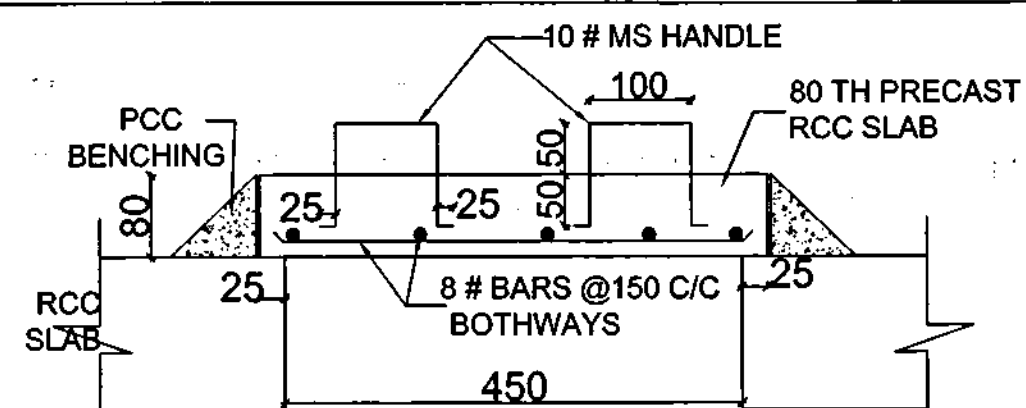
- NOTES**
1. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF THE WORK.
  2. FIGURED DIMENSIONS SHALL BE FOLLOWED.
  3. ALL DIMENSIONS ARE GIVEN IN MILLIMETRES UNLESS OTHERWISE SHOWN.
  4. CRUSHING STRENGTH OF BRICKS SHALL BE MINIMUM 70KG/CM<sup>2</sup>.
  5. SLAB THICKNESS WITH SOIL FILLING UP TO 500MM SHALL BE INCREASED BY 20MM PER 10CM OR PART THERE OF EARTH FILLING SUBJECT TO MAX<sup>m</sup> THICKNESS AS GIVEN IN SCHEDULE.
  6. IN CASE OF MASONRY WALLS BUILT IN STONE THE THICKNESS BE AS GIVEN IN BRACKETS IN SECTION OF WALLS.
  7. THIS DRAWING IS BASED ON DETENTION PERIOD OF 24 HOURS AND DESLUDGING PERIOD OF TWO YEARS AND DESIGN GENERALLY ADOPTED FROM IS 2470 (AS AMENDED) 1985.
  8. BEFORE COMMISSIONING THE SEPTIC TANK WILL BE FILLED WITH WATER OUTLET LEVEL SEPTIC TANK SHOULD PRERABLY BY SEEDED WITH WELL DIGESTED SLUDGE FROM OTHER SEPTIC TANK OR SLUDGE DIGESTION TANK SMALL QUANTITIES OF DECAYING ORGANIC MATTER SUCH AS DIGESTED COWDUNG MAY BE INTRODUCED IN CASE DIGESTED SLUDGE IS NOT AVAILABLE.
  9. SLOPE IN THE BED OF SEPTIC TANK WILL BE 1:10 OR AS SHOWN IN THE PLAN. SECTIONAL ELEVATION SHALL BE AS UNDER:-  
(i) FOR SEPTIC TANK UP TO 50 USERS - 5CM.  
(ii) FOR SEPTIC TANK 100 TO 500 USERS - 10CM.
  10. RCC MANHOLE SHAFT SHALL BE PROVIDED TO SEPTIC TANKS ONLY WHERE THE SEPTIC TANKS ARE BURIED UNDER GROUND IN OTHER CASES MANHOLE AND FRAMES ONLY SHALL BE KEPT 100 ABOVE GL / EARTH FILLING.
  11. BENCHING IN INLET CHAMBER SHALL BE PCC 1:2:4 LAID TO 1:1 SLOPE.
  12. CONNECTING PIPE FROM S.T OUTLET CHAMBER SHALL BE SWG PIPE 150 Ø.
  13. THE SOIL ABSORPTION SYSTEM SHOULD NOT BE COLSER THAN 18M TO ANY SOURCE OF DRINKING WATER AND NOT CLOSER THAN 6M. FROM ANY HABITABLE BUILDING.
  14. BRICK WORK IN SOAKAGE WELL (OF ANY DIAMETER) BE BUILT LIKE BRICK WORK STRAIGHT ON PLAN OR TO CURVE EXCEEDING 6M. MEAN RADIUS AND NEED NOT BE IN HEADER COURSES WITH BRICK CUT TO THE RADIO.
  15. SOAKAGE TEST AS GIVEN IN IS 2470.1985 WILL BE CARRIED OUT AND SIZE PROVIDED FROM THE TABLE ASCERTAINING THE PERCOLATION RATE IN MINUTES.
  16. BRIEF SPECIFICATION:-  
(a) SEPTIC TANK  
(i) FOUNDATION AND FLOOR PCC 1:2:4 OVER HARD  
(ii) BRICK WORK CORE CEMENT MORTAR 1:4  
(iii) PCC AND RCC WORK 1:2:4 MIX  
(iv) FINISHES:-  
(i) FLOOR 20MM WATER PROOF CEMENT PLASTER IN 1:3  
(ii) INTERNAL SURFACE OF WALL -DO-  
(iii) EXT. SURFACE OF WALLS FLUSH POINTED AS WORK PROCEEDS  
(v) SOAKAGE WELL  
(i) FOUNDATION PCC 1:4:8  
(ii) WALLS CM 1:6 HONEY COMBED  
(iii) ROOF RCC 1:2:4
  17. FOR DETAIL OF MANHOLE REF.DRG NO. CE/TD.805/87SHTNO 2/2.
  18. DT IS NOT RECOMMENDED IN AREAS WHERE FIBROUS DOORS OF TREES OR VEGETATION ARE LIKELY TO GENERATE THE SYSTEM AND CAUSE BLOCK AGE IN SUCH CASE THE DESIGN OF DTs SHALL BE CARRIED OUT BY E2(DESIGN) SECTION.
  19. IN ALL RCC WORK M-25 GDE DESIGN MIX CONCRETE AS PER IS.456 OF 2000 SHALL BE USED.
  20. ALL STEEL USED SHALL BE HYSD FE 500 CONFORMING TO IS -1786.
  21. CONFIRMATION WITH RESPECT TO REQUIRED SIZE OF SEPTIC TANK AND SOAKAGE WELL SHALL BE TAKEN FROM E2 (DESIGN) SECTION DURING PLANNING STAGE OF WORK.
  22. FOR INTERMEDIATE/UNAVAILABLE SIZES OF SEPTIC TANK AND SOAKAGE WELL, NEXT HIGHER AVAILABLE SIZE SHALL BE INCORPORATED.

SL NO	DATE	DESCRIPTION	INITIAL
REVISION			
TYPICAL DETAIL OF SOAKAGE WELL PIT & SEPTIC TANK (UP TO 300 USERS)			
DATE	23-04-21	DRN	NK VIJAY BHATT
DES	LT COL UDIT NEGI	CHIEF ENGINEER	UDHAMPUR ZONE
CHKD			
SCALE	NTS	CEUZ/TD-1585/2021	
UDIT NEGI LT COL SOI (DESIGN)			

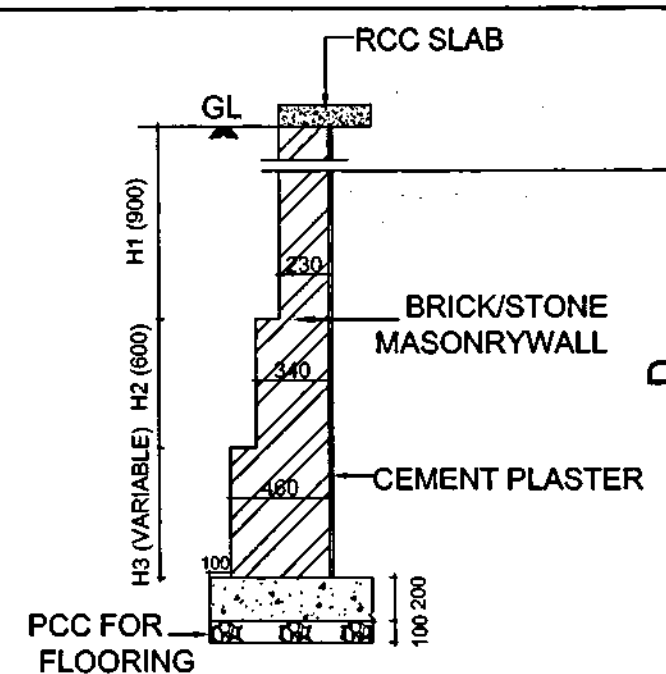
**SECTIONAL PLAN Z Z**  
**SINGLE COMPARTMENT SEPTIC TANK**  
**UP TO 20 USERS**



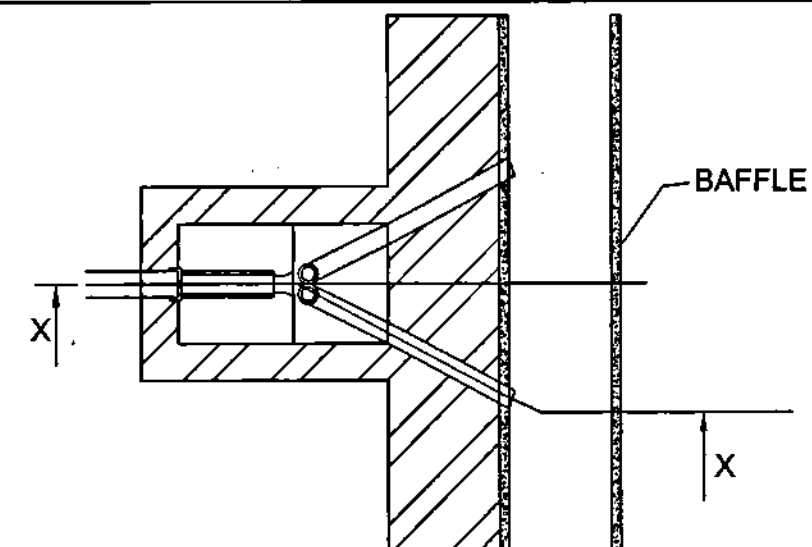
SECTIONAL X X



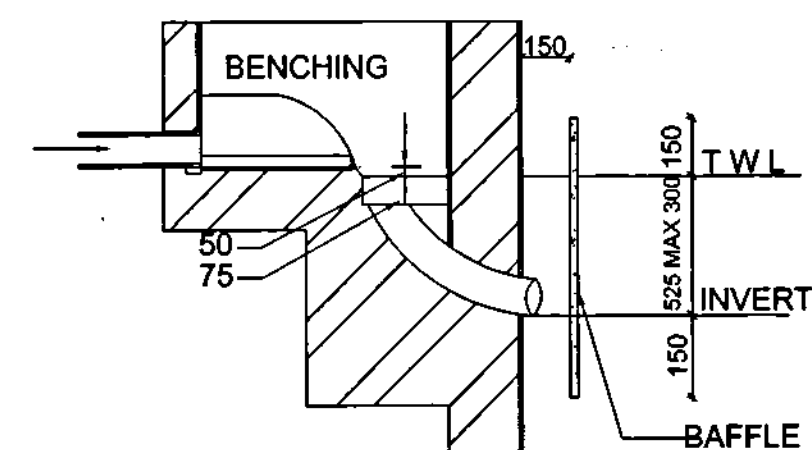
DETAIL OF MANHOLE COVER (SIZE OF  
MANHOLE 450X450)



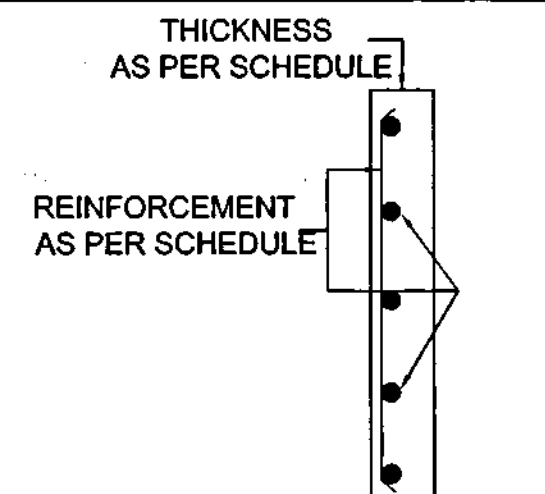
DETAIL OF BK  
WALL AT - 'A'



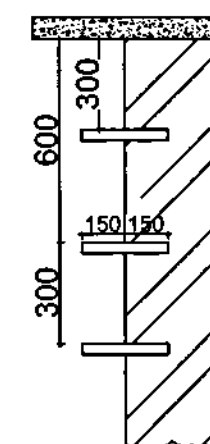
TWIN INLET FOR TANKS OF  
1200MM WIDE



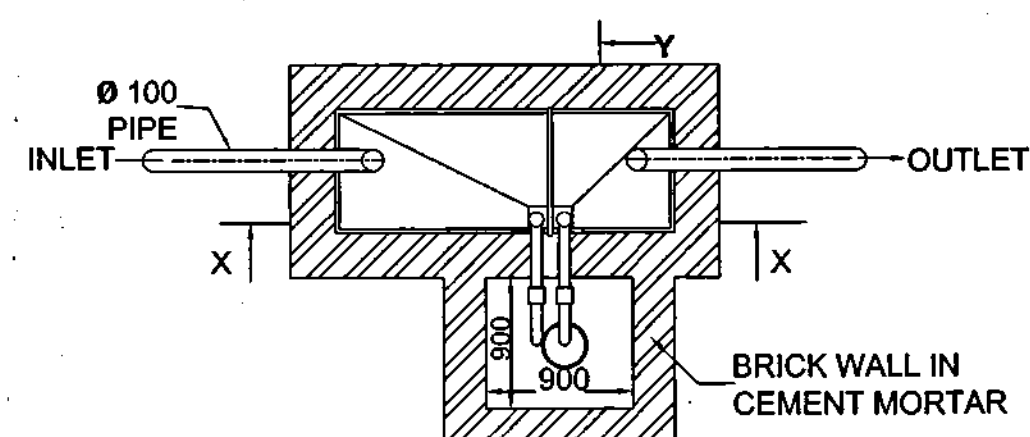
SECTIONAL X X



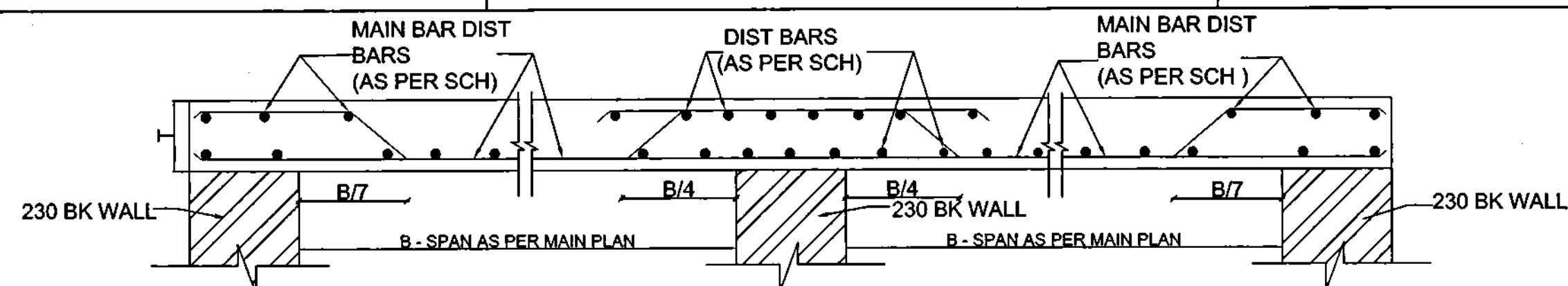
SEC OF RCC  
BAFFLE WALL



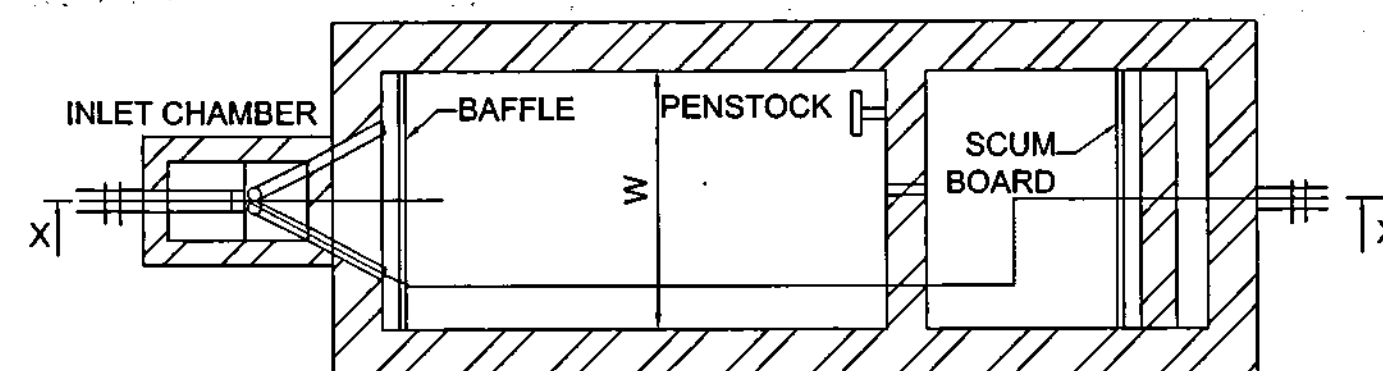
SEC THROUGH  
MS RUNG



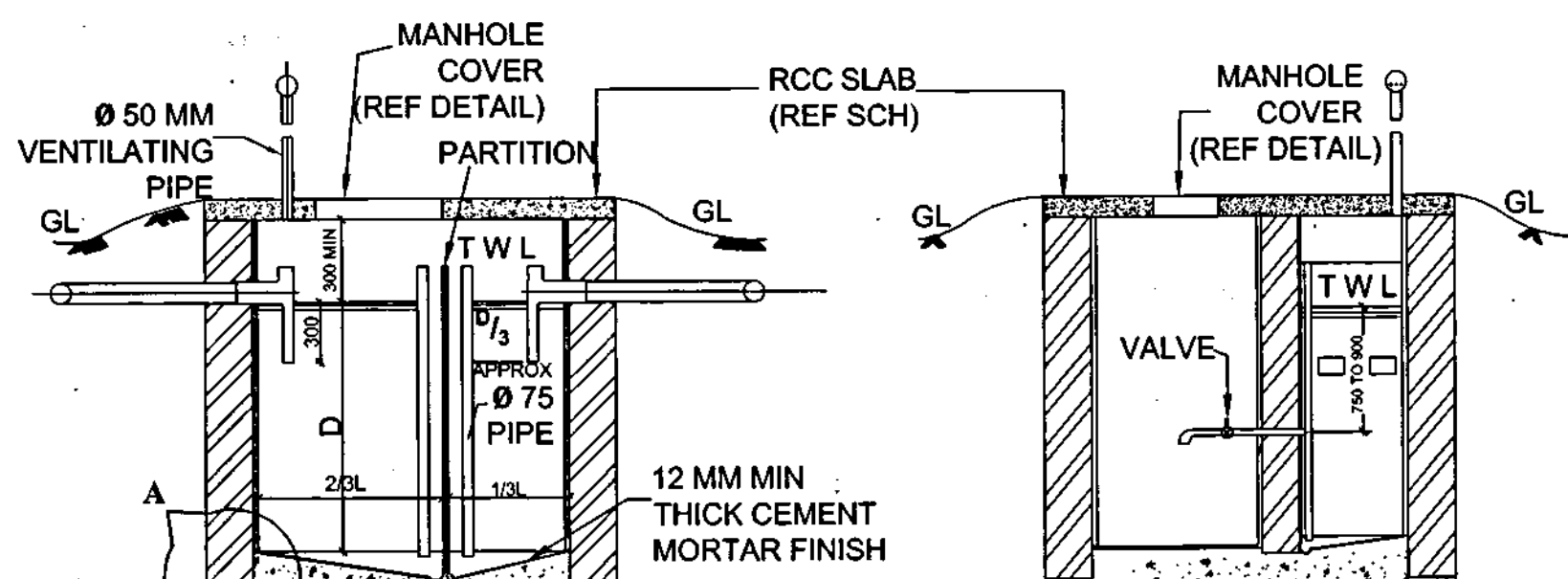
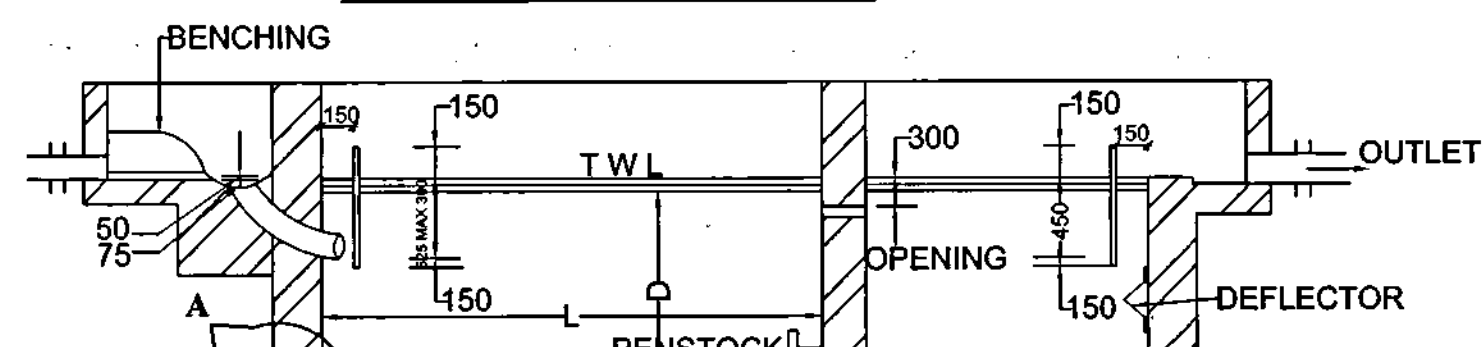
TWO COMPARTMENT SEPTIC  
TANK FOR POPULATION UP TO 50



### TYPICAL SECTION OF ROOF SLAB UP TO 300 USERS



### TWO COMPARTMENT SEPTIC TANK FOR POPULATION OVER 50



SL NO	DATE	DESCRIPTION	INITIAL
REVISION			
TYPICAL DETAIL OF SOAKAGE WELL PIT & SEPTIC TANK (UP TO 300 USERS)			
DATE	23.04.21	<b>CHIEF ENGINEER</b> <b>UDHAMPUR ZONE</b>	SHT NO
DRN	NK VIJAY BHATT		3
DES	LT COL UDIT NEGI		4
CKD			
SCALE	NTS		CEUZ/TD-1585/2021



# SCHEDULE / STRUCTURAL DETAIL OF SEPTIC TANK

SER. No.	No. OF USER (UP TO)	LENGTH (L) IN METERS	BREADTH (B) IN METERS	LIQUID DEPTH (D) IN METERS	EARTH FILLING DEPTH															SCHEDULE OF BAFFLE WALL REINFORCEMENT			REMARKS	
					ZERO			500 (UP TO)			1000 (UP TO)			1500 (UP TO)			2000 (UP TO)							
					THICKNESS OF SLAB (T)	MAIN BARS ALT CKD	DISTRIBUTION BARS	THICKNESS OF SLAB	MAIN BARS ALT CKD	DISTRIBUTION BARS	THICKNESS OF SLAB	MAIN BARS ALT CKD	DISTRIBUTION BARS	THICKNESS OF SLAB	MAIN BARS ALT CKD	DISTRIBUTION BARS	THICKNESS OF SLAB	MAIN BARS ALT CKD	DISTRIBUTION BARS	THICKNESS OF SLAB	MAIN BARS ALT CKD	DISTRIBUTION BARS		
FOR 20 USERS																								
1.	05	1.50	0.75	1.05	100	8 # @ 220 C/C	8 # @ 320 C/C	100	8 # @ 180C/C	8 # @ 320 C/C	100	8 # @ 90 C/C	8 # @ 300 C/C	120	12 # @ 150 C/C	8 # @ 300 C/C	130	12 # @ 120 C/C	8 # @ 280 C/C	80	10 # @ 150 C/C	8 # @ 180 C/C	SINGLE CHAMBER	
2.	10	2.00	0.90	1.40	100	8 # @ 220 C/C	8 # @ 320 C/C	100	8 # @ 180 C/C	8 # @ 320 C/C	100	8 # @ 90 C/C	8 # @ 300 C/C	120	12 # @ 150 C/C	8 # @ 300 C/C	130	12 # @ 120 C/C	8 # @ 280 C/C	80	10 # @ 150 C/C	8 # @ 180 C/C	DOUBLE CHAMBER	
3.	15	2.00	0.90	2.00	100	8# @ 220 C/C	8 # @ 320 C/C	100	8 # @ 180 C/C	8 # @ 320 C/C	100	8 # @ 90 C/C	8 # @ 300 C/C	120	12 # @ 150 C/C	8 # @ 300 C/C	130	12 # @ 120 C/C	8 # @ 280 C/C	80	10 # @ 150 C/C	8 # @ 180 C/C	DOUBLE CHAMBER	
4.	20	2.30	1.10	1.80	100	8 # @ 220 C/C	8 # @ 320 C/C	100	8 # @ 180C/C	8 # @ 320 C/C	100	8 # @ 90 C/C	8 # @ 300 C/C	120	12 # @ 150 C/C	8 # @ 300 C/C	130	12 # @ 120 C/C	8 # @ 280 C/C	80	10 # @ 150 C/C	8 # @ 180 C/C	DOUBLE CHAMBER	
FOR MARRIED ACCOMMODATION AND ANY OTHER LIVING ACCOMODATION WITH KITCHEN																								
5.	50	5.00	2.00	1.24	100	8 # @ 220 C/C	8 # @ 320 C/C	100	8 # @ 180 C/C	8 # @ 320 C/C	100	8 # @ 90 C/C	8 # @ 300 C/C	120	12 # @ 150 C/C	8 # @ 300 C/C	130	12 # @ 120 C/C	8 # @ 280 C/C	80	10 # @ 150 C/C	8 # @ 180 C/C	DOUBLE CHAMBER	
6.	100	7.50	2.65	1.24	100	8 # @ 220 C/C	8 # @ 320 C/C	100	8 # @ 180 C/C	8 # @ 320 C/C	100	8 # @ 90 C/C	8 # @ 300 C/C	120	12 # @ 150 C/C	8 # @ 300 C/C	130	12 # @ 120 C/C	8 # @ 280 C/C	80	10 # @ 150 C/C	8 # @ 180 C/C	DOUBLE CHAMBER	
7.	150	10.00	3.00	1.24	100	8 # @ 220 C/C	8 # @ 320 C/C	100	8 # @ 180 C/C	8 # @ 320 C/C	100	8 # @ 90 C/C	8 # @ 300 C/C	120	12 # @ 150 C/C	8 # @ 300 C/C	130	12 # @ 120 C/C	8 # @ 280 C/C	80	10 # @ 150 C/C	8 # @ 180 C/C	DOUBLE CHAMBER	
8.	200	12.00	3.30	1.24	100	8 # @ 220 C/C	8 # @ 320 C/C	120	8 # @ 120 C/C	8 # @ 300 C/C	140	12 # @ 110 C/C	8 # @ 300 C/C	150	12 # @ 110 C/C	8 # @ 240 C/C	180	12 # @ 100 C/C	8 # @ 220 C/C	100	10 # @ 150 C/C	8 # @ 180 C/C	DOUBLE CHAMBER	
9.	300	15.00	4.00	1.24	100	8 # @ 220 C/C	8 # @ 320 C/C	120	8 # @ 120 C/C	8 # @ 300 C/C	140	12 # @ 110 C/C	8 # @ 300 C/C	120	12 # @ 110 C/C	8 # @ 240 C/C	180	12 # @ 100 C/C	8 # @ 220 C/C	100	10 # @ 150 C/C	8 # @ 180 C/C	DOUBLE CHAMBER	
FOR OTHER ACCOMMODATION (EXCEPT OFFICE AND SCHOOL)																								
10.	50	5.0	1.60	1.40	100	8 # @ 220 C/C	8 # @ 320 C/C	100	8 # @ 180 C/C	8 # @ 320 C/C	100	8 # @ 90 C/C	8 # @ 300 C/C	120	12 # @ 150 C/C	8 # @ 300 C/C	130	12 # @ 120 C/C	8 # @ 280 C/C	80	10 # @ 150 C/C	8 # @ 180 C/C	DOUBLE CHAMBER	
11.	100	5.70	2.10	1.70	100	8 # @ 220 C/C	8 # @ 320 C/C	100	8 # @ 180 C/C	8 # @ 320 C/C	100	8 # @ 90 C/C	8 # @ 300 C/C	120	12 # @ 150 C/C	8 # @ 300 C/C	130	12 # @ 120 C/C	8 # @ 280 C/C	80	10 # @ 150 C/C	8 # @ 180 C/C	DOUBLE CHAMBER	
12.	150	7.70	2.40	1.70	100	8 # @ 220 C/C	8 # @ 320 C/C	100	8 # @ 180 C/C	8 # @ 320 C/C	100	8 # @ 90 C/C	8 # @ 300 C/C	120	12 # @ 150 C/C	8 # @ 300 C/C	130	12 # @ 120 C/C	8 # @ 280 C/C	80	10 # @ 150 C/C	8 # @ 180 C/C	DOUBLE CHAMBER	
13.	200	8.90	2.70	1.70	100	8 # @ 220 C/C	8 # @ 320 C/C	100	8 # @ 180 C/C	8 # @ 320 C/C	100	8 # @ 90 C/C	8 # @ 300 C/C	120	12 # @ 150 C/C	8 # @ 300 C/C	130	12 # @ 120 C/C	8 # @ 280 C/C	80	10 # @ 150 C/C	8 # @ 180 C/C	DOUBLE CHAMBER	
14.	300	10.70	3.30	1.70	100	8 # @ 220 C/C	8 # @ 320 C/C	120	8 # @ 120 C/C	8 # @ 300 C/C	140	12 # @ 110 C/C	8 # @ 300 C/C	150	12 # @ 110 C/C	8 # @ 240 C/C	180	12 # @ 100 C/C	8 # @ 220 C/C	100	10 # @ 150 C/C	8 # @ 180 C/C	DOUBLE CHAMBER	
FOR OFFICE ACCOMMODATION AND SCHOOL WITHOUT HOSTEL																								
15.	50	2.30	1.10	1.80	100	8 # @ 220 C/C	8 # @ 320 C/C	100	8 # @ 180C/C	8 # @ 320 C/C	100	8 # @ 90 C/C	8 # @ 300 C/C	120	12 # @ 150 C/C	8 # @ 300 C/C	130	12 # @ 120 C/C	8 # @ 280 C/C	80	10 # @ 150 C/C	8 # @ 180 C/C	DOUBLE CHAMBER	
16.	100	2.30	1.10	1.80	100	8 # @ 220 C/C	8 # @ 320 C/C	100	8 # @ 180C/C	8 # @ 320 C/C	100	8 # @ 90 C/C	8 # @ 300 C/C	120	12 # @ 150 C/C	8 # @ 300 C/C	130	12 # @ 120 C/C	8 # @ 280 C/C	80	10 # @ 150 C/C	8 # @ 180 C/C	DOUBLE CHAMBER	
17.	150	5.0	1.60	1.40	100	8 # @ 220 C/C	8 # @ 320 C/C	100	8 # @ 180 C/C	8 # @ 320 C/C	100	8 # @ 90 C/C	8 # @ 300 C/C	120	12 # @ 150 C/C	8 # @ 300 C/C	130	12 # @ 120 C/C	8 # @ 280 C/C	80	10 # @ 150 C/C	8 # @ 180 C/C	DOUBLE CHAMBER	
18.	200	5.0	1.60	1.40	100	8 # @ 220 C/C	8 # @ 320 C/C	100	8 # @ 180 C/C	8 # @ 320 C/C	100	8 # @ 90 C/C	8 # @ 300 C/C	120	12 # @ 150 C/C	8 # @ 300 C/C	130	12 # @ 120 C/C	8 # @ 280 C/C	80	10 # @ 150 C/C	8 # @ 180 C/C	DOUBLE CHAMBER	
19.	300	5.70	2.10	1.70	100	8 # @ 220 C/C	8 # @ 320 C/C	100	8 # @ 180 C/C	8 # @ 320 C/C	100	8 # @ 90 C/C	8 # @ 300 C/C	120	12 # @ 150 C/C	8 # @ 300 C/C	130	12 # @ 120 C/C	8 # @ 280 C/C	80	10 # @ 150 C/C	8 # @ 180 C/C	DOUBLE CHAMBER	

## REFERENCE TO DRAWINGS

SL NO	DRG. NO.	SHT. NO.	DESCRIPTION
TYPICAL DETAILS DRAWINGS			
1.	CEUZ/TD - 1187/2002	1/1	DETAILS OF INTERNAL PLASTER GROOVES AND EXTERNAL PLASTER DETAILS AT JUNCTION OF WALL/BEAM/COLUMN
2.	CEUZ/TD - 1251/2007	1/1	TYPICAL RCC DETAILS.
3.	CEUZ/TD - 1252/2007	1/11 TO 1/111	GENERAL NOTES FOR RCC WORKS.
4.	CEUZ/TD - 1584/2021	1/5 TO 5/5	TYPICAL DETAILS OF SEISMIC PROVISIONS.

SL NO	DATE	DESCRIPTION	INITIAL
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## REVISION

TYPICAL DETAIL OF SOAKAGE WELL & SEPTIC TANK (UP TO 300 USERS)

DATE	23.04.21	SHT NO.	4
DRN	NK VIJAY BHATT	CHIEF ENGINEER UDHAMPUR ZONE	
DES	LT COL UDIT NEGI		
CKD			
SCALE	NTS	CEUZ/TD-1585/2021	

UDIT NEGI  
LT COL  
SOI (DESIGN)

Recd Ndtu Ion No. 25089/7154-05/19-10/31/E-2 D dt. 23.04.21



TABLE SHOWING SIZE OF SOAKAGE WELL										REFERENCE TO DRAWINGS			
SIZE RECOMMENDED DIA 'd' (METRES)X DEPTH 'D' (METRES)										SL NO	DRG. NO.	SHT. NO.	DESCRIPTION
NO OF USERS	PRICOLATION RATE								REMARKS	TYPICAL DETAILS DRAWINGS			
	1	2	3	4	5	10	15	30		1.	CEUZ/TD - 1187/2002	1/1	DETAILS OF INTERNAL PLASTER GROOVES AND EXTERNAL PLASTER DETAILS AT JUNCTION OF WALL/BEAM/COLUMN
5	1.00 X 1.30	1.00 X 1.90	1.00 X 2.30	1.00 X 2.60	1.00 X 3.00	1.50 X 2.70	1.50 X 3.40	2.00 X 3.60		2.	CEUZ/TD - 1251/2007	1/1	TYPICAL RCC DETAILS.
10	1.00 X 2.60	1.20 X 3.10	1.50 X 3.00	1.50 X 3.50	1.80 X 3.30	2.00 X 4.10	2.20 X 4.60	2.80 X 5.10		3.	CEUZ/TD - 1252/2007	1/11 TO 11/11	GENERAL NOTES FOR RCC WORKS.
15	1.50 X 2.60	1.80 X 3.10	2.20 X 3.10	2.20 X 3.50	2.50 X 3.50	3.00 X 4.10	3.00 X 5.10	3.60 X 6.00		4.	CEUZ/TD - 1584/2021	1/5 TO 5/5	TYPICAL DETAILS OF SEISMIC PROVISIONS.
20	1.80 X 2.90	2.20 X 3.40	2.50 X 3.60	2.80 X 3.70	2.80 X 4.20	3.20 X 5.10	3.40 X 6.00	4.10 X 7.00					
FOR MARRIED ACCOMMODATION AND ANY OTHER LIVING ACCOMODATION WITH KITCHEN													
50	3.00 X 4.30	3.20 X 5.80	3.70 X 6.00	4.00 X 6.50	4.20 X 7.00	5.00 X 8.10	-	-					
100	4.00 X 6.50	5.00 X 7.40	5.00 X 8.90	-	-	-	-	-					
150	5.00 X 7.70	-	-	-	-	-	-	-					
200	-	-	-	-	-	-	-	-					
300	-	-	-	-	-	-	-	-					
FOR OTHER ACCOMMODATION (EXCEPT OFFICE AND SCHOOLS)													
50	2.80 X 4.00	3.00 X 5.20	3.50 X 5.40	3.80 X 5.80	4.20 X 5.90	5.00 X 6.90	5.00 X 8.60	-					
100	3.80 X 5.80	4.80 X 6.50	5.00 X 7.60	5.00 X 8.80	-	-	-	-					
150	5.00 X 6.60	-	-	-	-	-	-	-					
200	5.00 X 8.80	-	-	-	-	-	-	-					
300	-	-	-	-	-	-	-	-					
FOR OFFICE ACCOMMODATION AND SCHOOLS WITHOUT HOSTEL													
50	1.80 X 2.90	2.20 X 3.40	2.50 X 3.60	2.80 X 3.70	2.80 X 4.20	3.20 X 5.10	3.40 X 6.00	4.10 X 7.00					
100	1.80 X 2.90	2.20 X 3.40	2.50 X 3.60	2.80 X 3.70	2.80 X 4.20	3.20 X 5.10	3.40 X 6.00	4.10 X 7.00					
150	2.80 X 4.00	3.00 X 5.20	3.50 X 5.40	3.80 X 5.80	4.20 X 5.90	5.00 X 6.90	5.00 X 8.60	-					
200	2.80 X 4.00	3.00 X 5.20	3.50 X 5.40	3.80 X 5.80	4.20 X 5.90	5.00 X 6.90	5.00 X 8.60	-					
300	3.80 X 5.80	4.80 X 6.50	5.00 X 7.60	5.00 X 8.80	-	-	-	-					
SCHEDULE OF SOAKAGE WELLS													
SER NO.	DIA OF WELL ( IN METRE )	THICKNESS OF SLAB (T) IN MM	REINFORCMENT										
1.	UP TO 2.40	100	10 # @ 180 C/C BOTH WAYS (ALT BENT-UP)										
2.	UP TO 3.60	110	10 # @ 150 C/C BOTH WAYS (ALT BENT-UP)										
3.	UP TO 4.00	120	-DO-										
4.	UP TO 5.00	130	10 # @ 100 C/C BOTH WAYS (ALT BENT-UP)										
SL NO      DATE      DESCRIPTION      INITIAL													
REVISION													
TYPICAL DETAIL OF SOAKAGE WELL & SEPTIC TANK (UP TO 300 USERS)													
DATE	23-04-21	SHT NO.											
DRN	NK VIJAY BHATT	2											
DES	LT COL UDIT NEGI	CHIEF ENGINEER UDHAMPUR ZONE											
CKD		4											
SCALE	NTS	CEUZ/TD -1585/2021											
UDIT NEGI LT COL SOI (DESIGN)													