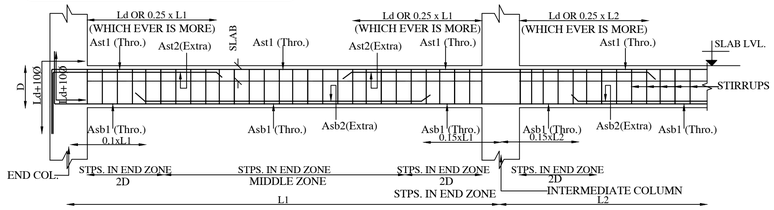
DETAILS OF BEAMS AT SLAB LEVEL-

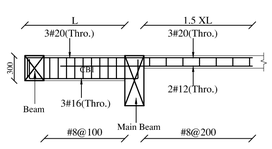


TYP.REINF. DETAILS IN THE SLAB BEAMS SPANNING BETWEEN SUPPORT TO SUPPORT
FOR DETAILS REFER TABLE [3] BELOW

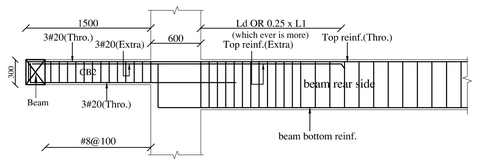
NOTE : AT THE JUNCTION OF TWO DIFF. NUMBER OF BEAMS THE HEIGHER REINFORCEMENT AT THE SUPPORT SHALL BE ADDOPTED.

TABLE -3 DETAILS OF SLAB BEAMS

SR. NO.	BEAM NO.	BEAM SIZE		LONGITUDINAL REINFORCEMENT				STIRRUPS		SIDE FACE REINF. (ON EACH FACE)
				TOP FACE REINFORCEMENT		BOTTOM FACE REINFORCEMENT		END ZONE '2L'STPS	MIDDLE ZONE '2L'STPS	
		W mm	D mm	Ast1 (Thro. at Top)	Ast2 (Extra at support)	Asb1 (Thro. at Bottom)	Asb2 (Extra at middle)			
STILT FLOOR ROOF BEAMS										
1	B1	230	300	2#16Ø	-	2#16Ø	1#12Ø	#8@ 100c/c	#8@ 175c/c	-
2	B2	230	600	3#20Ø	3#20Ø	3#20Ø	2#16Ø	#8@ 100c/c	#8@ 175c/c	-
3	B3	230	600	3#20Ø	2#20Ø	3#20Ø	2#16Ø	#8@ 100c/c	#8@ 175c/c	-
4	B4	230	600	3#20Ø	3#20Ø	3#20Ø	2#16Ø	#8@ 100c/c	#8@ 175c/c	-
5	B5	230	600	3#20Ø	-	3#20Ø	-			-
6	B6	230	600	3#20Ø	2#20Ø	3#20Ø	-	#8@ 100c/c	#8@ 175c/c	-
7	B7	230	600	3#20Ø	2#20Ø	3#20Ø	2#12Ø	#8@ 100c/c	#8@ 175c/c	-
8	B8	230	450	2#16Ø	-	2#16Ø	-	#8@ 100c/c	#8@ 150c/c	-
9	B9	230	450	3#16Ø	-	3#16Ø	-	#8@ 100c/c	#8@ 150c/c	-
10	B10	230	600	3#20Ø	3#25Ø	3#25Ø	3#20Ø	#8@ 100c/c	#8@ 175c/c	-
11	B11	230	600	3#20Ø	2#25Ø	3#20Ø	2#16Ø	#8@ 100c/c	#8@ 175c/c	-
12	B12	230	600	3#20Ø	2#25Ø	3#20Ø	2#20Ø	#8@ 100c/c	#8@ 175c/c	-
13	B13	230	450	3#20Ø	3#20Ø	3#20Ø	2#20Ø	#8@ 100c/c	#8@ 150c/c	-
14	B14	115	450	2#12Ø	-	2#12Ø	-	#8@ 150c/c	#8@ 150c/c	-
15	B15	230	600	3#20Ø	3#25Ø	3#20Ø	2#20Ø	#8@ 100c/c	#8@ 175c/c	-
16	B16	230	600	3#20Ø	2#20Ø	3#20Ø	-	#8@ 100c/c	#8@ 175c/c	-
17	B17	230	600	3#20Ø	2#20Ø	3#20Ø	2#20Ø	#8@ 100c/c	#8@ 175c/c	-
18	B18	230	600	3#20Ø	2#16Ø	3#20Ø	-	#8@ 100c/c	#8@ 175c/c	-
19	B19	230	300	2#16Ø	-	2#16Ø	-	#8@ 100c/c	#8@ 150c/c	
20	B20	230	450	2#16Ø	-	3#16Ø	-	#8@ 100c/c	#8@ 150c/c	-
TYPICAL FLOOR BEAMS										
21	B21	230	300	2#16Ø	-	2#16Ø	1#12Ø	#8@ 100c/c	#8@ 175c/c	-
22	B22	230	600	3#20Ø	2#20Ø	3#20Ø	2#16Ø	#8@ 100c/c	#8@ 175c/c	-
23	B23	230	600	3#20Ø	2#20Ø	3#20Ø	2#12Ø	#8@ 100c/c	#8@ 175c/c	-
24	B24	230	600	3#20Ø	2#20Ø	3#20Ø	2#16Ø	#8@ 100c/c	#8@ 175c/c	-
25	B25	230	600	3#20Ø	-	3#20Ø	-	#8@ 100c/c	#8@ 175c/c	-
26	B26	230	600	3#20Ø	2#16Ø	3#20Ø	-	#8@ 100c/c	#8@ 175c/c	-
27	B27	230	600	3#20Ø	2#16Ø	3#20Ø	2#12Ø	#8@ 100c/c	#8@ 175c/c	-
28	B28	230	450	2#16Ø	-	2#16Ø	-	#8@ 100c/c	#8@ 150c/c	-
29	B29	230	450	2#16Ø	-	3#16Ø	-	#8@ 100c/c	#8@ 150c/c	-
30	B30	230	600	3#20Ø	2#25Ø	3#20Ø	2#20Ø	#8@ 100c/c	#8@ 175c/c	-
31	B31	230	600	3#20Ø	2#20Ø	3#20Ø	2#16Ø	#8@ 100c/c	#8@ 175c/c	-
32	B32	230	600	3#20Ø	3#20Ø	3#20Ø	2#20Ø	#8@ 100c/c	#8@ 175c/c	-
33	B33	230	450	3#20Ø	3#20Ø	3#20Ø	2#16Ø	#8@ 100c/c	#8@ 150c/c	-
34	B34	115	450	2#12Ø	-	2#12Ø	-	#8@ 150c/c	#8@ 150c/c	-
35	B35	230	600	3#20Ø	2#25Ø	3#20Ø	2#20Ø	#8@ 100c/c	#8@ 175c/c	-
36	B36	230	600	3#20Ø	2#20Ø	3#20Ø	-	#8@ 100c/c	#8@ 175c/c	-
37	B37	230	600	3#20Ø	2#20Ø	3#20Ø	2#16Ø	#8@ 100c/c	#8@ 175c/c	-
38	B38	230	450	3#16Ø	2#20Ø	3#16Ø	-	#8@ 100c/c	#8@ 150c/c	-
39	B39	230	300	2#16Ø	-	2#16Ø	-	#8@ 100c/c	#8@ 150c/c	
40	B40	230	450	2#16Ø	-	3#16Ø	-	#8@ 100c/c	#8@ 150c/c	-



L- SEC. OF CANTILEVER BEAM CB1
(230X300)



L- SEC. OF CANTILEVER BEAM CB2
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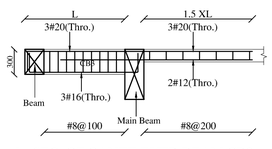
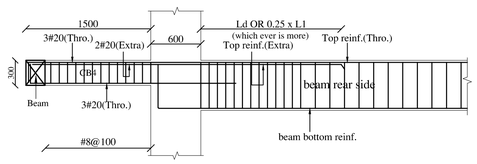
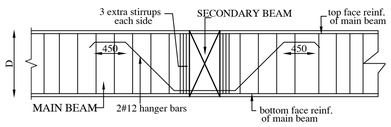


L- SEC. OF CANTILEVER BEAM CB3
(230X300)

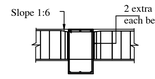


L- SEC. OF CANTILEVER BEAM CB4
(230X300)

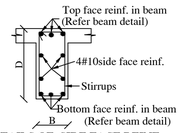
TYP. DETAILS



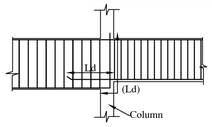
TYP.DETAILS OF HANGER BARS BELOW SECONDARY BEAM RESTING ON MAIN BEAM



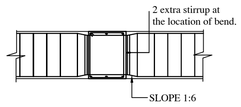
TYPICAL DETAILS OF REINF. AT THE JUNCTION OF TWO BEAMS OF UNEQUAL DEPTH.



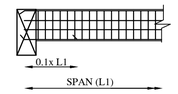
TYP.DETAILS OF SIDE FACE REINF. IN ALL OUTER BEAMS FOR BEAM DEPTH (D) 600 MM OR MORE



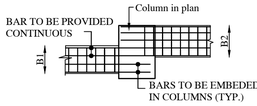
TYPICAL DETAILS OF REINFORCEMENT AT THE JUNCTION OF TWO UNEQUAL DEPTH OF BEAMS.



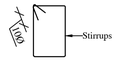
TYPICAL DETAILS OF REINFORCEMENT AT THE JUNCTION OF TWO BEAMS OF EQUAL DEPTH.



TYPICAL DETAILS OF BEAM AT END RESTING ON THE ANOTHER BEAM OF HIGHER BEAM

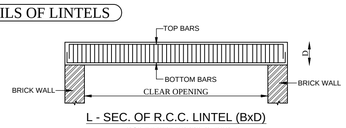


TYPICAL DETAILS OF REINFORCEMENT IN BEAM AT THE JUNCTION OF COLUMNS BEAM HAVING UNEQUAL WIDTH AT THE DIFFERENT FACE OF COLUMNS

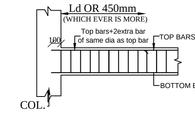


TYP. DETAILS OF HOOKS
(Ø = Dia of bar)

DETAILS OF LINTELS



L - SEC. OF R.C.C. LINTEL (BxD)
(FOR LINTEL REFER TABLE-5)

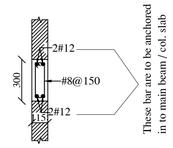


TYP. DETAIL OF LINTEL FIXING AT COLUMN
(for top & bottom bars of different span refer table -5)

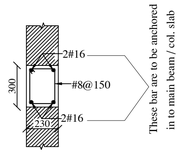
TABLE-5 DETAIL OF LINTELS FOR DOOR / WINDOW OPENING

S.N.	FOR 230 TH WALL					FOR 115 TH WALL				
	DOOR/ WINDOW OPENING (L)	Lintel Cross Section (B X D)	Longitudinal Reinforcemennt		Stirrups '2L' STPS	DOOR/ WINDOW OPENING (L)	Lintel Cross Section (B X D)	Longitudinal Reinforcemennt		Stirrups '2L' STPS
			BOTTAM BARS	TOP BARS				BOTTAM BARS	TOP BARS	
1	>750 ≤1500	230 X 150	2 # 12 +1#10	2 # 10	#8@175	>750≤1500	115 X 150	2 # 10	2 # 10	#8@175
2	>1650≤2500	230 X 230	3 # 12	2 # 10	#8@150	>1650≤2500	115 X 230	2 # 12	2 # 10	#8@150
3	>2550≤ 3000	230 X 300	4 # 12	2 # 10	#8@125	>2550≤3000	115 X 300	2 # 12+1#10	2 # 10	#8@125

DETAILS OF R.C.C. BAND SLAB LVL

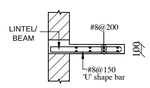


TYP. DETAIL OF RCC BAND (115X300)
AROUND CUB BOARD / SHAFT / FINS
TO SUPPORT 115 TH. BRICK WORK

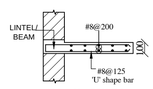


TYP. DETAIL OF RCC BAND (230X300)
AROUND CUB BOARD / SHAFT / FINS
TO SUPPORT 230 TH. BRICK WORK

TYP.DETAILS OF SUNSHADES/CHAJJAS



SUNSHADES/CHAJJAS
(PROJECTION UPTO 451-600 MM.)



SUNSHADES/CHAJJAS
(PROJECTION UPTO 601-750 MM.)

NOTES:-

[GENERAL]

[1] ALL DIMENSIONS ARE IN M.M. UNLESS OTHERWISE MENTIONED.
[2] ONLY FIGURED DIMENSIONS ARE TO BE FOLLOWED NEITHER THE BARS SHALL BE COUNTED NOR THE DIMENSIONS SCALED FROM THE DRG.
[3] ANY DISCREPANCY IN THE DRGS. SHALL BE BROUGHT TO THE NOTICE OF THE ARCHITECT / CONSULTANT AND CLARIFICATION OBTAINED IN WRITING PRIOR TO EXECUTION OF WORK.
[4] HIGH YIELD STRENGTH DEFORMED BARS OF YIELD STRESS 500 N/MM2 (Fe-500) WHICH SHALL CONFORM TO1786-1985 SHALL BE USED AS REINFORCEMENT
[5] CLEAR COVER OF MAIN REINF. SHALL BE AS FOLLOWS.
(a) FOOTING = 50 mm (b) COLUMN = 40 mm (c) BEAM = 30 mm (TOP & BOTTOM) OR DIA OF BAR WHICHEVER IS MORE (e) SLAB = 20 mm (f) WAIST SLAB = 20 mm
[6] END/SIDE COVER OF ALL REINFORCEMENT IN BEAMS & SLAB = 25 mm. OR DIA OF BAR WHICHEVER IS MORE
[7] THE COVER BLOCK OF CEMENT MORTAR SHALL BE USED TO ENSURE THE REQD. COVER OF REINFORCEMENT.
[8] DEVELOPMENT LENGTH (Ld) FOR DIFFERENT DIA METER OF BARS FOR CONC. MIX OF GRADE M - 25 SHALL BE = 49 X DIA OF BAR
[9] CONC. MIX FOR R.C.C. WORK SHALL BE OF GRADE M - 25 CONFORMING TO I.S. 456 - 2000.
[10] NECESSARY FIXTURE FOR ELECTRICAL, PLUMBING, ETC. SHALL BE PROVIDED IN SLAB, BEAMS BEFORE EXECUTION AS PER RELEVANT DRGS.
[11] THE STRUCTURE HAS BEEN DESIGNED FOR SEISMIC ZONE - III
[12] THE STRUCTURE HAS BEEN DESIGNED FOR STILT + 6 = 7 STOREY
[13] P.C.C.(1:4:8) SHALL BE PROVIDED.
[14] ALL PLAIN CONCRETE & RCC SHALL BE STRICTLY IN ACCORDANCE WITH THE PROVISION OF IS - 456:2000
[15] CUTTING,BENDING,FIXING & PLACING OF BARS SHALL BE IN ACCORDANCE WITH IS - 2502:1968, IS - 5525:1969 & IS - 456:2000

[FOUNDATION]

[1] THE LAYOUT OF BUILDING SHALL BE GIVEN FROM THE ARCH. DRG.
[2] THE DESIGN DATA FOR FOUNDATION HAS BEEN TAKEN FROM SOIL TEST REPORT PROVIDED BY THE CLIENT
[3] ALL EXTERIOR WALLS SHALL BE PROVIDED WITH TOE WALL BELOW TIE BEAMS AS TYPICAL DETAIL IS GIVEN
[4] EARTH BELOW FOUNDATION SHALL BE PROPERLY RAMMED & CONSOLIDATED BEFORE LAYING LEAN CONCRETE.

[COLUMNS]

[1] TIES IN PORTION OF COL. & BEAM JUNCTION SHALL BE SAME AS END ZONE.
[2] OVER LAPS ARE ALLOWED ONLY AT MIDDLE ZONE OF THE COLUMNS.
[3] NOT MORE THAN 50 % OF BARS SHALL BE LAPPED AT A SECTION AND LAPS SHALL BE STAGGERED.
[4] TIES IN PORTION OF COL. BELOW TIE BEAM SHALL BE SAME AS END ZONE .
[5] VERTICAL BARS OF RCC COLUMN AT TOP SLAB SHALL BE EXTENDED UPTO TOP OF BEAM & BENT INTO BEAM BY DEVELOPMENT LENGTH.

[BEAMS]

[1] FOR LOCATION OF BEAMS REFER SLAB PLAN.
[2] THE SPACING OF STIRRUPS AT OVERLAPS SHOULD NOT EXCEED 150 MM. C/C
[3] WHERE TWO LAYERS OF REINF. BARS ARE TO BE PROVIDED, SPACER BAR ARE TO BE PROVIDED AT SPACING OF 1000 MM. MAX. AND THE DIA OF THE SPACER BAR SHALL BE HIGHER OF DIA OF LONGITUDINAL BARS OR 25 MM.
[4] MAX. 3 NOS. OF BARS SHALL BE PROVIDED IN A LAYER OF 230 MM WIDE BEAM.
[5] AT THE JUNCTION OF TWO DIFF. NUMBER OF BEAMS THE HIGHER REINF. AT THE SUPPORT SHALL BE ADOPTED.
[6] OVER LAP IN TOP BARS SHALL BE NEAR MID SPAN & IN BOTTOM BARS SHALL BE NEAR SUPPORT OR AT SUPPORT
[7] THE DEPTH OF BEAM/LINTEL M0N0LITHIC WITH SLAB AS SPECIFIED IN SCHEDULE SHALL BE INCLUSIVE OF SLAB THICKNESS UNLESS OTHERWISE SPECIFIED
[8] HOOKS IN STIRRUPS OF BEAMS SHALL BE BENT INSIDE AT 135° & LENGTH OF HOOKS SHALL BE 10 X DIA OF BAR OF STIRRUPS

[SLABS]

[1] FOR SLAB REINFORCEMENT REFER TABLE-4 (DETAIL OF SLAB REINFORCEMENT)
[2] ALTERNATE BOTTOM BARS SHALL BE CURTAILED AT L / 7 OF SPAN AS SHOWN IN TYP. SECTION OF SLAB
[3] EXTRA BARS SHALL BE PROVIDED AT TOP FACE AS SHOWN IN TYP. SECTION OF SLAB
[4] THE CROSS REINF./TEMP. REINF. BELOW TOP REINF OF SLAB .I.E.#8@.300C/C IS TO BE PROVIDED JUST BELOW THE MAIN TOP STEEL AS SHOWN IN TYP. SEC.OF SLAB
[5] THE FIRST MAIN BAR OF SLAB SHALL BE PLACED AT 50 MM. OR HALF THE SPACING SPECIFIED WHICHEVER IS LESS FROM THE FACE OF SUPPORT

[MASONRY WORK]

[1] 115 TH.(1/2 BRICK) WALL -1:4 CEMENT: SAND MORTAR SHALL BE USED & #8,1 NOS. BARS AT EVERY 4th COURSE SHALL BE PROVIDED
[2] 230 TH.(1 BRICK) WALL - 1:6 CEMENT: SAND MORTAR SHALL BE USED.
[3] THE VERTICAL FACE OF CONCRETE AT JUNCTION OF WALL & RCC MEMBER SHALL BE RAKED TO GIVE A ROUGH SURFACE & 1:4 CEMENT:SAND MORTAR SHOULD BE APPLIED TO DEVELOPED BOND BETWEEN BRICK & RCC MEMBER.

REFERENCES : IS 456 - 2000, IS - 13920, - 2016, IS - 1893 PART (1) : 2016, SP-16 , SP-34
ARCH. DRG. NO. - ALL ARCH. DRGS

REVISION

S.N.	DATE	DESCRIPTIONS	INITIAL

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■ TENDER ☐ GOOD FOR CONSTRUCTION

PROJECT
PROPOSED TYPE-III HOUSING AT I.I.T. KANPUR
BLOCK - 02

DRG. TITLE:
DETAIL OF SLAB BEAM & TYPICAL DETAIL

DEALT BY	DATE	SHEET NO.
Himanshu	NOV.-18	ST-04
CKD. BY: Er.Omkar Verma	SCALE: N.T.S.	
DRG. NO.		

Client :-
I.I.T. KANPUR

ARCHITECT:
ARCH-EN DESIGN
Architect ASHOK KUMMAR
LKO.OFF.: 4/5,VISHAL KHAND,GOMTI NAGAR, LUCKNOW 0522-4088222, 0522-2303555
DELHI OFF.: B-½, HAUZ KHAS, NEW DELHI-16, 011-45188222, 011-45188288

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