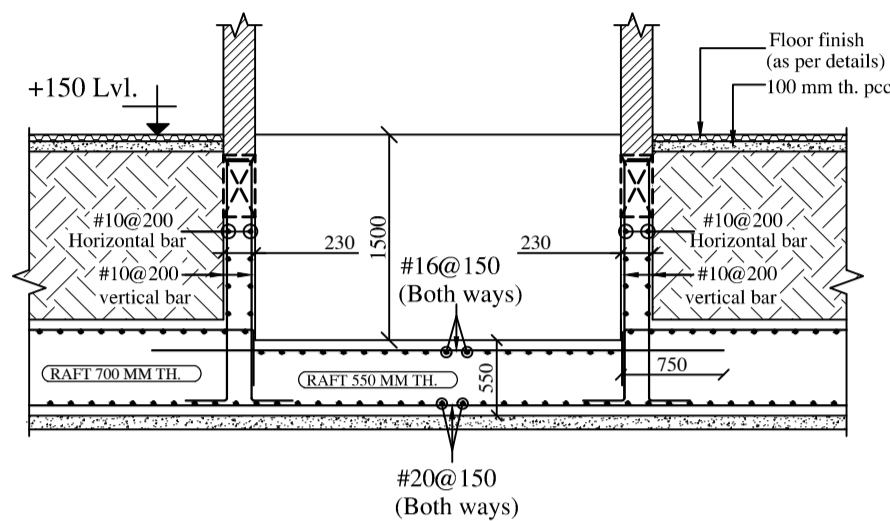
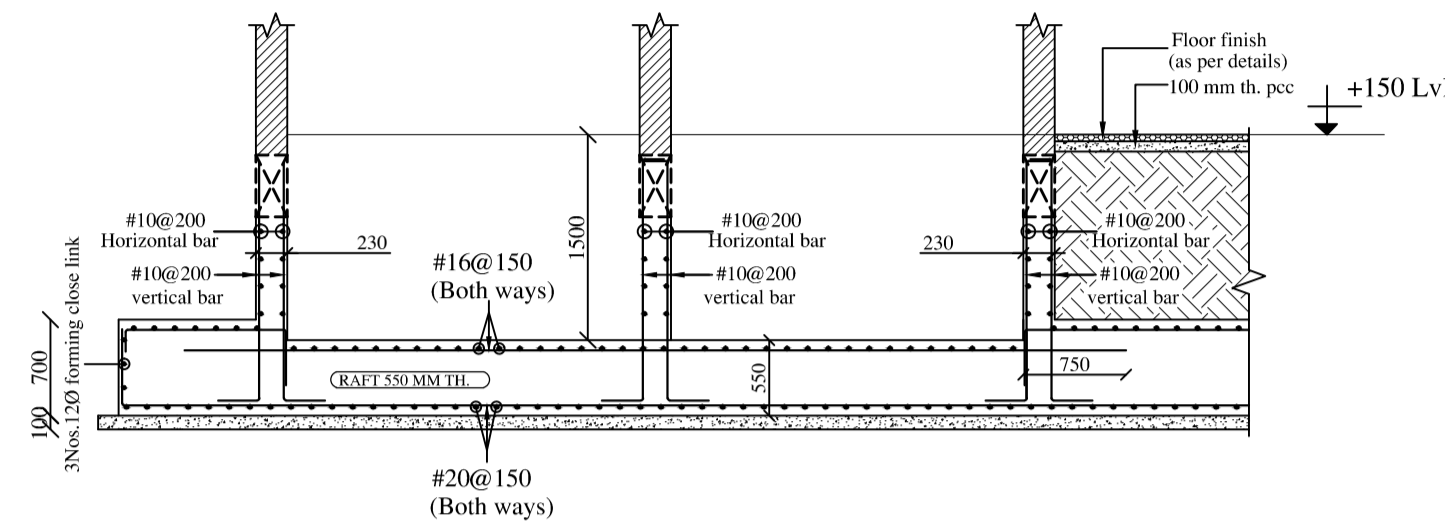


DETAIL OF RAFT SEC. AT R1-R1



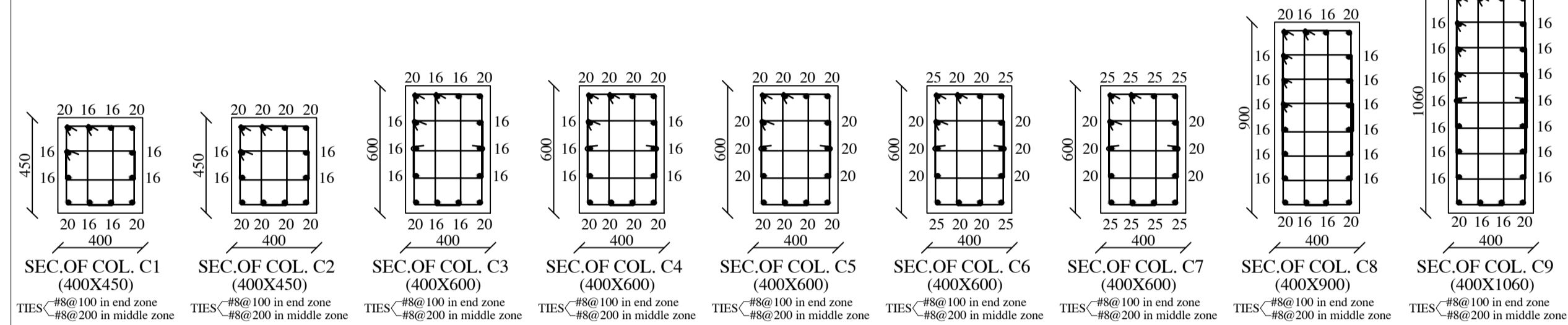
DETAIL OF LIFT SEC. AT L1-L1



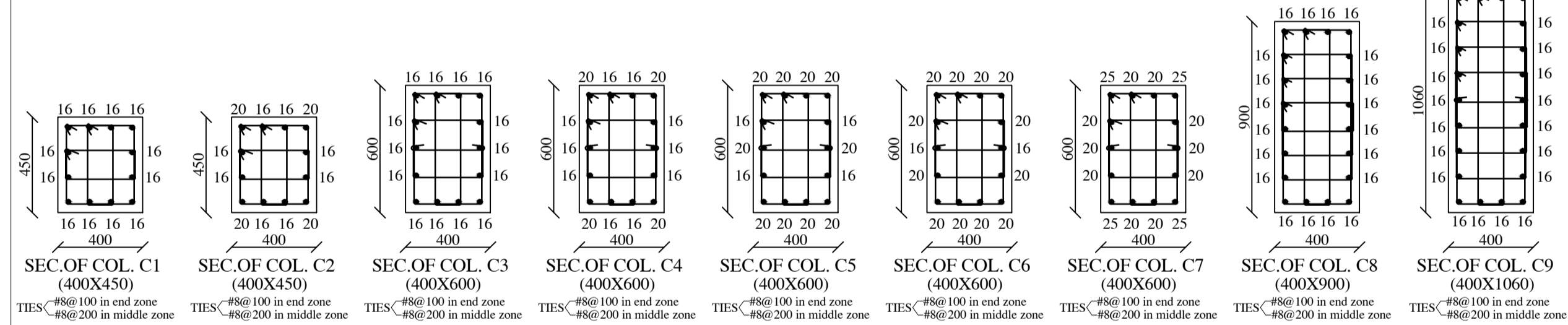
DETAIL OF LIFT SEC. AT L2-L2

DETAIL OF COLUMN REINFORCEMENT

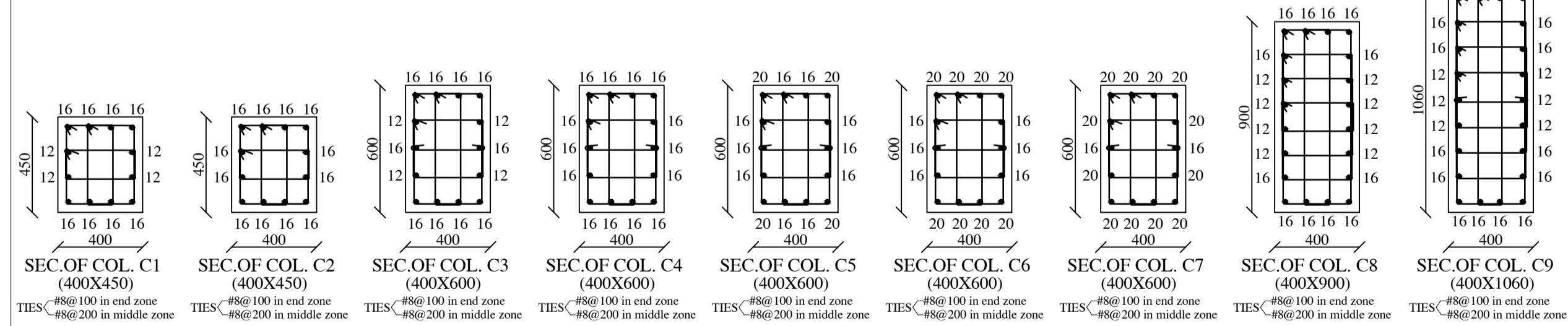
(1) COL. AT GROUND (STILT) FLOOR CONC. MIX - M-25



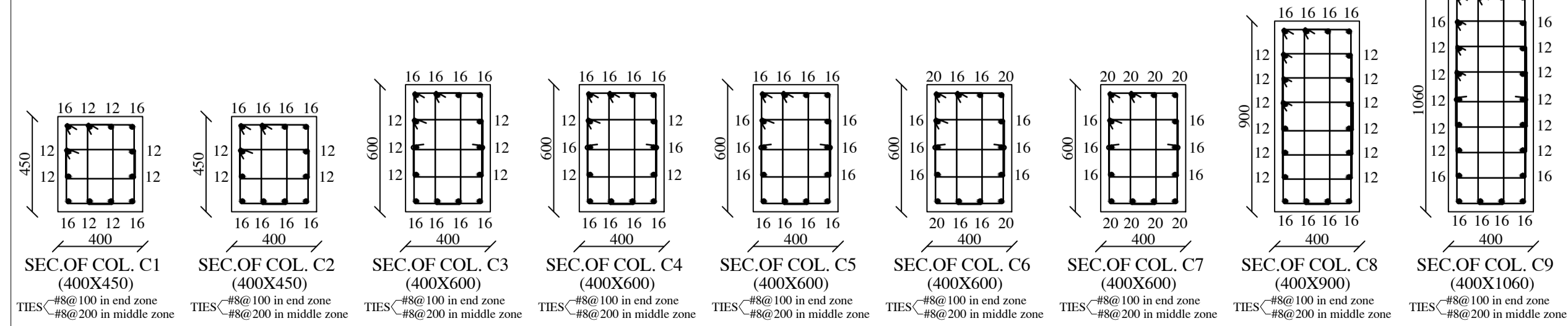
(2) COL. AT FIRST & SECOND FLOOR CONC. MIX - M-25



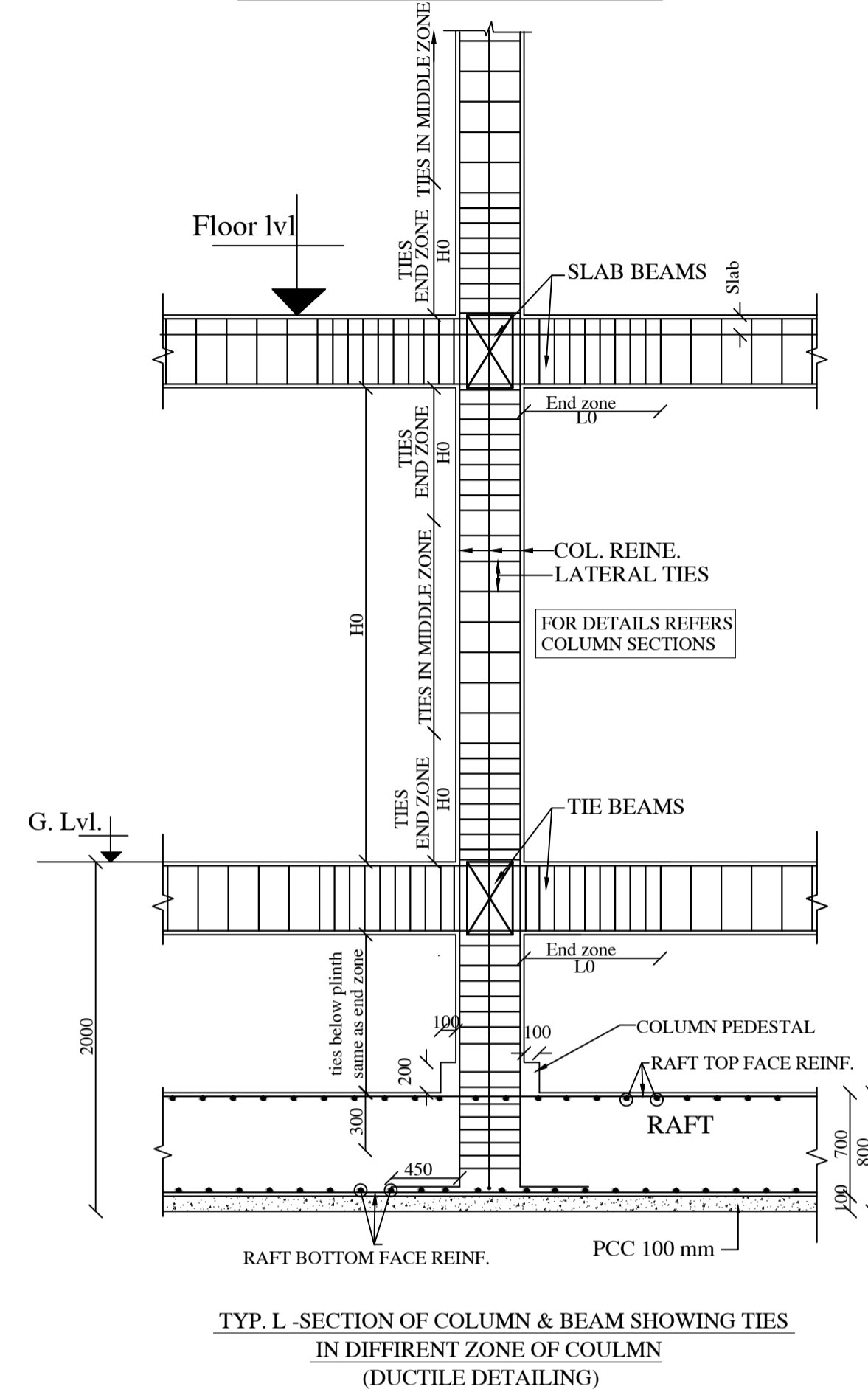
(3) COL. AT THIRD, FOURTH & FIFTH FLOOR CONC. MIX - M-25



(4) COL. AT SIX & SEVENTH FLOOR CONC. MIX - M-25

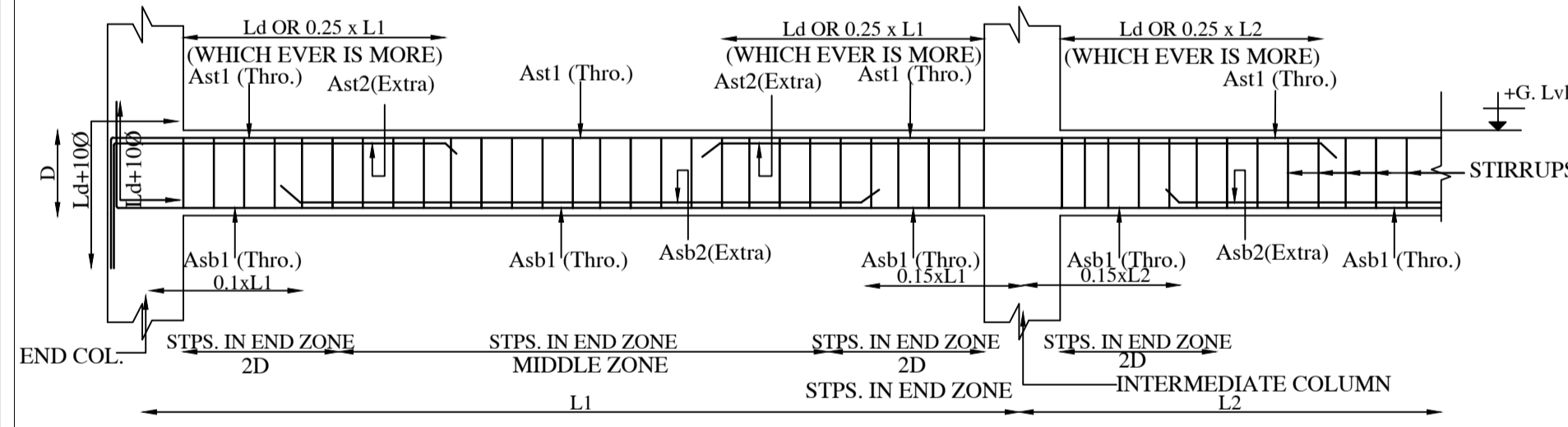


NOTE:-
H0=END ZONE OF COL. SHALL BE LARGEST OF FOLLOWING
(A) 450 MM.
(B) 1/6 X CLEAR HT. OF COL.(H)
(C) LARGEST LATERAL DIMENSION OF COL.(b)
L0 = END ZONE IN BEAM SHALL BE = 2 X DEPTH OF BEAM



TYP. L-SECTION OF COLUMN & BEAM SHOWING TIES IN DIFFERENT ZONE OF COLUMN (DUCTILE DETAILING)

DETAIL OF TIE BEAMS



TYP. REINF. DETAILS IN THE TIE BEAMS SPANNING BETWEEN SUPPORT TO SUPPORT

FOR DETAILS REFER TABLE [2] BELOW

NOTE : AT THE JUNCTION OF TWO DIFF. NUMBER OF BEAMS THE HIGHER REINFORCEMENT AT THE SUPPORT SHALL BE ADOPTED.

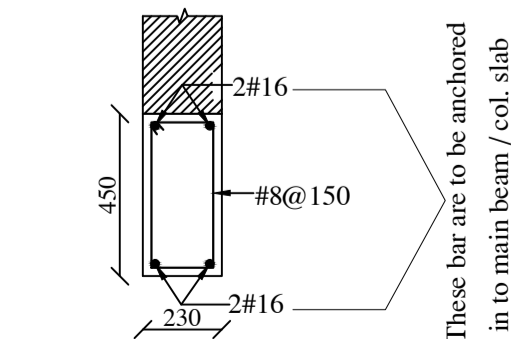
TABLE -2, DETAIL OF TIE BEAMS

SR. NO.	TIE 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			
1	TB1	230 450	3#16@	2#16@	3#16@	-	#8@100c/c	#8@175c/c	-
2	TB2	230 450	2#16@	2#16@	2#16@	1#12@	#8@100c/c	#8@175c/c	-
3	TB3	230 450	3#16@	2#16@	3#16@	2#12@	#8@100c/c	#8@175c/c	-
4	TB4	230 450	3#16@	2#16@	3#16@	2#16@	#8@100c/c	#8@175c/c	-
5	TB5	230 450	3#16@	-	3#16@	2#16@	#8@100c/c	#8@175c/c	-
6	TB6	230 450	2#16@	-	2#16@	-	#8@100c/c	#8@175c/c	-
7	TB7	230 450	2#16@	-	3#16@	-	#8@100c/c	#8@175c/c	-

DETAILS OF R.C.C. BAND GROUND LVL



TYP. DETAIL OF RCC BAND (115X450) AROUND CUB BOARD / SHAFT / FINS TO SUPPORT 115 TH. BRICK WORK



TYP. DETAIL OF RCC BAND (230X450) AROUND CUB BOARD / SHAFT / FINS TO SUPPORT 230 TH. BRICK WORK

NOTES:- (GENERAL)

- ALL DIMENSIONS ARE IN MM. UNLESS OTHERWISE MENTIONED.
- ONLY FIGURED DIMENSIONS ARE TO BE FOLLOWED NEITHER THE BARS SHALL BE COUNTED NOR THE DIMENSIONS SCALED FROM THE DRG.
- 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.
- HIGH YIELD STRENGTH DEFORMED BARS OF YIELD STRESS 500 N/MM² (Fe-500) WHICH SHALL CONFORM TO IS 1786-1985 SHALL BE USED AS REINFORCEMENT.
- 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
- ENDSIDE COVER OF ALL REINFORCEMENT IN BEAMS & SLAB = 25 mm OR DIA OF BAR WHICHEVER IS MORE.
- THE COVER BLOCK OF CEMENT MORTAR SHALL BE USED TO ENSURE THE REQ. COVER OF REINFORCEMENT.
- DEVELOPMENT LENGTH (Ld) FOR DIFFERENT DIA METER OF BARS FOR CONC. MIX OF GRADE M-25 SHALL BE = 49 X DIA OF BAR.
- CONC. MIX FOR R.C.C. WORK SHALL BE OF GRADE M-25 CONFORMING TO IS 456 - 2000.
- NECESSARY FIXTURE FOR ELECTRICAL, PLUMBING, ETC. SHALL BE PROVIDED IN SLAB, BEAMS BEFORE EXECUTION AS PER RELEVANT DRGS.
- THE STRUCTURE HAS BEEN DESIGNED FOR SEISMIC ZONE - III.
- THE STRUCTURE HAS BEEN DESIGNED FOR STILT +6 = 7 STOREY.
- P.C.C. (1:4:8) SHALL BE PROVIDED.
- ALL PLAIN CONCRETE & RCC SHALL BE STRICTLY IN ACCORDANCE WITH THE PROVISION OF IS - 456:2000.
- CUTTING, BENDING, FIXING & PLACING OF BARS SHALL BE IN ACCORDANCE WITH IS - 2502:1968, IS - 5525:1969 & IS - 456:2000.

[FOUNDATION]

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

[COLUMNS]

- TIES IN PORTION OF COL. & BEAM JUNCTION SHALL BE SAME AS END ZONE.
- OVER LAPS ARE ALLOWED ONLY AT MIDDLE ZONE OF THE COLUMNS.
- NOT MORE THAN 50% OF BARS SHALL BE LAPPED AT A SECTION AND LAPS SHALL BE STAGGERED.
- TIES IN PORTION OF COL. BELOW THE BEAM SHALL BE SAME AS END ZONE.
- VERTICAL BARS OF RCC COLUMN AT TOP SLAB SHALL BE EXTENDED UP TO TOP OF BEAM & BENT INTO BEAM BY DEVELOPMENT LENGTH.

[BEAMS]

- FOR LOCATION OF BEAMS REFER SLAB PLAN.
- THE SPACING OF STIRRUPS AT OVERLAPS SHOULD NOT EXCEED 150 MM. C/C
- 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.
- MAX. 3 NOS. OF BARS SHALL BE PROVIDED IN A LAYER OF 230 MM WIDE BEAM.
- AT THE JUNCTION OF TWO DIFF. NUMBER OF BEAMS THE HIGHER REINF. AT THE SUPPORT SHALL BE ADOPTED.
- OVER LAP IN TOP BARS SHALL BE NEAR MID SPAN & IN BOTTOM BARS SHALL BE NEAR SUPPORT OR AT SUPPORT.
- THE DEPTH OF BEAM/INTEL MONOLITHIC WITH SLAB AS SPECIFIED IN SCHEDULE SHALL BE INCLUSIVE OF SLAB THICKNESS UNLESS OTHERWISE SPECIFIED.
- HOOKS IN STIRRUPS OF BEAMS SHALL BE BENT INSIDE AT 135° & LENGTH OF HOOKS SHALL BE 10 X DIA OF BAR OF STIRRUPS.

[SLABS]

- FOR SLAB REINFORCEMENT REFER TABLE-4 (DETAIL OF SLAB REINFORCEMENT)
- ALTERNATE BOTTOM BARS SHALL BE CURTAILED AT L/7 OF SPAN AS SHOWN IN TYP. SECTION OF SLAB.
- EXTRA BARS SHALL BE PROVIDED AT TOP FACE AS SHOWN IN TYP. SECTION OF SLAB.
- THE CROSS REINF./TEMP. REINF. BELOW TOP REINF. OF SLAB IE #8@300/C/C IS TO BE PROVIDED JUST BELOW THE MAIN TOP STEEL AS SHOWN IN TYP. SEC. OF SLAB.
- THE FIRST MAIN BAR OF SLAB SHALL BE PLACED AT 80 MM. OR HALF THE SPACING SPECIFIED WHICHEVER IS LESS FROM THE FACE OF SUPPORT.

[MASONRY WORK]

- 115 TH. (UP) BRICK WALL - 1:4 CEMENT: SAND MORTAR SHALL BE USED & #8.1 NOS. BARS AT EVERY 4th COURSE SHALL BE PROVIDED.
- 230 TH. (1) BRICK WALL - 1:6 CEMENT: SAND MORTAR SHALL BE USED.
- 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 - 01)

DRG. TITLE:

DETAIL OF RAFT, COLUMN & TIE BEAMS

DEALT BY	DATE	SHEET NO.
Er Himanshu	NOV.-18	ST-02
CKD. BY	SCALE	
Er Omkar Verma	N.T.S.	
DRG. NO.		

Client :-

I.I.T. KANPUR

ARCHITECT:

AED
ARCH-EN DESIGN
Architect: **ASHOK KUMMAR**
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