

**A. GENERAL:**

1. ALL DIMENSIONS ARE IN MILLIMETRES AND LEVELS ARE IN METRES.
2. DRAWINGS SHALL NOT BE SCALED, ONLY WRITTEN DIMENSIONS SHALL BE USED.
3. ALL FOUNDATIONS SHALL BE CAST ON VIRGIN SOIL OR ON SOIL AS PER SPECIFICATION, WHENEVER THE SOIL CONTAIN THE SAME SHALL BE REMOVED AND REFILLED WITH THE SAME.

**B. CONCRETE WORK:**

1. ALL CONCRETE WORK SHALL BE AS PER IS:456 (LATEST REVISION)
2. ALL STRUCTURAL REINFORCED CONCRETE WORK SHALL BE WITH DESIGN MIX CONCRETE OF GRADE AS FOLLOWS UNLESS NOTED OTHERWISE.
3. THE GRADE CONC. FOR SUB & SUPER STRUCTURES ARE M-25
3. PLAIN CONCRETE WORK SHALL BE OF THE FOLLOWING GRADES OF NOMINAL MIX CONCRETE:
  - a). 1:5:10 PLUM CONCRETE FOR FILLING CONCRETE UNDER FOUNDATION (WITH MAXIMUM AGGREGATE SIZE OF 40 MM) AND AS , PIT, TRENCHES ETC.
  - b). M-15 FOR LEAN CONCRETE BELOW FOUNDATIONS & PLINTH PROTECTION
4. THE MINIMUM CLEAR COVER FOR PROTECTION OF MAIN REINFORCEMENT SHALL BE AS FOLLOWS

STRUCTURAL ELEMENT	COVER	TOP	BOTTOM	SIDES
a). PLINTH BEAM	25	40	40	
b). COLUMNS	50	50	40	
c). SLAB ON GRADE	20	25	25	
d). FLOOR BEAM	25	25	25	
e). SLAB	20	20	20	
f). FOUNDATION	50	50	50	

**C. REINFORCEMENTS:**

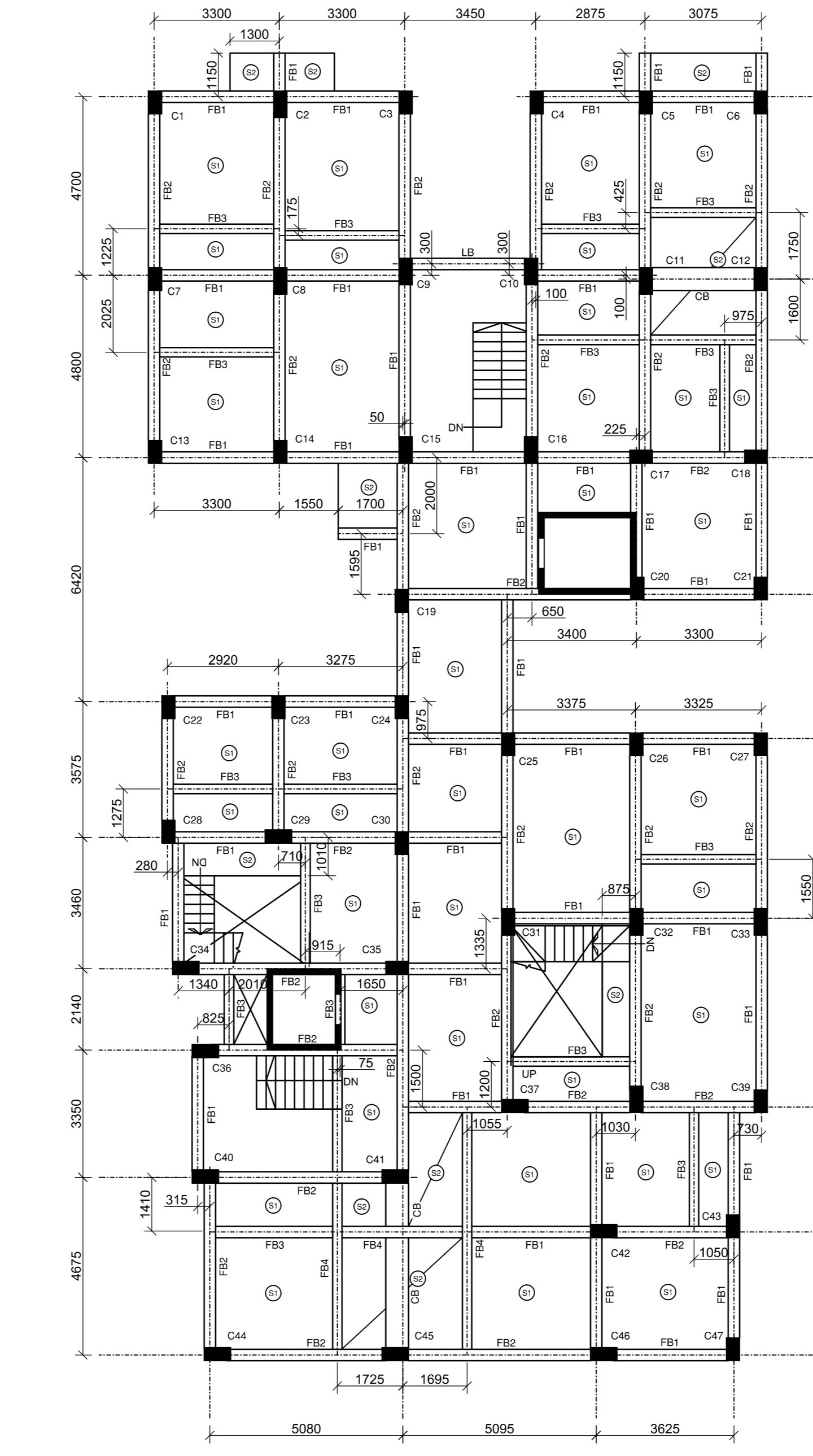
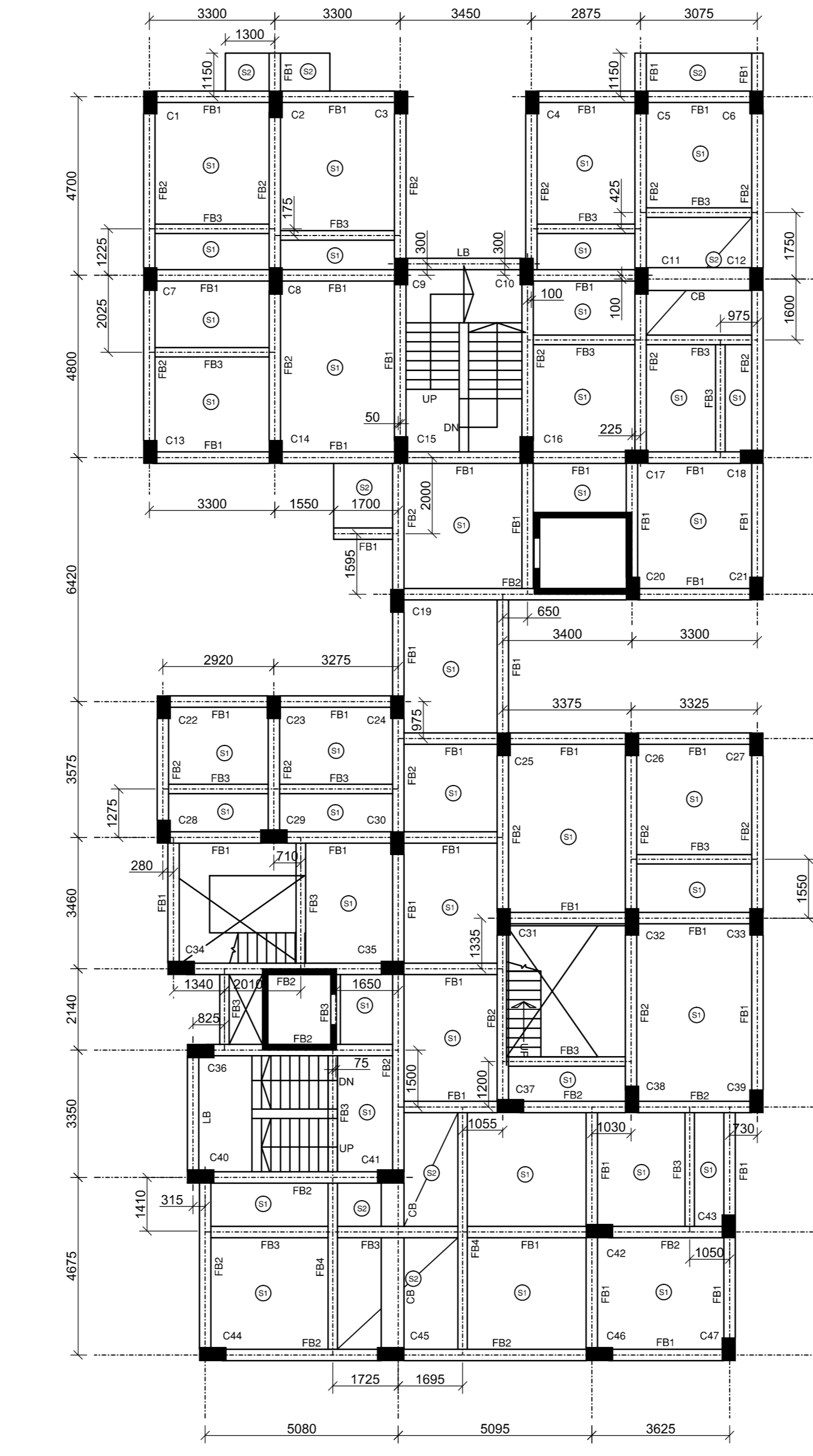
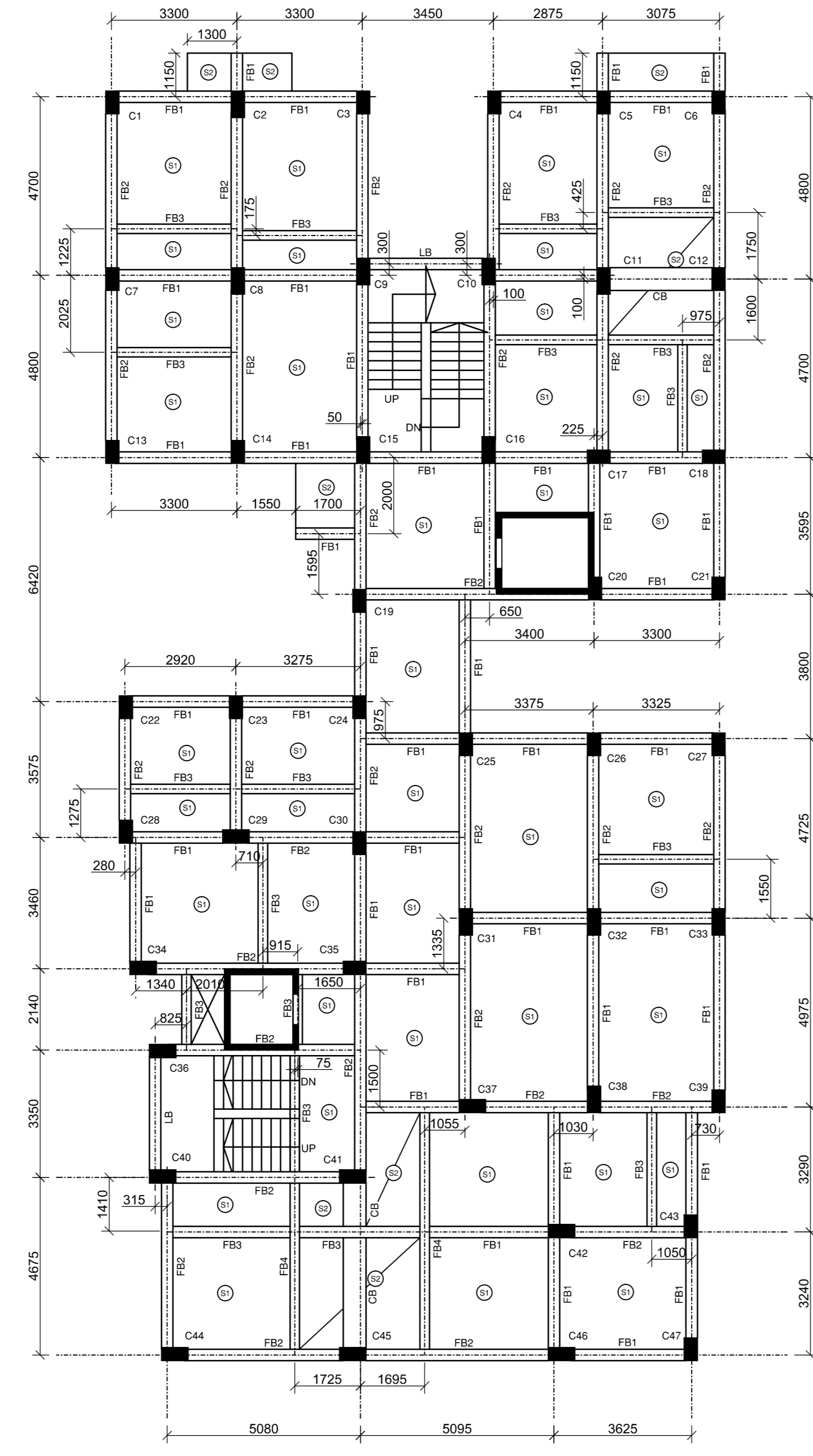
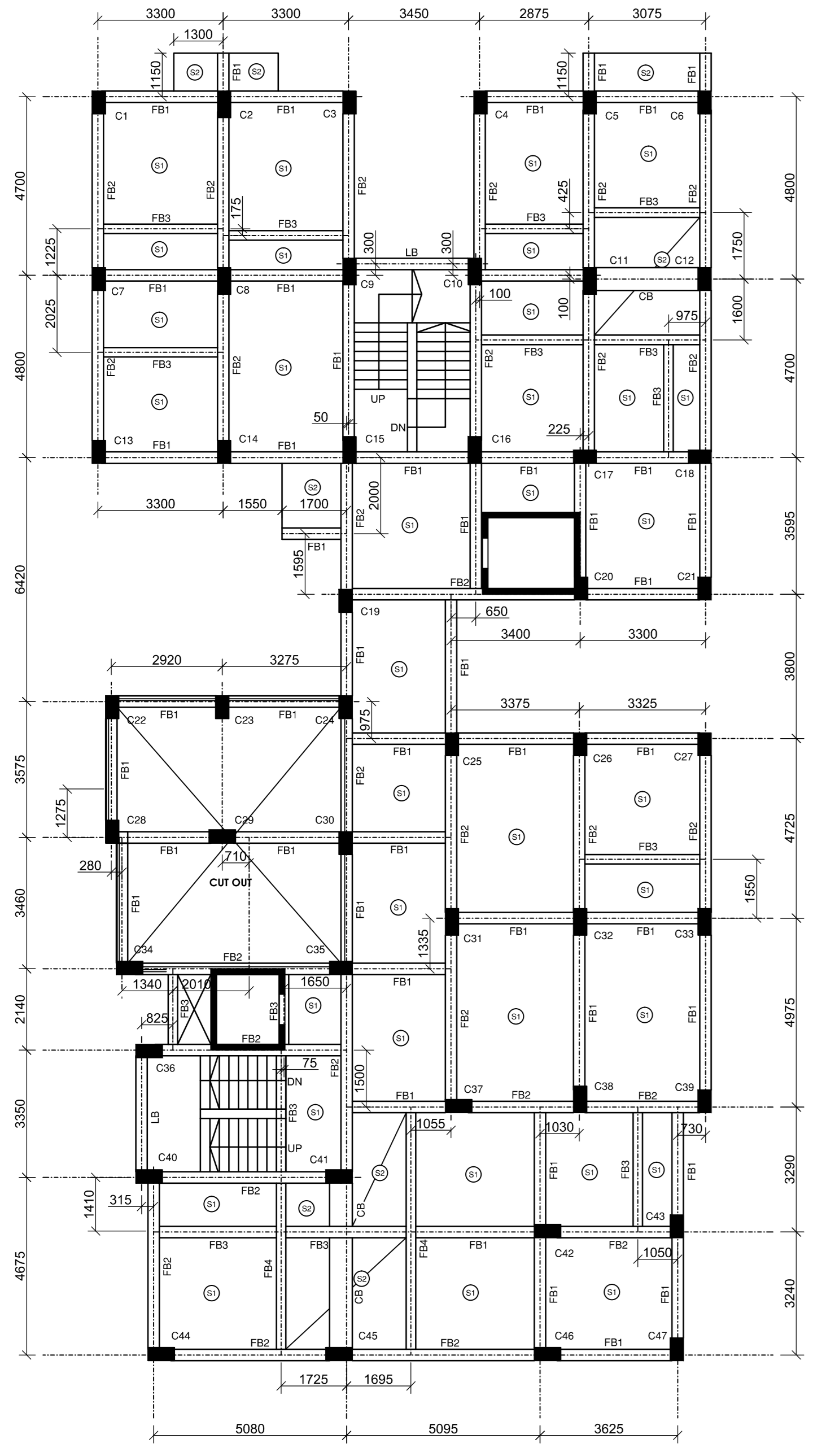
1. ALL REINFORCING STEEL SHALL BE OF TESTED QUALITY.
2. (a). HIGH YIELD STRENGTH DEFORMED BAR REINFORCEMENT (YIELD STRESS  $F_{yk}$  = 500 N/MM<sup>2</sup>) SHALL CONFORM TO IS:1786. (LATEST REVISION)
3. LAPS AND SPLICES OF REINFORCEMENT TO SUIT AVAILABLE LENGTH OF BARS SHALL BE MADE AS SHOWN ON THE DRAWINGS OR APPROVED BY THE ENGINEER AT SITE.
4. ALL HOOKS, BENDS, LAPS AND SPLICES SHALL BE AS PER IS:2502.
5. THE LAP/ANCHORAGE LENGTH OF BARS OF DIAMETER 'D' SHALL BE AS FOLLOWS:-

CONCRETE GRADE	DEFORMED BARS TENSION	DEFORMED BARS COMPRESSION
M-25	50xD	40xD

6. LAPPING OF BARS SHALL BE SUITABLY STAGGERED AND IN NO CASE MORE THAN 50% BARS SHALL BE LAPPED AT ANY SECTION.
7. LAPPING OF BARS FOR BEAM AND SLAB SHALL BE AVOIDED IN THE MAXIMUM TENSION ZONES.
8. DEVELOPMENT LENGTH ( $L_d$ ) = 50d<sub>max</sub> OF THE BAR+10d<sub>max</sub> OF THE BAR.
9. ALL SPACER BARS ARE 20d<sub>max</sub> @450 C/C AND TO BE PROVIDED WHEREVER REQUIRED.
10. PILE CAPACITY OF SOIL FOR 450 DIA PILE AT 20M DEPTH COMP 48T, TENS 34T.
11. PILE DESIGN HAS BEEN RECOMMENDED BY CLIENT.

NOTE:  
THIS BUILDING HAS BEEN DESIGNED FOR G+12.  
ALL EXTERNAL BRICK WALLS ARE 200MM THICK USED DENSITY 20kN/m<sup>3</sup>  
ALL INTERNAL BRICK WALLS ARE 125MM THICK USED DENSITY 20kN/m<sup>3</sup>

LOAD CONSIDERED NOTE:  
FLOOR LIVE LOAD = 2.5kN/m<sup>2</sup> (RESIDENTIAL)  
ACCESS ROOF LIVE LOAD = 1.5kN/m<sup>2</sup>  
NON ACCESS ROOF LIVE LOAD = 0.75kN/m<sup>2</sup>  
WATER TANK WITH WATER DEAD LOAD = 2.5kN/m<sup>2</sup>



**1ST FLOOR TO 3RD FLOOR BEAM SCHEDULE (M25-Fe500)**

BEAM NUMBERS	SIZE	BOTTOM REINFORCEMENT	TOP REINFORCEMENT	SHEAR STIRRUPS
FB1	300 500	4-T20 + 3-T20	4-T20 + 3-T20	2L-T8@100 C/C 2L-T8@150 C/C
FB2	300 500	4-T20 + 2-T16	4-T20 + 3-T20	2L-T8@100 C/C 2L-T8@150 C/C
FB3	250 450	3-T16 + 2-T16	3-T16 + 2-T16	2L-T8@150 C/C 2L-T8@150 C/C
FB4	250 500	3-T20 + 2-T20	3-T20 + 2-T20	2L-T8@150 C/C 2L-T8@150 C/C
FB5	300 500	4-T20 + 2-T20	4-T20 + 2-T20	2L-T8@150 C/C 2L-T8@150 C/C

**4TH FLOOR TO 6TH FLOOR BEAM SCHEDULE (M25-Fe500)**

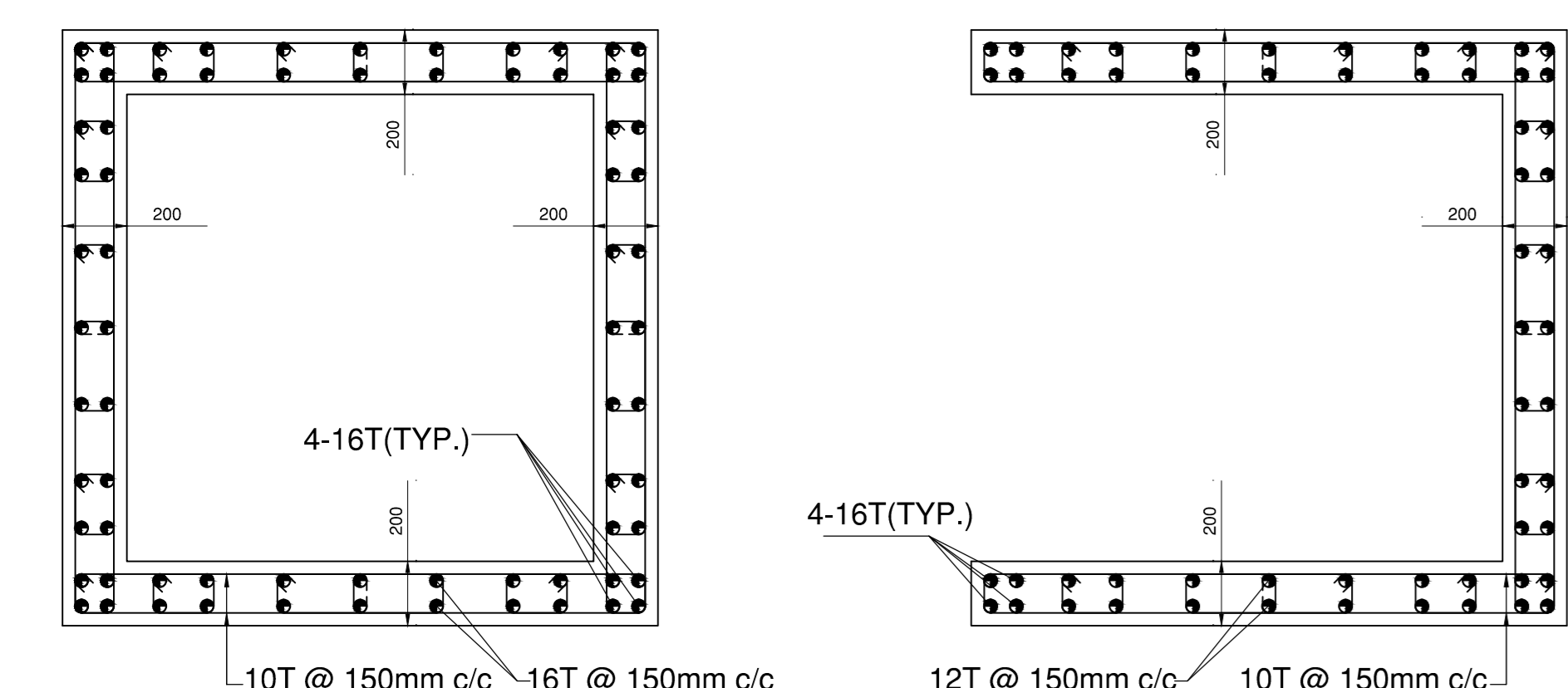
BEAM NUMBERS	SIZE	BOTTOM REINFORCEMENT	TOP REINFORCEMENT	SHEAR STIRRUPS
FB1	300 500	4-T20 + 2-T20	4-T20 + 2-T20	2L-T8@100 C/C 2L-T8@150 C/C
FB2	300 500	4-T20 + 2-T16	4-T20 + 2-T16	2L-T8@100 C/C 2L-T8@150 C/C
FB3	250 450	3-T16 + 2-T16	3-T16 + 2-T16	2L-T8@150 C/C 2L-T8@150 C/C
FB4	250 500	3-T20 + 2-T20	3-T20 + 2-T20	2L-T8@150 C/C 2L-T8@150 C/C
FB5	300 500	4-T20 + 2-T20	4-T20 + 2-T16	2L-T8@150 C/C 2L-T8@150 C/C

**7TH FLOOR TO 9TH FLOOR BEAM SCHEDULE (M25-Fe500)**

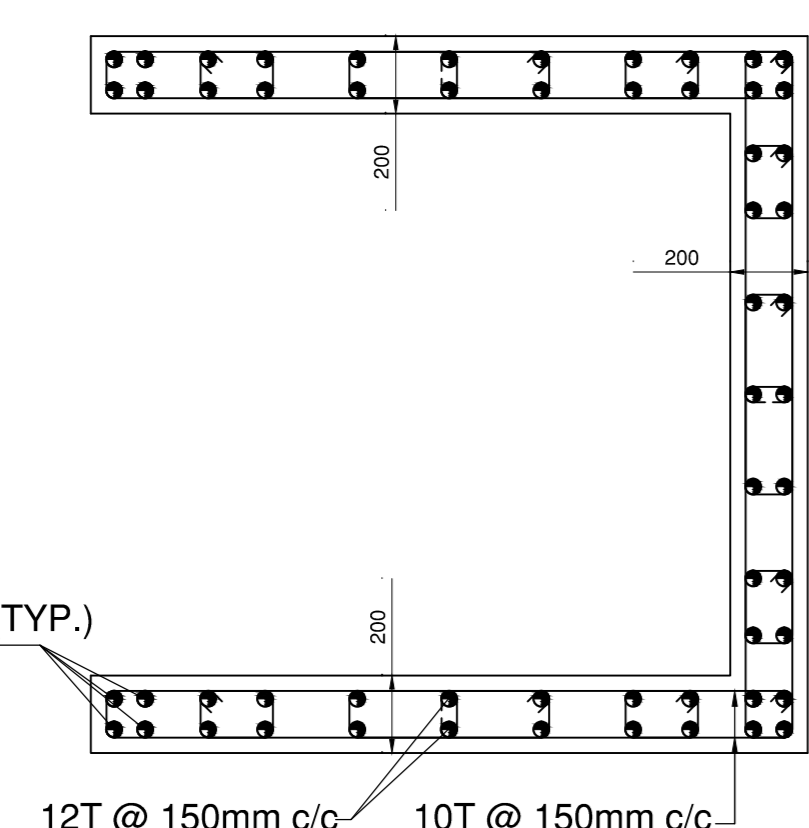
BEAM NUMBERS	SIZE	BOTTOM REINFORCEMENT	TOP REINFORCEMENT	SHEAR STIRRUPS
FB1	300 500	4-T16 + 2-T20	4-T16 + 2-T20	2L-T8@100 C/C 2L-T8@150 C/C
FB2	300 500	4-T16 + 2-T12	4-T16 + 2-T12	2L-T8@100 C/C 2L-T8@150 C/C
FB3	250 450	3-T16 + 2-T16	3-T16 + 2-T16	2L-T8@150 C/C 2L-T8@150 C/C
FB4	250 500	3-T20 + 2-T16	3-T20 + 2-T16	2L-T8@150 C/C 2L-T8@150 C/C
FB5	300 500	4-T16 + 2-T20	4-T16 + 2-T16	2L-T8@150 C/C 2L-T8@150 C/C

**9TH FLOOR TO 12TH FLOOR BEAM SCHEDULE (M25-Fe500)**

BEAM NUMBERS	SIZE	BOTTOM REINFORCEMENT	TOP REINFORCEMENT	SHEAR STIRRUPS
FB1	300 500	4-T16 + 2-T20	4-T16 + 2-T20	2L-T8@100 C/C 2L-T8@150 C/C
FB2	300 500	4-T16 + 2-T12	4-T16 + 2-T12	2L-T8@100 C/C 2L-T8@150 C/C
FB3	250 450	3-T16 + 2-T16	3-T16 + 2-T16	2L-T8@150 C/C 2L-T8@150 C/C
FB4	250 500	3-T16 + 2-T16	3-T16 + 2-T16	2L-T8@150 C/C 2L-T8@150 C/C
FB5	300 500	4-T16 + 2-T20	4-T16 + 2-T16	2L-T8@150 C/C 2L-T8@150 C/C



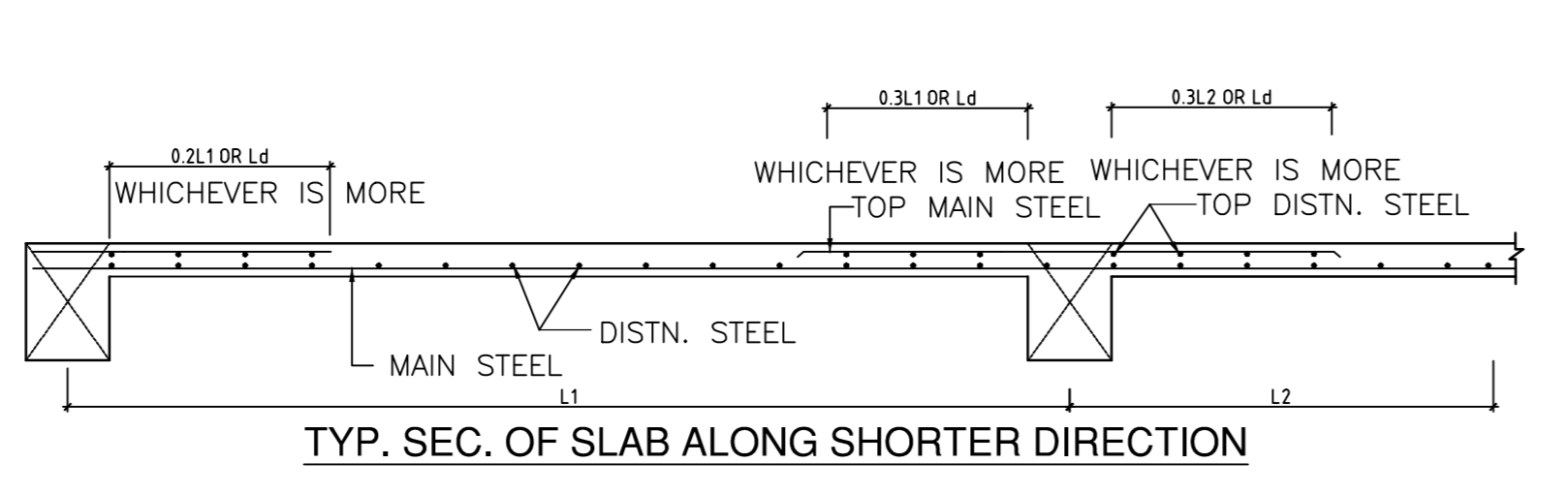
LIFT WALL SCHEDULE (M25-Fe500) FOUNDATION TO PLINTH



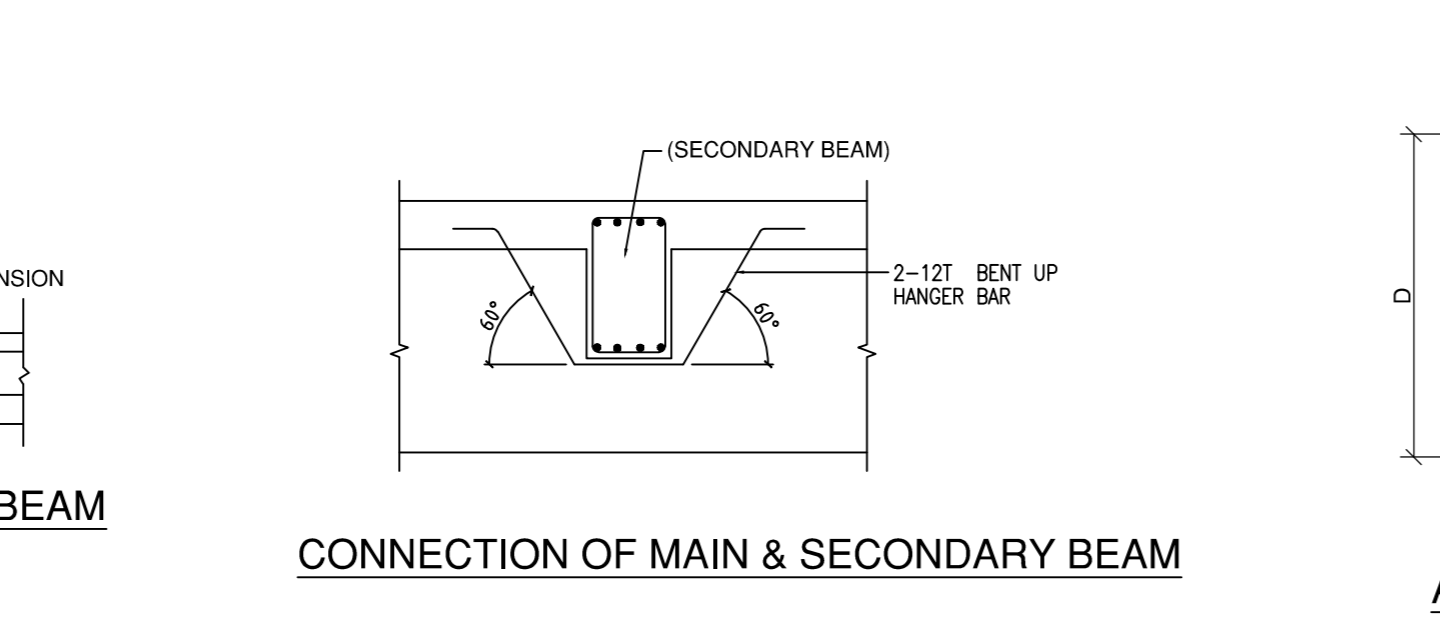
LIFT WALL SCHEDULE (M25-Fe500) PLINTH TO ROOF

**FLOOR SLAB SCHEDULE (M25-Fe500)**

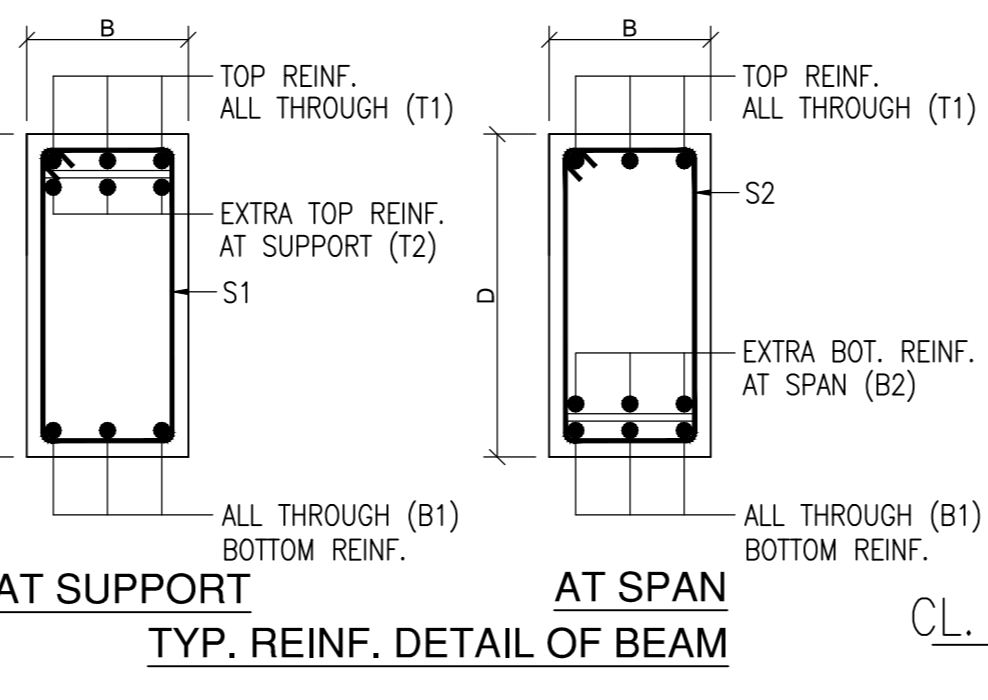
SLAB MARKED	SLAB THICKNESS	BOTTOM REINFORCEMENT	TOP REINFORCEMENT
S1	130	T10 @ 125 C/C	T10 @ 125 C/C
S2	150	T10 @ 125 C/C	T10 @ 125 C/C



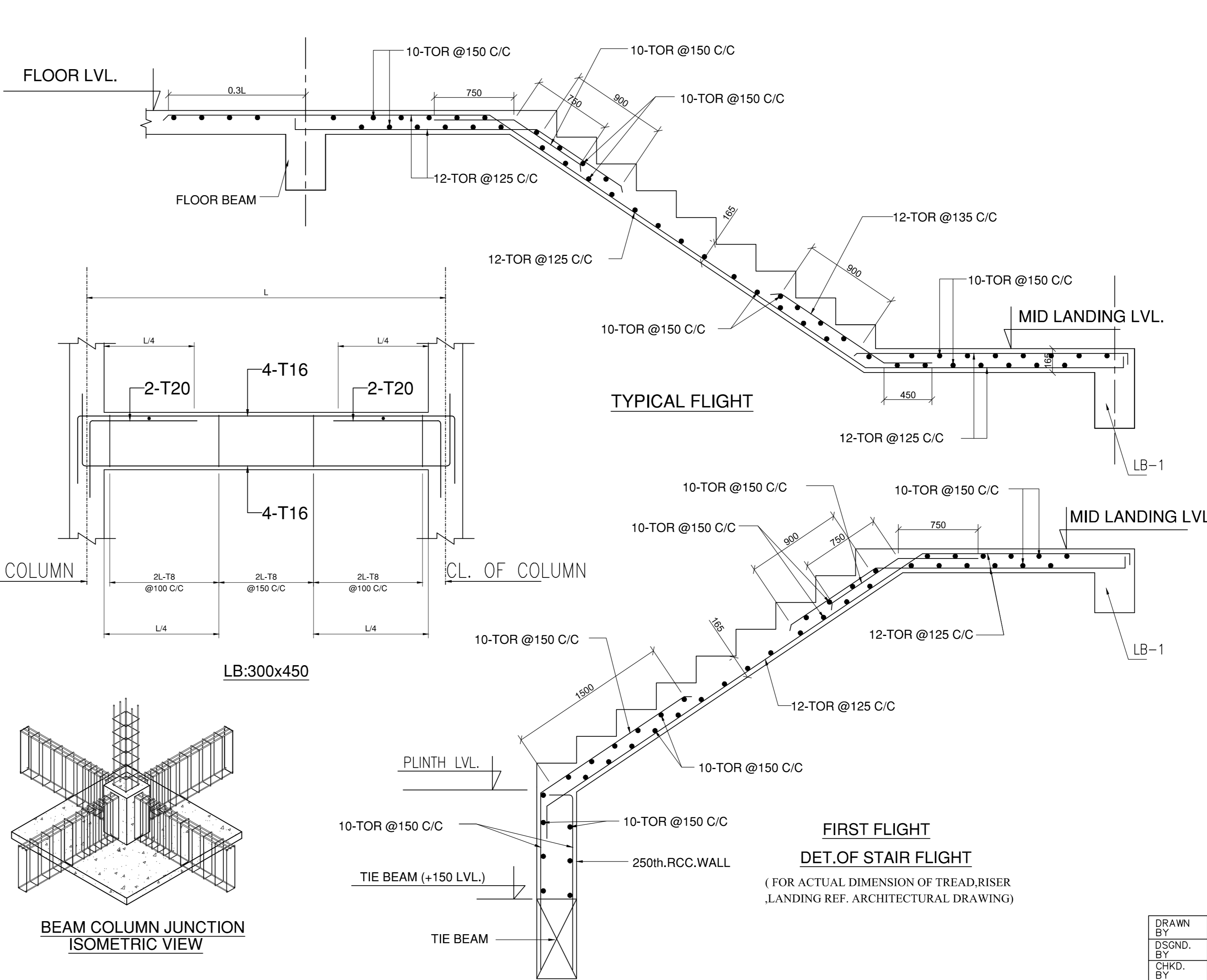
TYP. SEC. OF SLAB ALONG SHORTER DIRECTION



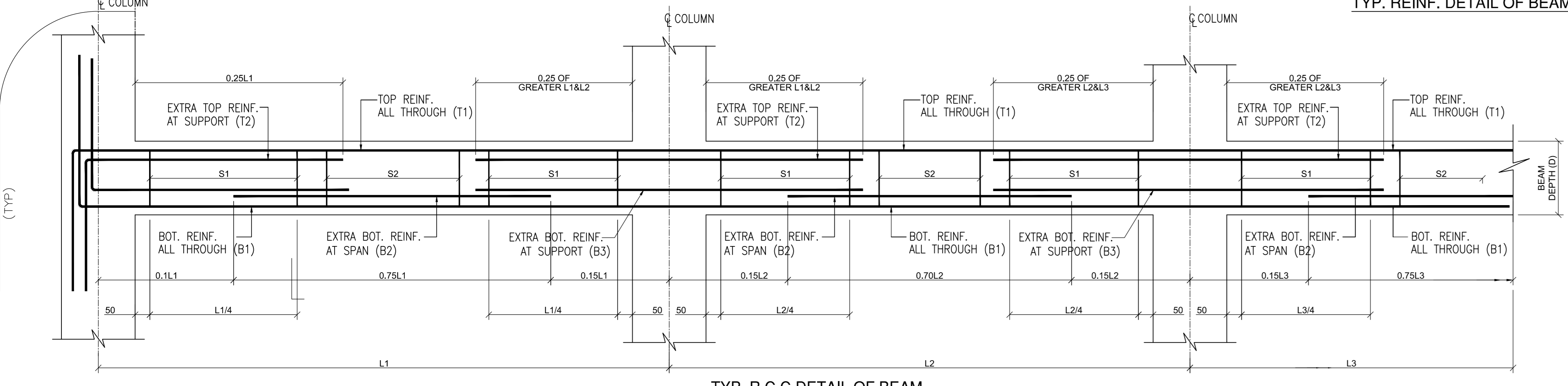
CONNECTION OF MAIN & SECONDARY BEAM



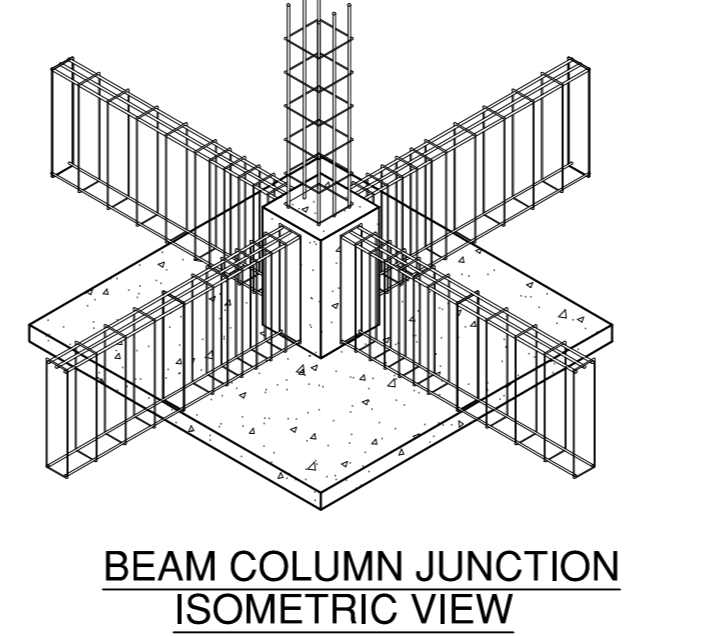
TYP. REINF. DETAIL OF BEAM



FIRST FLIGHT DET. OF STAIR FLIGHT (FOR ACTUAL DIMENSION OF TREAD, RISE, LANDING REF. ARCHITECTURAL DRAWING)



TYP. R.C.C DETAIL OF BEAM



BEAM COLUMN JUNCTION ISOMETRIC VIEW

**PROJECT TITLE:**  
PROPOSED G+12 STORED (RESIDENTIAL) BUILDING OF IN THE NAME & STYLE 'ITHEMBA DEVELOPMENTS LTD.' DIST - HOOGHLY, MOUZA & P.S. - CHANDERNAGORE, J.L. NO. - 1, C.S. & R.S.DAG NO.- 462, R.S.KHATHAN NO.- 289, L.R. DAG NO.- 786, L.R. KHATHAN NO.-3235,3236,3231,3232,3233,3234 SHEET NO.- 11 AT CHANDERNAGORE STATION ROAD, WARD NO.- 10, UNDER CHANDERNAGORE MUNICIPAL CORPORATION.

**DEMOLISHING ORDER NO.:**  
BD-6 / 2023 / 2024 / 50

**DATE :-** 04.01.2024

**DECLARATION OF STRUCTURAL ENGINEER**  
Certified that the Structural Analysis & Design of PROPOSED G+12 STORED (RESIDENTIAL) BUILDING OF IN THE NAME & STYLE 'ITHEMBA DEVELOPMENTS LTD.' has been prepared by me in the following land schedule: DIST - HOOGHLY, MOUZA & P.S. - CHANDERNAGORE, J.L. NO. - 1, C.S. & R.S.DAG NO.- 462, R.S.KHATHAN NO.- 289, L.R. DAG NO.- 786, L.R. KHATHAN NO.-3235,3236,3231,3232,3233,3234 SHEET NO.- 11 AT CHANDERNAGORE STATION ROAD, WARD NO.- 10, UNDER CHANDERNAGORE MUNICIPAL CORPORATION.

It is also certified that the said Structural Analysis has been prepared considering all possible loads including seismic loads and as per latest relevant IS Codes and the proposed structure is safe in all respect.

SIGNATURE OF STRUCTURAL ENGINEER

DRAWN BY	TP	DRAWING TITLE:-
DESIGN BY	RK	MARKING AND DETAILS OF STAIR, BEAM & SLAB
CHECK BY	SKS	
APPROV. BY	RK	