

COLUMN FOUNDATION & TIE BEAM LAYOUT PLAN (BLOCK -A & B)
SCALE - 1:1

STRUCTURAL PLAN FOR PROPOSED G+IV STORIED RESIDENTIAL FLAT BUILDING (BLOCK-A & BLOCK-B) OF (1) GOURI SANKAR ROY, (2) CHANDRANATH ROY, BOTH S/O LATE KALI KRISHNA ROY (3) SUMATI ROY D/O LATE KALI KRISHNA ROY, (4) SADHANA HAZRA W/O DILIP KUMAR HAZRA,(5) BANDANA SAMANTA W/O DEBKUMAR SAMANTA AT MOUZA- BHATCHALA, J.L. NO.- 37, R.S. PLOT NO.- 565, 565/598, 565/599, 567, L.R. PLOT NO. - 1489, L.R. KHATIAN NO. 436, 465, 3185, 3186, 3187, WARD NO.- 18, MAHALLA - BHATCHALA, HOLDING NO.- 606/1, UNDER BURDWAN MUNICIPALITY, P.S. BARDHAMAN, DIST. PURBA BARDHAMAN.

CERTIFICATE OF ENGINEER :-

CERTIFIED THAT THE FOUNDATION & SUPERSTRUCTURE OF THE BUILDING HAVE BEEN SO DESIGNED BY ME IS SAFE IN ALL RESPECT INVOLVING THE CONSIDERATION OF BEARING CAPACITY & SETTLEMENT OF SOIL ETC. AS PER I.S. STANDARD & N.B CODE. CERTIFIED THAT THE PLAN HAS BEEN DESIGNED & DRAWN UP STRICTLY ACCORDING TO THE BUILDING RULES FOR BURDWAN MUNICIPALITY

SRI ASHIM KUMAR SAHA
NAME OF STRUCTURAL ENGINEER



SCHEDULE OF FOUNDATION :-

GRADE	FOUNDATION UNDER COLUMN MKD.	TYPE AND SIZE sqm	DEPTH (D1) m	AT COLUMN SUPPORT (D2) m	PEDISTROL HEIGHT (D3) m	ALONG LONGER DIRECTION	ALONG SHORTER DIRECTION
I	C1;	2.400 x 2.400	0.250	--	1.600	12 TOR @ 0.100 C/C	12 TOR @ 0.100 C/C
II	C7; C13; C19; C31;	2.600 x 2.600	0.300	--	1.550	12 TOR @ 0.100 C/C	12 TOR @ 0.100 C/C
III	C6; C26;	2.700 x 2.700	0.350	--	1.500	12 TOR @ 0.100 C/C	12 TOR @ 0.100 C/C
IV	C2; C14; C18;	2.800 x 2.800	0.400	--	1.450	12 TOR @ 0.100 C/C	12 TOR @ 0.100 C/C
V	C8;	3.400 x 2.900	0.500	--	1.350	16 TOR @ 0.100 C/C	12 TOR @ 0.100 C/C
VI	C20;	3.100 x 3.100	0.450	--	1.400	16 TOR @ 0.150 C/C	16 TOR @ 0.150 C/C
VII	C24; C27;	2.900 x 2.900	0.400	--	1.450	12 TOR @ 0.100 C/C	12 TOR @ 0.100 C/C
VIII	C12;	3.000 x 3.000	0.400	--	1.450	16 TOR @ 0.150 C/C	16 TOR @ 0.150 C/C
IX	C3 = C4 + C5 + C9 + C10 + I1 + C15 + C16 + C17 + C21 + C22 + C23 + C25 + C28 + C29 + C30				SHOWN IN FIG 1		

SCHEDULE OF COLUMN :-

COLUMN MARKED	REINFORCEMENT UPTO 3RD ROOF			REINFORCEMENT FROM 3RD ROOF		
	SIZE (M)	LONGITUDINAL	TIES	SIZE (M)	LONGITUDINAL	TIES
C1; C2; C3; C4; C5; C6; C7; C13; C18; C19; C26; C30; C31;	0.300 x 0.400	10 - 16 Ø TOR	2L - 8 TOR @ 0.200 C/C	0.300 x 0.400	4 - 16 Ø TOR + 6 - 12 Ø TOR	2L - 8 TOR @ 0.200 C/C
C8; C9; C12; C14; C17; C20; C22; C23; C24; C25; C27; C28; C29;	0.300 x 0.400	12 - 16 Ø TOR	2L - 8 TOR @ 0.200 C/C	0.300 x 0.400	4 - 16 Ø TOR + 8 - 12 Ø TOR	2L - 8 TOR @ 0.200 C/C
C10; C11; C15; C16; C21;	0.300 x 0.400	4 - 20 Ø TOR + 8 - 16 Ø TOR	2L - 8 TOR @ 0.200 C/C	0.300 x 0.400	4 - 20 Ø TOR + 8 - 12 Ø TOR	2L - 8 TOR @ 0.200 C/C

SCHEDULE OF TIE BEAM :-

BEAM MARKED	SIZE OF BEAM	AT SUPPORT REINFORCEMENT			AT SPAN REINFORCEMENT		
		TOP	BOTTOM	STIRRUPS	TOP	BOTTOM	STIRRUPS
TB	0.300 x 0.400	3 - 16 TOR + 3 - 16 TOR	3 - 16 TOR	2 - 8 TOR @ 0.150 C/C	3 - 16 TOR	3 - 16 TOR	2 - 8 TOR @ 0.200 C/C
TB1	0.300 x 0.400	3 - 16 TOR	3 - 16 TOR	2 - 8 TOR @ 0.150 C/C	2 - 16 TOR	3 - 16 TOR	2 - 8 TOR @ 0.200 C/C

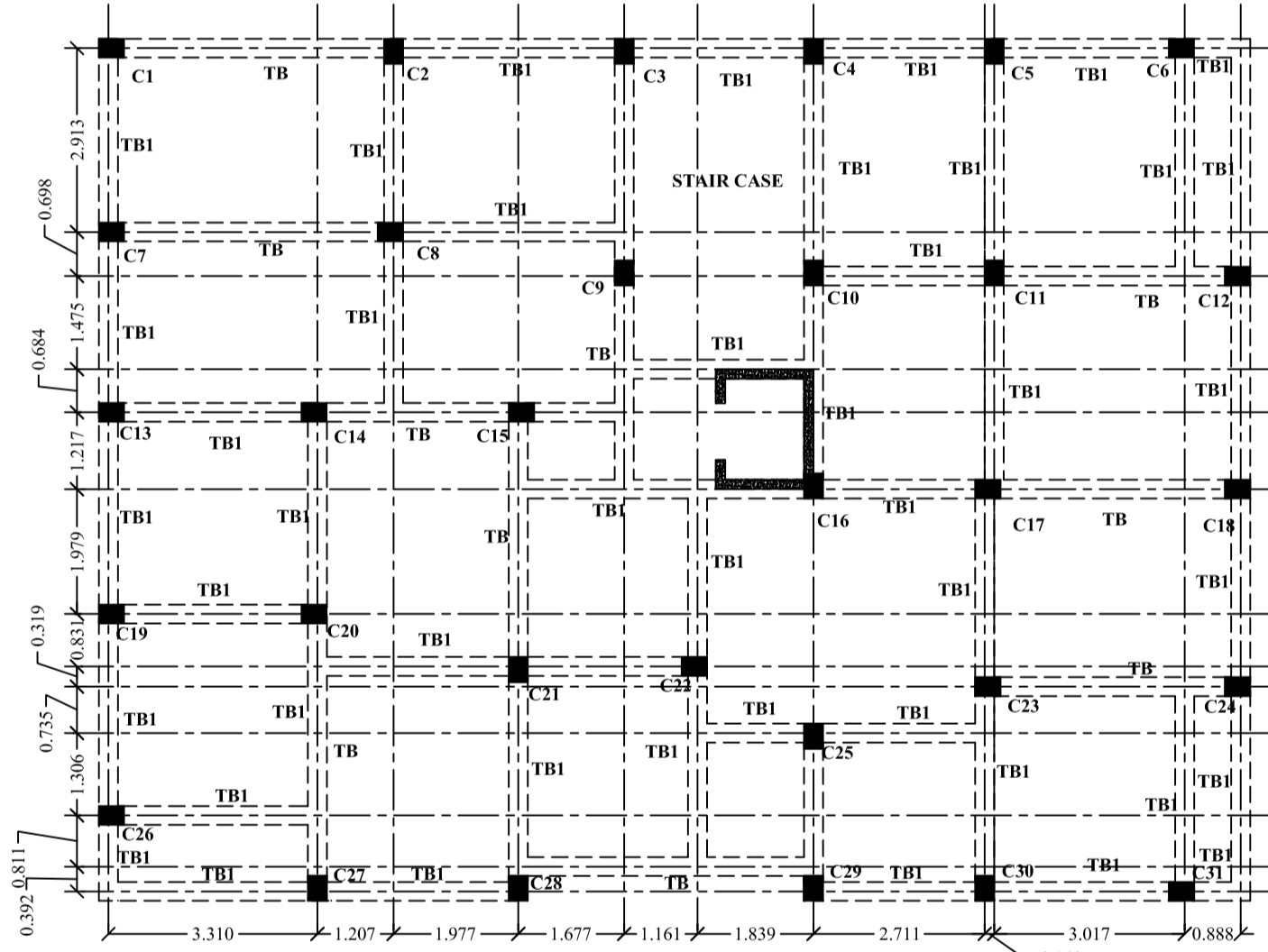
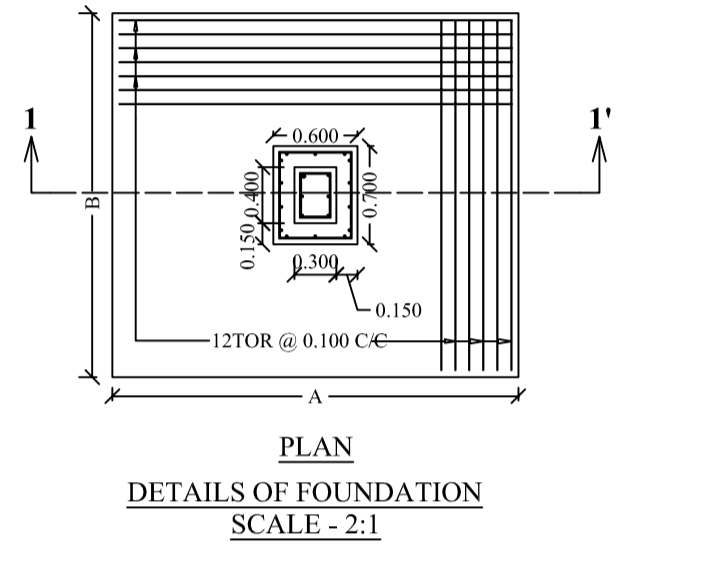
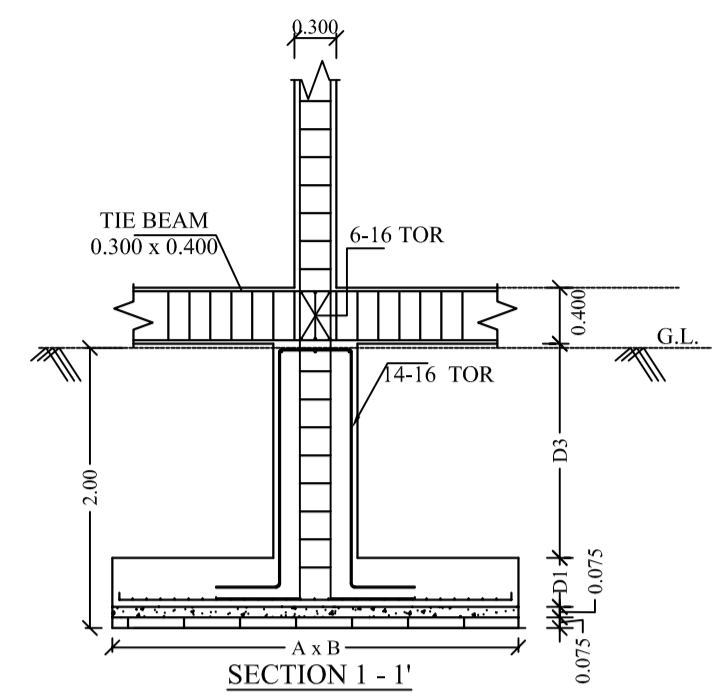
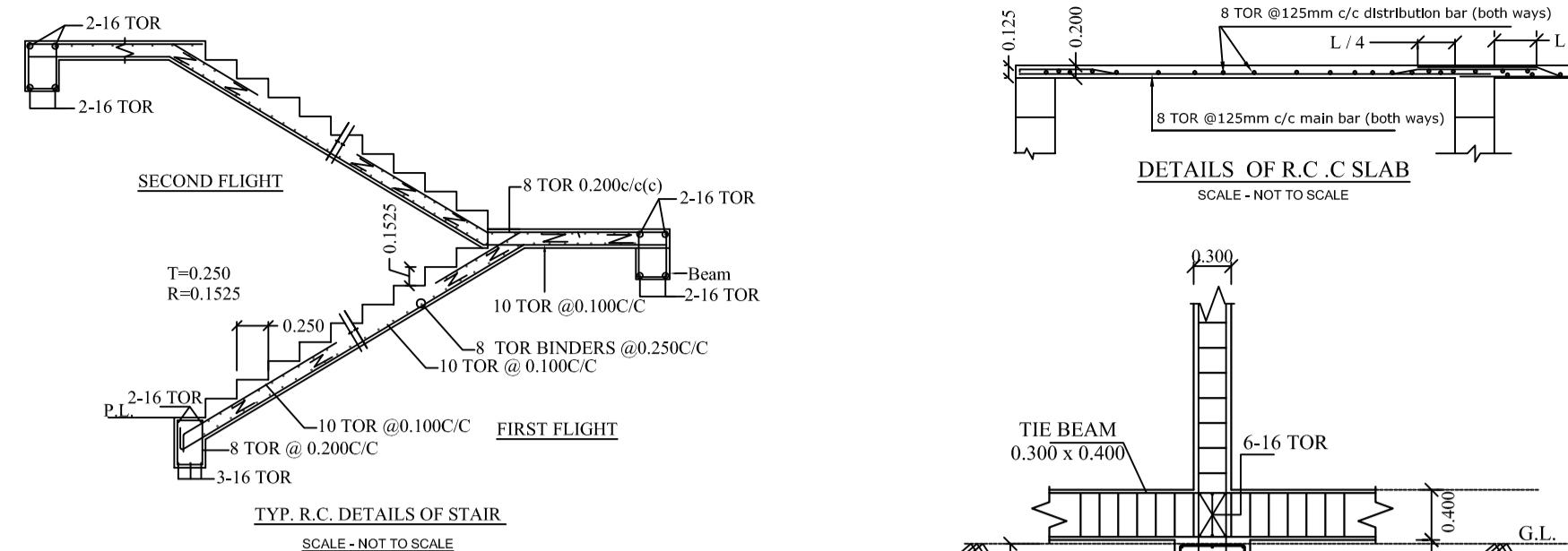
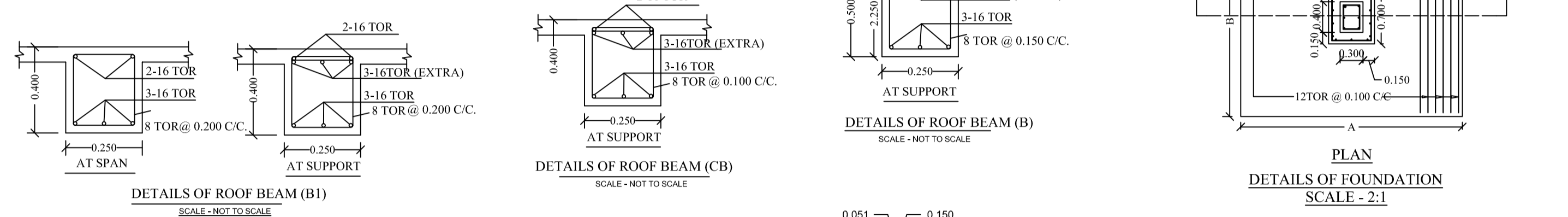
SCHEDULE OF ROOF BEAM :-

BEAM MARKED	SIZE OF BEAM	AT SUPPORT REINFORCEMENT			AT SPAN REINFORCEMENT		
		TOP	BOTTOM	STIRRUPS	TOP	BOTTOM	STIRRUPS
B	0.300 x 0.400	3 - 16 TOR	3 - 16 TOR	2 - 8 TOR @ 0.150 C/C	3 - 16 TOR	3 - 16 TOR	2 - 8 TOR @ 0.200 C/C
B1	0.300 x 0.400	2 - 16 TOR + 3 - 16 TOR	3 - 16 TOR	2 - 8 TOR @ 0.150 C/C	2 - 16 TOR	3 - 16 TOR	2 - 8 TOR @ 0.200 C/C
CB	0.300 x 0.400	3 - 16 TOR	3 - 16 TOR	2 - 8 TOR @ 0.100 C/C	—	—	—

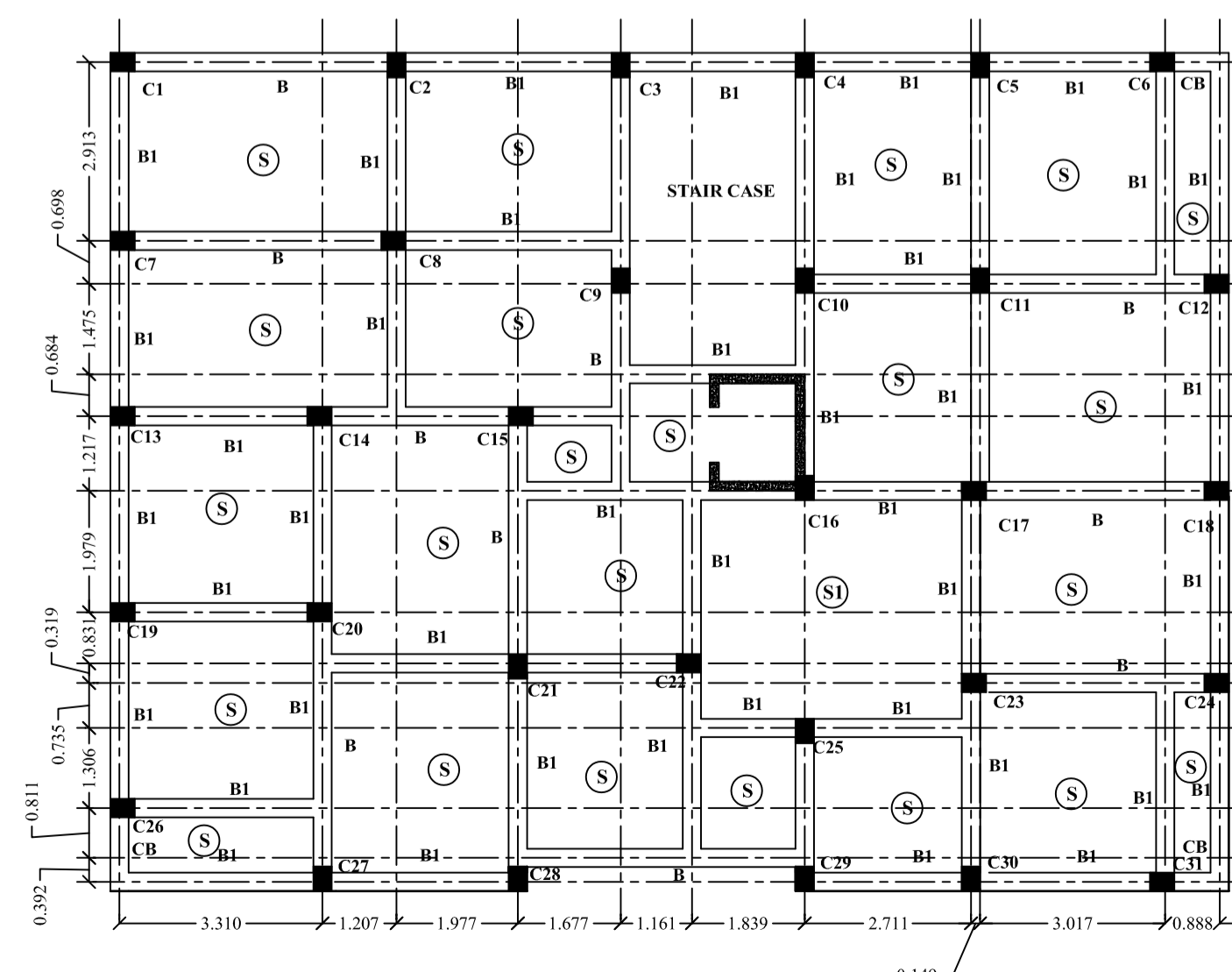
SCHEDULE OF SLAB :-

SLAB MKD	THICKNESS (m)	REINFORCEMENT AT SUPPORT				REINFORCEMENT AT SPAN			
		ALONG LONGER DIR.	ALONG SHORTER DIR.	ALONG LONGER DIR.	ALONG SHORTER DIR.	ALONG LONGER DIR.	ALONG SHORTER DIR.	ALONG LONGER DIR.	ALONG SHORTER DIR.
S	0.110	8 TOR @ 0.125 C/C	8 TOR @ 0.250 C/C	8 TOR @ 0.125 C/C	8 TOR @ 0.250 C/C	8 TOR @ 0.125 C/C	8 TOR @ 0.125 C/C	8 TOR @ 0.125 C/C	8 TOR @ 0.125 C/C
S1	0.150	8 TOR @ 0.0625	8 TOR @ 0.125 C/C	8 TOR @ 0.0625 C/C	8 TOR @ 0.125 C/C	8 TOR @ 0.125 C/C	8 TOR @ 0.125 C/C	8 TOR @ 0.125 C/C	8 TOR @ 0.125 C/C

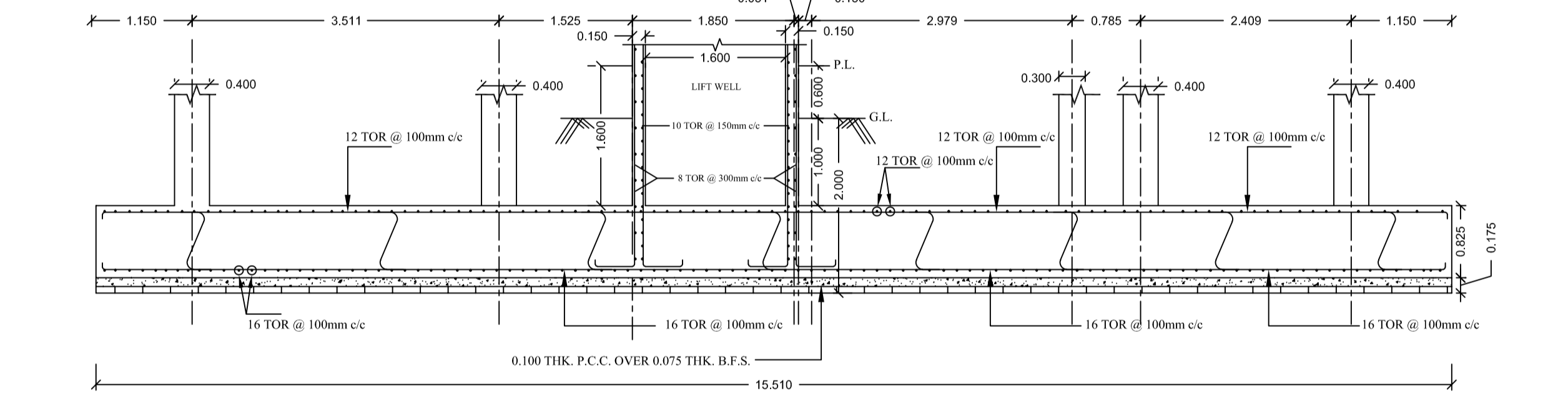
TORSIONAL REINFORCEMENT AS PER IS456:2000 WILL BE PROVIDED



TYPICAL TIE BEAM LAYOUT PLAN SCALE - 1:1



TYPICAL ROOF BEAM & SLAB LAYOUT PLAN SCALE - 1:1



SECTION AT A-A'

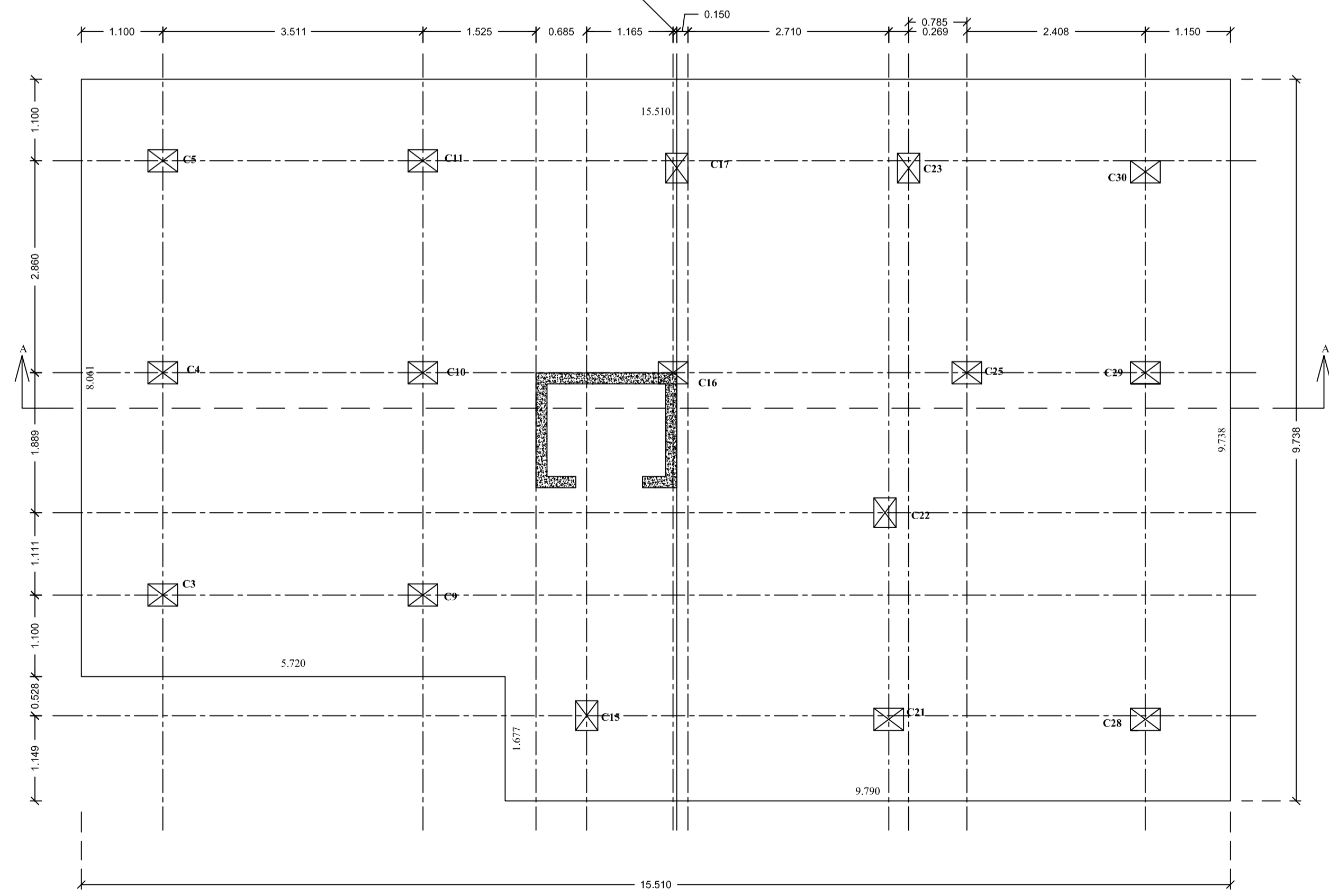


FIG.1

BLOCK -A

STRUCTURAL PLAN FOR PROPOSED G+IV STORIED RESIDENTIAL FLAT BUILDING (BLOCK-A) OF (1) GOURI SANKAR ROY, (2) CHANDRANATH ROY, BOTH S/O LATE KALI KRISHNA ROY (3) SUMATI ROY D/O LATE KALI KRISHNA ROY, (4) SADHANA HAZRA W/O DILIP KUMAR HAZRA, (5) BANDANA SAMANTA W/O DEBKUMAR SAMANTA AT MOUZA-BHATCHALA, J.L. NO.- 37, R.S. PLOT NO.- 565, 565/598, 565/599, 567, L.R. PLOT NO. - 1489, L.R. KHATIAN NO. 436, 465, 3185, 3186, 3187, WARD NO.- 18, MAHALLA - BHATCHALA, HOLDING NO.- 606/1, UNDER BURDWAN MUNICIPALITY, P.S. BARDHAMAN, DIST. PURBA BARDHAMAN.

Note :

- All dimensions are in M. Levels are in Meter, unless otherwise mentioned.
- Written dimensions are to be followed.
- This drawing is to be read in conjunction with relevant architectural drawing.
- Grade of concrete is M20 (mix not leaner than 1:1.5:3)
- Grade of reinforcement is Tor Steel, Grade - Fe- 500D
- Clear cover to main reinforcement
 - Footing = 0.050 m
 - Column = 0.040 m
 - Tie Beam = 0.025 m
 - Beam = 0.025 m
 - Slab = 0.020 m
- Lap length = 50 X Diameter of bar
- All distribution bar is 8 tor @ 0.250 C/C
- Used IS Codes :
 - IS:456-2000
 - IS:875 (Part II & III -1987)
 - IS:1893 - 2002
 - SP-16 & SP-34

CERTIFICATE OF ENGINEER :-

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SRI ASHIM KUMAR SAHA
NAME OF STRUCTURAL ENGINEER



SCHEDULE OF FOUNDATION :-

GRADE	FOUNDATION UNDER COLUMN MKD.	TYPE AND SIZE sqm	DEPTH AT EDGE (D1) m	DEPTH AT COLUMN SUPPORT (D2) m	PIEDestal HEIGHT (D3) m	REINFORCEMENT ALONG LONGER DIRECTION	REINFORCEMENT ALONG SHORTER DIRECTION
I	C3, C15	2.400 x 2.400	0.250	--	1.600	12 TOR @ 0.100 C/C	12 TOR @ 0.100 C/C
II	C7, C8, C13, C15, C25	2.550 x 2.550	0.300	--	1.550	12 TOR @ 0.100 C/C	12 TOR @ 0.100 C/C
III	C2	2.750 x 2.750	0.350	--	1.500	12 TOR @ 0.100 C/C	12 TOR @ 0.100 C/C
IV	C9	3.200 x 3.200	0.450	--	1.400	16 TOR @ 0.125 C/C	16 TOR @ 0.125 C/C
V	C16, C21, C25	3.150 x 2.400	0.450	--	1.400	16 TOR @ 0.125 C/C	12 TOR @ 0.100 C/C
VI	C13	3.050 x 2.750	0.400	--	1.450	16 TOR @ 0.150 C/C	12 TOR @ 0.100 C/C
VII	C23	3.400 x 3.400	0.500	--	1.350	16 TOR @ 0.125 C/C	16 TOR @ 0.125 C/C
VIII	C24	3.300 x 3.300	0.500	--	1.350	16 TOR @ 0.125 C/C	16 TOR @ 0.125 C/C
IX	C28	3.050 x 2.650	0.400	--	1.450	16 TOR @ 0.150 C/C	12 TOR @ 0.100 C/C
X	C4-C14	9.137x2.300	SHOWN IN FIG 1				
XI	C1-C10	7.894x2.300	SHOWN IN FIG 2				
XII	C17-C22	7.366x2.550	SHOWN IN FIG 3				
XIII	C5-C6-C11-C12-C18-C19	6.250x10.045	SHOWN IN FIG 4				

SCHEDULE OF COLUMN :-

COLUMN MARKED	REINFORCEMENT UPTO 3RD ROOF SIZE (M)	REINFORCEMENT FROM 3RD ROOF	
		LONGITUDINAL	TIES
C2, C3	0.300 x 0.400	10-16 TOR	2L-8 TOR @ 0.200 C/C
C1, C7, C8, C13, C15, C25	0.300 x 0.400	12-16 TOR	2L-8 TOR @ 0.200 C/C
C4, C5, C6, C16, C17, C20, C21, C22	0.300 x 0.400	8-16 TOR	2L-8 TOR @ 0.200 C/C
C9, C10, C12, C14, C18, C23	0.300 x 0.400	10-20 TOR	2L-8 TOR @ 0.200 C/C
C19, C24	0.300 x 0.400	12-20 TOR	2L-8 TOR @ 0.200 C/C

SCHEDULE OF SLAB :-

SLAB MKD	THICKNESS (m)	REINFORCEMENT AT SUPPORT				REINFORCEMENT AT SPAN			
		ALONG LONGER DIR		ALONG SHORTER DIR		ALONG LONGER DIR		ALONG SHORTER DIR	
		TOP	BOTTOM	TOP	BOTTOM	TOP	BOTTOM	TOP	BOTTOM
S	0.110	8 TOR @ 0.125 C/C	8 TOR @ 0.250 C/C	8 TOR @ 0.125 C/C	8 TOR @ 0.250 C/C	8 TOR @ 0.125 C/C	8 TOR @ 0.125 C/C	8 TOR @ 0.125 C/C	8 TOR @ 0.125 C/C
S1	0.150	8 TOR @ 0.0625 C/C	8 TOR @ 0.125 C/C	8 TOR @ 0.0625 C/C	8 TOR @ 0.125 C/C	8 TOR @ 0.125 C/C	8 TOR @ 0.125 C/C	8 TOR @ 0.125 C/C	8 TOR @ 0.125 C/C
CS	0.150	8 TOR @ 0.0625 C/C	8 TOR @ 0.125 C/C	8 TOR @ 0.0625 C/C	8 TOR @ 0.125 C/C	8 TOR @ 0.125 C/C	8 TOR @ 0.125 C/C	8 TOR @ 0.125 C/C	8 TOR @ 0.125 C/C

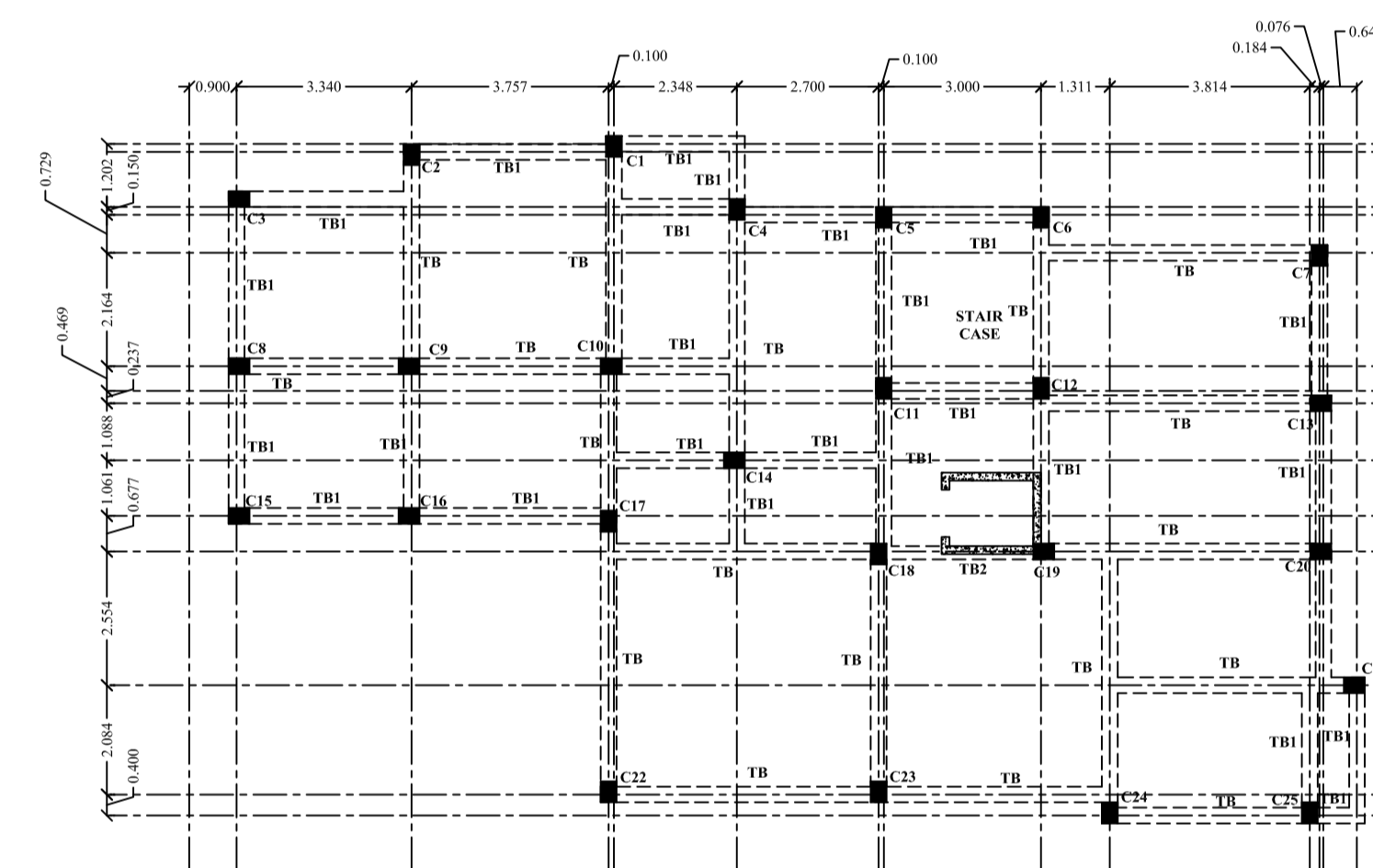
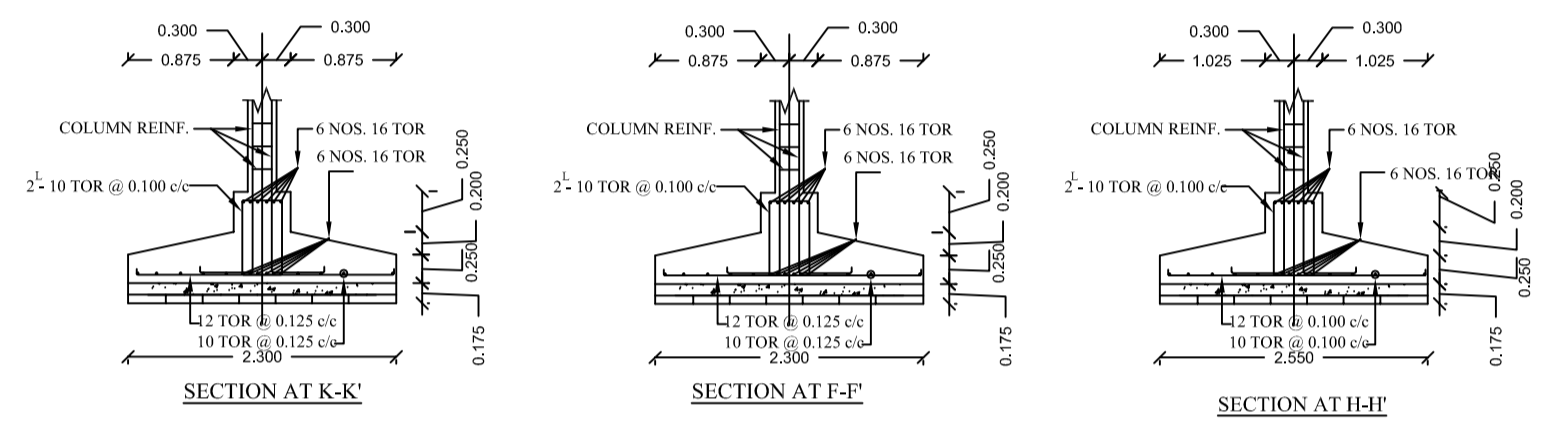
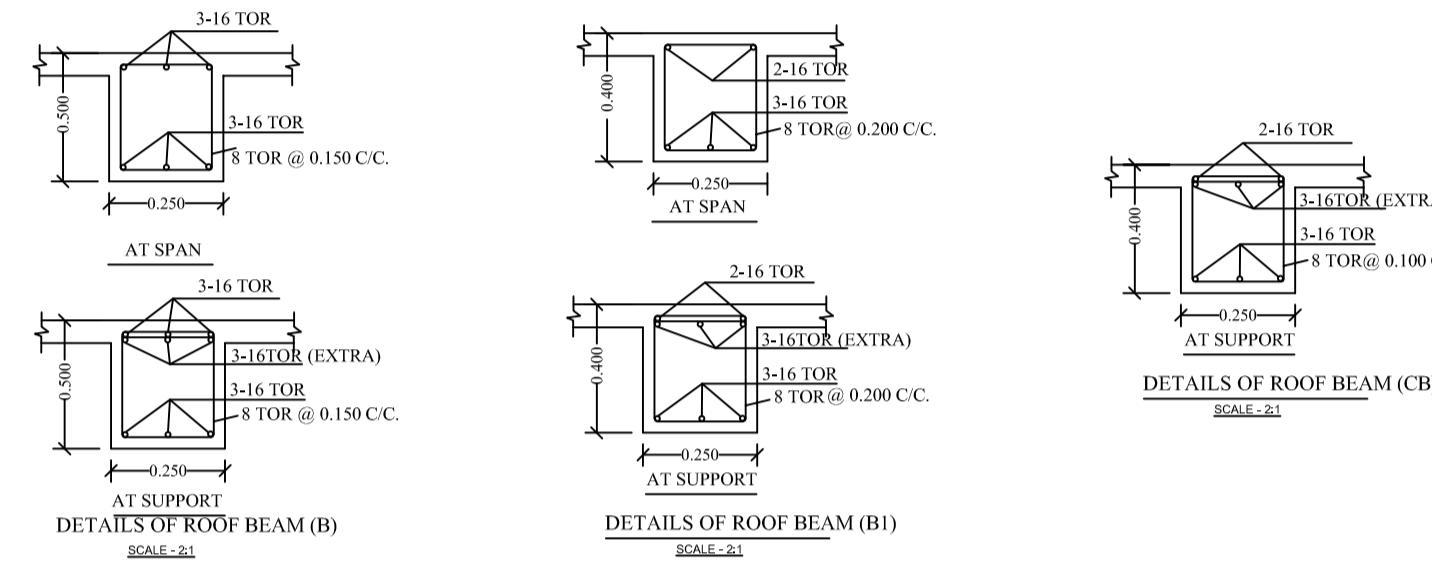
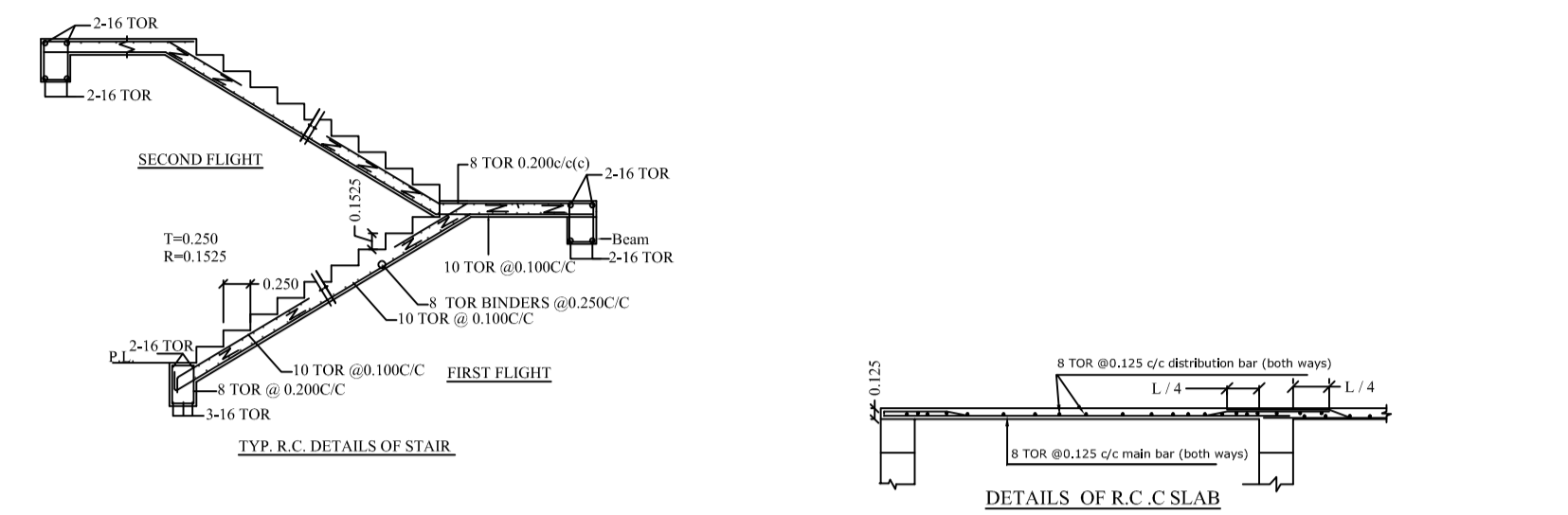
TORSIONAL REINFORCEMENT AS PER IS 456:2000 WILL BE PROVIDED

SCHEDULE OF ROOF BEAM :-

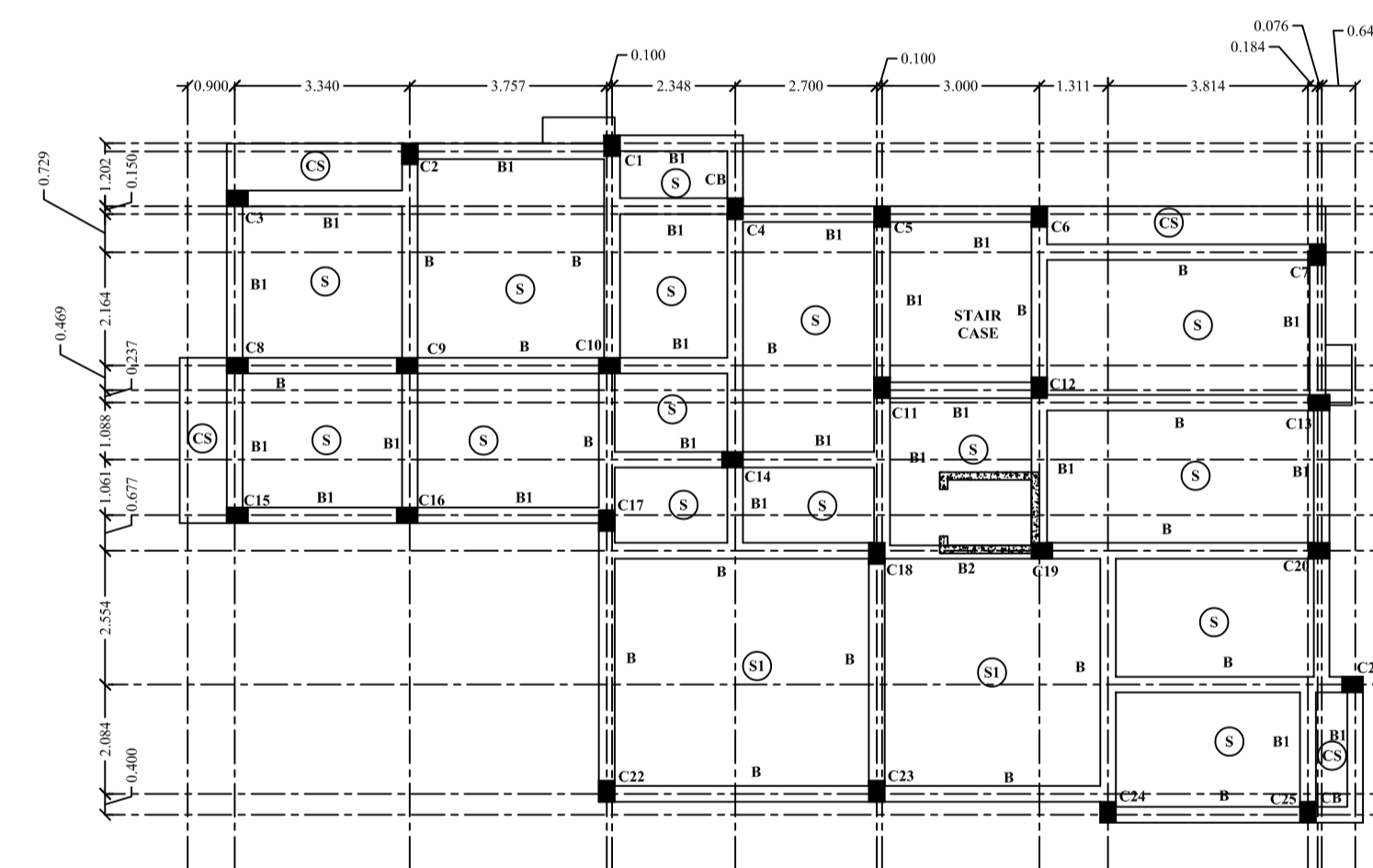
BEAM MARKED	SIZE OF BEAM	AT SUPPORT REINFORCEMENT			AT SPAN REINFORCEMENT		
		TOP	BOTTOM	STIRRUPS	TOP	BOTTOM	STIRRUPS
B	0.300 x 0.400	3-16 TOR	3-16 TOR	2-8 TOR @ 0.150 C/C	3-16 TOR	3-16 TOR	2-8 TOR @ 0.200 C/C
B1	0.300 x 0.400	3-16 TOR	3-16 TOR	2-8 TOR @ 0.150 C/C	3-16 TOR	3-16 TOR	2-8 TOR @ 0.200 C/C
B2	0.250 x 0.400	3-16 TOR	3-16 TOR	2-8 TOR @ 0.150 C/C	2-16 TOR	3-16 TOR	2-8 TOR @ 0.200 C/C
CB	0.300 x 0.400	3-16 TOR	3-16 TOR	2-8 TOR @ 0.100 C/C	2-16 TOR	3-16 TOR	2-8 TOR @ 0.200 C/C

SCHEDULE OF TIE BEAM :-

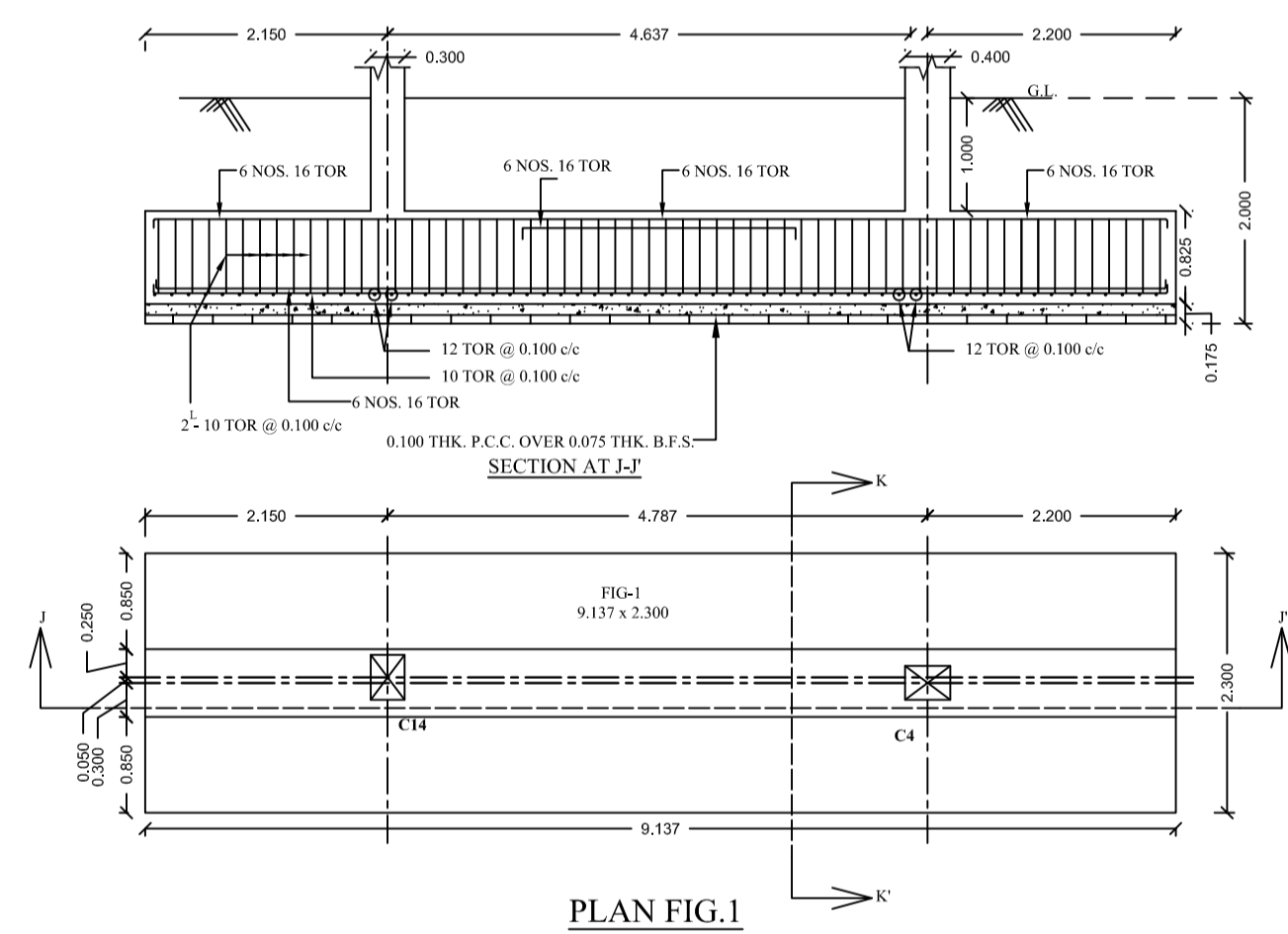
BEAM MARKED	SIZE OF BEAM	AT SUPPORT REINFORCEMENT			AT SPAN REINFORCEMENT		
		TOP	BOTTOM	STIRRUPS	TOP	BOTTOM	STIRRUPS
TB	0.300 x 0.400	3-16 TOR	3-16 TOR	2-8 TOR @ 0.150 C/C	3-16 TOR	3-16 TOR	2-8 TOR @ 0.200 C/C
TB1	0.300 x 0.400	3-16 TOR	3-16 TOR	2-8 TOR @ 0.150 C/C	2-16 TOR	3-16 TOR	2-8 TOR @ 0.200 C/C
TB2	0.250 x 0.400	3-16 TOR	3-16 TOR	2-8 TOR @ 0.150 C/C	2-16 TOR	3-16 TOR	2-8 TOR @ 0.200 C/C



TYPICAL TIE BEAM LAYOUT PLAN SCALE - 1:1



TYPICAL ROOF BEAM & SLAB LAYOUT PLAN SCALE - 1:1



PLAN FIG.1

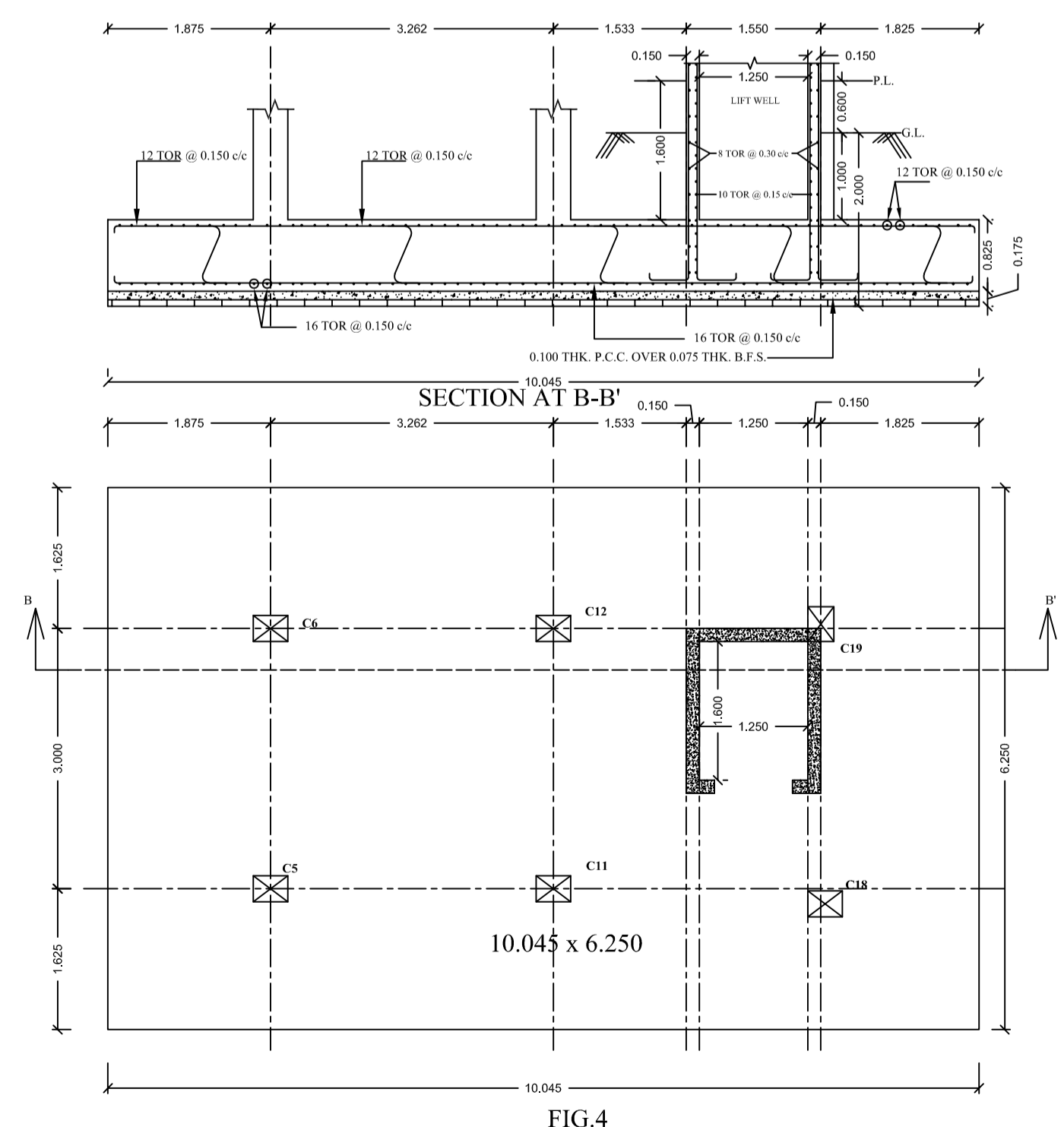
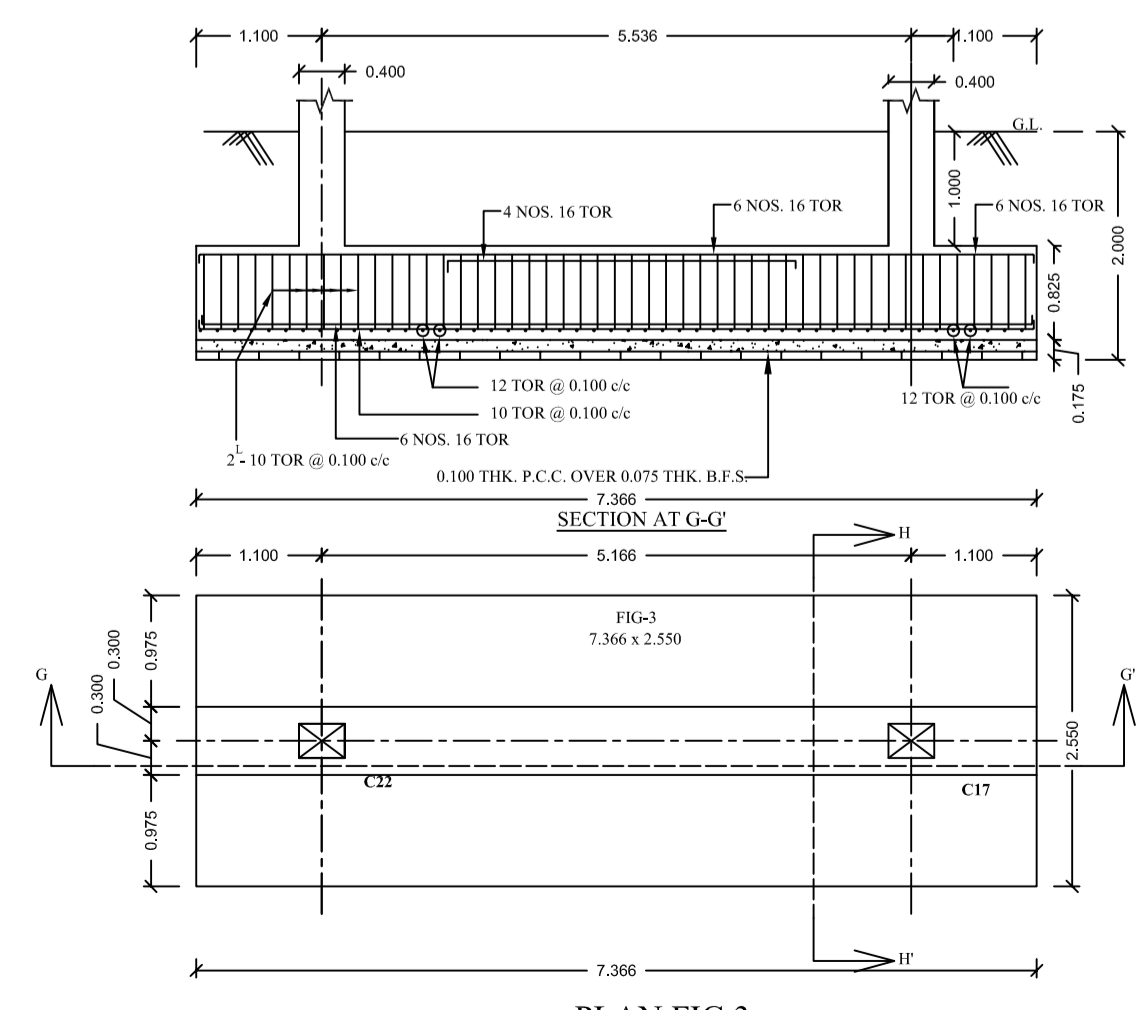
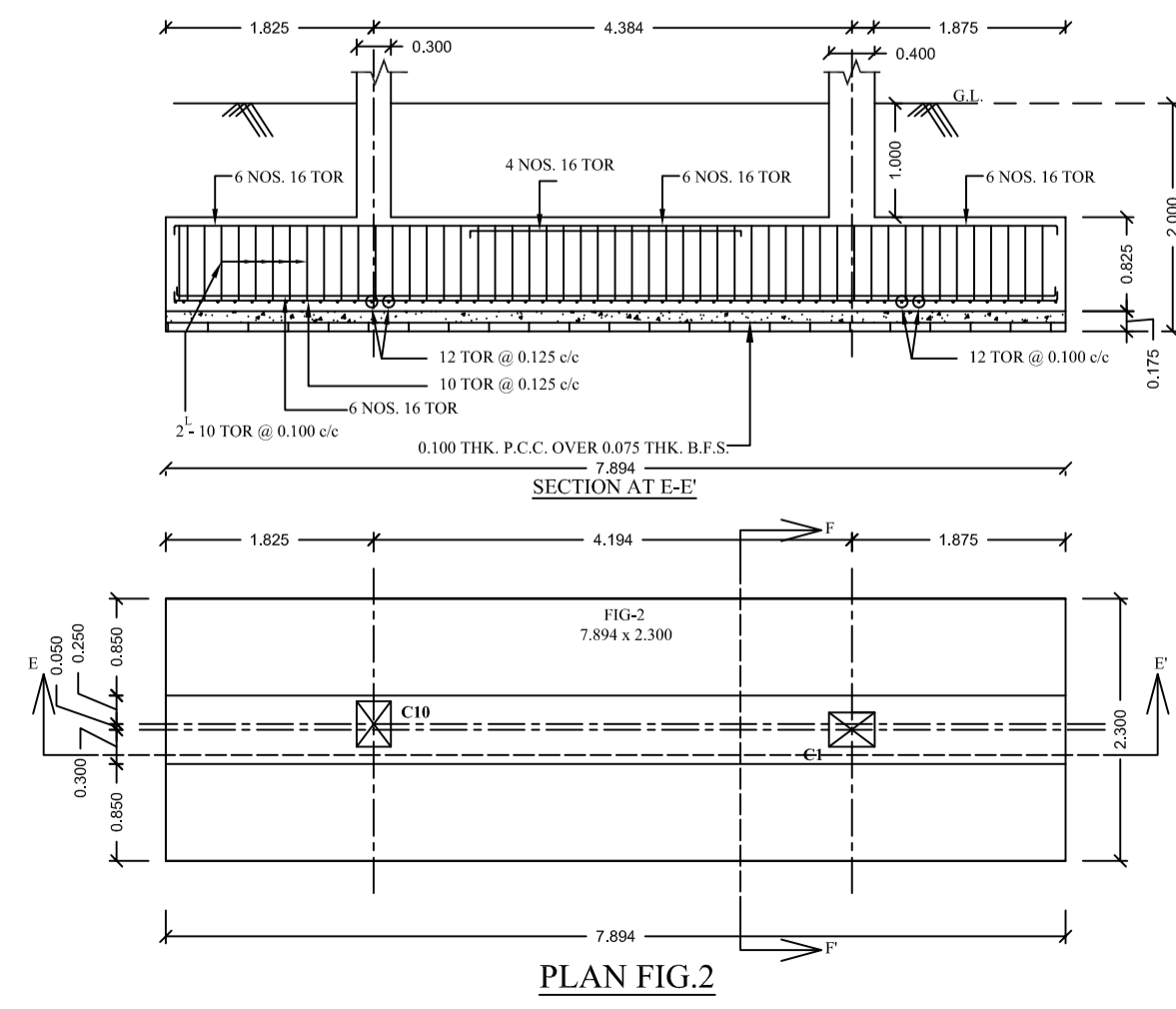


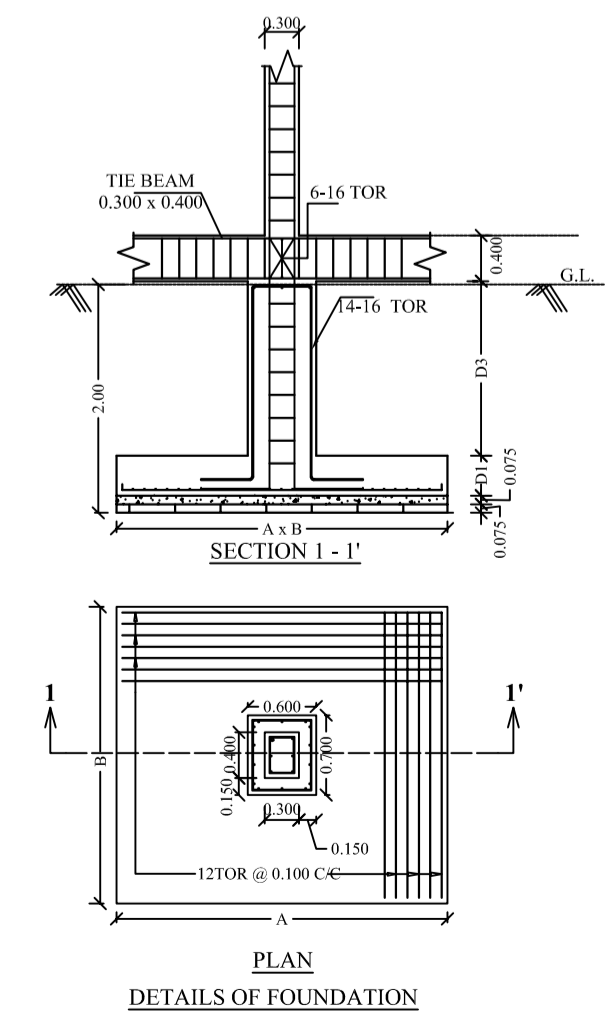
FIG.4



PLAN FIG.3



PLAN FIG.2



DETAILS OF FOUNDATION

STRUCTURAL PLAN FOR PROPOSED G+IV STORIED RESIDENTIAL FLAT BUILDING (BLOCK-B) OF (1) GOURI SANKAR ROY, (2) CHANDRANATH ROY, BOTH S/O LATE KALI KRISHNA ROY, (3) SUMATI ROY D/O LATE KALI KRISHNA ROY, (4) SADHANA HAZRA W/O DILIP KUMAR HAZRA, (5) BANDANA SAMANTA W/O DEBKUMAR SAMANTA AT MOUZA-BHATCHALA, J.L. NO.- 37, R.S. PLOT NO.- 565, 565/598, 565/599, 567, L.R. PLOT NO. - 1489, L.R. KHATIAN NO. 436, 465, 3185, 3186, 3187, WARD NO.- 18, MAHALLA - BHATCHALA, HOLDING NO.- 606/1, UNDER BURDWAN MUNICIPALITY, P.S. BARDHAMAN, DIST. PURBA BARDHAMAN.

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BLOCK-B

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