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LOAD CALCULATION FOR RESIDENTIAL APARTMENT

FOR STILT + FIVE FLOORS

The Load Calculation is done for the Proposed Construction of RCC Roof Residential Building for Block A, Block B & Block C having Stilt + Five floors at Agaram Village S.F.No.25/6, 25/7, 25/8, 26/3a1a1b, 26/4a, Elakudi Village s.f.no.6/5a2a at Balaji Nagar Trichy, Thiruverumbur taluk, Tiruchirappalli District.

The load coming over the individual column is distributed through Independent Foundations

Codes Referred:-

- **I.S. 875-1987** CODE OF PRACTICES for design loads (part 1,2 & 3)
- **I.S. 456-2000 & SP – 16** CODE OF PRACTICES for Plan and Reinforced Concrete
- **I.S. 1786-1985** CODE OF PRACTICES specified for high strength deformed steel bars & wires for concrete reinforcement.
- **I.S. 1904-1986** CODE OF PRACTICES for design of construction of foundation in soils.

Concrete Strength assumed	- M-30 for foundation (Isolated)
Concrete Strength assumed	- M-30 for column , Roof slab & Roof Beams
Steel	- Fe500
Zone	- II
Live Load for Residential	- 200 kg/Sqm
Depth of Foundation	- 2.5 mts.
Safe Bearing Capacity	- 210KN/ Sqm

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DESIGN CONCEPT

Limit state concept of design will be used as per IS : 456-2000 & SP– 16.

The detailing of reinforcement shall be done satisfying the requirements of IS 456-2000,

SP-16 , IS :13920, IS 4326-1993 and SP-34

The slabs and beams are checked for deflection as per IS 456-2000

LOAD CASES

1. Dead load (DL)
2. Live load (LL)
3. Earthquake Load (EQ)

LOAD COMBINATIONS

The following combinations of loads as per IS 1893 is considered in the analysis

1. DL+LL
2. 1.5DL+1.5LL
3. 1.2DL+1.2LL +1.2 EQX
4. 1.2DL+1.2LL -1.2 EQX
5. 1.2DL+1.2LL +1.2 EQZ
6. 1.2DL+1.2LL -1.2 EQZ
7. 0.9DL+0.9EQX
8. 0.9DL-0.9EQX
9. 0.9DL+0.9EQZ
10. 0.9DL-0.9EQZ

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MATERIALS USED

Following materials are generally used in the design of the various components of the structure

1. M 30 grade concrete for Foundation .
2. M 30 grade concrete for Roof Slabs & Roof beams.
3. Fe 500 grade reinforcement steel for all reinforced concrete members

COVER FOR REINFORCEMENT

Cover for reinforcement is considered as per table 16A of NBC , for a fire resistance of 2 hrs

1. Footing = 50 mm
2. Columns = 40 mm
3. Roof slabs = 20 mm
4. Roof Beams = 25 mm

DEAD LOAD, LIVE LOAD AND FLOOR FINISH LOADS FOR RESIDENCE

Self weight of 125 thk slab = 12.5 x 25 = 312.5 Kg / M^2

Live load = 200 Kg / M^2

Floor finish = 120 Kg / M^2

= 632.5 Kg / M^2

= 6.33 KN/ M^2

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DESIGN OF FOOTINGS

Size of Column = 300 x 760 mm

SBC of Soil assumed = 210 KN / Sqm

COLUMN

WIDTH (Breadth) =			300	mm
				Mm
DEPTH (Length) =			760	
				KN
Axial load from output (P1) =			2550	
Moment about Z axis (Mz) =			143	KN-m
Moment about X axis (Mx) =			1	KN-m
Safe bearing pressure =			300	KN/m2
AREA=	9.35	mm2		
1	x2	-0.46	x	
Required length of the footing				
Required width of the footing				
Depth required	292.882403			
Over All Depth	362.882403			

WITHOUT PEDASTAL

Column Breath =	300	mm
Column Length =	760	mm

FOOTING

Revised Footing length (L, dim.) =	4.5	m
Revised Footing Breadth (W,) =	4.5	m
Depth of footing (t) =	750	mm
Clear cover of footing =	60	mm
Main bar dia of footing =	20	mm
Effective depth of footing =	680	mm
Selfweight of the footing =	379.69	KN
Area of Footing(A) =	20.25	m2
Sect mod of foot about Z axis (Zz) =	15.19	m3
Sec mod of foot about X axis (Zx) =	15.19	m3
Grade of concrete fck =	30	N/mm2
Grade of steel fy =	500	N/mm2
Unit wt of soil =	18	KN/m3

CHECK FOR GROSS BEARING PRESSURE

Safe NET bearing pressure =	200	KN/m2
Safe gross bearing pr. =	246.80	KN/m3
Axial load from output (P1) =	2550	KN
Moment about Z axis (Mz) =	143	KN-m

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Moment about X axis (Mx) =	1	KN-m
Depth of top of foot. from ground =	1.85	m
Unit wt of soil =	18	KN/m3
Weight of soil retained above foot =	666.73	KN
P = (P1+soil+foot self wt) =	3596.42	KN
Maximum bearing pressure =	187.08	KN/m2
Minimum bearing pressure =	168.12	KN/m2

Hence footing is safe against max gross bearing pr.

DESIGN FORCES

Axial load:(Pu) =	3825	KN
Moment about Z axis (Muz) =	214.5	KN-m
Moment about X axis (Mux) =	1.5	KN-m
Maximum effective soil pressure pe max (Pu/Area+ Muz/Zz + Mux/Zx) =	203.11	KN/m2
Minimum effective soil pressure pe min (Pu/Area - Muz/Zz - Mux/Zx) =	174.67	KN/m2

Design of footing is done using above maximum effective soil pressure

CALCULATION FOR BOTTOM STEEL

Mu about X1 X1 = (pe max x length2/2)=

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$$A_{st} = \frac{0.5 f_{ck}}{f_y}\left[1 - \sqrt{1 - \frac{4.6 M_u}{f_{ck} bd^2}}\right] bd$$

Hence, Ast =	1238.786	mm2
Min Ast =	816.000	mm2
Spacing required =	253.60	mm
Spacing provided =	130	mm
pt provided =	0.36	%
pt required =	0.18	%
provide a maximum st	0.36	%

Hence provide 20 mm dia bar @ 130 mm c/c parellel to length of footing (|| to Z)

Mu about N1 N1 = (pe max x length2/2)=

Calc. Ast =	1575.672	mm2
Min Ast =	816	mm2
Spacing =	199.38	mm
Spacing provided =	130	mm
pt provided =	0.36	%
pt required =	0.23	%
provide a maximum st	0.36	%

Hence provide 20 mm dia bar @ 130 mm c/c parellel to breadth of footing (|| to X)

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DESIGN OF COLUMN

Size of Column = 300 x 760 mm
Ultimate Axial load = 3677 KN

Moment due to DL + LL + EQ =118 KN-m

Total **= 118KN-m**

$Pu/FckBd = 3677x\ 1.5 \times 10^3 / 30\ x760x\ 260 = 0.93$

$Mu/FckBd^2 = 118 \times 1.5 \times 10^6 / 30 \times 760x\ 260^2 = 0.11$

From SP 16 Chart 48 P/Fck = 0.08

P = 0.08 x 30 =2.4 %

Min 0.8 %

$Ast = 2.4 \times 76x\ 30 / 100 = 54.72Cm^2$

Provide 12Nos. of 25 mm dia bar (58.8 Cm^2) Hence ok.

Provided 6L8Tor @ 200 c/c as Column ties

DESIGN OF BEAMS

Span of Beam - 3.25 **M**

Load from Slab = 1.78 x 6.33 x 1 =11.26KN/m

Load from Slab = 2.8 x 6.33 x 1 =17.72KN/m

Self-weight of Beam = 0.20x 0.60 x 25x1 = 3 KN/m

Wall load = 2.43x0.20x6.5x1 = 3.159 KN/m

Total **= 31.98 KN/m**

$Maximum\ BM = WL^2/8 = 31.98X\ 3.25^2/8$ = 42.22 KN – m

$Mu/Bd^2 = 42.22\ X\ 1.5\ X\ 10^6 /\ 200\ X\ 550^2$ = 1.04

Pt = 0.280

$Ast = 0.280x\ 20x\ 55/\ 100$ = 3.00 Cm^2

Area of steel provided 2-16 Tor @ Bottom

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Area of steel provided 2– 16 Tor @ Top

Shear force at each support = 31.98x3.25/2 = 52.44 KN

Shear stress = 52.44x 1.5x 1000/(200x550) =0.71<3.1
Hence ok.
Vertical stirrups for shear = 52.44X1.5/55= 1.43 KN/cm
Provided 2 Legged 8Tor@ 150MM c/c

Hence Ok.

DESIGN OF SLABS

Panel size of Slab **3.35 m x 4.57m**

Ly / Lx = 4.57 / 3.35= 1.36 (Two way Slab)

W = 6.33 KN/M^2

Lx/35 = 3.35*1000/35= 95.71 Lx = 3.35M

Provide Slab thickness = 125mm

$M_x = \alpha_x w L_x^2$ α_x - 0.096

$= 0.096x6.33x3.35^2$

= 6.819 kN-m

$Mu/Bd^2 = 6.819 \times 1.5 \times 10^6 / 1000 \times 105^2$ =0.927

Pt = 0.252

Ast = 0.252x100x10.5/100 = 2.646 Cm^2

Area of steel required 8 Tor @ 200mm C/C as Main reinforcement

$M_y = \alpha_y w L_x^2$ α_y - 0.053

$= 0.053 x6.33x3.35^2$

= 3.76 kN-m

$Mu/Bd^2 = 3.76 \times 1.5 \times 10^6 / 1000 \times 105^2$ =0.51

Pt = 0.135

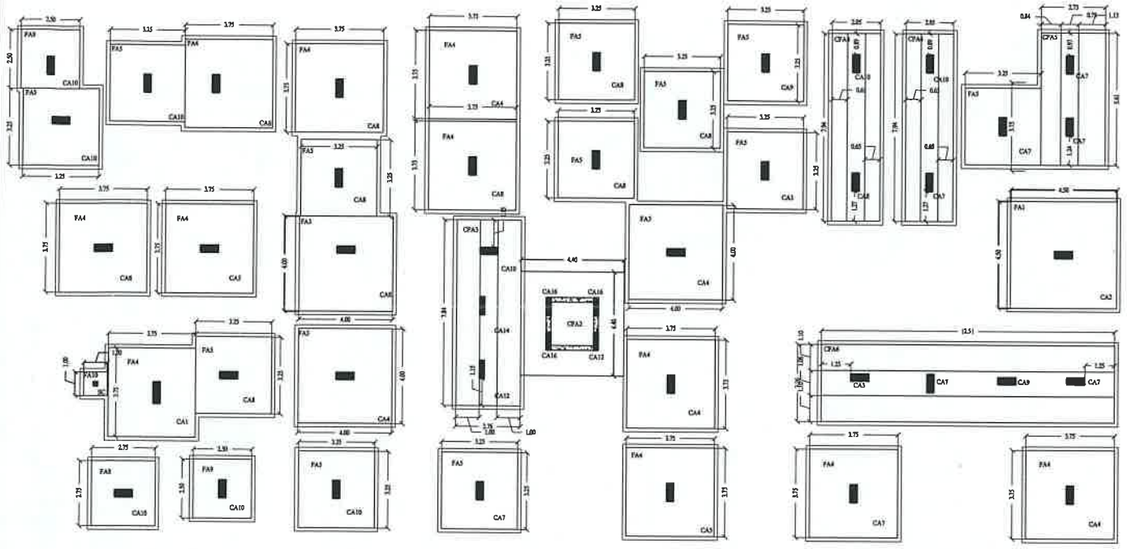
Min % 0.17

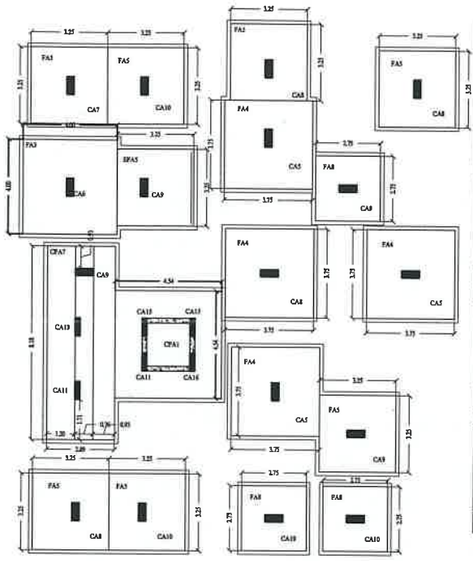
Ast = 0.17x100x10.5/100 = 1.78Cm^2

Area of steel provided 8 Tor @ 200 mm C/C

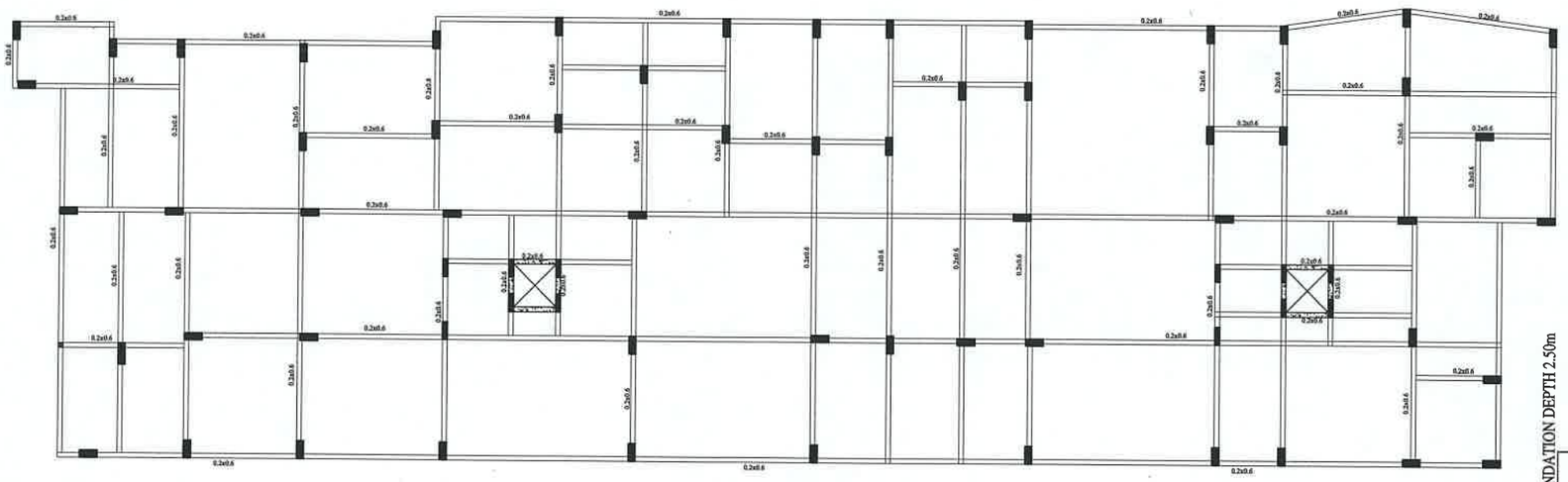
Hence Ok.

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BLOCK A - FOOTING LAYOUT



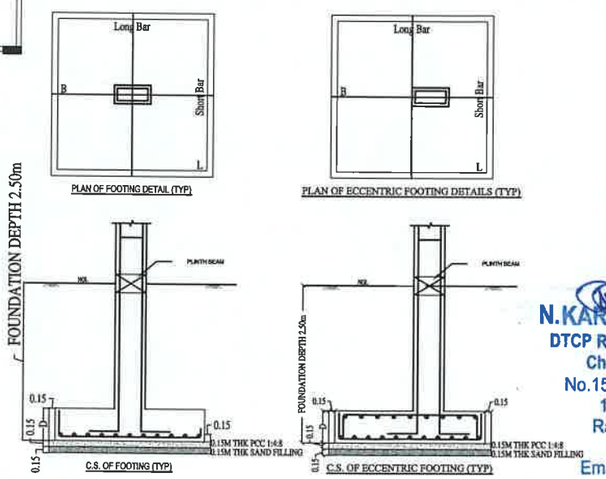
BLOCK A - PLINTH BEAM LAYOUT

COLUMN DETAILS (M30)

CA1 12"X36"	TIES	CA2 12"X30"	TIES	CA3 12"X30"	TIES	CA4 12"X30"	TIES
● 16-25ø 8ø@4"C/C		● 12-25ø 8ø@4"C/C		● 16-20ø 8ø@4"C/C		● 14-20ø 8ø@4"C/C	
CA5 12"X30"	TIES	CA6 12"X30"	TIES	CA7 12"X30"	TIES	CA8 12"X30"	TIES
● 12-20ø 8ø@4"C/C		● 10-20ø 8ø@4"C/C		● 16-16ø 8ø@4"C/C		● 14-16ø 8ø@4"C/C	
CA9 12"X30"	TIES	CA10 12"X30"	TIES	CA11 8"X30"	TIES	CA12 8"X30"	TIES
● 12-16ø 8ø@4"C/C		● 10-16ø 8ø@4"C/C		● 12-20ø 8ø@4"C/C		● 10-20ø 8ø@4"C/C	
CA13 8"X30"	TIES	CA14 8"X30"	TIES	CA15 8"X30"	TIES	CA16 8"X30"	TIES
● 10-16ø 8ø@4"C/C		● 14-16ø 8ø@4"C/C		● 12-16ø 8ø@4"C/C		● 10-16ø 8ø@4"C/C	

FOUNDATION DETAILS (M30)

TYPE	LENGTH	BREADTH	D	LONG BAR	SHORT BAR
FA1	4.50	4.50	0.80m	20mm Dia @130mm C/C	20mm Dia @130mm C/C
FA3	4.00	4.00	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FA4	3.75	3.75	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FA5	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
EFA5	3.25	3.25	0.60m	16mm Dia @175mm C/C T/B	16mm Dia @175mm C/C T/B
FA8	2.75	2.75	0.60m	16mm Dia @200mm C/C	16mm Dia @200mm C/C
FA9	2.50	2.50	0.55m	12mm Dia @150mm C/C	12mm Dia @150mm C/C
FA10	1.00	1.00	0.40m	10mm Dia @200mm C/C	10mm Dia @200mm C/C
CFA1	4.54	4.54	REFER DETAILS		
CFA2	4.40	4.40	REFER DETAILS		
CFA3	7.84	2.76	REFER DETAILS		
CFA4	7.94	2.05	REFER DETAILS		
CFA5	5.61	2.73	REFER DETAILS		
CFA6	12.51	3.26	REFER DETAILS		
CFA7	8.18	2.89	REFER DETAILS		



GENERAL NOTES:-

1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise. 5. Provide 8ø@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M25Conc & Fe500 unless specified otherwise.
8. Found. designed for STILT+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 10-T/Sq.m

Removal of formwork(Shuttering)

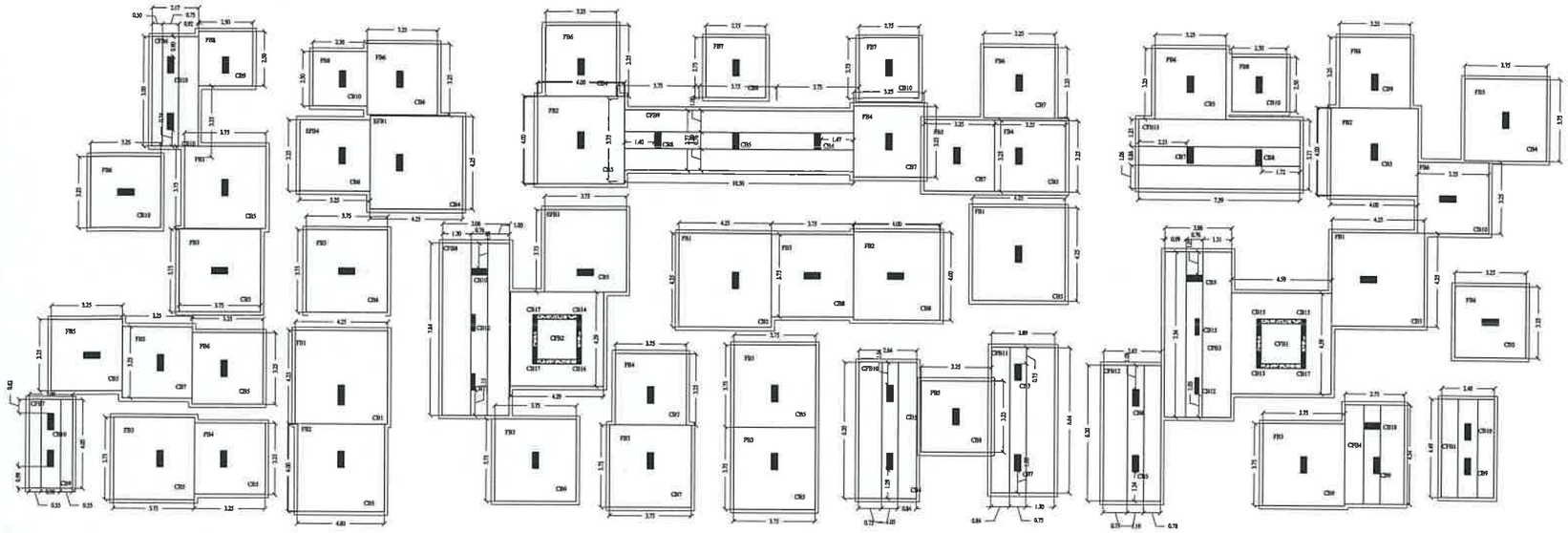
I. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap lenght of the bar for Tension & Compression members
iii) Lap lenght shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar end bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

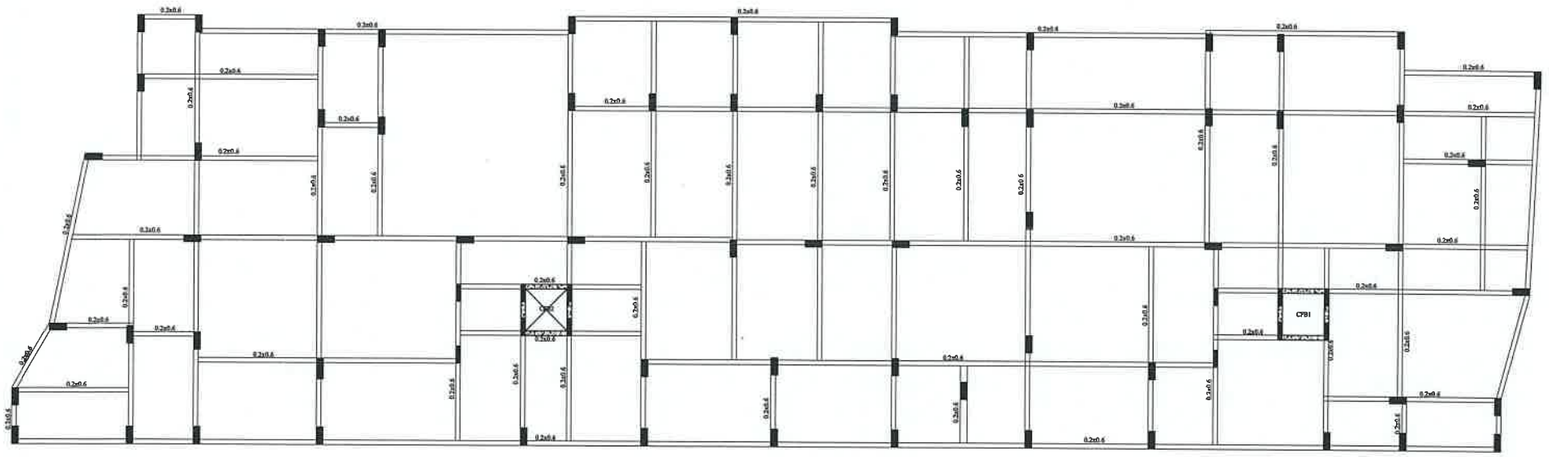
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SCALE : NTS	

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STRUCTURAL ENGINEER

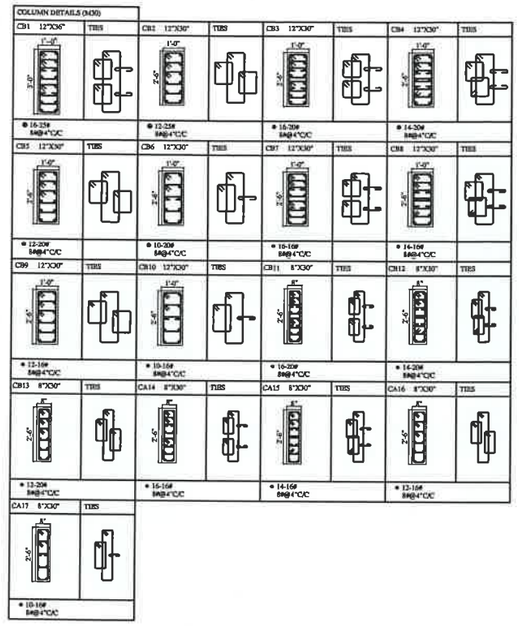
O W N E R S



BLOCK B - FOOTING LAYOUT

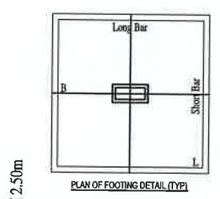


BLOCK B - PLINTH BEAM LAYOUT

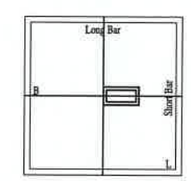


FOUNDATION DETAILS (M30)

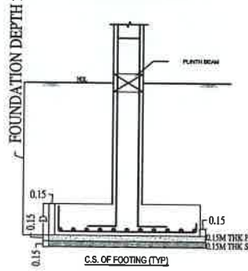
TYPE	LENGTH	BREADTH	D	LONG BAR	SHORT BAR
FB1	4.25	4.25	0.75m	20mm Dia @130mm C/C	20mm Dia @130mm C/C
EFB1	4.25	4.25	0.75m	20mm Dia @130mm C/C T/B	20mm Dia @130mm C/C T/B
FB2	4.00	4.00	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB3	3.75	3.75	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
EFB3	3.75	3.75	0.75m	16mm Dia @130mm C/C T/B	16mm Dia @130mm C/C T/B
FB4	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
EFB4	3.25	3.25	0.60m	16mm Dia @150mm C/C T/B	16mm Dia @150mm C/C T/B
FB5	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB6	3.25	3.25	0.60m	16mm Dia @175mm C/C	16mm Dia @175mm C/C
FB7	2.75	2.75	0.60m	16mm Dia @200mm C/C	16mm Dia @200mm C/C
FB8	2.50	2.50	0.55m	12mm Dia @150mm C/C	12mm Dia @150mm C/C
FB9	2.25	2.25	0.45m	12mm Dia @175mm C/C	12mm Dia @175mm C/C
FB10	2.00	2.00	0.40m	10mm Dia @150mm C/C	10mm Dia @150mm C/C
CFB1	4.59	4.59	REFER DETAILS		
CFB2	4.29	4.29	REFER DETAILS		
CFB3	7.54	3.06	REFER DETAILS		
CFB4	4.54	2.73	REFER DETAILS		
CFB5	4.49	2.40	REFER DETAILS		
CFB6	5.00	2.17	REFER DETAILS		
CFB7	4.05	2.0000	REFER DETAILS		
CFB8	7.84	3.06	REFER DETAILS		
CFB9	10.50	2.77	REFER DETAILS		
CFB10	6.20	2.64	REFER DETAILS		
CFB11	6.64	2.89	REFER DETAILS		
CFB12	6.20	2.63	REFER DETAILS		
CFB13	7.39	3.17	REFER DETAILS		



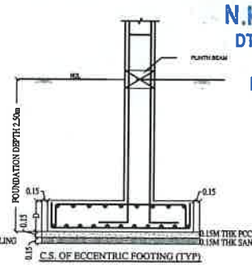
PLAN OF FOOTING DETAIL (TYP)



PLAN OF ECCENTRIC FOOTING DETAILS (TYP)



C.S. OF FOOTING (TYP)



C.S. OF ECCENTRIC FOOTING (TYP)

GENERAL NOTES:-

1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M25Conc & Fe500 unless specified otherwise.
8. Found. designed for STILT+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 10-T/Sq.m

Removal of formwork(Shuttering)

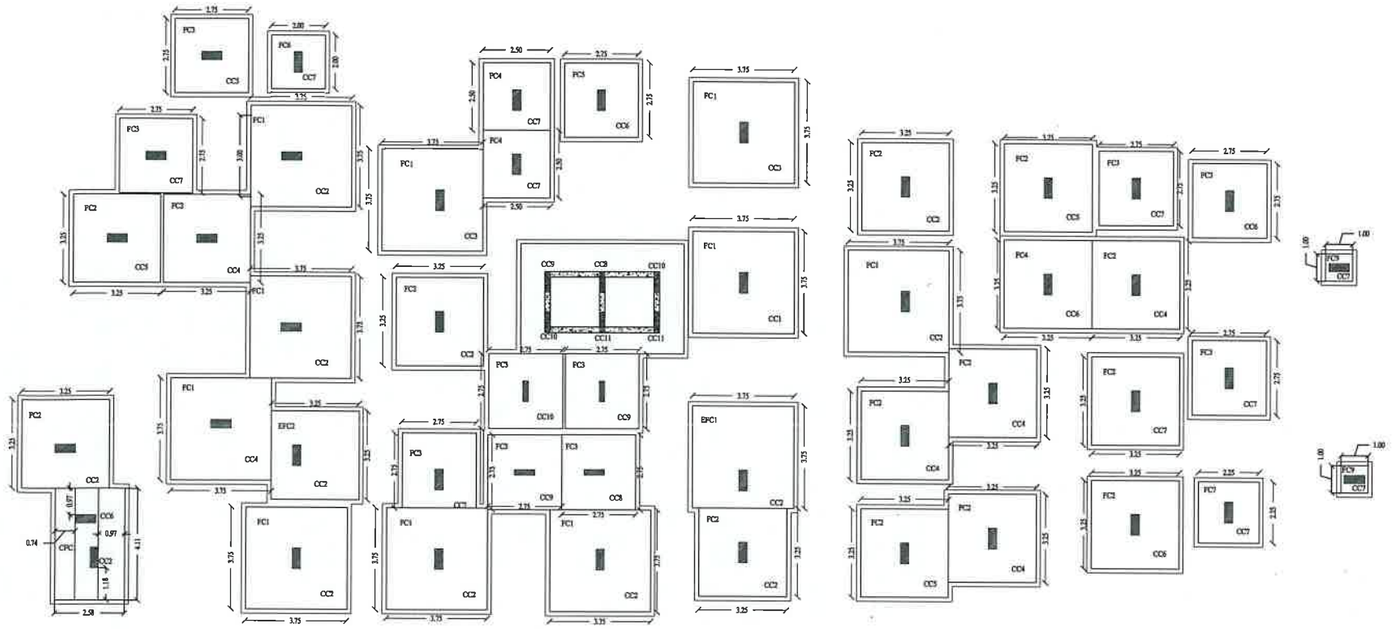
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap lenght of the bar for Tension & Compression members
iii) Lap lenght shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

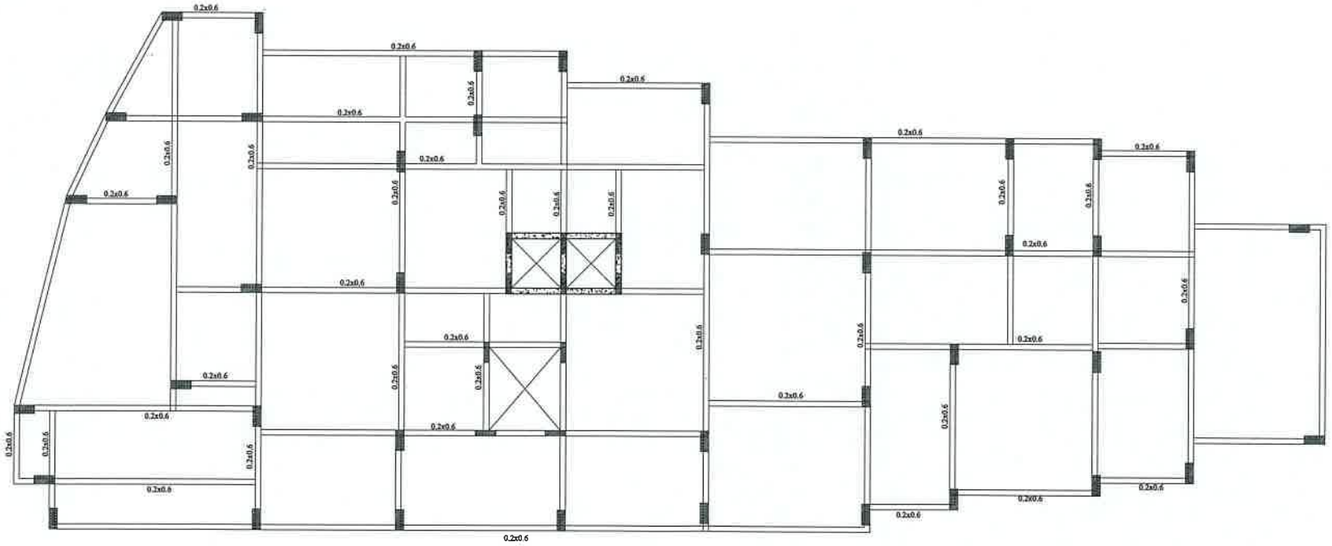
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SHEET NO: 01	
SCALE : NTS	

N.KARIKALAN, M.E.,(Struc.Engg.), MIE
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Email : nkarikalan1985@gmail.com
STRUCTURAL ENGINEER

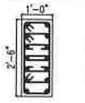
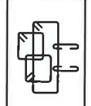
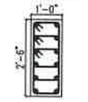
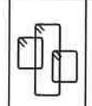
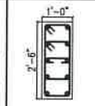
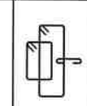
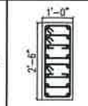
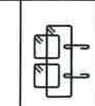
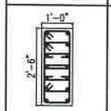
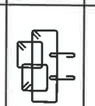
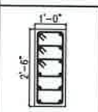
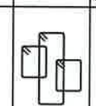
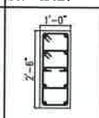
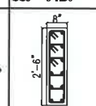
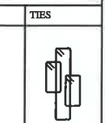
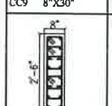
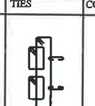
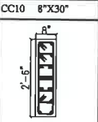
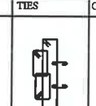
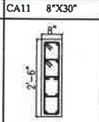
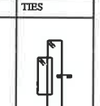
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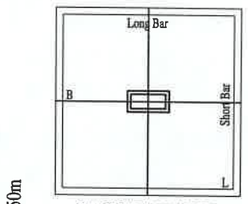
BLOCK C - FOOTING LAYOUT



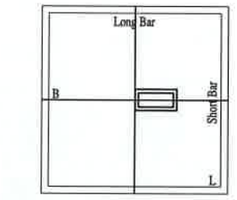
BLOCK C - PLINTH BEAM LAYOUT

COLUMN DETAILS (M30)							
CC1 12"X30"	TIES	CC2 12"X30"	TIES	CC3 12"X30"	TIES	CC4 12"X30"	TIES
							
• 14-20# 8#@4"C/C		• 12-20# 8#@4"C/C		• 10-20# 8#@4"C/C		• 16-16# 8#@4"C/C	
CC5 12"X30"	TIES	CC6 12"X30"	TIES	CC7 12"X30"	TIES	CC8 8"X30"	TIES
							
• 14-16# 8#@4"C/C		• 12-16# 8#@4"C/C		• 10-16# 8#@4"C/C		• 12-20# 8#@4"C/C	
CC9 8"X30"	TIES	CC10 8"X30"	TIES	CA11 8"X30"	TIES		
							
• 16-16# 8#@4"C/C		• 14-16# 8#@4"C/C		• 10-16# 8#@4"C/C			

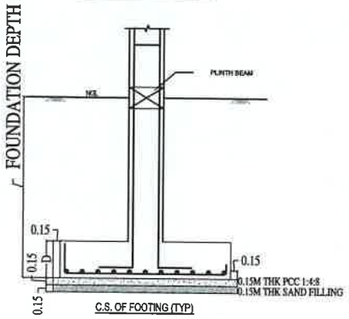
FOUNDATION DETAILS (M30)					
TYPE	LENGTH	BREADTH	D	LONG BAR	SHORT BAR
FC1	3.75	3.75	0.700m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
EFC1	3.75	3.75	0.700m	16mm Dia @130mm C/C T/B	16mm Dia @130mm C/C T/B
FC2	3.25	3.25	0.600m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
EFC2	3.25	3.25	0.600m	16mm Dia @150mm C/C T/B	16mm Dia @150mm C/C T/B
FC3	2.75	2.75	0.600m	16mm Dia @200mm C/C	16mm Dia @200mm C/C
FC4	2.5	2.5	0.550m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FC5	2.25	2.25	0.450m	12mm Dia @150mm C/C	12mm Dia @150mm C/C
FC6	2.00	2.00	0.400m	10mm Dia @175mm C/C	10mm Dia @175mm C/C
FC7	1.00	1.00	0.450m	10mm Dia @200mm C/C	10mm Dia @200mm C/C
CFC1	2.58	4.11	REFER DETAILS		



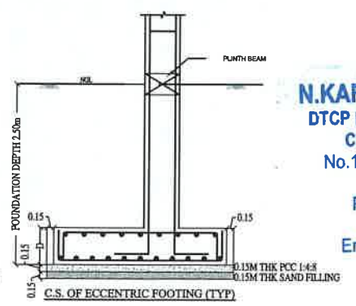
PLAN OF FOOTING DETAIL (TYP)



PLAN OF ECCENTRIC FOOTING DETAILS (TYP)



C.S. OF FOOTING (TYP)



C.S. OF ECCENTRIC FOOTING (TYP)

GENERAL NOTES:-

1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
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b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M25Conc & Fe500 unless specified otherwise.
8. Found. designed for STILT+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 10-T/Sq.m

Removal of formwork(Shuttering)

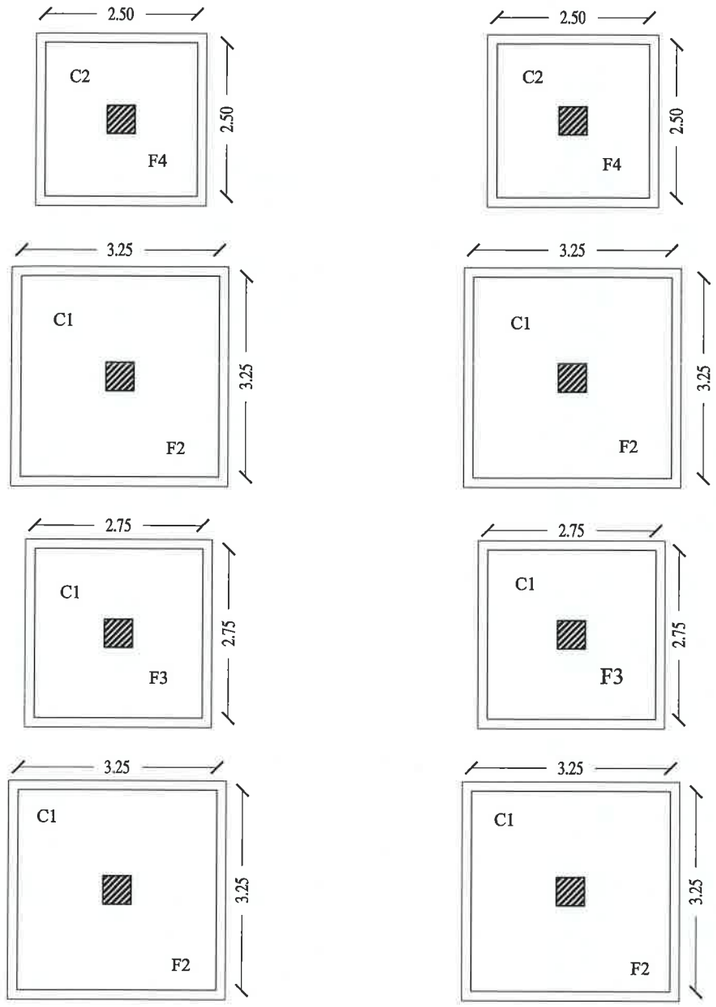
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
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B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
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THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

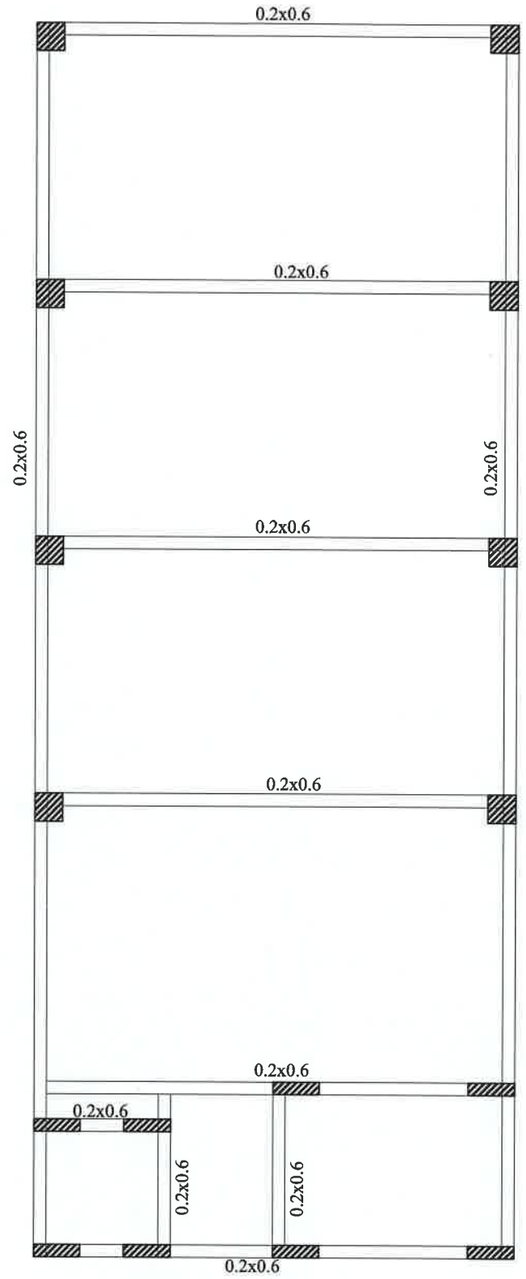
TITLE	BLOCK C – FOUNDATION DETAILS
SHEET NO: 01	
SCALE : NTS	

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DTCP Reg.No : CGLDIST/SE/Gr-I/2022/08/004
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STRUCTURAL ENGINEER

O W N E R S

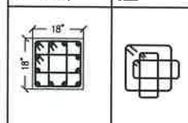
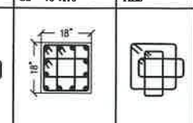
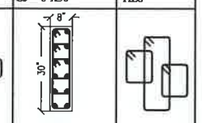
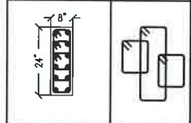
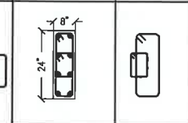
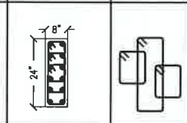
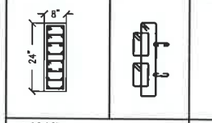
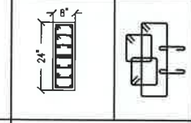


CLUB HOUSE - FOOTING LAYOUT



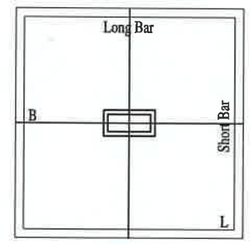
CLUB HOUSE - PLINTH BEAM LAYOUT

COLUMN DETAILS (M30)

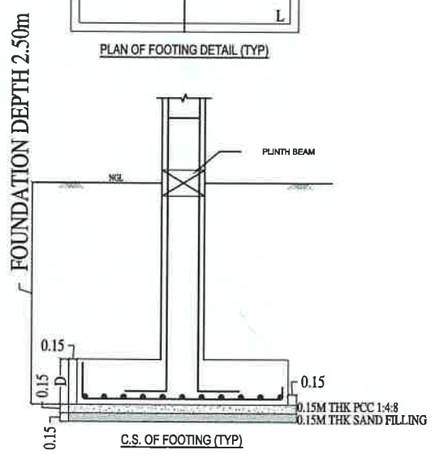
C1 18"X18"	TIES	C2 18"X18"	TIES	C3 8"X30"	TIES
					
● 12-25# 8#@6"C/C		● 12-20# 8#@6"C/C		● 12-25# 8#@4"C/C	
C4 8"X24"	TIES	C5 8"X24"	TIES	C6 8"X24"	TIES
					
● 12-25# 8#@4"C/C		● 8-25# 8#@4"C/C		● 12-20# 8#@4"C/C	
C7 8"X24"	TIES	CB8 8"X24"	TIES		
					
● 16-16# 8#@4"C/C		● 14-16# 8#@4"C/C			

FOUNDATION DETAILS (M30)

TYPE	LENGTH	BREADTH	D	LONG BAR	SHORT BAR
F1	4250	4250	750	20mm Dia @130mm C/C	20mm Dia @130mm C/C
F2	3250	3250	600	16mm Dia @175mm C/C	16mm Dia @175mm C/C
F3	2750	2750	600	16mm Dia @200mm C/C	16mm Dia @200mm C/C
F4	2500	2500	550	12mm Dia @150mm C/C	12mm Dia @150mm C/C
F5	2000	2000	400	10mm Dia @125mm C/C	10mm Dia @125mm C/C



PLAN OF FOOTING DETAIL (TYP)



C.S. OF FOOTING (TYP)

GENERAL NOTES:-

1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M30Conc & Fe500 unless specified otherwise.
8. Found. designed for Ground+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 210 KN/Sq.m

Removal of formwork(Shuttering)

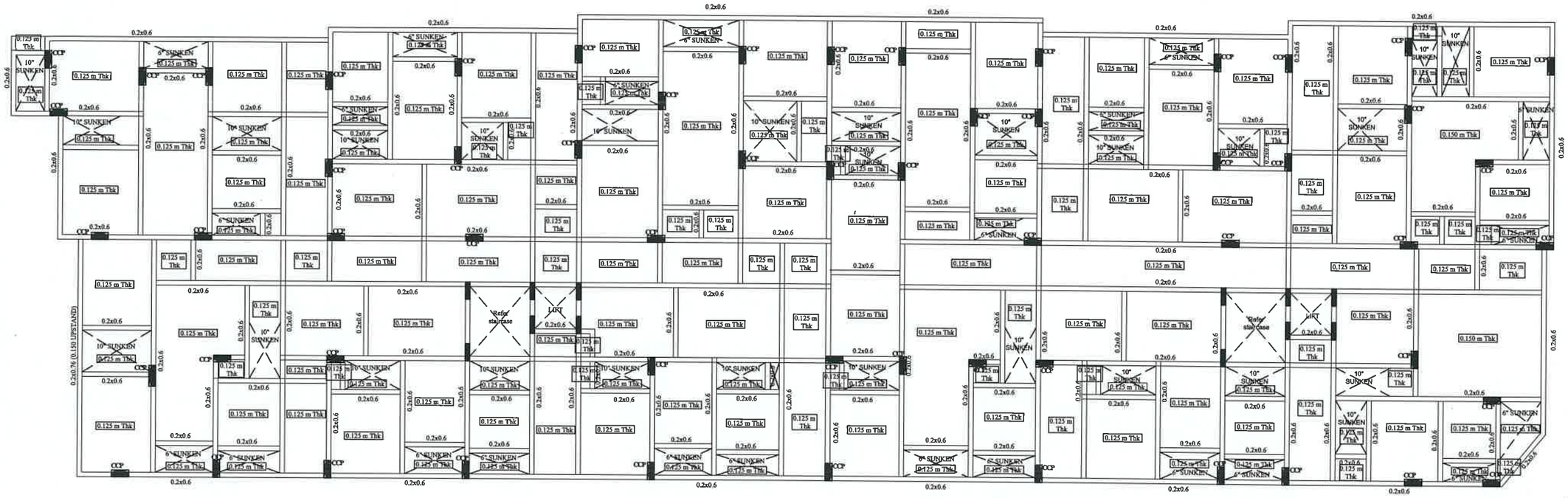
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcment bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap lenght of the bar for Tension & Compression members
iii) Lap lenght shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	FOUNDATION LAYOUT & DETAILS CLUB HOUSE
SHEET NO: 01	N
SCALE : NTS	

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O W N E R S



BLOCK A - Stilt Floor Roof Beam Layout

GENERAL NOTES:-

1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M25Conc & Fe500 unless specified otherwise.
8. Found. designed for STILT+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 10-T/Sq.m

Removal of formwork(Shuttering)

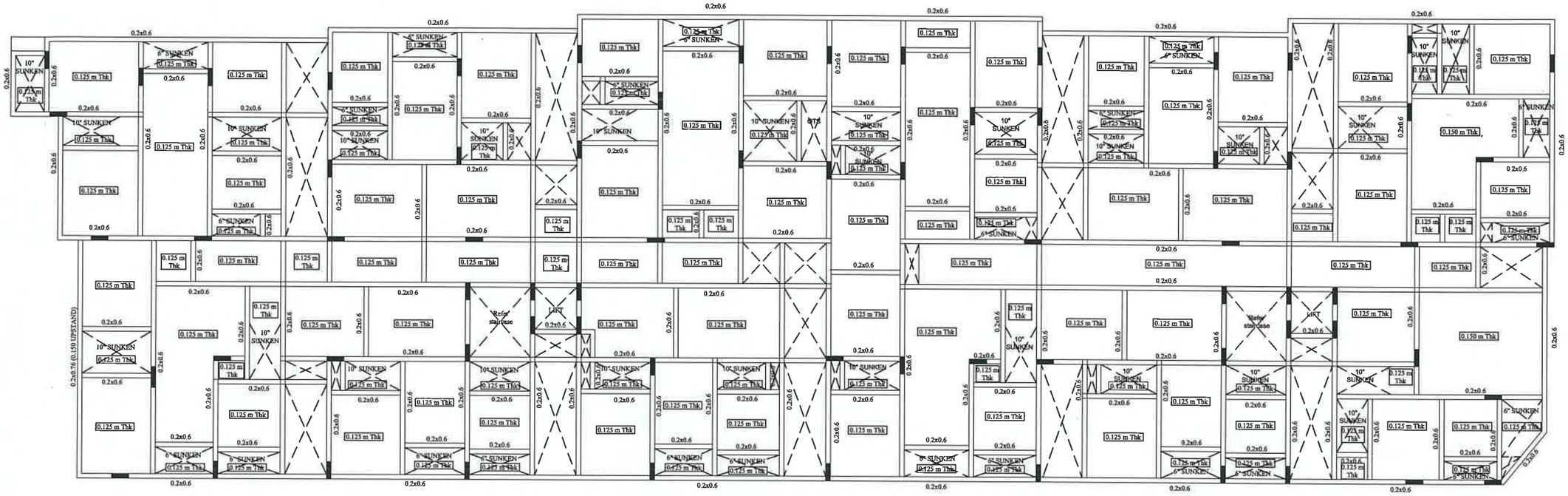
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap lenght of the bar for Tension & Compression members
iii) Lap lenght shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	BLOCK A – STILT FLOOR ROOF BEAM LAYOUT
SHEET NO: 02	N
SCALE : NTS	

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STRUCTURAL ENGINEER

O W N E R S



BLOCK A - First Floor Roof Beam Layout

GENERAL NOTES:-

1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M25Conc & Fe500 unless specified otherwise.
8. Found. designed for STILT+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 10-T/Sq.m

Removal of formwork(Shuttering)

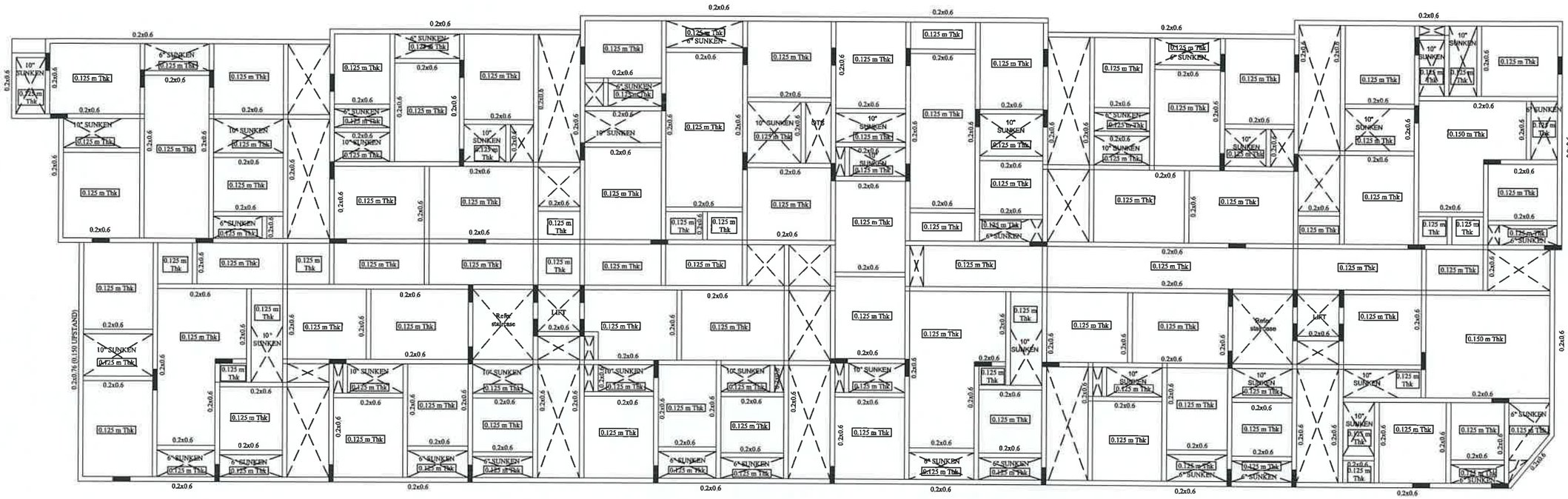
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap lenght of the bar for Tension & Compression members
iii) Lap lenght shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midbeight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	BLOCK A - FIRST FLOOR ROOF BEAM LAYOUT
SHEET NO: 03	
SCALE : NTS	

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STRUCTURAL ENGINEER

O W N E R S



BLOCK A - Second Floor Roof Beam Layout

GENERAL NOTES:-

1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M25Conc & Fe500 unless specified otherwise.
8. Found. designed for STILT+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 10-T/Sq.m

Removal of formwork(Shuttering)

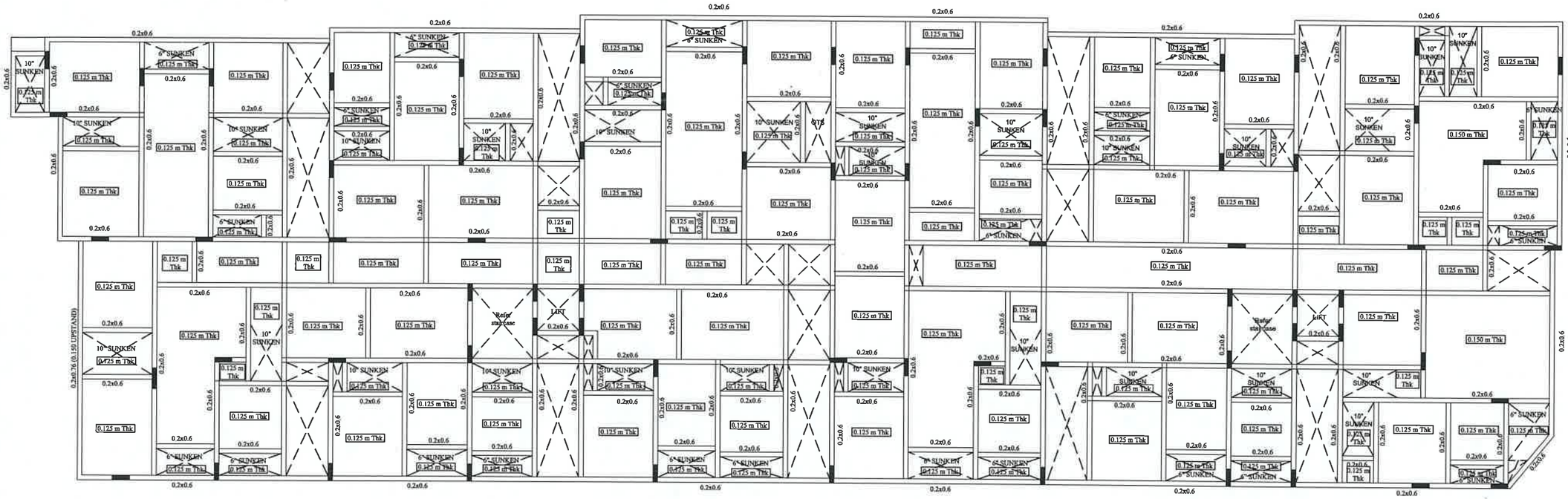
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcment bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap lenght of the bar for Tension & Compression members
iii) Lap lenght shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	BLOCK A – SECOND FLOOR ROOF BEAM LAYOUT
SHEET NO: 04	
SCALE : NTS	

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STRUCTURAL ENGINEER

O W N E R S



BLOCK A - Third Floor Roof Beam Layout

GENERAL NOTES:-

1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M25Conc & Fe500 unless specified otherwise.
8. Found. designed for STILT+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 10-T/Sq.m

Removal of formwork(Shuttering)

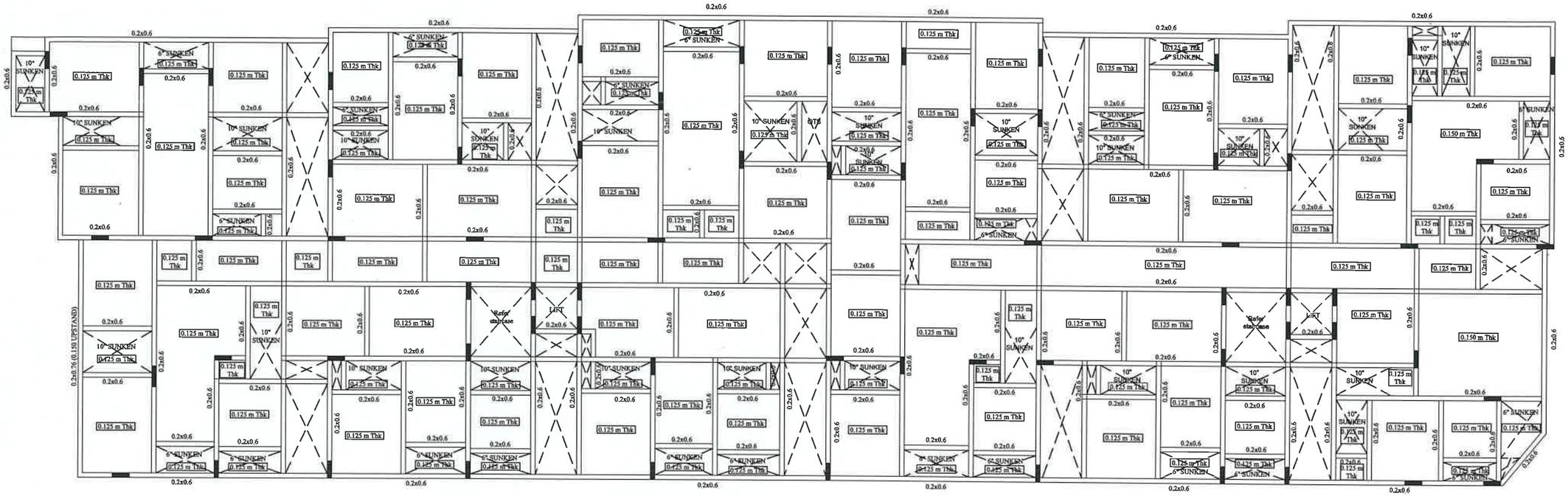
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap lenght of the bar for Tension & Compression members
iii) Lap lenght shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	BLOCK A – THIRD FLOOR ROOF BEAM LAYOUT
SHEET NO: 05	
SCALE : NTS	

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O W N E R S



BLOCK A - Fourth Floor Roof Beam Layout

GENERAL NOTES:-

1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M25Conc & Fe500 unless specified otherwise.
8. Found. designed for STILT+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 10-T/Sq.m

Removal of formwork(Shuttering)

1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap lenght of the bar for Tension & Compression members
iii) Lap lenght shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

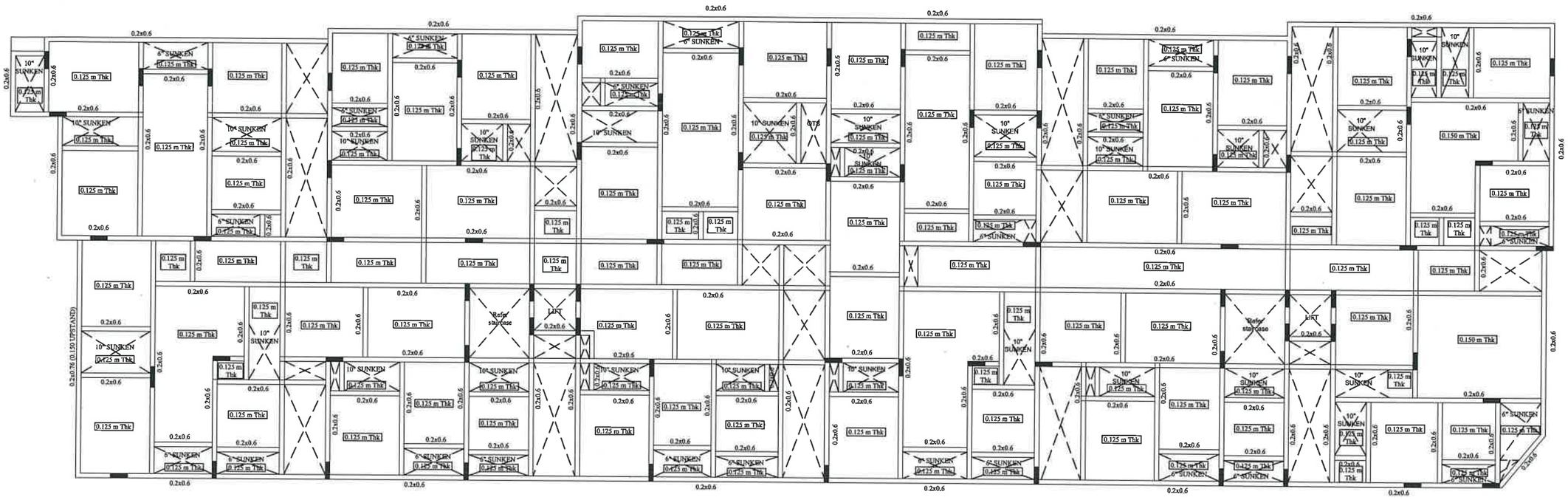
TITLE: BLOCK A – FOURTH FLOOR ROOF BEAM LAYOUT

SHEET NO: 06

SCALE : NTS

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STRUCTURAL ENGINEER

O W N E R S



BLOCK A - Fifth Floor Roof Beam Layout

GENERAL NOTES:-

1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M25Conc & Fe500 unless specified otherwise.
8. Found. designed for STILT+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 10-T/Sq.m

Removal of formwork(Shuttering)

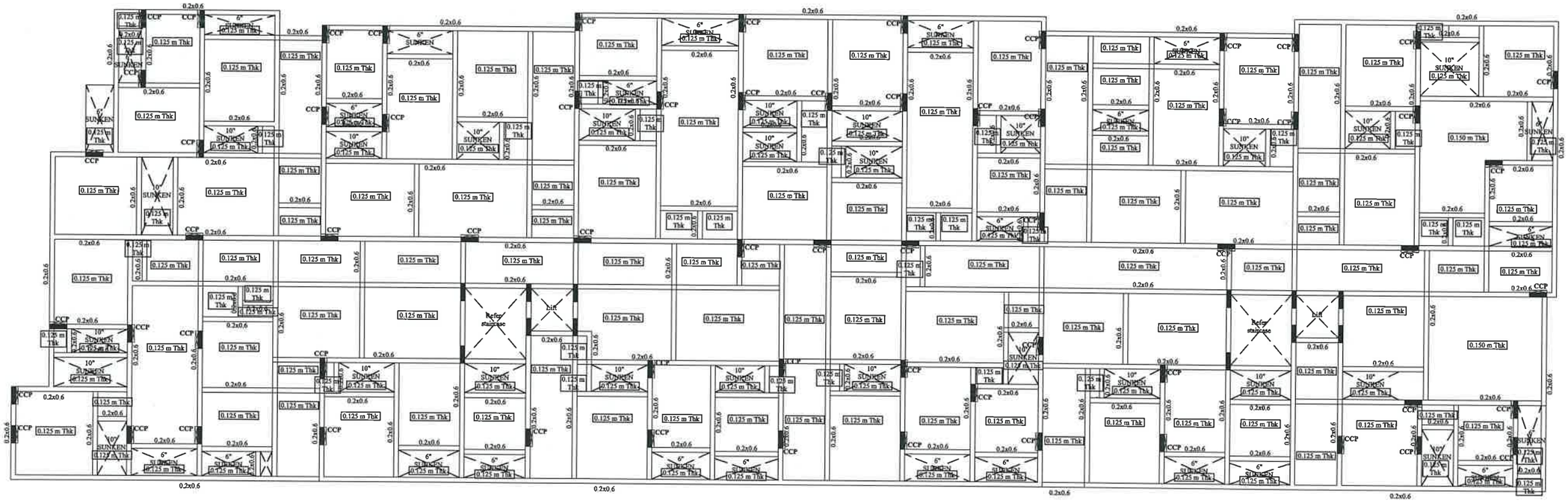
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
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B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcment bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap lenght of the bar for Tension & Compression members
iii) Lap lenght shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	BLOCK A – FIFTH FLOOR ROOF BEAM LAYOUT
SHEET NO: 07	
SCALE : NTS	

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Email : nkarikalan1985@gmail.com
STRUCTURAL ENGINEER

O W N E R S



BLOCK B - Stilt Floor Roof Beam Layout

GENERAL NOTES:-

1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Rafi Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M25Conc & Fe500 unless specified otherwise.
8. Found. designed for STILT+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 10-T/Sq.m

Removal of formwork(Shuttering)

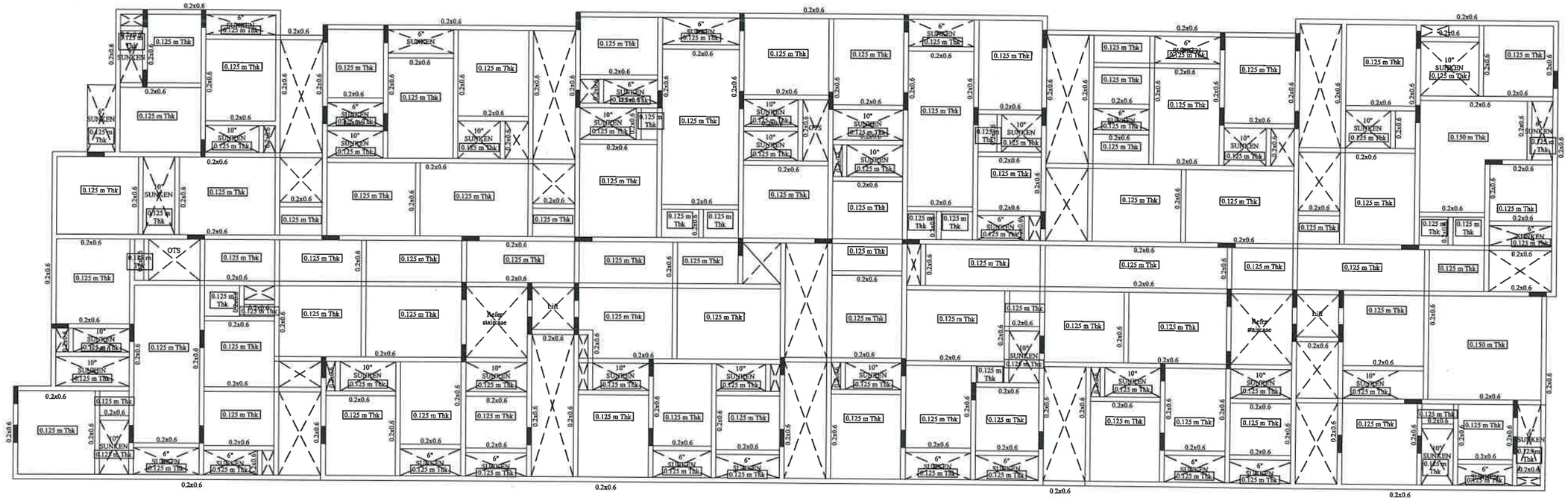
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcment bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap lenght of the bar for Tension & Compression members
iii) Lap lenght shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	BLOCK B – STILT FLOOR ROOF BEAM LAYOUT
SHEET NO: 02	
SCALE : NTS	N

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STRUCTURAL ENGINEER

O W N E R S



BLOCK B - First Floor Roof Beam Layout

GENERAL NOTES:-
1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M25Conc & Fe500 unless specified otherwise.
8. Found. designed for STILT+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 10-T/Sq.m

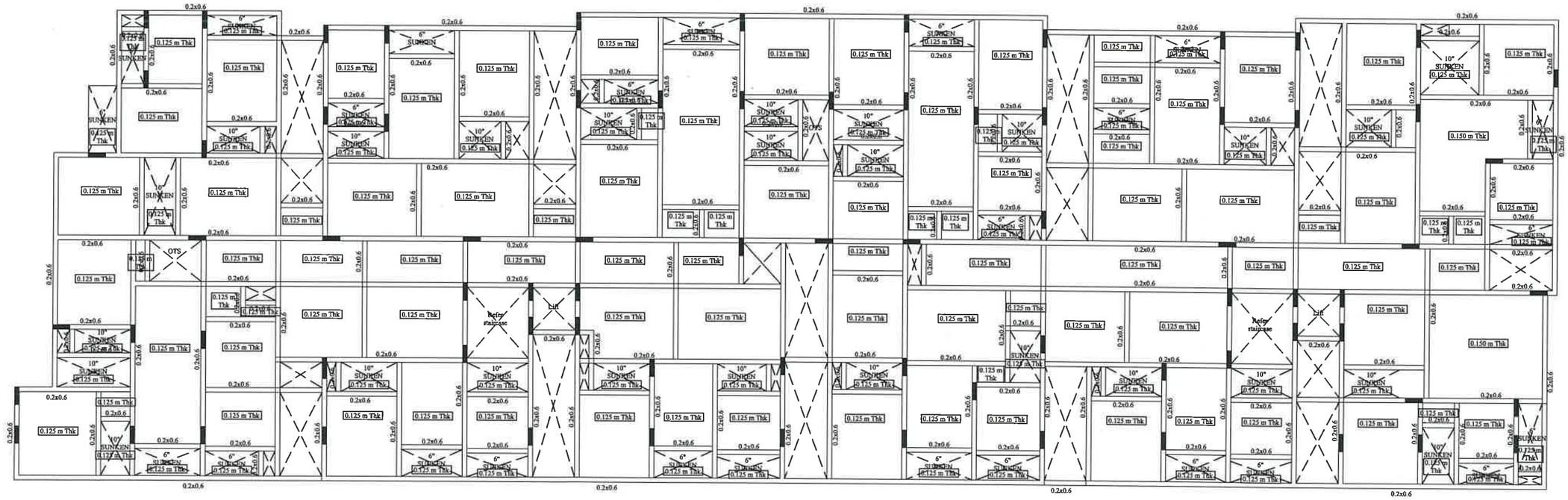
Removal of formwork(Shuttering)
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcment bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap lenght of the bar for Tension & Compression members
iii) Lap lenght shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	BLOCK B – FIRST FLOOR ROOF BEAM LAYOUT
SHEET NO: 03	
SCALE : NTS	

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STRUCTURAL ENGINEER

O W N E R S



BLOCK B - Second Floor Roof Beam Layout

GENERAL NOTES:-
1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M25Conc & Fe500 unless specified otherwise.
8. Found. designed for STILT+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 10-T/Sq.m

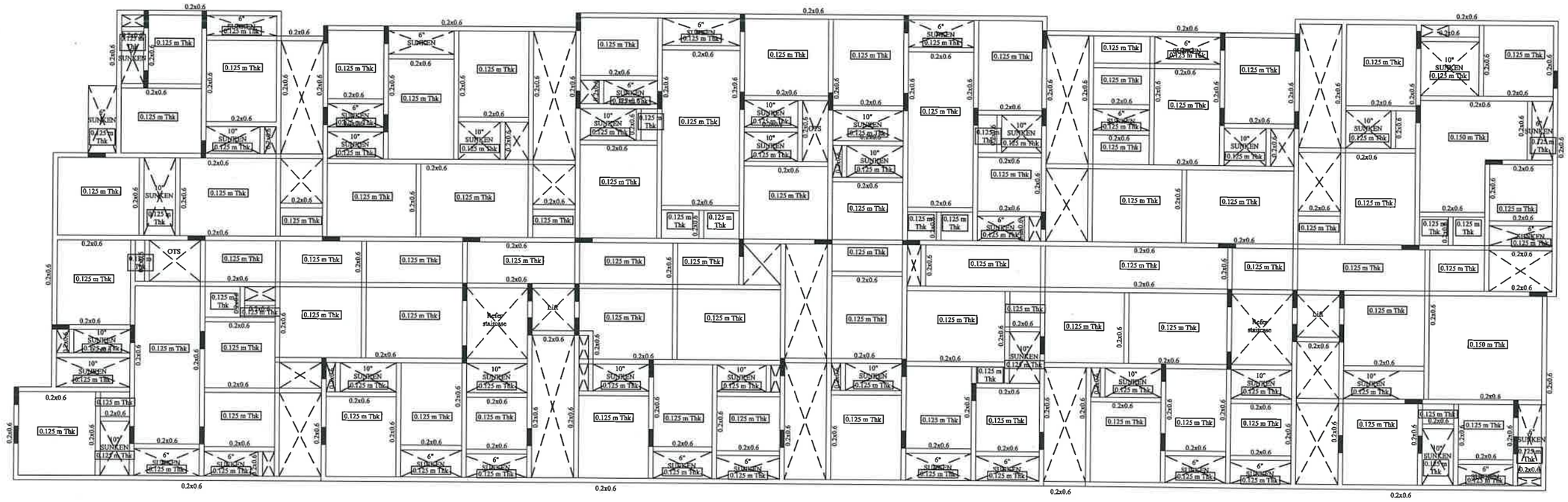
Removal of formwork(Shuttering)
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcment bars i) At any cross section of the member not more then 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap lenght of the bar for Tension & Compression members
iii) Lap lenght shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	BLOCK B – SECOND FLOOR ROOF BEAM LAYOUT
SHEET NO: 04	
SCALE : NTS	

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Email : nkarikalan1985@gmail.com
STRUCTURAL ENGINEER

OWNERS



BLOCK B - Third Floor Roof Beam Layout

GENERAL NOTES:-

1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M25Conc & Fe500 unless specified otherwise.
8. Found. designed for STILT+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 10-T/Sq.m

Removal of formwork(Shuttering)

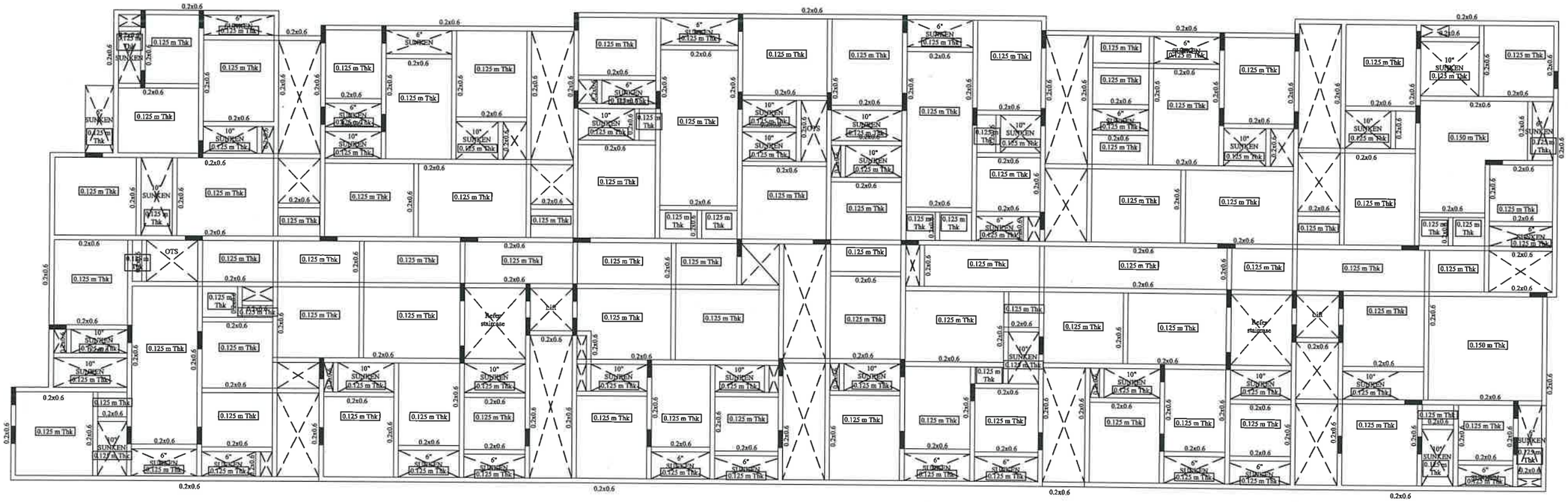
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcment bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap lenght of the bar for Tension & Compression members
iii) Lap lenght shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	BLOCK C – THIRD FLOOR ROOF BEAM LAYOUT
SHEET NO: 05	
SCALE : NTS	N

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Email : nkarikalan1985@gmail.com
STRUCTURAL ENGINEER

O W N E R S



BLOCK B - Fourth Floor Roof Beam Layout

GENERAL NOTES:-

1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M25Conc & Fe500 unless specified otherwise.
8. Found. designed for STILT+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 10-T/Sq.m

Removal of formwork(Shuttering)

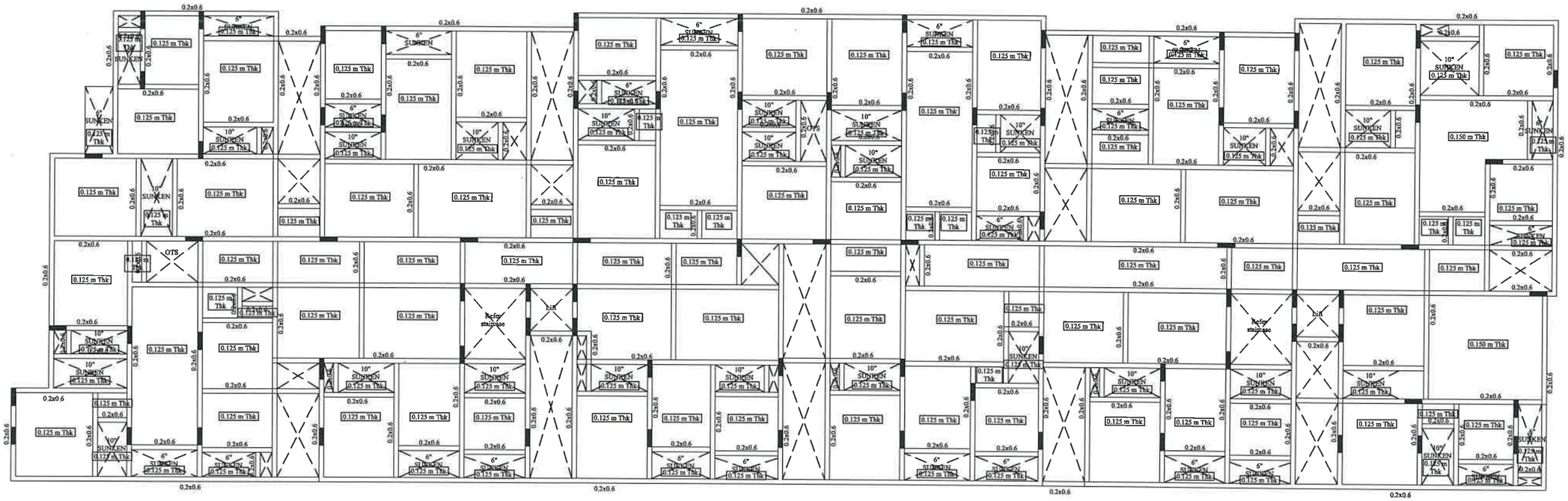
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Botiom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcment bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap lenght of the bar for Tension & Compression members
iii) Lap lenght shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	BLOCK B - FOURTH FLOOR ROOF BEAM LAYOUT
SHEET NO: 08	
SCALE : NTS	

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Mobile : 98942 45633
Email : nkarikalan1985@gmail.com
STRUCTURAL ENGINEER

O W N E R S



BLOCK B - Fifth Floor Roof Beam Layout

GENERAL NOTES:-
1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M25Conc & Fe500 unless specified otherwise.
8. Found. designed for STILT+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 10-T/Sq.m

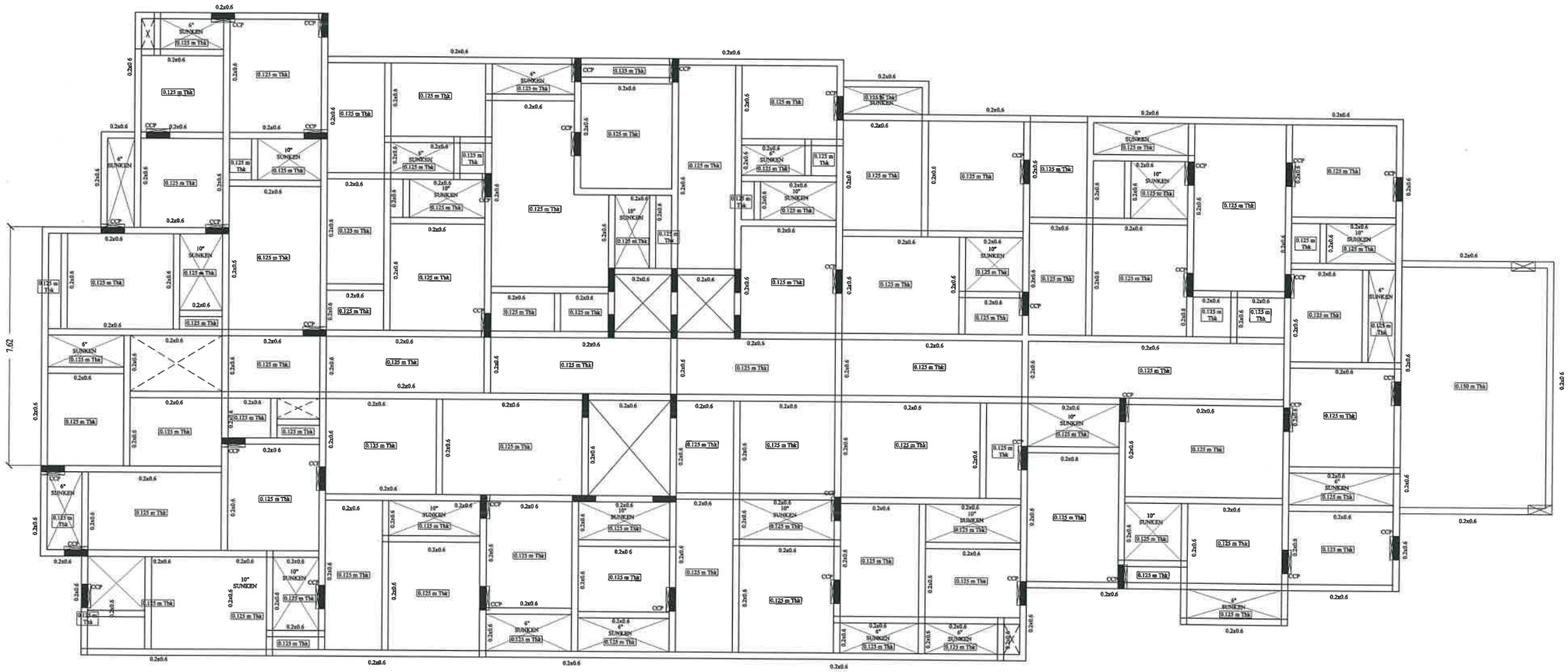
Removal of formwork(Shuttering)
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcment bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap lenght of the bar for Tension & Compression members
iii) Lap lenght shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	BLOCK B – FIFTH FLOOR ROOF BEAM LAYOUT
SHEET NO: 07	
SCALE : NTS	

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O W N E R S



BLOCK C - Stilt floor roof beam layout

GENERAL NOTES:-

1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M25Conc & Fe500 unless specified otherwise.
8. Found. designed for STILT+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 10-T/Sq.m

Removal of formwork(Shuttering)

i. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II

A) Vertical side of shuttering columns, Walls & beams - 24 Hours

B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days

C) Bottom shuttering of Beams (Keeping the Props) - 7 Days

d) Props to Slabs:

i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcment bars i) At any cross section of the member not more than 50% of the Bars shall be lapped

ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap lenght of the bar for Tension & Compression members

iii) Lap lenght shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level

v) Laps in beams and columns shall be provided at the point of contraflexure.

vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer

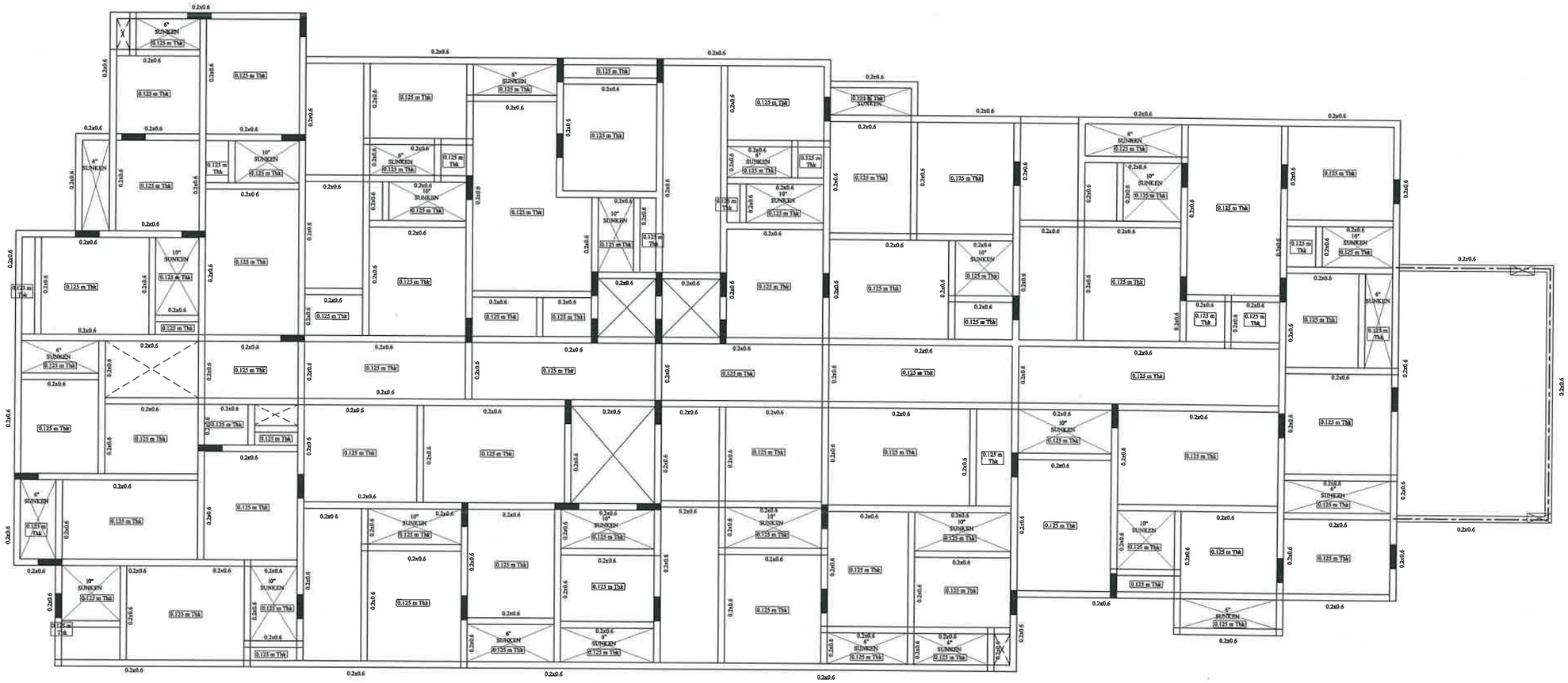
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	BOLCK-C STILT FLOOR ROOF BEAM LAYOUT
SHEET NO: 02	
SCALE : NTS	

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STRUCTURAL ENGINEER

O W N E R S



BLOCK C - First floor roof beam layout

GENERAL NOTES:-

1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M25Conc & Fe500 unless specified otherwise.
8. Found. designed for STILT+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 10-T/Sq.m

Removal of formwork(Shuttering)

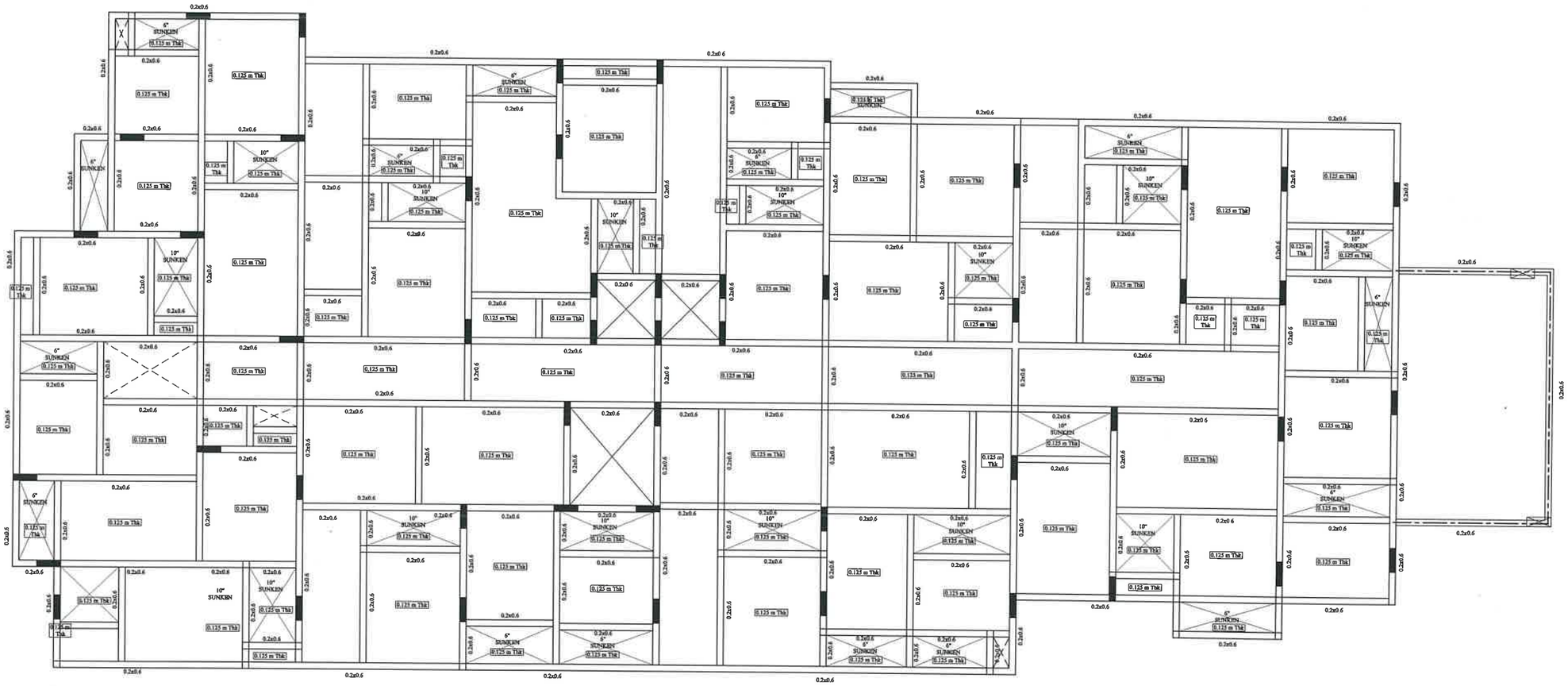
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcment bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap lenght of the bar for Tension & Compression members
iii) Lap lenght shall be 50 times the diameter of the bar for Tension & Compresion members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	BLOCK-C FIRST FLOOR ROOF BEAM LAYOUT
SHEET NO: 03	
SCALE : NTS	

N.KARIKALAN, M.E.,(Struc.Engg.), MIE
DTCP Reg.No : CGLDIST/SE/Gr-I/2022/08/004
Chartered Engineer (M-1644542/19)
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Ramapuram, Chennai - 600 089
Mobile : 98942 45633
Email : nkarikalan1985@gmail.com
STRUCTURAL ENGINEER

O W N E R S



BLOCK C - Second floor roof beam layout

GENERAL NOTES:-

1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M25Conc & Fe500 unless specified otherwise.
8. Found. designed for STILT+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 10-T/Sq.m

Removal of formwork(Shuttering)

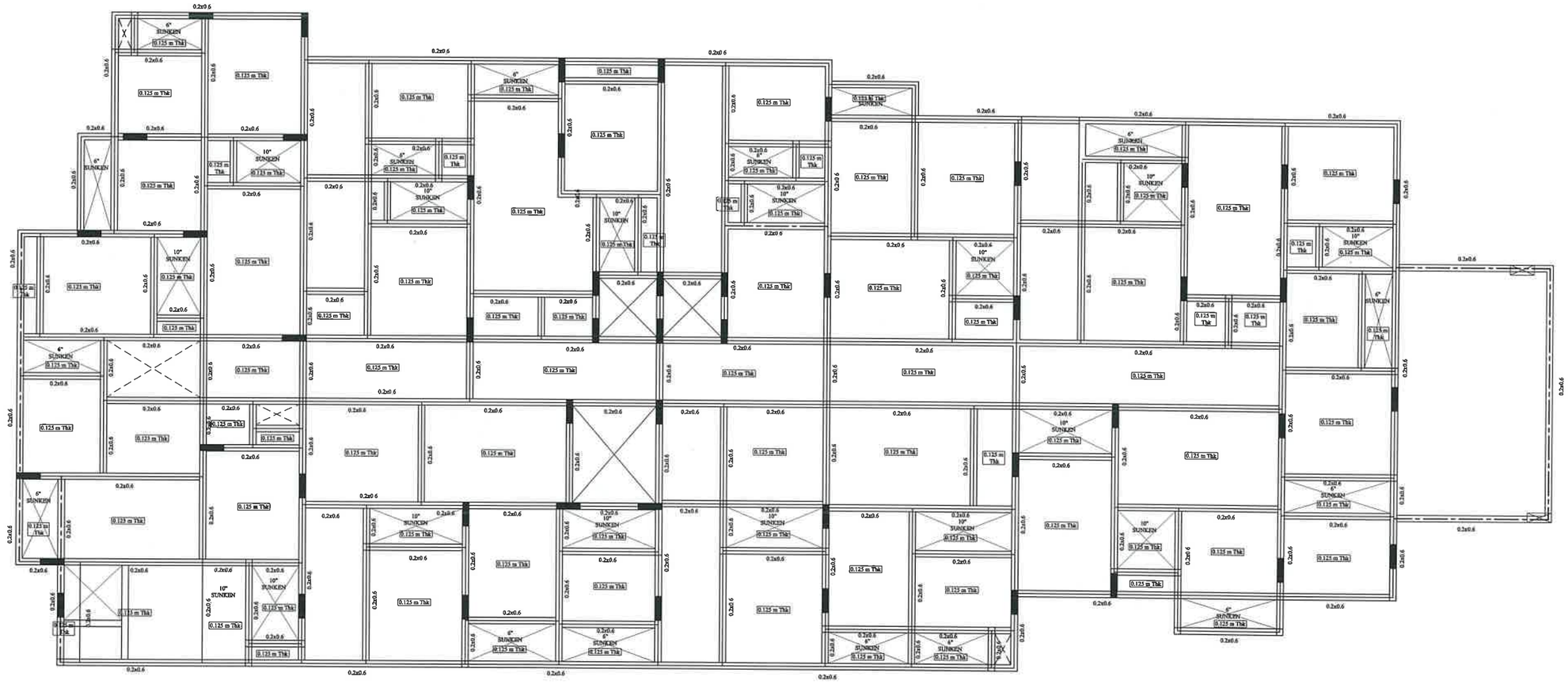
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcment bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap lenght of the bar for Tension & Compression members
iii) Lap lenght shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	BLOCK-C SECOND FLOOR ROOF BEAM LAYOUT
SHEET NO: 04	
SCALE : NTS	

N.KARIKALAN, M.E.,(Struc.Engg.), MIE
DTCP Reg.No : CGLDIST/SE/Gr-I/2022/08/004
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Ramapuram, Chennai - 600 089
Mobile : 98942 45633
Email : nkarikalan1985@gmail.com
STRUCTURAL ENGINEER

OWNERS



BLOCK C - Third floor roof beam layout

GENERAL NOTES:-
1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M25Conc & Fe500 unless specified otherwise.
8. Found. designed for STILT+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 10-T/Sq.m

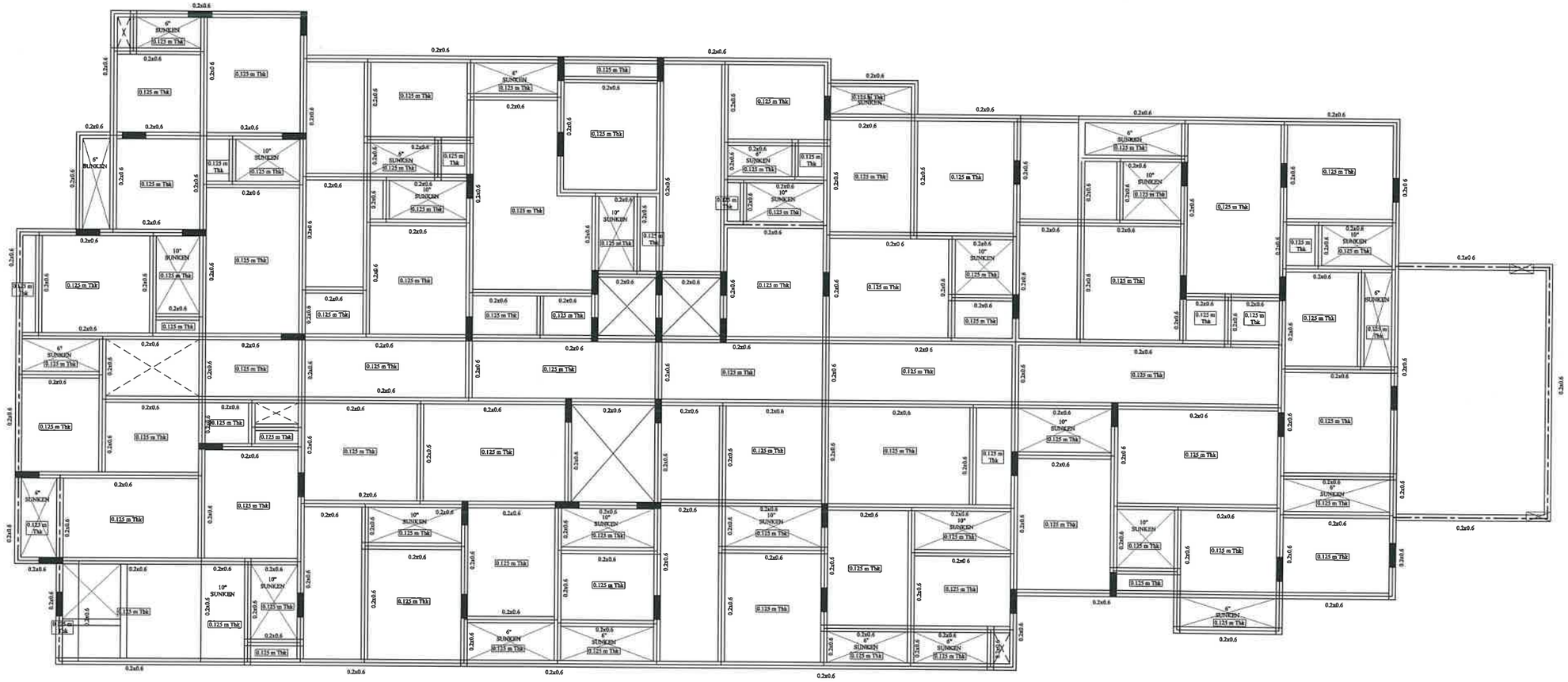
Removal of formwork(Shuttering)
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcment bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap lenght of the bar for Tension & Compression members
iii) Lap lenght shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	BLOCK-C THIRD FLOOR ROOF BEAM LAYOUT
SHEET NO: 05	
SCALE : NTS	

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DTCP Reg.No : CGLDIST/SE/Gr-I/2022/08/004
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Mobile : 98942 45633
Email : nkarikalan1985@gmail.com
STRUCTURAL ENGINEER

O W N E R S



BLOCK C - Fourth floor roof beam layout

GENERAL NOTES:-

1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M25Conc & Fe500 unless specified otherwise.
8. Found. designed for STILT+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 10-T/Sq.m

Removal of formwork(Shuttering)

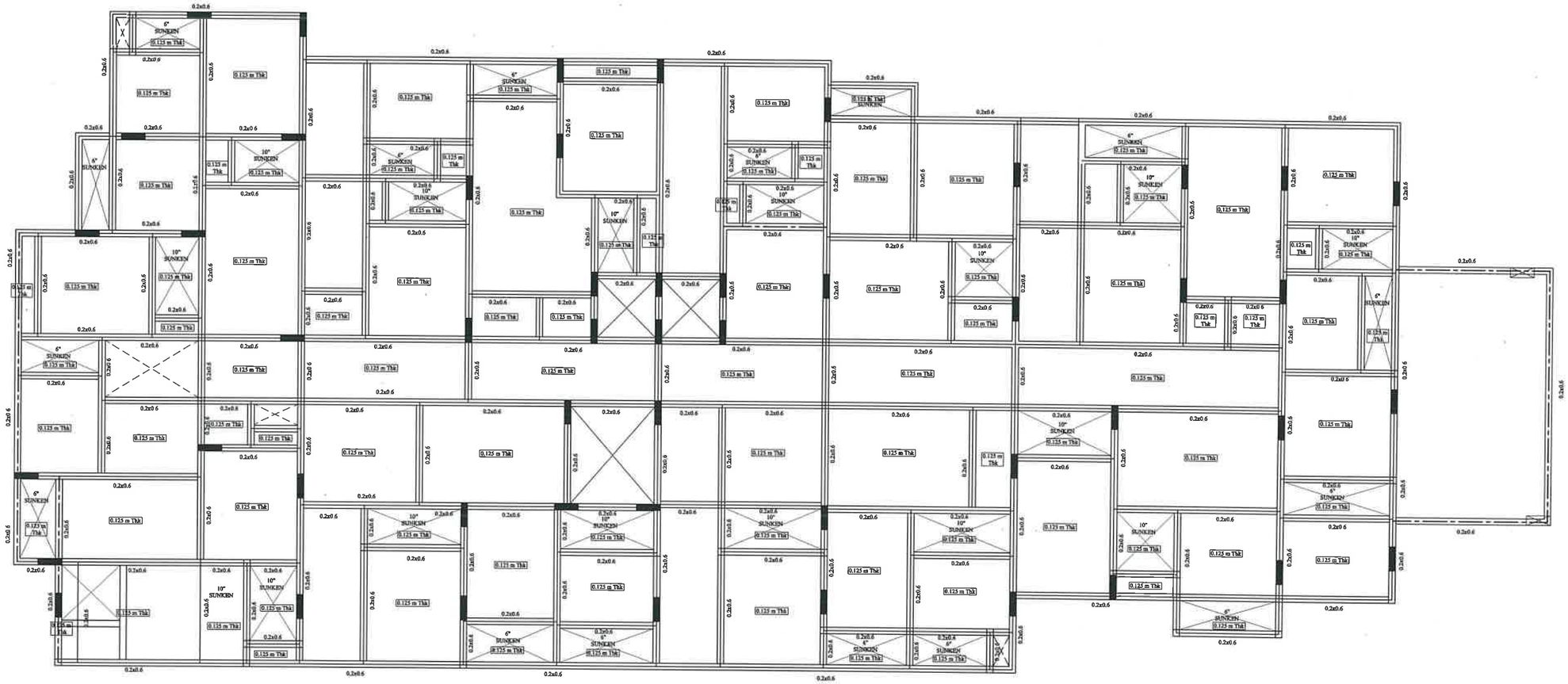
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A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcment bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap lenght of the bar for Tension & Compression members
iii) Lap lenght shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	**BLOCK-C FOURTH FLOOR ROOF BEAM LAYOUT**
SHEET NO: 06	
SCALE : NTS	

N.KARIKALAN, M.E.,(Struc.Engg.), MIE
DTCP Reg.No : CGLDIST/SE/Gr-I/2022/08/004
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Mobile : 98942 45633
Email : nkarikalan1985@gmail.com
STRUCTURAL ENGINEER

O W N E R S



BLOCK C - Fifth floor roof beam layout

GENERAL NOTES:-

1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col.25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M25Conc & Fe500 unless specified otherwise.
8. Found. designed for STILT+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 10-T/Sq.m

Removal of formwork(Shuttering)

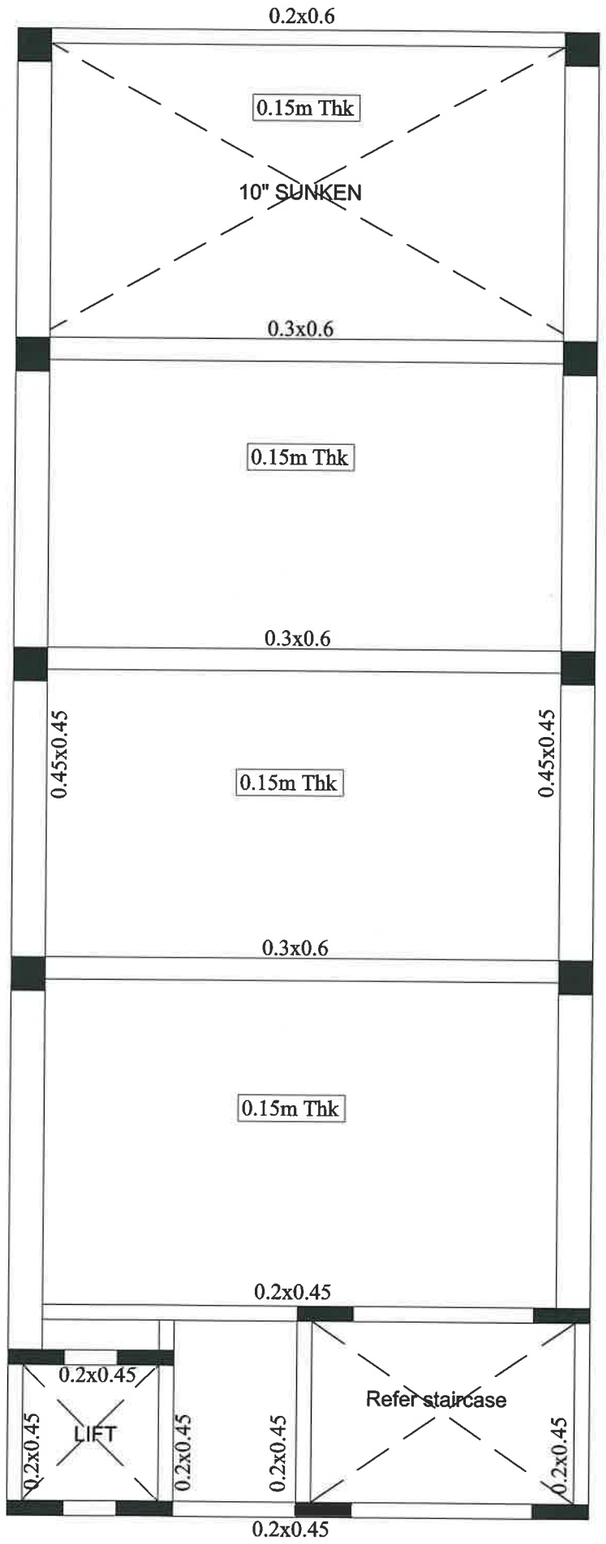
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B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap lenght of the bar for Tension & Compression members
iii) Lap lenght shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	BLOCK-C FIFTH FLOOR ROOF BEAM LAYOUT
SHEET NO: 07	
SCALE : NTS	

N.KARIKALAN, M.E.,(Struc.Engg.), MIE
DTCP Reg.No : CGLDIST/SE/Gr-I/2022/08/004
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No.15, Flat-B, Sri Ayyan Illam, 1st Floor,
1st Street, Narasimman Nagar,
Ramapuram, Chennai - 600 089
Mobile : 98942 45633
Email : nkarikalan1985@gmail.com
STRUCTURAL ENGINEER

O W N E R S



GROUND FLOOR ROOF BEAM LAYOUT

GENERAL NOTES:-

1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M30Conc & Fe500 unless specified otherwise.
8. Found. designed for Ground+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 210 Kn/Sq.m

Removal of formwork(Shuttering)

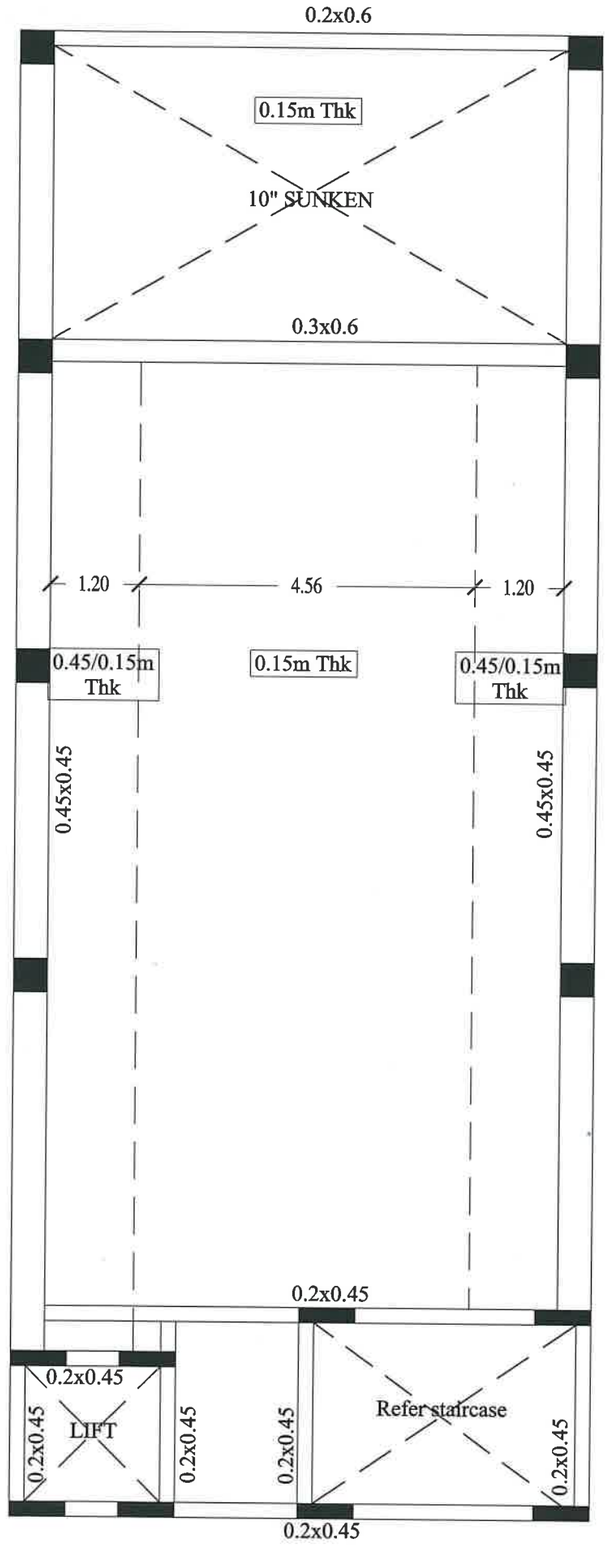
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vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

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TITLE	GROUND FLOOR ROOF BEAM LAYOUT CLUB HOUSE
SHEET NO: 02	N
SCALE : NTS	

N.KARIKALAN, M.E.,(Struc.Engg.), MIE
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Email : nkarikalan1985@gmail.com
STRUCTURAL ENGINEER

O W N E R S



FIRST FLOOR ROOF BEAM LAYOUT

GENERAL NOTES:-

1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M30Conc & Fe500 unless specified otherwise.
8. Found. designed for Ground +3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 210 Kn/Sq.m

Removal of formwork(Shuttering)

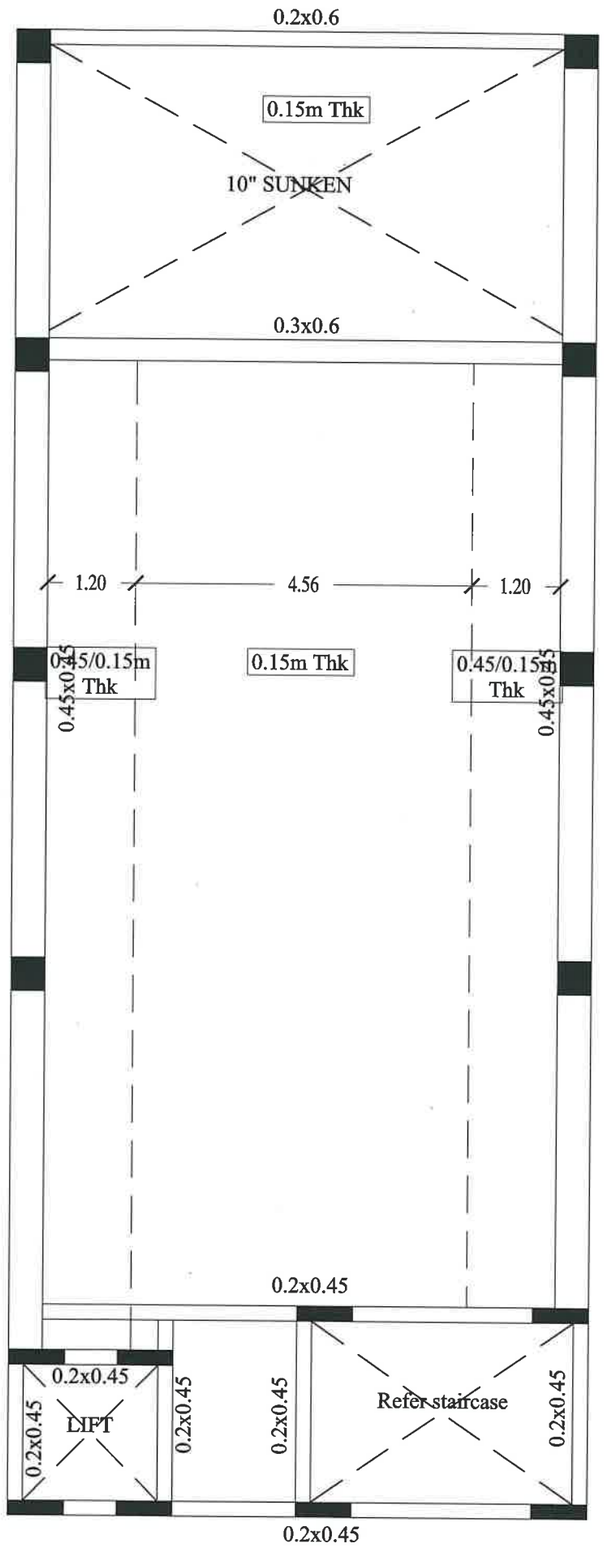
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vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/B, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	FIRST FLOOR ROOF BEAM LAYOUT CLUB HOUSE
SHEET NO: 03	N
SCALE : NTS	

N.KARIKALAN, M.E.,(Struc.Engg.), MIE
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Email : nkarikalan1985@gmail.com
STRUCTURAL ENGINEER

O W N E R S



SECOND FLOOR ROOF BEAM LAYOUT

GENERAL NOTES:-

1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide ##@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M30Conc & Fe500 unless specified otherwise.
8. Found. designed for Ground +3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 210-Kn/Sq.m

Removal of formwork(Shuttering)

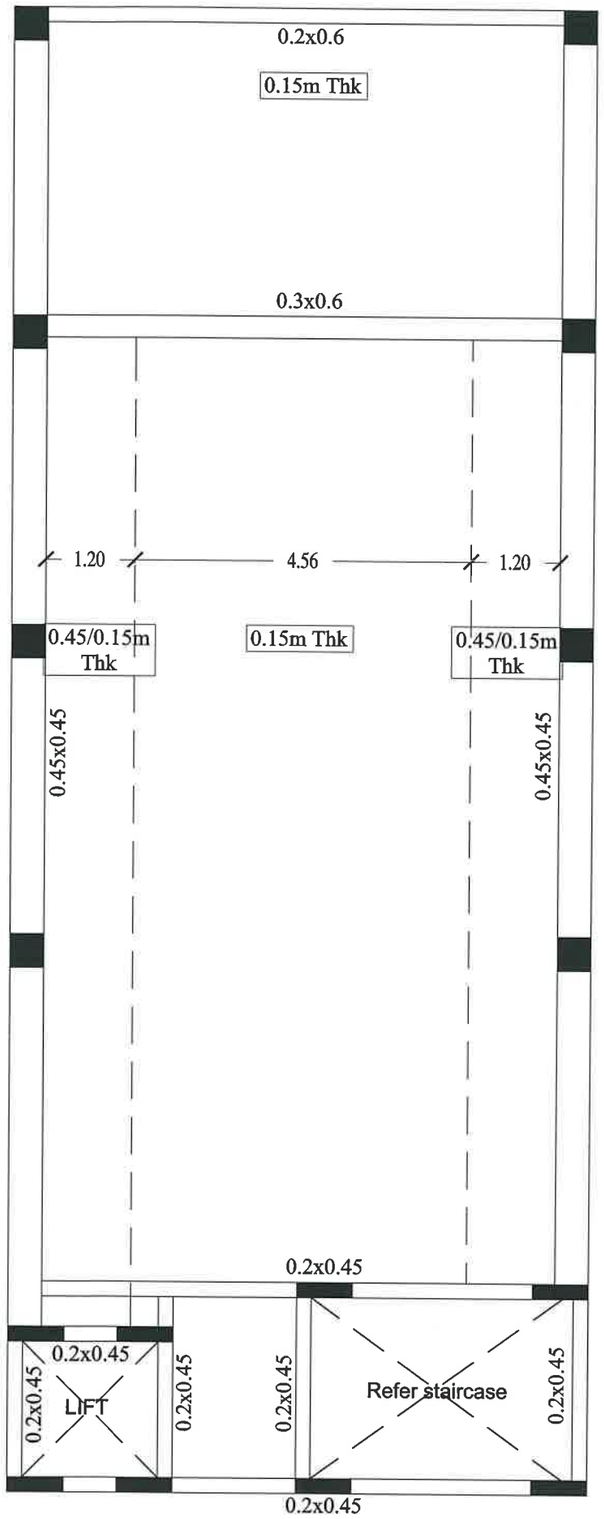
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i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcment bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap lenght of the bar for Tension & Compression members
iii) Lap lenght shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	SECOND FLOOR ROOF BEAM LAYOUT CLUB HOUSE
SHEET NO: 04	N
SCALE : NTS	

N.KARIKALAN, M.E.,(Struc.Engg.), MIE
DTCP Reg.No : CGLDIST/SE/Gr-I/2022/08/004
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STRUCTURAL ENGINEER

O W N E R S



THIRD FLOOR ROOF BEAM LAYOUT

GENERAL NOTES:-

1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
4. Slab thickness 5" thk unless specified otherwise.
5. Provide 8#@8"c/c as Dist. Steel wherever required
5. Crank lenght 0.25L of short span
6. Top rod extn 0.30L of short span
7. Use M30Conc & Fe500 unless specified otherwise.
8. Found. designed for Ground+3 Flrs. only.
9. Footing CL to coincide with Column CL.
10.SBC - 210 Kn/Sq.m

Removal of formwork(Shuttering)

1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcment bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
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TITLE	THIRD FLOOR ROOF BEAM LAYOUT CLUB HOUSE
SHEET NO: 04	N
SCALE : NTS	

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O W N E R S

THE LANDLENS SUITE

Eight ways to know a piece of land before you pay for it.

This report covers one part of the picture. These cover the rest, drawn from the same government records, for any property in Tamil Nadu.

LandLens One
Ask anything about a property and get an answer grounded in live government records, with the sources shown.
/landlens/one

Verify My Land
Every record check run on one property and returned as a single report.
/landlens/verify-my-land

Legal Opinion
An advocate's written opinion on the title, built on the records we pull for it.
/landlens

One Map
Every layer on one map: the parcel, its boundary, zoning, water bodies and what sits around it.
/landlens/one/map

PriceMap
What land actually changed hands for around this plot, taken from the registered deeds.
/landlens/pricemap

Build Scope
What you are allowed to build here: floor space, height, coverage and setbacks.
/landlens/build-scope

Property Tracker
Watch a property and hear about it when something new is registered against it.
/landlens/property-tracker

Deal Room
Run the transaction in one place: documents, stamping, signatures and the parties.
/landlens/deal-room

FREE TOOLS · NO ACCOUNT NEEDED

Twenty-four checks you can run yourself, at no cost.

Records and verification

The registers themselves, read for you.

- Encumbrance Certificate
- Patta and Chitta
- Field Measurement Sketch
- EC Analyzer
- Bank charge check
- Court case search
- Seller background check
- Approval check by survey

Value and duty

What it is worth and what it costs to register.

- Guideline value by street
- Guideline value by survey
- Stamp duty and registration fees
- Capital gains
- Floor space index
- Area unit converter

Zoning and land use

What the plan says can happen on this land.

- Land use zone finder
- CMDA land use check
- Coastal regulation zone
- Master plan check
- Water bodies finder
- Airport height clearance

Registers and directories

Who holds it, and which office keeps the record.

- Find your registering office
- Temple property check
- Waqf property check
- RERA register

Every free tool
/tools

Services we run for you
/services

The LandLens suite
/landlens/one

Verified RealEstate™

Every claim in this document traces back to a government record.

- Legal opinions, due diligence and title verification
- Building plan, layout and sub-division approvals
- Completion and occupancy certificates, regularisation
- Escrow, negotiation and NRI property management
- Land survey, soil testing, architecture and construction

Verified RealEstate
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Prepared from the registers named on the page each finding sits on. Where a register could not be read, this document says so in its place rather than leaving the gap to be read as a clean result.