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DIGITALLY VERIFIED RECORD

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Ref: GCON/DBR/GC-26115/2026
Date: 13.06.2026

STRUCTURAL DETAILED DESIGN BASIS REPORT

(DBR FOR DTCP SUBMISSION)

Project	Proposed Construction of Ground + 1 Floors Residential Building with 27 Dwelling Villas and Club House Development
Location	S.F. Nos. 42/3A2, 42/3A3, 42/3A4, 42/3B2, 42/3B3, 42/3B4, 42/3C2, 42/3C3, 42/3D2, 42/3D3, 43/12B2, 43/12C2, 43/12C3, 43/12C4, 43/23A, 43/23B, 52/1A2B, 52/1A2C, 52/1A3B and 52/1A3C, Srinivasa Nagar, 7th Street, Padur Village and Panchayat, Thiruporur Panchayat Union, Chengalpattu District, Tamil Nadu - 603103.
Prepared for	DTCP submission purpose
Structural Consultant	GCON ENGINEERS, Chennai
Drawing Reference	GC-26115-VILLA-SD-RCC-F&CL (1) 01-merged.pdf - RCC drawings attached as Appendix
Geotechnical Report	Geonix Technologies, Chennai - 600040, Report No. GT: R: 04/11-12 dated 06.04.2011
Allowable SBC Adopted	20 T/sqm at 2.00 m from Existing Ground Level (EGL)
Concrete Grade	RCC - M20 minimum, unless a higher grade is specifically noted in issued structural drawings
Reinforcement Grade	High Yield Strength Deformed Bars - Fe550D conforming to IS 1786
Block Work	AAC block masonry for wall loads considered in structural design basis

This brief structural design basis report summarizes the structural system, design codes, loading assumptions, material specifications, foundation criteria, design checks and typical sample calculations for column, beam, footing and slab. This report shall be read along with the attached RCC structural drawings and the latest approved architectural drawings.

For DTCP submission use only

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DOCUMENT CONTROL

Revision	Date	Description	Prepared / Checked
R1	13.06.2026	Detailed DBR updated with Fe550D, M20 RCC, AAC blockwork, sample calculations and drawing appendix	GCON Engineers

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Appendix A - RCC Drawings

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1. PROJECT BRIEF

The proposed development consists of Ground + 1 floors residential villas and club house development at Padur Village and Panchayat, Thiruporur Panchayat Union, Chengalpattu District, Tamil Nadu. The structural system has been planned as reinforced cement concrete framed construction with RCC beams, columns, slabs, plinth beams and isolated / combined pad footings as per the submitted structural drawing set.

- Number of dwelling villas: 27 Nos.
- Building configuration: Ground + 1 floor villas with club house development.
- RCC construction: Footings, columns, plinth beams, floor beams and slabs.
- Masonry: AAC block walling considered for wall load basis.
- Foundation depth and capacity: Designed based on 20 T/sqm SBC at 2.00 m from EGL as per soil report.

2. SCOPE OF REPORT

The scope of this DBR is to document the basic design parameters adopted for the structural design and to provide a brief design report suitable for statutory submission. The report provides typical sample calculations only. The detailed reinforcement shall be as per the approved structural drawings and issued bar bending schedules.

- Design basis and applicable Indian Standards.
- Material grades and durability criteria.
- Load assumptions and load combinations.
- Foundation design criteria using soil bearing capacity.
- Typical design verification for column, beam, footing and slab.
- Attached structural drawings for reference and DTCP submission record.

3. REFERENCE DRAWINGS AND INPUTS

Sl. No.	Input / Reference	Remarks
1	Architectural plans	Building layout, functional planning and floor levels to be followed as per approved architectural drawings.
2	RCC structural drawing PDF	Column layout, footing layout, plinth beam layout, floor beam and slab layouts, beam schedules and staircase details.
3	Soil report	Geonix Technologies, Report No. GT: R: 04/11-12, dated 06.04.2011.
4	Design data from client / consultant	Ground + 1 floor use, residential occupancy, AAC block work and adopted material grades.

Note: The drawing PDF uploaded for this DBR contains six sheets. Sheet 1 shows column layout and column schedule, Sheet 2 shows footing layout and footing schedule, Sheet 3 shows plinth beam / ground floor roof beam and slab layouts, Sheet 4 shows terrace beam and slab layouts, Sheet 5 shows beam schedules and Sheet 6 shows head room and staircase details.

4. APPLICABLE CODES AND STANDARDS

Code	Description / Use
IS 456:2000	Plain and reinforced concrete design, serviceability, durability and detailing provisions.

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IS 875 Part 1	Dead loads and unit weights of materials.
IS 875 Part 2	Imposed loads for residential and common areas.
IS 875 Part 3:2015	Wind load provisions.
IS 875 Part 5	Special loads and load combinations.
IS 1893 Part 1:2016	Earthquake resistant design criteria for buildings.
IS 13920:2016	Ductile detailing requirements, wherever applicable.
IS 1786	High strength deformed steel bars - Fe550D reinforcement.
IS 1904	Design and construction of foundations in soils.
NBC 2016	General building and structural safety guidance.

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5. MATERIAL SPECIFICATIONS

Item	Specification Adopted
Concrete for RCC	M20 grade minimum for RCC structural members, unless higher grade is mentioned in specific structural drawings.
Reinforcement steel	Fe550D grade HYSD bars conforming to IS 1786.
Masonry / block work	AAC block masonry considered for wall load in design basis.
PCC below footing	Nominal PCC bed as per drawing / site requirement.
Concrete cover	Foundation 50 mm, beam 30 mm, column 40 mm, slab 25 mm as indicated in drawing notes.
Lap length	Minimum 50 times bar diameter or as per structural drawings and IS requirements.
Cement / aggregate / water	To conform to relevant IS standards with proper quality control at site.

For execution, the grade marked in the latest Good for Construction drawing shall govern. Where a higher grade than M20 is specifically called for in any schedule, the higher grade shall be adopted for that member.

6. DESIGN CRITERIA AND STRUCTURAL SYSTEM

The structural design philosophy is based on limit state design as per IS 456. The load path considered is slab to beam, beam to column, column to footing and footing to soil. The structural framing arrangement has been coordinated with the architectural layouts and the RCC drawing set attached to this report.

Parameter	Design Basis
Structural system	RCC framed structure with slabs, beams, columns and isolated footings.
Floor system	RCC slab panels supported on beams. Slab thicknesses as per drawings generally 125 mm, 150 mm and 175 mm in different panels.
Foundation system	Shallow isolated pad footings connected with plinth / footing beams as indicated in the drawings.
Seismic load resistance	RCC frame action with detailing provisions as per IS 456 and ductile detailing principles wherever applicable.
Design method	Limit State Method.
Deflection / serviceability	Checked as per span to depth criteria and reinforcement detailing provisions of IS 456.

7. LOADING DATA

The following loading data has been considered as the general basis for the structural design. Final member design values shall be as per analysis model, tributary areas, wall positions and architectural usage.

Load Component	Adopted Value / Basis
Self weight of RCC	25 kN/m3.
AAC block masonry	Wall load calculated based on AAC block density, wall thickness and storey height. Typical design values may vary from 3.0 to 5.0 kN/m depending on wall thickness and height.
Floor finish / waterproofing	1.0 kN/m2 typical, adjusted where terrace treatment is heavier.
Live load - residential floors	2.0 kN/m2 typical as per IS 875 Part 2.
Live load - stairs / common areas	3.0 to 5.0 kN/m2 as applicable for access / common area use.
Terrace live load	1.5 kN/m2 typical for accessible / maintenance terrace or as per

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	usage.
Seismic load	As per IS 1893 Part 1, based on site seismic zone and building parameters.
Wind load	As per IS 875 Part 3 based on basic wind speed and exposure conditions.

8. LOAD COMBINATIONS

The structure shall be designed for the most adverse effects due to factored load combinations as per IS 456, IS 875 and IS 1893. The following combinations form the design basis.

Sl. No.	Load Combination
1	1.5 (DL + LL)
2	1.5 (DL + WL / EL)
3	1.2 (DL + LL + WL / EL)
4	0.9 DL + 1.5 WL / EL
5	Service load combinations for deflection, crack width and foundation pressure checks.

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9. ANALYSIS AND DESIGN METHODOLOGY

The structural analysis is based on a three-dimensional RCC frame concept or equivalent structural idealization. The design considers the stiffness of columns, beams and slab load distribution. Member forces are derived under gravity and lateral load combinations and used for reinforcement design.

- Slabs are designed as one-way or two-way panels depending on support condition and aspect ratio.
- Beams are designed for flexure, shear and anchorage requirements.
- Columns are designed for axial load and bending interaction as per IS 456.
- Footings are checked for soil pressure, bending, one-way shear and punching shear.
- Detailing follows IS 456 and ductile detailing principles where applicable.
- All site deviations shall be referred to the structural consultant before execution.

10. FOUNDATION DESIGN BASIS

The soil investigation report by Geonix Technologies, Chennai - 600040, Report No. GT: R: 04/11-12 dated 06.04.2011 reports the soil capacity. The foundation design basis adopted in this report is allowable SBC of 20 T/sqm at 2.00 m depth from EGL.

Item	Design Basis
Foundation type	Shallow isolated pad footings / connected footing system as per drawing.
Founding level	Approximately 2.00 m below EGL or as per site-specific founding stratum recommended by soil engineer.
Allowable bearing capacity	20 T/sqm = approximately 196 kN/m2.
Footing concrete	M20 minimum RCC or as per structural drawing.
Footing reinforcement	Fe550D reinforcement; typical footing bars as per schedule.
PCC bed	To be provided below footing as per drawing and site condition.

During excavation, the founding soil shall be checked for uniformity, absence of loose filled-up soil, organic material, water pockets or black cotton soil. Any abnormal soil condition shall be reported to the consultant before concreting.

11. DURABILITY AND COVER REQUIREMENTS

Member	Clear Cover Adopted
Footing / foundation	50 mm
Column	40 mm
Beam	30 mm
Slab	25 mm

The concrete shall be compacted properly with mechanical vibrators. Construction joints shall be planned and treated as per IS 456. Reinforcement shall be free from loose rust, mud, oil, paint and other deleterious materials before concreting.

12. STRUCTURAL DETAILING REQUIREMENTS

- All reinforcement shall be Fe550D and shall be placed strictly as per the RCC drawings.
- Beam and column bars shall be anchored inside joints with proper development length.
- Laps shall be staggered and located away from maximum stress zones wherever possible.
- Column confinement reinforcement shall be provided at beam-column joints and end regions as shown in drawings.

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- Clear covers shall be maintained using approved cover blocks of required thickness.
- Openings, sleeves, core cutting and chasing in RCC members shall not be done without written approval from the structural consultant.
- AAC block work shall be supported and tied properly with RCC frame using recommended wall ties / bands where required.

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13. SAMPLE CALCULATION - RCC COLUMN

The following is a typical sample calculation for a representative RCC column. This is a design-basis sample for submission; final design shall be as per detailed analysis and drawing schedule. Typical column schedules in the drawing show C1 and C2 type columns with RCC and Fe550 reinforcement.

Input	Value
Column size considered	200 mm x 450 mm
Concrete grade	M20
Steel grade	Fe550D
Effective length assumption	3.30 m typical storey height basis
Factored axial load for sample	900 kN
Factored moment for sample	35 kNm about major axis
Longitudinal steel provided in sample	10 Nos. 16 mm dia bars = 2010 mm2
Lateral ties	8 mm dia ties @ 150 mm c/c, closer spacing near joints as per detailing zone

13.1 Column Section Property Check

Gross area, Ag = 200 x 450 = 90,000 mm2

Steel area provided, Asc = 10 x pi x 16^2 / 4 = 2,010 mm2

Percentage steel = 2,010 / 90,000 x 100 = 2.23 %, within normal IS 456 limits

Minimum eccentricity = To be considered as per IS 456 and not less than code minimum

13.2 Axial Capacity Estimate

For a short axially loaded column, the approximate design axial load capacity may be estimated by IS 456 expression 0.4 fck Ac + 0.67 fy Asc, subject to slenderness and moment interaction checks.

Concrete area, Ac = 90,000 - 2,010 = 87,990 mm2

Concrete contribution = 0.4 x 20 x 87,990 / 1000 = 704 kN

Steel contribution = 0.67 x 550 x 2,010 / 1000 = 741 kN

Approx. axial capacity = 704 + 741 = 1,445 kN > sample factored axial load 900 kN

Hence the representative column section is adequate for the sample axial load. Biaxial bending / interaction checks shall be performed in the detailed design model for final design.

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14. SAMPLE CALCULATION - RCC BEAM

The following sample is for a representative RCC beam. The actual drawing contains multiple beam sizes including 200 x 300, 200 x 375, 200 x 450, 200 x 600 and 200 x 750 depending on location and level. This sample check demonstrates the design basis for flexure and shear.

Input	Value
Beam size considered	200 mm x 450 mm
Clear cover	30 mm
Effective depth, d	Approx. 400 mm
Effective span	4.40 m
Concrete grade	M20
Steel grade	Fe550D
Factored UDL for sample	35 kN/m
Main tension steel provided	2 Nos. 16 mm + 1 No. 12 mm = 515 mm2
Stirrups	2-legged 8 mm @ 125 / 150 mm c/c as per shear zone

14.1 Bending Moment Check

Factored moment, Mu = wL^2 / 8 = 35 x 4.40^2 / 8 = 84.7 kNm

Limiting moment capacity estimate = For b=200 mm, d=400 mm, M20, Fe550D approx. > 90 kNm depending on xu limit

Ast provided = 2T16 + 1T12 = 515 mm2

Lever arm, z = Approx. 0.9d = 360 mm

Moment capacity estimate = 0.87 x 550 x 515 x 360 / 10^6 = 88.8 kNm

The sample beam is adequate for the adopted sample moment. Final reinforcement shall be as per the structural beam schedule and detailed analysis.

14.2 Shear Check

Factored support shear, Vu = wL / 2 = 35 x 4.40 / 2 = 77.0 kN

Nominal shear stress = Vu / (b d) = 77,000 / (200 x 400) = 0.96 N/mm2

Shear reinforcement = Provide 2-legged 8 mm stirrups @ 125 mm c/c near supports and @150 mm c/c in mid-span, as per schedule

Shear reinforcement and anchorage details shall be followed strictly as per the structural drawing.

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15. SAMPLE CALCULATION - ISOLATED FOOTING

This sample calculation is for a representative isolated footing supporting a column. The attached structural drawing shows typical footing sizes such as F1 and F2 with pad dimensions and reinforcement schedules. The design basis below adopts SBC = 20 T/sqm = 196 kN/m2 at 2.00 m from EGL.

Input	Value
Column size	200 mm x 450 mm
Service axial load for sample	320 kN
Assumed self weight / soil cover allowance	10 % of column load = 32 kN
Total service load for footing	352 kN
Allowable SBC	196 kN/m2
Required footing area	352 / 196 = 1.80 m2
Footing adopted for sample	1.50 m x 1.50 m = 2.25 m2
Footing depth	525 mm typical basis
Footing reinforcement	T10 @ 100 mm c/c both ways bottom as indicated in schedule

15.1 Bearing Pressure Check

Net service pressure = 352 / 2.25 = 156.4 kN/m2

Allowable pressure = 196 kN/m2

Since 156.4 kN/m2 < 196 kN/m2, the adopted footing size is satisfactory for the sample service load.

15.2 Flexure and Shear Basis

Projection from column face = (1500 - 450) / 2 = 525 mm in one direction and (1500 - 200) / 2 = 650 mm in the other direction

Factored soil pressure = 1.5 x 156.4 = 234.6 kN/m2

Design bending moment = Checked at column face for cantilever projection using q x l^2 / 2 per meter width

One-way shear = Checked at distance d from column face

Punching shear = Checked around critical perimeter at d/2 from column face

The final footing depth and reinforcement shall be as per the footing schedule and the detailed foundation design calculations.

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16. SAMPLE CALCULATION - RCC SLAB

The sample slab calculation below is for a typical two-way slab panel supported on beams. The structural drawing shows slab thicknesses generally 125 mm, 150 mm and 175 mm at different locations, with reinforcement notes such as T8 @ 150 mm and T10 @ 150 mm alternate cranked / top and bottom as applicable.

Input	Value
Panel size for sample	3.71 m x 4.23 m
Slab thickness	150 mm
Effective depth	Approx. 125 mm
Concrete grade	M20
Steel grade	Fe550D
Dead load - slab self weight	0.15 x 25 = 3.75 kN/m2
Floor finish	1.00 kN/m2
Live load	2.00 kN/m2
Total service load	6.75 kN/m2
Factored load	1.5 x 6.75 = 10.13 kN/m2

16.1 Slab Design Basis

Aspect ratio = 4.23 / 3.71 = 1.14, hence panel behaves as two-way slab

Short span moment coefficient = Adopted as per IS 456 two-way slab coefficients based on support condition

Factored moment in short direction = alpha x w x lx^2; typical design moment depends on continuity and edge condition

Minimum reinforcement = 0.12 % of gross section for HYSD bars as per IS 456

Minimum steel for 1 m strip = 0.0012 x 1000 x 150 = 180 mm2/m

T8 @ 150 mm c/c steel area = (50.3 x 1000 / 150) = 335 mm2/m > minimum

Typical T8 @ 150 mm c/c or T10 @ 150 mm c/c reinforcement shown in the drawings is adequate for minimum steel and shall be verified for design moments based on actual panel continuity.

16.2 Deflection Check Basis

Span / effective depth = 3710 / 125 = 29.7

Deflection control shall be checked by span/depth ratio modification factors as per IS 456 based on percentage tension reinforcement and continuity conditions. Additional top steel shall be placed over supports as shown in the structural drawings.

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17. DRAWING SUMMARY

The attached RCC drawing PDF has been reviewed and included as Appendix A for DTCP submission reference. The main drawing contents are summarized below.

Sheet	Drawing Content / Structural Information
1	Column layout, column and wall schedule, column joint detailing and reinforcement notes.
2	Footing layout, isolated footing typical detail, footing schedule and footing beam reinforcement schedule.
3	Plinth beam layout, ground floor roof beam layout, ground floor slab layout and plinth beam schedule.
4	Terrace floor beam layout, terrace floor slab layout and slab reinforcement details.
5	Ground roof beam schedule and terrace roof beam schedule with beam sizes and reinforcement.
6	Head room beam layout, head room slab layout, staircase reinforcement details and head room beam schedule.

18. CONSTRUCTION NOTES

- All dimensions, levels and member positions shall be cross-checked with architectural drawings before execution.
- Only written dimensions shall be followed. Scaling from drawings is not permitted.
- Any discrepancy between architectural, structural and site conditions shall be brought to the notice of the structural consultant before construction.
- Concrete mix design, batching, placing, compaction and curing shall follow IS 456 requirements.
- AAC block walls shall be constructed after adequate curing / strength gain of RCC frame and shall be provided with proper joint treatment.
- No structural member shall be cut, chased or drilled without approval.
- Foundation excavation shall be inspected before PCC and reinforcement placement.
- Formwork and de-shuttering shall be as per IS 456 and good engineering practice.

19. DESIGN CERTIFICATE / CONCLUSION

Based on the structural drawings, adopted material grades, soil bearing capacity and relevant Indian Standards, the proposed RCC framed structure has been designed for gravity and lateral loading effects applicable to the project. The structure shall be safe and serviceable for the intended residential / club house use, provided the execution is carried out strictly in accordance with the approved structural drawings, architectural drawings, specifications and good construction practice.

This report is issued for DTCP submission and shall not be used independently for construction without the latest Good for Construction drawings.

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20. DESIGN REVIEW CHECKLIST

The following checklist records the design review items generally verified before issue of drawings and submission documents. This checklist is included to make the DBR self-contained for authority review.

Sl. No.	Review Item	Status / Remarks
1	Architectural grid, column locations and beam alignment coordinated	Reviewed based on attached RCC drawing set.
2	Concrete grade and reinforcement grade specified	M20 minimum RCC and Fe550D reinforcement adopted.
3	Soil bearing capacity incorporated in foundation design basis	20 T/sqm at 2.00 m from EGL adopted from soil report.
4	Footing sizes checked for bearing pressure	Representative footing check included; final footing sizes as per drawing.
5	Column schedule checked for axial load and detailing	Representative column check included; final reinforcement as per schedule.
6	Beam schedules checked for flexure and shear	Representative beam check included; final detailing as per drawing.
7	Slab thickness and reinforcement checked for panel action	Representative slab check included; final reinforcement as per drawing.
8	Clear cover and durability requirements noted	Foundation 50 mm, column 40 mm, beam 30 mm and slab 25 mm.
9	Ductility and confinement notes included	Column joint detailing and tie spacing to be followed as per drawings.
10	Construction notes and limitations included	Included in this report for site reference.

21. TYPICAL LOAD TAKE-OFF BASIS

The following typical load take-off illustrates how gravity loads are derived for the structural model. Actual design loads vary with panel size, wall position, terrace build-up and architectural usage.

Component	Typical Calculation	Load
150 mm RCC slab	0.150 m x 25 kN/m3	3.75 kN/m2
Floor finish / screed	Adopted typical floor finish	1.00 kN/m2
Residential live load	As per IS 875 Part 2	2.00 kN/m2
Total floor service load	3.75 + 1.00 + 2.00	6.75 kN/m2
Factored gravity load	1.5 x 6.75	10.13 kN/m2
AAC wall load - typical 200 mm wall	Density x thickness x height with plaster allowance	To be applied linearly on supporting beams
Parapet / terrace wall load	Based on height, thickness and density	Applied on terrace beams as line load

AAC block density and wall thickness shall be confirmed with the architectural specification and supplier data during execution. If any heavier block, brick masonry or facade material is adopted, the structural consultant shall be informed before construction.

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22. QUALITY CONTROL AND EXECUTION REQUIREMENTS

The design adequacy of the RCC structure is dependent on proper construction quality control. The following requirements shall be implemented at site.

Activity	Minimum Requirement
Reinforcement checking	Bar diameter, spacing, lap length, anchorage, cover and chair supports to be checked before concreting.
Formwork	Line, level, plumb, support spacing and tightness to be checked before concreting.
Concrete placement	Concrete shall be placed without segregation and compacted using needle vibrators.
Curing	Curing shall be started as soon as the concrete surface is ready and continued as per IS 456.
Cube testing	Concrete cube samples shall be taken at required frequency and tested for compressive strength.
Foundation inspection	Founding soil shall be inspected for soft pockets, filled soil, water seepage and level variation.
Block work	AAC block work shall be constructed with proper joint mortar / adhesive, curing and connection to RCC frame.

23. LIMITATIONS OF THIS DBR

- This DBR is prepared for DTCP submission purpose based on the information and drawing provided.
- The report contains typical sample calculations and does not replace the detailed structural calculation file or design model.
- Any change in floor usage, wall material, floor build-up, architectural layout or additional loading shall be referred back to GCON Engineers.
- The structural drawings and this report shall be revised if the final approved architectural plans differ from the drawings considered for design.
- Execution shall be carried out only with the latest Good for Construction drawings issued by the structural consultant.

APPENDIX A - RCC STRUCTURAL DRAWINGS

The following drawing sheets are appended from the submitted structural drawing PDF for DTCP submission record. The drawings shall be read along with this DBR and latest approved architectural drawings.

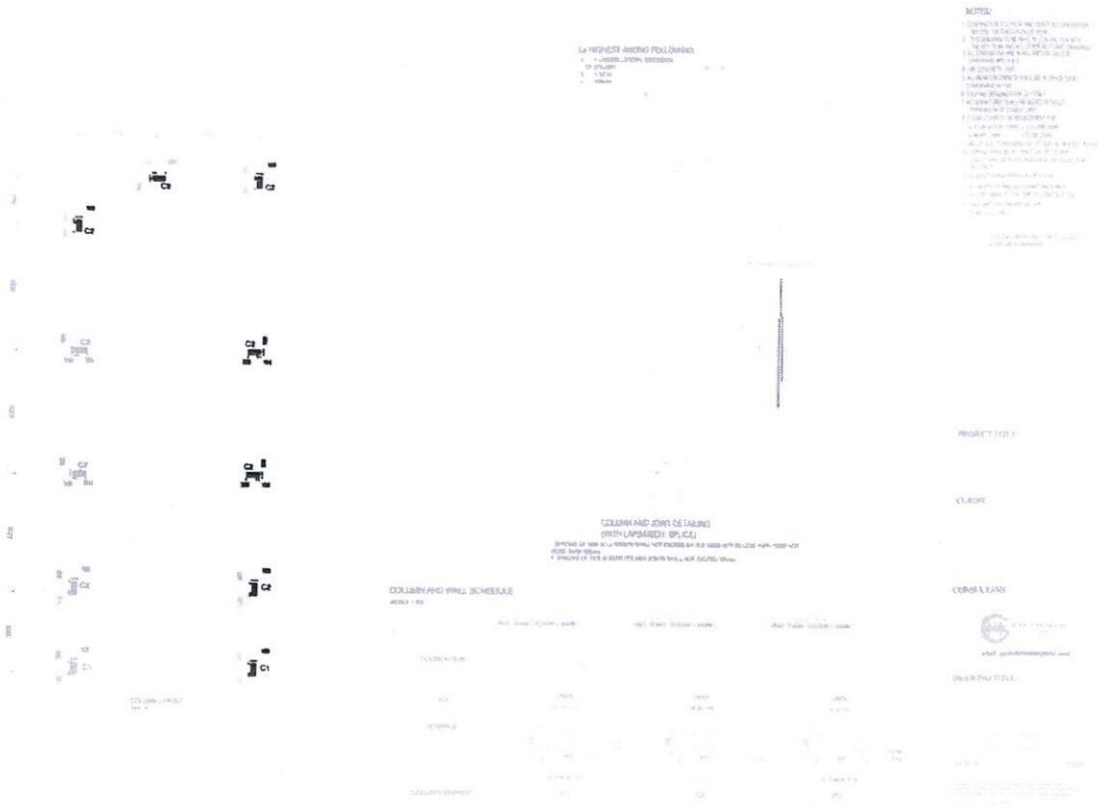
Appendix A.1 - Structural Drawing Sheet 1

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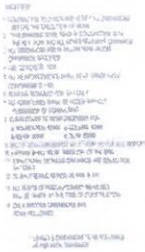
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Appendix A.2 - Structural Drawing Sheet 2







FOOTING BEAM REINFORCEMENT SCHEDULE

NAME	SIZE	BEAM DETAILS TOP	BOTTOM	STIRRUPS
FB1	375 X 450	(3) - 16Ø	(3) - 16Ø	8Ø @ 150
FB2	450 X 450	(4) - 16Ø	(4) - 16Ø	8Ø @ 150

FOOTING SCHEDULE (M20:Fe550)

FOOTING NUMBERS	FOOTING TYPE	FOOTING DIMENSION L	B	D	FOOTING REINFORCEMENT BOTTOM ALONG B	ALONG L	TOP ALONG B	ALONG L
F1	Pad	1800	800	500	T13@100 C/C	T10@100 C/C	--	--
F2	Pad	1300	500	525	T10@100 C/C	T10@100 C/C	--	--

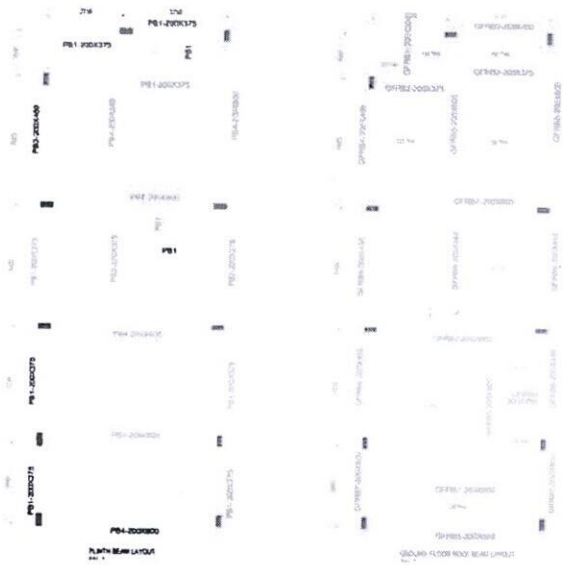
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For ALAMO XS REAL PRIVATE LIMITED

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Appendix A.3 - Structural Drawing Sheet 3







BEAM SCHEDULE (M20 : Fe550) (LEVEL: PLINTH)

BEAM NUMBERS	SIZE		BOTTOM REINFORCEMENT		TOP REINFORCEMENT			SHEAR STIRRUPS		
	B	D	THROUGHOUT	MID ADD'L	LEFT ADDL	THROUGHOUT	RIGHT ADDL	LEFT	MID SPAN	RIGHT
PB1	200	375	3-T12	-	1-T12	2-T12	1-T12	2L-T8@150 C/C	2L-T8@150 C/C	2L-T8@150 C/C
PB2	200	375	2-T12+1-T16	-	1-T16	2-T12	1-T16	2L-T8@150 C/C	2L-T8@150 C/C	2L-T8@150 C/C
PB3	200	450	2-T12+1-T16	-	1-T16	2-T12	2-T16	2L-T8@125 C/C	2L-T8@150 C/C	2L-T8@125 C/C
PB4	200	600	2-T16+1-T12	-	1-T12	2-T16	1-T12	2L-T8@125 C/C	2L-T8@150 C/C	2L-T8@100 C/C

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Appendix A.4 - Structural Drawing Sheet 4





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Appendix A.5 - Structural Drawing Sheet 5

BEAM SCHEDULE (M20 Fe550) (LEVEL: GROUND ROOF)

BEAM NUMBERS	SIZE		BOTTOM REINFORCEMENT		TOP REINFORCEMENT			SHEAR STIRRUPS		
	B	D	THROUGHOUT	MID ADD'L	LEFT ADD'L	THROUGHOUT	RIGHT ADD'L	LEFT	MID SPAN	RIGHT
GFRB1	200	300	3-T12	-	1-T12	2-T12	1-T12	2L-T8@125 C/C	2L-T8@150 C/C	2L-T8@125 C/C
GFRB2	200	375	2-T12+1-T16	-	1-T16	2-T12	1-T16	2L-T8@125 C/C	2L-T8@150 C/C	2L-T8@125 C/C
GFRB3	200	450	2-T12+1-T16	-	2-T16	2-T12	1-T16	2L-T8@100 C/C	2L-T8@150 C/C	2L-T8@125 C/C
GFRB4	200	450	2-T12+1-T16	-	1-T16	2-T12	2-T16	2L-T8@125 C/C	2L-T8@150 C/C	2L-T8@100 C/C
GFRB5	200	600	2-T16+1-T12	-	1-T12	2-T16	1-T12	2L-T8@100 C/C	2L-T8@150 C/C	2L-T8@100 C/C
GFRB6	200	450	2-T16+1-T12	-	-	2-T16	-	2L-T8@100 C/C	2L-T8@150 C/C	2L-T8@100 C/C
GFRB7	200	600	4-T16	-	2-T16	2-T16	2-T16	2L-T8@100 C/C	2L-T8@150 C/C	2L-T8@100 C/C

BEAM SCHEDULE (M25 : Fe550) (LEVEL: TERRACE ROOF)

BEAM NUMBERS	SIZE		BOTTOM REINFORCEMENT		TOP REINFORCEMENT			SHEAR STIRRUPS		
	B	D	THROUGHOUT	MID ADD'L	LEFT ADD'L	THROUGHOUT	RIGHT ADD'L	LEFT	MID SPAN	RIGHT
TEB1	200	300	3-T12	-	1-T12	2-T12	1-T12	2L-T8@125 C/C	2L-T8@150 C/C	2L-T8@125 C/C
TEB2	200	375	2-T12+1-T16	-	1-T16	2-T12	1-T16	2L-T8@125 C/C	2L-T8@150 C/C	2L-T8@125 C/C
TEB3	200	375	2-T12+1-T16	-	2-T16	2-T12	1-T16	2L-T8@100 C/C	2L-T8@150 C/C	2L-T8@125 C/C
TEB4	200	450	2-T12+1-T16	-	1-T16	2-T12	2-T16	2L-T8@125 C/C	2L-T8@150 C/C	2L-T8@100 C/C
TEB5	200	600	2-T16+1-T12	-	1-T12	2-T16	1-T12	2L-T8@100 C/C	2L-T8@150 C/C	2L-T8@100 C/C
TEB6	200	750	2-T25+2-T20	-	-	2-T16+2-T20	-	2L-T8@75 C/C	2L-T8@100 C/C	2L-T8@75 C/C
TEB7	200	450	2-T12+1-T16	-	1-T16	2-T12	1-T16	2L-T8@125 C/C	2L-T8@150 C/C	2L-T8@125 C/C

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For ALAMO XS REAL PRIVATE LIMITED

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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

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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.