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RE REGULATORY RECORD

# RERA Document

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DIGITALLY VERIFIED RECORD

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101, Basuvaraj Buildings,
Main Road, Thillainagar,
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✆ 0431 - 2741573
Cell : 94430 59910

Date : .....

**Structural Design for Foundation and Column for the Proposed Construction of Residential Apartment Building ( Affordable Housing ) after Demolishing the existing Building in T.S.No. 49/1, 49/2, Ward - AK , Block - 5 at Crawford colony main road, Crawford colony, K.Abishekapuram Village, Zone - IV, Trichirappalli corporation.**

The foundation and column shall be designed for the maximum span of 6m.

| | | |
|---|---|---|
| Number of floor | : | Stilt +5 Floor |
| Height of each floor | : | 3.00 m |
| Using concrete mix | : | M20 |
| RTS Bars | : | Fe 500 |

**LOAD:**

| | | |
|---|---|---|
| Live Load | : | 300 kg/m$^2$ |
| Dead Load | : | 250 kg/m$^2$ |
| Total load transfer to beam @ | : | 550 kg/m$^2$ |
| Clear Spacing of Beams | : | 3.5 m |
| Load transferred to beam /m | : | 3.5 x 1 x 550 = 1925 kg/m |
| Load transferred to Column / floor | : | 1925 x 6 = 11,550 / floor (or) 20000kg |
| Total load transferred to column | : | 20000 x 6 = 120,000 kg (or)120T |
| Self weight of column as 10% of load | | |
| Total load/ column | : | 132T |
| Assuming Column Area | : | A cm$^2$ |
| % of Longitudinal reinforcement | : | 4 % |

Using **Fe 500** steel and **M20** Concrete

| | |
|---|---|
| Pu | = 0.4 x 200 x Ac + 0.67 x fy x Ast |
| 1, 32,000 | = 0.4 x 200 x (Ac-0.04 Ac) + 0.67 x 5000 x 0.04 Ac |
| Ac | = 626 cm$^2$ |
| Required column Area | = 626 cm$^2$ |

**Hence provide column to the size of 23 cm x 45 cm**

Area of column 23 x 45 = 1035 cm$^2$ > 626 cm$^2$

Hence Safe.

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**Ast required** = 0.04 x 1035 = 41.4 $cm^2$

Using 25mm ϕ bars

Number of vertical required = 41.4/ 4.91 = **9 Nos**

**Hence provide 4 Numbers of 25 mm ϕ bars.+ 8 Numbers of 20 mm ϕ**

Area of steel provide (4 x 4.91 $cm^2$ ) +(8 x 3.19 $cm^2$ )

19.64 $cm^2$ + 25.52 $cm^2$ = 45.16

Total area of steel provided per column = 45.16$cm^2$

Hence Safe.

**Design of Lateral Reinforcement:**

Provide 8 mm ϕ RTS bar as lateral reinforcement

Spacing of reinforcement is not least of the following.

1. Least lateral dimension of column i.e . 23 cm.
2. 16 times the diameter of longitudinal Reinforcement 16x 2cm i.e. 32 cm.
3. 30 cm i.e. 30 cm.

**Hence provide lateral reinforcement @ 20 cm c/c.**

**Footing Design:**

Total load transferred by a column = 132 Tones.

Safe Bearing capacity of soil = 20 T/ $m^2$

(as per soil report)

Area of footing = 132 T/22 T = 6 $m^2$

**Hence provide footing size of 2.5 m x 2.5 m = 6.25** $m^2$

\- > 6.00 $m^2$

Hence Safe.

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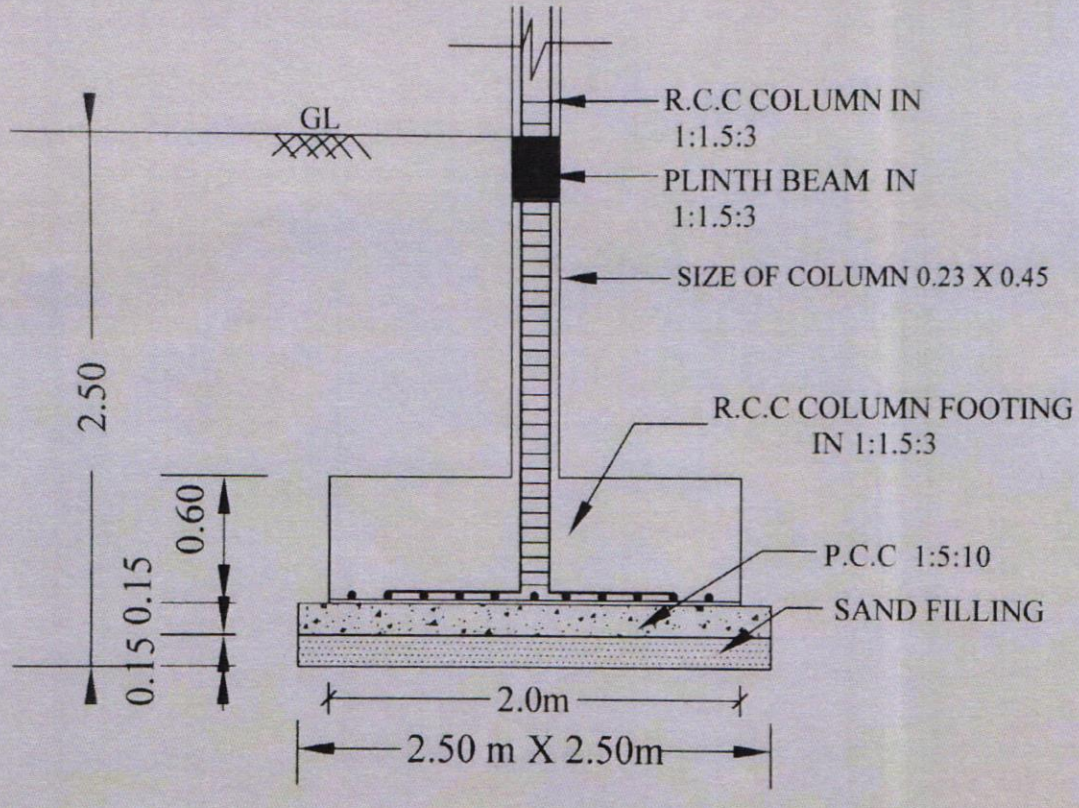
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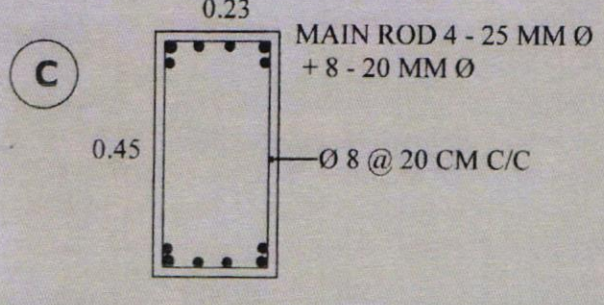
Date :

**COLUMN DESIGN FOR THE PROPOSED CONSTRUCTION OF RESIDENTIAL APARTMENT BUILDING ( AFFORDABLE HOUSING ) AFTER DEMOLISHING THE EXISTING BUILDING IN T.S.NO. 49/1, 49/2, WARD - AK , BLOCK - 5 AT CRAWFORD COLONY MAIN ROAD, CRAWFORD COLONY, K.ABISHEKAPURAM VILLAGE, ZONE - IV, TRICHIRAPPALLI CORPORATION.**




CROSS SECTION OF COLUMN FOOTING

NOT TO SCALE




CROSS SECTION OF COLUMN

ENGINEER.

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Date : 8.6.2026

## STABILITY CERTIFICATE
(To be furnished while filing application for registration of building)

1. The detailed engineering and structure design of the proposed building comprising of Stilt + 5 floors ( 20 dwelling inits ) **at T.S.No. 49/1, 49/2, Ward - AK , Block - 5 at Crawford Colony main road, Crawford colony, K.Abishekapuram Village, Zone - IV, Trichirappalli Corporation.** has been done by me/us based on the report of geo technical investigation (soil test) done by Time institute of Material Testing Report No. TIME/17/SOIL TEST/ March 2025 Dated March 2, 2025 and considering the functional requirement of the building.

2. It is certified that among other factors, the proposed building has been designed to resist earthquake. I/We have checked various parameters and found that the proposed building would be safe.

3. I/We further certify that:

(i) The minimum grade of concrete is M 20

(ii) The design and analysis has been done using the code of practice for plain and reinforced concrete as per IS 456, design loads as per IS Codes No. 456 and Design of earth quake resistant structure as per IS Code No 456

4. The building will be safe and sound when used for the purpose for which it is designed.

Stamp and Signature

Encl.:Structural Design Calculation

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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

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# 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.