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S.ARUN KUMAR, M.E.,(Struct)
9,9-1,Lakshmi Garden,
Sankara College Road,
Saravanampatti,
Coimbatore-641 035.
Mobile : 979 000 6296.

DESIGN BASIS REPORT

ON

TIARA APPARTMENT

S.ARUN KUMAR, M.E.,(Struct)
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TABLE OF CONTENTS

S.NO	TITLE	PAGENO.
1	**PREAMBLE**	03
2	**MODEL & ANALYSIS**	03
3	**LIST OF CODES USED**	03
4	**LOADING PARAMETERS** **Gravity Loads.** Dead load. Live load	04
5	**LOAD COMBINATIONS**	07
6	**STAAD IMAGES**	08
	1. Geometry 2. Render image of structure 3. Dead load of the Structure 4. Floor load of the Structure	09 09 10 10
9	**CONCLUSION**	32

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1. PREAMBLE

TABLE 1. GENERAL INFORMATION ABOUT THE STRUCTURE

1.	NATURE OF BUILDING	Residential Apartment	
2.	TYPE OF STRUCTURE	Framed	
3.	TOTAL NO. OF FLOORS	Stilt+5 Floors	
4.	PLINTH LEVEL	At 3 m	
5.	NUMBER OF FLOORS ABOVE G.L WITH HEIGHT	Ground Floor = 3.04 m	
		Typical Floors = 3.04 m	
		Terrace Floor	Up to OHT Top = 3.42 m
6.	TOTAL HEIGHT OF THE BUILDING	19.05 m	

2. MODEL AND ANALYSIS

The Model of the structure is created using STAAD.Pro V8i and the Structural analysis is carried out under the following considerations.

2.1 Material Used

Concrete = M25 (For All Concrete Structural Members)
Rebar = HYSD500 (For Structural Members)

3. LIST OF CODES USED

1. IS 456 – 2000 - Plain and reinforced concrete- code of practice
2. IS 875 – (Part –I) -1987 Code of practice for design loads (other than earthquake) for buildings and structures - Dead loads
3. IS 875 – (Part- II) -1987 - Code of practice for design loads (other than earthquake) for buildings and structures. - Imposed loads.

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4. LOADING PARAMETERS

i. Self-Weight is default in Staad.pro and it is considered as dead load.
ii. Apart from self-weight, all other loads are considered are as follows.

TABLE 2. GRAVITY LOADS

Floor	Load Type		Load	Reference
Typical floors	**Super Dead Load**	Brick Wall Load (9")	12 kN/m	$H_w * t_w * \gamma_b * 0.85$ H_w, Height of Wall = 3.04 m t_w Thickness of Wall = 0.23 m γ_b, Unit Weight of Brick = 20kN/m^3 0.85-% Deduction For Openings
		Brick Wall Load (4.5")	6 kN/m	$H_w * t_w * \gamma_b * 0.85$ H_w, Height of Wall = 3.04 m t_w Thickness of Wall = 0.115 m γ_b, Unit Weight of Brick = 20kN/m^3 0.85-% Deduction For Openings
		Slab Load (5" THK)	4.625 kN/m^2	$T_s * \gamma_{slab} + 1.5$ F.F T_s, Thickness of Slab = .125m γ_{slab}, Unit Weight of Slab = 25kN/m^3 F.F-Floor Finish

		Sunken Filling Load (9" THK)	4.05 kN/m^2	T_s, Thickness of Fill = 0.23 γ_{slab}, Unit Weight of Brick Bats = 18kN/m^3
	Live Load	Floor Load	2 kN/m^2	Live Load For Floors.
Terrace Floors	**Super Dead Load**	Parapet Wall Load (9")	4.6 kN/m	H_w * t_w * γ_b* 0.85 H_w, Height of Wall = 1 m t_w Thickness of Wall = 0.23 m γ_b, Unit Weight of Brick = 20kN/m^3
		Slab Load (5" THK)	4.625 kN/m^2	T_s * γ_{slab} +1.5 F.F T_s, Thickness of Slab = .125m γ_{slab}, Unit Weight of Slab = 25kN/m^3 F.F-Floor Finish
	Live Load	Floor Load	1.5 kN/m^2	Live Load Reduce For Terrace Floor.
Over Head Tank	**Super Dead Load**	RC Wall Load	10.92 kN/m^2	H_w * t_w * γ_c H_w, Height of Wall =1.90 m t_w, Thickness of Wall = 0.23 m γ_c, Unit Weight of Concrete = 25KN/m^3

		OHT Top Slab	4.625 kN/m^2	T_s * γ_{slab} +1.5 F.F T_s, Thickness of Slab = .125m γ_{slab} , Unit Weight of Slab = 25kN/m^3 F.F-Floor Finish
		OHT Bottom Slab	5.25 kN/m^2	T_s * γ_{slab} +1.5 F.F T_s, Thickness of Slab = .15m γ_{slab} , Unit Weight of Slab = 25kN/m^3 F.F-Floor Finish
	Live Load	Floor Load (oht top)	1.5 kN/m^2	
		Water Pressure	18.23 kN/m^2	

5. LOAD COMBINATIONS

The load combinations producing the most critical conditions on the frames are taken into account. The load combinations indicated in IS 875:1987 (Part 5) are adopted for the design of the framed structure. The load combinations with appropriate load factor a given below.

1. D.L + L.L
2. 1.5D.L + 1.5 L.L

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6. STAAD IMAGES

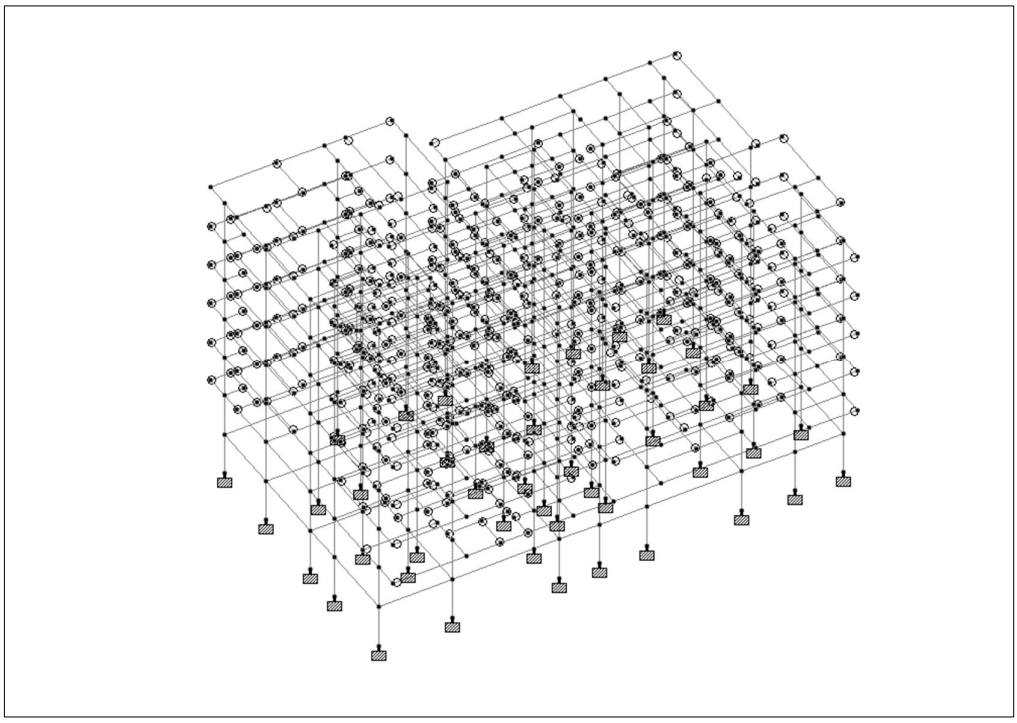


Fig1: Geomentry

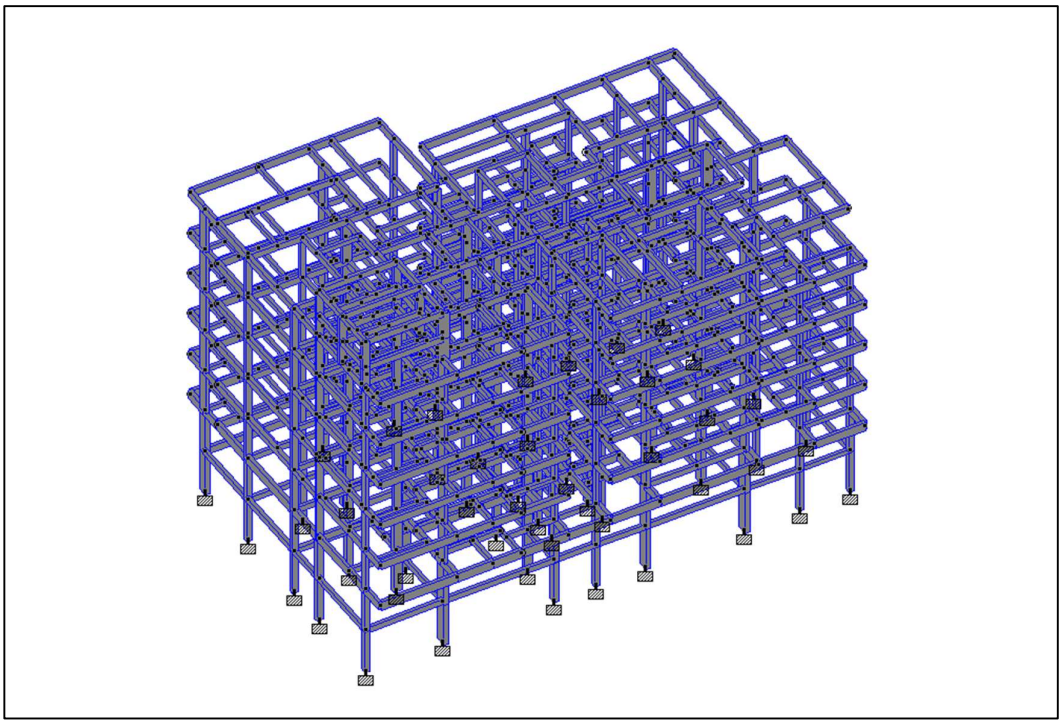
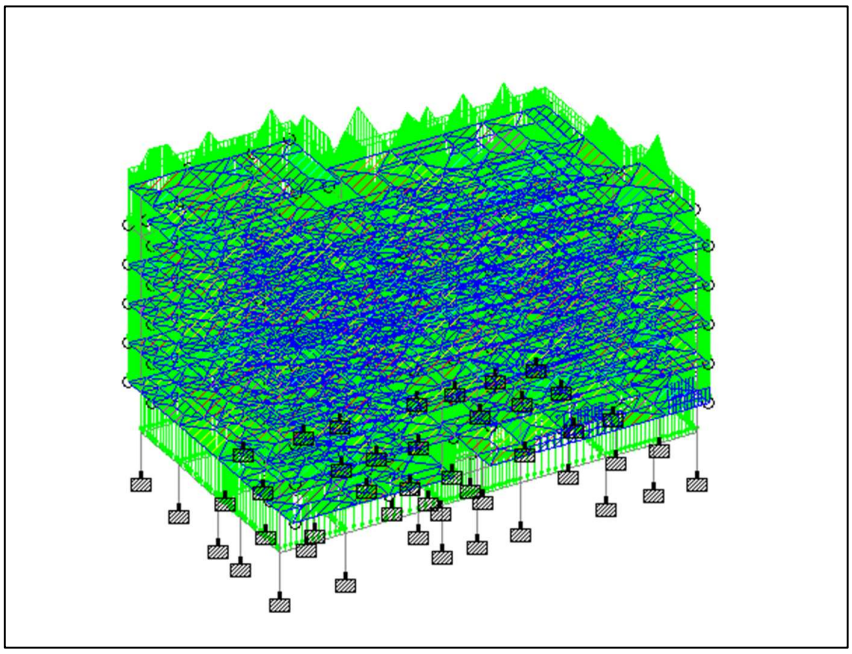


Fig2: Render image of Structure

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Fig3: Dead Load of Structure



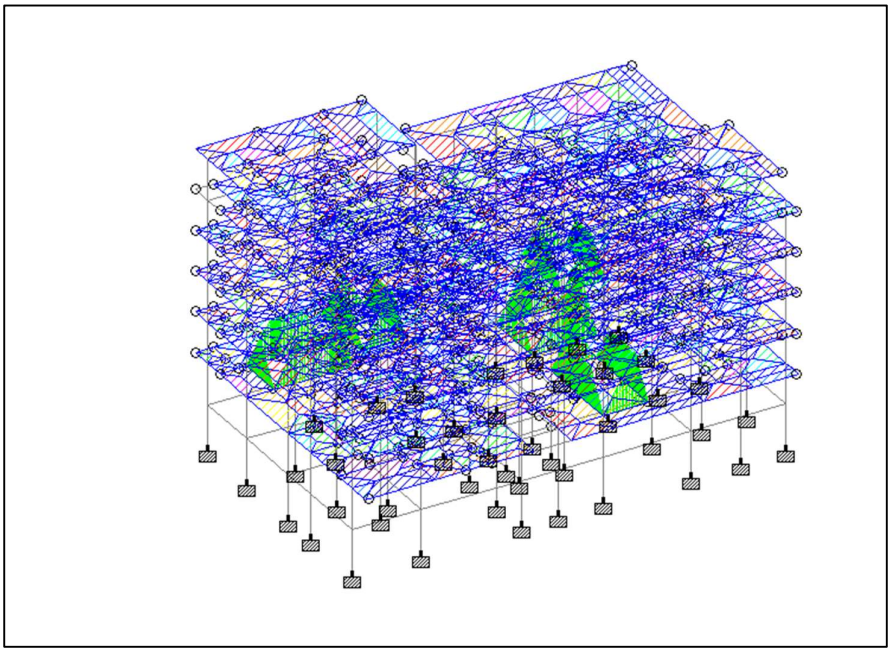


Fig4: Floor Load in the Structure



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Property Documentation & Workflow Tools

Forms & Templates, Document Generator, Document Translation, Dictionary

Vastu & Property Management Tools

Home Vastu Shastra, Plot Vastu Shastra, Property Management

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