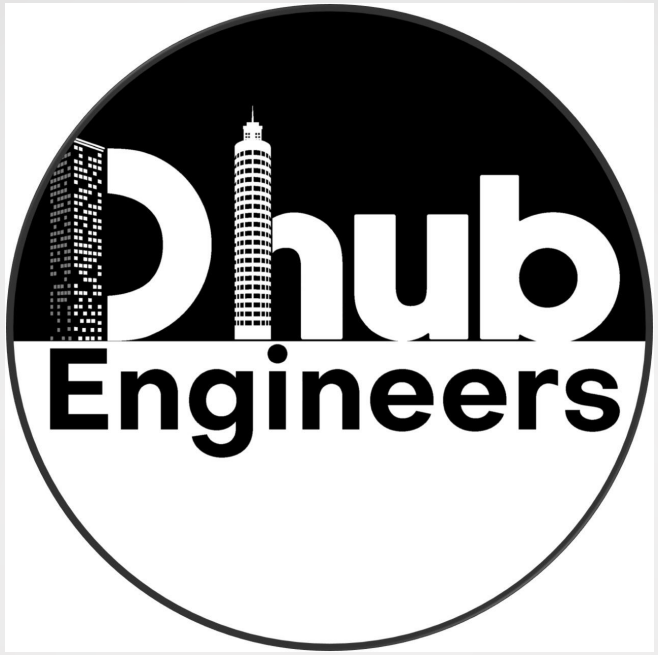


COMPANY PROFILE

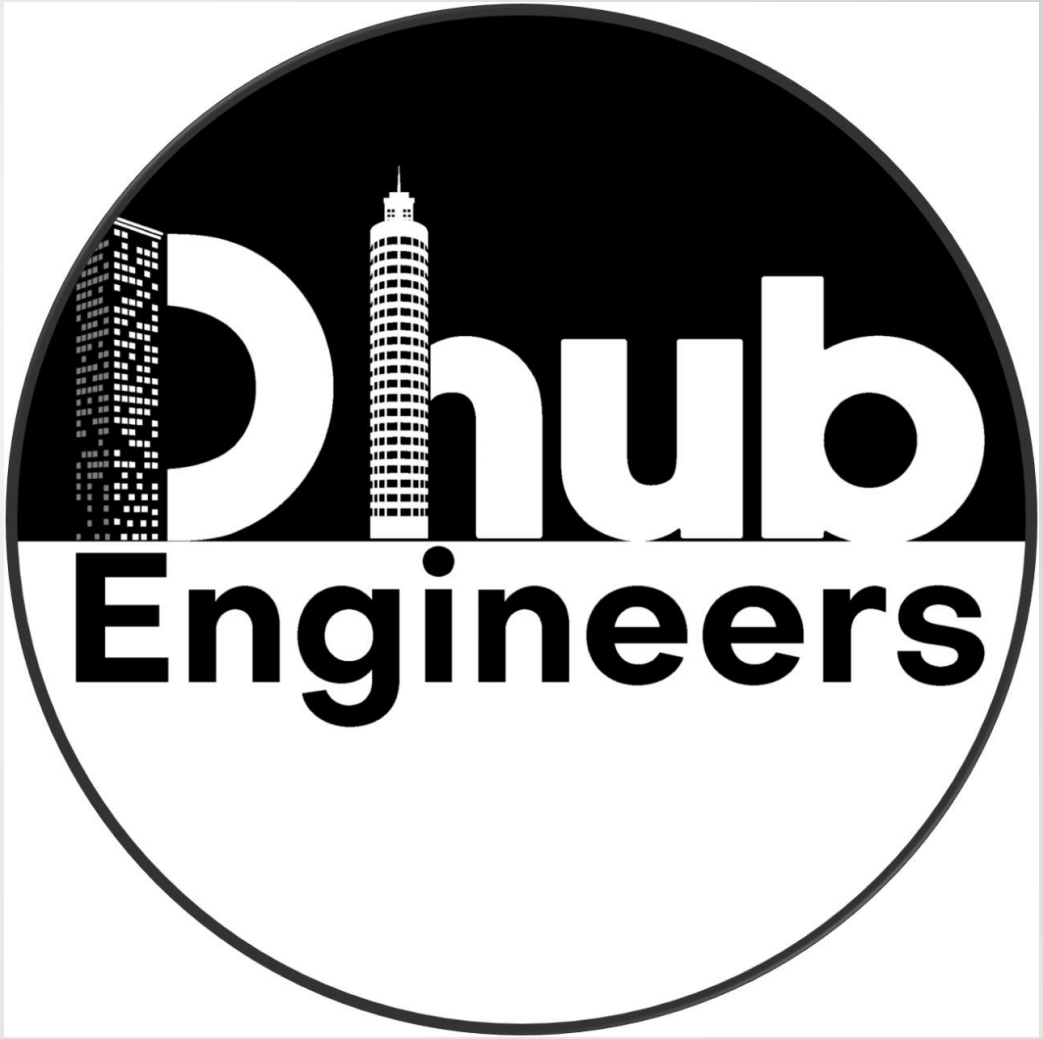
FLOW OF PRESENTATION

i. Consultant Team
ii. Key experts
iii. Projects
iv. Process and Standards
v. Design Principles & Methodology

CONSULTANTS TEAM

Structural Engineer

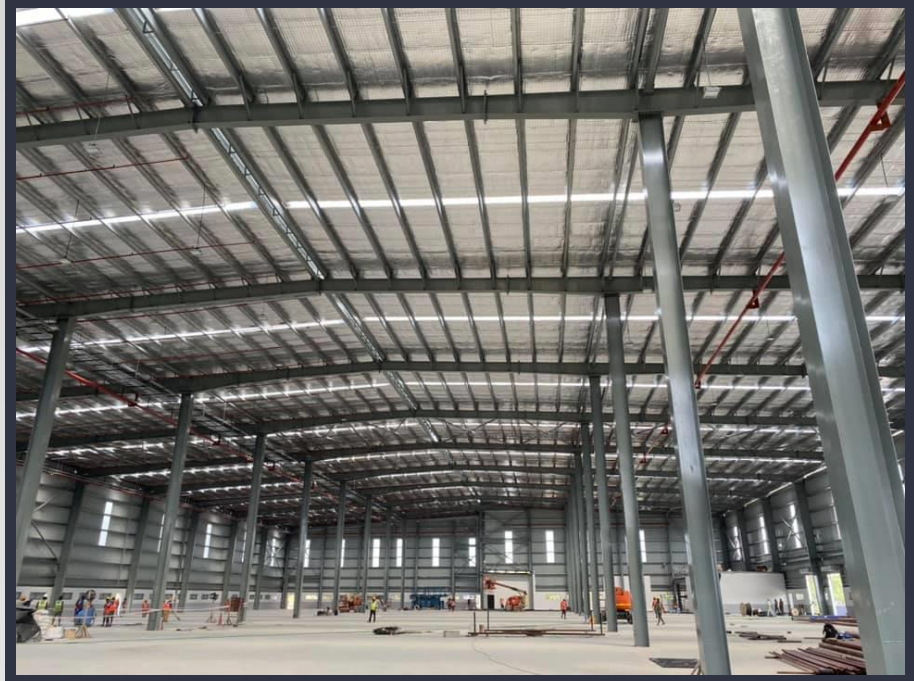
V. Gokul	Designed several projects including Cement plants, Institutional and commercial buildings, exhibition centres, Storage sheds, warehouses & PEB structures
Mouli Prashanth	Designed several projects including RC structures like Industrial, Institutional and Commercial Buildings, Low to High Rise Residential Buildings
Vishal Karthick	Designed several projects including Pre & Post Tensioned Structures in both Residential & Commercial Buildings
Dr. Jaison Selvaraj	Design and Execution of several type of structures including Industrial, Commercial and Institutional structures. Also Expertise in Project Management and consulting Valuation

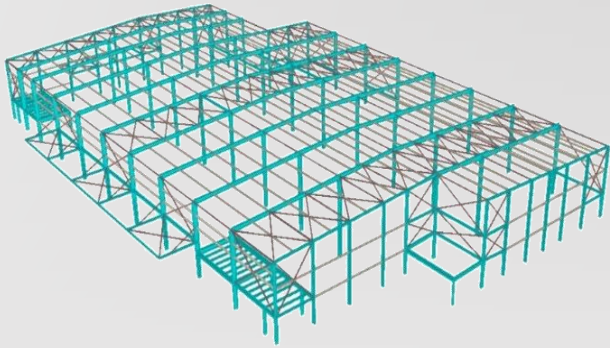


PEB WAREHOUSE - PROJECTS

FLYJAC Logistics, Oragadam

- Span 69 m x 116 m x 14.6 m
- Designed as per ASCE Standards



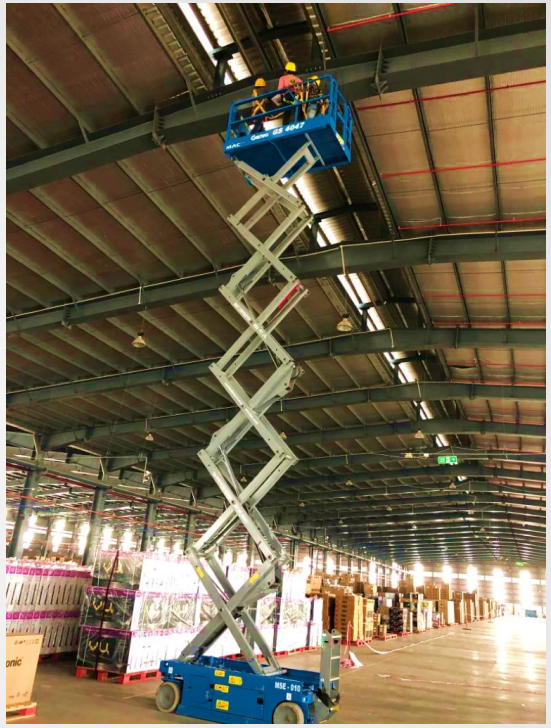


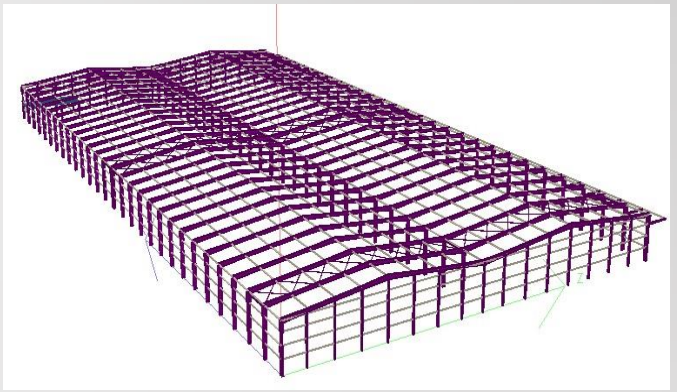
NCR – Mahindra city world

- Span 93.2 m x 85.2 m

Flipkart Warehouse, Redhills

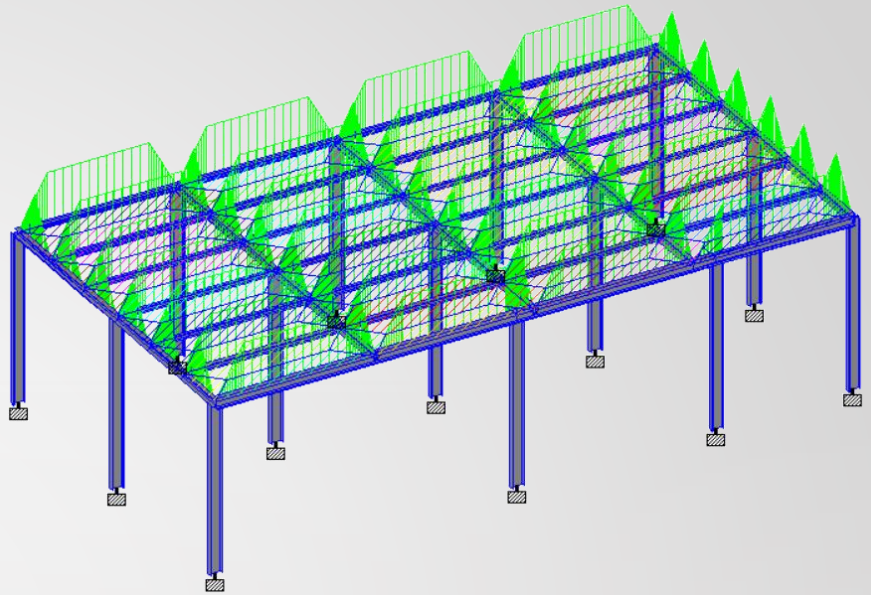
- Span 99 m x 193.3 m
- Structural assessment & Strengthening

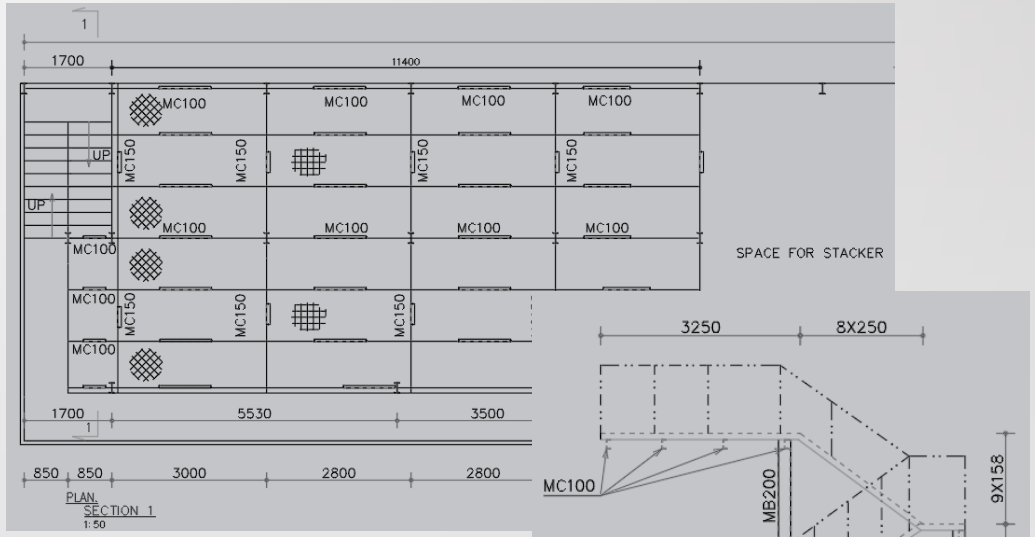




Integrated Air Cargo Handling Complex, Chennai Airport

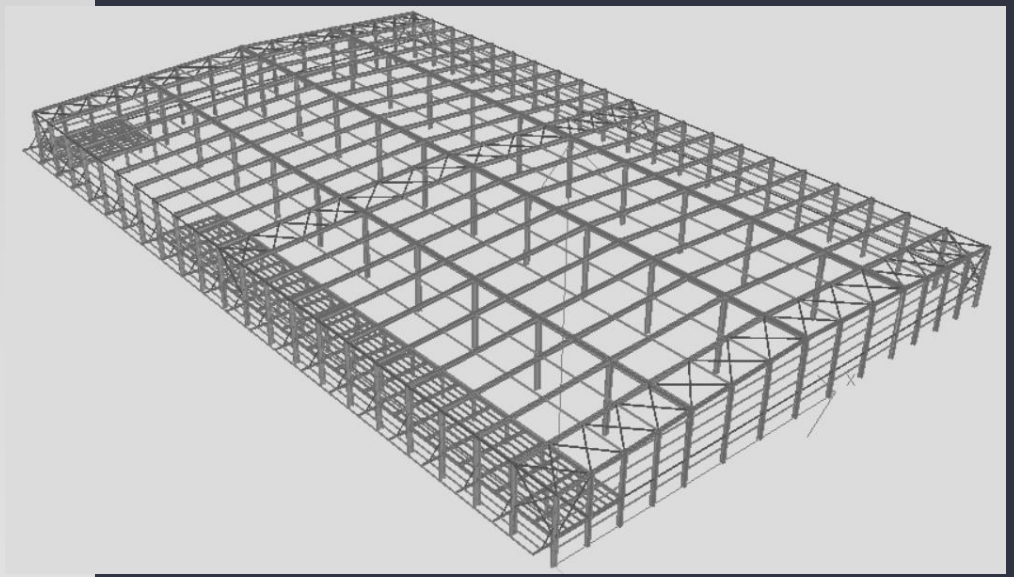
- Cargo Handling Platform 36m x 6m
- Built in an Operating Air cargo handling structure

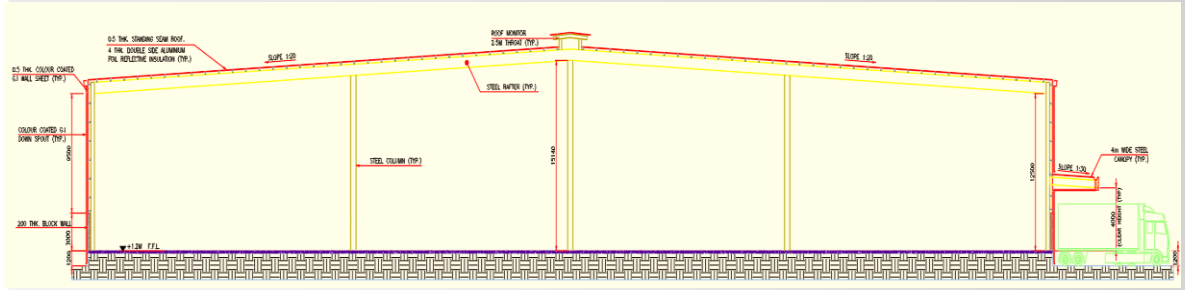


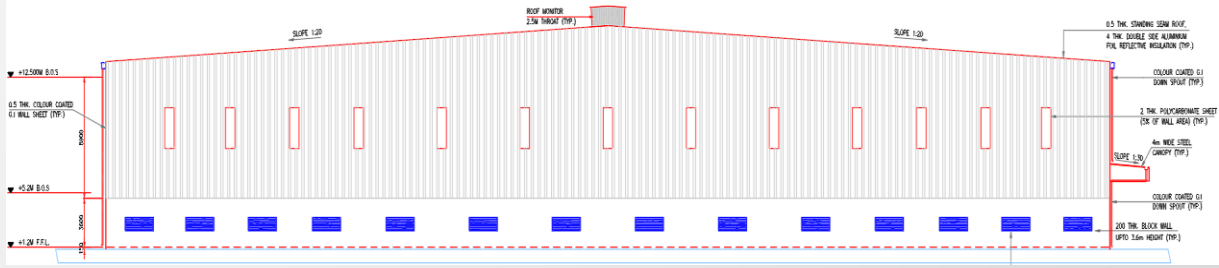


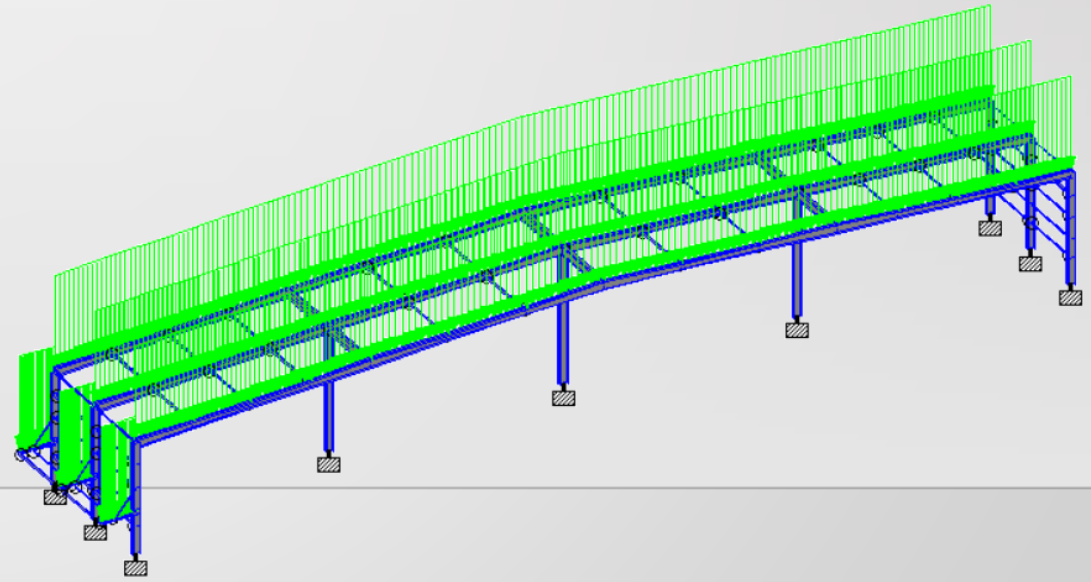
BT Warehouse

- Span 106 m x 169 m x 15.1 m
- 2 Nos of Mezzanine Platforms.



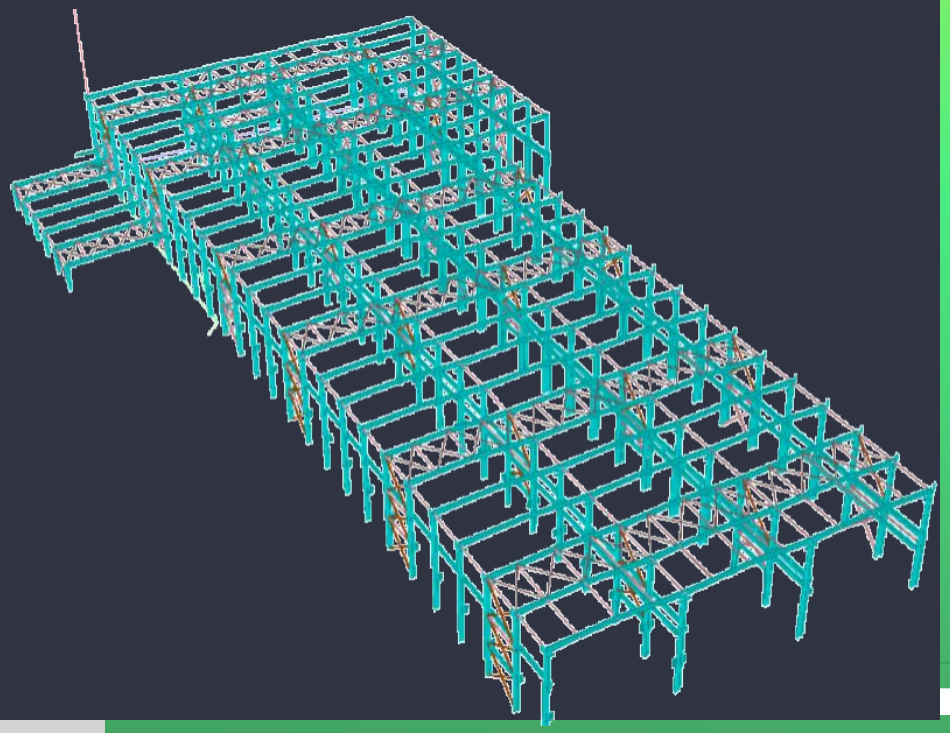


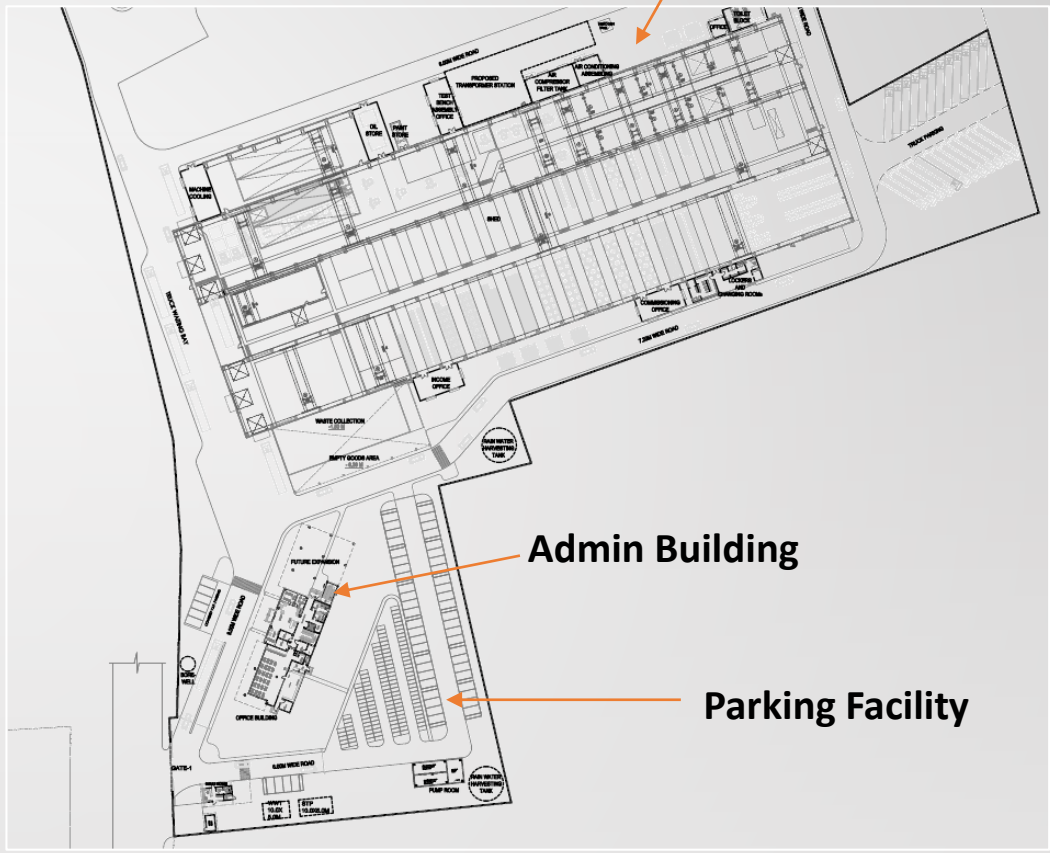




Eickhoff – Industrial Warehouse

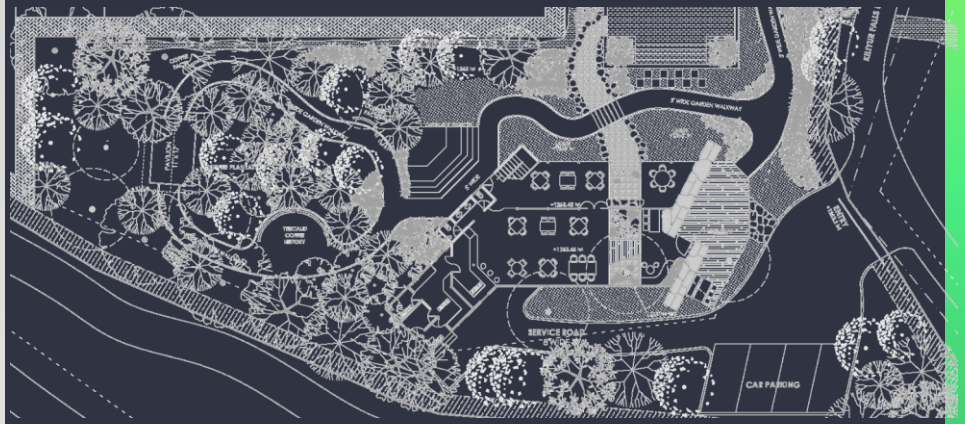
- Integrated Foundations for Warehouse & Supporting Ancillary Structures.
- 194 x 65 x 19m Large Industrial Facility
- Cranes of capacity 12t, 15t, 20t, 60t & 100t for Material Handling

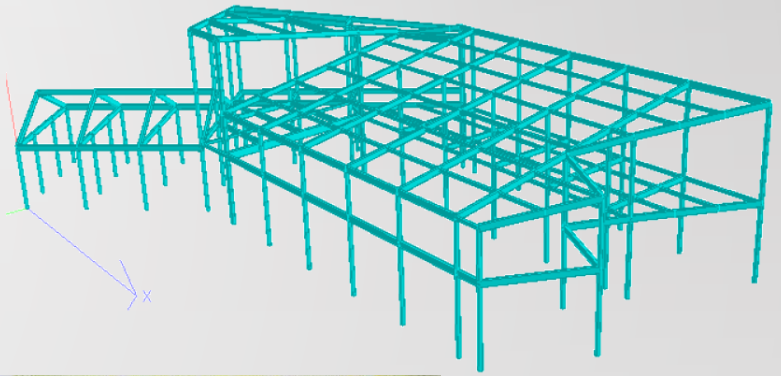




Coffee Museum

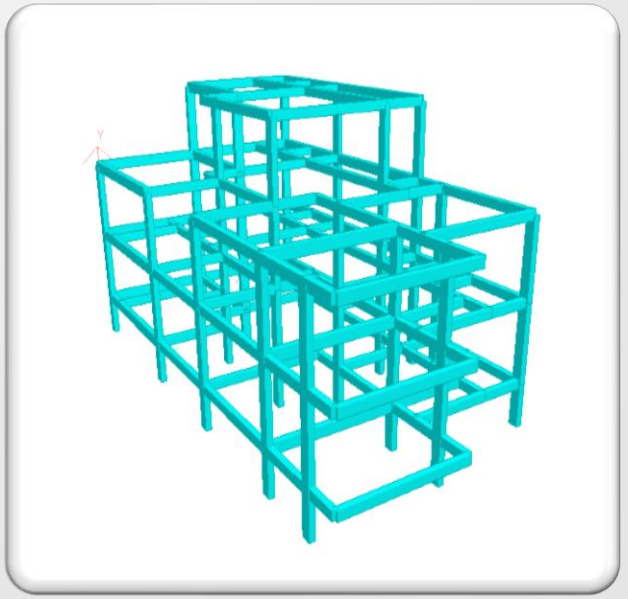
- Steel & Glass Building
- Green building resort in the midst of coffee Museum greenery

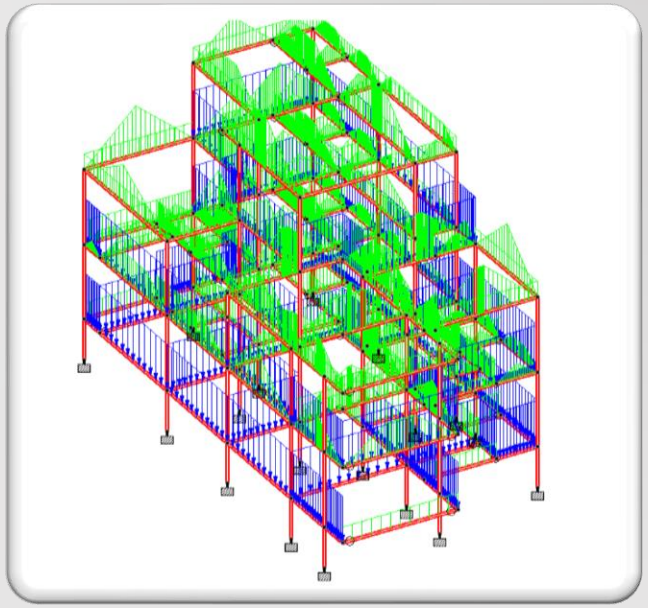




Mr Vijay Ananth Residence - Coimbatore

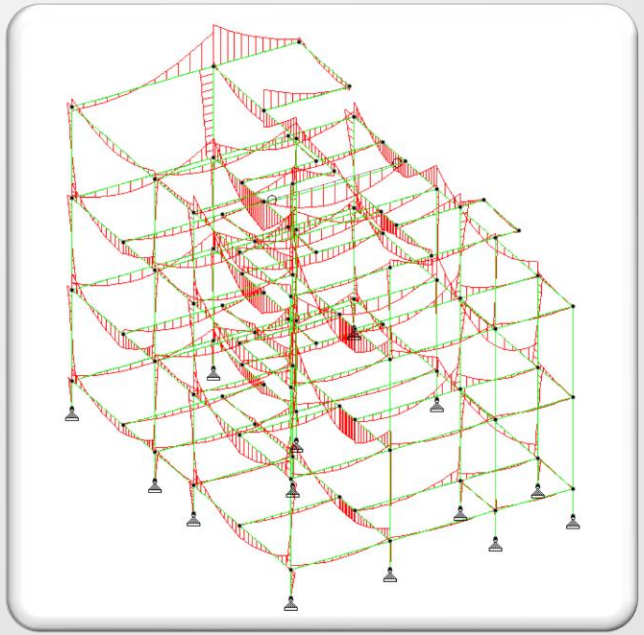
- RCC Framed Structure
- Associated with JSW Homes and completed within Timeline
- Overall Steel Coefficient completed within 2.75 kg /sft

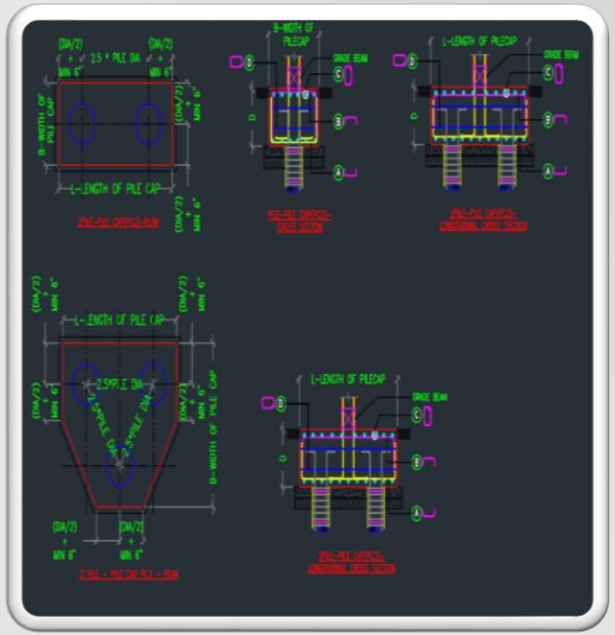




Mr Sai Krishna Residence - Coimbatore

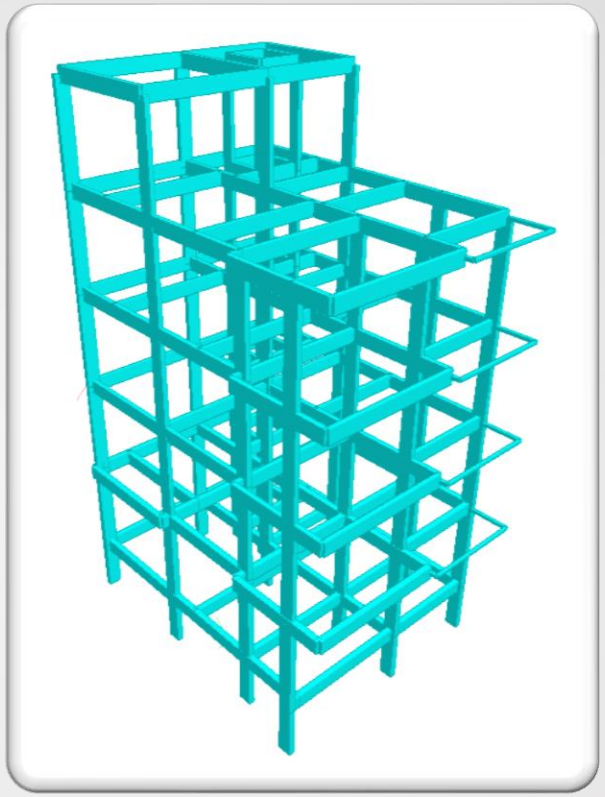
- RCC Framed Structure in Coimbatore
- Associated with JSW Homes and completed within Timeline
- Executed the structure in marshy land and foundation was designed for pile

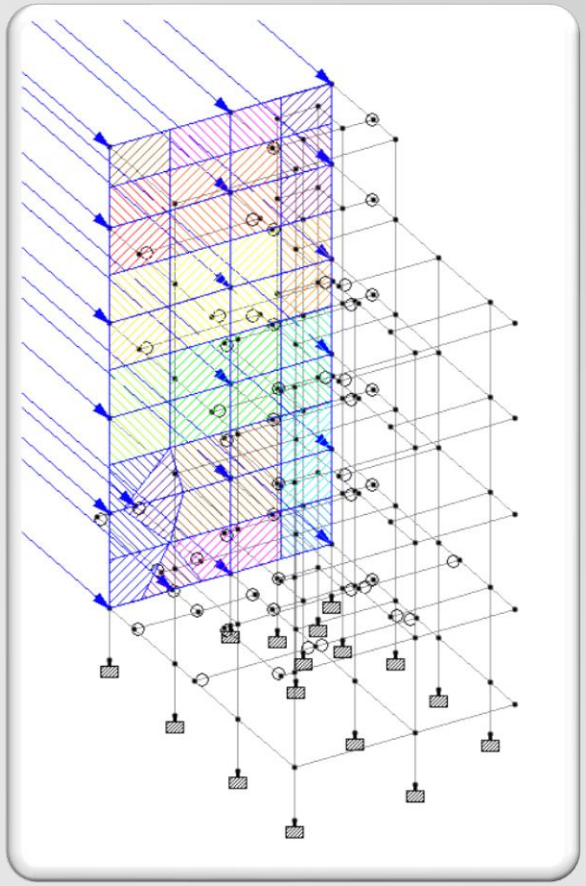




Mr Sridhar Villa - Bangalore

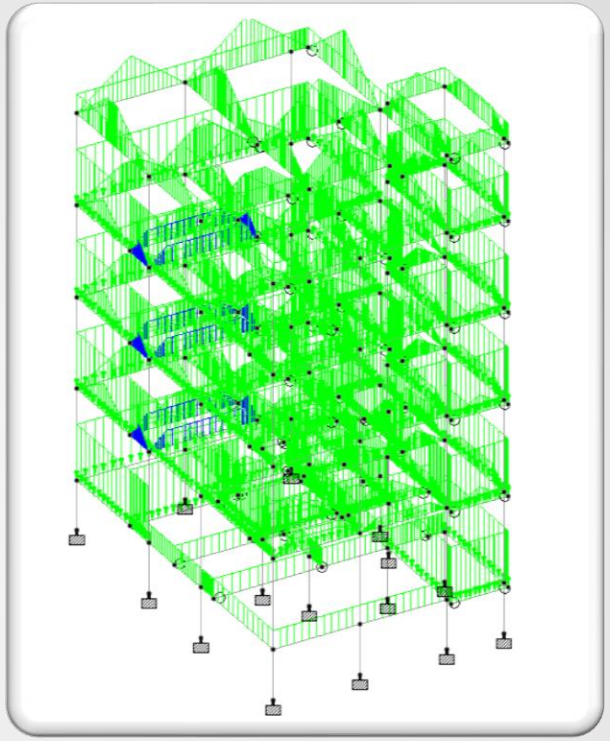
- S+4 RCC Framed Structure
- Designed the structure for Seismic and wind parameters
- Overall Steel Coefficient completed within 3.75 kg /sft

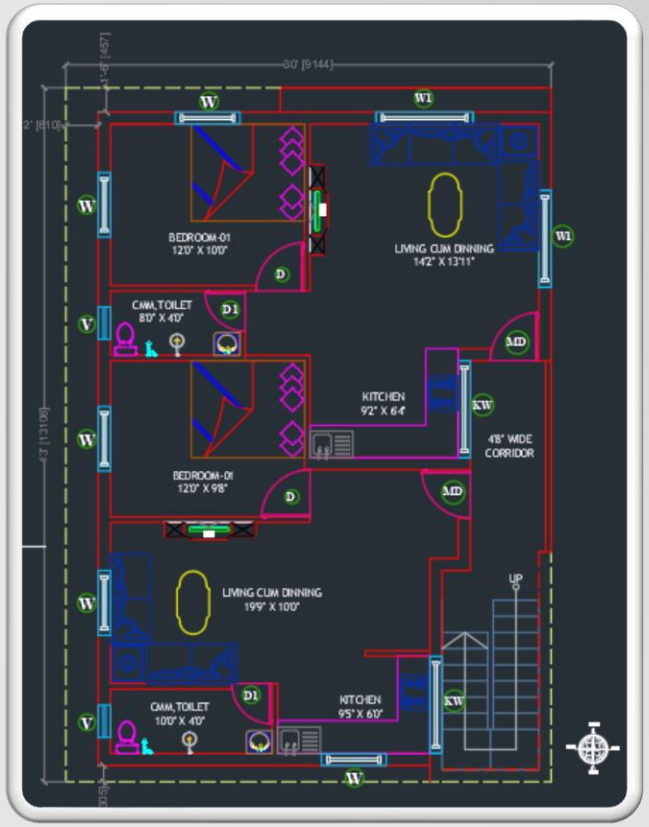




Mr Ravi Apartments - Bangalore

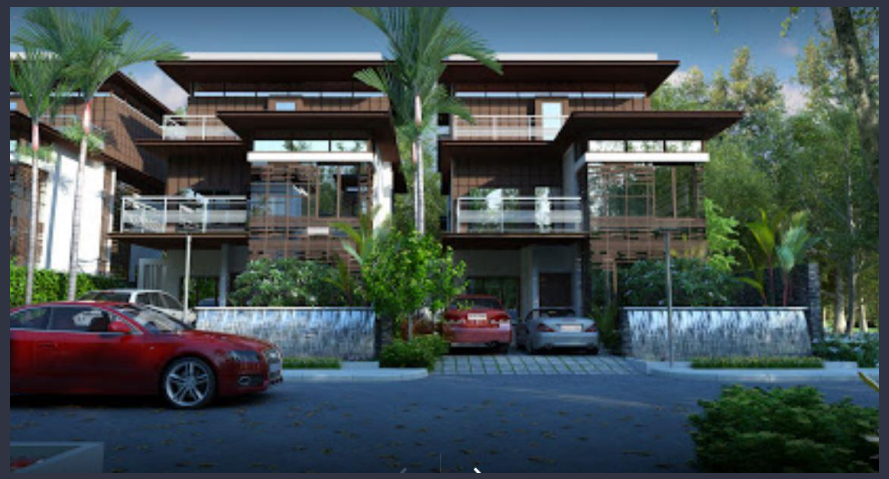
- G+4 RCC Framed Structure
- Designed the structure for Seismic and wind parameters
- Overall Steel Coefficient completed within 3.5 kg /sft





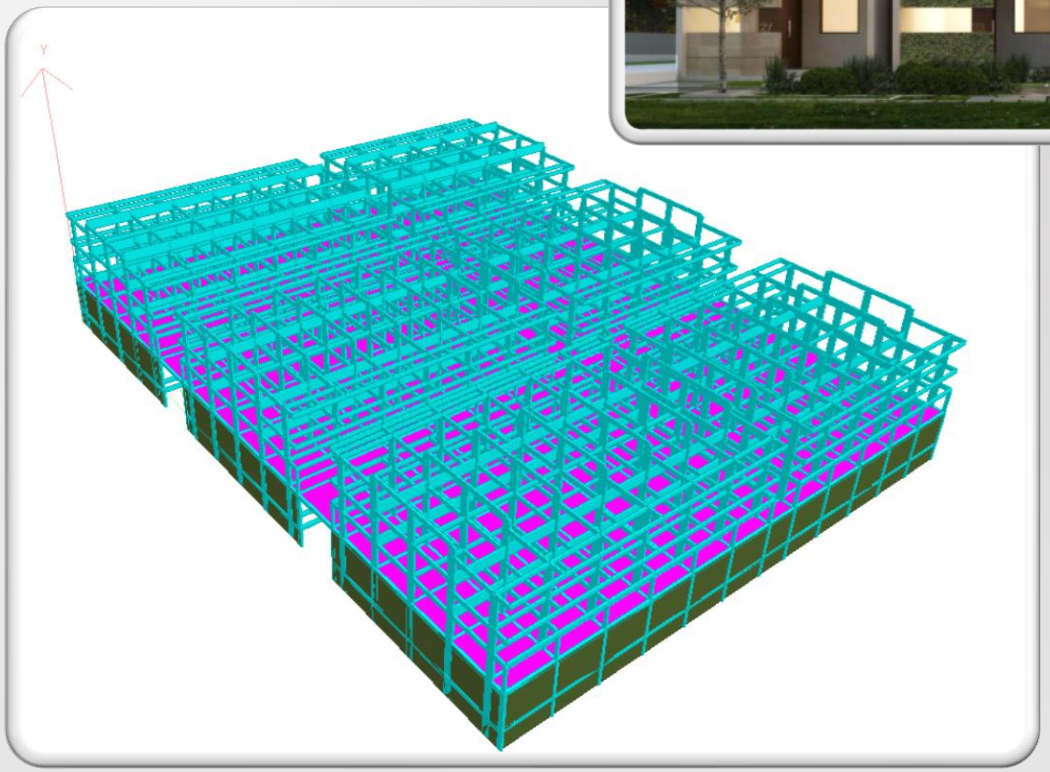
Villa – Hennur Road, Bangalore

- G+2 RCC Framed Structure - Bangalore
- Designed a Layout of total 50 residential villas with various modified units

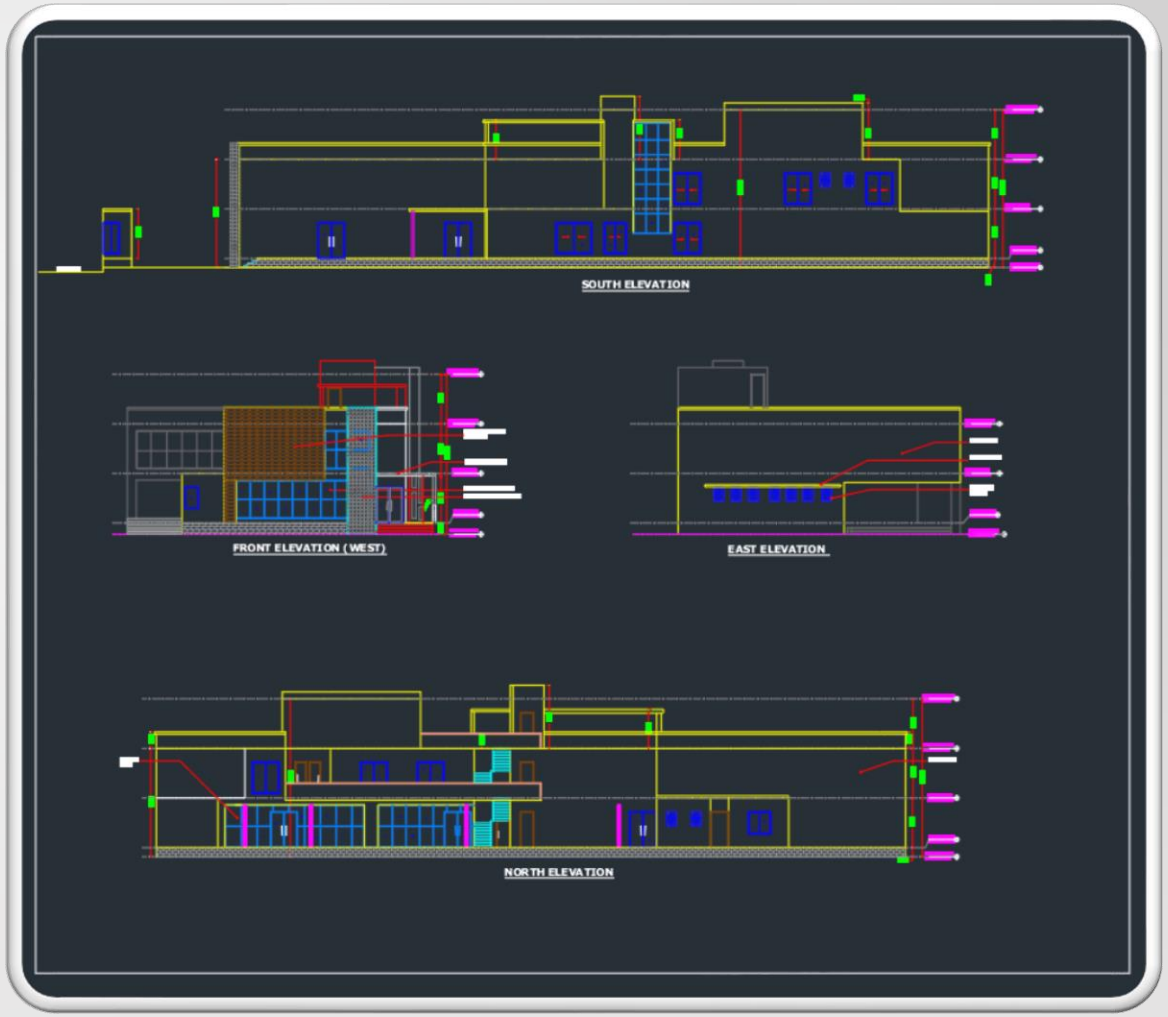


Garden Apartment - Bangalore

- G+2 RCC Framed Structure
- Designed a Layout of total 75 residential villas with various modified units
- Structure was designed for split levels with a common podium with clubhouse

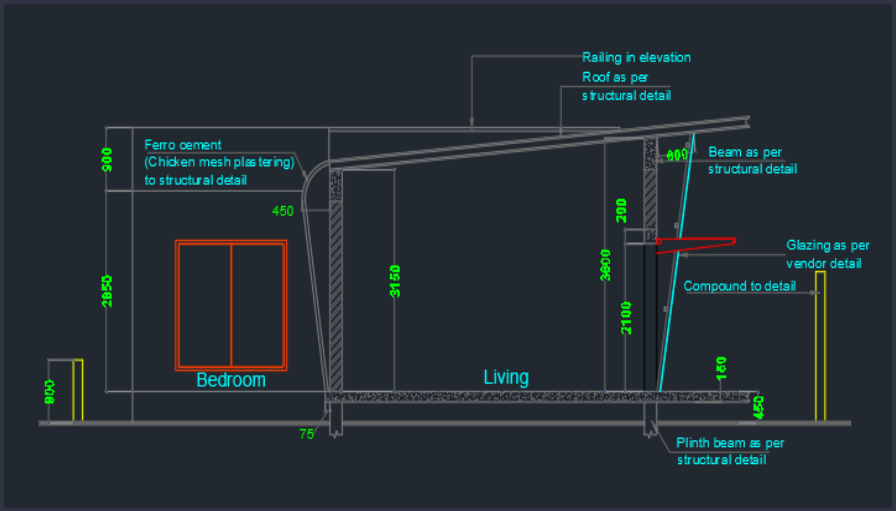


- G+3 RCC / Steel Structure - Chikkaballapura, Bangalore
- Structure was designed as composite structure of around 10000 sft

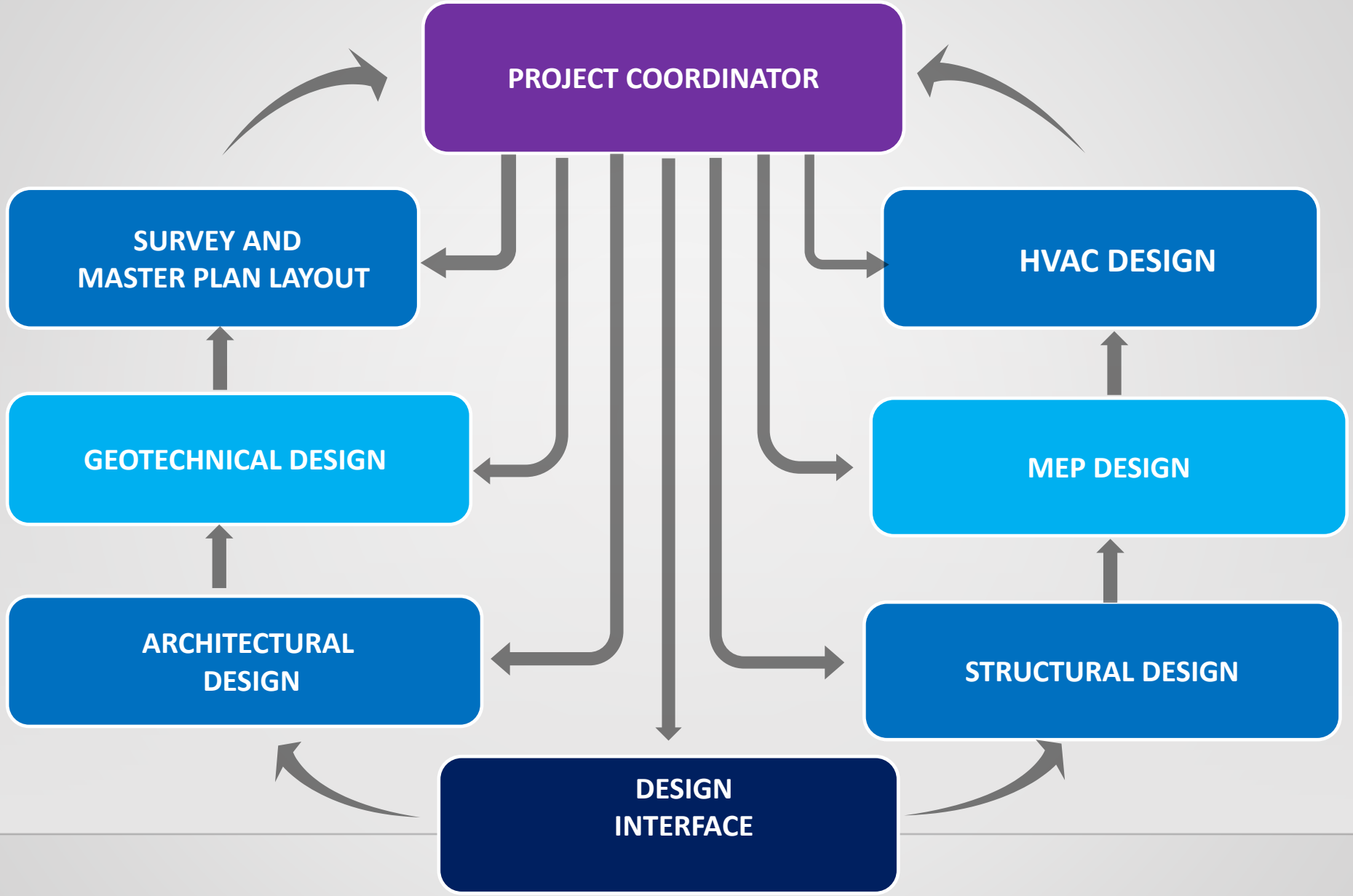


- Studio Villa – Nandi Hills
- Structure was designed for single storey

  Compact Holiday Villa



DESIGN TEAM-MULTI DISCIPLINE



STRUCTURAL DESIGNS AND DRAWINGS

DESIGN APPROACH

- Based on the architectural drawings of the proposed infrastructure, the design process will be followed by three dimensional modelling of the structure in STAAD.Pro Software. The analysis will be carried out for the modelled structures and the design of all the structural elements will be done according to Indian Standards. The analysis and design output results will be carefully cross verified before transforming those results to drawing form.
- Sensible selection of structural materials depending on specific need of the project, local conditions, material availability and local practices
- Finalization of structural system's configuration and member dimensions such that material strength utilization is optimized .
- To strictly follow design standards' provisions while designing and detailing the structure to achieve easily executable details as well as safe and durable structures.
- To prepare structural drawings covering every minute detail. Drawings with such high level of detailing help to minimize ambiguity during work execution and help to expedite the work, resulting in indirect economy.

STRUCTURAL DESIGNS AND DRAWINGS

DESIGN SOFTWARE

- STAAD.Pro is a structural analysis and design software application that performs various forms of analysis from traditional static analysis to more recent methods like p-delta, non-linear, pushover analysis, etc.

DRAFTING PROCESS

- Detailed structural drawings for the proposed infrastructure will be drafted by using AutoCAD software. The detail drawings will be released as good for construction drawings after correctness and quality checks.

DESIGN BASIS LOADS

- The load calculations are carried out in accordance with Indian Standard codes.
- The dead and live loads are calculated according to IS 875-Part1 and IS 875-Part 2 respectively.
- The wind loads are calculated as equivalent joint loads conforming to IS 875-Part 3 by considering various factors affecting the internal and external wind pressures.
- The seismic loads and factors such as Zone factor, Importance factor, Response reduction factor, etc., are calculated from IS 1893.
- The miscellaneous loads such as equipment loads, static and dynamic are calculated from the type of equipment and machineries.

STATIC CHECKS

This check will tell us whether all the applied loading flowed through the model into the supports. A satisfactory result would require that the applied loading be in equilibrium with the support reactions. To check the model and analysis and design results manually so as to make sure that:

1. The input data while modeling the structures is correct.

2. The assumed and the input loads on the structure are in par with the actual

condition of the structure.

3. The support condition considered are as per site condition.

4. A countercheck to verify that $\Sigma H=0$; $\Sigma V=0$ and $\Sigma M=0$.

DESIGN OF STRUCTURAL ELEMENTS

- The various structural members such are footing, column, beam, slab, etc., are designed in accordance with standard codes. All the governing factors such as Material grades, Forces and moments from analysis results are considered with utter priority in order to achieve safe and economical design.
- In each stage the loads, analysis, design and drawing will be checked before release.

DESIGN PROCESS -CHANGES

CLIENT

DESIGN TEAM

Revised Issue of Good for Construction Drawings

Site Changes

Vendor input Changes

Re-design

OVERALL INTERFACE

DESIGN CHANGES

- Changes may happen in design and drawings as per varying site conditions, client wish to modify certain parts, changes due to mechanical drawings or supplier drawings.
- The Process is:

I. Revision of Load & Structural Analysis

II. Revision of Structural Design

III. Revision and Approval of Drawing

IV. Re- Issue of Good for Construction (GFC) Drawing

STRUCTURAL SYSTEM & DESIGN PARAMETERS

REFERENCE CODES & STANDARDS

LOADINGS:

- IS:875 (Part-1) – 1987: Code of practice for design loads (other than earthquake) for buildings and structures - Dead loads.
- IS:875 (Part-2) – 1987: Code of practice for design loads (other than earthquake) for buildings and structures - Imposed loads
- IS:875 (Part-3) – 2015: Code of practice for design loads (other than earthquake) for buildings and structures - Wind loads.
- IS:1893 (2002): Criteria for Earthquake Resistant Design of Structures

REFERENCE CODES & STANDARDS

STRUCTURAL STEEL:

- IS:800 – 2007: Code of practice for general construction in steel.
- MBMA: Metal Building Manufacturers Association.
- IS:2062 – 1999: Steel for General Structural Purposes – Specification

CONCRETE:

- IS:456 – 2000: Plain and Reinforced concrete – Code of Practice
- IS:10262 – 2009: Guidelines for concrete mix proportioning

LOADINGS

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- The wind loads are calculated as equivalent joint loads conforming to IS 875-Part 3 by considering various factors affecting the internal and external wind pressures.
- The seismic loads and factors such as Zone factor, Importance factor, Response reduction factor, etc., are calculated from IS 1893.
- The types of load cases considered for this structure are as follows

  a) DEAD LOADS (DL)

  b) LIVE LOADS (LL)

  c) WIND LOADS (WL)/ SEISMIC LOADS (SL)

DESIGN APPROACH

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THANK YOU