ABOUT US

GRUNE is an Engineering consulting firm specializing in a broad range of below technical services and innovative solutions for sustainable, energy efficient systems, and complex projects nationwide. We believe in giving innovative solutions based on strategy that has a point.

- Capex Savings along with Opex Savings is not a myth any more
- Our design will aim to achieve targeted savings under both Capex & Opex

USP of our design

- Continuously strive for excellence and innovation through creative engineering solutions to minimize the Capex + Opex cost
- Dedicated quality service with a high level of personal detail and will strive to offer this to all our clients.
- Commitment to quality design which we achieve by working closely with clients, listening to their needs and meeting the project budgetary parameters.

LEADERSHIP TEAM

MR. PRADEEP NADKARNY

A professional with over 47 years of experience in wide range of specializations and building sectors. He passed out BE Mechanical with specialization in HVAC. He has worked with renowned HVAC Company for 23 years in various Departments such as Engineering Sales, Design, Construction, Branch Operation and also in Service division. His exposure in representing the world's largest consultancy has been in building up MEP Consultancy in western region with specialized projects as under including High Rise Buildings.

MR. TM MATHEW

A professional having more than 32 years of experience in the areas of management, supervision, leadership, decision making, technical direction, mentoring, analysis and design of various major Building Engineering Projects in India. He has extensive experience in Building Management System consisting of Building Automation, Fire Alarm and Security system for Residential, Commercial, Hotel and Hospital Projects. He has designed and developed design procedures and specifications and providing technical guidance for Building Management Systems in India.

MR. SOORAJ NAIR

A Professional Having more than 20+ years of experience in the engineering of MEP Designs/Execution as diverse as Hi-rise buildings, 5-star hotels, office buildings, shopping malls, multi-level basements, etc. Mechanical Engineer by profession he has in depth Knowledge of MEP services and his core strengths are HVAC and PHE, he has worked in various well known Consulting Design and contracting firms in India and has hands on constructions Experience in the International Market with his construction Stint in Dubai.
**OUR CORE SERVICES**

- CORE MEP ENGINEERING SERVICES ON BIM PLATFORM
- INTEGRATED BUILDING MANAGEMENT SYSTEM
- FIRE ENGINEERING
- BUILDINGS PHYSICS – ENERGY MODELING
- SUSTAINABILITY – GREEN BUILDING CONSULTANCY
- REVIEW OF MEP DESIGNS.
- VALUE ENGINEERING SOLUTIONS
- TECHNICAL ASSISTANCE FOR SITE ISSUES POST COMMISSIONING

**How we work?**

At GRUNE, we work collaboratively on all ends. We think strategically & creatively contribute fresh ideas. Through our innovative sustainability solutions, you will benefit from maximum capex+opex cost savings.

Our pragmatic approach focuses on a range of optimization opportunities including next-day behavioural changes, low operational cost, quick payback improvements, and long-term optimization options.
Our Alternate Approach

Performance Based Design

Steps to Innovate:

Study
- Latest Guidelines
- Case Studies of similar projects or
  Client Past Projects performance

Comparison
- Compare the outcome of proposed
design with client past project or similar
  projects in that region

Frame the Goals
- Discuss assumptions &
  targeted Goals with Client

Detailed Simulation Analysis
- Discuss detailed Simulation report
  and impact on energy related
  points for targeting Green rating

Evaluate Challenges
- Discuss the challenges &
  Constraints with client

Implication on Cost
- Discuss any incremental cost for
  individual items

Concept Design
- Concept reports on the basis of clients brief, available budget
- Establish development brief for MEP system design and design parameters

Schematic Design
- Confirm location and spaces for plant and equipment based on preliminary
  architectural layout drawings.
- Establish major services routes.
- Develop schematic drawings.
- Produce a Design Basis Report (DBR) describing the MEP design intents
- Produce Budgetary Cost Estimates based on established internal benchmark and
  cost bank
Detailed Design:-
- Estimation of air conditioning load, total electrical demand and water balance for the buildings based on detailed Architectural drawings.
- Preliminary selection of electrical/mechanical equipment capacities.
- Develop Coordinated Construction drawings to approximately 30% completion level

Tendering:-
- Coordination and approval of Construction Document Stage drawings, preparation of tender documents including special conditions of contract, specifications and detailed schedule of quantities on the basis of design drawings.
- Detailed cost estimates on the basis of unit rates obtained in recently-invited similar tenders.

Construction Administration
- Review contractor’s shop drawings and recommendation to Construction Manager for execution.
- One site visit per month and advice Construction Manager on compliance to design intent, quality of works and site coordination issues, if any.
- Participation with Construction Manager in the testing and commissioning of each system by the services contractor, advise Construction Manager on certification of test report from the services contractor.
- Assistance to Construction Manager in obtaining from the contractors as-installed drawings, list of recommended spares and Operation & Maintenance manuals for the system installed by them.

Sample Schematics: HVAC
Sample Schematics: Electrical

Scope of Electrical Supply Company

RMU (RING MAINS UNIT)
METERING KIOSK

CLIENT HT PANEL

FROM DG SYNC PANEL

INTERLOCKED

COMMON AREA LT PANEL

DISTRIBUTION PANELS

11KV/430V
1000 kVA TRANSFORMER

11KV/430V
1000 kVA TRANSFORMER

Sample Schematics: Plumbing & Fire Fighting

Single booster
Roof Tank
Series Connected
Series Connected with intermediate tanks

FIRE FIGHTING OVERHEAD TANK
.domestic OVER HEAD TANK

AIR RELEASING VALVE
ISO 6 N.R. Valve
AIR RELEASING VALVE

PUMP SET
UO WATER TANK
210 KL

THIRD FLOOR
PHC

SECOND FLOOR
PHC

FIRST FLOOR
PHC

P1 FLOOR
PHC

SECOND FLOOR
PHC

ISO VALVE
TO OTHER SHAFTS
ISO VALVE
TO OTHER SHAFTS

PIPE LEGEND
HYDRANT
SPRINKLERS
SPRINKLERS DRAIN

TERRACE FLOOR
PHC

4TH FLOOR
PHC

2ND FLOOR
PHC

1ST FLOOR
PHC

P1 FLOOR
PHC

BELL FLOOR
PHC

ALARM VALVE

TO EXTERNAL HYDRANT
Sample Schematics: IBMS

System Architecture: Building Automation/Management Systems

Energy Modeling:

- Energy-modeling is the computerized simulation of a building that focuses on energy consumption, utility bills and life cycle costs of various energy related items such as air conditioning, lights and hot water. It is also used to evaluate the payback of various energy conservation measures applied in the project.
Below List of Software’s will be used to perform energy modeling:

- IES
- eQuest
- Energy Plus
- Ecotect
Energy Conservation Measures:

- GREEN ROOFS
- WIND CATCHERS
- OPERABLE LOUVRE BOX
- OPERABLE WINDOWS
- REDUCED GLAZING ON SOUTH & WEST
- STRUCTURAL COOLING
- CONDENSATE RECOVERY
- GLAZING FILMS
- OPTIMIZE NORTH GLAZING
- SOLAR TUBES
- SHADING DEVICES TO MITIGATE GLARE
- NATURAL VENTILATION
- DISPLACEMENT VENTILATION
- DEMAND CONTROLLED VENTILATION
- RADIANT COOLING & HEATING
- DEDICATED OUTSIDE AIR SYSTEM
- THERMAL STORAGE
- ACTIVE CHILLED BEAM
- ELEVATED CHILLED WATER TIP
- UNDER FLOOR COOLING or HEATING
- DAYLIGHTING CONTROL
- LOW FAN POWER

Steps to Energy Savings

Design Criteria & Expectations

- Passive Design
- Internal Loads Optimization
- Efficient HVAC System
- Heat Recovery
- Building Controls

Renewable Energy

- CLIMATE
- Type of Window, Type of Windows and Frames
- FENESTRATION
- NATURAL VENTILATION
- Type of System, Size of System, Manufacturer’s Data
- HVAC
- DAYLIGHTING
- Efficiency and Size of Array
- PV
- Type of System, Type of System, Schedule of Use
- DOMESTIC HOT WATER
- Zoning (IP), Shading (IP), Shading
- GEOMETRY
- Construction Type, Construction Layers, Materials
- PLUG LOADS
- Type of Equipment, Schedule of Use
- LIGHTING
- Amount of Light, Number of People, Schedule of Use
- OCCUPANCY
Green building Services

Green building services team offers a comprehensive range of consultancy, assessment, and testing and certification services to all types of applications. We have by far the most extensive experience which results in cost effective and straightforward green building rating projects.

We have a well-qualified team of Green Building professionals and offer comprehensive services which include:

- Feasibility studies for the assessment of basic designs
- Green building consultancy and facilitation for LEED/IGBC & Griha
- Building Energy and lighting simulation

BIM Modeling

Highly experienced in 3D modelling, GRUNE uses industry and in-house developed techniques to coordinate services allowing the client to visualise the final install.

3D documentation provides the ability to optimise spatial allowances and constructability, resulting in faster and more concise construction programs.

Our modelling team has significant experience in providing a Level of Design (LOD) from initial concept (LOD 100), through to fully detailed models (LOD 300).

Creation of base building backgrounds using architectural and structural models imported from common packages including IFC, Microstation®, ArchiCAD®, Revit Architecture®, and Revit Structure®.

Design and documentation using AutoCAD MEP®, Revit MEP®, Navisworks®
Past Project Experiences of the team under various Organizations

30 + Platinum & Gold rated Projects

COMMERCIAL & RETAIL
- Kensington Office Complex, Hiranandani Gardens, Powai, Mumbai
- HDFC Office, Kanjurmarg, Mumbai
- Kohinoor City Mall Hotel & Office, Kurla, Mumbai
- High Street Phoenix Palladium, Mumbai
- Market City Mall & Office, Pune & Chennai
- Kanakia Commercial Complex, Boomerang Chandivali, Mumbai
- Neptune Magnet Mall, Bhandup, Mumbai
- Makers Maxity, BKC, Mumbai
- Dhirubhai Ambani International Convention & Exhibition Centre, BKC, Mumbai
- Surat Diamond Bourse Office Complex, Surat
- Shalimar Mall and Hotel, Lucknow
- Mosai Mall Nairobi, Kenya
- Inorbit Mall, Hyderabad
- R Mall, Mulund, Mumbai
- National Stock Exchange India Ltd, BKC, Mumbai
- Lodha Corporate Office, Mahalaxmi, Mumbai
- Cristal House, Powai, Mumbai
- Bayer office, Thane
- Koregaon Park, Pune
- Adani Corporate office
- DNIC Head Quarters, Mumbai
- British Council library, New Delhi

HOSPITALS
- Asian Heart Institute, BKC Mumbai
- Godrej Memorial Trust Hospital, Vikhroli Mumbai
- Dr. L.H. Hiranandani Hospital, Powai, Vashi & Thane
- Fortis Wockhardt Hospitals Bangalore, Kolkata, Mumbai & Kalyan
- Wockhardt Hospital, Mumbai
- Kokilaben Dhirubhai Ambani Hospital Andheri (W), Mumbai (Tallest, 70m)
- Kohinoor Hospital, Mumbai (First Platinum rated Hospital)

INSTITUTIONAL
- Powai School at Hiranandani Gardens Powai, Mumbai
- Kohinoor Educational Complex at Kohinoor City, Kurla, Mumbai
- NMIMS College, Mumbai
- IIT, Mumbai

IT CAMPUS
- Tata Consultancy Services Software Centre, Mumbai, Thane, Hyderabad, Kochi, Kolkata, Nagpur, Indore, Gandhinagar, Trivandrum, Bhubaneswar
- Lodha IT Park, Kanjurmarg, Mumbai
- Nirlanith Times Square IT Park, Sakinaka, Mumbai
- Kohinoor Square Tower, Shivaji park, Mumbai
- Veritas BTS at RMZ, Pune
- Zensar Technologies Ltd., Pune
- Loma IT Park, Mumbai
- TRIL IT Park, Gurgaon & Mumbai

RESIDENTIAL
- Lodha Residential Tower, Kanjurmarg, Mumbai
- Lodha Primero Residential Tower at Mahalaxmi, Mumbai
- Lodha Residential Complex at Bhyander Pada, Thane, Mumbai
- New Cuffe Parade at Wadala, Residential & Commercial for Lodha Group
- Pallava City Sector 5,6, Lodha Group
- Hirco Township, Panvel
- Indiabulls ‘Greens’, Panvel
- Godrej Garden City, Ahmedabad
- Savvy ‘SWARA’ at Ahmedabad
- Kalinga Nagar Township, Bhubaneswar
- Premium residential development in Brooklyn, Nairobi
- Metal Box, Worli, Mumbai
- Kalpataru Cred, Mumbai
- SD corporation, Kandivali, Mumbai
- Rivali Park – Borivali, Mumbai
- Prive, Tata Housing, Lonavala, Pune
- Wave City Centre, Noida
- PLL Carmichael, Mumbai
- Parthenon high Rise, Mumbai

HIGH RISE BUILDINGS
- New Cuffe Parade Residential & Commercial Development for Lodha group at Wadala
- Kohinoor Square Tower at Qadar
- Lodha Primero, Mahalaxmi, Mumbai
- Runwal Greens Mulund, Mumbai
- Shangrilla Hotel & Palladium Mall at High Street Phoenix, Lower Parel, Mumbai
- Lodha Residential & Commercial at Kanjurmarg Mumbai
- Kokilaben Dhirubhai Ambani Hospital Andheri (W), Mumbai
- Lodha Excellus Mahalaxmi, Mumbai
- Renaissance (Marriott) Hotel for K. Raheja Corp. at Powai, Mumbai
- Four Seasons Residences World
- New Cuffe Parade Residential & Commercial Development for Lodha group at Wadala
- Shangrilla Hotel & Palladium Mall at High Street Phoenix, Lower Parel, Mumbai
- Lodha Excellus Mahalaxmi, Mumbai
- J.W Marquee Dubai, 365 mts
- Grosvenor’s House Dubai, 275 mts
INDUSTRIAL
- United Phosphorus Limited Laboratories, Ankleshwar
- RKHS Food Park, Kalamboli, Navi Mumbai
- Hindustan Unilever Ltd, Hitex Office & Labs at Andheri, Mumbai
- Kelloggs Factory, Mumbai
- Bisleri Factory Andheri
- Scania Bus and Truck Assembly Bangalore
- Embassy Industrial Park – Pune

HOTELS
- Marriott Renaissance Hotel, Service Apartments & Convention Centre, Powai Mumbai
- J.W. Marriott Hotel, Retail & Commercial, Sahar International Terminal, Mumbai
- Grand Hyatt, Mumbai
- The Leela Palace, Udaipur & Chennai
- Taj Hotel Lake Palace, Udaipur
- Sahara Star Hotel, Mumbai
- Westin Hotel, Hyderabad
- Sofitel & Novotel Hotel in Mumbai
- Taj Vivanta Bekal, Kerala & Goa
- Palladium (St. Regis) Hotel, Mumbai
- Crown Plaza, Ahmedabad
- W Resort, Goa
- Mercure Hotel, Dwarka
- J.W Marquee, Dubai
- Grosvenor’s House, Dubai
- Hotel Sheraton, Srilanka

INTERNATIONAL PROJECTS
- J.W Marquee Dubai – 1600 Rooms
- Grosvenor’s House Dubai - 500 Rooms
- Office Complex in Srilanka.
- Mabati Mall Nairobi Kenya
- Premium residential development in brookside Nairobi
- King Khalid Medical City, Saudi Arabia