

On Time Delivery

We stick to the target dates committed to our clients and make sure every single aspect of the commitment given to our clients are met on target.

Overcome Bottlenecks

We identify and overcome bottlenecks at very early stage of the project which makes the whole process fluent and ensure the work done is efficient.

Detailed Analysis & Planning

We analyze and plan the project progress accordingly to make sure the project status remains healthy at any given time.



ADAPT

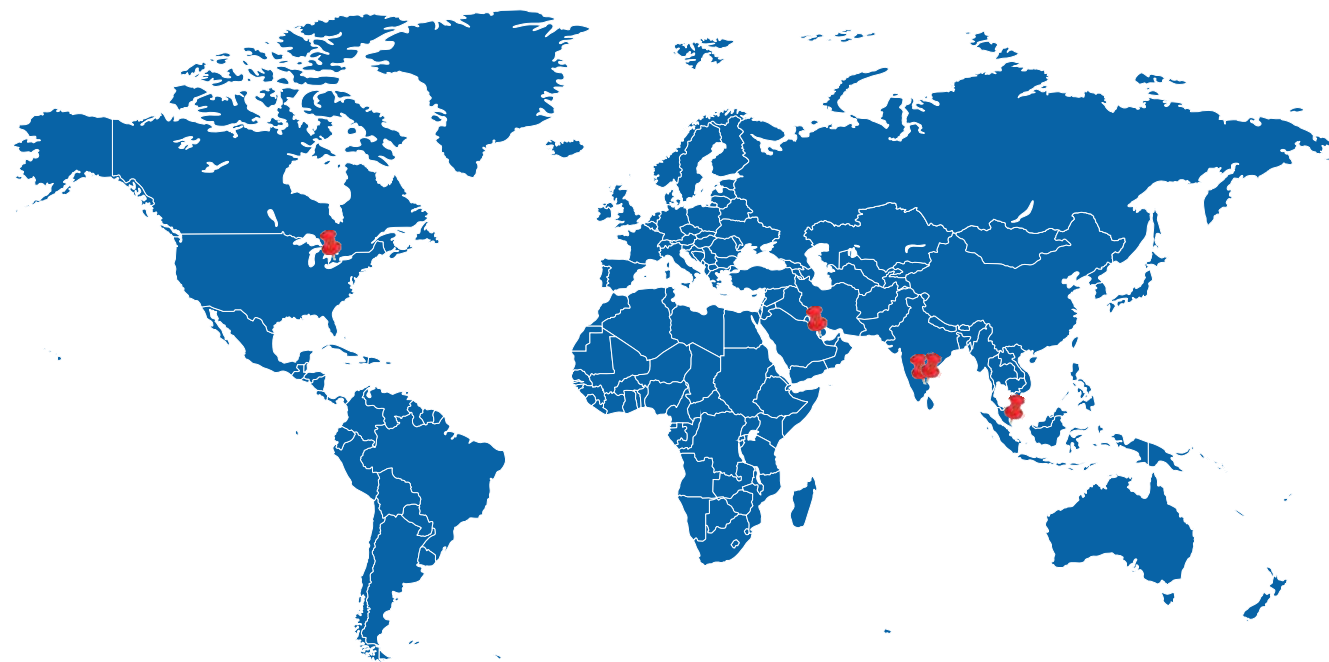
We adapt to the situation of the project and put use our technical expertise to ensure smooth flow of the project.

Client Focus

Our Client Focus approach towards projects enables us to provide the best possible solutions and ensure good relationships with our Clients.

Set Priorities

We set priorities accordingly to make sure the flow of project does not affect any stake holder in the project.



“We add value to your vision”



Conserve Solutions INC.

Green Building & MEP Solutions
204-10 George Street North,
Brampton L6X 1R2, Ontario, **Canada**
M : +1 647 575 9090 / +1 647 741 5917

Conserve Technical Services

Office No. 109, 1st Floor, Building No. 93,
Moza Building, Dubai, **UAE**. PO Box : 93064
T : +971 42520666 | M : +971 501362433



Conserve Green Building & MEP Solutions LLP

No. 73/3, Franklin Fort, First Floor, PVS Nagar,
New Mangalapuri Nagar, 1st Main Road,
Thoraipakkam, **Chennai** - 600 097, India.
M : +91 96772 63895

No. 19, Thathachariyar Residency,
Individual House Area, Mambalasalai,
Thiruvanaikovil, **Trichy** - 620 005. India.
T : +91 431 4040585



Conserve Academy

No. 73/3, Franklin Fort, First Floor, PVS Nagar,
New Mangalapuri Nagar, 1st Main Road,
Thoraipakkam, **Chennai** - 600 097, India
M : +974 30335856 / +91 98845 62406

Conserve Solutions PTE LTD

35, Selegie Road, Parkliene Shopping Mall,
Singapore - 188307
T : +65 9107 0232

info@conserveolution.com
www.conserveolution.com

WHO WE ARE

Conserve Green Building and MEP Solutions is founded by Passionate Professionals towards Sustainable Built Environment. At Conserve, we bring in our expertise to offer modern and cost effective solutions to meet our clients requirements.

Established in 2016 in Qatar, to serve the Construction Sector with Engineering Design Support Services to companies in Asia, Middle East, Europe, Australia, Canada, US and other parts of the world.

Conserve will lead the way to the future of construction and enriching Environments around the world with the most responsible way of approaching Engineering.

Through our commitment to quality, constant innovation and respect for the planet, we assure to exceed expectations by providing the best of the possible solutions to constantly meet the client's requirements with steady improvement.

Through our expertise we have assisted Clients, Consultants and Contractors in solving many critical design issues without affecting project progress and budget. We will meet challenging goals by engaging the talented and passionate people, who believe there is always a better way & solution.

Our pursuit of sustainability is rooted in optimism. Our approach to sustainable design takes advantage of what is readily available and explores what is practically achievable.



Our Vision

To emerge as an exclusive global brand in construction sector for delivering integrated sustainable engineering solutions.



Our Values

Ethics

Integrity and honesty is our priority which will never be compromised.

Quality

We intend to deliver excellence in whatever we do. We strongly believe, our reputation depends on what we deliver.

People

We aspire to be the employer of choice in our industry. We inspire our people by offering work with a purpose, challenging development opportunities, and rewarding career

Innovation

We believe in doing things differently. We listen, learn, and seek out the best ideas. We attract complacency and continually improve.

About Us

Conserve is the result of our passion on providing Engineering solutions to challenging situations. We are driven by Engineering Excellence, People centric approach, Ethics and Innovation.



Our Commitment

We commit to

- ⊙ Take responsibility on quality of our services
- ⊙ Take responsibility on time delivery of our services
- ⊙ Learn continuously and upgrade our skills
- ⊙ Promise only what we can deliver
- ⊙ Accomplish the project objective with minimum budget from client
- ⊙ Maintain a positive and informative working relationship with all stakeholders in the project we are working



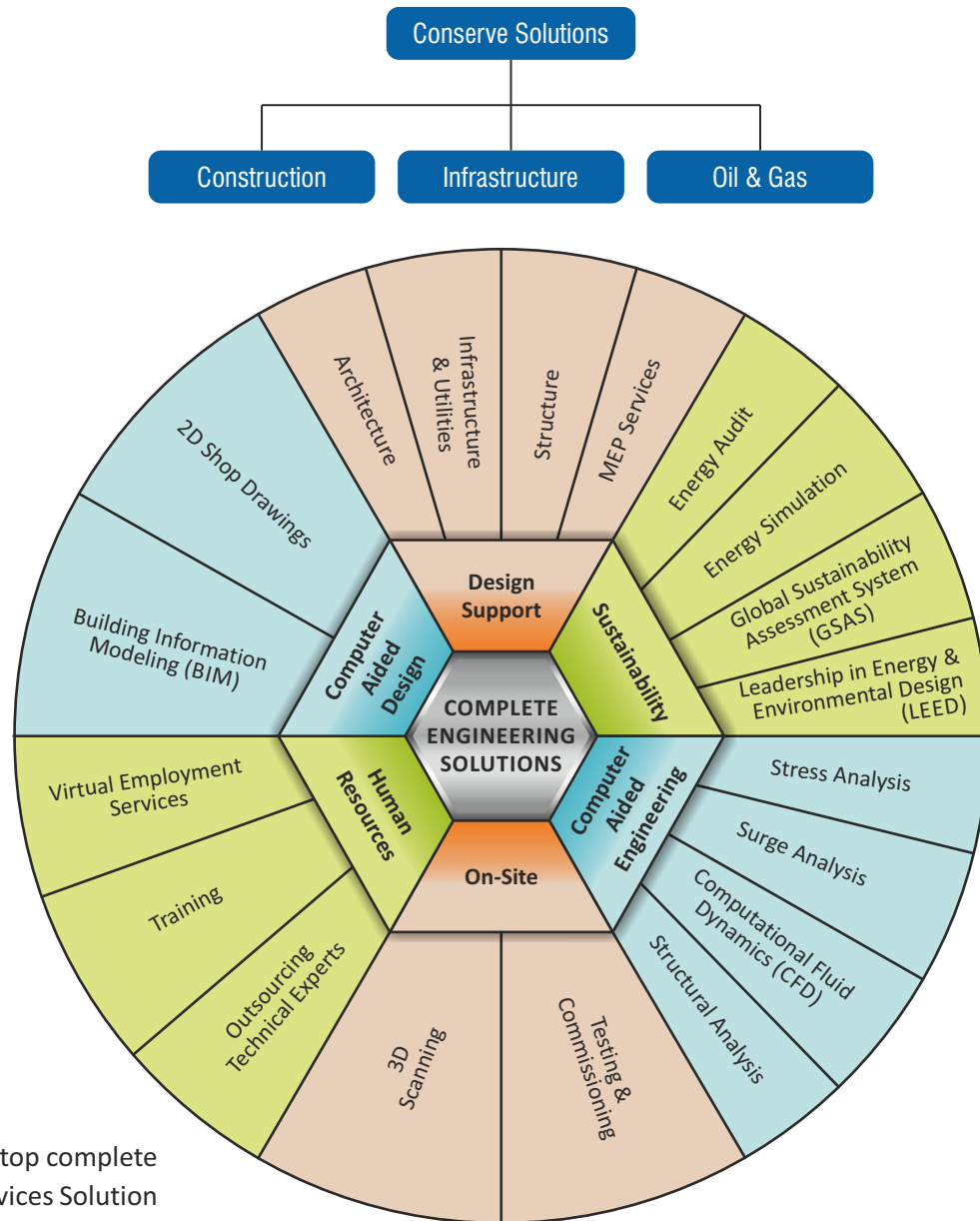
Our Inspiration

The people who are crazy enough to think they can change the world are the ones who do.

- Steve Jobs

- Yes.... we are crazy.

Business Areas



We are an one stop complete Engineering Services Solution provider for the Construction Sector.

Better use of manpower, better quality work force, back office in India, all of which translates in to lower costs.

Our Administrators are Project Management Professionals which has led to almost 30% reduction in reworks as compared to last year.



COORDINATION



SAVINGS



EFFICIENCY



QUALITY

The quest for quality and continual improvement is an on going process in Conserve Solutions



PROJECT MANAGEMENT

Project management is undoubtedly one of the most distinctive skills and here in Conserve Solutions we have a seamless work flow to execute the projects by meticulous planning and close coordination.

Architectural Services

Architectural services include design, preparation of construction documents, and construction administration. Architects also provide a wide variety of services including feasibility studies, architectural programming and project management.

CONSERVE provides a one-stop comprehensive range catering from personal interior spaces to City Master-Planning. We widely cover all stages of Design & Engineering Services :

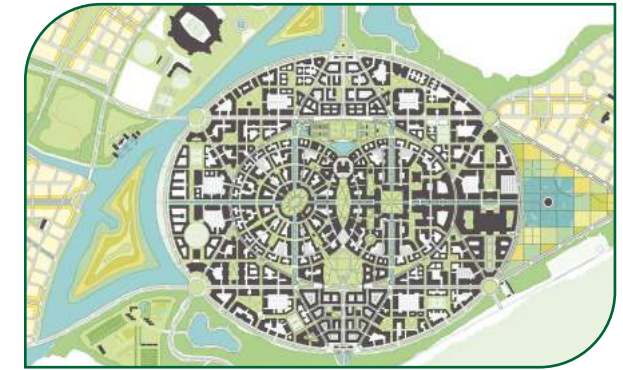


Surveys and Investigations :

- ⊙ Topographical survey and mapping
- ⊙ Transport survey
- ⊙ Collection of hydrological / hydrographic / geographical data
- ⊙ Soil and material surveys
- ⊙ Geotechnical investigation
- ⊙ Analysis / interpretation of seismological data / models

Design and Construction Engineering :

- ⊙ Architecture & Engineering Consulting
- ⊙ Assessment of institutional requirements
- ⊙ Integrated and Holistic, Building Design & Engineering, Building Design Services
- ⊙ Preliminary designs and cost estimates
- ⊙ Engineering design, bill of quantities and cost estimates
- ⊙ Technical specifications and tender documents
- ⊙ Tender evaluation
- ⊙ Contract negotiation
- ⊙ Specialized construction equipment Design
- ⊙ Renovation + Restoration
- ⊙ Sustainability Consulting



Studies and Planning :

- ⊙ Zonal Separation & functional flow Charts
- ⊙ Space Management
- ⊙ Sun-path Analysis
- ⊙ Environmental impact assessment
- ⊙ Socio-economic and feasibility
- ⊙ Pre-investment feasibility
- ⊙ Master Planning + Urban Design
- ⊙ Interior design planning
- ⊙ Landscape Architecture



Project Management :

- ⊙ Financial advice to owners and concessionaires
- ⊙ Construction programming, supervision and monitoring
- ⊙ Contract management
- ⊙ Material management
- ⊙ QA / QC plans
- ⊙ O and M Manuals
- ⊙ Project planning & scheduling
- ⊙ Cost Control
- ⊙ Time management
- ⊙ Risk management



Structure

We provide project management, bidding, and procurement support, as well as project coordination services from the planning to the construction phases.

Engineering of all buildings start with structure. Any building with very good architecture is complete only with elegant structural engineering. We at Conserve, provide structural engineering support service for concrete and steel structures.



RCC Structures :

- ⊙ Residential Commercial Building.
- ⊙ Boiler supporting structure.
- ⊙ Retaining wall and storage tank.
- ⊙ Equipment foundation.
- ⊙ Underground wagon tippler structure for coal handling.

We also provide GA, shop drawing for RCC & steel structure.

Our structural experience spans multiple industries like Oil & Gas, Power Generation, Food Processing Units, Process Plants, Roads & Bridges, Residential and Industrial building, which has resulted in innovative solutions for some of the most complex challenges they face.

With our increased focus on infrastructure requirements, we provide futuristic, environment-friendly, and sustainable design solutions for the following segments in both Steel and RCC:

Structural Solutions

Steel Structure :

- ⊙ Design of steel truss, roof structure.
- ⊙ Pre-engineering Building
- ⊙ Conveyor, crane & pipe trestle supporting structure.
- ⊙ Facade cladding supporting structure.
- ⊙ Pipe supporting structure.
- ⊙ Oil & gas both onshore & off shore.
- ⊙ Auxiliary beam & embedment plate in nuclear power plant.
- ⊙ Connection design.

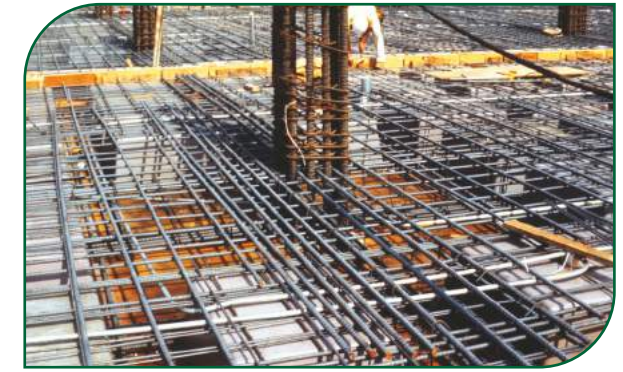


- ⊙ Pre-Engineering Building
- ⊙ Sub-Critical & Super Critical Boiler Supporting Structures
- ⊙ Water Treatment Plant Building
- ⊙ Wagon Tippler, Conveyor, Crane Supporting Structures
- ⊙ Detailed Connection Design and Detailing
- ⊙ Roof, Truss & Pipe Supporting Structure
- ⊙ Embedment Plate and Anchorage
- ⊙ Retaining Wall, Storage Tank & its Foundation
- ⊙ Equipment Foundation, Pipe Rack, Skid Supporting Structures
- ⊙ FEM Analysis
- ⊙ Infrastructure BIM (Building Information Modeling) services
- ⊙ FEED (Front-End Engineering Design)
- ⊙ GA & Fabrication Drawing releases



Mechanical Engineering

- ⊙ HVAC
- ⊙ Domestic Hot and Cold Water System
- ⊙ Foul And Waste Water Drainage
- ⊙ Fire Protection



MEP Engineering Design Support Services

MEP design is no more conventional, with changing regulations, requirement of Integrated Project Delivery, LEED, GSAS and other Green Building rating systems. Optimum MEP design is critical component of success in a project. We offer wide range of MEP Design support services to Owners, Consultants, Main Contractors and MEP Contractors.

We provide project management, bidding, and procurement support, as well as project coordination services from the planning to the construction phases.



Electrical Engineering

- ⊙ Small Power
- ⊙ Lighting
- ⊙ Emergency Lighting
- ⊙ Earthing and Lighting protection
- ⊙ Fire Alarm
- ⊙ Security systems
 - ✦ CCTV
 - ✦ Access control
- ⊙ BMS - Building Management System
- ⊙ SMATV System



Engineering Calculations - Mechanical

- ⊙ Heating / Cooling Load Calculations
- ⊙ External Static Pressure (ESP) Calculations
- ⊙ Pump Head Calculations
- ⊙ Fire Hydraulic Calculations
- ⊙ Psychometric Analysis
- ⊙ Pressurization for Lobby and Staircase
- ⊙ Ventilation Calculations
- ⊙ Loading Units and Discharge Units calculation
- ⊙ Selection of Equipment - AC equipment, Pumps, Fans etc.
- ⊙ Sizing of Services (Piping and Ducting)
- ⊙ System Volume Calculation - Chilled water, storm water, surface runoff etc.



Engineering Calculations - Electrical

- ⊙ Voltage drop Calculation
- ⊙ Short circuit calculation
- ⊙ Lighting Luminance
- ⊙ Lighting Rendering
- ⊙ Fire Alarm Battery Hour Calculation
- ⊙ Central Battery Capacity
- ⊙ Power System Analysis and Calculation

Other Special Services

- ⊙ Value Engineering
- ⊙ Method Statements for Mechanical and Electrical Installations
- ⊙ Operation and Maintenance Manuals
- ⊙ Tendering and Estimation support
- ⊙ Engineering Reports
- ⊙ Risk Analysis and its Mitigation Strategies in Design /Projects
- ⊙ Testing and Commissioning Plans



Our Infrastructure Engineering Design Support Services includes

- ⊙ **Mechanical Infrastructure** - Chilled Water, Potable Water, Foul Water, Irrigation, Storm Water, Surface Water and TSE
- ⊙ **Electrical Infrastructure** - HV & EHV Network, MV Network, Ooredoo / Vodafone Network, DSSS, Street Lighting, Tunnel Lighting, Underpass / Bridge Lighting and Gantry Lighting

Our design support services are Client Centric, aiming to reduce overall Life Cycle Cost of the project.

Traffic & Transportation Engineering



Widely associated with other disciplines :

- ⊙ Pavement engineering
- ⊙ Bicycle transportation engineering
- ⊙ Highway engineering
- ⊙ Transportation planning
- ⊙ Urban planning
- ⊙ Human factors engineering.

With close focus on safe and efficient traffic flow, road geometry, sidewalks and crosswalks, cycling infrastructure, traffic signs, road surface markings and traffic lights.

Below are the sub-headings to classify the area of expertise.

Intelligent Transportation System

- ⊙ Wireless communications & Bluetooth detection
- ⊙ Computational technologies including Floating car data/floating cellular data
- ⊙ Sensing technologies with Inductive loop detection & Video vehicle detection
- ⊙ Information fusion from multiple traffic sensing modalities
- ⊙ Intelligent transportation applications with Emergency vehicle notification systems



- ⊙ Automatic road enforcement
- ⊙ Variable speed limits
- ⊙ Dynamic traffic light sequence
- ⊙ Collision avoidance systems improved by On-Road Cooperative systems
- ⊙ Identifying Smart Transportation Capabilities as a New Business Model
- ⊙ Signal optimization using Linsig
- ⊙ Signal simulation and EPROM configuration.
- ⊙ ITS design proposals incorporating Automated ticketing & Variable messaging signage (VMS) for public parking.



Traffic Simulation using Paramics / Vissim

- ⊙ Simulations for real time visual display of traffic on ground.
- ⊙ Preparing detailed traffic report predicting the maximum capacity of car parks.
- ⊙ Queuing Studies at different hours of the day.
- ⊙ Network Recalibration for free flowing traffic.



Traffic Survey and Analysis

- ⊙ Conducting traffic studies.
- ⊙ 7 Day Volume Count Survey.
- ⊙ Origin Destination Studies.
- ⊙ Turning Movement Analysis.
- ⊙ Traffic revenue calculation and report generation.



City / Area Development Plan

- ⊙ Understanding the vision / objectives & creating a blueprint for future transportation network.
- ⊙ Planning a strategic travel demand model to cater to growing future needs.
- ⊙ Four-stage-modeling using CUBE/VISUM software.
- ⊙ Junction designing perfected using Sydra software.
- ⊙ Assessment of economic cost / viability and phasing of project.

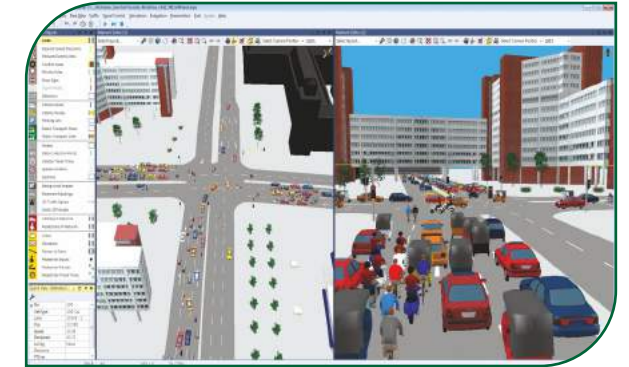


Road Safety Audit & Road Signage

- ⊙ Conducting Audits for existing road networks at various stages of completion.
- ⊙ Safety-Checks for road networks for consistency, to avoid unexpected road safety issues.
- ⊙ Detailed Feasibility / Research / Analysis at following stages.
- ⊙ Feasibility stage
- ⊙ Preliminary Design stage
- ⊙ Detailed Design stage
- ⊙ Construction stage,
- ⊙ Post-Construction stage

Traffic Impact Assessment

- ⊙ Study of Master plan of Multi-family residential apartments, duplexes, hotels and commercial areas.
- ⊙ Traffic Impact Assessment done and forecasting of trip demand on the new/widened roads.
- ⊙ VISUM Macro-Simulation software will be used for above.
- ⊙ Checking of the junction capacity and level of services (LOS) during peak periods using SIDRA software.
- ⊙ Report on final proposed internal road network and parking areas.



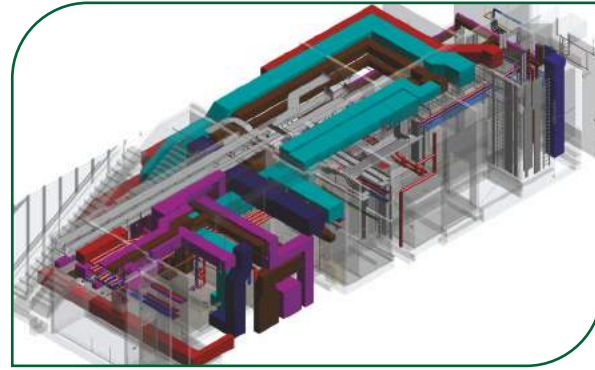
Documentation Package

- ⊙ Feasibility study
- ⊙ Building Survey
- ⊙ Construction Documents
- ⊙ Regulatory Approvals / Code Complaints
- ⊙ Design Review Comments / Revisions
- ⊙ Construction Administration
- ⊙ Requests for Information (RFI)
- ⊙ Pay Application Review/Approval
- ⊙ Plan and Cost Review Services
- ⊙ Consulting / Expert Witness Services

BIM Modeling

Building Information Modeling (BIM) is a digital representation of physical and functional characteristics of a facility. BIM is a shared knowledge resource for information about a facility forming a reliable basis for decisions during its life-cycle; defined as existing from earliest conception to demolition.

Conserve is leading the Construction Sector to leverage the power of Building Information Modeling (BIM) to optimize project resources. One of the biggest benefits in BIM is realized in 3D Construction Coordination.



Conserve is a one stop solution for Architecture, Structure and MEP Modelling. Conserve adapts Computational BIM (Dynamo) wherever necessary to automate the works wherever possible to speed up the work progress and deliver the works accordingly. Conserve brings in their competence in finding interference between Architecture, Structure and MEP services and eliminating them before construction begins. By fixing problems in the computer instead of in the field, costly and time-consuming change orders are avoided. In addition, we focus the team on using the 3D coordination process not just to correct errors, but to think through construct ability and plan delivery.

At Conserve, we also use data-rich 3D models to aid team (owner, architect, engineer, builder and trade contractors) decision making, streamline scheduling and trades utilization, validate existing conditions, identify safety concerns and increase material cost accuracy.

We can produce REVIT Models up to LOD 500.

Our BIM Modeling services Includes

Architectural	Preparation of Architectural 3D Models
Structural	Preparation of Structural 3D Models
MEP	Preparation of MEP 3D Models
BIM Coordination	Coordination among Architecture, Structure & all trades in MEP
Construction Documents	Issued for Construction Drawings, Shop Drawings and As-Built Drawings
Fabrication and Spool Drawings	Engineering Drawings for Fabrication of components/materials before installation
Builders Work	Builder's Working Drawings
Family Creation	Parametric Modeling for Architecture, Structure & MEP components
CAD to Revit	Preparation of 3D models from the 2D CAD files
Point cloud to 3D	Preparation of As-built model from scanned files to Revit
Construction Simulation	Simulation of Construction planning and progress in timeline (4D)
Bills of Materials	Executing Quantities of materials with cost (5D)
Sustainability	Implementation of Green Building factors in the model (6D)
Asset Management	Implementation of COBIE for facility management (7D)
Dynamo, Python & C-Sharp	Computation and Automation in BIM

Our expert services will enable

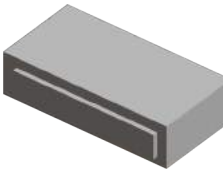

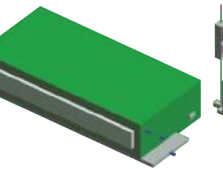
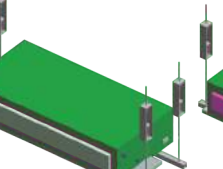
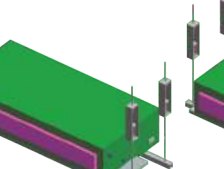
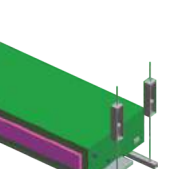
- ⊙ Improved coordination with production of coordinated, clash free and virtual 3D model
- ⊙ By reducing coordination issues in early stage, we can reduce installation time and cost
- ⊙ Our 3D model reduces the requirement of site-based variations and modifications and hence reduces wasted man hours
- ⊙ We help our client with more accurate data management and extraction with the help of our BIM services.
- ⊙ Our BIM model provides functionality for the automated generation of Bill of Materials / Quantity take off
- ⊙ Our 3D models can be integrated with Primavera or similar software for estimation, Manufacturing and Scheduling technology, support the manufacturing and fabrication process.
- ⊙ Our 3D models can improve the efficiency of on-site service installation and also support the off-site manufacturing / modularization process
- ⊙ Our BIM models help improve the accuracy, quality and detail of construction documentation.



Level of Detailing

Level of development defines the content and reliability of BIM elements at different stages or milestones. With "content" we mean geometric information, structured data and linked documentation.

LOD Description

LOD 100	LOD 200	LOD 300	LOD 350	LOD 400	LOD 500
					
Concept Design	Schematic Design	Detailed Design	Construction Documentation	Fabrication & Assembly	As-Built
The building 3D model is developed to represent the information on basic level. Thereby, only conceptual model creation is possible in this stage.	General model where elements are modeled with approximate quantities, size, shape, location and orientation. We can also attach non-geometric information to the model elements	Accurate modeling and shop drawings where elements are defined with specific assemblies, precise quantity, size, shape, location and orientation. Here too we can attach non-geometric information to the model elements	It includes model detail and element that represent how building elements interface with various systems and other building elements with graphics and written definitions	Model elements are modeled as specific assemblies, with complete fabrication, assembly, and detailing information in addition to precise quantity, size, shape, location and orientation. On-geometric information to the model elements can also be attached	Model elements are modeled as specific assemblies, with complete fabrication, assembly, and detailing information in addition to precise quantity, size, shape, location and orientation. On-geometric information to the model elements can also be attached



CAD Services

Preparation of Architectural, Structural and MEP drawings from Concept to As-built and getting it approved is one of the major challenge of contractors. We have a team of highly qualified engineers and draftsmen to prepare CAD drawings as per the Clients requirement.

We, Conserve solutions provide 2D drawings support for our clients in Architectural, Structural, MEP, Infrastructure and Transportation departments. As we are a Design service provider for Consultants and Design & Build Contractors, we study and execute our drawings with foresight methodology and proper analysis. We support the clients to avoid uncertainties and ensure the overall good health of the project.

- ⊙ Concept drawings
- ⊙ Isometric drawings
- ⊙ Issued for Construction drawings
- ⊙ Schematic drawings
- ⊙ Fabrication drawings
- ⊙ As-Built Drawings
- ⊙ Shop drawings
- ⊙ Detailed Design drawings
- ⊙ Coordination drawings
- ⊙ PDF to CAD Conversion

MEP

Plumbing, Drainage, Fire Fighting, HVAC, Small Power, Lighting
Fire Alarm, Security, CCTV
SMATV, ICT, Public Address
Audio Visual, BMS, Builder's Work, Coordination

STRUCTURAL

Structural Drawings, Reinforcement Drawings, Standard Details, Cast Unit Drawings, Assembly Drawings, Single Part Drawings, General Arrangement Drawings, Connection Detailed Drawings, Architecture Drawings

INFRASTRUCTURE

Road Signs & Traffic Lights, Chilled Water, Potable Water, Foul Water, Irrigation, Storm Water, Surface Water
TSE, HV & EHV Network, MV Network, Ooredoo Network, Street Lighting, Tunnel Lighting, Underpass Bridge Lighting, Gantry Lighting, Transportation, Road Marking & Signage
Pavement, Road Safety, Traffic Signal and Bike / Cycle / Pedestrian Tracks, Pumping Stations

ARCHITECTURAL

Architecture, Sustainable Building Design
Interior Design, Design Development
Land Planning, Exterior Renderings
2D & 3D Renderings, Energy Analysis

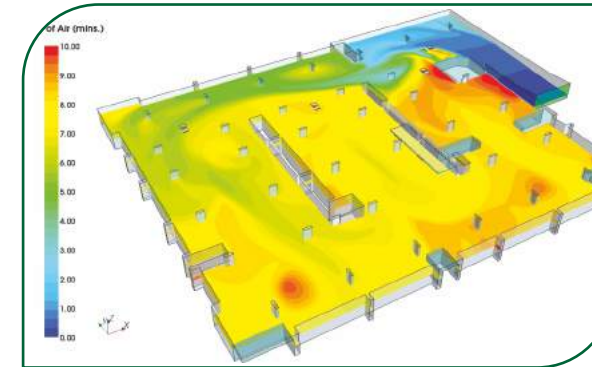
Oil & Gas

Piping, Equipment GA,
General Arrangement Drawings,
P&ID, PFD, Spoolgen

Specialised Engineering Services

Computational Fluid Dynamics (CFD), Piping Analysis, Vibration Analysis, Acoustics

We offer specialized engineering services related to Simulation and Analysis. We offer solutions for Building services, infrastructure and oil & gas domains. We adopt numerical methods and finite element methods for performing simulations and analysis.



Why perform Simulation and Analysis?

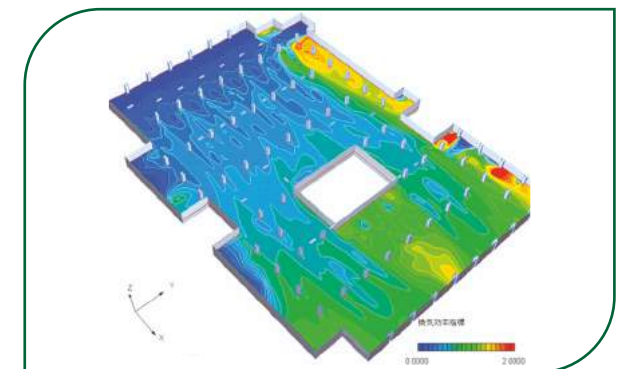
- ⊙ Using simulations is generally cheaper, environmental friendly, safer and sometimes more ethical than conducting real-world experiments.
- ⊙ By simulation and analysis, we can fore see the problems and mitigate it with ease which might help us by saving a lot of energy and cost.
- ⊙ Simulation and analysis can be done faster than real time there by saving a lot of time. The simulation and analysis can be done on the basis of if-then-else theories, thereby verifying the outputs for various conditions and ensuring safety in the project.

Computational Fluid Dynamics (CFD)

The principal areas of application are designs requiring an understanding of the air flow pattern, such as design of smoke control systems and air distribution in a heating, ventilation and air-conditioning system. Carrying out CFD analysis will ensure safety and comfort of the occupants/end users.

Applications of CFD analysis

- ⊙ Thermal Analysis, Temperature, humidity and velocity simulations for human comfort.
- ⊙ Transfer of heat through walls, roof and floor of the buildings.
- ⊙ Simulation of Boilers and Steam Generators.
- ⊙ Ventilation Analysis
 - ✦ Smoke simulations for Atriums and Tunnels.
 - ✦ Car Park Ventilation and Mining Ventilations.
- ⊙ Flow Simulation and Analysis in Mixing Tanks, Heat Exchangers and Erosion Tubes.
- ⊙ Fire Evacuation Modelling.
- ⊙ Offshore Rig Wind and Wave Analysis (mainly in Oil and Gas Sector).
- ⊙ CFD for oil and Gas Piping - Environmental Condition impact on Oil & Gas Process.

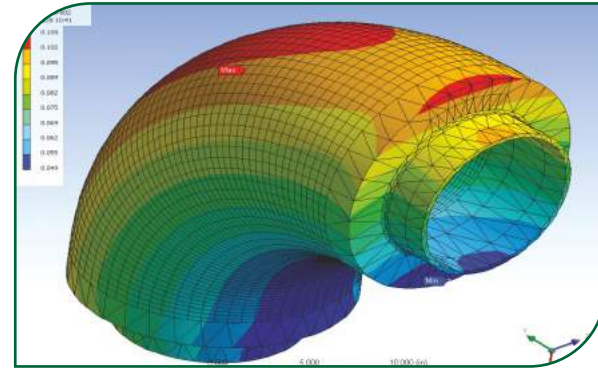


Piping Analysis

The objective of the piping stress analysis is to ensure structural integrity, operational integrity and optimal design of the system.

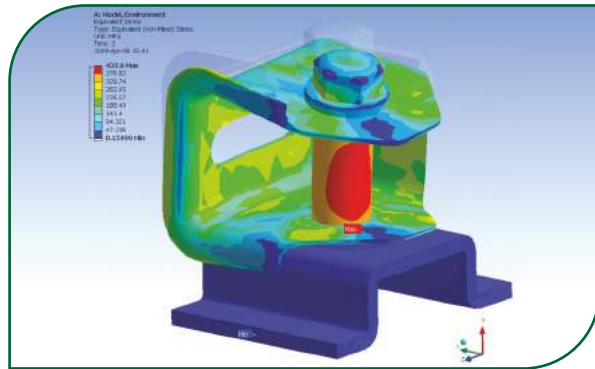
Applications of piping analysis

- ⊙ Thermal, Stress, Expansion and Seismic Analysis
- ⊙ Pulsation Analysis (mainly in Oil and Gas Sectors)
- ⊙ Surge Analysis
- ⊙ Flow Assurance Analysis (mainly in Oil and Gas Sectors)



Vibration Analysis

Vibration analysis is carried out to ensure the vibration from the mechanical equipment does not disturb the building. We provide solutions to design vibration isolation systems. There are various factors influencing the selection of vibration isolators such as the characteristics of the equipment to be isolated, operating environment, type of loading such as static loading and dynamic loading.



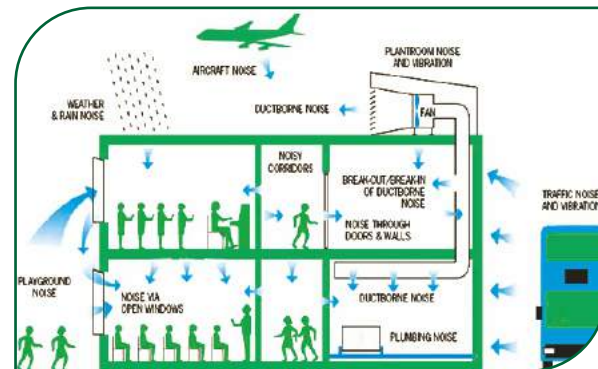
Vibration Isolation System Design Includes,

- ⊙ Design of Vibration isolators for large industrial equipment and instruments.
- ⊙ Design of Vibration isolators for equipment.

Acoustics Services

We provide acoustics services for commercial, residential, hospital and laboratory buildings. Detailed report based on the standard engineering practices, recommendations feasible and cost effective solutions in line with the requirement of the Architectural, Structural and Mechanical design teams.

- ⊙ Noise Vibration Surveys
- ⊙ Noise impact Assessments
- ⊙ Pre-Construction Noise / Vibration Assessments
- ⊙ Architectural
- ⊙ Acoustics - Design Advice



Tools for Acoustic Services

DIRAC	Control Rome Calculator
ODEON	Porous Absorber Calculator
Duct Noise Calculator	Speech Re-inforcement Calculator
Acoustic Tools	RION Sound Level Meter

Our Sustainability Services GSAS Consultancy & Facilitation

For Consultants as registered GSAS Design and Build service provider. Our services include comprehensive and complete GSAS Services. We will take all responsibilities right from project registration to receipt of targeted certification from GORD. Our scope shall include but not limited to,



- ⊙ Certification Strategy: Conserve shall first review the project, the nature of buildings within the project scope and help the project team to select appropriate GSAS rating system
- ⊙ Conduct GSAS Certification Workshop with project team members
- ⊙ We shall facilitate Registration of project with GORD
- ⊙ Preparation of compliance matrix and incorporating GSAS Requirements in construction/tender documents
- ⊙ Document the requirements of target GSAS Criteria
- ⊙ Review of Progress & Documentation
- ⊙ Prepare submittals for GORD
- ⊙ Attend meetings with GORD and other stakeholders

For Contractors as registered GSAS Construction Management Service provider. Our services include comprehensive and complete GSAS services as below. Contractors are required to have a full time GSAS CGP and register themselves as GSAS Service Providers or hire the services of GSAS Service Provider.

- ⊙ Conserve shall facilitate Registration of project with GORD. Registration and Certification fee to be paid by Client/Contractor
- ⊙ Debut a GSAS CGP to represent Contractor for GSAS Certification throughout the construction stage
- ⊙ Co-ordinate with consultants to collect the documents submitted for Provisional Certificate/Letter of Conformance (LOC)
- ⊙ Review the LOC documents
- ⊙ Manage GSAS document submittal (Construction stage)
- ⊙ Attend any meeting, site audit, and coordination with consultant/client/GORD related to GSAS
- ⊙ Manage online submission
- ⊙ Review all documents related to GSAS
- ⊙ Any work for the sake of achieving targeted star certification set forth in the Contract and LOC

GSAS MEP Support

Energy and Water are the critical criteria in GSAS assessment. A score of less than zero in Energy and Water shall result in certification denied. Conserve having very strong background in MEP can help projects to achieve Energy and Water Criteria with least effort. We have good experience in GSAS bespoke calculators and familiar with codes and standards referred by GORD



- ⊙ Optimized energy efficiency
- ⊙ Reduced operating costs
- ⊙ Improved IAQ and occupant comfort
- ⊙ Reduced change orders - Increased life of existing equipment
- ⊙ Reduced absenteeism
- ⊙ Reduced warranty issues
- ⊙ Fewer comfort problems
- ⊙ Documented maintenance requirements
- ⊙ Improved staff training
- ⊙ Reduced contractor callbacks



GSAS Operations Certification (O & M)

With the launch of GSAS Operations, Conserve is actively engaged in Sustainability in Existing buildings. Conserve can support existing facilities to earn

GSAS Energy Performance Labeling - EPC

GSAS Water Performance Labeling - WPL

GSAS Indoor Environmental Quality Performance Labeling - IEQPL

GSAS Waste Management Performance Labeling - WMPL



Commissioning Services for Green Buildings

In Construction industry, Commissioning is verifying that the building systems and the subsystems (HVAC, plumbing, electrical, fire/life safety, building envelopes, interior systems, utility plants, sustainable systems, lighting, wastewater, controls, building security etc.) are planned, designed, installed, tested and operated to achieve the owner's project requirements.

Very often Commissioning is misunderstood for Performance testing, testing and balancing. They are part of commissioning process and does not complete the entire commissioning process.

Commissioning is often seen as added cost. In reality Commissioning add value to project, A properly commissioned building provides the following benefits:



LEED Consultancy & Facilitation

For Consultants

Design consultants have significant responsibility in a Green Building Project. The challenging part is to achieve the target certification in cost effective way. Our services include right from initiating Green Building charrette to preparation of design documentation. Our services to design consultants include,

Modern building systems have become more complex and system integration becomes necessary for life-safety and proper indoor environmental quality. On most building projects the responsibility for the installation and functionality of equipment is divided amongst many contractors and sub-contractors. Each one is focused solely on their portion of the project and only conduct testing on the equipment for which they are directly responsible. We as the Commissioning Agent/Authority spend the essential time to test the equipment in an integrated manner to assess total system operations.

Our Commissioning Management is as per ASHRAE Standard 202-2013 -- Commissioning Process for Buildings and Systems

Commissioning is required in many Green Building rating systems like LEED, GSAS, Estidama Pearl etc. However any modern building can be benefited from the advantages of commissioning.

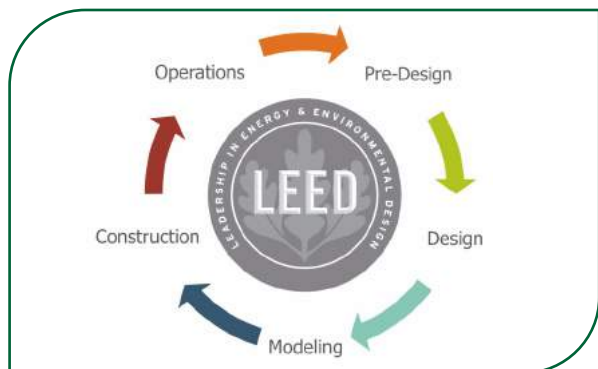


- ⊙ Early stage LEED feasibility study and recommendations
- ⊙ Prepare and post the RFP for the Commissioning Authority
- ⊙ Project-specific eco-charrette facilitation including the integrated design process
- ⊙ Develop baseline LEED Scorecard
- ⊙ GBCI project registration
- ⊙ Develop Responsibility matrix
- ⊙ Provide LEED-Kickoff team direction, support, resources, and sample documents
- ⊙ Create LEED team Action List with monthly updates
- ⊙ GBCI LEED-Online project setup and ongoing site management including assigning roles and responsibilities to team members



In bidding stage, it would be challenging for contractors to prepare technically strong proposal stating the competency in LEED Projects. We can support contractors in preparation of strong techno commercial proposal demonstrating competence in LEED/GSAS. We have number of LEED APs and GSAS CGPs who can contribute to the project.

Our CVs and Profiles can give a edge for the contractors with the other competitors. Once the contract is awarded, Conserve can take away the burden of LEED Documentation from the contractor's responsibility. In general our services to contractors include,



- ⊙ Demonstrate how to use LEED-Online to team members, the GBCI document repository site
- ⊙ LEED Scorecard and project updates issued to team at appropriate intervals
- ⊙ Review of architect's LEED Requirements in Construction Documents or guidance to architect to prepare
- ⊙ Complete management of LEED certification submittal documentation. Specifically, the two-phase certification process for Design submittals followed by Construction submittals. Services entail the technical review and edits of team submittals, plus back-check, for compliance prior to presenting documentation to the GBCI for the certification review process
- ⊙ Prepare and submit CIRs (Credit Interpretation Requests) if necessary

- ⊙ Dedicating a LEED AP to represent the contractor in all meetings with consultant and client.
- ⊙ Develop, Implement and Document the following LEED Prerequisite and credits
- ⊙ SS Construction Pollution Prevention Plan
- ⊙ MR Construction Waste Management Plan
- ⊙ IE Construction Indoor Air Quality Management Plan
- ⊙ Review material submittals specific to construction documentation like Recycled content, Regional Materials, and Low Emitting Materials etc.
- ⊙ Reviewing and updating LEED Online submittals and reporting on a regular basis throughout the construction process.
- ⊙ Soliciting, collecting and maintaining required documentation for the target credits to fully comply with LEED Design Review(s).
- ⊙ Performing calculations, analyses, and preparing documentation demonstrating the achievement of the prerequisites and selected credits from the LEED Design stage review.
- ⊙ Submitting the completed certification application through LEED Online.

For Contractors

For many contractors, complying with LEED requirements (or GSAS or other Green Building rating system) remains challenging, critical and appears as bottle neck affecting the project cost, schedule and progress. For example we know cases where the progress has been affected badly because of the delay in submission and approval LEED Prerequisite SS Construction Pollution prevention. Contractor cannot mobilize the site activities unless Construction Pollution prevention plan is approved. Conserve can support contractor's right from bidding stage to handing over stage.



Environmental Engineering

Conserve offers Environmental Services. We aim to build capacity and support to our clients with a range of the following environmental services:

- ⊙ Environmental Impact Assessment (EIA): The process of identification, examination and evaluation of the potential environmental impacts of a project covering all the stages.
- ⊙ Construction Environmental Management Plan (CEMP): A critical environmental impact analysis and formulation of mitigation measures during the construction period of project.

- ⊙ Strategic Environmental Assessment (SEA): SEAs integrates the environmental, socio-economic and sustainability features of the purposed project to ensure that they are considered and addressed properly.
- ⊙ Environmental Management Plan (EMP): A plan prepared to outline the procedures for environmental monitoring and mitigation actions throughout the construction and operational phases of a project.



Energy & Water Audit

Conserve Team have Energy Auditors certified by ASHRAE and Bureau of Energy Efficiency, Ministry of Power, India.

The objective of Energy Audit is to understand how energy is spent in a building and how can we optimize the use of energy and hence reduce the buildings operation cost.

According to the definition in the ISO 50002:2014 standard, an energy audit is a systematic analysis of energy use and energy consumption within a defined energy audit scope, in order to identify, quantify and report on the opportunities for improved energy performance.



Therefore, an energy audit is an energy assessment. This evaluation analyses energy flows in a building, process or system to reduce the amount of energy input into the system whilst maintaining or improving human comfort, health and safety. The level of detail of this evaluation determines the type of audit.

Energy Audit is appropriate for facilities and buildings who spend significant money on energy resources such as Electricity, Water, Gas, Chilled water etc.

Our Energy Audit procedures are as per ASHRAE Commercial Buildings Energy Audit Procedure and ISO 50002 Standard

The procedure we follow in Energy Audit are,

- ⊙ Kick-off meeting with Building's facility manager
- ⊙ Data Collection
- ⊙ Onsite Measurements
- ⊙ Data Analysis



ISO 50001 Energy Management

ISO 50001:2011 provides a framework of requirements for organizations to:

- ⊙ Develop a policy for more efficient use of energy
- ⊙ Fix targets and objectives to meet the policy
- ⊙ Use data to better understand and make decisions about energy use
- ⊙ Measure the results
- ⊙ Review how well the policy works, and
- ⊙ Continually improve energy management



3D Scanning

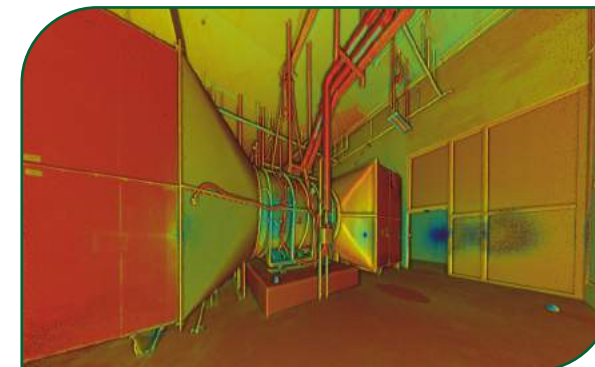
As-built engineering and documentation service deals with final documentation and updated drawings based on the as-built plant at the site. Taking a multidisciplinary approach, we at Conserve conduct discipline-specific site surveys (measurements, scanning, sketching), drawing and documentation markups, and updating of 3D models, drawings and documents.

In Conserve, we also provide road mapping services through 3D laser scanning in Conserve. This road mapping technique can be used in Global Information System (GIS). 3D Laser scanning is a highly accurate and precise method invented to document the As-Built of a construction site with a lot of time saving in real time surveying. The 3D scanner captures the construction site with millions of points per second with a tolerance of ±5mm.

We at Conserve, do the scanning of the project site and convert it to any deliverable format desired by the client.

Sequence of work

- ⊙ We scan your project site and acquire the points data.
- ⊙ Convert the captured data to Point Cloud/IGES/DXF.
- ⊙ Deliver the format to client in the form of LOD 500 3D Revit Models and 2D CAD drawings.



Testing and Commissioning

Testing & Commissioning is verifying that the building systems and the subsystems are planned, designed, installed, tested and operated to achieve the owner's project requirements. Very often Commissioning is misunderstood for Performance testing, testing and balancing. They are part of commissioning process and does not complete the entire commissioning process. Commissioning is often seen as added cost but in reality, commissioning adds value to project. Testing and Commissioning of a building ensures safety and design reliability of all the equipment's.



We at Conserve, have a specialized team of testing and commissioning engineers to carry out testing and commissioning for the following systems.

- ⊙ Building Envelope
- ⊙ Sustainable Systems
- ⊙ HVAC
- ⊙ Plumbing
- ⊙ Utility Plants
- ⊙ Fire Fighting
- ⊙ Earthing and Grounding
- ⊙ Sub-Station, Power cables, Equipment and Busbar Systems (Conventional, SFG, GIS, HVDC)
- ⊙ Auxiliary Supply Systems & Storage Battery Systems & UPS.
- ⊙ ELV systems

A properly commissioned building provides the following benefits

- ⊙ Optimized energy efficiency
- ⊙ Reduced operating costs
- ⊙ Improved IAQ and occupant comfort
- ⊙ Reduced change orders – Increased life of existing equipment
- ⊙ Improved staff training
- ⊙ Reduced absenteeism
- ⊙ Reduced warranty issues
- ⊙ Fewer comfort problems
- ⊙ Documented maintenance requirements
- ⊙ Reduced contractor callbacks



Outsourcing Technical Experts and Virtual Employees Service

As the construction world goes through a paradigm shift towards more sustainable processes & technologies, the need to optimise existing technologies and procedures to adopt new advancements become the more paramount.

We are a professional outsourcing company providing a complete suite of Engineering & Green Building (LEEDS / GSAS) outsourcing solutions to meet the shifting needs of clients

We are having a range of flexible and scalable solutions that are designed to help our clients to maximum their resources and minimum their expenditure.

We deploy man power resources & technologies that result in cost savings, improved quality, and quicker project delivery to our clients around the globe.

We utilize flexible engagement models to best suit our clients' requirements.

One of the challenges in design and construction of MEP Projects is to get Engineers and Draftsmen with required skill, in required time with in the budget. At conserve we can provide MEP Draftsmen and Engineers with required skill in short duration. By using our outsourced draftsmen and Engineers, project can reduce cost, reduce risk and execute the project within schedule.

Outsourcing Technical Experts

Deputation of technical experts to clients office / site as per requirement.

We don't stop with deputing people, after mobilization we monitor the production, collect feedback and ensure that the candidate delivers the results as per the expectation of our client.



Virtual Employees Service

Working through virtual office, with no cost on Infrastructure / Hardware / Software / Employee benefits cost on client.

We can provide skilled

- ⊙ Sustainability Engineers
- ⊙ Mechanical Engineers
- ⊙ Electrical Engineers
- ⊙ BIM Modelers
- ⊙ Architects
- ⊙ Quantity Surveyors
- ⊙ Project Coordinators
- ⊙ Draftsman
- ⊙ Piping Engineers
- ⊙ Structural Engineers
- ⊙ Environment Engineers

Trainings

We strongly believe in continuous education, We would like to contribute to the industry by promoting continuous education in our sector. We offer wide range of trainings from individual exam preparation course to corporate trainings on specific subjects based on clients requirement. We can offer training in any areas in MEP and Green Buildings. Some of our standard training modules are,

- ⊙ GSAS Workshop for project teams: The success of GSAS Certification depends on how familiar the project team is on GSAS rating system. We can offer customized workshop for project teams to create awareness of GSAS requirement to project team and hence ease the certification process. The workshop can be customized to half day or one day based on clients requirement
- ⊙ LEED Green Associate Exam Preparation Course: LEED Credentials are most popular for Green Building Professionals across the world. Our course is facilitated by USGBC LEED Faculty. The course helps professionals to pass LEED Green Associate Examination in less than 4 weeks



Piping Course: Generally Piping Engineering filed covers key role in Plant Engineering. Piping Engineer would be the heart of any piping engineering project. This course is structured to raise the level of expertise in piping design and to improve the competitiveness in the global markets. The objective of the course is to make a fresher graduate (Degree/Diploma) to proficient Piping Engineer.

- ⊙ To understand basics of Piping Engineering.
- ⊙ To understand the purpose of Piping Engineering.
- ⊙ Responsibilities of piping engineer in a project.
- ⊙ To understand project requirements & Methodology.
- ⊙ To learn types of calculations involved in piping engineering project.
- ⊙ To learn requirements of piping modelling.
- ⊙ To learn the requirements of piping analysis.

- ⊙ LEED AP BD+C Exam Preparation Course: Advanced level of LEED course for construction professionals. Our course is facilitated by USGBC LEED Faculty. The course helps professionals to pass LEED AP BD+C in less than 8 weeks
- ⊙ MEP Course: We offer different modules of MEP Course as below. The courses are targeting entry level MEP Professionals and site based MEP Professionals who want to enrich the knowledge in MEP Design
 - ✦ HVAC
 - ✦ Plumbing and Firefighting
 - ✦ Electrical Services
 - ✦ REVIT MEP One day workshop for Reviewers
 - ✦ REVIT MEP Basics & Essentials
 - ✦ REVIT - Architectures & Structural - Basics & Essentials



Codes & Standards Compliance

CIBSE	ASHRAE	ASPE	BS
DEWA	IBC/OBC	SMACNA	IEEE
QCDD	NFPA	UPC	AASHTO
KAHRAMAA	QHDM	QCS	NEMA
Ooredoo	HCM	ASTM	ANSI
MOI Regulations	QTM	BSI	ASME
ASHGHAL	ISHRAE	IEC	IESNA
NEC	IMC	IFC	ADA
IPC	IFGC	TIME SAVER	NEUFERT

Our Tools

Revit	E-Quest	CBE Thermal Comfort
Navis Works	Dialux	Climate Consultant
Autocad	Relux	EPA Net
Autodesk Fabrication	Elite	Water Cad
Bluebeam	Hourly Analysis Program	Hydro Cad
Ashrae Psychrometric	Ecotect	Cadpipe
ETABS	Furse	Pipe Flow Expert
Tekla	ETAP	STAAD Pro
Civil 3D	ECOSIM	NASTRAN
ANSYS CFX	FEMAP	FDS
Open Cascade	BENTLEY PLUS	ANSYS FLUENT
BENTLEY AUTOPIPE	CAESAR II	Infoworks
Pipenet	SIDRA	LINSIG
Paramics	Vissim	PDMS