Engineering Design Research
and Consultancy

from concept to commissioning

South City - Residential Township,
Bangalore

Super Speciality Hospital of Sri Sathya Sai
Central Trust at Whitefield, Bangalore

HSBC’s Office Complex,
Visakhapatnam
The Company

Larsen & Toubro Limited (L&T) is a technology-driven engineering and construction organization, and one of the largest companies in India’s private sector. It has additional interests in manufacturing, services and information technology.

Construction Division

ECC – the Engineering Construction & Contracts Division of L&T – is India’s largest construction organization. Many of the country’s prized landmarks – its exquisite buildings, tallest structures, largest industrial projects, longest flyovers, highest viaducts, longest pipelines and several benchmark projects – have been built by ECC. ECC’s leading-edge capabilities cover every discipline of construction: Civil, Mechanical, Electrical and Instrumentation.
ECC’s Engineering Design and Research Centre (EDRC) provides a broad spectrum of Engineering, Design, Research and Consultancy services, ranging from concept to commissioning for all types of projects: Buildings & Factories, Transportation Infrastructure, Hydel Power, Nuclear Power and Geo-technical Projects, Transmission Lines, Electrical and Instrumentation, Minerals & Metals, Bulk Material Handling, Water Supply and Treatment Plants.....

For all these projects, EDRC provides comprehensive engineering services like:

- Feasibility Studies
- Project Reports and Due Diligence Reports
- Architectural, Structural and Civil Design
- Geo-technical Engineering
- Building Services
- Mechanical System Engineering
- Electrical and Instrumentation System Engineering
- Hydraulic Engineering
- Engineering Project Management
- Inspection and Quality Assurance Support

EDRC is ISO 9001:2000 certified for all its operations by Lloyd’s Register Quality Assurance (LRQA).
Awards and Achievements

L&T has consistently won major international awards and commendations for the office buildings and diverse industrial structures designed by EDRC.

L&T has received the prestigious fib (International Federation for Structural Concrete) award and ‘Most Outstanding Concrete Structure’ awards on many occasions, besides being recognized at many international forums for its innovative designs. L&T has also been consistently acknowledged by reputed institutions as one of the best-managed companies in business excellence and ethics.

Advanced R&D Facilities

As part of its R&D efforts, EDRC constantly upgrades its knowledge and expertise in construction technology and complements the operations of ECC. In addition, it has full-fledged laboratories with facilities for concrete and soil testing including asphalt technology at its picturesque campus in Chennai.
Over the last six decades, EDRC has designed critical structures for many of India’s most challenging projects and has gained a reputation for innovation and quality through application of modern construction methods and techniques, which are constantly updated. It has a team of dedicated engineers to develop and acquire new concepts and structural systems for unique project developmental works in line with latest developments in the field. With the aid of state-of-the-art technology and customized software developed inhouse, this team works towards reducing construction time and adding value to the clients.

As economies grow, the thirst for markets becomes more and more acute and the demand for office space in premium locations goes up correspondingly. In such a situation high-rise buildings prove to be the ideal solutions to the space crunch, calling for advanced construction technologies. Realising this ever-increasing need, L&T has come to focus its developmental work on design & construction of high-rise buildings.

Dedicated Developmental Works

Perspective view of Golden City Dhyana Vihar Complex, Tada, Andhra Pradesh

Perspective view of ‘Serene County’ - a township in Hyderabad

Ocean Engineering Centre at IIT, Chennai

Model of Aditya Birla Memorial Hospital, Pune

Perspective view of a Tall Tower
Robust Resources

EDRC, Chennai has over 600 experienced design engineers/technical personnel employed in various engineering disciplines. Fast and accurate solutions are provided through advanced automation facilities. A network of computers with Windows NT/2000 operating system helps in sharing of resources.

Versatile Softwares

EDRC makes use of engineering software like NASTRAN, NISA, SAP 2000, I-DEAS, STAAD PRO, STRAP, ETABS, GRSTRUDL, PDMS, REVIEW REALITY, PLS-CADD, STRUCAD, MICROSTATION, AUTOCAD 2005, LAND DEVELOPMENT DESKTOP, 3D STUDIO MAX, VISUAL MODFLOW, FLOW MASTER, CAEPIPE, CEASER II, ETAP, TALREN, BENTLEY ARCHITECTURE REVIT, WATERCAD, SEWER CAD, etc.

In addition, a variety of structural design software has been developed in-house for regular application.
EDRC’s track record of expertise covers design of specialized designs for complicated structures like system housing, high-rise buildings, industrial structures, cement plants, factories, hospitals, bio-tech parks, hotels, shopping malls, IT & ITES parks, sports complexes, airports …..

It has to its credit pioneering work in large-span precast, prestressed concrete and structural steel structures, large storage silos, prill towers and tall chimneys.

The hallmark EDRC’s success lies in its ability to manage the entire planning, design and construction process for projects, however large and complex, with a single-point responsibility and through innovative, cost-effective solutions. It has an enviable history of delivering projects on time and within budget, adding value to the customer not only by meeting all their requirements but also by creating environments that go beyond pure functionality and enhance the quality of life.

Buildings & Factories Sector

Cyber Towers, Hyderabad

Saint Gobain Glass Factory near Chennai

Township for Pillai Perumal Nallur Power Plant, Tamil Nadu

Factory building of Perfect Circle, Pune, Maharashtra

World Class Exhibition Centre ‘HITEK’, Hyderabad
Aesthetic and Functional Architecture

Working in consonance with various departments, EDRC’s Architecture team offers creative planning and design services in line with the needs of the client. The dimensions of projects in today’s world continuously change from individual single-function units to large multi-function structures. EDRC’s focus areas include Housing, Townships, Industrial Structures, Hospitals, Hotels, Bio-tech Parks, Airports, Public Buildings, Transportation Terminals, etc. In step with the emerging trends, it has also acquired knowledge and experience in green building design.

Sound Structural Engineering for Strength

EDRC possesses expertise in the formulation of innovative structural schemes, structural analysis and design, implementation of new technologies, planning and coordination for all types of buildings, cement plants and other industrial structures including large factories, workshop complexes and warehouses. Expertise also covers seismic design and advanced dynamic analysis of structures.

It holds leadership position in the design of long-span precast, prestressed concrete structures; long span steel structures, circular and rectangular storage structures, large horizontal and vertical silos, and preheaters...

EDRC also offers a wide range of electrical system engineering services for a variety of projects. The services range from feasibility studies through concept design and detailed engineering to commissioning and handing over. The services include electrification with all allied and low-voltage systems for efficient operations.
Geo-technical Services for a Firm Foundation

As a part of India’s largest engineering and construction organization, EDRC offers down-to-earth solutions in geo-technical engineering services by employing latest technology, equipment and software. The range covers soil investigations and recommendations, design of shallow foundations, pile foundation, deep excavation, pile dynamic test, ground improvement and dewatering techniques, pavements, retaining walls…

Comprehensive Construction Methods and Planning

The Construction Methods Planning Cell (CMPC) complements site activities with safe and economical formwork and erection schemes, method statements and project planning. CMPC’s services include modern construction techniques and innovative solutions to various construction practices, viz. Excavation, Precast Concrete, Formwork, System Housing, and innovative schemes for erection of special structures.
Perspective view of Bangalore International Airport
Technology Centre II of L&T Infotech, Chennai
Perspective View of Hyderabad International Airport