

COMPANY

L&W Construction Private Limited

LOCATION

Bangalore, India

SOFTWARE

Autodesk® Navisworks™**Autodesk® Revit™**

Integrating BIM & Leed Certifications

L&W Construction private Limited delivers Globe tech park project on Navisworks &

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— **Ms. Malti Aravind**

BIM Lead
L&W Construction Private Limited



Image courtesy of L&W Construction Private Limited

L&W Construction Private Limited is a 100% subsidiary of Lee Kim TahWohHup Pte Ltd (LKTWH) from Singapore. LKTWH in turn is 50:50 joint venture company established by Lee Kim Tah Holdings Ltd and WohHup (Pte) Ltd, two of Singapore's oldest construction companies who have successfully completed projects in Singapore, Thailand, Malaysia, Indonesia, Myanmar, Middle East, Sri Lanka and Philippines.

In 2006, L&W Construction Private Limited commenced operations in Bangalore, India to carry out businesses in Project Management and Construction Activities. L&W Construction Private Limited expanded its presence in India by establishing its regional office in Chennai, Tamil Nadu in the year 2010. L&W is certified by ISO: 9001: 2008, ISO 14001:2004, BH OHSAS 18001:2007.

L&W Construction Private Limited has expanded into different verticals over the years and has dominant presence in High Rise Residential Buildings, Townships, Commercial Buildings, IT Parks, Industrial Complexes, Shopping Malls and Hotels. The company is fully committed to work excellence, constantly develop, improve the quality of product and seek cost-effective and innovative solutions to meet client's needs.

Meeting High Expectations:

Every man needs a special environment that imparts tranquility to the spirit and stimulant to mind. Keeping this in view, Globe Tech Park project was launched successfully by its promoters. This is a model IT Park, the first of its kind developed privately, offering all infrastructural facilities to the IT & Software Companies in Bangalore.

The Globe Tech Park consists of two multi-floored office buildings to suit a variety of needs and requirements, the tower A and B and special Multi-Level Car Park. Both the blocks A & B consists of two basements a ground floor and eleven upper floors. It is non-SEZ project with built-to-suit facilities and multi-tenanted buildings to meet customized business needs of the clients. Once fully developed, this project will offer over 750,000 sq ft of premium business space with state-of-art facilities where work freedom is celebrated.

The Globe Tech Park is awarded the LEED Gold certification, creates accountability for energy efficiencies, reducing costs over time and creating a meaningful contribution to resource prevention.

Revit - has helped our drafting team to visualize the design and point out obvious clashes/ design issues at first sight.

Taking Collaboration to the Next Level

L&W Construction Private Limited took over the project on owner's request from construction phase. The owner requested a Revit, MEP model deliverable from all design disciplines for use in facility management, as their previous projects had demonstrated that BIM reduced changes and produced measurable savings before and during construction.

Until now, the firm used 2D design software. However, L&W decided to adopt BIM technology for a number of compelling reasons. Globe Technology Park was the pilot project for the newly established BIM team. The project had gone way ahead in construction by the time team was established.

Autodesk's authorized value added reseller Neilsoft Ltd. helped L&W get up the BIM team and supported in the initial BIM implementation program for two multifloored office building. The L&W faced numerous challenges in this project, adapting and implementing a new technology to handle this project was primary challenge for the team. Coordinating with various departments, creating 3D models, preparing simulation, construction sequences and schedules for three multi-floored building with customized spaces adds to the complexities of the project.

The other issues faced were to make labour force understand the design intent, develop MEP models and walk-through of the basements for towers for MEP team to understand, visualize the site better and do the necessary amendments to avoid last minute decisions.

"Reworking on the problems that are beyond the limits of traditional 2D tools with the advance features in Autodesk BIM solutions, like Clash detection, understanding the interface details, logistics and safety planning, etc are important to ensure that there are no unpleasant surprises during construction." explains Malti Aravind, BIM Lead L & W Construction Pvt Ltd

Offering realistic visualizations

L&W Construction has always had a strong focus on using latest technology tools after transition to Autodesk BIM solution. The intensive training was held at the head office exploring drafting, scheduling and sequencing with respect to the disciplines and department responsibilities. After going through the training of all employees the management decided to implement BIM in ongoing Globe Technology Park project.

The project had gone way ahead in construction by the time team was ready with the BIM. The



Image courtesy of L&W Construction Private Limited

L&W Construction started with developing the 3D model, converting the MCP graph into Construction sequencing using Navisworks. All approved finishes were fed into the model. This was later used by the contractors and billing team to verify the quantities were correct. Now the team is involved in developing the as-built model with facility management in the pipeline.

Navisworks - Helped our execution team to visualize the construction program better than it was as a graph. Clash detection is now part of our co-ordination culture. The construction sequencing is now being used at tender level to convey our construction program to the prospective client. Coordinators now prefer to work with 3D because of its efficiency in co-ordination with all disciplines in one place.

Revit - has helped our drafting team to visualize the design and point out obvious clashes/ design issues at first sight. Their curiosity has led them to grow in their technical field than just being confined to producing drawings. Schedules are being used to cross verify the quantities are close to reality. Logistics planning is now done on Revit due to the ease of handling / assigning phases. Safety planning is done with the 3D model in picture.

"Autodesk understood our business requirements and delivered the right solution. Along with better visualization and coordination features, it was helped to make labour force understand the design intent. It's easy to develop MEP models and walk through allowed better forecasting, budgeting, and planning for MEP team, reducing changes during construction, as well as for ongoing operations." said Malti Aravind

Better Coordination with BIM

With the Globe Tech Park project characterized by great design, exceptional speed, quality, and innovation, L&W Construction Private Limited has earned a rock-solid reputation. The firm is now successfully implementing BIM in ongoing project like NetApp, Bangalore. Using Autodesk BIM solution the firm determined that it is possible to develop number of projects in less time, even up to 50% less compared to using 2D CAD product to manage and obtain the same results.

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