

Fully Engineered Solutions helped Prakhhyat Infraprojects to pioneer Integrated Logistics Infrastructure



Client:	Prakhhyat Infraprojects Pvt. Ltd.
Location:	Bhiwandi, On Mumbai – Nashik Highway, Maharashtra
Consultants:	EPICONS Consultants Pvt. Ltd.
End Use:	Warehouse
Brand:	ECOBUILD™ Building Systems
Roof System:	KLIP-LOK® 700 Roof System
Project Size:	1,05,752 sq.mt.

Premise - India has witnessed significant strides in e-commerce business in last few years. The logistics chains and warehousing facilities across the country are a backbone to support this e-retail and e-commerce revolution. World class retailers derive their efficiencies from their warehousing and logistics capabilities that are very critical to their business. Hence the demand for strategically located land parcels and warehousing oriented construction services is very high. The strategic business objectives of these large multinational organizations are serving as catalyst in transformation from conventional structures to engineered steel building solutions.

About Prakhhyat Group

Prakhhyat Infraprojects Pvt. Ltd. was formed by 6 visionaries in 2007, to provide state of art infrastructure with world-class facilities. Prakhhyat endeavors to create, develop and deliver large scale property, facilities and infrastructure that encourage private investment, create employment, diversify and stabilize local economy and aid in creating a sustainable environment. Today Prakhhyat is already a forerunner in industrial infrastructure with most converted project K Square, The Integrated Park Project already and several other projects in offing.

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Prakhhyat's K Square, The Integrated Park Project

Prakhhyat's pioneering and flagship 'K Square, The Integrated Park Project' was conceived to offer state of art, next generation logistics and industrial townships in an organized manner. K Square, Integrated Park Project is one of largest integrated parks spread over 170 acres with a built up area of more than 74 Lakh sq.ft. Its layout includes space for every entity in value chain of industry's manufacturing and logistics needs. The total area of K Square, The Integrated Park Project is divided into K Logix, K Industry, K Commerce and K Residency. K Logix has a 40 lac sq.ft. PEB Built-to-Suit Warehousing complex is designed, manufactured and supplied by Tata BlueScope Building Solutions. The many-tiered sub-projects and options offer flexibility to suit every scale of operation for any industry. K Square, The Integrated Park Project is a self-contained facility that minimizes logistic costs throughout supply chain and production cycle time by co-locating a number of suppliers in one low-cost location.

The Strategic Partnership: Prakhhyat Infraprojects and Tata BlueScope Building Solutions came together to build integrated logistics infrastructure in Bhiwandi on Mumbai-Nasik Highway. To develop this magnanimous infrastructure, Prakhhyat's first choice for strategic partner was Tata BlueScope Building Solutions due to its strong credentials of delivering engineered steel building solutions.

Early Involvement: Prakhhyat Infraprojects management team was well aware of advantages of involving steel building supplier in early stages of the project; such as ensuring effective design, smooth project co-ordination, faster project completion and meeting operational requirements of occupants.

Scope of Project: Tata BlueScope Building Solutions designed, manufactured and supplied Engineered Steel Building Solutions for K-Logix Project.

Detailed specifications:

The primary frame members were designed as per AISC-1989, design loads were as per MBMA-96, Seismic loads were as per IS 1893: 2002 and Cold Formed members were designed as per AISI -1996. Single side welding was considered for all primary members, welding as per American Welding Society (AWS), Structural Welding Code-Steel.




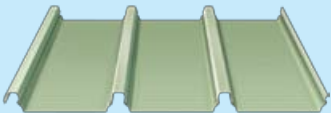


Challenges:

- Sequential delivery of materials to follow building erection priorities
- On site roll forming of KLIP-LOK® 700 roofing system, with single sheet length of up to 85.0m

Project Planning:

- (a) Daily monitoring: A dedicated Project Manager was a single point of contact throughout project to ensure proper coordination with external and internal stakeholders. Project progress reviews on daily and weekly basis were arranged to ensure proper coordination with all stakeholders.
- (b) Specific materials laydown area was required for particular modules, to enable easy identification.
- (c) Tata BlueScope Building Solutions offered expert advice to customer for resources consideration and deployment at site by builder with an aim to achieve a desired outcome.
- (d) To support our customer, daily monitoring and controlling of execution sequence was provided.

Key Project Requirements and Solutions Offered:

Sr.No.	Requirements	Fully Engineered Solutions	
1.)	Large column free area for efficient warehousing operations	All internal column spacing's are at 16.8m with Jack Beam, Jack Portal arrangement. As a result column free area achieved for efficient warehousing operations is 5,513 sq.ft.	
2.)	Facilitation of safe loading and unloading	4.5m wide continuous canopy at side walls	
3.)	Air changes in building	-Continuous Ridge Ventilators of 600 mm diameter in all buildings. -Louvers of 3.0m x 1.0m at Side walls in warehouse no. 7	
4.)	Cost efficient roof system	On site roll formed KLIP-LOK® 700 Roof System was proposed with a roof slope 1:20	
5.)	Day lighting	Continuous FRP skylights strips which cover up to 6% of roof area are provided between 'Ridge to Eave level'	
6.)	Thermal Insulation	Bubble Insulation of 4mm thickness with aluminum foil for both roof & wall of Warehouse No. 4 and 5	




Case Study

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Project Milestones and Performance:

Prakhhyat Infraprojects had released repeat orders for 6 Buildings with total area of 1,05,752 square meters, out of which four Buildings of 73,417 sq.mt are completed. The Warehouse 4 having an area of 24,461 sq.mt & Warehouse 6 having an area 7874 sq.mt are under construction.

The four buildings completed in K Logix projects are:

 <p>Warehouse 1 & 2 Area : 20,517 sq.mt Size : 111m x 200.5 m Clear height 10.80m</p>	 <p>Warehouse 7 Area: 7,393 sq.mt. 86.5m x 88.70m Clear height 10.8m</p>	 <p>Warehouse 5 Area : 22,770 sq.mt 165m x 138 m Clear height 10.80m</p>	 <p>Warehouse 5 – Extn. Area : 22,737 sq.mt 165m x 137.8m Clear height 10.80m</p>
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The Fully Engineered Solutions, Superior Quality and On-time delivery of materials are hallmarks of this project. The present occupants of K Logix are DHL, AMAZON and IRON MOUNTAIN.

Customer Feedback:



Mr. Sumeet Bhalotia,
 Director – Operations
 Prakhhyat Infraprojects Pvt. Ltd.

“The probability of meeting project goals are higher if there is a complete clarity in ‘Scope of Project’ to all stake holders involved. Tata BlueScope Building Solutions gained in depth understanding of our customers operational requirements and provided us value engineered solutions. Value Engineering not only meets optimization in design of steel structure but it also fulfills operational requirements of occupants. Greater flexibility in operations enhances productivity of our customers. The advantages of fully engineered solutions observed by us are Better space utilization, stronger structure with optimized cost and superior quality, and On-time project completion.”

We thank Prakhhyat Infraprojects team for their continued support during concept, planning and execution phase of the entire project.