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CSR Newsletter from L&T Construction

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January to June 2020

# CSTITRAINEES EMERGE AS SKILL HEROES IN THE C WID WORLD!

"The pandemic has disrupted what we once knew as normal and in the new normal, skill requirements from across our project sites have changed radically," declares Cdr. S Manjunatha, Head – CSR & CSTI, who spearheads the efficient functioning of the 8 Construction Skills Training Institutes (CSTIs) and 1 advanced skill centre spread across the country. "With our modular skill training concepts, we are aggressively upskilling our trainees to face new challenges," he adds, mindful of the fact that many of their 'finished products' are already making a positive difference at the sites where they are being placed.

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### FOREWORD

# EMERGING STRONGER IN A NEW WORLD!

Even as we emerge from lockdowns showing great resilience by adapting to new ways of working, COVID-19 continues to seriously impact people's lives around the world. Our teams are working hard to assist in the fight by supporting recovery efforts. Our priority remains the health and safety of our colleagues, our customers, and the communities where we work during these unprecedented times.

Learning was not disrupted even during lockdowns as we initiated several e-learning courses specially tailored for the young trainees at several of our CSTIs. 70% of the trainees from the Solar and Electrical trades have resumed training through these e-learning modules while others have been been adequately trained to build, operate smart systems and resolve field related issues of Fiber Optic Cable, CCTV surveillance, power, commissioning and COC. In a way these skills have made them frontline skill warriors in the COVID world.

At a Company level, we have been closely working with the Government of India, various State Governments and NGOs to implement several relief activities across the country like donating INR 150 crores to the PM-CARES fund, converting hospitals into COVID-19 treatment centres and testing labs, distributing PPEs, N-95 masks, ventilators and other health allied supplies to government health departments, feeding the needy and distributing dry rations during the lockdown period. We will continue to focus on such relief activities.

It is heartening that our L&T-eers are giving back to society using virtual volunteering platforms focused on skill development programmes like 'First Penguin Club' & 'Speak Up' for college students from underprivileged backgrounds. These programmes cover all the steps to success in a changing world: from charting career plans to bolstering confidence to face a competitive, skill-oriented world.

Social distancing and masks have become an integral part of the new normal. It is our collective responsibility to follow these protocols for our safety as well of those around us.

Here is a glimpse of the tireless efforts of our COVID skill warriors making a difference during the pandemic and our other CSR initiatives over the months.

Stay safe. Stay strong!



- Cdr. S. Manjunatha Head CSR & CSTI, L&T Construction



### Sailing smoothly in troubled waters

"Smooth seas do not make skilful sailors," observes Principal of CSTI Pilkhuwa, Kamaljit Singh Mehrok, philosophically. "The true measure of a team is not when it performs in times of comfort but when it stands tall and committed during challenging times." True to his word, CSTI Pilkhuwa has stood tall, committed and focused to set up Site-based Training Centres at the DIAL and IICC project sites to screen, test and monitor workmen deployed by sub-contractors. Since the last week of May, the centres have deployed 213 trainees and screened and tested 2500+ workmen sourced through sub-contractors.

Through its dedicated call centre, E-connect, the CSTI reaches out to past students to deploy at project sites, enrol new students and explore outreach opportunities through the Government and other agencies. "In a month's time, we have contacted 3000 past students," shares Mehrok, purposefully. "Of these, 400 have already been deployed while another 800 are waiting for conveyance to reach their respective sites." Where physical training has been disrupted due to the lockdown, e-learning modules such as tutorial videos have taken over and almost 70% of the trainees especially from the Solar and Electrical trades have resumed their training.

"The true measure of a team is not when it performs in times of comfort but when it stands tall and committed during challenging times.

*Kamaljit Singh Mehrok, Principal, CSTI Pilkhuwa* 





### Proving their mettle at sites

"Site-based training has restarted with a bang at projects sites," remarks Cdr. Manjunatha referring to the process of CSTI trainers and demonstrators skilling trainees and fresh candidates at sites. "It is quicker, more efficient and since they are being trained at a site, their appreciation of ground realities is better and so is their performance."

Principal, Niranjan Mishra and team at CSTI Kanchipuram are busy with various reskilling initiatives customised to meet the needs of a dynamic market. "Our talent strategy develops our trainees' digital and cognitive capabilities, their social and emotional skills and their adaptability and resilience," he informs. Their strategy is certainly working, reflected in the encouraging feedback about the quality of welding of their trainees from sites like the KKNPP project. "The welding trainees deployed there were selected through a stringent Russian qualification test," mentions a visibly proud Mishra.

Package 1 project, trainees took up additional responsibilities to effectively handle breakdowns and repairs, saving considerably on third party servicing costs in the process. Good housekeeping and adherence to 5S activities help reduce manpower and equipment downtime resulting in cost optimization as witnessed at the Gadag WSS Package 2 Project, Muthanna Belagavi, where a CSTI trainee's contribution has been equivalent to that of an electrical engineer to manage electrical maintenance. At Bisalpur Tonk Uniyara (RJ) and Jawai Cluster 4 WSS projects, the outstanding performance of the CSTI trainees has helped reduce budget and manpower.

Our talent strategy develops our trainees' digital and cognitive capabilities, their social and emotional skills and their adaptability and resilience. The welding trainees deployed at the KKNPP project were selected through a stringent Russian qualification test.



Niranjan Mishra,

Principal, CSTI Kanchipuram

CSTI trainees were deployed at various MMH project sites like JSW Dolvi, UAIL expansion, Tikiri, Rayagada, New HSM, Rourkela only after a stern and systematic evaluation by the project site team on various parameters like punctuality, eagerness to work at site, adherence to EHS standards, productivity, work knowledge & learning ability and team work. "Their average score across all these parameters was an impressive 4.23 on a 5-point scale," smiles Cdr. Manjunatha.

A sure shot method to safeguard profitability during such times is to save costs and the trainees deployed from CSTI Bengaluru have contributed significantly towards this end apart from performing creditably. At the Vellore





### Lending a hand to keep cities smart and safe



CSTI trainees are making their presence felt to build and operate smart systems like at the Nagpur Safe & Smart City Project where a group of 9 Apprentice Technicians, trained at the Smart City Skill Development Center at Hyderabad, have been resolving field related issues of Fiber Optic Cable, CCTV surveillance, power, commissioning and COC. Their 24x7 support involving the central management of all public announcements, monitoring of CCTVs and ensuring cyber security check across all IT systems has won praise from the Police Department.

Atmaram Magar, Project Manager, Pune Smart City Development Corporation, is all praise for the support of CSTI trainees during the lockdown "The Pune Smart City has developed customized web and mobile based dashboards which include applications like GIS tracking, heat-mapping analytics to track patients and quarantine cases, do contact tracing, community surveillance and such like and our CSTI technicians have ensured that all these systems keep running smoothly and efficiently. In fact, they have proved to be even more skilled than some of our engineers," he quips.

Smart solutions monitor strategic locations real time at Prayagraj Smart City through 1000+ CCTV surveillance and, support citizens through a 24x7 city helpline. "The CSTI technicians were working in 3 shifts, 24x7, to facilitate all requirements of the project," says Project Manager, Jignesh Dubey, acknowledging their sterling contribution.



The team at the **Energy Efficiency Services Ltd (EESL)** project is working overtime to ensure that the smart electricity meters with GPRS-based Communication Modules for Haryana and Uttar Pradesh are functioning at their optimal best. Appreciating CSTI trained technicians who have performed above and beyond the line of duty, Project Director, Shashikant Agarwal says, "Our customer has been very appreciative of the dedication shown by the trainees like Mayank, who have been independently handling all project related execution work meeting highest stands of quality and safety."

At the **Nagpur Metro Rail Project NMRCL**, the CSTI trained technicians are donning the role of safety stewards, installing radio communication systems, handling relevant documents and maintaining 13 metro stations. Kuntal Kanti

Sen involved as document controller for the entire project submitted over 2500 documents and ensured that all timelines were met. Apart from this, he also uploaded documents in the customer's digital portal - 'Assetwise'. Another CSTI trained technician, Taki Imam was appreciated by the customer for his exceptional performance regarding installations. "I must say that our technicians have made us proud by working hard following all COVID-19 SOPs, shares



Project Manager Jayakumar S. "They submitted 1200 milestone documents to complete billing of INR 21 Crores during the lockdown," he adds triumphantly.



**Atmaram Magar,** Project Manager,

Pune Smart City Development Corporation Our CSTI technicians have proved to be even more skilled than some of our engineers.



**Shashikant Agarwal** Project Director, EESL

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### Jignesh Dubey

Project Manager, Prayagraj The CSTI technicians were working in 3 shifts, 24x7, to facilitate all requirements of the project.



### Jayakumar S

Project Manager, NMRCL Our technicians have submitted 1200 milestone documents to complete billing of INR 21 Crores during the lockdown. It is impressive how they have risen to the occasion especially Shaik Rasool Basha who professionally managed all warehouse related activities. Especially the way he handled material recording and audits during the lockdown was appreciated by our customer. Certainly, the systematic training at the CSTI has shaped him into a skilled professional.

Sharad Parashar Project Manager, BMRL



Integrated Command & Control Centre, Prayagraj

At the BMRL project, CSTI trainees were assigned to build an OFC network from station to station, test, commission, prepare reports and adhere to all

specifications, especially to the new ones that cropped up with the outbreak of COVID-19. The three CSTI technicians assigned to the project ensured smooth running of all project parameters even when the vendor teams were absent. Pointing out some shining examples of their ownership, Sharad Parashar, Project Manager shares, "It is impressive how they have risen to the occasion especially Shaik Rasool Basha who professionally



Shaik Rasool Basha

managed all warehouse related activities. Especially the way he handled material recording and audits during the lockdown was appreciated by our customer. Certainly, the systematic training at the CSTI has shaped him into a skilled professional."

Another team at the Hyderabad Safe City & ITMS project led by Project Director Shanmuganathan M is ensuring that the Surveillance Systems for Hyderabad, Cyberabad & Rachakonda are functioning without a hitch 24x7 to help the State Government, the local authorities and the police department. CSTI-trained technicians have been proving to be worthy hands installing as many as 50 Public Address Systems on smart poles across the city to relay official messages on the lockdown, crowd restrictions and other precautionary messages.



### **SNIPPETS** CSTI Cuttack on combat mode against COVID-19

CSTI Cuttack has implemented various precautionary measures in its fight against COVID-19. Apart from following the highest standards of hygiene and sanitisation, the boys' hostel building at the CSTI was converted into a 96-bed quarantine facility in partnership with the Cuttack Municipal Corporation and Health Department, Govt. of Odisha. The facility that provides a safe space with proper medical care for COVID-19 patients has benefitted more than 1000 patients till date.









### **Emergency response training**

An emergency like COVID-19 demands quick and decisive responses for which CSTIs Kanchipuram, Bengaluru and Pilkhuwa have prepared a 15-day emergency response training module to fast track the training and orientation of the regional workforce mobilized either through sub-contractors or directly by CSTI and sensitize them at site. "They adapt quicker and better," points out Mishra, who has been one of the moving forces behind this module, "and they are able to perform from day one." The training module has been prepared in consultation with Construction Skills Training Department, HQ, Project Competency Cell and the technical services team at HQ.

### A more crucial role for CSTIs going forward

Even as the country gradually unlocks and sites resume operations, the lack of labour is proving to be the biggest deterrent to a return to normalcy. "While a reverse migration of the migrant labour is the only real solution, there is no telling how long the process will take," opines Cdr. Manjunatha, echoing the worry of the entire construction industry in India. "Till that happens, it remains our concerted effort to rapidly skill our wards, make them site-ready and keep feeding them to our project sites so that operations continue. The pandemic situation has underscored the key role that our trainees can play at sites and that augurs well for the future," he concludes with a thumbs up.

CSTI Trainees waiting to join during COVID-19

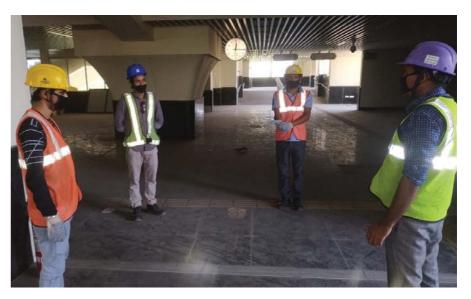
CSTI trainees provided site based training and placed during COVID-19

12697 CSTI Trainees placed at sites during COVID-19







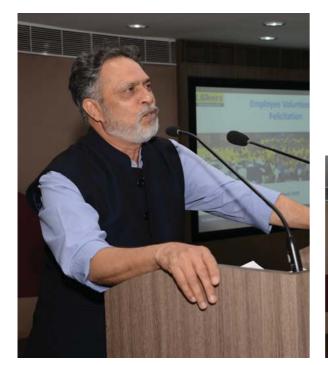


### CELEBRATE, REWARD AND POWER OUR GOODWILL AMBASSADORS

Employee volunteering is what our L&T-eers gladly do over and above their work responsibilities to spread a little cheer in the lives of the less privileged. Often unsung heroes, they are driven by their passion for social service. To celebrate their achievements and recognize their contribution, the CSR arm of L&T Construction hosted an Employee Volunteering Felicitation for the 2nd consecutive year on 9th March 2020 at HQ Campus, Chennai.

Employee volunteering has evolved over the years and is now an integral part of L&T's social initiatives with 1,900 employees having volunteered 6,388 hours for various community initiatives in 2019-20.

"I am extremely happy to see employee volunteering flourishing and I am sure for our L&T-eers, it has been a rewarding, engaging and, most importantly, meaningful workplace experience," opined M V Satish (MVS), Whole Time Director & Sr. Ex. Vice President (Buildings, Minerals & Metals), who was the Chief Guest of the event. He went on to thank the L&T-eers for committing their time and efforts for community service. "We should also look at





promoting volunteering at our many project sites that will create higher levels of commitment and pride among our employees," he added.

MVS, along with Dr. C Jayakumar, Vice President & Head - Corporate Human Resources, felicitated Star Volunteers who had clocked in more than 30 hours of volunteering and Significant Volunteers who had done 15-30 hours. The overall 'Champion of Volunteering' Award was bagged by Buildings & Factories IC for engaging the highest number of volunteers in 2019-20. The award was received by J Kabilan - Head HR, B&F IC.

NGOs who partnered with L&T CSR for employee volunteering were also honoured.

We should also look at promoting volunteering at our many project sites that will create higher levels of commitment and pride among our employees.

**M V Satish (MVS),** Whole Time Director & Sr. Ex. Vice President (Buildings, Minerals & Metals)









L&TEERING

### **CHANGING LIVES FROM AFAR!**

### **Employee Volunteering goes virtual**

L&TEERING

As the world fights a pandemic, despite having to incorporate social distancing and Work From Home (WFH) as ways of life, L&T-eers are still giving back to society using virtual volunteering platforms, instituted most opportunely only a few months before the outbreak of COVID-19. Today, volunteering is no longer about meeting in large groups for various field activities or volunteering at the local NGOs, instead, it is about creating a sense of togetherness using remote and virtual volunteer opportunities, embracing a non-traditional way of giving back secure in the realization that one still has the power to spread smiles and impart knowledge ... virtually! L&T has partnered with the NGO, Team Everest, to drive the virtual volunteering programmes **'First Penguin Club' & 'Speak Up'** 

Though millions graduate every year, they are largely 'un-employable' lacking specific skill sets. The **First Penguin Club** is a 100-hour skill development training programme focused on bridging this skill gap. Interested individuals (especially graduates) can enrol and avail of Soft Skill Training and Logical Thinking classes free of charge. The programme covers all steps to success in a changing world; from charting career plans to bolstering their confidence to face a competitive, skill oriented world.

> I thank Sharmila ma'am for spending her Sundays teaching us communication skills. She patiently clarifies all our doubts and is like our friend. Most importantly, we have overcome the fear of English. I am more confident now,"

**Lavanya,** Student

An initiative wherein volunteers guide students to telephonically improve their English communication skills through 1-to-1 conversations, the Speak Up programme has been a huge success. It pre-supposes that by practicing oral English communication daily, improvement is quicker. A 40-day programme, 'Speak up' has two volunteers tagged to each student for one-on-one, 30-minute telephonic conversations on alternate days during which they guide them. The curriculum spans 40 sessions and the volunteers need to complete one session a day.

The success of the Speak Up programme is gauged by feedback from the students like Lavanya who is pursuing her 2nd year in graduation. "I thank Sharmila ma'am for spending her Sundays teaching us communication skills. She patiently clarifies all our doubts and is like our friend," she says with a twinkle in her eye. "Most importantly, we have overcome the fear of English. I am more confident now," she adds.

For Sharmila Sampath, a star L&T-eer working in the Legal Department of L&T Construction, such testimonies propel her to reach out to more students. "I was emotional when I first interacted with intelligent students who have lofty ambitions but are deprived of opportunities to learn due to their economic condition. However now, together we have started making significant progress. I realise that empowering the younger generation with knowledge is the best service we can give. I have developed a personal bonding with the students and I am sure they will do well going forward," she says resolutely.



"I was emotional when I first interacted with intelligent students who have lofty ambitions but are deprived of opportunities to learn due to their economic condition. However now, together we have started making significant progress. I realise that empowering the younger generation with knowledge is the best service we can give.

Sharmila Sampath , L&T-eer



Teaching and interacting with the college students is very inspiring. I sleep better knowing that I have made a difference in someone's life.



**J Ashok,** L&T-eer

### **TUNNEL OF HOPE**

Living up to the testing times of the pandemic, Bhavin Kansara, an L&T engineer, designed and developed what he calls a Sanitiser Tunnel that can go a long way to curb the spread of the disease.

The tunnel is a 4x6x7 feet chamber akin to a metal detector doorframe or more aptly, the female passenger frisking cubicles seen at security check-ins at airports. A unique aspect of this sanitiser tunnel is that it is capable of sanitising an entire human body in a matter of just 10 seconds.

"I have used two body sensors, two operation theatre (OT) fogger machines, five-metre flexible PVC pipe, a 200-litre santiser tank filed with isopropanol alcohol, what is commonly known as sanitiser, and supporting electrical controls to develop the sanitizer tunnel," shares an excited Kansara.

The moment an individual enters the chamber, the entry-sensor automatically activates the fogger machines and starts to spray small particles of the sanitiser along with high velocity air. Within seconds, the entire chamber fills with the mixture of air and sanitiser. This, in turn, completely sanitises an individual from head to shoe in just 10 seconds. When the individual steps out of the chamber, the exit-sensor automatically deactivates the fogger machines. Depending on the number of people walking through, it consumes about 5-7-litres of sanitiser an hour.

As India limps towards a new normal of hygiene and sanitation, this sanitiser tunnel will be particularly useful at airports, railway stations, offices and hospitals that see a large number of people. Installing it at the entry/exit points will protect an individual until he/she comes in direct contact with an infected person.

Interestingly, it was his wife who sowed the seeds of innovation in Kansara's mind, "My wife is attached to a hospital at Dholera in Gujarat. With the pandemic worsening by the day, she asked me whether I could do something to protect the staff and patients from contracting the virus and thus was born the sanitiser tunnel," says Kansara with great pride



### L&T-EERING TO SAVE THE COAST OF MAURITIUS

On Jul 25th 2020, disaster struck the coast of the small island nation of Mauritius in the Indian Ocean when a Japanese oil tanker, M V Wakashio, carrying some 4,000 tonnes of fuel oil and diesel ran aground on a coral reef resulting in an oil spill that is now threatening the balance of both marine and human life in Mauritius. The oil spill is endangering a newly established marine farm, wildlife on the nearby green islands and the livelihood of hundreds of fishermen. The threat has forced the Prime Minister of Mauritius to declare a national crisis and seek help from countries specialized in handling such situations.

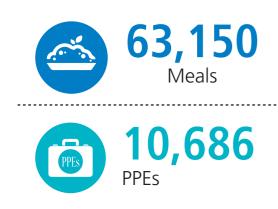
Several NGOs, local companies and volunteers have thrown themselves for the past two weeks to try and absorb, clean, and control the oil spill. While India has responded positively to help Mauritius through Indian Oil (Mauritius) who are helping to pump out the remaining fuel in the ship, our team of L&T-eers from the Mauritius Metro project site have also reached out in some of the most affected regions to help hundreds of local volunteers with food and refreshments, who are working day and night to clean the shores. Additionally, L&T has offered technical help to the marine authorities to manage the oil spill.

Our initiative has won the attention and appreciation of both the local community and media and who are expressing their appreciation in the print and social media. "We are building the biggest infrastructure for Mauritius and by reaching out in this time of national crisis, we have, on one hand, shown the people that we can be counted on, and on the other, have reaffirmed our commitment to this island nation," summed up G Vinod, Project Director, Mauritius Metro project.





## **STANDING BY THOSE IN NEED!**











90 Semi Fowler Beds



**10+7** Bipap Ventilators

#### Alleviating hunger in the community

The lockdowns resulted in the disruption of essential services and non-availability of many essential items that particularly affected the poor, sick who were stranded at hospitals and other marginalised communities who had lost their livelihoods. L&T has joined hands with Eco Kitchen to provide cooked food to several of Chennai's public hospitals for patients, caretakers and health workers. The team has thus far distributed 43,150 meals from 3rd April to 20th April 2020 across 7 government hospitals.

The CSR arm of L&T Construction, in association with Feed My Chennai, has distributed around 20,000 meals to migrant workers and people in distress across 7 zones of Chennai Corporation.

#### Support to the Health Department, Government of Tamil Nadu:

To supplement the efforts of the Government of Tamil Nadu, L&T provided 44,100 N-95 masks and 10,686 PPE kits to the Tamil Nadu Medical Services Corporation Limited, Chennai for the safety of frontline healthcare workers. 90 semi fowler beds with mattress and linen, 10 semi fowler beds with mattress, linen and castors, 10 ventilators, 7 Bipap ventilators, 20 multi parameter monitors were additionally donated.













### **GROWING STEM ACROSS SCHOOLS!**

L&T's flagship CSR programme, aptly titled 'Engineering Futures,' to impart STEM (Science, Technology, Engineering and Mathematics) education was introduced in 20 government-run schools in Chennai. Benefitting 6,332 students, this programme bridges the educational and digital divide by bringing technology to under-resourced government schools and transform teaching and learning into a collaborative, project-based approach. The beneficiaries of this project are the Teachers of Grade VI – VIII handling Science and Maths and the students of classes VI to VIII.

As an offshoot of this programme, two exhibitions to promote STEM learning were conducted. The **Sir CV Raman Intra school STEM Exhibition** was conducted in all 20 schools from 3rd - 11th February 2020 that was inaugurated by Dr S. Kannappan, Director of School Education, Government of Tamil Nadu at Government High School, Karambakkam on 3rd February 2020. 2,867 students enthusiastically participated in the exhibition displaying 595 working models. Based on the various models the students made presentations and the winning team from each school was selected to participate in the Inter-school STEM Exhibition.





595 Working Models







Commemorating the National Science Day on 28th February 2020, the **Sir CV Raman Inter-School STEM Exhibition** was conducted at Government High School Mugalivakkam. 100 students from 20 schools, supported by L&T participated, displayed 20 STEM working models that were broadly under the themes of Rescue Management, Science in Agriculture, Future Transportation & Communication and Energy Sources & Conservation. The winners were selected by an eminent panel of judges.

The top six winners will be taken to Indian Space Research Organization's SHAR unit at Sriharikota.

The STEM programme will be extended to another 83 government schools across five states of Tamil Nadu, Gujarat, Maharashtra, Haryana, Rajasthan and Puducherry in the current financial year.





### FOSTERING INDEPENDENT LIVING

For all children, and especially those with special needs, achieving independence is an important part of the journey into adulthood. With the right preparation and learning modules, children can develop these essential skills required to foster independent living. Vidya Sagar has developed a Transition curriculum for students in 2017 to make sure that they become contributing members of the family and society and learn important life skills apart from academics. The Transition curriculum looks at various skills needed for a student to gain inclusion and independence. The students are trained on various pre-vocational skills.

As a part of this training, the skill training unit was set up on 2nd March 2020 in association with the CSR arm of L&T Construction to develop back-office skills of students like photo copying, lamination, hospitality, etc. These skills will enable them to be better equipped and offer opportunities for open employment. All equipment at the skill training centre are modified to suit the needs of the children. The photo copying and lamination machines are equipped with tables and can be easily accessed on wheelchairs. The skill training unit will be managed by specially trained staff and will benefit all students above 12 years of age. The unit will be fully functional once the schools reopen as per Government orders.







### **FORD GLOBAL TECHNOLOGY & BUSINESS CENTRE** -**INDIA'S LARGEST PLATINUM-RATED GREEN BUILDING!**

Ford Global Technology & Business Centre, the 2.6 million square feet high-rise campus in Chennai and built by B&F has become India's largest Platinum rated green building in the office-cum-research park category. This well-deserved recognition from the Indian Green Building Council (IGBC) is thanks to its several sterling features.







#### Sustainable Architectural Design

Oriented to the sun path, all the buildings utilize maximum benefits of sunlight with more than 50% of the regularly occupied space having the required daylight illuminance levels. The flood, storm, and wind resilient buildings have an energy efficient façade that is of double-glazed, high performance glass with unique, honeycomb aluminium composite panels consisting of two cover sheets and a honeycomb core of aluminium that make them flat, light weight, fire resistant, stiff, and therefore sustainable. The design is also physically challenged friendly.

#### Water Conservation

Several technologies help to harvest rainwater, recycle and reuse grey water; low-flow fixtures and sensors reduce water waste, yield lower sewage volumes, reduce energy use, and accrue financial benefits. The zero-discharge campus has a 5000 KLD rainwater harvesting sump to capture storm water and water efficient fixtures reduce potable water consumption by 30% more than conventional fixtures. The sewage treatment plant installed at the campus treats waste water for flushing, landscape irrigation and cooling tower makeup. The latest efficient irrigation systems like soil moisture censors, drip irrigation, time-based controllers and central shut off valves help conserve water while a sophisticated metering system monitors the entire water system for efficiency and quality.















#### **Energy Efficiency**

The building's envelope design and energy efficient glass thermally insulates it while energy meters with BMS system constantly monitor and control various energy consuming systems. 450 kW Solar Panels and 3000 LPD Solar Hot Water Systems add to the building's output of renewable energy while daylighting and occupancy sensors significantly reduce the lighting load.

#### **Building Material & Resources**

Adding to the 'green' in the building are materials used like non-toxic GreenPro certified materials and furnishings, recycled-content or salvaged materials, FSI certified wood and other materials from renewable sources. An organic waste convertor efficiently converts organic waste generated into manure. To boost the local economy, over 50% of the construction materials were sourced from places within 400 km from the site.

#### **Indoor Environmental Quality**

The use of non-toxic materials, combined with natural ventilation and effective air filtration, have vastly improved indoor air quality, control indoor moisture levels, and protect occupants from mold, chemicals, combustion by-products and other indoor pollutants. More than 70% of the regularly occupied areas are designed with adequate natural lighting. CO2 sensors, installed in the return air duct, modulate the fresh air quantity as per the indoor CO2 levels.

#### **Innovation & Development**

LED fixtures light up both indoors and outdoors ensuring zero usage of mercury based light fixtures, to optimize energy. Eco-friendly housekeeping chemicals reduce the risk of exposure to harmful chemicals. In addition, a robust Green Education Outreach promoted green consciousness and educated various stakeholders accessing the buildings including occupants, visitors, students, etc.

#### Keeping the environment green

An integrated design approach adopted from design to commissioning ensured that the surrounding natural environment and related ecosystem were not affected in any way. The site level was raised considering the maximum flood levels and adequate erosion and sedimentation control measures like sedimentation basins, vehicle wheel washing facility, site barricading, water sprinkling, gravel roads for vehicular movement, slope protection strategies have been implemented. It also meets the needs of the local community, supports active & healthy lifestyles, provides ecosystem services, and creates a sense of place.

### **BLOOD DONATION -SAVING LIVES!**

As part of the safety month celebrations, the CSR arm of L&T Construction and L&T GeoStructure in association with Indian Red Cross Society, Tamil Nadu Chapter, organized a two-day blood donation camp at L&T HQ in Chennai on 5th & 6th of February 2020. 458 units of blood were donated by the enthusiastic L&T-eers.

Mr. S. Kanappan, Head & Chief Executive, L&T GeoStructure inaugurated the camp in the presence of Mr. K P Ravinath, Head EHS L&T GeoStructure and Dr. G. Sathappan, Sr. Medical Officer, L&T Construction.





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