Lincoln Bennet Rodrigues
Lindsay Bernard Rodrigues
Creating Uber Luxury Home Experiences
Minimized Elevator Downtime With Preventive Maintenance

Connected to cloud platform, KONE 24/7 CONNECTED SERVICES is a real-time monitoring intelligent service that prevents faults proactively resulting in lesser down time. Adds value to your buildings by ensuring safety & reliability for elevator users, peace of mind and transparency for the owners & facility managers.

Interested to connect your building’s elevators to real-time monitoring? Scan this QR code for more details or connect with KONE expert.
India's largest wood panel manufacturer has the highest MDF production capacity in India.

Greenpanel produces more than 500,000 cubic metres of world-class MDF annually.
UPGRADE YOUR SECURITY.
BUILD A SAFE WORLD.

The better way to secure your valuables

When it comes to your most valuable possessions, half-measures won’t do. Instead, choose a more robust security system like Quba’s range of digitised safes. Their superior technology gives you total peace of mind while the great designs make them easy on the eye.

- Capacitive finger print scan technology
- Emergency jump start (USB port for power bank)
- Aesthetically appealing designs, colours and finish
- Random password security (***12345*** up to 30 digits)

To find a solution best suited to your needs, call us at 1800 419 3330

www.quba.india.com

LinkedIn | Facebook | Instagram
Material Manufacturers

10 Greenpanel MDF seeing growing popularity
15 Asian Granito India expanding export network to over 120 countries

Cover Feature

18 Bennet & Bernard: Creating Uber Luxury Home Experiences

Lincoln Bennet Rodrigues Founder & Chairman and Lindsay Bernard Rodrigues, co-Founder & Director, operate the Bennet and Bernard empire in complete sync with each other's strengths, ideas and vision; while the former takes on the role of business expansion, the latter brings creative ideas alive

Architecture & Design

12 Office: A collaboration between Urbanscape Architects and Utopia Designs, the distinctively designed office is a new-age epitome of urban culture and environmental sensibility
16 Hotel: Mandalay Hall Kochi’s very own Art Hotel designed by Ar. Tony Joseph
22 Train Hall: Designed by Skidmore, Owings & Merrill (SOM), the Moynihan Train Hall restores the grandeur of train travel in New York
24 Residence: Cityspace’82 Architects designs a house with robust attributes and voluminous light-filled living spaces
28 Aquatic Center: MAD reveals design for 2024 Paris Olympics’ Aquatic Center
Dear Influencers,

We have embarked on a noble quest; beautifying homes. It's a journey where we have to move shoulder-to-shoulder with you.

Our wide range of home decor solutions will find resonance with you. We can also customize products in tune with your requirements.

So here's a glimpse into our expertise:
- Wall Art
- Lighting Solutions
- Lamps
- Furniture
- Table Décor
- Vases
- Gifts
- Artificial Plants

3, Baikunth Nagar, Hawa Sarak, Sodala, Jaipur 302006
+91-8209476561, 9521530398
virasatgiftsjpr@gmail.com
virasatgalleryjaipur
Contents

30 Station: ZHA wins competition to build Klenoviy Boulevard Station 2

32 Football Center: UNStudio has teamed up with Johan Cruijff ArenA for their winning masterplan for the Korean National Football Centre in Seoul

36 School: Sanjiv Enterprises’ design of the school follows the Gurukul philosophy of learning

38 Farmhouse: Ar. Aparna Kaushik creates a deconstructed Rubik’s cube layout

40 Residence: Designed by Studio Clay, the house illustrates its prominence through the composition of cuboids

44 Factory: Together with Vestre, manufacturer of urban furniture, BIG unveils the world’s most sustainable furniture factory which will double up as a 300-acre park

47 Metro Station: With the Doha Metro, Qatar Railways has created one of the most advanced and fastest driverless metro systems in the world

50 Hospital: Designed by IMK Architects, the Symbiosis Hospital & Research Center expresses grandeur and solidarity

Cover courtesy: Bennet & Bernard

Subscription

₹1800 / One Year

All payments in favor of NBM Media Pvt. Ltd. New Delhi. No part of this publication may be reproduced by any means without prior written permission from Editor.

* Responsible for selection of news under the PRB Act.

MGS - Modern Green Structures & Architecture is not responsible for statements made, or for opinions expressed, in the articles published in this volume and publisher accepts no responsibility for accuracy of information, errors or omissions and rejects any claims arising out of any action which a company or individual may take on the basis of information contained herein.

OPEN YOUR HOME WITH SHREEJI

MORTICE HANDLE
ULTIMATE CHOICE OF HARDWARE

Aldrops | Tadi | Handles | Hinges | Tower-bolt | Mortice Handle | Floor Spring | Curtain Bracket

SHREEJI METAL TECH.
SHIVAM INDUSTRIES AREA
PLOT NO. 15, B/H LABH PETROLIUM
NEAR MEERA UDIHYOG, NH 8
AJI RING ROAD RAJKOT-360002

PH-0281-2389966, 2389965
MO.NO. +91-9913856565
E-mail : shreeji@shreejihardware.com
Web : www.shreejihardware.com
Greenpanel MDF
Growing Popularity

While the MDF is a highly used board in international markets, there is less awareness of its usage and benefits in India as it is a relatively new generation product here. Shekhar Sati, President - Sales (MDF & Flooring), Greenpanel Industries, is confident that there is a great potential for this product in India and foresees exponential growth and acceptance of MDF boards in the coming years.

Uses, benefits and aesthetics

MDF is a high-density product as compared to the particle board and even plywood, with density ranging from 750-850 kg/M³, which makes it an extremely durable product. It has a high screw holding capacity, and great load bearing capacity as well.

MDF offers ease of application since it is very versatile and can be used for a variety of purposes such as for wall paneling, toy manufacturing, carving handicrafts and more. It can be carved, laser cut, and machined to achieve intricate designs with minimal wastage. The end-product achieved will be far superior to any other product as MDF brings better aesthetics and finish of the final product. It enables a uniform, smooth surface that is easy to paint. MDF is the most commonly used product for making modular furniture.

Another great benefit is that it is pocket-friendly: it is 20-25% cheaper than non-branded plywood and 40-50% cheaper than branded plywood. Using MDF is also time saving as it needs minimum sanding and finishing, which means less labour costs. Greenpanel MDF is available in different grades and in various thicknesses and sizes. Architects, designers, dealers, OEMs and other users can select from Club Grade, Exterior Grade, Industrial Grade, E1/ E0.5/ CARB P2 MDF, Pre-Laminated MDF or Veneered MDF, depending upon their application requirements.

All the products of Greenpanel are treated against termite, borers, and fungus. Though MDF doesn’t need any specific maintenance, precaution should be taken against their usage in wet areas where there are chances of seepage and moisture, plus, MDF should not be used for external applications. When applied in indoor spaces, an MDF-based product can last up to 15-20 years. You could say that MDF is as safe as plywood-based products and comes with a lot of other advantages.
Sustainable Manufacturing
Greenpanel is India’s largest manufacturer of wood panels. Its state-of-the-art manufacturing plants in Uttarakhand and Andhra Pradesh produce MDF, Plywood, Block Boards, Veneers, Flooring and Doors. The plants have a combined annual capacity of more than 550,000 cubic meters of MDF. Automated German technology machines ensure high production and international quality products while a world-class lab ensures quality control at every step of the manufacturing process.

Greenpanel MDF produced here is environment-friendly and sustainable. Our wood is sourced from Eucalyptus, Casuarina and Subabul agroforests. We use harvested timber and ensure replantation immediately after cutting the timber. We encourage agroforestry among farmers by giving them our saplings and in the process, generate a source of livelihood for them.

Our production processes do not harm the environment. We believe in minimum carbon emission and ensure all necessary measures to keep it under control. Our manufacturing plants operate on zero waste system. All wood scraps are used for fueling the power plant and the water treatment plant brings clean water. All the machineries are automated, so they emit less noise and dust. To ensure safe and environment-friendly finished products, we make emission-free products that are certified by several international agencies.

Expanding the brand
Today, the MDF category is growing at 20-25% year on year. In the last two years, with many small and mid-level players having ventured into the MDF business, the turnover of MDF has doubled. This year too, despite the pandemic lockdown impacting businesses badly, there is good growth in domestic demand and sales are picking up with 15-20% growth month on month.

Greenpanel has the largest production capacity in India and we export almost 25% of our production to different countries. To strengthen the Greenpanel brand recall and grow our MDF business, we are now focusing more on retail expansion. We aim to increase our reach and visibility across tier-3 and 4 towns. We have a state-wise plan to have a presence in each district level town, especially in rural markets, and are recruiting manpower to support our extensive marketing plan.

We are also using social media, digital advertisements, and the print media, while undertaking BTL activities, and conducting training sessions for carpenters and contractors. We have an ATL advertisement plan lined up from FY21-22 to increase the awareness and acceptance of our MDF and Flooring products.

We have around 2500 direct billing points which are working in the capacity of dealers, distributors, and retailers across the country, and many OEMs are buying directly from us. Our strategically located plants in the North (Rudrapur) and South (Tirupati), along with our in-house teams are catering to these regions. To make best use of the locational advantage and less lead time, we are creating a wide network in the northern and southern regions. As regards our market expansion, around 400 new counters were added in 2019 alone, and we plan to add another 500 new billing points this year in different parts of the country.
A Sculptural Manifestation

A collaboration between Urbanscape Architects and Utopia Designs, the architecture and design of Sangini House in Surat explores ways in which it can respond to the context and spirit of the heritage it stands on; a rather distinctively designed building, it is a new-age epitome of urban culture and environmental sensibility.

This office building of the Sangini Group characterizes new strategies for a flexible column-free office space that creates a new urban venture in the city's dense business district. Established in 1984, the Sangini Group is a leading construction firm delivering technical excellence in building design for habitats and commercial spaces. The site for their new office building is located on the city's Canal Road. The areas on the Vesu–Canal corridor are re-developed, and the roads are newly constructed. The scheme is envisioned as an upcoming real-estate epicentre, providing a revived infrastructure and a healthy lifestyle for its inhabitants.

The eight-storied office building reflects an innovative design. The irregular site with mandatory setbacks offered the opportunity of a triangular footprint. Conceptualising the design as a sculptural manifestation, the initial design ideas were developed as a work of art that would challenge the archetypal structural systems and the notion of a building, while showcasing the ethos of the Sangini brand, its capability and expertise in the developer domain.
The design intent was to create a dynamic built volume that would encourage the visitor to come into the space and the building. As a result, cantilevered floor plates that defy the conventional grid structure with post-tensioned sweeping floors have been cast along with exposed concrete walls that are structural in nature. Bearing in mind the cantilever’s scale, alternate floors have been intentionally connected with sheer walls, resulting in each floor acting as a single beam, with the functions shuffled accordingly. This exercise led to a column/wall free alternate floor.

The nature of the family business and the resultant hierarchy plays a crucial role in spatial planning and movement, in order to determine the connections and vertical segregation. Extending the home into the workspace, a personal, sensitive, and conscious experience is created within the building through the hierarchy of spaces and their interconnectivity. A small floor plate results in its segregation from the vertical core that comprises two lifts and a staircase.

Guided by the building’s unusual design, a distinctive profile and an appropriate orientation adopted through sun path analysis, the environmental strategy exploits the various factors to enable programmatic and functional success. The stone skin with three dimensional perforations envelopes the core and provides shade from the harsh sunlight of the south and west throughout the day. The skin wraps around on the fifth and sixth floor to unify the structure and create an inviting and invigorating volume of the five-floor high entrance.

The Sangini House stands as a testament to the brand’s values, designed in response to context, heritage, and functionality. Together with the highly efficient services equipment and systems in the building and the façade design that is integral to the energy strategy, the building aims to achieve a Platinum green rating

Principal Architect Dinesh Panwar
The entrance is where the private world of the tower meets the public realm and this soaring light filled space tones down the scale, making it look proportionate to the floor plate. The voluptuous space of the eight storied structure transforms visibly into a five storied structure, a warmer, more approachable and composed space.

From the entrance, the visitor is directed along the sweeping skin into a double height atrium which opens into a court. Daylight is drawn into the various office levels and down through the building via the atrium. Other active means of energy systems in the building include rainwater harvesting and drip irrigation systems, which are used to optimize water consumption, radiant floors, and ventilation systems.
Asian Granito India expanding export network to over 120 countries

Asian Granito, a leading tiles brand of India, is eyeing exponential growth from its exports business. Anti-China sentiments, reduction in gas prices, and robust export orders from USA, Europe, UK and Middle East are driving the export business in the current fiscal and it is expected to get further momentum in the coming months. The company is also expanding its business network in over 120 countries from 100 currently.

Asian Granito is the largest exporter amongst the organized players in India. Consolidated export of the company grew to around 17.6% of total revenues in H1FY21 vs 13.8% in H1FY20. India ranks 2nd and produces 12.90% of the global ceramic tiles output. The recent reduction of gas prices in the domestic markets has made Indian tile products more competitive in world markets and together with recent developments globally, share of India in the global trade is likely to improve considerably.

Says Kamlesh Patel, CMD, “Despite the challenges of Covid, demand from international markets has injected fresh blood in the Indian ceramic industry. Exports during the past three months have seen a considerable jump and are increasing due to the ongoing spat between USA and China, and all major players in the industry are working at a capacity of 80-85% due to the robust export orders.”

To further strengthen its international business and boost exports, Asian Granito has launched a 15,000 sq ft AGL Export House at Morbi, which showcases over 3000 products in all sizes, designs and finishes. Morbi accounts for more than 70% of the country’s tiles production with over 1000 manufacturing units in the zone. Trade partners and business communities across the globe regularly visit Morbi for business and trade.

Says Mukesh Patel, Managing Director, “Currently, many countries are looking at India for their requirements. With anti-china sentiments across the World and USA imposing heavy duties on tiles from China we anticipate huge export potential for Indian companies. The recent reduction in the gas price is also making Indian tiles more competitive in the World market and will be a major catalyst in export business. The move will reduce the total costs by 3-5% and help improve the margins and profitability of the overall sector in a challenging environment.” He informs that USA has imposed anti-dumping duty of up to 356% and anti-subsidy duties of up to 358.8% on Chinese ceramic tiles products. Duties on Indian tiles are only 8.5% which is expected to increase tiles exports to USA from India.

Asian Granito is also looking to engage with global players with an objective to make India a global manufacturing hub for tiles and sanitaryware and aims to provide end-to-end solutions including quality assurance, packaging, efficient supply chain management, and adherence to stringent compliance and ethical norms. In-line with this strategy, it has recently started catering to demand from Siam Cement Group (SCG), one of the largest cement and building material companies in Thailand and Southeast Asia. SCG has a presence in 21 countries including Indonesia, Malaysia, Vietnam, Philippines, Sri Lanka and others.

Asian Granito has 9 manufacturing units spread across Gujarat, over 300 exclusive showrooms, and 14 display centers across India. Its range of products consist of floor, wall, parking and outdoor tiles, including natural marble, quartz, porcelain etc. To leverage the synergies, the company has entered the sanitaryware market and has also launched CP Fittings and a faucets division in order to provide complete bathroom solutions. It has set a target to increase its retail touch points to over 10,000 and expand the network of exclusive showrooms to 500; and expects higher sales in the coming quarters due to its dominance in B&C class cities and a focused penetration in the market.
Mandalay Hall
Kochi’s very own Art Hotel

Mandalay Hall offers art enthusiasts its signature Art Residency and Exhibitions

Nestled in the cobbled by-lanes of Mattancherry, Mandalay Hall is a 200-year-old landmark building, which now operates as a luxury hotel in the once residential Jewish quarters. Inspired by the history and beauty of the heritage structure, the hotel is crafted with an unforgettable experience bridging Kochi’s past and present. It hosts immersive installations created by different artists who are invited by a chosen curator. This year, the Vol.2 of the residency is curated by internationally acclaimed artist Bose Krishnamachari, and features talented young Malayalee artists such as Anju Acharya and Dibin Thilakan.
The installations in the rooms are site-specific and temporal, lasting only for two years, after which a new set of artists and designers take-over the space. The Mandalay Hall Art Residency Vol. 1 hosted a stellar line-up of emerging and established national and international talent that included Giuseppe Stampone, Jigesh Kumar, Kartik Sood, Katayayini Gargi and Mithra Kamalam.

This building has five suite rooms or ‘Galleries’ that are rich art-filled spaces. Lovers of art can book a Gallery at the Mandalay Hall Concept Hotel to live inside an installation and experience art in a completely unusual and unprecedented way.

Ar.Tony Joseph and his family redesigned the boutique property, which is being managed by Joseph’s daughter Pallavi Kainady, a design strategist trained in New York. The space also houses design store Panchaloham, a high-end antique jewellery boutique, and Aah - an experimental restaurant serving contemporary Kerala cuisine.
Bennet & Bernard
The Brand That Epitomizes Goa

Here’s the story of Founder & Chairman Lincoln Bennet Rodrigues and co-Founder & Director Lindsay Bernard Rodrigues - first generation entrepreneurs of the Bennet & Bernard Group that defines glamour, magnificence, novelty and exclusivity of luxury housing in Goa. Lincoln and Lindsay operate the Bennet and Bernard empire collectively, the former taking the role of business expansion and the latter owns the conversion of ideas from paper to reality.
The zeal to be only the best and, aided by constant learning and reengineering, has been the key motivation. The going has been tough but they have been using this as their adrenaline and they have only gotten stronger. And the results are there for everyone to see.

Architecture at its best
Architectural landscape plays a significant role in real estate today. More so in Goa, because this is where the east meets west with elegance. It influences and interacts positively with society. Bennet and Bernard have created a niche for themselves with their unique style where you feel a distinctive sense of space and grandeur the moment you enter any of their projects. Over the last decade, the company has delivered many exclusive homes in Goa that are highly appreciated for their architecture and high standards of aesthetics, be it the Spanish or Portuguese-styled villas or duplex condominiums and penthouses in a French château-styled structure. None of the designs are ever repeated making each project exclusive for every owner.

“Architecture should speak of its time and place but yearn for timelessness.” – Frank Gehry

The company has successfully completed many high-end luxury projects in Goa like Gables by the Bay: an international trend in luxury residence, or the Spanish Casa Del Señor that artfully blends traditional influences with contemporary amenities to create luxury living spaces. Elmsgate, with Balinese architecture, is pure luxury. Tudor House, a beautiful French Château, transcends its royal dynasty look with its colonial frontal façade. Quinta Del Mariano is a colonial Portuguese architecture masterpiece, Northquay, Dutch...
Luxury is a limited edition and never mass-produced. The concept of luxury living should revolve around the idea of quintessential living where accessibility meets luxury and class. Living at our properties provides residents a rare opportunity to make an exceptional style statement. We believe that true luxury stems from exclusivity, hence, each project has its own story. We have always stayed ahead of the curve in introducing new concepts and will continue to bring disruptive innovation in holiday homes.

**Lincoln Bennet Rodrigues, Founder & Chairman**

Tropical architecture on a riverfront project is also marvellous and then there is Sevens, reflecting contemporary design. The projects are all on wishful locations, mostly in North Goa, in Assagao, Moira and Siolim, which convey an address of high value.

Grosvenor House, the latest in their offerings, is a one-of-its-kind Georgian architectural marvel that reflects international standards of high-end living. This formidable wonder, solitary, imposing, regal, poised to push the boundaries of luxury and aristocracy, beyond and higher is one of the most prestigious homes in Goa. The materials used for the project in all aspects including the steel are probably the most expensive and premium in their respective categories. Bespoke options of single stone Italian marble in each unit and top of the range sanitaryware add to the opulence. Each unit is furnished fully with contemporary Victorian interiors. Grosvenor House will be a striking landmark on an arterial road, yet tranquil behind the high walls of privacy.

**The best of construction methodologies**

“Architecture is the learned game, correct and magnificent, of forms assembled in the light.” – Le Corbusier

Since inception, environmental stewardship is a commitment at Bennet & Bernard and they strictly adhere to it. A building designed using passive architectural feature can significantly reduce its dependency on mechanical forms of cooling and heating and lower operational costs to a great extent. Hence, this is one of the core principles of their projects. Some of the other highlights that add to the sustainability appeal of projects include usage of white- or light coloured roofs that reflect the sun’s energy instead of absorbing it. Solar energy is also harnessed to its maximum potential. Large double glazed UPVC windows in the projects help maintain the internal temperature and provide good ventilation. Also, villas are optimally positioned and aligned keeping in mind the wind directions and sun to keep the villas naturally heated during the winters and cooler during the summers.
Modern technology is visible in multiple forms. It begins at the plinth level with damp-proofing technology. Sturdy construction is ensured through anti-termite treatment from naturally derived solvents. RCC structure tested for NDT (non-destructive test) and pulse velocity, rigid electrical concealed conduiting, external walls double coat plaster with integral admixture for water repellent properties, roof waterproofing with polyurethane liquid treatment with high elasticity, which has excellent thermal and weather resistance, most appliances with inbuilt inverters to mitigate fluctuations, are just some behind the scene instances where technology ensures fantastic build quality.

Growing demand of holiday homes in Goa

The demand for luxury holiday homes in Goa has always been high and has gone up in the post Covid-19 context. Many people today are looking for a retirement holiday home with millennials especially looking to invest in Goa as their getaway destination from the busy cities and chaotic lives. Buyers are looking at luxury projects that are independent and large in gated communities with unique architecture. The location of the project also plays a key role, along with exclusivity, and, hence, destinations with a scenic locale and with experiences within the home and community – all of which are highly demanded by the buyers. The quanta of health, convenience, and safety issues involved have risen lately, leading to buyers becoming extremely selective. Goa will definitely keep attracting investors because of its culture, lifestyle and the value for money it offers.

We have mastered the fine art of maintaining a balance between design and purpose and offer the highest levels of comfort, down to every last detail. Our enviable clientele list stands as testament to our promise of offering only the best

Lindsay Bernard Rodrigues, co-Founder & Director

The future is set

The journey of accomplishments, the brothers see as just having begun and have strategised several upcoming plans of expansion as they aim to rule the luxury housing and hospitality industry along with building up an empire in the FMCG sector with its unquestionable premium services and impeccable varieties of choice for the customers. As far as projects are concerned, Grosvenor House has just been launched, while Chiado de Moira and few other projects will be launched later this year. Internationally, the company is looking at a few hand-picked locations, which is currently work in progress. With Goa being India’s busiest hotspot on the international tourism map, the company plans to continue focus on the sunshine state. They are also looking at possible acquisitions, both in the country and in the global market to grow rapidly.

Bennet & Bernard have also forayed into the FMCG segment under the banner of Artisan Deli with expansion of the product line including cold cuts, frozen breads, premium meats etc. They have entered the retail segment recently with the launch of Goa’s first gourmet store, ‘Black Vanilla Gourmet’. The company will soon go pan India with the Artisan Deli brand and is focused on creating an exclusive range of processed foods in India and global markets with manufacturing units in multiple cities across the country. The Bennet & Bernard group has also expanded with a new brand line – Locke & Mason - a yogurt line of artisanal fruit yogurts and curd.

Bennet & Bernard has experienced a fair share of challenges in the course of executing its projects. And they have been dealt with poise and suaveness. The pandemic created situations of critical importance concerning hygiene and security and the company had to introduce changes and transformations in line with these expectations and come up with new design solutions. The pandemic further enhanced their commitment to keep exploring new avenues to make ‘Bennet & Bernard’ an iconic brand. The brothers believe there is no shortcut to success and nothing replaces hard work and dedication. And style that never goes out of style.
The new Daniel Patrick Moynihan Train Hall, named after the visionary United States senator who proposed the project in the 1990s, is one of the most monumental civic projects undertaken in the city in a generation, and transforms the way millions of people interact with one of the world’s largest cities.

Moynihan Train Hall expands the Pennsylvania Station complex with a 486,000-sqft rail hub in the landmark James A. Farley Post Office Building. Situated across Penn Station, it reverses the dark, overcrowded experience that so many commuters have endured for decades. It brings light to the concourses for the first time in more than 50 years, increases total concourse space by 50 percent, and restores the grandeur that was lost with the demolition of the original Penn Station half a century ago.

The new train hall is designed with a dramatic skylight that traverses the entire space and is arranged in four catenary vaults. To support the structure, SOM uncovered the building’s three massive steel trusses (which had been invisible to the postal workers a century ago). With a web-like structure, the bolted trusses add an extra sense of lightness – establishing a modern look and feel while displaying the workmanship of neo-classical design.

Restoring the Grandeur of Train Travel in New York

Designed by Skidmore, Owings & Merrill (SOM), the Moynihan Train Hall re-establishes a civic icon for New York, recaptures the original spirit of train travel to Penn Station, creates a new gateway to the city, and celebrates one of the greatest cities in the world.
Fact File

Project name: Moynihan Train Hall
Location: New York City
Area: 486,000 sqf / 45,151 sqm
Architect: SOM
Completion: 2020
Photos: Lucas Blair Simpson

Each of the four catenary vaults is composed of more than 500 glass and steel panels. At the edges of each vault, the panels thicken to sustain greater structural loads, while at the apexes, which span 92 feet above the concourse, the panels’ depth lightens to enhance the airy ambience of the space. The trusses are equipped with new lighting fixtures that illuminate the train hall at night.

A new clock inspired by the analog clocks that were once prevalent at the original Penn Station – marks the center of the room. Along the eastern wall are four large LED screens, ticketing and information kiosks, waiting rooms, and a food hall, which surround the space on two floors. The signage and wayfinding identify the hospitality and platform entries by color to enable intuitive circulation through the station. SOM designed the station’s interiors with Tennessee Quaker marble, a material that evokes a sense of warmth, calmness, and grandeur that are central to the design.

For the long run, Moynihan Train Hall serves as an important precedent for redefining historic architecture. It targets LEED for Transit certification through a variety of measures, from the natural lighting of the skylight to its use of new mechanical systems that improve the indoor air quality.
Zero Maintenance & Sustainable

Cityspace’82 Architects designs a house with robust attributes and voluminous light-filled living spaces

The design and construction of this house is completely based on the zero maintenance and eco-friendly design concept. The boundary wall is treated with dry stone cladding delineating a glamorous detail where the slab was scooped out to boast stellar like profiles, giving an illusion of bent stones. The entrance gate – as one of the most utilized elements - is installed in porcelain, a scratch-resist and water and termite proof medium, aiding to the longevity and zero-maintenance characteristics of the house. The driveway has an array of integrated directional lighting which also act as mood lighting at night.

The facade was installed by omitting smaller cubes from the bigger ones providing the building with openings and punctures that allow natural light to touch every corner of the house. A terrace in the form of a cantilever renders a floating powder-coated aluminium web and forms a dramatic feature. The cantilever is designed to be 3m wide to accommodate small social gatherings.

The apparent convergence of the building with the sky was achieved by Fibre Optics lighting integrated with the white painted wall on the front facade which grants it a glistening effect of twinkling stars with different intensities. In fact, this residence is the first in India to have fibre optics in the facade. The house can be lit with planter lights, fibre optics, and lights from art installations via a single control.
A façade reflects the nature of an architecture project. It is the most recognizable and acknowledged feature of a structure that becomes a part of the collective imagery. It also evinces an era or a period of architecture for future generations and demands as much aesthetic quality as the interiors. A well-designed building exterior exhibits a unique identity while also enabling optimum interior functioning as it shields the interiors from the external elements.

Ar. Sumit Dhawan
Residence
Self Drilling Screws | Blind Rivets | Dry Wall Screws

HP®

Landmark Crafts Pvt. Ltd.
E-mail: hpscrews@gmail.com, Web: www.landmarkcrafts.in
Customer Care No.: 9810331551

HP® is Registered Trademark of M/s Landmark Crafts Pvt. Ltd.
MAD Architects, led by Ma Yansong, was invited to participate in the long-awaited international competition to design the Aquatic Centre for the 2024 Paris Olympics. The firm teamed up with three French architectural studios: Jacques Rougerie Architecture, Atelier Phileas Architecture, and Apma Architecture on their design. The ambitions of the 2024 Paris Olympics is to instill environmental change and work towards hosting the games as carbon neutral. The 36 venues set for Paris 2024 will be housed in existing or temporary infrastructure, with only two new large-scale venues being built. One of these is the Aquatic Center. It is located in the Saint-Denis district of Paris, adjacent to the important Stade de France, which will host the opening and closing ceremonies of the Paris 2024 Olympics, along with track and field events. Positioned to the west of the stadium, separated by a high-speed road, the two key Olympic venues will be connected by a dynamic pedestrian bridge linking them to one another.

The design team’s proposal envisions the sports facility as an urban public artwork that showcases the beauty and hope of Paris. Driving along the city’s main road, at the intersection of the A1 and A86 highways, the translucent curved building appears to be floating, equipped with an incredible lightness, with the city in the distance. Its energetic curves change with the sunlight and the sky, like ripples.

The Aquatic Center will have the capacity to accommodate 5,000 spectators during the Olympics; but to maintain its legacy and usability, it has been designed to easily transform to half its size after the games. Aligning with Paris 2024’s environmental protection considerations and sustainable development, approximately 70% of the structure is constructed from wood, minimizing the project’s carbon footprint. At the same time, the building employs renewable energies. Large solar panels contribute to reducing light and energy consumption; and rainwater collection systems recycle water to irrigate integrated landscaping that covers an area of 6000 sqm.
Fact File
Project: 2024 Paris Olympics' Aquatic Center
Location: Paris, France
Site area: 27107 m²
Building Area: 14,363m²
Building Height: 24.45 m
Design Team: Mad Architects, Jacques Rougerie Architecture, Atelier Philéas architecture, Apma Architecture
Landscape Design: SIGNES PAYSAGE
Structural Engineering, Sustainability Consultant, Cost Control: INGEROP
Façade Consultant: ARCORA
Fluid, Water and Pool Engineering: SOJA
Acoustic Consultant: ACOUSTIQUE & CONSEIL

Through the white translucent curtain wall, natural light is able to enter the interior, creating a continuous play of light and shadow. On the exterior, it also functions as a 360-degree projection screen. During the games, it will display information and provide live broadcasts of on-going events inside. In collaboration with local multimedia artists, it will become the largest display interface of public art in the region, bringing vitality to the community at night.
Transporting 2.5 billion passengers each year with a peak daily usage of almost 10 million, the Moscow Metro continues to expand to serve the city’s increasing population that has grown by more than 3 million (over 30%) to 12.5 million people in the past 20 years.

Defined by intuitive navigation, Klenoviy Boulevard Station 2 connects residents and visitors to Nagatinsky Zaton with all of Moscow via the city’s expanding metro network.

The new Bolshaya Koltsevaya Line (Large Circle Line) is the city’s third orbital metro line and will significantly increase the capacity and connectivity of the network. Approximately 58 million passengers have already used its sections that opened in 2018. The entire new orbital metro line will be almost 70km in length when completed.

At the heart of the Nagatinsky Zaton district in the city’s southeast, Klenoviy Boulevard Station 2 will be the interchange between the orbital Bolshaya Koltsevaya Line and the future Biryulevskaya Line that will connect Kuryanovo and Biryulyovo districts to the south directly with the city centre. Located at Klenoviy Boulevard’s intersection with Kolomenskaya Street to optimise convenience for residents throughout the district, the new station will also offer access to the popular Kolomenskoye Museum-Reserve and its 390-hectacre park on the banks of the Moscow River.

Increasing Capacity & Connectivity

**ZHA wins competition to build Klenoviy Boulevard Station 2.** Designed to make transport comfortable and safe, the station integrates new technologies that adjusts interior environment conditions to enhance passengers’ experience and provide clear, real-time information of the network.

Transporting 2.5 billion passengers each year with a peak daily usage of almost 10 million, the Moscow Metro continues to expand to serve the city’s increasing population that has grown by more than 3 million (over 30%) to 12.5 million people in the past 20 years.

Defined by intuitive navigation, Klenoviy Boulevard Station 2 connects residents and visitors to Nagatinsky Zaton with all of Moscow via the city’s expanding metro network.

The new Bolshaya Koltsevaya Line (Large Circle Line) is the city’s third orbital metro line and will significantly increase the capacity and connectivity of the network. Approximately 58 million passengers have already used its sections that opened in 2018. The entire new orbital metro line will be almost 70km in length when completed.

At the heart of the Nagatinsky Zaton district in the city’s southeast, Klenoviy Boulevard Station 2 will be the interchange between the orbital Bolshaya Koltsevaya Line and the future Biryulevskaya Line that will connect Kuryanovo and Biryulyovo districts to the south directly with the city centre. Located at Klenoviy Boulevard’s intersection with Kolomenskaya Street to optimise convenience for residents throughout the district, the new station will also offer access to the popular Kolomenskoye Museum-Reserve and its 390-hectacre park on the banks of the Moscow River.
Providing intuitive navigation throughout, the design incorporates new innovations in lighting and passenger information systems to define the next generation of stations on Moscow’s renowned metro system. A series of columns on the station’s platforms are shaped to express instances of the same form being marginally distorted as it moves through space, with each column being a slight variation in form to signify its distance from the centre of the platform. The columns are developed as ‘arrows’ that direct passengers and also integrate lines of light on the ceiling and the floors to provide way-finding, functional lighting and signify platform edges.

The station’s lighting has been developed to enrich the environment and orientate travellers as they navigate through its spaces. Platform lighting conditions adjust to inform waiting passengers of a train’s impending arrival, while a dynamic lighting system further enhances passenger orientation throughout the station.

Fact File
Architect: Zaha Hadid Architects
ZHA Design Director: Christos Passas
Lighting Design: ARUP Lighting
Destination for Sports Fans

UNStudio has teamed up with Johan Cruijff ArenA for their winning masterplan for the Korean National Football Centre in Seoul. Celebrating the history and future of Korean football and the power of sport, the plan also focuses on health, wellness, science, technology, and education.

UNStudio’s masterplan was selected as the winning design in an international closed competition that took place in March this year. Commissioned by the Korean Football Association (KFA), the new state of the art National Football Centre (NFC) will not only become home to the Korean national team and their trainers, but also a laboratory for future generations of top league players, helping to foster their careers.

For the development of the masterplan, UNStudio brought together an international team of leading football stadium managers, along with specialists in sports science and digital data collection. This team of industry specialists has worked with world-renowned football leagues and stadiums throughout Europe and the Middle East. The essential elements for the masterplan are therefore based on lessons learned from other top international football clubs and training centres. Johan Cruijff ArenA brings 20 years of knowledge and experience in advising sport projects all over the world, such as for world cup host country Brazil. The stadium is highly regarded internationally as a role model and consultant for modern stadium construction and operation. The stadium also serves as a living lab for developing innovative concepts for stadium management and event experience.
Fact File
Client: Korea Football Association, (KFA)
Location: Cheonan-shi, Chungnam-do, Korea
Building site: 450,427m²
Program: Campus Masterplan and Urban Branding Strategy, 1 Outdoor Stadium with management facilities (1000-1500 Seats), 1 Indoor Stadium with support facilities, The National Team health and resort facility, Museum for Korean Football, supporting training fields and recreation, youth hostel and retail
Status: Competition 1st place
©Brick Visual UNStudio

UNStudio’s masterplan for NFC - located on a 450,427 m2 site in Cheonan-shi, Chungnam-do – is based on the latest insights into sports science and data technology. The Centre will be an exceptional professional football facility housing two stadiums and over a dozen sports field typologies, natural running tracks and indoor gymnasiums. These facilities will be linked to the numerous specialist sports medics and treatment centres that will ensure that the athletes can perform at the top of their game. The complex also features a high-end hotel with a spa, sauna and wellness centre, and other exclusive facilities for the players, a public plaza located at the heart of the complex with a museum, an indoor and outdoor stadium, restaurants, shops and a variety of semi-public sports facilities.

The NFC training facility will lead the way in sports innovation by focusing on ‘Health, Wellness, Science, and Technology’. For this reason, it will have over a dozen various sporting field typologies, natural running tracks, and indoor gymnasiums. Where possible, local natural materials of raw and exposed stone, timber, and textiles are employed, while an abundance of vegetation and green space is provided, thus embedding the campus into the surrounding landscape of farmland and hillsides.

Investing in the next generation of athletes, the NFC will become a training ground for all levels of athletes and will provide sports medicine scientists with the wide-ranging data they need to evaluate and customize different training regimens. The UNStudio team has specific knowledge of discretely integrating digital technology into the built environment for data collection related to the user’s health, activity, time and schedule allocation, in addition to other biometrics.
Customized range of

Doors & Windows

Designed specifically for various usages

Servicing the construction industry for over 49 years, we have executed many prestigious projects with our Doors & Windows all over India.

OUR CREDITS

- CBRI & TAC approved fully insulated fire doors for different fire ratings
- Blast Resistant steel doors & windows
- Large sized Industrial doors Manual & Motorized
- Hollow metal pressed steel doors (insulated & un-insulated) out of galvanised and stainless steel sheets
- Tubular profile windows with pressed steel frames for broad outlook
- Airtight steel doors
- Steel doors & windows as per IS:1058 & 1361
- Anodised & electrostatic powder coated aluminium doors, windows & partitions etc.
- Fully Automatic Vertical Folding Doors of width up to 14 metres and height up to 6 metres
- Pressed steel frames for doors & windows as per IS:4351
- Rolling Shutters as per IS:6248, both manual and automatic type
- Pressed stainless steel wall/column cladding panels, handrails, frames & fascia’s

On the Approved Vendors List of Various Govt. Undertakings Like EIL, NTPC, GAIL, BHEL etc.

SUPER STEEL WINDOW CO.

(AN ISO 9001 : 2015 ACCREDITED COMPANY)

STEEL HOUSE : F-2, Udyog Nagar, Adjacent to The ISH MEHRA DWAR, Rohtak Road (NH-10), New Delhi-110 041, INDIA
Tel.: +91 11 49534788 / +91 98100 80088   E-mail : info@supwinco.com   Website : www.sswc.in & www.supwinco.com
The scope of work included conceptualization, architecture and design, consultancy and project management for civil and electrical works, interiors, plumbing, furniture and fittings, CCTV and PA systems, and other allied works.

Sanjiv Enterprises undertook the project management and design of the Shree Pradesh Jyoti Vidhyamandir School at Kural Gram Pragati Mandal in district Vadodara for the Linde Engineering CSR Trust.

In the total plot area of 12,400 sqm, the built-up area is of 1997 sqm and the rest has been used as a playground. The school is located on a state highway and as per R&B Gujarat guidelines, a 75-m margin had to be kept from the highway; so, the margin space acted as the playground and open space. By fulfilling the norms and by-laws, the developer had a small rectangular block of land left for construction of the school.
The school campus is divided into two zones: public and private. The two colossal masses are linked by a vertical volume of staircase that eases the circulation and amalgamates the two spaces into one, while a diagonal pathway separates them visually. Courtyards act as buffer spaces for noise control, encourage outdoor activities, and bring maximum natural light and wind into the semi-open areas.

The design concept of the school building revolves organically around nature; the orientation is as per the sun’s movement and wind patterns, with the creation of wind pockets, light and shadow design elements. The challenge was to create a synergy by encasing the Gurukul principle of rural ancient India with precision engineering.

Jigar Shah, Engineer; Sanjiv Shah, Managing Partner; Ar. Isha Shah

To optimize the cost of the project, the basic structure of the building was created using a RCC frame that was covered with a plastered brick wall. The linearity of elevation facade was breached by using a combination of exposed brick masonry in triangular shape. The exterior facade walls were plastered using stone crete plaster. The large sized windows were constructed using R40 powder coated aluminium sections. The classrooms have laminated flush doors, and the toilets are fitted with PVC laminated doors. In the interiors, the flooring is a combination of Kota and Jaisalmer stones with semi-mirror polish. River washed Kota stone covers the semi-open spaces and the courtyard. MS railings were designed with round bars forming a variety of triangles. The interiors were created with materials like HDF boards, mild steel, granite etc.
Located on the outskirts of South Delhi, the Panther House boasts tropical architecture, pristine white marble flooring, and large windows that bring in the outdoors. Spaces flow seamlessly into each other, while daylight bathes the corridors through the floor-to-ceiling windows that feature aluminum sections with an anodized finish with minimal partitioning to maximize glazing. To combat the heat exposure from the large amount of glass, thermal brickwork was used for the exterior walls in combination with glazing from a high-end European brand.

The 15,000-sqft home is organised into independent wings with cascading roofs that emerge out of rich greenscapes. Keenly aligned with Vastu principles and awash with natural light throughout, the home balances modernity with tradition.

The home boasts a bold and captivating design. The bespoke interiors of the cigar lounge feature a silhouette of a panther elevated on a black mosaic wall. An emerald green crystal shines through the eye of the panther, with the ambient lighting controlled using automation. A metal and stone book leaf design bar table echoes the inventive use of polished materials. In contrast, a coconut shell panelled ceiling and mahogany floor impart warmth. In the waiting area, a real streetlamp stands incongruously against a floral chaise and oversized black planters.

The neutral pastel scheme highlights the white marble flooring, rich materials, and exquisite décor details. Unexpected touches like the exaggerated lights and quirky artwork add surprise elements. The architect elevates bathrooms to artful places: the master bathroom is immersed in period charm as its pristine white interiors play up the intricate details, while the round bathtub brings focus to the domed ceiling from where hangs a vintage chandelier. In the powder room on the ground floor, a mirror is substituted with a print of Rene Magritte’s The Son of Man - a surrealist self-portrait. And the juxtaposition is thematic of the home’s sweepingly dramatic design ethos as well as its occasional playfulness.

An Amalgamation of Modernity & Tradition

Leveraging expansive square footage, Ar. Aparna Kaushik creates a deconstructed Rubik’s cube layout that ensures the outdoors is visible from every section of the villa.

MGS - Modern Green Structure & Architecture January 2021
The farmhouse has come to represent an idiosyncratic canon of architecture that revels in its own definition of escape from the bustling urbania. The Panther House is a similar aspirational endeavour; it exudes a disparate amalgamation of styles and aesthetics that ultimately make it the structure it was intended to be — an immersive escape from the typical.

Ar. Aparna Kaushik
Flanked by bungalows on either side, the residence is framed within a 7200sq.ft plot. The built mass placed towards the south and western limit, carves open green space in the north and east, while the front facing open space is blanketed by grass.

Facade with cuboids juxtaposed in a receding pattern, as an intent to expose more number of faces on the north-east and east side frontage, results in an apparition of wider frontage. The prominence achieved is neutralized with the warm beige tones of the finishing materials – a combination of Travertine noche stone, Mathios stone tiles, and wood.

A wide gate leads to the main door through a black granite finished driveway, with a section near the entrance plinth covered with a projected mass, functioning as a drop-off space. The internal organisation of spaces, with three generations under one roof, is reflected through the placement of sleeping rooms, and the living, cooking and dining – all designed to be fluid and interconnected.

The entrance lobby, family lounge and the rear courtyard are centrally aligned along the length, and linked with each other, visually and physically, with the support of sliding doors - unifying the three areas into one spacious entity. The double-height rear courtyard contributes to the ventilation of the two bedrooms on either side and also functions as a shaded sit-out.

The interface between the intimate, hosting and entertaining spaces, is realised by placing bar, drawing and dining adjacent to each other, with sliding doors enabling flexible usage. The receiving area has a visible and physical linkage with the front expanse of lawn with a semi-covered sit-out while a separate circulation from the main lobby offers access to the front open space.
The building massing is manipulated in ways that create a sense of intrigue to a viewer. With planes, linear texture, striated texture the different parts of the massing are treated differently as per the functions they hold inside.

Ar. Asit Gupta
Fact File
Location: Meerut
Architect firm: Studio Clay
Site Area: 800 sq yd.
Built Up Area: 7000 sq. ft.
Project Team: Ar. Asit B Gupta, Ar. Bharat B Gupta,
Pawan Sharma, Alankriti Jain
Interior Designer: Ar. Asit B Gupta, Preeti Chauhan
Landscape Designer: Ar. Asit B Gupta
Civil Contractor: Ramu Contractors
Completion Date: 2019
Photo Credit: Bharat Aggarwal

Material Palette
Glass: Kay 2 Classics
Paint: ICI Dulux
Textured / Decorative Paints: Shahi Paints
Furnishings: Talwars & Dreams Furnishing
Flooring: Cream Italian Marble flooring
CP Fittings / Sanitaryware: Duravit, Villeroy & Boch, Jaquar
Air Conditioning: O-General
Lights: Tejas Lighting
Facade Stone: Travertine noche
Facade Tiles: Mathios stone (Altaia Amber)
Driveway & Landscape Hardscape: Leather finish steel grey granite, Unistone paver blocks
bauma CONEXPO INDIA
April 20-23, 2021
India Expo Centre, Greater Noida, Delhi NCR

International Trade Fair for Construction Machinery, Building Material Machines, Mining Machines and Construction Vehicles.
**The Plus**

Together with Vestre, the Norwegian manufacturer of urban furniture, **BIG** unveils The Plus - as the world’s most sustainable furniture factory which will double up as a public 300-acre park for hiking and camping.

Envisioned as a village for a community dedicated to the cleanest, carbon neutral fabrication of urban and social furniture, The Plus aims to be a global destination for sustainable architecture and high-efficiency production. As Norway’s single largest investment in furniture in decades, the 6,500m² open production facility will also serve as a landmark aligned with the region’s mission to establish a green manufacturing industry.

The Plus will be the first industrial building in the Nordic region to achieve BREAM Outstanding, the highest environmental certification. All materials are carefully chosen by their environmental impact, with the façade constructed from local timber, low-carbon concrete, and recycled reinforcement steel. Designed to be a ‘Paris Agreement-proof’ building, every aspect of the design is based on principles of renewable and clean energy to match Vestre’s eco-friendly production, such as ensuring a minimum of 50% lower greenhouse gas emissions than comparable factories.
The Plus is located in the village of Magnor, in the geographical midpoint between Vestre’s headquarter in Oslo and the company’s existing steel factory in Torsby, Sweden. The building is conceived as a radial array of four main production halls – the warehouse, the color factory, the wood factory, and the assembly – all of which connect at the center. The layout enables an efficient, flexible, and transparent workflow between the manufacturing units, thus generating the ‘plus’ shape at its intersection. At the center is the logistics office and exhibition center with direct connections to all four production halls, allowing Vestre’s employees to process logistical traffic with maximum efficiency.

The central hub wraps around a public, circular courtyard where the latest outdoor furniture collections are prominently exhibited with the changing seasons. The outdoor plaza doubles as a panopticon for visitors and staff to experience the factory’s production processes in full transparency.

The Plus will employ several Industry 4.0 solutions, such as smart robots, self-driving trucks, and a tablet to manage the entire factory. Every machine is assigned one of Vestre’s 200 colors, which spill onto the floors and lead back into the central roundabout. This colorful mapping of the machinery lends strong visual cues that help guide and explain the workflow of the Vestre production facility, allowing visitors to easily follow the production process as if touring a museum. Inside the factories, each wing has one alternating ceiling corner lifted to create inclined roofs that allow views inside to the production halls and outside to the forest canopies. Along the color and wood factory, the sloping roofs are extended to form a pathway for visitors and staff to hike up and down the building while following the production processes inside.

Four production units will be built with a 21m free-spanning, cross-laminated timber, creating flexible column free-spaces. A 3m-wide service corridor provides the technical infrastructure and the structural stability for each wing.

From all four sides of the buildings, visitors and staff are invited to hike around the facility and conclude on the green roof terrace, transforming the furniture factory museum into a campus in the woods. An ADA-accessible ramp allows wheelchairs and strollers to meander the serpentine path and enjoy the immersive experience of being among the pine trees. The Plus reinforces Vestre’s vision of combining social and democratic spaces with a future enriched by technology yet grounded in history and nature. On the rooftop, 1,200 photovoltaic panels are placed and angled according to optimal solar efficiency. Excess heat from the panels are connected to an ice-water system for cooling, heat and cold storage tanks, heat pumps and energy wells as a storage support system. Overall, the system contributes to at least 90% lower energy demand than that of a similar conventional factory.
Creating Stations with Public Appeal

With the Doha Metro, Qatar Railways has created one of the most advanced and fastest driverless metro systems in the world. Phase one of the project involved the construction of three metro lines (Red, Green and Gold). UNStudio created a vision for the station designs of which 37 stations have been completed.

UNStudio collaborated with the Qatar Rail Architecture Department on the development of an ‘Architectural Branding Manual’ - an extensive set of design guidelines, architectural details and material outlines to assure the spatial quality and identity of the network.

Modular Adaptability

Says Ben van Berkel, “Through the production of a design manual and with the use of adaptive parametric design, it has been possible to create a design with many variants, yet one which maintains a coherent identity throughout all of the stations. In this way, we can combine local contextual differences within an overall identity and parametrically adapt physical factors such as wayfinding, daylight penetration, passenger flows, constructive elements etc. in a complex but extremely disciplined system.”

Through a system of interconnected triangular base forms, the massing of the geometry adapts and transforms to incorporate programmatic functions and to connect interior spaces with exterior urban infrastructure.
Placemaking

One of the key goals of the metro network is to create an efficient and reliable service that encourages the use of public transport. The design of the stations makes use of urban design principles to create public spaces that enhance the urban experience at the pedestrian scale. Furthermore, the creation of a strong station identity creates instant recognition at busy road intersections. The new network also provides safe passage across busy road intersections that serve not only the metro users, but the population at large.
Metro Station

**Fact File**
Client: Qatar Railways Company  
Location: Doha, Qatar  
Program: Qatar Integrated Railway Project (QIRP), presently under development by the Qatar Railways Company (RAIL), comprises a complete railway system, consisting of four Metro Lines with approx 30 stations in phase 1 and 40 in phase 2.  
Status: Phase 1 completed  
Station photos: Hufton+Crow  
Diagrams: Designed by UNStudio, © Qatar Railways Company

**Caravanserai**
UNStudio’s concept design draws inspiration from the regional architectural lexicon, whilst simultaneously representing a vision of modernisation and preservation. Referencing the notion of Caravanserais - which were inns with enclosed courts that served as gathering and resting places on ancient trade routes - and following in the lineage of historic train palaces, the design generates social interaction and propagates place creation over space creation.

**Vaulted Spaces**
Building upon existing elements found in the architecture of the region, the Vault represents a new referential bridge between the region’s historic architecture and culture and its future as a beacon of innovation and prosperity. Drawing inspiration from the arch, expressions of traditional architecture, the lightness of the dhow sail, and the tensile profiles of nomadic tents, the Vaulted Spaces design proposes a contemporary approach to the interpretation and structural implementation of these references.

**Interiors**
The materialisation principles are experienced through a duality of a pure, modest exterior versus a rich, illuminated mother of pearl effect interior. The exteriors reference the monolithic strength of old Qatari architecture, while the interior spaces create a radiant effect of movement and fluidity. The use of this uniquely Qatari ornamentation and material palette assists in dividing the large interior spaces and guiding pedestrians towards the transient spaces. The integrated light lines amplify the experience, function as natural wayfinding elements and contribute to a unique ambience for the Metro Network.

Ben van Berkel: “We devised an adaptive parametric system which creates open, light and welcoming interiors for each of the individual stations. Traditional Qatari architectural features are reinterpreted to incorporate new, transformative qualities which capture daylight and direct it into the interiors.”

**Scales of Identity**
A key concept within the design is one of creating varying scales of identity for the user: network identity, line identity and station identity. The design further incorporates and integrates all functional and technical aspects of the stations and network into a coherent architectural expression.
Expressing Grandeur & Solidarity

Designed by IMK Architects, the Symbiosis Hospital & Research Center in Lavale, Pune, has been envisaged as a Multi-Specialty Hospital to provide the best health care facilities along with skill development.

Situated within 40 acres land, SUHRC is conceptualized to cater to the nearby population of Pune and its neighbouring areas, while providing tele-medicine services to ensure outreach services to peripheral, far-flung settlements.

Sitting along a slope, the building is strategically positioned to minimize the cut-and-fill of the hill site. Planned as a robust curve along the contours of the land, it forms the façade of the project. ‘Grandeur’ is a key element of the design brief. The structure expresses solidarity, resonating care and shelter for the patients. All the blocks have been planned for ease of functionality and to avoid criss-cross movement. A large open-to-sky courtyard separates the Skill Centre from the Hospital with two separate entrances, providing the students with different access as well as a space for relaxation and academic purposes.

The entrance for the Skill Centre draws inspiration from the stainless-steel surgical instruments used in hospitals. A mammoth silver steel bird, with wings wide open, welcomes the visitors. Supported by steel pipes, the futuristic roof is symbolic of a contemporary architectural response. A balance between light and shade has been achieved with smaller skylights within the roof, and a larger opening towards the upward bending tip. The upper surface of this canopy is converted to a terrace garden. Two large courtyards create buffer zones that bring in ample light and air into all the departments and spaces, thereby reducing power consumption.
At IMK Architects, we strive to use locally sourced, eco-friendly materials in all our projects. Since we wanted to design a façade which would require minimum maintenance, we opted for Sundried Compressed Stabilised Earth Bricks - an Alternative Low-Cost Carbon-Neutral Building Material

Rahul Kadri

Grand, yet local and responsive to the local context, the building has details like brick-art and the exposed concrete. Post-tensioned slabs are used to achieve flexibility, minimum beams, and larger spans that facilitate different size room arrangements and to allow for easy routing of ducts. Naturally compressed, sundried earthen bricks produced on-site, have been used for façade and masonry work. Colour coding enables easy identification of the different spaces and the critical areas.

Energy efficient systems include water cooled chillers with variable speed drive, pumps, cooling towers with CTI certification for assured thermal performance that make the chilled water flow requirement 17% lesser as compared to regular conventional systems. Transformers are selected to meet the loss values permitted by the Energy Conservation Building Code published by the BEE and LED light fixtures. The domestic water is recycled, treated, and used for secondary applications such as air conditioning, gardening, etc – resulting in zero liquid discharge from the building. Water cooled heat pumps integrated with the air conditioning chillers are used for hot water production, thereby consuming only 35% of the energy as compared to conventional electric heaters. The by-product of chilled water produced is taken back into the chilled water system to reduce load on the chillers. A thorough mode of System Testing, Adjusting and Balancing has ensured that the design intent is achieved in the actual functioning of the project by a third-party testing and commissioning agency.
Façade Design: Creating a Strong Visual Identity

The facade has used Sundried Compressed Stabilised Earth Bricks (CSEB) which were made using a natural mix of different types of locally available soils, stabilised with 5% cement, ensuring their durability. The flexibility of the material allowed for innovation in designing different façade compositions such as cladding, boxing, twisted and screen jaalis. The bricks’ natural porosity creates breathability in the façade and the façade elements act as shading devices for the interiors. This effectively reduces the internal heat gain, which reduces the energy consumption.

Innovation & Process

CSEB was used for the first time ever on a campus of this scale. Its manufacturing process is a time consuming one as the bricks need to be sundried during the monsoon season. This had to be accounted for in the overall project timeline. It was essential to design the soil mix to ensure its stability and durability. After conducting extensive research and experimenting on the natural mix of different types of locally available soils, the right blend of red soil, sand and murum was used in manufacturing CSEB.

Through a sustainable process, the bricks were manufactured on-site wherein block-making machines were installed and additional masons were hired from the nearby villages to make the bricks. The initial few months were spent in training the local masons in the craft of making the bricks, which contributed towards enhancing their skills. The on-site manufacturing process also reduced carbon emission, transport costs and wastage. The bricks were sundried (as opposed to kiln fired) - an extremely environmentally-friendly process.

Sustainability

CSEB, through its porosity and its use in elements such as cavity walls and jaalis, enables the structure to cope with climate of the region by allowing the building to breathe. This reduces the internal heat gain allowing for maximum thermal comfort and reducing energy consumption. A building constructed in CSEB requires 80% less energy consumption to achieve thermal comfort, significantly reducing the operations costs.

The Initial Embodied Energy of CSEB produced on site with 5% cement = 548.32 MJ/m³

The Carbon Emissions of CSEB produced on site with 5% cement = 49.37 Kg of CO₂/m³

The values are as per the research published by Auroville Earth Institute - a non-profit organization specializing in earth-based building technologies for sustainable development.
Switch from Chemical Earthing to Marconite® Conductive Aggregate Earthing

- 30000+ Macronite Earth Electrodes Installed
- Zero Maintenance for 50+ Years
- Implementation by Qualified Experts & Consultants

Our Clients

INTER-TECH HAS CHANNEL PARTNERS IN:
Raipur, Delhi, Panjim, Margao, Surat, Bhadurgarh, Bangalore, Kollam, Thissur, Gwalior, Nagpur, Gurgaon, Mumbai, Bhubaneshwar, Jaipur, Hyderabad, Meerut, Kanpur, Noida, Pune, Shimla & Chennai

Get in touch to be INTER-TECH’s new channel partner!

Chemically Inert \ No Corrosion \ No Recharge
Contact Us: +91-97171 63893, 98914 02128, 98914 72130 or +91-11-41020365
or info@intertech.com.co
Lingel Sicherheitstage 2020
Lingel Security Days 2020

Glazing & Hardware

Type

LPG 14
Lingel - Panzer - Glazing 14 mm
Recommended for P6B as per EN356

LPG 18
Lingel - Panzer - Glazing 18 mm
Recommended for P7B as per EN356

LPG-X
Upgrade your existing Lingel security glazing to LPG performance

Type

LSB 1
LINGEL SAFE BOX hardware to upgrade your existing Lingel window
Recommended for RC2 and RC3 as per EN1627-30

LSB 2
LINGEL SAFE BOX hardware for your new state of art
Lingel - security - window recommended for RC2 & RC3 as per EN1627-30

Lingel Provides Masterpiece Windows Where Every Component Is Merged To Perfection

www.lingelwindows.com  +91 9870273743  mario@lingel.in