



Happy New Year 2014



INSIDE

- Special Feature : City Centre Salt Lake
- History of Architecture in Kolkata
- Geology of Kolkata and Foundation Engineering
- Completed Projects in Kolkata
- Down Memory Lane
- News and Events
- Awards and Contest





City Centre Salt Lake Girish Dravid

The Ethos

City Centre Salt Lake is Kolkata's first integrated and unconventional mix of community spaces, retail, food outlets, entertainment, offices and residences, designed by legendary Architect Charles Correa. City Centre Salt Lake has successfully created a seamless experience for all classes of society. It offers an endearing environment where people can relax, shop at leisure or just browse past the window display, choose between a quick bite or a full-course spread, catch the latest blockbuster or the high-brow award winner - just like that.

With approximately 42,000sq.m of land, this integrated complex comprising the Mall, Plaza Blocks, Cineplex, the Tower, the Residency and the now legendary 'Kund', has acquired a loyal community.

The Complex

The layout of the complex is planned around the main shopping complex block with three floors and a partial fourth floor that was named Big Box. Surrounding the Big Box were six other blocks named A to F, with varying number of floors from three to five. In the front of the Big Box is the Kund, with a water body at the focal point and surrounding steps creating that quintessential community space. On the North-West of the Kund stands the Office Tower.

The Structure

Constructed in M:30 concrete and Fe 415 steel, the structure was designed in accordance with both 1984 and 2002 versions of IS 1893, since the new earthquake code was in draft mode when the design was commenced in the year 2001. Ductile detailing norms were adopted.

In the poor soil of Salt Lake, the pile capacities were very low. A 35 m long 750 mm dia pile could offer only 2000 kN safe vertical capacity. Pile foundation consisted of piles having diameters 450 mm, 500 mm, 600 mm and 750 mm. Large diameter piles were out of question, since driven cast in situ piles were used. Heavier weights of the rammer prohibit use of higher diameters in driven cast in situ piling technique. Initial and routine load tests were conducted to ascertain and reconfirm the pile capacities.

For the majority of the commercial and office buildings, flat slab system was selected as it was most appropriate from a variety of considerations – larger headroom / lower building height, flexibility in planning, large column free spaces, easy formwork, appearance etc. In the Office Tower however, ribbed slab was suggested on account of lack of continuous spans and for achieving a better lateral load resisting frame.



The Meeting place - Kund



View From The Metro Station



Unconventional-Street In The Mall

“The City Centre in Kolkata is a very special place...a microcosm of the whole metropolis, catering to multiple land-uses and diverse income profiles...a kaleidoscope of contrast, colour and energy. We have in the City Centre a wide range of different-sized residences, entertainment centres, offices and shops - varying from the smallest 'dukaans' to the most glamorous air-conditioned boutiques and large department stores.

These multifarious activities, all arranged in a fine-grained mix, are generated by a complex system of spaces...from broad colonaded public arcades to narrow bazar 'galis' to large terraced plazas...culminating in the kund in the centre of the complex. Coffee shops and restaurants, strategically placed at pivotal locations, provide opportunities to rest under wide-spreading trees and observe the world around you...a marvellous tradition, which has always been essential to life in the great city of Kolkata”.

Charles Correa, celebrated Architect-visionary, Designer of City Centre Salt Lake





The mall is flanked by The Residency on the left and the Cineplex on the Right, characterized by dynamic wave forms - The Residency undulates in the plan and the Cineplex Roof in elevation.



The Residency

The Residency has been designed to provide a lifestyle destination to homeowners. It is an exclusive residential block of designer homes comprising two, three and four bed-roomed apartments along with a few duplex and triplex units.

Spacious, functional and stylish, the design of The Residency allows one to enjoy an unhindered view of the landscaped open area from each apartment. Residential buildings have simple column / beam / slab structural framework.

An interesting feature of the property are the bridges that connect the building to the landscaped green area at the first floor level, thereby circumventing vehicular movement from the apartment block to the garden and the children's play area. Open spaces and community spaces have been Charles Correa's favourite themes. In tune with them, more than 70% of the total acres within The Residency are left open by stacking the residences on eight floors.

The Cineplex

The roof of the Cineplex was built using structural steel trusses overlaid by RCC slab in a complex wave form. The detailing of the seating and roof was an involved geometrical draughting exercise!

Basements of all the blocks are connected, which are used as mall office, storage space and mechanical and electrical areas. Water tanks and STP are also located in the basement.

With Charles Correa's fetish for minute detailing of nooks and corners, it was fun to work out various special and unconventional construction details, and it kept our engineers on their toes, managing the stiff drawing delivery deadlines at the same time incorporating the last minute sparks coming out of the architect's office.

Construction

M/s Petron Ltd were selected as the contractors. Use of flat slab system was very helpful in achieving quick progress. The only complicated structure in the complex was the Cineplex, with its sloping seating floors and wave formed roof. Piling in liquid soil was the big challenge. There were instances of piles shifting and tilting, which had to be addressed by additional piling at the site as well as re-designing the pile caps in the design office. Fortunately, there were no major hick-ups in the overall construction activity.



Sterling's Team



Vincent Pereira



Gulab Pereira

Jyoti Malekar
Kalpesh Patil
Manish Thakur
were important members of this team and are now ex-employees of Sterling.





History of Architecture in Kolkata

As the "Second City of the Empire" and the most important seat of power, wealth and glory next to London during British rule, Kolkata has an abundance of colonial buildings unsurpassed by any other city of this era. The Victoria Memorial, or the Writers' Building are only a few of countless examples that show the grandeur and splendor with which the city adorned itself. It is not only these beacons of architecture and institutions which were central to the British rulers that were built in the colonial style. The architectural language can be found throughout the city, from small utilitarian buildings, residential houses to buildings of culture, religion and recreation. More significant maybe, a hybrid style of architecture, combining imported colonial elements with local ones has developed over time.



Western influence is dominant in many of Kolkata's architectural monuments, though Indian influences also are apparent. The Raj Bhavan is an imitation of Kedleston Hall in Derbyshire, England; the High Court resembles the Cloth Hall at Ypres, Belgium; the Town Hall is in Grecian style; St. Paul's Cathedral is of Indo-Gothic-style architecture; the Writers' Building is of Gothic-style architecture with statuary on top; the Indian Museum is in an Italian style; and the General Post Office, with its majestic dome, has Corinthian columns. Victoria Memorial Hall represents an attempt to combine classical Western influence with Mughal architecture; the Nakhoda Mosque is modeled on the tomb of the Mughal emperor Akbar at Sikandra; the modern Birla Planetarium is based on the stupa at Sanchi. The Ramakrishna Mission Institute of Culture, the most important example of post independence construction, follows the style of ancient Hindu palace architecture in northwestern India.



Indian Temple architecture with Eastern influence can be seen in Kolkata temples. The ancient and medieval temples which are still existing, show a remarkable sense of geometry and spatial engineering. The modern temples built in last century reflect similar styles.



Much of this historical splendor has fallen into disrepair. The city's climate – humid and hot – accelerates any sign of neglect and quickly facilitates a second nature to take over once heroic structures. While a number of key monuments are carefully being renovated and refurbished, many of the colonial buildings are seen to be in bad conditions and have even reached advanced states of dilapidation. The concept of preservation and of protecting historical landmark buildings, deeply rooted in a European concept of tradition and history, is slowly being taken up by the city of Kolkata, its administrative units and its general population.

In contemporary Kolkata the cityscape has changed rapidly. The skyline is broken in some areas by skyscrapers and tall multistory blocks. The old and the new are vying for co-existence in an increasingly heterogeneous identity of the grand old city. The Chowringhee area in central Kolkata, once a row of palatial houses, has been given up to offices, hotels, and shops. In northern and central Kolkata, buildings are still mainly two or three stories high. In southern and south-central Kolkata, multistoried apartment buildings have become more common.

- Girish David





Geology Of Kolkata And Foundation Engineering



ITC Officer's Residence

Although Sterling has been providing its services to projects located in many parts of the country, majority of them happen to be in the West and South India thanks to the geographical locations of its offices. The engineers designing the projects in these parts are accustomed to dealing with variable soil profiles that invariably contain a large part of soft and hard rock. To them, foundation design in Kolkata is a vastly different experience.

Most of the Indo-Gangetic Plain is formed by alluvial soil. Kolkata is located over the "Bengal basin", which comprises of three geological structural units: shelf or platform in the west; central hinge or shelf/slope break; and deep basinal part in the east and southeast. Kolkata is located atop the western part of the hinge zone which is about 25 km wide at a depth of about 45,000 m below the surface. The shelf and hinge zones have many faults, among them some are active. Total thickness of sediment below the Kolkata is nearly 7,500 m above the crystalline basement; of these the top 350–450 m is quaternary, followed by 4,500–5,500 m of tertiary sediments, 500–700 m trap wash of cretaceous trap and 600–800 m permian-carboniferous Gondwana rocks. The quaternary sediments consist of clay, silt, and several grades of sand and gravel. These sediments are sandwiched between two clay beds: the lower one at a depth of 250–650 m; the upper one

10–60 m in thickness. This upper layer is of particular interest to a foundation designer.

The upper layer in which foundations are located, has about six sub-layers. The upper-most sub-layer consists of soft silty clay. N value in this layer varies from 1 to 5. It is very difficult to rest any load on this layer.

The second sub-layer consists of soft silty clay / clayey silt mixed with semi-decomposed vegetation. There is no substantial difference in the stiffness of this layer from the one above.

In the lower layers, the N value increases to about 20, sometimes reaching to about 35 to 40 to a depth of 15 to 20 m. The clay turns in to a stiff material with occasional silt, sand and micaceous particles which are sedimentary deposits from the timeless flow of alluvial material transported by the waters from the mountains.

At depths of 40 to 50 m, the sand content increases, making the strata quite hard, and offering even end bearing to the piles along with good surface friction contribution. N values have been recorded as high as 90 although the strata is still termed as soil and not as rock.

Weak soil coupled with high water table many times results in quick sand and bubbling soil conditions. With no lateral resistance in the upper layers in such conditions, the piles are often displaced or tilted. Construction of sub-structure and pile caps becomes extremely difficult in such situation.

Calculation for pile capacity is carried out as per IS 2911 Par 1-Sec 1, which accounts for soil friction contribution and end bearing component. Due to frequent variation in soil properties along the depth, the results are sensitive. Careful study of soil profile becomes necessary to ensure safety and derive economy by choosing an appropriate length of pile. Sometimes, just by increasing the pile length to the next harder layer, the capacity of pile can be enhanced substantially. A uniform length assigned to all piles can be a mistake, as the end bearing layer present in one location may not exist at some other location. For this purpose, the soil investigation should be conducted with sufficient number of boreholes, representing the whole site as accurately as possible. Mis-interpretation of soil properties can lead to unsafe or an over-conservative design.

Geotechnical Consultants in Kolkata are knowledgeable and experienced about the local conditions. They are aware of the treacherous nature of soil. Even then, physical pile load tests - initial as well as routine - must be conducted to verify the capacity calculations. More faith may be laid on the load tests than merely following the theoretical recommendations. All Kolkata consultants agree with this sentiment.

Weak and waterlogged soil makes construction of basement in this city is a challenging task, although elaborate shoring systems have been evolved by the local contractors that make it possible to dig down up to 10 m and sometimes more. Contractors provide the scheme and the supporting calculations which need to be verified jointly by the Geotechnical and Structural consultants.

Most importantly, communication with other engineers within our organization who have already designed projects in Kolkata, will help immensely, if you are about to take up a Kolkata assignment.

- Girish David



Down Memory Lane - Investment Building On Chowringhi Road

Girish Dravid



This was in 1983 and it was the fourth month of my career in Sterling. After completing an interesting design of an Exhibition Pavilion for Orissa Government to be erected at Pragati Maidan, Delhi, one day, I went to Kamal sir, asking for "some work". He immediately picked up a bunch of blue prints and asked me to study them, as if he was waiting for someone to come along next in line. It was a set of architectural drawings showing a longish plan of an office building with triangular cores at the two ends. The title was Investment Building for LIC, Chowringhee, Calcutta.

Since childhood, Calcutta was for me a land of stories, history, famous personalities, colonial buildings and an impression of abundance of art, music, dance, culture, mannerisms and tasty food formed by a picturesque description by our ace author Pu. La. Deshpande. Calcutta fascinated me. Relating my curious fascination childishly to the set of architectural prints, I fell in love with the building. It was the first high rise building project that I was going to handle. Kamal sir did not say that I had to work under anyone else, which meant, I had to report to him directly. I loved the set up. Apparently, Kamal sir was appointed by LIC as an advisor to assist them in the preparation of concept and scheme. LIC had its own architectural and structural engineering departments. They would carry out the detail design themselves.

The building had six bays of about 7.5 m along the long direction, and I forget now, what was the dimension on the shorter direction. However, I distinctly remember Kamal sir asking me to add one more row of columns internally, thus making four longitudinal grids of columns instead of the three – probably to minimise the depth of floor beams. The rectangular area was fully utilized as office space. It was the first time, I prepared a comparative statement and a drawing showing four different flooring systems for the office floor - beam/slab, ribbed slab, waffle slab and flat slab, a practice, which I have followed for every project till date even if no one is asking. For some reason, not known to me, the LIC went ahead with the conventional beam / slab system.

There were two shear walls - placed at right angles – at both ends, leaving a slit between them to provide natural light and ventilation to the Staircase, toilets, lifts and MEP areas located in these triangular cores. To overcome the weakness created by this "slit", triangular bulbs were introduced at both ends of the shear walls and they were joined by inter-connecting beams. The concept of "bulbs at the ends of the shear walls" was first explained to me by Kamal sir in this project.

Not having the facility of superfast computing in those days, I prepared manual spreadsheets for Wi, hi etc. and repeated the calculations for stiffness of the columns and walls - individually and combined, column loads, earthquake loads and wind loads, their distribution along the height and among the vertical elements in proportion of their stiffness many number of times until I was satisfied with the performance of the building and arriving at the most optimized force / cross section relationship for each member. Having done this, with a bunch of about 100 pages of calculations, in the next meeting with LIC, I was told that there was a "slight" change in the geometry of the cores. I came back to office and once again went through the tedious process of repetitive calculations to fix the sizes of columns, beams and shear walls and bulbs. Once more, stationery was consumed in heaps.

Rework happened once or twice more, before the architects granted us their final approval. Calculations were carried out for individual column and wall stiffnesses, as well as grouping the walls of a core together (re-defining the pier as you may call it in today's lingo) to check the stresses after each iteration.

Next was the layout of piles. A fat soil report by M/s Dadina, a very famous name in foundation engineering then, was at hand. Pile load distribution was arrived at using individual walls as well as group of walls, and even considering the whole building as a single cantilever. My job was to provide column loads and moments to M/s. Dadina for designing the pile foundation. Later, I had a chance to go through the pile foundation calculations submitted by Dadina, and that was some learning. In the very early stage in my career, I was introduced to Kolkata soil.

My task was completed, and then the project was taken over by the LIC design department. The final designs did not come to me. I had a chance to see the building in 2003 for the first time, twenty years after I worked on it. To me, it looked like a building with formidable proportions.

Today, when I visit Chowringhee Road, I invariably look at the Investment Building and wish that the building was taller. It is becoming increasingly inconspicuous in the crowd of taller and sizzling buildings with flashy facades and tapering elevation caps. Notwithstanding the appearance, the bond still lingered, because it was "My First Tall Building"





City Centre New Town, Rajarhat

An elaborate City Centre, offering a richer consumer experience, City Centre - New Town popularly known as CCNT, is the successful next version of Kolkata's new retail history, after it was created in Salt Lake for the first time. It is another hang out destination for the young and old alike, beautifully planned by architect Kapil Bhalla & developed by Bengal Ambuja Development Corporation Ltd.

Spread over almost 5L. sq ft, CCNT comprises a shopping plaza, food court, an entertainment arena, a cineplex and over 240 outlets. The Spine Plaza area covers 40,000 sq. ft. and the retail encompasses 3.5L. sq. ft. There are Seven Blocks with two Common Basements.



The building is an R.C.C. structure with shear walls and columns. The columns and shear walls are connected to each other with flat slabs with the slabs acting as in-plane rigid diaphragms for each of the floors. The seven blocks separated by expansion joints are arranged around a central shopping plaza atrium covered with tensile fabric roof.

Block A has a service floor at third level, which also facilitates column transfer for the hotel, which is affiliated to Swissotel Group of Hotels. A very large canopy with an intricate arrangement of suspenders to support its structural steel grid welcomes the guest at the lobby level.

Block M, which is next to Block A, has a restaurant and food court at second floor and a banquet hall at the third floor.

Block C has anchor stores at the first and second floors and the Cineplex on the third and fourth levels. A water body - aptly christened as Lotus Garden, sits atop the Cineplex, adjacent to Swimming Pool in one corner.

Blocks D1 and D2 are low rise buildings, with shopping on Ground, First and Second Floors, the terrace having been landscaped to form a Butterfly Garden.

Lastly, Block B is again two floor high, supporting on its terrace, part of the Boat Structure, which originates in the shopping plaza at ground floor and has its other side overlapping the terrace of Block B.

Flat slab is the predominant flooring system, even in the hotel block. Structural steel has been used extensively in bridges connecting various blocks, staircases, Boat Structure, Banquet Hall roof, transfer girders and Cineplex Roof.

Sterling Team on CCNT :

Vinayak Bhogale, Vincent Pereira, Amit Suralekar, Saurabh Butala, Louisa Rumao and Vishal Thakur.





Sterling's Projects in Kolkata

ITC Officer's Residence

Saurabh Butala



This residential tower designed for ITC officers at AJC Bose Road, is a modern multi-storey tower in a colonial style. Features such as cornices, pedestals, framed windows with decorative sills help the building resonate with the surrounding historic buildings from the British Raj. This building however, towers above the entire landscape and its older neighbours and is visible from as far as the Victoria Memorial.

The basement, ground and first floors are used for car parking and services. These three levels are connected by a pair of ramps on either end extending beyond the foot print of the building. The cover slab for the ramps is used as a landscaped area at the second floor level. The residential floors start from the third floor and go upto the 25th floor level. The second floor has a club house facility for the residents.

Each floor has two apartments. The lifts and staircases are located between the two wings with a common corridor. The building is an R.C.C. frame structure with shear walls and columns - connected to each other through a network of R.C.C. beams and slabs. The slabs act as in-plane rigid diaphragms for each of the floors.

Utalika Mamta Parmar

Six magnificent towers look into serene ponds and sylvan landscapes located at the southern and northern part of this 3 lakh sq mt site. The proposed mixed use development by Ambuja Neotia will have thirteen blocks –five HIG Towers, MIG and LIG towers, five parking blocks and a Club house. Utalika also has amenities like three swimming pools, gyms, a banquet hall, restaurants, library, club houses, crèche, jogging tracks, a waterfront, garden spaces and a kid's play zone.

The lateral load resisting system consists of central cores and corner shear walls along with internal columns. A flat slab system without drop panels have been used in the towers to provide flexibility of planning. The proposed foundation system is that of piles reaching down to 51 m. The towers have underground water tanks which result in a variation in the level of the pile caps by 4.2m. As this would have been inconvenient, diaphragm walls have been proposed all around the water tanks to retain soil. The buildings rest on core pile foundation with a raft thickness of 2m and an isolated pile foundation with raft thickness of 1.5m.



Altius Arjun Rao



This 21 storey residential project by Empress Group at 67-Christopher Road, strikes a stunning pose against a backdrop of vintage façades. It consists of two residential towers resting on a common parking podium up to the second floor level. There are two towers above the third floor level, one having a rectangular plan while the other is a T- shaped one. The towers connect at the 24th level where the terrace is used for amenities such as a swimming pool and deck, gymnasium and a landscaped roof garden common to both towers.

The towers are designed as R.C.C. structures with shear walls, columns, flat slab with drop panels at parking floors and conventional slab at residential floors. Transfer girders with a depth of 2.25m are provided at suitable locations on the third floor so that columns of adequate sizes can be floated to support the structure above and parking and drive ways are not affected below. There is a separation space of about 750mm between the top of the girder and the 3rd floor which is utilized for the passage of services from the residential floors and allows the first floor to appear similar to any other typical floor in elevation.



Sterling's Projects in Kolkata

Technopolis-2 Mamta Parmar / Bhushan Patil

Technopolis is an IT Park at Red Cross Palace road and consists of two 12 storey towers – A and B, a Utility building and a Central block with common basement and a ground floor. The Utility building houses the main servers while the hemispherical central block has a food court, a super market and a café area for the employees. This space has a floor to floor height of about 10 m.

Like all IT parks, large landscaped spaces are provided to ensure a close association with nature while the employees work with new age technology. The glass and steel façade is punctuated with lush green terrace gardens of double storey height at alternate floors to provide community spaces and leisure areas for the employees. A sheet of water cascades down into the pool below, along the front face of the Utility Building.



The entrance lobby leads to an impressive atrium with a height of about 6 m. The entrance of the building has a canopy covering an area of 14.6m x 10.5 m at a height of about 12m. Circular columns are used as supports internally while a steel truss holds up the glass façade.

A post-tensioned flat slab with drop panels with a clear height of 4 m is used for Tower A and Tower B while the internal columns are spaced on a grid of 10.8m x 8.4m. Peripheral beams have been avoided to present a seamless view through the glass façade. The Utility building and the central block, both have beam-slab systems to support heavy equipment loading and sloping roof profile respectively.

ITC Sonar Bangla Peer Review

Sterling was invited to complete the Peer Review of this 5 Star Business Hotel. This luxury hotel with a distinctly modern and sleek architectural style has 240 well-appointed guest rooms.



Sterling as a Learning Organisation

- Our engineers attended a technical lecture delivered by Mr. Manish Mokal, senior manager of Gammon India on "Design and execution of high strength mass concrete" at Ambuja Knowledge Centre on the 15th November 2013.
- Dr. Manmohan Maniyar conducted several technical lectures on "Analysis and Modeling of Structures for Seismic Loads" for our Sterling employees as part of our continuous lecture series.
- Nine Site engineers from Sterling visited the PSL Fabrication Workshop at Daman on 4th January, 2014. This was a very educational trip and a great learning experience.
- Girish Dravid presented a seminar on "Structural Audit" at IES Auditorium, Bandra on 26th July, 2013 at the annual PEATA (Practicing Engineers, Architects and Town Planners Association) conference.





UPCOMING PROJECT IN KOLKATA

Acharya Mahaprgya Mahashraman Education and Research Foundation

Sunila Shende



The proposed Complex will have four structures spread over an area of about 10,000 sq. m with a basement for car parking. There will be a multistorey residential tower, a School Building, a Spiritual centre block and a clubhouse.

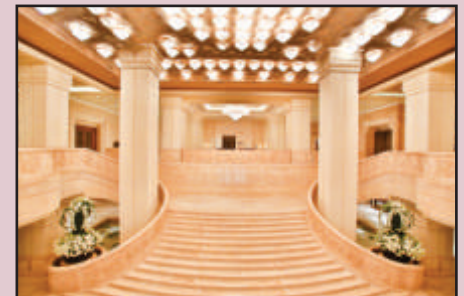
This complex presented various interesting structural challenges. All buildings in this complex are R.C.C. Structures. The Residential block and the school building consists of a conventional slab system with beams spanning up to 11 m.

The third floor level of the Club House has swimming pools and landscaped areas with inverted beams. The fourth floor is a part of the tower that goes up to 46m level and has leisure areas like spa and a restaurant. The remaining floors of this tower are hotel rooms for which the shape of the columns had to be changed from square in plan to elongated RCC walls. This was done with the help of transfer beams at the 5th floor level.

The Spiritual Centre has a flat slab flooring system with column grids at 7.5m x 7.5m meters at ground floor level to facilitate the car parking areas in the basement. The Meditation Hall on the next floor required an expansive area of 30m x 30m to be free from the visual distraction of structural elements such as columns and beams. This hall has a floor to floor height of 13.5m which is capped with a Banquet Hall with a floor to floor height of 11.7m. A large column free space of 44m x 38m has been achieved in this Banquet Hall through the use of post-tensioned beams at 3.75 m c/c in both the directions to support the slab. The terrace has provisions for a lawn Tennis court and Badminton Court which will be designed in structural steel.

Engineering the Grand Staircase

A very funny situation is arising with respect to the Grand Staircase in ITC Grand Chola, that was featured in one of our past Newsletters. The Grand Staircase in the lobby of the hotel has become a favourite venue for a variety of photo opportunities like group photo of delegates of conventions, conferences, seminars and even guests of a wedding. Our office is frequently consulted for the number of persons allowed to stand on the staircase. Recently, a request came to us to permit 400 delegates of a conference to be group photographed. Some time back, a permission was sought for allowing dancing during a wedding. Fortunately, the staircase has been designed for a live load that allows a closely packed line of humans on each of its steps.



Engineers at Sterling take Managerial Skills Test

In our constant endeavor to improve our leadership skills, Project Leaders at Sterling appeared for a **Managerial Skills TEST** conducted by **Disha Counseling Centre**. This on-line test for Psychometric Assessment enabled the engineers to test their skills pertaining to Self-Management, Stress Management, Communication Skills, Negotiation Skills, Crisis Management as well as a number of other parameters. The on-line results helped the engineers to understand their strengths and therefore perform better as Leaders and Managers.



Congratulations to our engineer **Saurabh Butala** who secured the **FIRST POSITION** in his ME First Year Course

Welcomes and Goodbyes

We welcome a number of new members to the Sterling Family ! They are :

Vinda Dravid, Ahsan Ansari, Arjun Rao and Abhinandan Batkadli to our BKC branch office.

We wish the following staff members, who have left the organisation the very best for their future career and they are :

Samantha Lopez, Mahendra Pawar, Sagar Sakore, Yogesh Rangari and Amol Gaulkar.





News and Events

- One day seminars were arranged at our BKC branch on "SOIL" on 8th and 22nd Nov '13. They were also attended by our staff from Fort branch. Mr. Shekhar Vaishampayan of Subsurface Consultants Pvt. Ltd. delivered the session on Shallow Foundations on Rock and Mr. Mandar Hasabnis also spoke about Pile Foundations.
- Our draftsman Pravin Sutar attended a two day seminar on "REVIT" he was exposed to the advantages of REVIT over AutoCAD and the numerous possibilities available on a Revit platform.
- Mr. Vinayak Naik our senior Project Leader was invited as the Guest Speaker at VJTI in July 2013. He spoke about "Issues related to modelling, analysis and design of High Rise Buildings". He captured the attention of the audience speaking about modelling issues in modern High rise buildings. Rohan Jirage our Design Engineer also attended this lecture.
- On 15th Nov. 2013 Mr. Vinayak Naik, presented an in-depth comparison between rolled sections and parallel flanged sections, highlighting the advantages of the latter in a seminar organized by JSPL at Hotel Orchid.
- A team of STADD engineers arranged a seminar on – "STAADPro Building Solutions" on 29th November at the Institution of Engineers auditorium, Haji Ali, Mumbai. It was attended by our passionate team of Design Engineers - Shrijay Kalghatgi, Kirankumar Joshi, Vijay Pawar and Mohammed Mossa.

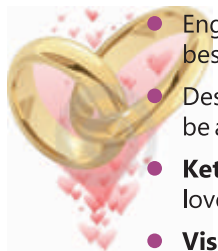
Congratulations.... and celebrations! Dhanashree Dighe, Assistant HR Manager

To our staff members who have been blessed with a new member in their family...

- **Kalpesh Mhatre** from Fort branch and his wife were blessed with a darling daughter **Kanakon** 21-Sep-2013
- **Vivek Thakur** from Fort branch and his wife became the proud parents of a sweet baby girl on 15-Nov-2013
- **Suryakant Tawade** from BKC branch became a happy father of an adorable baby girl **Swarali** on 13-Dec-2013.
- **Pradeep Dhuri** from Bandra branch and his wife have been blessed with a little princess - **Tanya** on 26-Dec-2013
- **Abdul Hafiz** from BKC branch and his wife were blessed with a precious baby **Huzefa** on 15-Dec-2013
- On 21-Dec-2013 **Kiran Kumar Joshi** from Bandra branch was pleased to announce the arrival of his son **Om**.
- **Kiran Sontakke** from BKC branch became the proud father of a baby girl on 17th Jan, 2013



To our staff who have tied the knot, we wish them a happy married life ahead !



- Engineer **Mohammed Moosa** from Fort office married **Nusrat** on 27-Jun-2013. Here is wishing you both the best life has to offer and a long and blissful life together.
- Design Engineer **Nitin Kamble** from BKC office tied the knot with **Deepali** on 19-Nov-2013...may all your days be as joyous and happy as the day of your wedding. Congratulations to the happy couple!
- **Ketan Naik** from Bandra office wedded **Dhanashree** on 25-Nov-2013. We wish you a life together filled with love, laughter and happiness for every moment throughout eternity!
- **Vishal Patil** from BKC office married **Tejashree** on 28-Dec-2013. May the joy of your wedding light the path to a glorious future.

Obituary



Mr. Kishor Patil

It is with great sadness that we finally bid adieu to Mr. Kishor Patil who passed away on 21st November 2013 at the age of 68. Mr. Kishor Patil was our ACE draftsman in the 70s and 80s - while working with Hadker Prabhu and Associates initially- and later in Sterling Engineering. He had a very good understanding of engineering design as well as construction issues. He could independently study architectural concept drawings and prepare structural GAs without much help from engineers. He was always admired for his speed and neatness. His contribution in the complex project like The Mumbai Stock Exchange was quite significant. He joined our Design Team and stayed in New Delhi to face the challenging projects like Indira Gandhi Stadium and Le Meridian Hotel. Above all, K.B. (as we used to call him in those days) was a gentle and kind man - ready to help and guide his colleagues and junior draftsmen. He worked till the age of 60 years - guiding the draftsmen and organising the deliverables in consultation with project leaders. He is survived by his wife, son Hemal and Amol who is working as a draftsman at our BKC branch office.





Editorial Dr. Deepali Hadker

Here is wishing all of you a very happy and successful 2014!

Welcome to the first issue of this year which is fully dedicated to our projects in the vibrant city of Kolkata. It is interesting to note that perhaps the oldest engineering company in India, Jessop & Company – often called “The Grandpa of all Companies” was started in Calcutta 225 years ago! Founded in 1788 by a renowned British Engineer William Jessop, this company built the first iron bridge at Lucknow and the famous Howrah Bridge in Kolkata. The Howrah bridge is an engineering fete in itself and connects the twin cities of Calcutta and Howrah while it spans across the River Hooghly.

Today this city has a rich cultural and architectural heritage and has become a colorful metropolis – called the “City of Joy” by the French author, Dominique Lapierre whose book by the same name became a best seller. The story revolved around the author's stay in the city where extreme poverty dominated but beneath the dirt and squalor of the slums was the warmth and special happiness among the people of Kolkata.

It is heartening to note that Sterling has earned an excellent reputation in Kolkata as leading structural consultants. What is noteworthy is that Sterling has agreed to share its enormous wealth of information with local engineers and has successfully established partnerships to collaborate where our engineers can learn from the locals while sharing the workload. This has come from the primary mission of the organisation to remain a “learning organisation”.

Sterling is proud to be a part of the “New Kolkata” as seen in the variety of projects completed by us and particularly, projects like the Salt Lake City Centre built on vacant wasteland and the City Centre in New Town, overcoming the challenges posed by the difficult sub-soil conditions, where the idea was not just to create a mall but an entire community making a strong contribution to the built environment! You will also read about the Technopolis II – IT park and residential developments like the sprawling site of Utalika and the twin towers of Altius. We hope you enjoy reading about these new developments in this intriguing city!



Awards

The **CNBC AWAAZ REAL ESTATE AWARDS 2013** were declared recently and a number of projects designed by Sterling were amongst the winners in the various categories. They are:

- Prestige White Meadows** – Residential development for Prestige Estates ● **Phoenix Market City**, Chennai Shopping Mall and Mixed use development for Phoenix Mills ● **Ramanujan IT City** IT Park for TRIL
- Tritvam**, Kochi Residential project for Tata Realty ● **Vivarea** Luxury Residential Towers for K Raheja Group
- Penninsula Business Park** Commercial Development for Peninsula Land Ltd. ● **R City Mall** Retail project for R Mall Developers



Design and Build Contest for all our Staff Members at Sterling!

We encourage all participants to design and build a “structural sculpture” to showcase your artistic talent along with your structural knowledge. You can submit solo entries or make groups of not more than four members. All submissions will be in the form of drawings and models as per the submission guidelines.

The winning team will receive a cash prize of Rs.10,000/-

The winning entry will be sponsored to build their model to a scale of 1:1. The winning model will be displayed and also featured in the company newsletter as well as on the website.

Submission Guidelines:

Maximum size of actual sculpture shall not be larger than L: 4 feet B: 4 feet H: 5 feet

Materials to be used : Mount board, thermocole, wood, cement/mortar, bricks, stone, metal, paper, paper mash, fabric, FRP, POP, cables ect.

Time Duration: 3 months

The participants may select any three of the following attributes to work around-

- | | |
|--|---|
| 1. Single base support | 2. Cantilever elements with L/H = 1.6 (minimum) |
| 3. Electro-mechanical systems | 4. Demonstrate a scientific principle |
| 5. Demonstrate an architectural style or a historical event/symbol | 6. Use of only one material |
| 7. Inclusion of green technology/materials | |

Contest Guidelines:

- | | |
|---|---|
| 1. Groups of up to 4 people may be formed. | 2. Individual participation is allowed. |
| 3. Model should not be a replica of an existing structure. | 4. No single geometrical shape can be used. |
| 5. Participants are expected to register within one week of announcing the contest. | 6. Design drawings on not more than 3 nos-A3 sheets are to be submitted within one month of announcing the contest. |

The drawings should feature various views of the sculpture and the materials used.

Contact us at Fort office : sterlingfort@gmail.com | Bandra West Office : sterlingbandra@gmail.com
 BKC office : sterlingbkc@gmail.com | Bangalore Office : sterlingengblr@gmail.com