



RISE UP TO THE CHALLENGE

Civil Engineering Construction Contractors

As sure as the spring will follow the winter, prosperity and economic growth will follow recession. Bo Bennett

started with this quote for a reason. The reason is to ensure that every individual working at BEB realizes that even though the times are tough, progress is still on our minds. In our Issue 5 - April 2007 "Three months into 2007", I had mentioned a path we had embarked upon. It was the path to success and progress. Two years after that, I strongly believe that we have significantly progressed upon this path and are in the right direction. Due to the dedication and hard work put in by everyone, we have successfully and consistently achieved a good and sturdy growth over the past two years.

However we must remember that this is not the time to sit back and relax. Unfortunately, times have changed, profit margins have reduced, competition has increased and jobs are scarce. But, there are still opportunities galore for companies with strong fundamentals, companies which can healthily compete and companies which can endure this passing storm. The coming financial year is going to get tougher but not insurmountable. We need to tighten our belts and look for ways to increase the top line and protect our bottom lines.

In order to continue establishing ourselves in the market as a leading contractor, we have to continue our growth. Work volumes should increase. Profits may not rise commensurate with the increased work load but in times like these, achieving the target growth without cutting corners or sacrificing quality and safety will in itself be a monumental achievement.

Implementing cost cutting measures even in the smallest of things can make a big difference at the end. The need of the day is to **control costs** much more efficiently than what is or was being done by:

- Reducing infructuous and superfluous expenses.
- b) Increasing outputs and efficiencies without neglecting safety aspects.
- Pooling and sharing resources not only between branches but within the branch too.
- d) Timely completion of the designated project works in spite of hurdles.
- e) Timely billing, certification and recovery of our dues.
- Judicious and economic use of resources, may it be manpower or plant & machinery.
- Ensuring proper quality controls and avoiding loss of time and money in re-work or repairs.
- h) Minimizing wastages of materials.
- Plugging all loopholes in the system measurements, pilferages, etc.

It is said that strategies which adapt to times work the best. With the changing scenario we have to change our strategies. Aggressive bidding and increasing volumes is the order of the day and we have to **rise up to the challenge** and reach our goals.

Digant L. Kapadia Managing Director

25 years SERVICE



Mr Decruse Mathew - Project Engineer on February 2, 2009



Mr Namdev Nigudkar - Peon on February 17, 2009



Mr K. V. Suresh Kumar - Outdoor clerk on February 18, 2009



Mr E. T. Joy - Foreman on March 1, 2009



Administration of 'Health & Safety' Highrises Implementing and managing safety in high rises is always a tough

iob. For high rise buildings of 30 and more floors, use of lightweight aluminium formwork enables speedy work progress - about 3 slabs per month. To achieve such speedy progress, safety arrangement is required to be planned well in advance such as netting, covering all openings, edge barricading, work platforms etc.

Bellissimo (50 storied building)

The site is completely blocked from all 4 sides viz. ACC Concrete Plant. LODHA Marketing Office, Slum area and construction of 'C' Wing. A very congested site with no space for material storage, material lifting and vehicle movement.

Creating work platform was a challenging iob due to typical design of structure of the building, a lot of curved areas and facial beams every 5th floor. Another major hurdle was that of controlling 'falling objects' as all activities were carried out very close to the building. We tried to avoid this problem by preparing brackets of special design for fitting with tie rod and fly nut.

To manage safety at site we decided to create work platforms on channels. Trial of the channel system was carried out on the 19th floor. Initially we took up the west side to protect the slum area and covered the entire area with the channels system upto the 23rd floor. The entire team took up this challenge and worked together to cover a

Problems encountered at Lodha major area with plywood, toe board, vertical

- 53 pours completed in 58 days 2009
- Erecting scaffolding for work platforms was more easy
- Comfort and safety was assured
- Saving of manpower
- Able to achieve speedy progress with this arrangement

Erecting a podium net covering the traffic movement within a span of 20 mtrs. length was another challenge. For this we developed special supporting channels and covered all possible areas with horizontal podium net.

This is a landmark project for the Lodha Group and they hired BOVIS to ensure international safety norms. I am proud to say thanks to the efforts of our team we were able to get satisfactory reports from BOVIS consistently.

Our site is the first site to display BBS and implement Tool Box Talk on BBS.

*QQT" related aspects

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The foremost emphasis should be on safety and Planning in that order. This will obviously involve the concept of total quality management by ensuring the right balance in QQT (Quality, Quantity and Time). Some related aspects in relation to high rise building projects are penned below; with special reference to completed Towers at Planet Godrei site, Byculla, Mumbai

- The work on planning in a tall structure had to be done more meticulously. A case in point is lack of such experience and right attitude at a crucial juncture of the client's representatives. In other words had the client possessed the right experience and handled a project of similar nature earlier or allowed BEBL to manage entirely, the status would be different. The human tendency is to justify under one pretext or another, the decision already taken. Only a few will have the guts to accept change and improve.
- As an example, the centerline of the lift shaft should be provided by the lift erector as is the common practice. This is often not done for reasons better known to the client. Further the final centerline to be followed should be based on completed tower as it would be more accurate than the one at halfway height. In one particular case the client refused to budge. They went ahead (despite protest) to work on the centerline that deviated resulting in cutting and rebuilding of shear wall at a few locations which could have been avoided mostly. A foolhardy decision like this against sane advice by BEBL has resulted in delay in completion of services and handing over.
- The practical experience coupled with right attitude is the only formula for timely and smooth completion. In the case referred to above, the client forced us to proceed with tiling and lift lobby work in spite of our warning knowing very well that it was against general practice.
- A major activity representing nearly 20% of the contract value was excluded without realizing consequences of such an action . The resulting time delay in facia repair could have been drastically reduced since this activity was a parallel activity and could have been completed much earlier.
- Considerable time was wasted by the client in taking decisions and concluding the work orders. Once they realized their folly they reached for the readily available scapegoat in BEBL who have a reputation to keep and hence try to help the client in the interest of long term relations.

- The construction logic dictated that a certain sequence be followed. But at the cost of quality, certain adjustments were made by the client. Undue pressure on cycle time, pushing tiling work without controlling the design/detailing, ignoring the right sequence and work of other agencies resulted in delays and cost overruns.
- Mivan (the system formwork specially used in this project (obtained from Malaysia) recommend a certain sequence of operations. The right sequence is followed using the reference points and axes on each floor which were transferred to the top all the way. Further, at each level, required time had to be allotted for cleaning / leveling etc., for adjusting the kicker / starter level and position to ensure that plates are placed properly. This process is invariably disturbed cut short to some extent due to stress on cycle time/ client's lack of experience and pragmatism/interference and pressure created on contractor's workmen.

The constant and undue pressure on speed without responsibility of verifying the logistics / practicality / the capability of general work force available in the country as well as the script (Tender) writer's experience all need to be viewed with a microscope.

In one particular case, the client delayed a tower by more than a year and this rendered the concept of cycle time irrelevant.

Bottom line --- The most important mile stone of the project was completion of the last typical slab. Thus realization of what was once declared as a dream to construct India's tallest cluster of 5 (50 level) towers in a prominent location in Mumbai, by the Chairman of the Godrej Group, was achieved.



The Oct - Nov 2008 issue of the "BEB Relationships" was superb. The content, the page layout, the artwork, the production quality etc. was very good. The coverage of the Golden Jubilee Celebrations was comprehensive without being verbose and it gave a good idea of the celebrations to those who could not attend. Using folding instead of stapling was a novel idea. It was eco-friendly too. Please keep it up.

Dinesh Nayak, Dy. G. M. - Tech & Mktg.

The photographs of the Golden Jubilee Celebrations covered in the last issue of the Newsletter "BEB Relationship" will make us feel nostalgic of the achievements and glory of our Company. We shall be able to remember those members of the team with gratitude who have served the Company for Long periods.

Bhushan Naik, Excutive Assistant - H.R.

In the last Newsletter Issue of January 2009, the quote by Mr N.C. Parameswaran "Today we are getting a job of Rs.200 Crores and everybody is sleeping peacefully that is the change we have made in the last 50 years" is so befitting and served to remind us of the fanatic dedication of the founders to their work.

P. L. Devassy. Account Assistant



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D. R. Nayak, Dy. G. M. - Tech & Mktg.



B.E. Billimoria & Co. Limited takes pride in its record in carrying out works speedily and always within the time limit specified in the contract. This has been possible due to the construction management practices followed by the Company apart from its highly trained and motivated human resource. The construction management involves coordinating a variety of tasks that must be completed within a given time limit for a specified amount of money.

Good construction management practice comprises of following stages:-

1. IDENTIFICATION:

This stage involves identification of:

- (a) Various targets/milestones to be achieved in the course of execution of work.
- (b) Tasks required to execute different items of work covered by the contract.
- (c) Various materials required to execute the work.
- (d) Various categories of sub-contractors / labour contractors/skilled workers required.
- Different types of tools, plant and equipment required to perform various tasks.
- Broad details of methodologies to be adopted.
- (g) The basic infrastructure needed at site.
- Possible bottlenecks and hurdles. This aspect is very important as a construction project is always subject to many imponderables.

2. DEFINITION:

This stage covers working out:

- Details of work components of various tasks.
- (b) Materials, human resources, tools, plants & equipment needed for different work components.
- (c) Methodologies and work instructions for different work components.
 - An analysis of possible bottlenecks and problems and their impact on the progress and cost of operations.

3. PROJECT DESIGN:

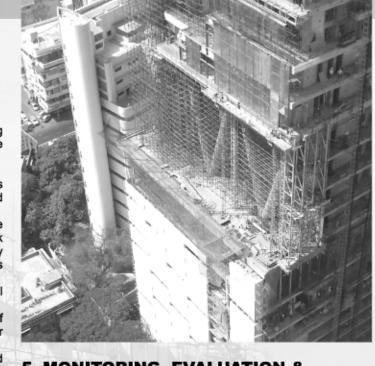
Project design encompasses a comprehensive scheme for carrying out the project in the light of matters identified and defined in the previous stages. Among other things, it involves:

- (a) Preparation of a detailed project bar chart showing various contract items, their planned commencement and completion dates and interdependencies.
- (b) Planning the layout of site infrastructure like accesses, site offices, stores, open storage yards, workshops, work areas, parking / holding areas for vehicles and machinery etc. in such a way that there is an efficient flow of materials and work.
- (c) Planning the labour and staff quarters with essential amenities.
- (d) Planning for the requirements of different types of construction equipment, plant & machinery and their capacities.
- (e) The best and the quickest way of mobilizing men and equipment so that the work can be started in the shortest possible time.
- Procedures for selecting various suppliers and subcontractors.
- (g) Preparation of schedules for deployment of subcontractors / labour contractors of different categories, equipment etc. based on the project bar chart.
- (h) Preparation of procurement schedules of various materials based on the project bar chart.
- Carrying out of 'what if' analysis of the project to see the repercussions of changes in various items above and also the effects of bottlenecks and hurdles.

4. IMPLEMENTATION:

This stage deals with:

- Setting up site infrastructure and mobilization.
- (b) Procurement of plant, equipment & machinery and their deployment as per the schedules prepared.
- (c) Selection and appointment of sub-contractors/labour contractors and deployment of skilled workers as per the schedules prepared.
- (d) Procurement of materials in sync with the work schedules developed on the basis of bar chart.
- (e) Carrying out the work as per the bar chart and as per the quality standards prescribed.



5. MONITORING, EVALUATION & MODIFICATION:

A good bar chart and an action plan will be of no use if not continuously monitored and modified to suit the changing parameters, which is inevitable in a project.

This stage encompasses:

- (a) Monitoring every activity to see that it is proceeding as planned and if not, finding out its cause/s and taking corrective action.
- (b) Assessing whether an activity has been allotted the planned resources and whether the result is commensurate. In addition, assessing whether resources are over-allocated or under-allocated and taking corrective action.
- Evaluating the impact of delay in any activity on the downstream activities / targets / milestones / end date of the project and taking corrective action.
- (d) Evaluating the repercussions of unforeseen bottlenecks / hurdles on the project after they arise and determining remedial measures.
- (e) Modifying various schedules and the original bar chart to reflect the new realities brought out in the monitoring and evaluation exercise.





Shridhar Ghasti, Sr. Engineer - Antilia

Thorough removal of air through compaction is of vital importance for concrete to achieve its full strength and thus ensure durability. Currently the most effective way of achieving this is through induction of vibration into the concrete. Vibration can be induced either by a traditional poker device or via new vibratory free screeding tools that eliminate the need for a poker. Concrete should

be placed in layers no more than 450mm deep and each layer has to be vibrated before it sets and the next layer is placed. Vibration ensures escape of air bubbles to the surface. When Vibration penetrates the first layer by about 100mm it ensures a strong bond between the two layers.

When using a poker only a small area around the poker will be compacted to an appropriate degree. The area depends on a number of factors - size of the poker head, frequency and amplitude of the vibration, slump of the concrete, aggregate and admixtures, amount and size of reinforcement bars, distance from the formwork etc. The size of the compaction circle can be determined by the 'fat' that rises to the surface. This 'fat' aids in providing a final finish to the concrete. For complete compaction the poker should be inserted at intervals so these circles overlap..

Choosing a vibrator

The size of the job and the power supply available on site will determine the type of pokers to be used

- Hand held, small jobs powered by mains electricity or a generator
- Backpack pokers, powered by small backpack mounted Honda engine
- High Frequency Electric Pokers
- The selection of head size is determined by its application. Small diameters for small concrete volumes and narrow areas. Large diameters for large pours to increase productivity
- Rubber coated heads protect epoxy coated rebar.

The design, construction, operation, maintenance and demolition of buildings takes enormous amounts of energy, water and materials and generates large quantities of waste in addition to pollution of air and water.

As the environmental impact of buildings becomes more apparent, a concept called green building is gaining momentum. Green or sustainable building is the practice of creating healthier and more resource-efficient models of construction, renovation, operation, maintenance, and demolition. Research and experience increasingly demonstrate that when buildings are designed and operated with their lifecycle impacts in mind, they can provide great environmental, economic, and social benefits.

Most of us talk about energy consumption and pollution caused by industries and transport when at least 40% of the total energy produced is consumed by buildings.

The Indian scenario

Madhav S Bapat

The construction industry in India is the largest sector after agriculture, contributing about 7% towards India's GDP. The sector is forecast to grow at a pace of over 10% per

annum for the next five years, against the world average of 5.5%. The development of Indian economy is creating demand for residential and non-residential construction, as consumers demand more houses, commercial spaces, shopping malls, hotels, other facilities and modern amenities. In property terms, this new demand translates into over 12 million homes, 600 shopping malls, 80 million sq.ft. of offices and 200 townships, along with airports, hotels, hospitals and schools, all slated for construction by 2010.

Green buildings are steadily increasing their footprint in India with an increase from 6,000 sgm of green space in 2003 to 304,800 sgm expected by the end 2009. Today a variety of green building projects are coming up in the country, residential complexes, exhibition centres, hospitals, educational institutions, laboratories, IT parks, airports, government buildings and corporate offices.

India, which has an estimated 19 years for the domestic oil reserve to last and 86% of its oil consumption being imported, has taken a leading role in promoting green buildings coming close behind the US, Australia and Canada. Green buildings utilize designs and materials that are environment friendly. They ensure pollution-free environment and reduction in energy bills through smart energy management, building management, adoption of solar photovoltaic system, high performance windows and heat resistant paints among others.

Edge over conventional

heating, ventilation and air conditioning or

GREEN BUILDING FROM CONCEPT TO REALITY

Harshal Hirde, Sr. Manager - Safety





HVAC. Green buildings have provision for solar protection to prevent heat gain in the premises during the day. This helps in putting less of load on air-conditioning system to maintain ambient temperature within the premises.

Weather sensors help in optimizing the benefits offered by automated solar protection systems. In winter, the natural heat can be allowed in the premises using the same solar shades and for controlling them, depending on the sun effect and heat entering the building, thereby helping the heating system perform better. The downsizing of active temperature management systems (air conditioning and

heating) in the green buildings reduces the overall building costs.

As per estimates, 76% of the electricity generated by all power plants is consumed by buildings and 35% of the energy consumed in a building is because of use of light in the day time. So the big question is how to reduce the consumption of this energy. The simple answer to this question is the solar protection mechanism in green building. It ensures the usage of natural light to the maximum and that results in the reduction in the consumption of electricity used for lighting. Indian climate provides us natural light for quite a long duration and if the luminosity coming in can be controlled,

then this will be a huge source for energy. This mechanism also protects the premises from the glare and heat in the summer and maintains the warmth during the winter. This helps in the increase in the comfort level of users as it enables natural ventilation. natural light and also climate control in a natural way. So, the overall experience in

The Road Ahead

such buildings is quite soothing.

The Indian Green Building Council (IGBC) estimates that demand for green building materials and equipment will reach \$4 billion per annum by 2010. Going green is the latest trend among the corporates. Green building, as the concept is called, ensures environment protection, water conservation, energy efficiency, use of recycled products and renewable energy. Industry experts feel that in tune with the global trend to protect environment, the number of green building projects in India is expected to go up from the current 164 to

over 2,000 by 2012.

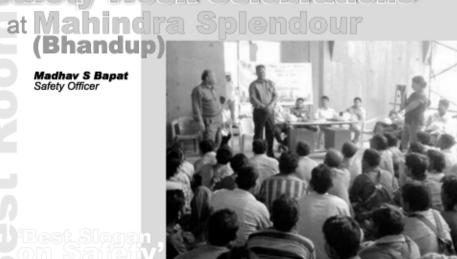
A two pronged strategy can be considered. First, to make sure that the "trend" doesn't become a marketing buzz but a real step to be taken by construction equipment suppliers, developers/builders, architects/interior designers and the second, to educate end-users in a way that they are responsible towards our next generation.

Although the initial investment will be 4-5% higher than the traditional buildings, in the long run, the returns on investment will be very high. Indian developers are realizing this fast and the interest level is increasing and maybe with intelligent systems and controls, we can manage the environmental constraints favorably to reduce energy consumption.



It is estimated that 40 per cent of energy consumption in a building is on account of

Safety Week Celebrations



Safety Week is celebrated all over India from 4th March to 10th March for the last 38 years. 4th March is the Foundation Day of National Safety Council.

At Mahindra Splendour, the Safety Week started with an inaugural function at the auspicious hands of Mr. Vijay Joshi, (DGM), MLDL. Our GM-Project, Mr. Sunil Deshmukh welcomed Mr. Vijay Joshi and his team and the accompanying guests Mr. Sachin Neve, Mr. Atish Varadkar, Mrs. Kavita and Mrs. Seema Patil. Mr. Deshmukh briefed the audience of 450 workers and 80 Staff on the Safety Week Celebration at site which included Best Slogan on Safety and 'My Room Best Room' competition (for labour), demonstrations for Fire Fighting and First Aid, specialised training on BBS, Mock Drills and Blood Donation Camp.

Mr Madhav Bapat, Safety Officer, organised the Safety Week along with his colleague Mr.

Vilas Nikam, Safety Officer and the Safety Stewards. All the events were conducted between 1:00 and 2:00 pm.

Mr. Vijay Joshi gave a small talk wherein he expressed his appreciation for the efforts by the BEBL Safety Team to maintain safety and accident free situation at the site. He admired the manner in which the function was conducted and the discipline of the BEBL workforce.

Mr. Harshal Hirde our Senior Safety Manager appealed for an effective accident free site and increased safety awareness amongst the workers.

On 9th March we had the Fire Fighting demonstration which was also witnessed for the first time by the BMC Fire Fighting Officer Mr. S.R. Borole and his colleague Mr. Kumbhar. The demonstration displayed elaborately how to use the different Fire Extinguishers. Mr. Borole affirmed that precaution was always better and

narrated the various precautionary measures to be followed when there is a fire and the chemistry of fire due to different reasons.

On 10th March we had the prize distribution for the winners of the competitions during the Safety Week. The Judges had a difficult time selecting the best slogan as most of the slogans conveyed excellent safety awareness messages and almost all rooms of the labour were clean and tidy. The prizes were distributed by Mr. Vijay Joshi, Mr. Dilip Awar and Mr. Sunil Deshmukh. The prize winners for the competitions are as follows:-

'My Room Best Room'

1st Prize awarded to Mr. Sawan

2rd Prize awarded to Mr. Ranjan

3rd Prize awarded to Mr. Sahadev Samantray.

4th Prize awarded to Mr. Safigul Sardar (MESS)

'Best Slogan on Safety'

1st Mr Anil Navak

2rd Mr Sushil Navak

3rd Mr Nassir Hussain

4th Mr Tirupatti

Six Special Prizes were distributed for Best Safety Awareness amongst the workforce of 450 labourers during the year 2008-09.

The enthusiasm and involvement of the entire team made the Safety Week a memorable one and with the support of all we successfully arranged a blood donation camp for the first time in the history of BEBL.

on Safety

Mumbai, Pune, Nagpur, Bangalore, Coimbatore, Hyderabad, Chennai, Noida

Project Update

5. N. Bhat, Vice President - Operations

RESIDENTIAL

'Mahindra Splendour' at Bhandup, Mumbai - 5 towers with 2 level parking and stilt. 2 towers having 32 floors each and 3 towers having 21,23 and 25 floors each

'Crescent Court' at Greater Noida, Uttar Pradesh - 3 towers with double basement, ground + 22 floors and 2 towers with double basement, ground + 6 floors

'Antilia' a private residence at Altamount Road, Mumbai with double basement, Stilt + 27 floors

'Ashok Towers' at Parel, Mumbai - 3 towers with ground + 30 floors and 1 tower with ground + 51 floors and 3 levels of podium

'Planet Godrej' at Byculla, Mumbai - 5 towers with part podium, 48 + 3 floors

'Lodha Grandeur' at Parel, Mumbai basement, ground + 27 floors 'Regency Park Tower' at Thane - stilt + 23 floors

'Lodha Bellissimo' at Lower Parel, Mumbai - 3 level podium and stilt + 50 floors

Concorde Manhattan' at Doddathoguru village, Bangalore - 5 towers with double basement, ground + 14 floors

'Aparna Sarovar' at Kancha Gachibowli village, Hyderabad - 5 towers with double basement, ground + 19 floors

CORPORATE

'Ashford' at Lower Parel, Mumbai - with double basement, ground + 14 floors

'Godrej Eternia' at Shivajinagar, Pune - stilt + 10 floors

'Brigade Gateway' at Malleshwaram, Bangalore - double basement, Ground + 28 floors Commercial complex at Gachibowli, Hyderabad -Block 1 with stilt + 5 floors and Block 2 with basement, ground + 5 floors

'Information Technology Park' at Vilankurichi, Coimbatore - basement, Ground + 4 floors

UTILITY

'Maternity Home - stilt + 7 floors & Row Apartment' - stilt, podium + 4 floors at Edenwoods, Thane

'Hospital and Medical College' at Chennai with ground + 3 floors and ground + 4 floors respectively

'Amonara' Mall at Hadapsar, Pune - 2 blocks with basement, ground + 3 floors

'Brigade Gateway' at Malleshwaram, Bangalore, multilevel car parking

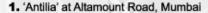
'UPAL' Mall at Lucknow, Uttar Pradesh -With 3 basements, ground

CIPLA' Research and Development Centre at Vikhroli, Mumbai

'Tennis stadium' at Yamuna Sports Complex, New Delhi

'Badminton & Squash stadium' at Siri Fort Sports Complex, New Delhi

'MMRDA' Foot-over bridges at Jogeshwari Vikhroli Link Road, Mumbai



2. 'Regency Park Tower' at Thane

3. 'Lodha Grandeur' at Parel, Mumbai



Dear Colleagues

BRANC

an article on YOUR EXPERIENCE OF WORKING WITH BEBL."

You are invited to write

The best write-up will be awarded and published in the next issue of our newsletter. Please email your write-up to sneha@bebanco.com by end-May 2009

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BRANCH OFFICES

Bangalore

Shiv Kripa, 1st Floor, Plot No. 56 1st Cross, 4th Main, Domlur IInd Stage Indira Nagar, Bangalore 560 071 Tel + 91 80 2535 9559 Tele Fax + 91 80 2535 9566 beb@blr.bebanco.com

Chennai

301, Shivalaya Complex, 'B' Block 225 Ethiraj Salai Egmore, Chennai 600 008 Tel + 91 44 2823 3888 Fax + 91 44 2823 3837 beb@chennai.bebanco.com Coimbatore

Guest House, Plot No.12, Door No.5 Mani Mahal Road, Ramalakshmi Nagar Peelamedu, Coimbatore 641 004 Tel + 91 422 655 3422 / 2599251 Tele Fax + 91 422 2599601 beb@cjb.bebanco.com

Delhi

A-34, Okhla Industrial Area Phase - 1 New Delhi 110 020 Tel + 91 11 2681 6661/62 Fax + 91 11 2681 2726 bncl@delhi.bebanco.com

Civil Engineering Construction Contractors

Registered Office:

Shiv Sagar Estate 'A' Block, 2nd Floor Dr. A.B. Road, Worli, Mumbai 400 018 Tel:+ 91 22 6654 5000 Fax:+ 91 22 6654 5050 Emall: beb@bebanco.com Website: www.bebanco.com

Hyderabad

102, Imperial Apartment
H. No.6-3-866/2, Greenlands, Begumpet
Ameer Pet Rd. Hyderabad 500 016
Tel + 91 40 6613 9908
Fax + 91 40 6666 9907
beb@hyd.bebanco.com

Pune

101-102, Mantri Terrace Thube Park, Shivaji Nagar Pune 411 005 Tel + 91 20 6620 4867 Fax + 91 20 2551 0683 beb@pune.bebanco.com

