

## BCEOM India at the World Road Congress

The 23<sup>rd</sup> World Road Congress was held from 17 to 21 September in Paris, with a focus on sustainable development. Among more than 4000 exhibitors and participants from 120 countries, BCEOM India participated in the event along with other Egis companies.

This was an opportunity to highlight BCEOM India's capability and experience, the prospects of the Indian market and the role of BCEOM India as an anchor for Egis activities in India. Contacts were made and discussions held with visiting Indian delegations from the road construction industry and from public organisations. Areas or projects for cooperation with international players

Through presentations given at the Egis stall, technical visits to sites (traffic control center, dynamic equipment for congestion management, toll plazas, and footbridges), it was also an opportunity to promote technical innovation and tools and methods used by the company outside India.



## A Major EC Funded Project in Water Sector

**Technical Assistance** to provide expertise, advice and assistance for the implementation of the **State Partnership Programme in Rajasthan BCEOM in association with STEM, Bangalore & GVNML, Jaipur.**

The proposed State Partnership Programme for Rajasthan is to be implemented over a **6-year period** and it forms a part of the European Union strategy to support development in India.

This programme supports the water sector reform to achieve an efficient and sustainable water resources management.

**Training, Capacity building, Gender Development, Financial, Legislation are important components of the project.**

The Team: **Three International experts, 3 National experts and 20 National & International short term experts.**

Funding agency : **European Commission**

Contract Value : **Euros 4.70 Million.**  
(BCEOM share Euros 4.00 Million & other partners Euros 0.70 million )

Duration : **2007- 2011**

Office location : **Jaipur, Rajasthan.**

Contact Persons: **Frank Peacock (Team Leader ) & Pramod Nikumbh (Water & Sanitation Department)**



### EDITO

The first half of 2007 has seen a steady development of BCEOM India's activities. New projects have been gained and new sectors are coming up.

The support from Egis has been confirmed for a second year, which acknowledges the results of last year as well as the confidence of Head Office in the strengths of BCEOM India as well as in the prospects of the Indian market.

In order to further grow, BCEOM India is increasing its focus on its main asset, staff, through a number of trainings and a policy aimed at creating a stimulating working environment.

*The Patrika Team*

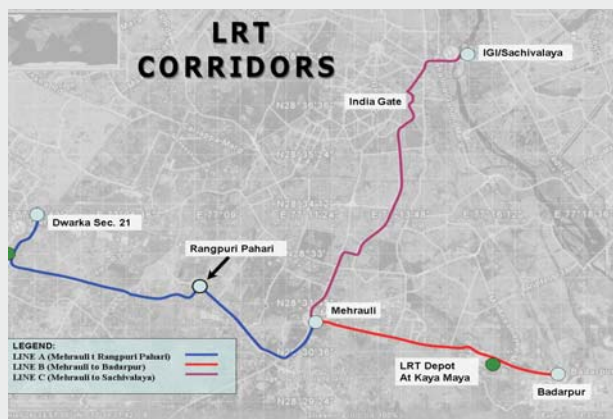
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## News From The Ongoing Projects

### Delhi Light Railway Transit Project

The LRT Project proposed to be built by Delhi Integrated Multi-Model Transit System (DIMTS) for the Government of the National Capital Territory of Delhi GNCTD will form part of the General Transport Network proposed for the teeming metropolis of Delhi. As envisaged the full LRT network will be built in two phases viz. Phase I - and Phase II. Phase I which is approx. 45 route-km and shown in blue illustrates the general alignment of the three proposed corridors of the LRT Project which is to be completed by end-2009 or early 2010 well in time before the Commonwealth Games scheduled in October 2010,, while Phase II is proposed to be completed by 2012.



Map Showing LRT Alignments (Phase I)

Phase I of LRT Project will be built first, and is the subject of the present Feasibility Study.

The LRT Project had envisaged three lines as under :

Line A: Mehrauli to Dwarka Sector 21 via Vasant Kunj junction and IGI Airport

Line B: Mehrauli to Badarpur via Saket

Line C: Mehrauli to Delhi Sachivalaya/Indraprastha/IG Stadium via India Gate / Nehru Stadium

Lines A and B have been merged into a single line for operational reasons. Hence there are now essentially two operational corridors viz:

1. Badarpur to Dwarka Sector 22 via Mehrauli and Rangpuri Pahari -26.25km (approx)
2. Mehrauli to IGI/ Sachivalaya via India Gate - 15.70 km (approx)

The LRT will run mainly at-grade, within a segregated right-of-way. However elevated sections will be considered for those special cases where an at-grade section cannot be provided (e.g. large road intersections, narrow ROW etc.). Modern LRT ambitions are to be an efficient mass transit system but also an exemplary well urban inserted mode in the urban grid to the extent that it also becomes a trigger for urban rejuvenation and/or development.

From March onwards several reports have been submitted and we made draft submission to client in month of September 2007. In wait for comments if any so that we can incorporate them and will be able to give final submission at the end of October 2007. BCEOM and EGIS Rail LRT staff have worked under tremendous pressure to produce the reports on time and ensure the success of this 1st Urban Rail Project.

### Assam (A8/A9) East West Corridor Project (NHAI)

Construction Supervision in JV with STUP and AARVEE

Period : 2005 2008; Contact:bceom\_awb9@rediffmail.com

**Bravo!!! ..... Isfakul...**

Meet our team member **Isfakul Hussain Khanikar**, who was attacked by some unidentified ultras at our work site in the state of Assam, EW-II (AS-8) / CS-II-A9 Project on 31st march 2007 at around 5:45 PM. This attack caused serious injuries to him leading to hospitalization and surgery in the abdomen. His right hand was also seriously injured.

Now he is still in the process of recovery from this trauma and has already joined the Site office on 8th June'07.

We on behalf of the team would like to thank him to show such bravery to fight this adverse situation and come back to his site to attend his duties. Its really an exemplary act for all others working in the state of Assam. Wishing him luck.



### Independent Consultancy Services (BOT Project) for AP - 3 Project

Client : NHAI /Domestic funded

Period : 2006 2009; Contact: bceom\_ap3@bceomindia.com

The Concessionaire of AP-3 (and AP-2) GMR Jadcherla Expressways Pvt Ltd, of NH-7 on North-South Corridors (NHDP-Phase II), BOT Project, held a day outing for all IC staff of BCEOM, including Span Consultants of AP-2, Concessionaire's staff, Contractors and NHAI staff on Sunday the 29th July 2007 at Pragati Resorts, around 35 Km from Hyderabad. The PD, NHAI used the opportunity to hold the monthly review meeting at the Banquet Hall for both AP-3 and AP-2 packages. All staff of BCEOM attended the day outing and all of them thoroughly enjoyed the indoor/outdoor games in a positive and friendly climate.

## ViziRoad : BCEOM's Road Inspection Equipment

VIZIROAD is a system of visual statement records directly in computer for any type of road or different information. VIZIROAD is useful to carry out road inventory, pavement condition survey, measure roughness of the existing road, capture the picture at suitable intervals and record the coordinates of road and associated features. VIZIROAD has following components to collect several informations at site.

- Laptop
- Two Key boards
- GPS
- Roughness machine
- Camera



The recorded data in computer is then processed to create a strip chart showing different features of the road. This system can also be used for traffic count survey. This system is useful for feasibility study, detailed engineering study and pavement management system projects. BCEOM India is operating this equipment since 2005.

For information on ViziRoad contact : Rajesh Chaabra

## Failure Of A Highway Embankment On Soft Clay Foundation - A Case Study With Remedial Measures

A paper was published by Dr. Bhandari in the proceedings of the 16<sup>th</sup> International Conference On Soil Mechanics and Foundation Engineering held at Osaka during Sept. 12-16, 2005. It was awarded a prize by the Indian Geotechnical Society (IGS) on December 12, 2006 as the best paper on case histories.

It was concerned with ameliorating the properties of 10m thick soft clays ( $c_u = 6.5$  kpa) encountered at the Visakhapatnam site of the port connectivity project linking the Vizag port to NH5 on the outskirts of the city. Under embankment loading of  $8t/m^2$ , a total settlement of approximately 1000mm and a time period of several years to achieve 90% degree of consolidation were computed. In order to bring the settlements and their rate within the project time requirements, Flexi drains FD 747 (100mm wide x 3.5mm thick) were installed at 2.0m c/c triangular spacing using Ch/ Cv ratio of 2:5. Construction of the embankment in the field went on till an embankment height of 3.3m was reached.

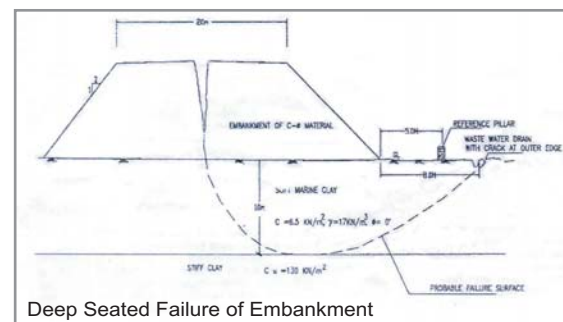
For laying the remaining height of embankment in section A from km 4.250 to km 4.420, some 30 truck loads of fill material were unloaded on its 170m stretch in stockpiles of 1.8m height spaced nearly 1.5m c/c placed across the entire width of the road crest. No such dumping of fill material was resorted to from km 4.030 to km 4.095 and from km 5.425 to km 5.845. On the first section, the dumping was completed around the afternoon of 23-04-03 and during inspection the same evening, a longitudinal crack running precisely along center line of the embankment was observed. This corresponded to a peak pressure rise in a nearby peizometer. In connection with the failure, the following typical features were also taken note of:

- (i) All damage was seen to have occurred on only left side of the embankment although the material was stockpiled on both sides of the embankment.
- (ii) Further embankment movements ceased 7days after initiation of cracking. Maximum crack width measured was 750mm and max. depth around 1900mm.
- (iii) Measurements on a small pillar in the affected area indicated that it moved horizontally about 80cm from its original location and that it suffered a heave of 20cm. Also, the outer edge of a nearby drain exhibited a crack of 25 to 50mm width.

Taking cognizance of all the above observations, the figure below illustrates probable configuration of the deep seated failure (not to scale).

### Remedial Measure

The remedial measures consisted of reducing spacing of the band drains to 1.15m, interposing high tensile strength (180 kN/m) high modulus polyester geotextile at interface of sand blanket and embankment fill and provision of side berms.



For information on Highway Embankment on Soft Clay Foundation contact: Dr. Bhandari

## Staff Joining Between July to September

### In Headquarter

Harbansh Singh, Office Assistant  
Ajay Kumar, DTP Operator  
Rini Joseph, Secretary  
Sonia Nangia, Receptionist  
Suresh Chander, AutoCAD Draftsman(LRTS)  
Sanjay Kumar Arya, CAD Draftsperson  
Anil Kumar Panda, DGM (Env)  
Arijeet Sen, Asst. Engr. (Structures)  
Seema Verma, BD Executive  
Mr. Mujeeb Ur Rehman, Planner  
Keshab Raj Dangi, Helper  
Sanjeet Singh, Office Asst.  
Manoj Kumar, Cleaner  
Manpreet Kaur Gill, Asst. Engr. (IT)  
Subhajit Chatterjee, Asst. Engr (Structures).

### In the Projects

Satwinder Singh, Sr. Surveyor, "Punjab State Road Project, Mohali"  
Parveen Rana, Office Asst., "NS Punjab, CS-I"  
Pranob Das, Computer Operator, "A-8, Assam"  
Shashank Shukla, Secretary cum Computer Operator, "UPSRP-Ph II"  
Ravi Bhushan Dwivedi RE, "UPSRP-Ph II"  
Debabrata Kar, Office Manager cum Accountant, "UPSRP-Ph II"

D. K Chaturved, Office Manager, "ECFP"  
Hari Prakash, Computer Operator, "NS Punjab, CS-I"  
Sudha Katoch, Computer Operator, "UPSRP-II"  
Sushma Choudhary, Secretary, "PSRP"  
Harnek Singh, Secretary, "NS Punjab, CS-I"  
Raghvendra Kumar Singh, AQME, "IC U.P". (Meerut-Muzaffarnagar)  
V.N. Praveen Kumar, Computer Operator, "BRTS, Bhopal"  
Rijoy Augustine, Computer Operator "IC Project (TN-5)"  
G. Sreenivasulu, Secretary, " IC Project (TN-4)"  
Khusboo Doshi, Secretary, Admin. Asst, "ECFP"  
Bhagwat Kumar, Translator, "ECFP"  
A K Singh, Field Engineer, "A-9, Assam "  
Niren Sarma, Field Engineer, (Bridges), "A-9, Assam "  
Ram Sahuwan Sharma, Surveyor, "UPSRP- II"

### 1st Campus Recruitment

Sarat Chandra Putrevu, Asst. Engr. (Water)  
Kandarpa V. Ravindra, Asst. Engr.(Water)  
V R P Reddy, Asst. Engr. (Traffic)  
T. Someswar Rao, Asst. Engr. (Traffic)  
L D C Kiran, Asst. Engr. (Geotechnical)  
Subba Rao Kakumanu, Asst. Engr.

K. Katyayani Lakshmi, Asst. Engr. (Structures)  
Udhay Bhaskar Ch, Asst. Engr.(Traffic)



**Mr. Jean Claude Genin**

He joins us at Head Office from BCEOM in Aug'07. He will be responsible for management of highway projects in India. His rich experience of 16 years in highway in Europe & Overseas will be of added value to BCEOM India.

## Seminars, Conferences and Trainings

### Quality Control & Quality Assurance

An In-house training on Quality Control & Quality Assurance was held on 7th & 8th September 2007 at our Guwahati Project (Assam). It was conducted by Mr. N R Bhatta & Mr. K. Venugopal. The focus of this training is to meet the needs of Clients & community through technical excellence & Innovation and train the Quality Staff on changing work procedures, processes and practises, familiarise them with emerging trends & technologies within the industry. The participants included Material Engineers, Field Engineers & Laboratory Technicians from all contract packages as well as Client.

### Road Development in India

A conference on road development in India was held on 21st & 22nd August 2007 at New Delhi. It was organised by Indian Infrastructure Organisation. Mr Sudhendra K (DGM - T&T) from Head office attended the conference. The focus of the Training was to provide an updated understanding of road development, to provide a forum for discussion on key issues and trends, State initiatives, New Model Concession Agreement, Need for an Independent Regulator, Financing of Road Projects, International Experience, Project Showcase, Promise of Technology & Developing Capacity, Capabilities and Best Practises.

### Training on Rigid Pavements and Paver Blocks

This training was organised by Central Road Research Institute, India (CRRI) from 11th to 14th September. Mr. Rajesh Chaabra, DGM (Highways) from Head office attended the Training. Besides various aspects for design of pavements, construction techniques and maintenance of rigid pavements, the other focus of the Training was to equip the highway professionals to meet the challenges and opportunities in fast developing transport infrastructure. Professionals were advised to:

- Explore new options for building roads which are sustainable assets and relatively maintenance free.
- Find ways to conserve natural resources.
- Favour technologies which results in less dependence on petroleum based binder, bitumen.

Solution provided to achieve these objectives was use of Cement Concrete Pavements and Paver Blocks. The construction of concrete pavement is faster than the flexible pavements with the help of pavers. Paver Blocks for road construction are used for truck lay-by, petrol pumps, parking area and urban roads.

### Urban Infrastructure Exp, Mumbai

India's largest Urban Expo at India USP 2007 was held at Mumbai from Sept 27-30, 2007.

An event targeting the urban infrastructure sector in India, & essentially providing a common platform for city govt. & infrastructure providers for exploring options, potential partners and business opportunities, its highlights were: Workshop programme & Urban marketplace. BCEOM participated with a stall display of our capabilities and services in all the sectors. It provided an excellent opportunity to network/ interact with officials from the JNNURM cities as well as with other consultants in similar & related and complementary fields. BCEOM's presence was in full strength with representatives from all Sectors and Senior Management.

**! TO CONTACT THE EDITOR** [patrika@bceomindia.com](mailto:patrika@bceomindia.com)

Sushmita Basu, DGM-HR  
Vishwa P. Singh, Asst. Manager (HR)

### New Projects Won:

Roads and Highways Sector  
*Preparation of Feasibility for 6 Laning as BOT (Toll) Project DBFO Pattern, (Nellore-Chilikaluripet) for National Highways Authority of India.*

### Water Supply and Sanitation Sector

*Flood Vulnerability Assessment of four major Agglomerations for Gujarat State Disaster Management Authority*