



Editorial team of Patrika wishes all its readers a very **Happy & Prosperous 2010**. We bid adieu to Year 2009 - a year of Challenges & Success and welcome New Year with new vigour.

Year 2010 begins with Egis India securing two milestone highway design projects - "Ashram-Badarpur flyover project" and "DPR of 459 km of NH in Maharashtra". Congratulations to Mr. Avadesh Singh and his team!!

We are pleased to inform our readers that our much awaited website www.egis-india.com has been successfully launched & the credit goes to Mr. Sumit Simlai.

It also needs a special mention that our current issue of Patrika features contributions from new members of Egis India family - Mr. Sankardev, Mr. Sanyal, Mr. Jha & Mr. Shival Manchanda. We convey our gratitude to them & look forward to their active participation in future also.

EDITO

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Year That Has Gone by...

As we reflect upon the Year 2009, it had been a year of challenges and rewards. It was a Year of Transformation for Egis India; from being viewed as a Roads & Highways firm we have positioned ourselves as Infrastructure Consulting firm. It's remarkable to achieve success across all sectors, reinstating our stakeholders belief in us.

While we continue to expand in Roads & Highways sector, our efforts brought desired results in new sectors with the following successes:

- Rail Sector bagged mega projects like Chennai Metro Rail Project and Kolkata Metro Rail Project.
- Water department forayed into Irrigation sector with Narmada Valley Development Authority's design project, Bhopal; Water Supply project in Imphal; Drainage and Sewerage Project in Orissa and UP Water Resources Project.
- Urban & Architecture Department got prestigious projects like "Re-designing of Mumbai CST"; first supervision project in Urban Transportation in BRTS; Master Plan Projects in Bhiwadi.
- Road sector was awarded with biggest Project Management Consultancy Project for Ganga Expressway; Hyderabad Outer Ring Road Project; PMC for Pune Sholapur; Independent Consultancy Services for Gujarat, besides Chennai Bangalore Expressway and other pre-bid services.

The year also witnessed change in the Management of Egis India. New Management took over the reins around mid 2009 to carry the legacy forward. Challenges & its rewards during 2009 only reinforced our confidence & trust in the company's vision (Vision 2012). We are fortunate to be part of this change and the growth curve.

Let's challenge ourselves to reach greater heights as rightly quoted by Author Noela Evans **"Challenge is a dragon with gift in its mouth. Tame the dragon and the gift is yours."**

Zoom on Allahabad Bypass

Allahabad Bypass Project: Construction of Road from Km. 158 to 198 (except Ganga Bridge) has been taken up by National Highways Authority of India with loan assistance from World Bank.

The total work was divided into 3 contract packages (ABP1, ABP2 & ABP3). Bidding was done on International Competitive Bidding process.

Allahabad Bypass is a 84.708 km is an access-controlled highway and forms part of Golden Quadrilateral connecting four metropolitan cities of India i.e. Delhi, Kolkata, Mumbai and Chennai.



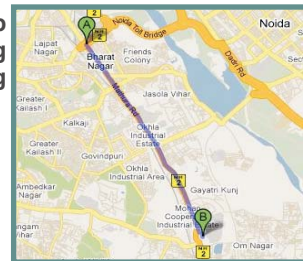
The project comprise of 2.608 km of 4-lane widening of the existing NH-2 and 82.1 km of new construction. The Allahabad Bypass takes off from Km 158 of NH-2 (near Kokhraj), runs for 2 Km along the existing alignment and then for 82.10 km along new bypass alignment, north of Allahabad city. It meets again the existing alignment of NH-2 (near Handia) and runs another 0.608 km to end at km 242.708 (NH-2 stationing km 245). The civil work involves construction of rigid pavement for the main carriageways and flexible pavement for the service roads. The work also involves construction of interchanges, overpasses, underpasses, rail over bridges, cross drainage works, river protection works and toll plaza.

The existing alignment of two lane of NH-2 passes through the congested city of Allahabad and there was no scope to widen this existing road to four/six lane divided carriageway. Since the existing NH-2 passes through the Allahabad city, the ongoing traffic from Kanpur to Varanasi and vice versa had to negotiate through the city which resulted in traffic blockages in several places of the city. Allahabad bypass was inaugurated in October 2009 bringing great relief to highway commuters.

New Projects Won

Name of the Project: "Feasibility and Preparation of Detailed Project Report for up gradation of Ashram- Badarpur section of NH-2 (km 8.30 to km 16.100) including Improvement of Intersection at Ashram (Mathura road) by providing underpass/elevated flyover to ease out the traffic congestion in the area"

Name of Client: National Highways Authority of India
Duration: 5+2 months
Funding Agency: NHA
Contact: Mr. Avadesh Singh, Team Leader



In order to ease the traffic congestion in the intersection at Ashram Chowk which provides connectivity between Mathura Road, NH 2, and Ring Road (connecting Lajpat Nagar - Sarai Kale Khan & DND Flyover), and for up gradation of Ashram-Badarpur section of NH-2 (Km.8.30 to Km.16.100) which includes improvement of Intersection at Ashram (Mathura road) on NH-2. Egis BCEOM International in JV with EGIS India has been awarded to study feasibility and preparation of Detailed Project Report by NHA. This project study will include providing underpass/elevated flyover along with traffic circulation plan in the area covering the localities in a stretch of at least 1-2 kilometer on each arm of the intersection in particular and in about 12 Kms length along Mathura road in general.

Name of the Project: "Independent Engineer for the work of Four Laning of Ahmedabad-Viramgam-Maliya Road on BOT (VGF) Basis"

Name of Client: Gujarat State Road Development Corporation Ltd.
Duration: 48 months
Funding Agency: Viability gap funding Scheme on BOT Basis
Contact: Mr. AP Mishra, Team Leader



GSRDC has appointed Egis BCEOM International in association with EGIS India as Independent Engineer for Four Laning of Ahmedabad-Viramgam-Maliya Road. It is a BOT project constituting construction of additional two lane and upgradation to 4-lane divided carriageway including Bridges; widening and rehabilitation/reconstruction of bridges and culverts; construction of high embankment/elevated structures/ROBs etc. along the existing highways. The proposed construction works will involve use of modern equipment and construction practices/ techniques.

Name of the Project: "Identification, Survey, Preparation of DPR's (Detailed Project Reports) And Detailed Estimates of Balance Medium and Minor Projects in Narmada Basin (Group-B) From Omkareshwar Dam Site To Gujarat State Boundary For 1,60,000 Ha Of CCA"



Name of Client: Narmada Valley Development Authority, Govt. of Madhya Pradesh
Duration: 18 months
Funding Agency: GOI
Contact: Mr. Pramod Nikumbh

This project involves identification, survey, preparation of Detailed Project Reports and detailed estimates of balance medium and minor irrigation projects in lower part of Narmada Basin to cover an area of 1,60,000 ha under irrigation.

About 20 medium and 180 minor irrigation schemes will be planned in the sub basin of tributaries of project area of Narmada basin. It is proposed to use high resolution satellite data of 0.6 m or higher for DEM generation and detail mapping of the area in GIS under proposed schemes and extraction of contour information at 12 m interval. Entire outcome of the project will be accessed through customized web based application. Planning for drinking water in rural areas and formation of water users association are also part of the assignment.

News From Ongoing Projects

Name of the Project: "Architect & Technical consultant for Preparation Of Master Plan & Feasibility report for Mumbai CST Railway Station"

Name of Client: Ministry of Railways
Duration: 52 weeks
Funding Agency: Indian Railways
Contact: shival.m@egis-india.com



"Lunar Eclipse" saw the moon meeting the statue over the dome of Chhatrapati Shivaji Terminus(CST), Mumbai on the last night of 2009. As we presented the "Master Plan" to the Railway Authorities in January'2010, a change is about to begin. Egis India in association with Egis Rail and the principal architects Arep Ville, France presented the master plan on 15th January'2010 to the Railway Authorities. The master plan, developed after months of field studies, surveys and many interactions and presentations to the railway and the local state authorities, envisage CST to be transformed into a major "Multimodal Hub". The Master Plan focuses on 3 aspects of the station "Railway", "Heritage" and "the Urban Environment". The fourth dimension of the Master Planning is to develop a vacant plot lying on the NE corner of the site on PPP basis so as to subsidize the project.

The project also transforms the station to be ready for the future 2030 passenger flux by proposing a major railway remodeling & rail operations and also by upgrading passenger facilities and by providing more usable area for the passengers. The project also proposes the connections to future modes of transport like Metro, rearranging the existing modes of transport like buses and taxis and realigning of the corridors of passenger movements.

The project proposal has been appreciated by the Mumbai Heritage Conservation Committee and UNESCO. Further a presentation is being planned to Government of Maharashtra for approvals. The Yard remodeling proposal and improvement in operational efficiencies is being proposed by a team of Rail Experts from Egis Rail and Egis India. Egis India is also providing architectural and engineering inputs in the project.

Mr. Sumit Simlai



Director (Rail)
DOJ: 24th March, 2009

“Having been asked to pen a few words about my perception of Egis India, I find it a bit difficult to really step aside and look objectively. Not an easy task when you have to write an opinion about your own home! Now past 11 months, I do have a few good things to say.

First, having come from a manufacturing background I did find it intriguing, having to deal with humans as a subject of business and not anymore the products and material that I was so used to. For me the very nature of business has changed. I think that this very aspect has given me far more experience in this short period than what I would have gained otherwise!

Second, you my colleagues are simply wonderful and each one great to work with. Just last week I was in France and I could clearly see the uniformity of culture and behavior between the Indian and French units.

Lastly to sum up what a very senior man in EBI told me: I believe that the creation of Egis India and its current management is one of the few best things that could have happened for the group.”

Tools & Techniques

Push Launching Technique for Construction of Long Span Truss

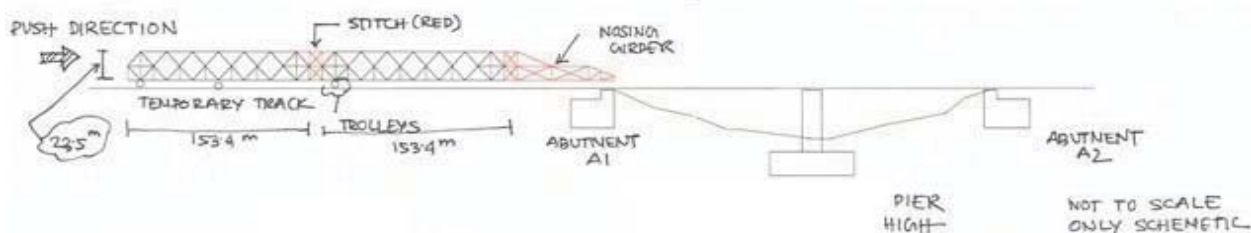
Sometimes the simplest bridge designs come in the most complex and innovative engineering and construction packages. Such is definitely the case with the new Bridge No 20 & Bridge No 93 in Jammu Udhampur Rail Link Project in India. The Bridge No 20 consists of 2 spans of triangulated truss girders of span 153.4 m each. It consists of one Central pier and two abutments at ends. Central pier is 90 m high and is resting on open raft foundation. Both the abutments are resting on well foundations. This bridge is crossing a local Khad named Jhajjar Khad, which is approx 125 m deep, gorges. The Bridge No 93 consists of 1x80m+2x102m span. It has two piers and abutments at ends. Piers are of 70m high. This bridge provides access over 80m deep gorges called Gambhir Khad.

In the hilly terrain having 125m gorges and limited access at one end abutment, construction of the bridges has been a difficult task and posed numerous challenges. Apart from the complexity of design and construction of these bridges requires great amount of planning and special techniques. The topography of the area resulted into long girders, combined with large pier heights.

After thorough investigations and considering the site constraints/terrain conditions, following observations were made:

- Bridge location is so high that fabrication and erection at site not possible
- One end of abutment had very less space for construction activity. Since it was just after the bridge railway track entering a tunnel
- Movement of construction material at site is not possible due to rough geographical conditions
- Bridges were designed for simply supported condition.

Geography and terrain conditions were deterrent for adopting any other solutions than incremental push launching. It was decided to adopt Customized Push Launching Technique for the construction of



The truss bridge has been launching analysis has been carried out and structural adequacy has been checked. Wherever required members have been strengthened. A 70m nosing is adopted to minimize the erection loading on permanent structures including abutment and piers. During launching, when the truss is maximum cantilever i.e. a position just before touching the pier/abutment at opposite side is found to be most critical and prone to wind. Detailed wind analysis is carried out and found to critical as the natural frequency was around 0.03Hz. After considering through analysis of wind, it was decided to launch the bridge in low wind season with a wind speed restriction of 50Kmph.

The bridge launching took only two weeks without any damage to structures, minor yielding of gusset plate found and rectified later. Push launching is used extensively for concrete/steel box girder bridges; adoption of this novel technique to truss type bridges requires intricate enabling works. Some of which are being adopted for the first time on Indian Railways. This is the longest span steel rail bridge till now. Next time, if you travel by train to vaishno devi Temple in katra, Jammu, you can see the bridge.

Sanjoy Sanyal,
Sr. Design & Construction Engineer,
Chennai Metro Rail Project

Study of Acceleration Noise Behavior in Heterogeneous Traffic Condition

A common claim of the studies on traditional measure of evaluating traffic flow quality and the factors affecting the perceptions of the quality of service is that the quality of service should be determined by incorporating the perspective of road-users, not relying solely on effectiveness measures developed by system managers or experts. As an alternative approach, the speed variation of a vehicle has been suggested as a promising indicator of traffic flow quality perceived by individual drivers. In particular, acceleration noise, defined by the standard deviation of the acceleration experienced by a vehicle in a traffic stream, has been often studied as a measure of the degree of speed variation. The idea of acceleration noise as measure for the quality of service was based on the notion that drivers tend to maintain their desired speeds unless traffic or roadway conditions restrict their maneuverability. In general, the higher degree of speed variation indicates poorer quality of service, and thus, driver discomfort. In the last half century various studies related to acceleration noise have been conducted. However, most of these studies are on multilane traffic with lane discipline. Further, measurement of recent measures to define the traffic flow quality (i.e. density) is also difficult in Indian traffic conditions as drivers do not follow lane discipline. Lack of studies in heterogeneous traffic conditions motivates me to study the acceleration noise behaviour in heterogeneous traffic stream as my M. Tech. Project work.

Traffic data (like traffic composition, flow, etc.) has been collected by recording the traffic using a high quality video camera on the straight section of the road. Simultaneously a test vehicles (passenger cars) equipped with GPS instruments (with accuracy in sub meters) keep on moving on the selected road with speed of traffic stream and keep recording its own speed and position at every seconds. Various observations made in this study on behavior of acceleration noise are enumerated here:

- ❖ Acceleration noise values observed in Indian traffic conditions is varies from 0.10 m/s² to 0.9 m/s².
- ❖ Acceleration noise decreases as flow increases,
- ❖ Acceleration noise increases with increase in stream speed,
- ❖ It is observed that acceleration noise values are lower in bidirectional traffic streams than unidirectional traffic streams.

Satish Kumar Jha

Assistant Engineer (Highway Design)

Tri-shift Work Cycle: Better Occupational Health in Construction

The Construction industry in India employs about 8.5 million building & other construction workers as per NSS (1987-88), being the 2nd largest employer in the country after agriculture, though being an unorganized sector. Much have been achieved in the last decade in the field of Occupational Health, Safety and Environment in this industry with the advent of Safety Management systems and Safety Certifications. The anomaly though lies in working hours of a worker /employee in this industry. In time-bound projects, engineers, foremen, workers of contracting/executing organisation have to work 12 hours a day in critical environmental conditions.

Construction requires considerable commitments to the activities because processes are time consuming requiring consistent attention and control. Major urban projects are required to run 24/7 to succumb to deadlines. The Building & Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 recommends a 48-hour working cycle per week to prevent overexertion.

One exercise can be to change the bi-shift to a tri-shift work cycle i.e. by regulating daily, three numbers of 9 hour shifts of employees with a joint-shift of 1 hour (to bridge the communication gap of teams) where-in information and charge transfer takes place between the previous and the following shift of employees. This can not only make construction a lucrative job opportunity but can also:

- ❖ attract more educated and skilled human resource
- ❖ increase the number of trained professionals
- ❖ inculcate competition and innovation at work
- ❖ increase productivity of employee
- ❖ Reduce accidents and risk

Sankardev Chowdhury

Engineer-Material & Track

General Consultancy, Kolkata Metro Project

Staff Joining between October to December

Corporate Office

- Partha Pratim Banerjee, Deputy General Manager (Bridges); Faridabad
- Mahmad Raphiyoddin Malik, Environmental Engineer; Faridabad
- Abhay Kumar, Recruitment Manager; Faridabad
- Anil Kumar, CAD Draughtsperson; Faridabad
- Satish Kumar Jha, Asst. Engineer (Highway Design); Faridabad
- K. Sudhakar, Technician (Surveys & Investigation); Faridabad
- Awadhesh Prasad, Computer Operator; Faridabad
- Hari Narayana Murthy Akula Venkata, Senior Engineer (Highway Design); Hyderabad
- Siva Rama Krishna G, CAD Draughtsperson; Hyderabad

Project Offices

- Karunakar Upadhyay, Surveyor; BRTS, Bhopal
- Parsuram Paswan, Computer Operator; BRTS, Bhopal
- Pavan Sharma, Assistant Engineer; BRTS, Bhopal
- Anil Thakur, Assistant Engineer; BRTS, Bhopal
- Jitendra Baghel Assistant Engineer; BRTS, Bhopal
- Gajendra Agrawal, Field Engineer; BRTS, Bhopal

- Ashok Shakya, Surveyor; BRTS, Bhopal
- Rupesh Sahu, Field Engineer; BRTS, Bhopal
- V.K. Venkatesan, System Integration and Interface Management Engineer; Chennai Metro Rail Project
- Gunaseelan.B, Engineer; Chennai Metro Rail Project
- P. Kalaikumar, Surveyor; Chennai Metro Rail Project
- M. Jeyachandran, Secretary/DTP Operato; Chennai Metro Rail Project
- S. Nagarajan, Consultant (Manager-Design & Specifications); Chennai Metro Rail Project
- P. Rajamoni, Consultant (Project Manager-Railway/Track Expert)
- Dr. Sujeet Singh, Field Officer; Project Impact Evaluation UPWSRP
- Suresh Chand Gupta, Consultant-Utility Engineer; SQC BRTS, Bhopal
- Yogesh Behari Lal Srivastava, Translator; Development and Capacity Building, UP
- Victor Hermus, Assistant Office Manager; Hyderabad Outer Ring Road
- P. Alagiri, Senior Quality/Material Engineer; IC Project (TN-4)

- Saravanan. S.G, Quantity Surveyor; KSTP-I
- G. Balakrishnan, Field Engineer; KSTP-IV B-2
- Sandip Kumar, Laboratory Technician; NH-2 Kanpur
- Sachinand Shankar Karadmare, Surveyor; Pune-Sholapur
- Giteshwar Shrimanwar, Secretary; Pune-Sholapur
- Rahul Mohan Bhojar, Secretary cum Computer Operator; Pune-Sholapur
- Anup Anil Gaikwad, Assistant Engineer; Pune- Sholapur
- N. Vinayagam, Quantity Surveyor; Pune-Sholapur
- Mohan Golabrao Ande, Material Engineer; Pune-Sholapur
- Anil Ashok Dhomne, Utility cum Liason Officer; Pune-Sholapur
- Bhadekar Digambar Dattatray, Field Engineer; Pune-Sholapur
- Ranjit Kumar, Field Engineer; U P S R P-Phase II
- Abhimanyu Kumar Pandey, Quantity Surveyor; U P S R P-Phase II
- Ravi Prakash Sinha, Quality Control Engineer; U P S R P-Phase II
- Md. Rafiullah Khan, Quality Control Engr; BRTS, Bhopal
- Ravi Shankar Shukla, Field Engineer; BRTS, Bhopal
- Mukesh Bele, Quality Control Engineer; BRTS, Bhopal
- Samiullah Khan, Assistant Engineer; BRTS, Bhopal
- Praveen Shinde, CAD Technician; BRTS, Bhopal
- Akkalapotu Suryanarayana, Bridge Engineer; Pune-Sholapur

- K.Satyama Reddy, Field Engineer; Pune-Sholapur
- Maheshkumar K Sindhur, Engineer; Pune-Sholapur
- Sanjay Kumar Sinha, Field Engineer; Pune-Sholapur
- Yogesh, Cad Draughtsperson; Pune-Sholapur
- Peddinti Hari Babu, Field Engineer; Pune-Sholapur
- Gajeli Raghavendra Hanmantu, Field Engineer; Pune-Sholapur
- Yeeda Samuel Jairaj, Material Engineer; Pune-Sholapur
- Ramesh Atmaram Bhosale, Field Engineer; Pune-Sholapur
- Munir H. Inamdar, Field Engineer; Pune-Sholapur
- Kuderu Masud Vali, Bridge Engineer; Pune-Sholapur
- Shaik Siraj Kamal, Field Engineer; Pune-Sholapur
- Binod Kumar Jha, Deputy Resident Engineer; U P S R P-Phase II
- Alope Kumar Srivastava, Field Engineer; U P S R P-Phase II
- Jai Prakash, Draughtsman; U P S R P-Phase II
- Narayana Rao Cheva, Field Engineer; Hyderabad Outer Ring Road
- Naga Brahman Kasarla, Field Engineer; Hyderabad Outer Ring Road
- Jasti Goutham, Field Engineer; Hyderabad Outer Ring Road
- Sandeep Ganji, Field Engineer; Hyd. Outer Ring Road

Cricket Match

A Cricket Match was organized for HO staff on 14th Nov, 2009 at DDA Sports Complex. The players were divided in two teams - one led by Mr. Pramod Nikumbh and the other by Mr. N. V. Krishna. The team led by Mr. Pramod Nikumbh won the match by 19 runs. Though initially planned as a half day event (considering the attendance) it went on till evening. Didn't take too long for our players to get into the tempo..... !

Following prizes were declared:

- Man of the Match - Parminder**
- Best Bowler - Arun**
- Best Batsman - Parminder**



Books from Library

- Pavement Analysis & Design by Hwang H. Yang
- National Building Code by BIS
- Financing of Major Infrastructure and Public Service Projects by Robert Sachs.
- Specifications for Roads & Bridge Works - 2009 by MOSRT&H.
- Advanced Reinforced Concrete Design by Krishna Raju
- Reinforced Concrete Design by Devdas & Menon
- Pocket Books for Highway Engineers by MOSRT&H
- Pocket Books for Bridge Engineers by MOSRT&H

Reference Books:

- Oxford French Dictionary
- Airport Development in India-2009
- Ports in India-2009

Magazines:

- People Matters (Monthly Magazine) Leadership

- Excellence (Monthly Magazine)
- Labour Law Reporter (Monthly Magazine)
- Airport International (Monthly Magazine)
- India Today (Weekly Magazine)
- Urban Railways (Bi-Monthly Magazine)
- Project Info (Weekly Magazine)
- Indian Infrastructure (Monthly Magazine)
- Pravartak; Journal of Risk Management (Monthly Magazine)
- Water Today (Bi-Monthly Magazine)
- Corporate Professional Today (Fortnightly Magazine)
- Infrastructure Today (Monthly Magazine)
- Indian Highways
- Highway Research Journal
- Highway Research Records
- Journal of Indian Roads & Congress

Jokes



You are very fortunate... think, if you were very bright, efficient and a great worker...how much you would have suffered in this place..?



You have only given me 'things to do list'...where is the 'who will do' the list..?

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