Initiative for
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IIT Gandhinagar

iGrip webinar series on GEOSTRUCTURES

Regional Rapid Transit System in National Capital Region (NCR)

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Mr. Vinay Kumar Singh, an Indian Railway Service of Engineers (IRSE) officer, is the first Managing Director of National Capital Region Transport Corporation (NCRTC), a company under Ministry of Housing & Urban Affairs, Government of India.

NCRTC has been mandated to implement Regional Rapid Transit System (RRTS) in NCR a flagship project of Govt. of India and participating State Governments. RRTS would be the first regional rail of the country and shall mark the beginning of high-speed rail based regional connectivity in India.

Mr Singh is a Post-Graduate from the Indian Institute of Technology (IIT) Delhi. He is a civil engineer and has worked on a wide variety of challenging professional assignments including maintenance of the highly demanding Ahmedabad-Kandla Port rail line as Divisional Engineer, on Western Railways. He has been Deputy Chief Engineer in charge of the first section of Delhi Metro Rail Project and Executive Director in the Ministry of Railways, Government of India. He has experience of working on Board of many joint venture companies of Ministry of Railways.

Before joining NCRTC, Mr Singh was the Chief Executive Officer of the High Speed Rail Corporation, a subsidiary of Rail Vikas Nigam Ltd, where he played a key role in finalising the feasibility study of Mumbai-Ahmedabad High Speed Rail Corridor and finalisation of techno – economic agreement between India and Japan for construction of this line.

Abstract

Despite of well managed metro services and very good road network in the region, the problems of congestion, traffic jams and pollution etc. are well known in National Capital Region and Delhi in particular. Planners believe that the solution lies in distribution of opportunities across the region and development of strong transport backbone in the region with an environmentally sustainable transport system. Considering the need, NCR Planning Board planned eight region-wide rail-based corridors to be funded by the Central Government and participating State Governments. These were named as Regional Rapid Transit System. National Capital Region Transport Corporation (NCRTC) has been assigned the responsibility of construction and operation of these RRTS corridors. Delhi-Ghaziabad-Meerut is the first RRTS corridor sanctioned by the Government of India and is under construction.

Considering the length and need of travel time of one-hour, operational speed of 160 kmph and design speed of 180 kmph was decided for the system. The construction of these corridors for the first time in India has its own challenges with respect to selection, procurement, implementation, and indigenisation of most suitable technology for rolling stock, signalling, track, viaduct, and underground structure. The requirements of higher speed, high acceleration, very high operational frequency, and stringent completion targets all put together make it a technically and managerially unique project not only in the country but globally as well.

This webinar tries to explain how the challenges particularly related to infrastructure are being effectively resolved i.e. selection, design, and implementation of suitable type of foundation, substructure, superstructure, bearings, and track etc. The implementation is being expediated following effective tender packaging, using pre-fabrication techniques and tools like 3D BIM etc.