

## Chennai Metro Rail Limited

(A Joint Venture of Govt. of India and Govt. of Tamil Nadu)

Press Release 28-07-2012

## CMRL Tunneling work commences at Nehru Park Metro Station site on 28.7.2012

Chennai Metro Rail Project Tunneling work commenced at Nehru Park Metro Station site on 28.7.2012. It is a mile stone event in the history of Metro Rail in Chennai, as this is the first Tunnel Boring machine to start tunneling work in Chennai.

Chennai Metro Rail Project is a joint venture project of Government of India and State Government. State and Central Governments have been extending all necessary assistance for the implementation of this large infrastructure project.

Phase I of the Chennai Metro Rail Project, consists of two Corridors with a combined length of 45 Kms. Corridor-I, with a length of 23 Kms. (14.3 Kms. underground and 8.7 Kms. elevated), will run from Washermenpet to the Airport via Anna Salai. Corridor-II, with length of 22 Kms. will run from Chennai Central to St. Thomas Mount via Koyambedu. The portions of Corridor -I from Washermenpet to Saidapet on Anna Salai, and Corridor-II to Periyar EVR Salai and Anna Nagar 2<sup>nd</sup> Avenue, will be underground and the remainder elevated. The total length of the Underground section is 24 Kms. with 19 underground stations.

Chennai Metro Rail Limited had awarded a tender in 2011 to M/s. Larsen and Toubro, in joint venture with Shanghai Urban Construction Group (SUCG) for the design and construction of 3.342 km of Twin Tunnels including three Underground Stations at Nehru Park, Kilpauk Medical College, and Pachiappa's College. M/s. L&T- SUCG JV had started the construction work on 07<sup>th</sup> February 2011.

Presently L&T- SUCG JV have completed the 20 metres deep underground TBM launching shaft at Nehru Park inside which two Tunnel Boring machines have been installed. The underground shaft is a box like structure of 40mx21m which is a part of the major station box of 228m long. Tunneling operations commenced on 28<sup>th</sup> July 2012 from Nehru Park Station to Egmore Station. The tunneling distance between Nehru Park to Egmore is 939 meters. This distance is expected to be covered in about 5 months.

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The two TBMs will be operated under the guidance of experts in both the shifts with automatic Alignment and monitoring control system developed with Japanese technology. The tunneling will be requiring feeding of segments brought from Casting yard for installing the concrete linings of the twin tunnels.

The two TBMs are having the state of the art technology including safety systems. The cut soil will be brought out and disposed. All the necessary precautions with regard to the plugging of old bore wells and utility diversions have been taken well in advance and all the buildings enroute will be monitored round the clock when TBMs are in operations.

Heavy Circular concrete liners for the tunnels are manufactured at the state of the art Segment Casting factory at Vayalanellur. This factory has so far produced 1400 segment rings. There will be cross passages between the two tunnels every 245 meters for ensuring operational fire safety. The retaining wall structure at other areas of the Nehru Park Station are also completed and the Excavation works are progressing now. Retaining wall works are progressing in other two stations which are at Kilpauk Medical College and Pachaiyappa's College. Structurally an underground station consists of three levels which are roof, concourse and base level. The platforms will be at base level of the station. There will be multiple Entry-Exit's in every station, which includes lifts and escalators. The construction site is maintained with international safety standards for both tunneling as well as station construction. The tunneling and underground station works are scheduled to be completed by April-2015.

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