PERTEMUAN PERSATUAN
Meetings of the Society

Ceramah Teknik (Technical Talk)

Engineering geology considerations of LRT System Two for Kuala Lumpur

MUHINDER SINGH

Laporan (Report)

Mr. Muhinder Singh, Manager (Geotechnical), Pengurusan LRT Sdn. Bhd. gave the above talk to a packed hall at the Geology Department, University of Malaya on the 19th January 1996. The Light Rail Transit (LRT) System for KL has apparently generated a lot of interest not only for geologists and engineers but also professionals in related fields.

After his informative, well illustrated presentation, the speaker showed a video of the Tunnel Boring Machine (TBM) before ably answering the many queries put forward.

Abstrak (Abstract)

The LRT System 2 for Kuala Lumpur currently being constructed by PUTRA, the concession holders, comprises a 30 km route linking Gombak to the northwest and Lembah Subang to the southeast of Kuala Lumpur. The route alignment will be completed partly elevated and partly underground with certain short sections at-grade. A total of 17 elevated stations, 5 underground stations and 1 station at-grade with a depot area and marshalling yard at either end will be constructed.

The geology along the alignment is generally complex. The northern section is predominantly Hawthorden schist before the transition into the overlying Kenny Hill Formation in the central region of Kuala Lumpur. Limestone is also encountered at deeper levels beneath the Kenny Hill Formation. The route alignment along the southern section interfaces between the Kenny Hill Formation and granite, independently outcropping at various locations. The Kuala Lumpur area in general, is also characterised by deep deposits of alluvium due to extensive mining activities carried out in the past.

The elevated sections are constructed using a sophisticated pre-cast launching system. The underground stations are constructed by top-down cut and cover whereas the tunnel sections by tunnel boring machines. The two types of machines used are the Closed Face Earth Pressurised Shield Tunnelling Machine and the Open Faced Rotary Backhoe Tunnel Boring Machine.

Precautionary measures undertaken by PUTRA include extensive building and structure risk assessments, instrumentation monitoring and advanced building protection prior to construction. Pengurusan LRT Sdn. Bhd. the Project Managers have also set-up a Geotechnical Engineering Database Management System (GEDMS) to systematically record all geotechnical information in electronic format for access prior to, during and after construction.

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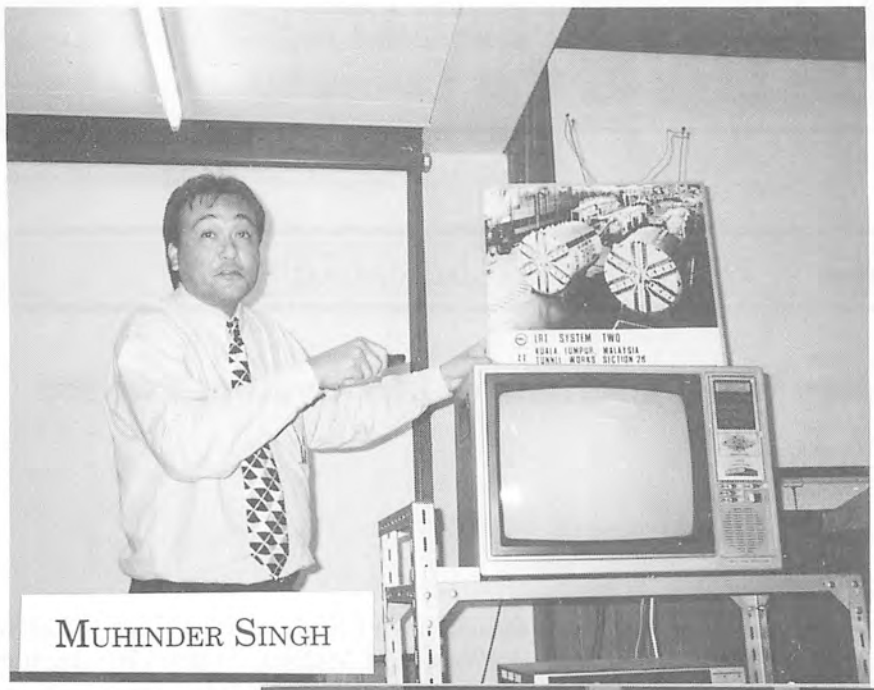

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