





the seven underground stations. The overarching concept will be layered with individual station design themes, reflective of the neighbourhood in which each of the stations is located.

The design for the 24 elevated MRT stations is based on the concept of *wakaf*, a traditional Malaysian pavilion built for travellers to stop and rest. The platform levels of the elevated MRT stations follow *wakaf*'s open-sided design, allowing for natural lighting and ventilation. This is for the comfort of commuters waiting for trains, while also helping to lower operation costs due to reduced use of air-conditioning and lighting. Most of the elevated stations are above roads, reducing the need to acquire private land for stations.

All stations will have escalators, lifts, customer service, ticket vending machines, toilets, prayer rooms, and public telephones. They will also be equipped with facilities for the disabled, such as lifts and ramps, tactile guide, and warning strips along walkways and platforms.

The stations will be linked by covered walkways, while some underground stations will be directly connected to adjacent buildings through underground walkways. Adequate number of lay-bys will be built to enable people to drop off passengers and also to accommodate feeder buses which will service areas outside Kuala Lumpur's central business district. Moreover, 16 of the stations will have park and ride facilities.

Approximately 80 percent of building materials will be locally sourced or made. Same goes for architectural finishes, sanitary fixtures, etc.

## PROJECT CHALLENGES

Urban planning in some parts of the world, especially in city areas, focuses on building infrastructure first before developing a new township. However, in Malaysia, the railway corridor is not predetermined during urban planning. As a result, cities which are predominantly in the Klang Valley are congested with people who have little access to public transport. Without a proper corridor for railway, it will be difficult to promote seamless connectivity and pedestrian network—two elements that the MRT aims to offer.

In a scenario like this, space, land or the right of way becomes a constraint when building the MRT. At certain locations, there is no adequate land to work on. For example, the tunnels for the Bukit Bintang Station is designed to be stacked, as there is not much land at Jalan Bukit Bintang to work with, given its location in the heart of Kuala Lumpur.

Another constraint of this project is interconnecting the MRT stations to existing public transport systems. Interconnectivity between existing public transport systems is vital for any public transport to be effective. Residential areas in Malaysia are widely spread and far from the city centre, and therefore the MRT cannot reach all these areas. As such, feeder bus services become essential to support the transit system. To address these constraints, the KVMRT stations will be equipped with many bus and taxi lay-by areas. For the convenience of commuters who are driving, they will be able to park their vehicle at the park and ride facilities. — Edited by Denice Cabel

## PROJECT DATA

**Project Name**  
Klang Valley MRT Sungai Buloh-Kajang Line  
**Location**  
Sungai Buloh to Kajang (Klang Valley), Malaysia  
**Status**  
Under construction  
**Expected Completion**  
2017  
**Client/Owner**  
Mass Rapid Transit Corporation Sdn Bhd  
**Architecture Firm**  
Hijas Kasturi Sdn Bhd (Elevated Station—*Wakaf*)  
**Green Building Consultant/Engineer**  
MMC Gamuda KVMRT (PDP) Sdn Bhd  
**Mechanical & Electrical Engineer**  
MMC Gamuda KVMRT (PDP) Sdn Bhd  
**Civil & Structural Engineer**  
MMC Gamuda KVMRT (PDP) Sdn Bhd  
**Quantity Surveyor**  
MMC Gamuda KVMRT (PDP) Sdn Bhd  
**Images/Photos**  
Mass Rapid Transit Corporation Sdn Bhd

**3** Artist impression of the One Utama MRT Station. Based on the *wakaf*, this design is adopted for all elevated stations  
**4** Night view of the Sungai Buloh MRT Station  
**5 & 6** Entrance to the future KL Sentral MRT Station in front of Muzium Negara at night  
**7** Concourse level for the KL Sentral MRT Station  
**8** Platform level at the KL Sentral MRT Station