

Rides on the Macau light rail will be free until the end of this month. XINHUA/ZHANG JUNIA



MACAU LRT SYSTEM ON TRACK THANKS TO US

The Macau Light Rail System opened for commercial operation on December 10, a fortnight before the reunification celebrations.

This first phase has 11 stations with a route length of 9.3 kilometers, covering most parts of Cotai, linking the airport, ferry terminal and border crossing, and hopefully relieving the jams resulting from rapid commercial development.

Such systems are, by definition, lighter versions of mass transit railways, with a reduced capacity (this system carries a maximum of 100 commuters per car and 200 with a two-car train).

But unlike the tramway and Tuen Mun LRT, this system uses rubber tires on rails and runs on overhead viaducts.

Its technical advantages are lower noise levels and minimum interference with road traffic. But the construction and maintenance costs will be much higher. It is almost like the automatic people mover system at our airport but running on viaducts instead of tunnels.

MTR Corp has been awarded a contract to operate and maintain the Macau LRT, as it has ample experience in similar systems, including the Tuen Mun LRT, the airport APM and previously the Docklands Light Railway in south London.

Macau should be applauded for this wise choice of operator, as the smooth and safe operation of a transport system demands not only technical competence but also knowledge of local culture and social behavior.

This reminds me of the early days of our Tuen Mun LRT. Launched on August 8, 1988, it was meant to be an auspicious day to inaugurate a transport system that was built ahead of the town's development, but did it deliver its promise?

For cost-saving reasons, the original design of the railway running on viaducts was changed to an at-grade system with a lot of level crossings, using traffic lights.

It not only slowed the speed of both rail and road traffic in Tuen Mun but also rendered the system less than intrinsically safe. Unfortunately, many accidents occurred in the early stages of operation.

Both the tramway and the Tuen Mun



LRT also tried trailer cars at one stage in hopes of increasing carrying capacity, but the longer length of the trains caused a lot of unexpected traffic jams as they invariably stopped in a queue at traffic intersections. The superficial way to increase capacity was soon scrapped.

The tramway had been running on the north of Hong Kong Island for over a century and people accepted it as part of the city scene, but for Tuen Mun, the LRT met a lot of difficulties.

Some of us may remember the case of the first director of the LRT, Joe Wade, as a competent engineer but unfortunately weak in dealing with the local community.

He soon got in trouble with the district council and had to be released with a "golden handshake" from the Kowloon-Canton Railway Corp.

It took time for people to accept this transport system before it ran smoothly for some 30 years until recently, when the system was damaged in the unrest.

Part of the signaling system was destroyed, tracks had been sawn off or cast in cement, not to mention the damage to the toll collection system, electronic signage and others. As some of the original suppliers have now gone out of business, it is taking the MTRC some time to find suitable substitute equipment.

The lesson we learn seems to be the need to design transport systems not only for safety and efficiency, but also to anticipate social behavior and expectations of the commuters.

With the new management of the railway company having both technical knowledge and social sensitivity, I am optimistic to see the mass transit systems of both Hong Kong and Macau develop and improve sustainably to meet the ever-changing demands and expectations of the citizens and visitors.

Veteran engineer Edmund Leung Kwong-ho casts an expert eye over Hong Kong's iconic infrastructure