



Downtown Line 1: The Challenges

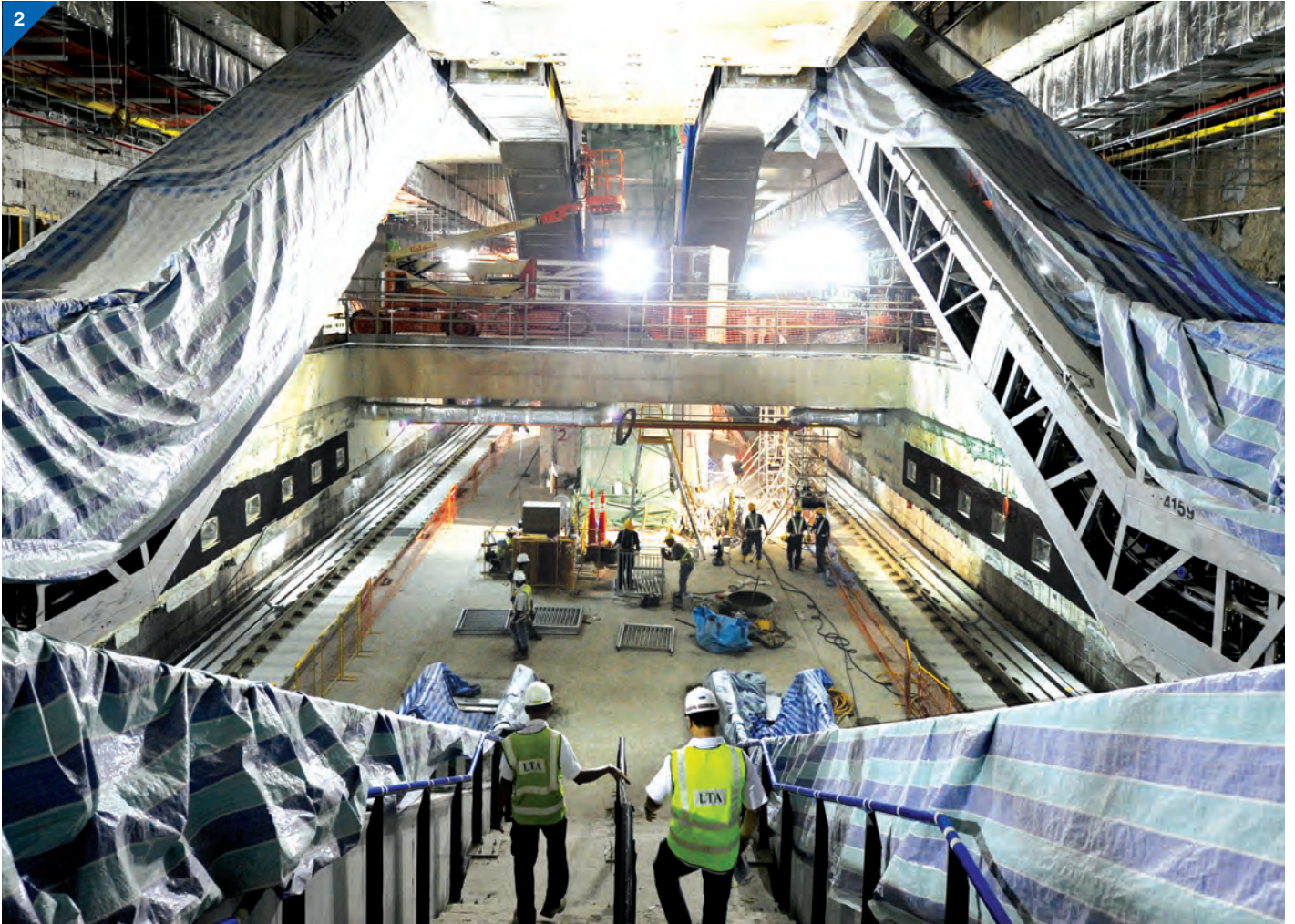
Part 2 of Connect's series on the Downtown Line 1 delves into its numerous construction challenges. LTA's Project Directors Tan Kok Jin and Sha Marican talk about how these were overcome.

What was the main construction challenge of DTL1?

It runs from Chinatown with many old shophouses towards the CBD flanked by high-rise buildings and crosses the existing North-South MRT line, before it swings around Marina Bay to end under the major thoroughfares at Bugis. Imagine having to introduce a new MRT line along this already densely built-up corridor with mixed developments and a wide variation of streetscapes; where do we find space to work? How do we transport heavy equipment and construction materials to the worksites? What do we do to minimise disruption to the daily routine of people living and working in the area? These were the main challenges we encountered.

Was there any particular station which was a bigger headache?

They were all challenging. At Chinatown station, we took pains to protect the shophouses there by using different methods of construction. At Telok Ayer station, we had to work our construction through a



maze of telecommunications cables, fibre optic cables, water pipes, gas pipes, power cables, traffic and street lighting cables. At Downtown station, we had to construct a pair of new tunnels sitting directly on top of the operating North-South MRT line. At Bugis station, on the other hand, we had to build the tunnels under the existing Bugis station. And at the Promenade station, we also had to work under the linkway of the existing Circle Line Promenade station, which meant every item used for construction had to be reduced in height in order to be able to fit into the worksite located under the underground linkway.

Was co-ordination a challenge?

Definitely! Because we are in the heart of the downtown area, we had to co-ordinate with the organisers of the Formula 1, Youth Olympic Games, National Day Parade, Chingay Parade, New Year Countdown, Asia-Pacific Economic Cooperation (APEC), SAFRA Half-Marathon, Standard Chartered Bank Marathon, OCBC Cycle Singapore, Great Eastern Woman's 10-km Run and Aviva Ironman, amongst others.

Any surprises along the way?

Construction does not go exactly according to how it is scheduled especially when it involves underground construction on such a massive scale. There may be unanticipated challenges – we faced an influx of water at Downtown Station as there were many different construction works going on at the same time which changed the ground water flow - special requests from the stakeholders that require the project team to address before construction works can carry on or even mother nature's wrath like a sudden rain intensity that we had to respond to. As such, our greatest satisfaction is that despite these “distractions”, we are still on schedule to deliver DTL1.

How do you feel now that DTL1 is near completion?

We are like parents-to-be anticipating the arrival of their new-born baby. Imagine expecting mothers having a gestation of 9 months, we have carried this project through 6 years! We really look forward to the opening of DTL1 and take pride in bringing greater travelling convenience to our commuters.

-
- 1 Interior of Downtown Line Telok Ayer MRT station under construction.
 2 Ongoing construction works at the Downtown Line Bugis MRT Station.