

Translation

For Information

October 2018

**Legislative Council Panel on Transport
Subcommittee on Matters Relating to Railways**

**Progress and Financial Situation of the
Construction of the Hong Kong Section of the
Guangzhou-Shenzhen-Hong Kong Express Rail Link**

(Quarterly Report for the Period ending 30 June 2018)

INTRODUCTION

This paper aims to brief Members on the major works progress and financial situation of the construction of the Hong Kong Section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link (“XRL”) and the relevant monitoring work carried out by the Highways Department (“HyD”) for the period ending 30 June 2018.

BACKGROUND

2. At the meeting of the Subcommittee on Matters Relating to Railways (“RSC”) under the Legislative Council (“LegCo”) Panel on Transport in April 2010, Members agreed that reports on progress update and financial situation of the construction of the Hong Kong Section of the XRL should be submitted at six-month intervals. To enhance the reporting to the LegCo on the progress update and financial situation of the construction of the Hong Kong Section of the XRL, such reports have been submitted to the RSC at quarterly intervals since the fourth quarter of 2014.

— 3. This paper, which is appended with the progress report (**Annex**) of the MTR Corporation Limited (“MTRCL”), reports on the major works progress,

indicators, financial situation for the second quarter of 2018 (i.e. from 1 April to 30 June 2018), and an overview of trial operations.

PROGRESS UPDATE OF THE PROJECT

4. The HyD, with the assistance of its Monitoring and Verification (“M&V”) Consultant, continued to monitor systematically the implementation of the works on the Hong Kong Section of the XRL by the MTRCL under its monitoring mechanism and took appropriate follow-up actions. Such mechanism includes meetings at various levels (such as meetings of the Project Supervision Committee chaired by the Director of Highways, Project Coordination Meetings chaired by an Assistant Director of HyD, Contract Review Meetings chaired by HyD’s Chief Engineer) and regular site inspections.

5. Since the third quarter in 2015, the Government has been monitoring the progress of the remaining works of the XRL project against the revised commissioning target of the XRL in the third quarter of 2018.

6. As stated in the MTRCL’s progress report, the overall progress of the Hong Kong Section of the XRL was 99.9% as at the end of June 2018, which was ahead of the planned progress of 99.6% based on the target of commissioning of the XRL in the third quarter of 2018. According to assessment by HyD of the Programme to Complete submitted by the MTRCL against the commissioning target of the third quarter of 2018, the major works of the entire XRL project have been substantially completed. The fire services inspections in the West Kowloon Station (“WKS”) have been substantially completed. The installation works for port area facilities have also been substantially completed and system testing was in progress. There were only some works remaining, which mainly involved facilities within WKS and nearby roads. Moreover, the MTRCL formally commenced the trial operations in early April 2018 to prepare for the commissioning of the XRL in September 2018. The progress of the relevant works and tasks are set out below.

(a) Construction of West Kowloon Station and Nearby Roads

7. The works for Architectural Builder's Works and Finishes on various floor levels of the WKS were substantially completed, and the majority of electrical and mechanical ("E&M") and building services systems had also been completed and tested, and had entered the final stage of testing. The associated works in "Hong Kong Port Area" and "Mainland Port Area", including false ceiling installation, finishes works, tile flooring and screeding works, and installation of immigration counters and clearance facilities were also substantially completed and system testing was underway. In addition, the hardware for passenger facilities at the WKS including passenger service counters, tourist information centre etc. had been progressively put in place.

8. The three-tiered underpass at the junction of Austin Road West and Lin Cheung Road in the vicinity of the WKS had been completed and opened for public use in stages. The MTRCL envisaged that the remaining road facilities, seven footbridges and two subways connecting the WKS and adjacent areas would be opened at an appropriate time to tie in with the commissioning of the Hong Kong Section of the XRL in September this year. Upon the opening of these facilities, an efficient pedestrian link to and from the WKS would be in place.

9. Although the major construction works at the WKS had been substantially completed, there were still considerable number of contractors' workforces as well as personnel for trial operations and inspections working at the same location at the same time. As such, proper management and coordination would continue to be required so that the remaining works, trial operations and inspections could be carried out concurrently in an orderly and smooth manner. The HyD would closely monitor the MTRCL's works in conjunction with its M&V Consultant, and coordinate the installation of the relevant clearance facilities.

(b) Fire Services Installation and Inspections

10. The fire services installation works and inspections at the tunnel sections, Shek Kong Stabling Sidings and various ventilation buildings had been completed. The fire services installation works at the WKS was also completed. The Fire Services Department completed the integrated fire services system inspections on 10 July 2018 and certified the satisfactory condition of fire services installation and equipment on 12 July 2018.

(c) E&M Systems Installation

11. The Main Control System for the Hong Kong Section of the XRL was connected to respective control systems in the Mainland with interface tests amongst these systems completed. The installation works and system testing of remaining E&M equipment at the WKS were also completed.

12. All lifts in ventilation buildings and ancillary buildings were tested with “Use Permits” obtained from the Electrical and Mechanical Services Department (“EMSD”). The installation of lifts and escalators at the WKS had been substantially completed. All escalators and the majority of lifts at the WKS were issued with “Use Permits” from EMSD.

13. For the ticketing system, the installation works and the associated testing for all automatic ticket vending machines, passenger ticket gates, ticket sales facilities at the WKS were completed.

(d) High Speed Trains

14. All nine sets of the high speed trains had passed various tests, including reliability run tests, and were put into trial operations. Prior to the operation of Mainland trains in the Hong Kong Section of the XRL, the MTRCL was required to verify the safety design of Mainland trains and conduct tests to ascertain their compatibility with the railway infrastructure of Hong Kong and operational safety. EMSD would monitor the tests conducted by the MTRCL and provide advice to MTRCL on their assessment on the operational safety of Mainland trains running in the Hong Kong Section of XRL. The relevant work

was completed in August 2018.

(e) Trial Operations

15. The MTRCL commenced trial operations in April 2018 and cross-boundary trial operations commenced in May 2018, which covered run-in of various systems for safety and reliability, and training of staff to familiarise themselves with the various operation systems and operating environment, through the simulation of actual operating environment. Moreover, the MTRCL had conducted several major drills and exercises in conjunction with relevant emergency and rescue departments on different scenarios that might occur during the operation of the XRL to ensure that the entire railway system was safe and sound. The MTRCL had also conducted drills and exercises to simulate the port operation and to assess the required clearance time for passengers during the trial operations.

16. During trial operations, the MTRCL followed the prevailing incident notification mechanism to inform EMSD as soon as practicable after the occurrence of incidents affecting railway safety or incidents that may attract media or public attention such as collision, derailment, interruption to traction power, station partial/total black-out, broken rail, etc. Moreover, the MTRCL was also required to notify HyD on incidents under the following circumstances:

- (a) Severe personal injuries
- (b) Posing safety concerns to works or nearby building structures
- (c) Causing harm or disruption to the public
- (d) Significant impact or casting doubt on safety, quality, cost or programme
- (e) Giving rise to media public attention

17. The MTRCL had immediately notified EMSD and HyD respectively of the five incidents that occurred during trial operations.

18. As regards the training of high speed train drivers, since the XRL is a

cross-boundary high speed rail, all drivers from the MTRCL and the Mainland railway operator who would operate high speed trains between Hong Kong and the Mainland were required to go through relevant training at both Hong Kong Section and Mainland Section¹, and acquire driving licence of high speed trains issued by the National Railway Administration in order to operate high speed train on the Hong Kong Section of the XRL. According to the MTRCL, there was no record of work injury during the training period of Hong Kong high speed train drivers.

19. The MTRCL submitted a “safe and sound” report to EMSD in early August 2018. After consulting relevant government departments, EMSD confirmed on 15 August 2018 that the Hong Kong Section of XRL was safe and in sound condition. This was a key milestone towards the commissioning in September 2018.

**Transport and Housing Bureau
Highways Department
October 2018**

¹ All high speed train drivers must acquire high speed train driver’s licence issued by the National Railway Administration, and for this they need to complete complete classroom training and practical training for not less than three months. After obtaining a licence, high speed train drivers who need to operate high speed trains to and from Hong Kong will also need to complete training organised by MTRCL and the Mainland operator with a view to familiarise themselves with the line characteristics of the Hong Kong Section and Mainland Section of the XRL.

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Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link**

(Report for the period between 1 April and 30 June 2018)

INTRODUCTION

This paper presents the construction progress of the Hong Kong Section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link (“XRL”) project up to 30 June 2018.

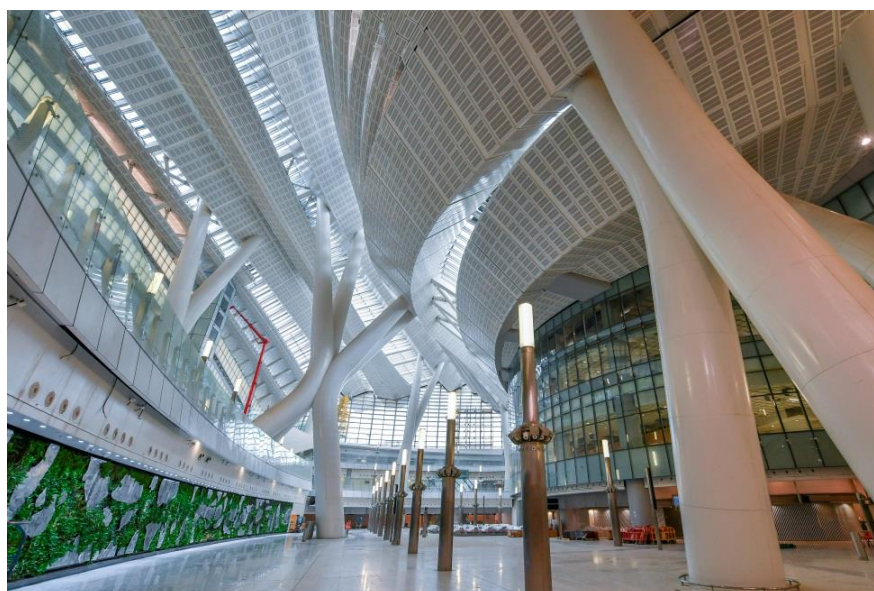
BACKGROUND

2. The progress reported below is based on the target of completing the XRL project to allow for passenger service in the third quarter of 2018 (“Q3 2018 Schedule for Completion”). This paper outlines major works progress, key performance indicators (“KPIs”), as well as financial status for the period between 1 April and 30 June 2018.

MAJOR WORKS PROGRESS OF THE XRL PROJECT

(I) Major Progress of the Construction Works and Electrical & Mechanical Systems

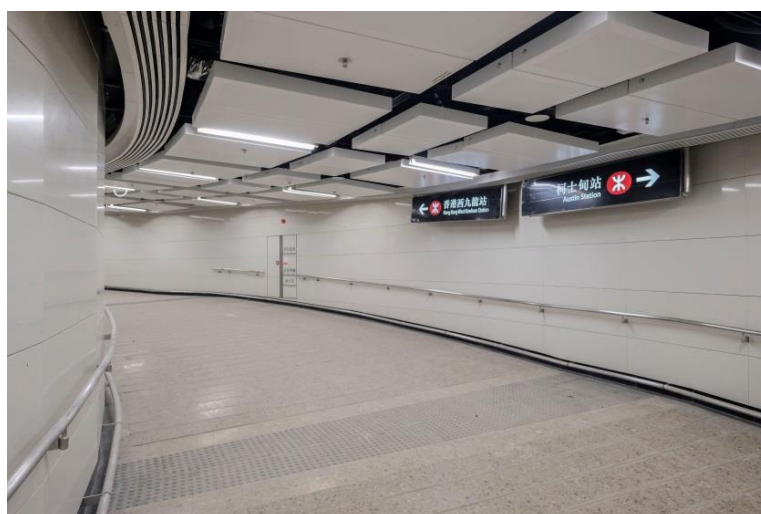
3. As at 30 June 2018, overall the XRL project was 99.9%¹ complete against the planned progress of 99.6% according to the Q3 2018 Schedule for Completion. The trial operations have started on 1 April 2018 to prepare for the target commissioning in September 2018.



Substantial completion of the construction of Hong Kong West Kowloon Station facilitates the commencement of trial operations

4. The remaining Architectural Builders' Works and Finishes and building services works at the Hong Kong West Kowloon Station ("the Station") as well as external works in the vicinity of the Station, including seven footbridges, two pedestrian subways and West Kowloon Station Bus Terminus, have been substantially completed. The remaining sections of the Lin Cheung Road and Austin Road West Underpass were also opened for public use in May 2018.

¹ Sum of all weighted percentages completed of all major contracts



Construction of footbridges and pedestrian subways in the vicinity of Hong Kong West Kowloon Station has been substantially completed

5. Equipment installation works have been carried out by respective users at the Customs, Immigration and Quarantine (“CIQ”) areas of both Hong Kong and the Mainland at Level B2 and B3 in the Station.
6. Testing of various Electrical and Mechanical (“E&M”) systems in the Station, such as Main Control System and ticketing system etc., has been substantially completed.
7. Installation and testing of all major lifts and escalators for the XRL project have been substantially completed.

8. Fire Services Department's inspection for the Station has been completed, and the fire certificates were obtained in July 2018.

(II) Pre-Operations Preparation

9. Trial operations commenced on 1 April 2018, which cover the run-in of various train services and station facilities systems, including train trial runs and testing of various systems and station facilities such as signaling system and ticketing system, to identify any teething issues and make improvements.



Testing of ticket machines is in progress

10. A number of drills and exercises simulating various operating scenarios as well as major emergency drills, such as passenger journey simulation and emergency evacuation at the Station etc., have been carried out to get staff members familiarized with the operational and incident management procedures, particularly on coordination with all parties concerned. Various relevant government departments, such as the Fire Services Department and Hong Kong Police Force, also participated in the drills and exercises concerning emergency and rescue.



Passenger journey simulation was conducted to assure safe and effective management on platform duties

11. Equipment installation in the CIQ areas by the respective authorities is crucial for the operational readiness for the target opening in September 2018. The Government of the Hong Kong Special Administrative Region (“HKSAR”) is in close liaison with the Mainland authorities on the progress of installation of the Mainland CIQ systems and equipment, while the Corporation is providing necessary support, in particular on the infrastructure and station-wide E&M supporting systems such as electricity supply and ventilation system etc.

12. The Corporation is discussing the detailed operational arrangements with the HKSAR Government and will provide the general public with further information when available.

(III) Updated Financial Situation of the XRL project

13. As at 30 June 2018, the cumulative expenditure for the awarded contracts was \$70.9 billion.

14. The Corporation will continue to closely monitor the costs and progress of the XRL project. Details of the financial situation of the project are shown in Annex 2.

MTR Corporation Limited
October 2018

Annex 1 - KPIs of Major Works Progress

Summary of the Construction Progress of the XRL Project

Works Commencement Date	26 January 2010
Target Completion Date	Q3 2018
Works Progress	Overall completion progress: 99.9% [as at end June 2018]

Progress of Key Civil Works Contracts

Cumulative progress of contracts for the Station construction:

Contract No.	Concrete structural works	Station excavation works
	End June 2018	End June 2018
810A	100% (100%)	100% (100%)
810B	100% (100%)	100% (100%)

Percentage in brackets is the planned progress of the Q3 2018 Schedule for Completion

Cumulative progress of contracts for tunnel construction:

Contract No.	Actual progress	Planned progress*
	End June 2018	End June 2018
811A	100%	100%
811B	100%	98.2%
820	100%	100%
821	100%	100%
822	100%	100%
823A	100%	100%
823B	100%	100%
824	100%	100%
825	100%	100%
826	100%	100%

Cumulative progress of E&M works:

E&M Works Progress	Actual progress	Planned progress*
	End June 2018	End June 2018
Station Building Services	99.8%	96.5%
Track Laid	100%	100%
Overall installation	99.9%	99.0%
Overall E&M	99.5%	98.8%

** Percentage is the planned progress of the Q3 2018 Schedule for Completion*

Annex 2 - Financial Expenditure

Expenditure report ending 30 June 2018

Table 1 – Situation of Expenditure²

	Awarded contract sum for the contracts (\$ million)	Cumulative expenditure (\$ million)
Railway Tunnels	22,550.4	31,083.8
Station	14,742.1	28,088.2
E&M Works	8,453.8	11,739.7
Total	45,746.3	70,911.7

Table 2 – Situation of substantiated claims³

	Claims resolved			Claims unresolved		
	Number	Amount claimed originally* (\$ million)	Amount awarded# (\$ million)	Number	Amount claimed* (\$ million)	Interim award (\$ million)
Railway Tunnels	160	4,815	2,474	427	7,990	2,250
Station	129	10,066	6,285	288	1,861	742
E&M Works	19	1,026	709	103	4,506	1,887
Total	308	15,907	9,468	818	14,357	4,879

*Amount stated in the contractor's detailed claim report.

The amount awarded means the payment for claims resolved.

² Table 1 shows the awarded contract sums and the cumulative expenditures for contracts in respect of railway tunnels, station and E&M works. The cumulative expenditures exceeded the respective contract sums because of the increase in cost due to price escalations, unfavourable ground conditions, changes in design to suit actual site conditions and various unforeseen circumstances etc.

³ Table 2 shows the details (no. of claims, amount claimed and amount awarded) for claims resolved and unresolved in respect of railway tunnels, station and E&M works. The amount awarded and amount of interim award are not necessarily equal to the amount claimed as all the claims are subject to the Engineer's assessments based on justifications and information provided by the contractors.

As at 30 June 2018, the Corporation had received 1,126 substantiated claims and the amount claimed in total was approximately \$30.3 billion, representing 66.2% of the awarded contract sum for the contracts. The Corporation has been discussing the details of the claims with the contractors concerned, and would thoroughly assess the amount claimed. The Corporation would process each claim in a prudent manner, and the contractors would have to provide sufficient justifications and information. As at 30 June 2018, 308 cases were resolved and about \$9,468 million was awarded, representing about 20.7% of the awarded contract sum for the contracts. Subject to the needs of individual works and progress of the relevant assessment and discussion, interim awards amounting to about \$4,879 million have been made for some cases.