#### **Translation**

For Information March 2015

### 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 31 December 2014)

#### 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 31 December 2014.

#### **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 LegCo on the progress update and financial situation of the construction of the Hong Kong section of the XRL, such reports are now submitted to the RSC quarterly instead of six-month intervals.

3. This paper, which is appended with the progress report document

(Annex) of the MTR Corporation Limited ("MTRCL"), reports on the major works progress, indicators and financial situation for the period between 1 October and 31 December 2014.

#### REVISED XRL PROGRAMME TO COMPLETE

- 4. In May 2014, MTRCL stated that the new commissioning target would be by the end of 2017. HyD, with the assistance of its monitoring and verification ("M&V") consultant, has completed its review on MTRCL's proposed Programme to Complete ("PTC"). HyD considers that the PTC could be attained provided that the target progress is met for the critical contracts and various major conditions are satisfied, including (but not limited to) that the contractors maintain their best endeavours through to the completion of their respective works; and various assumed production rates of key construction activities for tunnel and West Kowloon Terminus ("WKT") contracts can be met, etc.
- 5. HyD notified the MTRCL of its assessment in writing on 23 October 2014. MTRCL responded that it would make its best endeavor to implement the XRL project, and to manage and monitor the implementation of XRL project in accordance with the Entrustment Agreement with a view to meet the target completion in end 2017. HyD closely monitored how MTRCL followed up on the various major conditions to achieve the target of commissioning the XRL by the end of 2017, e.g. whether the respective contractors have made their best endeavor to implement their works; whether the assumed production rates have been met persistently, etc.
- 6. At the same time, HyD continued to monitor closely the progress of the remaining works of the XRL project against MTRCL's PTC. Apart from using the established mechanisms under the Entrustment Agreement on the XRL project to monitor MTRCL's implementation of the XRL project, HyD also requested MTRCL to enhance its monitoring mechanisms over works progress

including a focus on the critical contracts and sequences of works. At the recent meetings of the Project Supervision Committee ("PSC") (held on 31 October, 28 November and 24 December 2014), MTRCL reported that the progress of XRL works, including those of the critical contracts mentioned in the paragraphs below (see paragraph 8 to 14), remained falling behind the PTC. HyD and its M&V consultant also noticed continuous progress delay and works deficiency in certain contracts as the target production rates could not be met continuously.

#### PROGRESS UPDATE OF THE PROJECT

As stated in MTRCL's progress report, the overall progress of the Hong Kong section of the XRL was 66.3% as at the end of December 2014, indicating a delay as compared to the planned progress of 69.5% in the PTC. HyD and its M&V consultant would continue to use their monitoring mechanisms including meetings at various levels (e.g. the PSC meetings chaired by the Director of Highways, the Project Coordination meetings chaired by HyD at Assistant Director level) to systematically monitor the implementation of the XRL project by MTRCL; and would urge MTRCL to follow up and take effective improvement measures accordingly through serving letters to MTRCL as well as regular meetings and site visits.

#### (a) Construction of WKT North (Contract 810A)

8. According to MTRCL's progress report, about 80% of excavation works and 30% of concrete structural works for WKT North (Contract 810A) were completed. The structural concrete production for WKT remained unsatisfactory (which is 9% behind the planned progress of 39% according to the PTC). So, better co-ordination of sequences of works with more manpower and work fronts would be required at the work sites to recover the delay in concrete production. Also, MTRCL would have to take more improvement measures including pressing the contractor for scheduled concrete production, maintaining close dialogues with the contractor, and monitoring the the contractor's manpower on a daily basis. Effectiveness of such measures by

MTRCL would be followed up and monitored by HyD at regular site inspections and monthly Contract Review Meetings ("CRMs"), e.g. to request MTRCL to provide reports with regard to the progress of concrete structural works and pouring rates; to serve letters to MTRCL urging for improvement of progress for concerned works, etc.

- 9. There are three critical paths for the construction of WKT North, namely (i) excavation works near Jordan Road for the northern portion of WKT; (ii) steelwork fabrication for the Station Entrance Building ("SEB"); and (iii) construction works for the Lin Cheung Road Underpass. Their progress is set out below.
- 10. Critical path (i) (excavation works for the northern portion of WKT) involves removal of a significant quantity of rock. To enhance the efficiency of the excavation works, MTRCL proposed the use of blasting to excavate part of the bedrock there. HyD closely liaised with the relevant Government departments to obtain the necessary approvals. With concerted efforts, MTRCL obtained the blasting permit in September 2014, and conducted the first two (out of four) stages of blasts in end December 2014. The third stage of blast commenced in January 2015, while MTRCL expected the fourth stage (which is the last stage) to be commenced in mid-2015 and carried out in parallel with the third stage. HyD would continue to closely monitor the results of the blasting works and impacts on the surrounding buildings.
- 11. HyD was very concerned about the progress of critical path (ii) (steelwork fabrication for the SEB) which was highly complicated. HyD noticed that MTRCL was working very hard with the contractor to formulate proposals to overcome various works-related difficulties, including the fabrication, delivery and erection of the steelwork, as well as the planning and implementation of the temporary works. To tie in with the progress of the steelwork fabrication for the SEB, the contractor set up two additional fabrication yards on the Mainland to expedite the fabrication of temporary supporting steel structure for the steelwork. However, the two additional fabrication yards have yet to be able to commence operation and so the targeted completion of the temporary supporting steel structure remained to be seen.

12. As regards critical path (iii) (the construction works for the Lin Cheung Road Underpass), MTRCL has submitted the proposal to completely close Lin Cheung Road northbound between Austin Road West and Jordan Road to allow more working space for the construction works and to reduce the relevant risk of works. Discussion between MTRCL and relevant Government departments had reached the final stage, and MTRCL is arranging the implementation details of the proposal, aiming for implementation in April 2015.

### (b) Construction of Tai Kong Po to Tse Uk Tsuen Tunnels (Contract 823A)

13. With the breakthrough of the downtrack South Tunnel and North Tunnel between Tai Kong Po and Tse Uk Tsuen in May and August 2014 respectively, the two tunnel boring machines ("TBMs") commenced tunnelling works for the uptrack tunnels in end October and end November 2014 respectively after re-assembly and testing. With the tunnelling works at an initial stage, HyD has urged MTRCL at regular meetings and site visits to closely monitor their progress and confirm whether the two TBMs could achieve the target excavation rates when operating at the composite (soil and rock) stratum.

### (c) Construction of Huanggang to Mai Po Tunnels (Contract 826)

Regarding the cross-boundary tunnel section, the two TBMs completed the tunnelling works for the Shenzhen section of the XRL and have commenced those for the Hong Kong section of the XRL. The downtrack TBM has been operating at the marble zone, with pilot probing conducted in front of the TBM. Repairs of longer duration were required to replace the parts of the TBM that had been worn out during excavation at the marble zone. The uptrack TBM, which overtook the downtrack TBM in late September 2014 and tunnelled through the marble zone in the second half of December 2014, is now heading towards Mai Po. As the excavation for downtrack tunnel is far behind the programme with only 30% of planned excavated length completed, HyD is very concerned that the progress of the downtrack tunnelling works. At the

regular PSC meetings, HyD has expressed its concern over the progress of the tunnelling works and the frequent repairs of the TBMs, and has urged MTRCL to take effective mitigation measures to improve the TBMs' excavation rates, e.g. to increase more resources for maintenance so as to expedite the maintenance works for TBMs. If the excavation rate of the TBMs for the remaining tunnel works remained unsatisfactory, this contract would become one of the critical contracts that would affect the overall completion of the XRL project by 2017.

#### (d) Other Works Contracts

- 15. As for the progress of the remaining construction works, HyD and its M&V consultant noted that there were continuous delays regarding the works for the WKT Approach Tunnel (South) (Contract 811B) and the Ngau Tam Mei to Tai Kong Po Tunnels (Contract 824). MTRCL has proposed measures to recover the delays, and HyD has explored and developed step-up measures with MTRCL to further help catch up the delays. To improve the progress of excavation works under Contract 811B, MTRCL has encouraged the contractor to co-ordinate with other contractors of the adjacent work sites, and has explored the possibility of additional egresses at various locations for the delivery of spoil. For example, building platforms and adding egresses at locations vacated upon reprovisioning of Jordan Road have been considered. MTRCL has also requested the contractor of Contract 824 to deploy more resources and manpower to the work site to expedite the works. HyD would continue to closely monitor the works progress. HyD would request MTRCL to follow up on different situations of delays that might possibly occur, and would assist MTRCL, where necessary, in solving any works-related problems as early as possible to help recover the delays.
- 16. HyD and its M&V consultant assessed that timely completion of the critical contracts (Contracts 810A, 823A and 826) under the PTC would be subject to effective implementation of the various improvement measures mentioned above. HyD has expressed clearly to MTRCL its grave concern over the continuous delay in works progress, and has written to MTRCL to urge that follow-up actions and effective measures be taken proactively. MTRCL responded that the PTC and its associated risks were under review, which was

expected to be completed in the second quarter of 2015.

#### (e) <u>Electrical and Mechanical Systems</u>

- 17. Installation of various electrical and mechanical ("E&M") systems at the Shek Kong Main Building, Running Maintenance Shed, Shek Kong Feeder Station, Infrastructure, Building Maintenance and Permanent Way Maintenance Building, and Security Operation Centre have been substantially completed and their acceptance test would be conducted in the first half of 2015. As for other major facilities at Shek Kong (such as the Stabling Sidings, Emergency Rescue Siding, Shek Kong Plant Building (South)/(North), Train Wash Plant and Operation Control Centre, etc.), works under various E&M contracts were underway as scheduled. These contracts were on Power Supply (Contract 845), Building Services for Tunnel Ventilation Facilities and Emergency Rescue Siding and Building Services for Shek Kong Stabling Sidings (Contracts 855 and 856), Lifts (Contract 847), Radio Communication System and Fixed Communication System (Contracts 849 and 851), Signalling System Trackside Equipment (Contract 841A), etc.
- 18. In order to alleviate the risk in delay, MTRCL is managing to strive for tunnel access for the installation works for Trackwork, Overhead Line and Trackside Auxiliaries (Contract 830 and 846).
- 19. Works for the Tunnel Environmental Control System (Contract 843) of the ventilation buildings and other E&M contracts were underway as scheduled. Those for the ventilation buildings at Kwai Chung and Mai Po were in satisfactory progress. Acceptance test was being performed for the former and final installation for the latter.
- 20. At WKT, works for E&M systems have commenced separately according to the works progress of various levels and sections to tie in with the schedule. These systems include low voltage Electrical Installation (Contract 816C), Environmental Control System (Contract 816A), Lifts and Escalators and Moving Walkways (Contracts 847 and 848), Fire Services, Plumbing and Drainage Systems (Contract 816D). Progress of installation of

lifts at WKT was affected by insufficient work fronts, and HyD has reminded MTRCL to arrange for earliest release of all lift shafts at the works site to facilitate the lift contractor's installation works.

#### (f) XRL Trains

21. The first XRL train (Contract 840) is expected to be delivered to Hong Kong in 2015 for pre-testing. As the peak of the installation works for E&M systems would be tightly interlaced with the integrated testing and commissioning phase of the whole railway system, close communication and collaboration amongst different Government departments would be critical to the timely completion of the project. HyD would continue to take the leading role to accomplish this goal.

#### XRL LATEST COST TO COMPLETE

- 22. The Government received a letter from MTRCL on 24 July 2014 informing the Government of the Cost to Complete ("CTC") for the Hong Kong section of the XRL. MTRCL also announced on 11 August 2014 that the CTC of the XRL would be \$71.52 billion (additional insurance costs and Project Management Cost included). The estimate is based on the PTC under which the XRL will be in commission by the end of 2017. It is about \$6.5 billion more than the Entrustment Cost of \$65 billion, and also exceeds the Approved Project Estimate.
- Based on the information provided by MTRCL and with the assistance of the M&V consultant, HyD has completed the review of MTRCL's CTC. In their review, HyD and its M&V consultant identified certain items which had not been included in the CTC or which would need to be reviewed to ensure adequate coverage in the risk allowances. HyD notes that the second report of the MTRCL Independent Board Committee ("IBC") reported a similar conclusion reached by its own appointed experts. HyD has urged MTRCL to review again the CTC in view of the reports of the MTRCL IBC and HyD's review findings, and to advise how the identified items which had not been

included in the CTC would be addressed and allowed for. MTRCL was expected to continue to make the best endeavours to complete the XRL project according to the proposed PTC at the lowest possible cost. MTRCL responded that it would review again the CTC which was expected for completion in the second quarter of 2015. By then, we will report the outcome to LegCo as early as possible.

24. The above review of MTRCL's CTC estimate only focused on the engineering estimate of the cost required to complete the whole XRL project, and did not take into account any consideration on the obligations regarding project cost overrun. The Government will act in accordance with the Entrustment Agreement as regards the overrun of approved project estimate and the parties' responsibility for bearing the relevant costs. The Government will assess MTRCL's obligations regarding project implementation, works delay and project cost overrun, and will reserve all the rights to pursue the warranties and obligations from the MTRCL.

#### THE SECOND REVIEW REPORT OF THE IBC OF MTRCL

25. The first report of the MTRCL IBC, established to review the revised schedule for the commissioning of the Hong Kong section of the XRL, was published in July 2014, followed by a second report published in October 2014. The second report comprises IBC's findings and conclusions in relation to various matters, reviewed by its two independent experts, on the MTRCL's XRL project management; as well as the IBC's recommendations for consideration by the MTRCL Board. The Government expects MTRCL to propose early to the Government a comprehensive and practicable solution after taking into full consideration the report prepared by the IBC's independent experts and the issues raised by HyD, with a view to completing and commissioning the Hong Kong section of the XRL according to the PTC. HyD has been following up with MTRCL in this regard, as well as on MTRCL's implementation of the recommendations made in the second report. At the same time, the Government expects MTRCL to conduct a better risk management in project management and monitoring, as well as budget control.

#### THE GOVERNMENT'S INDEPENDENT EXPERT PANEL

- 26. In the light of the delay of the construction of the Hong Kong section of the XRL, the Chief Executive appointed an Independent Expert Panel ("IEP") in May 2014. The report of the IEP ("the Report") was released on 30 January 2015. The Report reviewed the implementation of the Hong Kong section of the XRL and put forward recommendations aiming to improve the systems, processes and practices for implementing and monitoring the Hong Kong section of the XRL as well as future new railway projects.
- The Administration attaches great importance to the observations and recommendations in the Report, and will, together with HyD, actively pursue the Report's recommendations and explore the implementation arrangements with MTRCL and other relevant parties, particularly in relation to monitoring and reporting of construction works. Besides, necessary changes in the monitoring mechanism and institutional arrangements, in connection with the mode of agreement to be adopted in the implementation of new railway projects in future, will also be studied in detail. This will include a review of the institutional arrangements for implementing, under the concession approach, future new railway projects under the Railway Development Strategy 2014, taking into account the experience of the implementation of the Hong Kong section of the XRL project and the Report's recommendations.

Transport and Housing Bureau Highways Department March 2015

#### For Information

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

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

(Report for the Period between 1 October and 31 December 2014)

#### INTRODUCTION

This is the progress report on the construction of the Hong Kong section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link ("XRL") project.

#### BACKGROUND

- 2. On 15 April 2014, the MTR Corporation Limited ("the Corporation") announced the revised target opening of the XRL for passenger service by the end of 2017. To enhance the reporting mechanism and transparency on project management, the Corporation will submit the reports on progress update and financial situation of the Hong Kong section of the XRL at three-month intervals instead of six-month from this report onwards.
- 3. This paper outlines the critical challenges and the latest progress update of the XRL project under the revised programme, and to report the project progress, key performance indicators ("KPIs") and financial status for the period between 1 October and 31 December 2014.

#### MAJOR WORKS PROGRESS OF THE XRL PROJECT

# (I) <u>Critical Challenges of the Target Opening (Contracts 810A, 823A and 826)</u>

- 4. In the meeting of the Subcommittee on 5 May 2014, the Corporation highlighted that the Contracts 810A, 823A and 826 are critical contracts. The following will focus on the critical challenges currently faced in the above three contracts.
- (a) West Kowloon Terminus Station North (Contract 810A) Multi-works carried out in parallel under complex construction environment
- 5. The excavation works in the vicinity of Jordon Road, which involve considerable underground boulders and corestones to be removed, are still facing critical challenges. The Corporation has commenced trial blasts throughout September and December 2014, with data showing that blasting is feasible to proceed compromising the safety and integrity of the nearby structures both within and outside of the construction site. These trail blasting will further developed into full scale production blasting which is expected to commence in early 2015 to expedite the progress of excavation in WKT station north. As for the concrete structure, the contractor have to proactively advance their redeployment plans to secure sufficient labors such as steel fixers and carpenters, optimize the excavation and concrete structure construction sequence, as well as to enhance the co-ordination with the adjacent contracts to recover the target concrete pours.
- 6. Relevant Government departments have reviewed the proposal from the Corporation on the full closure of Lin Cheung Road northbound between Austin Road West and Jordon Road. The Corporation will continue to co-ordinate with relevant Government departments, thus to achieve the targeted implementation of the closure for Lin Cheung Road northbound in the second quarter of 2015.

- 7. The complexity of the steel structure of the WKT, which will become a landmark of West Kowloon area, is also relatively uncommon in Hong Kong. As of end 2014, the completion rate for erection of both the permanent and temporary steelworks of WKT rooftop reached 32% and 9% respectively.
- 8. To minimize the impact to nearby traffic which is very busy, delivery of the oversized steelworks is carried out at night time with stringent co-ordination among project teams. In addition, each piece of component of the steelwork structure is varied in size and shape, meticulous compilation has to be carried out on-site to ensure each component is at its correct position and angle. This makes the whole erection procedure very challenging.
- (b) Yuen Long tunnel section connecting Tsat Sing Kong and Tai Kong Po (Contract 823A) Close observation still requires on the performance of TBM after modification
- 9. Two tunnel boring machines ("TBM") for tunneling the northern and southern section of the Yuen Long and Tai Kong Po Tunnels commenced excavation of the northbound tunnel in October and November 2014 respectively after their southbound tunnel drive.
- 10. With the lesson-learned from the southbound tunnel drives, the two TBMs have been enhanced, re-assembled and resumed their northbound tunneling works with satisfactory progress. While proceeding along complex mixed-ground geological condition, the ongoing performance and the progress of the TBMs remains under scrutiny.
- (c) Cross-boundary tunnel section (Contract 826) Substantial wear and tear of the TBM affecting performance
- 11. The northbound TBM had successfully passed through the marble zone in the second half of December 2014 and has been speeding up the excavation works towards the retrieval shaft at Mai Po. The southbound TBM resumed excavation

in November 2014, but stopped again due to heavy wear and tear of some TBM components which required a substantial period to complete the repairs. The Corporation is developing recovery measures and contingency plans with the contractor to mitigate the overall impact to the entire project.

12. In addition, ground freezing will be deployed to construct most of the cross passages between southbound and northbound tunnels due to the complex geological environment. Therefore, the contractor has started the required advance works.

#### (II) Overall Progress of Construction Works

- (a) Tunnel construction New Territories section
- 13. Tse Uk Tsuen to Shek Yam Tunnel section (Contract 822) completed about 6km out of the 7.6km of the tunnel lining works in 2014, while track laying and related works are in progress. The Shing Mun ventilation main building structural works were over 75% complete. The staircases inside the shaft connecting to the tunnels were also completed.
- 14. The Tai Kong Po and Tse Uk Tsuen (Contract 823A) southbound tunnel excavation was completed. The interior structural works of the southern section were substantially completed with the advance works for track-laying and overhead line installation in progress. Interior structural works and the construction of the cross passages between the southbound and northbound tunnels at the northern section were in progress.
- 15. The difficult groundwater conditions in the Ngau Tam Mei to Tai Kong Po Tunnels (Contract 824) have improved and breakthrough of the tunnels is expected to be in the first quarter of 2015. The tunnel lining production, however, has suffered further delay as the arrangements of labour resources could not meet the works progress requirement, which will have a knock-on effect to the subsequent track-laying works. The Corporation is working closely with the

contractor and to develop improvement measures to mitigate the delay. The Corporation will monitor the progress closely as this contract may become one of the critical contracts.

- 16. The Mai Po to Ngau Tam Mei (Contract 825) northbound tunnel achieved breakthrough in November 2014. The construction of platform structure, cross passages and walkway along both sides of the tunnel had already commenced. Track-laying and installation of overhead line, signaling and telecom equipment in the southbound tunnel commenced and progressing satisfactorily.
- The structural works of the Plant Buildings North and South for Shek Kong Stabling Sidings ("SSS") and Emergency Rescue Siding ("ERS") (Contract 823B) have been substantially completed. The structural works for all 14 buildings had been completed with electrical and mechanical ("E&M") installation in progress. Statutory inspection of the SSS by the Fire Services Department is targeted to commence in early 2015.
- (b) Tunnel construction Urban section
- 18. The TBM for the Nam Cheong to Hoi Ting Road tunnel section (Contract 820) was dismantled at the retrieval shaft at Hoi Ting Road after completion of tunnels in the urban section. The interior fitting-out works and E&M installation in the Nam Cheung ventilation building are currently in progress, while the reinstatement works along Sham Mong Road will be completed in the near future.
- 19. The section of WKT Approach Tunnel near Hoi Ting Road (Contract 811A) had successfully completed the transfer of loading of the West Rail Line ("WRL") onto the newly constructed XRL tunnel. All structural works of this section of the approach tunnel were completed.
- 20. The Approach Tunnel near Jordan Road (Contract 811B) completed more than 70% of the structural works. Part of the top-down slabs at B3 level was also completed. Other works including the new Public Transport Interchange (PTI)

and the installation of related underground utilities are in progress.

- 21. Low voltage power had been energized in November 2014 at the Mongkok West ventilation building, while E&M contractors had been granted access for on-site installation works.
- (c) Construction of West Kowloon Terminus (Contracts 810A and 810B)
- Around 88% of the overall excavation works and around 43% of the concrete works had been completed for the West Kowloon Terminus (WKT). The completion rate for excavation and concrete works of the Austin Road West Underpass reaches 47% and 18% respectively.
- 23. At the central part of WKT (core area), concreting work at different slabs and at-grade level are in progress, while E&M contractors had been granted access to carry out works at some of the floor areas at WKT station north in end 2014. Excavation and concrete works continued under B2 slabs at the former Jordan Road with the target to complete the slabs extending from east to the west at B3 level in the first quarter of 2015.
- 24. In addition to moving ahead the excavation and construction works of WKT, the Corporation deployed staff to the fabrication yards in overseas and the Mainland to closely monitor the manufacturing of the mega-sized structural steel member for the WKT entrance; as well as the large-scale erection works at WKT site. The also contractor was also planning to expand their fabrication facilities to increase production.
- (d) E&M system and signaling system
- 25. Installation and testing of major E&M equipment and pipes were in progress at WKT, while the continuity of these works will depend on the progress of the station structural works.
- 26. Building services works at the Shek Kong Stabling Siding (SSS)

commenced after the completion of structural works. Low voltage distribution system had been delivered to the XRL Operations Control Centre, with the installation of trains washing plant being underway.

- 27. Installation of E&M equipment including ventilation system and telecom equipment continues at several ventilation buildings and tunnel sections as well as the SSS & Emergency Rescue Siding (ERS). The installation of the large ventilation fans at Kwai Chung ventilation building was completed, and test operation was conducted in November 2014.
- 28. Contractors gained access to about 60% of the XRL tunnels to carry out overhead line installation and track-laying. The track-laying in the southbound tunnel between Nam Cheung and Kwai Chung had been substantially completed.
- 29. Installation of the signaling system at Nam Cheung ventilation building completed with initial testing commenced.
- (f) Overall progress
- 30. As at 31 December 2014, the overall completion progress of the XRL project was 66.3% against the planned progress of 69.46%. The Corporation will continue to strive for the target opening of the XRL by end 2017, though there are still numerous challenges to be overcome.

### (III) Preparation and Interface Works

- (a) Temporary traffic arrangements
- 31. Roads in the vicinity of the WKT construction site, including Austin Road West, Wui Man Road, Wui Cheung Road, Temporary Road D1A(S) northbound, Jordan Road, Lin Cheung Road southbound and the ingress slip road for Cross-Border Coach Terminus at Kowloon Station, will remain in the existing position until the planned opening of the Austin Road West/ Lin Cheung Road

Underpass system and the traffic network in the vicinity of the WKT in 2017. The Corporation reported the latest progress of the construction work of XRL and both existing and proposed temporary traffic management schemes to the Traffic and Transport Committee of Yau Tsim Mong District Council (YTMDC T&TC) in November 2014, which included the proposed full closures of Lin Cheung Road northbound. Prior notice will be given to residents of nearby estates and buildings before implementation, while relevant information will also be uploaded to the XRL dedicated website for public information.

- (b) Blasting works at WKT Station North (Contract 810A)
- 32. With trial blasting commenced on 22 September 2014, four rounds of 'feel blast' activities had been arranged for nearby stakeholders including members of YTMDC T&TC, Community Liaison Group of the XRL project (WKT) as well as representatives of the management offices for estates atop Kowloon Station to experience the noise and vibration during blasting. Attendees in general agreed that the impact on noise and vibration from blasting being minimal.
- 33. The Corporation had issued advance notifications through SMS to inform stakeholders the estimated blasting time on the day of blasting. Hotline has also been set up to address enquiries promptly.
- (c) Tunneling works and community liaison for the urban section
- 34. The tunneling work for the tunnel section from Mei Lai Road to Hoi Ting Road completed in October 2014. In October and November 2014, re-inspection to relevant buildings in Tai Kok Tsui area was arranged to re-confirm there was no adverse impacts to the buildings. With the completion of tunneling works at Tai Kok Tsui, number of enquiries also went down.
- (d) Communication with residents of Yau Tam Mei Tsuen ("YTMT")
- 35. At the requests of YTMT residents, representatives of the Corporation and relevant Government departments attended over 240 site inspections, visits

and residents meetings in order to maintain direct communication with the local stakeholders to explain the works in details and listened to their views.

- 36. As for the complaints referred by LegCo Public Complaints Office, the Corporation had been handling every case individually with the residents and had replied to the Office on the follow-ups. The Corporation and its contractor will keep close dialogues with the residents to minimise the impact of the works on the local community.
- 37. The Corporation had been following up the LegCo members' suggestions made at the previous LegCo case conferences as well as the local representatives' suggestions afterwards in a pragmatic manner. Close dialogue with the local stakeholders had been established to collect and co-ordinate their views as well as explore practical solution(s) to resolve issues. The LegCo members will continue to be updated in a timely manner. As the demands from the stakeholders involve public funding, the Corporation will adhere to the principle of fiscal prudence.
- (e) Handling of enquiries and complaints
- 38. Members of the public can make use of various channels to express their views or make enquiries concerning the XRL project including MTR Projects Hotline, site inspections and meeting. Enquires or complaints received concerning the XRL project over the past 3 months were mainly about the tidiness and cleanliness of work sites, environmental implications, traffic management and suspected damages to buildings, etc. Cases have been followed up.
- 39. The XRL Information Centre handled 5 project related enquiries from October to December 2014.
- (f) Public engagement and community involvement activities
- 40. During the period between October and December 2014, the Corporation visited three secondary schools and seven primary schools for talks on XRL project and information of the latest works progress.

#### (IV) Response to Public's Concerns on the Project

- (a) Independent Board Committee
- 41. Further to the release of the second Independent Board Committee ("IBC") report on review on XRL project on 28 October 2014, the Capital Works Committee ("CWC") of the Board adopted the schedule of key milestones and key performance indicators set out by the experts. The project team had been reporting the progress against each of the milestones.
- 42. The Corporation also enhanced the reporting mechanism. The project team would notify the Management and the Board as soon as practicable should there be any delay on the critical contracts, and propose practical delay recovery measures. This mechanism would bring greater transparency of the project management and increase the possibility of recovering delay in a timely manner for completion of the project.

### (V) Employment Opportunities

As at the end of December 2014, about 7,907 construction workers and technical/professional staff members were employed for the construction and E&M works for the tunnels and the WKT. The XRL project will continue to seek deployment of manpower resources actively to meet the project needs.

### (VI) <u>Updated Financial Situation of the XRL project</u>

44. As at 31 December 2014, the cumulative expenditure for the awarded contracts was \$43.1538 billion.

45. In view of the revised programme for project completion in 2017, the Corporation had submitted the latest estimate of the XRL Cost to Complete, which is \$71.52 billion (inclusive of future insurance and project management costs), to Government in end July 2014. We will make reference to the expert's advice and recommendations to reassess the project cost. It is expected to complete and submit to Government for review in Q2 2015. Meanwhile, we will continue to closely monitor and control costs and strive to keep expenditure to the minimum necessary while ensuring successful delivery of this Project in accordance with the revised project schedule. Details of the financial situation of the XRL project are shown at Annex 3.

MTR Corporation Limited February 2015

### **Annex 1 - KPIs of Major Works Progress**

### **Summary of the Construction Progress of the XRL Project**

Works Commencement Date	26 January 2010				
Target Opening Date	End of 2017, under the Corporation's revised				
	programme				
Works Progress	• Overall completion progress: 66.3%				
	[as at end December 2014]				
	• Project expenditure: HK\$ 43.1538 billion				
	[as at end December 2014]				

### Progress of Key Civil Works Contracts

### Cumulative progress of contracts for WKT construction:

Contract No.	Concrete structural works		Terminus excavation works		
	End	End End End		End	
Contract No.	September	December	September	December	
	2014	2014	2014	2014	
810A	27%	30% (39%)	73%	79% (75%)	
810B	75%	79% (95%)	98%	99% (99%)	

Percentage in bracket is the planned progress

### Cumulative progress of contracts for other tunnel sections:

	Tunnel excavation works				
Contract No.	End September 2014		End December 2014		
	Northbound	Southbound	Northbound	Southbound	
811B	72%	72%	77% (93%)	77% (93%)	
811A	100%	100%	100% (100%)	100% (100%)	
820	100%	100%	100% (100%)	100% (100%)	
821	100%	100%	100% (100%)	100% (100%)	

822	100%	100%	100% (100%)	100% (100%)
823A	0%	100%	13% (16%)	100% (95%)
824	85%	88%	92% (100%)	95% (100%)
825	94%	100%	100% (100%)	100% (100%)
826	24%	24%	34% (45%)	25% (82%)

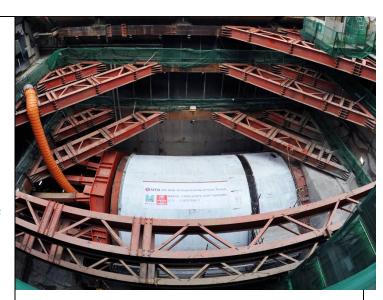
Percentage in bracket is the planned progress

# **Annex 2 - Progress Photos**

New Territories Section - Cross- boundary Tunnel Section	Advance works for the construction of the cross passages of the Cross-boundary Tunnel Section (826)	
New Territories Section - Mai Po to Ngau Tam Mei Tunnel Section	Mai Po to Ngau Tam Mei northbound tunnel broke through in November 2014, all excavation works completed (825)	9:04 18 NoV/2014
New Territories Section - Ngau Tam Mei to Tai Kong Po Tunnel Section	Tunnel lining works inside Ngau Tam Mei to Tai Kong Po Tunnel Section (824)	

New
Territories
Section - Tai
Kong Po to
Tse Uk Tsuen
Tunnel
Section

TBM of Shek
Kong northern
section
re-launched in
November 2014
to carry out the
excavation of the
northbound
tunnel (823A)



Tunnel structural works of Shek Kong southern section completed substantially (823A)



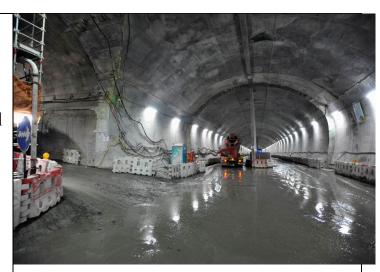
New
Territories
Section Shek Kong
Stabling
Sidings and
Emergency
Rescue Siding

Stabling Sidings (823B)



New
Territories
Section - Tse
Uk Tsuen to
Shek Yam
(Tai Mo
Shan) Tunnel
section

Internal conditions of the Tse Uk Tsuen to Shek Yam Tunnel (822)



Staircase structure inside the shaft of Shing Mun ventilation building (822)



New
Territories
Section Shek Yam to
Mei Lai Road
Tunnel
section

Utilities works at Kwai Chung ventilation building (821)



Urban
Section Mei Lai Road
to Hoi Ting
Road Tunnel
section

Nam Cheung ventilation building and Nam Cheung works site (820)



Urban
Section WKT
Approach
Tunnel

Tunnel structural works underneath the West Rail Line tunnel (811A)



Approach tunnels and utilities works near Jordon Road (811B)



### WKT

Aerial view of WKT (810A & 810B)



Construction
Works of the
underpass at
Austin Road West
(811B)



Modules of the WKT's roof steel structure delivered to the works site (810A)



Construction works of WKT roof structure (810A)



# E&M System

Large equipment of the Terminus E&M system



Entrance gates testing in the Mainland China factory



Installation works at the Running Maintenance Shed was substantially completed



Giant ventilation fan of Kwai Chung ventilation building



Installation of the railroad switch inside tunnels



# **Annex 3 - Financial Expenditure**

## **Expenditure report ending 31 December 2014**

<u>Table 1 – Situation of Expenditure</u>

	Awarded contract sum for the contracts (\$ million)	Cumulative expenditure (\$ million)	Estimated amount* of unresolved claim (\$ million)
Railway Tunnels	ailway Tunnels 22,463.6		6,334.5
West Kowloon Terminus ("WKT")	14,590.2	13,072.3	4,606.5
Electrical and	8,166.1	5,919.1	737.2
Mechanical			
("E&M") Works			
Total	45,219.9	43,153.8	11,678.2

<sup>\*</sup>Amount stated in the contractor's detailed claim report.

<u>Table 2 – Situation of substantiated claims</u>

	Claims resolved			Claims unresolved		
	Number	Amount	Amount	Number	Amount	Interim award
		claimed	awarded		claimed*	(\$ million)
		originally*	(\$million)		(\$ million)	
		(\$ million)				
Railway	82	2,258	1,207	302	7,308	974
Tunnels						
WKT	46	247	187	265	5,580	973
E&M	$2^{\theta}$	0	0	59	747	10
Works						
Total	130	2,505	1,394	626	13,635	1,957

<sup>\*</sup>Amount stated in the contractor's detailed claim report.

2. As at 31 December 2014, the Corporation received 756 substantiated claims and the amount claimed in total was about \$16.14 billion, representing 35.7% 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 31 December 2014, 130 cases were resolved and about \$1,394 million was awarded, representing about 3.08% of the awarded contract sum for the contracts. Subject to the needs of individual works and progress of the relevant assessment and discussion, interim award amounting to about \$1,957 million was made for some cases.

<sup>&</sup>lt;sup>6</sup>Claims withdrawn by the contractors no longer included.