

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 706 – HIGHWAYS

Transport – Roads

47TR – East Rail Extension – essential public infrastructure works for Ma On Shan to Tai Wai Rail Link

Members are invited to recommend to Finance Committee -

- (a) the upgrading of part of **47TR**, entitled “East Rail Extension - essential public infrastructure works for Ma On Shan to Tai Wai Rail Link – subways and footbridge”, to Category A at an estimated cost of \$117.9 million in money-of-the-day prices; and
- (b) the retention of the remainder of **47TR** in Category B, retitled “East Rail Extension – essential public infrastructure works for Ma On Shan to Tai Wai Rail Link – public transport interchanges at Tai Wai Station and Wu Kai Sha Station”.

PROBLEM

The facilities for pedestrian access to five stations, namely, Tai Wai Station, Che Kung Temple Station, City One Station, Tai Shui Hang Station and Heng On Station of the Ma On Shan to Tai Wai Rail Link (MOS Rail) will be inadequate upon its commissioning in late 2004.

/ PROPOSAL

PROPOSAL

2. The Director of Highways (DHy), with the support of the Secretary for Transport, proposes to upgrade part of **47TR** to Category A at an estimated cost of \$117.9 million in money-of-the-day (MOD) prices for the construction of essential public infrastructure works (EPIW) at Tai Wai Station, Che Kung Temple Station, City One Station, Tai Shui Hang Station and Heng On Station along the MOS Rail.

PROJECT SCOPE AND NATURE

3. The proposed scope of **47TR** comprises -
- (a) construction of a 24.3-metre long, 8.9-metre wide subway underneath the existing **Tai Wai Station** connecting Tsuen Nam Road to the station area of Tai Wai Station and a future public transport interchange (PTI);
 - (b) construction of a 63.4-metre long, 3.7-metre wide subway and the associated ramp and staircase connecting an existing subway underneath Che Kung Miu Road to **Che Kung Temple Station**;
 - (c) construction of a 38-metre long, 4-metre wide footbridge and the associated ramp and staircase to the south of **City One Station** spanning Chap Wai Kon Street with a connection to an elevated walkway through Sha Tin Town Lot No. 394 (STTL 394);
 - (d) construction of a 125.5-metre long, 5.2-metre wide subway and the associated ramp and staircase across Hang Tai Road, Ma On Shan Road and Hang Tak Street connecting to **Tai Shui Hang Station**;
 - (e) construction of a 46.2-metre long, 5.2-metre wide subway and the associated ramp and staircase across Sai Sha Road connecting to **Heng On Station**, relocation of a bus bay and 21-metre long noise barrier and construction of a cover to an existing 40-metre long footpath;
 - (f) construction of an at-grade **PTI** to serve the future integrated Tai Wai Station of the existing East Rail and the MOS Rail; and

- (g) construction of an at-grade **PTI** to serve Wu Kai Sha Station of the MOS Rail.

A site plan is at Enclosure 1.

4. The part of the project we propose to upgrade to Category A comprises items 3(a) to 3(e) mentioned in paragraph 3 above. We propose to retain items 3(f) and 3(g) in Category B for upgrading to Category A in late 2001 or early 2002 after the completion of the PTI design.

5. The Kowloon-Canton Railway Corporation (KCRC) commenced construction of the MOS Rail in November 2000. Subject to funding approval, we plan to commence construction of **47TR** in February 2001 for completion in December 2004 to tie in with the commissioning of the MOS Rail.

JUSTIFICATION

6. In June 1998, KCRC submitted a proposal for the planning and implementation of the East Rail Extension from Hung Hom to Tsim Sha Tsui (TST Extension) and of the MOS Rail, which included a package of EPIW to tie in with the commissioning of the MOS Rail in late 2004. The MOS Rail will be an 11.4-kilometre extension of KCRC's East Rail from Tai Wai to Ma On Shan traversing the eastern part of Sha Tin and Ma On Shan. Nine stations are planned in or near Tai Wai, Che Kung Temple, Sha Tin Wai, City One, Shek Mun, Tai Shui Hang, Heng On, Ma On Shan and Wu Kai Sha.

7. At present, the pedestrian facilities for Tai Wai Station, Che Kung Temple Station, City One Station, Tai Shui Hang Station and Heng On Station are inadequate. We need to complete the works described in paragraphs 3(a) to 3(e) above to facilitate or provide pedestrian access to these Stations upon the commissioning of the MOS Rail in 2004.

Tai Wai Station

8. A PTI will be built on the southern side of Tai Wai Station to facilitate convenient interchange of commuters between the railway and other transport modes. We need to build a 8.9-metre wide subway underneath the existing railway embankment to link up Tsuen Nam Road at the north of the Station with a public passageway within the station concourse. In addition to providing an additional entrance to the Station, the subway, together with the public passageway, will form a direct access to the PTI and Che Kung Miu Road

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for pedestrians coming from the northern side of the Station. Without the subway, they will have to make a detour following Mei Tin Road.

Che Kung Temple Station

9. Che Kung Temple Station concourse will be bounded by Che Kung Miu Road, a proposed slip road of Trunk Road T4 and a Comprehensive Development Area site. We need to build a subway beneath the proposed slip road of Trunk Road T4 to provide an access to the Station. The proposed subway will join existing subways across Che Kung Miu Road and Sha Tin Tau Road to form a comprehensive pedestrian subway network linking up the Che Kung Temple Station with the local developments. In the absence of the proposed subway, pedestrians will need to use an at-grade crossing facility across the proposed slip road of Trunk Road T4 to gain access to the Station. This is undesirable from pedestrian safety and junction capacity perspectives.

City One Station

10. We will provide a footbridge across Chap Wai Kon Street to link up City One Station with Sha Tin Town Lot 394. It will serve as an access to the Station for residents of the housing developments at both Sha Tin Town Lot 394 and Sha Tin Area 14B, which are to be connected by an elevated walkway. This integrated pedestrian network will enhance the pedestrian safety and junction capacity of Chap Wai Kon Street/Ngan Shing Street.

Tai Shui Hang Station

11. Tai Shui Hang Station will be located on the central median of Ma On Shan Road, which is a 3-metre high earth embankment above the adjacent Hang Tai Road and Hang Tak Street. We propose to build a subway crossing underneath all three roads, thus linking up the Station with the developments on both sides of these parallel roads. The subway will offer users a safe and convenient access without conflicting with the road traffic.

Heng On Station

12. Heng On Station will be located on the central median of Sai Sha Road. We will provide a subway crossing underneath Sai Sha Road, thus linking up Heng On Station with developments on both sides of the road. In association with the subway, we will relocate an existing bus bay and a 21-metre long noise barrier. We will also construct a cover to the existing 40-metre long footpath with a view to providing a covered route linking to the existing subway across Hang Ming Street.

13. We intend to entrust **47TR** to KCRC for implementation in conjunction with the MOS Rail project in order to improve the interface and coordination between the railway project and the EPIW and to enable simultaneous completion so that the pedestrian facilities are available when the railway line commences operation.

FINANCIAL IMPLICATIONS

14. We estimate the cost of this project to be \$117.9 million in MOD prices, made up as follows -

	\$ million	
(a) Subway connection to Tai Wai Station	12.7	
(b) Subway connection to Che Kung Temple Station	7.6	
(c) Footbridge connection to City One Station	18.1	
(d) Subway connection to Tai Shui Hang Station	24.3	
(e) Subway connection to Heng On Station	25.5	
(f) On-cost ¹ payable to KCRC	14.5	
(g) Contingencies	10.3	
	Sub-total	113.0 (at September 2000 prices)
(h) Provision for price adjustment	4.9	
	Total	117.9 (in MOD prices)

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¹ An on-cost at 16.5% of the project base cost (i.e. items (a) to (e) in paragraph 14) will be payable to KCRC for undertaking the technical studies, design and construction supervision of the EPIW under **47TR**.

15. Subject to approval, we will phase the expenditure as follows -

Year	\$ million (Sep 2000)	Price Adjustment Factor	\$ million (MOD)
2001 – 2002	65.6	1.02550	67.3
2002 – 2003	35.5	1.05627	37.5
2003 – 2004	9.7	1.08795	10.6
2004 – 2005	1.4	1.12059	1.6
2005 – 2006	0.8	1.15421	0.9
	113.0		117.9

16. We have derived the MOD estimate on the basis of the Government's latest forecast of trend labour and construction prices for the period 2001 and 2006. The works will be included as parts of three lump sum contracts with remeasurement items for foundation works, without price fluctuation to be awarded by KCRC.

17. We estimate the additional annual recurrent expenditure arising from the proposed works to be \$1.2 million.

PUBLIC CONSULTATION

18. We and KCRC consulted the Traffic and Transport Committee (TTC) of the then Sha Tin Provisional District Board in November 1998 and May 1999, and of the Sha Tin District Council in November 2000 on the MOS Rail project including EPIW under **47TR**. Members asked that a stopping point for cross-boundary coaches at the Tai Wai PTI be provided and requested the Government to consult it on the proposed design of the new PTIs at Tai Wai Station and Wu Ka Sha Station. The relevant government departments are working out the proposed design of the PTIs and will revert to the TTC of the Sha Tin District Council. In response to comments raised on the design of the MOS Rail such as the aesthetic design of the stations, KCRC and the relevant government departments will revert in due course.

19. We gazetted the proposed roadworks under **47TR** together with the MOS Rail project under the Railways Ordinance on 26 March 1999. We received two objections on the proposed subway to Tai Shui Hang Station described in paragraph 3(d) above. The objectors requested that the subway ramp be shifted away from an existing earth mound in front of Tai Shui Hang Village on environmental and fung shui grounds. We have revised the design of the subway by shifting the subway ramp away from the earth mound and reducing the width of an adjoining footpath from 3.5 metres to 2.5 metres. We informed the two objectors about the subway design revision. One objector withdrew his objection with the condition that the majority of the earth mound be maintained while the other objector did not respond.

20. Having considered the two objections to the EPIW together with other objections to the MOS Rail scheme, the Chief Executive in Council authorized the MOS Rail scheme together with the modified EPIW under **47TR**. The notice of authorization was gazetted on 27 October 2000.

21. At the meeting of the LegCo Panel on Transport on 15 December 2000, Members noted a paper on the EPIW for the MOS Rail and TST Extension i.e. **47TR** and **48TR**, and that we would submit the EPIW to the PWSC meeting in January 2001 for consideration. The paper was discussed by the Subcommittee on matters related to the implementation of railway development projects of the LegCo Panel on Transport on 4 January 2001. The main points raised by Subcommittee Members on the EPIW of the MOS Rail are summarized as follows -

- (a) the PTIs should be carefully designed to ensure adequate provision of height, ventilation and lighting;
- (b) the reasons for the on-cost level of 16.5% should be provided; and
- (c) KCRC should provide information on the measures to be undertaken to mitigate the noise impact arising from the construction works and railway operation, and remedial measures to be undertaken in case the actual noise level exceeded the stipulated standards.

We will revert to Members on the above points before PWSC meeting on 17 January 2001.

22. Subcommittee Members also made some comments on the MOS Rail project. These include -

/ (a)

- (a) a copy of the Environmental Impact Assessment Report and feasibility study report on the MOS Rail should be provided;
- (b) monitoring mechanism for railway construction works should be reviewed and an independent panel be formed to assess claims for compensation; and
- (c) KCRC should provide a forecast on the loading of East Rail during morning peak hours and take measures to ensure that passengers at Tai Wai Station would normally be able to board on the first train arriving at the platform before the commissioning of the Shatin to Central Link.

We and KCRC are considering appropriate follow-up actions and will also revert to Members.

ENVIRONMENTAL IMPLICATIONS

23. We have undertaken a Preliminary Environmental Review (PER) to review the potential environmental impacts associated with the construction and operation of the proposed EPIW, which confirmed that none of the EPIW are designated projects under the Environmental Impact Assessment Ordinance. The PER concluded that the EPIW will not cause long term environmental impact and that short term environmental impact at construction stage can be mitigated by standard pollution control measures. We have included in the project estimates the cost to implement suitable mitigation measures during construction.

24. During the planning and design stages, we have considered ways of reducing the generation of construction and demolition (C&D) materials as much as possible. We shall require the contractors to submit Waste Management Plans (WMPs) for approval before commencement of construction. These will set out appropriate mitigation measures including the allocation of an area for waste segregation. We shall ensure that the day-to-day operations on site comply with the approved WMPs. We shall also control the disposal of C&D materials in accordance with the approved WMPs. We estimate that about 23,600 cubic metres of C&D materials will be generated from the EPIW project. Of these about 6,000 cubic metres (25.4%) will be reused on site, 11,400 cubic metres (48.3%) will be reused in other part of the MOS Rail project, 6,000 cubic metres (25.4%) of inert C&D materials will be deposited in public filling areas and 200 cubic metres (0.9%) of C&D wastes will be disposed of at landfills. We shall record the disposal, reuse and recycling of C&D materials for monitoring and auditing purposes.

LAND ACQUISITION

25. The project does not require any resumption of private land.

BACKGROUND INFORMATION

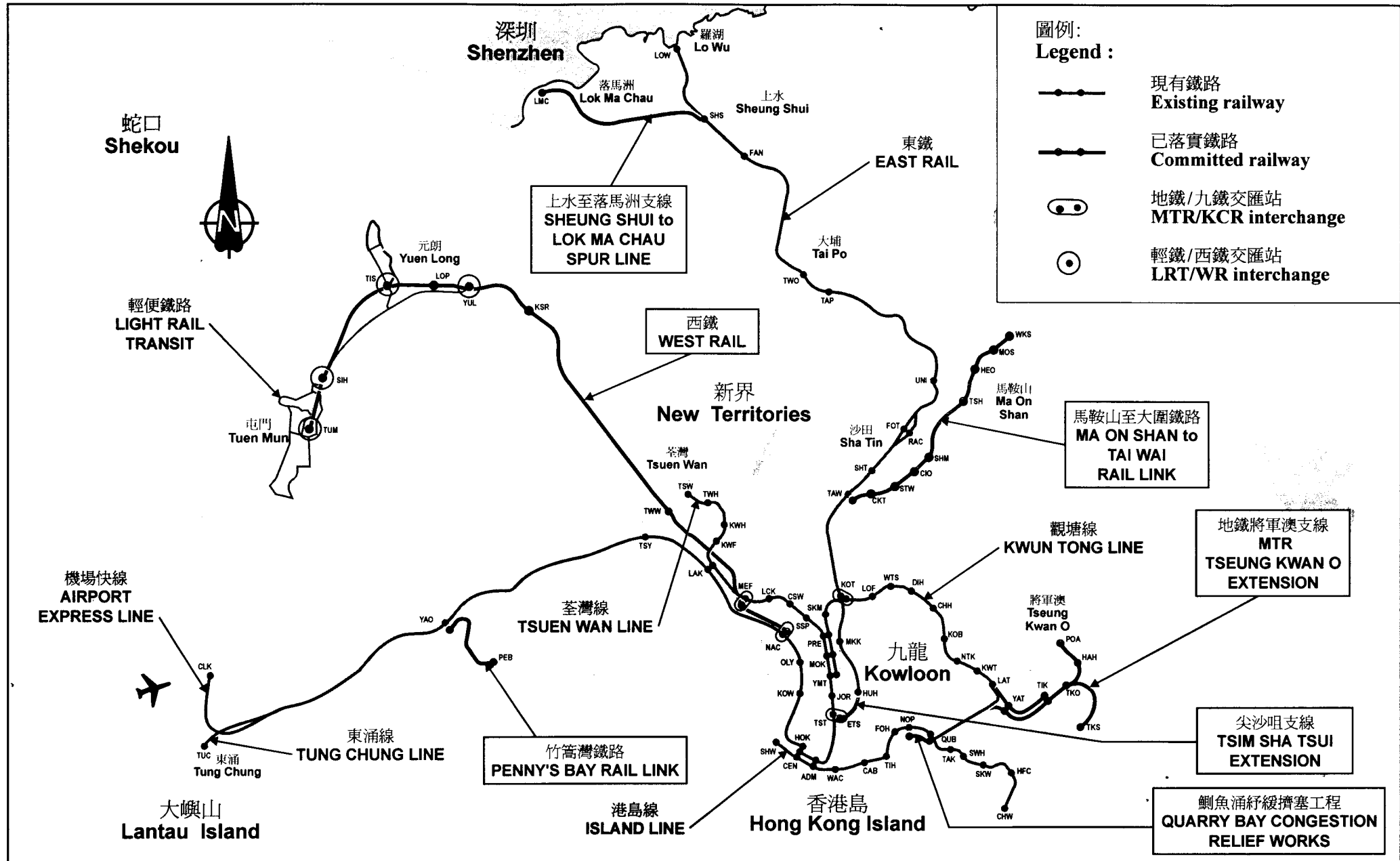
26. The MOS Rail is one of the priority railway projects recommended under the 1994 Railway Development Strategy. This rail link is essential to improving access to Ma On Shan and to facilitating further development of the area.

27. On 26 May 2000, Finance Committee (FC) approved an equity injection of \$8.5 billion from the Capital Investment Fund to KCRC for construction of the MOS Rail and the TST Extension. We also informed FC that the Government would need to carry out EPIW in the order of \$1.8 billion in 1999 prices, including public interchange interchanges, pedestrian subways and footbridge, which are necessary for the operation of both the MOS Rail and the TST Extension.

28. We included **47TR** in Category B of the Public Works Programme in January 2000.

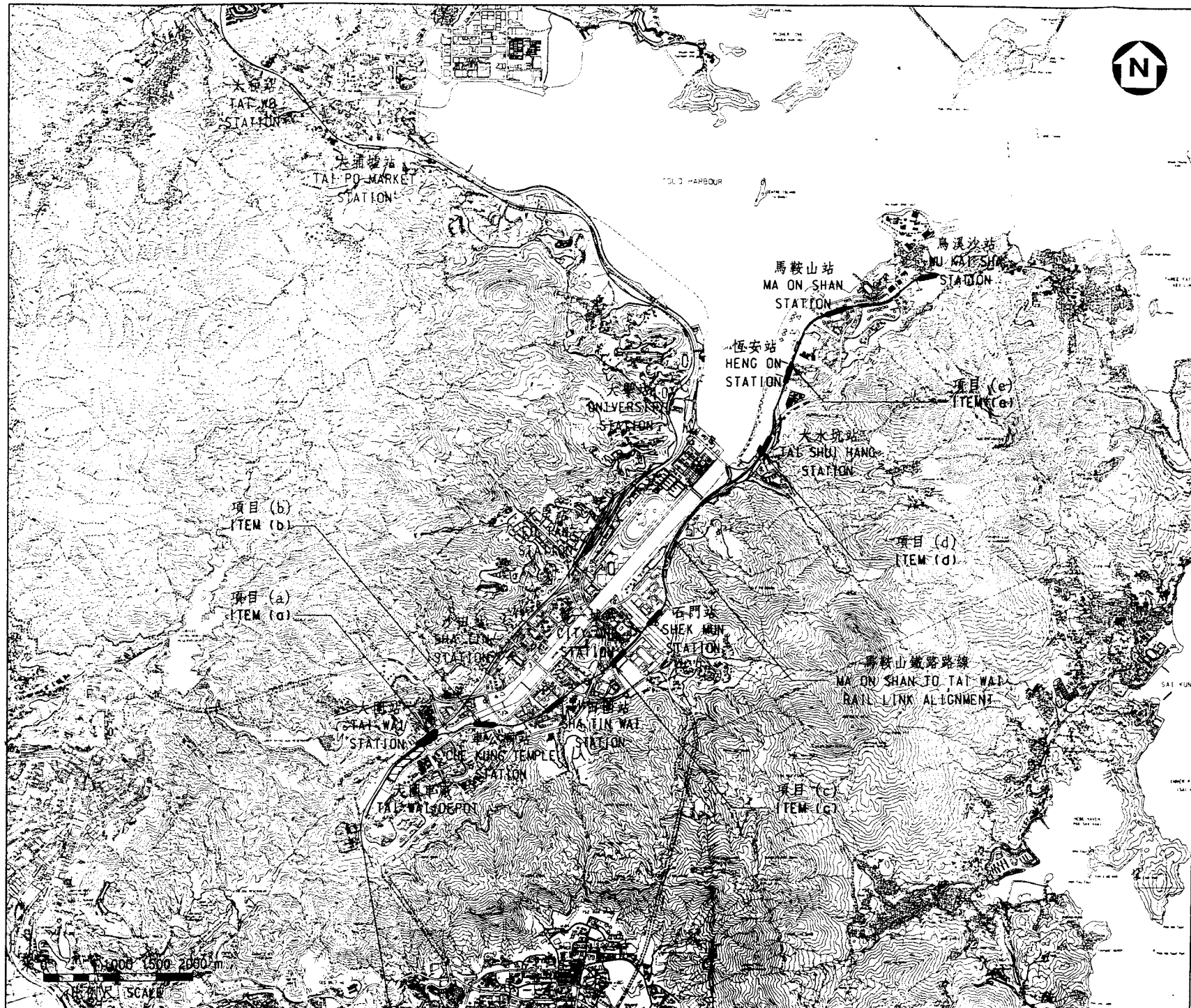
29. We estimate that the project will create some 145 jobs totalling 2 410 man-months, comprising 35 professional/technical staff and 110 labourers during construction period.

Transport Bureau
January 2001



現有及已落實鐵路網絡

EXISTING AND COMMITTED RAIL NETWORK



註解 NOTES:

- 圖例
LEGEND
- 擬建主要基礎工程
PROPOSED ESSENTIAL PUBLIC INFRASTRUCTURE WORKS

A	11/12/00	STATION NAME REVISED	SIGNED BY W.M. TONG
編號 no.	日期 date	內容 description	簽署 initial

修訂 REVISION		姓名 name	日期 date
測量 surveyed			
設計 designed	SIGNED BY W.M. TONG		4/9/00
繪圖 drawn	SIGNED BY H.K. TSANG		5/9/00
描摹 traced			
核對 checked	SIGNED BY W.M. TONG		5/10/00
核准 approved	SIGNED BY N.T. CHIANG		5/10/00

ORIGINAL SIGNED yip sek ki 9/10/00
 總工程師/鐵路(1) 日期
 CHIEF ENGINEER(R11) DATE

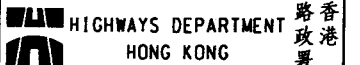
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 工程編號 project no.

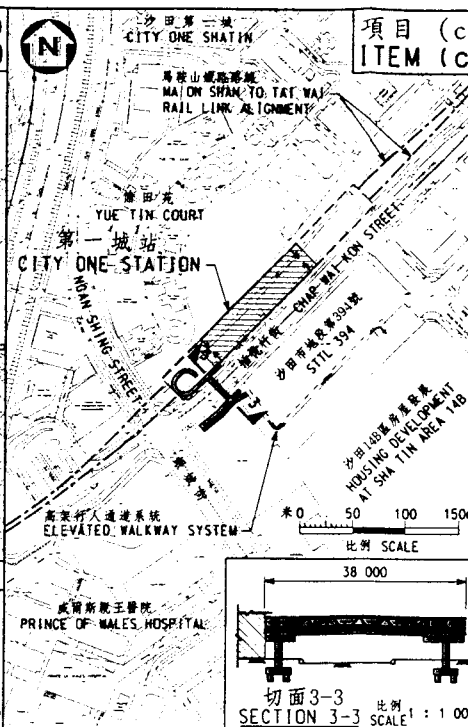
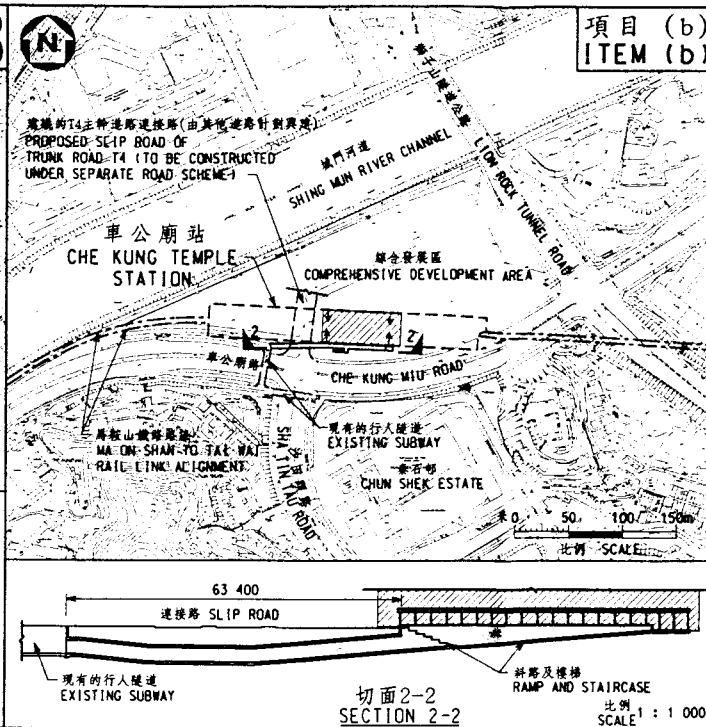
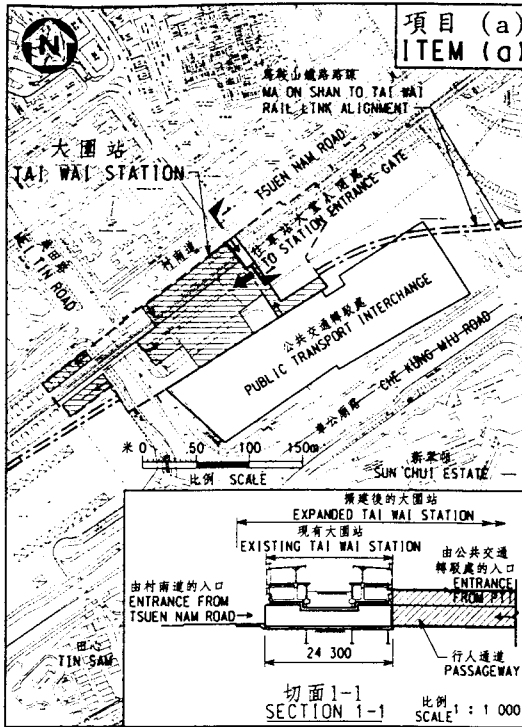
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 東鐵支線 -
 馬鞍山鐵路
 主要基礎工程
 PWP ITEM 47TR
 EAST RAIL EXTENSION -
 ESSENTIAL PUBLIC
 INFRASTRUCTURE WORKS FOR
 MA ON SHAN TO TAI WAI
 RAIL LINK

圖號 drawing no.	比例 scale
RW047MQS-SP0001A	1 : 50 000 @ A3

參考編號 CAD Ref. RW047MQS-SP0001A.DGN
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 RAILWAY DEVELOPMENT OFFICE





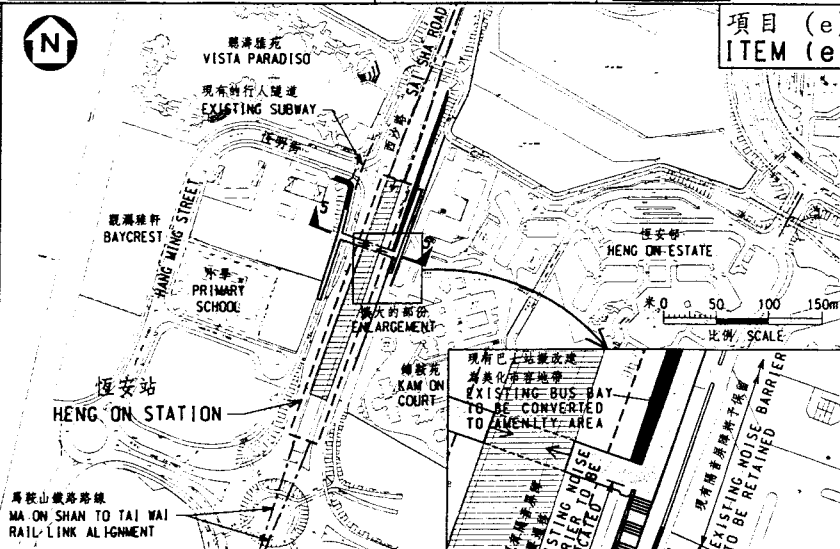
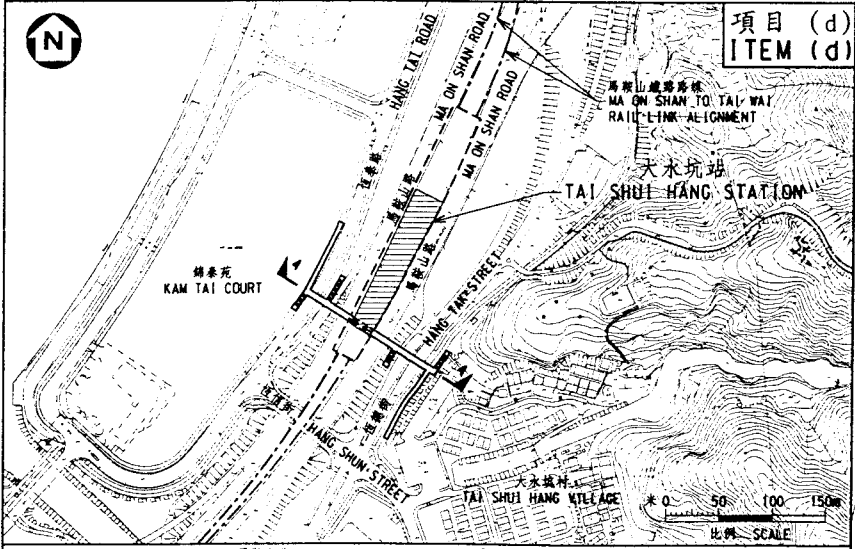
註解 NOTES:

- 所有量度單位皆為毫米。
ALL DIMENSIONS ARE IN MILLIMETRES.

圖例 LEGEND

- 擬建的行人隧道
PROPOSED PEDESTRIAN SUBWAY
- 擬建的行人天橋
PROPOSED FOOTBRIDGE
- 擬建的行人徑
PROPOSED COVER TO EXISTING FOOTPATH
- 現有巴士站擬改為美化市容地帶
EXISTING BUS BAY TO BE CONVERTED TO AMENITY AREA
- 建議遷移後的巴士站
PROPOSED RELOCATED BUS BAY
- 車站大堂
STATION CONCOURSE
- 車站入口
STATION ENTRANCE

A	11/12/00	STATION NAME REVISED	SIGNED BY W.M.TONG
編號 no.	日期 date	內容 description	簽署 signature
修訂 REVISION			
		姓名 name	日期 date
測量 surveyed			
設計 designed	SIGNED BY W.M.TONG		1/9/00
繪圖 drawn	SIGNED BY K.S.YAU		1/9/00
描摹 traced			
核對 checked	SIGNED BY W.M.TONG		5/10/00
核准 approved	SIGNED BY M.T.CHIANG		5/10/00



ORIGINAL SIGNED YIP SEK KI 9/10/00
總工程師/鐵路(1) 日期
CHIEF ENGINEER/RL(1) DATE

合約編號 contract no.
檔案編號 file no.
工程編號 project no.

圖則名稱 drawing title
工務計劃項目 47TR
東鐵支線 -
馬鞍山鐵路
主要基建工程
PWP ITEM 47TR
EAST RAIL EXTENSION -
ESSENTIAL PUBLIC
INFRASTRUCTURE WORKS FOR
MA ON SHAN TO TAI WAI
RAIL LINK

圖號 drawing no.	比例 scale
RW047MOS-SPO002A	1:5000 OR AS SHOWN @ A3

參考編號 CAD Ref. RW047MOS-SPO002A.DGN
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