

**For discussion
on 14 November 2001**

PWSC(2001-02)72

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 706 – HIGHWAYS

Transport – Footbridges and pedestrian tunnels

**129TB – Footbridge and road widening at the junction of Hung Mui Kuk
Road and Tin Sam Street, Sha Tin**

Members are invited to recommend to Finance Committee the upgrading of **129TB** to Category A at an estimated cost of \$33.0 million in money-of-the-day prices for the construction of a footbridge and widening of road at the junction of Hung Mui Kuk Road and Tin Sam Street, Sha Tin

PROBLEM

The road junction of Hung Mui Kuk Road and Tin Sam Street is overloaded, rendering the junction vulnerable to traffic accidents and posing hazards to pedestrians.

PROPOSAL

2. The Director of Highways, with the support of the Secretary for Transport, proposes to upgrade **129TB** to Category A at an estimated cost of \$33.0 million in money-of-the-day (MOD) prices for the construction of a footbridge and widening of road at the junction of Hung Mui Kuk Road and Tin Sam Street.

/PROJECT

PROJECT SCOPE AND NATURE

3. The scope of the project comprises –
 - (a) construction of an L-shaped footbridge with one section across Hung Mui Kuk Road and another section across Tin Sam Street. The footbridge is 4.5 metres wide, covered and equipped with three lifts;
 - (b) addition of one lane at the Sha Tin bound approach of Hung Mui Kuk Road for the exclusive left turn of traffic into Tin Sam Street; and
 - (c) associated drainage, earth, retaining wall and landscaping works.

A site plan is at the Enclosure.

JUSTIFICATION

4. Hung Mui Kuk Road is a dual three-lane carriageway serving the southern part of Sha Tin, namely, the Tin Sam area dotted with densely populated public housing estates. Tin Sam Street branches off from Hung Mui Kuk Road and stretches into the south-west region of Hung Mui Kuk that encompasses the Tin Sam and Hin Keng areas. Given the local residents' heavy reliance on public transport and the proximity of the Tin Sam area to the Lion Rock Tunnel, 10 bus routes¹ plying various locations pass through Hung Mui Kuk Road. There are many bus stops on both sides of the Road, attracting heavy pedestrian flows during peak periods.

Pedestrian Traffic

5. The T-junction where Tin Sam Street intersects with Hung Mui Kuk Road is a signalised control junction with at-grade crossing facilities. According to our recent survey at the morning peak, an hourly flow of 2 700 pedestrians patronised the junction, namely, some 1 700 crossed Hung Mui Kuk Road and 1 000 crossed Tin Sam Street. Cyclists and jaywalkers are common scenes at the

¹ The bus routes have large catchment areas including Lung Hang Estate, Sun Chui Estate, Chun Shek Estate, Hin Keng Estate, Mei Lam Estate, Pok Hong Estate, Sha Kok Estate, Sun Tin Wai Estate and Jat Min Chuen.

/crossing

crossing points. The situation is particularly critical when some vehicles are stuck at the crossing points awaiting vehicles in front to clear away. Nine pedestrian accidents with injuries occurred at this junction in the past two years ending 30 June 2001.

Vehicular Traffic

6. The road junction of Hung Mui Kuk Road and Tin Sam Street has been operating beyond capacity during the morning peak hours. Traffic tails back from the junction on both Hung Mui Kuk approach and Tin Sam Street approach. In the worst case, traffic at Hung Mui Kuk Road (Kowloon bound) tails back about 160 metres, nearly as far as the roundabout of Hung Mui Kuk Road/Che Kung Mui Road. The traffic queue in Tin Sam Street approach is about 60 metres long. According to the latest traffic forecast, the reserve capacities² (RC) of the junction with and without the proposed junction improvement at peak periods are as follows –

	Reserve Capacity		
	2001	2006	2011
Without junction improvement	-2%	-5%	+13% ³
With junction improvement	—	+23%	+43%

7. As reflected from the above, the projected RC in 2001 is already -2%. The situation will continue to aggravate and reach a projected RC of -5% by 2006. To enhance the RC of the junction, we propose to widen the Sha Tin bound carriageway of Hung Mui Kuk Road with the provision of one additional left turn

/lane

² The performance of a traffic signal junction is indicated by its RC. A positive RC indicates that the junction is operating with spare capacity. A negative RC indicates that the junction is overloaded, thus resulting in traffic queues and longer delay time.

³ The predicted RC of +13% in 2011 is based on the assumption that all major transport projects in Sha Tin will have been completed by that time. Road projects include Route 9 section between Cheung Sha Wan Road and Sha Tin; Tai Po Road widening - Tai Wai and Sha Tin Sections; Lion Rock Tunnel Road widening and flyover at Che Kung Miu Road/Hung Mui Kuk Road. Railway projects include Ma On Shan Rail between Ma On Shan and Tai Wai Station.

lane⁴ and replace the existing at-grade pedestrian crossings with a covered footbridge. The additional turning lane will relieve traffic from Lion Rock Tunnel Road to Tin Sam and nearby areas. With local widening and removal of at-grade pedestrian crossings, the junction will be able to support smooth and efficient traffic flow in the long term. The proposed footbridge will separate pedestrians and cyclists crossing Hung Mui Kuk Road and Tin Sam Street from the at-grade vehicular traffic. Upon completion of the footbridge, we will remove all the existing at-grade crossings. To enable the disabled to use the footbridge, we will provide lifts for the footbridge taking into account the limited space in this congested area.

FINANCIAL IMPLICATIONS

8. We estimate the cost of the project to be \$33.0 million in MOD prices (see paragraph 9 below), made up as follows –

	\$ million	
(a) Footbridge	20.3	
(b) Lifts and lift shafts	6.3	
(c) Roadwork, drainage, retaining wall and earthworks	3.1	
(d) Landscape works	0.2	
(e) Contingencies	3.0	
	Sub-total	32.9 (in September 2001 prices)
(f) Provision for price adjustment	0.1	
	Total:	33.0 (in MOD prices)

⁴ We will convert the original exclusive left turn lane into a left turn and straight ahead traffic lane. Thus the Sha Tin bound traffic time can be reduced to allow more time for the Kowloon bound traffic.

9. Subject to approval, we will phase the expenditure as follows –

Year	\$ million (Sep 2001)	Price Adjustment Factor	\$ million (MOD)
2002 – 03	10.4	0.99700	10.4
2003 – 04	19.5	1.00398	19.6
2004 – 05	2.0	1.01101	2.0
2005 – 06	1.0	1.01808	1.0
	32.9		33.0

10. We have derived the MOD estimate on the basis of Government's latest forecast of trend labour and construction prices for the period 2002 to 2006. We will tender the works under a lump sum with bills of quantities contract. The contract will include provisions for price fluctuation as the contract period exceeds 21 months.

11. We estimate the annual recurrent expenditure arising from the proposed works to be \$500,000.

PUBLIC CONSULTATION

12. We consulted the Traffic and Transport Committee of the then Sha Tin Provisional District Board on 19 January 1999 and they supported the proposed works.

13. We gazetted the proposed road scheme under the Roads (Works, Use and Compensation) Ordinance on 2 July 1999 and received no objections. Secretary for Transport authorised the execution of the proposed works on 19 November 1999.

/ENVIRONMENTAL

ENVIRONMENTAL IMPLICATIONS

14. We conducted a Preliminary Environmental Review for the project in May 1997. The findings of the Review conclude that no Environmental Impact Assessment is required and that no long term adverse environmental impact is envisaged when the footbridge and the improved junction are in operation. The project is not a designated project under Schedule 2 of the Environmental Impact Assessment Ordinance and no environmental permit is required for the construction and operation of the project.

15. For short term construction impact, we will control noise, dust and site runoff nuisance to comply with established guidelines and standards through the implementation of environmental pollution control measures. These measures include the use of silencers, mufflers, acoustic linings and shields for noisy construction activities, installation of dust suppression equipment and wheel washing facilities, and frequent watering and cleaning of the site.

16. We have considered in the planning and design stages measures to reduce the generation of construction and demolition material (C&DM) as far as possible. We estimate that about 2 300 cubic metres (m³) of C&DM will be generated by the project, all of which will be reused as fill in public filling areas⁵. We will control the disposal of C&DM to the designated public filling facility through a trip ticket system. We will record the disposal of C&DM for monitoring purposes. We shall require the contractor under the contract to submit a waste management plan to the Engineer for approval, with 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 waste management plan.

LAND ACQUISITION

17. The project does not require any land resumption or clearance.

⁵ A public filling area is a designated part of a development project that accepts public fill for reclamation purposes. Deposal of public fill in a public filling facility requires a license issued by the Director of Civil Engineering.

/BACKGROUND

BACKGROUND INFORMATION

18. We upgraded **129TB** to Category B in September 2000 and completed the detailed design and drawings for the project in October 2001. We plan to start construction works in early 2002 for completion in January 2004.

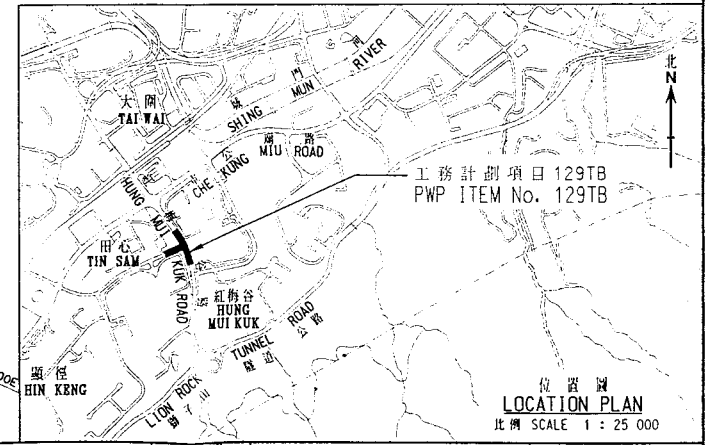
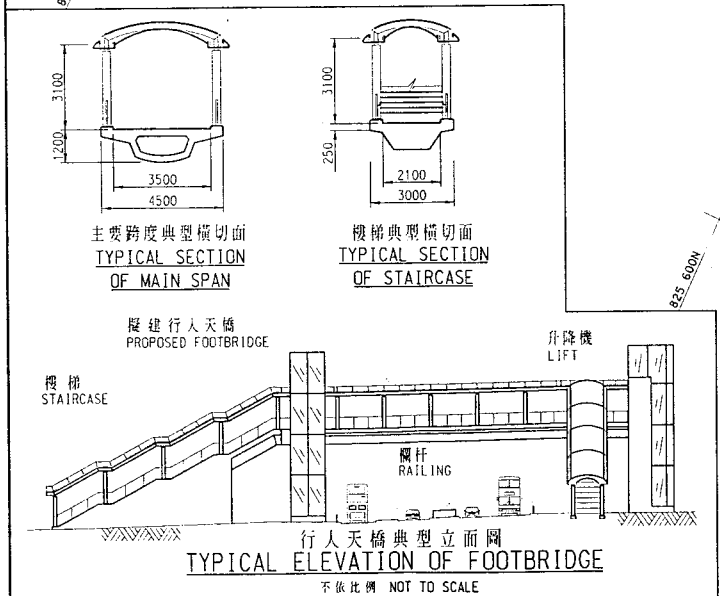
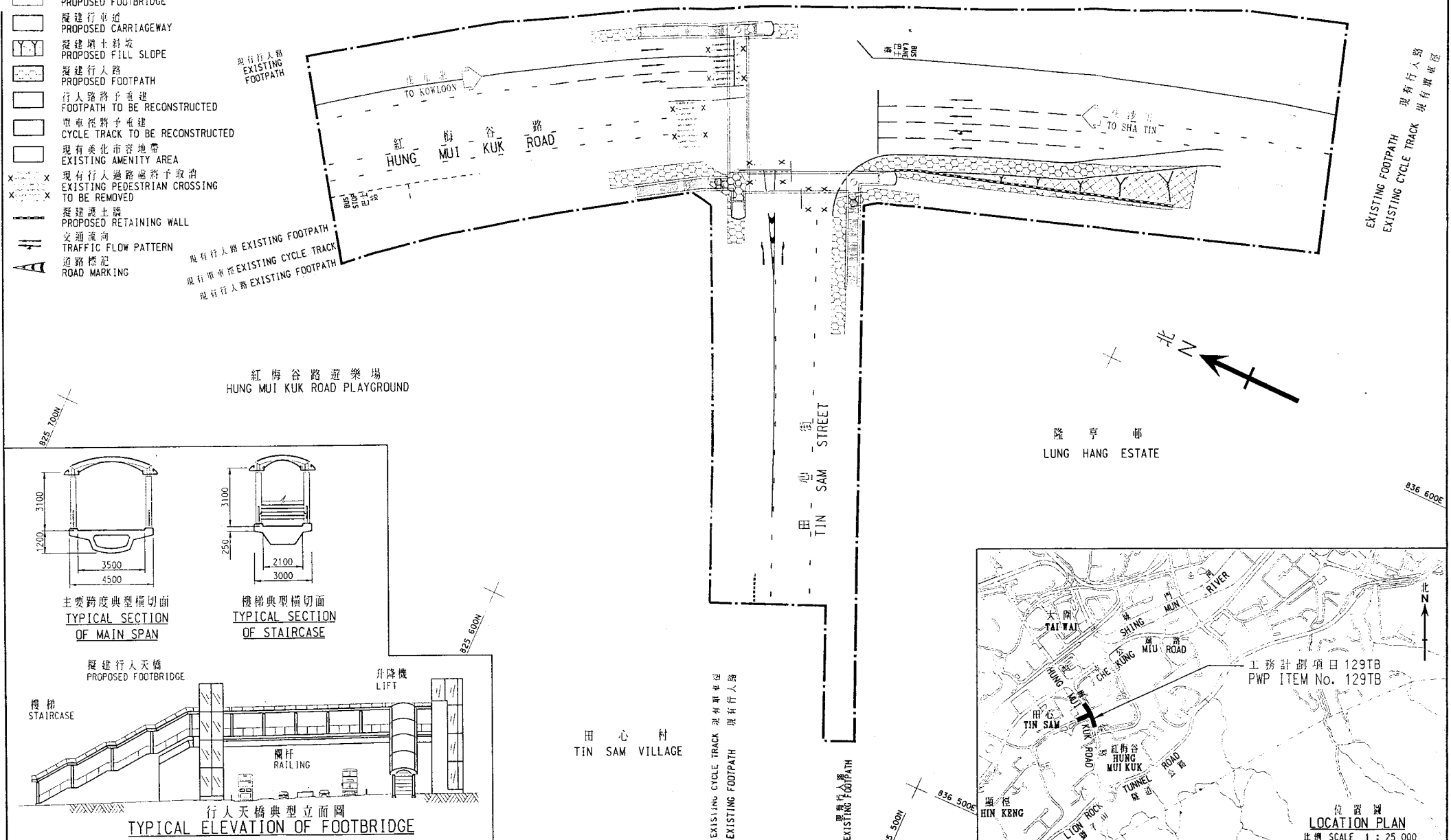
19. We estimate that the project will create some 35 new jobs comprising four professional/technical staff and 31 labourers totalling 770 man-months.

Transport Bureau
November 2001

LEGEND 圖例

- 施工範圍界限
WORKS SITE LIMIT
- 擬建行人天橋
PROPOSED FOOTBRIDGE
- 擬建行車道
PROPOSED CARRIAGEWAY
- 擬建填土斜坡
PROPOSED FILL SLOPE
- 擬建行人路
PROPOSED FOOTPATH
- 行人路將予重建
FOOTPATH TO BE RECONSTRUCTED
- 單車徑將予重建
CYCLE TRACK TO BE RECONSTRUCTED
- 現有美化市容地帶
EXISTING AMENITY AREA
- 現有行人過路處將予取消
EXISTING PEDESTRIAN CROSSING TO BE REMOVED
- 擬建護土牆
PROPOSED RETAINING WALL
- 交通流向
TRAFFIC FLOW PATTERN
- 道路標記
ROAD MARKING

新翠邨
SUN CHUI ESTATE



drawing title 圖則名稱
工務計劃項目 129TB
紅梅谷路/田心街交界處之行人天橋及道路擴闊工程
PWP ITEM No. 129TB
FOOTBRIDGE AND ROAD WIDENING AT JUNCTION OF HUNG MUI KUK ROAD / TIN SAM STREET

D	10.01	GENERAL REVISION	
C	10.01	GENERAL REVISION	SIGNED
B	09.01	GENERAL REVISION	SIGNED
A	07.01	GENERAL REVISION	SIGNED
次序 no.	日期 date	修訂摘要 description	署名 initial
修訂 REVISION			

designed 設計
P. L. KAN SIGNED date 日期 11/00
drawn 繪圖
Q. Y. LEUNG SIGNED date 日期 11/00
approved 核准
date 日期
office
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