

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 706 - HIGHWAYS

Transport - Footbridges/pedestrian tunnels

121TB - Duplication of Pedder Street Footbridge

Members are invited to recommend to the Finance Committee the upgrading of **121TB** to Category A at an estimated cost of \$65.0 million in money-of-the-day prices for the construction of a duplicate footbridge alongside the existing Pedder Street Footbridge spanning Connaught Road Central.

PROBLEM

The capacity of the existing Pedder Street Footbridge is insufficient to meet future pedestrian demand arising from the gradual completion of developments on the Central Reclamation.

PROPOSAL

2. The Director of Highways, with support of the Secretary for Transport, proposes to upgrade item **121TB** to Category A at an estimated cost of \$65.0 million in money-of-the-day (MOD) prices for the construction of a duplicate footbridge alongside the existing Pedder Street Footbridge.

/ **PROJECT**

PROJECT SCOPE AND NATURE

3. The scope of the project comprises -
- (a) construction of a six-metre wide covered footbridge alongside the existing Pedder Street Footbridge;
 - (b) demolition of two escalators at the southern end of the existing Pedder Street footbridge fronting World Wide House;
 - (c) reprovisioning of the two escalators at (b) above and the construction of a staircase between them;
 - (d) installation of a lift fronting World Wide House;
 - (e) realignment of the slip road for the eastbound traffic u-turning to the westbound lanes of Connaught Road Central;
 - (f) minor widening of the section of Pedder Street underneath the proposed footbridge and associated local adjustments to the western kerb line of Connaught Place; and
 - (g) associated road works, drainage works and landscaping works.

A site plan is at Enclosure 1 for Members' reference.

JUSTIFICATION

4. The existing Pedder Street Footbridge is a major pedestrian link spanning Connaught Road Central linking the Central elevated walkway system along the northern side of Connaught Road Central to Pedder Street. It has a maximum two way flow capacity of 18 000 pedestrians per hour (pph). It is currently operating at about 15 000 pph with congestion observed during peak periods.

5. The gradual completion of developments¹ on the Central Reclamation Phase I will generate additional pedestrian demand which will overload the existing footbridge. We expect the estimated peak hourly pedestrian flow to rise to 16 000 pph in 2001 and 23 000 pph in 2011. The proposed six-metre wide footbridge will provide additional capacity to meet the anticipated pedestrian demand. We will install a lift at the southern end of the proposed footbridge to address the needs of the disabled and the elderly.

6. We need to demolish two escalators at the southern end of the existing footbridge to accommodate the new footbridge. We will re-build them beside the duplicate footbridge. As there is a tidal pattern of pedestrian demand for up-stairs and down-stairs movements during the morning and evening peak hours, we will provide a staircase between the escalators.

7. Since the section of Pedder Street underneath the duplicate footbridge will not be wide enough to accommodate the five designated traffic lanes, we will widen it slightly under the project. Associated local adjustments to the western kerb line of Connaught Place will also be necessary to facilitate traffic movements there.

FINANCIAL IMPLICATIONS

8. We estimate the capital costs of the project to be \$65.0 million in MOD prices (see paragraph 9 below) , made up as follows -

| | \$ million |
|--|-------------------|
| (a) Footbridge structure and staircase | 40.8 |
| (b) Escalators and lift | 5.8 |
| (c) Demolition works | 1.1 |
| (d) Road and drainage works | 1.8 |
| | / (e) |

¹ The developments on Central Reclamation Phase I include the Airport Railway Hong Kong Station (ARHKS), hotel developments and commercial offices. The first phase of ARHKS was completed in March 2000. The public transport interchange under the second phase of ARHKS will be completed by late 2002.

| | | \$ million | |
|-----|--------------------------------|-------------------|---------------------------|
| (e) | Consultants' fees for – | 6.8 | |
| | (i) construction stage | 1.0 | |
| | (ii) resident site staff cost | 5.8 | |
| (f) | Contingencies | 4.9 | |
| | Sub-total | 61.2 | (at December 1999 prices) |
| (g) | Provision for price adjustment | 3.8 | |
| | Total | 65.0 | (in MOD prices) |

A breakdown by man-months of the estimate for consultants' fees is at Enclosure 2.

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

| Year | \$ million (Dec 1999) | Price Adjustment Factor | \$ million (MOD) |
|-------------|----------------------------------|--|-----------------------------|
| 2000 - 2001 | 10.8 | 1.00000 | 10.8 |
| 2001 - 2002 | 27.6 | 1.04500 | 28.8 |
| 2002 - 2003 | 20.6 | 1.10770 | 22.8 |
| 2003 - 2004 | 2.2 | 1.17416 | 2.6 |
| | 61.2 | | 65.0 |

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10. We have derived the MOD estimate on the basis of the Government's forecasts of trend labour and construction over the period 2000 and 2004. We will tender the works under a lump sum contract with firm bills of quantities. The contract will provide for price adjustments as the contract period will exceed 21 months.

11. We estimate the additional annually recurrent expenditure to be \$251,000.

PUBLIC CONSULTATION

12. On 7 September 1995, we consulted the Traffic and Transport Committee of the then Central and Western District Board on the proposed works. Members of the Committee supported the project. We reported the latest project development to the Traffic and Transport Committee of the then Central and Western Provisional District Board in June 1999.

13. We gazetted the proposed works under the Roads (Works, Use & Compensation) Ordinance on 7 June 1996 and received no objections. The Secretary for Transport authorized the proposed works on 1 July 1996. We subsequently gazetted minor amendments² to the gazetted plan and scheme on 2 July 1999 and received no objections. The Secretary for Transport authorized the amendments to the proposed works on 27 September 1999.

ENVIRONMENTAL IMPLICATIONS

14. We completed a Preliminary Environmental Review (PER) for the project in February 1995. The study concluded that the project would not give rise to impacts that exceed established criteria. The Director of Environmental Protection vetted the PER and agreed that an Environmental Impact Assessment would not be necessary. For short term impacts, we will control noise, dust and site run-off nuisance during construction through the implementation of appropriate mitigation measures in the works contract.

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² The minor amendments involve revision of the canopy layout and the limit of the works area, inclusion of an area for the creation of a permanent easement and the requirement for temporary road closure under the gazetted plan and scheme.

15. We have considered in the planning and design stages ways of reducing the generation of construction and demolition material (C&DM). We have minimized the extent of demolition work required at the existing elevated walkway system for accommodating the proposed works to reduce C&DM generation. We estimate that about 10 cubic metres of construction and demolition (C&D) waste will be disposed of at landfills and 600 cubic metres of public fill will be delivered to other construction sites as imported filling material. Under the terms of the contract, we shall require the contractor to submit a waste management plan to the Engineer for approval. We shall require the Engineer to ensure that the day-to-day operations on site comply with the approved waste management plan. We shall require the contractor to separate public fill from C&D waste for disposal at appropriate locations and to sort the C&DM by category on site to facilitate reuse/recycling. This will reduce the generation of waste. We shall also require the contractor to reuse the excavated material on site or in other sites to avoid the disposal of public fill to public filling facilities and to use steel instead of timber in formwork and temporary works as far as possible to further minimize the generation of C&DM. We shall record the disposal, reuse and recycling of C&DM for monitoring purposes.

LAND ACQUISITION

16. The proposed works do not require any land acquisition.

BACKGROUND INFORMATION

17. We included **121TB** in Category B in September 1995.

18. Since the location of the proposed footbridge is close to the Mass Transit Railway Corporation's (MTRC's) Central Subway project, we originally intended to entrust the design and construction of the proposed works to MTRC to minimize interface problems. In September 1995, we entrusted the detailed investigation and design of the proposed works to MTRC and charged the cost of \$3.13 million to Subhead **6008TX** - "Consultants' design fees and charges and major in-house investigations for highways projects". MTRC substantially completed the detailed design and working drawings for the proposed works in December 1996. However, the Government could not reach agreement with MTRC on the estimated construction cost of the project. As a result, we terminated the negotiation with MTRC and rescheduled the construction of the project to commence after the completion of the Central Subway project.

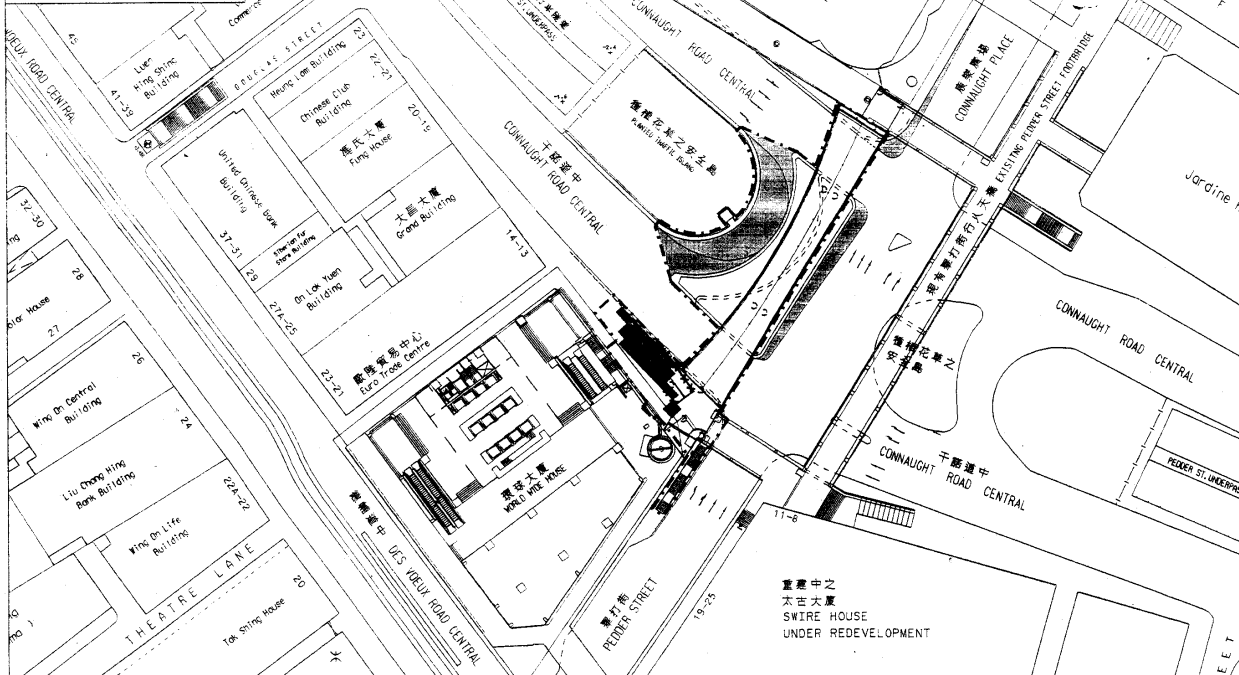
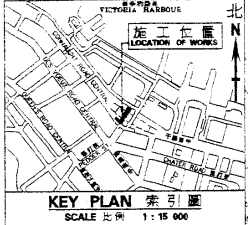
19. In October 1999, we engaged consultants to undertake a review of the design completed in December 1996 to cope with current site conditions and the latest requirements from relevant maintenance authorities. We charged the associated cost of \$1.18 million to Subhead **6100TX** "Highway works, studies and investigations for items in Category D of the Public Works Programme".

20. We have completed the design review and are ready to invite tenders. We plan to start the construction works in September 2000 for completion in December 2002.

21. We estimate that the project will create some 55 jobs, comprising 10 professional/technical staff and 45 labourers during the construction period.

Transport Bureau
May 2000

(PWSC0257/WIN10)

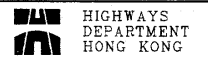
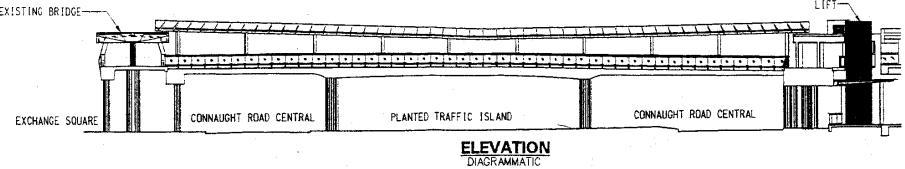
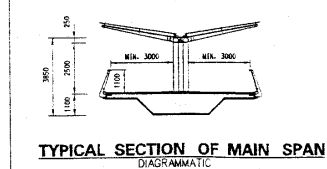


NOTES
All levels are in metre above P.D.H.K.

LEGEND : 圖例

- 施工地區界限
LIMIT OF WORKS AREA
- 擬擴闊之行車道
PROPOSED WIDENING OF CARRIAGEWAY
- 擬置之自動梯及樓梯
PROPOSED ESCALATORS AND STAIRCASE
- 擬置之行人天橋
PROPOSED FOOTBRIDGE
- 擬置之傷殘人士升降機
PROPOSED DISABLED LIFT
- 擬重新定線之連繫路
PROPOSED RE-ALIGNED SLIP ROAD
- 擬拆卸之原有自動梯
EXISTING ESCALATORS TO BE DEMOLISHED

| no. | date | description | initials |
|--|------|--|-----------------|
| REVISION | | | |
| drawn | | Szeung S.E. LEE (RA) | 03/2000 |
| checked | | ROGER WONG (ENGINEER) | 03/2000 |
| approved | | S.E. CHEUNG Senior Engineer / Capital Works | 03/2000 Date |
| contract no. | | | |
| file no. HHCW 121TB | | | |
| project no. B 121TB | | | |
| contract | | | |
| drawing title DUPLICATION OF PEDDER STREET FOOTBRIDGE 畢打街行人天橋複線工程 | | | |
| drawing no. HH 8722 | | scale 1:750 OR AS SHOWN | |
| office HIGHWAYS / HONG KONG REGION | | | |



121TB – Duplication of Pedder Street Footbridge

Breakdown of estimates for consultants' fees (at December 1999 prices)

| Consultants' staff costs | | | Estimated man months | Average MPS* salary point | Multiplier factor | Estimated Fee (\$ million) |
|--------------------------------------|--|--------------|----------------------------|------------------------------------|----------------------|----------------------------------|
| (a) | Administration of contract | Professional | 6 | 38 | 2.4 | 0.8 |
| | | Technical | 3 | 16 | 2.4 | 0.2 |
| (b) | Site supervision by resident site staff employed by the consultants | Professional | 18 | 38 | 1.7 | 1.8 |
| | | Technical | 112 | 16 | 1.7 | 4.0 |
| Total consultants' staff cost | | | | | | 6.8 |

*MPS = Master Pay Scale

Notes

1. A multiplier factor of 2.4 is applied to the average MPS point to arrive at the full staff cost including the consultants' overheads and profit, as the staff will be employed in the consultants' offices. (At 1.4.1999 MPS pt. 38 = \$57,525 p.m. and MPS pt. 16 = \$21,010 p.m.). A multiplier factor of 1.7 is applied in the case of resident site staff supplied by the consultants.
2. The consultants' fees for work in the construction stage cover a provisional part of the lump sum fee for contract administration and the fee for resident site staff management in terms of monthly fees for respective rank of resident site staff. These fees are quoted by the selected consultants under Agreement No.CE62/97 - "Review, Tender and Construction of Duplicate Pedder Street Footbridge and Disabled Lift" which are available for acceptance by Government subject to approval of upgrading of **121TB** to Category A.