

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 707 – NEW TOWNS AND URBAN AREA DEVELOPMENT New Territories North and West Development Transport - Roads 749TH – Road L18A in Area 18, Tuen Mun

Members are invited to recommend to Finance Committee the upgrading of **749TH** to Category A at an estimated cost of \$66.6 million in money-of-the-day prices for the construction of Road L18A in Area 18, Tuen Mun.

PROBLEM

There is no proper access to serve the two existing developments and a planned residential development located in the northern part of Tuen Mun Area 18.

PROPOSAL

2. The Director of Civil Engineering and Development, with the support of the Secretary for the Environment, Transport and Works, proposes to upgrade **749TH** to Category A at an estimated cost of \$66.6 million in money-of-the-day (MOD) prices for the construction of Road L18A in Area 18, Tuen Mun.

PROJECT SCOPE AND NATURE

3. The scope of **749TH** comprises –

/(a)

- (a) construction of an approximately 400 metres (m) long and 10.3 m wide single two-lane carriageway (one traffic lane in each direction) with a 3.5 m wide footpath on each side including an about 160 m long elevated structure over Wong Chu Road (the proposed Road L18A);
- (b) reconstruction of sections of existing footpaths and carriageway along Tin Hau Road and Yip Wong Road and the associated traffic signals;
- (c) ancillary works including the construction of retaining walls, slopeworks, drainage and waterworks, amenity and landscaping works, and the demolition of an existing temporary access road; and
- (d) implementation of environmental mitigation measures during the construction period.

— A site plan showing the proposed works is at Enclosure 1.

4. We plan to commence the construction works in May 2007 for completion in May 2009.

JUSTIFICATION

5. There are two existing developments, namely Hoh Fuk Tong Primary School (the School) and CLP Power Hong Kong Limited's San Shek Wan Substation (the Substation), and one planned residential development in the northern part of Tuen Mun Area 18. While the School is served by a temporary access road from Lung Mun Oasis, the Substation is connected by a temporary access road linking up Wong Chu Road, which will be closed upon the opening of Road L18A.

6. This project seeks to provide a permanent road access for the northern part of Tuen Mun Area 18. The new road will serve the existing developments and act as an essential access for the future residential development in this area. It is estimated that upon the completion of the planned residential development in 2010 or 2011, about 1 000 households with a population of about 3 000 will be using this new permanent road.

7. A single two lane road will be adequate for the existing and planned developments in the northern part of Tuen Mun Area 18 as revealed from the findings of a traffic review. It is also envisaged that the nearby roads, such as Yip Wong Road and Tin Hau Road will continue to operate well within their capacity during peak hours upon the opening of the new access road.

FINANCIAL IMPLICATIONS

8. We estimate the cost of the project to be \$66.6 million in MOD prices as follows -

	\$ million	
(a) Roadworks	6.7	
(b) Elevated road structure and foundation	29.6	
(c) Associated footpaths, retaining walls and slope works	9.6	
(d) Associated drainage and waterworks	3.5	
(e) Associated amenity and landscaping works	2.6	
(f) Environmental mitigation measures	1.3	
(g) Consultants' fees	5.7	
(i) construction stage	0.5	
(ii) resident site staff costs	5.2	
(h) Contingencies	<u>5.9</u>	
Sub-total	64.9	(in September 2006 prices)
(i) Provision for price adjustment	<u>1.7</u>	
Total	<u>66.6</u>	(in MOD prices)

A breakdown by man-months of the estimate for consultants' fees under item (g) is at Enclosure 2.

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

Year	\$ million (Sept 2006)	Price adjustment factor	\$ million (MOD)
2007 – 2008	21.5	1.01250	21.8
2008 – 2009	30.4	1.02796	31.2
2009 – 2010	13.0	1.04310	13.6
	64.9		66.6

10. We have derived the MOD estimates on the basis of the Government's latest forecast of the trend rate of change in the prices of public sector building and construction output for the period from 2007 to 2010. We will invite tenders for the proposed works under a lump-sum contract because we can clearly define the scope of the majority of the works in advance. The contract will provide for price adjustments as the contract period will exceed 21 months.

11. We estimate the annual recurrent expenditure upon the completion of the project to be about \$299,044.

PUBLIC CONSULTATION

12. We consulted the Traffic and Transport Committee of Tuen Mun District Council (the Committee) on 13 September 2002. We consulted the Committee again on 13 January 2006 on the proposed works. Members supported the project subject to the Administration's undertaking to construct a one-way connection road from Road D4 to Road L18A¹.

13. We gazetted the proposed road scheme under Roads (Works, Use and Compensation) Ordinance (the Ordinance) on 4 May 2006 and received no objection. The Permanent Secretary for the Environment, Transport and Works (Transport) authorised the proposed works under delegated authority of the Ordinance on 7 August 2006. The notice of authorisation was gazetted on 18 August 2006.

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¹ Road D4 is an existing road between Lung Mun Oasis and Glorious Garden. We will arrange for the implementation of the one-way connection road from Road D4 to Road L18A to tie in with the completion of Road L18A.

14. We circulated an information paper on the project to the Legislative Council Panel on Transport on 24 November 2006. Members did not raise any objection to the project.

ENVIRONMENTAL IMPLICATIONS

15. The project is not a designated project under the Environmental Impact Assessment Ordinance. We conducted a Preliminary Environmental Review (PER) for the project. The PER indicated that the project would not cause any long-term environmental impacts. The PER also indicated that short-term noise, dust, site run-off and waste impacts during construction would be anticipated. We have included \$1.3 million in the project estimate for implementation of mitigation measures.

16. We have considered suitable measures, such as the use of steel parapets on the flyover and gully former for drainage inlet to reduce the use of formwork materials, in the planning and design stages to reduce the generation of construction and demolition (C&D) materials where possible. We will require the contractor to reuse the excavated material as filling material on site or in other suitable construction sites as far as possible, in order to minimise the disposal of C&D materials to public fill reception facilities. We will encourage the contractor to maximise the use of recycled or recyclable C&D materials, as well as the use of non-timber formwork to further minimise the generation of construction waste.

17. We will also require the contractor to submit a waste management plan (WMP) for approval. The WMP will include appropriate mitigation measures to minimise, reduce, reuse and recycle C&D materials. We will ensure that the day-to-day operations on site comply with the approved WMP. We will control the disposal of public fill and C&D waste to designated public fill facilities and landfills through a trip ticket system. We will require the contractor to separate public fill from C&D waste for disposal at appropriate facilities. We will record the disposal, reuse and recycling of C&D materials for monitoring purposes.

18. We estimate that the project will generate about 28 000 tonnes of C&D materials. Of these, we will reuse about 13 000 tonnes (46.4%) on site, about 12 000 tonnes (42.9%) as fill in public fill reception facilities² and dispose

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² Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of public fill in public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

of about 3 000 tonnes (10.7%) at landfills. The total cost for accommodating C&D materials at public fill reception facilities and landfill sites is estimated to be \$699,000 for this project (based on a unit cost of \$27/tonne for disposal at public fill reception facilities and \$125/tonne³ at landfills).

LAND ACQUISITION

19. The proposed works does not require any land acquisition.

BACKGROUND INFORMATION

20. We upgraded **749TH** to Category B in 2000.

21. We engaged consultants to carry out site investigation and detailed design for the proposed works in May 2002. We have charged the cost of about \$1.0 million to block allocation **Subhead 7100CX** “New towns and urban area works, studies and investigations for items in Category D of the Public Works Programme”. The consultants have completed the detailed design for the project.

22. The proposed construction works will involve the removal of 33 trees including 28 to be felled and five to be transplanted. All trees to be removed are not important trees⁴. We will incorporate planting proposals as part of the project, including the estimated quantities of 100 trees, 9 375 shrubs, 205 climbers, and 1 065 square meters of woodland tree and shrub mix.

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³ This estimate has taken into account the cost for developing, operating and restoring the landfills after they are filled and the aftercare required. It does not include the land opportunity cost for existing landfill sites (which is estimated at \$90/m³), nor the cost to provide new landfills (which is likely to be more expensive) when the existing ones are filled.

⁴ “Important trees” refers to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –

- (a) trees over 100 years old;
- (b) trees of cultural, historical or memorable significance e.g. Fung Shui tree, tree as landmark of monastery or heritage monument, and trees in memory of an important person or event;
- (c) precious or rare species;
- (d) outstanding form (taking account of overall tree sizes, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or
- (e) trees with trunks diameter exceeding 1.0 m(measured at 1.3 m above ground level) or with height/canopy spread equal or exceeding 25 m.

23. We estimate that the proposed works will create about 52 jobs (42 for labourers and another 10 for professional/technical staff) providing a total employment of 1 100 man-months.

Environment, Transport and Works Bureau
December 2006

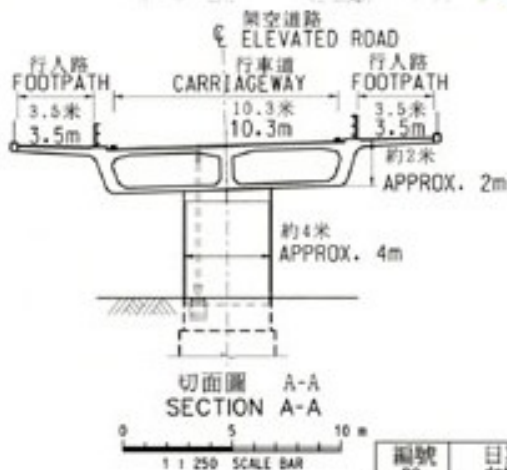
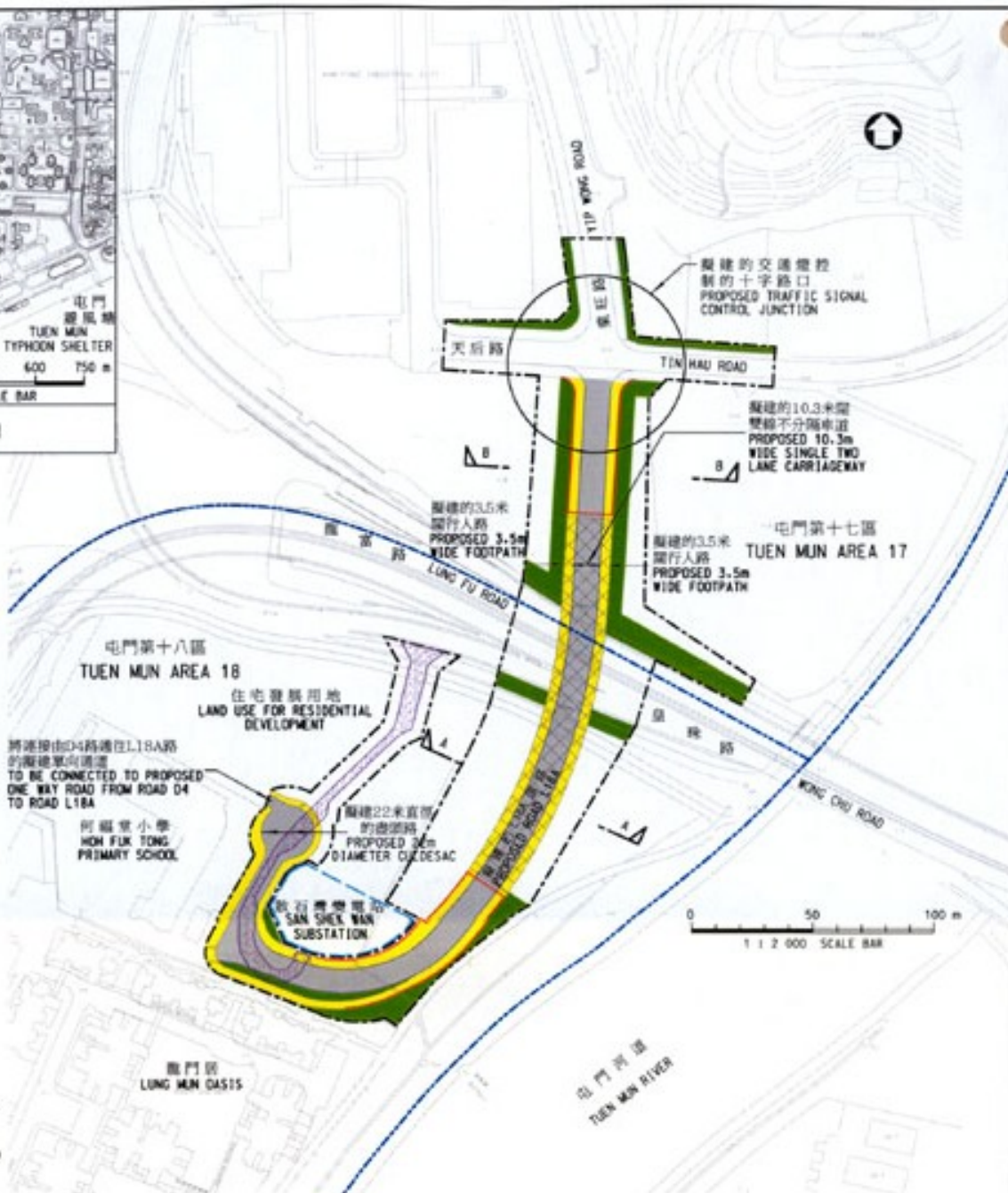


備忘 Notes:

- 所有座標參照香港1980大地基準，同時以米為量度單位。
ALL CO-ORDINATES REFER TO HONG KONG GEODETIC DATUM (1980) AND ARE IN METRES.
- 除在其它方面指定外所有量度以米為單位。
ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
- 所有水平以米為單位並基於香港水平基準上。
ALL LEVELS ARE IN METRES ABOVE HONG KONG PRINCIPAL DATUM.

圖例 LEGEND:

- 工地範圍
LIMIT OF WORKS AREA
- 擬建的擋土牆
PROPOSED RETAINING WALL
- 規劃範圍界線
PLANNING SCHEME BOUNDARY
- 電站範圍界線
ELECTRICITY SUBSTATION BOUNDARY
- 行人路
FOOTPATH
- 綠化範圍
PLANTING AREA
- 行車路
CARRIAGEWAY
- 架空道路
ELEVATED ROAD
- 現有臨時行車道路將於L18A路通車後永久封閉及拆卸
EXISTING TEMPORARY ACCESS ROAD TO BE PERMANENTLY CLOSED AND DEMOLISHED AFTER OPENING OF ROAD L18A



二〇〇六年至二〇〇七年年度工程小組委員會文件
P.W.S.C. SUBMISSION 2006/2007

圖則名稱 drawing title

屯門第十八區L18A路

ROAD L18A IN AREA 18, TUEN MUN

編號 no.	日期 date	內容摘要 description	核對 checked	核准 approved
修訂 REVISION				
繪圖 drawn	簽署 initial	日期 date	項目編號 item no.	辦事處 office 新界西及北拓發展處 NEW TERRITORIES NORTH AND WEST DEVELOPMENT OFFICE
P.K. SO	SIGNED	15.11.2006	749 TH	
核對 checked	簽署 initial	日期 date	比例 scale	土木工程拓展署 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
S.P. HO	SIGNED	16.11.2006	AS SHOWN	
核准 approved	簽署 initial	日期 date	圖則編號 drawing no.	
M.T. LAW	SIGNED	16.11.2006	NTW 1392	

749TH – Road L18A in Area 18, Tuen Mun

Breakdown of the estimates for consultants' fees

Consultants' staff costs		Estimated Man-months	Average MPS* salary point	Multiplier ^(Note 1)	Estimated fees (\$ million)
(a) Consultants' fees for construction stage ^(Note 2)	Professional	--	--	--	0.3
	Technical				0.2
(b) Resident site staff costs ^(Note 3)	Professional	28	38	1.6	2.4
	Technical	98	14	1.6	2.8
Total					5.7

* MPS = Master Pay Scale

Notes

1. A multiplier of 1.6 is applied to the average MPS point to estimate the cost of resident site staff supplied by the consultants. (As at 1 January 2006, MPS pt. 38 = \$54,255 per month and MPS pt. 14 = \$18,010 per month.)
2. The consultants' staff cost for the contract administration is calculated in accordance with the existing consultancy agreement. The construction phase of the assignment will only be executed subject to Finance Committee's approval to upgrade 749TH to Category A.
3. We will only know the actual man-months and actual costs after completion of the construction works.