

For discussion
on 4 June 2008

PWSC(2008-09)25

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 707 - NEW TOWNS AND URBAN AREA DEVELOPMENT

Transport - Roads

324TH - Widening of Yeung Uk Road between Tai Ho Road and Ma Tau Pa Road, Tsuen Wan

Members are invited to recommend to Finance Committee the upgrading of **324TH** to Category A at an estimated cost of \$163.3 million in money-of-the-day prices for widening of Yeung Uk Road between Tai Ho Road and Ma Tau Pa Road, Tsuen Wan.

PROBLEM

The section of Yeung Uk Road between Tai Ho Road and Ma Tau Pa Road needs to be widened to cope with the future traffic demand arising from the new developments along Yeung Uk Road.

/PROPOSAL

PROPOSAL

2. The Director of Civil Engineering and Development, with the support of the Secretary for Transport and Housing, proposes to upgrade **324TH** to Category A at an estimated cost of \$163.3 million in money-of-the-day (MOD) prices for widening of Yeung Uk Road between Tai Ho Road and Ma Tau Pa Road to cope with the growing traffic demand.

PROJECT SCOPE AND NATURE

3. The scope of **324TH** comprises –
- (a) widening and realignment of Yeung Uk Road of about 550 metres (m) long between Tai Ho Road and Ma Tau Pa Road with low noise surfacing;
 - (b) widening and realignment of Ma Tau Pa Road of about 200m long between Yeung Uk Road and Texaco Road;
 - (c) provision of a service lay-by along Ma Tau Pa Road near Tsuen Wan Town Lot Number (TWTL No.) 393;
 - (d) modification of the junction of Yeung Uk Road and Tai Ho Road and the junction of Yeung Uk Road and Ma Tau Pa Road;
 - (e) construction of vertical noise barriers of approximately 240m long and 2.5m high along Yeung Uk Road between Wo Tik Street and Ma Tau Pa Road;
 - (f) removal of existing abandoned structures including the electricity transformer room near the junction of Yeung Uk Road and Ma Tau Pa Road and the lighting tower, entrance kiosk and a single storey concrete building at the ex-Tsuen Wan Sports Ground at Yeung Uk Road;
 - (g) ancillary works including landscaping, traffic aids installation, street lighting, water and drainage works; and modification of existing refuge islands/medians; and
 - (h) provision of environmental mitigation measures.

/Details

Details of the proposed works are shown at Enclosure 1.

4. We have completed the detailed design of this project, and plan to commence the construction works in October 2008 for completion in August 2011. We will employ consultants to supervise the proposed works.

JUSTIFICATION

5. The existing section of Yeung Uk Road between Tai Ho Road and Ma Tau Pa Road is a dual two-lane carriageway of about 550m long, which operates at a volume/capacity (v/c) ratio of 0.71¹. There are new developments located on both sides of Yeung Uk Road including the Vision City completed in late 2007, TWTL Nos. 353 and 394 to be completed by 2009 and TWTL No. 393 being included in the Land Sale Programme in the 2008/2009 financial year. In addition, other developments are planned in the vicinity of Tsuen Wan West Station of the West Rail.

6. It is expected that from early 2008 to around 2014, the area near Yeung Uk Road will have an additional population in-take of about 24 000 by phases. As a result, a large volume of traffic will be generated on Yeung Uk Road. The traffic entering and leaving Yeung Uk Road to and from the developments will interrupt the through traffic thereat. The section of the road between Tai Ho Road and Ma Tau Pa Road needs to be widened to cope with the growing traffic.

7. The proposed provision of 7.3m wide service roads at both the eastbound and westbound carriageways of Yeung Uk Road is necessary to segregate the through-traffic with the traffic to be generated by the developments.

8. Widening and realignment of a section of Ma Tau Pa Road of about 200m in length between Yeung Uk Road and Texaco Road is necessary –

- (i) to improve the junction of Ma Tau Pa Road with Wang Lung Street, which is the main entrance and exit of the nearby industrial area; and

/(ii)

¹ Volume to capacity (v/c) ratio is an indicator which reflects the performance of a road. A v/c ratio equal to or less than 1.0 means that a road has sufficient capacity to cope with the volume of vehicular traffic under consideration and the resultant traffic will flow smoothly. A v/c ratio above 1.0 indicates the onset of congestion; that above 1.2 indicates more serious congestion with traffic speeds deteriorating progressively with further increase in traffic.

- (ii) to include a service lay-by fronting TWTL No. 393. The developments at TWTL No. 393 near the junction of Yeung Uk Road and Ma Tau Pa Road, as well as TWTL No. 402 and TWTL No. 403 both located off Wing Shun Street close to the junction of Ma Tau Pa Road and Texaco Road, will accommodate a significant number of residential flats and commercial areas, which will lead to more demand for public transport services. A service lay-by of adequate length on Ma Tau Pa Road outside TWTL No. 393 will meet the anticipated demand for pick-up and drop-off of passengers without affecting the traffic flow along the road.

9. Modifications of the two cross-road signal-controlled junctions of Yeung Uk Road at Tai Ho Road and Ma Tau Pa Road respectively are required to facilitate widening of their respective junction approaches so that these junctions will not become bottlenecks of Yeung Uk Road after widening.

FINANCIAL IMPLICATIONS

10. We estimate the capital cost of the project to be \$163.3 million in MOD prices (see paragraph 11 below), made up as follows –

	\$ million
(a) Roadworks	71.4
(i) Yeung Uk Road	53.5
(ii) Ma Tau Pa Road	17.9
(b) Noise barriers and low noise surfacing	17.3
(c) Removal of existing abandoned structures	1.1

/(d)

		\$ million	
(d)	Associated drainage and waterworks	19.1	
(e)	Associated landscaping works	10.3	
(f)	Environmental mitigation measures	2.2	
(g)	Consultant’s fees	13.2	
(i)	construction stage	1.1	
(ii)	resident site staff costs	12.1	
(h)	Contingencies	12.1	
	Sub-total	146.7	(in September 2007 prices)
(i)	Provision for price adjustment	16.6	
	Total	163.3	(in MOD prices)

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

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

Year	\$ million (Sept 2007)	Price adjustment factor	\$ million (MOD)
2008 – 2009	5.0	1.02575	5.1
2009 – 2010	40.0	1.06293	42.5
2010 – 2011	55.0	1.10545	60.8
2011 – 2012	25.0	1.14967	28.7

/2012

Year	\$ million (Sept 2007)	Price adjustment factor	\$ million (MOD)
2012 – 2013	15.0	1.19566	17.9
2013 – 2014	6.7	1.24348	8.3
	146.7		163.3

12. We have derived the MOD estimates on the basis of the Government's latest forecast of trend rate of change in the prices of public sector building and construction output for the period 2008 to 2014. We will invite tenders for the proposed works under a lump-sum contract because we can clearly define the scope of the works in advance. The contract will provide for price adjustments as the contract period will exceed 21 months.

13. We estimate the annual recurrent expenditure arising from this project to be about \$876,000.

PUBLIC CONSULTATION

14. We consulted the Traffic and Transport Committee of the Tsuen Wan District Council (the Committee) on 7 November 2006. The Committee had no in-principle objection to the project, but requested the Administration to review the proposed scheme and the noise mitigation measures. We consulted the Committee again with a revised scheme on 2 January 2007 and 8 May 2007. Members supported the project.

15. We gazetted the proposed road scheme under the Roads (Works, Use and Compensation) Ordinance (the Ordinance) on 31 August 2007. Four objections were received and were all withdrawn unconditionally after discussion between the objectors and the Administration. The Permanent Secretary for Transport and Housing (Transport) authorized the proposed works under delegated authority of the Ordinance on 24 January 2008. The notice of authorization was gazetted on 1 February 2008.

16.

16. We submitted an information paper on the project to the Legislative Council Panel on Transport on 16 May 2008. Members noted the project without adverse comments.

ENVIRONMENTAL IMPLICATIONS

17. **324TH** is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). We completed a Preliminary Environmental Review (PER) for the project, which indicated that it will not cause significant environmental impact on air and water qualities during the operation stage. The PER also showed that with the proposed direct mitigation measures which include noise barriers of 2.5m high and low-noise road surfacing, the traffic noise level at the representative noise sensitive receivers will be reduced. We have included \$17.3 million for installing noise barriers and low-noise surfacing. We will implement suitable mitigation measures to control short-term environmental impacts during the construction stage. These measures will include watering of the site, provision of wheel-washing facilities, covering of materials on trucks, use of silenced construction plant, and provision of mobile noise barriers. We have included \$2.2 million in the project estimate for the implementation of environmental mitigation measures.

18. We have considered the level and layout of the proposed works and construction sequence in the planning and design stage to reduce the generation of construction waste where possible. In addition, we will require the contractor to reuse inert construction waste (e.g. excavated soil) on site or in other suitable construction sites as far as possible, in order to minimize the disposal of inert construction waste to public fill reception facilities². We will encourage the contractor to maximize the use of recycled or recyclable inert construction waste, as well as the use of non-timber formwork to further minimize the generation of construction waste.

/19.

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

19. We will also require the contractor to submit for approval a plan setting out the waste management measures, which will include appropriate mitigation measures to avoid, reduce, reuse and recycle inert construction waste. We will ensure that the day-to-day operations on site comply with the approved plan. We will require the contractor to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. We will control the disposal of inert construction waste and non-inert construction waste to public fill reception facilities and landfills respectively through a trip-ticket system.

20. We estimate that the project will generate in total about 45 000 tonnes of construction waste. Of these, we will reuse about 5 500 tonnes (12 %) of inert construction waste on site and deliver about another 35 600 tonnes (79 %) to public fill reception facilities for subsequent reuse. In addition, we will dispose of about 3 900 tonnes (9 %) of non-inert construction waste at landfills. The total cost for accommodating construction waste at public fill reception facilities and landfill sites is estimated to be \$1,448,700 for this project (based on a unit cost of \$27/tonne for disposal at public fill reception facilities and \$125/tonne³ at landfills).

HERITAGE IMPLICATIONS

21. The project will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites/buildings, sites of archaeological interest and Government historic sites identified by the Antiquities and Monuments Office.

LAND ACQUISITION

22. The proposed works do not require any land resumption. The developers of the adjoining TWTL Nos. 353 and 394 are currently required under their respective lease to form and construct some of the government land affected by the project. We will make appropriate provisions in our contract to match our land requirement dates with those dates, or such other extended dates, under lease.

/BACKGROUND

³ This estimate has taken into account the cost for developing, operating and restoring the landfills after they are filled and 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.

BACKGROUND INFORMATION

23. We upgraded **324TH** to Category B in December 2005.

24. We engaged a consultant to carry out the site investigation and design for the proposed works in July 2006. We have charged the cost of about \$6.5 million in MOD prices under **Subhead 7100CX** “New towns and urban area works, studies and investigations for items in Category D of the Public Works Programme”. The consultant has now completed the detailed design of the project.

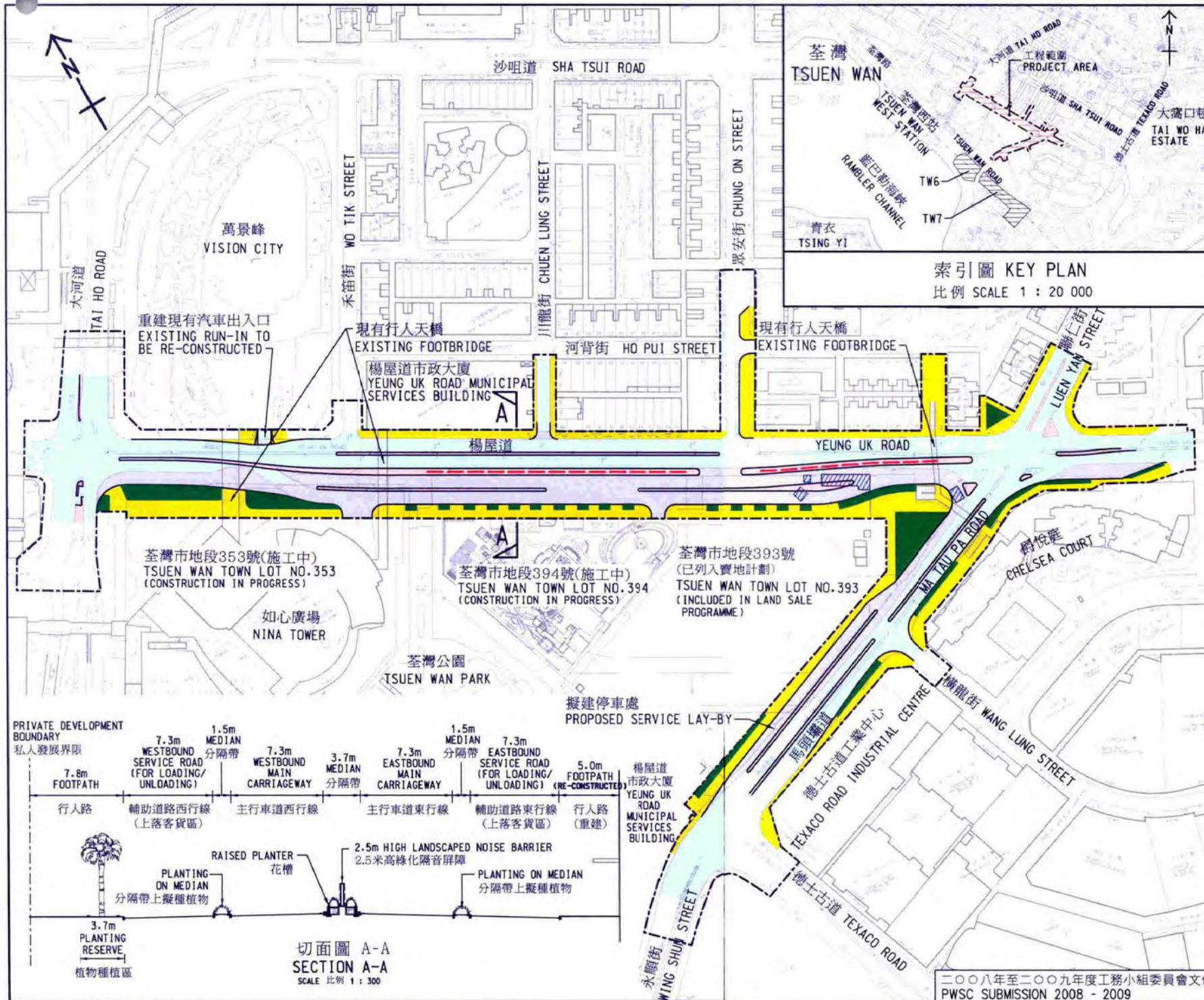
25. Of the 35 trees within the project boundary, six will be preserved. The proposed works will transplant the remaining 29 trees elsewhere. All these trees to be removed are not important trees⁴. We will incorporate planting proposals as part of the project, including estimated quantities of 42 trees and 33,000 shrubs.

26. We estimate that the proposed works will create about 116 jobs (94 for labourers and 22 for professional/technical staff), providing a total employment of 3 346 man-months.

Transport and Housing Bureau
May 2008

⁴ An “important tree” 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 of 100 years old or above;
- (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) trees of precious or rare species;
- (d) trees of 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 trunk diameter equal or exceeding 1.0 m (measured at 1.3 m above ground level), or with height/canopy spread equal or exceeding 25 m.



- 註釋 NOTES :
- 除在其他方面指定外,所有量度以米為單位。
ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
- 圖例 LEGEND :
- 施工區界限
LIMIT OF WORKS AREA
 - ▭ 擬建行車道
PROPOSED CARRIAGEWAY
 - ▭ 現有行車道將予重建
EXISTING CARRIAGEWAY TO BE RECONSTRUCTED
 - ▨ 現有廢置構築物將予清拆
EXISTING ABANDONED STRUCTURES TO BE REMOVED
 - ▭ 擬建行人路/現有行人路將予重建
PROPOSED FOOTPATH/EXISTING FOOTPATH TO BE RECONSTRUCTED
 - ▭ 擬建安全島/分隔帶
PROPOSED ISLAND/MEDIAN
 - ▭ 擬建美化地帶
PROPOSED PLANTING AREA
 - 擬建2.5米高綠化隔音屏障
PROPOSED 2.5m HIGH LANDSCAPED NOISE BARRIER

編號 No.	日期 date	內容描述 description	核對 checked	核實 approved
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修訂 REVISION

繪圖 drawn	姓名 name	簽署 initial	日期 date
核對 checked	P.K. SO	SIGNED	19.5.08
	C.C. NG	SIGNED	19.5.08

核准 approved

SIGNED 19.5.08
DUNCAN S.C. SIU 日期 date (CE/NTW)

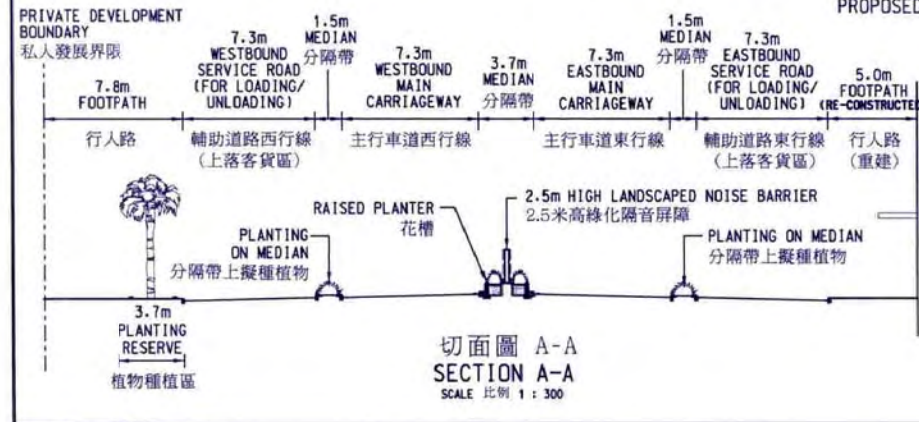
項目編號 item no. 324TH

圖則名稱 drawing title

荃灣大河道與馬頭壩道之間一段楊屋道的擴闊工程
WIDENING OF YEUNG UK ROAD BETWEEN TAI HO ROAD AND MA TAU PA ROAD, TSUEN WAN

圖則編號 drawing no. NTW 1394
比例 scale 1:2000 OR AS SHOWN

辦事處 office
新界西及北拓展處
NEW TERRITORIES NORTH AND WEST DEVELOPMENT OFFICE



Enclosure 2 to PWSC(2008-09)25

324TH – Widening of Yeung Uk Road between Tai Ho Road and Ma Tau Pa Road, Tsuen Wan

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	--	--	--	1.0
	Technical	--	--	--	0.1
(b) Resident site staff (Note 3)	Professional	69	38	1.6	6.3
	Technical	193	14	1.6	5.8
Total					13.2

* 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 April 2007, MPS point. 38 = \$56,945 per month and MPS point 14 = \$18,840 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 324TH to Category A.
3. We will only know the actual man-months and actual costs after completion of the construction works.