

**ITEM FOR PUBLIC WORKS
SUBCOMMITTEE OF FINANCE COMMITTEE**

HEAD 706 - HIGHWAYS

Transport - Traffic Control

23TC - Provision of facilities for traffic incident management and traffic information dissemination in the urban areas and their vicinities

Members are invited to recommend to Finance Committee –

- (a) the upgrading of part of **23TC**, entitled “Expansion of Journey Time Indication System to Kowloon”, at an estimated cost of \$54.0 million in money-of-the-day prices; and
- (b) the retention of the remainder of **23TC** in Category B.

PROBLEM

We need to provide journey time information for motorists to make informed route choices based on latest traffic information at major approach roads to the road-harbour crossings in Kowloon and alleviate the congestion on these approach roads.

/PROPOSAL

PROPOSAL

2. The Commissioner for Transport, with the support of the Secretary for the Environment, Transport and Works, proposes to upgrade part of **23TC** to Category A at an estimated cost of \$54.0 million in money-of-the-day (MOD) prices for the implementation of the Journey Time Indication System in Kowloon (JTIS Kowloon).

PROJECT SCOPE AND NATURE

3. The scope of the proposed works to be part-upgraded under **23TC** comprises –

- (a) installation of journey time indicators with digital display modules at six strategic locations in Kowloon to provide real-time average journey time of vehicles crossing the harbour through the three road-harbour crossings;
- (b) installation of the necessary vehicle detection equipment along the approach roads to the road-harbour crossings in Kowloon and exits on Hong Kong Island to collect the traffic data required for computation of estimated vehicle journey time;
- (c) installation of a computer system for computing journey time information, and for monitoring and controlling the system operation;
- (d) modification of vehicle detection and data communication equipment of the JTIS on Hong Kong Island (JTIS Hong Kong) for integrating with the JTIS Kowloon as a single system; and
- (e) installation of hardware and software to disseminate journey time information and average vehicle speeds of the combined JTIS Hong Kong and JTIS Kowloon system on the Internet.

4. A plan showing the locations for installing the journey time indicators is at Enclosure.

5. We plan to commence the proposed works in December 2007 for completion in June 2009.

/JUSTIFICATION

JUSTIFICATION

6. In 2003, we implemented JTIS Hong Kong to provide motorists with the estimated journey time for traveling from Hong Kong Island to Kowloon via the three road-harbour crossings. We have installed digital journey time indicators at Gloucester Road eastbound (near Revenue Tower), Canal Road Flyover northbound (near the exit of Aberdeen Tunnel) and Island Eastern Corridor westbound (near City Garden) to allow motorists to make an informed choice on the route to cross the harbour from Hong Kong Island to Kowloon based on the latest traffic situation. This has to some extent helped alleviate the congestion on the approach roads to the road-harbour crossings on Hong Kong Island. Apart from the digital indicators, information collated from the JTIS has been translated into a Traffic Speed Map and uploaded onto Transport Department's website since August 2005.

7. A before-and-after survey was conducted on JTIS Hong Kong in December 2002 and January 2004 respectively. It was found that the average vehicle speed along the approach roads of road-harbour crossings on Hong Kong Island North has generally increased by 4% after the implementation of JTIS Hong Kong. Moreover, at the suggestion of the Legislative Council (LegCo) Panel on Transport, we carried out a survey earlier this year to ascertain the usefulness of JTIS. 3 665 motorists were interviewed, of whom 2 760 had made cross-harbour trips within a month before the survey. Amongst these 2 760 motorists, over 87% noticed the existence of the JTIS. Of the respondents who noticed the existence of the JTIS, 64% felt that the system could assist them in choosing a cross-harbour route, and 61.7% considered that the JTIS also helped them in other aspects, such as estimating the arrival time and the level of congestion. About 80% of the 2 760 respondents supported the expansion of the JTIS to Kowloon.

8. In the light of the satisfactory performance of JTIS Hong Kong and the public support for expanding the system to Kowloon, we propose to implement JTIS Kowloon. This would help motorists better plan their cross-harbour routes from Kowloon to Hong Kong Island and improve the traffic on the approach roads to the road-harbour crossings in Kowloon.

FINANCIAL IMPLICATIONS

9. We estimate the cost of the project to be \$54.0 million in MOD prices (see paragraph 13 below), made up as follows –

/(a)

	\$ million	
(a) Electronic, electrical and mechanical equipment installation	32.0	
(i) Vehicle detection equipment	6.0	
(ii) Data communication equipment	6.0	
(iii) Central computer system	6.0	
(iv) Journey time indicators	4.0	
(v) Related building services works, installation and commissioning of the system	10.0	
(b) Refurbishment of gantry sign	5.0	
(c) Modification of vehicle detection and data communication equipment of JTIS Hong Kong for integrating with the new system	4.8	
(d) Electrical and Mechanical Services Trading Fund (EMSTF) charges ¹	6.5	
(e) Contingencies	4.2	
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	Sub-total	52.5 (in September 2006 prices)
(f) Provision for price adjustment	1.5	
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	Total	54.0 (in MOD prices)
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/10.

¹ Since the establishment on 1 August 1996 under the Trading Fund Ordinance, the EMSTF charges government departments for design and technical consultancy services for E&M installations provided by the Electrical and Mechanical Services Department (EMSD). The services rendered for this project include carrying out the design on all E&M installations and providing technical advice on all E&M works and their impacts on the project from maintenance and general operation points of view.

10. As regards paragraph 9(a) above, the cost is for the design, supply, installation, testing and commissioning of the JTIS Kowloon, including vehicle detection equipment for collection of vehicle speed data; data communication equipment for transmitting detected vehicle speed data to the central computer system for calculation; the central computer system for journey time calculation as well as for control and monitoring of all field equipment; journey time indicators to display the calculated journey time; and the related building services works.

11. As regards paragraph 9(b) above, the cost is for the design, modification and necessary strengthening of the gantry signs for installation of journey time indicators and vehicle detection equipment.

12. As regards paragraph 9(c) above, the cost is for the design, supply and modification of necessary equipment of JTIS Hong Kong, testing and commissioning for integrating the system with the new Kowloon system to form a single system.

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

Year	\$ million (Sept 2006)	Price adjustment factor	\$ million (MOD)
2007 - 08	8.0	1.01250	8.1
2008 - 09	32.2	1.02769	33.1
2009 - 10	8.1	1.04310	8.4
2010 - 11	4.2	1.05875	4.4
	52.5		54.0

14. We have derived the MOD estimate 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 2007 to 2011. We will invite tenders for the works under a lump-sum contract. We will not allow for price adjustment in the contract, as the contract period will not exceed 21 months.

15. We estimate that the total annual recurrent expenditure arising from this project will be about \$5.6 million.

PUBLIC CONSULTATION

16. We consulted the Traffic and Transport Committee of the Kowloon City District Council and Yau Tsim Mong District Council on 23 March 2006 on the proposed expansion of the JTIS to Kowloon. Members had no objection to the proposal.

17. We consulted the LegCo Panel on Transport on 24 March 2006. Members suggested that we should conduct a survey to ascertain the usefulness of the JTIS. On 20 November 2006, we informed Members of the survey results, which have been summarised in paragraph 7 above. Panel Members did not raise any further comment on the proposal.

ENVIRONMENTAL IMPLICATIONS

18. The project is not a designated project under Schedule 2 of the Environmental Impact Assessment Ordinance (Cap. 499) and an environmental permit is not required. The project will unlikely give rise to adverse environmental impacts. We have included in the project estimates the cost of implementing suitable mitigation measures² to control the short-term environmental impacts during the construction works for the indicators, ducting, vehicles detectors and controllers.

19. The project will generate a negligible amount of construction and demolition materials. Nevertheless, we will require the consultant/contractor to consider measures to minimise the generation of such materials and to reuse/recycle as much as possible in the implementation of the project.

LAND ACQUISITION

20. The project does not require any land acquisition.

/BACKGROUND

² Measures include the use of quiet equipment, careful scheduling of work, appropriate location of plant in relation to noise sensitive receivers as well as good site practices such as implementation of a temporary drainage system which includes silt traps, sedimentation pits for silty run-off, and infiltration pits for retaining concrete washings etc.

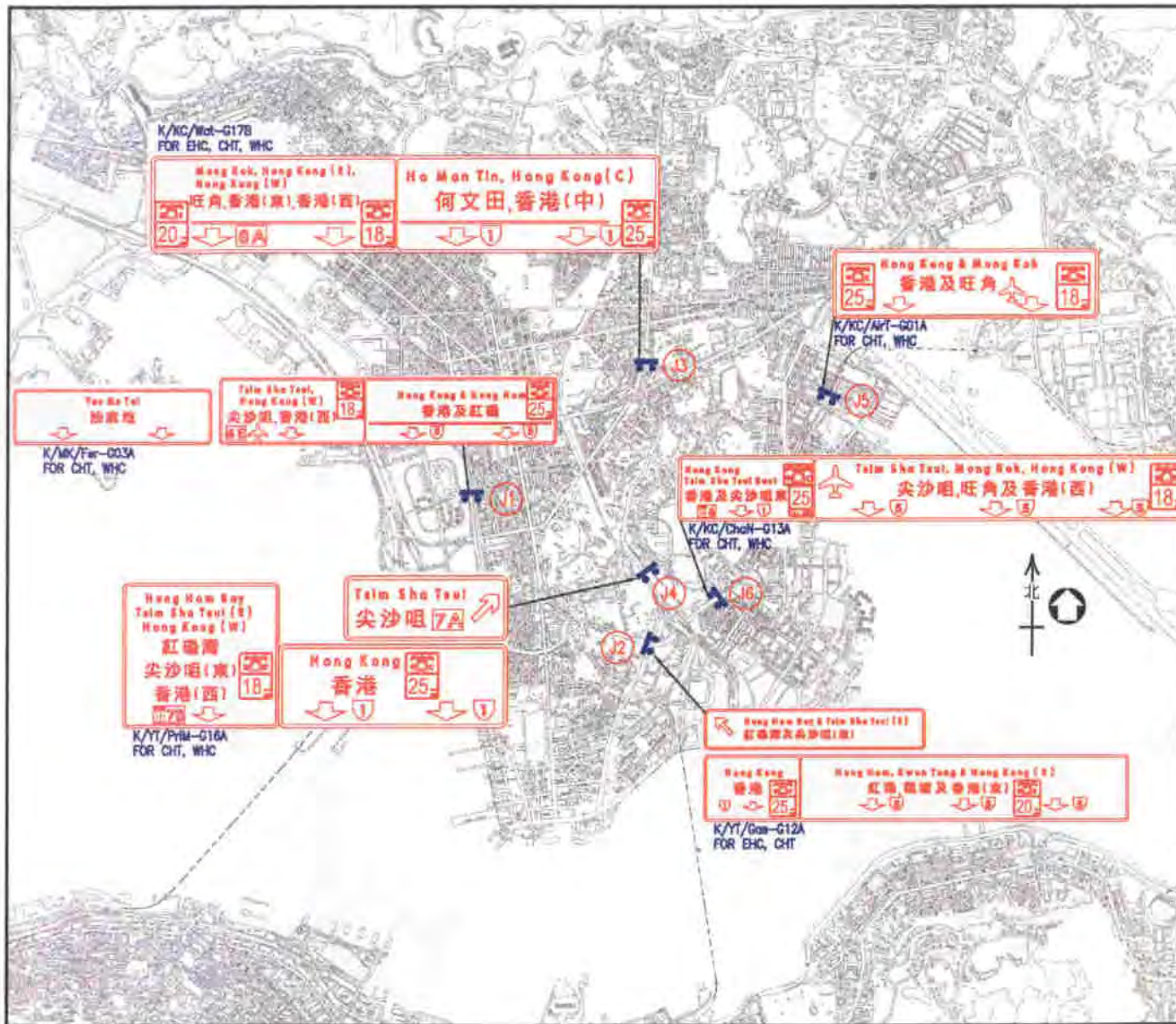
BACKGROUND INFORMATION

21. We upgraded **23TC** to Category B in October 2005. The scope of work of **23TC** includes the provision of Closed Circuit Television Systems, expansion of the JTIS to Kowloon and provision/installation of Variable Message Signs. The current proposal is to partly upgrade **23TC** in respect of JTIS Kowloon. We will submit proposals in respect of the remainder of **23TC** in due course.

22. The proposed project will not involve any tree removal or planting proposals.

23. We estimate that the project will create about 17 jobs (seven for professional/technical staff and ten for labourers) providing a total employment of 170 man-months.

Environment, Transport and Works Bureau
December 2006



<p>圖例 Legend:</p> <p> 行車時間顯示屏的擬定安裝位置及路牌資料 Proposed Location of Journey Time Indicator</p> <p>CHT 紅磡海底隧道 Cross Harbour Tunnel</p> <p>EHC 東區海底隧道 Eastern Harbour Crossing</p> <p>WHC 西區海底隧道 Western Harbour Crossing</p>	
<p>項目名稱 Contract Title</p> <p>擴展行車時間顯示系統至九龍區 Expansion of Journey Time Indication System to Kowloon</p>	
<p>題目 Drawing Title</p> <p>行車時間顯示屏的擬定安裝位置及路牌資料 Proposed Locations of Journey Time Indicator and Sign Face Details</p>	
<p>部門 Office</p> <p>交通及運輸調查部 TRAFFIC AND TRANSPORT SURVEY DIVISION</p>	<p>比例 Scale</p> <p>不按比例 N.T.S.</p>
運輸署 Transport Department	