

**For information**

**Legislative Council Panel on Transport**

**Projects Relating to Area Traffic Control and  
Closed Circuit Television Systems**

**PURPOSE**

This paper sets out our proposal on projects relating to –

- (a) the replacement of Area Traffic Control (ATC)<sup>1</sup> and Closed Circuit Television (CCTV)<sup>2</sup> systems in Kowloon, Tsuen Wan and Sha Tin, and expansion of the systems to Tseung Kwan O; and
- (b) the expansion of CCTV system in the territory.

**BACKGROUND**

2. We first introduced the ATC and CCTV systems in Kowloon in 1977 and progressively extended them to Tsuen Wan, Sha Tin, Hong Kong Island, Tai Po and North District<sup>3</sup>. Installation of these systems in Tuen Mun and Yuen Long is expected to complete in 2008. Statistics show that the traffic conditions have improved significantly through better management of the signalised junctions.

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<sup>1</sup> ATC system provides real-time coordination and adjustment of traffic control signals within an area by computers having regard to changes in traffic flow level. The objectives are to maximise road capacity and to minimise traffic delay.

<sup>2</sup> CCTV system provides traffic operators at the control centre of the Transport Department with real time traffic information from CCTV cameras installed at strategic locations, thus allowing quick remedial actions to be taken when necessary to cope with abnormal traffic conditions and/or traffic incidents.

<sup>3</sup> The ATC and CCTV systems in Kowloon were installed in 1977 and replaced in 1995. The systems in Tsuen Wan and Sha Tin were installed in 1995 and 1998 respectively. The systems in Hong Kong Island were installed in 1989 and replaced in 2006. The systems were expanded to Tai Po and North District in 2005.

3. Apart from the CCTV cameras mentioned in paragraph 2, which are installed to supplement the ATC system, CCTV cameras are also installed in other parts of the territory to monitor traffic flow and facilitate traffic management. These cameras could provide us with real-time traffic information, which allow quick remedial actions to be taken when necessary to cope with abnormal conditions and/or traffic incidents and dissemination of traffic information to the public.

4. To facilitate better traffic and incident management, and information dissemination to the public, we propose to replace and expand the existing ATC and CCTV systems. Details are set out below.

### **Replacement of ATC and CCTV Systems in Kowloon, Tsuen Wan and Sha Tin, and Expansion of the Systems to Tseung Kwan O**

5. The existing ATC and CCTV systems in Kowloon and Tsuen Wan, and Sha Tin were installed in 1995 and 1998 respectively. The systems are reaching the end of their effective life cycle, and maintenance has been costly and difficult. Replacement of these systems is hence proposed.

6. Currently, the signalised junctions in Tseung Kwan O are not placed under the control of ATC system. Rapid development and increasing population in Tseung Kwan O in recent years have significantly increased pressure on traffic at critical junctions, particularly during peak hours. For better traffic management and congestion alleviation, we propose to expand the ATC and CCTV systems to Tseung Kwan O.

### **Expansion of CCTV System in the Territory**

7. The Transport Department has installed about 600 CCTV cameras on strategic road network (SRN) (including Tuen Mun Road, Yuen Long Highway, North Lantau Highway, San Tin Highway, Fanling Highway and Tolo Highway), the tunnel areas, the urban areas and the New Territories to monitor traffic conditions. Nevertheless, the coverage of CCTV cameras on the SRN in the New Territories and the urban areas could be further improved to allow adequate traffic information to be collected and disseminated in the event of incidents or region-wide serious traffic congestion. We therefore propose to expand the CCTV system for better traffic and incident management.

8. Currently, CCTV images captured from a selection of about 180 cameras from the existing CCTV system are made available on the Internet to inform the public of prevailing traffic conditions on critical road sections. This service allows road users to make informed route choices and facilitates pre-trip planning, and is welcomed by the public<sup>4</sup>. However, when these cameras are deployed for incident management purposes (e.g. during serious traffic accident and/or traffic congestion), they would become unavailable to perform their normal traffic monitoring functions. This would cause considerable inconvenience to the public, especially those planning to travel through the areas affected by the incident. To ensure continuous and timely access of traffic information by the public, we propose to install an independent set of cameras at these locations mounted at fixed and pre-set direction to capture the general traffic information.

## **PROPOSAL**

### **Replacement of ATC and CCTV Systems in Kowloon, Tsuen Wan and Sha Tin, and Expansion of the Systems to Tseung Kwan O**

9. We propose to implement this project at an estimated cost of \$337.2 million.

10. The scope of the project comprises:

- (a) replacement of existing ATC and CCTV instation equipment including computer systems, associated system software, data transmission equipment, peripheral equipment and remote terminals;
- (b) replacement of all ATC outstation equipment including traffic signal controllers, vehicle detectors and about 105 CCTV cameras in Kowloon, Tsuen Wan and Sha Tin;
- (c) provision of ATC outstation equipment including traffic signal controllers, vehicle detectors and about 14 new CCTV cameras in Tseung Kwan O;
- (d) provision of leased data transmission network for these ATC and CCTV systems; and

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<sup>4</sup> The hit rate of the relevant website is around 200,000 per day.

- (e) associated engineering works, including works for the provision, replacement and upgrading of detector loops, plinths for traffic signal controller and CCTV kiosk, aspect cable checking and repair, drawpits, cable ducts and minor fitting out works at existing control centres.

11. Plans showing the above ATC junctions and CCTV cameras are at **Enclosure 1**.

### **Expansion of CCTV System in the Territory**

12. We propose to implement this project at an estimated cost of \$124.8 million.

13. The scope of the project comprises:

- (a) provision of instation CCTV computer equipment, associated software, data transmission equipment, video display system and operator workstations;
- (b) installation of about 40 new CCTV cameras on the SRN in the New Territories and about 85 new CCTV cameras in the urban areas;
- (c) installation of about 180 new fixed CCTV cameras at selected locations for traffic information dissemination to the public;
- (d) associated works including civil works, camera mounting works including foundation;
- (e) provision of leased telecommunication services to allow the transmission of video images and related control signals from the CCTV cameras to the control centres; and
- (f) provision of additional CCTV and incident management equipment at Transport Department's control centres and offices of Hong Kong Police Force, Fire Services Department, Immigration Department and Highways Department.

14. Plans showing the locations of the CCTV cameras are at **Enclosure 2**.

## **FINANCIAL IMPLICATIONS**

### **Replacement of ATC and CCTV Systems in Kowloon, Tsuen Wan and Sha Tin, and Expansion of the Systems to Tseung Kwan O**

15. We estimate the cost of this project to be \$337.2 million in money-of-the-day (MOD) prices, with breakdown as follows –

	<b>\$ Million</b>
(a) ATC system and equipment	151.4
(b) CCTV system and equipment	39.9
(c) Civil works	86.8
(d) Miscellaneous works including minor fitting out and building services works at existing control centres and duty visits where required.	1.8
(e) Consultants' and site staff fees	24.3
(f) Contingencies	25.8
Sub-total (in September 2006 prices)	330.0
(g) Provision for price adjustment	7.2
<hr/> Total (in MOD prices) <hr/>	<hr/> 337.2 <hr/>

### **Expansion of CCTV System in the Territory**

16. We estimate the cost of the project to be \$124.8 million in MOD prices, with breakdown as follows –

	<b>\$ Million</b>
(a) CCTV system and equipment	40.8
(b) Civil works	60.6
(c) Miscellaneous works including minor fitting out and building services works at existing control centres and duty visits where required.	0.7
(d) Consultants' and site staff fees	10.5
(e) Contingencies	10.2
Sub-total (in September 2006 prices)	122.8
(f) Provision for price adjustment	2.0
Total (in MOD prices)	124.8

## **IMPLEMENTATION**

17. Subject to funding approval, we propose to implement the projects in the following timeframe:

### **Replacement of ATC and CCTV Systems in Kowloon, Tsuen Wan and Sha Tin, and Expansion of the Systems to Tseung Kwan O**

<b>Activity</b>	<b>Target Date</b>
Commencement of tendering process	September 2007
Award of contract	January 2008
Commencement of construction works	January 2008
Project completion	November 2011

### **Expansion of CCTV System in the Territory**

<b>Activity</b>	<b>Target Date</b>
Commencement of tendering process	September 2007
Award of contract	January 2008
Commencement of construction works	January 2008
Project completion	September 2010

## **PUBLIC CONSULTATION**

18. We consulted this Panel in 2001 on the Intelligent Transport Systems, which comprised the ATC and CCTV systems. Members supported the proposal.

19. For items relating to the ATC system, we consulted the Traffic and Transport Committees (TTCs) of 9 relevant District Councils (DCs) in the past few months. Members in general had no objection to the proposal. For items relating to the CCTV system, we consulted the TTCs of all 18 DCs over the same period. Members in general supported the proposals. However, a member of Central & Western DC indicated concern on the privacy issue and raised objection. In response, we explained that guidelines were established to restrict the use of the CCTV system and information collected would only be used for traffic management purposes.

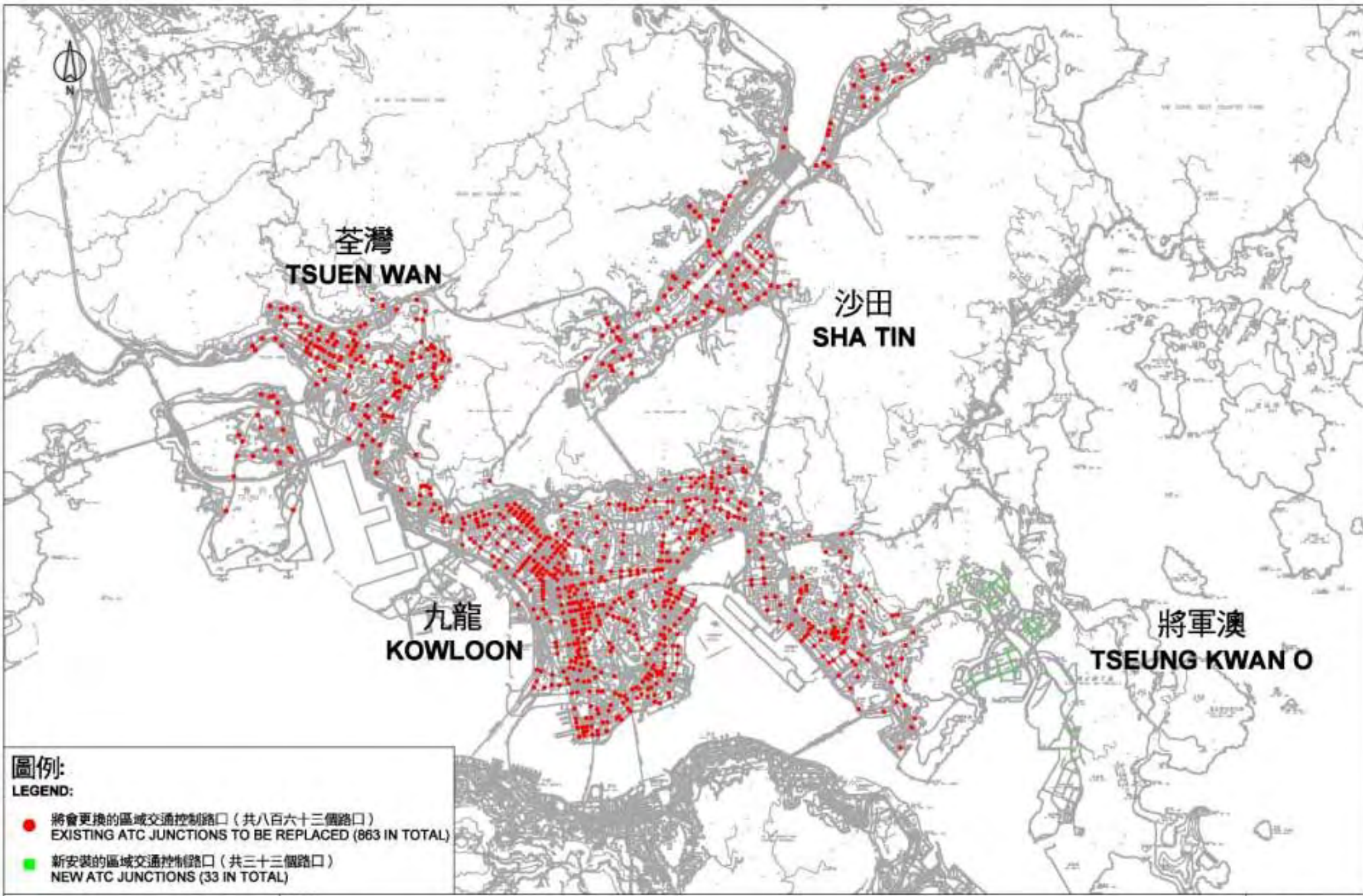
## **WAY FORWARD**

20. We plan to consult the Public Works Sub-committee on 20 June 2007 and seek the approval of the Finance Committee on 6 July 2007 for funding the implementation of the project.

## **ADVICE SOUGHT**

21. Members are invited to note our proposal.

**Environment, Transport and Works Bureau**  
**May 2007**



**圖例:**

**LEGEND:**

- 將會更換的區域交通控制路口 (共八百六十三個路口)  
EXISTING ATC JUNCTIONS TO BE REPLACED (863 IN TOTAL)
- 新安裝的區域交通控制路口 (共三十三個路口)  
NEW ATC JUNCTIONS (33 IN TOTAL)



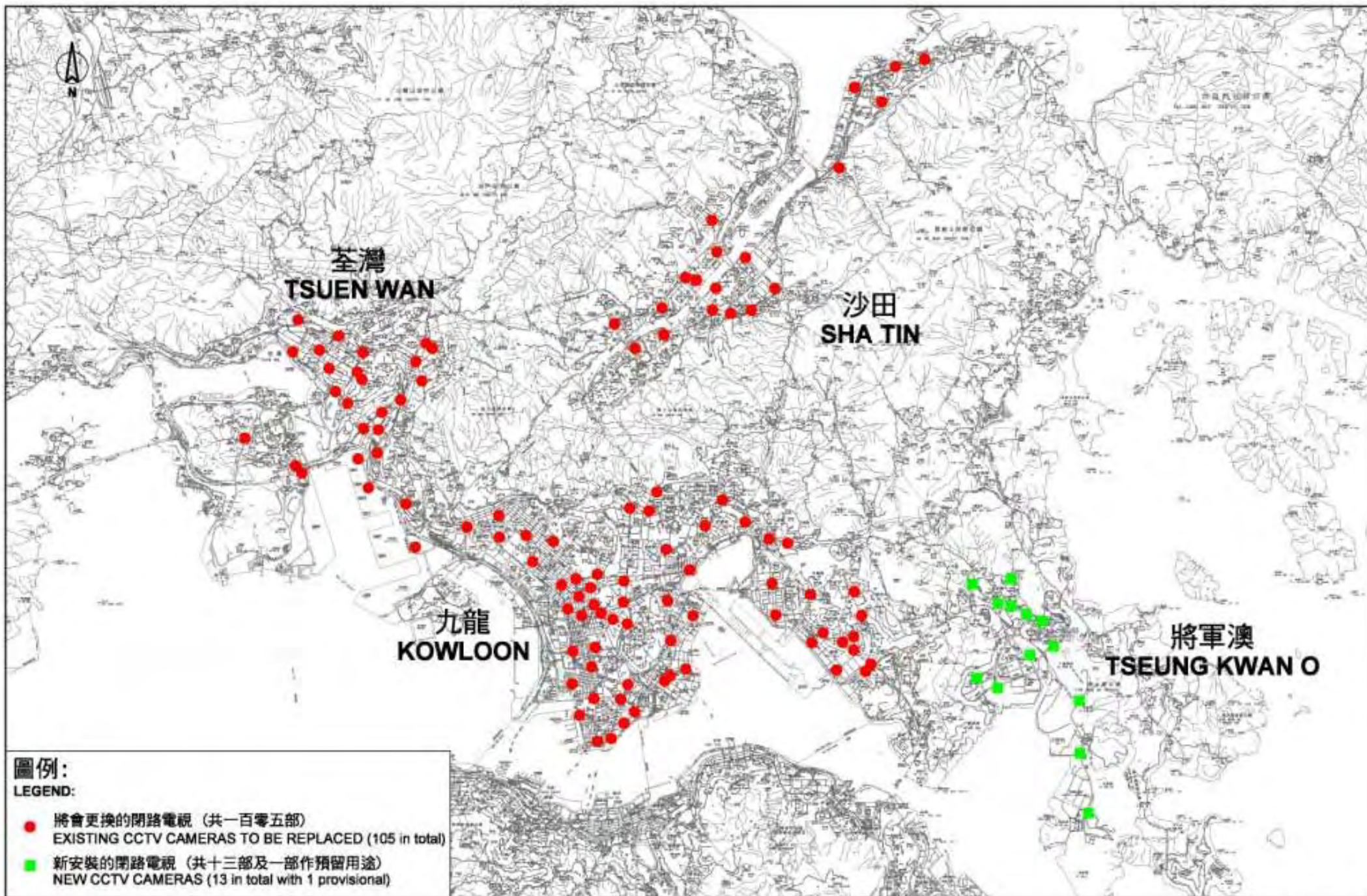
**運輸署**  
Transport Department

**圖名**

Drawing Title

工務計劃項目第22TC號-更換九龍、荃灣及沙田區區域交通控制及閉路視系統及把系統擴展至將軍澳  
PWP ITEM NO 22TC - REPLACEMENT OF AREA TRAFFIC CONTROL AND CLOSED CIRCUIT TELEVISION SYSTEMS FOR KOWLOON, TSUEN WAN  
AND SHA TIN AND EXPANSION OF THE SYSTEMS TO TSEUNG KWAN O





**圖例:**

**LEGEND:**

- 將會更換的閉路電視 (共一百零五部)  
EXISTING CCTV CAMERAS TO BE REPLACED (105 in total)
- 新安裝的閉路電視 (共十三部及一部作預留用途)  
NEW CCTV CAMERAS (13 in total with 1 provisional)



**運輸署**  
Transport Department

圖名  
Drawing Title

工務計劃項目第22TC號-更換九龍、荃灣及沙田區區域交通控制及閉路視系統及把系統擴展至將軍澳  
PWP ITEM NO 22TC - REPLACEMENT OF AREA TRAFFIC CONTROL AND CLOSED CIRCUIT TELEVISION SYSTEMS FOR KOWLOON, TSUEN WAN AND SHA TIN AND EXPANSION OF THE SYSTEMS TO TSEUNG KWAN O

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北區  
NORTH  
DISTRICT

屯門  
TUEN MUN

沙田  
SHA TIN

圖例:

LEGEND:

- 新安裝的閉路電視  
(共三十九部及一部作預留用途)  
NEW CCTV CAMERAS  
(39 in total with 1 provisional)



運輸署  
Transport Department

圖名  
Drawing Title

工務計劃項目第21TC號-在現有主要公路上提供交通管制及監察設施

PWP ITEM NO 21TC - PROVISION OF TRAFFIC CONTROL AND SURVEILLANCE FACILITIES ON EXISTING STRATEGIC ROADS

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