

For information

Legislative Council Panel on Transport

Expansion of Speed Enforcement Camera System, Phase 2

PURPOSE

This paper informs Members of our proposal to procure 20 digital speed enforcement camera (SEC) units and install 25 new camera housings.

BACKGROUND

2. Speeding is a serious offence that can bring about grave consequences. It endangers not only the driver and passengers of the vehicle concerned, but also other road users.

3. The first fixed SEC system was introduced in early 1999. It consists of two wet-film cameras operating on a rotational basis at ten camera housings installed at Tolo Highway and Fanling Highway. To further combat vehicle speeding, a digital SEC system consisting of eight digital cameras and 75 housings was installed at various locations in the territory and has been in operation since 2004. Currently, there are in total ten SECs operating at 85 camera housings on a rotational basis¹. The locations of the existing SEC housings are at **Annex A**.

PROPOSAL

4. We propose to enhance the existing SEC system and to further expand the system at a total estimated cost of **\$32.18 million**. The detailed proposals are set out below -

¹ The present SEC System comprises the following –

	No. of cameras	No. of housing sites
Wet-film	2	10
Digital	8	75
Total	10	85

- (a) to procure 20 digital camera units of not lower than 4 million-pixels and ancillary equipment (two to replace the existing wet-film cameras; eight to replace the existing 1.3 million-pixel cameras; and ten additional cameras units);
- (b) to install 25 digital camera housings (two to replace the existing wet-film camera housings²; and 23 at new housing locations); and
- (c) to upgrade the Police's backend computer system for processing the prosecution cases.

JUSTIFICATION

5. Speeding is a common traffic offence in Hong Kong. In the past three years³, the average number of prosecutions instituted against speeding was 220 150 per year. During the same period, the average number of traffic accidents and casualties involving vehicle speeding was 387 and 509 per year respectively. Speeding is therefore a prevailing problem. To further combat and deter speeding, we see the need to further enhance our enforcement actions by expanding the SEC system.

6. Both overseas experience and a local study have shown that automatic SEC system is an effective enforcement means in deterring speeding. There are findings showing that with the installation of the SEC system, there were reductions in speeding activities, the average speed on roads and the number of speed-related accidents⁴.

² Out of the existing ten wet-film SEC housings, two will be demolished and replaced by new digital cameras housings in this project. Replacement of the remaining eight wet-film housings will be carried out under a separate project involving the widening of Tolo Highway/Fanling Highway which is scheduled for completion in early 2013.

³ Accident and prosecution figures involving vehicle speeding for the past three years are as follows -

Year	No. of Accidents	No. of Casualties	No. of Prosecutions
2005	419	560	227 308
2006	358	460	216 198
2007	383	506	216 945
Average	387	509	220 150

⁴ A study in the United Kingdom in 2000-2002 showed that the number of vehicles exceeding the speed limit dropped by 67% and traffic accidents fell by 65% after the installation of the SECs. Similarly, a study conducted by Transport Department in 1999 also revealed that after installing ten SECs along Tolo Highway and Fanling Highway in 1999, there was a marked reduction of over 50% in the number of speeding vehicles (in excess of the speed limit by 15 kilometres per hour) and 40% in the number of traffic accidents involving injuries.

7. There is also a need to enhance the existing SEC system because the existing wet-film cameras are approaching the end of their life span and should be replaced by new digital models. In respect of the existing eight digital cameras, they only have a resolution of about 1.3 million pixels. Upgrading the photograph resolution will enhance the legibility of the vehicle registration marks captured by the cameras and the effectiveness in processing the data for prosecution. It is expected that the overall efficiency and effectiveness of the prosecution process will also be enhanced with the adoption of the latest digital technology and computer system.

8. The SEC system operates with a portable digital camera and radar unit, a camera pole with housing and a police central computer system. The camera pole with housing is installed on the verge of a road or highway. The camera unit will take photographs of speeding vehicles. The photographs, together with the violation data, will be stored in the storage device of the cameras. Such data will then be downloaded onto the police central computer system for identification of the offending vehicles and responsible drivers, and for follow-up prosecution actions including fixed penalty tickets or summons applications.

9. The locations of the additional 23 camera housings are at **Annex B**. The following criteria are used in determining the SEC housing locations:-

- (a) accident records with particular emphasis on accidents caused by vehicle speeding;
- (b) prevalence of speeding activities observed by the Police;
- (c) the need for an even distribution of SEC housing locations to provide an area-wide deterrent effect;
- (d) strategic or trunk roads with higher traffic speed and traffic flow; and
- (e) geological and environmental factors surrounding the sites.

10. If the proposal in paragraph 4 above is approved and upon completion of the project, there will altogether be 20 digital cameras at 100 housings, representing 100% increase in the number of cameras and 18% increase in camera housings. The camera-to-housing ratio will be increased from the current 1:8.5 to 1:5. The enhanced SEC system will put the concerned road sections under close surveillance and hence strengthen deterrent effect and enforcement capabilities substantially. The automatic fixed SEC system will continue to be supplemented by Police's ad-hoc manual and mobile enforcement operations, in order to achieve the best results in deterring and combating speeding over the territory.

IMPLEMENTATION PROGRAMME

11. Subject to funding approval by the Finance Committee, the proposed implementation programme will be as follows: —

Activity	Target Date
Tendering exercise	October 2008 to February 2009
Contract commencement	March 2009
Commissioning of the 1 st batch of ten housings and six new cameras	March 2010
Commissioning of the remaining 15 housings and 14 new cameras	August 2010

FINANCIAL IMPLICATIONS

12. We estimate that the cost of procuring and installing the new cameras and camera housings, as well as the replacement of the existing wet-film and digital cameras will be about \$32.18 million, with the breakdown as follows :—

	\$ million
(a) Procurement of 20 digital camera units and ancillary equipment	9.80
(b) Procurement of new camera housings, camera poles and power cubicles	5.50
(c) On-site installation (including civil works), testing, commissioning, training and expert report	7.90
(d) Upgrading of the Police backend computer system, software and ancillary equipment	2.71
(e) Electrical and Mechanical Services Trading Fund (EMSTF) project management charges	3.68
(f) Contingency (10% of items (a) to (d))	2.59
Total	32.18

13. On paragraph 12(a) above, the estimate of \$9.80 million is for the procurement of 20 digital camera units and ancillary equipment. Out of the 20 units, each of 12 units consists of a camera, a radar and a flash and each of the remaining 8 units consists of a camera with upgraded pixels only.

14. On paragraph 12(b) above, the estimate of \$5.50 million is for the procurement of 25 camera housings and camera poles to accommodate and support the camera units, and 25 power cubicles to house the electrical devices for power supply.

15. On paragraph 12(c) above, the estimate of \$7.90 million is for the demolition of existing housings and installation of new housings and ancillary equipment including the camera poles and power cubicles; laying of cable ducting; testing and commissioning of the expanded camera system after installation; training of Police staff for the operation of the system and engagement of an independent expert to provide the expert reports on the accuracy and reliability of the system prior to implementation.

16. On paragraph 12(d) above, the estimate of \$2.71 million is for the enhancement of the central computer system currently used by the Police for the processing of electronic prosecution against speeding.

17. On paragraph 12(e) above, the estimate of \$3.68 million is for the payment to EMSTF for providing project management services including the whole process of investigation, design, tendering, installation, testing, commissioning, and monitoring till the end of the defect liability period.

18. The estimated cash flow is as follows -

Year	\$ million
2008-2009	0.39
2009-2010	13.42
2010-2011	18.37
Total	32.18

19. We estimate that the additional annual recurrent expenditure for operating the new SECs and housings, maintenance and related prosecutions would be in the order of \$14 million.

WAY FORWARD

20. We plan to seek funding approval from the Finance Committee on 16 May 2008 for the proposed acquisition of 20 digital SEC units and 25 digital camera housings.

ADVICE SOUGHT

21. Members are invited to note the proposal to acquire 20 digital SEC units and 25 digital camera housings to combat vehicle speeding.

Transport and Housing Bureau
April 2008

Existing Speed Enforcement Camera Housing Locations

Road		No. of Housings
Digital SEC Housings		
1	Tuen Mun Road	16
2	Fanling Highway	8
3	Tolo Highway	8
4	North Lantau Highway	7
5	San Tin Highway	5
6	Tai Po Road	5
7	Castle Peak Road	4
8	Island Eastern Corridor	4
9	Shatin Road	3
10	Ting Kok Road	3
11	Aberdeen Praya Road	2
12	Hoi On Road	2
13	Lion Rock Tunnel Road	2
14	Lung Fu Road	2
15	Gloucester Road	1
16	Kwai Chung Road	1
17	Po Fu Lam Road	1
18	Yuen Shin Road	1
Wet-film SEC Housings		
19	Tolo Highway	5
20	Fanling Highway	4
21	Castle Peak Road	1
Total		85

Proposed New Speed Enforcement Camera Housing Locations

Road		No. of Housings
1	Kong Sham Western Highway	4
2	Yuen Long Highway	4
3	Lung Cheung Road	3
4	North Lantau Highway	3
5	Ching Cheung Road	2
6	Princess Margaret Road	2
7	Tate's Cairn Highway	2
8	Wan Po Road	2
9	Tseung Kwan O Road	1
Total		23