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YORK REGION TRANSIT INSTALLATION OF SECURITY CAMERAS

The Transit Committee recommends:

- 1. The presentation by Rajeev Roy, Manager, Transit Management Systems be received; and**
- 2. The recommendation contained in the following report, April 4, 2006, from the Commissioner of Transportation and Works be adopted:**

1. RECOMMENDATION

It is recommended that:

1. Regional Council approve the installation of security cameras on transit buses and at terminals and that staff be authorized to proceed with a Request for Proposals process for the supply and installation of such equipment.

2. PURPOSE

The purpose of this report is to seek Regional Council approval for the installation of security cameras on transit buses and at terminals.

3. BACKGROUND

In response to recent world events, as well as violent incidents that have occurred on Canadian transit systems, transit agencies are conducting risk and vulnerability assessments and have deployed technical assistance teams to help strengthen security and emergency preparedness. Many transit agencies are undertaking installation of on-board and terminal security cameras.

Unlike many other transit agencies that have had on-board security systems for many years, Canadian transit agencies are now beginning to look at these technologies in order to improve passenger safety. As a late entrant, Canadian agencies benefit from the technological advances and decreasing costs to implement such systems.

York Region Transit (YRT) has taken the initiative to prepare Request for Proposals (RFP) for the installation of security cameras on buses and at terminals. The consultants engaged are currently working with YRT staff to identify the necessary functionalities for

these installations. Once the functionalities are finalized, detailed specifications will be prepared for inclusion in the RFP documents.

4. ANALYSIS AND OPTIONS

Security cameras installed on transit buses would provide the following functions:

- System Security – prominent placement of surveillance equipment can have a natural deterrence effect to reduce criminal activity, resulting in improved customer and operator security.
- Response to Incidents in Progress – surveillance equipment can be integrated with silent alarm buttons to provide improved response to incidents in progress.
- Risk Management – this will include response to incident claims from vehicular accidents, slips, falls, as well as potential negligence claims relating to passenger and driver security.
- Legal Evidence – certain recordings from surveillance equipment are admissible as evidence in legal proceedings. These records can either aid in obtaining criminal convictions or provide valuable evidence in determining the validity of civil claims, particularly where false or exaggerated claims are made.
- Customer Service – this includes audio and visual monitoring to respond to fare disputes and other complaints for in-service vehicles.
- Employee/Contractor Performance – surveillance system can be used to track and monitor certain employee or contractor operations. This can include contractor compliance as it relates to operating, maintenance or customer service parameters.

The security cameras installed at terminals may provide the following functions:

- Incident response.
- System security as described above.

4.1 On-Board Security Cameras

YRT conducted a workshop with staff to identify the key functions for the three transit services provided by the Region: Viva, YRT conventional transit and Mobility Plus. The following is a summary of the specific requirements identified by the workshop participants.

- Risk management relating to passenger safety on and off the bus is essential for all services. This indicates monitoring activity both on and off the vehicle, and the capability to store certain or all footage produced by the system. The same functions that achieve passenger safety also provide passenger security.
- Admissibility of surveillance footage as legal evidence in a court of law is essential for all services.

- Deterrence of vehicle vandalism is essential for all vehicles, both on and off the vehicle.
- Improved incident response is highly desirable for all the services. Thus, streaming of footage and integration with covert alarms can be considered and included or provisioned for in the specifications.
- Driver security is desirable for all services. This relates primarily to customer assaults, but could also include slips and falls in the vehicle.
- YRT and Viva services have an essential need for surveillance as it relates to risk management of external accidents (i.e. pedestrian, cars, etc.) to deal with claims.
- Contractor compliance in terms of maintenance and customer service is desirable, and in the case of Mobility Plus, essential. This relates to specific activities that occur within the vehicle as they are stipulated in the contractor agreements.
- Monitoring and supporting fare evasion charges is desirable for YRT's conventional service as well as the Mobility Plus service. The Viva service uses a Proof-of-Payment system and thus has a need for on-board enforcement officer monitoring.

4.2 Terminal Security Cameras

YRT and its consultants have identified key functions of importance with respect to terminal security cameras. The following presents the specific requirements identified by staff.

- Improved incident response is highly desirable for the terminal locations. Thus, local recording of full motion video and streaming of degraded video (5-15 frames per second) to central dispatch should be included in the specifications. The transmission of degraded video will reduce data communication costs.
- Deterrence of vandalism is essential for the terminal locations. This requires strategic camera placement that will provide inside and outside coverage of the terminal.

4.3 Next Steps

YRT will continue working on the specifications to identify the needs of both the bus and terminal systems. The following items will specifically be addressed during the finalization of the RFP documents:

- Technology: Surveillance systems rely on certain enabling technologies that have advanced significantly in recent years. This includes primarily, but is not limited to, CCTV cameras and the associated storage media. The emergence and proliferation of digital cameras allows for digital storage methods which greatly improve the durability and flexibility of surveillance systems. Digital systems can record and store longer time intervals, offer faster data retrieval, and allow for streaming of video or stills through wireless communications.
- Operations: In the case of on-board security cameras, this concern would be addressed with each of the operations and maintenance contractors. In the case of terminal security cameras, the system will be operated through YRT's own internal resources.

- Maintenance: Hardware maintenance is a concern for on-board security cameras as the vehicles are stored outdoors. Thus, specifications will include appropriate environmental conditions and testing to address this issue. In the case of terminal security cameras, environmental conditions and testing requirements will also be included but there are many existing installations from which YRT can take comfort that there will not be any issue. Regular maintenance of terminal security cameras will be performed through maintenance contractors for which arrangements would be made.

4.4 Implementation Schedule

Subject to the functionalities for on-board cameras being included in the specifications, and the quotes which will be received in response to the RFP, YRT plans to cover a fraction of the existing Viva, Mobility Plus and Conventional Transit fleet this year. The rest of the fleet will be completed next year subject to the approval of future Business Plans and Budgets.

During 2006, terminal security cameras will be implemented at the following locations:

- Promenade Terminal
- Bernard Terminal
- Richmond Hill Centre, including pedestrian overpass (to be constructed in 2006)

4.5 Privacy Issues

This report has been reviewed by Legal Services and customer privacy is not considered an issue with the installation of security cameras.

5. FINANCIAL IMPLICATIONS

The cost of on-board video surveillance systems depends on the following factors:

- Number of cameras – varying system designs employ different quantities of cameras in different orientations.
- Varying technology – the proliferation of digital technologies has greatly expanded the cost and functional range of security camera systems.
- System functionality – often driving the number of cameras and choice of technology is the desired functionality of the system.

Typical capital costs could range from \$5,000 - \$8,000 per vehicle depending on the above factors. The operational cost will include system maintenance, spares, video storage and retrieval and video archiving.

The cost of a terminal video surveillance system depends on the following factors:

- Number of cameras – fixed or pan-tilt-zoom capability including installation cost.
- Video transmission – full motion or degraded video for monitoring purposes at dispatch office including transmission cost.
- Central system – monitoring and central hardware cost.

The system will have a high initial capital cost due to central monitoring and hardware systems. However, the incremental cost of adding another terminal could range from \$30,000 - \$50,000 depending upon the site specific requirements and the above factors. The operational cost will include system maintenance, monitoring staff, spares, video storage and retrieval and video archiving.

The estimated cost of installation, integration and testing of on-board and terminal video surveillance systems and other associated equipment and training of staff and contractors, is summarized in Table 1:

Table 1 Cost Summary			
Year	Planned Scope of Work	Capital Cost	Operating Cost (per Year)
2006	110 Buses	\$550,000	\$50,000
	Bernard Terminal		
	Promenade Terminal	\$200,000	\$10,000
	Richmond Hill Centre		
2007	240 buses	\$1,200,000	\$110,000

Funding has been included in the 2006 Business Plan and Budget for this project. Expenditures in Year 2007 are subject to the approval of the 2007 Business Plan and Budget.

The Finch and Newmarket terminals are GO Transit facilities and YRT is initiating discussions with them regarding the installation of video surveillance systems.

6. LOCAL MUNICIPAL IMPACT

Installation of security cameras will lead to safer communities, in general, through a reduction in terminal graffiti and petty crime. Passengers will feel an enhanced sense of security as well with the presence of security cameras. A reduction in false injury claims can also be expected as a result of the cameras.

7. CONCLUSION

It is recommended that the installation of security cameras on transit buses and at terminals be approved, and that York Region Transit staff be authorized to proceed with a Request for Proposals process for the supply and installation of the equipment.

Senior Management Group has reviewed this report.