

**MEETING DATE July 19, 2006**

**SUBJECT Staff Response to Commission Inquiry - Management Program for Escalators and Elevators**

At its meeting of November 19, 2003, the Commission moved that staff be requested to report back as progress is made in the TTC's ability to provide real time notification to riders concerning elevator and escalator stoppages, with particular emphasis on resource requirements.

In addition, at its meeting of January 25, 2006, the Commission requested staff to report on who has responsibility for keeping escalators moving and changing the direction of travel and to review the feasibility of retrofitting escalators with buzzers or devices that signal the Collectors when they stop working.

After receiving the April 19<sup>th</sup> memorandum for information, the Commission further requested the following:

1. That staff report back on the possibility of shortening the timeframe for the real time escalator and elevator monitoring project.
2. That staff develop a direct line of accountability for the movement of escalators and elevators in subway stations.

**Background**

TTC has worked over the years to improve the customer information and trip planning process. In the event of an elevator or escalator outage, up-to-date availability status of escalators and elevators from telephone or online services is provided and "accessible alternative" signs at elevator locations are being installed to identify alternate routing options when a customer does encounter an out-of-service elevator. Out-of-service signs for both escalators and elevators are in use that includes an expected return to service date for any work which takes longer than a day. Maintenance has steadily reduced the number of unplanned stoppages and emergency crews are on standby to respond to any unplanned calls.

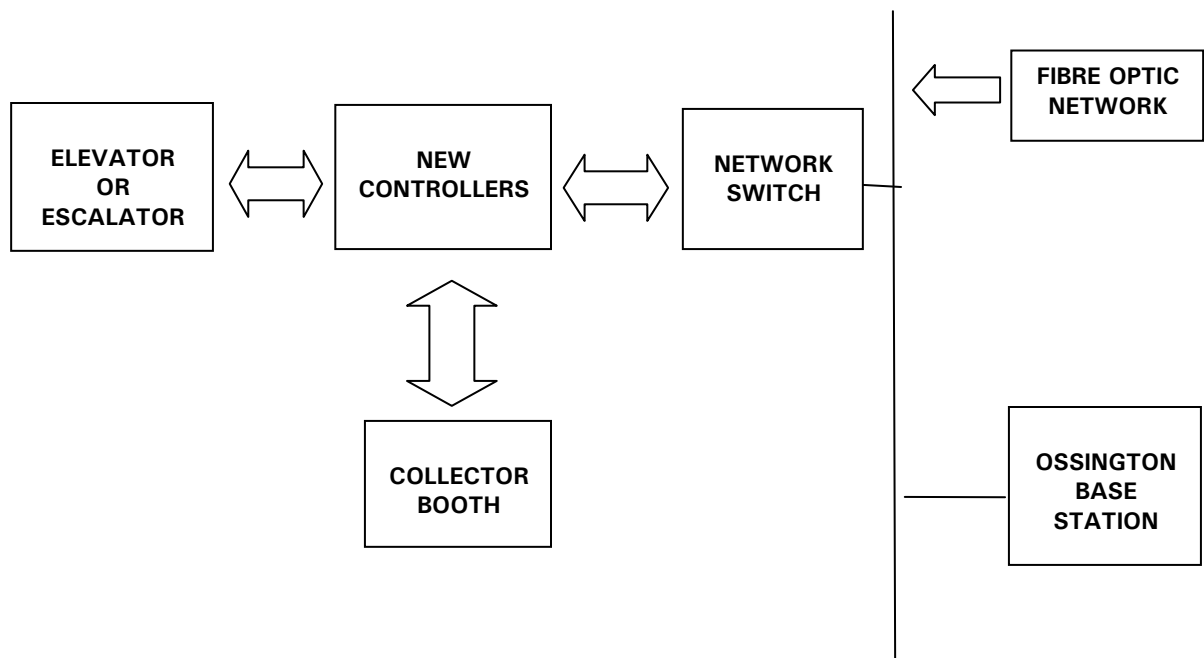
Even with these improvements, the process still largely depends on timely feedback from the field as most elevating units are not visible or wired to the Collector booth.

### Development of a Real Time Monitoring System

A Capital Project was undertaken in 2005 to determine the feasibility of implementing a real time monitoring system on the Sheppard Line that would provide detailed escalator and elevator fault indications to a remote location. There are several benefits to a real time system. They include the ability to alert the Collector to call Transit Control for a Mechanic, to facilitate the gathering of real time fault data for analysis and to improve customer information.

### Scheduling of Real Time Project

Implementation requires the installation of new or modified elevating device controllers on all elevating devices and additional communication infrastructures. The replacement of Sheppard controllers can coincide with the Sheppard Escalator Mini-Overhaul (completion 2010). The communication network will be enhanced during the installation of the CCTV Security Camera Project (completion 2008). This will leave the physical connections of the controllers to the elevating device units, to the Collector booth and to the network (as shown below).



In order to proceed with a full scale implementation and while the equipment and communication infrastructures are being put in place, software development and testing work is still required to ensure that reliable data is captured and transmitted. Specific objectives include the installation of an alert feature for the Collector booth and the accurate collection of real time monitoring and troubleshooting data. Customer display options need to be presented and agreed upon. Bayview Station has been selected as a test location and will be hooked up to our maintenance office at

Ossington Station by the end of 2007. We will then be able to fully test the system, demonstrate its benefits and ensure the successful implementation across the system. All subway elevators and Sheppard Line escalators will be installed by 2010 with the balance of the escalators to follow by 2012. A detailed station/device plan will be developed once the 2007 pilot is fully tested and the schedule will be adjusted accordingly. Cost estimates for implementing the Sheppard Line is \$580,000. New estimates will be developed and additional funding will be requested in next year's budget to expand the system throughout the Subway and SRT systems.

### **Accountability for Keeping Escalators and Elevators Moving**

Transit Control is responsible for communicating to maintenance staff or to a service provider when a unit is out-of-service. The current system does rely on timely feedback from the field to the Collectors who, in turn, notify Transit Control.

When Transit Control is advised about a stopped elevator, a Supervisor is sent to the scene to assist passengers. The service provider is called and the telephone information line is updated. When the service provider has restored the unit back to service, the message system is revised.

When Transit Control is advised about a stopped escalator, an Escalator Mechanic is dispatched. The Mechanic will inform Transit Control of the status of the unit. Regular update to the telephone information line is provided for units unavailable for service. In the case that a stop button is pushed, either the Collector or Janitor is able to restart the unit on their own.

Chief General Manager

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