MEETING DATE: April 11, 2001

SUBJECT: 504 King Streetcar Route: Results Of Police Enforcement Blitz, And Next Steps

RECOMMENDATIONS

It is recommended that the Commission:

1. Request the Toronto Police Services Board develop, in conjunction with Toronto Transit Commission staff, a traffic movement strategy for use on busy transit routes and on roadways with High Occupancy Vehicle (HOV) lanes.

2. Note the following for information:

- violations of traffic regulations on King Street are a significant barrier to the provision of reliable and regular transit service; during the demonstration 10-week police enforcement blitz, 7,191 tickets were issued to motorists for illegal left turns, parking, stopping, and blocking intersections;

- there was no significant reduction in the number of tickets issued per week as the blitz continued, despite a heavy and persistent police presence, indicating that the public's disregard for current traffic regulations is blatant and rampant, and that the motoring public is not deterred by the current fines associated with traffic by-law violations;

- while there were times when traffic flow did improve as a result of the police enforcement, there was still considerable congestion caused by autos in the downtown area and, as a result, surveys of the 504 King route did not show any significant increase in transit speeds through the central area. This confirmed that police enforcement, by itself, is not effective enough to make a marked improvement in the operation of the line; in the longer term, the only way to operate fast, reliable, efficient service is to do something which prohibits private-use vehicles from coming on the streetcar tracks in the first place;

- the frequency of streetcars on the 504 King route is every 2 minutes during the morning peak hour, and this level of service is beyond the practical limits of streetcars operating in mixed traffic. This combination of extraordinarily-high frequency streetcar service being forced to operate in congested mixed traffic is almost unheard of in the transit industry because it is impossible to provide fast, reliable service under such circumstances. A dedicated right-of-way is needed for streetcars on King Street;

- TTC and Toronto Transportation Services staff are working together to address traffic control and enforcement issues such as the hours of parking restrictions which apply in Toronto, and the standing of taxicabs serving the downtown office towers;

- there are several internal operational measures which the TTC itself must take, in addition to police enforcement and a dedicated right-of-way, to ensure that streetcars on the 504 King route operate quickly and reliably; these include re-scheduling non-emergency track and switch maintenance into non-peak periods, improving route management and service-disruption response techniques, expanding the proof-of-payment (POP) fare collection system, removing certain seats at the rear of streetcars to improve passenger movement within the streetcars, and selectively using higher-capacity articulated streetcars; and

3. Forward this report to the City of Toronto, the Toronto Police Services Board, and Toronto Transportation Services and Planning and Urban Development.

FUNDING

Staff will report back on the funding implications of dedicated police enforcement, POP implementation on King, and savings associated with speeding up service.

BACKGROUND

At its meeting on December 8, 1999, the Commission considered a report entitled, *Operational Improvements on 504 King Streetcar*, in which was listed a number of initiatives the TTC is taking to improve streetcar service on King Street. One of these was the need for increased and sustained enforcement of existing traffic regulations.

At its meeting on September 5, 2000, the Commission confirmed the expenditure of $98,000, which was subsequently exceeded, for hiring paid-duty police to aggressively enforce existing traffic regulations along this route.

This report describes the results of the police enforcement blitz, the actions being taken jointly by the TTC and Toronto Transportation Services to improve service on the 504 King streetcar route, and discusses other internal TTC operating problems identified during the blitz and associated solutions.

DISCUSSION

Results of the Police Enforcement Blitz

One of the key factors contributing to the problems of irregular service and overcrowding on the 504 King streetcar line is the heavy traffic congestion over the whole route, and particularly in the downtown area. These high levels of congestion are made worse by private motorists and taxi drivers who flagrantly, and continually, ignore the traffic regulations in place on King Street.

To address this problem, the TTC hired paid-duty police to enforce the existing traffic regulations along the 504 King route, mostly in the congested area between Bathurst and Sherbourne Streets, for ten weeks beginning on September 5, 2000. On a typical day, four to eight officers were on duty. They issued 7,191 tickets consisting of 2,889 for illegal left turns, 2,643 for illegal parking or stopping, 557 for blocking intersections, 150 for passing while streetcar doors were open, and 952 other violations. TTC staff had assumed that, as motorists became aware of the police presence and enforcement blitz, they would start to obey the traffic regulations. However, there was no significant reduction in the rate of traffic violations throughout the ten weeks of the blitz.

Even though there was, at times, improvement in traffic flow in the police enforcement zones, there was still considerable traffic congestion at busy points on the route and, overall, surveys did not show marked improvement in the 504 King service.

Staff made the following additional observations during the enforcement blitz:

i. Police enforcement of traffic violators on King Street is not effective enough, by itself, to make a significant improvement in the overall quality of streetcar service on this route. However, the high violation rate demonstrates that strict and persistent enforcement is essential for any broader plans to improve the operation of the 504 King service.
ii. The current fines for traffic violations are not severe enough to discourage violators. The unabated high rate of traffic violations, and comments from the police, indicate that many motorists – particularly those in commercial vehicles – consider traffic tickets to be an affordable part of "the cost of doing business". Staff also learned that commercial operators, who are permitted to stop briefly in a "No Parking" zone while they are actually loading or unloading, often leave their vehicles unattended for extended periods and receive tickets for illegal parking. When this occurs, they can and do have these tickets recinded immediately at the City’s "First Appearance Facility". The cancellation of tickets in this fashion significantly undermines efforts to reduce congestion through enforcement of traffic regulations.
iii. A major cause of congestion is the long-standing problem of taxicabs parking illegally, notably in the westbound curb lane in front of First Canadian Place and in the eastbound curb lane of the Toronto Dominion Centre. This restricts all westbound and eastbound traffic flows at these locations to a single lane. To date, this can be effectively addressed only with continual police presence, but this is not practical.

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v. The current prohibitions on parking, standing, and turning are from 7 – 9 in the morning and from 4 – 6 in the afternoon. However, streetcar service is often subject to the most severe congestion just after the morning rush hours, and prior to, and just after, the afternoon rush hours. The existing hours of restriction are not effective in reducing traffic congestion during all busy traffic hours and need to be expanded to better reflect current traffic conditions.

To address these observed problems and to improve traffic law enforcement, the following actions are being pursued by TTC staff together with Toronto Transportation Services:

- The development of a traffic movement strategy, in conjunction with the Toronto Police Service, for use on busy transit routes and on roadways with High Occupancy Vehicle lanes.

- The elimination of the practice of rescinding traffic tickets, for illegal parking on selected roadways, especially those with major transit routes, at "First Appearance Facilities".

- The establishment of an alternative arrangement in the central business district for stopped or parked taxis, so that they don't constrict or bottleneck traffic. For example, special stopping bays could be cut into wide sidewalks such as those in front of First Canadian Place and the Toronto Dominion Centre.

- The extension of the current peak period traffic restrictions in the central area to be from 7 – 10 in the morning and from 3 – 7 in the afternoon, to better conform to the hours during which traffic is heaviest.

<u>High-Frequency Streetcar Service Can't Operate in Mixed Traffic</u>

The quality of service on the 504 King streetcar route is often poor, and particularly so during peak periods, when service regularity deteriorates, bunching and gapping occur, and many streetcars are so crowded that waiting customers are unable to board. This proved to be true even during the ten-week police enforcement program, and continues to be largely true at present, despite the fact that the TTC has added a considerable amount of service to the line: four streetcars during the morning peak period in late 2000, and another three streetcars in February, 2001, specifically scheduled to serve the busiest part of the route. As residential development continues along King Street -- over 4,000 residential units between Bathurst Street and Sudbury Street alone -- the requirements for increased capacity and service regularity will be even greater.

With the most-recent service additions, the 504 King streetcar route now has a morning peak-hour frequency of a streetcar every two minutes. The Yonge subway, by

comparison, has a morning peak period frequency of a subway every two minutes and 21 seconds. The subway, however, operates in its own private tunnel, while the 504 King streetcar route, with more-frequent service, must operate in congested mixed traffic. At such a high service frequency, even the smallest disruption -- things such as a stopped taxi, a minor traffic accident, an emergency vehicle stopped briefly on the tracks, or even disproportionately-high passenger loading or unloading -- can cause gaps in service, with the associated bunching and overloading of streetcars. The bottom line is that a route with as high a frequency of service as that operated on the 504 King route cannot operate effectively in mixed-traffic conditions.

Many Torontonians take for granted the high frequency of service offered by the TTC on most of its routes, and likely fail to appreciate how unusual the 504 King situation is. In most other North American cities, and in many European cities, a transit route is considered to have high frequency service when streetcars come every five minutes, or even every ten minutes; the two-minute service offered on the 504 King streetcar is an extraordinarily high-frequency service by any standards. Moreover, in most North American cities which operate streetcars or light rail transit, and in virtually all European cities which operate such service, the vehicles operate in their own physically-reserved right-of-way, not in congested mixed traffic with no more priority than private automobiles.

These two facts taken together -- the high-frequency service and the mixed-traffic operating environment -- present an extraordinarily-difficult operating challenge to the TTC with respect to the provision of fast, reliable, transit service. Under these circumstances, adding more streetcars to the route will not improve service regularity or capacity; having more streetcars stuck in traffic or stranded behind double-parked taxis or courier trucks is throwing away money. In fact, adding streetcars can actually worsen the situation because, as the space between vehicles become shorter and shorter, the sensitivity of the service to minor delays becomes greater and greater, and the likelihood of bunching and gapping increases.

The only way to ensure a higher-quality service on King Street is to operate the service in its own dedicated right-of-way. Staff of the TTC, Toronto Transportation Services, and Toronto Planning and Urban Development are working together to identify options for establishing dedicated streetcar lanes on King Street, and will be bringing forward a separate report to discuss such options.

TTC Operating Practices Must Also Be Improved

During the ten-week police enforcement blitz, the TTC carefully studied the performance of the 504 King streetcar route and, while traffic congestion and mixed-traffic operating disruptions were found to be significant deterrents to the provision of fast, reliable service, TTC staff identified a number of its own operating practices which were also contributing to the poor quality of service on the route. TTC staff have formulated plans to address these problems:

- ***Problem:*** At present, the maintenance and cleaning of streetcar tracks and switches, and other non-urgent track repair work, is carried out, partially, during peak periods. This activity can obstruct the progress of streetcars and, thus, create gaps in service, bunching of streetcars, and reduce service regularity.

Solution: In order to address this problem immediately, crews are being directed to carry out these non-critical activities outside peak service hours. When work must be conducted during these periods, crews are focussing on minimizing the impact of their work on streetcar operations.

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- ***Problem:*** It was discovered that some streetcar operators still may not fully appreciate that it is detrimental to both service and overall traffic if they stop their streetcar at a signalized intersection to either wait for their scheduled departure time or to dash in to get a coffee or refreshment en route. This is because the majority of signalized intersections on streetcar routes are equipped with signal priority detection equipment which will hold a green light or bring-on a green light, for a streetcar detected to be at that signal. A green light held due to either of these operator actions is an improper and disruptive use of the signal priority system.

Solution: All streetcar operators will be re-educated regarding the signal priority system. Training will commence immediately.

- ***Problem:*** Short-turning of streetcars, one of the most frustrating experiences for streetcar passengers, is sometimes done towards the end of a streetcar operator's shift, in order to ensure that that operator returns to his or her home division on time so that overtime costs can be contained. This cost-consciousness must be balanced against the detrimental effects on customer service which such short-turning generates. Short-turning of streetcars is also done for the purpose of filling a gap in service in the opposite direction. Even so, such short-turns are very annoying for customers.

Solution: Streetcar route supervisors will be re-educated regarding techniques for determining the need for pre-emptive short-turns and in alternative means of achieving service regularity along the entirety of a route. This program will commence immediately.

- ***Problem:*** Operating speed on the 504 King streetcar route is decreased because of the large amount of time required to have all boarding passengers enter by the front door in order to do their fare transaction with the driver. This delay could be significantly reduced by allowing customers, who have already paid their fare, to board streetcars on this route using the rear or, in the case of larger articulated streetcars, the two rears doors.

Solution: Staff will immediately review the measures necessary to expand the proof-of-payment (POP) program, which is currently in use on the 501 Queen streetcar route, to the 504 King streetcar route. In particular, a review of fare enforcement and security measures will be undertaken in time for possible implementation of POP on the 504 King route in September, 2001.

- ***Problem:*** When a transit service is operating at an overall low rate of speed, there is little downside to having closely-spaced stops, because the traffic congestion and obstructions require the streetcars to stop frequently anyway. However, upon successful implementation of the previously-described actions to speed-up service on the 504 King streetcar route, it should be possible to further improve service by reducing the number of service stops located on the route. This would be purposeful only if a situation is achieved where streetcars are able to move quickly and without obstruction.

Solution: In anticipation of this situation, a review will be undertaken of possible stop eliminations which, together with other measures, would result in faster service on the 504 King route. Stop eliminations can be undertaken with very short lead time, so implementation could be done as soon as the operating circumstances on this route warrant such action.

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- ***Problem:*** Operating speeds on any busy transit route, including the 504 King streetcar route, are decreased when a high level of crowding on the vehicle results in the vehicle stopping for a long time at stops while people try to squeeze onto the very limited space available on the streetcar. TTC staff have detailed knowledge of the

- specific runs which are busiest, particularly in the morning peak period.

Solution: In order to provide more capacity on these particularly-busy runs, higher-capacity articulated streetcars have replaced some regular streetcars, so that boarding times can be reduced at busy stops. Commencing February 19, 2001, seven of the 43 streetcars operating on the 504 King route have been replaced with these higher-capacity articulated streetcars.

- ***Problem:*** Operating speeds on any busy transit route, including the 504 King streetcar route, are reduced when passengers crowd in the front half of the streetcar, making it difficult for people to board quickly. The time required for passenger boarding is increased when people have to squeeze in because the front door is crowded. This problem is particularly noticeable on streetcars where the rear half, or rear third in the case of articulated streetcars, contain double seats on both sides of the aisle, thus making the standing and walking space of the aisle very constrained. This, in turn, deters people from using the standing space in the rear sections of the streetcars.

Solution: In order to address this problem, a test will be undertaken on ten streetcars to replace the rear-section double seats, on the "door" side only, with single seats, so that the standing and walking space provided in the aisle will be much improved. This should result in more-effective use of the rear sections of the vehicles, and reduce the tendency for passengers to crowd into the front sections of the streetcars. This test will commence in September, 2001.

- ***Problem:*** The reliability and regularity of service on streetcar routes can be dramatically reduced in the winter when heavy snow storms occur, large curbside mounds of snow are created by ploughs, and parked vehicles stick out onto the tracks and obstruct streetcars.

Solution: In order to improve this situation, TTC staff, in conjunction with City snow removal crews and the Police, have formed Emergency Snow Removal Teams to immediately remove vehicles obstructing streetcar tracks and to give priority snow removal to these streetcar routes. This was tested successfully this past winter and

will be continued in the winter of 2001-2002.

- ***Problem:*** The reliability and regularity of streetcar service can decrease significantly when the frequency of service becomes very high, and the spacing between vehicles very close. Successive streetcars catch up to each other and create bunching and gapping. Moreover, very closely-spaced streetcars can reduce the effectiveness of the transit signal priority system because this system is not programmed to provide additional green time for more than one streetcar at a time.

Solution: In order to address this problem of too many streetcars too close together on the 504 King streetcar route, work will be done regarding operating streetcars in coupled pairs, at more manageable headways. Coupling streetcars would allow full use of the capacity of both streetcars, and both streetcars could benefit from signal

priority. The TTC disposed of its streetcar couplers some years ago owing to unreliable performance of this equipment, but staff will complete an assessment of the technical feasibility and costs associated with conducting a test of this operation.

Problem: The reliability and regularity of streetcar service on the 504 King and other streetcar routes is significantly affected by streetcars which break down while in revenue service. The TTC's streetcar fleet is aging, with some streetcars as old as 23 years and approaching the end of their 30-year design life. Many components in the streetcar propulsion systems are now obsolete and are no longer available from any supplier.

Solution: TTC staff are currently designing a major overhaul program for the TTC streetcar fleet which, if implemented, will significantly improve the reliability of the TTC's streetcars. This overhaul program is planned to commence in 2010 and will be completed by 2013.

SUMMARY

The Police enforcement blitz on the 504 King streetcar route revealed that there is a very high rate of traffic regulation violation along King Street. In order to address this, there is a need for strict, persistent, and consistent police presence. However, even such police presence is not effective in deterring traffic violations because current fines are not severe enough, commercial operators have the ability to get their tickets rescinded, the current hours of parking prohibitions on major arterial roads are not consistent with the hours of heavy traffic congestion, and there are persistent problems of taxi cabs standing and parking on arterial roads, thus reducing these roads to one lane of traffic, in which streetcars must operate.

In response to these problems, TTC staff are working with Toronto Transportation Services staff to take action on changing the hours of parking restrictions, identifying other locations for taxis, and developing a traffic movement strategy for use on busy transit routes and on roadways with High Occupancy Vehicle lanes.

The ten-week study revealed a number of internal TTC operating problems which must be addressed in order to improve the quality of service being provided on streetcar routes. TTC staff are responding to these problems through a number of initiatives such as re-scheduling track and switch maintenance work to off-peak hours, refining and modifying short-turning practices in response to service disruptions, expanding the POP fare collection system, and changing the seating configuration in the rear of streetcars to allow for better passenger movement within the streetcars.

The ten-week study also revealed that high-frequency streetcar service, such as that offered on the 504 King streetcar route, cannot operate reliably or quickly in congested mixed traffic. There are few, if any, cities in the world besides Toronto which attempt to operate such high-frequency streetcar service without the benefit of a physically-separated right-of-way. Options to establish such a right-of-way on King Street are being pursued by the TTC in conjunction with Toronto Transportation Services.

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March 27, 2001

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