

To: GVTA Board of Directors

From: Ian Jarvis, Vice President, Finance and Administration

Date: June 24, 2002

Subject: **Managing Fare Evasion**

PURPOSE

The purpose of this report is to inform the Board of the status of the process underway to reduce revenue loss due to fare evasion.

BACKGROUND

Transit revenues are TransLink's biggest source of revenue. About \$236 million in transit fares, which is 39% of total revenues, is expected to be collected in 2002.

Public transit organizations everywhere experience a loss of revenue due to fare evasion. Transit organizations are faced with the challenge of minimizing, in an effective and efficient manner, the amount of evasion that takes place. Managing revenue includes managing fare evasion.

In Greater Vancouver, revenue loss through fare evasion has been a specific concern of the public in recent years. During the public consultation process on financing in the fall of 2001, this issue was raised by many people who wanted to see TransLink reduce revenue loss from fare evasion before providing new revenue in the form of taxes or increased fares.

Appendix A provides an overview of the current practices in place to combat fare evasion. It also provides a description of our current collection and fare systems. The key elements that should be highlighted are as follows:

- The bus system is a closed system in that each passenger without a monthly or annual pass must interact with an electronic fare box which validates transfers, fare savers and counts the coin fare to ensure that proper payment is received. Pass holders must show their valid fare to the driver.

- All other modes including SkyTrain, SeaBus and West Coast Express operate on a proof of payment system in which the passenger must present a valid fare when checked within a fare paid zone.
- The proof of payment system is not unique and is utilized in many systems throughout the world. This system relies on surprise checks by operating personnel who check for valid fares. Passengers caught without valid fare are directed to purchase a valid fare and are subject to a fine under the Greater Vancouver Transit Regulations.
- A fare audit is undertaken three times a year to provide an estimate of the rate of fare evasion on the system. This information, in addition to information that is logged on a daily basis by SkyTrain personnel, is used to target fare checking and enforcement activities.
- The effectiveness of fare enforcement is hampered by a number of factors including the limits in powers of TransLink Special Constables; fine levels and the efficacy of collection systems, court processes and available resources.

The \$80 million funding package approved last fall was made up of \$40 million from fuel taxes, and \$20 million each from property taxes and transit revenues. The new revenues to be generated from transit revenues included increases in fares, commercial revenues and the reduction of fare loss. In an effort to determine if there is a better way to produce enough revenue, encourage ridership, and reduce fare evasion a fare review process was initiated by TransLink. The review process has included the following activities: discussion groups with employees at SeaBus, SkyTrain, CMBC; a multi-stakeholder meeting that included representatives from user groups; and a review of fare evasion policies of transit operations elsewhere in North America.

TransLink receives comments on a continuous basis speculating on the extent of fare evasion (some as high as tens of millions of dollars). Many commented that if turnstiles were in place on the SkyTrain system and if front line staff undertook more checking the property tax increase would not have been required to fund the transit system. Because of the persistent perceptions about the level of fare evasion, TransLink also committed to have an independent audit done on the whole issue.

DISCUSSION

The development of a strategy to reduce the current level of fare evasion is complex as there are a number of contributing factors and related issues. A comprehensive strategy would address:

- public perceptions and attitudes
- employee behavior and attitudes
- operating principles
- fare structure
- technology
- enforcement and collection regulations and processes

Like any cost in a business, fare evasion must be managed. Fare evasion in a transit system is comparable to shoplifting in the retail sector. Retailers estimate the cost to their business and then employ a number of techniques to improve their net revenues including; security personnel, communications and technology to ensure that all goods that leave the store have been paid for. These same techniques apply in the transit system.

As outlined in Appendix A, TransLink employs a systematic approach that includes many of the techniques retailers use to manage the issue of fare evasion. The issue at hand is to determine if the current practices can be improved upon with the existing level of resources and are there other cost effective strategies that can be utilized to improve net revenues.

So where are we?

There has been significant work done to date to manage revenue loss from fare evasion. A number of steps have been taken, particularly since the end of the labour dispute in 2001 during which there was virtually no fare checking on the system. A lot of information and suggestions have been gathered through the process underway which will require evaluation to determine if a reasonable pay back can be achieved.

Our fare evasion loss is not materially different from other transit operations who are willing to share their experiences. The issue is complex and a reasoned approach is required. We commit in this report to establishing a benchmark and reporting fare evasion loss on a regular basis. We will continue to maintain the maximum level of fare checking with the existing resources.

What has been done in addition to the request for an audit?

In order to satisfy ourselves and to address the perceptions of the public, the first formal step in developing an enhanced strategy to improve the management of fare evasion was to commission an independent audit to estimate the current level of fare evasion and to provide suggestions for improvements to current practices and procedures. This process and the results are described later in this section.

Increased Checking

Before the audit was commissioned TransLink had already been stepping up the efforts to reduce the level of fare evasion. Fare checking data generated by SkyTrain personnel had indicated that the fare evasion rate in the period immediately following last year's labour dispute was double the rate just prior to the strike. To address this issue, the level of fare checking and enforcement on the SkyTrain was increased using existing personnel. As a result, the level of ticketing on SkyTrain more than doubled in the period from September 2001 to date and the level of evasion has been reduced to pre-strike levels. Up until 2000, SkyTrain Attendants checked about 155,000 fares a week. The number of fare checks now being done by the SkyTrain

Attendants (STAs) has increased to about 230,000 per week, representing about 25% of current SkyTrain passengers. The number of violation tickets issued has also increased significantly. In 2000, about 1,400 tickets per month were issued. Today, Special Provincial Constables are issuing about 3,300 tickets per month. The intention is to keep this level of checking up to further reduce the level of evasion on the SkyTrain system.

Additional SkyTrain and Security personnel are currently being hired for the Millennium line. These resources are being deployed on the Expo line, which has improved the staff presence and allowed for increased fare checking. The fare evasion data that is captured during this time will be used to evaluate the reduction in fare loss with increased staff presence and fare checking.

Electronic Fare Boxes

The implementation of the electronic fare boxes on buses was completed in February, 2002. Sometimes controversial in the public view, a key reason for this significant investment was to reduce the level of fare evasion on the bus system. The immediate effect of these boxes was to reduce the level of foreign and other non-valid coins to almost nil (see pictures below) and to eliminate the theft of transfers that are now secured inside the box. The data captured by the system will become more reliable as the consistency in which the fare boxes are operated improves and it is, therefore, too early to estimate their impact on fare loss. The electronic fare boxes can also facilitate the migration to swipe cards, proximity cards and smart card technology.



CUBIC Farebox Burnaby and Oakridge Transit Centres Nov 1 - 30.



DUNCAN Farebox – Richmond, Surrey, Port Coquitlam and North Vancouver Transit Centres Nov 1 - 30.

Ticket Vending Machines

In addition to the fare boxes on the buses, new Ticket Vending Machines (TVMs) being installed on the SkyTrain system will reduce fare loss. Incidents of mispayment will be reduced as the new TVMs accept all 5, 10 and 20 dollar bills when installed, and will accept debit and credit cards by the end of the year. They will issue proof of payment transfers that will be validated by the electronic fare boxes on the buses and can dispense monthly or 28 day passes which will facilitate more prepaid revenues. As with the electronic fare boxes, the TVMs are equipped to facilitate the adoption of electronic payment in the form of smart cards.

Electronic Gates

In anticipation of an eventual introduction of smart cards, TransLink staff have been investigating the components of an implementation. This work has been done under two programs. The first was the Provincial ITS Vision and Strategic Plan which investigated electronic payment systems as a major initiative. The second program was part of a federally funded national consortium called "Integrated Mobility Systems" (IMS I) which explored methods of accessing and integrating a range of services using smart cards. As these programs have been generic in nature, staff are starting the preparation of a TransLink specific business case for smart cards. This will define the most appropriate business model and outline the benefit assessment including the impact of smart cards on fare evasion.

Fare Evasion Communications Campaign

It is important that our customers and the general public be aware of the effect of fare evasion on our system, and the consequences for those who knowingly evade paying their fare. A communications campaign has been developed that will begin in August with posters within the system that explain the proof of purchase system and reminds customers about the fare paid zones. In addition to the posters, the signage is being enhanced on the system to speed visual recognition of fare paid zones. The campaign

will also include posters that explain the role and function of the staff who are involved in checking fares. With the opening of the balance of the Millennium Line on August 31, and the new 97B Line link to the system, customers will be provided with information in the Buzzer on the proof of purchase system that is used extensively within the system.

In addition to the specific customer information items, an effort will be made to inform the general public through the news media about what is being done to reduce fare evasion, what the consequences are for a person who is caught and an explanation of the proof of purchase system. The overall message is that people who cheat aren't beating the system but, rather, they are hurting transit users and taxpayers. Furthermore, our research indicates that there is no public tolerance for people who try to beat the system and, therefore, we will use all means available to us to reduce fare evasion.

KPMG Audit of Fare Evasion

TransLink contracted KPMG, an international accounting firm, to complete an audit of fare evasion. The objectives of the KPMG audit were to:

- Estimate the amount of fare evasion taking place
- Review and assess the reasonableness of TransLink’s methodology for estimating fare evasion. Provide recommendations to improve the methodology.
- Review and assess the current fare checking, enforcement and fare audit processes and procedures. Provide recommendations to improve the processes and procedures.

The KPMG audit report is attached as Appendix B. The following table summarizes KPMG’s estimates of the amount of fare evasion taking place. KPMG’s evasion rates are slightly higher than TransLink’s estimated evasion rates.

	KPMG¹ Estimated Loss	KPMG Evasion Rate
Bus	\$2,871,000	2.6%
SkyTrain	3,301,000	8.7%
SeaBus	410,000	8.5%
WCE	97,000	1.6%
Total	\$6,679,000	3.9%

1 Fare evasion rate is the percentage of fares checked in which there is an exception to full fare. (KPMG comments that the evasion rate on buses could be 50% higher, increasing the rate from 2.6% to about 4.0%, and increasing the revenue loss by a further \$1.4 million.)

The KPMG estimated loss of \$6,679,000 equates to 3.2% of total fare revenue of \$208,250,000 in 2000. TransLink's estimate of revenue loss was 2% for the four-month period immediately following the labour dispute.

The specific recommendations in the audit report have been reviewed by a steering committee that is led by the VP, Finance and Administration with representation from each of the service providers, TransLink security and public affairs staff. A list of the KPMG recommendations and management's response is outlined in Appendix C. Many of the recommendations have already been acted upon. Some of the more visible steps that are underway include:

- Rider information campaign on fare evasion initiated in July
- Fare zones clarified at some SkyTrain stations
- Some turnstiles in the SeaBus stations closed off resulting in marine attendants checking the fares of most passengers boarding the SeaBus

Fare Evasion in Other Jurisdictions

TransLink also requested KPMG to conduct enquiries into fare evasion at other transit systems. KPMG's enquiries, as summarized in Appendix C, show the following:

- Fare evasion is a concern to transit operators generally.
- Generally, transit operators have difficulty in quantifying the revenue losses from fare evasion. Losses reported are often no more than "educated guesses".
- Most of the transit operators obtain fare evasion estimates through internal sources, although some external studies of the issue have been conducted.
- Fare evasion information and estimates of revenue losses from fare evasion is more difficult to obtain for buses than rail transit systems.
- Fines for fare evasion tend to be significantly higher than those currently levied by the BC Provincial Court and, in some jurisdiction, revenues from fines are received by the transit operator.

Levering our existing resources

Utilizing the results of the KPMG report, we have commenced a comprehensive review of current procedures that involves the participation of front line staff, customers, industry experts and Board representation. Appendices E and F provide an overview of the process and the results to date. The suggestions received in this process reflect the complex nature of the issue and the key themes are as follows:

- Fare structure and media
- Jurisdiction of Special Constables and staffing levels
- Public perception of TransLink's attitude towards fare evasion
- Lack of enforcement staff support for front line staff
- Collection process – enforcement

A significant number of suggestions and recommendations were identified through this process. Many of these suggestions involve policy change and clarification of roles and responsibilities, and it will take some time to evaluate them in terms of cost and benefit.

An example which can be used to illustrate the complexity of the issue is the current policy on buses referred to as “inform not enforce”. This policy directs bus drivers to inform passengers without valid fares that a valid fare is required to enter the bus. If confronted, the driver is to allow the passenger on-board. This policy is founded on the premises of the role of the driver and to reduce the amount of driver assaults. Most assaults on drivers relate to issues around avoidance of fare payment. In order to make an informed decision on any amendment to this policy the following factors should be considered in consultation with staff and unions:

- Driver roles/responsibilities
- Driver safety
- Driver support systems
- Fare enforcement capability on buses

Increased fine levels and offenses

Since last fall, TransLink has undertaken the background work and evaluation required to prepare a request to increase and expand fines for transit related offenses.

A companion report dealing with the issue of fine levels and infractions recommends tripling the existing fines for fare evasion, setting minimum fine levels as well as requesting the Province to share fine revenues to provide TransLink with additional resources to address fare loss and safety and security on the system.

An alternative fare enforcement scheme will be considered to improve fare enforcement fine collection. The feasibility of using collection methods similar to private operators of parking facilities will be examined. Common law of trespass could be used as the basis to issue collection notices.

Establishing a fare loss benchmark – regular evaluation and reporting

A key element of a strategy to reduce fare evasion is to establish a benchmark to work towards. Information gathered through the KPMG audit and our own research indicates that no system will eliminate fare evasion entirely. Even those rapid transit systems which deploy fully closed systems with automated gating system incur fare loss – some reported as high as a 4% fare evasion rate.

As a target to work towards staff have established an initial target of a 2% revenue loss from fare evasion which appears to be the industry benchmark. Based on the KPMG audit this would equate to reducing the current estimate annual loss of \$6.7 million by \$2.5 million.

It is our intention to report out at least annually on the rate of fare evasion and fare loss and to update the board on the progress to meeting our stated target.

Fare Enforcement - Powers and Jurisdictional Issues

The jurisdictional authority of TransLink's Special Police Constables is limited to the SkyTrain system, SeaBus, West Coast Express at Waterfront Station only and bus loops adjacent to the SkyTrain system. SPCs are the only TransLink personnel who are empowered to issue violation tickets and enforce the provision of the Greater Vancouver Transit Regulations. Other personnel can check for fares and ask non-fare payers to purchase a valid fare or leave the system but they have no power to enforce.

This means that there is no enforcement capability on bus or West Coast Express. The appropriate powers for SPCs is currently under review by the Solicitor General. This initiative has not been active for some time as other competing priorities are taking precedence. TransLink staff are formulating a position for the Board's consideration.

Gating

There appears to be a view that gating the SkyTrain system will reduce fare evasion and improve the perception of safety and security on the system. Information found on the internet indicates that some closed systems experience revenue loss in the range of 4% of revenues.

As outlined in Appendix A the system was designed to be barrier-free to improve the movement of passengers.

The most recent formal review of the issue was done for the Rapid Transit Project Office (RTPO) in September 2000. The study assumed a 5.8% fare evasion rate for the current "proof of payment" resourcing. Based on capital cost estimate of \$83 million to gate both the Expo and Millennium line and increased operation costs of \$22 million per year, the estimated incremental cost for gating was \$300 million on a net present value basis.

The KPMG fare evasion rate estimate of 8.7% is higher than that assumed in the RTPO study. However, based on the same capital cost estimate of \$83 million plus an additional \$22 million in incremental operation costs the investment in gating would not be recovered from reduced fare evasion, even if fare evasion was reduced to nil.

CONCLUSION

Transit organizations experience revenue losses due to fare evasion. TransLink has fare checking, fare enforcement and fare audit processes in place to minimize the amount of fare evasion.

The independent audit conducted by KPMG indicates that TransLink's current fare audit program probably underestimates fare evasion revenue loss, but the revenue loss rate is not substantially higher than reported by other transit organizations, and is substantially lower than commonly believed by the general public.

Much has been done in the past year to reduce fare evasion, and more still needs to be done. The input and involvement of front line staff and the results of the KPMG audit provide the basis for improving our processes.

We will update the Board on a regular basis on the progress being made to increase revenues through the reduction of fare loss.

Attachments:

- Appendix A: Background Information – Managing Fare Evasion
- Appendix B: KPMG Audit Report
- Appendix C: Addendum to KPMG Report
- Appendix D: Summary of KPMG Recommendations and Management Responses
- Appendix E: Summary of Employee Focus Groups
- Appendix F: Summary of Cross Functional Discussion Panel