City of Richmond

Report to Committee

To:	Public Works and Transportation Committee	**Date:**	May 17, 2010
From:	Victor Wei, P. Eng. Director, Transportation	**File:**	01-0154-04/2010-Vol 01
Re:	**TRANSLINK SMART CARD AND FAREGATE PROJECT - IMPLEMENTATION SCHEDULE**		

Staff Recommendation

That staff continue to work with TransLink to facilitate the implementation of a smart card fare collection system including electronic faregates at all Canada Line rapid transit stations.

Victor Wei, P. Eng.
Director, Transportation
(604-276-4131)

Att. 1

FOR ORIGINATING DEPARTMENT USE ONLY	
ROUTED TO: — **CONCURRENCE** RCMP ..... Y ☑ N ☐ Building Approvals ..... Y ☑ N ☐ Development Applications ..... Y ☑ N ☐	**CONCURRENCE OF GENERAL MANAGER**
REVIEWED BY TAG — YES ☑ NO ☐	**REVIEWED BY CAO** (DEPUTY) — YES ☑ NO ☐

Staff Report

Origin

On January 14, 2008, the Premier and the Minister of Transportation announced the $14 billion *Provincial Transit Plan*, which includes the introduction of a smart card system and the installation of electronic faregates and closed-circuit cameras at rapid transit stations. On May 28, 2010, TransLink announced a shortlist of three consortia selected to submit proposals to supply a smart card and faregate system (see **Attachment 1**). This report provides an update on the current status and implementation schedule of this combined project.

Analysis

1. Project Background

In December 2009, the TransLink Board authorized a project to design, implement, test, commission, operate, and maintain a new smart card fare collection system including the installation of faregates at all of the rapid transit stations. **Attachment 2** illustrates typical smart card features. The primary objectives of the project is to:

- improve operating efficiency and increase ridership through improved information and data;
- create new opportunities to generate or increase revenue;
- provide convenient new options for transit riders to increase customer satisfaction;
- improve the quality and efficiency of transit service delivery; and
- improve safety and security.

Initially, the new fare collection system will be designed to mimic the existing zone-based fare structure. The new smart card system will enable TransLink, at some point in the future, to replace this zone-based fare structure with a distance-based structure thereby resulting in a more equitable fee for users, such as Richmond passengers travelling to and from southern/central parts of Vancouver, which is currently a 2-zone fare. The new system will be deployed across all of TransLink's transit services including buses, HandyDART, SkyTrain and Canada Line, West Coast Express, and SeaBus. The project includes three main streams of activities:

- procurement of the smart card and faregate system (i.e., capital procurement and a 10-year operating and maintenance agreement);
- design and construction of improvements to older SkyTrain stations to ready them for faregate installation; and
- analysis of business processes and opportunities to take advantage of the new system.

2. Schedule and Budget

Procurement and design of the equipment and systems will occur in 2010 with implementation occurring during 2011 and 2012 (see **Figure 1**). The station construction program is scheduled to be completed by September 2012 while the new fare collection system is scheduled to be in place by early 2013.

The project has a total capital budget of $171M, which includes system acquisition, station construction and internal costs. The Province of British Columbia is contributing $40M and the Government of Canada is contributing a further $30M for a total of $70M in senior government contributions.

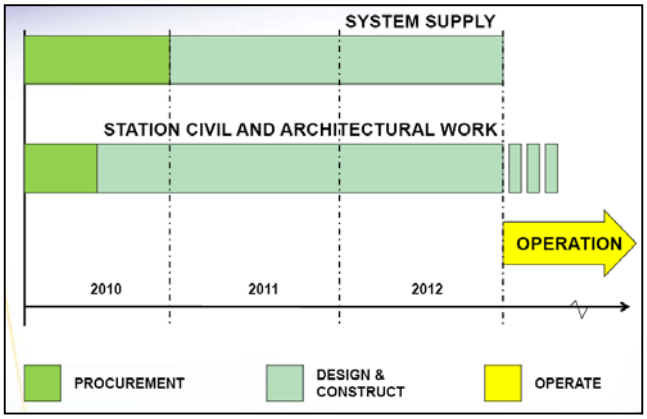

Figure 1: Project Schedule

3. Current Status

Work is underway on all three streams of activities. A project steering committee includes representatives from TransLink and the Province of British Columbia; staff from TransLink and all of its operating subsidiaries are actively involved in the project. A business process team has initiated an internal consultation process to identify needs and requirements that the new system will need to meet, and later this year will focus on new opportunities and potential business changes to take advantage of the new systems and data.

With respect to the systems procurement, a Request for Qualifications (RFQ) was issued in December 2009; ten submissions were received by the close of the process in mid March 2010. TransLink has reviewed the submissions and, at the end of May 2010, identified a shortlist of three consortia that will be asked to develop formal proposals based on TransLink's specifications. All three groups have international experience in supplying smart card electronic fare payment systems and faregates to some of the biggest transit operations in the world.

With respect to the station modifications, the work has been organized into four "design packages" based on the level of modifications needed and design consultants have been hired to design the required modifications. The modifications are largely limited to the Expo Line stations, which, unlike the Millennium and Canada Lines, were not designed to accommodate future faregates. TransLink aims to issue the first construction tenders by early 2011.

4. City of Richmond Involvement

Stakeholder consultation is underway as is co-ordination with local municipalities, including Richmond. To date, meetings with affected municipalities, which began in April 2010, have discussed the overall project and the proposed Design Approval Process (DAP) and Construction Approval Process (CAP). As all work for the Canada Line stations will occur within the station envelopes, no formal approvals or permits are required from the City. Notwithstanding, the design team will share construction drawings with the City for staff's information. TransLink staff have also confirmed that a building code and fire safety consultant has been retained to ensure that the station modifications do not impact the life/safety features of the stations. Staff will work with TransLink to ensure that the functional impacts of the faregates on passenger flow and queuing at station entrances are minimized.

Public notification of the upcoming changes will occur prior to the start of station modifications and likely will be tailored to the degree of construction activity required. In Richmond, all Canada Line stations are designed to easily accommodate faregates and thus the required work

will be relatively minor. Public notification could encompass a display board or information kiosk within the station as well as notices published in local newspapers.

Financial Impact

None.

Conclusion

Per the *Provincial Transit Plan*, TransLink has initiated a $171M project to introduce a smart card system and install electronic faregates at all rapid transit stations, including the Canada Line in Richmond. Station modifications are scheduled to begin in early 2011 and be completed by September 2012 with the launch of the smart card system occurring in early 2013.

All transit users are expected to greatly benefit from this project via improved travel safety and security, increased convenience of fare payment and a more equitable fare structure. Staff and the TransLink project team will continue to meet as required throughout the project life and regular updates will be provided to Council on the project status.

J. Caravan

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JC:lce

TRANSLINK

News Release

For Release: Immediately
May 28, 2010

Contact: Ken Hardie
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TransLink selects companies to propose Smart Card / Faregate system for transit

Three consortia that supply smart card electronic fare payment systems and faregates to some of the biggest transit operations in the world have qualified to submit proposals to supply a Smart Card and Faregate system for TransLink, to be in operation by the target date of first quarter of 2013. The three groups are:

Thales/Octopus International Projects – creator of the 'Octopus Card' used on Hong Kong's transit service and supplier of similar systems in the Netherlands, Norway and Dubai.

Serco/Parkeon – who introduced a complete smart card program for Perth, Australia and have provided related systems to transit operations in Belgium, England and Dubai, as well as to the French national rail system, SNCF.

Cubic/IBM – whose systems include London's 'Oyster Card' and systems for US transit agencies in Los Angeles, Atlanta, Miami-Dade, San Francisco plus Brisbane in Australia.

The three groups were among 10 that responded to TransLink's 'Request for Qualifications,' a process that identifies suppliers with the technology and the track record to provide the systems and services needed. The next stage in the process will launch in June when these groups will be asked to develop formal proposals based on TransLink's specific requirements.

The proposals received will be evaluated against qualifications, technical and financial criteria to identify the most cost and technically effective system for TransLink. A contract, that will include operations and maintenance of the system for 10 years, could be awarded later this year with work beginning in 2011.

Funding for the Smart Card / Faregate project includes $40 million from the provincial government and $30 million from the federal government's Build Canada Fund. TransLink will cover the remaining costs.

TransLink CEO Ian Jarvis says, "Smart Cards will make our transit system easier to use for the customers and provide invaluable information that will help us maximize the efficiency and productivity of our fleets. Faregates will address the public's long-standing concern with fare evasion on SkyTrain and will promote a greater sense of security," he says.

TransLink's smart card will be modeled after electronic fare payment systems in use around the world. Transit customers use a card with an electronic chip that they 'load' with funds to pay for their transit trips. In many of the world's leading systems, customers tap their cards on special readers when they enter a transit vehicle or station and some systems also have customers 'tag-off' as they exit. The fare charged to their card can be based on the distance they travel, the time of day, the specific route or other factors.

In fact, smart cards will give TransLink more flexibility to structure the transit fare system to achieve a number of goals including increases in efficiency and ridership. In addition, smart cards generate a significant amount of valuable data on how customers use the transit network – information that TransLink will use to refine routes and schedules, or even to help determine the size of the buses needed at various places and times.

The introduction of an electronic fare payment system provides the opportunity to install Faregates in SkyTrain and SeaBus stations. Adding a gate or barrier to a Smart Card process is relatively simple and, in fact, the two systems complement each other. However, because most of the original Expo Line SkyTrain stations were never designed with the necessary space for Faregates, the overall project includes station modifications that will begin next year.

CEO Ian Jarvis says it was particularly gratifying to have all of the world leaders in Smart Card and Faregate technology express interest in putting TransLink's new system in place. He adds, "We're especially grateful to yet again have the financial support of the provincial government and the federal government in a project that will contribute so much to our ongoing drive to deliver efficiency, effectiveness and greater customer benefits."

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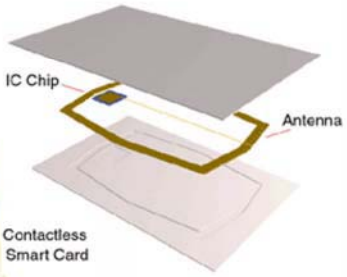
SMART CARD



An "intelligent" card that be used for fare payment and other services

Computer chip is embedded in a credit-card size plastic card

Highly flexible - supports a range of fare products and pricing strategies

Can be printed with custom graphics and photos

Available in two types – "permanent" and "disposable"

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