

4

YORK REGION TRANSIT ELECTRONIC FAREBOX PROCUREMENT AND UPGRADE

The Transit Committee recommends the adoption of the recommendations contained in the following report, April 26, 2005, from the Commissioner of Transportation:

1. RECOMMENDATIONS

It is recommended that:

1. Regional Council authorize York Region Transit staff to enter into negotiations with the exclusive Canadian supplier of GFI Genfare electronic fareboxes, Garival Incorporated, pursuant to the sole source provisions of the Purchasing By-Law.
2. Regional Council authorize York Region Transit staff to enter into negotiations with Garival Incorporated for refurbishing of the existing 159 GFI Genfare fareboxes operating on DOS based software, to the Windows-based Version 7 operating system, at a cost not to exceed \$1,297,521, plus taxes.
3. Regional Council authorize York Region Transit staff to enter into negotiations with Garival Incorporated to procure 35 new Windows-based Version 7 GFI Genfare fareboxes to convert the existing Division 2 gravity type fareboxes to electronic registering type fareboxes, including a complete data management system, at a cost not to exceed \$490,793, plus taxes.
4. Regional Council authorize York Region Transit staff to enter into negotiations with Garival Incorporated to procure 17 new Windows-based Version 7 GFI Genfare fareboxes, to be installed in the new buses being supplied during the year 2005, at a cost not to exceed \$186,150, plus taxes.
5. Regional Council authorize the Chief Administrative Officer and the Commissioner of Transportation and Works to execute the agreement in respect to the above-mentioned contracts on the Region's behalf, subject to prior review by Legal Services.

2. PURPOSE

The purpose of this report is to seek Transit Committee and Regional Council authority to enter into negotiations with the exclusive Canadian supplier (Garival Incorporated) of the electronic fareboxes system currently used by York Region Transit (YRT). The following tasks, as identified in the capital budget, need to be completed:

- Conversion and refurbishing of existing DOS-based software fareboxes to Windows-based software.
- Replacement of older gravity fareboxes used in the Newmarket-Aurora area (Division 2) with electronic fareboxes.
- Ordering additional fareboxes to accommodate expansion of York Region Transit (YRT) services system-wide.

Approval by Regional Council to enter into negotiations with the exclusive Canadian supplier of the existing electronic fareboxes will allow for future purchases and up-grades with the same supplier.

3. BACKGROUND

The existing fare collection system on conventional YRT buses is based on the verification of payment at the time of boarding. The bus driver verifies passenger fare payment once a passenger displays a valid pass or deposits a cash fare payment (coins and banknotes), or a pre-purchased ticket, into the farebox.

3.1 Electronic Registering Fareboxes

Divisions 1, 3 and 4 (Markham, Richmond Hill and Vaughan) currently have electronic registering fareboxes installed on all buses. With the electronic registering fareboxes, the driver registers the cash fares and various passes by pressing pre-assigned buttons on the farebox keypad. The acceptance and classification of adult, student, child, senior and express tickets is done automatically by the fareboxes, based on the dimension of the tickets. Data from the registering fareboxes is transferred to a computer in the garage at the end of each day by means of a data downloading probe. This data is used to obtain ridership information on various YRT routes.

YRT currently has 74 buses equipped with upgraded Windows-based electronic registering fareboxes, including the buses acquired from GO Transit. All buses in Division 4 (Vaughan) are equipped with this newer version of the farebox and YRT is having little or no problem in maintaining these fareboxes.

The electronic registering fareboxes installed on buses in Divisions 1 and 3 (Markham and Richmond Hill) are DOS-based fareboxes and are at the end of their useful life, as most of the peripheral hardware is extremely difficult to procure. The Region's IT Services branch has confirmed that continued support of the hardware may not be feasible due to the age of the equipment.

3.2 Gravity Fareboxes

Buses operating in the Newmarket-Aurora area (Division 2) are equipped with gravity (non-registering) fareboxes which makes automated fare category classification impossible.

3.3 Supplier

The supplier, Garival Incorporated, is the exclusive Canadian supplier of the GFI fareboxes. Garival has been supplying and supporting fareboxes in York Region since 1996.

4. ANALYSIS AND OPTIONS

4.1 Requirement

4.1.1 DOS Based Fareboxes Upgrade

Upgrade and refurbishment of the existing 159 GFI Genfare fareboxes operating on DOS- based software to Windows-based Version 7 operating system is required for the following reasons:

- Continued support by the Region's IT Services to the peripheral hardware equipment.
- Reduced downtime due to difficulty in maintaining the DOS-based fareboxes which are approximately 15 years old and have outlived their useful life.
- Consistency across the system with new buses being installed with Windows-based fareboxes.
- Ticket fares to be classified in additional categories (Zone 2 tickets) due to the introduction of the Viva bus rapid transit system.

4.1.2 Gravity Fareboxes

The 35 existing gravity type fareboxes in Division 2 (Newmarket-Aurora) are proposed to be replaced with electronic registering type fareboxes including a complete data management system for the following reasons:

- Better auditing capability and reduced risk of fraud.
- Automated ridership information and savings in the cost for undertaking surveys to collect such data.
- Better service planning effort due to improved ridership information.
- Improved security in cash handling.

4.1.3 New Fareboxes

YRT is purchasing 17 new buses to accommodate expansion of YRT services. Seventeen new Windows-based Version 7 GFI Genfare fareboxes are required to be installed in these buses.

4.2 Sole Source Option

In order to maintain consistency in the fare collection system on conventional buses, it is necessary that the fareboxes have the same functionality and are supported by the same complement of hardware such as, emptying vaults, data downloading probe, central data management system, etc. It is also unlikely that a different vendor would be interested in upgrading another manufacturer's fareboxes. This leaves no option in terms of going to other vendors and obtaining a competitive quote for the procurement of new fareboxes and the upgrade of existing fareboxes.

4.3 Integration with GTA Fare System

The Ministry of Transportation is currently designing and will soon be implementing an electronic purse-based GTA fare card that will be accepted for fare payment by the majority of the transit operators. YRT is actively involved in the proposed implementation of the GTA fare card, likely to be operational in the Year 2007-2008, which is planned to be used in conjunction with the electronic fareboxes during the transition period.

The fareboxes will still continue to be used on the conventional buses to accept cash fares if a passenger wishes to do so. For this reason, YRT is proposing to purchase the cheapest registering type of fareboxes being manufactured by GFI Genfare for the new buses, and the buses in Division 2 (Newmarket-Aurora). The proposed upgrade and refurbishing of the existing 159 GFI Genfare fareboxes operating on DOS-based software to Windows-based Version 7 operating system is still required for the reasons mentioned above.

5. FINANCIAL IMPLICATIONS

Sufficient funds for the new purchases and upgrades of the electronic fareboxes are included in the 2005 Business Plan and Budget. The estimated total cost of the project will be \$1,974,464, plus taxes. A breakdown of the cost is provided below:

Table 1
Farebox Project Costs

Description	Unit Price	Unit	Quantity	Total Price
Upgrade 159 fareboxes for Division 1 and 3 (Markham and Richmond Hill)	\$ 7,413	Each	159	\$ 1,178,667
Data management system for Division 1 and 3	99,645	LS	1	99,645
Spare Parts for Division 1 and 3	19,209	LS	1	19,209
New fareboxes for Division 2 (New Market - Aurora)	10,950	Each	35	383,250
Spare Parts for Division 2	7,898	LS	1	7,898
Data management system for Division 2	99,645	LS	1	99,645
Fareboxes for new buses	10,950	Each	17	186,150
			Total	\$ 1,974,464

6. LOCAL MUNICIPAL IMPACT

There is no local municipal impact associated with this project.

7. CONCLUSION

It is recommended that YRT staff be authorized to enter into negotiations with Garival Incorporated for the purchase of new GFI Genfare Windows-based electronic fareboxes and the upgrade of the existing DOS-based fareboxes to new Windows-based electronic fareboxes for conventional transit services in York Region.

The Senior Management Group has reviewed this report.