

Minutes – Standing Policy Committee on Finance – December 1, 2016

REPORTS

Item No. 4 Automatic Fare Collection System (Project No. 4230001409) Financial Status Report No. 17 for the Period Ending September 30, 2016

STANDING COMMITTEE DECISION:

The Standing Policy Committee on Finance concurred in the recommendation of the Winnipeg Public Service, and received as information the financial status of the Automatic Fare Collection System Replacement project, as contained in the report.

Minutes – Standing Policy Committee on Finance – December 1, 2016

DECISION MAKING HISTORY:

Moved by Councillor Lukes,

That the recommendation of the Winnipeg Public Service be concurred in.

Carried

ADMINISTRATIVE REPORT

Title: AUTOMATIC FARE COLLECTION SYSTEM (PROJECT NO. 4230001409) FINANCIAL STATUS REPORT NO. 17 FOR THE PERIOD ENDING SEPTEMBER 30, 2016

Critical Path: STANDING POLICY COMMITTEE ON FINANCE

AUTHORIZATION

Author	Department Head	CFO	CAO
T. VanDekerkhove	D. Wardrop	M. Ruta	D. McNeil

EXECUTIVE SUMMARY

This is a multi-phase capital project that has updated Transit's fare collection hardware with electronic fareboxes and has introduced a smart card system for fare payments to replace paper tickets and passes. The updated technology has improved flexibility and convenience for passengers to purchase fare products, and enhanced security and data collection over the previous manual fare collection system.

RECOMMENDATIONS

That the financial status of the Automatic Fare Collection System Replacement Project, as contained in the report, be received as information.

REASON FOR THE REPORT

Administrative Standard No. FM-004 requires quarterly reporting to the Standing Policy Committee on Finance.

IMPLICATIONS OF THE RECOMMENDATIONS

None.

HISTORY / DISCUSSION

On February 22, 2006, Council approved the report submitted by the Transit Department entitled Implementation Plan for Rapid Transit Task Force Recommendations. The implementation plan included a recommendation that the existing fareboxes be replaced with an automated fare collection system. The fareboxes dated back to the early 20th Century and had

been out of production for decades. Implementation of a new fare collection system was intended to modernize and simplify the fare collection process, provide more convenience and options for passengers, and improve the security of fare collection.

The Automatic Fare Collection System has a total budget of \$17.74 million; \$15.24 million was approved in the 2011 and earlier Capital Budgets and Council approved the transfer of an additional \$2.5 million from surpluses in the 2011 Transit Buses Capital Project and the Transit System Funds retained earnings at its meeting of July 20, 2011.

MAJOR PROJECT STEERING COMMITTEE

Administrative policy for projects with capital costs exceeding \$10 million requires formation of a Major Capital Project Steering Committee. The Committee has been formed and its members are:

Paul Olafson, Corporate Controller, Corporate Finance Department
Clive Wightman, Director of Community Services
Dave Wardrop, Director of Transit

The Committee has reviewed this report and recommends that the report be sent to the Standing Policy Committee on Finance.

PROJECT STATUS

The project remains within budget but is behind schedule.

DESCRIPTION OF PROJECT

Fare collection is a core element of Transit's business and has an impact on the operations of every division within the department. This is an extremely complex technology project involving the installation of electronic validating fareboxes on Transit's fleet and the implementation of a smart card-based automatic fare payment system that is supported by the necessary financial and information technology hardware and software systems.

The electronic validating fareboxes have been configured to accept coins and valid tokens only and collect, secure, reliably count and report all fare payments. They have been configured to print and validate transfers. They have also been equipped to read and write to contactless electronic smart cards.

Pre-purchased fare products are offered on electronic smart cards. These cards contain a record of the payment, including the time of payment, and constitute the "transfer" to permit the passenger to board another bus for free during the valid time period.

Retail outlets, as well as telephone and on-line systems, are being used by passengers to conveniently reload transit products or value onto the reloadable electronic smart cards.

As an enhancement to this project, Transit has introduced a single ride token that is used exclusively by schools and social service agencies. The tokens were produced by the Royal Canadian Mint and have a unique electro-magnetic signature that are verified by the new fareboxes to prevent counterfeiting. The tokens should last a minimum of 10 years. Tokens were introduced into service on August 4, 2016.

The primary contract for the supply of the automatic fare collection system was awarded to Garival Inc. of Laval, Quebec in the estimated amount of \$12,934.470.00 before all taxes in January 2012.

PROJECT SCHEDULE

The Automatic Fare Collection System Project was delivered in two phases. Phase 1 was completed in June 2013 and consisted of the installation of the new fareboxes on the entire bus fleet. Paper tickets and monthly and weekly flash passes are continuing to be used in Phase 2 of the project.

Smart cards have been implemented as Phase 2 of the project. The smart card system has been in development since 2013. The complexity of the implementation has required more system development, verification and rework than was initially anticipated and this has caused the project to fall behind schedule.

The smart card system was implemented for seniors on July 4th, 2016 with Full Fare and Youth passengers commencing August 8, 2016. The rollout through all passenger classes will continue until the end of 2016.

The delivery of the project is being accomplished through seven separate contracts that were awarded as shown in the table below.

Bid Opportunity Number	Description	Date of Contract Award	Estimated Completion Date	Award Amount
550-2008	The Gooderham Group - Consultant Services for the Update of Transit Fare Collection Systems and Technology	October 22, 2008	December 2011	\$86,973.00
345-2011	Infodev Electronic Designers International - Integration of On-Board Security Camera and Fare Collection Systems with Existing Advanced Transit Communication and Vehicle Location System	May 13, 2011	November 2012	\$919,175.00 ¹
777-2011	McKim Cringan George - Development and Implementation of a Multimedia Public Information Campaign	November 23, 2011	December 2016	\$159,400.00 ¹
878-2011	The Gooderham Group - Implementation Project Manager	November 23, 2011	December 2015	\$285,526.00
925-2010	Garival Inc. - Automatic Fare Collection System	January 1, 2012	March 2017	\$12,934,470.00
877-2011	Ernst and Young LLP - Professional Accounting/Audit Advisory Services	February 10, 2012	December 2014	\$22,750.00
Sole source	KPMG LLP – Consulting Services	May 7, 2012	December 2014	\$85,000.00

Total Award Amount
\$14,493,294.00

¹A portion of these awards have been charged to separate projects as the contract work spanned multiple projects
 (\$461,125.00)

Total Award Amount Applied to Fare Collection

169.00

\$14,032,

RISK AND MITIGATION STRATEGIES

Risk Matrix¹	
Risk Statement and Explanation	Mitigation
Potential passenger dissatisfaction should system not function as promised	Extensive testing and verification has been performed before being introduced to the public. Quick customer service response to customer and agent issues once smart cards are in circulation.
Risk of delay in implementation of electronic farebox and smart card technology	The project was split into two phases with the first being the electronic farebox component, and the second being the smart card component.
Risk of card distribution problems if every passenger is allowed to acquire a smart card at the same time.	Smart cards have been introduced by passenger class, specifically Handi-Transit registrants, seniors, youth, full-fare, eco-pass and post-secondary customers. Also, paper products will not be phased out until the volume of smart cards sold is sufficient to prevent a surge in demand, and excessive line-ups at card distribution points.

¹Risk Matrix is arranged vertically from higher to lower assessed risk

This project is in part financed by the Manitoba Winnipeg Infrastructure Fund. The Province has approved the funding to March 31, 2017.

FINANCIAL ANALYSIS

Project Component	Budget	Value/Cost Estimate	Variance Budget to Contract Value/Cost Estimate	Change in Variance from Last Report
Professional Services	\$1,200,000	\$1,238,195	(\$38,195)	-
External Contracts	14,680,000	14,680,000	-	-
Other Equipment	860,000	860,000	-	-
Overhead and Others	1,000,000	961,805	38,195	-

	\$17,740,000	\$17,740,000	-	-
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Summary

Contracts Issued to Date
\$14,032,169

Total Change Orders (Garival)
\$317,147

Other Project Costs
(Provincial Retail Sales Tax, Overheads, Salaries, Communication
and Other Contingencies):
\$3,390,684

**Total Approved Budget:
\$17,740,000**

Two change orders were approved during this reporting period. In total, twenty-two change orders with Garival were implemented at a total net cost, before taxes, of \$317,147.40.

Change Order 34 was to get Garival's assistance in migrating the system database to a more secure server that is monitored 24-7, at a cost of \$9,800.

Change Order 36 was to improve administrator user access rights and limitations within the peggo web application, at a cost of \$6,625.

Budget revisions will be accommodated in the External Contracts portion of the project.

Professional Services include the following:

1. Technical engineering consultation on the design and testing of the fare collection system;
2. External auditing of systems and procedures necessary to secure revenue; and
3. Marketing to effectively communicate the changes to the public.

Other equipment includes the following:

1. Infrastructure changes and equipment in Transit garage buildings and treasury to allow secure revenue servicing and coin handling;
2. The communications hardware required for the new fareboxes to exchange route and bus stop information with the bus radio system and use the Wi-Fi system within Transit buildings to communicate with data servers to upload revenue collection information from the bus and download fare structure and smart card update information to the farebox on a daily basis.

The breakdown of payments under the Contract with Garival Inc. are itemized below. Phase 1 of the project consists of the installation of the great majority of the hardware necessary for the

project including all fareboxes and cash vaults. The payment for this phase makes up 60% of the total value of the contract. A deficiency payment of 5% of the total contract is being retained from Phase 1 because the farebox transfer printers are not meeting reliability requirements. A written agreement regarding this deficiency payment has been accepted by Garival Inc. and will remain in place until the printers achieve specified reliability levels. A prototype of a printer modification will be tested in fall 2016 to determine if it can improve reliability of the transfer printers.

Phase 2 of the project is for the implementation of the smart card system and makes up 40% of the value of the contract. To date, 33.5% of the Phase 2 work has been deemed to be complete and paid. Further payments will be made as milestones are met by the contractor.

Garival Contract Details		
Contract Value		12,934,470
Payments to Date		(9,074,084)
Holdback for Farebox Deficiencies		(646,736)
Milestone Payments Not Yet Earned		3,213,650

The project cash flow is included in Appendix 1 (attached).

FINANCIAL IMPACT

Financial Impact Statement

Date: November 3, 2016

Project Name:

First Year of Program 2012

AUTOMATIC FARE COLLECTION SYSTEM (PROJECT NO. 4230001409) – FINANCIAL STATUS REPORT NO. 17 FOR THE PERIOD ENDING SEPTEMBER 30, 2016

Comments:

There is no financial impact as this report is for information only.

original signed by:

Tanis Yanchishyn, CPA, CA

Manager of Finance and Administration

CONSULTATION

In preparing this report there was consultation with:

None

OUR WINNIPEG POLICY ALIGNMENT

01-01b Key Directions for the Entire City- “Key Directions for Connecting and Expanding our Sustainable Transportation and Infrastructure Network.”

Create a safe, efficient and equitable transportation system for people, goods and services.

SUBMITTED BY

Department:

Transit

Division:

Asset Management Office

Prepared by: Tim VanDekerkhove, Project Manager
Date: November 3, 2016
File No. 925-2010

Appendix I

**AUTOMATIC FARE COLLECTION SYSTEM
TRANSIT DEPARTMENT
As of September 30, 2016**

Project Component	Capital Budget			Capital Expenditure Forecast				Surplus (Deficit)	Variance Last Report	Change in Variance
	Council Approved Changes July 20,2011			Actual Costs	Forecast		Total			
	Original	Note 2	Revised	To Sept 30, 2016	2016	2017	Forecast	From Revised Budget		
A PROFESSIONAL SERVICES Note 1	\$ 1,200,000	\$ -	\$ 1,200,000	\$ 992,496	\$ 164,619	\$ 81,080	\$ 1,238,195	(38,195)	(38,195)	-
B EXTERNAL CONTRACTS	12,180,000	2,500,000	14,680,000	10,650,278	2,699,914	\$ 1,329,808	\$ 14,680,000	-	-	-
C OTHER EQUIPMENT	860,000	-	860,000	763,214	81,203	\$ 15,583	\$ 860,000	-	-	-
D OVERHEADS AND OTHER	1,000,000	-	1,000,000	636,945	283,322	\$ 41,538	\$ 961,805	38,195	38,195	-
	\$ 15,240,000	\$ 2,500,000	\$ 17,740,000	\$ 13,042,933	\$3,229,058	\$ 1,468,009	\$ 17,740,000	-	\$ -	\$ -

Explanatory Notes

- 1-Professional Services includes amounts for a communication/advertising campaign.
- 2-Prevailing market conditions increased expected costs.