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YORK REGION TRANSIT GREATER TORONTO AREA FARE SYSTEM PROGRESS REPORT

The Transit Committee recommends that:

- 1. The presentations by Wally Beck, iTRANS Consulting Inc. regarding GTA Smart Card Update and Catherine Johnson, Advance Care Technology Association of Canada regarding Smart Card technology be received.**
- 2. The communication from Bruce McQuaig, Assistant Deputy Minister, Ministry of Transportation, dated June 2, 2004, regarding the 'GTA Integrated Ticket System project' be received.**
- 3. The recommendations contained in the following report, June 4, 2004, from the Commissioner of Transportation and Works be adopted.**

1. RECOMMENDATIONS

It is recommended that:

1. The Regional Municipality of York support the GTA Fare System Steering Committee's Fare Policy Model outlined in Attachment 1.
2. The Region continue to provide appropriate Regional staff, as required, to support the GTA Fare System initiative.

2. PURPOSE

The purpose of this report is to update Transit Committee and Regional Council on the Greater Toronto Area (GTA) fare system project since the staff presentation at the April, 2004 Transit Committee meeting.

3. BACKGROUND

The proposed GTA fare system is intended to provide a common fare card (smart card) that would allow customers to ride on any participating GTA transit system without pre-purchasing tickets or passes, and without knowing in advance the fare policies or having the exact cash fare for each transit system. This GTA fare card would provide fare payment on all systems and accommodate the fare policies of all service providers, including intersystem transfers, discounts and customer loyalty schemes, in a way that would be essentially transparent to the customer. Customers would still be able to pay in cash if they chose. A GTA fare system would act as an important enabler of transit integration in the GTA.

There are two major components to an integrated smart card system. York Region Transit, as well as all other participating Municipal Transit Service Provider System (MSPS) transit agencies, will require a computer system, and all buses will be equipped with card readers known as Fare Transaction Processors (FTP). A central system will enable fare integration between transit systems, and will reconcile transit system revenues on a daily basis to ensure each service provider agency receives the appropriate revenues. GO Transit defined a need for a new fare collection system, which coincided with the needs of surrounding GTA transit systems. Given the desirability of integrating transit services, a collaborative effort between operating authorities made sense. The Ministry of Transportation of Ontario recognized this need and committed up to \$40 million to cover a portion of the two major components needed for successful fare integration. The Province will cover 33% of capital costs attributed to each local transit authority smart card system needs, and 100% of the capital and ongoing operating expense of the common central system.

In 2003, York Region Transit signed an Administrative Framework Accord between the Ontario Ministry of Transportation and GTA transit agencies. The accord constitutes the administrative framework needed to coordinate the design-related activities between the signatories. The accord is not a legally binding document, rather it was designed to enable the Steering Committee to make timely decisions and recommendations to successfully complete procurement documents and address transit authority concerns during the design process.

The Province recently announced that it will be assuming accountability for the GTA Fare System project. This means the Design Team and Project Manager, along with budget administration for the project, will be transferred from GO Transit to the Province. It is the Province's intention to move forward in a seamless fashion to provide the necessary resources to maximize the ability to meet established schedules.

4. ANALYSIS AND OPTIONS

4.1 GTA Fare System Project Overview

There are six phases that are required to achieve full GTA fare integration by mid 2009.

4.1.1 Phase 1 – Planning Process (Completed)

This process has been completed and is comprised of project planning, financial analysis and the development of business models. The business model revealed that there is a strong business case at York Region Transit (YRT) for an integrated fare collection system utilizing smart card technology. Savings will be realized through improvements such as the elimination of costs associated with fare collection, the production and distribution of various forms of fare media (i.e. tickets, transfers, and passes), security, and lower farebox maintenance-related costs, etc. Since operating conditions will change

over time, the business model will be updated on an as-needed basis to reflect the most current information available.

The remainder of the phases and a preliminary indication of the overall time schedule is outlined as follows:

4.1.2 Phase 2 - Design (Current)

The design phase ends with the signed-off Vendor RFP comprising vendor specifications, contract conditions and procurement rules and processes. This phase is currently underway and by November 2004, approvals by decision-making bodies will be required. The firm of Booz, Allen, Hamilton (BAH) was retained by GO Transit and the Province to develop the technical specifications for the procurement of the GTA Fare System equipment and other infrastructure. Although the municipal service providers such as York Region Transit are not contributing to the cost this year, the interests of the municipal service providers are being reflected in the system design.

GO Transit staff and the Consultant Technical Management Team (BAH) will continue working with the GTA Steering Committee, York Region Transit and other MSPSs to develop user specifications for the smart card technology this year. To date, this consensus building process among service providers has proven to be invaluable.

By the latter part of 2004, each agency will have more accurate information with respect to its share of the integrated fare system costs and will weigh it against the most current business case to determine how well the smart card system will meet the agency's customer needs.

4.1.3 Phase 3: Procurement - December 2004 to October 2005

The GTA fare system is comprised of four main components: the GO Transit Service Provider System, the Municipal Service Provider Systems, the Central System, and the GTA fare card. All the components must work together as a single system using a single common fare card (smart card) for use throughout the GTA. The procurement approach is structured to support the stated requirements. It should be noted that the procurement would be a single procurement for all participants. The process will involve consultation with the appropriate staff from the participating agencies.

4.1.4 Phase 4: Development – November 2005 to April 2007

This phase ends with a system that is developed, tested and accepted for initial revenue service demonstrations. The installation of the smart card system will be phased in a way that will make the transition to smart cards as smooth as possible. The learning curve will be instrumental in ensuring that the eventual full rollout is relatively problem-free.

4.1.5 Phase 5: Initial Service Demonstrations – May 2007 to July 2008

By July 2008, the full system will have been fully demonstrated on GO Transit and early adopter municipal systems, with inter-connection to GO Transit and a TTC subway interface. This phase will end when final modifications are confirmed.

4.1.6 Phase 6: Full Roll-out – Begins August 2008 to July 2009

The full roll-out will include all municipal systems, the full GO rail and bus network, the interfaces with TTC at subway terminals, and the central system. The date the system is fully rolled out will depend on the number of transit systems participating and individual implementation schedules.

4.2 GTA Fare System Steering Committee 2004 Phase 2 Workplan

Within the policy and fiscal framework of the sponsoring organization, a GTA Fare System Steering Committee acts as the primary forum for system design decisions and recommendations. There are three levels of memberships on the Steering Committee represented by area municipalities. Participating ‘Core Members’ are York Region Transit, Ajax Pickering Transit Authority, Burlington Transit, GO Transit, Hamilton Street Railway Company, Ministry of Transportation, Mississauga Transit, Oakville Transit, Oshawa Transit Commission, and Whitby Transit. The remaining GTA transit system – Brampton Transit – is a ‘Non-core Member’. The Toronto Transit Commission is an observing body.

Given the time-consuming nature of the Steering Committee member participation and other York Region Transit (YRT) initiatives underway, YRT has retained the services of iTRANS Consulting Inc. of Richmond Hill for representation. Throughout the process, other Regional staff have been called upon on an as needed basis. In this regard, YRT staff and staff members from the Region’s Finance and Legal Services departments have been involved at this point.

4.2.1 Current Status

The Steering Committee will be involved from preliminary design to the development of final specifications in Phase 2. To assist the Steering Committee, a secure password-protected GO Transit website has been developed to enable member access to confidential documents. A public website (www.gtfaresystem.ca) is in place to facilitate the dissemination of information to the general public and the vendor community. The Steering Committee efforts to date have resulted in several milestones.

At this point and until the end of Phase 2, there will be no cost to York Region Transit for the Consultant Technical Management Team.

4.2.2 GTA Fare System Issues

YRT staff will continue to be actively involved with and support the efforts of the Steering Committee and at the same time keep Transit Committee apprised of issues where decision-making is required. In this regard, there are several ongoing issues that are being addressed with consensus being reached at various stages of Phase 2. The main issue categories that are being addressed are:

- Municipal business case analysis.
- Municipal fare policy model.

- Design of the fare card (smart card).
- Farebox replacement strategy.
- Specialized transit (Mobility Plus).
- Credit/ debit card acceptance.
- Third party agencies and commissions.
- Division of customer service responsibilities.
- Joint procurement.
- Business models.
- Central technical support.
- Central system architecture.
- Additional applications for the fare card.
- Communications strategy.
- Centralized functions.
- Funding issues.
- Central financial management.
- Roll-out strategy.
- Governance.

Detailed papers are being developed for all the issues identified and will be debated among steering committee members and appointed subcommittees, as required. The consensus building approach is proving to be effective in formulating an eventual GTA smart card fare system that will reflect, as much as possible and in a timely manner, all the requirements of municipal service providers. A number of issues have been dealt with to the extent that transit staff is able to provide a status summary (below) while other issues have yet to be dealt with sufficiently to merit an update at the time of writing.

4.2.3 Municipal Business Case Analysis

The municipal participants in the GTA Fare System have collaborated on the development of a Municipal Business Case Analysis and are in the process of refining and broadening the analysis to take into account a wider range of implementation and operational costs.

4.2.4 Municipal Fare Policy Model

The goal is to develop a common fare policy model that will be the basis for the standard design of the municipal transit systems. Developing a common fare policy will help achieve one of the main goals of the GTA fare card project, which is to promote inter-municipal travel. This is achieved through the common fare payment of the e-purse and by developing various fare policies that will encourage passengers to migrate to the fare card. Having a standard approach throughout the GTA will also reduce the complexity of travel within the GTA and lower the cost to build and maintain the fare card system.

A recent milestone reached was agreement among the municipal participants and GO Transit on passenger fare category definitions: free (pre-school), child, student, post-

secondary student and senior. Each MSPS will be able to determine their unique concession fares within each group.

Fare policies will be user-friendly, however, there will be change required in how fares are being paid by passengers. Change is generally met with some resistance at the user level, and as such, York Region Transit will make every effort to evolve into the new fare collection system over a period of time, to maximize user acceptance. Attachment 1 summarizes the consensus reached among the Municipal Service Provider Systems related to a common municipal fare policy model.

4.2.5 Integration with Bus Rapid Transit Stations (YRT Issue Only)

To provide for pre-paid passenger boardings on the Region's bus rapid transit (BRT) service, variations of ticket vending machines (TVM) will be installed, negating the need for fare collection on buses. As the smart card system becomes fully integrated, a migration strategy (currently being drafted) will need to be in place to affect a smooth and cost effective transition to smart card use. In this regard, it should be noted that while the TVMs will be used less in the future, they would remain necessary for the infrequent transit rider or visitor to the area to enable cash payments on the transit system.

It should also be pointed out that York Region Transit, with its three-zone fare structure, two-zone ticketing system with proof-of-payment, integration with GO bus and GO rail, TTC bus and subway, Brampton Transit, and a service area 2.5 times that of Toronto, will have the most complex fare collection system of all the municipal service providers in the GTA.

4.2.6 Joint Procurement Strategy

The intention is to implement the GTA Fare System through a joint single procurement, (i.e. one vendor contract for all components of the system). All participants have reviewed their procurement policies and have determined that there are no policies that would prohibit them from participating in this type of procurement, which will be contractually arranged through one of the participants as the lead agency.

4.2.7 York Region Transit Roll-out Schedule

There are two defined stages being considered. The early adopter stage will involve at least one Municipal Service Provider (MSP) and one GO Transit corridor served by both rail and bus. The purpose of the early deployment, scheduled for August 2007, is to test all smart card system functions before full system roll-out. The full system roll-out will proceed quickly thereafter in the other MSPs.

Initially, implementation of a full GTA and YRT rollout was not scheduled until 2009 while the Region's bus rapid transit system is scheduled to begin operation in 2005. Given the rapid transit initiatives that were introduced after the GTA Steering Committee dealt with the smart card implementation plan, YRT felt that York Region should be one of the early adopters of the GTA fare card. The GTA Fare System steering committee has acknowledged York Region Transit's desire to be an early adopter with implementation

scheduled for the second half of 2007. Hamilton and Ajax Pickering are also seeking early adopter status.

4.2.8 Specialized Transit – Mobility Plus

The GTA fare card project does not currently include specialized transit within its scope. During discussions on the fare policy model, the steering committee supported the recommendation that specialized services be addressed independent of the fare policy model discussions. Since more and more conventional services are being adapted to accept mobility devices (i.e. low floor wheelchair accessible buses), integration between Mobility Plus and York Region's conventional and BRT services will increase, and as such, demand will grow to have smart card capabilities on dedicated Mobility Plus vehicles.

4.2.9 Existing Fare Collection Equipment

Another issue that had to be addressed was the replacement of the existing fare collection equipment. YRT currently uses DOS-based electronic farebox equipment out of one garage and Windows-based equipment out of another. The DOS-based fare collection equipment will be upgraded to Windows and options to replace the mechanical fareboxes in the Newmarket (Laidlaw) garage continue to be investigated. The least cost scenario is the system-wide purchase of mechanical fareboxes when the smart card system is introduced; however, the mechanical farebox solution will be dependent upon the success of the smart card system and a detailed business case analysis.

4.2.10 Governance Model

Lessons learned from other multi-party smart card implementation projects indicate that having a governance model in place early to address participant concerns before procurement and implementation is mandatory for a smoother and more effective transition. A staff member from the Region's Legal Services branch represents the Region on a governance subcommittee. The subcommittee is currently developing an agreement, which will set out the respective roles and responsibilities of the participating agencies.

4.3 Relationship to Vision 2026

The development of a GTA fare system using smart card technology is supportive of the Vision 2026 goal to "... have effective, efficient and environmentally sensitive transportation, waste management and water systems", and the action areas around that goal, including "developing an integrated transportation network " and "making transit accessible".

5. FINANCIAL IMPLICATIONS

Throughout 2003 and by the end of 2004, the financial implications associated with York Region's continued participation in this project are limited to utilizing the services of iTRANS Consulting Inc. as YRT's representation on the GTA Fare System Steering

Committee and related work. The 2004 Business Plan and Budget contains \$100,000 for this purpose. It will not be until Q4 of 2004 that York Region will have the information needed to commit financially to the GTA fare system initiative and proceed with the procurement stage.

6. LOCAL MUNICIPAL IMPACT

The development of GTA fare system using smart card technology will further enhance public transit as a transportation option. This, in turn, will support the modal split objectives of the Region and all local municipalities.

7. CONCLUSION

York Region Transit is committed to providing a convenient fare payment system that enables York Region residents, and residents throughout the GTA, to transfer seamlessly between transit systems. The long term time frame for full GTA implementation in 2009 is far more aggressive than other international smart card installations that involve several municipalities and a central clearing house. During the interim, YRT has a number of local issues to overcome that will be addressed in a timely fashion to ensure that needs are met and costs are minimized.

YRT supports the GO Transit-led initiative which is now the direct responsibility of the Province and will continue to be an active participant on the GTA Fare System Steering Committee. York Region Transit staff will continue to keep Transit Committee apprised of the progress and time lines as the project matures and where Transit Committee direction will be required.

The Senior Management Group has reviewed this report.

(A copy of the attachment referred to in the foregoing is included with this report and is also on file in the Regional Clerk's Office.)