

GO Shuttle Service

Organization

City of Mississauga — Transportation and Works,
Mississauga Transit

Status

Started 2001, ongoing

Overview

Mississauga Transit implemented a transit service to take passengers from or near their front door to a GO station in the morning, and from the station to home in the afternoon. Using 21-seat shuttle buses, the service costs 50 cents and guarantees passengers a travel time of 15 to 20 minutes. The service reduces parking demand at GO stations, carbon dioxide emissions, and provides residents with a premium transit service.

Budget:

- Net cost to implement Cooksville service was \$68,000.
- Net cost to implement Meadowvale service was \$94,000.
- Cost to conduct market research, surveys, and analysis \$22,600.

Results:

- About 3,000 passenger trips per month are taken on the Cooksville service, and about 4,300 passenger trips per month are taken on the Meadowvale service.
- During the pilot project 600 car trips were eliminated and 67 tonnes carbon dioxide emissions were reduced.
- The guaranteed travel time of 15 to 20 minutes from a passenger's home to a GO Station is consistently met.

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Resources

- City of Mississauga (www.mississauga.ca)

Community context

The City of Mississauga's population has grown steadily over the last decade. From 550,000 people in 1996, its population reached almost 625,000 in 2004.

Mississauga resident uses public transit for commuting less than once per week, on average (40 rides per person per year). As a bedroom community, a high percentage of the population lives in Mississauga and works elsewhere in the Greater Toronto Area (GTA).



Mississauga Transit wants to increase ridership for commuting purposes to 50 rides per person per year

Mississauga Transit officials believe that the relatively low percentage of residents using public transit for commuting can be attributed to several factors. Many Mississauga households own two or even three personal vehicles, so the personal automobile is most often used as the main form of commuter transportation. Residents perceive driving to be more convenient and efficient, and there are many free parking areas in the city. Transit officials also cite poor land use planning that has, historically, not been conducive to implementing or supporting fast and efficient public transit.

Policy context

The city formed an Air Quality Advisory Committee in 1998. The committee includes members from all city departments, the Region of Peel Health Department, city councillors, and the city's environmental coordinator. Its mandate is to recommend strategies to improve local air quality by reducing greenhouse gases (GHG) and smog-producing emissions, and to increase community support of environmentally sustainable measures.

The city is also a member of Partners for Climate Protection (PCP). PCP, managed by the Federation of Canadian Municipalities, is a framework that helps municipal governments design and implement local action plans to reduce energy use and GHG emissions.

The shuttle service pilot project reflected the goals and objectives that were developed in the over 30 air quality action plans monitored by the Air Quality Advisory Committee.

In November 1999, Mississauga Transit presented its report to the city's general committee (all councillors are members) outlining its desire to introduce a shuttle pilot service.

Rationale and objectives

The city wanted to develop a new service that would increase the use of public transit and decrease vehicle use and greenhouse gas emissions.

Transit officials proposed using small, 21-seat shuttle buses that would pick up passengers at or near their front door and deliver them to a GO station (the GTA's commuter rail system) within a guaranteed travel time of 15 to 20 minutes.

City council and the Air Quality Advisory Committee were intrigued by the idea to launch a premium transit service and approved a six month pilot project.

The specific objectives were to:

- Offer a premium transit service that would guarantee a travel time of between 15 and 20 minutes from at or near a resident's home to a GO station
- Relieve traffic congestion
- Free up parking spaces at local GO stations
- Improve local air quality
- Achieve a revenue to cost objective of at least 35% within the first six months of launching the service

The city initiated the pilot project to test the service and to see if it could be applied to other Mississauga neighbourhoods.



Mississauga Transit wanted to use a 21-seat shuttle buses, like that pictured above, to implement a new premium transit service

Actions

Cooksville Pilot Project

Market research. Mississauga Transit hired Creative Research International (CRI) to survey customers and recommend the most appropriate location for a pilot project. Research was conducted at three GO stations: Cooksville, Meadowvale, and Clarkson (the names are the same as the neighbourhoods they serve).

CRI, Mississauga Transit and GO Transit staff distributed a total of 5,100 surveys, and half of those surveyed returned the completed form. Initial results suggested that the Cooksville community had the highest number of potential users for the proposed shuttle service.

Transit staff then telephoned the survey respondents for additional information (such as their address) and to see if they were still interested in the shuttle service.

Determining routes. The addresses of all survey respondents were plotted on a map to determine the catchment area for the potential routes. The catchment area map showed which routes could best meet the city's objective of guaranteeing a travel time of between 15 and 20 minutes from at or near the resident's home to the GO station. Transit officials confirmed that Cooksville would be the easiest area in which to design the pilot shuttle bus routes that would also maximize the coverage area.

With only two shuttle buses, meeting every GO train in the morning and in the afternoon was not possible. Based on the survey responses, the three most popular morning and the four most popular afternoon arrival and departure times were chosen.

Shuttle bus stop locations were chosen primarily by where the service would "get the biggest bang for its buck." For example, there are a number of apartment buildings and condominiums within the Cooksville catchment area and many of these locations were chosen for shuttle bus stops.



Based on customer response, transit officials chose the most popular GO station arrival and departure times

Working with GO Transit. Transit staff worked with GO Transit, not only on the distribution and collection of surveys, but also to clarify where the shuttle buses would drop off and pick up passengers at the station.



GO Transit's vice-chair, Eldred King, helps kick off the Cooksville shuttle service pilot project

Fares. The fare was set at 50 cents per passenger per trip, upon presentation by the passenger of a valid GO Transit ticket or pass. This fare is consistent with the Fare Integration Agreement between Mississauga Transit and GO Transit. The arrangement allows the local system to charge a deeply discounted fare of 50 cents for travel by local transit to any GO station in Mississauga. On a monthly basis, GO Transit refunds to Mississauga Transit the difference between 50 cents and the value of the adult ticket fare (currently \$1.90). GO Transit has similar agreements with all transit systems operating in the GTA.

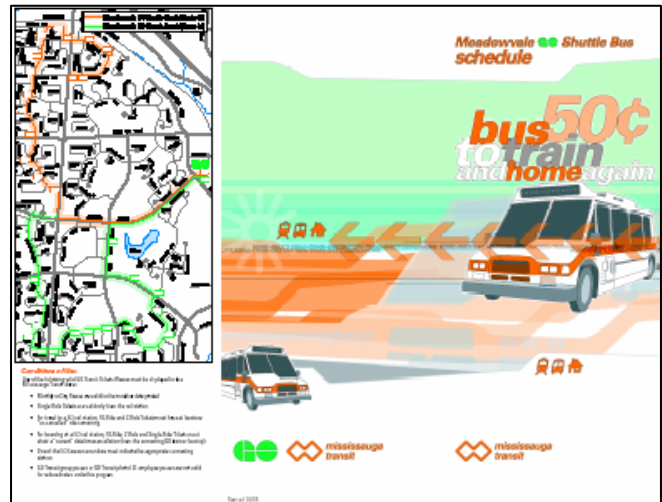
The role of Mississauga Transit drivers. All drivers in Mississauga Transit received training on the new route and runtime guides. During the first weeks of the pilot project, drivers also handed out brochures to other potential customers at the GO stations.

Expansion to Meadowvale

Evaluating the pilot and expanding it. City council was impressed by the results of the Cooksville pilot project (see Results, below). In the fall of 2001, council approved the shuttle service as a permanent transit option and directed transit staff to expand the service to Meadowvale.

To begin service to Meadowvale, transit staff used the market research and surveys previously done by CRI and conducted a second survey at the Meadowvale GO station. Based on the new survey results, city council approved the Meadowvale service (northbound and southbound shuttle bus routes) in October 2002.

New promotional materials. For the launch of the Meadowvale service, the city designed a promotional brochure that was handed out to potential customers at the Meadowvale GO station.



A new brochure was designed for the launch of the Meadowvale shuttle service

Results

Ridership statistics. Approximately 3,000 passenger trips are taken on the two Cooksville routes per month—1,800 on the west-bound route and 1,200 on the east-bound route. Approximately 4,300 passenger trips are taken on the two Meadowvale routes per month—2,000 on the north-bound route and 2,300 on the south-bound route.

Reduced vehicle use and emissions. 75% of the people surveyed after the Cooksville pilot project was launched used to drive to the Cooksville GO station or were dropped off by another driver. Based on these figures, Mississauga Transit estimated that the Cooksville GO shuttle has eliminated over the demonstration period 600 car trips for an estimated reduction in carbon dioxide emissions of 67 tonnes.

Service popularity. A survey of passengers conducted after the Cooksville pilot project was launched found that 100% were satisfied with the service. The pilot project was also so well received that the city did not do any outside marketing of the service. Ridership increased solely by word-of-mouth.

Guaranteed travel time. The guaranteed travel time of 15 to 20 minutes from a passenger’s home to a GO Station has been consistently met with one exception. When the city expanded the service to Meadowvale, heavy construction on a main road during the first weeks of service operation slowed down the runtime of the shuttle buses. However, the reasons for the delays were obvious to passengers and no complaints were received.

Revenue to cost ratio. The city aimed to achieve a 35% revenue to cost ratio within six months of launching the service. Within six months, Cooksville and Meadowvale reached 52% and 50% revenue to cost ratios, respectively.

Recognition. The City of Mississauga won the FCM-CH2M Hill Sustainable Community Award in the sustainable transportation category for the pilot project (May 2002).

Participants

City of Mississauga

Mississauga Transit

GO Transit

Creative Research International

Resources

Budget. The city purchased 12 mini-shuttle buses in 1997 at a cost of \$300,000 each. The city spent \$22,600 to have CRI conduct surveys at all three initial sites and make recommendations.

	Cooksville	Meadowvale
Gross cost	\$142,000	\$190,000
Revenues	74,000	\$96,000
Net operating cost	\$ 68,000	\$ 94,000

Staff resources. Half a dozen staff members worked on both the pilot project and on ongoing shuttle services. Mississauga Transit’s service implementation team developed the routes, schedules, marketing and promotion, and regularly deal with the transit operators.

Timeline

November 1999. Mississauga Transit submits report to the city’s general committee (includes all city councillors) outlining the idea of the shuttle service.

April 2000. CRI and transit staff begin distributing surveys to potential shuttle service users at three locations.

May 2000 to February 2001. Telephone surveys of potential users conducted and market research analyzed. Staff determine the catchment area, shuttle bus routes, bus stop locations, and fare structure.

March 2001. Shuttle service to the Cooksville GO station launched.

September 2001. Pilot project ends and city council decides to keep the shuttle service as a permanent transit option.

Spring 2002. Second survey conducted at Meadowvale GO station.

October 2002. Meadowvale shuttle service launched.

Lessons learned

Personal contact with customers is very effective. Transit staff were able to customize the shuttle service to customers’ needs through face-to-face contact and telephone surveys.

Promotion is necessary even with a successful service. Transit staff did not promote the pilot service as the surveys and customer contact indicated high ridership potential. Once the service was launched, ridership increased solely by word of mouth. Staff were also concerned that if the pilot service was promoted too heavily, they would not have the resources to keep up with the demand.

Some months have seen lower ridership numbers than others. One reason may be that, as residents move out of the area and new residents move in, the new residents are unaware of the service. In order to retain an adequate number of riders per month to ensure a stable revenue-cost ratio, city staff began promoting the Cooksville service in the fall of 2001 (after it was approved as a permanent service) and continues to promote it on an ongoing basis.

City staff also designed a completely new marketing brochure when the service was expanded to Meadowvale to promote the service to customers in that area.

Small shuttle buses can be expensive and limit expansion. Each of the shuttle buses used in Mississauga seats 21 passengers and cost \$300,000. In comparison, transit companies in Canada typically spend between \$400,000 and \$700,000 on one standard or articulated transit bus, which can seat approximately 44 and 64 people respectively. In future, the city may use regular 12-metre

buses. In order to expand the service to other areas it will need to determine whether the streets used on the routes have the required turning radius.

Female customers may be more apt to use the service.

From their customer satisfaction surveys, Mississauga Transit discovered that more female passengers used the afternoon shuttle service. In particular, female survey respondents mentioned that during winter months when nightfall comes earlier, they felt safer using the shuttle service than walking to their car in a GO transit parking lot.

Cold weather can increase ridership. In January of 2003 temperatures in the GTA dipped to -40°C with the windchill factor. Most of the GO transit parking lots are very large and many passengers during this period told Mississauga Transit that they preferred to use the shuttle service rather than walk to their parked car.



In future, larger buses may be used to satisfy customer demand for the service

Next steps

The pilot project that led to the shuttle service becoming a permanent transit option has, in some ways, become a victim of its own success. There is increased demand for the Meadowvale service and the shuttle buses are often filled to capacity. If Mississauga Transit is to expand the service—to Clarkson, the third site that was originally studied—it will need to investigate whether larger (regular-sized) buses could be used on the routes, subject to the city’s annual budget.

Mississauga Transit wants to resurvey Cooksville passengers, as ridership declined somewhat in 2003 but is showing signs of recovery in 2004. Officials believe that one reason for the decline could be the number of apartment buildings in the catchment area, which may indicate that residents there are more transient. As people move out of the area, the new residents who move in may not be aware of the shuttle service. New marketing efforts will need to be made to ensure ongoing promotion of the service. Although these activities were constrained by the city’s 2003 budget, Mississauga Transit plans to perform some unofficial surveys and ride counts.

Images are courtesy the City of Mississauga and GO Transit