

**DISABLED ADULT TRANSIT SERVICE (DATS)
2002 SERVICE REVIEW**

Prepared by: The Office of the City Auditor
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Introduction

The last significant review of the City of Edmonton's Disabled Adult Transit Service (DATS) was undertaken in the early 1990s. This review culminated in the acceptance and implementation of the 1994 Strategic Plan for DATS. Concerns regarding DATS' service provision surfaced in the last quarter of 2001 and prompted the City Manager to initiate a review of DATS services and request that the Office of the City Auditor (OCA) participate on the project.

Background

Edmonton's paratransit service began as a pilot project in 1975 with the fundamental goal to provide an affordable transportation service within the City limits for physically disabled adults (wheelchair or ambulatory) over the age of 16 years who were unable to use the regular transit service. In 1975 approximately 36,000 trips were provided at a cost of \$5.66 per trip.

From 1975 to 1981, a single contractor provided the service. As a result of operational and administrative problems, contracts were awarded to two different companies. These contractors provided dispatching, operations and vehicle maintenance services from 1981 through 1985. Contractors were paid a flat rate for each ride provided.

In 1985, a further review was conducted and the City implemented a brokerage system with the City being the broker-manager. Under the brokerage system, the City provided the scheduling and dispatching services to improve reliability and cost effectiveness. The City owned and maintained 30 lift-equipped small buses, which were operated by contracted drivers; all sedans and some lift-equipped buses were owned, maintained and operated by contractors. DATS driving services were initially awarded to two independent contractors that specialized in door-to-door service with payment based on hours of service rather than on a flat per trip basis.

Starting in 1988, payment to contractors reverted to a per-trip basis when an analysis showed it would be less costly than the hourly contract option. About the same time, the City decided to award contracts on a one-contractor/one-route basis, which was seen as providing a higher quality of service. By mid-1997, delivery of service had been fully converted to a contracted environment with contractors once again owning all vehicles.

In September 1998, the Alberta Labour Relations Board determined that independent DATS owner-operators and their back-up drivers were employees of the City of Edmonton. This resulted in DATS drivers, excluding commercial transportation companies, becoming City employees.

Today, DATS is a section of Edmonton Transit System (ETS) and part of the family of accessible transit services (low-floor buses, community buses, light rail transit, and DATS). It is a shared ride, door-to-door transportation service for eligible citizens of Edmonton sixteen years of age and older who cannot use regular transit services because of a physical or cognitive disability.

City employees currently provide about 70% of DATS trips, with the remaining 30% provided by contracted commercial transportation companies. Table 1 provides a breakdown of the 115 vehicles used in the delivery of service.

Table 1: DATS Vehicles

<u>Type of Vehicle</u>	<u>Employee Owned</u>	<u>Contractor Owned</u>	<u>TOTAL</u>
Sedan/Passenger Van	39	23	62
Lift Van	40	13	53
TOTAL	79	36	115

The City employs 79 regular drivers as well as 40 casual drivers who are called in to work by and for regular drivers who require relief drivers. Both City employees/drivers and contractors are paid on a flat rate basis (per passenger/trip). Casual drivers who fill in for regular employees are paid 50% of route earnings (flat rate x trips) with the remaining 50% paid to the vehicle owner as compensation for the use of their vehicle.

In 2001, DATS provided approximately 843,000 trips to the 12,440 registered users of the service. All paratransit services, including DATS, are being challenged with providing increased service to the aging population and persons with cognitive disabilities. Tables 2 and 3, which compare trips provided in 1997 to those provided in 2001 show that:

- Between 1997 and 2001 the number of trips increased by 12.8% (average of 3.2% annually).
- Over the last 4 years, trips provided to patrons 65 or older increased by 18.1% for ambulatory patrons and 14.0% for wheelchair/scooter patrons (average of 4.2% annually).
- Ambulatory patrons made up 67.1% of registrants and utilize 64.4% of all trips.
- Patrons with cognitive disabilities made up 25.1% of registrants and utilize 35.0% of all trips.
- Ambulatory registrants with cognitive disabilities utilized DATS almost twice as often as other patrons.

Table 2: Service for Ambulatory Patrons

Trips (in thousands)	1997			2001			4 Year Increase
	Physical	Cognitive	Total	Physical	Cognitive	Total	
Age Group							
Under age 65	152	202	354	150	243	393	11.0%
65 or Older	112	15	127	122	28	150	18.1%
TOTAL	264	217	481	272	271	543	12.9%
Registrants	<i>1997 active registrant base not available</i>			6,041	2,308	8,349	
<i>Trips per registrant</i>				45.0	117.4	65.0	

Table 3: Service for Wheel Chair/Scooter Patrons

Trips (in thousands)	1997			2001			4 Year Increase
	Physical	Cognitive	Total	Physical	Cognitive	Total	
Age Group							
Under 65	202	7	209	219	16	235	12.4%
65 or Older	<u>56</u>	<u>1</u>	<u>57</u>	<u>57</u>	<u>8</u>	<u>65</u>	14.0%
TOTAL	258	8	266	276	24	300	12.8%
Registrants	1997 active registrant base not available			3,278	813	4,091	
<i>Trips per registrant</i>				84.2	29.5	73.3	

Audit Objectives

The main objective of the OCA review was to develop recommendations that would establish a positive and stable environment for the City's DATS service and operations. These recommendations are based on:

1. Benchmarking with paratransit services in comparable cities to identify best practice or successful strategies.
2. Reviewing strategic documents that were used in establishing current DATS processes.
3. Participating in the review of the DATS scheduling system.

Results

Based on the OCA's review and participation in discussions with various stakeholders the OCA believes that the current service delivery model is not sustainable in the longer term for the following reasons:

- The current business model was designed for a contracted environment and has not been reviewed since drivers became City employees. Experience has shown that the model is not functional in the current environment.
- The payment structure has resulted in issues for drivers that has affected service delivery.

Further exploration of alternative business models needs to be undertaken prior to decisions being made on the long-term direction for improvements to DATS service.

1. Paratransit Benchmarking Study

The benchmarking study undertaken by the OCA involved 21 municipalities or regional services, including Edmonton. Data were derived from the Canadian Urban Transportation Association's (CUTA) *Specialized Transit Fact Book – 2000 Operating Data*, and surveys circulated to select cities. The study also included a review of initiatives currently underway in the United States.

Based on 2000 data, Edmonton compares favourably with other municipalities in terms of volume of service provided to its patrons, as indicated by the high number of total trips provided and the low percentage of unaccommodated trips.

Of concern is Edmonton's relatively high percentage of vehicle breakdowns and late cancellations ("no-shows") as well as the short cancellation notice policy. Detailed observations are presented in the appendix to this report.

Recommendation 1: That ETS require DATS vehicle owners to provide proof of vehicle breakdown and ensure that adequate vehicle maintenance is completed on a regular basis.

Recommendation 2: That ETS contact paratransit services with low cancellation/no-show rates to obtain detailed information on their processes and, where practical, implement similar processes for DATS.

Recommendation 3: That ETS increase its minimum cancellation notice requirement from 30 minutes to 1 hour.

2. Strategic Plan Review

In order to assess the actions identified in the DATS 1994 Strategic Plan, the OCA reviewed the status report provided to City Council in May 2000, discussed the actions taken with various members of DATS and ETS and reviewed various supporting documents that were provided. Overall, the OCA is satisfied that the actions planned and reported have been taken. However, the following areas should be revisited in light of changes in the business environment, integration with other ETS services as well as customer and driver complaints:

- Mobility Training

The mobility training program launched in 1995 included development of training materials for both DATS patrons and trainers utilizing the "train the trainer" concept. This program encourages the use of regular transit services, allowing patrons more transportation options and reducing demand on DATS services. Funding was received in 2001 from an external source to update program materials. However, detailed program delivery plans have not been established and funding for the continued delivery of the program has not been approved.

Recommendation 4: That ETS contact and work with disabled persons advocacy groups and program service providers to develop detailed training delivery and funding plans.

- Taxi Saver Coupon

In 1997, ETS completed a feasibility study on the use of taxi coupons to supplement DATS services. The study concluded that costs per trip could be significantly below that of a trip on DATS, due in part to the shift in costs to the user. The study also found that this type of program tends to generate a new market. The combined effect results in the requirement for start-up and additional on-going funding to sustain the program because of the net increase in ridership. The paratransit benchmarking study undertaken by the OCA showed that the per trip cost of taxis to be lower than that of dedicated paratransit services and provide greater flexibility in scheduling. Introduction of a taxi saver coupon program would provide ambulatory and some wheelchair patrons with additional transportation options and increase the flexibility of DATS service. The taxi coupon program has been submitted in previous budgets, including the 2002 budget, but has not received approval.

At its February 2, 2002 meeting The Transportation and Public Works Committee passed the motion “That the Administration meet with representatives of the Edmonton Taxi Cab Commission, Amalgamated Transit Union 569, Citizen’s Advisory Board, Persons with Disabilities and the Taxi Cab Industry to provide solutions for the provision of in-demand 24/7 service to the disabled community...”

Recommendation 5: That ETS update information on the Taxi Saver Coupon program and include the cost and benefits in all business model scenarios being considered by the administration.

Recommendation 6: Deleted at City Council Meeting

- Functional Organization

A formal review of the DATS functional organization structure and assignment of responsibilities has not been undertaken since drivers became City employees in 1998. Prior to 2002, administrative resources had not been identified and put into place to fully support the driver-employee environment. This has resulted in the overlap of some duties and areas where functional responsibilities are unclear.

The need for a driver supervisor was identified in the 2002 budget. The following motion was made during City Council’s budget deliberations: “That the Transportation and Streets Department, DATS Customer Service and Absence Central Standards – 2002 Operating Budget of \$167,000 be held in abeyance until such time as the DATS report comes forward and City Council approves the release of the funds.”

Recommendation 7: That ETS undertake a formal functional review of DATS to resolve current issues and provide clarity of roles and responsibilities; and that the functional organization structure be reviewed on a timely basis whenever there is a significant change in operations.

- Driver Accountability

Under the current business model, regular DATS drivers own their vehicles. Combined with the difficulty attracting qualified casual drivers, any disciplinary action that could be taken would have a direct negative impact on the DATS service and its patrons. In addition, ETS does not have a process that encourages DATS driver accountability.

Recommendation 8: That ETS, in conjunction with Human Resources, develop a process that would promote accountability of DATS drivers and minimize the impact on patrons when disciplinary action is required.

- Communication Plan

The DATS communication plan identifies numerous communication vehicles including newsletters, brochures, automated phone information lines, the Internet, and general presentations. Under the current plan, DATS Administration is fully responsible for distribution. However, based on comments received during the review process, some individuals and groups feel they are not fully informed of developments within DATS.

It is noted that many of the disabled advocacy and program groups have their own communication processes to keep their members informed on initiatives, events and other points of interest. There may be an opportunity to partner with these groups to improve communications with the disabled community.

Recommendation 9: That ETS approach the various disabled advocacy and program services groups to identify opportunities for partnerships to improve communications.

- Fundraising

In 1996, a Fundraising Committee was created as an extension to the DATS Advisory Group with the objective of raising funds to increase the number of trips that could be provided by DATS. Barriers such as limited interest shown by the Advisory Board on Services for Persons with Disabilities and the DATS Advisory Group and DATS being a City service tended to discourage prospective donors and resulted in the committee being dissolved in 1999.

Only three of the 21 cities profiled in the CUTA *Specialized Transit Fact Book* identified funding from sources other than revenue, tax and government funding. The funds from other sources were received primarily for capital purchases.

Recommendation 10: That ETS adapt methodologies that have been successful with other paratransit services in acquiring funding from the private sector and seek City Council's direction for fundraising activities.

- Patron Safety

Comments received while reviewing the 1994 Strategic Plan and from some individuals interviewed by the DATS review team indicate there are concerns regarding the safety of patrons. These include allowing ambulatory patrons to utilize lifts designed for wheel chairs, transporting electric scooters larger than will fit safely on lifts, the inability to properly secure and lack of attention to properly secure mobility devices during transport, and the design of the securing mechanism itself.

It was also noted that some mobility devices are not designed for transport and that the design and size of devices is continually changing. Further, while most mobility devices have CSA approval, their design may not be compatible with existing lift and securing devices.

Recommendation 11: That ETS review standards for mobility devices that will be transported on DATS vehicles and that those standards be clearly communicated to and enforced with patrons.

Recommendation 12: That ETS review current loading and securing practices, document, communicate, and enforce acceptable safe practices.

Recommendation 13: That ETS, through City Council, request the Federal and Provincial Governments' to legislate standards for transportable mobility devices and client restraint systems.

3. Scheduling System Review

The consultant hired to the review of the DATS scheduling system was appointed in the first week of March 2002. The objective of the study is to evaluate the First Win scheduling algorithm and implementation as well as other paratransit scheduling systems, and make recommendations identifying the advantages, risks, costs/resources, and critical success factors regarding scheduling options for DATS.

The OCA is participating in the review. The results of this review will be reported in the second half of 2002 by the Administration in conjunction with the OCA.

We would like to acknowledge the cooperation and support we received from all individuals contacted during this review.

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APPENDIX

Paratransit Benchmarking Study

The benchmarking study undertaken by the OCA involved 21 municipalities or regional services, including Edmonton. Much of the data used in the analysis was derived from the Canadian Urban Transportation Association's (CUTA) *Specialized Transit Fact Book – 2000 Operating Data*, published in September 2001. The OCA supplemented the CUTA survey data with surveys circulated to 21 municipalities with populations greater than 150,000 and over 50,000 paratransit passenger trips per year. Replies were received from 16 recipients.

The OCA also reviewed studies of initiatives currently underway in the United States. The implementation of the *American with Disabilities Act* human rights legislation in 1990 continues to be the main driver of improvements to American paratransit delivery services. The industry remains in a state of flux as it attempts to meet the legislated requirement despite budgetary constraints.

Canadian Paratransit Services

The OCA analyzed the survey data from two perspectives:

- a) Overall – Edmonton's paratransit data were ranked/compared to data from 20 Canadian municipalities.
- b) Similar municipalities – Edmonton's paratransit data were compared to municipalities with similar populations and trip levels (Calgary, Hamilton, Ottawa-Carleton, Winnipeg, and Victoria).

1. Paratransit Client Base

A greater percentage of Edmonton's population uses paratransit services compared to other municipalities. Although Edmonton is ranked eighth in terms of population, it is ranked fourth in terms of the number of registrants (behind Vancouver, Toronto, and BC Municipal Systems) and number of trips provided (behind Toronto, Montreal and Vancouver). This trend is also evident when Edmonton is compared against municipalities of similar size and registrant-base; relative to its population, Edmonton provides more trips than comparably sized cities. A greater percentage of DATS trips are utilized by ambulatory patrons compared to the rest of Canada (66% vs. 54%). (See Table 1.)

Table 1: Paratransit Service Comparisons (2000 CUTA Data)

	Overall		Edmonton	Similar	
	Rank of 21	Range		Rank of 6	Range
Population	8	182,000 – 2,500,000	648,284	3	333,953 – 842,388
# Registrants	4	897– 25,392	14,108	1	7407 – 14,108
# Trips	4	52,396– 1,490,897	859,148	1	294,018 – 859,148
% Trips – Wheelchair	13 (lower than avg.)	21–100% (Avg: 46%)	34%	3	23 – 70% (Avg. 40%)
% Trips – Ambulatory	13 (higher than avg.)	0–79% (Avg. 54%)	66%	3	30 – 77% (Avg. 60%)
Adult Fares	16	\$1.45 – 2.60 (Avg. 1.98)	\$1.65*	4	\$1.45 – 2.25 (Avg. \$1.84)

* January 1, 2002, DATS' adult fare increased to \$2.00.

2. Method of Delivery

a) Vehicle Ownership and Breakdowns

Most municipalities either own the vehicles or have contractors supply the vehicles and drivers. Edmonton is the only municipality where employees own and maintain the paratransit vehicles. Edmonton has the highest rate of vehicle breakdowns, averaging over 10% compared to the survey average of 4%. This high level of vehicle breakdowns adversely impacts DATS schedules, pick-up times, trip length and customer satisfaction.

b) Dedicated and Non-dedicated Service

When paratransit service is provided in vehicles used exclusively for the transport of persons with disabilities, the municipality is said to provide “dedicated” service. This service can be provided internally or under contract. Alternatively, when service is provided to persons with disabilities with non-exclusive vehicles, this is termed “non-dedicated” service. Typically, non-dedicated service refers to the use of taxis.

The trend is to provide less service through the dedicated mode and more through the non-dedicated mode of service delivery. Non-dedicated service can be a cost-effective means of serving on-demand travel needs and off-peak, intermittent demand (e.g., late night service). Taxis can either be non-subsidized or become part of a taxi-saver coupon program where the municipality pays part of the taxi fare. Since taxi service is paid on a per-trip basis, if there are no trips, no costs are incurred.

Using 2000 CUTA data, non-dedicated service provision is significantly less expensive than dedicated service (on average, \$9.72 vs. \$17.54). However, only 31% of paratransit service is supplied by non-dedicated service providers. The reason for this is not readily apparent, but may have to do with the increased cost-effectiveness of dedicated service provision for peak-hour and many-to-one trips or the business model selected by the municipality.

Table 2: Dedicated and Non-dedicated Service (2000 CUTA Data)

	Overall		Edmonton	Similar	
	Average	Range		Average	Range
Transportation Expense/Trip:					
Dedicated	\$17.54	\$11.00 – \$28.85	\$11.59	\$16.58	\$11.59 – \$18.95
Non-dedicated (e.g., taxis)	\$9.72	\$5.60 – \$15.04	Not applic.	\$7.31	\$5.60 – \$10.06
Service:					
% Supplied by Dedicated	69%	31 – 100%	100%	81%	50 – 100%
% Supplied by Non-dedicated	31%	0 – 69%	0%	19%	0 – 50%

Transportation Expense/Dedicated Trip = (Dedicated Contract + Internal + Maintenance + Fuel Exp) / Dedic. Trips
 Transportation Expense/Non-dedic..Trip = (Non-dedic. Contract + Taxi + Scrip Program Expenses) / Non-dedic.Trips

c) Service Delivery Models

Booking, scheduling and dispatch are often performed in-house to maintain quality, with the driving contracted to ensure cost-effectiveness. Few municipalities use a hybrid model of contracted and in-house drivers: Edmonton, BC Municipal System (serving 7 small urban centres), Quebec City and Toronto were the only examples.

Over three-quarters of municipalities in the CUTA survey use non-dedicated service providers (e.g., taxis) to complement their dedicated service. This will increase to 86% as Calgary and Ottawa incorporate accessible-taxi programs into their paratransit delivery models. Of those municipalities currently using non-dedicated service providers, 75% do not provide a taxi-saver coupon program.

Table 3: Method of Delivery (2000 CUTA Data)

	Number of Municipalities	Total Expense per Trip	
		Range	Average
In-house	1	n/a	\$20.01
In-house + taxi	6	\$13.54 – 20.65	\$17.20
Contract	3	\$11.32 – 25.77	\$19.32
Contract + taxi	7	\$9.31 – 15.36	\$13.54
In-house & contract*	1	n/a	\$12.46
In-house, contract & taxi	3	\$9.79 – 26.86	\$16.62

Total expense per trip = total operating expenses/total passengers

*Edmonton

Of the similarly assessed municipalities, three did not provide non-dedicated service in 2000 (Edmonton, Calgary and Ottawa). However, Calgary and Ottawa are anticipating providing

non-dedicated service (taxi rides) in the near future. Edmonton would then be the only municipality that does not supplement its dedicated service with non-dedicated service.

Table 4: Anticipated Changes in Service Delivery Models for Similar Municipalities Between 2000 and 2003

Service Delivery Model	2000 CUTA Data	2002/2003 Projections
Dedicated	3	1*
Dedicated & Non-Dedicated	3	5

* Edmonton

3. Trip Analysis

a) Trip Bookings

DATS provides fewer on-demand trips than average (1% vs. 5%), concentrating its resources on subscription trips (69% vs. 62%). Subscription trips usually encompass work, education, and medical trips. DATS patrons appear to desire greater flexibility and accessibility to on-demand trips.

b) Trip Prioritization

Over half (56%) of survey respondents prioritize their bookings based on trip purpose (e.g., work, education, medical); the remainder make bookings on a first-come, first-served basis, including Edmonton. In prior years, interest groups have expressed concern about the prioritization of trips, stating that such a process could be deemed discriminatory.

c) Service Standards

DATS' service standards are consistent with those of the majority of municipalities, with a 30-minute pick up window and maximum 60-minute travel time. Some municipalities also set sub-goals based on how many zones would be traversed during the course of a trip, or make the distinction between urban and suburban trips.

d) Late Cancellations / "No-shows"

In 2000, Edmonton had one of the highest percentages of "no-shows" – patrons who opted not to take their scheduled ride and failed to notify DATS in a timely manner (ranked 18 of 21). The high percentage of "no-shows" decreases the overall number of rides supplied and reduces scheduling efficiency and customer/driver satisfaction. High no-show rate has led to over-booking in anticipation of the no-shows, further compounding scheduling issues.

DATS administration recognizes that "no-shows" are an issue and is actively looking for ways to resolve it. Many municipalities, however, stated in the survey that they felt limited in their ability to enforce policies such as suspension of service for excessive no-shows. The primary difficulties were inadequate manpower for follow-up and difficulty in proving that a patron was a "no-show" (e.g., Was the driver on time? Did the driver wait the required time? Was the driver at the right entrance/location?).

e) Cancellation Policy

Edmonton is the only paratransit service with a minimum cancellation standard of 30 minutes to cancel a previously scheduled trip. A 1-hour minimum notice was the most common amongst municipalities, but a significant number of survey respondents (37.5%)

required more than 1 hour’s notice. Increasing the cancellation notice time from 30 minutes to 1 hour would provide booking clerks greater flexibility in responding to requests for service.

f) Unaccommodated Trip Requests

In 2000, Edmonton appears to have had fewer unaccommodated trip requests than the average (1.29% vs. 2.58%) and was ranked second against its cohorts. Calgary was the only major centre with a lower rate than Edmonton’s (see Table 5).

All municipalities acknowledged that the total number of trips they provide is limited by budgetary constraints. One-third of the municipalities surveyed had integrated paratransit service with regular transit or provided a travel-training course in an attempt to manage demand. Two municipalities were in the process of developing a program for implementation later in 2002. DATS services have been integrated with regular transit and a travel-training program has been developed.

g) Complaints

No distinction was made by CUTA with respect to complaint type; analysis was based on the aggregate number of complaints. In 2000, Edmonton ranked favourably both in general and against its cohorts. However, DATS administration acknowledges it faced some exceptional challenges in 2001, such as the problematic implementation of the FirstWin scheduling.

Table 5: Trip Profile (2000 CUTA data)

	Overall		Edmonton	Similar	
	Average	Range		Average	Range
% Trip Type:					
Subscription	62%	30 – 93%	69%	57%	30 – 78%
Reservation	33%	0 – 70%	30%	42%	21 – 70%
On-demand	5%	0 – 30%	1%	1%	0 – 2%
	Rank (of 21)	Range		Rank (of 6)	Range
% Trips – “No shows”	18	0.3 – 3.15%* (Avg. 1.3%)*	2.82%	4	0.88 – 16.96%
% Trips – Unaccommodated	9	0.01 – 12% (Avg.2.58%)	1.29%	2	0.42 – 6.93%
% Complaints of All Travel Requests	9 of 17**	0.01 – 0.37% (Avg. 0.1%)	0.07%	1 of 3***	0.07 – 0.28%

* Two municipalities were removed due to extreme values (13% and 17%)

** Four municipalities did not supply this information to CUTA

*** Three municipalities did not supply this information to CUTA.

American Paratransit Services

The United States of America may well be leading the way in paratransit service, due to civil rights legislation (*Americans with Disabilities Act*, 1990), which mandated that transit authorities provide comparable paratransit or other special transportation services to individuals with disabilities who cannot use fixed route bus services. Service comparability is measured in terms of four criteria:

1. ADA paratransit services must equal fixed-route services in terms of service area and days and hours of service.
2. Fares cannot exceed twice the fixed-route passenger fare.
3. Reservation systems should allow for next day service.
4. Trip-purpose restrictions and capacity constraints should be eliminated.

Under the ADA, paratransit services are not intended to serve as a comprehensive system of transportation for individuals with disabilities, but instead as a “safety net” to ensure transportation equity for individuals with disabilities for whom it is appropriate. Transit authorities are also required to make their *fixed route* service fully accessible.

Traditionally, paratransit service provision has been inefficient because it is labour intensive, achieves low productivity and generates minimal passenger revenue¹. Transit authorities are searching for strategies that will maintain service quality, balance supply with user demand and reduce the net costs of service delivery. The Transit Cooperative Research Program (TRCP) noted the following industry trends:

- a) Transit agencies continue to evolve their methods of paratransit delivery as they strive to balance quality and cost issues. As a result, many have changed their service delivery models within the last three years.
- b) The use of private-sector paratransit service providers has increased, due to lower labour costs and responsiveness to capacity increases.
- c) Contracts with non-profit carriers are limited, mainly due to inability to meet increasing demand.
- d) Transit authorities are conducting their own reservations and scheduling to maintain quality control and ensure demand management.
- e) With increased focus on integration with regular transit services, some authorities are reconsidering the viability of direct operation. Labour costs continue to be the main hurdle.

Conclusion

Based on 2000 data, Edmonton compares favourably with other municipalities in terms of volume of service provided to its patrons and costs, as indicated by the high number of total trips provided, the low percentage of unaccommodated trips and the low transportation expense.

Of concern is the relatively high percentage of vehicle breakdowns and late cancellations (“no-shows”) as well as the short cancellation notice policy. Further exploration of alternative

¹ *Paratransit Contracting and Service Delivery Methods*, 1998, Transit Cooperative Research Program

business models needs to be undertaken before any decision can be made in regard to significant changes in service delivery.

Canada is beginning to mirror the changes that have occurred in the United States that resulted from the passing of the *Americans with Disabilities Act* in 1990. Both countries are struggling to provide increased services with limited resources and investigating a variety of means of doing so. Demand management will receive greater focus as the demand for paratransit services continues to intensify.