



OFFICE OF THE
City Auditor

Edmonton Transit System Branch Audit

December 18, 2006



The Office of the City Auditor conducted
this project in accordance with the
*International Standards for the
Professional Practice of Internal Auditing*

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Edmonton Transit System Branch Audit

Executive Summary

Edmonton Transit System (ETS) is one of five branches within the Transportation Department. Its mission¹ is to provide customer-focused, safe, reliable and affordable public transit services that link people and places. In 2006 the operating budget for ETS was approved at \$180.4 million of which \$108.7 million was funded by the Tax Levy. The approved budget included funding for 1,912.0 Full Time Equivalents (positions). The ETS fleet consists of 769 diesel buses, 49 trolley buses, 29 community buses, 91 DATS lift vans and 37 LRT vehicles. ETS projects it will carry in excess of 55 million passengers in 2006.

This review highlights the need for Council to provide the Administration with clear direction as to service level expectations and the degree of tax levy subsidy for the provision of transit service.

The OCA is confident that the Administration has the tools and experience to design the strategies and operational business plans to meet Council expectations once direction has been provided.

To assist Council in their consideration of what direction to provide to ETS, the Office of the City Auditor (OCA) has included information about the Canadian transit industry and how Edmonton compares against other Canadian cities. The observations contained in the body of the report are summarized in three areas: Governance, Strategies and Operational Performance. DATS operations were not included in the scope of this audit.

Governance

City Council, Senior Management and Operational Management and Staff play key roles in the delivery of transit service. Council is the owner of the transit service and the administration is accountable to Council for operating the service within approved policy. Understanding and adopting the responsibilities associated with each role will facilitate Council's approval and oversight role and provide the administration with the direction and flexibility required to achieve the greatest benefit from the City's investment in transit services.

¹ Edmonton Transit System 2006-2008 Business Plan

There are three strategic documents that are an integral part of the governance framework: the 1999 Transportation Master Plan (TMP), Horizon 2000, approved in 1996, which sets out specific strategies and long term goals for the delivery of transit services, and the ETS business plan that sets out a 10 year expenditure forecast for capital spending and short term goals, operating strategies for service delivery and activities that support Council initiatives.

The OCA's analysis shows ETS' revenue/cost ratio is 8% below the average ratio for comparable Canadian transit organizations selected by the OCA. The OCA estimates that each increase of 1% in the revenue/cost ratio represents approximately \$1.5 million of tax levy savings which can be achieved through a combination of revenue increases, service changes and cost reductions. An 8% increase in the revenue/cost ratio represents \$12.0 million dollars in potential tax levy savings. One factor that has contributed to ETS having a lower revenue/cost ratio compared to many Canadian transit organizations is that Edmonton's cash fares and pass prices are 11% to 14% below the average of comparable organizations.

Recommendation 1

The OCA recommends that ETS Management develop a fare policy for Council approval. Establishment of the fare policy requires Council's direction on the appropriate transit revenue/cost ratio.

Management Response: Agreed

The fare policy report will be presented to the Transportation and Public Works Committee during the first quarter of 2007.

Strategies

Horizon 2000 defined a transit strategy to deliver improved performance and provide customers with a more reliable and consistent service. The strategies set out in Horizon 2000 have not been reviewed or updated since being approved by City Council in 1996. Following Council approval of the TMP in 1999 and recommendations in the Edmonton Transit Fare Structure Strategy Review report in 2000, ETS management adopted the City's business planning and budget process to guide transit service delivery. Council's consent for service delivery decisions was obtained through annual budget deliberations. The OCA's review of ETS services shows that between 1994 and 1999 there was an improvement in the financial performance of transit service delivery and that between 1999 and 2005 the trend has been a decline in the revenue/cost ratio.

The OCA's research shows that transit organizations recognize the need to increase ridership and revenues. To facilitate ridership increases, organizations are developing comprehensive ridership growth plans. ETS projects ridership growth based on population forecasts and does not have a comprehensive ridership growth plan. A comprehensive plan that includes ridership growth targets is an effective tool for monitoring improvements in the effectiveness and efficiency of transit services.

An assessment of the utilization of the ETS fleet shows, on average, ETS buses are utilized less than those of comparable transit organizations. The OCA believes there is potential to reduce operational costs and maintain passenger carrying capacity by adjusting bus deployment decisions and utilizing more articulated buses on high volume routes and more smaller community buses on lower volume routes. We also observed that ETS does not have a stable source of funding for replacement of its fleet, jeopardizing the ability to maintain its fleet replacement strategy.

Recommendation 2

The OCA recommends the ETS Management develop a comprehensive long-term strategy that is aligned with the TMP for City Council approval. The strategy should address ridership growth, long-term fleet requirements and service delivery standards. The strategy should be kept current and aligned with Council direction through regularly scheduled reviews.

Management Response: Agreed

ETS is currently preparing terms of reference for the development of a Strategic Ridership Growth Plan. Input into the plan will be sought from key stakeholders including City Council. ETS is providing input into the Transportation Master Plan and will ensure that the strategies in both documents are aligned. This will be completed by the end of 2007.

Recommendation 3

The OCA recommends that ETS management regularly report key performance information to Council indicating progress towards implementation of the long-term strategy. Key performance indicators include the revenue/cost ratio, passengers per vehicle hour, passengers per capita.

Management Response: Agreed

These three reporting indicators will be incorporated into future reports that will be presented to committee and council.

Recommendation 4

The OCA recommends that ETS management in conjunction, with Corporate Services management, develop a long-term fleet replacement and funding strategy. The strategy should include opportunities to improve the bus fleet mix and identifying alternate stable fleet replacement funding sources.

Management Response: Agreed

Currently the Transit Administration does have a long-term bus replacement plan however it is not funded beyond 2009. As well the current fleet of GM's has become less and less reliable and has increased operating costs. A short-term replacement plan will be presented early in 2007 and long-term replacement and vehicle mix type strategy will be developed over the course of 2007 with a report in 2008.

Operational Performance

The OCA observed that the passenger boarding count standards used to flag transit services for further investigation were lower than those approved by City Council in 1996. The OCA reviewed boarding count performance reports used by ETS. Although the data gathering needs to improve, the reports indicate that approximately 40% of bus routes are not performing within the target range established by ETS management.

Based on assertions made by ETS management, in 2005 approximately 680,000 service hours were affected by possible overload conditions and approximately 170,000 service hours did not fully meet the minimum standards.

In the opinion of the OCA, ETS will need to continue making difficult deployment choices over the next 3 to 5 years to deal with services not within the target range set by ETS. Improving its route monitoring process should improve the economy of service delivery and decrease the risk of passenger overload and underload conditions.

ETS has been effective in increasing ridership. However, there was also a corresponding increase in service hours. The increase in ridership is consistent with the population growth used to forecast ridership growth. This is supported by the 2005 Household Travel Survey that reported that transit use remained constant in comparison to 1994 (9% modal split). Benchmark results illustrate that Edmonton uses more resources to move lesser levels of passengers than most other municipalities.

Between 1994 and 1999 ETS was successful in increasing the efficiency of service delivery. However, there is a continual decline in efficiency from 1999 through 2005. Benchmark results show that many Canadian transit organizations are more efficient than ETS.

From 1996 to 1998 ETS reported a reduction in the number of service hours to the Canadian Urban Transit Association². This decline could be attributed to a major service revamp following Horizon 2000. This reduction in service hours did not negatively impact ridership, and resulted in a lower cost per passenger. Since 1998 the cost per passenger has steadily increased as service hours have been added. This decline in the economy of service will require higher tax levy funding to maintain existing service levels if the trend continues.

² ETS management advised the OCA that the hours of service reported to CUTA in 1998 was in error. The impact of this error is seen in Chart 7 of the report.

Recommendation 5

The OCA recommends that ETS management set and consistently apply service level standards that will challenge Transit to reduce service delivery hours for non-performing bus routes, improve the cost efficiency and reduce the risk of passenger overload and underload conditions.

Management Response: Agreed

As part of the Strategic Ridership Growth Plan noted in recommendation 2 ETS will undertake a review of service standards. This review will include options that involve stringent minimum standards as well as options that consider public transit needs of specific markets (e.g., community bus routes, senior citizens and mobility need in low demand time periods). The impacts of different service standards will be identified for Council consideration.

Conclusion

Council is the owner of the transit service and the Administration is accountable to Council for operating the service within approved policy. Policies should clearly define service strategies, fare structure, performance standards and financial targets. Current policies are not in place that provide clear direction for the delivery of transit services and performance expectations. ETS has been effective in increasing ridership numbers. However, the OCA believes that ETS has opportunities to improve its effectiveness, efficiency and economy without sacrificing ridership growth. In the long term, every 1% increase in ETS revenue/cost ratio will reduce the tax levy by approximately \$1.5 million. An 8% increase in the revenue/cost ratio represents \$12.0 million dollars in potential tax levy savings.

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Edmonton Transit System Branch Audit

1. Introduction

The Office of the City Auditor's (OCA) approved 2006 work plan included a Branch Audit of the Edmonton Transit System (ETS). The primary objective of this Branch Audit is to provide assurance that ETS services are delivered in an effective, efficient, and economical manner.

ETS is one of five branches within the Transportation Department. Its mission³ is to provide customer-focused, safe, reliable and affordable public transit services that link people and places. ETS provides various public transportation services, including bus routes, light rail transit (LRT) and transportation for people with disabilities (DATS).

2. Background

2.1. General Background

The City of Edmonton does not have a current transit policy that provides clear direction on ETS performance expectations.

The most recent strategic direction from Council is the Horizon 2000 plan which was approved in July 1996. The plan called for overall service restructuring, including a basic network along major arterial routes supplemented by flexible community routes that are customer driven and adhere to strict performance criteria. This strategy is a targeted approach to the planning, budgeting and delivery of transit services, with an eye to both cost and customer needs.

Table 1, Operating Budget, illustrates the increase in operating costs and revenues from 2001 to 2006. Table 2, Capital Expenditure Budget, sets out the approved capital expenditures for the same period.

³ Edmonton Transit System 2006-2008 Business Plan

Table 1 – Operating Budget
(Millions of Dollars)

| | 2001 | 2002 | 2003 | 2004* | 2005* | 2006 |
|-----------------------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Operating Expenditures | \$123.6 | \$131.0 | \$136.7 | \$148.2 | \$163.9 | \$180.4 |
| <i>Percentage Increase</i> | | 6.0% | 4.4% | 8.4% | 10.6%^ | 10.1%^ |
| Revenue | <u>52.3</u> | <u>55.7</u> | <u>58.7</u> | <u>63.0</u> | <u>66.3</u> | <u>71.7</u> |
| Tax Levy | <u>\$71.3</u> | <u>\$75.3</u> | <u>\$78.0</u> | <u>\$85.2</u> | <u>\$97.6</u> | <u>\$108.7</u> |
| <i>Percentage Increase</i> | | 5.6% | 3.6% | 9.2% | 14.6% | 11.4% |
| Full Time Equivalents (FTE) | 1,550.3 | 1,593.1 | 1636.3 | 1,706.6 | 1,812.8 | 1,912.0 |

Information Source – Approved Operating Budget Tables

* Capital financing for bus replacement removed from 2004 and 2005 budgets for comparison purposes.

^ Service hours increased a greater percentage in 2005 (3.7%) and 2006 (4.5%) compared to the four previous years – 2004 (1.7%), 2003 (2.2%), 2002 (1.6%), and 2001 (0.6%).

Between 2001 and 2006, the operating expenditure budget for all transit services increased by 46.0% for an average of 9.2% per year. Over the same period, revenue increased by 37.1%, tax levy funding increased by 52.5%, and full time equivalents increased by 23.3%.

Table 2 – Capital Expenditure Budget
(Millions of Dollars)

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|--------------------------|---------------|---------------|---------------|---------------|---------------|----------------|
| LRT | \$13.7 | \$15.9 | \$32.7 | \$39.2 | \$32.2 | \$90.4 |
| Bus Fleet and Facilities | <u>32.5</u> | <u>29.6</u> | <u>26.5</u> | <u>18.6</u> | <u>27.2</u> | <u>35.8</u> |
| Total | <u>\$46.2</u> | <u>\$45.5</u> | <u>\$59.2</u> | <u>\$57.8</u> | <u>\$59.4</u> | <u>\$126.2</u> |

Information Source – Approved Capital Budget Tables (ETS and Mobile Equipment Services)

The significant increase in capital funding allocated to LRT in 2006 is for the South LRT expansion.

2.2. Full Cost of Transit Service

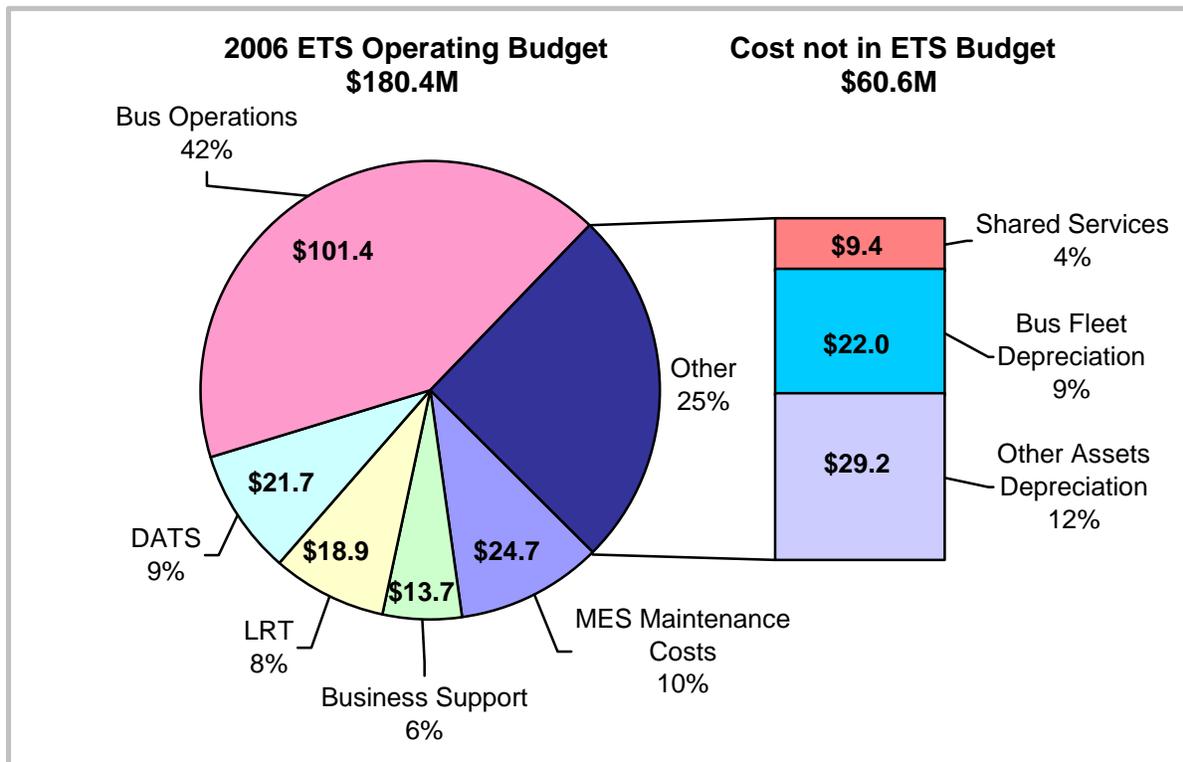
The full cost of providing transit service is not reflected in the ETS operating budget. The OCA estimates that 25% of the total cost of transit service is either included in other parts of the City's budget or not included at all. These costs include:

1. Shared Services including finance, human resource, information technology and other services provided by the Corporate Services Department. A corporate project to identify costs of services provided to operational areas is being finalized. The estimated allocation for ETS is \$9.4 million as reflected in Chart 1, Full Cost of Transit Service.
2. Depreciation of assets is not part of the accounting and reporting requirements for the public sector. The Public Sector Accounting Board released an exposure draft in

May 2006 on a reporting model which recognizes that financial statements should provide an accounting of the full nature and extent of financial affairs and resources. This would include depreciation on the following transit assets:

- Transit Bus Fleet - At the present time most public transit organizations in Canada are using an 18 year life cycle for planning fleet replacement. However, a recent survey shows some organizations are planning to shorten this cycle to as few as 12 years. The annual depreciation on the City's fleet using an 18 year life cycle is estimated at \$22 million.
- Other Transit Assets – These assets include the light rail transit system, bus shelters and transit centres. It is estimated that the value of these assets are approximately \$1 billion dollars. Based on an average 30 year life cycle the annual depreciation on these assets is estimated at \$29.2 million.

**Chart 1
Full Cost of Transit Services**



2.3. Bus Fleet Maintenance Costs

The City's entire fleet of vehicles, excluding LRT, are managed by the Mobile Equipment Services Branch (MES) in the Corporate Services Department. Under the current agreement between ETS and MES, all maintenance costs for the ETS fleet are

charged to ETS. Chart 1 illustrates that 10% of the full cost of transit service goes towards bus fleet maintenance. The OCA compared the transit fleet maintenance budgets to the overall ETS budgets from 2000 to 2006. During this period, MES maintenance costs have remained a consistent percentage of total ETS expenditures.

3. Observations and Analysis

The results presented in this report represent the significant observations from the data gathered and analyzed throughout the audit. The observations are presented in three areas: Governance, Strategies and Operational Performance and are primarily related to regular transit service, excluding DATS. Recommendations resulting from the observations are presented in section 5 of this report along with management's response.

3.1. Governance

3.1.1. Governance Framework

Governance is defined as "The combination of processes and structures implemented by the governing body in order to inform, direct, manage, and monitor the activities of an organization towards the achievement of its objectives."⁴ Governance can also be described as a relationship model between a governing body and an empowered administration. Governance models include the governing body's oversight role in providing assurance that the organization is achieving its intended goals and that the organization is operating in a manner that best serves its stakeholders.

Within effective governance models, policies serve as guiding mechanisms designed to ensure that intended goals are being accomplished. Also, an integral part of any governance model is the accountability of the administration. Accountability is accomplished by delivering and communicating both plans and achieved results to the governing body.

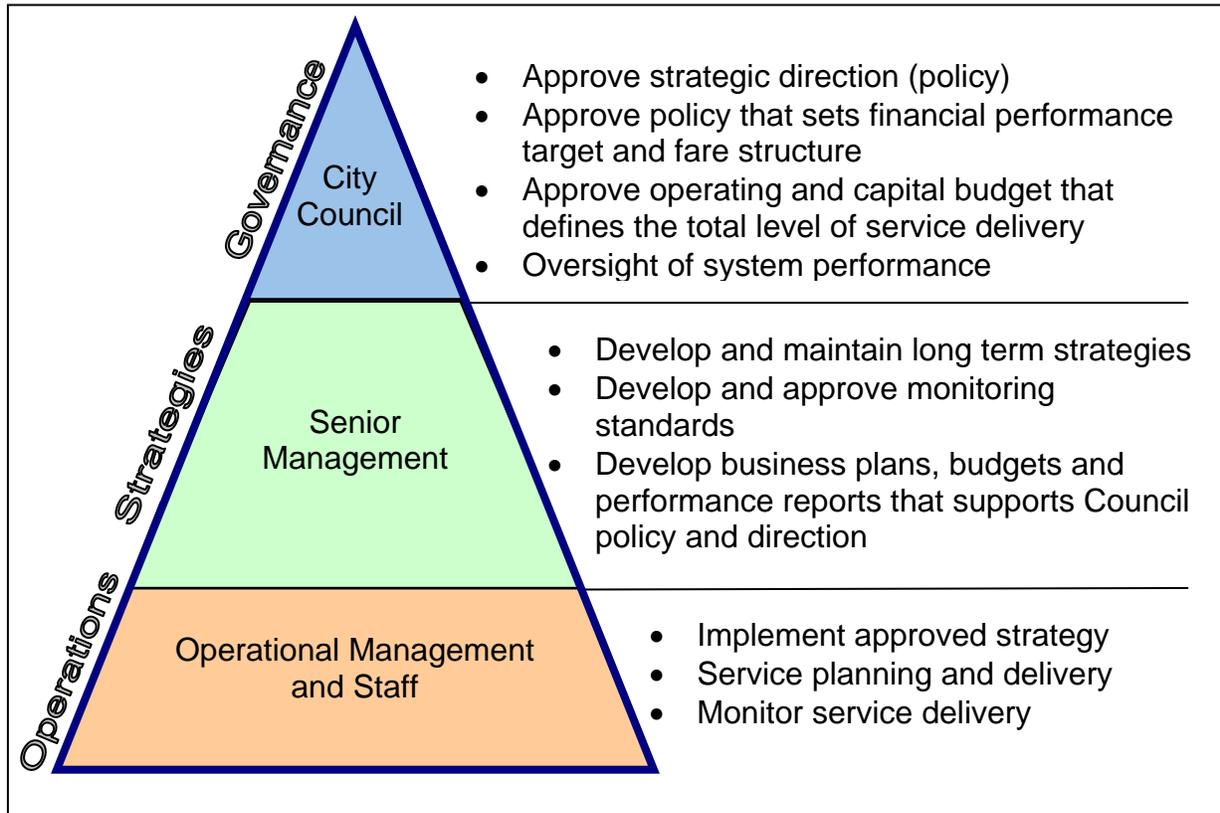
Council is the owner of the financial, environmental and social direction that form the basis for the delivery of transit service. This direction should be communicated to the administration through approved City policies that clearly define service strategies, fare structure, performance standards and financial targets. Current policies are not in place that provide clear direction for the delivery of transit services.

The administration is accountable to Council for managing the transit operations within the parameters established in the approved policy. Operational results should be reported to Council with financial performance information on a regular basis.

⁴ Definition of Governance: Institute of Internal Auditors, The Professional Practices Framework, Jan 2004, p 28.

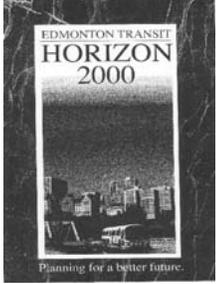
Figure 1, Governance Framework, summarizes key roles of City Council, Senior Management and Operational Management and Staff. This framework facilitates Council’s approval and oversight role and provides the administration with the direction and flexibility required to achieve the greatest benefit from the investment in services.

**Figure 1
Governance Framework**



The OCA used the above governance structure to assess the ETS. Figure 2, Strategic Documents, describe the three documents that are an integral part of the governance framework for the delivery of transit services.

**Figure 2
Strategic Documents**

| | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <p>1. Transportation Master Plan (TMP)</p> <p>The TMP was approved by City Council in 1999. It is at the heart of Edmonton’s transportation system. The TMP expresses the City of Edmonton’s approach to the “movement of people and goods”. The TMP provides general objectives for transit services including: “Meeting basic mobility needs ...”, “Offering a viable and competitive alternative ...” and “Expanding the carrying capacity of the transportation system”.</p> <p>An assessment of the TMP and recommendations to strengthen the transportation planning process are included in the OCA’s 2006 Transportation Planning Branch Audit.</p> |  |
| <p>2. Horizon 2000</p> <p>Horizon 2000 was approved by City Council in 1996 and is considered a companion document to the TMP. Horizon 2000 aligns with the TMP setting out specific strategies and long-term goals for the delivery of transit services.</p> |  |
| <p>3. Business Plan</p> <p>The business plan sets out a 10 year expenditure forecast for capital spending and short-term goals, operating strategies for service delivery and activities that support Council initiatives. The business plan is to align with the goals and strategies set out in the TMP and Horizon 2000.</p> |  |

In the opinion of the OCA the above governance structure and strategic documents can provide an adequate governance framework for transit services with the TMP providing the vision for the movement of people, ETS strategies (e.g., Horizon 2000) defining longer term transit service delivery strategies and goals, and the business plan setting out how the goals will be achieved.

3.1.2. Revenue/Cost Ratio

A revenue/cost ratio is one tool Council can use to provide the administration with direction on financial performance expectations. The revenue/cost ratio is the ratio of revenue generated through fares and advertising in relation to total operating expense. It is the performance target which guides the transit organization towards a specific cost efficiency level.

When setting a revenue/cost ratio the primary purpose of transit must be recognized. For example if the primary purpose of providing transit service is mass transit then a higher ratio could be expected. If the service is to be more diverse to satisfy different groups of individuals, a lower ratio may be appropriate.

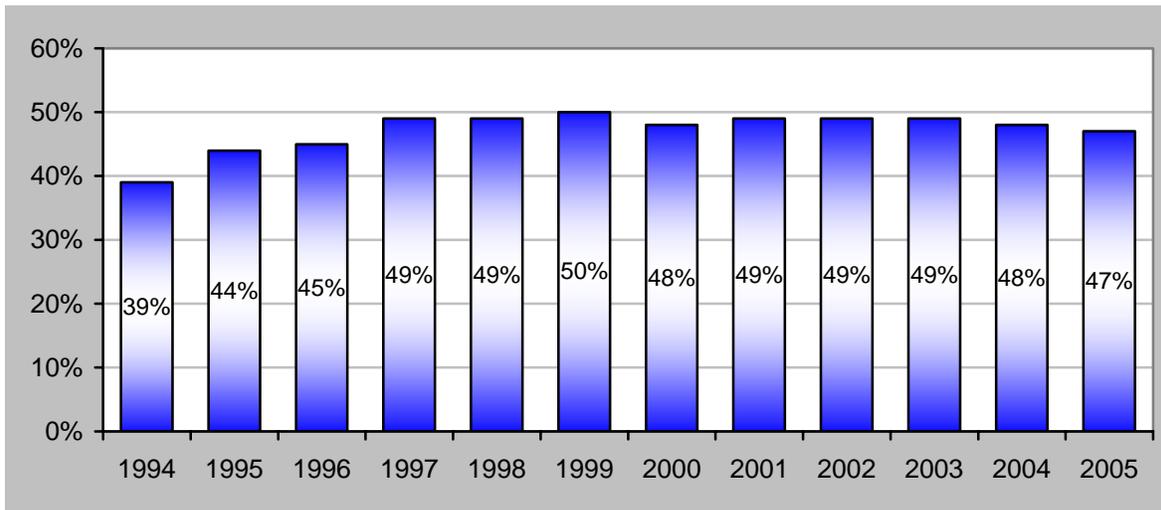
Senior management's role is to develop the appropriate strategies and business plans to ensure the appropriate revenue/cost ratio approved by Council is achieved.

In 1988 City Council approved Policy C401A, "Farebox Recovery Policy". This farebox policy provided direction to ETS that passenger revenues should recover 40-45% of operating costs. However in 1992, this policy was superseded by Policy C451C "Edmonton Transit Tariff Structure" which changed the 40-45% recovery ratio to an informal revenue/cost guideline that continues to be used by ETS management. Subsequently, in 2000 Council directed that the annual fare structure be based on the Corporate Business Plan and Long Range Financial Guidelines.

The OCA reviewed the 12 year trend of ETS' performance and compared ETS's 2005 performance to that of nine other public transportation organizations in Canada (Calgary, Hamilton, Mississauga, Ottawa, Toronto, Vancouver, Waterloo Region, Winnipeg and York). These organizations were selected from the Canadian Urban Transportation Association⁵ (CUTA) grouping of municipalities with population greater than 400,000. While the environmental and physical characteristics of each municipality vary, the OCA believes that collectively the selected cities provide a good representation of the Canadian public transportation environment. Key differences include population density and method of service delivery. For example, Winnipeg has a transit system based purely on buses, Calgary's transit system utilizes a combination of light rail transit and buses, while Toronto has a very large rail transit system. The trends and comparisons are illustrated in charts 2 through 14 in this report.

⁵ The Canadian Urban Transit Association (CUTA) represents the public transit community in Canada. CUTA's mission is to establish public transit as the primary solution to urban mobility. CUTA's goals include: providing members with ongoing intelligence about the transit environment, and assisting their members to improve the efficiency, effectiveness and overall competitiveness.

Chart 2
ETS Revenue/Cost Ratio



Information Source – Canadian Transit Fact Books⁶

Chart 2, ETS Revenue/Cost Ratio, illustrates ETS's revenue/cost ratio trend over a twelve year period from 1994 to 2005. Following the creation of Horizon 2000, ETS was successful in increasing the revenue/cost ratio from 39% in 1994 to a high of 50% in 1999. In October 2000, Council approved recommendations in a report entitled "Edmonton Transit Fare Strategy Review" that stated the annual fare structure was to be based on Corporate Business Planning and Long Range Financial Planning guidelines approved within the budget process. In 2000 the revenue/cost ratio fell to 48% and declined to 47% in 2005. This downward trend requires that tax levy funding be incrementally increased in order maintain the equivalent level of transit services.

The OCA estimates that each increase of 1% in the revenue/cost ratio represents approximately \$1.5 million tax levy savings which can be achieved through a combination of revenue increases, service changes and costs reductions. This estimate is based on ETS's approved operating budget for 2005.

Factors that have contributed to the decline in the revenue/cost ratio include: refurbishment and maintenance of older diesel and trolley buses, fuel price increases, lease of temporary bus storage facilities and limited fare increases.

Between 1994 and 2005 adult fares increased from \$1.60 to \$2.00 for cash and from \$46.00 to \$59.00 for monthly passes. This represents an average annual increase of 2.3% and 2.6% respectively, well below the average cost increase of 9.2%.

⁶ The Canadian Transit Fact books are annual publications produced by The Canadian Urban Transit Association (CUTA). The books contain operating statistics provided by the various Transit authorities. The OCA did not audit the information published by CUTA and relied on CUTA processes for data integrity and comparability.

**Table 3
ETS 2005 Fare Comparison**

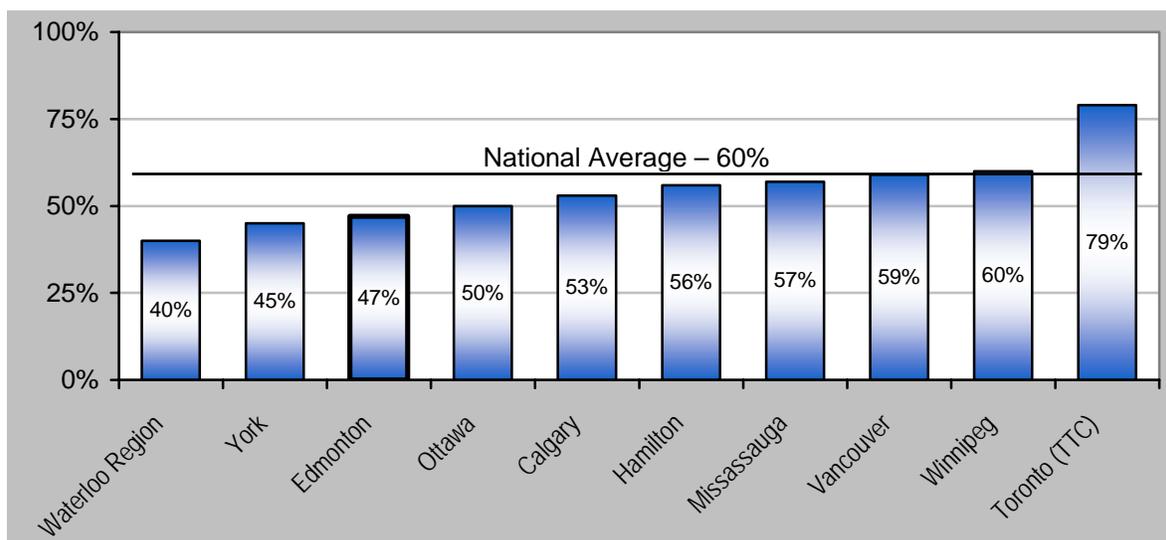
| | Adult Fares | | Student Fares | | Senior Fares | |
|-----------------------------------------------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|
| | Cash Fare | Monthly Pass | Cash Fare | Monthly Pass | Cash Fare | Monthly Pass |
| Edmonton | \$2.00 | \$59.00 | \$1.75 | \$42.00* | \$1.75 | \$11.00 |
| Range for Comparable Organizations | \$1.85 - \$2.75 | \$55.00 - \$98.75 | \$1.40 - \$2.75 | \$40.00 - \$83.25 | \$1.55 - \$2.75 | \$11.00 - \$83.25 |
| National Average for Comparable Organizations | \$2.27 | \$68.50 | \$1.97 | \$49.18 | \$2.02 | \$39.41 |
| Edmonton Fares as a Percentage of to the National Average | 88% | 86% | 89% | 85% | 87% | 28% |

Information Source – Canadian Transit Fact Book, 2005 Operating Data

* Per ETS - Student Monthly passes are sold to school boards at a discount rate. School boards resold passes to students at subsidized rates.

Table 3, ETS 2005 Fare Comparison, shows Edmonton cash fares are 11% to 14% below the average of comparable organizations. Adult monthly passes generate the greatest portion of revenues. Edmonton’s adult pass price was the second lowest for the organizations included in the review.

**Chart 3
Revenue/Cost Ratio Comparison - 2005**



Information Source – Canadian Transit Fact Book, 2005 Operating Data

Chart 3, Revenue/Cost Ratio Comparison - 2005 illustrates that ETS’s revenue/cost ratio is the third lowest of the ten public transit organizations selected by the OCA. The average revenue/cost ratio for the ten municipalities represented in the chart is 55%

while the national average for all public transit organizations is 60%. ETS’s revenue/cost ratio is 8% below the average of the ten municipalities represented in Chart 3, which represents \$12.0 million dollars in potential tax levy savings.

A higher revenue/cost ratio target challenges the administration to identify opportunities for revenue increases, service changes and cost reductions. Figure 3, Revenue/Cost Ratio Formula illustrates the revenue/cost relationship including strategies to improve the ratio. Table 4 provides a more detailed explanation of the key strategies available to increase the revenue/cost ratio and achieve savings.

**Figure 3
Revenue/Cost Ratio Formula**

| Formula | Increase Ratio by: |
|-------------------------------------------|----------------------------------------------------------------------------------------------------|
| $\frac{\text{Revenue}}{\text{Cost}} = \%$ | Revenue 1. Increase farebox rates 2. Increase ridership volume 3. Increase other revenues |
| | Costs 4. Reduce service level hours 5. Reduce indirect costs |

**Table 4
Strategies for Increasing Revenue/Cost Ratio**

| Description | Strategies |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Increase farebox rates | <ul style="list-style-type: none"> Develop appropriate pricing for transit fares, including discounts on various fare products. |
| 2. Increase ridership volume | <ul style="list-style-type: none"> Develop and implement comprehensive ridership growth plan, monitor results, and update the plan on an annual basis to ensure relevancy. Include ridership target goals in the growth plan, and report actual results to Council. |
| 3. Increase other revenues | <ul style="list-style-type: none"> Actively pursue alternate sources of revenue such as advertising, charter service and regional services. |
| 4. Reduce service level hours | <ul style="list-style-type: none"> Revise bus route planning and scheduling process to meet minimum passenger boarding standards. Improve carrying efficiency by using more articulated buses (<i>121 passengers standing load</i>) to replace the lower-capacity standard size buses (<i>82 passengers standing load</i>) during peak hour periods. |
| 5. Reduce or eliminate indirect costs | <ul style="list-style-type: none"> Review indirect cost activities to ensure significant value added. |

The benefits of a higher revenue/cost recovery ratio are:

1. The ability to provide more transit service for the same tax levy dollar.
2. A challenge to make more effective trade-off choices when planning and scheduling the transit route system.

In the opinion of the OCA, ETS should develop a fare policy (both cash fares and month passes) for Council approval. Establishment of the fare policy requires Council's direction on the appropriate transit revenue/cost ratio.
(Recommendation 1)

3.2. Strategies

3.2.1. Horizon 2000 Service Delivery Strategies

Approved in 1996, Horizon 2000 defined a strategy to deliver improved performance and provide transit users with a more reliable and consistent service. The foundation for this strategy is based on service structure, fare structure, vehicle and infrastructure as well as marketing and communication. The strategy was subjected to a peer review that included public transportation organizations and consultants from across Canada. It was then presented to a number of major stakeholder groups in the city to obtain feedback and identify specific concerns prior to presenting the strategy to City Council for approval.

Horizon 2000 identified two main transit service components:

- City-wide transit routes (Base Network) that operate on a consistent and reliable basis every day of the year. The base network is comprised of core routes that provide basic cross-town service focusing on high demand corridors and connector routes that expand the base network coverage and act as a feeder for core routes.
- Community transit services (Community Network) that provide service to local community amenities as well as connect with the city-wide routes for travel across town or to the downtown area.

The Horizon 2000 strategy was a targeted approach to the planning, budgeting and delivery of transit services, with an eye to both cost and customer needs. It allowed for reduction of service in the community network during times of restraint and removal of service if minimum ridership levels were not reached.

After initial implementation of the strategies set out in Horizon 2000, ETS management adopted the City's business planning and budget process to guide transit service delivery, obtaining Council's consent for service delivery decisions during annual budget deliberations. For example, recommendations in the Edmonton Transit Fare Structure Strategy Review report in 2000 directed ETS to base the annual fare structure on

business planning guidelines approved within the budget process. The impact of these decisions are described later in this report.

In the opinion of the OCA the strategies set out in Horizon 2000 were sound and provided the administration with good direction for the delivery of transit service. Longer term strategies, such as those in Horizon 2000, allow the administration to focus resources in areas that have the greatest potential for socio-economic benefit. *(Recommendation 2)*

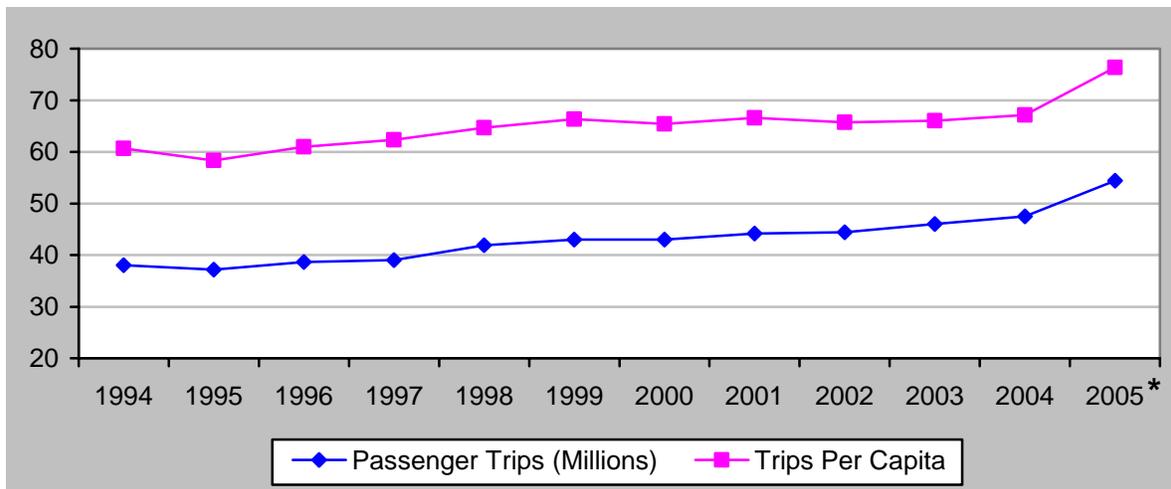
3.2.2. Achievement of Horizon 2000 Goals

Horizon 2000 identified five goals: increased ridership, increased consistency and reliability, increased customer satisfaction, increased opportunities for persons with disabilities, and improved financial performance.

1. Increased Ridership

Horizon 2000 recognized that market research, public consultation and communication strategies were required to promote ridership at the community level.

**Chart 4
ETS Ridership**



Information Source – Canadian Transit Fact Books
* New pass multipliers applied in 2005

Chart 4, ETS Ridership, illustrates that total estimated passenger trips increased from 38 million in 1994 to 43 million in 1999 and continued to increase to 54 million in 2005. On a per capita basis the number of trips increased from 60 to 66 from 1994 to 1999 and to 76 in 2005. The majority of the increase for 2005 is due to a change

in pass multipliers⁷ used to calculate ridership. Without the change in pass multipliers the trend from 2004 to 2005 would be similar to that of prior years.

The 2005 Household Travel Survey reported that transit share of daily trips remained constant in comparison to 1994 reported survey results (9% modal split). The survey results corroborate the relatively small increase in ridership per capita from 1994 to 2005 (60 to 68). This increase in ridership can be attributed to existing customers making greater use of transit services.

2. Increased Consistency and Reliability

Insufficient information is available to complete an assessment of this goal independent of overall customer satisfaction. The assessment of this goal is included with Goal 3, Increased Customer Satisfaction.

3. Increased Customer Satisfaction

Customer satisfaction surveys conducted by ETS show that overall satisfaction ratings declined from 91% in 2000 to 81% in the spring of 2006. The survey topics include operators, fleet and facilities, safety and security and service delivery. It should be noted the 2006 survey was conducted shortly after a death on a bus.

Comparable information on customer satisfaction levels prior to implementation of Horizon 2000 is not available and target levels were not identified, therefore the OCA is unable to complete an assessment of this goal.

ETS has initiated a project to develop a set of customer service standards that describe the services a customer can expect. Project objectives include the development of a framework for quality service, measurement targets and tools to ensure the effectiveness of the framework and standards.

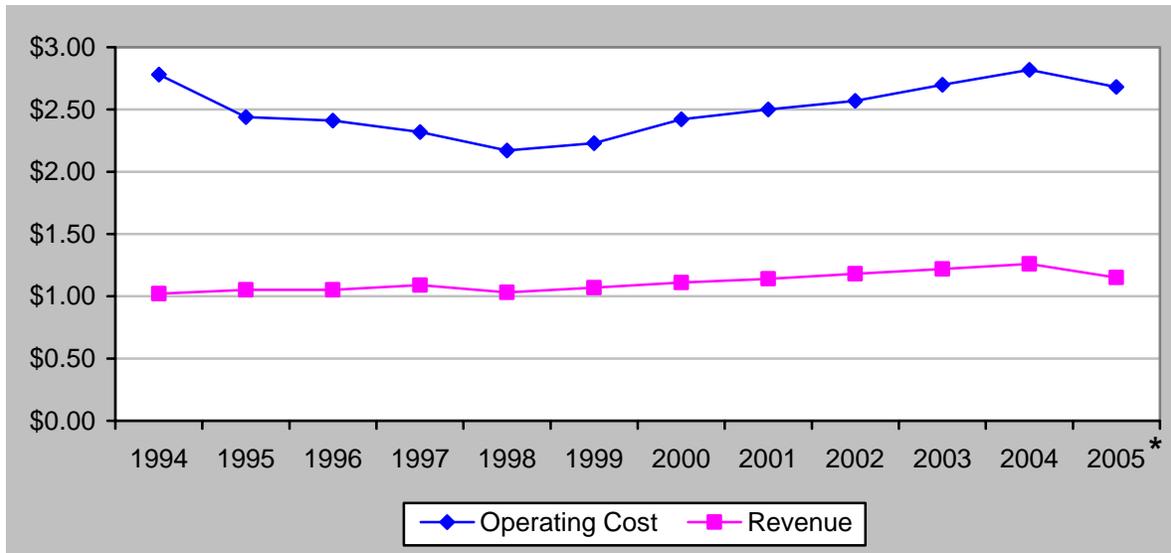
4. Increased Opportunities for Persons with Disabilities

Prior to implementation of the Horizon 2000 strategies 9% of the transit fleet was accessible for persons with disabilities, by 1999 27% of the fleet was accessible. The City now purchases only accessible buses. In 2005 65% of the fleet was accessible.

⁷ Transit ridership figures are calculated by applying factors to farebox revenues and fare product sales. Pass ridership is estimated by multiplying pass sales by the average number of one-way trips that are taken by pass users in a month. This number is called the pass multiplier and is estimated based on customer surveys. Transit applied new pass multipliers in 2005 to reflect the results of surveys and benchmarking activities. Pass multipliers were increased by 17% for adult passes, 9% for student passes and 43% for senior passes.

5. Improved Financial Performance

Chart 5
ETS Costs and Revenues per Passenger Trip



Information Source – Canadian Transit Fact Books

* New pass multipliers applied in 2005

Chart 5, ETS Costs and Revenues per Passenger Trip, shows that between 1994 and 1999 the cost per passenger trip decreased from \$2.78 to \$2.23 while revenues increased from \$1.02 to \$1.05. Between 1999 and 2005 the cost per passenger trip increased from \$2.23 to \$2.68 (20.1%) while revenues increased from \$1.07 to \$1.15 (7.5%).

In 2006 ETS completed a review of the performance measures presented in their business plan and budget documents. The review included comparing the measures against those used by other public transit organizations. New performance measures have been adopted that provide ETS a basis on which to report operational performance.

In the opinion of the OCA, the identified strategies and goals contained in Horizon 2000 provided ETS with good direction regarding the transit program. However, Horizon 2000 lacked specific meaningful targets that could be used to monitor and report on transit system performance. (*Recommendations 2 and 3*)

3.2.3. Ridership Growth Plan

The OCA’s 2006 report on the Transportation Planning Branch Audit included the following observation:

“Currently, the TMP forecasts that the transit share of daily trips to all destinations will be approximately nine percent. This share is not expected to change over the long term. One key outcome of an effective strategic transit policy is that it can focus management on operational strategies to increase ridership with a corresponding increase in revenues.”

ETS projects ridership growth using population forecasts as the key driver. They do not have a comprehensive ridership growth plan which includes ridership growth targets and ridership modal split percentage targets. The modal split percentage ridership rate is a metric that could be used as an effectiveness measure for public transit.

A transit ridership growth plan needs to be aligned with other City department plans (e.g., neighborhood development, roadway development, parking) as well as with external stakeholders.

The OCA’s research shows that the need to increase overall ridership is a common theme amongst all transit organizations. For example, the Province of Ontario published a document entitled “A Guide to Preparing A Transit Ridership Growth Plan” which was developed in conjunction with numerous transit organizations. The document identifies the factors that should be considered in developing the ridership growth plan, including:

- capital and operating initiatives,
- initiatives to address both conventional and specialized transit,
- coordination among transit agencies in adjacent municipalities,
- performance measures to assess how ridership growth objectives and targets are being met
- external factors, not always within municipal control (e.g. blackout, medical epidemic, economic cycles, etc), and
- the ridership growth plan needs to be reviewed and updated.

In the opinion of the OCA a ridership growth plan should be developed and updated in conjunction with other operational strategies in order to improve the effectiveness and efficiency of transit services. (*Recommendations 2 and 3*)

3.2.4. Transit Bus Fleet

The fleet requirement included in Horizon 2000 identified 40-foot clean diesel buses as the base need with a requirement to replace the current fleet at a rate of 34 to 50 buses per year. The strategy also recognized that there is potential for small bus application during some off-peak periods, Sundays and holidays, as well as on some Community Network routes. Two types of small bus service were identified; a “medium” duty application serviced by 30-foot low floor buses and a “light” duty application serviced by ELF buses. To support integration of DATS with other public transit services the

strategy identified the requirement to purchase low floor accessible buses for both base and community services.

Since 1998 the majority of fleet acquisitions have been 40-foot low buses to replace the aging GM buses. Most of the growth in the fleet has been through refurbishment of GM buses. The City also purchased a number of used ELF buses from another transit organization to sustain ETS's fleet of small buses.

Table 5, ETS Fleet Mix, illustrates the number and types of vehicles in service as of August 2006.

**Table 5
ETS Fleet Mix**

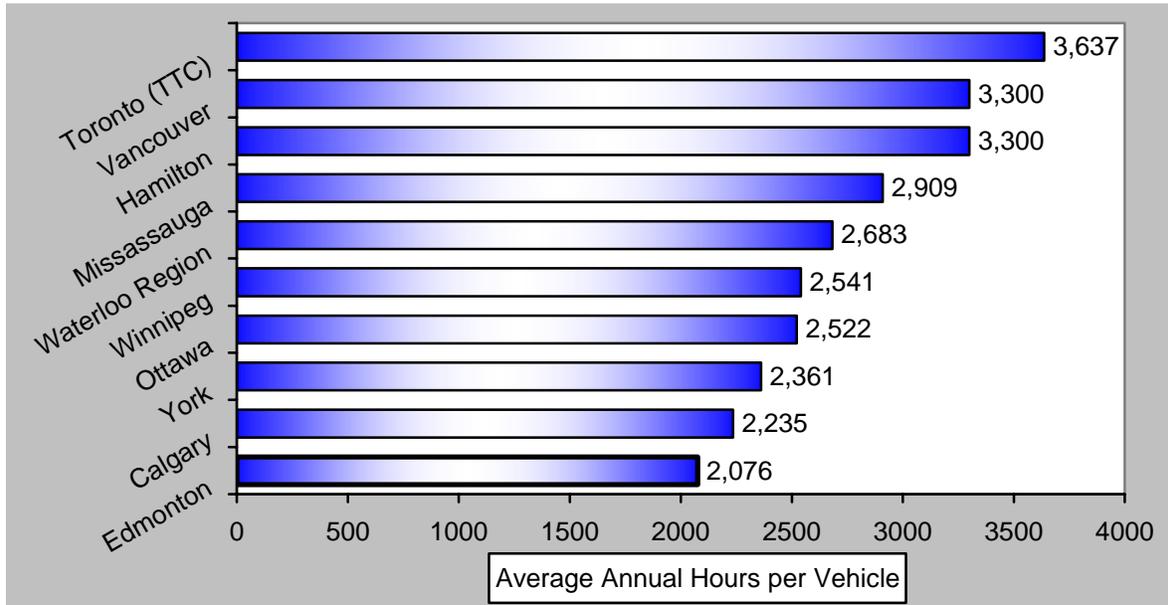
| Type of Bus | Active Fleet | Average Age | Weekday Requirement |
|------------------------|--------------|-------------|---------------------|
| 40-foot Diesel Buses | | | |
| • GM (high floor) | 220 | 28 | |
| • Low floor | <u>536</u> | 5 | |
| | <u>756</u> | | 603 |
| • Articulated | 13 | 3 | 10 |
| ELF Community Buses | 29 | 6 | 19 |
| Trolley Buses | 49 | 23 | <u>39</u> |
| Total Bus Fleet | 847 | | 671 |

Information Source - MES Fleet Records

The bus fleet includes 176 spare units to facilitate maintenance programs, vehicle breakdowns and backup in accordance with standard practices of fleet management. Edmonton's spare ratio is 21% compared to 12% to 20% for other Canadian transit organizations.

ETS's fleet contains 269 GM high floor diesel and trolley buses, comprising 32% of the bus fleet. These buses are "non-accessible" and have an average age of 28 years and 23 years respectively. The OCA's review of maintenance cost summaries shows that maintenance costs are up to 60% higher for GM diesel buses compared to newer low floor accessible buses. Further, maintenance costs are nearly three times as much to maintain trolley buses compared to the low floor accessible buses.

**Chart 6
Fleet Utilization Comparison- 2005**



Information Source – Canadian Transit Fact Book, 2005 Operating Data

Chart 6, Fleet Utilization Comparison – 2005 shows that ETS has the lowest vehicle utilization based on service hours. Edmonton’s utilization is 10% lower than Calgary, 20% lower than Winnipeg and 45% lower than Toronto.

**Table 6
Bus Fleet Use At or Near Capacity**

| Year | Number of Measurements | Number Rated as Possible Overload | Percentage |
|----------|------------------------|-----------------------------------|------------|
| 2002 | 1,039 | 220 | 21% |
| 2003 | 1,040 | 223 | 21% |
| 2004 | 1,065 | 235 | 22% |
| 2005 | 1,004 | 181 | 18% |
| Average: | | | 21% |

ETS System Performance Review (Years 2002 – 2005)

Table 6, Bus Fleet Use At or Near Capacity, are results from manual passenger boarding counts that are completed twice a year. This table shows the number of routes where passenger loads were at or near the bus capacity. Over the four years 2002 through 2005, 21% of the fleet was at, or near, capacity. This is an indication of the high level of effectiveness of service delivery for those routes experiencing possible overload conditions.

An opportunity exists to increase utilization, reduce the risk of overload conditions and reduce costs by replacing older diesel and trolley buses with articulated buses. Articulated buses have a carrying capacity 48% greater than standard buses. Effectively, this means that two articulated buses have the same passenger capacity as three standard buses. The OCA estimates operational savings of up to \$150,000 for every three standard buses that are replaced with two articulated buses.

The OCA's review of the fleet mix in other transit organizations showed that Ottawa's fleet includes 224 articulated buses and Vancouver's fleet includes 117 articulated buses. In comparison ETS has thirteen articulated buses.

Prior to acquiring additional articulated buses a review of existing infrastructure would be required to be undertaken as most of ETS' infrastructure is designed around the 40 foot bus. Increased use of articulated buses may require changes to transit centres and bus stop shoulders.

The OCA's review of boarding counts also indicated that a similar number of routes had low ridership levels where smaller community buses may be more effectively utilized.

The funding requirements for fleet replacement have either been allocated directly from the operating budget through prioritization against other capital projects, or through grant programs. This is inconsistent with the replacement of all other vehicles in the City's fleet, which is funded from a reserve that has been established over time. No such reserve exists for the transit fleet. The absence of a stable funding source places the fleet replacement strategy at risk should funding not be available when required.

In the opinion of the OCA ETS should complete a thorough assessment of bus utilization and, where practical, replace 40 foot buses with articulated buses and smaller community buses to ensure the maximum saving potential is realized. The City should develop a stable fleet replacement and funding strategy, evaluating alternate funding sources such as establishment of a bus fleet replacement reserve and leasing options. *(Recommendation 4)*

3.2.5. Update of Strategies

One of the major observations in the OCA's 2006 report on the Transportation Planning Branch audit was the need to update the Transportation Master Plan (TMP) every three years and complete a major rewrite every ten years. This cycle allows newly elected council members to understand current policy and provides an opportunity to influence and set policy direction. It also ensures that the plan reflects the needs of all Edmontonians.

The Horizon 2000 transit strategies that were approved in 1996 have not been reviewed or updated since being approved. The OCA was advised that ETS management now use the City's business planning process to guide service delivery rather than the long-term strategies approved by City Council in July 1996.

Comparison of the objectives set out in the annual ETS business plan shows that they are aligned with the TMP. However, these goals identify the purpose for transit service in general terms, not the long term strategies required to achieve the outcomes in an efficient and effective manner.

Strategic direction setting documents for ETS should have a long-term focus and reflect how the City will address evolving public transportation needs. A strategy that is not updated periodically puts the City at risk of not meeting the longer term transit needs of the community. Changes in the environment include:

- A shift in the employment base or population growth to suburban areas and changing travel patterns.
- Changes in the workforce such as more people working at home and working part time.
- Changes in user attitudes.
- Significant changes in the demographic mix within our region such as age, lifestyle, and wealth.
- The economic boom the Edmonton region is experiencing makes the need for regional public transit planning more apparent.

In the opinion of the OCA, Transit needs to review, update and consolidate all long-term strategies, including service delivery, ridership growth, fare structure and infrastructure, to reflect Council's direction and changes in the environment. Edmonton Transit needs to develop a process for continual review and update of strategies to ensure the needs of the community are met. (*Recommendations 2*)

3.3. Operational Performance

3.3.1. Monitoring and Adjusting Service

Transit service planning is the process for the deployment of transit resources in order to best meet identified customer needs. The planning approach is based on the general objectives for transit service that are set out in the TMP and direction received through the annual budget process.

A key decision in providing transit service is determining how often a bus service should be provided and determining the "right" level of transit service. These decisions are critical to attracting and retaining passengers and maximizing cost efficiency of the transit system and operating in an efficient manner within the constraints set for the system.

Passenger boardings per hour is the most commonly used criterion in the transit industry to monitor service delivery. Pre-determined standards identify expected passengers per hour and should be used as a necessary system constraint.

The OCA reviewed performance reports used by ETS and observed that 15 and 30 boardings per hour were used as standards to flag transit services for further investigation. As shown in Table 7, Passenger Boarding Standards, these standards do not align with those approved in the Horizon 2000 document approved by City Council in 1996. ETS management advised the OCA that standards were changed to reflect changes in the way services are delivered. These changes include extending community service routes into core express service during peak periods and the use of lower capacity ELF community buses.

Table 7
Passenger Boarding Standards (Per Hour)

| | Peak Period | Weekday Mid-day | Evening and Week-end |
|------------------------------|--------------------|------------------------|-----------------------------|
| Horizon 2000 | | | |
| • Base Network | 50 | 30 | -- |
| • Community Network | 30 | 30 | 15 |
| • Express & Special Purpose | 60 | -- | -- |
| Current ETS Standards | 10 to 30 | 10 to 30 | 10 to 20 |

Conducting passenger boardings counts is currently a manual process completed twice a year by ETS. These counts are completed by bus operators and supervisors.

Route productivity reports prepared by ETS from 2002 to 2005 indicate that over 40% of services are not within the target range set by ETS management. This includes 21% in possible overload conditions and 21% not meeting minimum boarding standards.

Based on assertions made by ETS management, in 2005 approximately 680,000 service hours were affected by possible overload conditions and approximately 170,000 service hours did not fully meet the minimum standards shown in table 7 above.

While all transit routes are included during the manual passenger boarding count process, there needs to be a more frequent and diligent approach taken by ETS in order to place greater reliance on tracking passenger counts on individual routes. Reliable and targeted passenger boarding counts are required to improve ETS management's ability to make difficult deployment choices to sustain an efficient transit system.

ETS is currently installing automated passenger counter (APC) technology on 10% of its fleet to improve the monitoring process. ETS will be modifying its processes to fully utilize the information that will be available from the APCs. Adopting an aggressive

approach to system and route changes does not negate the need to consider additional qualitative inputs like customer feedback.

In the opinion of the OCA, ETS should confirm the passenger boarding standards used are consistent with Council's expectations. This will provide ETS with confidence that the difficult deployment choices to address services not within the target range are supported by Council. Improving its route monitoring process should improve the economy of service delivery and decrease the risk of passenger overload and underload conditions. (*Recommendation 5*)

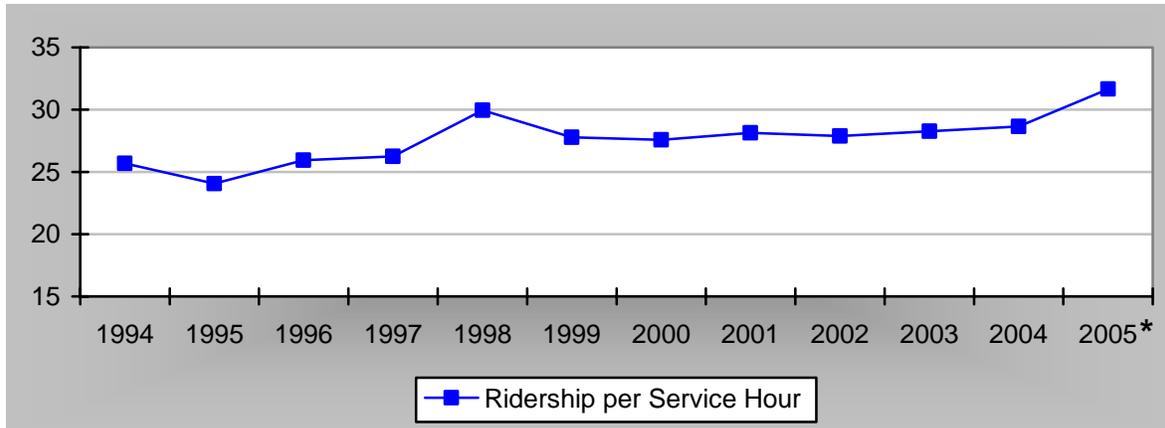
3.3.2. Operational Performance

The primary outcome of a stable transit system is simply the movement of high volumes of people. The operational management of a transit system begins with the identification of transit customer needs and the development of an infrastructure, labor force, and service delivery plan to meet those customer needs. The combination of these key activities must be delivered in a manner such that public transit is delivered effectively, efficiently, and economically.

In order to assess the effectiveness, efficiency and economy of transit services, the OCA analyzed the internal performance results of the ETS. The OCA benchmarked ETS against other Canadian municipalities by comparing ETS internal results to transit industry published results for 2005. Additionally, the OCA conducted a national survey of ten municipal transit organizations to obtain information on transit policy, standards, ridership strategies. The results of these analyses are discussed within the key operational performance areas.

Effectiveness of Transit Services

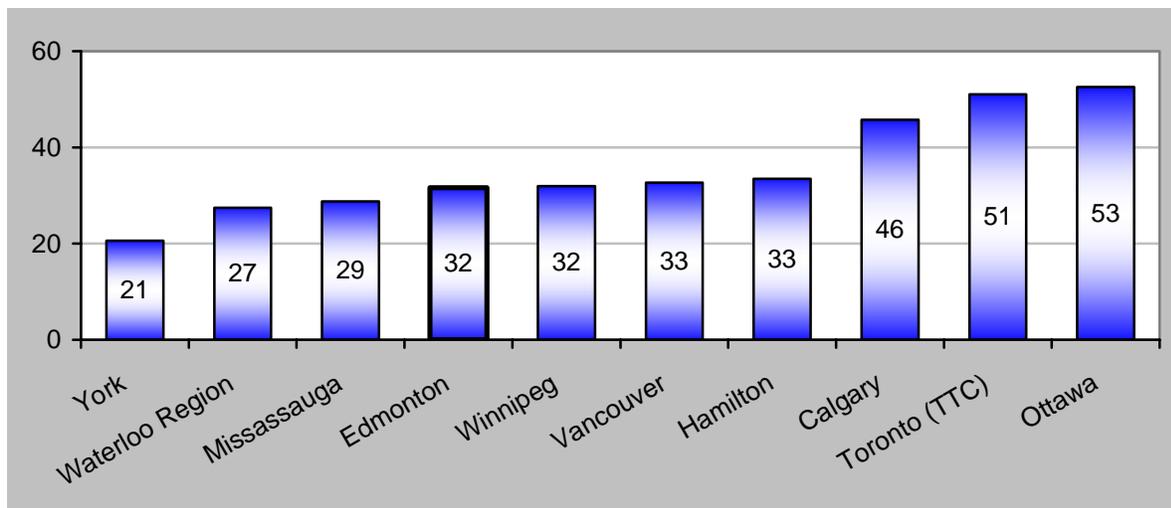
Chart 7
ETS Ridership per Service Hour



Information Source – Canadian Transit Fact Books⁸
* New pass multipliers applied in 2005

Chart 7, ETS Ridership per Service Hour, illustrates the change in ridership from 1994 to 2005. The chart shows between 1994 and 1999 increases in ridership per service hour are greater than the increases between 1999 and 2005. While ETS has been effective in increasing overall ridership (Chart 4-Page 18) the increase is offset by an increase in service hours.

Chart 8
Ridership per Service Hour - 2005

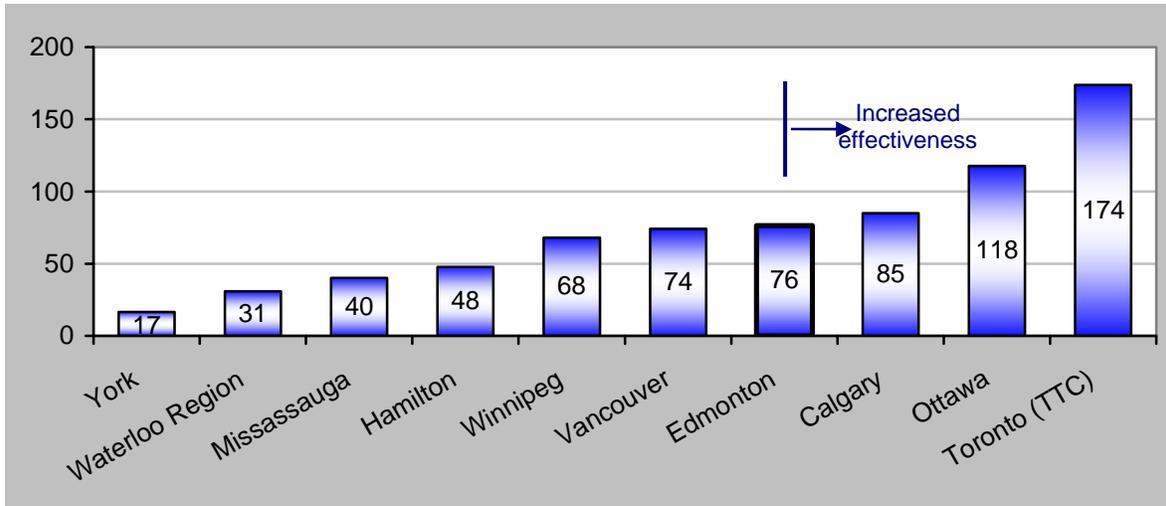


Information Source – Canadian Transit Fact Book, 2005 Operating Data

⁸ ETS management advised the OCA that the hours of service reported to CUTA in 1998 was in error.

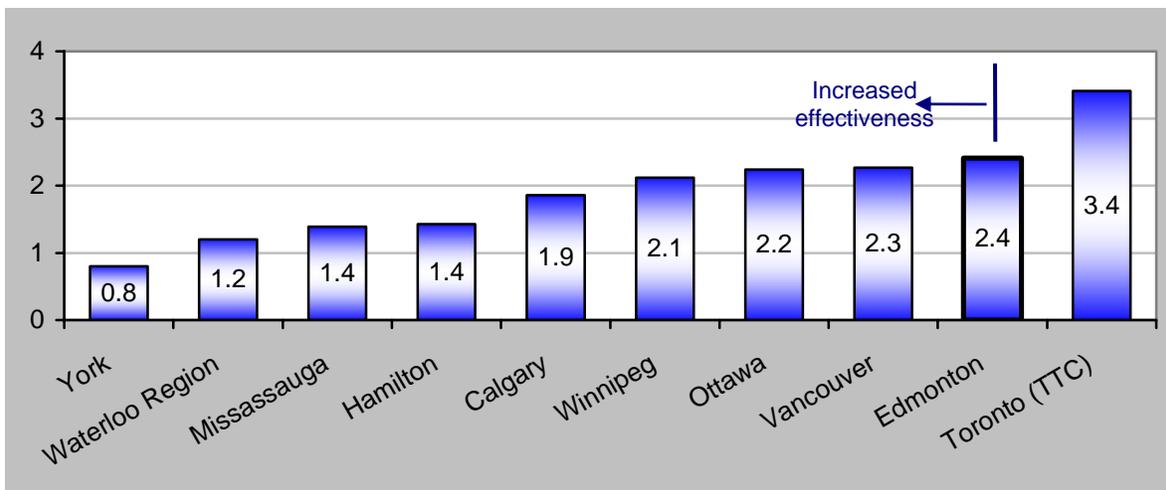
Chart 8, Ridership per Service Hour – 2005 compares the effectiveness of ETS's service delivery with that of other Canadian transit organizations.

**Chart 9
Ridership per Capita - 2005**



Information Source – Canadian Transit Fact Book, 2005 Operating Data

**Chart 10
Service Hours per Capita - 2005**



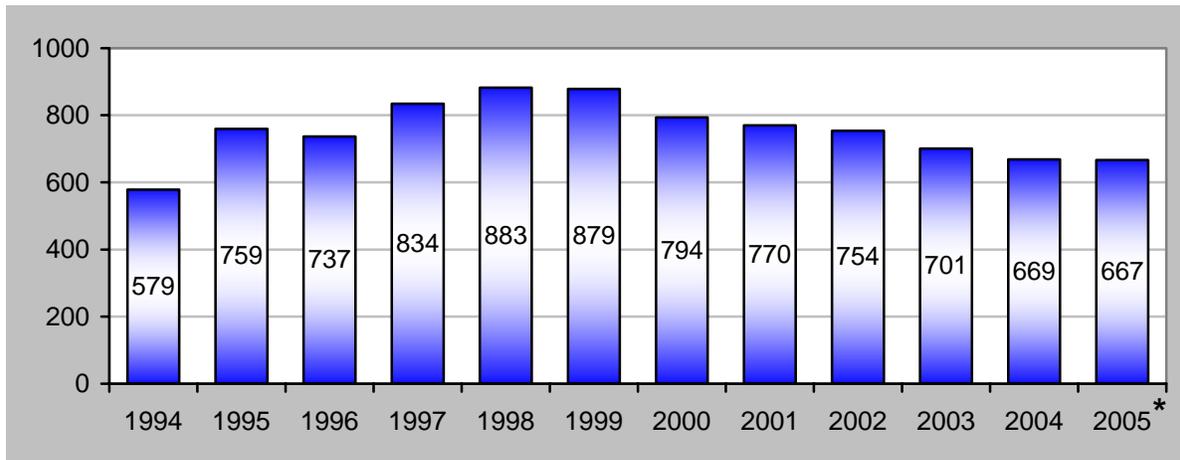
Information Source – Canadian Transit Fact Book, 2005 Operating Data

Chart 9, Ridership per Capita and Chart 10, Service Hours per Capita are additional benchmark comparisons of Edmonton to other municipalities. In 2005 Edmonton moved 76 passengers per capita using an average of 2.4 service hours. In comparison the City of Winnipeg moved 68 passengers per capita using only 2.1 hours per capita. The City of Ottawa moved 118 passengers per capita with 2.2 hours per capita. Thus, these comparisons illustrate that Edmonton uses more resources to move lesser levels of passengers than most other municipalities.

Efficiency of Service Delivery

Efficiency can be demonstrated by comparing the tax levy subsidy to the level of ridership. Chart 11, ETS Ridership per \$1,000 Tax Levy, illustrates the trends in the number of passenger trips provided for every \$1,000 of tax levy.

**Chart 11
ETS Ridership per \$1,000 Tax Levy**

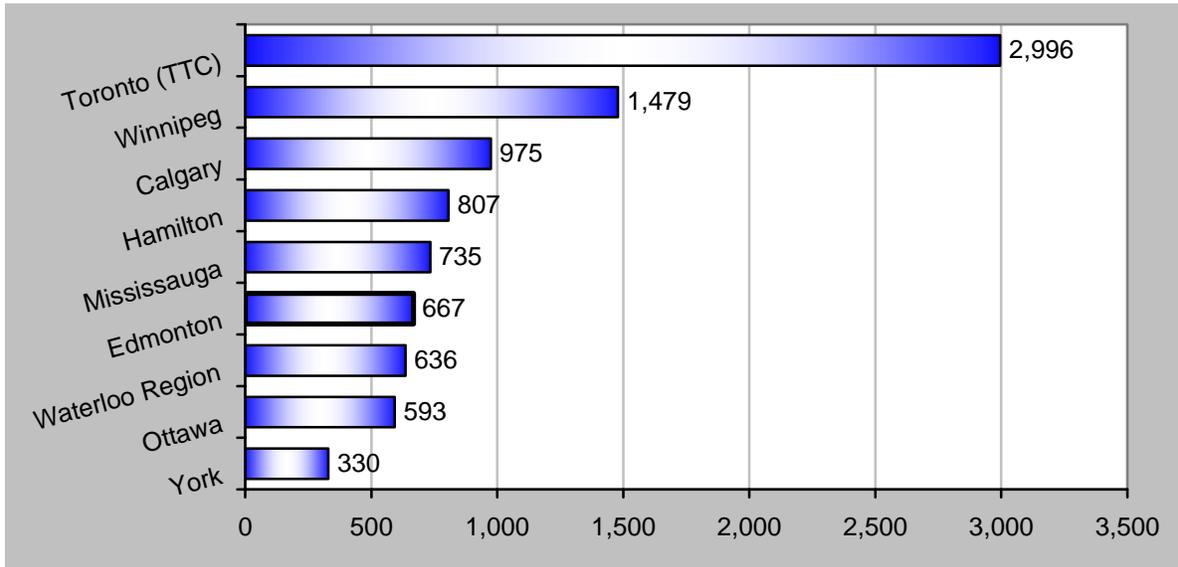


Information Source – Canadian Transit Fact Books
 * New pass multipliers applied in 2005

Between 1994 and 1999 efficiency increased from 579 to 879 indicating that ETS was successful in increasing the efficiency of service delivery. However, the chart also shows a continual decline in efficiency from 1999 through 2005. The OCA estimates that two thirds of the decline from 879 to 667 passengers per \$1,000 tax levy can be attributed to inflationary pressures and greater trip distances⁹.

⁹ The average annual Canadian Price Index was calculated based on the Bank of Canada, Monetary Policy, Canadian Price Index 1995 to present. The increase in travel distance was calculated by prorating the 12% increase in travel distance (1994 – 2005) reported in the 2005 Household Travel Survey.

Chart 12
Ridership per \$1,000 Tax Levy - 2005



Information Source – Canadian Transit Fact Book, 2005 Operating Data

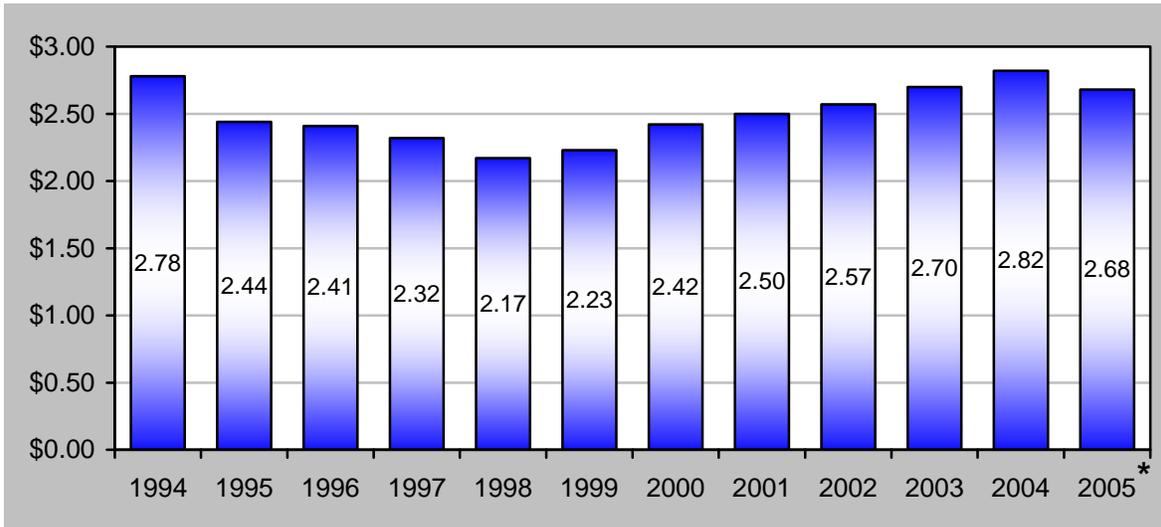
Chart 12, Ridership per \$1,000 Tax Levy - 2005 compares Edmonton’s ridership level against eight other cities. The comparison shows Edmonton in the lower half with 667 passenger trips per \$1,000 Tax Levy (585 before formula change). Toronto provides 4.5 times the number of rides, Winnipeg over twice the number and Calgary approximately 50% more rides than Edmonton per \$1,000.

In the opinion of the OCA ETS could improve efficiency by developing a more comprehensive ridership growth plan and improved fleet utilization.
(Recommendations 2 and 4)

Economy of Service

The economy of service is best demonstrated by determining the operating cost per passenger.

**Chart 13
ETS Operating Cost per Passenger**

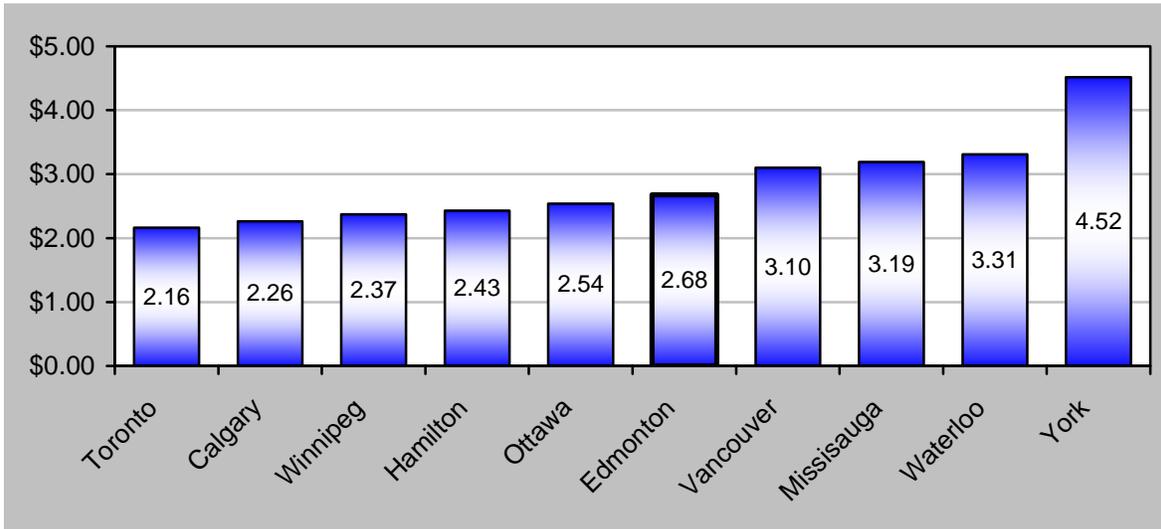


Information Source – Canadian Transit Fact Books

* New pass multipliers applied in 2005

Chart 13, Edmonton Operating Cost per Passenger illustrates the trends from 1994 to 2005. From 1996 to 1998 the operating cost per trip was reduced from \$2.78 in 1995 to a low of \$2.17 in 1998. Since 1998 the cost per passenger has steadily increased as service hours have been added.

**Chart 14
Operating Cost per Passenger**



Information Source – Canadian Transit Fact Book, 2005 Operating Data

Chart 14, Operating Cost per Passenger, illustrates Edmonton’s costs are about average, but are closer to the higher cost of Canadian transit service providers.

In the opinion of the OCA ETS could improve the economy of service delivered by improving the strategic planning processes, through consistent application of standards, improved fleet utilization, and regular performance monitoring and reporting. (*Recommendations 2, 3, 4 and 5*)

4. Conclusion

Council is the owner of the transit service and the Administration is accountable to Council for operating the service within approved policy. Policies should clearly define service strategies, fare structure, performance standards and financial targets. Current policies are not in place that provide clear direction for the delivery of transit services and performance expectations.

ETS has been effective in increasing ridership numbers. However, the OCA believes that ETS has opportunities to improve its effectiveness, efficiency and economy without sacrificing ridership growth. Policies that provide clear direction are required in order for ETS management to deliver services that are aligned with Council expectations.

A financial measurement common to transit organizations is the revenue/cost ratio. Based on the current budget, every 1% increase in ETS revenue/cost ratio will reduce the tax levy by approximately \$1.5 million. In the long-term, if the revenue cost ratio

reported by ETS in 2005 was increased by 8% to the average for transit organizations identified in this report the potential tax levy savings would be approximately \$12.0 million dollars.

The most recent published data that was available for comparing ETS performance against that of other Canadian public transit organization is for 2005. The OCA recognizes that 2006 brought a number of challenges to ETS and that they were responding to these challenges as the audit was underway.

5. Recommendations and Management Response

The OCA believes that implementation of the following recommendations will facilitate improving the effectiveness, efficiency and economy of transit services.

| Recommendation | Management Response and Action Plan |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1. The OCA recommends that ETS Management develop a fare policy for Council approval. Establishment of the fare policy requires Council’s direction on the appropriate transit revenue/cost ratio.</p> | <p>Accepted Comments: The fare policy report will be presented to the Transportation and Public Works Committee during the first quarter of 2007. Responsible Party: Manager of Edmonton Transit</p> |
| <p>2. The OCA recommends the ETS Management develop a comprehensive long-term strategy that is aligned with the TMP for City Council approval. The strategy should address ridership growth, long-term fleet requirements and service delivery standards. The strategy should be kept current and aligned with Council direction through regularly scheduled reviews.</p> | <p>Accepted Comments: ETS is currently preparing terms of reference for the development of a Strategic Ridership Growth Plan. Input into the plan will be sought from key stakeholders including City Council. ETS is providing input into the Transportation Master Plan and will ensure that the strategies in both documents are aligned. This will be completed by the end of 2007. Responsible Party: Manager of Edmonton Transit</p> |

| Recommendation | Management Response and Action Plan |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>3. The OCA recommends that ETS management regularly report key performance information to Council indicating progress towards implementation of the long-term strategy. Key performance indicators include the revenue/cost ratio, passengers per vehicle hour, passengers per capita.</p> | <p>Accepted Comments: These three reporting indicators will be incorporated into future reports that will be presented to committee and council. Responsible Party: Manager of Edmonton Transit</p> |
| <p>4. The OCA recommends that ETS management, in conjunction with Corporate Services management, develop a long-term fleet replacement and funding strategy. The strategy should include opportunities to improve the bus fleet mix and identifying alternate stable fleet replacement funding sources.</p> | <p>Accepted Comments: Currently the Transit Administration does have a long-term bus replacement plan however it is not funded beyond 2009. As well the current fleet of GM's has become less and less reliable and has increased operating costs. A short-term replacement plan will be presented early in 2007 and long-term replacement and vehicle mix type strategy will be developed over the course of 2007 with a report in 2008. Responsible Party: Manager of Edmonton Transit</p> |
| <p>5. The OCA recommends that ETS management set and consistently apply service level standards that will challenge ETS to reduce service delivery hours for non-performing bus routes, improve the cost efficiency and reduce the risk of passenger overload and underload conditions.</p> | <p>Accepted Comments: As part of the Strategic Ridership Growth Plan noted in recommendation 2 ETS will undertake a review of service standards. This review will include options that involve stringent minimum standards as well as options that consider public transit needs of specific markets (e.g., community bus routes, senior citizens and mobility need in low demand time periods). The impacts of different service standards will be identified for Council consideration. Responsible Party: Manager of Edmonton Transit</p> |

The Office of the City Auditor thanks the management and staff of the ETS Branch for their cooperation and assistance during this audit.

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Appendix 1

Audit Objective, Methodology and Scope

Objective

The primary objective of this Branch Audit is to provide assurance that ETS services are delivered in an effective, efficient, and economical manner.

Audit Criteria

Audit criteria are used to test the assertion presented in the audit objective and to provide a framework for developing evidence to support recommendations. Audit criteria are always expressed in terms of what would be observed in an ideal organization. The criteria that was used in this audit were:

- The governance framework and strategic direction are sufficient to implement an effective public transit program.
- Bus routes are properly planned and monitored to ensure bus operations are scheduled in an efficient manner.
- An effective costing system and performance measures are in place to ensure public transit services are delivered in a cost-effective manner.

Methodology

The methodology for this Branch Audit included three phases:

Planning

During the planning phase, all programs, services and functions of the ETS Branch were reviewed to ensure a continued relevance, performance measurements exist, and to assess Management's risk awareness level. The OCA facilitated a number of sessions with ETS management and staff, and gathered information from various stakeholders including members of City Council and Transit Operators to gain a thorough understanding of the transit environment, management processes, current issues and concerns. A preliminary assessment was completed using criteria which included federal and provincial legislation, City Bylaws, Council Approved Policy and Administrative Directives. At the completion of the planning phase, the OCA held discussions with Management regarding the results and identified the areas where additional fieldwork would add the most value.

Fieldwork

Appendix 1

During the fieldwork phase the OCA assessed controls which included the development and approval of policy and service targets. The fieldwork phase also included more detailed testing of selected areas, review of cost structures used to develop service programs, benchmarking, and gathering of evidence to support the development of recommendations.

Reporting

The reporting phase included disclosure and discussion of the audit results with Management and coordination of management's responses to recommendations. Finally, this audit report was prepared for presentation to ETS Management and City Council.

Scope

This section reflects the key results of the planning phase. Based on these results the scope of the fieldwork phase included the following:

- **Governance Structure** – An assessment of the effectiveness of the governance framework and strategic direction provided to ETS was undertaken to determine its impact on the establishment of service levels. This review included examination of documents such as Bylaws, Policies, Directives and Standards as well as processes such as policy development, decision making, approval and results reporting.
- **Long Range and Short Term Planning** – The review of long range planning included an assessment of the integration of ETS planning with other City of Edmonton planning functions. This review also included consideration of controls for establishment of bus routes in new areas and realignment of existing services. The review of short term planning included determination of the adequacy of ridership information used to plan and evaluate service usage. The review facilitated an assessment of resource requirements and utilization.
- **Service Costing** – The cost of providing transit service has increased at a rate that exceeds the combined consumer price index and service growth rates. The service costing review included an examination of existing managerial costing reports as well as costing and pricing models used to plan and monitor services. Costs were analyzed in a variety of ways.

The following was not included in this audit:

- **Bus Fleet Maintenance** – This function is managed by the Mobile Equipment Service Branch of the Corporate Services Department and will be reviewed during that Branch Audit.
- **DATS** – A full review of DATS was completed in 2002 with implementation completed in 2005. Further, a review of this area is currently underway by ETS.
- **Security** – This area has recently undergone major changes including reorganization and reclassification of security officers. In addition, a monitoring process has been implemented to track security incidents and more effectively address high risk areas.

Appendix 1

- Service Support (Recruitment & Training) – The most significant issue for this area is ETS' ability to attract and retain new recruits due to the strong economy. Service Support has demonstrated a high level of awareness of this issue and is considering alternatives to address the constraint.
- Communications – Several business areas are involved in the management of incoming and outgoing information using various media. The media used include BusLink, ETS Information Line, Commendations and Concerns phone lines, internet, and printed route schedules. This can lead to inconsistent messaging and ineffective use of resources. The Branch Manager informed the OCA of planned organizational changes in this area. Further, communications will be impacted by the Corporate 311 initiative currently underway.