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YORK REGION TRANSIT 2003 SYSTEM PERFORMANCE REVIEW

The Transit Committee recommends:

- 1. The presentation by Irene McNeil, Manager, Service Planning, be received; and**
- 2. The recommendation contained in the following report, April 23, 2004, from the Commissioner of Transportation and Works be adopted:**

1. RECOMMENDATION

It is recommended that:

1. The York Region Transit 2003 System Performance Review be received for information.

2. PURPOSE

The purpose of this report is to evaluate the 2003 performance of the York Region Transit (YRT) system. The report will provide Transit Committee and Council with an overview of system performance based on commonly used industry indicators. The report will also compare YRT's performance with selected GTA and other Canadian transit systems. This report pertains to conventional transit services only and does not include YRT Mobility Plus ridership statistics.

3. BACKGROUND

In the fall of 2000, the Province announced the implementation of a mandatory performance measurement program for all Ontario municipalities in nine core service areas: solid waste, water and wastewater, roads, transit, fire, police, local government administration, land use planning and social services. The program is intended to enhance accountability, provide a basis for continuous improvement initiatives and demonstrate to taxpayers how efficiently local governments deliver key municipal services.

The concept of measuring performance is not new to the public transit industry. Prior to 1998, Ontario transit agencies were required to submit detailed financial and operational data in order to qualify for provincial subsidies. In addition, the Canadian Urban Transit Association (CUTA) collects and publishes detailed annual system statistics and performance measurements for all public transit agencies in Canada. As a result, the public transit industry is well advanced in the development and monitoring of performance measures. Some of the more common and relevant transit performance indicators include:

- **Financial Performance** - Revenue/Cost Ratio; Cost/Revenue Hour; Average Fare (Passenger Revenue/ Passenger Trips); Cost/Capita; Cost/Passenger
- **Service Utilization** - Passenger Ridership; Passengers/Capita; Passengers/Hour
- **Service Provision** - Revenue Vehicle Hours/Capita

4. ANALYSIS AND OPTIONS

York Region Transit commenced operations on January 1, 2001, with the amalgamation of conventional transit systems formerly operating in the municipalities of Markham, Vaughan, Richmond Hill, Newmarket and Aurora. In the most recent Environics survey conducted for the Region last Fall, transportation ranked as one of the most important local problems facing the municipality. Fifty-two percent of the residents polled noted that they would like to see more spending on public transit in order to improve services. Along with public opinion surveys, actual performance indicators are also important tools to identify trends and provide benchmarks for future planning purposes.

When referring to the YRT system, TTC routes operating north of Steeles Avenue are included, since costs and revenues associated with these services form part of the YRT budget. GO bus services operating in York Region, notably on Yonge Street and Bayview Avenue, are only included in the YRT budget for the last four months of 2003, following the jurisdictional change in operation from GO to YRT. Therefore only September – December ridership and operating data associated with these services is included in the 2003 performance review. As a result, performance indicators relating to Region-wide transit ridership will still be somewhat understated since the Yonge/ Bayview services carry over three million passengers annually.

Note: It is important to note that all YRT data for years prior to 2001 is based on submissions to CUTA made by the local municipalities operating the transit systems at the time. Some of the aggregate data for those years, notably population, do not match Region of York data. Caution should therefore be used regarding all population based performance measures. In addition, it should be noted that in the peer group comparisons, 2003 YRT data is presented versus 2002 data for the peer group (the most recent available from CUTA).

As noted earlier, effective September 2003, YRT operated local bus service in the Yonge and Bayview corridors. As a result, significant revenue hours and passenger volumes have been added to both the ridership base and revenue hour data. Consequently, statistical comparisons between 2002 and 2003 will reflect an unusually high increase for YRT even though it was merely a change in operating jurisdiction from GO Transit to YRT.

The 2003 Performance Review report will evaluate the YRT system in terms of:

- Trend analysis for the YRT system pre/post amalgamation (1999-2004)
- Peer group comparisons

York Region is a fairly unique urban area, which makes peer group analysis rather complex. Several factors must be given careful consideration when attempting to compare performance indicators. By the end of 2003, York Region had a transit service area population of 842,000 (i.e. population that actually has access to conventional YRT transit services), making York Region comparable to Mississauga (630,000), Ottawa (724,000) or Calgary (905,000). However, due to its suburban type development, close proximity to a major metropolitan area, proximity to rapid transit networks (subway and commuter rail systems) and tremendous growth patterns, the Region is more akin to the situation that exists in the city of Laval, north of Montreal. In addition, service levels and service coverage vary throughout York Region itself, due primarily to variations in population density and location of major employment areas. The population density affects the demand for transit service and YRT's ability to provide efficient service.

In order to provide comparisons for existing conditions and likely future scenarios, the following transit systems are used for a variety of comparative scenarios: Brampton Transit, Mississauga Transit, TTC, OC Transpo (Ottawa), Grand River Transit (Waterloo Region), Laval, BC Transit-Victoria and Calgary Transit (*see Attachment 1* for a concise summary of the peer group comparisons). It should be noted that Laval experienced two strike days in 2002, thereby affecting some performance indicators.

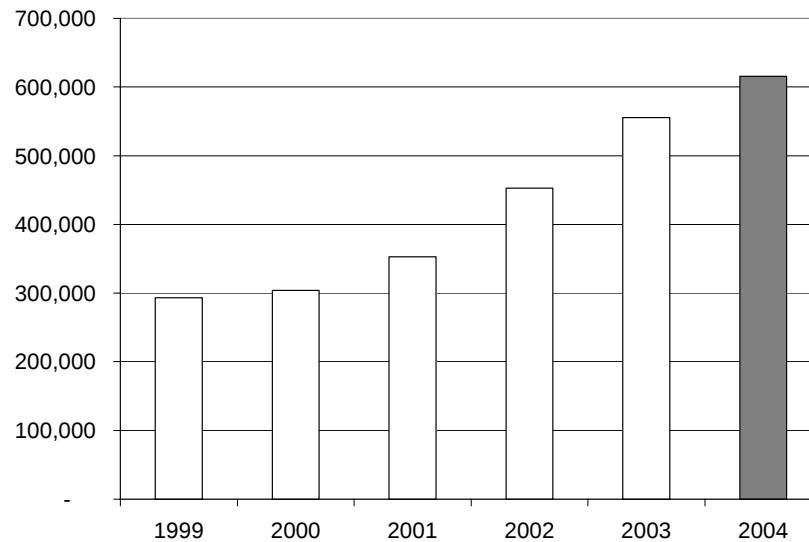
4.1 Public Transit Performance Indicators

Based on CUTA data, statistics have been compiled for York Region transit systems and the selected peer group systems covering the period 1999-2002 (*see Attachment 1* for a summary of these statistics). Along with this time series data, the 2003 actual and 2004 budgeted data is also presented and compared with the selected peer group 2002 data.

4.1.1 Service Provision – Revenue Hours

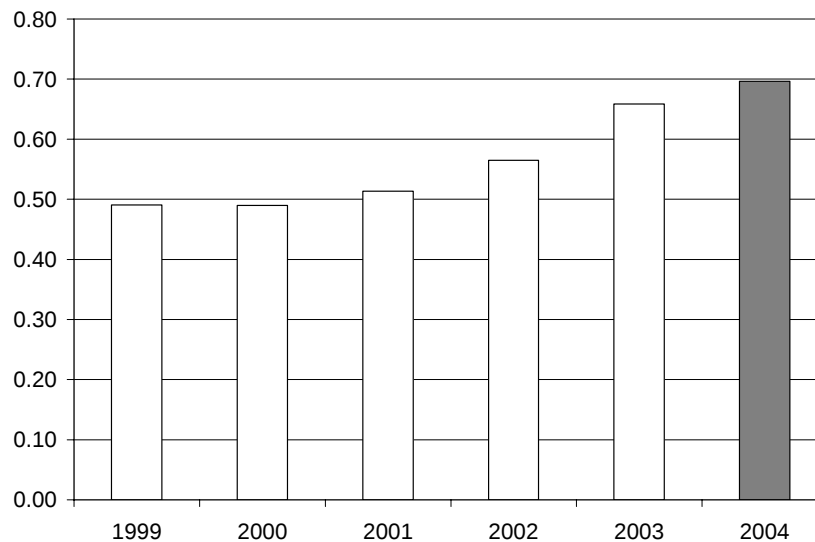
The amount of service provided is most easily measured by *revenue vehicle hours*. This figure represents the annual vehicle hours operated by active “in-revenue” vehicles and does not include charters, deadheading, training, road tests and or maintenance related travel. Since amalgamation, YRT has increased the hours of revenue service by an average of 20% per year (Exhibit 1).

Exhibit 1
Revenue Vehicle Hours – York Region



When this figure is coupled with population, the resulting performance indicator measures *revenue hours per capita*. In 2003, YRT provided on average, 0.66 hours of service per capita. As indicated in Exhibit 2, since 2001 the revenue hours/capita has steadily increased, following several years of minimal increases.

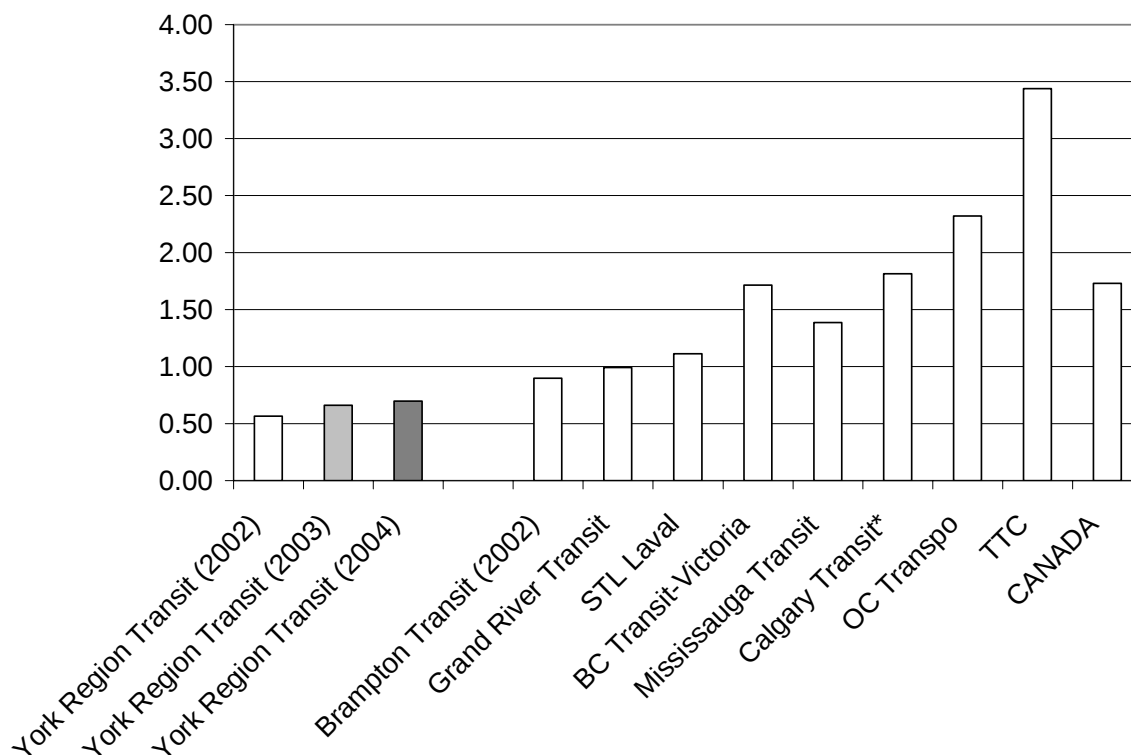
Exhibit 2
Revenue Hours per Capita – York Region



In the peer group comparison, YRT still provides the lowest rate of service per capita. As indicated in Exhibit 3, YRT provides only 0.66 revenue hours/capita, well below the peer group range of 0.9 to 3.44 or the Canadian average of 1.73. The YRT figure reflects the relatively low levels of service that is spread across a large suburban population area, as

compared to the older, more established systems with higher population density centres. It should also be noted that even with the post September 2003 addition of revenue hours in the Yonge and Bayview corridors included, YRT still provides the lowest rate amongst the peer group.

Exhibit 3
Revenue Hours per Capita – Peer Group



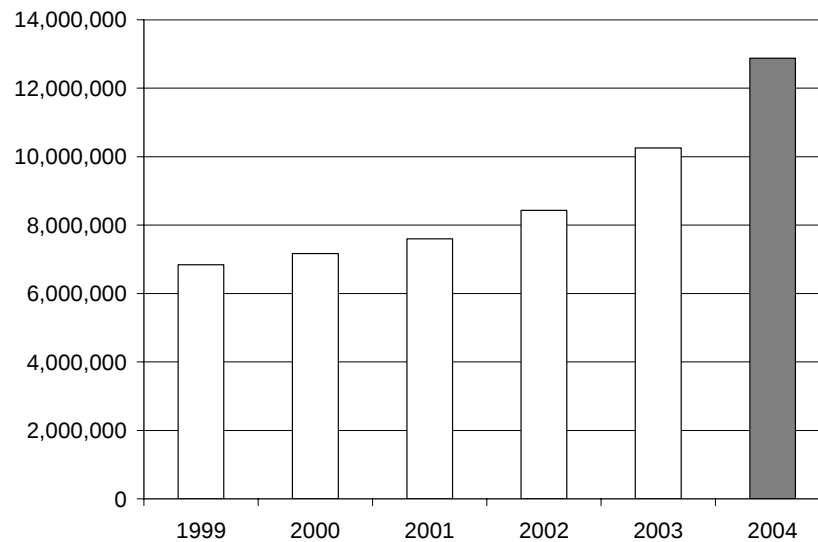
4.1.2 Ridership

Ridership is measured by *revenue passenger trips* and does not include transfers or charter trip activity. Since the amalgamation of transit services in 2001, ridership in York Region has grown by over two million riders or an average of 9.5% per year. The increase in 2003 over the previous year was an impressive 9.3% even without the Yonge & Bayview ridership. This can be attributed to the tremendous rate of population growth and related increases in transit service levels. Although the vast majority of routes experienced new ridership growth, the most significant increases occurred in a number of key corridors including:

- Route 88 – Bathurst corridor serving Finch subway and Seneca College (112,000 new annual passengers)
- Routes 25 & 90 - Don Mills/Leslie serving Seneca College and Don Mills subway (110,000 new annual passengers)
- Route 3 - South Markham/South Vaughan serving York University (71,000 new annual passengers)

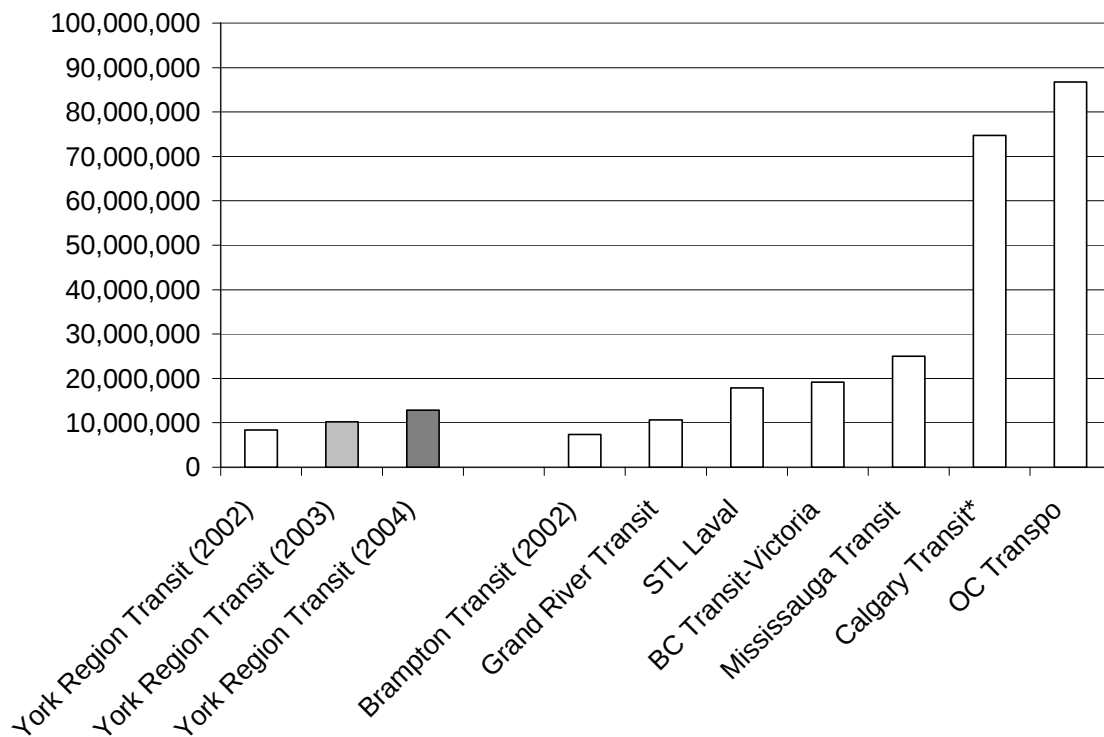
- Route 129A - McCowan corridor (70,000 new annual passengers)
- Route 107 - Keele corridor (70,000 new annual passengers)
- Route 85 - 16th Ave / Rutherford corridor (50,000 new annual passengers)

Exhibit 4
Ridership (Revenue Passengers) – York Region



In the peer group, YRT ridership is just slightly lower than Grand River Transit (10,646,000) and almost 2 million riders more than the next closest comparator, Brampton Transit (7,367,000). In 2002, the Canadian overall transit ridership growth rate was 1.2%, and Ontario transit systems overall had an actual decrease of 1.3%. Therefore, YRT ridership grew faster than that of other transit systems in Ontario and Canada, due to a combination of population, employment and service growth. It should be noted that Exhibit 5 provides further peer group comparisons (excluding TTC ridership which exceeded 410 million passengers and therefore not included on the graph for presentation purposes).

Exhibit 5
Ridership (Revenue Passengers) – Peer Group



4.1.3 Service Utilization

Service utilization is typically measured by two indicators; *passengers per capita* and *passengers per revenue hour*. Passengers per capita measures market penetration, that is revenue passenger trips divided by the service area population. Passengers per revenue hour specifically measures the average number of passengers riding transit during an hour of service (on average with no regard to time of day or day of week). Since amalgamation, service utilization within York Region has increased in terms of passengers per capita, however utilization has decreased in terms of per revenue hour of service (Exhibits 6 and 7). The increase per capita can be attributed to the significant ridership increases which are higher than population growth rates. The service hour utilization rate is lagging due to the tremendous increase in service but a corresponding lag in the ridership increase rate. As noted earlier, the Yonge & Bayview ridership reflects only part of the year, therefore the total transit passengers per capita rate is somewhat understated prior to 2004.

Exhibit 6
Passengers per Capita - York Region

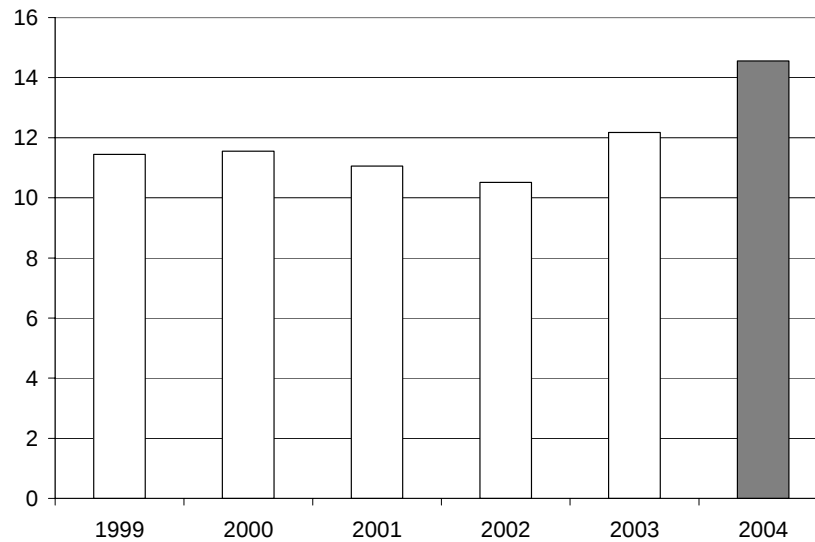
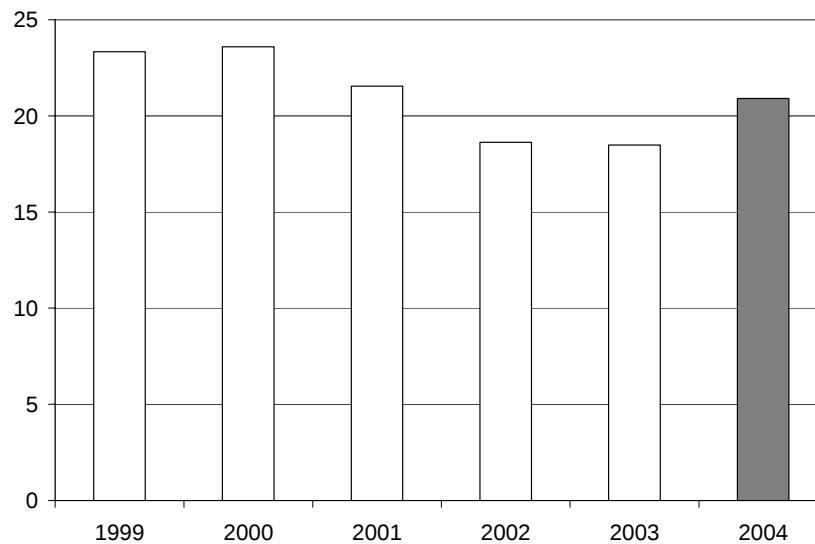
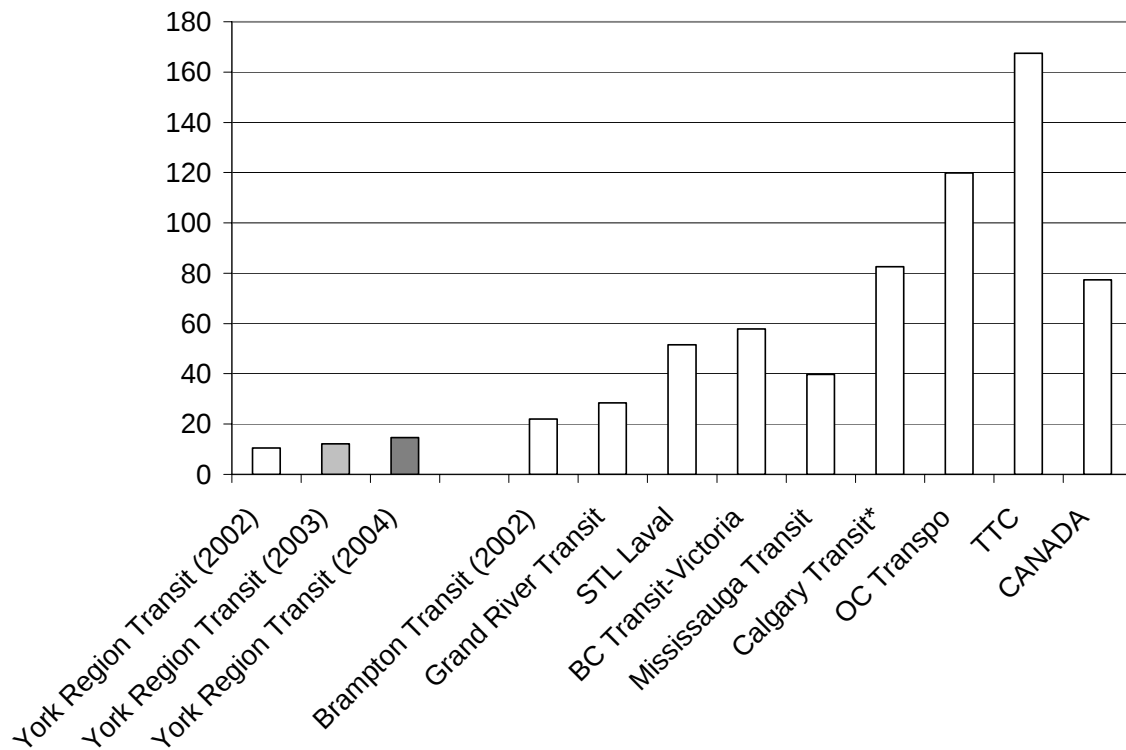


Exhibit 7
Passengers per Revenue Hour - York Region



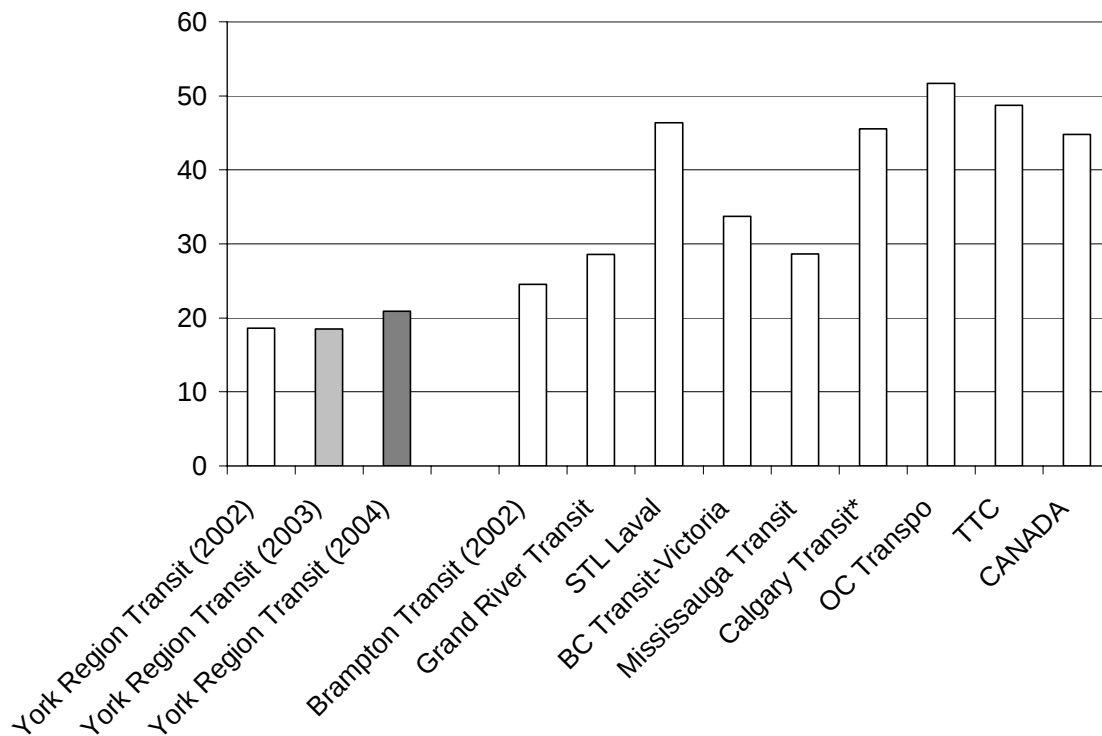
YRT's market penetration (measured by passengers/capita), at 12.8, is far below the level observed in the peer group, which ranges from 21.97 (Brampton) to 167.46 (TTC) passengers per capita. The Canadian average is 77.40 passengers/capita. Several factors contribute to York Region's relatively low service utilization rates including prevailing low density suburban development, abundant free parking, relatively high levels of income/auto ownership and still somewhat limited transit service convenience.

Exhibit 8
Passengers per Capita - Peer Group



Similarly, although not quite as obvious, Exhibit 9 shows that at 18.48, YRT is below the range of its peers in terms of passengers per hour. The YRT figure is less than half the national average, and lower than the next closest peer system, Brampton, at 24.51.

Exhibit 9
Passengers per Revenue Hour – Peer Group



As noted earlier, these low levels of service utilization are in part the result of York Region's relatively low level of transit service, low population density, relatively high per capita income, little or no parking cost/restrictions and spread-out employment densities. Affecting the trend of these service usage indicators is the greatest challenge facing York Region Transit. With the introduction of Rapid Transit services in the Fall of 2005 and the trend towards higher density and node/corridor development, transit usage should continue to increase at an even higher rate.

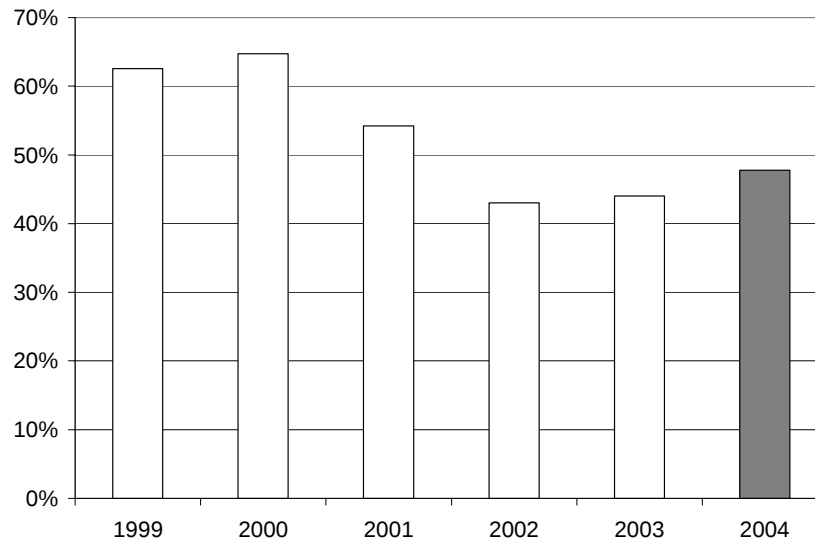
4.1.4 Financial Performance

Financial performance can be measured using a variety of indicators including *revenue to cost ratio* (total operating revenues divided by total direct operating expenses not including capital), *net operating cost per capita* (municipal operating contribution of net operating cost divided by service area population) and *net operating cost per passenger* (net direct operating cost divided by regular service passenger trips).

In York Region, the revenue/cost ratio was steadily increasing until 2001 (Exhibit 10). Prior to amalgamation, the ratio averaged at 65%. Not surprisingly, the revenue/cost ratio dropped to 42% in 2002, reflecting the significant financial investment made by the Region following amalgamation. Specifically, the decrease in the revenue/cost ratio is directly related to the significant increases in operating costs related to the harmonization of service hours and increases in service levels to meet set minimum standards. It is expected that, as ridership and associated revenues increase, the revenue/cost ratio will also improve (2004 budget projects an increase to 48%). Significant increases in ridership

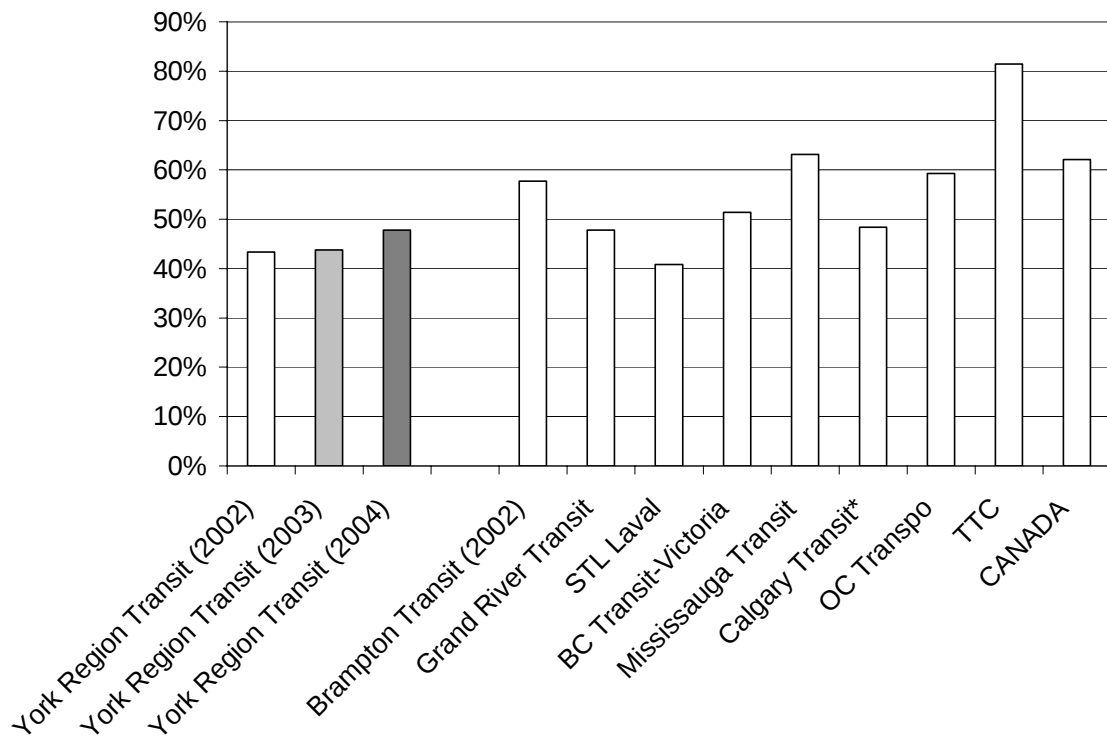
will be needed to affect the overall cost recovery and modal split (transit market share); only then will revenues experience a noticeable increase.

Exhibit 10
Revenue/Cost Ratio – York Region



In the peer group, YRT's revenue/cost ratio at 44% is within the lower end of the peer group spectrum (Exhibit 11). The ratios observed in the group range from 41% (Laval) to 81% (TTC). The Canadian average is 62%. YRT's ratio is similar Laval (41%), Grand River (48%) and Calgary (48%), all of which have recently made major investments in their transit systems. It should be noted that the TTC has one of the highest revenue/cost ratios not only in Canada, but exceeds most international cost recovery measures. This high level of cost recovery can be attributed to a mature and efficient transit system which operates within a relatively high density environment, charges a relatively high average fare and, of course, the well developed rapid transit corridors.

Exhibit 11
Revenue Cost Ratio – Peer Group



The net operating cost/capita and net cost/passenger provide a measure for financial investment after taking into account farebox revenues. Prior to 2001, the municipal contribution to transit in York Region averaged \$12.38 per capita and \$1.02 net cost per passenger. By 2003, this investment has risen to \$30.57 and \$2.51 respectively. These increases are directly attributable to increases in services hours and, to a lesser extent, increased contract service costs, improved levels of service monitoring and associated administration costs.

Exhibit 12
Net Cost per Capita – York Region

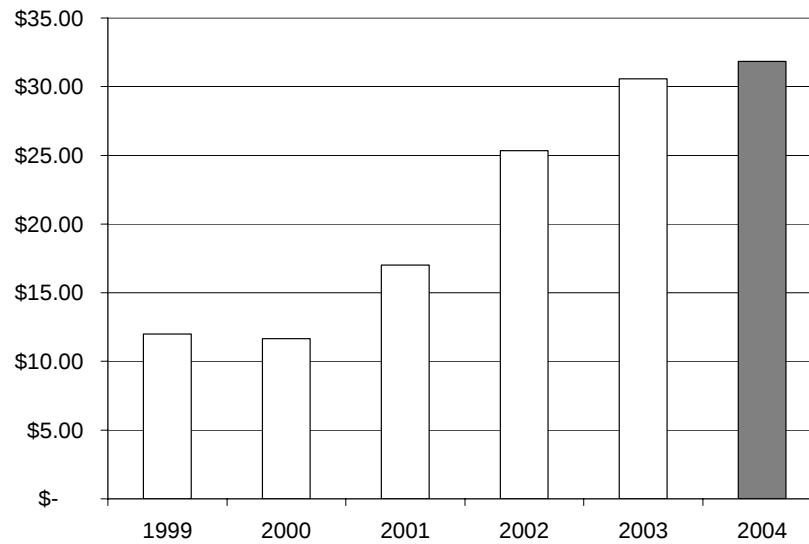
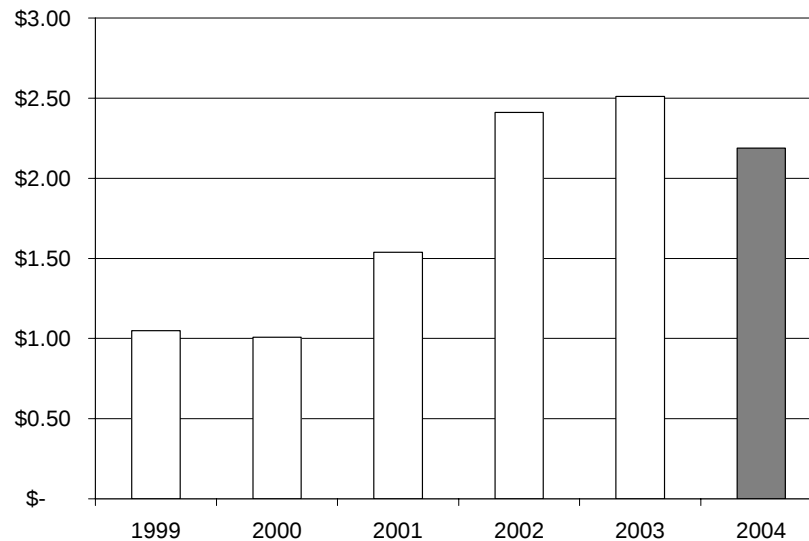
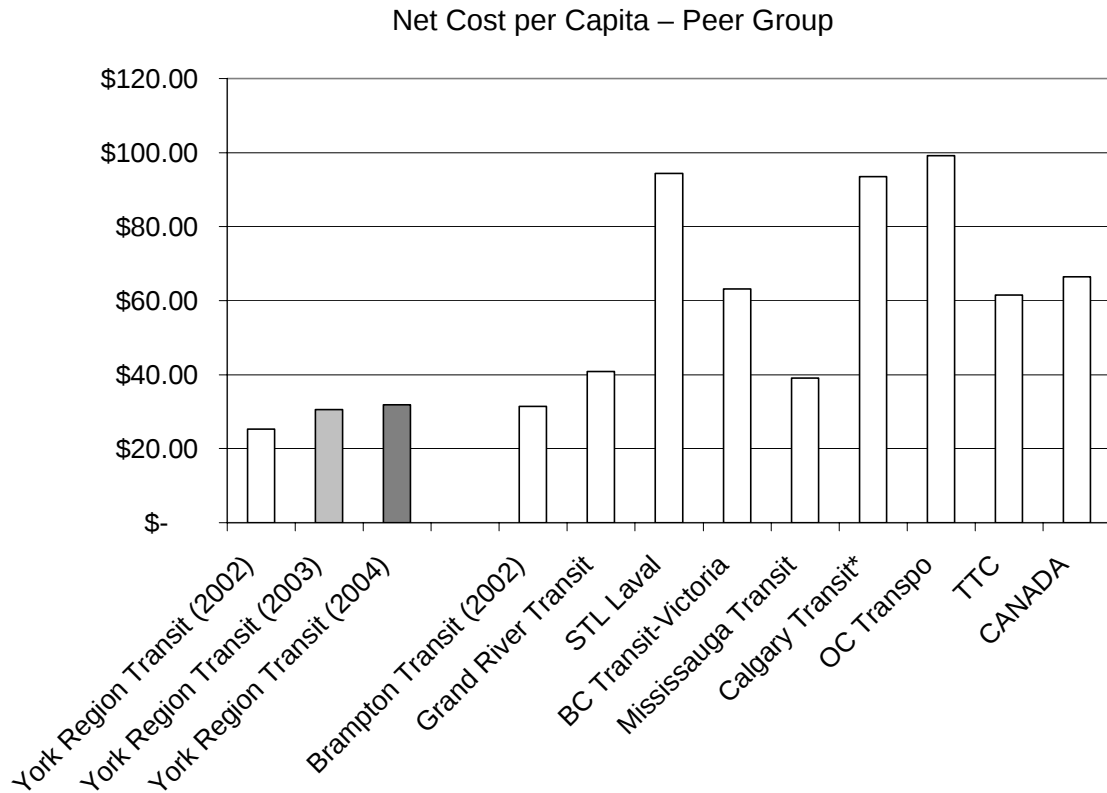


Exhibit 13
Net Cost per Passenger – York Region



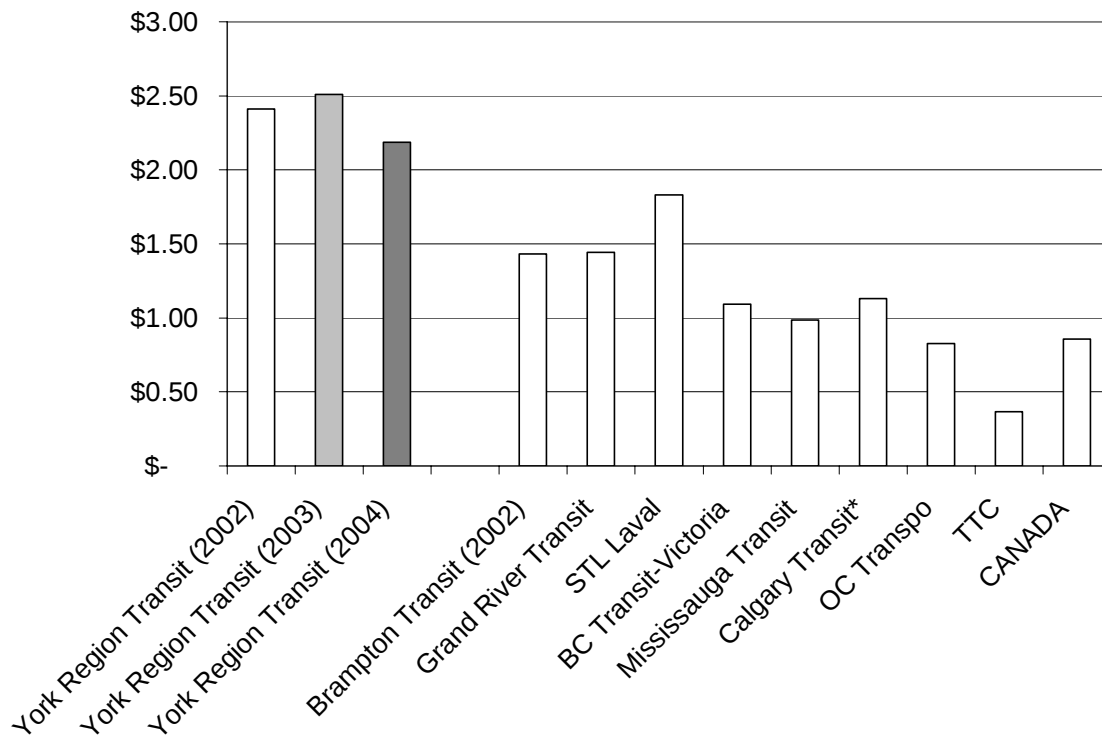
Compared to the peer group, the YRT 2003 financial investment on a net cost per capita basis is one of the lowest, with only Brampton being close at \$31.44 per capita. OC Transpo, Laval and Calgary invest approximately three times the current York Region amount. It should be noted that the transit systems at the higher end of the range are more likely to operate rapid transit facilities, provide higher passenger fare subsidies and generally invest greater resources in their transit systems. Once again, these comparators provide York Region with reasonable targets for future resource allocation.

Exhibit 14



York Region Transit's net cost per passenger rate, at \$2.51, is relatively high when measured against the peer group, which ranges between a low of \$0.37 (TTC), to a high of \$1.83 (Laval). This can be attributed primarily to relatively low levels of ridership combined with the vast geographic service area and relatively low-density development. As part of YRT's ongoing system review, off-peak service levels are continually monitored on an individual route-by-route basis to maximize service efficiency. This figure will be reduced in 2004 however, to approximately \$2.19 as the full year impact of taking over the Yonge and Bayview GO services is felt.

Exhibit 15
Net Cost per Passenger – Peer Group



4.1.5 Cost Effectiveness and Cost Efficiency

Cost effectiveness is measured by *total cost/passenger* which is calculated by dividing total direct operating expenses (gross) by passenger trips (ridership). The efficiency of financial resources is measured by *total cost/revenue hour*.

Prior to amalgamation, cost/passenger ranged between \$2.72 and \$2.86, and was relatively stable over the four years 1997-2000. By 2003, cost/passenger has increased by 60% to \$4.46, one of the highest rates of increase in Canada. This can be attributed to the increased level of financial investment coupled with the expected lag in ridership increase. Similarly, prior to amalgamation, the cost/hour averaged \$67.46. By 2003, the cost/hour increased by 22% to \$82.46. This increase can be attributed to direct increases in operating costs (e.g. service contract rates, fuel), increased customer service (call centre) and marketing activities and administration.

Exhibit 16

Total Cost per Hour – York Region

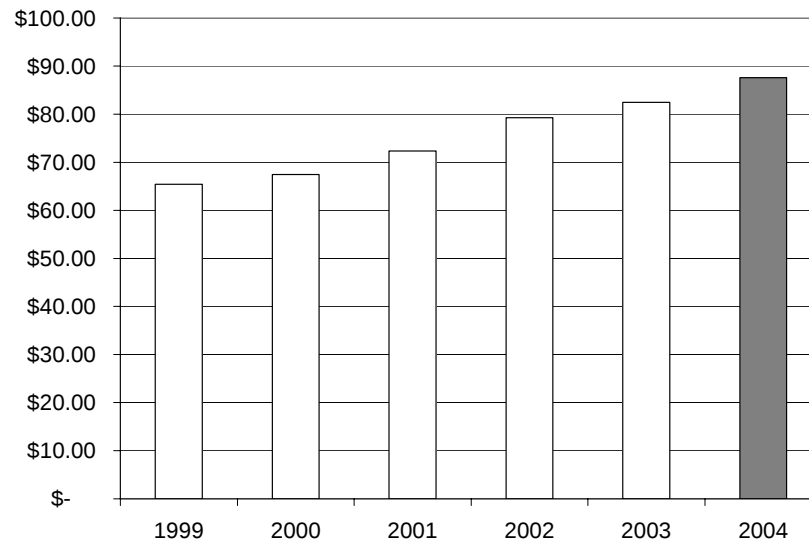
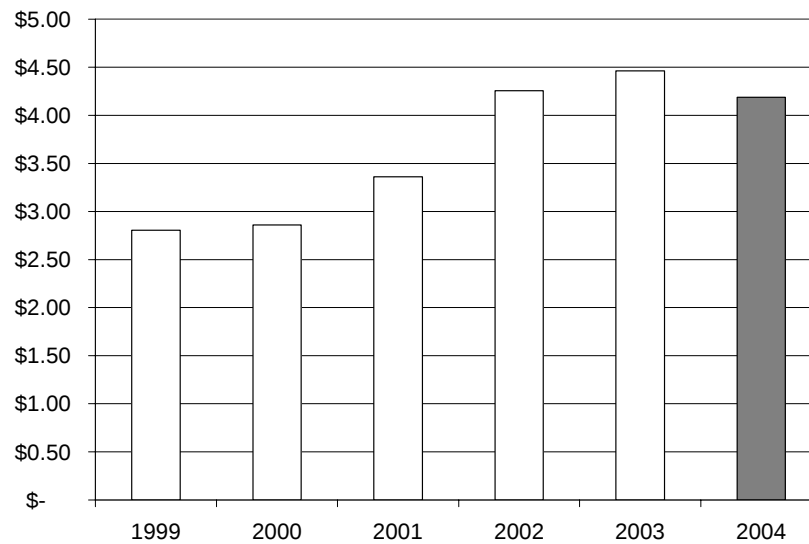
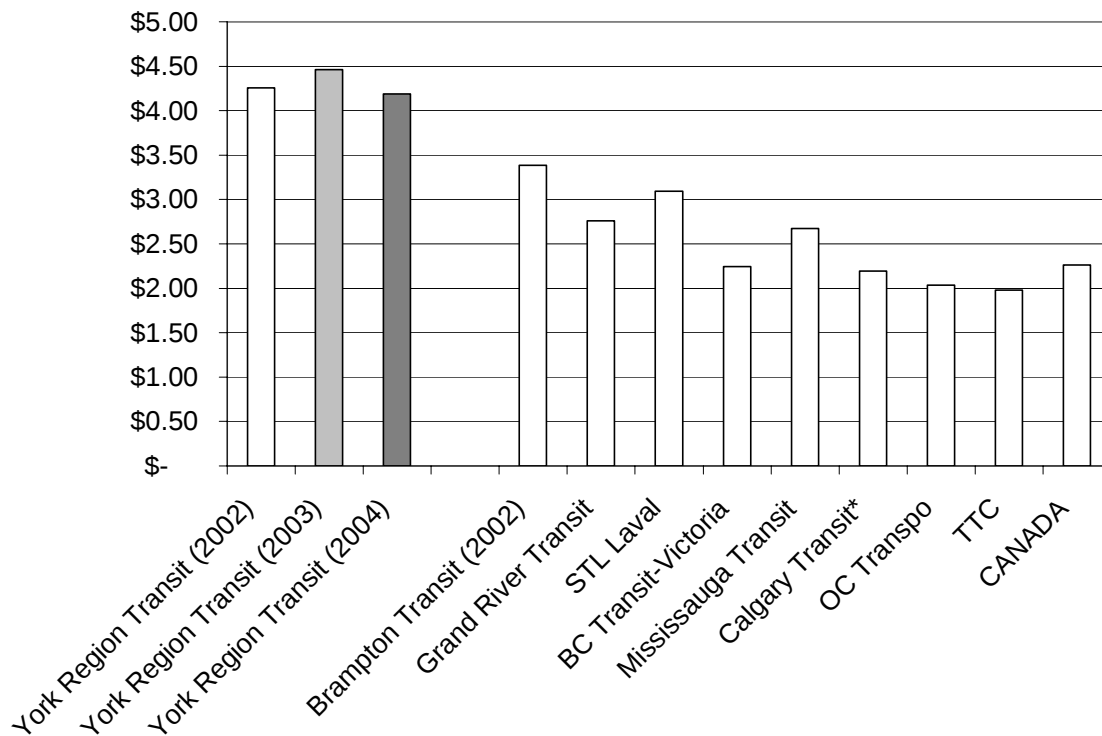


Exhibit 17
Total Cost per Passenger – York Region



In the peer group, YRT's cost/passenger at \$4.46 is the highest, followed most closely by Brampton at \$3.38. Brampton is a relatively good comparator in terms of similar suburban type development and commuter patterns. The peer group ranges between a low of \$1.98 (TTC) and \$3.38 (Brampton). The Canadian average is \$2.26.

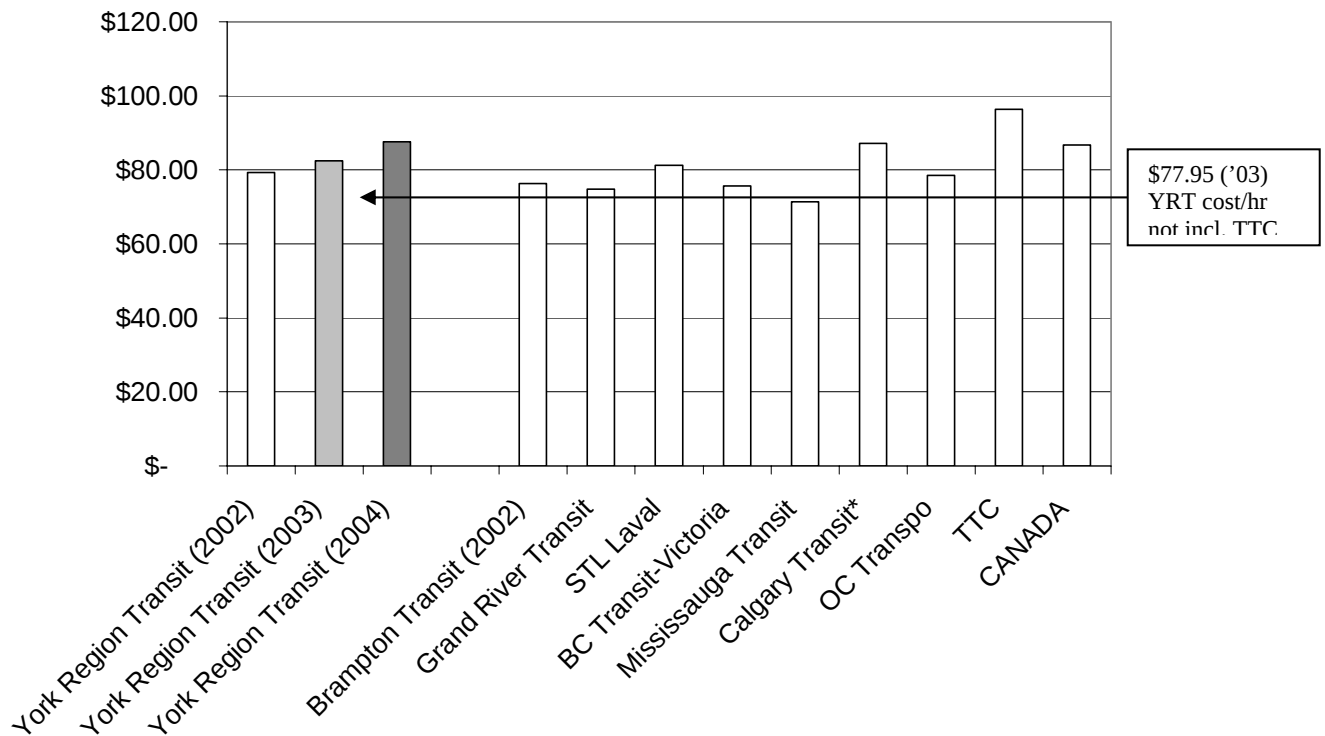
Exhibit 18
Total Cost per Passenger – Peer Group



YRT's cost/hour of \$82.46 is within the higher half of the peer group range (\$71.35 to \$96.34), with the Canadian average being \$86.72. It is interesting to note that, although YRT conventional transit services are in large part contracted out to the private sector (with the exception of TTC services), the YRT cost/hour is actually higher than some of the peer group systems with in-house municipal operations, namely Brampton (\$76.30), Grand River Transit (\$74.83) and Mississauga (\$71.35).

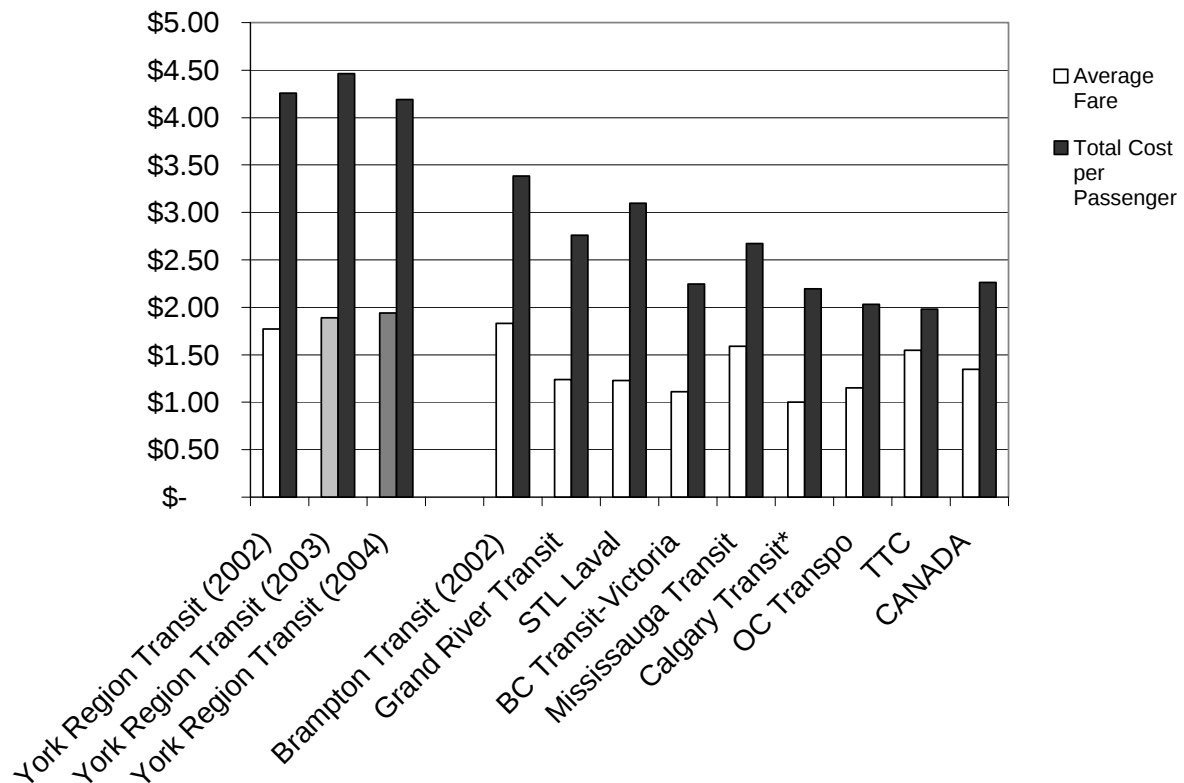
Caution should be taken with these costs, in part due to the inconsistency in the way some municipal systems report their data. In discussions with CUTA staff, although systems are requested to report full costs (including inter-departmental charges), not all municipalities allocate all costs in this manner. Additionally, YRT contracts approximately 21% of its services from the TTC, which in 2003 charged approximately \$96.34 per hour. This, in part, contributes to the relatively high overall YRT rate. When the TTC service hours and associated costs are isolated, the 2003 YRT cost/hour decreases to \$77.95, which is 10% below the Canadian average and on par with systems such as Grand River and OC Transpo.

Exhibit 19
Total Cost per Hour – Peer Group



Another interesting financial statistic is the *average fare*. This measurement calculates the passenger revenue divided by passenger trips and reflects the relative affordability of the transit system. In 2003, YRT's average fare was \$1.89. This was the highest in the peer group which ranged from a low of \$1.00 (Calgary) to the second high of \$1.83 (Brampton). The Canadian average was \$1.35. This relatively high rate is largely due to YRT's large market of adult commuters who are charged at the top end of the fare structure.

Exhibit 20
Average Fare Cost per Passenger – Peer Group



4.2 Relationship to Vision 2026

The primary reason for undertaking a performance review is to ensure that the transit system's performance indicators are identifying trends and providing benchmarks for future strategic planning purposes. YRT's Five-Year Plan set specific targets including an increase of annual revenue passengers from 10 to 17 million over the next five years (2006). YRT's mandate also includes a major role in contributing to an increase the Region's a.m. peak hour modal share from 8 to 12 percent during the same period.

Vision 2026 includes a goal statement relating to the development of Infrastructure for a Growing Region, which states that:

"In 2026, York Region will have effective, efficient and environmentally sensitive transportation, waste management and water systems."

To support this goal, the Region has identified specific action areas. The following action areas have been considered for this report:

- Continuing to improve service and infrastructure for successfully integrated transit service.
- Developing an optimal mix of transit service types.

- Promoting transit usage as a practical and wise alternative to private vehicle use.

By measuring key indicators such as levels of investment (costs), returns (ridership and revenues) and various efficiency measures, York Region continues to develop a transit supportive and thus balanced transportation network.

5. FINANCIAL IMPLICATIONS

As part of a continuous improvement process, the monitoring of performance measures provides YRT management and staff with the tools to evaluate both the efficiency and effectiveness of service delivery strategies. These measures and resulting trends can then be used to develop short-term budget forecasts and longer-term strategic plans. For instance, increases in transit ridership and transit service levels will have a positive impact on the transit modal split (percentage of transit market share vs. automobile use). This increase is critical if the Region is to achieve a more balanced transportation system. It is clear from the current performance indicators, that York Region will require still greater investments in its transit system in order to have a measurable impact on transit ridership.

However, investment in public transit cannot be made in isolation. Public policies governing planning and development practices to encourage higher density development are also needed to support a better public transit environment. Paid parking policies, transportation demand management initiatives and aggressive marketing campaigns are all factors required to make a demonstrable change in transit usage.

6. LOCAL MUNICIPAL IMPACT

Monitoring performance measures provides YRT staff with the necessary tools to make good decisions regarding service improvements. The YRT system is comprised of over 60 routes operating across the Region. Each route is being evaluated on an individual basis as part of YRT's annual service plan review. As a result of this review, service level adjustments and possible route restructurings will be proposed in order to increase ridership levels and improve convenience and efficiency. A series of public information centres and stakeholder consultations will be held in the next few months to solicit input prior to making service recommendations to Transit Committee in September.

7. CONCLUSION

Public transit performance indicators measure service provision, ridership levels and service utilization. During the first three years of amalgamation, although York Region Transit experienced significant increases in both ridership and service levels, the passengers/capita and cost recovery indicators were still below many other transit systems. With the planned implementation of rapid transit services in York Region in the

Fall of 2005, financial performance and market penetration will need to be closely monitored to ensure the effective use of transit investments. The rapid transit initiatives will see service implemented in the four main transportation corridors linking the major urban centres in the Region. It is envisioned that, with the introduction of rapid transit, increased population and employment density will follow, thus providing greater opportunities for significant increases in transit ridership. Along with financial investment and targeted marketing campaigns, a demonstrated commitment to supporting increased development densities will also be required, especially in the main transit corridors.

In summary, a number of key indicators provide clear direction in terms of future transit strategy. For example, with the YRT net cost/capita being one of the lowest in Canada (for systems of our size), the need for greater financial investment is obvious. The low YRT service utilization rates represent the most significant challenge - not only do we need to increase ridership, but a real change is needed in the overall transit market share. The relatively high operating rate also needs to be closely monitored to ensure that service delivery is efficient while at the same time service demand is met.

During the first quarter of 2004, ridership continues to increase. These increases should continue throughout the year, resulting in impressive ridership gains and an upward trend towards more positive performance indicators.

The Senior Management Group has reviewed this report.

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