RIDERSHIP GROWTH STRATEGY

MARCH 2003

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EXECUTIVE SUMMARY

There is a growing expectation that transit in general, and the TTC in particular, must take on an increased role in providing travel for people in Toronto if the City is to grow and thrive economically and in an environmentally-sustainable way. Each level of government has recently announced plans and policy initiatives, that highlight the need for greater use of transit in urban areas - the City with its Official Plan, the Province of Ontario with its "Smart Growth Council" and "Gridlock Subcommittee", and the Government of Canada with its approval of the Kyoto Accord. Achieving these policy objectives will require a fundamental shift in transit's role in Toronto and the relative importance of automobile travel.

Unfortunately, these initiatives follow on the heels of a consistent lack of government support for the TTC in the past decade. Provincial funding was reduced a number of times in the mid-1990's and is only now being partly restored. The TTC's ridership and market share has fallen significantly during this period, to a large extent because of lack of government support. While there is no simple "magic answer" that will reverse this trend, government support for the TTC must be real and pronounced if the current widespread public and government expectations for improved transit are to be met.

The TTC's mandate is to operate and maintain transit services that provide safe, fast, reliable, convenient, and comfortable travel in a cost-effective way. The TTC's highest priorities are to our current passengers, and to maintain the existing system in a state-of- good-repair. The TTC needs a substantial, ongoing, funding commitment to meet these basic priorities and fulfil its role of providing transportation services to a large proportion of Toronto's population. Once these needs are met, the TTC could attract more people out of their automobiles and onto transit with a stable source of increased funding and a commitment on the part of the City to implement policies that support efficient transit operations and transit-oriented development in Toronto.

This report outlines a Ridership Growth Strategy for the TTC which will allow the TTC to contribute significantly to achieving the objectives of the City's Official Plan and help create truly "smart" re-urbanisation in Toronto. Increasing transit ridership in a substantial way, however, will require action on the part of the TTC, the City of Toronto, and senior levels of government.

City of Toronto Actions Needed to Improve Transit

In the preparation of its Official Plan, the City of Toronto identified a range of policy, regulatory, and enforcement actions that it could take to improve transit operations and encourage ridership growth. These are described in the background report entitled *Transportation Building Blocks for Official Plan* and include:

- extending the hours when parking is prohibited on major arterial roads to better reflect the realities of the extended hours of traffic congestion on the roads;

- introducing additional bans on left-turning vehicles on major transit routes;

- establishing a dedicated team of personnel to continuously enforce parking and turn restrictions and designated transit lanes on roads;

- constructing right-turn "queue jump" lanes for transit vehicles when major roads are being rebuilt in Toronto; and,

- requiring developers to minimise the amount of parking they provide close to rapid transit lines and "higher-order transit corridors".

These actions do not have major financial implications for the City and can be implemented quickly if there is political will. Strong support from City staff and politicians will also be necessary to implement surface rapid transit on the higher-order transit corridors identified in the Official Plan. There will be negative impacts for some users of these corridors but introducing higher-order surface transit services provides large benefits for transit users and is central to achieving "smart" city-building. Introducing surface rapid transit improvements must be supported if transit is to become a more-attractive travel alternative in Toronto.

The Need for Stable Funding

The TTC’s experience over the past decade dramatically illustrates the damage that is caused to transit use when government funding is in a continual state of flux. The TTC’s funding arrangements have been changed annually, typically with final approvals for any one year being received well into the year when the expenditures are already underway. This should be completely unacceptable for a $1.3 billion-a-year business that requires investment decisions for vehicles with 18- and 30-year lives, and facilities that last 40 years or more. This funding environment prevents the establishment of any longer-term strategic business perspective on investing in the future of transit in Toronto.

Some funding for transit expansion can be provided through development charges, and the City is currently updating its Development Charges Bylaw. There is, however, a limit to what is realistic for the City to charge in the way of development fees. It is unlikely that development charges, even if applied in an aggressive way, will ever provide more than a small proportion of the TTC's capital needs for growth as outlined in this strategy.

In the current situation, short-term actions to increase transit ridership at the TTC will not be effective in creating ongoing patterns of increased ridership if there is no long-term funding arrangement established to allow higher ridership levels to be sustained. A strategic approach to increasing transit ridership requires a clear, consistent, long-term funding arrangement that realistically reflects ongoing operating costs, state-of-good repair capital needs, and the funding requirements of system and fleet expansion.

Investing in Transit to Increase Ridership

This strategy presents a comprehensive, staged, approach to transit service improvements, fare initiatives, and the construction of new facilities at the TTC to increase ridership. The overall approach is summarised in Exhibit E1. It is based on extensive research and factual data relating to how and why passengers use transit, and what has been effective in the past, and elsewhere, in attracting new riders to transit.

Exhibit E1 - Ten Year Ridership Growth Strategy (not available in this on-line report format)

There is a substantial amount of population and employment growth forecast for the GTA in the next

decade and, while only a quarter of the growth is forecast to occur in Toronto, the opportunities for increased transit ridership are much greater in Toronto than in the low-density areas outside the City over the next ten years. Unlike many recent proposals for transit improvements in the GTA, the TTC's Ridership Growth Strategy is based on a systematic cost-benefit analysis of options to determine where the greatest benefits can be achieved from scarce taxpayers dollars. The strategy minimises risks by allocating funding first to the programs that have already been proven to provide the greatest benefit at the lowest cost. Funding can then be progressively increased as the success of the overall program is demonstrated.

The TTC's Ridership Growth Strategy recommends making the following transit investments:

- a 10% increase in peak period service on busy routes. This requires that the bus fleet be expanded by 100 vehicles, over and above the current forecast needs, and an advancement in the timing of construction of a new bus garage. Improved service in the afternoon peak period can be implemented in 2004 and 2005; improvements in the morning peak period can be implemented when the additional vehicles are available, likely in 2006;

- increasing off-peak service on major routes in 2004, with ongoing additional increases between 2005 and 2008;

- a staged program of construction of surface rapid transit rights-of-way on major corridors beginning in 2004;

- construction of additional commuter parking in at-grade surface lots;

- the installation of additional transit signal priority equipment on an ongoing basis beginning in 2004;

- proceeding with the Volume Incentive Program (VIP) Green Pass fare discount, conditional on the current test being successful, along with a set of modest fare incentives targeted at increasing student and senior ridership starting in 2004 and 2005;

- a reduction in the cost of Metropasses by $5.00 in 2005, and the introduction of a weekly pass in 2006;

- increasing the carrying capacity of the Scarborough RT to accommodate ridership growth; and,

- a reduction in fares, in real terms, in 2006/2007.

When introduced, these initiatives will provide immediate benefits to TTC users and will attract new passengers to the TTC system in conjunction with planned re-urbanisation in Toronto as envisioned in the City's Official Plan. Significant increases in transit ridership, however, will take many years to develop. The recommended strategy is expected to increase system-wide ridership by 10 percent, or 40 million additional passengers on the system annually, once fully implemented. Coupled with the expected growth in travel from the population and employment growth forecasts from the City's Official Plan, TTC ridership could reach 500 million riders per year by 2011

The strategy features a substantial reinvestment in increased service levels on existing routes. This will increase service reliability, reduce passenger waiting times, decrease crowding, and allow some additional passengers to get a seat. Service improvements at off-peak times can be implemented over a

six-to-twelve-month period, which allows time to hire and train operators, but service improvements at peak times would require the purchase of additional vehicles, so these would require a two-to-three-year lead time for implementation.

Transit operating in mixed traffic cannot realistically be expected to provide a quality of service that is attractive enough to convince large numbers of people to shift over from the automobile. On a number of major transit routes in Toronto, passenger volumes require services that are at, or close to, a frequency and capacity of operation that cannot reliably be operated in mixed traffic. This situation is expected to become more widespread as ridership grows on the system and traffic congestion worsens. For ridership to grow on these routes, additional priority must be given to transit on the road network.

For this reason, the strategy also features a continuous program of upgrading major surface transit routes by converting them to surface rapid transit rights-of-way. Streetcar rights-of-way, such as those on Spadina Avenue, or an equivalent bus operation, were reviewed for every "Avenue" and "Higher-Order Transit Corridor" identified in the City's Official Plan. Many of these corridors already have high transit ridership – often with transit vehicles carrying more people than automobiles these road sections. These corridors are also targeted for additional transit-oriented growth in the City's Official Plan. As illustrated in Exhibit E2, a total of 13 roadways were identified as practical, cost-effective, candidates for such treatment. Bus Rapid Transit (BRT) is being used successfully in Richmond B.C., Boston, Los Angeles, and a number of other locations world-wide. In the Toronto context, it is envisioned that bus rapid transit rights-of-way could be constructed in the centre lanes of major arterial roads allowing buses to operate at speeds approaching those of the subway. This would result in a dramatic improvement in the quality of transit services provided in these corridors and attract new riders to transit. It would also strongly support transit-oriented re-development in these corridors over time. The proposed strategy will allow nine of these projects to proceed over the next decade at an average annual cost of $45 million per year.

Typically, in the older parts of Toronto, where road rights-of-way are 30 metres or less on major roads, and buildings are often right at the edge of the right-of-way, there is no opportunity for road widening. In these situations, the establishment of surface rapid transit rights-of-way would require taking an existing traffic or parking lane – an option that may not be feasible in many cases. In these locations, the importance of much-more stringent regulations, and stricter enforcement of those regulations, will be essential to give greater priority to transit vehicles.

Exhibit E2 - Proposed Surface Rapid Transit Corridors (not available in this on-line report format)

The situation with the Scarborough RT is unique. The line is currently operating at capacity at peak times, and cannot absorb any significant ridership growth. Because of this capacity constraint, ridership growth on the line has now been suppressed for a number of years. The line was originally constructed to accommodate the small, 40-foot vehicle currently in use and, at a minimum, will require major reconfiguration or reconstruction before 2015 when the current vehicles reach the end of their useful life. However, in order to accommodate the demand not currently being met, and to achieve the objectives of the Official Plan in Scarborough, a substantial increase in the capacity of the Scarborough RT will be required over the next ten-to-fifteen years. An acceleration of this program has been included in the Ridership Growth Strategy.

In establishing the strategy, careful consideration has been given to the relationship between fares and service. Transit fares, and price sensitivity, are rarely the reasons why people do not choose transit over other modes. For transit to compete effectively with the automobile, it must provide an attractive level of convenience, comfort, speed, and reliability compared to the equivalent automobile trip, and this is the first priority in this strategy. The fare initiatives focus on encouraging increased pass usage. Pass users

are the most-committed and most-frequent users of transit. Providing this market with additional flexibility in terms of both cost and convenience is a cost-effective way of increasing ridership. However, introducing fare discounts, without first addressing service issues, would have little chance of attracting significant numbers of new riders. A strategy to increase ridership at the TTC should, therefore, initially involve service improvements, followed by fare incentives once additional capacity is available on the system.

The potential benefits of introducing fare-by-distance or fare-by-time-of-day pricing schemes have been considered. The TTC does not currently have the complex fare equipment that is required to implement fare-by-distance without substantially inconveniencing existing riders who enjoy a simple fare system with easy transfers between connecting services. While there are a small number of examples of transit operators who have special peak-period fares, a number of major properties have recently abandoned this pricing regime, including Chicago, Cleveland, Ottawa, and Edmonton. At this point in time, there is not a business case for implementing such pricing arrangements at the TTC, primarily because of the high costs and risks involved in introducing the new technology required. TTC staff will continue to monitor the research and trial implementations of these systems that are occurring in other cities.

The Ridership Growth Strategy provides a consistent, long-term, staged program of providing priorities for, and investing in, existing transit services using proven technologies and operating strategies. This offers the greatest likelihood of achieving sustained increases in transit ridership. It will, however, require additional capital and operating funding for the TTC; annual operating subsidies would need to be increased by $80 million per year in constant 2003 dollars. This would result in the TTC's revenue/cost ratio falling to approximately 72% - an operating ratio that is still far above most other major transit properties in North America. The TTC's Capital Budget would need to be increased by $59 million per year initially and by a further $40 million per year over the three-year period when the Scarborough RT is being reconstructed. These capital costs are over and above the TTC's current basic capital needs which are expected to average $375 million per year over the next decade. It is absolutely essential, however, that the TTC's state-of-good-repair capital needs be met before expansion programs are undertaken. Exhibit E3 illustrates that the proposed Ridership Growth Strategy represents a small proportion of the TTC forecast capital needs over the next decade.

Further work is required to establish when extensions to the subway system are warranted, based on the City's need for subway-oriented developable land, and the rate at which the City wants to achieve development in subway corridors. When a program of subway expansion is initiated, the continuous program outlined in this report will increase capital needs at the TTC by a further $175 million per year on a long-term basis.

The Ridership Growth Strategy presented here provides a realistic program of expansion at the TTC to put in place a transit system that will attract new riders, and support the City's Official Plan vision for a transit-oriented re-urbanisation in Toronto. The strategy is modest compared to the mega-projects being proposed elsewhere in the GTA, and has a much higher probability of success in terms of actually attracting new riders to transit in the next decade. Its success is not contingent on large-scale re-development in particular locations or corridors – modest re-development on many corridors is both more practical and more likely to actually occur – and the program is flexible enough to respond to changing conditions compared to a single major initiative.

This Ridership Growth Strategy is the TTC's response to all levels of government that are advocating increased transit use through the cost-effective use of tax dollars. For this to occur, these governments will, collectively, have to commit to adequate, stable, funding for the TTC over the coming decade and beyond, and to take those actions necessary to make transit a truly effective alternative to the automobile in Toronto.

Exhibit E3 - Capital Implication of Ridership Growth Strategy (not available in this on-line report format)

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1 INTRODUCTION

The TTC's mandate is to provide public transit services in the City of Toronto, which benefit passengers and attract as many passengers as possible to the service. Of course, this must be done within the financial limitations established by the City and the senior levels of government. The TTC works hard to understand passenger travel needs, and to provide services which, as much as possible, are tailored to meet those needs in the most cost-effective way possible. However, owing to cuts in funding and an increasing community and society orientation to automobile travel, the TTC's ridership and market share has been declining over the past 15 years.

At the same time, there is a growing recognition that current forms of urban development and urban transportation are not sustainable. Many groups - private and public sector, businesses and citizens alike - have asserted that, for Toronto and the GTA to thrive, an increasing proportion of all urban travel must be done by transit. T he TTC, in partnership with all levels of government, has both the opportunity and, the responsibility to take a leading role in achieving a pattern of sustainable, environmentally-friendly urban development in Toronto.

The City of Toronto, the Province of Ontario, and the Government of Canada have each, recently, announced goals and objectives in which transit in general, and the TTC in particular, play a major role. The City has recently approved a new Official Plan that presents a vision of City growth where:

"*the focus is on altering behaviour so as to reduce our dependence on the private automobile*", and indicates that the plan must be *"supported by high-quality transit services, including priority measures for buses and streetcars"*

The Province of Ontario has created the "Smart Growth Council" for the Greater Toronto Area whose advice includes:

"increasing transit use by making transit a viable alternative to taking the car is fundamental to relieving gridlock in the long term"

The Government of Canada's Task Force on Urban Issues has indicated that:

"Congestion is not so much a symptom of not enough roads, but of not investing enough in other forms of transportation", and

"It is time for the Government of Canada to develop a program to specifically address urban transit"

With respect to climate change and the Kyoto Accord, the Federal Government has indicated that:

"*Reducing energy consumption by vehicles – including the family car – will be a big part of the climate change solution"*

Unfortunately, the reality of the TTC's situation in the past fifteen years has been one of dramatic reductions in government subsidies, resulting in fare increases that have been more than 50% above the rate of inflation, and system-wide reductions in the services provided. Not surprisingly, this has resulted in falling ridership and a losing battle for market share compared to automobile use. Long-term funding arrangements with our government partners are uncertain and continue to change, virtually on an annual basis, making even medium-term planning for the City and the TTC very difficult. While there is much talk of giving transit more priority on the City's roads, there has been little tangible support for this when actual proposals are put on the table.

The purpose of this report is to provide a blueprint for increasing transit ridership in Toronto over the next 10 years; one which clearly explains the choices available and provides a realistic evaluation of the costs, risks, and probability of success involved in achieving increased transit ridership in Toronto.

There has been much attention paid to the forecast growth in automobile travel throughout the GTA. However, there is an opportunity to minimise this growth, and the negative impacts associated with it, if an increased proportion of this future travel occurs on transit. Rapid transit facilities hold the promise of achieving this objective but, to be cost-effective, they need to be supported by high-density developments – much higher densities than can be practically achieved in the short- and medium-term in most suburban areas. The only practical way for transit to take on a significantly-greater role in the short- to medium-term in the GTA is if higher-density growth occurs in locations where existing transit infrastructure can be better utilised. These locations are primarily in the City of Toronto and they are important elements in both the City's new Official Plan, and this Ridership Growth Strategy.

Transit is a very utilitarian product, not a highly-prized consumer good, and it is in direct competition with the private automobile, which offers a high level of comfort and convenience compared to transit service. Transit service is most effective where there is both a high quality of transit service available, and automobile travel is less desirable because of some combination of cost and slow speeds due to road congestion. Without some significant priorities being given to transit users on the road system, it will be difficult to shift large numbers of people away from automobile use. Most personal travel behaviours only change slowly over time, often triggered by a major event such as when people change their home or work location for example, so investing in increasing transit ridership requires long-term commitments. The initiatives presented here will have immediate benefits to existing passengers on the TTC system and will strongly encourage increased transit use over time in conjunction with planned re-urbanisation in Toronto as envisioned in the City's Official Plan. Large gains in transit ridership will, however, take many years to develop.

There are a wide range of factors influencing the way in which people locate and make travel choices and which, ultimately, determine the extent to which the TTC can attract new riders. Only a few of these factors, however, are directly under the control of the TTC. These include safe and consistent operation, courtesy, and effective public communication, and the TTC works hard to maintain and improve its performance in these areas. Most of the major influences on transit ridership, however, are beyond the TTC's control.

A combination of transit-supportive policies and increases in direct funding to improve transit services are needed to be effective in increasing transit use. While the focus of this report is on the need for, and effective use of, additional funding for transit, this alone will not allow the TTC to significantly change the way people chose to locate and travel in Toronto. Increased funding for transit must be in support of serious, specific municipal and provincial programs that:

- encourage transit-friendly compact urban form;

- modify rights-of-way and introduce regulations which increase the relative speed of transit travel compared to automobile travel – for example, by converting travel lanes to bus-only rights-of-way, and introducing more-stringent peak period parking and turn prohibitions on major transit routes;

- increase the relative cost of automobile use through increased fuel taxes, road tolls, and increased parking costs; and

- minimise highway construction and discourage low-density development on the suburban fringe of the urbanised area.

Investing in improved transit service makes sense for many reasons, but it must be done in a way that provides significant, measurable, and real returns on investment. If taxpayers' funds are to be used to improve transit services, there needs to be a strong business case to prove that the money is well spent, and that any funding provided will generate significant additional ridership. There is no simple, low-cost solution to achieving increased transit ridership, or to reduce congestion and pollution. Attracting new riders to transit will require substantial increases in government policy commitments and subsidy, on a consistent basis, over a number of years. One-time funding arrangements and individual mega-projects will not result in significant changes in overall travel patterns over the long term or over a wide area. A consistent, long-term, staged program of providing priorities for, and investing in, expanded existing transit services, using proven technologies and operating strategies, provides the best opportunity to achieve sustained increases in transit ridership.

The underlying issue will continue to be the extent to which the City and senior levels of government will be willing to take the steps necessary to invest in transit to achieve their broader objectives. This report presents a strategy for improving the efficiency, effectiveness, and quality of transit services, and for investing in transit in the next decade in Toronto – a strategy that will ensure that additional funding for transit will actually result in significant increases in transit ridership.

1.1 Background

Toronto City Council, at its meeting of October 29, 30, and 31, 2002, approved a new Official Plan for the City. In developing the plan, one of the principles established at the outset was that it should create a City where "people will be at no disadvantage if they do not own a car". The now-approved plan provides a vision for re-intensifying Toronto in development nodes and along designated "Avenues", while preserving all of the City's stable neighbourhoods. Forecasts call for a 15%-to-20% growth in population and employment within Toronto over 20 years, with the City's population increasing by 420,000 between 2001 and 2021. This results in the City's population reaching 2.9 million by 2021. During the three-year process of evaluation, review, and consultation that went into the development of the City's Official Plan, it became increasingly clear that the realisation of this vision would require an increased reliance on transit services to provide for travel within Toronto. No significant increases in road capacity are contemplated within the plan or, for that matter, could be realistically achieved in a city that is largely developed. The plan explicitly identifies the need to reduce automobile use and promote other modes of travel such as transit, cycling, and walking.

During the process of developing the Official Plan, the City was also reviewing and approving the TTC's operating and capital budgets on an annual basis. The City and the Province of Ontario began changing funding arrangements for the TTC in the early 1990's, and the Province eliminated all operating funding for transit in 1998. The City has struggled to maintain adequate funding levels for the TTC since that time. The TTC's current budgets focus almost entirely on status-quo operations and "State of Good

Repair" capital budget needs, and do not include funding for any substantial expansion of services.

Also during this period, both the Provincial and Federal governments announced major policies and initiatives – approval of the Kyoto Accord, in the case of the Federal Government, and the "Smart Growth" initiative by the Province of Ontario – both of which reflect a belief that there must be a substantial shift towards transit ridership in Toronto over the next decade.

The Commission recognized that, for the TTC to fulfil the Official Plan vision for future transit services and the expectations of the senior levels of government, the TTC would need to make its service more reliable and attractive, and that this will require a substantial increase in transit funding levels above that contained in the TTC's budget forecasts. For this reason, the Commission requested staff to prepare a "Ridership Growth Strategy" which would "examine options to increase ridership and provide excellent service at a reasonable cost". As outlined in Appendix A, there have also been a range of motions and requests, both from the Commission and City Council, during debates on the Official Plan and on the TTC's budgets, requesting information on the TTC's future plans to increase ridership and the funding implications of these plans. This report responds to these requests through the development of a comprehensive Ridership Growth Strategy for the next decade at the TTC. It details the most cost-effective ways of increasing transit ridership in the City and the cost and subsidy implications of those plans.

The strategy is premised on the assumption that the TTC's basic operating and capital funding needs will be met, and that all of the initiatives discussed here are in addition to base funding levels. It should be emphasised, however, that the TTC's first priorities for funding continue to be to maintain the existing levels of service, and to the fund the basic life-cycle rehabilitation and replacement of the existing transit system through the "State-of-Good-Repair" budget.

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2 HOW TO INCREASE RIDERSHIP

2.1 Why people choose to use transit

People use transit to travel to work, to school, to shop, to go to the doctor, or any number of other purposes – all of the same reasons that they might also travel by automobile, walking, or any other mode of travel. Why they choose transit rather than other modes is the key to understanding how to increase transit ridership.

Transit is in direct competition with other modes of travel, notably the automobile. In fact, transit, in many ways, complements walking and cycling because urban environments that are conducive to walking and cycling are also transit-supportive. Compact urban forms that encourage many walking trips, and good pedestrian access, also provide good pedestrian access to transit services. People who make walking and cycling trips instead of automobile trips are also likely to be heavy transit users. In a very basic way, the primary competition for travel mode is between automobiles, and the combination of transit-walk-cycling.

There is extensive research available on how people choose their mode of travel. The TTC and others have undertaken substantial observed-behaviour and stated-preference surveys in Toronto and the GTA regarding travel behaviour, and there is similar information from elsewhere which corroborates the

Toronto results. Over the last five years alone, the TTC has conducted almost 40,000 interviews with Toronto and GTA residents about their use of transit and other transit-related issues. A summary of these studies is provided in Appendix B.

The key factors governing mode choice are speed, reliability, comfort, convenience, and cost. Different segments of the market put differing values on these factors, and an understanding of market segments is critical to determining the potential for attracting transit riders. In addition, some modes of travel are simply not available or practical for some trips - few people will make very long walking trips for example - and people do not necessarily have an automobile available for any given trip. The availability and attractiveness of various modes is also very dependent on the location of both the origin and the destination of the trip being made.

There are some general conclusions that can be drawn from research on mode choice. People who have access to an automobile find that it provides a very-high level of comfort and convenience. Automobile trips are typically very expensive relative to transit, cycling, or walking, but people who own automobiles are willing to pay for the comfort and convenience offered by the car. The relative costs of automobile versus transit costs in the GTA are discussed in more detail in Appendix C. Transit fares, and price sensitivity, are rarely the primary reason why people do not choose transit services over other modes. For transit to compete effectively with the automobile, it must provide an acceptable level of convenience, comfort, speed, and reliability compared to the equivalent automobile trip.

For example, a key comfort-and-convenience factor in choosing to make a transit trip relates to the walk to and from a transit stop, both at the start of the trip and at the destination of the trip. Both ends of the trip must have a walk that is of a reasonable distance, and have some minimum acceptable pedestrian facilities, if transit is to be a viable alternative to automobile travel. It is this consideration that makes it unlikely that transit will ever provide a reasonable alternative to automobile travel in many suburban areas that have been designed and constructed to optimise automobile travel at the expense of pedestrian access. Many suburban residential areas, shopping malls, and business parks have been constructed in such a way that transit use will never be an attractive option because of the long, unattractive pedestrian trips required to reach transit services in these areas.

The situations where transit can compete effectively with automobile travel are those where there is good pedestrian access to transit at both ends of the trip, and where transit can provide comparable speed to automobile travel when all factors are considered. Under these conditions, transit travel becomes attractive to many potential users. These conditions exist for travel to and from downtown Toronto in peak periods, where the roads are congested and rail lines (GO and subway) provide a comparable travel speed to automobile travel. There is also excellent pedestrian access from the downtown rail stations to destinations in the downtown. Transit achieves a 60%-to-70% mode split to transit in these favourable circumstances.

Transit can be provided most cost-effectively where large numbers of people can travel together to similar destinations. Major destinations like the downtown core, university campuses, and major employment/commercial nodes, can be provided with a high quality of transit service, and major investments in transit facilities can be justified based on the large numbers of passengers benefiting from the service. As the volume of travellers to a location decreases, however, it is less and less likely that major transit facilities can be justified. Successful rapid transit lines are invariably anchored by at least one major development node that allows for excellent pedestrian access for large numbers of passengers. Similarly, the intensity of development at individual stations along a rapid transit line is also a major determinant of the success of the line because development at stations helps to increase the volume of travellers who will find the line attractive. Relatively few passengers use rapid transit lines as an intermediate part of a trip that involves transfers to and from the line at each end.

The combination of a well-designed, higher-density urban environment, coupled with a fast, reliable transit service that is available at all times, attracts and encourages a transit/walk/cycle lifestyle that is "smart" in every way. There are large community benefits from people who choose this lifestyle. It is low cost from a taxpayer perspective by making best use of many types of existing infrastructure and resources, it is environmentally friendly, and it is even healthier. A significant proportion of the TTC's ridership falls into this category, and the City's Official Plan is based on encouraging many more people to make this choice.

One of the objectives of the TTC's Ridership Growth Strategy is to help encourage more people to adopt this lifestyle by enhancing both the quality and availability of transit service in the City. To achieve this, transit must be an attractive alternative to the automobile, both in the peak periods for travelling to and from work or school and at off-peak times.

2.2 Improving Surface Transit Speed and Reliability

Fully grade-separated rapid transit rights-of-way (like GO trains, the subway, or an Ottawa-style bus Transitway) provide an attractive alternative to automobile travel, in part, because they provide service, in a reliable way, at speeds that are comparable to automobile travel. To achieve this, however, requires very large investments in infrastructure and, in a dense urban environment like Toronto, typically involves expensive tunnels and structures in many locations. To warrant such expenditures normally requires that very large numbers of passengers use the facility, however, and there are few locations in Toronto where there is any reasonable expectation of this occurring in the foreseeable future.

Buses or streetcars operating in mixed traffic cannot realistically be expected to provide a quality of service that is attractive enough to compete effectively with the automobile. As the road network becomes more congested, buses and streetcars are delayed along with the rest of the traffic, and the reliability of the service deteriorates significantly. This frequently occurs at present on the TTC system on major streetcar routes through the downtown area and a number of major bus routes in the system. TTC staff have taken a number of initiatives to shore-up the reliability of service, but these measures can result in an overall slowing-down of service. The fact is that service reliability has been getting progressively worse over the past decade on many major routes in the TTC system and this has been a contributing factor in the TTC's loss of market share as outlined in section 4.0. Slow, unreliable bus or streetcar transit service, where people can wait 15 or more minutes for a vehicle that was scheduled to come every two-to-three minutes, will not attract significant numbers of passengers away from their automobiles.

In addition, there is a practical limit to the number of passengers that transit vehicles can carry through a congested road network if they are operating in mixed traffic. Regardless of the number of vehicles assigned to the route, in practice, transit vehicles can only move through congested intersections and pick up passengers at the maximum rate of approximately one vehicle per traffic signal cycle length (90 to 120 seconds). Some services operated by the TTC, such as the 504 King streetcar, are at, or close to, this limit at the present time, and more services are expected to reach this limit in the next ten years based on Official Plan forecasts. For streetcar operations, there is some opportunity to increase capacity through the use of multiple units (two-car trains). The TTC is actively considering the use of multiple units on some streetcar routes as ridership grows beyond the capacity limits of single-unit operation in the congested downtown area. Other than the use of multiple units, there is no practical way of increasing the capacity of routes that are at their practical capacity in mixed traffic without additional priority being given to transit vehicles on the road network.

It is for these reasons that the TTC and City staff have been exploring the need and potential for "surface

rapid transit" options on the higher-order transit corridors identified in the Official Plan. The operation of streetcars or buses in partial or exclusive rights-of-way on major arterial roads provides a way to move beyond the problems associated with vehicles operating in mixed traffic, without the extremely high costs associated with tunnelling or fully grade-separated transit operations.

Such an approach also has the significant advantage of reducing the risks involved with major investments in fully-grade separated rights-of-way by providing a "pre-cursor" service that will help to establish rapid transit ridership patterns in a corridor in advance of when a fully-grade separated right-of-way may be warranted.

2.3 Cost of Travel and the Relationship between Service and Fares

There are two basic passenger issues related to the setting of fares:

- the community and social-welfare issues related to the cost of travel for passengers who have no other means of travel except the TTC; and
- the relative cost of transit versus automobile travel, and the best way of spending resources to attract new transit riders.

Fifteen-to-twenty percent of regular TTC passengers do not have access to an automobile for their trip and are, therefore, highly dependent on the TTC for travel in Toronto. While the cost of travel may be a very significant issue for some of these people, it is beyond the mandate of the TTC to effectively resolve broader social and community issues related to income distribution and welfare. For this reason, the TTC's involvement in social welfare issues related to fares has been limited to the historical provision of concession fares for children, students, and seniors. TTC fare levels, while having increased in real terms over the past 15 years (see section 4.0 below), remain affordable to the large majority of regular users of the system.

In terms of attracting new riders to the system, customer research, both in Toronto and elsewhere, has consistently shown that existing and potential passengers are much more sensitive to the quality of, and changes in service than they are to fares. For this reason, the main focus of initiatives to increase transit ridership is on improved service, rather than reduced fares.

There is clear evidence, however, that the large fare increases introduced by the TTC in the 1990's, as a result of massive cuts to funding, had a significant negative effect on transit ridership overall, and it is likely that some portion of these riders could be attracted back to transit through changes in fares. There is an opportunity to selectively target fare discounts at market segments that are most likely to increase their overall use of transit. While such programs would reduce TTC revenues and increase subsidy requirements, these programs would generate increased ridership. Students, in particular, have been more adversely affected than other groups by the fare increases of the 1990's. Targeting the student travel market has the added longer-term advantage that, if people develop transit-oriented behaviour as students, there is a higher likelihood that they will continue to be regular transit users in their older years. It is for these reasons that the Commission is currently testing the VIP (Volume Incentive Program) Green Pass that will allow post-secondary institutions and other organisations to sell monthly passes to their employees/students at a discounted rate.

It is also important to note that there is a direct relationship between transit fare policies and the resulting cost of providing transit services. The cost of carrying additional passengers is highest in peak periods. In the morning peak, the TTC’s fleet of vehicles is fully utilised, so any significant growth in

ridership at this time requires the purchase of new vehicles. At off-peak times, there is a greater likelihood that additional ridership can be accommodated using the existing excess capacity that exists on many routes at off-peak times. The overall cost of operation at peak times is also higher than at off-peak times because it is less efficient to schedule operators for small pieces of work in the morning and afternoon than it is to schedule additional work at off-peak times. For these reasons, fare initiatives that encourage greater off-peak travel are, in general, more cost-effective than fare policies that increase peak travel.

There is also an important synergy between service and fares that needs to be considered. Fare changes can be implemented relatively quickly where, usually, there is a lead-time required for the introduction of significant changes in service levels. In addition, potential new passengers may take a long time to respond to service changes unless an implementation program is established that gives them an incentive to try a new service for the first time. Changes in fares can be an effective part of such a package to help introduce a broad-based set of improvements to potential new passengers.

A program to increase ridership at the TTC, therefore, should include a complementary set of both service improvements and fare initiatives. Service improvements should be introduced first, and fare changes should follow which target, as a first priority, those groups whose travel behaviour is most sensitive to changes in fares and those who travel at off-peak times.

2.4 Summary

Transit can be effective in attracting significant numbers of trips where:

- the urban environment has been constructed for good pedestrian access;
- the density of development is sufficient to justify an investment in higher-order transit rights-of-way that allow transit vehicles to move at speeds, and reliability that are comparable or better than that of the equivalent automobile trip;
- rapid transit rights-of-way are provided, either on the surface, or in a fully grade-separated facility, depending on the volume of travel in the corridor; and,
- the synergy between service and fares is recognised, and service improvements are accompanied by complementary fare programs targeted at passengers who are most likely to increase their use of transit.

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3 THE NEED FOR TTC AND CITY COMMITMENT TO IMPROVE THE QUALITY OF TRANSIT

A long-term investment in service improvements and fare incentives is fundamental to achieving a significant increase in TTC ridership. However, even with such an investment, both the TTC and the City must do their parts, on the operations, service, and policy fronts, if there is to be a demonstrable

change in the way people travel in Toronto. There must be a commitment to take every reasonable measure and initiative to ensure the greatest possible return on investments in transit.

3.1 The Importance of Passenger Focus in TTC Service Delivery

The Ridership Growth Strategy focuses on improvements to service quality and speed, and on fare incentives that will be feasible and cost-effective in attracting new riders. However, the TTC's operating practices, business culture, and sensitivity to passenger needs – factors that will affect the TTC's ability to be a serious travel option in Toronto well beyond the medium term – must reflect and continually adapt to the needs and expectations of its changing passenger base.

Critical to attracting passengers are efforts to improve the comfort, reliability, and convenience of service. The TTC has made, and continues to make significant efforts to achieve this goal. A major initiative regarding route management, strict monitoring of service reliability, ongoing, major improvements to terminal operations at a number of stations, improved interior configurations of buses and streetcars, more comfortable seating on new vehicles, and the commitment to buying only low-floor fully-accessible vehicles are examples of these efforts. The organisation must continue its work in these areas.

The attractiveness, cleanliness, and ambience of subway stations and trains is very important to passengers' overall travel experience. The TTC's recent initiatives regarding station renovations, improved lighting, rebuilding of escalators, recycling of newspapers, enhanced station cleaning, installation of elevators, and acquisition of roomier and brighter "T-1" subway cars are all examples of important work in this area. Again, these initiatives must be continued and strengthened.

Communicating effectively with passengers contributes to their satisfaction with the TTC. A number of initiatives, all of which will require new funding, have been identified as having the potential to provide significant customer benefits. These include improved and more-effective signage within subway stations and system-wide, continued expansion and improvement of the provision of electronic information through the TTC's web site, electronic displays of vehicle arrival times within subway stations and on-street at stops, direct marketing of community-specific service information, and automated announcement of stops in the subway system.

Passengers need to know that safety and security are top priority in the TTC system, and a number of initiatives in this area have contributed to the TTC system being widely regarded as extremely safe. These include increased presence of security personnel throughout the system, introduction of the "request stop" program, more closed-circuit surveillance of station areas, the establishment of "designated waiting areas", and the installation of platform edge markers. Again, efforts and resources targeted at increasing system safety and security should be increased in order to meet or exceed passengers' expectations in this area.

The desire to continually improve the quality and friendliness of the service which the TTC delivers must continue to be engendered in all employees – management, staff, and union. The Awards of Excellence program, which recognises employees who have provided truly excellent service according to customer commendations, is a key tool in this drive. Also critical is the TTC's ongoing program of employee training and development. These and other initiatives to inculcate an unwavering commitment to satisfying customers must be supported, strengthened, and accelerated.

All of these types of ongoing, long-term commitments to improving the overall quality of performance of the TTC must be an integral part of the TTC's Ridership Growth Strategy.

3.2 City Actions Required to Improve Transit Service

The City, in its background work in support of the Official Plan, identified a set of "building blocks" for the transportation plan, as shown in Exhibit 1, and *"stressed the importance of transit priority policies as one of the most cost-effective means of improving the competitiveness of public transportation"*. The building blocks illustrate that the City has, under its control, a range of policy tools that can be used to influence travel choices without the need for major expenditures. Parking policies and standards, transit priority measures, and land use planning tools can be used to shape future travel demand and increase transit use at no added cost to the City.

The planning work behind the Official Plan acknowledges that *"improved transit competitiveness, realistically, can only be achieved at some "cost" to other road users"* and that "*the fundamental issue is whether the City is prepared to make the tradeoffs that improve transit competitiveness at the expense of driver inconvenience"*. These are difficult choices that require a balancing of the concerns of individuals who are inconvenienced against the community benefits gained from promoting transit service. If the objectives of the Official Plan are to be realised, however, City staff and politicians must move the balance in the direction of promoting transit service.

There are a number of simple, achievable changes that could be made in the short-term by the City to demonstrate its commitment to improved transit service in a tangible way:

- extending the hours during which parking is restricted on major arterial roads to better reflect the realities of the extended peaking of traffic congestion on the roads;
- introducing additional bans on left-turning vehicles on major transit routes; and
- establishing a dedicated team of personnel to continuously enforce parking and turn restrictions and bus- and streetcar-only lanes on transit routes.

Exhibit 1 - City of Toronto Transportation Building Blocks (not available in this on-line report format)

The TTC has requested the City to undertake all of these actions in the past, but has been unable to achieve meaningful progress on these issues. The City can be pro-active in promoting transit in other ways such as:

- constructing right-turn "queue jump" lanes for transit vehicles when major roads are being rebuilt in the City. These lanes, coupled with signal priority equipment and the relocation of transit stops to the far side of intersections, is a low-cost way of increasing transit speeds;
- actively encouraging developers to minimise the amount of parking they provide when proposing developments close to rapid transit lines or on the "Avenues' where higher-order transit is planned; and
- maintaining a strong pro-transit position when faced with possible opposition from automobile drivers when undertaking the "Avenue" and district planning studies needed to support the broader vision of the Official Plan.

For the TTC's Ridership Growth Strategy to be effective, it will require more from the City than just additional funding for transit. It will also require a strong commitment on the part of the City to support transit-promoting initiatives even though such initiatives may well be opposed by some automobile

users.

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4 WITHOUT STABLE FUNDING, THE TTC CANNOT DO ITS JOB

Since 1988, the TTC's ridership has fallen 11% while the population of the City of Toronto grew by 20%. The TTC is losing market share, so a greater proportion of all trips are now being made by automobile than was the case in the late 1980's. The TTC's ridership fell over this period as a result of a number of events, and economic and demographic trends in the TTC's operating area, but a major contributing factor to the decline was the reduction in subsidies provided to the TTC during this time period.

As shown in Exhibit 2, the TTC's ridership peaked at the end of the 1980's at approximately 465 million riders per year. In the 1980's, Toronto had experienced moderately strong economic growth, TTC funding support was stable, fare increases were more-or-less in line with annual rates of inflation, and ridership grew at an average rate of 3.5% per year. In the early 1990's, however, fares were increased five times for a total of a 41% increase, service was disrupted twice through labour actions, services were cut twice and funding was reduced. Over 200 fewer buses and 40 fewer streetcars are in operation at peak times now compared to the services operated in the late 1980's. These inter-related actions, happening within a short time span, had a catastrophic effect on ridership that was greater than the impact that would have occurred if each event had happened alone. The lingering effect of these changes pushed ridership down until 1996.

As shown in Exhibit 3, funding for the TTC continued to be cut throughout the period 1991 to 2000, with annual operating subsidies being reduced by $100 million. Every attempt was made to protect service and maintain fares at reasonable levels during this period. This was done through a combination of a corporate restructuring and downsizing in 1995 and 1996, eliminating a net of about 800 jobs, and substantial service cuts in 1996. In 1996, however, further fare increases and service cuts were required to balance the budget. These resulted in the TTC having a lower ridership level in 1996 than had occurred anytime since 1980. Since 1996, while funding arrangements continued to be chaotic, the TTC has managed to provide modestly-increasing service levels and to keep fare increases close to inflation levels. This, coupled with a positive economic climate in the TTC's service area, has allowed the TTC to reverse the trend of the early 1990's and achieve an increase of 42 million riders or 11% in the past 7 years.

Throughout the late 1970's and 1980's, the TTC had a stable funding arrangement with the then-Municipality of Metropolitan Toronto and the Province of Ontario. It was based on a "User's Fair Share" principle that called for passengers to contribute 68% of the annual cost of operating transit service through their fares. The remainder of the operating funding was shared equally between Metro and the Province, with each contributing 16% of the operating costs. In addition, the capital costs associated with transit service were funded 75% by the Province and 25% by Metro. Between 1978 and 1988, TTC ridership grew by 37%, in part because the stable funding arrangement provided a consistent basis for the TTC to respond to the population growth occurring in Toronto. The funding arrangement allowed

the TTC to make capital investments in vehicles and infrastructure, and increase service levels to actively promote greater transit use on a long-term basis.

The funding arrangement used for the TTC during the 1980's was, and continues to be, typical of the funding arrangements in place throughout the transit industry in North America. As illustrated in Table 1, government funding typically covers 40% to 70% of the cost of operating transit services in other communities, with senior levels of government usually contributing to both operating and capital costs of urban transit services. This compares to the current 20% subsidy rate in Toronto, which is the result of progressively-reduced funding levels since 1992. In constant dollars, government funding for the TTC's operating costs are now only 50% of what they were in 1992. Equally problematic from a TTC perspective is that the arrangements for funding transit in Toronto have been in a continuous state of flux during this time.

Table 1

Funding for Transit Agencies with Heavy Rail Systems - 2001

		Source of operating funds					Source of capital funds		
United States	**Transit operator**	**Fares**	**Federal**	**State**	**Local**	**Other**	**Federal**	**State**	**Local**
Atlanta, Georgia	MARTA	29%	0%	0%	59%	12%	52%	0%	48%
Baltimore, Maryland	MTA	31%	0%	68%	0%	1%	78%	22%	0%
Boston, Massachusetts	MBTA	31%	0%	50%	15%	4%	41%	0%	59%
Chicago, Illinois	CTA	42%	0%	21%	32%	5%	57%	13%	30%
Cleveland, Ohio	CGRTA	18%	0%	1%	79%	2%	65%	13%	22%
Los Angeles, California	LACMTA	30%	0%	0%	66%	4%	86%	0%	14%
Miami, Florida	MDT	31%	0%	7%	60%	2%	63%	5%	32%
New York, New York									
MTA New York City Transit	NYCT	54%	0%	26%	17%	3%	43%	0%	57%
Philadelphia, Pennsylvania	SEPTA	40%	0%	47%	9%	4%	55%	37%	8%
San Francisco, California									
Bay Area Rapid Transit	BART	51%	0%	0%	39%	10%	50%	4%	46%
Washington, D.C.	WMATA	43%	0%	16%	22%	19%	71%	12%	17%

		Source of operating funds					Source of capital funds		
Canada	**Transit operator**	**Fares**	**Federal**	**Provincial**	**Local**	**Other**	**Other**	**Provincial Agency**	**Local**
Calgary, Alberta (light rail)	CT	37%	0%	2%	52%	9%	3%	75%	22%
Montreal, Quebec	STM	47%	0%	7%	34%	12%	0%	100%	0%
Vancouver, B.C.	TransLink	34%	0%	0%	0%	66%	0%	99%	1%
Toronto, Ontario	TTC	82%	0%	0%	18%	0%	0%	0%	100%

Sources: U.S. Federal Transit Administration 2001 National Transit Database - Transit Profiles; CUTA; TTC

On the capital side, the TTC’s ageing infrastructure requires a continuous program of capital investment to maintain a state of good repair. Cutbacks in government funding have resulted in this being the sole focus of the TTC’s capital budget. As extensively documented in the TTC's Capital Budget submissions,

the TTC's base capital needs are expected to be approximately $3.8 billion over the next ten years. The vehicles purchased under the funding programs for the 1970's and 1980's are now reaching the end of their useful lives and must be replaced, for current services to be maintained. The ageing vehicles and infrastructure require a continuous program of maintenance to ensure that they function safely and reliably.

Exhibit 2 - TTC Annual Ridership 1988 to 2002 (not available in this on-line report format)

Exhibit 3 - Provincial and Municipal Operating Subsidies (not available in this on-line report format)

With complete uncertainty about its funding levels and commitments from year-to-year, the TTC cannot plan, let alone implement, a program of service improvements to attract additional riders. Instead, the TTC is forced to plan and operate service, never knowing whether there will be adequate funding even to keep operating the service that is currently in place. No allowance is included in the TTC's current Capital Budget for requirements to address the City's Official Plan. Even transit initiatives to promote ridership growth that are recommended by the TTC and supported by senior governments are not currently approved or funded. They are shown "below the line" in the TTC's Capital Plan.

The senior levels of government have made various announcements concerning possible infrastructure investments that might be available to fund the TTC's capital budget needs. These include the Province of Ontario’s Transit Improvement Plan (TIP) in 2001, the Ontario Transit Renewal Program (OTRP), and the Golden Horseshoe Transit Investment Partnership (GTIP) programs in 2002. The Federal Government has announced funding for transit under the Canada-Ontario Infrastructure Program (COIP) in 2001, and the Canada Strategic Infrastructure Fund (CSIF) in 2002, but it is unclear the extent to which the TTC’s State of Good Repair needs are, or will be, eligible for funding under these programs. There continue to be discussions about a possible three-way split of funding between the City of Toronto, the Province of Ontario, and the Government of Canada, however, each government has its own perspective on needs, priorities, and acceptable funding arrangements.

With respect to operating costs, the TTC needs clear direction from the City of Toronto, and through it, the senior levels of government, as to what should be the new "User's Fair Share" for transit in Toronto. In the past, this has been established based on a target revenue-to-cost ratio, and City Council passed a motion in 1999 directing the TTC to maintain an 80% revenue-to-cost ratio. The City has recently approved the TTC's 2003 Operating Budget on this basis.

A longer-term capital funding arrangement would need to address the TTC’s ongoing State-of-Good-Repair funding needs as a base, before investments are made in expansion of the transit system. Additional capital funding over this base will be required if the TTC is to pursue an effective ridership growth strategy. Additional capital funding should be contingent on a strong business case that demonstrates that such additional funding will result in a larger increase in ridership than other possible investments to increase transit ridership over the long term.

This principle should apply equally to all proposed transit investments in the Greater Toronto Area. The current situation with respect to capital funding for transit in the GTA is characterised by individual proponents of transit projects making competing claims regarding the benefit of their particular project. There are at least four independent proposals for transit projects in the GTA at the present time:

- York Region Rapid Transit Plan
- GO Inter-regional Bus Rapid Transit Plan

- GO Rail Expansion Plan
- Borealis "Smart Ride" Streetcar Proposal

The proposals contained in this report will represent a fifth set of proposals. All of these proposals need to be compared to one another in a consistent way to determine what is the best allocation of scarce transit funding in the GTA over the next ten and twenty years.

In the current situation, short-term actions to increase transit ridership at the TTC may not be effective in establishing ongoing patterns of increased ridership if longer-term funding issues are not resolved to allow higher ridership levels to be sustained. A strategic approach to increasing transit ridership requires a clear, consistent, long-term funding arrangement that realistically reflects ongoing operating costs, state-of-good-repair capital needs, and the funding requirements of expansion programs.

4.1 Funding Transit Expansion Through Development Charges

At its meeting of October 29, 30, and 31, 2002, after approving the new Official Plan, City Council also directed City staff to meet with TTC staff to:

"better define the infrastructure requirements arising from the new Official Plan with the intent of providing a financing tool to fund these improvements and this be reported with the introduction of a new Development Charges Bylaw"

The City of Toronto currently collects approximately $15 million in development charges annually, 12.6% of which, or $1.9 million per year, is specifically transit-growth related. These development charges were established based on a Development Charges Bylaw approved by the City in 1999 that included an assessment of TTC's growth-related capital requirements primarily focusing on funding for the Sheppard Subway. In the analysis process, based on various assumptions and definitional interpretations of what constitutes growth-related expenditures, the City's net contribution to the cost of constructing the Sheppard Subway was discounted from a total of $384-milion to $32 million of costs potentially recoverable through Development Charges. This amount was further reduced by Council's decision to only apply the residential portion of the development charges. The net result has been that the City is, and will be, collecting a total of $12.4 million or 3.2% of its share of the cost of the Sheppard Subway through development charges.

In the preparation of the original development charges bylaw, some account was taken of the need to purchase additional buses to respond to ridership growth, along with two other projects, notably the construction of an additional platform at Union Subway station and the planned construction of the Harbourfront LRT. These expenses were subject to a similar discounting, resulting in the current very-low total amounts being collected for transit expansion through development charges.

The current approach to development charges will not generate a significant amount of capital funding for the growth in transit services proposed in this report. There is an overall concern, however, that if development charges become too high, they will deter development and become counter-productive from a City economic development perspective. The City's residential development charges are currently only 20% to 30% of those applied in the regions surrounding Toronto, and the City does not currently apply development charges to non-residential development, so there may be some scope for the City to increase development charges and still maintain its competitiveness in attracting new development. There is, however, a limit to what is realistic from a development charges perspective.

Based on the Ridership Growth Strategy recommended in this report, development charges for transit could be increased by ten or twenty-fold, however, this would still represent a small proportion of the TTC's expected total capital needs over the coming 10 years. It is unlikely that development charges, even if applied in an aggressive way, will ever provide more than a small proportion of the TTC's capital needs for growth as outlined in this plan.

TTC staff are working with City staff to develop a revised Development Charges Bylaw. It is recommended that the Ridership Growth Strategy presented here be used as the basis for establishing the transit component of the new Development Charges Bylaw. It must be recognised, however, that this action alone will not provide enough funding to allow the capital projects outlined here to proceed. Substantial amounts of expansion funding will be required in addition to the contribution that is expected from development charges.

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5 PROPOSALS TO INCREASE RIDERSHIP

The preparation of the TTC’s ridership growth strategy began with a comprehensive inventory of possible actions that could be undertaken by the TTC to increase ridership. The alternatives were grouped roughly under the headings of service, fares, and innovative technologies. Best practices across North America were reviewed, along with current studies locally. The TTC’s research on passenger preferences were also assessed to determine if they would suggest possible mechanisms for increasing transit ridership that had not yet been identified. The result was a long list of possible options for consideration, and these options were initially screened for practicality in the Toronto context and then evaluated using a consistent evaluation framework as described in Section 6, below. This section of the report summarizes the proposals that have been included in the evaluation process.

5.1 Service Proposals

5.1.1 Increase Service on Existing Routes

When service was reduced on a system-wide basis during the 1990's, vehicles were removed from most routes in the system at most times of the day. This resulted in passengers having longer waiting times for vehicles, increased crowding on vehicles with less chance of getting a seat, and less-reliable service as the remaining services struggled to carry the increased passenger loads. In total, 232 buses and 60 streetcars were removed from morning peak service during this period and overall, service levels fell by 11.5% between 1990 and 1997 while the population in Toronto grew by approximately 10%.

A simple and direct way to improve service and attract more riders to the TTC in the next decade would be to reverse what was done in the 1990's: invest in improved service on existing routes by adding vehicles to service. This would benefit large numbers of existing passengers and attract new passengers to the system due to the overall improvement in quality of service.

For the evaluation of alternatives, this proposal was divided into four sub-groupings:

- a range of possible improvements in peak service on major routes;

- improved off-peak service – plan for all surface passengers to have a seat;
- the provision of 19 hours of service each day on all routes in the system; and,
- a minimum of 20-minute frequencies of service on all routes in the system.

The passenger and cost implications of implementing these improvements are summarised in Table 2. Many existing passengers would directly benefit from these service improvements, and it is expected that, when implemented, these changes would increase transit ridership on the system by 13 million passengers per year. Over time, this growth in ridership would increase as passengers become familiar with the new service levels and new residents of Toronto find transit more attractive than they otherwise would as a result of the improvements.

Table 2

Summary of Proposed Service Improvements

	Existing riders who benefit	New ridership	Operating Costs			Peak vehicles required	Capital cost
			Costs	Revenue	Subsidy		
	million	million	$million	$million	$million		$million
1. Improve peak period service on major routes:							
- 2% increase in peak service	17.40	0.44	$1.4	$0.7	$0.7	16	$9.4
- 6% increase in peak service	45.10	1.73	$4.5	$2.7	$1.9	53	$31.9
- 10% increase in peak service	74.30	2.84	$9.2	$4.4	$4.7	100	$60.0
2. Improve off-peak service on major routes: - standard based on seated load	44.73	2.28	$12.0	$3.5	$8.4		
3. Full service on all routes: - 6:00 a.m. to 1:00 a.m.	8.73	2.88	$20.1	$4.5	$15.6		
4. Maximum of 20-minute service on all routes	18.22	2.73	$19.1	$4.2	$14.8		

Note: All figures are annual

Implementing improved service at peak times would require the purchase of 100 additional buses. It would also involve the hiring and training of large numbers of new operators. As there is a two- to-three year lead time required for ordering new buses, the proposals regarding morning peak period operation could not be implemented until 2006. The proposals for improved service in the afternoon peak period and at off-peak times could be implemented over a one-year period.

5.1.2 Commuter Parking Expansion

There is a substantial market for people who would like to drive from their homes to a subway station and travel the rest of their trip on the TTC. The majority of passengers who use the TTC's current

commuter parking lots are residents travelling from outside of Toronto into the City to work or school. The TTC currently provides approximately 13,000 commuter parking spaces, all of which are located on subway lines, most of which are located close to a terminal station. The well-located lots are full to capacity each weekday, typically before 8:00am. Passengers who use these lots make approximately eight million trips on the TTC each year. It is likely that the market for commuter parking at subway stations is greater than the TTC and City can reasonably accommodate. Land close to subway stations is valuable from a redevelopment perspective and, as long as new development on these lands generates more trips for the TTC than the provision of commuter parking, it is in the best interest of the TTC to have these lands developed for such higher-density uses. Any commuter parking expansion must also be consistent with area secondary planning for the proposed site.

It is possible to construct parking structures, either above ground or below ground, to accommodate commuter parking and, in some cases, this can be done in conjunction with the redevelopment of the property for other purposes, with parking provided on a shared basis. However, such structures are expensive to construct and operate. The cost-benefit assessment indicates that commuter parking in structures is not a cost-effective way of increasing transit ridership except in shared-use situations, and that the focus for future commuter parking expansion should be on the development of surface lots.

There is a limited amount of land available near subway stations for commuter parking use. It has been assumed, for analysis purposes, that land could be found to increase the supply of commuter parking by 20% or 2600 spaces. When fully developed, the addition of 2600 commuter parking spaces would be expected to increase ridership on the TTC by approximately one million passengers annually. The construction and operation of these new lots has been assessed based on whether the lots are constructed on the surface or in structures.

Consideration was given to including options for commuter parking at locations served by surface routes at a distance from subway stations. An analysis of the market for commuter parking, and the profile of existing commuter parking lot users, indicated that it is unlikely that such lots would be successful at attracting a significant number of new passengers to transit who are not otherwise already using TTC surface routes.

5.1.3 Expanded Traffic Signal Priority Program

The TTC, in conjunction with the City’s Transportation Services Department, has an ongoing program of installing transit priority equipment at traffic signals on major transit routes in Toronto. The equipment involves a detector at each traffic signal which identifies transit vehicles in the traffic stream and reduces the time wasted waiting at red lights, either by extending the green time or reducing the red time experienced by the transit vehicle for that particular cycle.

The program has been very successful at increasing the speed of transit vehicles sufficiently to increase capacity and/or reduce the number of transit vehicles that must be assigned to major routes. The program requires an initial capital investment to equip a route, and could be expanded with additional funding. Currently, approximately 40 signals per year are equipped with transit priority equipment. The expansion proposal evaluated here involves expanding the program by 50% to allow for 60 signals per year to be equipped. This would result in an additional five routes being equipped over-and-above the ten which would normally be done in the ten-year horizon of this plan, and would be expected to increase TTC ridership by an additional 600,000 per year when fully implemented

5.1.4 Constructing Bus and Streetcar Rapid Transit

As noted in Section 2.2 above, a number of the major bus and streetcar routes in Toronto are reaching their practical limit with respect to what can be achieved operating in mixed traffic. As automobile congestion increases, it is expected that this problem will arise on more and more of the major surface routes in the TTC system. Many of these roadways have been designated as "Avenues" in the City's new Official Plan. They are expected to absorb a substantial amount of population and employment growth in Toronto in the next ten-to-twenty years and generate substantial numbers of new transit riders. The issue of accommodating future transit ridership within the City's transportation network is acknowledged in the Official Plan through the designation of many of the "Avenues" and a number of other roadways as "future higher-order transit corridors". Exhibits 4 and 5 show the designated growth areas and higher-order transit corridors identified in the City's Official Plan.

Significantly improving bus and streetcar service on these roadways would both assist the City in achieving its Official Plan vision and would attract substantial numbers of new riders to the TTC. The speed and reliability of bus and streetcar services can be dramatically improved through the establishment of physically separated transit-only lanes, typically in the centre of the roadway. These will allow buses and streetcars to provide transit service that is comparable to automobile travel times at peak times, with much-improved service reliability compared to mixed-traffic operation. As illustrated in Exhibit 6, the TTC has experience with the construction and operation of such rights-of-way for streetcars on Spadina Avenue and on Queens Quay, where there have been dramatic benefits to transit passengers with the introduction of "streetcar rapid transit". The TTC has promoted the implementation of similar treatments on other streetcar routes, notably King Street and, more recently, on St. Clair Avenue. The plans for transit service in the Waterfront development area envision the construction of such streetcar rights-of-way on a number of the major roadways in the area to provide a very high level of transit service.

The equivalent operation for buses is referred to as bus rapid transit (BRT) and is being used successfully in Richmond B.C., Boston, Los Angeles, and a number of other locations world-wide. This concept is illustrated in Exhibit 7. It has recently received a large amount of attention, particularly in the US, where the General Accounting Office and the Federal Transit Administration have published material suggesting that Bus Rapid Transit can provide a very attractive, cost-effective solution to enhancing urban transit systems in many situations.

In the Toronto context, it is envisioned that bus rapid transit could be constructed in the centre lanes of major arterial roads. Such changes require the conversion of existing travel lanes and/or parking lanes to transit use, or the widening of the roadway to accommodate displaced automobiles. Bus Rapid Transit can be implemented at modest cost, especially if it is done without road widening, and it provide an opportunity, from an urban design perspective, to develop an attractive pedestrian-friendly urban streetscape. The major impediment to implementing such rights-of-way is the effect they have on local automobile traffic circulation. Left turns on the street are restricted to major, signalised intersections, and often the loss of automobile capacity and/or on-street parking spaces is seen as a major deterrent to implementation.

It should be noted that the BRT concept, in the TTC context, is different from what has recently been proposed by GO Transit in the "GO BRT" project. The GO proposal envisions a long-distance, grade-separated bus facility in freeway and Hydro corridors that is closer to Ottawa's bus "Transitway" than, for example, the Richmond B.C. "B-Line" BRT which operates in the centre of arterial roads and is not grade-separated.

Exhibit 4 - City Official Plan - Urban Structure (not available in this on-line report format)

Exhibit 5 - City Official Plan - Higher Order Transit Corridors (not available in this on-line report

format)

Exhibit 6 - Spadina Streetcar Right-of-Way (not available in this on-line report format)

Exhibit 7 - Partially Exclusive Median Bus Lanes in Richmond, B.C. (not available in this on-line report format)

For the purposes of this analysis, every "Avenue" and "Higher Order Transit Corridor" identified in the City's Official Plan has been considered for a possible surface rapid transit operation. With the assistance of the City's Urban Development Services Department, the forecasts of future population and employment from the City's Official Plan work have been used to assess possible future transit ridership on each of these corridors. The corridors were grouped into those where the demand for transit is expected to exceed the practical capacity of transit vehicles in mixed traffic by 2011, and those where capacity issues alone do not require that such rights-of-way be constructed. Exhibit 8 shows the roads identified in the analysis which are expected to over-capacity in 2011.

It was recognised in the analysis that, for some road sections in Toronto, there is limited scope for surface rapid transit due to narrow road rights-of-way. Typically, in the older parts of Toronto, where road rights-of-way are 30m or less on major roads, and buildings are right at the edge of the right-of-way, there is no opportunity for road widening. Table 3 provides a list of the road sections that were identified in the ridership analysis as requiring surface rapid transit rights-of-way by 2011, but where the narrowness of the road right-of-way means that it will be very difficult to implement such facilities. For these locations, while it is very important to develop ways of giving priority to transit vehicles, financial constraints are not the limiting factor to moving forward with improved transit priorities. For this reason, these road sections have not been included in the proposals presented in this report. Improvements in transit services on these road sections will need to be addressed in some way, however, if the objectives of the Official Plan are to be realised.

Table 3

Roads Which Warrant Surface Rapid Transit But Are Too Narrow

- higher-order transit service warranted by 2011
- available right-of-way too narrow to allow road widening
- alternate priority measures must be implemented
King Street from Dufferin Street to Parliament Street
Queen Street from Dufferin Street to Carlaw Avenue
Carlton Street from Yonge Street to Parliament Street

Dufferin Street from King Street to Bloor Street
Eglinton Avenue from Weston Road to Leslie Street
Pape Avenue from Danforth Avenue to Millwood Road
Victoria Park Avenue from St. Clair Avenue to Danforth Road
Finch Avenue from Yonge Street to Warden Avenue
Steeles Avenue from Yonge Street to Don Mills Road

As illustrated in Exhibit 8, and listed in Table 4, a total of thirteen road sections were identified as being feasible for the construction of dedicated transit rights-of-way or similar treatments, and cost-effective in attracting new transit riders. Five of the road sections identified will require bus or streetcar rapid transit rights-of-way by 2011 based on transit capacity issues alone. A further eight were identified as significantly benefiting from such treatment. Appendix D provides a more-detailed description of the evaluation of the road sections assessed in the review.

Table 4

Proposed Surface Rapid Transit Corridors

	Over capacity in 2011 if not improved
First-Priority Corridors:	
Downsview Station to York University/Steeles Avenue	√
Yonge Street – Finch Station to Steeles Avenue	√
Dundas Street West – Kipling Station to Etobicoke Creek	√
Lawrence Avenue West – Lawrence West Station to Jane Street	√
St Clair Avenue – Yonge Street to Runnymede Avenue	
Eglinton Avenue East – Leslie Street to Kennedy Station	
Eglinton Avenue East – Kennedy Station to Guildwood GO Station	
Second-Priority Corridors:	

Sheppard Ave East – Don Mills Road to Scarborough Centre Station	
Don Mills Road/Overlea Boulevard – Millwood Road to Steeles Avenue	
Eglinton Avenue West – Renforth Drive to Weston Road	
Lawrence Avenue East - Victoria Park Avenue to Lawrence East Station	
Lawrence Avenue East - Lawrence East Station to Morningside Avenue	

In total, if all of these roadways were provided with bus or streetcar rapid transit, it is estimated that TTC ridership could increase by 22 million per year by 2011 based on the improved speeds offered by such rapid transit services. As all of these roadways are designated as 'Avenues" or "Higher Order Transit Corridors" serving growth nodes, there is a good longer-term potential for these facilities to attract additional riders.

5.1.5 Increase the Capacity of the Scarborough RT

The Scarborough RT, which was constructed in the early 1980's as a demonstration project by the Province of Ontario, is now operating at capacity at peak times. The service currently provided is the maximum possible with the TTC's current fleet of 28, 18-year-old Scarborough RT "MkI" vehicles. Current passenger loads result in crowding which is greater than normally-acceptable standards. There is no capacity available on the current line to accommodate ridership growth, although an analysis of the City's Official Plan forecasts indicate that a 20% growth in transit ridership is projected for the line by 2011. This growth would result in an increase in TTC ridership of approximately six million passengers per year if the capacity of the Scarborough RT can be increased to accommodate it.

Exhibit 8 - Proposed Surface Rapid Transit Corridors (not available in this on-line report format)

Unfortunately, the vehicle used on the line was a prototype that is no longer in production, and there no longer is a cost-effective way of obtaining new vehicles of this type. The TTC is in negotiations with the Vancouver, B.C. transit agency to purchase their used MkI vehicles, but this will be expensive and will only defer the need to make major decisions regarding the future of the line. The TTC's current MkI vehicles will reach the end of their practical lives by 2015, and the used Vancouver cars, if acquired, would have a similar practical life, so some action will be required before 2015 to accommodate existing and future transit users in the corridor.

A review of alternatives was undertaken in 2001 that looked at options including converting the line to the more-modern "MkII" technology (that used by Vancouver's SkyTrain and others), converting the line to bus or streetcar rapid transit, or extending the Danforth subway into Scarborough City Centre. All of the options would require significant capital expenditures. The study concluded that, while acquisition of used MkI cars from Vancouver would allow longer-term decisions to be deferred, the least-expensive way of increasing the capacity of the line over the longer-term would be to convert the line to MkII technology.

To achieve the objectives of the Official Plan in Scarborough, at a minimum, a substantial increase in the capacity of the Scarborough RT will be required over the next ten-to-fifteen years. For the purpose

of this report, it has been assumed that the improvement will involve the reconstruction of the line to accommodate MkII vehicles. The MkII vehicle is longer than the MkI vehicle and cannot operate on the existing turning radii on the current Scarborough RT. To accommodate the longer MkII car, both along the line and in the stations, would require the reconstruction of the tunnel section on the line, and of locations on the line and in the current yard which have turning radii that are too tight for the MkII vehicle. There would also be minor modifications required in the stations. These changes are estimated to cost in the order of $120-milion, and would require that the line be closed for a two-year period.

No additional vehicle purchases have been assumed as the allocation in the current budget for the purchase of MkI cars is adequate to provide the needed capacity on the line until 2011. This is the case regardless of whether the funds are spent on used Vancouver cars or on new MkII cars if the line is reconstructed.

A more-comprehensive analysis of future needs and technology options will be required before final decisions are made on the future of the Scarborough RT. However, it is likely that, if any changes are made to the plan assumed for this report, they would involve increased capital costs, overall. In this way, the capital cost assumed for this report represents a conservative estimate of future costs.

5.1.6 Continuous Program of Subway Expansion

Since the opening of the first subway in Toronto in 1954, the City has progressively added to the subway network through extensions of existing lines and the construction of new lines. An investment in subway construction represents a long-term commitment to city-building and to permanent high-quality transit service which influences city-wide development patterns. While there are high costs associated with subway construction, there are substantial longer-term paybacks related to increased development densities at city nodes and stations along the line. Toronto has been successful at creating strong mixed-use nodes along subway lines at many stations, and the extension of the subway network, with appropriate municipal policies and incentives, would build on these successes.

Subway construction in the current Toronto context will not result in short-term paybacks that justify the expenditures involved, but this type of investment in base infrastructure in the City is a highly-visible commitment on the part of governments to building viable, higher-density transit-oriented communities that thrive over the long term.

In August 2001, the Commission received the *Rapid Transit Expansion Study* (RTES) report that provided a comprehensive assessment of possible future rapid transit extensions in Toronto. Subsequent to the report, the Commission identified two priorities for future subway expansion, the extension of the Spadina subway from Downsview Station to York University and Steeles Avenue, and the extension of the Sheppard Subway from Don Mills Station to Scarborough City Centre. These extensions will cost approximately $1.1 billion and $1.7 billion, respectively, to construct in constant 2003 dollars.

The RTES report also proposed that an ongoing program of subway expansion be established that would have the advantages of:

- providing the City with the opportunity to create a stable longer-term financial plan which included subway construction, rather than having to arrange for special funding each time a subway construction project is approved;

- less risk being involved in undertaking a series of smaller projects rather than single large projects; and,

- operating benefits being realised more quickly, with smaller sections of a new subway line opening progressively.

From a construction scheduling perspective, there is a minimum scale of subway construction project that can be managed cost-effectively. A more-detailed assessment of possible project staging for subway construction is being prepared and will be presented to the Commission in the near future. For the purpose of this report, it is assumed that a practical ongoing construction program of sequential construction of the two projects would involve expenditures at an average rate of $175 million per year. These expenditures would, of course, fluctuate somewhat from year-to-year depending on the progress of specific work activities. The Sheppard Subway extension project would be completed in 10 years, with the first operating segment (Don Mills to Victoria Park) opening 7 years after project approval. The Spadina Subway extension project would be completed in 8 years, with the first operating segment (Downsview to Keele/Finch) opening 7 years after project approval.

5.2 Fare proposals

Fare incentives to increase ridership have been developed and examined in terms of two approaches: keep the existing flat fare system or revise the existing fare system. A summary of the alternatives is provided below, with a more-detailed description of the options is provided in Appendix E.

The TTC currently has a flat fare system. The flat fare strategy is characterized by the payment of a single fare for a trip, regardless of the length of the trip or time of day. This system is easily understood by riders and relatively simple in terms of administration, operational processes, and infrastructure requirements. However, flat fares also result in inequities - a rider who travels for one block pays the same amount as a rider who travels across the whole system. Other major transit properties in North America that use a flat fare include New York, Los Angeles, Chicago, Montreal, Ottawa, Calgary, and Edmonton.

As explained in Section 5.2.2, the TTC could implement changes to the existing flat fare system and consider a fare structure based on distance travelled or time of day. However, there are a number of practical issues and passenger-related concerns associated with these alternatives fare structures that do not make them attractive or feasible options, particularly when the primary objective is to increase transit ridership.

5.2.1 Options Which Maintain the Existing Fare System

This approach involves the development and assessment of alternatives within the context of continuing with the existing flat fare system. Alternatives were developed and assessed for three main groupings.

Overall Fare Reduction

Aside from the level of service provided, fares are the next most-important component in the decision to use public transit. With the reduction in transit subsidies during the 1990’s, TTC fares were increased by more than 50% above the rate of inflation during this period. This steep increase in fares contributed to a dramatic decline in annual ridership from a peak of 463 million in 1988 to 372 million in 1997. While ridership has improved to 411 million rides in 2002, overall ridership is still more than 11% below the 1988 peak. One option to reverse this trend is to apply a fare decrease to all fare categories. The fare reduction alternatives evaluated were:

- Pro-rata reduction of $0.10 to Adult ticket/token

- Pro-rata reduction of $0.20 to Adult ticket/token
- Pro-rata reduction of $0.30 to Adult ticket/token

These programs could be expected to increase TTC ridership by approximately four million passengers per year for each $0.10 change in fares.

Discounts /Changes to Existing Fare Media

Alternatives in this group have been developed and assessed for three categories. The first category is adjustments/discounts to the pricing of Metropasses. Research has found that riders who travel on passes have the highest trip rates as well as having the tendency to increase trip- making after switching to passes from another fare media. The increased use of passes should be encouraged as it provides numerous benefits to the TTC including an increased commitment to transit by riders and an increased level of convenience with which pass purchasers can ride the system. The increased use of passes can also reduce the level of fare media processing required within the system. Pass prices are established by applying an assumed monthly trip rate to the ticket/token fare in effect at the time for each fare category. Alternative pass-pricing strategies were developed using both absolute changes in dollar cost and adjustments in the assumed trip rate. The various alternative pricing strategies for pass users that were evaluated were:

Discount the Adult Metropass

- $2.50 discount
- $5.00 discount
- $10.00 discount

Trip rate reduced by 3 trips for Adult, Senior and Student Passes

These discounts could be expected to increase ridership by approximately two million passengers annually on the TTC for every $5.00 discount.

The second category is adjustments to concession fares. Seniors, students and children are less likely to be employed and more likely to have a higher degree of dependency on transit to meet their travel needs. It is appropriate to examine pricing strategies for this group in light of this, as well as the fact that, in 1997, the price for seniors and students relative to adult fares was increased from 50% of adult fares to 66%. The significant increase in fares for this group has been a major contributor to declining ridership over the last number of years. The following alternatives were examined for concession fares:

- Senior/Student fares held constant when other fares are increased by $0.10
- Senior/Student passes held constant
- Senior/Student fares reduced from 66% to 50% of adult fares
- Senior/Student pass trip rate reduced by 2 trips per month
- Senior/Student pass trip rate reduced by 4 trips per month

- Senior/Student pass trip rate reduced by 6 trips per month
- Child Fare Age Exemption Increased From 2 Years to 6 Years
- Extend Student Metropass Age to 21

The final category is focused on revising selected features/conditions of existing fare media to provide riders increased flexibility and value resulting in increased trip making and ridership. The transferable pass option eliminates the identification requirement for pass usage, and allows a Metropass to be used by more than one rider – the pass can be transferred between riders but can only be used by one rider at any one time.

A second alternative is to adjust the time of eligible usage for the Day Pass. At the present time, Day Pass usage is restricted to after 9:30 a.m. Monday to Friday. An option to increase the flexibility of this fare media and increase usage for riders who have high trip requirements on specific days is to eliminate the morning time restriction.

The VIP Green Pass, which provides discounted Metropasses based on the purchase of a minimum monthly volume, and which has been approved by the Commission for a one-year pilot, is targeted at two groups. The first is employees who regularly use transit to travel back and forth to work and who would benefit from a less expensive pass. The program also has the benefit of getting employers involved in looking at ways to encourage the use of transit by their employees. The second group is post-secondary students. By providing the opportunity to purchase a discounted pass, it may be possible to influence travel habits and patterns and "attract" riders on a longer-term basis.

As a final option in this category, the TTC has been asked to consider an alternative that would reduce the cost of an adult cash fare from $2.25 to $1.00 for a one-day period. This option was seen as a way to stimulate ridership on days with low system utilization (i.e. statutory holidays), as well as to thank riders for their patronage.

New Fare Media

These alternatives examine the introduction of new fare products for various market niches, within the context of the existing fare system.

The Special Period Weekly Pass, which has been approved by the Commission for two test periods, is directed at meeting the needs of those riders who do not receive adequate benefit from purchasing a monthly pass but whose travel patterns and demands better match using a pass on a weekly basis. The option examined in this report considers the impact if a Weekly Pass were implemented for all weeks of the year on a permanent basis.

Senior/Student Day Passes are an extension of the Adult Day Pass and provide additional flexibility and savings to this group of riders who may make a large number of trips on a specific day.

5.2.2 Changes to the Existing Fare System

An alternative approach to the options proposed above would be for the TTC to change its fare policy and implement a new basis for charging riders. The current fare system is a flat fare system which has a simple base fare for each rider category. Two alternatives to the TTC’s current system have been considered within the context of this report.

Fare-By-Distance

Under a fare-by-distance system, users pay in proportion to their trip length, which more closely reflects the cost to the transit authority of providing that trip than a flat fare system. A fare-by-distance system benefits the short-distance trip-maker, while those making longer trips would pay higher fares. With flat fares, those travelling short distances pay disproportionately more on a per-kilometre basis than longer-distance trip makers. Fare-by-distance reduces that inequity. Fare-by-distance systems range from zone fare structures to systems involving advanced fare collection technology in which travel distances are determined for each individual trip and fares are calculated accordingly. Zone fares are a subset of the fare-by-distance option whereby a transit property's service area is divided into two or more zones, with a different fare being charged in each zone.

Some of the key issues/considerations associated with fare-by-distance systems include:

- difficulty in defining zone boundaries. This is especially true in the case of the TTC where the mix of ridership, in terms of distance and mode used (surface and/or rapid transit), will result in a significant portion of ridership perceiving the proposed boundaries are unfair;

- it is very difficult to develop fare differentials between zones that result in revenue neutrality. Industry experience has shown that price elasticity for short trips is not high enough to increase the number of short distance trips to recover the revenue lost from reducing fares;

- zone-based fares do not eliminate the inequity issue for short-distance trips that cross zone boundaries; and

- the TTC does not currently have the complex fare equipment which is required to implement fare-by-distance without inconveniencing existing riders who enjoy a simple fare system with easy transfers between connecting routes. A zone-based fare system could be implemented using the existing fare collection system only by implementing manual checking at zone boundaries. However, this is very labour-intensive to administer and would result in significant delays in service. The only other alternative in terms of implementing this option would be to invest significant sums of money in capital equipment.

Peak/Off-Peak Fares (Time-Based)

All transportation modes are subject to time periods during the day where there are significant differences in the demand for service. One approach to recognise the difference required in service levels for varying demand is to implement differential pricing that matches fares with the level of service provided. Put in the simplest terms, periods of high demand have a higher fare, and periods of low demand have a lower fare.

At the present time only five transit properties in North America have peak-period pricing in effect - Washington, Minneapolis, Seattle, Cincinnati, and Vancouver. There is a trend in public transit to move away from time-based pricing, and major properties that have recently abandoned this pricing regime include Chicago, Cleveland, Ottawa, and Edmonton.

Key issues with time-based fare regimes include:

- Increased complaints from riders on complexity of fares (the simpler the better);

- Increased fare disputes at peak/off-peak transition times; and

- Determining the appropriate time-based fare differentials and measuring resultant changes in demand. Industry research has shown that significant revenue losses may need to be incurred by the transit agency to effect any shift in demand.

Although the alternatives for the fare systems outlined above provide theoretical benefits in terms of rider price equality and cost recovery, these options require fundamental and significant changes to current TTC fare collection methods, and operating procedures and processes. These options would also require a significant capital investment in terms of infrastructure, equipment, and technology. The examination, assessment, and development of recommendations to support the implementation of any of the alternative fare systems listed above is beyond the scope of this report.

5.3 Innovative Technologies

There are a number of innovative technologies currently under development in the transit industry that might contribute to increased transit ridership. Advanced technology systems are being designed to improve transit on-street operations and control, fare collection procedures, and communications with passengers. The TTC actively monitors progress in these fields to assess the applicability of these emerging technologies to our current systems and procedures. However, the TTC’s extremely-limited funding requires it to take a cautious approach to spending passengers' and taxpayers' money on projects and systems which are not fully proven technically, or for which the ridership benefits are not clear. The TTC's primary role is that of service provider; research and development related to new technologies is outside the scope of the TTC's core transit service business. This results in the TTC having other properties test and develop new transit technologies, and then adopting these technologies when they are proven to be reliable means of improving service and increasing ridership.

The TTC has had experience with advanced technology systems that were introduced before they were fully proven, or which never achieved the potential expected of them. The Scarborough RT, for example, was a prototype of a proposed advanced technology system in its day. The technology has evolved based on the lessons learned in Toronto to become a cost-effective technology in other cities, but the initial system installed in Toronto is now incompatible with the second-generation technology, and the TTC-owned prototype system has become costly and problematic for the TTC and the City. There are risks involved in the early adoption of unproven technologies, so the TTC now implements new technologies in a carefully-staged way and only after such systems have been proven successful elsewhere.

It has been suggested that there would be large benefits for the TTC to introduce an advanced fare system using "Smart Card" technology. In 2000, the TTC undertook a comprehensive review of the technology itself, and its applicability to the TTC's situation. Based on the actual operating experience of Paris, London, New York, Chicago, and Washington, the study concluded that there is not, at present, a business case for implementing such a system at the TTC. The initial investment costs would be substantial because of the need to install high-cost equipment in every TTC vehicle and station entrance. Project costs were estimated to be in the order of $140 million to $160 million. The experience at other properties with these fare systems has been mixed, with most properties finding that the ongoing operations and maintenance costs of the systems are higher than expected. There are no clear indications of increased ridership directly related to the implementation of the new fare technology, and there have not been any objective, systematic evaluations of the costs and benefits of these systems that the TTC is aware of. On this basis, TTC staff plan to monitor progress on this system, but not consider implementation until the technology has become standardised and there is solid evidence that this is

important to passengers and will increase ridership.

Another evolving area of innovative transit technology is automated vehicle locating (AVL) systems. The TTC's antiquated AVL system, known as CIS, was developed in the early 1980's to improve the reliability of on-street operations by providing two-way communications between each vehicle on the road and a control centre. There is much-improved technology available today to upgrade the TTC's system, and the TTC has an ongoing project to upgrade its system in a staged way. A more-aggressive approach to replacing and upgrading the system could be pursued, but there are significant risks associated with rapidly making wholesale changes to a functioning system. The assessment of TTC staff is that a staged approach to introducing this upgraded technology will result in better results overall. There is adequate funding in the TTC's current Capital Budget to accommodate this staged approach to the upgrading of the TTC's system.

Passenger information systems are being tested in other properties which can provide schedule information and, in some cases, real-time information to passengers about service. There are systems available for subways, for example, that provide an indication of when the next train is expected at any given station. There are also systems to provide automatic passenger announcements on subway cars. In the TTC context, the simplicity of the subway system (no merging lines and no express/local service), and the very frequent service provided, reduces the need and justification for such information on station platforms. The TTC currently has a project underway to examine the potential for installing a station announcement system onboard subway trains.

Overall, there is little solid evidence that significant increases in ridership can be achieved through the implementation of any of these advanced-technology systems. Given the limited return on investment associated with implementing innovative technology systems, the TTC will continue to take a cautious approach to making major investments without first having a high degree of confidence that the system will be successful and relevant to customer satisfaction. For this reason, there are no new proposals for pursuing innovative technologies as part of the TTC's current ridership growth strategy.

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6 EVALUATION OF OPTIONS AND ALTERNATIVE INVESTMENT STRATEGIES

6.1 Evaluation of Options

The proposals presented in the previous section were evaluated based primarily on their expected cost-effectiveness in attracting new riders to the TTC, but also with respect to a range of other criteria listed in Table 5.

Table 5

Evaluation Criteria for Assessing Ridership Growth Proposals

1. Ridership impact:
- number of new (linked) passengers trips annually
2. Additional annual operating subsidy required
3. Resulting change in system R/C ratio
4. Capital cost:
- annualised based of vehicle/facility life
- constant 2003 dollars
5. Overall cost-effectiveness:
- additional subsidy required per new rider attracted
6. Benefits to existing riders:
- number of annual existing rides who benefit
- measure of benefit
- reduced cost
- travel time savings
- improved reliability
- flexibility, satisfaction
7. Risk Factors:
- risk that the benefits won't be achieved
8. Ease of Implementation
9. Community acceptability

Operating costs, revenue impacts, and capital costs were considered for each proposal based on constant 2003 dollars, and capital costs were annualised based on an assumed facility/vehicle life in each case. Ridership forecasts were prepared based on existing ridership and industry-standard elasticities of demand for fare and service changes. For the service proposals that involve the construction of new rights-of-way to help accommodate future growth, a projection was made of future potential ridership as well, based on the 2011 forecasts of population and employment used in the preparation of the City's Official Plan. In the special case of the Scarborough RT, where current capacity constraints effectively cap the ability of the ridership to grow in the area, the new population forecast for 2011 in the catchment

area for the line was used as the basis for assessing new passengers and revenue for the project.

The costs, revenues, and ridership forecasts were combined into one financial measure that was used to compare all proposals: the increase in total annual subsidy required per new rider gained. Also used in the screening of options was an assessment of the risks associated with the proposal, particularly with respect to feasibility for short-term implementation and, in the case of the construction projects, community acceptability.

There are a number of proposals, both with respect to service improvements and with respect to fares, that can be implemented with an additional subsidy of $3.00 subsidy per new passenger-trip, or less. Many of the bus and streetcar rapid transit corridor projects fall into this category, as does the Scarborough RT project, but these projects will be more difficult to implement than the fare and service proposals. More significant ridership improvements can be achieved, but at a higher cost, through broader system-wide service improvements and fare discounts.

6.2 Alternative Investment Strategies

To illustrate the range of possible investment strategies that could be considered to significantly increase TTC ridership, the proposals have been categorised into three groups. The groups represent three possible levels of investment which provide a consistent overall strategy of fare and service improvements to systematically increase TTC ridership over the next ten years.

Group 1 Investment Package

Group 1 projects have an average subsidy per new passenger-trip of approximately $2.70, and are shown in Table 6. They would improve service during specific time periods, and for specific groups of passengers, where there is the greatest potential for increased ridership. The fare programs are primarily targeted at increasing off-peak ridership, which is cost-effective from a service perspective. The fare proposals can be implemented quickly if funding is available.

Table 6

Ridership Growth Strategy - Group 1 Investments

	New ridership	Annual operating costs			Capital costs		Total annual subsidy
		Costs	Revenue	Subsidy	Project total	Annual over 10 years	
	million	$million	$million	$million	$million	$million	$million
Service Proposals:							
1. Improve peak service	2.84	$9.2	$4.4	$4.7	$60.0	$6.0	$10.7
2. Improve off peak service on major routes	2.28	$12.0	$3.5	$8.4	$0.0	$0.0	$8.4
3. Upgrade to surface rapid transit on six "Avenues" in 10 years	12.33	$0.0	$0.0	$0.0	$300.0	$30.0	$30.0
4. Surface commuter parking expansion	0.99	$1.0	$2.2	-$1.1	$18.2	$1.8	$0.7
5. Expand Traffic Signal Priority program	0.60	$0.2	$0.9	-$0.8	$5.0	$0.5	-$0.3
Fare Proposals:							
1. Discount Metropass by $5.00	2.00	$0.1	-$9.0	$9.1	$0.0	$0.0	$9.1
2. Remove 9:30 a.m. restriction on Day Pass	0.40	$0.1	-$0.7	$0.8	$0.0	$0.0	$0.8

3. Senior/student Day Pass	0.60	$0.1	-$0.8	$0.9	$0.0	$0.0	$0.9
4. Reduce Senior/Student Metropass trip rate by six	0.60	$0.0	-$1.2	$1.2	$0.0	$0.0	$1.2
5. VIP Green Pass	1.40	$0.1	-$2.6	$2.7	$0.0	$0.0	$2.7
Total of Group 1 Investments	24.04	$22.7	-$3.2	$26.0	$383.2	$38.3	$64.3
Average Annual Subsidy per New Passenger	$2.67						

Group 1 also includes substantially-improved service on all major routes in the system during all time periods. The service improvements identified for time periods other than the morning peak period can be implemented over a 9- to 12-month period, but the morning peak period service changes require the purchase of additional vehicles, so will require a 2- to 3-year lead-time for implementation.

Of the eight bus and streetcar rapid transit projects identified as having a subsidy per new passenger-trip of less than $3.00, it is assumed in Group 1 that six of these proceed over the next decade at an average annual cost of approximately $25 million per year. Also included in the cost is funding for the purchase of 10 additional buses per year at a cost of $5 million per year to accommodate the expected increase in ridership resulting from the improved services once the facilities are in use. The Group 1 projects include three projects that are currently undergoing Environmental Assessment studies, but it is unlikely that construction can begin on these projects immediately, as there will be time required for approvals and design in each case. This could work well from a cash-flow perspective, however, as the expenditures for new vehicles would occur at the beginning of the time period.

The Group 1 package would provide some support for achieving the goals of the City's Official Plan. It would allow bus or streetcar rapid transit rights-of-way to be constructed in all of the corridors that were identified as having an absolute requirement for such rights-of-way by 2011, and would allow three additional corridors to be constructed. It also does not address the longer-term capacity issues related to the Scarborough RT, however, which will be a constraint on future development in the area by 2011.

The Group 1 package would require additional funding of approximately $26 million in operating subsidies, and $38 million in capital subsidies each year over the next decade. These new funding levels would still be substantially lower in real terms than both what was provided to the TTC in the 1980's and what is currently provided to most other major transit systems in North America today. The Group 1 package represents a low-risk, modest-cost option where there will be immediate benefits in terms of increased TTC ridership and longer-term benefits to both the City and senior levels of government in terms of achieving land use objectives and environmental goals.

Group 2 Investment Package

The Group 2 investment package represents a more-aggressive approach to attracting new passengers to the TTC through the restoration of services that were eliminated in the 1990's, and the introduction of overall fare reductions to make a small step towards offsetting the large increases, in real dollars, which were required in the 1990’s because of severe funding cuts. It also provides strong support for the City's Official Plan by providing for the construction of additional bus rapid transit rights-of-way on designated "Avenues" to help encourage greater transit-oriented development in these corridors. Implementing the Group 2 set of initiatives would demonstrate leadership in attracting new riders to transit in a significant way.

Group 2, as shown in Table 7, includes all of the proposals in the Group 1 package, plus a combination of additional fare discounts and service improvements. The Group 2 improvements have an average annual subsidy per new passenger-trip of approximately $3.50. It includes the introduction of a weekly pass and a fare reduction for all fare categories. Improvements would be made in the frequency and hours of service on most routes in the system, and the hours of operation on most routes in the system would be restored to the previous standard of 19-hour service, seven days per week. As with the Group 1 options, most of the fare and service level changes can be implemented quickly, but improvements to morning peak period service would require the purchase of additional vehicles which would require a 2- to 3-year lead time.

Table 7

Ridership Growth Strategy - Group 2 Investments

	New ridership	Annual operating costs			Capital costs		Total annual subsidy
		Costs	Revenue	Subsidy	Project total	Annually over 10 years	
	million	$million	$million	$million	$million	$million	$million
Service Proposals:							
1. Full service on all routes from 6:00 a.m. to 1:00 a.m.	2.88	$20.1	$4.5	$15.6	$0.0	$0.0	$15.6
2. Maximum of 20-minute service on all routes	2.73	$19.1	$4.2	$14.8	$0.0	$0.0	$14.8
3. Upgrade to surface rapid transit on three additional "Avenues"	3.49	$0.0	$0.0	$0.0	$150.0	$15.0	$15.0
4. Expand capacity of Scarborough RT (convert to Mark II assumed)	5.76	$2.6	$8.9	-$6.3	$120.0	$7.8	$1.5
Fare Proposals:							
1. Weekly Pass	2.40	$1.0	-$2.6	$3.6	$0.0	$0.0	$3.6
2. Overall Fare Reduction - minus $0.10 adult ticket/token pro-rated	3.60	$0.0	-$20.2	$20.2	$0.0	$0.0	$20.2
Total of Group 2 Investments	20.86	$42.8	-$5.2	$48.0	$270.0	$22.8	$70.8
Total of Group 1 and Group 2 Investments	44.90	$65.5	-$8.4	$73.9	$653.2	$61.1	$135.0
Average Annual Subsidy Per Passenger	$3.39						

Group 2 funding would allow three additional bus rapid transit rights-of-way to be constructed along "Avenues" that are identified as having major future growth potential. It would allow such rights-of-way to be established in advance of, or concurrent with, development in the corridors to help establish, at the outset, transit-oriented travel patterns from the new developments. Funding for the conversion of the

Scarborough RT to MkII operation has been included in Group 2, but it may be required as a Group 1 project if used MkI cars from Vancouver cannot be acquired.

The Group 2 package would require additional funding, in addition to Group 1 funding, of approximately $48 million in operating subsidies and $23 million in capital subsidies each year, over the next decade. In total, Group 1 and 2 improvements would require $74 million in additional operating subsidies and $61 million in additional capital subsidies each year. This would result in the operating revenue/cost ratio for the TTC to fall to approximately 72%. This would result in funding being almost restored to the funding levels provided in the 1980's.

Overall, this does not represent an unrealistic program of investing in transit service. It would still leave the TTC receiving less funding on a revenue/cost basis than virtually all other major cities in North America.

Group 3 Investment Package

The Group 3 investment package includes the entire Group 1 and Group 2 improvements, and adds a continuous program of subway construction at the historic average rate of expenditure for rapid transit construction - $175 million per year. Because of the long time-frames involved in subway design and construction, the benefits of this investment will not begin to be realised until seven-to-ten years after the program begins but, at that point, additional new riders would begin to be attracted to the services. Over time, the new revenues received would result in an improving operating revenue-cost ratio on the system because subways can carry large numbers of passengers more cost-effectively than surface operations.

A continuous subway construction program would provide confidence in the development community that permanent high-quality transit service will be in place to serve potential development sites along the corridors, and this would provide a strong incentive for the kind of higher-density development envisioned in the City’s Official Plan.

6.3 Summary

These three groups of investments provide a staged approach to a renewed commitment to transit in Toronto - a commitment which was made during the 1970's and 1980's but which was lost in the 1990's and presently. This type of substantial, long-term commitment to increased funding for transit will be required to achieve the objectives of the City’s Official Plan.

The Group 1 strategy addresses the required transit rights-of-way for achieving the 2011 population and employment targets, and provides a first step towards investing in a transit system that will be progressively more attractive to passengers as Toronto grows and congestion increases. It provides for improved service on major routes with more-frequent, reliable service. This is coupled with a modest program of discounting fares through reducing the cost of passes. This will encourage greater use of the system, particularly at off-peak times. It is, however, unlikely that these programs, alone, will be enough to reverse the trend of falling market share that has become the norm during the 1990's and early 2000’s.

To actively promote transit as a reasonable alternative to the automobile for many trips, transit must compete effectively with the automobile based on travel speed, comfort, and convenience, as described in Section 2.0. To do this effectively, and for the City to demonstrate a real commitment to achieving the Official Plan, the investments in Group 2 are required. They allow for the construction of surface rapid transit rights-of-way on additional key corridors in advance of, or in conjunction with, redevelopment as

it proceeds, to help establish transit-based lifestyles at an early stage in the redevelopment. It includes system-wide service enhancements that will reduce walking and waiting times for transit, and provide the type of high-quality transit service in the off-peak that is needed to encourage greater numbers of people to adopt a truly transit-oriented lifestyle.

A continuous program of subway construction as presented in Group 3 enhances the overall program in a long-term way by providing a strong incentive to developers served by the new rights-of-way, to redevelop their lands to higher densities. The permanence of subway construction provides a dramatic statement of the commitment the City is making to encourage higher-density transit-oriented development in the areas served by the new rights-of-way. While the construction of new subway facilities is not required from a capacity perspective, to achieve the population and employment forecast for Toronto by 2021, the construction of subways is an important component to achieving the longer-term vision of the plan.

6.4 Implementation Staging and Short-Term Budget Implications

All three of the investment packages are required to achieve the vision of the Official Plan for a strongly transit-oriented intensification of Toronto over time. There are practical limits, however, to the rate at which these proposals can be implemented. The packages need to be staged to achieve the objectives of the Official Plan in a progressive way, while minimising the risks associated with the program. In addition, there are synergies between the programs which allow them to reinforce each other, and these synergies need to be considered in an implementation plan.

Service improvements should be introduced first, with fare discounts implemented to reinforce the benefits of improved service. Introducing fare discounts without addressing service issues will have little chance of success at attracting significant numbers of new riders. Conversely, implementing fare discounts in conjunction with service increases, as part of a marketing strategy to gain attention for, and attract passengers to a new service initiative, has the greatest potential for success.

Service improvements at off-peak times can be implemented over a six-to twelve-month period, which allows time to hire and train operators, but service improvements during the morning peak will require additional vehicles. There are no buses available in the current fleet to accommodate the proposed increase in service in the morning peak-period, so additional buses must be purchased which involves a two- to three-year lead time. With changes in current maintenance practices, additional streetcars from the existing fleet could be made available at peak times to accommodate the proposed service increases. These changes would, however, take one-to-two years to implement.

The construction of bus or streetcar rapid transit rights-of-way - the projects that show the greatest benefits of all of the programs assessed here - involve two- to three-year timeframes of approval, design, and construction. The timing of implementation is highly dependent on the level of community and political support provided for each individual initiative. Since the primary objective of subway construction is to establish patterns of high-density of development in Toronto, the timing of subway construction should be tied to the rate at which the City needs additional high-density, subway-oriented development sites. At this point in time, there is a substantial inventory of such sites available in Toronto, but more assessment is required to determine what is an appropriate rate for subway construction related to the rate at which the City can absorb such developments.

Based on these considerations, it is proposed that the program be implemented in a staged way over the next five-to-ten years as follows:

1. Introduce the afternoon peak period bus service improvements in Group 1 in 2004 because buses are available to implement these services immediately. Include the purchase of additional buses for peak-period operation, and advance the construction of a new bus garage into the 2004 Capital budget to accommodate the delivery of additional buses in early 2006. This will allow the morning peak period bus service improvements identified in Group 1 to be implemented in 2006.

2. Increase streetcar fleet availability in 2004 and 2005 to allow the introduction of improved peak-period streetcar service.

3. Stage the implementation of the off-peak service improvements over five years beginning in 2004. This will allow most of the Group 1 off-peak service improvements to be in place by the end of 2004, and the complete package in place by 2008.

4. Budget for additional commuter parking expansion in surface lots beginning in 2004 and construct new commuter parking facilities where cost-effective.

5. Budget for an acceleration and expansion of the traffic signal priority program beginning in the 2004 budget.

6. Include funding for design and approval activities for the construction of bus and streetcar rapid transit rights-of-way in the 2004 budget, the initiation of some construction in 2005, and include funding for the full program in 2006 and beyond. This is in recognition of the practical timing constraints of gaining approvals for these projects. This also has the benefit of smoothing the investment funding required, as bus purchases are recommended for 2004/2005 as described above.

7. Proceed with the implementation of the VIP Green Pass fare discount program and reduce the cost of Senior/Student Metropasses in 2004.

8. Introduce a discount to the Metropass and a senior/student day pass in 2005/2006, in conjunction with the ongoing implementation of the off-peak service improvements described above.

9. Undertake the construction necessary to convert the Scarborough RT to MkII operation in the 2007 to 2009 period noting that, if the current negotiations with Vancouver for used MkI cars are successful, in which case this expenditure can be deferred until 2013-2014.

10. Implement a system-wide fare reduction in 2006/2007, and a weekly pass in conjunction with the introduction of improved peak-period service.

11. Initiate a joint study with the City on the rate of construction of subway-oriented development in Toronto to establish when to begin a subway construction program.

Table 8 outlines the funding implications of this implementation approach on the TTC 2004 to 2008 budgets. The budget changes are shown in constant 2003 dollars, and are in addition to the forecast expenditures outlined in the TTC’s current Capital Budget.

Table 8

Ridership Growth Strategy - Outline of Expected Budget Implications

	Change in operating budget			Incr
	Costs	Revenue	Subsidy	capit
	$million	$million	$million	$mi
2004 Plan				
Continuing Programs:				
Improve off peak service on major routes	$12.0	$3.5	$8.4	$(
Improved afternoon peak period service on major routes	$3.6	$0.0	$3.6	$(
Reduce Senior/Student Metropass trip rate by 6	$0.0	-$1.2	$1.2	$(
VIP Green Pass	$0.1	-$2.6	$2.7	$(
Total of additional continuing programs	$15.7	-$0.3	$15.9	$(
Single-year Costs	$0.0	$0.0	$0.0	$(
Expand Traffic Signal Priority program	$0.0	$0.0	$0.0	$(
Surface commuter parking expansion	$0.0	$0.0	$0.0	$
Bus purchases for improved peak service	$0.0	$0.0	$0.0	$3
Upgrade to surface rapid transit on the "Avenues"	$0.0	$0.0	$0.0	$
EA for expanding the capacity of the Scarborough RT[1]	$0.0	$0.0	$0.0	$
Additional funding for growth strategy in 2004	**$15.7**	**-$0.3**	**$15.9**	**$3**
2005 Plan				
Additional Continuing Programs:				
Expand Traffic Signal Priority program	$0.2	$0.9	-$0.8	$(
Surface commuter parking expansion	$1.0	$2.2	-$1.1	$
Off peak service improvements in Group 2	$9.8	$2.2	$7.6	$(
Discount Metropass by $5.00	$0.1	-$9.0	$9.1	$(
Senior/student Day Pass	$0.1	-$0.8	$0.9	$(
Remove 9:30 a.m. restriction on Day Pass	$0.1	-$0.7	$0.8	$(
Expanding the capacity of the Scarborough RT[1]	$0.0	$0.0	$0.0	$1
Total of additional continuing programs	$11.3	-$5.2	$16.5	$1
Single Year Costs				
Bus purchases for improved peak service	$0.0	$0.0	$0.0	$3
Upgrade to surface rapid transit on the "Avenues"	$0.0	$0.0	$0.0	$2
Additional funding for growth strategy in 2005	**$27.0**	**-$5.5**	**$32.4**	**$6**

[1] The timing for this project, and further work on Scarborough RT expansion, will be dependent on the results of the current negotiations with Vancouver regarding u
Reconstruction costs are included here as $12 million per year over 10 years. Actual expenditures are expected to be in the order of $40 million per year over 3 years
year period.

Note: All costs are in constant 2003 dollars

Table 8

Ridership Growth Strategy - Outline of Expected Budget Implications (cont'd)

	Change in operating budget			Increased capital cost	
	Costs	Revenue	Subsidy		
	$million	$million	$million		$mi
2006 Plan					
Additional Continuing Programs:					
Improve peak service	$5.5	$4.4	$1.1		$(
Off peak service improvements in Group 2	$9.8	$2.2	$7.6		$(
Upgrade to surface rapid transit on the "Avenues"	$0.0	$0.0	$0.0		$4
Fare reduction - minus $0.10 adult ticket/token pro-rated	$0.0	-$20.2	$20.2		$(
Introduce Weekly Pass	$1.0	-$2.6	$3.6		$(
Additional funding for growth strategy in 2006	**$43.3**	**-$21.7**	**$65.0**		**$5**
2007 Plan					
Additional Continuing Programs:					
Off peak service improvements in Group 2	$9.8	$2.2	$7.6		$(
Additional funding for growth strategy in 2007	**$53.1**	**-$19.5**	**$72.6**		**$5**
2008 Plan					
Additional Continuing Programs:					
Off peak service improvements in Group 2	$9.8	$2.2	$7.6		$(
Additional funding for growth strategy in 2008 and beyond	**$62.9**	**-$17.3**	**$80.2**		**$5**
Note: All costs are in constant 2003 dollars					

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7 RECOMMENDATIONS

The strategy for increasing ridership described in this report requires a range of actions on the part of the TTC, the City of Toronto, and the senior levels of government. All of these actions, separately, are important components of achieving the City's vision of a transit-oriented community, but to truly achieve the vision, a comprehensive approach with the support of all parties is required. No one agency, organisation, or government acting independently, can be as effective as a comprehensive longer-term co-ordinated program which is supported by all parties.

In fact, one of the characteristics of the past decade has been a pattern of independent, uncoordinated actions resulting in continuously-changing funding programs and disjointed short-term initiatives. This approach has contributed to the recent failure of the TTC to maintain and increase its market share in its ongoing competition with the automobile.

It is important for the TTC, itself, to demonstrate a commitment to the program and this must be more than a senior management initiative. Throughout the organisation, both union and management must:

1. Continue to demonstrate that funding provided to the TTC is used cost-effectively to directly benefit passengers.

2. Design and operate service in a customer-focused way and continue to seek out ways of improving service and operations as described in section 2.4.

3. Make sure that, when facilities and improvements are made to improve the speed and reliability of service, in particular, that those benefits are achieved in actual on-street operations.

4. Monitor the evolution of innovative technologies closely and recommend implementation when the costs and risks associated with these technologies are manageable in the TTC’s context.

The City of Toronto must:

1. Establish a program to implement the pro-transit policies, regulations and principles in support of the new Official Plan and described in Section 3.0 of this report, pertaining to parking restrictions, left-turn prohibitions and a truly effective approach to enforcing such regulations on the major surface transit routes in Toronto.

2. Follow through on the transit focus of the Official Plan vision by incorporating effective transit-oriented policies and regulations in individual district and "Avenue" plans including policies related to density of development, urban design and pedestrian orientation, and restrictions on automobile use through limiting parking supply and automobile road capacity.

3. Support the implementation of the proposed surface RT projects that are required to achieve the City’s Official Plan.

4. Incorporate transit priority features into the design of all road reconstruction projects on major transit routes, including the incorporation of right-turn/queue jump lanes.

5. Provide its share of the funding needed to undertake the Ridership Growth Strategy described in this report.

The Province of Ontario and the Government of Canada must make long-term commitments to transit-oriented change in Toronto by:

1. Establishing and maintaining a stable funding arrangement and providing adequate funds for the TTC to undertake the Ridership Growth Strategy described in this report.

2. Providing leadership in planning and environmental policies and regulations by working together to provide strong support of, and incentives for transit travel in urban areas.

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Appendix A - Summary of directions and requests received from the Commission and City Council

Toronto Transit Commission

Meeting of April 10, 2002:

Staff are requested to begin development, in conjunction with Commissioners, of a report on a ridership growth strategy

Meeting of May 15, 2002:

Staff are requested to submit a separate analysis report on the feasibility of implementing a transferability feature to the regular TTC monthly Metropass.

Staff are requested to report on a cost and travel time comparison from locations outside the City of Toronto boundary using: local transit and individual fares; GTA pass and local transit; driving to TTC commuter parking lots and buying a Metropass; and drive and park downtown.

Meeting of November 20, 2002:

Mr. O'Donohue's "Toronto Area Rapid Transit" proposal be referred to staff for consideration and comment within the context of the Ridership Growth Strategy.

City of Toronto Council

Meeting of October 29, 30, and 31:

The Chief General Manger of the TTC be requested to investigate ways to implement streetcar service on Don Mills Road without eliminating any current traffic lanes as a way of fulfilling the intent of the new Official Plan to designate Don Mills Road as a major transit route, and further, that partnerships with York Region be explored in this regard.

Meeting of February 26, 2003:

The City of Toronto Council request the Province of Ontario to restore its pre-1998 traditional transit funding levels.

The TTC, in their long-term planning, be requested to give consideration to the public transportation needs in the north-west quadrant of the City and the area of the City bounded by Victoria Park on the west to the eastern boundary of the City and Steeles Avenue on the north to the 401.

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Appendix B - TTC Market Research

The TTC undertakes an ongoing market research program to gather data on key rider characteristics/demographics and to determine the primary factors used by riders in making the decision to use public transit. The TTC's market research program is comprised of a number of elements as described below.

The Market Tracking Study has been conducted continuously since 1998, and gathers data from approximately 750 Toronto and 350 GTA residents three times a year. Since 1998 over 14,000 surveys have been completed. Data on the following topics are regularly gathered and analyzed:

- frequency of use;
- split of captive/choice and heavy/light users;
- service ratings;
- security; and
- use of customer information sources.

The Focus Group Program is directed at gathering data from the various segments of riders on specific initiatives and proposed programs and services. Over 35 focus groups have been conducted since 1998 with approximately 350 participants.

The Metropass Ridership Diary Study collects trip making and other core data from 30 Metropass users weekly. The data is used to determine trip-making rates for pass users as well as to determine the elements of TTC that users consider critical.

In addition, a number of "targeted" research projects have been conducted to examine key ridership factors and issues. Some of the studies include:

- Factors influencing "905" residents in their decision to use the TTC or the automobile for cross-boundary trips into Toronto;
- The TTC Versus The Car Competitive analysis;
- Metropass Discount Plan Joiner/Leaver Survey;
- Metropass Pricing;
- Weekday/Weekend Commuter Parking Lot Survey;
- Fare Media Usage; and
- Facility Satisfaction and Rating Survey.

In terms of retaining and/or attracting riders to transit, TTC and industry research has determined that there are two elements that are the primary determinants in the decision to use transit. Other elements may enhance the rider's experience or improve passenger service but do not enter in the decision to use

or not use transit. The prime determinants are:

- service levels - frequency and reliability; and
- fares - cost and choice/flexibility.

The research has shown that service is the primary factor, and fares are secondary.

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Appendix C - Automobile Versus Transit Cost

At the May 15, 2002 Commission Meeting, the Commission passed a motion requesting that staff prepare a report comparing the cost and travel times of private vehicles and transit for cross boundary travel.

Table C1 provides a summary of the key assumptions underlying the analysis. Table C2 details the analysis of the cost and travel times between downtown Toronto and the city centres of Brampton, Mississauga, Richmond Hill and Pickering. Travel times and corresponding costs were developed for the following commuting options: Private vehicle; GO Transit; Private vehicle/TTC and GO Transit/Local transit/TTC.

The general conclusions that can be drawn from this analysis include:

- Private vehicles in most cases provide a travel time advantage over transit options. However, accompanying this time savings is a significant increase in travel costs. The time advantage for a private vehicle is based on "normal" travel conditions and does not factor in delays resulting from accidents, weather or construction. These events reduce any time savings by a considerable degree.
- The monthly cost of using transit options is vastly below that of a private vehicle especially when the capital costs of a vehicle are included;
- The transit option that provides reasonably close travel times to the automobile is GO Transit for routes using trains operating on express service;
- Transit travel times are adversely impacted by the number of transfers and modal switches.

Table C1 **KEY ASSUMPTIONS** **CAR/TRANSIT MONTHLY COST COMPARISON**
Vehicle variable operating costs: $0.1225/km

includes fuel, maintenance and tires only
source: Canadian Automobile Association Driving Costs, 2002 Edition.
Vehicle total costs: $0.40/km
includes variable operating costs plus depreciation/capital and insurance
based on annual mileage of 18,000 km
source: Canadian Automobile Association Driving Costs, 2002 Edition.
Monthly distance travelled based on 21 workdays per month, and travel from "city centre" to "city centre".
Private vehicle travel times are based on A.M. peak. Source is EMME/2.
TTC travel times based on published schedules.
GO Transit travel times based on published schedules.
Union Station parking based on monthly cost at BCE Place ($351).
Average travel time from home to GO Station is 10 minutes.
Time required at each transfer point is 5 minutes (car to transit, transit to transit).

Table C2

COMPARISON OF MONTHLY TRAVEL TIMES AND COST FOR DIFFERENT TRAVEL MODES SELECTED GTA CITIES TO DOWNTON TORONTO

City	**Option 1** **Private Vehicle**		**Option 2** **GO Transit**		**Option 3** **Private Vehicle/TTC**		**Option 4** **GO/Local/TTC**	
	Total Cost[a]	**Travel Time**	**Total Cost**	**Travel Time**	**Total Cost**	**Travel Time**	**Total Cost**	**Travel Time**
Newmarket	$619 to $1,263	63 min	$190	98 min	$285 to $719	70 min	$249	103 min
Richmond Hill	$502 to $845	41 min	$131	53 min	$157 to $207	48 min	$161 to $190	78 min
Brampton	$536 to $594	43 min	$160	48 min	$240 to $303	65 min	$161	84 min
Mississauga								
- Square One	$492 to $812	42 min	$119	55 min	$158 to $303	56 min	$161	78 min
Mississauga								
- Clarkson	$509 to $867	48 min	$141	34 min	N/A	N/A	N/A	N/A

Pickering	$556 to $1,021	58 min	$150	40 min	$235 to $441	72	$244	87 min

a) lower estimate includes vehicle operating costs only (i.e. fuel, maintenance, tires and parking) upper estimate includes vehicle operating and capital costs (i.e. fuel, maintenance, tires, parking, depreciation/capital and insurance)

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Appendix D - Evaluation and Screening of Surface Rapid Transit Proposals

The purpose of the evaluation and screening process for possible surface rapid transit proposals was to provide a reasonable basis for comparison with other investment options at a strategic level. The simple process used here does not provide definitive results about specific priorities among the options reviewed. This will be required, on a location-by-location basis, as part of the project approval process.

In the evaluation of proposals, every "Avenue" and "Higher-order Transit Corridor" identified in the City's Official Plan was considered, along with roadways forecast to have high transit use in 2011. With the assistance of the City's Urban Development Services Department, the forecasts of future population and employment used to develop the City's Official Plan have been used to assess possible future transit ridership on each of these corridors.

The physical constraints associated with widening the candidate roads were reviewed, and the roadways where further widening is not practical were screened out of further evaluations. This review was also used to establish order-of-magnitude costs for the possible widenings to accommodate a surface rapid transit corridor based on simple unit costs. This costing exercise, while appropriate for the screening process used here, will need to be refined substantially on a corridor-by-corridor basis before any final decisions are made on possible priorities.

The number of new passengers attributable to each of these projects was estimated based on the travel time savings which would be achieved by passengers attracted to the faster service. An elasticity approach was used to estimate this number of new passengers. In addition, new ridership from population and employment growth in Toronto between 2001 and 2011 was also attributed to each proposal. For the road sections expected to be over-capacity by 2021, all of the forecast additional transit ridership for the road was attributed to the construction project. For the remaining proposals, half of the forecast future growth was attributed to the project in recognition of the requirement of enhanced transit to achieve the forecasted population and employment growth envisioned in the Official Plan.

The costs and the forecast of new ridership attributable to each project were then used to estimate the subsidy required per new passenger attracted for each project. This was used to group the projects into three priorities for investment in surface rapid transit rights-of-way. This measure was also used to compare these investments to other possible service and fare investments to increase transit ridership. Table D1 summarises the results of the evaluation of surface rapid transit proposals.

Table D1

Summary Evaluation of Surface Rapid Transit Projects

	Priority Group	Current annual ridership	At capacity in 2011	Capital costs		Subsidy per new rider	Annual new ridership		
				Project total	Annual		Pop. and diverted	Attracted due to speed	Total
		million		$million	$million	$	million	million	million
Category 1 **Projects with current status**									
Downsview Stn to York University/Steeles Av	1	10.8	Yes	$50.0	$3.3	$2.27	1.0	0.5	1.5
Yonge St - Finch Stn to Steeles	1	10.0	Yes	$10.0	$0.7	$0.30	1.7	0.5	2.2
Sheppard Av East - Don Mills Stn to Scarborough Centre Stn	2	7.5	Yes	$113.8	$7.4	$4.76	1.2	0.4	1.6
Dundas St West - Kipling Stn to Etobicoke Creek	1	5.6	Yes	$25.9	$1.7	$1.13	1.2	0.3	1.5
St Clair Av streetcar - Yonge St to Runnymede	1	10.9	No	$25.0	$1.6	$0.75	1.5	0.7	2.2
Category 2 **Other corridors in Official Plan**									
Don Mills Rd/Overlea Blvd - Millwood Av to Sheppard Av	2	4.9	No	$96.0	$6.2	$5.32	0.8	0.4	1.2
Don Mills Rd - Sheppard Av to Steeles Av	2	8.1	No	$53.8	$3.5	$6.10	0.4	0.2	0.6
Eglinton Av West - Renforth Dr to Weston Rd	2	4.4	No	$154.6	$10.0	$9.61	0.8	0.2	1.0
Eglinton Av East - Leslie St to Kennedy Stn	1	6.9	No	$42.9	$2.8	$2.66	0.7	0.3	1.0
Eglinton Av East - Kennedy Stn to Guildwood GO Stn	1	13.8	No	$42.9	$2.8	$1.33	1.4	0.7	2.1
Markham Rd - Ellesmere Rd to Steeles Av	3	2.5	No	-	-	-	-	-	
Category 3 **Other "Avenues" and corridors**									
Kingston Rd streetcar - Victoria Park Av to Eglinton Av	3	5.1	No	-	-	-	-	-	-
Lake Shore streetcar - Long Branch to Park Lawn Rd	3	4.0	No	-	-	-	-	-	-
Ellesmere Rd - McCowan Rd to Victoria Park Av	3	3.5	No	-	-	-	-	-	-
Lawrence Av East - Victoria Park Av to Lawrence East Stn	2	2.3	No	$39.4	$2.6	$2.82	0.8	0.2	1.0
Lawrence Av East - Lawrence West Stn to Morningside Av	2	3.6	No	$62.4	$4.1	$2.84	1.2	0.2	1.4
Wilson Av - Yonge St to Hwy 400	3	8.3	No	$180.0	$11.7	$8.08	1.1	0.4	1.5
Dufferin St - Lawrence Av to Wilson Av	3	2.1	No	-	-	-	-	-	-
Queensway - Park Lawn Rd to Kipling Av	3	0.5	No	-	-	-	-	-	-
McCowan Rd - Scarborough Centre Stn to Finch Av	1	8.1	Yes	$58.6	$3.8	$1.64	1.9	0.4	2.3
Lawrence Av West - Lawrence West Stn to Jane St	1	6.0	Yes	$37.4	$2.4	$1.39	1.5	0.3	1.8
Total Priority 1	8	77.0		$292.8	$19.0	$1.32	11.65	3.97	15.62

Total Priority 2	6	25.7		$519.8	$33.8	$5.06	4.34	1.16	5.51

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Appendix E - Fare Proposals To Increase Ridership

Part I - Option Framework And Description

Overview

In terms of promoting ridership growth through fares, the structure of fares is only one element in the overall fare system. An overview of fare systems and the key elements and considerations is provided below as a starting point in the development of potential fare options.

The fare system is a key interface between a transit agency and its passengers. It directly affects the way in which passengers experience and perceive the transit agency and its services. In general, transit passengers expect a fare system that:

- Is fast, easy to understand and use, with reliable fare transactions;
- Offers payment options that suit the riders particular trip making requirements (frequent, infrequent, weekly, daily, cross-boundary, short-distance etc);
- Allows easy transfers between modes and different transit providers; and
- Provides easy access to fare media.

In order to meet the needs of both the passenger and the transit operator, the fare system should be:

- Simple - passenger-friendly, easily understood and used by riders and employees;
- Quick - allow fast transactions (turnstiles/boardings, purchases, transfers);
- Flexible - be adaptable to changing fare strategies, loyalty programs and integration with other systems;
- Economical - provide for cost-effective administration, maintenance and capital investment;
- Reliable - meet high standards for reliability and be easy to maintain;
- Secure - minimize the potential for fraud and fare evasion, provide a secure environment for revenue and meet privacy requirements; and
- Information-rich - provide timely and complete data for marketing, finance, service planning and workforce productivity.

Not all of these objectives are mutually compatible, and in order to achieve one objective, another one

may have to be compromised. For example, the objective of increasing cross-boundary ridership in a region may require changes to the fare collection system which would be incompatible with an objective of increasing fare revenues or reducing operating costs.

- Fare systems consist of various components:
- Fare structure or policy - flat fare, fare-by-distance, fare-by-time-of-day, transfers between modes, concession fares;
- Fare media - tickets, tokens, passes, cash, magnetic or smart cards;
- Fare collection procedures- pay-on-entry, pay-on-exit, proof-of-payment, honour fare; and,
- Fare collection equipment/technology - fareboxes, electronic registering fareboxes and turnstiles, equipment to read magnetic stripes, smart cards or proximity cards.

While these components are often discussed in isolation, each component in fact is highly interrelated, and any change to one component can require changes to some or all of the remaining components. In addition, a fare system must be supported by technology and infrastructure for ticketing and fare media distribution, fare and revenue processing and data/information collection and distribution.

The TTC currently uses a flat fare system. The advantages of this fare system include:

- The system is simple and easily understood by users;
- It is relatively simple to administer; and
- It minimizes disputes with riders in relation to peak/off-peak transition times and zone boundaries.

The options developed and assessed for the Ridership Growth Strategy assume the continuation of the flat fare system.

Options Overview

Provided in the following sections is a description of the various fare options that have been assessed as part of the Ridership Growth Strategy. The main categories under which the options have been grouped are:

- Overall Fare Reduction;
- Discounts/Revisions to Existing Fares; and
- New Fare Products.

Overall Fare Reduction

As detailed previously, one of the prime factors in making the decision to use public transit is the level of fares. The negative ridership impact of TTC fare increases over the last ten years has been well documented. One approach to reverse this trend would be to implement a fare decrease which would be applied to all fare categories. The impact of this alternative has been examined for three scenarios:

- Pro-rata reduction to $1.80 Adult ticket/token (from $1.90);
- Pro-rata reduction to $1.70 Adult ticket/token (from $1.90); and
- Pro-rata reduction to $1.60 Adult ticket/token (from $1.90).

Discounts/Changes to Existing Fare Media

Transferable Pass

Currently, all TTC passes (except the Weekly GTA Pass) are non-transferrable and there is a requirement for users to provide photo ID for verification purposes if requested by TTC staff. One approach to providing additional value to pass holders is to remove the photo ID requirement and make monthly passes transferable. The impact of this option has been estimated based on the following assumptions:

- The Transferable Pass can be transferred between riders but can only be used by one rider at a time;
- The Transferable Pass would replace the existing Metropass rather than being a new type of fare media;
- The Transferable Pass is not priced at a premium; and
- The transfer/lend rate is estimated at between 10% and 20%, and additional trips on "borrowed" passes are in the range of 3 to 5 trips per month.

Discounted Metropass

The Adult Metropass is currently priced at $98.75 monthly. Any ticket/token fare increase of more than $0.05 would increase the price of the monthly pass to over $100 - this price point is critical in terms of rider psychology. One alternative is to "freeze" the price of the Adult Metropass at $99 for a defined period of time at the next fare increase if required. The assessment of this option is based on the following assumptions:

- The revenue/ridership impact is assessed at three price points:
    - Adult ticket/token at $1.95 = $101.50 Metropass ($2.50 discount);
    - Adult ticket/token at $2.00 = $104.00 Metropass ($5.00 discount); and
    - Adult ticket/token at $2.05 = $109.00 Metropass ($10.00 discount).
- The switching rate for ticket/token to Metropass is estimated at between 5% and 15%, and ridership is factored up by 15% for those riders who switch to a Metropass at the discounted price; and
- The discount is only applied to the Adult Metropass.

Adjustments to Concessional Fares

This alternative provides additional fare discounts to concessional fares, which include seniors, students and children. Numerous options for this category have been assessed as outlined below:

- Concession fares held constant ($0.10 fare increase)

This option involves holding concession fares constant when a $0.10 fare increase is applied to adult fares. This is a straightforward option and only involves revisions to the pricing regime.

- Concession fares prices at 50% of adult fares

From 1976 to 1996 senior and student fares were priced at 50% of the adult ticket/token price. On June 1, 1996 the discount for senior and student fares was reduced from 50% to 33% of adult fares. This discount is still in effect today. The ridership and revenue impact of implementing the previous discount was assessed reflecting current fare levels and ridership mix.

- Price of Senior/Student pass held constant

The alternative examines the impact of holding the price of concession passes at existing levels when the next fare increase is effected while the allowing the ticket and cash fares for seniors and students to increase accordingly.

- Price of Senior/Students passes reduced by 2/4/6 trips per month

Senior and student Metropasses are currently priced at 66 trips per month - this is in comparison to 52 trips for an adult Metropass. The ridership/revenue impact was estimated for alternatives where the trip rate was reduced from 66 trips per month by 2, 4 and 6 trips respectively.

Trip Rate Reduced by 3 Trips For All Passes

Metropass users are the heaviest users of the system and are the most committed transit riders. As this group of riders already travels during peak times, any ridership benefit from reducing prices by 3 trips per month would occur in periods where there is system capacity.

Student Metropass discount extended to all individuals 19 to 21 years of age regardless of educational status.

To assist young adults who may be in a transition period and have limited sources of income, the impact of extending the student Metropass price to individuals ages 19 to 21 regardless of school status was assessed. Individual in this age category who use cash or tickets/tokens would still be required to pay the regular adult fare.

The impact of the variations outlined above have been estimated based on the following assumptions:

- Existing ridership mix at an annualized ridership of 412M;
- Existing trip making rates for each fare media category; and
- The switching rate from tickets/tokens is estimated at 15%, and ridership is factored up by 15% for riders who switch from tickets/tokens.

Child Fare Exemption

At the present time, children under two years of age are exempt from the TTC child fare. The TTC child fare is currently $4.25 for 10 tickets or $0.50 cash, which is significantly lower than other local transit properties which range from $1.00 to $1.35. It has been proposed to increase the age exemption from under two years of age to under six years of age. The potential impacts of this option have been estimated based on the following assumptions:

- There were 13.1 million child rides in 2001, and it is estimated the children between two and five years of age comprise in the range of 25% to 35% of the child ridership base; and
- Increasing the age exemption will have no impact on demand/ridership in the child category. The cost of the child fare has not been identified as a barrier to the use of the system by families travelling with children.

Discount to Cash Fare for Specific Days

In order to stimulate ridership on days with low system utilization (i.e. statutory holidays), as well as to thank riders for their patronage, the option of reducing the adult cash fare for a specific period (i.e. one-day) was examined. The analysis is based on the following assumptions:

- Demand and revenue effects are based on reducing the adult cash fare to $1.00;
- All adult ticket/token users switch to cash during the period that the cash fare is reduced; and
- Thanksgiving Day 2003 is used as the representative day to estimate the impact of this option.

Remove 9:30 a.m. Restriction on Use of Day Pass

At the present time Day Passes are valid from Monday to Friday only after 9:30 a.m. To provide riders additional flexibility in terms of fare and travel options, the impact of removing the existing time restriction during weekdays was examined. All other terms and conditions remain unchanged.

VIP Green Pass

The VIP (Volume Incentive Program) Green Pass which provides discounted Metropasses based on the purchase of a minimum monthly volume for a one-year period, and has been approved by the Commission for a one-year pilot is targeted at two groups. The first is employees who used transit to travel back and forth to work and who would benefit from a more inexpensive pass. The program also has the benefit of getting employers involved in looking at ways to encourage the use of transit by their employees. The second group is post-secondary students. By providing the opportunity to purchase a discounted pass, it may be possible to influence travel habits and patterns and "capture" riders for the long-term.

Additional Fare Media

Weekly Pass

At the present time, the TTC only sells Metropasses that are valid for a period of one month. Although the Metropass provides regular riders the best "financial deal", it has been postulated that some riders

cannot afford to pay for a full month of transit ridership all at once, especially at the end/beginning of a month. As such, there may be demand for a pass that provides similar benefits to a regular pass, but can be purchased on a weekly basis. This approach may also have the added benefit of contributing to increased passenger value and satisfaction.

Staff presented this option at the May 2002 Commission Meeting. The Commission approved the staff recommendation of two pilot tests of a Special Period Weekly Pass each lasting one week - the first pilot will be completed March 10 to March 16, 2003. The key elements and components of the pilot will be reviewed after the initial test, and adjusted as required prior to the second test period. Each test will be accompanied by a communication/marketing program to maximize exposure and sales. The key assumptions associated with the Weekly Pass pilot are:

- The Weekly Pass will have the same features as the Metropass (unlimited travel, magnetic stripe, non-transferrable) except that it does not provide access to TTC commuter parking lots;
- The Weekly Pass is priced at $28.50 (trip multiple of 15);
- Ridership is estimated to increase by 15% for those riders who switch to the Weekly Pass from tickets/tokens; and
- It is estimated that 1% of current Metropass holders will switch to the Weekly Pass.

Senior/Student Day Pass

The price of the existing Day Pass is based on adult fares. To provide seniors and students the same "economic opportunity" for unlimited travel on a daily basis, the feasibility of a Senior/Student Day Pass was examined. Because of the logistical/operational issues associated with verifying the proper use of a Family Pass for these two groups, the option has been restricted to single use only. Two variations of this option have been assessed - both seniors and students included and only seniors included as it can be argued that students should be in school from Monday to Friday, and as such this type of pass would have no benefit. The key assumptions for this option are:

- Ridership impact based on switching rates of 5.0% and 2.9% of current ticket users for seniors and students respectively, and one additional trip per pass;
- Valid for single travel only;
- Priced at $5.00; and
- Valid after 9:30 a.m. Monday to Friday and from start of service on Saturday, Sunday and statutory holidays.