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# YORK REGION TRANSIT
# CONVENTIONAL FLEET REPLACEMENT STRATEGY

**The Transit Committee recommends the adoption of the recommendations contained in the following report, January 31, 2007, from the Commissioner of Transportation and Works subject to amending recommendation 1 by adding the words “if appropriate” following the word “service”, so that recommendation 1 now reads as follows:**

1. **Regional Council approve the YRT fleet replacement program recommended in this report whereby all buses would be retired after no later than 18 years of service, if appropriate, (after a phase-in period).**

## 1. RECOMMENDATIONS

It is recommended that:

1. Regional Council approve the YRT fleet replacement program recommended in this report whereby all buses would be retired after no later than 18 years of service (after a phase-in period).

2. Four additional replacement buses be purchased in 2007 at an approximate total cost of $1.9 million, subject to the adequacy of funding currently provided for in the draft 2007 Capital Budget.

## 2. PURPOSE

York Region Transit (YRT) staff is seeking approval from Transit Committee and Regional Council to adopt a fleet replacement strategy that would ensure conventional transit buses are replaced no later than 18 years following their acquisition or prior to 18 years as conditions warrant.

## 3. BACKGROUND

Conventional transit buses are designed for a 12-year life. Many Canadian transit agencies extend bus life to 18 years, following a major structural refurbishing program. YRT’s current retirement practice is to retire buses within 18 years. However, due to the large number of buses in the fleet that were manufactured in the 1980’s and the significant growth in transit services since the Region amalgamated transit service in 2001, there are a large number of older buses in the fleet at this time. It will be necessary to operate as many as 38 buses in 2007 and 46 buses in 2008 that are older than 18 years.

This report investigates and recommends a vehicle replacement strategy that will ensure all conventional transit buses are retired no later than 18 years (after a phase-in period), or earlier where justified.

## 4. ANALYSIS AND OPTIONS

### 4.1 YRT's Conventional Bus Fleet

YRT's current bus fleet consists of 365 active conventional transit buses including the Viva fleet. There are currently 38 buses in the fleet that are older than 18 years. The high number of older buses is attributed to the following:

- Aging bus fleet assumed by the Region when transit services were amalgamated in 2001.
- Some older buses acquired when the Region assumed the Yonge and Bayview routes and buses from GO Transit in 2003.
- Limited bus replacement program due to significant growth of YRT services.

In addition, there were a large number of buses purchased in 2002 when 50 buses were acquired followed by 37 and 124 buses in 2003 and 2005, respectively. These acquisitions dictate a managed replacement approach to mitigate the numbers of buses that will have to be purchased as these buses reach the end of their 18-year lifespan.

### 4.2 Current Major Refurbishing Program

As buses available in the marketplace have a design life of 12 years, YRT currently performs a major refurbishment program to extend the lifespan to 18 years. These refurbishments are generally performed between 9 and 12 years and consist of complete removal of the bus skin, structural repairs, mechanical upgrades and amenity replacements. The vehicle replacement strategy recommended in this report would require this refurbishing program continue.

### 4.3 Older Bus Impact

There are a number of factors which discourage the use of buses beyond 18 years as noted below:

- The bus exhaust emissions on older buses do not meet current standards which have become increasingly stringent since the early 1990s.
- The buses typically lack current customer-friendly standards including low floor accessibility, kneeling and ramp access, high visibility destination signs, and air-conditioning.
- Requirement to conduct supplemental structural and body refurbishing.
- Reduced bus parts availability resulting in increased down time.
- Reduced rate of service availability and in-service breakdowns due to a greater incidence of malfunctions.

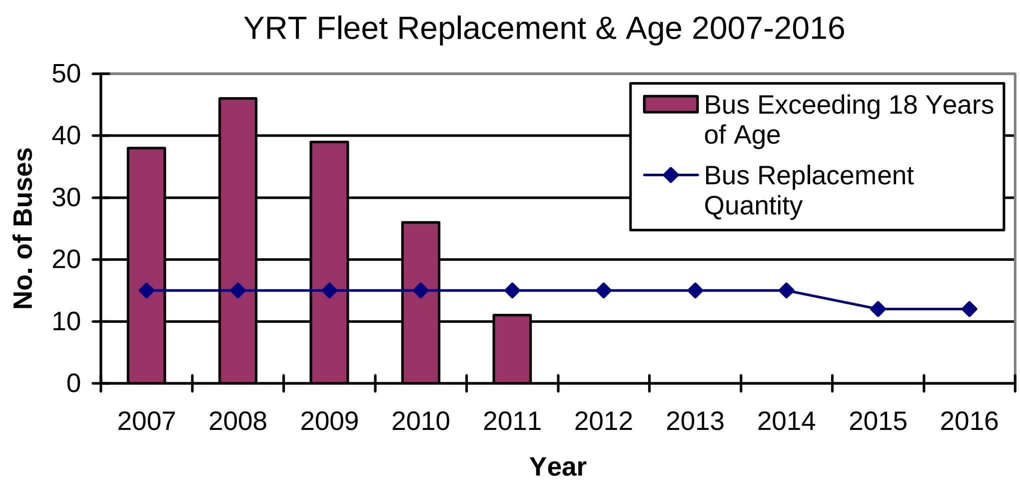
- Higher operating costs.

Given the negative impact of operating older buses, YRT staff is recommending that all conventional transit buses be retired no later than 18 years of service (after a phase-in period).

### 4.4 YRT Replacement Program

The draft 2007 Business Plan and Budget for YRT identifies a 10-year capital plan for bus replacement. This is shown in Table 1.

**Table 1**




This plan will permit the replacement of all buses exceeding 18 years by 2012. However, a recent review of our older buses indicates that some moderate structural refurbishing will be required on some units that are over 18 years and it would be advantageous that they be replaced sooner. Staff would like to pursue an option whereby up to four additional replacement buses be purchased in 2007 subject to funding being available in the 2007 capital budget for YRT. This would increase the bus replacement number to 19.

To mitigate the requirement for significant bus replacement acquisitions in years where large numbers of buses were acquired, it would be necessary to retire buses that have attained a lifespan of between 15 and 18 years. This is considered common practice for most larger transit agencies including Mississauga Transit, Brampton Transit, London Transit, and Hamilton.

Due to the significant number of bus acquisitions which occurred between the years 2000 and 2006, the number of buses requiring replacement will grow to an average of approximately 30 replacement units for each of the years between 2018 and 2024. To mitigate the requirement for sizeable replacement purchases in any given year, especially during 2023 when 124 buses will reach their 18-year lifespan, it will be beneficial to stagger the replacement over a few years.

### 4.5 Thomas Bus Replacement

Forty Thomas buses, smaller conventional buses (9.1 and 10.7 metre long), were purchased in 2002 to meet the rapid expansion of the service at that time. These buses are medium-duty units and are no longer in production. Given the service reliability and emerging higher cost to operate this model of bus, it may not be economically feasible to continue operation of these units to the 12-year design life. New suppliers and developments in the manufacture of smaller low-floor buses have improved and staff is proposing that these buses be retired over a 3-year period commencing in 2013. This forecast will be subject to further review and justification including the Business Plan and Budget process.

### 4.6 Relationship to Vision 2026

Ensuring that YRT buses are retired after 18 years of service as recommended in this report will provide a fleet that better meets current emission standards. This complements the Vision 2026 goal of “Enhanced Environment, Heritage and Culture”, specifically as it relates to promoting clean air policies and initiatives.

## 5. FINANCIAL IMPLICATIONS

In January 2007, The Ministry of Transportation, Ontario implemented the Ontario Bus Replacement Program (OBRP). This new multi-year capital funding program will support the replacement of municipal transit buses. Although full details of the plan have not been provided, it is understood that transit systems will be eligible to receive up to one-third funding for the replacement of buses up to a subsidy cap. For YRT, the 15 conventional replacement buses included in the draft 2007 Business Plan and Budget plus the recommended purchase of up to four additional buses are eligible for subsidy funding in 2007.

The 2007 Capital Budget contains funding in the amount of $7.5 million for replacement of 15 buses and $11.6 million for 24 expansion buses. The $1.9 million required to fund the four proposed additional replacement buses could be derived from the existing budget allocation if the unit bus costs for both replacement and expansion buses are below budget submissions. As such, there is no additional funding required beyond the amount submitted in the 2007 Business Plan and Budget. Total subsidy allocation from the Province based on bus replacement expenditures of $7.5 million would be up to $2.5 million.

As YRT’s 10-Year Capital Programs are prepared in future years, it will be necessary to include projections that follow the recommended vehicle replacement strategy in this report to mitigate the requirement to purchase significant numbers of vehicles in any one year as buses attain their 18-year lifespan.

## 6. LOCAL MUNICIPAL IMPACT

The recommendations provide a cost-effective strategy to ensure the bus fleet is reliable, environmentally friendly, has improved customer access and comfort and is aesthetically pleasing, thus promoting transit ridership.

## 7. CONCLUSION

In conclusion, YRT staff recommends that Transit Committee and Regional Council approve the recommended YRT fleet replacement strategy detailed in this report to ensure that all vehicles that have attained an 18-year lifespan are retired.

For more information on this report contact Rick Takagi, Manager, Operations (Ext. 5624) of the Transit Branch in the Transportation and Works Department.

The Senior Management Group has reviewed this report.